

EXHIBIT A

WELL NO. 6 PUMPING UNIT REPAIR

SPECIAL REQUIREMENTS

1. The Work

The Work shall include all labor, materials, equipment, and methods required for inspection and repair or replacement of the District's existing Well No. 6 domestic water well pumping unit in accordance with the Scope of Work-Fee Schedule. The Owner reserves the right to award Schedule I as part of the well repair contract as shown in Exhibit "B". Specific work to be performed identified in Exhibit "B" includes the following general items Well No. 6 as follows:

I. Well No. 6

Remove, inspect, repair, and refurbish the existing well pump line shaft and bowl assembly or furnish a new bowl assembly (based upon existing equipment inspection), perform video inspection of well, and re-install the existing or new equipment for Well No. 6. Bidder (Contractor) shall complete all items included in Exhibit "B" Schedule I – Well No. 6 Scope of Work Fee Schedule. The Work will include all work listed in the Scope of Work-Fee Schedule and Alternate Work-Fee Schedule and as described herein.

District will notify Contractor of acceptance of total Project Amount with a "Notice to Proceed" letter for Well No. 6 work items.

- A. The Contractor shall furnish all materials, labor, equipment, tools, transportation and services for the removal of the District's existing Well No. 6 pumping unit, inspection of said pumping unit, repair of pump bowl assembly and line shaft (or re-equipping with new pump bowl assembly and/or line shaft, as required).

Well No. 6 is located in an existing masonry wall building with a removable wood roof structure which is located within Edgar Canyon approximately 1,000 feet north east of the intersection of Wildwood Canyon Road and Oak Glen Road, in the County of San Bernardino, CA. The entrance to Well No. 6 is made via an existing District access road that exits Oak Glen Road to the east, approximately 1,200 feet south of the intersection of Wildwood Canyon Road and Oak Glen Road. A location map, plan view of the site, and site photographs are attached in Appendix "B" for Well No. 6.

- B. Well No. 6 consists of an existing well which the District installed a 16" steel liner from 0' to 251' below ground surface in 1999. See attached data in Appendix "C".
- C. The Well No. 6 work includes all work set forth on the Schedule I – Well No. 6 Scope of Work-Fee Schedule and generally as described in the following items:

Well No. 6 Work to be Performed by Contractor

- Provide temporary facilities as necessary for removal of pumping facilities.
- Remove existing Well No. 6 pumping unit equipment including 40 horsepower 480 volt 3 phase electric motor, gas engine drive shaft and right angle drive, discharge head, approximately 210'± of 6" column and 1 3/16" line shaft (including couplings, centering spiders, and bearings) for water lubricated pumping unit. Tag well to determine presence of fill.
- Inspect and provide comments and/or recommendations regarding serviceability of existing pump column and shaft.
- Deliver the District's existing 40 hp electric motor from the Well No. 6 project site to the District's electrical repair Contractor, Brithinee Electric. District will arrange and pay for Brithinee Electric to inspect and perform a full spectrum vibration analysis on the existing motor and make any repairs deemed necessary to the motor. Brithinee Electric is located at 620 South Rancho Avenue in the City of Colton, CA.
- Haul column, line shaft, centering spiders, bearings, and pump bowl assembly to Contractor yard for evaluation regarding condition and serviceability of the column, line shaft, centering spiders, bearings, and bowl assembly.
- Inspect existing 210' of 6" column removed from well. Provide written report and recommendations to District of column conditions and serviceability.
- Recondition (as required) 210'± of existing 6" pump column and line shaft.
- Disassemble and inspect pump bowl assembly. Per District maintenance records, existing pump bowl assembly is a Flowserve 8M28, 7 stage assembly. Measure and record wear and damage. Provide report and recommendations to District of bowl conditions and refurbishment options (this work is to be completed in order for the District to access the existing bowl condition only, upon completion of this work, the District will then make the decision whether to reinstall the existing pumping unit, rebuild the existing bowl assembly, or replace said existing bowl assembly with a new bowl assembly). In the event the District elects to replace the existing bowl assembly, said existing bowl assembly shall be delivered from the Contractors place of disassembly to the District's Well 2 site for storage subsequent to disassembly and inspection.
- Bail well clean.
- Clarify water in preparation for initial (pre cleaning) video log. Perform color video log of well and provide comments and recommendations to District. Camera shall be capable of lateral (side) as well as axial viewing. Provide DVD disk (2 copies) to District. (Survey shall be conducted by an independent party approved by District).
- If District selects to replace the pumping unit bowl assembly and/or motor, the Contractor shall furnish a new replacement bowl assembly and/or motor. Bowl assembly and motor shall be furnished and installed to meet pumping unit and motor requirements set forth in Specification Section 11320. Fee shall be based upon replacing the existing bowl assembly with a new Flowserve, Goulds, or approved equal bowl assembly
- Repair existing pump discharge head as necessary, as required.
- Pick up and deliver the District's existing 40 hp electric motor from the District's electrical repair Contractor, Brithinee Electric, Inc. to the Well No. 6 project site.

