CITY OF SANTA ROSA TRANSPORTATION AND PUBLIC WORKS
PROJECT WORK ORDER NO. A010099-2014-17

PROJECT NAME: **ENGINEERING DESIGN SERVICES FOR CARLEY AND PETER SPRINGS WELL REHABILITATION**

CITY PROJECT MANAGER: **CASEY CLABORN**

CONSULTANT PROJECT MANAGER: **JIM MULLIGAN**

SCOPE OF SERVICE: See Consultant's Scope of Services/Proposal for Services and Fee Schedule dated August 13, 2021, attached as Exhibit B-1.

START DATE: **SEPTEMBER 2021** COMPLETION DATE: **JANUARY 2024**

CHARGE NUMBER FOR PAYMENT: **55725** CC

NOT-TO-EXCEED AMOUNT FOR THIS WORK ORDER: **$905,441.00**

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, Inc., Agreement No. A010099," dated July 24, 2014, which is 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.

CITY OF SANTA ROSA,
A Municipal Corporation

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

WEST YOST & ASSOCIATES, INC.,
A California corporation

By: Jeffrey D. Pelz (Oct 6, 2021 16:11 PDT) Date: Oct 6, 2021

Name: Jeffrey D. Pelz

Title: Vice President

By: Elizabeth Drayer (Oct 6, 2021 11:01 PDT) Date: Oct 6, 2021

Name: Elizabeth Drayer

Title: Secretary

APPROVED AS TO FORM:

By: Jessica Mullan (Oct 14, 2021 09:27 PDT)
Santa Rosa City Attorney's Office

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

6 SCOPE OF SERVICES

This section presents our proposed scope of work, which is aligned with the City's RFP. The project will be executed in three phases with project management, meetings, and quality assurance/quality control (QA/QC) integral to each phase.

Project Management and Meetings

Project Management. Project management includes those general management activities that are not specific to any one task, including overall program management; coordination of activities and communication with City staff; coordination and management of West Yost subconsultants; quality control and quality assurance (QA/QC) activities; and invoicing. The Project duration is anticipated to be approximately 26 months.

Meetings. Proposed meetings include:

- **In-person meetings:** Five (5) in-person meetings are assumed:
  - Project kick-off meeting.
  - Meeting to receive and discuss City comments on the Draft Preliminary Design Report (PDR).
  - Well Equipping Design Review Meetings at 40%, 75%, and 100% design.
  - No meetings have been budgeted to receive City comments on the Draft Well Drilling technical specifications (although a conference call to receive and discuss City comments is budgeted).

- **Biweekly Project Status Conference Calls:** Up to fifty (50) conference calls are assumed.
- **City Council Meeting:** If requested, West Yost will provide City staff with technical support during preparation for a City Council meeting to discuss the PDR. Although not required in the City's requested scope of services, if requested by City's staff, a West Yost staffer can also attend this City Council meeting to provide technical assistance in responding to Council questions.
- **Attend Prebid Meetings** for both the replacement well and the well facility contractor bid packages.

Monthly conference calls will be initially scheduled between the West Yost project manager and the City's project manager, plus others by specific request. The in-person meetings would include a broader group to be determined, and as requested by the City. If additional meetings or unanticipated project management activities are required, these can be provided with a corresponding budget and schedule augmentation.

QA/QC. QA/QC protocols will be implemented continually throughout the project. This will include thorough internal review prior to submittal of every project deliverable. The internal review will be led by a principal engineer or hydrogeologist who will not be involved in the project on a daily basis. The internal reviewer will check documents, confirm calculations, address constructibility issues, and recommend design improvements.

Project Management Deliverables: West Yost will prepare the agenda for in-person meetings and monthly conference calls, plus monthly invoices with a brief description of activities completed during the previous month.

Phase 1 Pre-Design Services

Background Data Review: West Yost will obtain and review the City's available records for the Carley and Peter Springs wells including original well construction logs, record drawings, water quality testing data, and inspection, service, and maintenance logs. West Yost will also conduct a site inspection with City staff to inventory the well equipment and create a list of site features and concerns that should be considered in the design process. The information provided by the City will be compiled with West Yost's records of past work conducted at the site and well completion logs of other wells completed in Sonoma Volcanics.

Water Quality Assessment: West Yost will use the existing equipment to collect water samples from each of the wells. We will analyze the samples for standard water quality parameters and for constituents affecting the efficacy of potential water treatment methods.

Site Survey: Once the site survey is received from the City, West Yost will prepare up to three (3) draft site layouts in PDF format for City review and comment. Once the City has selected a site layout, the location of the replacement Carley Well can be staked for construction.

Geotechnical Evaluation: The site was damaged during the previous drought by subsidence of expansive soils underlying the site and in the Idaho Drive neighborhood. The site geotechnical situation is critically important. Both the geotechnical engineer and structural engineer have worked together with West Yost at other sites with expansive soils and will develop geotechnical, structural, and mechanical improvements to protect the facility in the event of continued soil movement. Some of the approaches may be to excavate expansive soils and backfill with non-expansive soils, designing the building to withstand differential settling, and adding flexible couplings (similar to the double ball joint expansion coupling at Emergency Well 7 at A Place to Play Park). Also provided in this task will be a Well Corrosion Analysis and Material Selection Report by JDH Corrosion Consultants to determine corrosion properties and recommend corrosion protection for buried elements.

