

**CITY OF SANTA ROSA TRANSPORTATION AND PUBLIC WORKS
PROJECT WORK ORDER NO. A010032-2011-12B**

PROJECT NAME: **FARMERS LANE GROUNDWATER WELL FACILITY
EVALUATION PHASE 2**

CITY PROJECT MANAGER: **JILLIAN TILLES**

CONSULTANT PROJECT MANAGER: **GERRY NAKANO**

SCOPE OF SERVICE: See Consultant's Scope of Services/Proposal for Services and Fee Schedule dated January 6, 2017, attached as Exhibit B-1.

START DATE: **FEBRUARY 2017**

COMPLETION DATE: **JUNE 2018**

CHARGE NUMBER FOR PAYMENT: **55691**

NOT-TO-EXCEED AMOUNT FOR THIS PROJECT: **\$106,700.00**

261
AA

TERMS AND CONDITIONS: This Project Work Order is issued and entered into as of the last date written below in accordance with the terms and conditions set forth in the "Master Professional Services Agreement with West Yost Associates, Agreement No. A010032," dated November 1, 2011, "Project Work Order No. A010032-2011-12, dated September 25, 2015, and "Project Work Order No. A010032-2011-12A, dated February 22, 2016, which are hereby incorporated and made part of this Project Work Order. In the event of a discrepancy or conflict between the terms and conditions of the Project Work Order and the Master Agreement, the Master Agreement shall govern.

PROJECT WORK ORDER HISTORY

Original Project Work Order No. A010032-2011-12	Amount: \$435,200.00
Amendment No. A010032-2011-12A	Amount: \$ 30,000.00
Amendment No. A010032-2011-12B	Amount: <u>\$ 106,700.00</u>
	Total: \$571,900.00

CITY OF SANTA ROSA,
A Municipal Corporation

By: _____
Daniel J. Galvin, III
Chair, Board of Public Utilities

Date: _____

WEST YOST & ASSOCIATES, INC.
A California Corporation

By: _____
Name: Jeffrey D. Pelz
Title: Vice President

Date: 1/18/17

By: _____
Name: Dianne L. Lee
Title: Secretary

Date: 1/18/17

APPROVED AS TO FORM:

By: _____
Santa Rosa City Attorney's Office

Attachments: Exhibit B-1 - Consultant's proposal and fee for services for this Project Work Order



January 6, 2017

SENT VIA: EMAIL

Ms. Jillian Tilles, PE
Associate Civil Engineer
Transportation & Public Works Department
Capital Projects Engineering – CIP Team 2
City of Santa Rosa
69 Stony Circle
Santa Rosa, CA 95401

SUBJECT: Farmers Lane Groundwater Wells: Phase 2 Work Plan – Budget Augmentation
Request for Design of Selected Electrical Power Option

Dear Jill:

The purpose of this letter is to describe the budget augmentation request which corresponds to the additional, out-of-scope work items requested by the City of Santa Rosa (City) and the associated level of engineering work effort that will be incurred during Task 3: Design of Selected Electrical Power Option for the Farmers Lane Groundwater Wells Phase 2 work plan. As described in our December 11, 2015 budget augmentation request for Task 2: Confirmation Pump Testing, "Based on our initial discussions with City Ops staff about the existing power supply constraints at Station 4, the power system evaluation/solution may also require out-of-scope work effort and the need for a corresponding budget augmentation. The cost of this budget augmentation cannot be determined until the analysis of options is completed, but it is highly likely that additional design time and effort will be required."

The proposed changes discussed in this letter will alter the current Task 3 scope and budget in two ways:

1. Design of City-requested Option 2A: The need to provide additional geotechnical, structural, and electrical design services in support of two proposed well buildings required to replace and expand the existing W 4-1 and W 4-2 pump houses to accommodate the new required Motor Control Centers and other electrical equipment; and
2. Pre-Purchase Documents: Prepare technical specifications and drawings for the City to use in pre-purchasing long-lead time items such as the pumps and certain electrical equipment.

These changes are described below.

DESIGN OF CITY-REQUESTED OPTION 2A

The approved work plan, dated August 31, 2015, included a nominal fee for a structural engineer to design equipment pads and flow meter vaults for "Option 2" (installing a new electrical service at Well 4-2). During development and review of the alternatives, it was recommended that the proposed electrical equipment be placed in buildings for better climate control, security, and site aesthetics. The structural, electrical, and geotechnical work needed to design the two proposed new buildings was not included in the approved work plan budget (Project Work Order 5). Therefore, West Yost requests these services be added to the work plan with a corresponding budget augmentation. The required out-of-scope geotechnical, structural, electrical, and work to design the buildings is discussed below.

