

# SAN BENITO COUNTY WATER DISTRICT

30 Mansfield Road  
Hollister, CA 95023



SPECIFICATIONS

FOR

NORTH COUNTY GROUNDWATER SUPPLY PROJECT –  
MONITORING WELL INSTALLATION  
ISSUED FOR CONSTRUCTION

Prepared By:  
Garrett Haertel, PE

September 2020

## NOTICE INVITING BIDS

San Benito County Water District ("SBCWD") will receive bids for the North County Groundwater Supply Project – Monitoring Well Installation project no later than Wednesday October 21, 2020 2:00 PM Pacific Daylight Time, at which time or thereafter bids will be opened and read aloud. No oral, telegraphic, electronic, facsimile, or telephonic bids or modifications will be considered. Bids received after the scheduled Bid Submittal Deadline will be rejected and returned unopened. It is the responsibility of the Bidder to see that any bid submitted shall have sufficient time to be received by the SBCWD before the Bid Submittal Deadline. Bids shall be valid for 60 Days after the bid opening date.

Bids must be submitted on the preprinted bid forms supplied by the SBCWD as part of the bid Package and presented to **SBCWD in a sealed envelope marked ATTN: North County Groundwater Supply Project – Monitoring Well Installation – October 21, 2020.**

Bidders may obtain a copy of the Contract Documents from the District office. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, SBCWD shall provide an electronic copy of the Contract Documents at no charge to the contractor plan room.

It is the responsibility of each prospective bidder to download and print all Bid Documents for review and to verify the completeness of Bid Documents before submitting a bid. Any Addenda will be posted and distributed to the recipients on the Planholder's List. It is the responsibility of each prospective bidder to check with SBCWD staff through the close of bids for any applicable addenda or updates. SBCWD does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, downloading or printing of the Bid Documents.

A Pre-Bid Conference and Site Walk will be held at the District office located at 30 Mansfield Road in Hollister, California on the following date(s) and time(s): Thursday October 15, 2020 at 9:00 AM. Prospective bidders MAY NOT visit the Site without making arrangements through the Project Engineer, Garrett Haertel.

Each Bid must be accompanied by cash, a certified or cashier's check, or a Bid Bond in favor of SBCWD in an amount not less than ten percent (10%) of the Total Bid Price. The Bid Security must be submitted directly to SBCWD prior to the specified date and time for bid opening as set forth in the Instructions to and Information for Bidders.

The successful bidder will be required to furnish SBCWD with Payment and Performance Bonds equal to 100% of the Contract Price. Bonds shall be on the forms included in the Contract Documents; SBCWD will not accept bonds on any other form.

Pursuant to Public Contract Code section 22300, the successful bidder may substitute certain securities for funds withheld by SBCWD to ensure his performance under the Contract.

Pursuant to section 1770, et seq. of the California Labor Code, the Contractor and all Subcontractors shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations and comply with all applicable Labor Code provisions, which include, but are not limited to the employment of apprentices, the hours of labor and the debarment of contractors and subcontractors.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a Contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. In bidding on this project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its bid.

Contractor must demonstrate Qualifications for Engineered Construction, by providing a list of 3 projects completed within the last 7 years involving work of similar type and complexity. To be considered of similar type and complexity, listed projects should include the installation of municipal supply groundwater wells.

Each bidder shall be a licensed contractor pursuant to sections 7000 et seq. of the Business and Professions Code in the following classification(s) throughout at the time it submits its bid and for the duration of the Contract: Class C-57 Well Drilling Contractor License.

SBCWD shall award the Contract for the Work to the lowest responsive, responsible bidder as determined from the base bid and all add alternates. SBCWD reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding process.

For further information, contact Garrett Haertel, Deputy District Engineer, (831) 637-8218 ext. 120, [garrett@sbcwd.org](mailto:garrett@sbcwd.org).

## **SAN BENITO COUNTY WATER DISTRICT**

Dated: September 21, 2020

By: \_\_\_\_\_  
Garrett Haertel, PE  
Deputy District Engineer

## **INSTRUCTIONS TO AND INFORMATION FOR BIDDERS**

### **1. AVAILABILITY OF CONTRACT DOCUMENTS**

Bids must be submitted to SBCWD on the Bid Forms which are a part of the Bid Package for the Work. Bid and Contract Documents may be obtained from the District office, as indicated in the Notice Inviting Bids.

### **2. EXAMINATION OF CONTRACT DOCUMENTS**

SBCWD has made copies of the Contract Documents available as indicated above. Bidders shall be solely responsible for examining the Site and the Contract Documents, including any addenda issued during the bidding period, and for informing themselves with respect to local labor availability, means of transportation, necessity for security, laws and codes, local permit requirements, wage scales, local tax structure, contractors' licensing requirements, availability of required insurance, and other factors that could affect the Work. Bidders are responsible for consulting the standards referenced in the Contract Documents. Bidders shall be solely responsible for their failure to examine the documents and inform themselves, shall proceed at their sole risk, and no relief for error or omission will be given except as required under State law.

### **3. INTERPRETATION OF CONTRACT DOCUMENTS**

Discrepancies in, and/or omissions from the Bid or Contract Documents or questions as to their meaning shall be immediately brought to the attention of SBCWD by submission of a written request for an interpretation or correction to SBCWD.

Any interpretation of the Bid or Contract Documents will be made only by written addenda duly issued and posted to bidders listed on the Planholder's List. SBCWD will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the Bid or Contract Documents to any bidder, and no bidder should rely on any such oral interpretation.

Bids shall include complete compensation for all work to be performed under the Contract Documents.

### **4. INSPECTION OF SITE; PRE-BID CONFERENCE AND SITE WALK**

Each prospective bidder is responsible for fully acquainting itself with conditions of the Site (which may include more than one location) and those relating to construction of the Work, fully understanding the facilities, difficulties and restrictions which may affect the cost or effort required to complete the Work. To this end, a Pre-Bid Conference and Site Walk may be held on the date(s) and time(s) indicated in the Notice Inviting Bids.

### **5. ADDENDA**

SBCWD reserves the right to revise the Bid and Contract Documents prior to the bid opening date. Revisions, if any, shall be made by written addenda. All addenda issued by SBCWD shall be included in the bid and made part of the Contract Documents. Addenda will be issued by SBCWD. Please Note: Bidders are responsible for ensuring that they have received any and all addenda.

## 6. ALTERNATE BIDS

If alternate bid items are called for in the Contract Documents, the lowest bid will be determined on the basis of the base bid and all add alternates unless otherwise specified in the Notice Inviting Bids. The time required for completion of the alternate bid items has been factored into the Contract Time and no additional time will be allowed for performing any of the alternate bid items. Regardless of whether the alternates bid items will be considered in determining the low bid, SBCWD may elect to include one or more of the alternate bid items, or to otherwise remove certain work from the scope of Work. Accordingly, each Bidder must ensure that each bid item contains a proportionate share of profit, overhead and other costs or expenses which will be incurred by the Bidder.

## 7. COMPLETION OF BID FORMS

Bids shall be submitted on the preprinted bid forms supplied by the SBCWD as part of the bid Package and presented to **SBCWD in a sealed envelope marked ATTN: North County Groundwater Supply Project – Monitoring Well Installation – October 21, 2020**. No oral, telegraphic, electronic, facsimile, or telephonic bids or modifications will be considered. Bids received after the scheduled Bid Submittal Deadline will be rejected and returned unopened. It is the responsibility of the Bidder to see that any bid submitted shall have sufficient time to be received by the SBCWD before the Bid Submittal Deadline. The Bid must be submitted to:

(US Mail, Hand Delivered or FedEx, UPS or other shipping company)  
San Benito County Water District  
30 Mansfield Road  
Hollister, CA 95023

Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. Bidders shall fill in all blank spaces (including inserting "N/A" where applicable) and initial all interlineations, alterations, or erasures to the Bid Forms. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms nor make substitutions thereon. Deviations in the Bid Form may result in the bid being deemed non-responsive.

Bids shall only be prepared using copies of the Bid Forms which are included in the Bid and Contract Documents. Bidders must include the following Bid Forms with their bid: (1) Bid Acknowledgement, (2) Schedule of Pay Items, (3) Non-Collusion Declaration, (4) Designation of Subcontractors, (5) Experience Statement, (6) Iran Contracting Act Certification, (7) Public Works Contractor Registration Certification, and (8) Bid Bond.

Bidders are solely responsible for the "on time" submission of their bid. SBCWD will only consider bids that have transmitted successfully and have been issued a time stamp from the District Office indicating that the bid was submitted successfully. Failure of the Bidder to successfully submit a bid shall be at the Bidder's sole risk, and no relief will be given for late and/or improperly submitted bids.

## **8. BID SECURITY**

No Bid will be considered unless it is accompanied by a Bid Security of not less than ten percent (10%) of the Total for Comparison of Bids, as set forth in the Schedule of Pay Items. The Bid Security shall be in the form of (a) cash, (b) a cashier's check made payable to SBCWD, (c) a certified check made payable to SBCWD, or (d) a proper Bid Bond, in the form set forth herein.

The Bid Security must be submitted directly to SBCWD as follows:

By Mail, Courier or Walk-in:  
San Benito County Water District  
Attn: **North County Groundwater Supply Project  
– Monitoring Well Installation – October 21, 2020**  
30 Mansfield Road  
Hollister, CA 95023

**The Bid Security must be received prior to the specified date and time for bid opening.**

If Bidder elects to provide the required Bid Security in the form of a Bid Bond, the original hard copy Bid Bond must be submitted to SBCWD at the address indicated above prior to the specified date and time for bid opening.

## **9. MODIFICATIONS OF BIDS**

Each Bidder shall submit its Bid in strict conformity with the requirements of the Bid and Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a Bid may render it non-responsive and may cause its rejection. Bidders shall neither delete, modify, nor supplement the printed matter on the Bid Forms, nor make substitutions thereon. Oral, telephonic and electronic modifications will not be considered.

## **10. CONTRACTOR'S PERFORMANCE**

Bidders must self-perform a minimum of thirty percent (30%) of work on the Project.

## **11. DESIGNATION OF SUBCONTRACTORS**

Pursuant to State law, the Bidders must designate the name, location of place of business, and contractor's license number for each subcontractor who will perform work or render services to the Bidder in an amount that exceeds one half of one percent (1/2%) of the Bidder's Total Bid Price, or \$10,000, whichever is higher, if work involves streets or highways. Bidder must also include the portion of work each such subcontractor will perform, on the form provided herein by SBCWD. No additional time will be provided to bidders to submit any of the information required in the Designation of Subcontractor form.

## **12. LICENSING REQUIREMENTS**

Pursuant to section 7028.15 of the Business and Professions Code and section 3300 of the Public Contract Code, all bidders must possess licenses issued by the State of California Contractors License Board for performance of this Contract. Pursuant to section 7028.15 of the Business and Professions Code, any bid submitted by a contractor not currently licensed in accordance with state law and pursuant to the requirements found in the Contract Documents shall be nonresponsive, and SBCWD shall reject the Bid. SBCWD shall have the right to request, and Bidders shall provide within five (5) Days, evidence satisfactory to SBCWD of all valid license(s) currently held by that Bidder before awarding the Contract. Pursuant to Public Contract Code section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code section 2717(b) in order to supply mined material for this Contract.

## **13. PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION**

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a Contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. To this end, Bidder shall sign and submit with its Bid the Public Works Contractor Registration Certification on the form provided, attesting to the facts contained therein. Failure to submit this form may render the Bid non-responsive. In addition, each Bidder shall provide the registration number for each listed subcontractor in the space provided in the Designation of Subcontractors Form.

## **14. SIGNING OF BIDS**

All Bids submitted shall be executed by the Bidder or its authorized representative.

## **15. BID PROTEST PROCEDURE**

Submitted bids will be timely made available for review upon written request of any bidder. Bidders may file a "protest" of a Bid with SBCWD's Project Engineer. The protest must:

- A. Be filed in writing within five (5) business days after the bid opening date;
- B. Clearly identify the alleged irregularity or other basis for the protest;
- C. Clearly identify the specific SBCWD staff determination or recommendation being protested;
- D. Specify, in detail, the factual and legal grounds for the protest; and
- E. Include all relevant, supporting documentation with the protest at time of filing.

If the protest does not meet all of these requirements, SBCWD will reject it without further review.

If the protest is timely and complies with all of the above requirements, SBCWD's Project Engineer, or other designated SBCWD staff member, shall review the protest, any response from the challenged bidder, and all relevant information. SBCWD will provide a written response to the protestor.

The procedure and time limits set forth in this paragraph are mandatory and are the sole and exclusive remedy in the event of a bid protest. Failure to comply with these procedures shall constitute a failure to exhaust administrative remedies and a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings.



## SAN BENITO COUNTY WATER DISTRICT

### BID FORMS

FOR: North County Groundwater Supply Project – Monitoring Well  
Installation – October 21, 2020

BIDDER: \_\_\_\_\_

- 1.1. In response to the Notice Inviting Bids dated September 2020 and in accordance with the accompanying Instructions to and Information for Bidders, the undersigned hereby proposes to SBCWD to furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than materials and equipment specified as furnished by SBCWD, and to perform all operations necessary and required to construct the Project in accordance with the provisions of the Contract Documents and any addenda thereto, and at the prices stated opposite the respective items set forth in the Schedule of Pay Items below.
- 1.2. This Bid constitutes a firm offer to SBCWD which cannot be withdrawn for 60 days after the date set for opening of Bids, or until a Contract is executed by SBCWD and a third party, whichever is earlier.
- 1.3. The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and any addenda thereto; that it has carefully checked all of the words and figures shown in its Schedule of Pay Items; that it has carefully reviewed the accuracy of all statements in this Bid and attachments hereto; and that it understands and agrees that SBCWD will not be responsible for any errors or omissions on the part of the undersigned in preparing this Bid.
- 1.4. The undersigned has by careful examination of the Specification and any addenda thereto, and by examination of the actual Site conditions, satisfied itself as to the nature and location of all Work, the general and local conditions to be encountered in the performance of any Work, the requirements of the Contract and all other matters which can in any way affect the Work or the cost thereof.
- 1.5. If awarded a Contract, the undersigned agrees to execute and deliver to SBCWD within 15 days after date of receipt of Notice of Award, a signed Contract in duplicate and the necessary Performance Bond, Payment Bond, Certificates of Insurance and Endorsements, Escrow Agreement (if used) and Tax Identification Number.
- 1.6. Attached hereto and by this reference incorporated herein and made a part of this Bid are the following forms from the Specification which have been completed and executed by undersigned Bidder:

SCHEDULE OF PAY ITEMS  
NONCOLLUSION DECLARATION  
DESIGNATION OF SUBCONTRACTORS  
EXPERIENCE STATEMENT  
IRAN CONTRACTING ACT CERTIFICATION  
PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION  
BID BOND

- 1.7. Undersigned also acknowledges receipt, understanding, and full consideration of the following addenda to the Specification in preparing its bid:

Addenda Nos. \_\_\_\_\_

- 1.8. The undersigned is hereby representing that it is and will be properly licensed both at the time that it submits a Bid as well as at the time the Contract is awarded, if the Contract is awarded to the undersigned.

- a. Individual Contractor: Undersigned certifies that it is now licensed in accordance with the provisions of the Contractor's License Law of the State of California,

License number \_\_\_\_\_

Expiration date \_\_\_\_\_

License classification \_\_\_\_\_

- b. Joint Venture: Undersigned certifies that the individual members of the joint venture are now licensed in accordance with the provisions of the Contractor's License Law of the State of California.

Member No. 1

Name \_\_\_\_\_

License number \_\_\_\_\_

Expiration date \_\_\_\_\_

License classification \_\_\_\_\_

Member No. 2

Name \_\_\_\_\_

License number \_\_\_\_\_

Expiration date \_\_\_\_\_

License classification \_\_\_\_\_

(If there are more than two members of the joint venture, attach a page for the additional member(s) with the above information.)

1.9. Undersigned acknowledges that the representations made herein are made under penalty of perjury.

BIDDER:

Bidder's Business Address:

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Type or print name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Where signed) (City, State)

(corporate seal)

Dated: \_\_\_\_\_, 20\_\_\_\_\_  
State of Incorporation: \_\_\_\_\_

Names and addresses of all partners or joint venturers:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Statement of the authority of signatory to bind Bidder:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SCHEDULE OF PAY ITEMS					
<b>BIDDER NAME:</b>					
Item No.	Description	Est. Qty.	Unit Of Measure	Unit Price	Total Line Item Cost
1	Mobilization/Demobilization (including All Risk Installation Floater Insurance); not to exceed 10% of the total bid price.	1	Lump Sum (LS)	\$	\$
2	All-Risk Insurance	1	LS	\$	\$
3	Borehole drilling (1 foot of length, 12-inch diameter, up to 800 feet in depth)	800	Each (EA)	\$	\$
4	Borehole Geophysical Testing (1 foot of length)	800	EA	\$	\$
5	Well Casing (1 foot of length) – Installation and Materials	500	EA	\$	\$
6	Well Screen (1 foot of length) – Installation and Materials	300	EA	\$	\$
7	Well Screen Appurtenances	1	LS	\$	\$
8	Artificial Filter Pack (1 foot of length) – Installation and Materials	400	EA	\$	\$
9	Inter Screen Zone Seal (1 foot of length) – Installation and Materials	300	EA	\$	\$
10	Grouting and Sealing – Installation	1	LS	\$	\$
11	Grouting and Sealing (cubic yards of material) – Materials	6	EA	\$	\$
12	Well Development by Surging and Airlift (per hour)	10	EA	\$	\$
13	Well Development by Overpumping (per hour)	40	EA	\$	\$
14	Well Development – Installation and Removal of Pump	1	LS	\$	\$

SCHEDULE OF PAY ITEMS					
BIDDER NAME:					
Item No.	Description	Est. Qty.	Unit Of Measure	Unit Price	Total Line Item Cost
15	Aquifer Zone Water Quality Testing – Installation and Removal of Pump	1	LS	\$	\$
16	Discrete Aquifer Zone Water Quality Testing (per hour)	20	EA	\$	\$
17	Combined Aquifer Zone Water Quality Testing (per hour)	12	EA	\$	\$
18	Well Disinfection	1	LS	\$	\$
19	Borehole and Well Destruction (1 foot of length)	800	EA	\$	\$
20	Standby Time (per hour)	12	EA	\$	\$
TOTAL FOR COMPARISON BIDS					\$
TOTAL BID PRICE WRITTEN IN WORDS					

The costs of any Work shown or required in the Plans and Specification, but not specifically identified as a Pay Item are to be included in related Pay Items and no additional compensation shall be due Contractor by virtue of Contractor's compliance with the Plans and Specifications.

Bidders must provide pricing for every bid item.

The estimated quantities for unit price items are for purposes of comparing bids only and SBCWD makes no representation that the actual quantities of work performed will not vary from the estimates.

In case of discrepancy between the unit price and the line item cost set forth for a unit price item, the line item cost, calculated at the unit price multiplied by the estimated quantity, shall prevail and shall be utilized as the basis for determining the lowest responsive, responsible bidder. However, if the amount set forth as a unit price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Line Item Cost" column, then the amount set forth in the "Line Item Cost" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price. If any of the above discrepancies exist, SBCWD may recalculate the bid price on the basis of the unit price and the bidder agrees to be bound by such recalculation. Final payment for unit price items shall be determined by SBCWD from measured quantities of work performed.

**NON-COLLUSION DECLARATION**  
**TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID**

The undersigned declares:

I am the \_\_\_\_\_ of \_\_\_\_\_, 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 his or her 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 he or she has 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].