Phase I Deliverables: West Yost will provide a draft TM discussing the relevant findings of the background information review, results of water quality analysis, geotechnical recommendations, and a design concept for the Carley replacement well. The TM will include recommended project phasing, a projected timeline, and preliminary estimates of construction costs. West Yost will provide a final TM following incorporation of City comments.

Phase 2 Engineering Design Services

DESIGN OF THE CARLEY WELL

Design period services are focused on preparing the final technical specifications and drawings for the City's use in procuring the services of a qualified, licensed C-57 water well drilling contractor to construct the Carley replacement well. Proposed activities include:

- Prepare draft final technical specifications and drawings for drilling of the pilot hole, discrete water quality sampling from specific zones, construction of the replacement well, and abandonment of the existing Well. Preliminary well design will be based on lithologic log and cutting samples collected during drilling of the pilot boring, geophysical logs, formation sieve analyses, and discrete water quality sampling of specifically encountered zones.
- Modify draft final technical specifications and drawings to reflect review comments received from City. (One meeting with City staff to receive/review City comments has been

budgeted. It is also assumed that the City will provide West Yost with a consolidated set of written comments from which final modifications will be made).

- Provide final technical specifications and drawings, sealed by a professional engineer or registered geologist, and send to the City for City advertising and selection of a qualified, licensed well drilling contractor.

DESIGN/EQUIPPING OF THE CARLEY AND PETER SPRINGS WELL FACILITIES

Engineering design services includes design of the Carley Replacement Well and facilities and the design of improvements for the Peter Springs Well. Design period services for the well facilities are focused on preparing the bid package for the City's use in obtaining bids from general contractors. Proposed activities include: prepare a preliminary design report to document proposed improvements; prepare design drawings and technical specifications for improvements at the well site; design of connecting utilities up to 300 feet beyond the pump station fence line; draft design drawings for City review at the 40%, 75%, and 100%, technical specifications at the 75%, and 100% review stages in PDF and/or Word format, and construction cost estimates at all levels, with a more detailed construction cost estimate following the 100% Design Submittal. West Yost will meet with City staff to review and discuss City comments on draft design documents and modify documents as required to reflect comments received and submit an estimate of probable construction cost with each design submittal. West Yost has attached the City of Santa Rosa Design Services Terms for Capital Improvement Projects in Appendix B.

West Yost will also support the City during the Division of Drinking Water (DDW) permit amendment application and review process. Work will include coordinating with the DDW District Engineer, preparing the source water assessment report using the TurboSWAP software, and submitting the report electronically to the DDW's Drinking Water Source Assessment and Protection Program.

Specific activities required to complete this task are:

- Reviewing the Environmental Data Resources database report,
- Identifying Potentially Contaminating Activities (PCAs) in the vicinity of the proposed well,
- Entering the PCAs from the database report into the TurboSWAP program,
- Preparing a map of the radial distance from the proposed well to the PCAs, and
- Electronically submitting data through the TurboSWAP program.

We are assuming the City will provide the EDR database report and the TurboSWAP program files to be used in this effort.

Bid period services for both the well and well facility work are primarily focused on assisting the City in selecting a general contractor. The City will take the lead role/responsibility for the execution of this work, with West Yost's support. Proposed activities include assisting the City with the bidding process, responding to contractor questions, and issuing addenda, if needed.

The Peter Springs Well casing and facilities will be modified and improved as part of the project. After modification of the facilities, the well will continue to be used for irrigation and as a supplemental emergency supply. Modifications will include but are not limited to replacing the submersible pump, installing a pitless adaptor, potentially installing a VFD, extending the Peter Springs well casing above ground, potential design of a pressure tank and installing a protective enclosure.

Phase 2 Deliverables: West Yost will prepare draft and final technical specifications for the abandonment of existing well and the construction of the replacement well. West Yost will provide 40%, 75%, and 100%, and Final Design Plans and Technical Specifications for the well equipment and facilities and estimates of probable construction costs with each deliverable submittal.

Phase 3 Engineering Services During Construction

Though not specifically requested in the RFP, engineering services during construction of the well are included in response to the Q&A sheet issued by the City. Throughout the well construction activities, the West Yost team will respond on behalf of the City to requests for information and change orders from the contractors and issue field orders if needed. West Yost will review the contractor's submittals, monitor the contractor's compliance with required technical specifications during drilling, and document the well construction. The West Yost team will work with City inspectors to develop a specific project implementation schedule. We will then coordinate our field geologist's activities with the City and the contractor to verify the proper collection/bagging of cutting samples, logging of observed materials, collection of depth-specific water quality samples, noting of drilling penetration rates, and proper collection of other required field data. Our professional geologists, certified engineering geologists, or certified hydrogeologists will confirm and log soil cuttings and generally be on site to observe critical field activities

and to make recommendations at the appropriate times during these field drilling activities. All other contractor compliance activities will be the responsibility of the City inspectors. At the conclusion of these field activities, the field data, geophysical logging data, lithology, water quality sampling and other field observations will be compiled and summarized in a well construction report to be provided to the City.