The City has also requested West Yost's assistance in reviewing the requirements of PG&E's Water Infrastructure and System Efficiency (WISE) Program, meeting with PG&E staff, and determining if the proposed improvements may be eligible for financial or other assistance. Because the work effort that will be required is not fully defined, West Yost has allocated a maximum of 24 hours of senior staff time. This allocation will likely be sufficient for helping the City determine eligibility, but may not be sufficient to complete application forms and document compliance with the program. If the City proceeds with applying for assistance under the WISE Program, additional level of effort and corresponding budget augmentation may be required and can be better defined and discussed at that time.

Geotechnical

The purpose of the geotechnical study will be to evaluate the soil and geologic conditions at the site to provide geotechnical conclusions and recommendations for the design and construction of the Project. One boring at each well site (two borings total), on the order of 20 to 40 feet deep using a track-mounted auger rig, will be drilled. The borings are anticipated to be drilled in the City-owned parking space adjacent to Well 4-1 and in the landscaping area east of Well 4-2. In addition, to try to better define observed settlement issues at the S-4 Pump Station building, a shallow boring will be drilled near the front door of the S-4 Pump Station building (at a location to be coordinated with Operations staff). Drilling cuttings will be removed from the site and disposed of properly. Samples will be tested for moisture content, dry density, shear strength, expansion potential (Expansion Index) and classification (Atterberg Limits and percent of silt and clay). The geotechnical report will describe seismic hazards; site preparation and treatment of weak, porous, compressible and/or expansive surface soils; support of concrete slabs on grade; backfilling of trenches; and other geotechnical design criteria as appropriate.

Structural

Proposed additional structural design includes the proposed well buildings at Well 4-1 and Well 4-2, including the building foundations. Structural design for the transformer and electrical equipment pads, and the flow meter vaults, is already included in the currently authorized scope and budget.

Electrical

Proposed additional electrical and instrumentation design is required only for the new pump building electrical components. Electrical design for the proposed well pump motors, motor control center, variable frequency drives, and site electrical work has already been included in the currently authorized scope and budget.

PRE-PURCHASE DOCUMENTS

To expedite delivery of some equipment that have long expected lead times, the City has decided to pre-purchase some of the equipment. The anticipated equipment that the City will pre-purchase includes:

1. Submersible Pump for Well 4-1
2. Lineshaft Vertical Turbine Pump for Well 4-2
3. Metering/Main Switchboard
4. Motor Control Center
5. Variable Frequency Drives (150 HP for Well 4-1 and 200 HP for Well 4-2)

Work will include preparing equipment procurement technical specifications and drawings, providing the City with a list of possible vendors, and providing an equipment cost estimate. West Yost will also prepare a specification section to install Owner-furnished equipment as part of the construction technical specifications for the Project.

REQUESTED BUDGET AUGMENTATION

The requested budget augmentation for the additional work described above is \$106,700 (\$86,700 + \$20,000), as shown in the following table.

Revised Budget Summary for Farmers Lane Well Phase 2 Services, dollars				
Tasks	Current Budget	Proposed Budget Augmentation		Proposed Augmented Budget
		Design of Option 2A	Pre-Purchase Documents	
Task 1. Electrical Power Options Evaluation	57,000	—	—	57,000
Task 2. Confirmation Pumping Tests	239,300	—	—	239,300
Task 3. Design of Selected Option	126,600	86,700	20,000	233,300
Task 4. Engineering Services During Construction ^(a)	—	—	—	—
Task 5. Project Management and Meetings	12,300	—	—	12,300
Contingency (~8%)	30,000	—	—	30,000
Totals	465,200	86,700	20,000	571,900
^(a) Not part of this currently proposed work effort.				

Amount Approved with GS Tilles

Ms. Jillian Tilles, PE

January 6, 2017

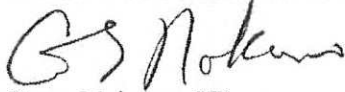
Page 4

An updated Conceptual Schedule showing the revised approach is enclosed. As shown, if the project keeps moving as indicated, the construction work at the wells would take place beginning November 2017 with substantial completion by May 2018. As instructed by City staff, West Yost is proceeding with this work plan and is actively working on the technical specifications.

Please let me know if you have questions or require additional information.