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

Print Name: \_\_\_\_\_

## Notary Acknowledgment

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

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature of Notary Public

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

#### DESCRIPTION OF ATTACHED DOCUMENT

- ☐ Individual  
☐ Corporate Officer

\_\_\_\_\_  
Title(s)

- ☐ Partner(s)      ☐ Limited  
                         ☐ General

- ☐ Attorney-In-Fact  
☐ Trustee(s)  
☐ Guardian/Conservator  
☐ Other:

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Title or Type of Document

\_\_\_\_\_  
Number of Pages

\_\_\_\_\_  
Date of Document

\_\_\_\_\_  
Signer(s) Other Than Named Above



### DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act of the Public Contract Code of the State of California, sections 4100 et seq., each bidder shall set forth below: (a) the name and the location of the place of business and (b) the portion of the work which will be done by each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work in an amount in excess of one-half of one percent (1/2%) of the Contractor's Total Bid Price. Notwithstanding the foregoing, if the work involves streets and highways, then the Contractor shall list each subcontractor who will perform work or labor or render service to Contractor in or about the work in an amount in excess of one-half of one percent (1/2%) of the Contractor's total Bid Price or \$10,000, whichever is greater. No additional time shall be granted to provide the below requested information.

If no subcontractor is specified, for a portion of the work, or if more than one subcontractor is specified for the same portion of Work, then the Contractor shall be deemed to have agreed that it is fully qualified to perform that Work, and that it shall perform that portion itself.

Portion of Work	Subcontractor Name <u>AND</u> CSLB License Number	Location of Business	DIR Registration Number

Portion of Work	Subcontractor Name <u>AND</u> CSLB License Number	Location of Business	DIR Registration Number

Name of Bidder\_\_\_\_\_

Signature\_\_\_\_\_

Name and Title\_\_\_\_\_

Dated\_\_\_\_\_

## EXPERIENCE STATEMENT

Bidder submits, as a part of its Bid, the following statements as to its experience qualifications. Bidder certifies that all statements and information set forth below are true and accurate. Bidder hereby authorizes SBCWD to make inquiry as appropriate regarding its experience.

- a. Bidder has been engaged in the contracting business under its present business name for \_\_\_\_ years.
- b. Bidder's experience in Work of a nature similar in type and magnitude to that set forth in the Specification, must include installation of groundwater test wells, extends over a period of \_\_\_\_ years.
- c. Bidder, as contractor, has satisfactorily completed all contracts awarded to it, except as follows:

(Name any and all exceptions and reasons therefor. Bidder shall attach and designate additional pages if necessary.)

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- d. Within the last three years Bidder has satisfactorily completed the following contracts covering Work similar in type and magnitude to that set forth in the Specification for the following owners: (person, firms, or authorities)

Owner's Name, Address & Telephone	Name of Owner's Representative	Type of Work and Year	Contract Amount (rounded to closest thousand dollars)

(Bidder shall attach and properly designate additional pages if necessary.)

**IRAN CONTRACTING ACT CERTIFICATION  
(Public Contract Code Section 2200 *et seq.*)**

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

- ☐ The Contractor is not:
- (i) identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or
  - (ii) a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.
- ☐ Agency has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, Agency will be unable to obtain the goods and/or services to be provided pursuant to the Contract.
- ☐ The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000.

Signed \_\_\_\_\_

Titled \_\_\_\_\_

Firm \_\_\_\_\_

Date \_\_\_\_\_

**Note:** In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

### **Public Works Contractor Registration Certification**

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations.

See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information.

No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Bidder hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.

Name of Bidder: \_\_\_\_\_

DIR Registration Number: \_\_\_\_\_

Bidder further acknowledges:

1. Bidder shall maintain a current DIR registration for the duration of the project.
2. Bidder shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

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

## BID BOND

KNOW ALL PERSONS BY THESE PRESENTS that, \_\_\_\_\_  
\_\_\_\_\_ hereinafter called the Principal, and \_\_\_\_\_  
\_\_\_\_\_, a corporation duly organized under the laws of the State of \_\_\_\_\_,  
having its principal place of business at \_\_\_\_\_ in the State of  
\_\_\_\_\_, and authorized to do business in the State of California, hereinafter  
call the Surety, are held and firmly bound unto the San Benito County Water District, hereinafter  
called the Obligee, on order, in the sum of \_\_\_\_\_ Dollars  
(\$\_\_\_\_\_) (being at least ten percent (10%) of the total amount of Principal's Bid  
price) lawful money of the United States, for the payment of which we bind ourselves, our heirs,  
executors, administrators, successors, and assigns, jointly and severally, firmly by these present.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Principal has submitted its Bid for the project entitled \_\_\_\_\_  
\_\_\_\_\_ to the Obligee, the Bid, by reference thereto; being  
hereby made a part hereof.

NOW, THEREFORE, if Principal's Bid is rejected or, in the alternate, if the Proposal is accepted  
and the Principal signs and delivers a Contract and furnishes a Performance Bond and Payment  
Bond, all in the form and within the time required by the Bid and the Contract Documents, then  
this obligation shall become null and void, otherwise the same shall remain in full force and effect  
and upon default of the Principal shall be forfeited to the Obligee, it being expressly understood  
and agreed that the liability of the Surety for any and all default of the Principal shall be the amount  
of this obligation as herein stated, as liquidated damages.

The Surety, for value received, hereby agrees that its obligations and its bond shall not be  
impaired or affected by any extension of the time within which the Obligee may accept such  
Proposal, and the Surety hereby waives notice of any such extension.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety  
shall pay, in addition to the sum set forth above, all costs incurred by the Obligee in such suit,  
including reasonable attorney's fees and expert witness fees, to be fixed by the court, in addition  
to the penal sum of the Bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

BY: \_\_\_\_\_  
SURETY

BY: \_\_\_\_\_  
PRINCIPAL

## Notary Acknowledgment

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

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature of Notary Public

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

#### DESCRIPTION OF ATTACHED DOCUMENT

- ☐ Individual  
☐ Corporate Officer

\_\_\_\_\_  
Title(s)

\_\_\_\_\_  
Title or Type of Document

- ☐ Partner(s)      ☐ Limited  
                         ☐ General

\_\_\_\_\_  
Number of Pages

- ☐ Attorney-In-Fact  
☐ Trustee(s)  
☐ Guardian/Conservator  
☐ Other:

\_\_\_\_\_  
Date of Document

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Signer(s) Other Than Named Above

Note: Signature of person executing for Surety must be notarized and evidence of corporate authority attached.

**END OF BID BOND**

## BOND FORMS

### PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the San Benito County Water District (hereinafter referred to as "SBCWD") has awarded to \_\_\_\_\_, (hereinafter referred to as the "Contractor") an agreement for \_ North County Groundwater Supply Project – Monitoring Well Installation \_\_\_\_ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated \_\_September 2020\_\_, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by the Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of the Contract Documents.

NOW, THEREFORE, we, \_\_\_\_\_, the undersigned Contractor and \_\_\_\_\_ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto SBCWD in the sum of \_\_\_\_\_ DOLLARS, (\$\_\_\_\_\_), the sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless SBCWD, its officers and agents, as stipulated in the Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Project, unless otherwise provided for in the Contract Documents, the guarantee obligation shall hold good for a period of one (1) year after the acceptance of the work by SBCWD, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect SBCWD from loss or damage resulting from or caused by defective materials or faulty workmanship the above obligation in penal sum thereof shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit SBCWD's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.



As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by SBCWD in enforcing such obligation.

Whenever Contractor shall be, and is declared by SBCWD to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at SBCWD 's option:

4. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or
5. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and SBCWD, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by SBCWD under the Contract and any modification thereto, less any amount previously paid by SBCWD to the Contractor and any other set offs pursuant to the Contract Documents.
6. Permit SBCWD to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by SBCWD under the Contract and any modification thereto, less any amount previously paid by SBCWD to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that SBCWD may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if SBCWD, when declaring the Contractor in default, notifies Surety of SBCWD 's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract. including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

[Remainder of Page Left Intentionally Blank.]

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
CONTRACTOR/PRINCIPAL

\_\_\_\_\_  
Name

By\_\_\_\_\_

SURETY:

By: \_\_\_\_\_  
Attorney-In-Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached.

The rate of premium on this bond is \_\_\_\_\_ per thousand. The total amount of premium charges, \$\_\_\_\_\_.  
(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Name and Address of Agent or Representative for service of process in California, if different from above)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Telephone number of Surety and Agent or Representative for service of process in California)

\_\_\_\_\_

## Notary Acknowledgment

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

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature of Notary Public

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

#### DESCRIPTION OF ATTACHED DOCUMENT

- ☐ Individual  
☐ Corporate Officer

\_\_\_\_\_  
Title(s)

\_\_\_\_\_  
Title or Type of Document

- ☐ Partner(s)      ☐ Limited  
                         ☐ General

\_\_\_\_\_  
Number of Pages

- ☐ Attorney-In-Fact  
☐ Trustee(s)  
☐ Guardian/Conservator  
☐ Other:

\_\_\_\_\_  
Date of Document

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

**END OF PERFORMANCE BOND**

## **PAYMENT BOND (LABOR AND MATERIALS)**

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the San Benito County Water District (hereinafter referred to as "SBCWD ") has awarded to \_\_\_\_\_, (hereinafter referred to as the "Contractor") \_\_\_\_\_ an agreement for \_ North County Groundwater Supply Project – Monitoring Well Installation \_\_\_\_ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated \_\_\_\_September 2020\_\_\_\_, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, Principal is required to furnish a bond in connection with the contract described above; providing that if Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and \_\_\_\_\_ as Surety, are held and firmly bound unto SBCWD in the penal sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, fail to pay for any materials, provisions or other supplies, 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 amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by SBCWD in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of

any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between SBCWD and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 9100 of the Civil Code, and has not been paid the full amount of his claim.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract. including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the \_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Corporate Seal of Principal,  
if corporation)

\_\_\_\_\_  
Principal (Property Name of Contractor)

By \_\_\_\_\_  
(Signature of Contractor)

(Seal of Surety)

\_\_\_\_\_  
Surety

By \_\_\_\_\_  
Attorney in Fact

Signatures of those signing for the Contractor and Surety must be notarized and evidence of corporate authority attached. A Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

## Notary Acknowledgment

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

STATE OF CALIFORNIA

COUNTY OF \_\_\_\_\_

On \_\_\_\_\_, 20\_\_\_\_, before me, \_\_\_\_\_, Notary Public, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory

evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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

WITNESS my hand and official seal.

Signature of Notary Public

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### CAPACITY CLAIMED BY SIGNER

#### DESCRIPTION OF ATTACHED DOCUMENT

- ☐ Individual  
☐ Corporate Officer

\_\_\_\_\_  
Title(s)

\_\_\_\_\_  
Title or Type of Document

- ☐ Partner(s)      ☐ Limited  
                         ☐ General

\_\_\_\_\_  
Number of Pages

- ☐ Attorney-In-Fact  
☐ Trustee(s)  
☐ Guardian/Conservator  
☐ Other:

\_\_\_\_\_  
Date of Document

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Signer(s) Other Than Named Above

### END OF PAYMENT (LABOR AND MATERIALS) BOND

## **AGREEMENT**

### **North County Groundwater Supply Project – Monitoring Well Installation**

This Agreement is made this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, between the San Benito County Water District ("SBCWD") and \_\_\_\_\_ ("Contractor") for performance of the following public work of improvement \_ North County Groundwater Supply Project – Monitoring Well Installation \_\_\_\_ (the "Project" or the "Work"), which shall be performed in accordance with all plans, specifications and other contract documents attached to or incorporated into this Agreement.

#### **SECTION 1 - SCOPE**

A. Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project in accordance with the Contract Documents, which is generally described as follows:

1. Drilling of a minimum 12-inch diameter borehole to a total depth of approximately 800 feet, as determined by the District's Representative.
  - a. Formation samples will be collected every five feet by the Contractor and logged by the District's Representative.
  - b. Contractor will be responsible for the collection of formation samples.
  - c. A suite of geophysical logs will be collected on the completed borehole once total depth has been reached.
  - d. Contractor will be responsible for collection of geophysical logs.
2. All drilling shall be by rotary drilling method or similar approved drilling methods in strict compliance with these specifications at the specified location.
3. Following the completion of drilling, the District's Representative will evaluate the suitability of the location to serve as a test well. Should the location appear favorable, a test well will be installed in the exploratory borehole. However, if the District's Representative determines that the aquifer is not sufficient, then a well will not be completed.
4. If no well is installed, the borehole will be destroyed in accordance with these specifications and state and local requirements.
5. Test well construction shall include the installation of 6-inch diameter PVC casing, 6-inch diameter continuous slot PVC well screens in discrete aquifer zones, artificial filter pack corresponding to the screen zones, bentonite seals between screen zones, and annular and surface sanitary seal. The test well will generally conform to the design described in detail in these specifications. However, all final test well design details will be based on analysis of data gathered during the drilling process and observations made by the District's Representative.

6. The sanitary seal at the well will be installed in accordance with the San Benito County Water District (District) requirements. The Contractor will coordinate with the District's Representative and a representative from the District to allow inspection of the installation of the seal.
7. Drilling fluids and cuttings can be disposed of onsite or on a property neighboring the work site, as directed by the District and/or District's Representative.
8. The completed test well will be developed with a combination of mechanical surging, air lifting, and overpumping.
9. The first flush of water produced during development will be contained for disposal or to allow fines to settle prior to discharge.
10. Water generated during development, including the first flush of sediment laden water, will be discharged overland on the property. The District will coordinate the agreement for discharging development water on the property and will determine the appropriate location(s) and methods.
11. The test well is estimated to require approximately 50 hours of development. However, one of the goals of development is to reduce the turbidity in the produced water to less than 10 nephelometric turbidity units (NTU). The ultimate duration of development will be determined by the District's Representative.
12. Zone specific testing of the completed test well will be undertaken following the completion of development. These tests will be conducted on each discrete screened interval and shall consist of:
  - a. For each screen interval, the Contractor shall install pumping equipment fitted with packers above and below the screen interval.
  - b. The packer assemblies should be capable of sealing the screen zone off from the rest of the well so that discrete water quality samples can be collected.
  - c. The pumping equipment should be capable of producing approximately 100 gallons per minute from each screen zone and should be equipped with a throttle or valve to reduce the rate to as low as 20 gpm.
  - d. A means of collecting water levels with manual sounding devices and transducers shall be installed in the well during each test.
  - e. The discharge manifold will include a totalizing flow meter and a sample port.
13. A combined test while pumping from the entire well will be completed following zone specific testing. This test shall consist of the following:
  - a. The pumping equipment should be capable of producing approximately 200 gallons per minute and should be equipped with a throttle or valve to reduce the rate to as low as 20 gpm.



- b. No packer assemblies shall be included in this test pumping equipment and the pump intake shall be placed in a blank section of the well identified by the District's Representative.
  - c. A means of collecting water levels with manual sounding devices and transducers shall be installed in the well.
  - d. The discharge manifold will include a totalizing flow meter, a sample port and a means of connecting sprinkler pipe for land disposal of produced water.
- 14. The intent is that all water generated during well performance testing and water quality sampling will be discharged to a contained collection pit or spread overland within the work area boundaries as designated under the District's permit.
  - 15. Surface completion for the test well will consist of a protective locking above ground standpipe and an expansion plug in the top of the casing.

Without limiting the foregoing description, Contractor's scope of work includes, but is not limited to, the following:

- Submit all required samples, product data, certificates, operations and maintenance instructions, guarantees, and other submittals no later than 15 days after the date SBCWD issues a Notice to Proceed and before the preconstruction meeting.
- Satisfy all requirements of Section 01-16 Submittals within the attached Technical Specifications.
- Submit a list of all permits and licenses the Contractor shall obtain indicating the agency granting the permit, the expected date to submit the application, and the required date for the receipt of the permit.
- Protect all materials to be used in the Work in accordance with the specifications.
- Protect existing facilities and personal property.
- Attend a preconstruction conference with SBCWD to discuss schedule, access, sequence of work, and other issues.
- Prepare and submit a written daily activity report to SBCWD for each day on which work is performed, including weekends and holidays when worked, and submit reports to SBCWD no later than the next business day. The daily reports shall, at a minimum, include the following information: construction activities, construction crew sizes of general and subcontractors, start or completion of activities, progress on construction activities (including units or portions of work completed), tests or inspections performed, deliveries of material or equipment, delays or potential delays, visitors to the site, weather conditions, construction equipment used, and personal injuries or damage to property.
- The Contractor shall be responsible for unloading, hoisting and otherwise handling its own materials, supplies and equipment.
- Coordinate with owner-scheduled events.
- The Contractor is responsible for researching and complying with all local codes, agencies and jurisdictions that regulate and govern the Work.
- Contractor shall set up, identify, coordinate, provide safe access, and obtain all inspections for its work, as required by any authorized agency or applicable code, prior to covering up work.

B. The following documents are incorporated into and made part of this Agreement by reference:

- Notice Inviting Bids
- Instructions to and Information for Bidders
- Bid Forms and Addenda
- Bid Payment and Performance Bonds
- Insurance Requirements (Attachment A)
- Special Conditions
- Project Drawings
- Technical Specifications
- Standard Specifications for Public Works Construction (the "Green Book"), excluding Sections 1 through 9, most recent version (the Standard Specifications)
- Change Orders issued in accordance with the Contract Documents

C. These documents shall be referred to collectively as the "Contract Documents." The Contract Documents are intended to be complementary, and a requirement in one document is as effective as if it appeared in all of the Contract Documents. In the event of a conflict between any of the Contract Documents, the documents shall be given effect in the following order: Change Orders (most recent first), Addenda (most recent first), Technical Specifications, Plans, Special Conditions, Agreement, Standard Specifications, Bid Forms, Instructions to and Information for Bidders, Notice Inviting Bids.

D. Contractor shall comply with all requirements of the Contract Documents. Where there is a conflict between the requirements of the several Contract Documents, the more stringent requirements shall govern.

## **SECTION 2 - PRICE**

A. SBCWD agrees to pay, and Contractor agrees to accept, the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) (the "Contract Price") subject to adjustments for changes in the work as may be directed in writing by SBCWD, as payment in full for the Work. Work to be done at unit prices will be paid based on actual quantities of work performed and accepted.

B. Contractor shall submit a payment application for the total work completed once each month and upon completion of the Project and satisfaction of all conditions of the Contract Documents. SBCWD shall make payment within thirty (30) days of receipt of a complete and undisputed application, less five percent retention. SBCWD shall release the retained funds (less any amounts in dispute, deducted for liquidated damages or as required by law, or other offsets) no less than thirty-five (35) days after the date SBCWD accepts the Work. Pursuant to Public Contract Code Section 22300, for monies earned by the Contractor and withheld by SBCWD to ensure the performance of the Contract, the Contractor may, at its option, choose to substitute securities meeting the requirements of Public Contract Code Section 22300.

If any of the Work is to be paid based on unit prices, Contractor shall submit a monthly itemized estimate of Work done for the purpose of making progress payments. Contractor shall submit, with each of its payment requests, an adjusted list of actual quantities, verified by SBCWD, for

unit price items listed, if any, in the Bid Form. Following SBCWD's acceptance of the Work, the Contractor shall submit to SBCWD a written statement of the final quantities of unit price items for inclusion in the final payment request. SBCWD shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any estimate for payment.

C. Contractor agrees to furnish, as a condition of payment, payroll affidavits, receipts, vouchers, certified payroll reports, and other documents, in form satisfactory to SBCWD, prior to receipt of any payment. Contractor shall submit Conditional and Unconditional waivers and release of lien upon (as provided in Civil Code Sections 8132, 8134, 8136 and 8138) on behalf of itself, subcontractors and suppliers that furnished labor, material, equipment or services to the Project.