The West Yost team will provide engineering services during the construction of the well facility features shown in the project plans and specifications, including modifications to the well building, pump installation, mechanical improvements, and site work.

Throughout the construction activities, the West Yost team will review contractors' shop drawings and other submittals, including material submittals, project schedule, and schedule of values (up to fifty [50] submittals and/or resubmittals are assumed based on the Emergency Well 7 project that has had 41 submittals so far); respond to and process contractors' submitted requests for information (up to twenty [20] are assumed), change orders (up to ten [10] are assumed per City Request for Proposals [RFP]), and field orders; provide occasional field observation by the design team and attend onsite construction status meetings led by the City's Construction Management team (up to six [6] site visits are assumed); provide design team technical design expertise whenever a change order is being considered, including, but not limited to, plan details, specifications, and cost estimates; review and comment on draft change orders (up to twenty [20] change orders are assumed); participate in final inspection and testing and start up, and make recommendations to the City regarding project acceptance; and, prepare record drawings of the final project depicting conditions as documented by the Contractor and construction manager. West Yost can also assist the City with Construction Management, Special Inspections, and soil/concrete testing during construction if desired by the City. This work has not been included in the fee estimate that is provided separately.

Phase 3 Deliverables: West Yost will provide well construction documents and a draft and final Well Construction Report documenting as built conditions. For the construction and equipping of the well facility, West Yost will provide responses to RFIs, submittals, other correspondence with contractors, and Record Drawings and Specifications based on red-line markups provided by the City's CM team and the Contractor.

City of Santa Rosa Design Services Terms for Capital Improvement Projects

Please see Appendix B for this document.

B /// APPENDIX B DESIGN SERVICES TERMS

As requested in the RFP, below is the "City of Santa Rosa Design Services Terms for Capital Improvements Projects".

Attachment C

City of Santa Rosa
Design Services Terms for
Capital Improvement Projects

Consultant shall:

I. Deliverables

1. Provide design memo summarizing project information such as environmental concerns, required right of way, water quality impacts, any non-standard conditions, and modification of City's pre-design information.

2. Provide a 40% submittal that includes: 8 sets of project plans on 22" x 34" white bond paper (typical 40, 75, 90 submittals), and 3 copies of the preliminary engineer's estimate created using the City supplied Microsoft (MS) Excel spreadsheet template. The primary scale of the drawings shall be 1 inch = 20 feet unless otherwise approved by the City. Show the plan-view alignment on the topo. Identify utility conflicts. Determine the right of way needs, and indicate the status of environmental permits.

3. Provide a 75% submittal that includes: 8 sets of project plans, 3 copies of draft Technical Specifications (based on City's MS Word "boilerplate" templates), and 3 updated engineer's estimates. Incorporate 40% review comments in project plans. Send copies of project plans to utility companies for their review.

4. Provide a 90% submittal that includes: 8 sets of project plans, 3 copies of 90% Technical Specifications, proposed edits to "front end" general specifications, and 3 copies of updated engineer's estimate. Incorporate all remaining comments into the project plans and technical specifications.

5. Provide a 100% submittal that includes: final stamped and signed mylar project plans, final Technical Specifications in electronic MS Word format, stamped and signed Technical Specifications cover sheet in PDF format (City provides MS Word format cover sheet template), an itemized Bid Sheet (MS Excel format), and proposed edits to "front end" general specifications. Final project plans shall be on archival quality white mylars (durable, dimensionally stable polyester) that are 22" x 34" and made with archival quality permanent ink that does not smear even if wet. Pencil originals and sticky backs are not acceptable.

6. Provide final approved project plans in electronic AutoCAD format, and all related files in MS Word, MS Excel, and PDF formats as appropriate.

7. Complete Consultant/City evaluations upon completion of project.

II. Software

1. Prepare project plans using Autodesk AutoCAD Civil 3D 2011 to 2016. Obtain prior written approval from the City's project manager to use a different product version of AutoCAD. Provide final approved electronic project plans to the City in AutoCAD (*.dwg) format and all related files on CD or DVD with instructions to the City regarding how to access and use the files and the interrelationships among them. These instructions shall include a list describing what is contained in each drawing (.dwg) file.

2. Prepare most other documents using Microsoft (MS) Word and Excel 2007 or more recent versions.

III. Plans

1. Submit project plans that conform to the City's drafting standards manual and contain the original unedited topographic and control layers along with the design layers. Coordinates shall be based on City's coordinate system. Consultant shall use the same coordinates provided in the topographic survey and shall not modify any value.

2. Utilize the City established plan, profile, and cover sheet templates in AutoCAD. Each plan and/or profile sheet submitted by Consultant shall include the following:

   A. Location and coordinates of control points, point number, elevation and description.
   B. Graphic scale.
   C. North arrow.
   D. Mapping showing streets (edge of pavement, face of curb).
   E. Elevations of all existing features, structures, or utilities.
   F. Match lines with appropriate sheet numbers.

