MAUL FOSTER ALONGI
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August 18, 2020
Project No. P0830.06.01

John Walsh
City Administrator, City of St. Helens
265 Strand Street
St. Helens, OR 97051

Re: Sykes Road Reservoir Siting

Dear Mr. Walsh:

Maul Foster & Alongi, Inc. (MFA) appreciates the opportunity to submit this proposal to assess the Sykes Road property as a potential site for an acquisition by the City of St. Helens. MFA understands that this scope of work is intended to inform suitability of the site for construction of a new 4-5 million gallon municipal water reservoir to serve the existing Main Elevation Zone, and possibly the High Elevation Zone, within the City's current water service area boundary. It is anticipated that the facility will have hydraulic design criteria similar to existing reservoirs within the City's pressure zones.

MFA will work with MurraySmith and Geotechnical Resources, Inc. (GRI) to evaluate the land parcels for potential environmental issues, collect data and conduct site reconnaissance, and complete a reservoir siting analysis. The work will be performed in two phases. Tasks 1, 2, and 3 will be performed in Phase 1 to evaluate the site for suitability of siting the reservoir and inform the City on potential property purchase. Task 4 will be initiated in Phase 2 only upon the City proceeding with purchase of the property or otherwise issuing approval to perform the work. The following scope of work describes these tasks.

SCOPE OF WORK

Task 1—Baseline Environmental Assessment

In 2015, MFA completed a baseline environmental assessment of the Sykes Road landfill, which is located on the subject land parcel, as an element of a larger environmental due diligence assessment of the Boise White Paper (BWP) mill. The assessment was completed on behalf of the City of St. Helens to support a land transfer opportunity with BWP. The Sykes Road landfill assessment summarized the landfill's construction methods, operational history, leachate management, and monitoring based on MFA's review of documents provided by BWP and Oregon Department of Environmental Quality (DEQ) files.

To support the City's proposed acquisition of the land parcels, MFA will update the 2015 baseline environmental assessment for the landfill and surrounding area within the land parcels by reviewing additional documents, if available, that have been prepared since 2015, including

documents made available by BWP and new documents in DEQ files. The updated baseline environmental assessment will also include a review of available monitoring data to assess whether operation of the landfill may have resulted in releases of hazardous substances to the environment. The data review will emphasize identification of any new releases that may have occurred since the 2015 assessment that meet the definition of a Recognized Environmental Concern (REC), as defined in the ASTM International Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13).

The baseline environmental assessment is intended to identify issues germane to your decision-making process. It is not a Phase I Environmental Site Assessment, which would be performed in the future if the City chose to pursue the property. Nonetheless, the data review proposed for the baseline environmental assessment will support preparation of a future Phase I Environmental Site Assessment, if needed.

Task 2—Data Collection and Site Reconnaissance for Reservoir

In addition to data collected for Task 1, work will be performed to gather and review existing mapping, as-builts, engineering reports, water system studies, and other data related to the proposed project. It is anticipated available data will include:

- Prior City water system studies, analyses and reports
- City mapping resources including topographic and water system mapping
- Record drawings of all relevant water system facilities, including existing reservoirs
- Any available geotechnical information from the landfill construction, or other sources
- Tax lot maps
- Recorded deeds and easements

The project team will perform one site visit to observe and record site conditions.

Task 3—Preliminary Reservoir Feasibility Review

This task will develop preliminary design criteria and a review of the property for suitability of a water storage reservoir. One meeting with City staff will be conducted to review which service zone the proposed reservoir will serve based on available elevations at the property and confirm the reservoir floor and overflow elevations. A reservoir siting overview map will be prepared showing the band of ground elevations needed for the proposed reservoir and potential reservoir locations using an aerial photo and topographic mapping. Preliminary property review will include evaluation of the following information:

- Site topography
- Available land for the reservoir and other site facilities
- Accessibility to site
- Land use permitting requirements
- Environmental interests, including review of mapped wetlands, streams and vegetation and buffers
- Geo-hazards, including review of DOGAMI geo-hazard maps and Seismic Hazard mapping
- Proximity to existing distribution system piping
- Reservoir type (steel or concrete) relative to site conditions and options for partially/fully burying the reservoir or keeping the reservoir above grade

A preliminary geotechnical assessment will also be included in this task to evaluate it geology is suitable for a reservoir. the preliminary review will include a site visit, and review of existing geological mapping to evaluate potential fatal flaws relative to geotechnical interests at the subject property, including the potential for ground instability and landslides.

Task 4—Phase 2 Reservoir Siting Analysis

Task 4 will include a preliminary reservoir location assessment and geotechnical review.

The reservoir location assessment will include developing preliminary design criteria and completing a siting analysis to develop an economical orientation and configuration for the proposed reservoir at the property. Preliminary property review will include evaluation of the following information:

- Site topography
- Available land for the reservoir and other site facilities
- Access to site
- Land use permitting requirements
- Review of mapped wetlands, streams and vegetation and buffers
- Geo-hazards, including review of DOGAMI geo-hazard maps and Seismic Hazard mapping.
- Proximity to existing distribution system piping

- Reservoir type (steel or concrete) relative to site conditions and options for partially/fully burying the reservoir or keeping the reservoir above grade

Conceptual site plans will be prepared orienting up to four (4) alternate reservoir configurations to accommodate varied structure location, backfill depths and finished grade conditions. Site plans will include a topographic map of the property, a preliminary orientation of the proposed reservoir and cross-section view comparing the proposed reservoir and the existing ground surface to determine the amount of grading and size of property required to site the reservoir. This task will also include analysis of potential routes for reservoir waterline piping to connect to the City's existing or planned system in Sykes Road, and a review of potential on-site storm drainage detention and stormwater pipeline routing.