Sincerely,

WEST YOST ASSOCIATES

A handwritten signature in black ink, appearing to read "Gerry Nakano".

Gerry Nakano, PE

Vice President

cc: Mr. Andy Allen, PE - City of Santa Rosa

Enclosure: Conceptual Schedule for Farmers Lane Wells 4-1 and 4-2
Rehabilitation and WTP Improvements

Conceptual Schedules for Farmers Lane Wells 4-1 and 4-2 Rehabilitation and WTP Improvements

Conceptual Schedules for Farmers Lane Wells 4-1 and 4-2 Rehabilitation and WTP Improvements																																				
Tasks	Fiscal Year 2016-2017												Fiscal Year 2017-2018												Fiscal Year 2018-2019											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May				
Wells 4-1 and 4-2 Schedule																																				
Notice to Proceed		◊																																		
Design Period Services ^(A)				Δ			Δ	Δ																												
Notice to Proceed with Pre-Purchase Specs			◊																																	
Develop Pre-Purchase Specs					Δ																															
City Bid and Award for Pre-purchase Items																																				
Supplier Submittals and Manufacturing																																				
City Bid and Award																																				
Construction Period																																				
Pre-Construction Period																																				
Constructors Period																																				
Post-Construction Period																																				
Water Treatment Plant Improvements ^(B)																																				
Develop Scope of Work and City Approval																																				
Notice to Proceed																																				
Design of Facility																																				
City Bid and Award																																				
Construction Period																																				
Pre-Construction Period																																				
Construction Period																																				
Post-Construction Period																																				

^(a) Includes PDR and 90% Draft review submittals and assumes a one-week City review period for each submittal.

^(a) These design services are not currently authorized by the City.

West Yost Task
City Task
Contractor/Supplier Task
◊ Notice(s) to Proceed
Δ West Yost Deliverables:

Basis of Design Memorandum - late January 2017
90% Design Plans and Specifications - early April 2017
Final Plans and Specifications - early May 2017
Pre-Purchase Technical Specifications - late February 2017

2017 Billing Rate Schedule

(Effective January 1, 2017 through December 31, 2017)*

POSITIONS	LABOR CHARGES (DOLLARS PER HR)
ENGINEERING	
Principal/Vice President	\$273
Engineering/Scientist/Geologist Manager I / II	\$251 / \$263
Principal Engineer/Scientist/Geologist I / II	\$229 / \$243
Senior Engineer/Scientist/Geologist I / II	\$205 / \$215
Associate Engineer/Scientist/Geologist I / II	\$182 / \$195
Engineer/Scientist/Geologist I / II	\$147 / \$170
Engineering Aide	\$83
Administrative I / II / III / IV	\$75 / \$94 / \$114 / \$126
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	\$250 / \$260
Principal Tech Specialist I / II	\$230 / \$240
Senior Tech Specialist I / II	\$210 / \$220
Senior GIS Analyst	\$200
GIS Analyst	\$189
Technical Specialist I / II / III / IV	\$130 / \$150 / \$170 / \$190
CAD Manager	\$159
CAD Designer I / II	\$123 / \$138
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	\$261
Construction Manager I / II / III / IV	\$159 / \$170 / \$182 / \$227
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$138 / \$153 / \$170 / \$177
Apprentice Inspector	\$125
CM Administrative I / II	\$68 / \$91

- Hourly rates include Technology and Communication charges such as general and CAD computer, software, telephone, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside Services such as vendor reproductions, prints, shipping, and major West Yost reproduction efforts, as well as Engineering Supplies, etc. will be billed at actual cost plus 15%.
- Mileage will be billed at the current Federal Rate and Travel will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness, research, technical review, analysis, preparation and meetings billed at 150% of standard hourly rates. Expert witness testimony and depositions billed at 200% of standard hourly rates.
- A Finance Charge of 1.5% per month (an Annual Rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

* This schedule is updated annually

2017 Billing Rate Schedule (continued)

(Effective January 1, 2017 through December 31, 2017)*

Equipment Charges

EQUIPMENT	BILLING RATES
Gas Detector	\$80/day
Hydrant Pressure Gage	\$10/day
Hydrant Pressure Recorder, Standard	\$40/day
Hydrant Pressure Recorder, Impulse (Transient)	\$55/day
Trimble GPS – Geo 7x	\$220/day
Vehicle	\$10/hour
Water Flow Probe Meter	\$20/day
Water Quality Multimeter	\$185/day
Well Sounder	\$30/day

* This schedule is updated annually