

CITY OF SANTA ROSA  
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES  
FROM: JILLIAN TILLES, ASSOCIATE CIVIL ENGINEER  
TRANSPORTATION AND PUBLIC WORKS DEPARTMENT  
SUBJECT: PROJECT WORK ORDER APPROVAL – PROFESSIONAL  
ENGINEERING SERVICES FOR FARMERS LANE  
GROUNDWATER WELL FACILITY EVALUATION PHASE 2

AGENDA ACTION: MOTION

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RECOMMENDATION

It is recommended by the Water Department and the Transportation and Public Works Department, that the Board, by motion, approve a Project Work Order (PWO) under the Master Professional Services Agreement with West Yost & Associates, Inc. of Pleasanton, California, to provide Professional Engineering Services for Farmers Lane Groundwater Well Facility Evaluation Phase 2, with a total amount, including Amendments A and B of this PWO, of \$571,900.00.

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EXECUTIVE SUMMARY

The Farmer's Lane Well Facility upgrades evaluation has entered into the design phase for the well rehabilitation and repairs. As part of the project, new submersible pumps with Variable Frequency Drive (VFD) controls will be installed at W4-1 and W4-2 to produce a combined flow of 2500 gallons per minute. The current budget does not account for geotechnical, structural and electrical design costs needed to complete the design for reconstructing the well houses; ensuring climate control for electrical equipment; and providing security and aesthetics at these facilities. Additional budget is also included to assist the City in determining eligibility for energy efficiency incentives through the PG&E Water Infrastructure and System Efficiency (WISE) program, and to prepare a separate Bid for pre-purchasing the pumps and electrical equipment. Both items typically have long lead times and pre-purchasing the equipment will allow the contractor to complete the construction when the well facility is not in use (from October, 2017 to April, 2018). The additional budget requested is \$106,700.00, increasing the total budget to \$571,900.00.

## BACKGROUND

In August 2014, the Farmers Lane Well Facility Evaluation was initiated to determine the scope of work needed to rehabilitate the Farmers Lane Wells and Treatment Plant. The evaluation addressed production loss from the wells, water quality changes in the produced waters that have affected the treatment process effectiveness, the process and control reliability at the facility, and facility safety/OSHA compliance issues.

At the conclusion of Phase 1, the City was presented with findings and recommendations for the well and facility upgrades. One of the key recommendations is to set the pump bowl assemblies at a greater depth in both Well 4-1 and Well 4-2. This would also require replacing the existing 75 horsepower pumps with higher horsepower pumps and adding variable frequency drives to provide a more consistent flow rate at 2,500 gallons per minute over the typical 7.5-month extended pumping season. In order to provide the higher capacity pumps, electrical upgrades and new power service will be required at both well houses. Additionally, electrical controls will be placed into the well houses to provide for better climate control, security and site aesthetics, which will require the construction of two new buildings.

The second key recommendation is to address the naturally occurring dissolved gases at the treatment plant. To effectively remove the naturally occurring gases, the pressure has to be lowered to below 3 pounds per square inch to separate the gases from the water. This will require that the water be pumped from the wells into two degassing tanks. This modification will be a part of the design for water treatment plant upgrades.

Due to overall cost of the well and treatment plant upgrades, the City has decided to complete the work in two phases: Design and construct the well upgrades in FY2016/2017 and design and construct the treatment plant upgrades in FY 2017/2018.

## PRIOR BOARD OF PUBLIC UTILITIES REVIEW

Not Applicable

## ANALYSIS

Amendment B to the PWO addresses out of scope geotechnical, structural and electrical work needed to construct the new buildings to complete the well upgrades. The proposed improvements may be eligible for energy savings rebates through PG&E's WISE program. While the City will take the lead in the application process, the City has requested the consultant provide technical assistance regarding the proposed improvements as eligibility is determined. Additional budget is also included to assist the City in determining eligibility for energy efficiency incentives and to prepare a separate Bid for pre-purchasing the pumps and electrical equipment. Both items typically have long lead times and pre-purchasing the equipment will allow the contractor to complete the construction when the well facility is not in use (from October, 2017 to April, 2018).

### FISCAL IMPACT

This project is being funded by the Water Department. The engineer's estimate for the well upgrades is approximately \$2 million. The current consultant design fees, which included Phase 1 of the Farmers Lane Well Facility evaluation, is \$571,900.00. This is approximately a \$106,700.00 increase from the previous contract price of \$465,200.00.

The engineer's estimate for the water treatment plant upgrades is approximately \$2.5 million. The fees and scope of work for the design of the treatment plant upgrades is approximately \$415,000 and will be executed with a separate PWO at the beginning of the FY 2017/2018.

### ENVIRONMENTAL IMPACT

This action is exempt from the California Environmental Quality Act (CEQA) because the project design process does not have a potential for resulting in a direct physical change in the environment, pursuant to CEQA Guideline section 15378.

### BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

None

### ATTACHMENTS

- Attachment 1 – Project Work Order Agreement

### CONTACT

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