

November 6, 2017

Mr. Sam Adams  
Utilities Manager  
City of Camas  
1620 SE 8th Ave  
Camas, WA 98607

Subject: **Well 6/14 Water Transmission Main Scope**

Dear Mr. Adams:

We are pleased to present this proposal to provide engineering design services for the Well 6/14 Water Transmission Main project. The objective of the project is to provide engineering and planning services to allow for the replacement of this transmission main segment. The following is a detailed breakdown of the project scope.

## **PROJECT UNDERSTANDING**

Our understanding of the project is as follows:

- Currently, the City is not able to operate both Wells 6 and 14 simultaneously as a result of the undersized transmission main between Well 14 and the connecting 24-inch transmission main.
- The intent of the design is to hydraulically size the proposed transmission main so that it can accommodate simultaneous pumping capacities from Well 6 and Well 14. The future operating capacity of Well 6 is 1,500 gallons-per-minute (gpm). When combined with Well 14, the desired capacity is 2,500 gpm.
- A SEPA checklist will be required because the transmission main will be greater than 8-inches in diameter.

## **SCOPE OF SERVICES**

### **Task 1 – Project Management**

**Task 1.1 – Project Administration.** Includes project correspondence, contract management, invoicing, budgeting, and scheduling.

**Task 1.2 – Meetings.** Includes four meetings and/or site visits in Camas.

*Task 1 Deliverables:* Invoicing, Project updates, Project schedule



## **Task 2 – Pre-Design Tasks**

**Task 2.1 – Review Available Background Documents.** Review record drawings, design reports, GIS information, and any water master plan documents provided from the City.

**Task 2.2 – Base Mapping.** Existing survey work completed in this area will be supplemented as required to show extents of the corridor and property boundaries. The survey will include surface features, utilities, survey control, legal boundaries, tree mapping, and topography. Survey will be in State Plane coordinates. The surveyed corridor will be widened to allow for some variation in the pipeline alignment (see attachment).

**Task 2.3 – Field Verify Utilities.** After receipt of the survey, a site visit will be completed to verify surveyed conditions and surface features. Potholing recommendations will be provided to the City.

**Task 2.4 – Hydraulic Analysis.** Based on desired capacities and other associated issues such as chlorine contact time, perform a hydraulic analysis and recommend the proposed pipe diameter. Identify any other relevant considerations/concerns or areas for additional analysis if required.

**Task 2.5 - Alignment Verification.** Based on all of the information gathered, and preliminary recommendations from the critical areas review, propose a transmission main alignment and any sensible alternatives on a PDF exhibit to the City.

*Task 2 Deliverables:* Base Map, Recommended Diameter, Recommended Alignment

## **Task 3 – 30% Design Submittal**

**Task 3.1 – 30% Level Design Plans.** Develop preliminary drawings to the 30% design level of completion. The drawings will depict a firm plan view alignment, utility crossings, significant valves or fittings, and any services or connections.

**Task 3.2 – Construction Cost Estimate.** Prepare a 30% level cost estimate identifying the significant cost factors and quantities.

*Task 3 Deliverables:* Plans, Cost Estimate

## **Task 4 – 90% Design Submittal**

**Task 4.1 – 90% Level Design Plans.** Develop the drawings to a 90% level of completion. The plans will include a confirmed alignment, profile, connections, fittings, and details.

**Task 4.2 – Special Provisions.** Provide special provisions to the latest edition of the Washington State Department of Transportation (WSDOT) standard specifications. Provide any supplemental specifications if required.

**Task 4.2 – Construction Cost Estimate.** Prepare a 90% level cost estimate identifying the significant cost factors and quantities.

*Task 4 Deliverables:* Plans, Special Provisions, Cost Estimate

### **Task 5 – Bid Set Design Submittal**

**Task 5.1 – Draft Bid Set.** Develop the plans, special provisions, and cost estimate to 100% level completion. Incorporate review comments from the previous submittal stage.

**Task 5.2 – Final Bid Set.** Finalize the plans, special provisions, and cost estimate for bidding purposes. Incorporate review comments from the draft submittal stage.