- Install pumping unit including refurbished or new bowls, existing 6" pump column, line shaft, centering spiders, bearings and electric motor.
- Coordinate installation of Owner furnished and installed fire hose to existing recharge ponds (for water clarification) directly north east of well site. Owner will furnish and install discharge hose for well startup water clarification prior startup of well No. 6.
- Start up and performance test new and existing equipment, controls and instrumentation; Contractor shall operate pump as required.
- Disinfect well in accordance with Specification Section 11320, State of California Department of Health Service requirements and in accordance with AWWA procedures.
- Clean up well site.

Well No. 6 Work to be Performed by District's Staff

- Assist Contractor with disassembly and assembly of Well No. 6 building's removable roof. Contractor shall provide truck crane for actual roof removal activity.
 - District will perform bacteriological testing and assist Contractor with pumping unit startup and testing.
 - District will install temporary discharge hose for repair (if performed) and for well startup and testing water clarification prior to discharge.
- D. Payment for work related to the well pump repair and equipping of the well (as required) will be based on actual quantities furnished, installed, or constructed based upon final project negotiated prices in accordance with the prices set forth on the Scope of Work-Fee Schedule for various lump sum or unit price items. If information indicates that the completion of the work at any time is not warranted, the District reserves the right to terminate all further work. In such an event, the Contractor will be paid for the value of his work completed to that time on the basis of prices stated in the bid schedule.
- E. All materials, supplies, equipment, and labor, except those services expressly stipulated to be furnished by the District, shall be supplied by the Contractor. The Contractor shall leave the premises in a neat and orderly condition.
- F. The Contractor shall record and notify the District of the commencement and completion of each contract operation and work item.

2. Disposal (if required), Disinfection and Testing Water

Disposal, chlorinated water and testing water may be through a District furnished and installed discharge hose from the existing well site to a point of discharge into the District's existing recharge ponds located in the vicinity of the well site. Contractor shall coordinate well discharge with the District to ensure that existing properties are protected and that well discharge does not overtop said existing recharge ponds.

3. Authorization to Proceed

Owner will provide an Authorization to Proceed Letter for the well site to the Contractor. The Contractor will then be authorized to begin Contract Work submittal document submission, material ordering, and construction scheduling.

4. Working Hours

Contractor shall perform all work between 7:00 AM and 5:00 PM, Monday through Friday. Contractor shall not work on Owner holidays. Said holidays are as follows:

New Year's Day
Martin Luther King Jr. Day
Presidents Day
Memorial Day
Independence Day
Labor Day
Veterans Day - November 11
Thanksgiving Day
Day After Thanksgiving Day
Christmas Day

When a legal holiday falls on a Saturday, it is observed on the preceding Friday, when it falls on a Sunday, it is observed on the following Monday.