### **SECTION 3 - ENTIRE AGREEMENT**

This Agreement represents the entire agreement between SBCWD and Contractor and supersedes any prior written or oral representations. No oral order, objection, direction, claim or notice by any party or person shall affect or modify any of the terms or obligations contained in the Contract Documents.

### **SECTION 4 - TIME**

A. Contractor shall complete the Project no later than **Ninety (90) calendar days** following SBCWD's issuance of the Notice to Proceed (the "Contract Time").

B. Time is of the essence of this Agreement.

C. Contractor shall provide SBCWD with scheduling information in a form acceptable to SBCWD, including any changes made by SBCWD in the scheduling of work. Contractor shall coordinate its work with that of all other contractors, subcontractors and suppliers so as not to delay or damage their performance.

D. If Contractor fails to complete the Project within the Contract Time, SBCWD will sustain damage. It is and will be impracticable to determine the actual damage which SBCWD will sustain in the event of and by reason of such delay, therefore Contractor will pay to SBCWD the sum set forth in the Special Conditions for each and every calendar day's delay beyond the time prescribed to complete the Work; Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, agrees that SBCWD may deduct the amount thereof from any monies due or that may become due the Contractor under the Contract.

E. It is further agreed that in case Contractor fails to complete the Project in all parts and requirements within the Contract Time, SBCWD shall have the right to extend the Contract Time or not, as may seem best to serve the interest of SBCWD; and if it decides to extend Contract Time, SBCWD shall further have the right to charge to the Contractor, his heirs, assigns or sureties, and to deduct from the final payment for the work, all or any part, as it may deem proper, of the actual cost of engineering, inspection, superintendence, and other overhead expenses directly chargeable to the Contract that accrue during the period of such extension.

F. The Contractor will not be assessed with liquidated damages or the cost of engineering and inspection during the delay in the completion of the Project caused solely by acts of God or of the public enemy, fire, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes; provided, that the

Contractor shall within three (3) days from the beginning of any such delay, notify the Engineer, in writing of the causes of delay. SBCWD shall ascertain the facts and the extent of delay, and his findings thereon shall be final and conclusive.

G. As an express condition of any adjustment of the Contract Time or Contract Price on account of delay, including delay caused by acts of SBCWD, Contractor must give SBCWD written notice of the commencement of delay within three (3) days of its occurrence.

## **SECTION 5 - LABOR**

A. The Contract is subject to California Labor Code Sections 1720 and following, and Contractor and any subcontractor shall pay not less than the specified prevailing rates of wage to all workers employed in performance of the Work. Pursuant to the provisions of Section 1770 of the California Labor Code, SBCWD has obtained the general prevailing rate of wages and employer payments for health and welfare, vacation, pension and similar purposes in SBCWD, as determined by the Director of the Department of Industrial Relations, a copy of which is on file in the office of SBCWD, and shall be made available for viewing to any interested party upon request. The Contractor and each subcontractor shall forfeit as a penalty to SBCWD not more than Two Hundred Dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the stipulated prevailing wage rate in violation of the Labor Code. In addition, the difference between the prevailing wage rate 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.

B. Contractor's attention is directed to the provisions in Section 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor under the Contractor. It shall be the responsibility of the Contractor to effectuate compliance on the part of itself and any subcontractors with the requirements for employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

C. Pursuant to Labor Code Section 1776, the Contractor and each subcontractor shall maintain weekly certified payroll records showing the name, address, social security number, work classification, straight time and overtime hours paid each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed in connection with the work. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury. In the event of noncompliance with the requirements of this Section, the Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying any item or actions necessary to achieve compliance with this section. If Contractor or subcontractor does not comply after such ten (10)-day period, the Contractor shall, as a penalty to SBCWD, forfeit One Hundred Dollars (\$100) for each day, or portion thereof, for each worker until strict compliance is effectuated.

D. In accordance with Labor Code section 1771.4, the Contractor and each subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on a weekly basis and in the format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement.

E. Contractor shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

F. Pursuant to the requirements of Division 4 of the Labor Code, the Contractor will be required to secure the payment of worker's compensation to its employees in accordance with the provisions of Section 3700 of the Labor Code. Prior to commencement of work, the Contractor shall sign and file with the Engineer a certification in the following form:

"I am 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 before commencing the performance of the work of this contract."

G. If the Contract Price is greater than \$25,000, Contractor shall, in advance of excavation five feet or more in depth, submit to SBCWD a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation. If such plan varies from the shoring system standards, the plan shall be prepared by a registered civil or structural engineer. The plan shall not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations, and all costs therefor shall be included in the Contract Price. Nothing in this section shall be deemed to allow the use of a shoring, bracing, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this section shall be construed to impose a tort liability on SBCWD, any of its officers, officials, partners, employees, agents, Contractors or volunteers. SBCWD's review of the Contractor's excavation plan is only for general conformance to the Construction Safety Orders. Prior to commencing any excavation, the Contractor shall designate in writing to SBCWD the "competent person(s)" with the authority and responsibilities designated in the Construction Safety Orders.

H. Full compensation for conforming to the requirements of this section shall be considered as included in the Contract Price, and no additional compensation will be allowed therefore.

## **SECTION 6 - CHANGES IN WORK**

A. Contractor shall make no changes in the Work without written direction from SBCWD. Contractor shall not be compensated for any change made without any SBCWD's written direction. No changes in the work covered by this Agreement shall exonerate any surety or any bond given in connection with this Agreement.

B. If SBCWD directs the Contractor in writing to make changes in the work that materially affect the cost of performing the work, the Contract Price will be adjusted based on one of the following:

1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities involved in the changed Work;
2. By a combination of existing and new unit prices and related quantities for the changed work;

3. Time and Materials, calculated as set forth in Section 6(C), below; or
4. By mutual acceptance of a lump sum.

C. The cost for extra or changed work performed on a Time and Materials basis shall be determined as follows:

1. Labor: Contractor will be paid cost of labor for workers used in actual and direct performance of extra work, including only :
  - (a) Actual Wages: Actual wages paid shall include any employer payments to or on behalf of workers for health and welfare, pension, vacation, and similar purposes.
  - (b) Labor Surcharge: Payments imposed by local, county, state, and federal laws and ordinances, and other payments made to, or on behalf of, workers, other than actual wages as defined above, such as taxes and insurance. Labor surcharge shall be and shall not exceed that set forth in California Department of Transportation official labor surcharges schedule which is in effect on date upon which extra or changed work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein.
2. Material: Only materials furnished by Contractor and necessarily used in performance of extra Work will be paid for. Cost of such materials will be cost, including sales tax and delivery charges, to purchaser (Contractor, Subcontractor or other forces) from supplier thereof, except as the following are applicable: (a) If cash or trade discount by actual supplier is offered or available to purchaser, it shall be credited to SBCWD notwithstanding fact that such discount may not have been taken. (b) For materials salvaged upon completion of extra Work, salvage value of materials shall be deducted from cost, less discounts, of materials. (c) If SBCWD determines that cost of a material is excessive, then cost of material shall be deemed to be lowest reasonably available wholesale price at which material is available in quantities concerned delivered to Site, less any discounts described in (a), above.
3. Equipment: For Contractor-owned equipment, payment will be made at rental rates listed for equipment in California Department of Transportation official equipment rental rate schedule which is in effect on date upon which extra Work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein. If there is no applicable rate for an item of equipment, then payment shall be made for Contractor- or Subcontractor-owned equipment at rental rate listed in the most recent edition of the Association of Equipment Distributors (AED) book.
  - (a) For rented equipment, payment will be made based on actual rental invoices. Equipment used on extra Work shall be of proper size and type.
  - (b) Cost of equipment shall be calculated at rental rate for equipment of proper size and type, as determined by SBCWD. Rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools,

necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Unless otherwise specified, manufacturer's ratings, and manufacturer-approved modifications, shall be used to classify equipment for determination of applicable rental rates. Rental time will not be allowed while equipment is inoperative due to breakdowns.

- (c) Individual pieces of equipment or tools having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools.

4. Work Performed by Special Forces or Other Special Services: When SBCWD and Contractor, by agreement, determine that special service or item of extra Work cannot be performed by forces of Contractor or those of any Subcontractors, service or extra Work item may be performed by specialist. Invoices for service or item of extra Work on basis of current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with established practice of special service industry to provide complete itemization. In those instances wherein Contractor is required to perform extra Work necessitating a fabrication or machining process in a fabrication or machine shop facility away from Site, charges for that portion of extra Work performed in such facility may, by agreement, be accepted as a specialist billing. In lieu of overhead and profit provided in paragraph 5(a), below, fifteen percent (15%) will be added to specialist invoice price, after deduction of any cash or trade discount offered or available, whether or not such discount may have been taken.

5. Overhead Defined:

- (a) The following constitutes charges that are deemed included in overhead for all Contract Modifications, including work performed on a Time and Materials basis. Contractor shall not invoice or receive payment for these costs separately: Drawings: field drawings, Shop Drawings, etc., including submissions of drawings; Routine field inspection; General Superintendence; General administration and preparation of cost proposals, schedule analysis, Change Orders, and other supporting documentation; Computer services; Reproduction services; Salaries of project engineer, superintendent, timekeeper, storekeeper, and secretaries; Janitorial services; Small tools, incidentals and consumables; Temporary on-Site facilities (Offices, Telephones, Plumbing, Electrical Power, lighting; Platforms, Fencing, Water, Home office expenses; vehicles and fuel used for work otherwise included in the Contract Documents; Surveying; Estimating; Protection of Work; Handling and disposal fees; Final cleanup; Other incidental Work; Related warranties.

6. Overhead and Profit for Time and Materials:

For work Contractor performs on Time and Materials at SBCWD's direction, the following markups will be added to the cost of labor, materials and equipment, calculated as described above.

- (a) Overhead and profit on labor shall be fifteen percent (15%).
- (b) Overhead and profit on materials shall be fifteen percent (15%).
- (c) Overhead and profit on equipment rental shall be ten percent (10%).
- (d) When work is performed by a first tier Subcontractor, Contractor shall receive a five percent (5%) markup on Subcontractor's total costs of extra work. First tier Subcontractor's markup on its Work shall not exceed fifteen percent (15%).
- (e) When extra Work is performed by a lower tier Subcontractor, Contractor shall receive a total of five percent (5%) markup on the lower tier Subcontractor's total costs of extra work. Contractor and first tier Subcontractors and lower tier Subcontractors shall divide the fifteen percent (15%) markup as mutually agreed.
- (f) Notwithstanding the foregoing, in no case shall the total markup on any extra work exceed twenty percent (20%) of the direct cost, notwithstanding the actual number of Contract tiers.
- (g) On proposals covering both increases and decreases in Contract Price, overhead and profit shall be allowed on the net increase only as determined in this paragraph. When the net difference is a deletion, no percentage for overhead or profit will be allowed, but rather a deduction shall apply.
- (h) The markup shall include profit, small tools, cleanup, supervision, warranties, cost of preparing the cost proposal, jobsite overhead, and home office overhead. No markup will be allowed on taxes, insurance, and bonds.

D. If SBCWD directs the Contractor in writing to make changes in the Work that materially affect the time required to perform the Work, SBCWD will make a reasonable adjustment to the Contract Time.

## **SECTION 7 - CLAIMS AND DISPUTES**

A. If any dispute shall arise between SBCWD and Contractor regarding performance of the work, or any alleged change in the work, Contractor shall timely perform the disputed work and shall give written notice of a claim for additional compensation for the work to SBCWD within three (3) days after commencement of the disputed work. Contractor's failure to give written notice within the three (3)-day period constitutes an agreement by Contractor that it will receive no extra compensation for the disputed work.

B. If a claim cannot be resolved through direct discussions between SBCWD and Contractor, disputes for \$375,000 or less shall be handled in accordance with Public Contract Code Sections 20104 et seq. SBCWD shall respond in writing within 60 Days of receipt, or, may request in writing within 30 Days of receipt of the claim, any additional documents supporting the claim or relating to defenses or claims SBCWD may have against the claimant. If additional information is needed thereafter, it shall be provided upon request. SBCWD's response shall be submitted within 30 Days after receipt of the further documents, or within the same period of time taken by



the claimant to produce the additional information or documents, whichever is greater. The Contractor shall make these records and documents available at all reasonable times, without any direct charge.

C. If a claim is more than \$375,000, the parties agree to participate in mediation with a mutually agreeable mediator following an exchange of documents reasonably necessary for resolution of the issues in dispute.

D. If the claimant disputes SBCWD's response, or if SBCWD fails to respond within the statutory time period(s), the claimant may so notify SBCWD within 15 Days of the receipt of the response or the failure to respond, and demand an informal conference to meet and confer for settlement. Upon such demand, SBCWD shall schedule a meet and confer conference within 30 Days.

E. If following the meet and confer conference, the claim or any portion thereof remains in dispute, the claimant may file a claim pursuant to Government Code sections 900 et seq. and Government Code sections 910 et seq. For purposes of those provisions, the time within which a claim must be filed shall be tolled from the time the claimant submits the written claim until the time the claim is denied, including any time utilized for the meet and confer conference.

F. Submission of a claim, properly certified, with all required supporting documentation, and written rejection or denial of all or part of the claim by SBCWD, is a condition precedent to any action, proceeding, litigation, suit, or demand for arbitration by Contractor.

G. Venue for any litigation arising out of or relating to this Agreement shall be San Benito County, California.

H. Pursuant to Public Contract Code Section 9201, SBCWD shall provide Contractor with timely notification of the receipt of any third-party claim relating to the Contract.

## **SECTION 8 - INSPECTION AND PROTECTION OF WORK**

A. Responsibility for, and security of, all work and materials is the responsibility of the Contractor until final acceptance of the Project by SBCWD.

B. Contractor shall make the work accessible at all reasonable times for inspection by SBCWD. Contractor shall, at the first opportunity, inspect all material and equipment delivered to the jobsite by others to be used or incorporated in the Contractor's work and give prompt notice of any defect therein. Contractor assumes full responsibility to protect the work done hereunder until final acceptance by SBCWD.

C. When the Work is completed, Contractor shall request, in writing, a final inspection. Within ten (10) days of the receipt of such request, SBCWD shall make a final inspection. The Contractor or its representatives may be present at the final inspection. The purpose of such final inspection shall be to determine whether the Work has been completed in accordance with the Contract Documents, including all change orders and all interpretations and instructions previously issued.

D. SBCWD may reject materials or Work that does not meet the requirements of the Contract Documents. If SBCWD does so, Contractor shall promptly remove the rejected materials or work and replace it with materials or work that meet the requirements of the Contract Documents, at no additional cost to SBCWD.

## **SECTION 9 - ASSIGNMENT AND SUBCONTRACTING**

- A. Contractor shall give personal attention to the performance of the Contract and shall keep the Work under its control.
- B. No subcontractors will be recognized as such, and all persons engaged in the work of construction will be considered as employees of the Contractor, who will be held responsible for their work which shall be subject to the provisions of the Contract and specifications.
- C. No subcontractor who is ineligible to bid work on, or be awarded, a public works project under Labor Code Sections 1771.1 or 1777.7 can bid on, be awarded or perform work as a subcontractor on the Project. The Contractor is prohibited from performing work on the Project with a subcontractor who is ineligible to perform work on a public works project under these sections of the Labor Code.
- D. When a portion of the work which has been subcontracted by the Contractor is not being prosecuted in a manner satisfactory to SBCWD, the subcontractor shall be removed immediately on the requisition of SBCWD in the manner required by law and shall not again be employed on the work.
- E. Contractor may not assign any portion of the Contract except upon written consent of SBCWD.

## **SECTION 10 - TERMINATION**

- A. Should Contractor fail within seven (7) calendar days from receipt of SBCWD's written notice to correct any default, including but not limited to failure perform the Work in accordance with the Contract Documents, failure to comply with the directions of SBCWD, or failure pay its creditors, SBCWD may terminate this Agreement and/or, in its sole discretion, make a demand on Contractor's performance bond surety. Following a termination for default, SBCWD shall have the right to take whatever steps it deems necessary to complete the Project and correct Contractor's deficiencies and charge the cost thereof to Contractor, who shall be liable for the full cost of SBCWD's corrective action, including reasonable overhead, profit and attorneys' fees.
- B. SBCWD may at any time terminate the Contract at SBCWD's convenience upon five (5) days written notice to Contractor; in the event of termination for convenience, Contractor shall recover only the actual cost of work completed to the date of termination, which costs are documented to SBCWD's satisfaction, calculated in accordance with Section 6, above. Contractor shall not be entitled to any claim or lien against SBCWD for any additional compensation or damages in the event of such termination.
- C. If SBCWD terminates Contractor for cause, and if it is later determined that the termination was wrongful, such default termination shall automatically be converted to and treated as a termination for convenience. In such event, Contractor shall be entitled to receive only the amounts payable under this section, and Contractor specifically waives any claim for any other amounts or damages, including, but not limited to, any claim for consequential damages or lost profits.

## **SECTION 11 - HOLD HARMLESS AND INDEMNIFICATION**

A. SBCWD and all officers and employees thereof connected with the Work, shall not be answerable or accountable in any manner: for any loss or damage that may happen to the Work or any part thereof; for any loss or damage to any of the materials or other things used or employed in performing the Work; for injury to or death of any person; or for damage to property from any cause except losses due to sole or active negligence of SBCWD's officers or employees.

B. Contractor shall indemnify, defend with legal counsel approved by SBCWD, and hold harmless SBCWD, its officers, officials, employees and volunteers from and against all liability, loss, damage, expense, cost (including without limitation reasonable legal counsel fees, expert fees and all other costs and fees of litigation) of every nature arising out of or related to the Work or the Project, except such loss or damage which is caused by the sole or active negligence or willful misconduct of SBCWD. Should conflict of interest principles preclude a single attorney from representing both SBCWD and Contractor, or should SBCWD otherwise find Contractor's legal counsel unacceptable, then Contractor shall reimburse SBCWD its costs of defense, including without limitation reasonable attorney's fees, expert fees and all other cost and fees of litigation. The Contractor shall promptly pay any final judgment rendered against SBCWD (and its officers, officials, employees and volunteers) except for claims determined by a trier of fact to have been the result of SBCWD's sole or active negligence or willful misconduct. The foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this Agreement.

C. Contractor's obligations under this section apply regardless of whether or not such claim, charge, damage, demand, action, proceeding, loss, stop notice, cost, expense, judgment, civil fine or penalty, or liability was caused in part or contributed to by an Indemnitee. However, without affecting the rights of SBCWD under any provision of this agreement, Contractor shall not be required to indemnify and hold harmless SBCWD for liability attributable to the active negligence of SBCWD, provided such active negligence is determined by agreement between the parties or by the findings of a court of competent jurisdiction. In instances where SBCWD is shown to have been actively negligent and where SBCWD's active negligence accounts for only a percentage of the liability involved, the obligation of Contractor will be for that entire portion or percentage of liability not attributable to the active negligence of SBCWD.

D. In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the contract as shall be considered necessary by SBCWD, may be retained by SBCWD until disposition has been made of such suits or claims for damage.

## **SECTION 12 - BONDS AND INSURANCE**

### **A. Bonds**

1. Within ten (10) days after being notified of the award of the contract, and before SBCWD will execute the agreement for construction, the Contractor to whom the Contract is awarded shall furnish and file with SBCWD Performance and Payment Surety bonds as set forth below.
2. Contractor shall submit the bonds on the forms provided with the Contract Documents, duly executed by a responsible corporate surety listed in the United States Department of the Treasury circular entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as

Acceptable Reinsuring Companies," authorized to do business in the State of California and acceptable to SBCWD conditioned upon the faithful performance by the Contractor of all requirements of the Contract Documents. Each of the bonds shall be in a sum no less than one hundred percent (100%) of the Contract Price.