3. Use City established title blocks and layer convention.

4. Indicate the plan completion percentage (40%/75%/90%) near the project title area of the border on sheet one of the plans.

IV. Special Provisions/Technical Specifications

1. Prepare Technical Specifications of the Special Provisions utilizing the City CIP supplied "boilerplate" templates. Modify only as necessary. All changes shall be highlighted by developing the technical specifications with MS Word "track changes" activated, or through a similar process.

2. Review 'front end' general specifications of the special provisions (white pages), Sections 1-9 (to be provided by City), especially Order of Work, Number of Working Days, and Liquidated Damages. Consultant shall propose changes to Sections 1-9 as necessary. However, the changes to Sections 1-9 shall be made by City Staff only.

3. Verify that all items in the engineer's estimate are covered in the special provisions and that it is clear how all work is paid for. List items in the same order and with the same title as on the special provisions. Do not add headers or footers to the technical specifications.

4. Stamp and sign final Technical Specifications cover page (utilizing the City supplied template) and submit to City in PDF format. Provide camera-ready final approved technical specifications in Microsoft Word format to City via email and/or on CD, DVD, or other format designated by City.

5. Include Order of Work or any other process-related provisions, as required.

6. Include any required environmental permits, applicable regulations, and mitigation monitoring requirements in the special provisions.

7. Identify any supplementary reports used for design and indicate they are available for contractor viewing during bidding. Also indicate that such reports are not part of the contract.

8. Include any project specific provisions relating to the public outreach process in the special provisions.

9. Verify that the project plans and special provisions reference the same project name.

V. Design information for Pipeline Improvements

The following shall not be construed as all inclusive. It is the responsibility of the consultant design engineer in responsible charge of the project to adhere to local standards of care and commonly accepted design principles.

1. City will provide Consultant with water, sewer, and storm drain base maps, available record plans for existing water and sewer system, as well as underground utility base maps from Pacific Gas & Electric, Comcast, and ATT. Utility base maps are schematic and should not be used for determining locations of existing underground utilities. After reviewing maps, advise City where utility markout requests should be made to PG&E, Comcast, and ATT before proceeding with design.

2. Detail project plans sufficiently with enough survey information so that the project can be completed from the project plans. The project plans should stand alone, without the need for additional information.

3. "X-Ref" the topographic survey into the design drawing.

4. Show survey control points and their coordinates on the project plans.

5. Show centerline or control line stations and coordinates at all beginning and ending points, BCs, PRCs, ECs, angle points, and tees (when control line is the pipeline alignment). Table format is acceptable.

6. Include curve data for each curve: (delta, radius & length) and tangent data: (bearing and length).

7. Show enough information on the project plans so that the centerline (or control line) is locatable in the field from the information on the plans. This can be accomplished in several ways:
   1. Show coordinates of entire centerline. A table showing BCs, PIs, ECs, etc. is the preferred format, or;
   2. Show ties to existing monuments at beginning and ending of centerline or control line, or;
   3. Show coordinates and basis of bearings at beginning and end of centerline or control line.

8. Reference the locations of improvements on the project plans using one of three acceptable methods:
   1. Where a single pipeline, such as a sewer, water, or storm drain is to be installed Consultant may show station runs along the alignment of the pipeline. Alignment shall contain all information listed under Items 5 & 6 of this section.
   2. Where multiple improvements (sewer, water, storm drain, curb and gutter, etc.) are to be referenced by station and offset to a single centerline or a control line, all centerline information listed under Items 5 & 6 of this section shall be shown on the plans. If project includes reconstruction of the roadway structural section position centerline at appropriate location to establish the street crown line.
   3. Coordinates - This method uses coordinates to locate and control the layout of all planned improvements. All BCs, PIs, PRCs, ECs, angle points, beginnings, endings, etc. of all improvements are indicated individually on each plan sheet or listed in a table.

9. Include striping information in the project plans. Separate plan sheets may be used if necessary.
   1. Striping plans are used by the survey crew to lay out the location of the new striping on the pavement. The striping shall be able to be located and laid out from the information on the plans alone. This information shall be presented on the plans so that it can be located and laid out in the field using only a pocket tape and a rag tape.

   2. Show lane widths, lengths or turn pockets and tapers, lengths to transition points, angle points, BCs and ECs on the plans. Lengths can be referenced to cross walks, stop bars, curb returns, angle points in the curb and gutter or other easily identifiable features.

10. Locate and accurately depict (including drawing to scale) all underground utilities on the project plans.

11. Check for potential utility conflicts. Advise City on appropriate pothole locations, if any, to confirm clearances. Show water main in profile with grade changes or drop structures necessary to clear conflicts. Water valve data may be helpful.

12. Offset alignments for replacement water mains from existing water mains a minimum of four feet in order to maintain water service during construction.