5. Permits, Certificates, Laws, and Ordinances

Contractor shall, at his own expense, procure all permits, certificates, and licenses required of him by the State of California, County of Riverside, County of San Bernardino, California Regional Water Quality Control Board, South Coast Air Quality Management District, or any other authority or agency having jurisdiction for the execution of the Work. Contractor shall comply with all federal, state, and local laws, ordinances, or rules and regulations relating to the performance of said Work.

6. Records

The Contractor shall keep records providing the following information for those items of work that are performed:

- A. A complete daily log and record on the well shall be furnished to the District.
- B. Complete log of existing materials and equipment removed from the existing wells
- C. Complete log of existing or new materials and equipment installed in existing wells
- D. As-Built Drawings/Submittals documenting final construction.

7. Project Completion Date

Project completion date shall be 30 days from the date of the Authorization to Proceed Letter for the project as issued by the District. The 30 day completion date will be adjusted for the project as necessary to provide for material acquisition delays in the event the existing pumping unit is not repaired and a new pumping unit bowl assembly is required.

8. Liquidated Damages for Delay

Contractor shall pay to Owner, as fixed and agreed, liquidated damages for each calendar day's delay in the completion of all the work beyond the time agreed upon, the amount of \$500.00.

9. Contract Information/Drawings

The following Appendices are made a part of these Contract Documents:

APPENDIX LIST
(Attached in the back of these Contract Documents)

| <u>Title</u> | <u>Appendix No.</u> |
|--|---------------------|
| Specification 11320 – Deep Well Vertical Turbine Pumping Unit Technical Specifications | A |
| Well No. 6 Location Map, Site Plan Image, and Photos | B |
| Well No. 6 Well and Pumping Unit Information | C |
| Well No. 6 SCE Test Report (2001) | D |

10. Right to Change Work

District reserves the right to direct Contractor to cease work upon the well at any phase and to determine payment for work performed in accordance with the bid unit prices. District also reserves the right to either increase or decrease other related work in accordance with the aforementioned unit prices. Payment for all work shall be predicated upon work completed.

11. Payment Requests

Contractor shall submit all partial payment requests and final payment request to District. Payment requests shall be submitted by the 18th day of the month preceding the month in which payment will be made. On approval by the District, partial payments will be made by the first day of the month following the month in which request for payment is made.

All payment requests shall show all Scope of Work-Fee Items and sub items for the Contract Work. In addition, said requests shall show the percentage of completion of each Fee Item and sub item and the amount thereof, said amounts being totaled to arrive at the value of the completed Work. The net partial payment amount shall equal 95% of said total.

12. Site Maintenance

- A. The Contractor shall at all times maintain each well site and each discharge site in a neat and orderly fashion, free from trash and construction waste materials. All cleared and waste material shall become the property of the Contractor and shall be disposed of by him outside the limits of the work in accordance with applicable ordinances and regulations of governmental agencies having jurisdictions.

- B. Unattended construction materials and equipment shall be left in a manner such that they do not constitute fire hazards, exposed to vandalism, or become a nuisance or danger due to forces of nature such as rain or wind.
- C. The Contractor shall secure well head (plate off) at all times when well work is not being actively performed with a securing system acceptable to the District.
- D. Existing improvements as designated by the District, whether on the construction site or on other property, shall be protected in place and shall be provided with adequate access.
- E. While construction is being conducted, the Contractor shall provide safety in the area of construction.
- F. Contractor shall remove any sediment deposited to city streets or storm water channels on a daily basis.

13. Data to be Submitted by Contractor

Contractor shall furnish District the following data and said data must be accepted by District prior to performing any Contract Work appurtenant to specific submittal items. Data (two copies) shall be submitted directly to the District for review and acceptance or rejection. Contractor shall submit five copies of accepted data the District for distribution of same.

A. Material and Equipment Lists with Catalogs

Schedule I Pump shaft, line shaft, bearing, and coupling manufacturer's data sheets.

Schedule I Pump column and coupling manufacturer's data sheets.