**B. Insurance**

1. Contractor shall obtain, at its sole cost and expense, all insurance required by Attachment A to this Agreement. Certificates of such insurance and copies of the insurance policies and endorsements shall be delivered to SBCWD within ten (10) days after being notified of the award of the contract, and before execution of the agreement for construction by SBCWD.

**SECTION 13 - WARRANTY**

Contractor warrants to SBCWD that all materials and equipment furnished shall be new, free from faults and defects and of good quality and conform to the requirements of the Contract Documents.

Contractor hereby warrants its work against all deficiencies and defects for the period required by the Contract Documents or the longest period permitted by California law, whichever is greater. Unless otherwise stated in the Contract Documents, warranty periods shall begin upon the filing of the Notice of Completion and shall be for one year.

This Article shall not limit SBCWD's rights under this Contract or with respect to latent defects, gross mistakes, or fraud. SBCWD specifically reserves all rights related to defective work, including but not limited to defect claims pursuant to California Code of Civil Procedure Section 337.15.

**SECTION 14 - LAWS TO BE OBSERVED**

A. Contractor shall keep itself fully informed of all existing and future state and federal laws and county and municipal ordinances and regulations that in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

B. Contractor shall at all times observe and comply with, and shall cause all of its agents and employees to observe and comply with all such existing and future Federal, State and local laws, ordinances, regulations, orders, and decrees of bodies or tribunals having any jurisdiction or authority over the Project; and shall protect and indemnify SBCWD, and all officers and employees thereof connected with the Project, against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by SBCWD's representative or their employees. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications, or contract for the work in relation to any such law, ordinance, regulation, order or decree, Contractor shall promptly report the same to SBCWD in writing.

C. This Contract shall be governed by and construed in accordance with the laws of the State of California.

## **SECTION 15 - MISCELLANEOUS**

### **A. Existing Utilities**

The location of known existing utilities and pipelines are shown on the Plans in their approximate locations. However, nothing herein shall be deemed to require SBCWD to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the project can be inferred from the presence of other visible facilities, such as buildings, cleanouts, meter and junction boxes, on or adjacent to the site of the Project. Underground facilities not known to SBCWD may exist, or be in a location different from that which is shown in the Contract Documents.

Contractor shall take all steps reasonably necessary to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service, including but not limited to calling Underground Service Alert to locate utilities in accordance with the procedures described in Government Code 4215 et seq. Contractor shall protect from damage any utility facilities that are to remain in place, be installed, relocated or otherwise rearranged.

If the Contractor is required to locate, repair damage not due to the Contractor's failure to exercise reasonable care, and remove or relocate existing main or trunk line utility facilities, it shall be compensated under Section 6 of this Contract – Changes in the Work – including payment for equipment on the Project necessarily idled during such work.

The right is reserved by SBCWD and the owners of underground facilities or their authorized agents, to enter the job for the purpose of making such changes as are necessary for the rearrangement of their facilities or for making necessary connection or repairs to their properties. The Contractor shall cooperate with forces engaged in such work and shall conduct his operations in such a manner as to avoid any delay or hindrance to the work being performed by such other forces.

SBCWD will assume the responsibility for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Project site if such utilities are not identified by SBCWD in the Contract Documents or which can reasonably be inferred from the presence of other visible facilities.

### **B. Utility Location**

It shall be the Contractor's responsibility to determine the exact location and depth of all utilities, including service connections, which have been marked by the respective utility owners and which the Contractor believes may affect or be affected by the Contractor's operations. The Contractor shall not be entitled to additional compensation nor time extensions for work necessary to avoid interferences nor for repair to damaged utilities if the Contractor does not expose all such existing utilities as required by this section.

The locating of utilities shall be in conformance with Government Code Section 4216 except for SBCWD's utilities located on SBCWD's property and not on public right-of-way.

After the utility survey is complete, the Contractor shall commence "potholing" or hand digging to determine the actual location of the pipe, duct, or conduit. Contractor shall notify SBCWD before starting potholing operations.

The Contractor's attention is directed to the requirements of Government Code Section 4216.2 (a)(2) which provides: "When the excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation prior to the legal excavation start date and time, as such date and time are authorized pursuant to paragraph (1) of subdivision (a) of 4216.2. The excavator and the operator or its representative shall conduct an onsite meeting at a mutually-agreed-on time to determine actions or activities required to verify the location of the high priority subsurface installation prior to start time." The Contractor shall notify SBCWD in advance of this meeting.

C. Differing Site Conditions

1. The Contractor shall promptly, and before the following conditions are disturbed, notify SBCWD in writing of any:
  - (a) 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.
  - (b) Subsurface or latent physical conditions at the site differing materially from those indicated by information about the site made available to bidders before the deadline for submitting bids, or
  - (c) Unknown physical conditions at the site of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.
2. Contractor shall give Notice in accordance with the Change Order provisions above.
3. SBCWD shall promptly investigate the conditions, and if it finds that such conditions do materially so differ, or do involve hazardous waste, and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work, it shall issue a change order under the provisions described in the Contract Documents.
4. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in the Contract Documents.
5. In the event a dispute arises between SBCWD and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, Contractor shall not be excused from completing the Work as provided in the Contract Documents. The Contractor shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by this Contract or by law, which pertain to the resolution of disputes and protests.

D. Records and Audits

1. Contractor and its subcontractors shall establish and maintain records pertaining to this contract. Contractor's and subcontractors' accounting systems shall conform to generally accepted accounting principles and all records shall provide a breakdown of all costs charged under this contract, including properly executed payrolls, time records, invoices and vouchers.
2. Contractor shall permit SBCWD and its authorized representatives to inspect, examine and make copies of Contractor's books, records, accounts, and any and all data relevant to this Contract at any reasonable time for the purpose of auditing and verifying statements, invoices, or bills submitted by Contractor pursuant to this contract and shall provide such assistance as may be reasonably required in the course of such inspection. SBCWD further reserves the right to examine and re-examine said books, records, accounts, and data during the three (3)-year period following the termination of this Contract; and Contractor shall in no event dispose of, destroy, alter, or mutilate said books, records, accounts, and data in any manner whatever for three (3) years after the termination of this Contract.
3. Pursuant to California Government Code Section 8546.7, the parties to this Contract shall be subject to the examination and audit of representative of the Auditor General of the State of California for a period of three (3) years after final payment under the contract. The examination and audit shall be confined to those matters connected with the performance of this contract including, but not limited to, the cost of administering the contract.

E. Clayton Act and Cartwright Act

Section 7103.5 of the Public Contract Code specifies that in entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 commencing with Sec. 16700) of Part 2 of Division 7 of the Business Profession Code, arising from purchase of goods, services or materials pursuant to the contract or subcontract. Pursuant to Public Contract Code Section 7103.5 the Contractor and all of its Subcontractors hereby offer and agree to assign to SBCWD all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 commencing with Sec. 16700) of Part 2 of Division 7 of the Business Profession Code, arising from purchase of goods, services or materials pursuant to this Agreement. This assignment shall become effective when SBCWD tenders final payment to the Contractor without further acknowledgement by the parties.

F. Site Superintendent

The Contractor shall provide competent supervision and staffing of the Work as approved by SBCWD. The Contractor or designated representative shall be present at the site at all times while work is actually in progress. Superintendent must be able to proficiently speak, read and write in English.

G. Character of Workers

If any or person employed by the Contractor or any Subcontractor shall appear to SBCWD to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the request of SBCWD, and such person shall not again be employed on the Work.

H. Notices

All notices permitted or required under this Agreement shall be given at the following address, or at such other address as the parties may provide in writing for this purpose:

**San Benito County Water District:**

**CONTRACTOR:**

Email: garrett@sbcwd.com

Email: \_\_\_\_\_

Attn: Garrett Haertel

Attn: \_\_\_\_\_

The parties may designate, in writing, other individuals to whom notice is to be given. Notices shall be deemed to be received upon personal delivery to the addresses above; if sent by email, upon delivery; if sent by overnight delivery, upon delivery as shown by delivery service records; if sent by facsimile, upon receipt as confirmed by the sending facsimile equipment; if by United States Postal Service, five days after deposit in the mail.

**SECTION 16 - WAIVERS OF LIEN**

Upon request the Contractor shall submit a complete list of major suppliers and/or subcontractors who will be providing material and/or labor for the performance of the Work, and shall submit with each payment request waivers of lien from each major supplier and/or subcontractor. Sample forms to be used will be furnished by SBCWD.

**SECTION 17 - CLEAN-UP**

Contractor will remove from the project site all debris resulting from performance of the Work no less often than daily. If Contractor fails to do so, SBCWD may, after twenty-four (24) hours' notice to Contractor, clean up the site and deduct the cost from the Contract Price.

**SECTION 18 - LICENSE REQUIREMENT**

Contractor's attention is directed to Business and Professions Code Sections 7000 et seq. concerning the licensing of contractors. At the time Contractor enters into this Contract and all times Contractor is performing the Work, Contractor shall have a valid license issued by the Contractors State License Board in the classification stated in the Special Conditions. All bidders and subcontractors shall be licensed in accordance with the laws of this State and any contractor or subcontractor not so licensed is subject to penalties imposed by such laws.

Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be



referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

## SECTION 19 - COMPLIANCE WITH STATE STORM WATER PERMIT

Contractor shall be required to comply with all aspects of the State Water Resources Control Board (State Water Board) Water Quality Order No. 2009-0009-DWQ, including any and all subsequent amendments. National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction Activity (Permit) for all projects that involve construction on or disturbance of one acre or more of land or which are part of a larger common area of development.

**SAN BENITO COUNTY WATER DISTRICT:**

**CONTRACTOR:**

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

By: \_\_\_\_\_  
(Authorized Representative of Contractor)

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

Printed Name: \_\_\_\_\_

**ATTEST:**

Title: \_\_\_\_\_  
(Attach Notary Acknowledgment for  
Authorized Representative of Contractor)

\_\_\_\_\_  
Board Secretary

License No. \_\_\_\_\_

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

(Contractor Signature must be Notarized)

## **SPECIAL CONDITIONS**

### **1.1 LIQUIDATED DAMAGES**

- A. As provided in the Notice Inviting Bids, Contractor shall pay to SBCWD the sum of \$1,000 for each and every calendar day's delay in completion of the Work beyond expiration of the Contract Time.

### **1.2 LICENSE CLASSIFICATION**

- A. In accordance with Section 3300 of the Public Contract Code, SBCWD has determined that the Contractor shall have a **Class C-57 Well Drilling Contractor License** at the time it enters into the Contract and at all times it is performing the Work.

### **1.3 ASSIGNED CONTRACTOR PERSONNEL**

- A. Contractor and subcontractor employees who will perform on this project may be subject to a background investigation.

### **1.4 COOPERATION AND CARE**

- A. Should construction be under way by SBCWD, other agencies or other contractors within or adjacent to the limits of the work specified or should work of any other nature be under way by other forces within or adjacent to said limits, the Contractor shall cooperate with all such other contractors or other forces to the end that any delay or hindrance to their work will be avoided. SBCWD reserves the right to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces.
- B. Until the final acceptance of the contract, the Contractor shall have the charge and care of the Work and of the materials to be used therein, including materials for which partial payment has been received. SBCWD shall not be held responsible for the care or protection of any material or parts of the Work prior to final acceptance, except as expressly provided in the Special Conditions.
- C. The contractor shall verify all elevations and dimensions shown on the construction drawings within SBCWD right-of-way prior to starting Work. The contractor shall notify the owner's representative of any discrepancy in the construction drawings or site conditions so that proper clarifications can be made before construction begins.

### **1.5 PROGRESS OF THE WORK**

- A. Hours of work - Overtime and holidays. The Contractor shall perform all work during the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday unless otherwise authorized by SBCWD in writing. If the Contractor wishes to work during any other hours or on weekends, written permission must be received from SBCWD. The request must be received at least two (2) working days in advance of any work. No work will be allowed on SBCWD Holidays except in the case of an emergency. A listing of SBCWD holidays is on file in the office of SBCWD. If Contractor requests overtime work in which SBCWD will incur costs, Contractor shall be responsible for

payment of SBCWD's costs incurred in connection with the overtime work. SBCWD will invoice the Contractor at time and one half to cover the costs incurred. If Contractor does not pay the invoice within ten (10) days, SBCWD may deduct the amount billed from other payments due or to become due to Contractor under the Contract.

- B. SBCWD shall have the authority to suspend the Work wholly or in part, for such a period as it may deem necessary.
- C. Inspection. All Work shall be inspected by SBCWD. The charges for inspection shall be in accordance with SBCWD's regulations. If SBCWD is unable to provide an inspector or inspectors, Contractor shall reschedule the Work for another time at no cost to SBCWD. Work performed without inspection shall be rejected.

#### 1.6 LIMITS OF WORK

- A. The "limits of work" are shown on the plans. The Contractor shall make its own arrangements, and pay all expenses for additional area required outside of the limits of work unless provided in the Special Conditions.

#### 1.7 TEMPORARY FIELD OFFICE

NOT USED.

#### 1.8 FUGITIVE DUST

- A. In addition to all other environmental and air quality requirements of the Contract Documents, Contractor must also comply with Monterey Bay Air Resources District's Fugitive Dust regulations, to reduce the amount of particulate matter entrained in the ambient air as a result of the Project.
- B. SBCWD has considered these other contractors when determining the Contract Times and no additional time or compensation will be added to the Contract due to these requirements.

### **END OF SPECIAL CONDITIONS**

**ATTACHMENT A**  
**INSURANCE REQUIREMENTS FOR MINOR PUBLIC WORKS PROJECTS**

1. Time for Compliance. Contractor shall not commence Work under this Agreement until it has provided evidence satisfactory to SBCWD that it has secured all insurance required under this Section. Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein. Contractor shall not allow any subcontractor to commence work on any subcontract until it has provided evidence SBCWD that the subcontractor has secured all insurance required under this Section.
2. Minimum Requirements. Contractor shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Contractor, its agents, representatives, employees or subcontractors. Contractor shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement and shall verify subcontractors' compliance. Contractor's and subcontractor's insurance shall meet at least the following minimum levels of coverage:

(A) Minimum Scope of Insurance. Coverage shall be at least as broad as the latest version of the following: (1) *General Liability*: Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001); (2) *Automobile Liability*: Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto) or if Contractor has no owned autos, Code 8 (hired) and 9 (non-owned); and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance, with statutory limits. The policy shall not contain any exclusion contrary to the Agreement, including but not limited to endorsements or provisions limiting coverage for (1) contractual liability or (2) cross liability for claims or suits by one insured against another.

(B) Minimum Limits of Insurance. Contractor shall maintain limits no less than: (1) *General Liability*: \$2 Million per occurrence, \$4 Million aggregate for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit is used including, but not limited to, form CG 2503, either the general aggregate limit shall apply separately to this Agreement/location or the general aggregate limit shall be twice the required occurrence limit; (2) *Automobile Liability*: \$1 million per accident for bodily injury and property damage; and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation: statutory limits. Employer's Liability limits of \$1 million per accident for bodily injury or disease. Defense costs shall be paid in addition to the limits. Notwithstanding the minimum limits set forth above, any available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as additional insureds.

(C) Notices; Cancellation or Reduction of Coverage. At least fifteen (15) days prior to the expiration of any such policy, evidence showing that such insurance coverage has been renewed or extended shall be filed with SBCWD. If such coverage is cancelled or materially reduced, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with SBCWD evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, SBCWD has the right but not the duty to obtain the insurance it deems

necessary and any premium paid by SBCWD will be promptly reimbursed by Contractor or SBCWD may withhold amounts sufficient to pay premium from Contractor payments. In the alternative, SBCWD may suspend or terminate this Agreement.

3. Insurance Endorsements. The insurance policies shall contain the following provisions, or Contractor shall provide endorsements on forms approved by SBCWD, to add the following provisions to the insurance policies:

(A) General Liability. The general liability policy shall include or be endorsed (amended) to state that: (1) using ISO CG forms 20 10 and 20 37 (including completed operations), or endorsements providing the exact same coverage, SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions shall be covered as additional insureds with respect to the Work or ongoing and completed operations performed by or on behalf of the Contractor, including materials, parts or equipment furnished in connection with such work; and (2) using ISO form 20 01, or endorsements providing the exact same coverage, the insurance coverage shall be primary insurance as respects SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any excess insurance shall contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of SBCWD, before SBCWD's own primary insurance or self-insurance shall be called upon to protect it as a named insured. Any insurance or self-insurance maintained by SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions shall be excess of the Contractor's insurance and shall not be called upon to contribute with it in any way.

(B) Automobile Liability. The automobile liability policy shall include or be endorsed (amended) to state that: (1) SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Contractor or for which the Contractor is responsible; and (2) the insurance coverage shall be primary insurance as respects SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions shall be excess of the Contractor's insurance and shall not be called upon to contribute with it in any way. Notwithstanding the minimum limits set forth above, any available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as additional insureds.

(C) Workers' Compensation and Employer's Liability Coverage. The insurer shall agree, using form WC 00 03 13 or the exact equivalent to waive all rights of subrogation against SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions for losses paid under the terms of the insurance policy.

(D) All Coverages. Each insurance policy required by this Agreement shall be endorsed to include the following provisions:

- (i) coverage shall not be suspended, voided, reduced or canceled except after thirty (30) days (10 days for nonpayment of premium) prior written notice by certified mail, return receipt requested, has been given to SBCWD and all additional insureds,
- (ii) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to SBCWD and any other additional insureds,
- (iii) standard separation of insureds provisions,
- (iv) no special limitations on the scope of protection afforded to SBCWD, and all additional insureds,
- (v) waiver of any right of subrogation of the insurer against SBCWD, its officials, officers, employees, agents, and volunteers, or any other additional insureds, or shall specifically allow Contractor or others required to provide insurance in compliance with these specifications to waive their right of recovery prior to a loss. By signing this agreement, Contractor hereby waives its own right of recovery against SBCWD or any other additional insureds, and shall require similar written express waivers and insurance clauses from each of its subcontractors.

4. Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by SBCWD. Contractor shall guarantee that, at the option of SBCWD, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects SBCWD, its directors, officials, officers, employees, agents, and volunteers and any other Additional Insured named in the Special Conditions; or (2) the Contractor shall procure a bond guaranteeing payment of losses and related investigation costs, claims, and administrative and defense expenses.
5. Claims Made Policies. Claims made policies are not acceptable.
6. Subcontractor Insurance Requirements. Contractor shall not allow any subcontractors to commence work on any subcontract relating to the work under the Agreement until Contractor has verified that the subcontractor has provided evidence to SBCWD that they have secured all insurance required under this Section. If requested by Contractor, SBCWD may approve different scopes or minimum limits of insurance for particular subcontractors. The Contractor and SBCWD shall be named as additional insureds on all subcontractors' policies of Commercial General Liability Insurance.
7. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A:VII, licensed to do business in California, and satisfactory to SBCWD.
8. Verification of Coverage. Contractor shall furnish SBCWD with original certificates of insurance and endorsements effecting coverage required by this Agreement on forms satisfactory to SBCWD. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates

and endorsements must be received and approved by SBCWD before work commences. SBCWD reserves the right to require complete, certified copies of all required insurance policies, at any time.