13. Complete the profile and details after the City approves the alignment.

14. Verify sewer and water service to each address.

15. Check water service and sewer lateral locations for conflicts with trees or other obstructions.

16. Show all plugged wyes on existing sewer mains. If the TV logs indicate that a wye is plugged, do NOT draw a lateral in its place.

17. Include "in" or "out" in invert grade callouts (e.g. INV 6" IN = 175.25', INV 8" OUT = 175.15'). Please use N/S/E/W references for secondary clarification only.

18. Include an item in the technical specifications and the estimate for Leaded Joint Removal. Where leaded joints are encountered during excavation of existing water mains (such as during tie-in operations) the excavation will be modified so as to remove the leaded joint. Section 4-1.03B of the Standard Specifications should be explicitly excluded from contract language for this item.

19. Assess the potential for rocky soil conditions and advise the City as to the need for geotechnical borings during design.

20. Evaluate potential curb & gutter, sidewalk, and valley gutter replacement needs. If areas of potential replacement are significantly greater than would normally be required for completion of the utility work, the City may elect to include additional replacement of these features in the construction contract.

21. Show pavement rehabilitation details on project plans per City Materials Engineering input.

22. Provide centerline profile and structural cross-sections at maximum 50' intervals along the project limits for projects that include a roadway construction or reconstruction component.

23. Projects that include curb ramp improvements, at a minimum, shall show station and design grades at all Conforms, BCs, ECs, PRCs, Grade Breaks and Centerline of Pedestrian Ramp(s). Include curve data for each curve: (delta, radius & length).

24. Design pedestrian ramps adjacent to areas to be paved as part of the project where they do not currently exist.

25. All pedestrian ramps shall be directional ramps. Design Exception Memorandums are required where directional ramps are not feasible.

VI. Construction Contract Assistance

1. Promptly respond to questions, inquiries, and correspondences concerning the project until the Notice of Completion is filed. Display Consultant's name and telephone number on the project plans and in

the special provisions. Answer all questions and resolve problems regarding the design of the project. Prepare and make City Council presentations when required. Prepare any necessary addenda to the Special provisions. Assist City in obtaining approval of the addenda. Prepare the final Engineer's estimate. Attend a pre-bid conference for the prospective bidders at City facilities or at the project site. Coordinate with the City's construction management team to solve field-related problems.

The following options will be included in Consultant's proposal, as directed by City.

VII. Environmental (As directed)

1. Assist City with environmental document processing including, but not limited to, meetings, exhibits, studies, and postings. Obtain permits necessary for construction of the project. Any provisions relating to environmental permits, regulations, and mitigation requirements shall be included in the project special provisions.

2. Provide Phase I site assessment for all easements to be acquired by the City.

3. Determine if any permits are required for project construction such as from the Army Corps of Engineers, The California Department of Fish and Game, and the RWQCB. Initiate permit process as soon as possible.

4. City will investigate underground contamination and obtain a one-time discharge permit from the City's Environmental Compliance Section of the Water Department.

VIII. *Surveying (As directed)*

1. Perform all surveying required to prepare the project plans and right of way documents, unless a topographic map is provided by City. Horizontal and vertical control monuments shall be set in the field under the direction of the City after the preliminary survey is completed. The monuments shall be of sufficient durability as determined by City and the Consultant to enable City forces to set line and grade for construction purposes. The interval between control points shall be determined by the Consultant and City prior to actual construction of the project.

2. Vertical control shall be based on the City Bench Mark datum and set to an accuracy ratio of 0.04 feet times the square root of the distance in miles. The basis for horizontal control point coordinates shall be the City's coordinate system with a minimum accuracy ratio of 1: 20,000. The engineer shall verify that all existing utilities have been marked-out in the field prior to surveying or have been plotted on the drawings.

3. Perform all topographical surveys required to prepare the project plans (1"=20') and right of way documents. The surveys shall generally include the street right of way from the back of sidewalk on one side of the street to the back of sidewalk on the other side of the street and shall include existing features, structures and utilities such as water services, cleanouts, valves, storm drain inlets/manholes, trees, etc. Dip all sewer and storm drain manholes and determine distance to top of valve nut at all critical water main locations.

4. Set control and monuments. Use the City bench mark datum and coordinate system. Show approximate right of way and property addresses on base maps.

5. Include pavement markings and complete street cross sections in survey scope of work for street-based projects. A complete street cross section includes, at a minimum: backs of sidewalks, faces of curbs, lips of gutters, and crown. Where a sidewalk does not exist, the edge of pavement and any adjacent drainage ways (top + flow line) should be surveyed for road reconstruction purposes.

IX. Right of Way (As directed)

1. Prepare and coordinate all necessary right of way descriptions and individual plats (R-sheets). Deliver original completed R sheets to the City. Obtain preliminary title reports for all affected parcels within the right of way. Provide aerial photography or field data as needed for right of way, property line, and easement determination in the field. Locate any required right of way lines, property lines, or easements for right of way purposes in the field.

X. Soils Report (As directed)

1. Develop safety and disposal plans for excavated contaminated soil in accordance with any applicable permit requirements.