B. Fabrication and Component Drawings with Diagrams

Schedule I Pumping unit bowl assembly and appurtenances.

C. Construction Schedule

Construction Schedule.

14. Contractor Cooperation and Coordination

Contractor shall cooperate with District and all jurisdictional agencies. Contractor shall establish a work schedule sufficiently in advance of work to permit coordination of work with District and other agencies. Owner will have representatives on site to observe and verify compliance with Contract Documents. Contractor shall not operate any existing facilities, including opening or closing of pipeline valves.

15. Construction Water and Power

Owner will provide a reasonable quantity of construction water free of charge from Owner's existing potable water system. Vender is notified that water pressure near the well facilities

consists of low pressure water supply and pumps will be necessary if high pressure water delivery is required. Contractor shall apply for an Owner supplied meter. Contractor shall furnish and install Owner approved backflow device (as necessary) and all necessary piping and appurtenances, including pumps and water trucks, necessary to convey water from Owner's meter to work location.

Contractor shall provide required power to perform all phases of work.

16. Specified Model Numbers

All model numbers used herein are provided for information only, to assist Contractor in selecting equipment that conforms to Specifications. In case of any conflict between model numbers given herein and the descriptive specifications or performance specified, the descriptive specifications and performance specified shall govern.

17. Well Protection

The Contractor shall protect open wells by installing a steel locking cover which shall be maintained in place at all times unless work within the well is actively in progress.

18. Well Disinfection

Unless otherwise stated, the Contractor shall use the following procedure to disinfect well and that the Contractor shall perform and assist District's Staff with disinfection and pump startup as described hereafter and as necessary to achieve well disinfection:

- A. Immediately prior to installation of permanent pumping equipment. Contractor shall disinfect pumping unit components with chlorine.
- B. Upon completion of well pumping unit installation, the Contractor shall disinfect the well and installed pumping unit with chlorine solution.
 - 1) Contractor shall dose the well by adding liquid chlorine solution to well to obtain required concentration of at least 100 parts per million.
 - 2) Immediately after dosing the well, District and Contractor shall pump water to ground surface until chlorine is detected and shall then allow the water to return into the well. Contractor shall repeat said procedure twice at one hour intervals.
 - 3) The well will then be allowed to stand without pumping or agitation for 24 hours.
 - 4) The District and the Contractor shall then pump the well to waste until chlorine is no longer evident, and shall continue to pump the well to waste for 15 minutes thereafter.
 - 5) The District and the Contractor shall then allow the well to stand without pumping or agitation for 24 hours prior to sampling.
 - 6) The District will then secure two (2) samples of water from the well in approved containers, and have said samples analyzed by a State certified analytical laboratory for total coliform (presence/absence), fecal coliform

(presence/absence), and heterotrophic plate count. The District will secure the first sample within five minutes of starting the pump at the specified pumping rate, and the second sample thirty minutes thereafter.

- 7) The well shall be deemed properly disinfected only if the sample analysis results indicate absence of total coliform bacteria, absence of fecal coliform bacteria, and a heterotrophic plate count of less than 500 colony forming units per milliliter (CFU/ml).
 - 8) If the sample analysis results do not indicate that the well was properly disinfected, the District and the Contractor shall repeat the entire disinfection procedure, including sampling, sample analysis, and reporting of sample analysis results.
- C. After 24 hours, the Contractor will assist the District, as necessary, to secure two samples of water from the well in approved sealed containers. District will have said samples analyzed by a State certified analytical laboratory for chlorine residual, total coliform (presence/absence), *e. coli* (presence/absence), and heterotrophic plate count. The District will secure the first sample within five minutes of starting the pump at the specified pumping rate, and the second sample thirty minutes thereafter.
- D. The well shall be deemed properly disinfected only if the sample analysis results indicate absence of total coliform bacteria, absence of *e. coli* bacteria, and a heterotrophic plate count of less than 500 colony forming units per milliliter (CFU/ml).