9. Reservation of Rights. SBCWD reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

## **END OF INSURANCE REQUIREMENTS**

## **TECHNICAL SPECIFICATIONS**

### **North County Groundwater Supply Project – Monitoring Well Installation**



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## **TECHNICAL SPECIFICATIONS**

### **SAN BENITO NORTH COUNTY HOLLISTER TEST WELL INSTALLATION AND TESTING**

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**PREPARED FOR:  
SAN BENITO COUNTY WATER  
DISTRICT**

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**July 2020**



2490 Mariner Square Loop, Suite 215  
Alameda, CA 94501  
510.747.6920  
[www.toddgroundwater.com](http://www.toddgroundwater.com)

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### San Benito North County Hollister Test Well

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## SECTION 01 – DESCRIPTION OF WORK

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The work described in these Technical Specifications is to be performed on behalf of San Benito County Water District, hereafter known as the District. The work will be performed under the supervision of Todd Groundwater, hereafter known as the District's Representative.

The City of Hollister has needed additional well capacity in the northern part of Hollister since municipal Well 3 was taken out of service in 2010 due to pump malfunction and possible casing collapse. A test well was drilled near Well 3 in 2013, but the water quality was too poor to complete it as a production well. Since then, the District, the City of Hollister (City), and Sunnyslope County Water District (SSCWD) have collaborated on regional water supply issues. This process resulted in the "North County Project", and Phase I of this project includes construction of a new well to serve the northern part of Hollister.

The first task of this project involved water quality canvassing in 16 wells north of the City to assess local groundwater conditions. Many of these wells have been sampled in the past, but previous sampling was several decades ago and recent water quality data for the area was sparse. Water quality samples were collected in the fall of 2019 and spring of 2020 and analyzed for local constituents of concern, including total dissolved solids (TDS), nitrate, sodium, iron, manganese, arsenic, and total hardness. The results of this sampling showed that the best overall water quality among the canvassed wells was from Well DD-1. This well had a TDS value of 490 milligrams per liter (mg/L), a total hardness value of 190 mg/L, and a nitrate as nitrogen concentration of 0.33 mg/L, all within acceptable State limits for drinking water. Other constituents, such as sodium, iron, manganese, and arsenic were shown to be problematic in the eastern portion of the water quality canvassing area but were not an issue in Well DD-1.

A parcel of land near Well DD-1 was located that allows for physical and legal access and is suitable for test well drilling.

This document presents the Technical Specifications for drilling, construction, and testing of the North County Hollister Test Well. The work shall be performed on behalf of the District (San Benito County Water District). The work shall be performed under the supervision of Todd Groundwater (District's Representative). The work to be conducted by the Contractor consists of furnishing all materials, equipment, supplies, transportation, and labor, performing all operations, and conducting all work necessary to drill an exploratory borehole, install a test well in the completed exploratory borehole, and conduct zone specific discrete water quality testing on the completed well.

The project will include the drilling, well construction, development, and water quality testing for one new test well. If during drilling the selected site is obviously not favorable for the production of water for potable supply, no test well will be installed and the borehole will be destroyed. If the test well is completed and water quality is found to be unacceptable as a location for a production well, the test well will be maintained and incorporated as a dedicated monitoring well for the District. The work will include the following:

1. Drilling of a minimum 12-inch diameter borehole to a total depth of approximately 800 feet, as determined by the District's Representative.
  - a. Formation samples will be collected every five feet by the Contractor and logged by the District's Representative.
  - b. Contractor will be responsible for the collection of formation samples.
  - c. A suite of geophysical logs will be collected on the completed borehole once total depth has been reached.
  - d. Contractor will be responsible for collection of geophysical logs.
2. All drilling shall be by rotary drilling method or similar approved drilling methods in strict compliance with these specifications at the specified location shown on **Figure 1** at the end of these specifications.
3. Following the completion of drilling, the District's Representative will evaluate the suitability of the location to serve as a test well. Should the location appear favorable, a test well will be installed in the exploratory borehole. However, if the District's Representative determines that the aquifer is not sufficient, then a well will **not** be completed.
4. If no well is installed, the borehole will be destroyed in accordance with these specifications and state and local requirements.
5. Test well construction shall include the installation of 6-inch diameter PVC casing, 6-inch diameter continuous slot PVC well screens in discrete aquifer zones, artificial filter pack corresponding to the screen zones, bentonite seals between screen zones, and a surface sanitary seal. The test well will generally conform to the design described in detail in these specifications and shown schematically on **Figure 2**. However, all final test well design details will be based on analysis of data gathered during the drilling process and observations made by the District's Representative.
6. The sanitary seal at the well will be installed in accordance with the San Benito County Water District (District) requirements. The Contractor will coordinate with the District's Representative and a representative from the District to allow inspection of the installation of the seal.
7. Drilling fluids and cuttings can be disposed of onsite or on a property neighboring the work site, as directed by the District and/or District's Representative.
8. The completed test well will be developed with a combination of mechanical surging, air lifting, and overpumping.
9. The first flush of water produced during development will be contained for disposal or to allow fines to settle prior to discharge.
10. Water generated during development, including the first flush of sediment laden water, will be discharged overland on the property. The District will coordinate the

agreement for discharging development water on the property and will determine the appropriate location(s) and methods.

11. The test well is estimated to require approximately 50 hours of development. However, one of the goals of development is to reduce the turbidity in the produced water to less than 10 nephelometric turbidity units (NTU). The ultimate duration of development will be determined by the District's Representative.
12. Zone specific testing of the completed test well will be undertaken following the completion of development. These tests will be conducted on each discrete screened interval and shall consist of:
  - a. For each screen interval, the Contractor shall install pumping equipment fitted with packers above and below the screen interval.
  - b. The packer assemblies should be capable of sealing the screen zone off from the rest of the well so that discrete water quality samples can be collected.
  - c. The pumping equipment should be capable of producing approximately 100 gallons per minute from each screen zone and should be equipped with a throttle or valve to reduce the rate to as low as 20 gpm.
  - d. A means of collecting water levels with manual sounding devices and transducers shall be installed in the well during each test.
  - e. The discharge manifold will include a totalizing flow meter and a sample port.
13. A combined test while pumping from the entire well will be completed following zone-specific testing. This test shall consist of the following:
  - a. The pumping equipment should be capable of producing approximately 200 gallons per minute and should be equipped with a throttle or valve to reduce the rate to as low as 20 gpm.
  - b. No packer assemblies shall be included in this test pumping equipment and the pump intake shall be placed in a blank section of the well identified by the District's Representative.
  - c. A means of collecting water levels with manual sounding devices and transducers shall be installed in the well.
  - d. The discharge manifold will include a totalizing flow meter and a sample port.
14. The intent is that all water generated during well performance testing and water quality sampling will be discharged to a contained collection pit or spread overland within the work area boundaries as designated under the District's permit.
15. Surface completion for the test well will consist of a protective locking above ground standpipe and an expansion plug in the top of the casing.

The preliminary proposed design for the North County Hollister Test Well is shown on **Figure 2**.

The work shall include the following tasks:

- obtaining necessary permits
- utility clearance
- mobilization and demobilization to the project site



- maintenance of drilling records
- borehole drilling and formation sampling
- representative lithology sampling for sieve analysis
- lithologic and geophysical logging
- installation of PVC well casing, screen, filter pack, and bentonite seals
- sanitary sealing
- well development
- well discrete zone performance testing and water quality sample collection
- completion of the well head
- management of drilling and construction derived waste including drilling fluids and cuttings that must be disposed of offsite
- management of groundwater generated during pump testing that will need to be discharged overland

Well installation will first require drilling a 12-inch diameter borehole to approximately 800 feet. Formation samples will be collected every five feet and logged under the supervision of a California Licensed Professional Geologist provided by the District's Representative. Upon reaching total depth, geophysical logging will be conducted by the Contractor using electrical resistivity, spontaneous potential, and natural gamma radiation methods.

After reviewing the lithologic and geophysical data, the District's Representative will select up to eight intervals for discrete aquifer zone flow and water quality testing. The goal of the aquifer zone testing is to conduct a short duration pumping test of identified aquifer zones, then collect a water quality sample from each zone. Following discrete zone flow testing and water quality testing, a combined well constant rate pumping test that pulls groundwater from all discrete zones will be performed and a water quality sample will be collected.

After completion of well testing, samples will be sent to a State Certified laboratory for analysis and the District's Representative will provide a final report assessing the flow and water quality findings and the suitability of the site as a location for a future municipal water supply production well.

## **Section 01-01 – Drilling Location**

The test well drilling site is a parcel of currently fallow land owned by Christopher Ranch that is bounded by Highway 156 to the north, San Felipe Road to the west, the Santa Ana creek to the east, and an abandoned Pacheco Pass Highway to the south (**Figure 1**). The site is located approximately 650 feet to the west/northwest of the existing Well DD-1 that shows good groundwater quality. The site has a gated entry and access road along the abandoned Pacheco Pass Highway that can serve as the point of entry to the drilling site and

can accommodate drilling equipment and contractor vehicles. As shown on Figure 1, the drilling staging area will be a roughly 320 feet by 120 feet in the northeast corner of the parcel. All materials, cuttings, vehicles, and operations will be confined within the delineated work area. The exact location of the new well will be surveyed and marked by the District prior to Contractor mobilization to the site.

## **Section 01-02 – Codes and Standards**

All work shall be conducted in accordance with all applicable county, state or other public authority codes and standards including but not limited to San Benito County and San Benito County Water District, State of California Water Well Standards, and ANSI-NSF Code 61. All equipment and materials used by the Contractor in the drilling and construction of the well shall be cleaned and disinfected prior to being placed in any borehole. All equipment and materials shall also be maintained essentially free of oil, grease, or other petroleum hydrocarbons that may otherwise impact the aquifer and well.

## **Section 01-03 – Permits and Licenses**

Unless otherwise stipulated in these Contract Documents, the District will obtain all necessary permits required by County, State or other public authorities except as specified herein. The Contractor shall assist the District or the District's Representative in obtaining permits, as required. The Contractor shall also maintain licenses relating to all work and the required permits. The Contractor shall assist the District and the District's Representative in giving all notices required by laws or ordinances relating to the work. The Contractor shall cooperate with the District's Representative to ensure that all permits and licenses are obtained to complete the work.

## **Section 01-04 – Health and Safety Plan**

The Contractor shall be responsible for the health and safety of all personnel in the work area during all times for the duration of the project as described in these Technical Specifications. The Contractor shall prepare and implement a site-specific Health and Safety Plan (HSP) in accordance with 29 CFR 1910 to protect construction workers and the public during all excavation and construction. The HSP shall include the following, at a minimum:

- A summary of all potential risks to construction workers and the maximum exposure limits for all known and reasonably foreseeable site chemicals;
- Specified personal protective equipment and decontamination procedures, if needed;

- Emergency procedures, including route to the nearest hospital;
- Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, notifying San Benito County Water District, and retaining a qualified environmental firm to perform sampling and remediation; and the identification and responsibilities of a site health and safety supervisor.

The site-specific HSP must be approved by the District prior to mobilization.

### **Section 01-05 – Site Cleanup**

During the progress of the work, the Contractor shall keep the premises in a neat and clean condition, and free from any unsightly accumulation of rubbish. Before acceptance of the work, the Contractor shall satisfactorily dispose of or remove from the vicinity of the work all rubbish, unused materials, and all other equipment or materials belonging to Contractor or used under Contractor's direction during construction.

### **Section 01-06 – Water for Construction**

The District will provide construction water for a fee. Contractor shall make all arrangements for water meter with the City Public Works, Engineering Department. Service will be at locations to be coordinated with the City. Contractor shall provide any/all temporary piping, hoses, etc. needed to transport water from service location to the jobsite. A reduced pressure principle backflow preventer assembly (Febco 825Y or approved equal) must be provided and installed by the Contractor with any temporary piping, hoses, etc. Water used for human consumption shall be kept free from contamination and shall conform to the requirements of the State and local authorities for potable water.

The pipe, appurtenances, and backflow prevention equipment and installation shall be approved by the District and the Contractor shall comply with the following terms and conditions:

- The contractor shall conserve water supplies. Undue waste of water will be reason for the District to close these sources to further use by the contractor.
- The method of pumping and the capacity and condition of pumps used by the contractor shall be subject to the District's approval.

- In permitting the use of water, no representation is made that water will always be available from that source. During system shutdowns or other similar occasions, water may not be available for the Contractor's use. At these times, the Contractor shall provide water from its own sources.

The Contractor shall be solely responsible for the adequate functioning of its water supply system and shall be solely liable for claims or damage resulting from its use.

## **Section 01-07 – Drilling Fluids and Cuttings Management and Disposal**

Drilling fluids and cuttings can be disposed of onsite. All fluid and cutting disposal locations and methods will be at the direction of the District and the property owner.

Any construction of mud pits must be positioned ten (10) feet from the drilled well or any existing well. Any mud pits and channels shall be dewatered and excavated to acceptable limits approved by the District's Representative. The excavated pits and channels shall be backfilled with dry soil acceptable to the District or District's Representative. Backfill shall be compacted by wheel rolling to a density comparable with adjacent soils.

## **Section 01-08 – Discharge Water- General**

The Contractor shall be responsible for properly disposing of all water resulting from all drilling, well development, and pumping operations. The Contractor shall be responsible for ensuring that all discharge water is disposed of in accordance with all applicable local, County, State, and Federal regulations. All permits needed for water discharge to any facility shall be acquired by the District with assistance from the Contractor. The Contractor shall use best management practices (BMPs) in accordance with standard practices to reduce construction impacts to adjacent areas. These shall include erosion control and sediment removal devices (i.e. straw waddles, filter fabric, sandbags, etc.) at all discharge locations, all affected storm drain inlets, and at all fluid and cutting containment facilities.

Any overland disposal of water on the site will be at the direction of the District or the District's Representative. The location(s) and methods of discharge will be determined by the District. All overland discharge will be monitored by the District and the District's Representative and may be stopped or restricted at any time in response to uncontrolled overland flow, flooding, excessive ponding, excessive fine-grained content, or due to any other nuisance issues created by the discharge.

The Contractor shall be responsible during the work to prevent contaminated water, gasoline, oil, solvents, or any other contaminant from impacting local surface water or wetland areas. Contractor will work with the District and/or the District's Representative to

establish fluid discharge containment and discharge protocols at the work site prior to beginning work. In no case will any fluids or other material be discharged on sensitive habitat areas identified by the District or the District's Representative. Costs of water disposal shall be borne by the Contractor and no additional payment will be made therefor.

#### **Section 01-08-01 – Discharge Water During Drilling**

Unless approved otherwise by the District, all discharge water resulting from drilling operations shall be disposed of via overland flow on the property at a location designated by the District or the District's Representative in accordance with **01-08**. Discharge water during drilling does not include the discharge of drilling fluids. Disposal of drilling fluids shall be conducted in accordance with **01-07 Drilling Fluids and Cuttings Management and Disposal**.

#### **Section 01-08-02 – Discharge Water During Development**

Discharge water during development, including the first flush, will be disposed of via overland flow on the property in accordance with **01-08**.

The District may allow the Contractor to discharge water during development in a storm sewer system controlled by the District or other local agency. However, any discharge to the storm sewer will not include the first flush of development and must meet the District's stormwater discharge permit thresholds. In this case, unless approved otherwise by the District, discharge water resulting from the first flush of development shall be containerized and removed from the site for disposal or allowed to settle and evaporate for spreading on the ground surface. The duration and quantity of first flush development water shall be determined by the District's Representative. Pending the approval of the District or District's Representative, subsequent development water shall be disposed of in the storm sewer system or on the property at a location designated by the District. Conveyance of discharge water to the storm sewer system will require placement of appropriate piping and BMPs to control flow and prevent erosion and sedimentation.

Development water may be tested at the end of development to determine if water produced during later phases of the work is acceptable for disposal in the water quality testing phase of the project.

#### **Section 01-08-03 – Discharge Water During Discrete and Combined Aquifer Zone Testing**

All discharge water resulting from performance testing and water quality sampling shall be disposed of at an acceptable location that will result in no interference with aquifer testing. The determination of any interference with aquifer testing shall be made by the District's Representative. The Contractor shall be responsible for disposing the discharge water to a

location that will not interfere with the aquifer test as determined by the District's Representative.

Discharge water resulting from testing and water quality sampling of the well shall be disposed of either by discharge to the storm sewer system or overland flow, as determined by the District. The Contractor shall provide the necessary equipment for containment and disposal of discharge water regardless of the ultimate disposal location.

### **Section 01-09 – Noise**

The Contractor shall comply with all applicable noise ordinances. Operational noise shall be kept to a minimum and proper noise arrestors and mufflers shall be utilized. Noise reduction measures may have to be increased during the project in response to complaints from local residents and businesses. The District or District's Representative will work with the Contractor to determine what additional noise reduction measures are warranted.

### **Section 01-10 – Protection of Groundwater Resources**

The Contractor shall take all necessary precautions during the construction period to prevent foreign objects, contaminated water, gasoline, or any other contaminant from entering the well, either through the opening or by seepage through the ground surface.

### **Section 01-11 – Electric Power**

All electric power required on the part of the Contractor during the performance of the work called for under these specifications, or any operations appurtenant thereto, shall be furnished by the Contractor at the sole expense of the Contractor.

### **Section 01-12 – Protection of Existing Utilities**

It shall be the responsibility of the Contractor to locate all existing surface and underground utility facilities in and near the site of the work. The Contractor shall take all necessary measures to avoid injury to existing surface and underground utility facilities in and near the site of the work. No error or omission on the drawings shall be construed to relieve the Contractor from his responsibility to protect all surface and underground pipes, conduits, cables, or other structures. The Contractor shall indemnify the District and District's Representative, and hold them harmless from any and all claims, demands, or liability made or asserted by any person or entity on account of or in connection with any damage to such

surface or underground facilities caused by the Contractor or any of his agents or subcontractors.

### **Section 01-13 – Existing Site Conditions**

The District accepts no responsibility for subsurface conditions which exist, or are implied or indicated by contract documents. It is the Contractor's responsibility to investigate the project area to determine subsurface conditions expected to be encountered.

### **Section 01-14 – Construction Limitations**

The Contractor shall be expected to conduct his operations within the designated limits of the area shown on **Figure 1** and in a manner which minimizes damage to existing infrastructure, landscape, and surface water.

### **Section 01-15 – Site Access**

Access to the site will be provided by the District in coordination with the property owner. This access will involve entrance through the gate on the abandoned access highway as shown on **Figure 1**.

### **Section 01-16 – Submittals**

Complete specifications, data, catalog cuts, or samples covering the following items furnished under this section shall be submitted in accordance with these specifications.

1. A copy of the Health and Safety Plan (**01-04**)
2. Daily Reports and Water Well Driller's Report (**03-02 and 03-03**),
3. Copy of Driller's Log (**03-04**),
4. Drilling Fluid Data (**04-03** and bid sheet questionnaire),
5. Documented Manufacturer's Specifications for Well Casing (**06-01**),
6. Well Screen Data (**07-01**),
7. Artificial Filter Pack Data (**08-01**),
8. Grouting and Sealing Data (**09-01**),
9. Well Plumbness and Alignment Records, if requested (**10-01**),
10. Well Development Records (**11-01**),
11. Aquifer Testing Records (**13-01**),
12. Well Disinfection Records (**14-01**),
13. Well Destruction Records (**15-01**).

## **Section 01-17 – Payment**

The provisions of the conditions described in **Section 01 – Description of Work** are considered applicable to all work and no additional compensation will be allowed therefor. Payment shall be made for the specified bid items of work listed herein.



## **SECTION 02 – MOBILIZATION AND DEMOBILIZATION**

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### **Section 02-01 – General**

Mobilization and demobilization include the assembly and transportation of all necessary tools, equipment, personnel, and materials to and from the sites of the work to perform all of the work required under these specifications. It also includes the site work necessary to accommodate the well drilling, construction, development, and final cleanup work on the grounds occupied by the Contractor at the drilling location, as required under these specifications.