A preliminary geotechnical review of the proposed property will be conducted to evaluate if the geology present is acceptable for siting a reservoir. It is anticipated that the preliminary review will include a site visit, and review of existing geological mapping to evaluate potential fatal flaws relative to geotechnical interests at the subject property, including the potential for ground instability and landslides that may impact the property. A summary of findings will be provided in a technical memorandum format.

Deliverables

Deliverables for this scope of work will include the following:

- Baseline Environmental Assessment Report (Task 1)
- Preliminary Siting Feasibility Technical Memorandum (Task 3)
- Geotechnical Study Technical Memorandum (Task 3)

ASSUMPTIONS

In preparing the Scope of Work, MFA has reviewed the provided information and made necessary assumptions to define the services and fees. These assumptions are listed below:

- Project duration will be approximately four months
- It is assumed that COVID-19 safety requirements will extend through the project duration, requiring that all meetings be held via conference call or video conferencing; site reconnaissance/field work will also require appropriate social distancing and safety measures.
- It is assumed that one reservoir volume with corresponding dimensions will be reviewed and presented for a total of up to four separate tank orientations.

- Floor and overflow elevations will be selected to match the City's existing reservoir(s). It is assumed that work will not include hydraulic analysis using the City's water system model.
- Appropriate tank dimensions will be determined based the desired storage volume, established overflow and floor elevations, and design and construction requirements in accordance with American Water Works Association (AWWA) D110 Type I Tank standards for prestressed concrete reservoirs, and AWWA D100 standards for welded steel reservoirs.
- The reservoir style will be a circular ground level reservoir and elevated reservoir styles will not be considered due to the site elevations and capacity constraints.
- Analysis of reservoir waterline and stormwater piping alignments will be limited to on-site piping terminating at the property frontage on Sykes Road.

BUDGET

The estimated cost to perform the proposed work is as follows:

- Phase 1 (Tasks 1, 2, 3): $41,227
- Phase 2 (Task 4): $29,568

The total cost to perform the work (Phase 1 and 2) is $70,795 (see attached estimated budget). Phase 2 work will not be performed without a separate written or verbal authorization to proceed from the City. This cost estimate does not represent a lump sum. MFA bills for time and materials, consistent with the attached schedule of charges. MFA may apply money from one task to another to complete the scope of work.

SCHEDULE

MFA will begin work within 10 days of receiving authorization to proceed, this proposal is valid for 30 days.

Sincerely,

Maul Foster & Alongi, Inc.

Jacob Faust, PE
Senior Engineer

Ted Wall, PE
Vice President

Attachments: Estimated Budget
Schedule of Charges

Estimated Budget
City of St. Helens
Sykes Road Reservoir Siting

	Task	Maul Foster & Alongi, Inc.			Subcontractors	Total
		Hours	Labor	Direct		
1	Baseline Environmental Assessment	58	$7,290	$210	$0	$7,500
2	Data Collection and Site Reconnaisance	18	$2,890	$0	$5,520	$8,410
3	Preliminary Reservoir Feasibility Review	19	$3,010	$80	$22,227	$25,317
4	Phase 2 Reservoir Siting Analysis	30	$4,760	$80	$24,728	$29,568
					Total Estimated Cost	**$70,795**

SCHEDULE OF CHARGES

PERSONNEL CHARGES

Principal	$190 – 250/hour
Senior	$140 – 190/hour
Project	$135 – 160/hour
Staff	$115 – 130/hour
Analyst	$120 – 140/hour
Technician/Design	$100 – 125/hour
Administrative Support	$90 – 110/hour

Depositions and expert witness testimony, including preparation time, will be charged at 200 percent of the above rates.

Travel time will be charged in accordance with the above rates.

OUTSIDE SERVICES

Charges for outside services, equipment, and facilities not furnished directly by Maul Foster & Alongi, Inc. will be billed at cost plus 10 percent. Such charges may include, but shall not be limited to the following:

- Printing and photographic reproduction
- Rented vehicles
- Transportation on public carriers
- Special fees, permits, insurance, etc.
- Rented equipment
- Shipping charges
- Meals and lodging
- Consumable materials

SUBCONTRACTORS

Charges for subcontractors will be billed at cost plus 15 percent.

DIRECT CHARGES

Vehicle per mile $0.75

COMPUTER CHARGES

CADD, ArcGIS, Tableau, Alteryx.....$20.00/hour
EQuIS, EVS, Modeling Applications.....$30.00/hour

FIELD EQUIPMENT

The rates for field equipment are set forth in the Field Equipment Rate Schedule.

DOCUMENT PRODUCTION

The rates for document production are set forth in the Document Production Rate Schedule.

RATE CHANGES

Schedule of Charges and Standard Equipment Rates are subject to change without notice.

BILLING AND PAYMENT

Invoices will be submitted monthly and shall be due and payable upon receipt. Interest at the rate of one and one-half percent (1.5%) per month, but not exceeding the maximum rate allowable by law, shall be payable on any amounts that are due but unpaid within thirty (30) days from receipt of invoice, payment to be applied first to accrued late payment charges and then to the principal unpaid amount.