2. Provide boring logs when unstable or deep excavations are anticipated.

3. Provide all documents in printed and electronic formats.

XI. Plan Coordination and Research (As directed)

1. Coordinate with and obtain approval from all affected local agencies and companies, including but not limited to the City Departments of Community Development, Transportation and Public Works, Water, Sonoma County Water Agency, Sonoma County Road Department, California Regional Water Quality Control Board, Pacific Gas and Electric Company, Comcast, and AT&T. Coordination shall include preparation and processing of all correspondences, check prints, forms, applications, permits, diagrams, viewfoils, and any other necessary items as determined by the City Engineer. This coordination shall continue until the project plans are approved by the City. The Consultant shall also be responsible for assisting the City in obtaining review and approval from any affected County, State, and Federal agencies. This assistance shall include but not be limited to applying for public funds and supplying check prints of project plans, special provisions, estimates, and right of way plats and descriptions as directed by the City. Copies of all correspondence shall be transmitted to the City.

XII. Public Outreach (As directed)

1. Assist City with all public outreach, including but not limited to correspondence, mailings, exhibits, and meetings.

		Principal Engineer/Scientist/Geologist II	Principal Engineer/Scientist/Geologist II	Senior Engineer/Scientist/Geologist II	Associate Engineer/Scientist/Geologist I	Principal Engineer/Scientist/Geologist II	Principal Engineer/Scientist/Geologist II	Associate Engineer/Scientist/Geologist I	Associate Engineer/Scientist/Geologist II	Principal Engineer/Scientist/Geologist II	CAD Designer II	Administrative III	QC Review										
West Yost Associates		PE/PS/PG II $279	PE/PS/PG II $279	SE/SS/SG II $247	AE/AS/AG I $202	PE/PS/PG II $279	PE/PS/PG II $279	AE/AS/AG I $202	AE/AS/AG II $216	PE/PS/PG II $279	CAD II $160	ADM III $126	P/VP $307	Labor								Costs		
PROJECT:		JM/AR	KL	PD/DV	AR/AK	JC	JW	TN/WJ	KT	CT	SB	AP/MC		Hours	Fee	ATM	FDG	RGH	JDH	Ewing	Drill	Sub. w/ markup 10%	Other Direct	Total Costs
Task 1	***Phase 1 Pre-Design Services***																							
1.1	Geologic Environment		2	8	32									42	$ 8,998									$ 8,998
1.2	Preliminary Site Layout		8	8		24	2	40			24			106	$ 23,382									$ 23,382
1.3	Review Well Completion Report			2										2	$ 494									$ 494
1.4	Geotechnical Evaluation			2		4								6	$ 1,610			$ 7,800	$ 7,500			$ 16,830		$ 18,440
1.5	Well Abandonment		1	2	8									11	$ 2,389						$ 45,000	$ 49,500		$ 51,889
1.6	Water Quality Testing		1	2	8					16				27	$ 6,853									$ 6,853
1.7	Pre-Design TM		2	24	8	32					8	20		94	$ 20,830									$ 20,830
1.8	Task Management	40												40	$ 11,160									$ 11,160
Subtotal, Task 1 (hours)		**40**	**14**	**48**	**56**	**60**	**2**	**40**	**0**	**16**	**32**	**20**	**0**	**328**										
Subtotal, Task 1 ($)		**$ 11,160**	**$ 3,906**	**$ 11,856**	**$ 11,312**	**$ 16,740**	**$ 558**	**$ 8,080**		**$ 4,464**	**$ 5,120**	**$ 2,520**			**$ 75,716**			**$ 7,800**	**$ 7,500**		**$ 45,000**	**$ 66,330**		**$ 142,046**
Task 2	***Phase 2 Design Of Carley Well***																							
2.1	Preliminary Design of Well		10	32	24	4								70	$ 16,658									$ 16,658
2.2	Preparation of Well Drilling & Construction Specifications		8	24	4							4		40	$ 9,472									$ 9,472
2.3	Task Management	24												24	$ 6,696									$ 6,696
Subtotal, Task 2 (hours)		**24**	**18**	**56**	**28**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**134**										