*Task 5 Deliverables:* Draft Bid Set, Final Bid Set

### **Task 6 – Permitting Services**

#### **Task 6.1 –Critical Areas Research and Site Assessment**

Clark County GIS data indicates the potential presence of critical areas within the transmission line alignment including geologic hazards (erosion hazard areas, steep slopes) and fish and wildlife habitat (priority habitat buffers and riparian habitat conservation areas). For this effort BergerABAM will conduct the following tasks:

- Research published information including, but not limited to, the National Wetlands Inventory, Washington Department of Fish and Wildlife, Natural Resources Conservation Service, and Washington Department of Natural Resources to determine the potential presence of critical areas meeting the definition provided for within the Camas Municipal Code at the project site.
- Conduct one 4-hour field visit to confirm the presence of critical areas.
- Prepare a draft and final memorandum documenting the critical areas research and field visit.

#### **Task 6.2 – SEPA Checklist**

A State Environmental Policy Act (SEPA) checklist is required because the water transmission line exceeds the exempt threshold of eight inches for utility lines (WAC 197-11-800). For this task BergerABAM will conduct the following:

- Prepare and submit a SEPA checklist for the project that documents the environmental impacts of the proposal, including any mitigation measures recommended to reduce impacts to non-significant levels.

- Conduct a, 60-minute coordination phone call with the City to obtain information relevant to the completion of the SEPA checklist.
- Provide the draft SEPA checklist to the City's utilities manager for review in electronic (Microsoft Word) format.
- Prepare a final SEPA checklist and submit it to the City's Community Development Department for formal review and notification.

### **Task 6.3 – Archaeological Predetermination**

According to CMC 16.31.070(A), an archaeological predetermination is required for projects which require ground disturbance and are mapped within an area with high probability of archaeological artifacts. Clark County GIS data indicates that the proposed water transmission main alignment is located in an area with high archaeological probability; therefore, an archaeological predetermination will be required. For this task, BergerABAM will contract Archaeological Services, LLC to complete or provide the following, in accordance with the City of Camas' predetermination requirements:

- Archaeological Services, LLC will provide a qualified professional archaeologists to complete the City's predetermination requirement.
- A thorough review of records, documentation, maps, and other pertinent literature shall be performed.
- Subsurface investigation shall be performed when considered necessary by the archaeologist.
- The completed predetermination report shall be submitted to DAHP, to the tribes, as well as the City.

### *Task 6 Assumptions/Exclusions/Required Information*

- Preparation of responses to questions in the checklist will involve coordination with the City based on the 30% design level plans (Task 3).
- The City will be the lead agency and will make the SEPA threshold determination.
- The City is responsible for SEPA notice and review.
- Only minor revisions to the SEPA checklist will be required after submittal to the Community Development Department.
- SEPA review by the City will result in a determination that impacts are not significant.
- If present, critical areas, will not be impacted and a critical areas report will not be required. If review under this task determines that critical areas reports are necessary, a scope and fee addendum will be required for the completion of this work.
- Two BergerABAM natural resource scientists will visit the project site for the critical areas site assessment. A cultural resources predetermination will be completed and used to inform the applicable section of the SEPA checklist.
- Archaeological Services, LLC have been contracted to complete the City's archaeological predetermination process; further archaeological work, if required by the City, will require a scope extension.

- No site plan review or other permits are required.
- One round of review by the client of the draft SEPA checklist and critical areas memorandum.

#### ***Task 6 Deliverables***

- One 4-hour field visit
- Draft and final critical areas memorandum
- Draft and final SEPA checklist
- Two, 60-minute coordination phone calls with the City staff

#### **Task 7 – Construction Support**

**Task 7.1 – RFI and Submittal Response.** Respond to Contractor Requests for Information (RFI) during bidding and construction (up to 5 RFI's). Review Contractor material submittals and provide responses.

**Task 7.2 – Site Visits and Meetings.** Attend three site visits and/or meetings during construction to include a construction punchlist.

**Task 7.3 – Record Drawings.** Provide final record drawings to the City based on redline markups from the Contractor.

*Task 7 Deliverables:* RFI Response, Punchlist, Record Drawings

#### **Assumptions**

- Subconsultant services such as geotechnical investigation are not included.
- A 1200C Construction NPDES is not required for this project.
- The hydraulic analysis is limited to this segment of pipeline up to the connection locations.
- Design related to the groundwater pumping systems or chlorination system is not included.
- The City will manage coordination and acquisition activity for any easement related activity. Preparation of legal easement documents is not included.
- The survey does not include the exact northern boundaries where they abut the river. Private utility locates are not included.
- Scope assumes that coordination with the Department of Health is not required.
- The City will prepare all “front-end” contract documents for bidding.
- The proposed transmission alignment will not be located in shoreline jurisdiction.
- The Construction Support task is limited to RFI response, submittal reviews, and periodic meetings. Items such as construction administration, bid reviews, inspection, and contractor payments, are not included.