### **Section 02-02 – Final Cleanup**

Before final acceptance, the job sites and all grounds occupied by the Contractor in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures, and equipment; and all parts of the work shall be left in a neat and acceptable condition. The project site shall be left in a condition acceptable to the District and property owner.

### **Section 02-03 – Payment**

The lump sum price paid for mobilization and demobilization to the project area shall cover all work, all costs of transporting tools, equipment, personnel and materials to and from the drilling sites, and all site preparations and cleanup work required (**Bid Item 1**). The lump sum amount will be approved in advance and will be deemed reasonable by the District's Representative. Fifty (50) percent of the total payment shall be paid on the first pay period after mobilization onto the site is complete. The remaining fifty (50) percent shall be paid upon final acceptance of work.

## **SECTION 03 – SAMPLING AND RECORDS**

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### **Section 03-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for the sampling and reporting during drilling of the exploratory borehole and construction and testing of the test well in accordance with these specifications.

### **Section 03-02 – Daily Report**

The Contractor shall maintain and deliver upon request to the District's Representative a detailed daily report describing site activities. During drilling, the report shall give a complete description of all formations encountered, number of feet drilled, number of hours on the job, shutdown due to breakdown, length of casing set, samples collected, and other pertinent data as requested by the District's Representative. The fluid level in the hole should be measured daily prior to starting pumps. After drilling is completed, the daily reports shall give a description of work items completed, number of hours on the job, shutdown due to breakdown, samples collected, and other pertinent data as requested by the District's Representative.

### **Section 03-03 – Well Completion Report**

The Contractor shall file a Well Completion Report for the well with San Benito County Water District and the California Department of Water Resources (DWR) in accordance with the provisions of the San Benito County well permitting and the California Water Code.

### **Section 03-04 – Driller's Log**

In addition to reporting requirements for the DWR Water Well Driller's Report, the Contractor shall maintain a complete log for the well, as applicable, setting forth the following items:

1. Identification and type of all drill rigs used in the drilling and construction of the well,
2. The reference point for all depth measurements and measurement method(s),
3. The depth at which each change of formation occurs,
4. The location and thickness of each aquifer,
5. The identification of the material of which each aquifer is composed,
6. The depth interval from which each formation sample was taken,
7. The depth at which the borehole diameter changes,

8. Total depth of completed well,
9. Location limits of lost circulation zones,
10. The depth of the surface or sanitary seal,
11. The nominal hole diameter of the wellbore above and below the casing seal,
12. The type and quantity of sealing material installed for the seals (sanitary seal and seals between screen zones),
13. The type and quantity of artificial filter pack installed in the well,
14. The depth and description of the well casing, including the end fitting,
15. Data regarding well screen type, size, and placement in the wellbore,
16. The sealing off of water-bearing strata, if any, and the exact location thereof,
17. Depth intervals, pumping rates, and test durations throughout zone specific and combined well flow and water quality sampling
18. The date and time for all measurements recorded, and
19. Any and all other pertinent information required by these specifications.

### **Section 03-05 – Penetration Rate Logs**

During the drilling of the well the Contractor shall maintain a time log showing the actual penetration time required to drill each foot of hole (i.e., the time required to drill each drill rod). Also noted in the log shall be the types and weights of bits used in the various sections of the hole.

### **Section 03-06 – Lithologic Log**

A lithologic log for the borehole shall be prepared by the District's Representative to accompany the set of formation samples noting depth, strata thickness, lithology (including size, range and shape of particles, smoothness, and rock type), rate of penetration, and other pertinent information. The Contractor shall cooperate and provide assistance as required in collecting soil cutting samples and data for preparation of each lithologic log.

### **Section 03-07 – Formation Sampling**

#### **Section 03-07-01 – Frequency of Sampling**

Unless approved otherwise by the District's Representative, formation samples shall be collected under the direction of the District's Representative with complete assistance from the Contractor as required. Formation samples in the borehole shall be taken every five (5) feet (or as directed by the District's Representative) and at each change in formation. Unless determined otherwise by the District's Representative, samples shall be collected in separate bags or other acceptable containers of at least 500-gram capacity for each interval. Containers shall be provided by the Contractor and shall be plainly marked with well designation, owner, location, depth interval, and date and time the sample was taken. The

Contractor shall be responsible for the safe storage of formation samples until acceptance by the District's Representative.

**Section 03-07-02 – Sampling Method- Direct of Reverse Rotary**

Unless approved otherwise by the District's Representative, the formation sampling method for direct or reverse rotary shall be as follows. A return flow sample shall be taken by removing from the discharge fluid a representative sample of the formation by a means acceptable to the District's Representative such as collecting the sample at the shale shaker, a cutting sample box, a baffle in a ditch, or catching it in a bucket and allowing the sample to settle out. The penetration of the bit shall stop when the bottom of the sampling interval is reached for such time as is required for all the cuttings to move from the last drilled section of the hole and settle at the sampling point. The return ditch and sample catching device shall be cleaned of all cuttings after each sample is taken. A cutting sample shall be carefully collected from the sampling point.

**Section 03-07-03 – Water Sampling**

The Contractor shall cooperate with the District's Representative in collecting any water samples during drilling and development of the well.

**Section 03-07-04 – Payment**

No separate or additional payment shall be provided for the sampling and records requirements specified herein. Payment therefore shall be included in the various bid items of work.

## SECTION 04 – BOREHOLE DRILLING

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### Section 04-01 – General

The work described in this section consists of drilling a borehole to a diameter sufficient for the installation of a 6-inch diameter casing and screen plus a minimum 3-inch and maximum 6-inch annular filter pack. Drilling the borehole and construction of the test well shall be performed by an experienced well driller licensed in the State of California. Only competent workpersons shall be employed on the project and a driller and a minimum of two (2) helpers must be on the job at all times during drilling and well construction. The Contractor shall drill the exploratory borehole at the exact location designated by the District.

The Contractor shall employ approved drilling methods and properly install the materials described herein so that the finished test well: 1) conforms to these specifications, and 2) conform to the general design illustrated in **Figure 2**. The Contractor shall dispose all drilling fluid, cuttings, and discharge water during drilling so as not to damage public, private property, or wildlife habitat.

### Section 04-02 – Methods

The drilling of the borehole shall employ hydraulic direct mud rotary or reverse rotary drilling methods. A minimum 12-inch diameter borehole will be drilled to the total anticipated depth of the well at 800 feet, or as directed by the District's Representative. Drilling shall be conducted in a manner that assures a sufficiently straight and plumb borehole and well installation to meet the requirements of **10-01 Plumbness and Alignment**.

Upon advancement of the borehole to total depth, a suite of geophysical tests shall be completed in the borehole. The Contractor shall ensure that the District's Representative is given a minimum of 24 hours notice prior to reaching total depth in the borehole in order to schedule geophysical testing as described in **05-01 Borehole Geophysical Testing**.

The Contractor shall submit for review and approval by District's Representative supporting information including: 1) age and manufacturer's name and model number of drilling equipment, mud pump, power unit, and other pertinent machinery, and 2) type and properties of any drilling fluids. The Contractor shall be responsible for designing and controlling a drilling and drilling fluids (mud) program that conforms to sampling requirements specified in **03-01 Sampling and Records**.

All cuttings generated during borehole drilling shall be disposed of in accordance with **01-07 Disposal of Drilling Fluids and Cuttings**. No separate or additional payment shall be provided for the disposal of drilling fluids or cuttings. Payment therefore shall be included in the various bid items of work.

### **Section 04-03 – Drilling Fluid**

All drilling fluids shall be acceptable for water well drilling in accordance with AWWA A100-90 and shall be approved by the District's Representative prior to use. Drilling fluid types shall be noted on the bid sheet questionnaire. No additives including polymers shall be added to the drilling fluid unless the Contractor obtains prior approval from the District's Representative. All drilling fluids shall be specifically compounded for water well construction, designed for minimum aquifer penetration, and shall not damage the potential capacity, efficiency, or quality of the well. Should a conflict arise between drilling fluid requirements for ease in drilling and requirements for well yield and aquifer protection then the ruling requirements shall be those for well yield and aquifer protection.

Unless approved otherwise by the District's Representative, drilling fluid properties shall be maintained within the following limits using test procedures conforming to American Petroleum Institute R.P.-13-B- "Procedures for Testing Drilling Fluids" (API RP 13B):

1. Weight (fluid density): 70-85 pounds per cubic feet.
2. Marsh Funnel Viscosity: 29-40 seconds per quart.
3. Filtration (wall cake and filtration loss): maximum thickness of 3/32 inches with maximum 30-minute water loss of 20 cubic centimeters (cc).
4. Sand contents (solids larger than 200 mesh): maximum of two (2) percent by volume.
5. pH: 7.0 to 9.0 units

Test samples for drilling fluids shall be collected at the rig pump suction with sufficient care to ensure a true and representative sample. It is the Contractor's responsibility to provide and maintain all necessary equipment for measuring fluid properties. Unless approved otherwise by the District's Representative, the tests shall be conducted: 1) every 25 feet of depth; or 2) every four (4) circulating hours, whichever is more frequent. The tests shall also be conducted whenever conditions appear to have changed, problems arise, or whenever requested by the District's Representative.

The Contractor shall conduct all tests and shall maintain a log showing the drilling fluid properties set forth herein including date, time, depth, viscosity, drilling fluid weight, sand content, filtration properties, pH, and any other pertinent comments.

## **Section 04-04 – Payment**

Payment for drilling shall be in vertical feet unit price per foot of length of drilling (**Bid Item 3**) for the entire depth of the exploratory borehole. Payment shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications.

## SECTION 05 – BOREHOLE GEOPHYSICAL TESTING

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### Section 05-01 – General

The Contractor will arrange and contract for conducting a borehole geophysical testing program after the borehole has been drilled to total depth and before well construction begins. The geophysical contractor and calibrated logging tools will be approved by the District's Representative in advance of the testing. Geophysical testing in the borehole shall include the following logs:

- Caliper,
- Resistivity (including a short- and long-normal log),
- Guard,
- Gamma Ray,
- Spontaneous Potential (SP),
- Single Point Resistance, and
- Temperature

The Contractor shall assist the geophysical contractor as required in conducting the geophysical testing. The Contractor shall provide the District's Representative with 24-hour notice of the time for completing drilling of the pilot borehole to total depth as determined in the field to enable the District's Representative to be present for geophysical testing.

Upon drilling the borehole to the total depth as directed by the District's Representative, borehole fluid circulation shall continue until all drill cuttings have been removed from the borehole, the drilling fluid in the hole is uniform, and the geophysical equipment is on location. With approval from the District's Representative, the drill pipe shall be removed from the hole and the Contractor shall remain on site, to assist the geophysical contractor as required, until geophysical logging is complete. The time after removing the drill pipe from the hole until the geophysical contractor is released from the site shall be regarded as standby time in accordance with **16-01 Standby Time**.

In the geophysical logging tools cannot be lowered to the total depth drilled due to hole conditions, the Contractor may be required to circulate the fluids and clean out the hole at the discretion of the District's Representative and at no additional cost to the District. In the event that geophysical testing cannot be performed over the total depth drilled even after cleaning the hole, the District shall receive a credit from the Contractor. The credit shall be in the form of a reduction in the total feet charged for drilling equal to the difference between the total depth drilled minus the total depth available for geophysical testing.



## **Section 05-02 – Payment**

Payment for geophysical testing of the exploratory borehole shall be a unit price per foot of logged borehole (**Bid Item 4**). Payment shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications.

## **SECTION 06 – WELL CASING**

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### **Section 06-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for installation of permanent well casing in accordance with these specifications. Selection of any required temporary casing used only for construction is left to the Contractor unless otherwise specified by the District's Representative. Permanent well casings shall be continuous and watertight from top to bottom of the casing except for well screens. Casing to be installed in the test well location shall include minimum 6-inch diameter Schedule 80 PVC well casing.

### **Section 06-02 – Casing Selection**

#### **Section 06-02-01 – Material**

All Schedule 80 PVC well casing material shall be new and manufactured in the United States and conforming to ASTM Standard 480-76. The poly vinyl chloride (PVC) well casing will be made of virgin plastic produced by the original compounder and shall contain PVC homopolymer and such additives as needed to provide the required processing and toughness characteristics. The Contractor shall submit copies of the casing specification documentation from the manufacturer to the District's Representative for approval before delivering casing to the job site. Unless approved otherwise by the District's Representative and except for end pieces, all sections of casing shall be a minimum length of five (5) feet.

#### **Section 06-02-02 – Diameter**

All final Schedule 80 PVC casing shall have a nominal diameter of 6-inches.

#### **Section 06-02-03 – Thickness**

All casing wall thickness shall be sufficient to withstand anticipated formation and hydrostatic pressures imposed on the casing during installation, well development, and use. The minimum wall thickness of the well casings shall be 0.432 inches, consistent with 6-inch nominal diameter Schedule 80 PVC casing.

#### **Section 06-02-04 – Length**

The finished length of well casing in the completed test well shall extend from the top of the uppermost screen in the well to the final height of casing above ground plus the distance between each discrete screened zone and the length of the tailpipe below the deepest screen. Estimated finished length of well casing will be determined by the District's Representative based on data gathered during the drilling process. The total finished length of all well casing in the test well is anticipated to be between 400 to 600 feet, depending

upon the total depth, length, and number of screened intervals in the final test well design. The Contractor shall furnish all necessary material and equipment and perform all labor to provide custom lengths of casing, as is feasible.

#### **Section 06-02-05 – Joints**

Casing joints shall be watertight and shall be appropriate for the material used so that the resulting joint shall have the same structural integrity as the casing itself. Unless approved otherwise by the District's Representative, all casing joints shall be made in accordance with AWWA A100-06. The Contractor shall provide all necessary material and equipment and perform all labor to make joints in custom lengths of casing.

### **Section 06-03 – Installation**

Unless directed otherwise by the District's Representative, the method of well casing installation shall be at the option of the Contractor, provided installation meets the requirements of **10 Plumbness and Alignment** and that the installation process does not alter the shape, size, configuration, or strength of the casing specified herein.

#### **Section 06-03-01 – End Fittings**

End fittings for the test well shall be new and fabricated from Schedule 80 PVC conforming to ASTM Standard 480-76. The bottom of the lowermost screen section shall be fitted with a tail pipe and closed bottom. The length of the tail pipe shall be specified by the District's Representative.

### **Section 06-04 – Payment**

Payment for installation of well casing shall be in vertical feet determined as the length set below ground surface plus the finished casing height above ground surface from each blank section in the test well. Payment shall be on a unit price per foot of length for installation plus the cost of casing at the invoice price (**Bid Item 5**). Payment shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications.

## **SECTION 07 – WELL SCREEN**

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### **Section 07-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for installation of well screens in the test well in accordance with these specifications.

### **Section 07-02 – Screen Selection**

#### **Section 07-02-01 – Construction**

The well screen shall be of Schedule 80 machine slot PVC design. The placement of the screens in the test well will be determined by the District's Representative based on data gathered during drilling and sample analysis.

The Contractor shall provide the District's Representative with the name of the proposed screen manufacturer(s) and submit copies of the screen specification documentation for approval prior to delivering well screens to the job site.

#### **Section 07-02-02 – Material**

All machine slot PVC well screens shall be new and made of virgin plastic produced by the original compounder. Screens shall contain PVC homopolymer and such additives as needed to provide the required processing and toughness characteristics. Unless approved otherwise by the District's Representative and except for end pieces, all sections of screen shall be a minimum length of five (5) feet.

#### **Section 07-02-03 – Diameter**

The well screen shall be pipe size type with a nominal diameter of 6 inches. The inside diameter of the tail pipe, riser pipe, and blank pipe shall match the inside diameter of the screen, and the tail pipe, riser pipe, and blank pipe wall thickness shall correspond to ASTM standards.

#### **Section 07-02-04 – Strength**

All well screens shall have sufficient strength to withstand anticipated formation and hydrostatic pressures imposed on the screen during installation, well development, and use. The Contractor shall submit screen strength specifications, including collapse and tensile strength, as well as supporting drawings and data to the District's Representative for approval.

#### **Section 07-02-05 – Screen Aperture Size**

The anticipated well screen aperture size for all of the test well screens will be 0.060 inches (No. 60 Slot). The Contractor shall submit copies of the screen specification documentation

from the manufacturer detailing screen aperture size and construction techniques to the District's Representative for approval before delivering casing to the job site. The final selection of aperture size will be provided by the District's Representative based on formation samples collected and described in **03-01 Sampling and Records**.

#### **Section 07-02-06 – Length**

The overall length of well screen in the test well shall be designated by the District's Representative based upon final determination of formation sampling and geophysical testing. The estimated number of individual screened zones is expected to be between six (6) and ten (10), and the total overall length of the well screens is estimated to be between 200 and 400 feet. For the purpose of bid preparation, the Contractor shall assume that there will be eight (8) individual screen sections and the total combined length of these sections will be 300 feet. These estimates are based upon preliminary design parameters, which are generalizations taken from other wells in the Hollister Valley.

The continuous slot screens shall be supplied in section lengths accommodating final design by the District's Representative following exploratory borehole drilling. Estimated section lengths that may be required are as follows: four five foot sections (4 x 5 ft), eight ten foot section (8 x 10 ft), and ten twenty foot sections (10 x 20 ft). These estimated lengths (overall and individual sections) are based on previously completed wells in the Hollister area, but they should not be considered definite. Individual continuous slot wire wrap screen sections shall be a minimum length of five (5) feet.

The screened sections will be separated by blank pipe sections, with lengths depending on the geologic conditions encountered during drilling. The length and depth of the blank pipe shall be specified by the District's Representative. The top and bottom of each screen section shall connect directly to 6-inch diameter casing.

#### **Section 07-02-07 – Selection Period**

The District's Representative shall be allowed a 24-hour grace period following the completion of drilling to select the intervals, length, and corresponding aperture of the screens for the well. The period beyond 24-hours which may be required for the District's Representative to select the screen design shall be regarded as standby time as defined in **16-01 Standby Time**, unless the Contractor is performing other work resulting from the requirements of this contract. The selection period shall begin after geophysical logging is completed and formation samples are accepted by the District's Representative. If other work is being performed after acceptance of the formation samples, the selection period shall not begin until the day following completion of said other work. The selection period shall end when the Contractor is notified by the District's Representative of the selected aperture size and length of the screen. Notification for the purpose of ending this selection

period shall be conducted verbally either in person or by telephone and may be confirmed on the same date in writing via email or facsimile.

### **Section 07-03 – Joints**

Joints shall be appropriate for the material used so that the resulting joint shall have the same structural integrity as the casing itself. The screen joints shall be made in accordance to the manufacturer's specifications and shall allow connections to blank casing, riser casing, and tail pipe.

#### **Section 07-03-01 – Screen to Screen**

Joints between screen sections shall be mechanical and shall be straight, sand tight, and have the same structural integrity as the screen itself. Joining methods recommended by the screen manufacturer shall be employed.

#### **Section 07-03-02 – Screen to End Fittings**

Joints between the screen and end fittings shall be in accordance with screen-to-screen joint requirements specified herein.

#### **Section 07-03-03 – Screen to Casing**

Joints between screen sections and casing shall be in accordance with screen-to-screen joint requirements specified herein.

### **Section 07-04 – Installation**

Unless approved otherwise by the District's Representative, the well screen shall be placed into the borehole as a unit. Centralizer use and placement will be at the option of the Contractor, subject to approval by the District's Representative prior to commencement of work.

### **Section 07-05 – Payment**

#### **Section 07-05-01 – Well Screen**

Payment for well screen shall be in vertical feet as determined as the summation of the screen intervals over the distance from the top of the tail pipe to the bottom of the riser in the test well, and shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work associated with the well screen and appurtenances in accordance with these specifications. Payment for continuous slot well screen shall be on a unit basis per foot of length for installation plus the cost of screen and shipping at the invoice price (**Bid Item 6**).