Subtotal, Task 2 ($)		**$ 6,696**	**$ 5,022**	**$ 13,832**	**$ 5,656**	**$ 1,116**						**$ 504**			**$ 32,826**									**$ 32,826**
Task 3	***Phase 2 Design of Well Equipping***																							
3.1	Preliminary Design Report					24	4	40			24	24		116	$ 22,756	$ 2,800	$ 6,000		$ 3,000			$ 12,980		$ 35,736
3.2	40 Percent Plans					32	8	60			60			160	$ 32,880	$ 8,000	$ 8,000		$ 3,000			$ 20,900		$ 53,780
3.3	75% Plans and Specs					32	8	60			60	40		200	$ 37,920	$ 9,000	$ 8,000		$ 3,000			$ 22,000		$ 59,920
3.4	100% Plans and Specs and Cost Estimate					32	16	60			60	40		208	$ 40,152	$ 10,770	$ 8,000	$ 1,500	$ 3,000	$ 13,500		$ 40,447		$ 80,599
3.5	Final Deliverables					32		60			40			132	$ 27,448	$ 8,000	$ 8,000		$ 3,000			$ 20,900		$ 48,348
3.6	Well Permitting Services				12	40			120		8			180	$ 40,784									$ 40,784
3.7	Task Management	40												40	$ 11,160	$ 2,400	$ 2,000		$ 500			$ 5,390		$ 16,550
Subtotal, Task 3 (hours)		**40**	**0**	**0**	**12**	**192**	**36**	**280**	**120**	**0**	**252**	**104**	**0**	**1036**										
Subtotal, Task 3 ($)		**$ 11,160**			**$ 2,424**	**$ 53,568**	**$ 10,044**	**$ 56,560**	**$ 25,920**		**$ 40,320**	**$ 13,104**			**$ 213,100**	**$ 40,970**	**$ 40,000**	**$ 1,500**	**$ 15,500**	**$ 13,500**		**$ 122,617**		**$ 335,717**
Task 4	***Phase 3 Services during Construction of the Well***																							
4.1	Submittal support services for well construction		12	24	10							2		48	$ 11,548									$ 11,548
4.2	Pre-mobilizaton Activities		8	32	10									50	$ 12,156									$ 12,156
4.3	Well Construction Activities		60	200	40									300	$ 74,220								$ 3,000	$ 77,220
4.4	Post-Construction Activities		16	60	20							12		108	$ 24,836									$ 24,836
4.5	Task Management	20												20	$ 5,580									$ 5,580
Subtotal, Task 4 (hours)		**20**	**96**	**316**	**80**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**526**										
Subtotal, Task 4 ($)		**$ 5,580**	**$ 26,784**	**$ 78,052**	**$ 16,160**							**$ 1,764**			**$ 128,340**								**$ 3,000**	**$ 131,340**
Task 5	***Phase 3 Services during Construction of the Above-Ground Facilities***																							
5.1	Pre-Construction Activities					24		40			8			72	$ 16,056	$ 2,000	$ 2,000		$ 500			$ 4,950		$ 21,006
5.2	Construction Period Activities					24		200						224	$ 47,096	$ 35,000	$ 10,000	$ 12,000	$ 10,000			$ 73,700		$ 120,796
5.3	Post Construction Activities					24		40			16			80	$ 17,336	$ 5,910	$ 2,000		$ 2,000			$ 10,901		$ 28,237
5.4	Task Management	40												40	$ 11,160									$ 11,160
Subtotal, Task 5 (hours)		**40**	**0**	**0**	**0**	**72**	**0**	**280**	**0**	**0**	**24**	**0**	**0**	**416**										
Subtotal, Task 5 ($)		**$ 11,160**				**$ 20,088**		**$ 56,560**			**$ 3,840**				**$ 91,648**	**$ 42,910**	**$ 14,000**	**$ 12,000**	**$ 12,500**			**$ 89,551**		**$ 181,199**
Task 6	***Contingency***																							
6.1	10% Contingency													0										
Subtotal, Task 6 (hours)		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**										
Subtotal, Task 6 ($)																								
TOTAL (hours)		**164**	**128**	**420**	**176**	**328**	**38**	**600**	**120**	**16**	**308**	**142**	**0**	**2,440**										
TOTAL ($)		**$ 45,756**	**$ 35,712**	**$ 103,740**	**$ 35,552**	**$ 91,512**	**$ 10,602**	**$ 121,200**	**$ 25,920**	**$ 4,464**	**$ 49,280**	**$ 17,892**			**$ 541,630**	**$ 83,880**	**$ 54,000**	**$ 21,300**	**$ 35,500**	**$ 13,500**	**$ 45,000**	**$ 278,498**	**$ 3,000**	**$ 823,128**
																							10% Contingency	**$ 82,313**
																							TOTAL	**$ 905,441**