## **SCHEDULE**

The schedule for these tasks is estimated to be no longer than 16 weeks including City review. BergerABAM will provide a proposed project schedule after Notice to Proceed is given.

## **FEE ESTIMATE**

We propose a not-to-exceed budget of \$78,649. This fee will be accrued on a time and materials basis. If you agree with this proposal, please incorporate this scope of work into City contracting documentation, or sign in the space provided below and return to us electronically or in hardcopy form. BergerABAM will forward our standard terms and general conditions if needed.

Thank you for the opportunity to provide this proposal and we look forward to working with you. Should you have any questions or comments about this proposal, please call me at 503/872-4121 or email me at [dan.johnston@abam.com](mailto:dan.johnston@abam.com).

Sincerely,



Dan Johnston, PE  
Project Manager



Tom Wilcox, PE  
Vice President

## **ACCEPTED BY CITY OF CAMAS**

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Signature

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Name (Printed)

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Title

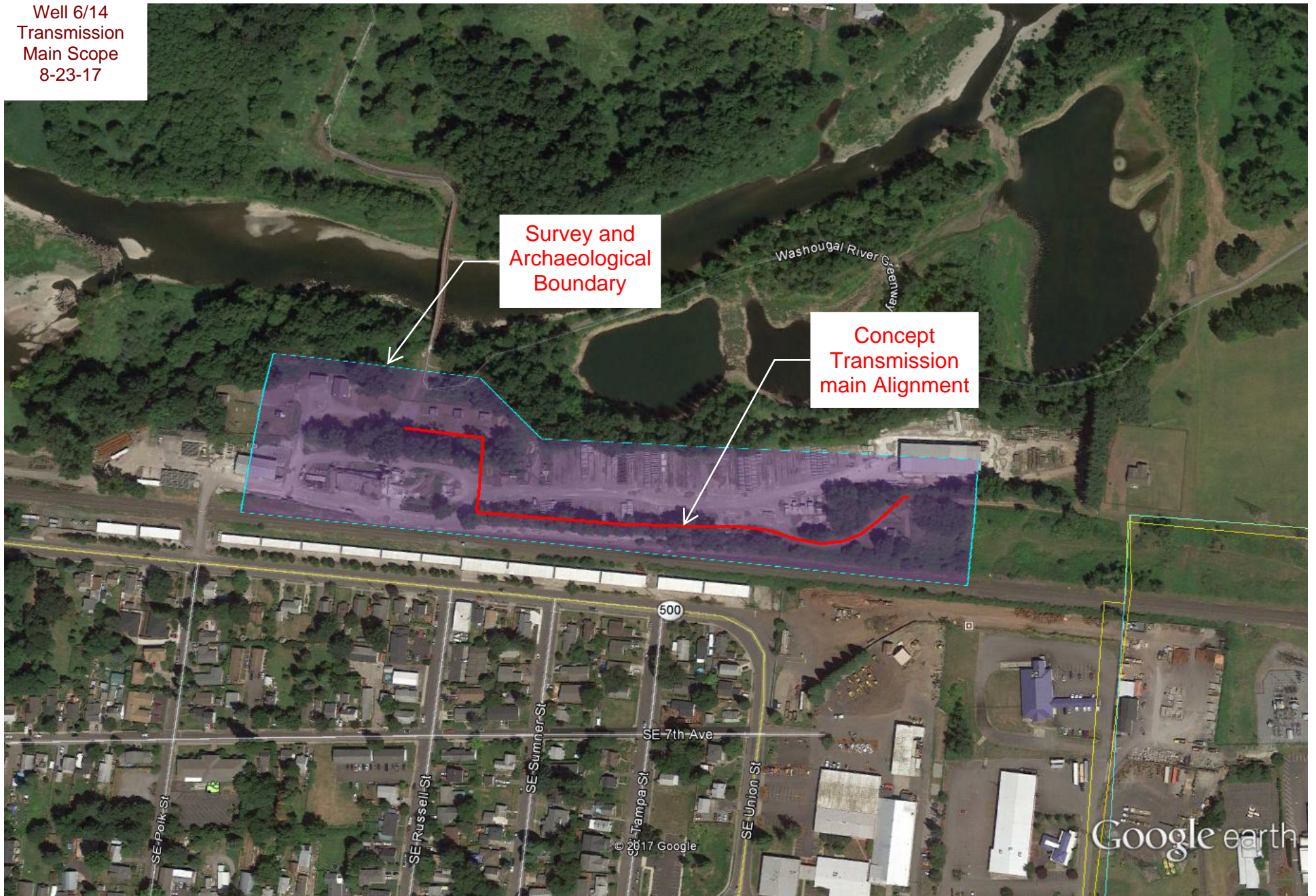
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Date