**Section 07-05-02 – Well Screen Appurtenances**

Well screen appurtenances shall include, but not be limited to, the closed bottom and well casing centralizers in the well. Payment for well screen appurtenances shall be on a lump sum basis, and include material and installation, and shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications (**Bid Item 7**). The unit cost of pipe material is described in **06-01 Well Casing**.

## **SECTION 08 – ARTIFICIAL FILTER PACK**

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### **Section 08-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for installation of an artificial filter pack in accordance with these specifications.

### **Section 08-02 – Filter Pack Selection**

#### **Section 08-02-01 – Material**

All filter pack material shall be washed and free of shale, carbonate, mica, clay, dirt, loam, organic impurities, and other deleterious material of any kind. The material shall contain no iron or manganese in a form or quantity that will adversely affect the water supply from the well. The filter pack material shall be obtained from an approved source and shall consist of hard, rounded particles with an average specific gravity of not less than 2.5. Not more than one (1) percent by weight of the material shall have a specific gravity of 2.25 or less. The material shall contain not more than two (2) percent by weight of thin, flat or elongated pieces (pieces in which the largest dimension exceeds the smallest dimension multiplied by three). Not more than five (5) percent of the material shall be soluble in hydrochloric acid.

#### **Section 08-02-02 – Gradation**

The filter pack material will be equivalent to No. 3 filter pack in accordance with AWWA Nos. A100 and B100 specifications. However, the final selection of filter pack material will be made based upon drilling results.

Prior to delivery to the well site, the Contractor shall submit the source and gradation of the filter pack material to the District's Representative.

#### **Section 08-02-02.1 – Filter Pack to Formation Ratio**

The filter pack to formation material ratio at the 70<sup>th</sup> percentile shall fall within the 4:1 to 10:1 range depending upon formation material uniformity characteristics.

#### **Section 08-02-02.2 – Uniformity Coefficient**

The uniformity coefficient of the filter pack material shall not exceed 2.5.

#### **Section 08-02-03 – Thickness**

The annular thickness of the filter pack adjacent to the well screens in the well shall be a minimum of three (3) inches and a maximum of six (6) inches.



**Section 08-02-04 – Length**

The final length of the filter pack shall be determined by the District's Representative following drilling and geophysical logging. In general, filter pack shall be placed across each screened interval, with a buffer of approximately five (5) feet of filter pack above the top and below the bottom of each screen section. Additionally, filter pack shall extend from the bottom of the lowermost screen to the bottom of the borehole.

The estimated number of individual screened zones is expected to be between six (6) and ten (10), and the total overall length of the well screens is estimated to be between 200 and 400 feet. Therefore, the estimated number of individual filter pack zones is also between six (6) and ten (10), and the overall length of filter pack is estimated to be between 300 and 500 feet. For the purpose of bid preparation, the Contractor shall assume that there will be eight (8) individual screen/filter pack sections and the total combined length of filter pack in these sections will be 400 feet. These estimates are based upon preliminary design parameters, which are generalizations taken from other wells in the Hollister Valley.

**Section 08-02-05 – Selection Period**

The District's Representative shall be allowed a 24-hour grace period to designate the filter pack gradation for the well. The grace period coincides with the grace period described in **07-01 Well Screen**. The period beyond 24 hours which may be required for the District's Representative to determine filter pack specifications shall be regarded as standby time as defined in **16-01 Standby Time**. Unless the Contractor is performing other work resulting from the requirements of this contract, the selection period shall begin after geophysical logging and after the formation samples are accepted by the District's Representative. If other work is being performed after acceptance of the formation samples, the selection period shall not begin until the day following completion of said other work. The selection period shall end when the Contractor is notified by the District's Representative of the requirements for the artificial filter pack. Notification for the purpose of ending this selection period shall be conducted verbally either in person or by telephone, and may be confirmed in writing via email or facsimile the same date as verbal notification is completed.

**Section 08-02-06 – Submittals**

The acceptability of artificial filter pack material shall be determined based upon certified laboratory test results and service records for the source of the material. Prior to delivery to the well site, the Contractor shall submit the following to District's Representative for approval:

1. Source of filter pack material.
2. Certified laboratory test results demonstrating that the filter pack material meets the material and gradation criteria specified herein.
3. A sample of the material of sufficient quantity to conduct tests to independently

- determine the properties of the filter pack material.
4. Invoice amounts for filter pack material to be delivered to the site.

### **Section 08-03 – Delivery and Storage**

The material for the filter pack shall be delivered to the well site upon approval by the District's Representative. The material may be delivered in bags or in bulk. Material delivered in bags shall be protected from weather until installed. Materials delivered in bulk shall be stored on a surface covered with a 2-mil thick plastic sheet or equivalent and will be sheltered from weather or contamination at all times prior to installation. Material for the filter pack that comes in contact with the ground or other contaminated material shall not be used, and all materials shall be protected from contamination until installation.

### **Section 08-04 – Installation**

Unless directed otherwise by the District's Representative, the method of filter pack installation shall be at the option of the Contractor. The material shall be placed to ensure continuity of the filter pack without bridging, voids, or segregation. Filter pack materials shall not be installed by freefall unless approved by the District's Representative prior to placement.

### **Section 08-05 – Disinfection**

The Contractor shall be responsible for ensuring that the filter pack material is adequately disinfected during installation with a solution containing a concentration of at least 50 milligrams per liter (mg/l) of available chlorine.

### **Section 08-06 – Well Screen**

The well screen used in conjunction with an artificial filter pack shall be in accordance with **07-01 Well Screen**.

### **Section 08-07 – Payment**

Payment for the artificial filter pack shall be on a unit price per foot of length for installation in the test well plus the cost of filter pack material at the invoice price (**Bid Item 8**). The length of filter pack shall be determined as defined herein. The quantity of filter pack material to be paid for at the invoice price shall be determined as the annulus volume to the nearest cubic yard calculated using the filter pack length and thickness as defined herein. Payment shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications.

## **SECTION 09 – GROUTING AND SEALING**

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### **Section 09-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for grouting and sealing the annular space between the screened zones and the surface sanitary seal in accordance with these specifications. Grouting consists of sealing by filling the annular space between the well casing and the borehole between each filter pack section and above the uppermost sand zone with acceptable impervious material. Unless otherwise specified by District's Representative, sealing of the well above the uppermost filter pack shall occur immediately following completion of filter pack installation.

### **Section 09-02 – Seals Between Screen Zones**

#### **Section 09-02-01 – Sealing Requirements**

The annular space around the well casing shall be grouted between each filter pack/screen zone. These annular seal intervals shall be a minimum thickness of three (3) inches. The seal shall be placed between the borehole and the 6-inch diameter well casing and shall not be allowed to migrate into the artificial filter pack.

#### **Section 09-02-02 – Material**

Sealing material shall consist of coated time release bentonite pellets. Cuttings from drilling shall not be used as sealing material. If approved by the District's Representative the Contractor may install a transitional seal between the uppermost filter pack and neat cement to control cement migration. The materials and placement of a transitional seal must be presented to the District's Representative for review prior to placement.

#### **Section 09-02-03 – Length**

The final length of the seals between filter pack zones shall be determined by the District's Representative following drilling and geophysical logging. In general, inter zone seals shall be placed between each filter pack interval.

The estimated number of individual screen/filter pack zones is expected to be between six (6) and ten (10), and the total overall length of the filter pack is estimated to be between 300 and 500 feet. Therefore, the estimated number individual inter zone seals is between five (5) and nine (9), and the overall length of these seals is estimated to be between 200 and 400 feet. For the purpose of bid preparation, the Contractor shall assume that there will be seven (7) individual seal sections and the total combined length of bentonite seal in these sections will be 300 feet. The Contractor may also place an additional bentonite seal above the uppermost screen/filter pack zone to serve as a transitional seal. These estimates are

based upon preliminary design parameters, which are generalizations taken from other wells in the Hollister Valley.

## **Section 09-03 – Sanitary Seal**

### **Section 09-03-01 – Sealing Requirements**

The annular space around the well casing shall be grouted from the ground surface to a minimum depth of 100 feet or to the top of the uppermost filter pack section. The sanitary seal shall have a minimum thickness of three (3) inches. The seal shall be placed between the borehole and the 6-inch diameter well casing. The seal shall not be allowed to migrate into the artificial filter pack.

### **Section 09-03-02 – Material**

Sealing material shall consist of neat cement grout sanitary seal. Cuttings from drilling shall not be used as sealing material. The seal shall not be allowed to migrate into the artificial filter pack. If approved by the District's Representative the Contractor may install a transitional seal between the filter pack and neat cement to control cement migration. The materials and placement of a transitional seal must be presented to the District's Representative for review prior to placement.

#### **Section 09-03-02.1 – Neat Cement**

Grout shall consist of a mixture of ASTM C150 Type II Portland cement and water in the ratio of 0.67 cubic feet (5 gallons) of water per 94 pound sack of cement. Water used to prepare sealing mixtures shall generally be of drinking water quality and shall be free of petroleum products, suspended material, and other deleterious substances. Cement used for sealing mixtures shall be ASTM C150 Type II Portland cement. Accelerators, retardants, bentonite, and other additives shall not be used without prior approval by the District's Representative. If approved, bentonite may be added up to six (6) percent by weight. The maximum slump shall be four (4) inches.

## **Section 09-04 – Placement**

All sealing material shall be installed in the presence of the District's Representative. The Contractor will notify the District's Representative a minimum of 24 hours in advance of planned sealing material placement.

Unless directed otherwise by the District's Representative, the method of placement shall be at the option of the Contractor, provided that the installation of each seal zone is carried out in one continuous operation from the bottom of the interval to be sealed to its top (the ground surface in the case of the sanitary seal) and that the installation conforms to the requirements specified herein. Sealing material shall be placed by methods that prevent

freefall, bridging, or dilation. Annular sealing materials shall not be installed by freefall unless approved by the District's Representative prior to placement.

All loose cuttings and any other obstructions shall be removed from the annular space before placement of sealing material.

In accordance with San Benito County Water District requirements, the Contractor will notify the designated San Benito County Water District representative to allow for inspection during surface seal placement. Upon installation of the sanitary sealing material and unless approved otherwise by the District's Representative, no further work shall be completed on the well until the grout has set a minimum of 72 hours. The 72-hour curing period shall not be regarded as standby time as defined in **16-01 Standby Time**.

### **Section 09-05 – Testing**

Verification of proper sealing material placement at the well shall be made by the Contractor demonstrating that the volume of sealing material placed in the annular space equals or exceeds the annulus volume.

### **Section 09-06 – Payment**

#### **Section 09-06-01 – Payment for Inter Screen Zone Seals**

Payment for sealing between each screen/filter pack zone shall be on a unit price per foot of length for installation in the test well plus the cost of bentonite sealing material at the invoice price (**Bid Item 9**). The length of the inter screen seals shall be determined as defined herein. The quantity of seal material to be paid for at the invoice price shall be determined as the annulus volume to the nearest cubic yard calculated using the filter pack length and thickness as defined herein. Payment shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications.

#### **Section 09-06-02 – Payment for Sanitary Surface Seal**

Payment for grouting and sealing in the sanitary seal shall be on a lump sum basis for installation plus grouting and sealing material in the test well. Installation shall include full compensation for furnishing all labor, materials, tools, and equipment and the performance of all work on a lump sum basis in accordance with these specifications (**Bid Item 10**). Grouting and sealing material (**Bid Item 11**) shall be based on cubic yards of material installed in the seals of the well.

## **SECTION 10 – PLUMBNESS AND ALIGNMENT**

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### **Section 10-01 – General**

The completed well shall be sufficiently plumb and straight so that there will be no interference with installation, alignment, operation of any monitoring or testing equipment and all associated appurtenances. The well shall be constructed and all casings and liners set round, plumb, and true to line as defined herein. If requested by the District's Representative, the Contractor shall demonstrate that the work is in compliance with the requirements set forth herein by conducting a plumbness and alignment test. The Contractor shall furnish all labor, tools and equipment and perform the test or tests described herein.

In the event the plumbness or alignment tests fail to meet the tolerances prescribed herein, the plumbness and alignment of a well shall be corrected by the Contractor at his own expense. Should the Contractor fail to correct the faulty plumbness and alignment, the District's Representative may refuse to accept the well.

### **Section 10-02 – Methods**

#### **Section 10-02-01 – Plumbness**

The test for plumbness at the well shall be made with an acceptable plummet arrangement. The plummet shall be constructed with either a tripod or drill rig frame assembly. The apex of the assembly shall be stationary with a recommended minimum height of 10 feet above the hole. The plumb ring or plunger shall be heavy enough to keep the plumb line taut and shall consist of a rigid spindle with round plates at both ends. The outer diameter of the end plates shall be one-half (1/2) inch smaller than the inside diameter of that part of the casing or hole being tested. The distance between end plates shall be approximately 1.25 times the inside diameter of that part of the casing or hole being tested.

#### **Section 10-02-02 – Alignment**

Alignment shall be tested by lowering a section of pipe or dummy to a depth equal to the total depth of the well or a depth determined by the District's Representative. The section of pipe or dummy shall have a length of 40 feet and an outside diameter of not more than one-half (1/2) inch smaller than the inside diameter of that part of the casing or hole being tested.

## **Section 10-03 – Tolerances**

### **Section 10-03-01 – Plumbness**

Plumbness shall be determined at depth intervals of 10 feet or more frequently when approaching the allowable maximum. The test for plumbness shall be determined by calculating the drift at each interval. The drift is calculated as the product of the deflection and the distance from the plunger to the apex, divided by the depth of the plunger below the top of the hole. The deflection is the measured horizontal deflection of the plumb line from center of the top of the casing. The maximum allowable drift of the well from the vertical shall not exceed two-thirds ( $2/3$ ) of the smallest inside diameter of that part of the well being tested per 100 feet of depth.

### **Section 10-03-02 – Alignment**

The test for alignment shall be satisfactory upon demonstrating that the specified section of pipe or dummy moves freely throughout the tested interval.

### **Section 10-04 – Payment**

No separate or additional payment shall be provided for the plumbness and alignment testing specified herein. Payment therefore shall be included in the various bid items of work.

## **SECTION 11 – WELL DEVELOPMENT**

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### **Section 11-01 – General**

The work described in this section consists of furnishing all necessary pumps, surge blocks, jets, bailers, air equipment, measurement equipment, other material, and other equipment and performing all labor for well development at the completed test well in accordance with these specifications. The test well shall be developed by swabbing with simultaneous air jetting followed by pumping unless other methods are deemed necessary and approved by the District's Representative. Development shall be completed either with the drilling rig or with alternative equipment.

### **Section 11-02 – Development Methods**

#### **Section 11-02-01 – Surging**

Initial development shall include surging the well. The surging shall be conducted with either a solid or valved surge block. Surging shall be conducted from top to bottom of each screened section in strokes of five (5) to ten (10) feet. Fines drawn into the well shall be measured and removed periodically before such accumulation reaches five (5) percent of the screen length.

Surging or swabbing in the completed test well shall be continued for up to 8 hours, or until the fines entering the well are decreased to acceptable levels as determined by the District's Representative. After surging, the well shall be bailed or pumped clean of all mud, sand, and sediment.

#### **Section 11-02-02 – Air Lift**

Air lift development may be done by the single pipe air pumping system using the casing or a separate drop pipe as the eductor line. The compressors, air lines, hoses, and fittings shall be of adequate size to pump the well by airlift principle at approximately 100 gpm. During development the Contractor shall initially pump the well with air until the well is developed to the point that yields clear sand-free water. The Contractor shall then shut off the air and allow the water in the well to return to static conditions. The Contractor shall then reopen the valve and reintroduce air into the well until water is brought to the surface by the air lift method, at which time the Contractor will close the air valve and allow water to drop back down the well and return to static condition. The Contractor shall repeat this lifting and dropping of the column of water until the water in the well becomes turbid at which time the Contractor will continuously pump the well with air until it again yields clear sand-free water. The Contractor shall repeat the above operations until the well no longer produces fine material when it is surged and backwashed as described above. The bottom of the air line shall be placed at different levels in order to facilitate development of all screened



areas, and the process repeated until all screens yield water free of turbidity when surged and backwashed.

Air lifting following surging in the completed test well shall be continued for up to 12 hours, or until the fines entering the well are decreased to acceptable levels as determined by the District's Representative.

Air lifting may be performed in conjunction with surging or swabbing. If airlifting is performed in combination with surging or swabbing, then the combined actions in the well shall be continued for up to 20 hours, or until the fines produced from the well are decreased to acceptable levels as determined by the District's Representative.

After air lifting, the fines that have accumulated in the tail pipe of the well shall be measured and bailed or pumped clean of all accumulated mud, sand, and sediment.

#### **Section 11-02-03 – Overpumping**

Upon completion of the air lifting or combined air lifting/surging process, development shall include interrupted overpumping and surging conducted with a pump capable of pumping at rates up to 300 gpm against the system total dynamic head. The pumping shall be carried out in multiple steps with no check valve or foot valve present. Unless determined otherwise by the District's Representative, the multiple steps shall include pumping rates ranging between 20 and 300 gpm against the system total dynamic head. Pumping shall be conducted in five (5) minute cycles, and shall continue a minimum of two (2) hours at each pumping rate or until acceptable standards are attained. Unless approved by the District's Representative, overpumping will be conducted for at least 30 hours.

#### **Section 11-02-04 – Other Development Methods**

If approved by the District's Representative, other effective well development methods proposed by the Contractor may be conducted for purposes of well development. Detailed descriptions of proposed alternative development methods shall be submitted to the District's Representative in writing for approval. The District's Representative shall be allowed a 24-hour grace period to consider alternative development methods prior to their implementation. The grace period shall begin upon the Contractor's written submission the proposed alternative method. The grace period shall end on the day the Contractor is notified by the District's Representative of the decision regarding alternative development methods. Notification for the purpose of ending the grace period shall be conducted verbally.

#### **Section 11-03 – Installation of Pump for Development**

The Contractor shall furnish, install, operate, and remove an acceptable pump for developing the well. The pump and prime mover shall be a variable-speed type, so that the

discharge may be varied from 20 to 300 gpm. The test pump shall have its intake set at a sufficient depth to conduct the well development specified herein. The intake will be set at approximately 150 feet below the static water surface. The pumping unit shall be complete with an ample power source, controls, and appurtenances. There shall not be any foot valves, check valves, or other one-way flow devices on the pump, drop pipe, or discharge piping and the pump bowls or impellers shall be capable of spinning backward to facilitate surging during development. The Contractor shall furnish and install discharge piping for the pumping unit of sufficient size and length to conduct water to a suitable point as specified herein in **01-08 Discharge Water**.

An accurate device for measuring the discharge rate of the pump shall be provided, installed, and maintained by the Contractor. The device shall consist of a flow meter (preferred), circular orifice, weir, or flume arrangement and shall be capable of accurately measuring the flow within an accuracy of five (5) percent, as determined by the District's Representative, throughout the 20 to 300 gpm range. The method of measuring discharge rate shall be approved by the District's Representative prior to installing the pump and discharge line. If a flow meter is used to measure discharge rate, the Contractor will provide the District's Representative with a recent certification of calibration of the meter. Estimating discharge by measuring the vertical height of the water jet from vertical discharge piping or measuring the horizontal distance of the water jet from horizontal discharge piping shall not be an acceptable measurement method in accordance with these specifications.

A sounding pipe extending from the top of the casing to the maximum anticipated drawdown depth shall be provided by the Contractor. The sounding pipe shall be of a diameter and construction such that it will easily pass a standard datalogging transducer and electric sounding probe.