WEST YOST
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1 EXECUTIVE SUMMARY

WEST YOST
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August 13, 2021

Mr. Casey Claborn, PE
City of Santa Rosa, Water Department
69 Stony Circle
Santa Rosa, CA 95401

VIA EMAIL: cclaborn@srcity.org

RE: Engineering Design Services, Professional Services Agreement C01997 - Carley and Peter Springs Well Rehabilitation

Dear Mr. Claborn:

West Yost is pleased to present this proposal to assist the City of Santa Rosa (City) with professional services for the Capital Improvement Project C01997 – Carley and Peter Springs Well Rehabilitation project.

The Carley and Peter Springs Wells and Facility are a vital part of the City's Emergency Groundwater Supply Program (EGSP). With the Russian River watershed experiencing record low rainfall and extremely dry conditions for the second year in a row, the Carley and Peter Springs facility is more important than ever to bolster use of the City's available groundwater supply. Replacement of the Carley Well, modification of the Peters Springs Well and improvements to the well facilities will help secure the City's long-term water supply reliability, provide operational flexibility, and maximize the use and benefits of this important resource. Design and construction of the improvements need to be scheduled and implemented in a way that aligns to the City's priorities and schedules and minimizes interruption of the groundwater supply from these wells.

The West Yost team stands ready to implement the City's objectives to improve the Carley and Peter Springs Wells and Facility for emergency operations and irrigation supply, with the potential for future conversion to full-time production, with or without treatment.

The West Yost team has the local experience and exceptional professional qualifications to assess the current hydrogeologic and facility conditions, develop viable design alternatives, provide clear recommendations for the City's consideration, and deliver a successful project that meets the City's needs. The team understands the objectives, issues, significance, and urgency of the project and is committed to providing City staff with excellent professional services integrated across the required disciplines and delivered through a collaborative, focused approach.

Our approach is based on our previous hydrogeologic and engineering services on this well facility, experience with neighborhood construction logistics, a long track record of successfully partnering with the City's departments and division staff representatives, and an understanding of the City's goals and objectives. Our scope of work is organized into three phases. **Phase I** includes **Pre-Design Services** consisting of background data review, water quality assessment, site layouts, and a geotechnical evaluation. The **Phase 2 Engineering Design Services** include design of the Carley Replacement Well and facilities and improvements for the Peter Springs Well. **Phase 3** includes **Engineering Services During Construction** of the Carley Replacement Well and new well facilities for both wells. Our approach to implement the scope of work includes the following elements:

A recognition that time is of the essence: West Yost knows how important it is to the City to get these wells improved, back online and reliably serving the community. We envision facilitating a series of workshop-driven meetings with City staff to capture the City's objectives swiftly and efficiently and incorporate them in the pre-design and design. These workshops, coupled with early discussions with the City regarding vendor and materials supplier outreach and procurement, have been successful on other fast track projects we have completed.

A proven, cohesive team that will bring the efficiencies of recent experience on similar projects: Our team of local hydrogeologists and engineers have worked together on municipal well assessment, rehabilitation, design, and construction projects for the Cities of Santa Rosa, Petaluma, Milpitas, Modesto, Roseville, Woodland, and others.

Casey Claborn, PE
July 28, 2021

Technical knowledge that will result in cost-effective and reliable results for the City: Our in-depth knowledge of the City's varied hydrogeology, groundwater program, and water system and facilities, as well as our firm's extensive qualifications designing and constructing wells in fractured bedrock overlain with alluvium, demonstrate our understanding of the required work. We will apply proven approaches to developing alternatives, specifying logistics, scheduling, and producing high-quality deliverables while managing costs.

West Yost's team members and subconsultants have worked on numerous similar projects in northern California and have worked closely with the City on water supply planning and solutions since 1998. Our proposed team includes the following California Professional Engineers, Geologists, and Specialists:

- **Jim Mulligan, PE | Project Manager.** Jim will provide direct interface with you and your team. Jim has four years of experience at West Yost and 27 years of municipal water supply design and project management experience as a Water Utility Manager and Water Operations Manager for the City of Roseville and Project Engineer for California American Water. Jim is a strong team manager who brings to the City the perspective and values of a former municipal utility engineering and operations manager. Jim has an excellent rapport with staff across all disciplines and will lead the team as an extension of City staff. As with all members of our team, Jim has committed his services to the project as detailed in our proposal.
- **Peter Dellavalle, PG | Field Services Manager.** Peter has 31 years of experience and has worked closely with Jim Mulligan, Andy Rodgers, Jim Connell, and Ken Loy on the City's EGSP and numerous well projects for cities and municipalities.
- **Ken Loy, PG, CHG, CEG** and **Jeff Wanlass, PE | Quality Assurance/Quality Control Leads.** Ken is a Principal Hydrogeologist with over 32 years of experience completing municipal well projects, and Jeff has more than 20 years of experience designing municipal supply well facilities throughout northern California.
- **Jim Connell, PE | Principal Engineer for well facility design services**. Jim has 30 years of experience and has worked on multiple City water planning and EGSP well projects. Jim will be supported by experienced West Yost engineering staff and an established team of subconsultants.
- **Andy Rodgers | Principal-in-Charge.** Andy will assure the City receives the high-level of service it is accustomed to from West Yost. He has 33 years of experience and has served as project manager for numerous prior City projects.

Our team is confident that the enclosed proposal and cost estimate (provided, as requested, in a separate file) demonstrates to the City that we have the necessary qualifications, experience and commitment to collaborate with City staff to deliver a cost-effective, successful Carley and Peter Springs Well Rehabilitation Project. West Yost attended the site walk on July 27, 2021 and acknowledges receipt of the City's responses to questions sent to all prospective proposers on August 5, 2021.

The primary contact person for this submittal is Project Manager Jim Mulligan, PE. Principal-in-Charge Andy Rodgers is authorized to bind the firm for a period of up to 90 days after the submittal of this proposal. West Yost appreciates this opportunity to serve the City of Santa Rosa, and we look forward to working closely with you.

Sincerely,
WEST YOST

Andy Rodgers
Vice President, Principal-in-Charge

707.508.3672
arodgers@westyost.com

Jim Mulligan, PE
Project Manager

916.846.4719 cell
jmulligan@westyost.com

A010099-2014-17 Engineering Design Services for Carley and Peter Springs Well Rehabilitation

Final Audit Report 2021-10-06

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