- FEE ESTIMATE -															
Title: Well 6/14 Water Transmission Main															
Date: 11/6/2017															
TASK	TASK DESCRIPTION	Staff Designation													
		Senior Project Manager	Environmetal Scientist	Environmetal Scientist	Senior Planner	Planner	Specification Writer	Project Manager	Senior Project Engineer	Engineer/ Designer	Dept Coordinator	Technical Editor	Word Processing		
		Brian Carrico	Dustin Day	Allison Kinney	Ethan Spoo	Ryan Crotty	Tim de Boer	Dan Johnston	Dan Shafar	Dustin Briggs	Emily Lewis	Madeleine Dulemba	Laura Townsend	Totals	
		\$210.00	\$131.76	\$82.50	\$131.97	\$84.51	\$130.68	\$173.88	\$151.38	\$123.60	\$67.80	\$101.00	\$76.59		
1	Project Management						44	6					\$8,559.00		
1.1	Project Administration						32						\$5,564.16		
1.2	Meetings (4)						12	6					\$2,994.84		
2	Pre-Design Tasks						6	16	32				\$7,420.56		
2.1	Review Background Documents						2	8					\$1,558.80		
2.2	Base Mapping						4		4				\$1,189.92		
2.3	Field Verify Utilities							2	4				\$797.16		
2.4	Hydraulic Analysis							2	8				\$1,291.56		
2.5	Alignment Verification							4	16				\$2,583.12		
3	30% Design Submittal						4	14	68	2			\$11,355.24		
3.1	30% Level Plans						2	12	60	2			\$9,715.92		
3.2	Construction Cost Estimate							2	8				\$1,291.56		
3.3	QA/QC						2						\$347.76		
4	90% Design Submittal						18	2	18	68	2		\$13,965.24		
4.1	90% Level Plans							2	12	60	2		\$9,715.92		
4.2	Special Provisions						16		4				\$2,696.40		
4.3	Construction Cost Estimate								2	8			\$1,291.56		
4.4	QA/QC						2						\$261.36		
5	Bid Set Submittal						6	4	8	48	2		\$8,759.04		
5.1	Draft Bid Set						4	2	4	32			\$5,431.20		
5.2	Final Bid Set						2		4	16	2		\$2,980.08		
5.3	QA/QC							2					\$347.76		
6	Permitting Services	2	4	24	8	32						5	5	\$7,575.07	
6.1	Critical areas Research and Memorandum		4	16								2	2	\$2,202.22	
6.2	SEPA Checklist			8	8	32						3	3	\$4,952.85	
6.4	QA/QC	2												\$420.00	
7	Construction Support							4	28	16				\$6,911.76	
7.1	RFI and Submittal Response							2	12					\$2,164.32	
7.2	Site Visits and Meetings (3)							2	12					\$2,164.32	
7.3	Record Drawings								4	16				\$2,583.12	
	Expenses													\$298.32	
\$ 0.535	Mileage													\$171.20	
	Misc Expenses													\$100.00	
10%	Administrative Fee													\$27.12	
	Subconsultants													\$13,805.00	
10%	Olson Engineering													\$10,000.00	
	Archaeological Services LLC													\$2,550.00	
	Administrative Fee													\$1,255.00	
	TOTAL FEE	\$420	\$527	\$1,980	\$1,056	\$2,704	\$3,136	\$11,128	\$13,624	\$28,675	\$407	\$505	\$383	\$78,649.23	



Well 6/14  
Transmission  
Main Scope  
8-23-17



Google earth

feet  
meters