## **Section 11-04 – Measurements During Development**

The Contractor shall provide all equipment and labor for the measurement of the following operating parameters during development of the test well:

- Discharge rate,
- Static and pumping water levels (with a standard manually operated water level measurement device),
- Turbidity of the discharge water in nephelometric turbidity units (NTU), and
- Sand content of discharge water.

Unless approved otherwise by the District's Representative, all measurements of the sand content shall be conducted using an Imhoff Cone or Rossum centrifugal sand sampler provided by the Contractor.

### **Section 11-05 – Completion of Well Development**

Unless determined otherwise by the District or District's Representative, well development at the test well shall be considered complete upon satisfaction of the following conditions:

1. The sand content of the discharge water shall average not more than five (5) milligrams per liter (mg/l) for a complete pumping cycle of two (2) hours duration when pumping at the designated capacity.
2. The turbidity of the discharge water is below 10 NTU.

Upon completion of development, the Contractor shall remove all sand, gravel, and other debris accumulated in the bottom of the test well.

### **Section 11-06 – Discharge Water**

Unless approved otherwise by the District's Representative, discharge water shall be disposed of in accordance with **01-08 Discharge Water**.

### **Section 11-07 – Records**

Complete records of all development work shall be maintained by the Contractor and submitted to the District's Representative. These records shall include:

- Quantity and description of any material placed into the well.
- Methods of measurement.
- Duration of each operation.
- Sand content as a function of production rate and time.
- All other pertinent information relating to conditions encountered during development.

### **Section 11-08 – Payment**

#### **Section 11-08-01 – Well Development by Surging and Airlift**

Measurement and payment shall be by the hour for active surging and/or airlifting. The price paid per hour shall include full compensation for furnishing all labor, materials, tools, and equipment necessary to develop the well by surging or airlifting in accordance with these specifications (**Bid Item 12**). Payment for disposal of discharge water during development is addressed in **01-08 Discharge Water**.

#### **Section 11-08-02 – Well Development by Overpumping**

Measurement and payment for pump operation during well development shall be by the hour of pump operation. The price paid per hour of operation during well development shall include full compensation for furnishing all labor, materials, tools, and equipment required for well development by overpumping in accordance with these specifications (**Bid Item 13**). Payment for disposal of discharge water during development is addressed in **01-08 Discharge Water**.

**Section 11-08-03 – Installation and Removal of Pump**

The lump sum price for installation and removal of the pump shall include full compensation for furnishing all labor, materials, tools, and equipment required for installation and removal in accordance with these specifications (**Bid Item 14**).

## **SECTION 12 – WELL HEAD COMPLETION**

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### **Section 12-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for well head completion at the completed test well in accordance with these specifications.

### **Section 12-02 – Casing Capping**

Upon completion of the well, the Contractor shall install a suitable threaded, flanged, or welded lockable and accessible cap on the top of the casing to prevent foreign objects and surface contaminants from entering the well.

### **Section 12-03 – Locking Above Ground Surface Completion**

Unless directed otherwise by the District's Representative, a locking steel monument shall be installed around the well casing at the surface. The closed top of the monument shall be no more than three (3) feet higher than the surrounding grade. The monument will be set in a concrete well pad that shall extend a minimum of 18 inches from the monument in all directions and be sloped away from the casing to prevent surface runoff from accumulating adjacent to the well. This completion will provide a protective enclosure for the well casing at the ground surface, with access through a hinged locking cover.

### **Section 12-04 – Casing Height**

Unless directed otherwise by the District's Representative, the well casing shall extend twenty-four (24) inches above the final ground elevation.

### **Section 12-05 – Site Grading**

The ground surface surrounding the well casing shall be graded and sloped away from the well to prevent surface runoff from entering the completed well.

### **Section 12-06 – Payment**

No separate or additional payment shall be provided for the well head completion specified herein. Payment therefore shall be included in the various bid items of work.

## **SECTION 13 – DISCRETE AND COMBINED AQUIFER ZONE WATER QUALITY TESTING**

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### **Section 13-01 – General**

The work described in this section consists of furnishing all necessary pumps, measurement equipment, discharge piping, other equipment, and other material and performing all labor for testing of discrete aquifer zone water quality in accordance with these specifications.

The Contractor shall provide the pump, power, measurement equipment, discharge piping, and all other equipment required for discrete aquifer zone water quality testing. In general, the Contractor shall be responsible for providing and maintaining the desired pumping operation schedule. The District's Representative shall be responsible for recording discharge and water level measurements (in the pumping well and any observation wells) and for specifying discharge and time schedules for the performance testing. The Contractor will assist with discharge measurements and collection of water quality samples from each discrete aquifer zone and from pumping without packers separating zones, as specified in **13-03 Testing Methods**.

### **Section 13-02 – Installation and Removal of Pump for Discrete Aquifer Zone and Combined Water Quality Testing**

The Contractor shall furnish, install, operate, and remove an acceptable pump for hydraulic and water quality testing of each discrete screened zone in the well. Each screened zone shall be tested independently in succession. The pump and prime mover shall be a variable-speed type, so that the discharge may be varied from 20 to 200 gpm. For each screen zone test the pump shall have its intake set at a sufficient depth to conduct the testing specified herein. The intake will be set at the base of the screen in each screened section. The pumping unit shall be complete with an ample power source, controls, and appurtenances and shall include packer units capable of sealing each screened zone from water entering either from above or from below. The pump, drop pipe, or discharge pipe shall be equipped with a one-way valve (foot valve or check valve) to ensure that water does not flow back in to the well when the pump is turned off. The Contractor shall furnish and install discharge piping for the pumping unit of sufficient size and length to conduct water to a suitable point as specified in **01-08 Discharge Water**.

An accurate device for measuring the discharge rate of the pump shall be provided, installed, and maintained by the Contractor. The device shall consist of a flow meter, circular orifice, weir, or flume arrangement and shall be capable of accurately measuring the flow within an accuracy of five (5) percent, as determined by the District's Representative, throughout the 20 to 200 gpm range. The method of measuring discharge rate shall be

approved by the District's Representative prior to installing the pump and discharge line. If a flow meter is used to measure discharge rate, the Contractor will provide the District's Representative with a recent certification of calibration of the meter. Estimating discharge by measuring the vertical height of the water jet from vertical discharge piping or measuring the horizontal distance of the water jet from horizontal discharge piping shall not be an acceptable measurement method in accordance with these specifications.

A sounding pipe extending from the top of the casing to near the pump intake depth shall be provided by the Contractor. The sounding pipe shall be of a diameter and construction such that it will easily pass a standard datalogging transducer and electric sounding probe.

The Contractor will ensure that appropriate sample ports are installed in the discharge manifold of the pumping system to allow for the collection of water quality samples and that these ports remain operational at all times.

Packer assemblies shall be installed by the contractor in such a way so as to adequately seal the target screened zone from the other screened zones in the well. As such, packer assemblies shall be installed above the top and below the bottom of the target screened zone. The packers may be installed as far above and below the screened section as is convenient, but shall not be placed within, above, or below screened sections adjacent to the target area. The packers shall either have an outside diameter sufficient to seal against the inside of the 6-inch diameter blank casing or shall be of the inflatable type that can be expanded once in place. In either case the packers shall be designed and installed so as to cause no damage or distortion of the screened or blank zones during installation or operation. All equipment, materials, dimensions, and methods associated with the packers shall be approved by the District's Representative prior to installing the pump or moving it between screened zones. If inflatable packer assemblies are proposed for use, the Contractor will demonstrate the operation of the equipment to the District's Representative's satisfaction prior to use.

Following completion of discrete aquifer zone water quality testing the pumping equipment will be operated in such a way as to allow water to enter from all the screened zones so that water quality samples representing the combined screened aquifers can be collected. The Contractor shall be responsible for modifying the pumping assembly to allow for operation during this combined zone testing.

The Contractor shall be responsible for removing the pumping equipment and all appurtenances following the completion of performance testing. The equipment will be removed in such a manner as to cause no damage to the completed well or surface completion. Removal of pumping equipment will not begin until the end of the recovery time, as specified in **13-05 Recovery Time**.

## **Section 13-03 – Testing Methods**

### **Section 13-03-01 – Discrete Aquifer Zone Water Quality Testing**

Upon completion of well development, a set of discrete aquifer zone water quality samples will be collected from each screened zone. This set of tests shall be scheduled to begin when the water level has recovered to static water level as determined by the District's Representative. The time period for recovery to static water level shall be determined by the District's Representative.

For this test, the pump will be installed to operate in each screened zone individually and in succession. Unless determined otherwise by the District's Representative, each discrete zone test will have durations of two (2) hours, with sample collection occurring at the end of the period.

Based on lithology from other wells in the Hollister Valley, we assume that there will be between six (6) and ten (10) individual screened zones. For the purpose of bid preparation, the Contractor shall assume that there will be eight (8) individual screen sections, so the total combined duration of pumping for discrete aquifer zone water quality testing of these sections will be 16 hours. These estimates are based upon preliminary design parameters, which are generalizations taken from other wells in the Hollister Valley. Actual testing durations will depend on the lithology encountered during drilling and on the final well design as designated by the District's Representative.

The Contractor shall be responsible for maintaining the desired pump operation schedule and for monitoring, maintaining, and recording discharge rates during each test. The District's Representative shall assist the Contractor in recording the discharge rates and shall be responsible for measuring and recording pumping water levels in the well during each discrete zone test.

The Contractor shall assist the District's Representative in the collection of water quality samples at the end of each discrete zone test. The Contractor will ensure that appropriate sample ports are installed in the discharge manifold of the pumping system and that these ports remain operational at all times. The Contractor shall reduce pumping rates or discharge line pressure to accommodate sample collection at the direction of the District's Representative.

### **Section 13-03-02 – Combined Aquifer Zone Water Quality Testing and Performance Testing**

Following completion of discrete aquifer zone water quality testing the well will operated in such a way as to allow water to enter from all the screened zones so that water quality samples representing the combined aquifers can be collected. This phase of the water



quality testing will be combined with a constant rate discharge pumping test (Performance Testing) to allow estimation of aquifer parameters.

For this test, the pump will be installed to operate in from the bottom of the well, pulling water from all screened zones. The discharge and time duration of the constant rate test shall be designated by the District's Representative and in general shall equal an anticipated rate of 50 to 100 gpm and may extend to an 8-hour time period. The constant rate test shall not begin until the well has adequately recovered from the discrete aquifer zone water quality testing. The District's Representative shall determine when adequate recovery has been achieved. Discharge shall be maintained within plus or minus five (5) percent of the designated rate. Discharge shall be checked and adjusted, if necessary, every ten (10) minutes during the first hour of pumping, every hour thereafter. The Contractor shall be responsible for maintaining the desired pump operation and for monitoring, maintaining, and recording discharge rates during test pumping. The District's Representative may assist the Contractor in recording discharge and will be responsible for measuring and recording water level measurements during drawdown and recovery.

The Contractor shall assist the District's Representative in the collection of water quality samples at the end of each discrete zone test. The Contractor will ensure that appropriate sample ports are installed in the discharge manifold of the pumping system and that these ports remain operational at all times. The Contractor shall reduce pumping rates or discharge line pressure to accommodate sample collection at the direction of the District's Representative.

#### **Section 13-04 – Aborted Test**

Failure of pump operation for a period greater than five (5) percent of the elapsed pumping time shall require suspension of the test until the water level in the pumped 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. The District's Representative shall be the sole judge as to whether recovery after an aborted test is complete. Idle time during recovery as a result of an aborted test shall not be measured as recovery time or standby time for payment to the Contractor.

#### **Section 13-05 – Recovery Time**

Time that the pumping equipment shall be left off to allow for water level recovery after the pumping test shall be designated by the District's Representative as recovery time. During recovery time, the Contractor shall take all necessary measures to protect the well from damage or contamination. Upon termination of the combined aquifer water quality test and unless approved otherwise by the District's Representative, no further work shall be completed on the well until a minimum 24 hours of recovery time has elapsed. The pump

for performance testing shall be left off and undisturbed in place during the 24-hour recovery period. The 24-hour recovery period shall not be regarded as standby time as defined in **16-01 Standby Time**.

### **Section 13-06 – Discharge Water**

Unless approved otherwise by the District's Representative, discharge water shall be disposed of in accordance with **01-08 Discharge Water**.

### **Section 13-07 – Payment**

#### **Section 13-07-01 – Installation and Removal of Pumping Equipment**

The lump sum price for installation and removal of the pump shall include full compensation for furnishing all labor, materials, tools, and equipment required for installation and removal in accordance with these specifications (**Bid Item 15**).

#### **Section 13-07-02 – Discrete and Combined Aquifer Zone Water Quality Testing**

Measurement and payment shall be by the hour. The price paid per hour shall include full compensation for furnishing all labor, materials, tools, and equipment necessary to conduct the discrete (**Bid Item 16**) and combined (**Bid Item 17**) aquifer tests in accordance with these specifications.

#### **Section 13-07-03 – Recovery Time**

No separate or additional payment shall be provided for recovery time specified herein.

## **SECTION 14 – WELL DISINFECTION**

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### **Section 14-01 – General**

The work described in this section consists of furnishing all material and equipment and performing all labor for well disinfection in accordance with these specifications. The Contractor shall disinfect the test well following the completion of the other items of work described in these specifications. The Contractor shall also disinfect the well periodically during construction as required and as requested by the District's Representative.

### **Section 14-02 – Method**

The well shall be disinfected using a solution of fresh water and acceptable chlorine compounds. The chlorine solution used for disinfecting the well shall be of such volume and strength and shall be applied so that a concentration of at least 50 milligrams per liter (mg/l) of available chlorine shall be obtained for the entire depth of the well at static conditions. All well surfaces above the static water level shall be completely flushed with the solution resulting in a wetted condition for a period of not less than 20 minutes. The disinfecting solution shall remain in the well for a period of at least 24 hours. After the 24-hour contact period, the well shall be pumped to waste until the presence of chlorine is no longer detectable. The Contractor shall provide records of disinfection to the District's Representative documenting the volumes, original concentration, time left in place, and residual concentration(s) during the disinfection of the well.

### **Section 14-03 – Discharge Water**

Unless approved otherwise by the District's Representative, discharge water shall be disposed of in accordance with **01-08 Discharge Water**.

### **Section 14-04 – Payment**

Payment for disinfection shall be on a lump sum basis per well and shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all work in accordance with these specifications (**Bid Item 18**).

## **SECTION 15 – BOREHOLE AND WELL DESTRUCTION**

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### **Section 15-01 – General**

At the District's Representative's discretion, a test well may not be installed and the borehole shall be destroyed. Upon determination that the borehole should be destroyed, the Contractor shall furnish all material and equipment and perform all labor to properly close the borehole in accordance with San Benito County Water District requirements and guidelines provided by the California Department of Water Resources (DWR) Bulletin Nos. 74-81 and 74-90 and as specified herein. The goal of destruction is to restore the hydrogeologic conditions that existed before the hole was drilled.

In addition, any partially completed or completed test well shall be considered as requiring destruction if: 1) during or after drilling the District's Representative determines the well should be destroyed, or 2) the well fails to conform to these specifications and the Contractor is unable to correct the condition or negotiate a mutually acceptable cost reduction for specification deviations. Upon determination that the well should be destroyed, the Contractor shall furnish all material and equipment and perform all labor to properly destroy the well in accordance with guidelines provided above.

### **Section 15-02 – Method**

Unless approved otherwise and in addition to other requirements specified in DWR Bulletin Nos. 74-81 and 74-90, the entire borehole or well will be filled with cement grout placed from the bottom upward by methods that will avoid segregation or dilution of material.

### **Section 15-03 – Records**

The Contractor shall submit to the District's Representative complete records of the entire destruction procedure to provide a record that the borehole/well was properly sealed. The records shall include type, depth, and quantity of sealing material; measurements of static water levels; and any changes in the well made during the destruction procedure such as perforating casing.

### **Section 15-04 – Payment**

Payment for well destruction shall be in vertical feet as determined by the final depth of the borehole or well, and shall include full compensation for furnishing all labor, materials, tools and equipment, and the performance of all the work involved in destroying the well according to these specifications (**Bid Item 19**).

## **SECTION 16 – STANDBY TIME**

### **Section 16-01 – General**

Standby time shall be paid only for inactive periods resulting from requirements of this contract. Idle time required for maintenance or failure of equipment shall not be measured as standby time. Idle time as a result of weather delays shall not be measured as standby time. Standby time shall be based on one work shift per day (8 hours) regardless of the Contractor's operating schedule. Standby time will not be paid for Saturdays, Sundays, or holidays on which work is not customarily performed, unless the Contractor has previously agreed to work on such days.

### **Section 16-02 – Payment**

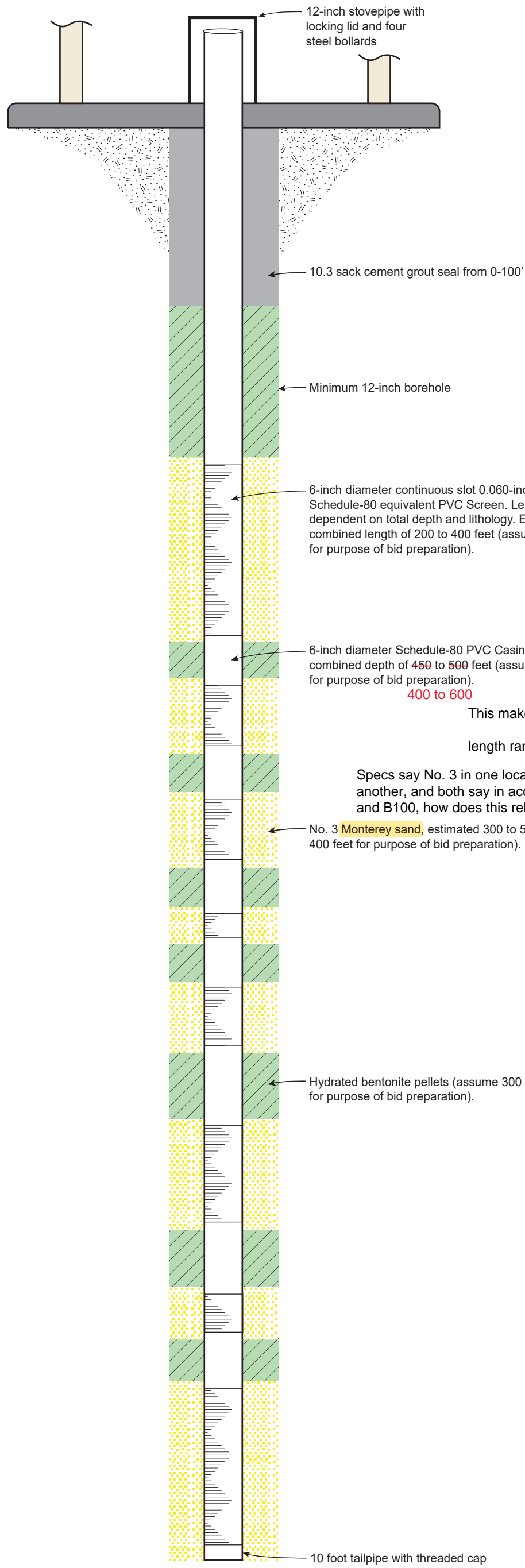
Payment for standby time shall be made at the unit price per hour as shown on the bid schedule, and only for that part of a regular eight-hour shift during which the Contractor may not continue work because of the requirements of the specifications (**Bid Item 20**).

## Figures



Depth (feet below ground surface)

0  
100  
200  
300  
400  
500  
600  
700  
800



Total Depth  
Estimated to be 800 feet

July 2020

TODD  
GROUNDWATER

Figure 2  
North County  
Hollister Test  
Well Design