



May 31, 2018

Via Electronic Submittal

Mr. Patrick Loomis
City of Duluth
411 West First Street, Room 211
Duluth, MN 55802

**Re: Proposal for Environmental Support Services
Waseca Street Extension – 59th Ave West to Raleigh Street**

Dear Patrick:

Barr Engineering Company is presenting the City of Duluth with this proposal to provide environmental support services related to the Waseca Street Extension Project in Duluth, Minnesota (Property). The services described in this proposal are based on the findings and information presented in the May 2018 Phase I Environmental Site Assessment (ESA) prepared by AMI Consulting Engineers (AMI) and on our familiarity with the project area.

Project Understanding

The City of Duluth will be completing reconstruction, combined with new construction, of an extension of Waseca Street from 59th Avenue West to Raleigh Street. This work will involve replacement of existing paved surfaces and new construction of a roadway and utilities on property to be acquired. Barr reviewed the Phase I ESA completed along this corridor to identify parcels or adjacent areas with a potential for soil, groundwater and/or vapor contamination based on the setting and history of past activities.

The City has hired LHB as the lead design engineer for the extension project and Barr has been asked to provide environmental support services consisting of phase II investigation work, response action and construction contingency planning, environmental technical specification preparation, as well as Minnesota Pollution Control Agency (MPCA) liaison assistance.

Scope

The scope of work will be divided into three separate phases:

- Phase II Investigation – soil boring observation and sampling;
- Response Action and Construction Contingency Plan development – remediation planning for construction;
- Remediation Design – environmental technical specifications and plan sheet development; and
- Agency (MPCA) liaison assistance.

Tasks associated with each of the phases have been identified below.

Task 1 – Phase II Investigation

Soil screening and sampling will be completed in conjunction with the geotechnical investigation planned by LHB for engineering design purposes. The following tasks will be completed under this phase:

- Prepare a project-specific health and safety plan (PHASP) prior to performing the borings.
- Identify geotechnical boring locations for environmental sampling. If necessary, identify additional environmental soil boring locations to be investigated
- Coordinate the investigation field work schedule with LHB and their drilling subcontractor.
- We understand the current work scope includes up to 15 hollow stem auger borings to be advanced to a depth of 14.9 feet in the approximate locations shown on the LHB drawings. Boring locations and depths may vary depending on utility locations, accessibility in the field, and soil conditions encountered.
- A Barr geoscientist will be on-site to observe the boring advancement and classify soil samples in accordance with the Unified Soil Classification System (USCS) - ASTM D-2488, *Standard Practice for Description and Identification of Soils (Visual/Manual Method)* and record additional geologic information.
- Screen soil samples for organic vapors using a photoionization detector (PID).
- Document evidence of soil contamination including odor, discoloration, sheen, or other field indications of potential soil impacts.
- Field screening results along with visual observation and professional judgment will be used to guide the selection of samples that will be sent to the laboratory for analysis.
- Collect two to four soil samples from each soil boring and submit the samples for laboratory analysis of one or more of the following: volatile organic compounds, gasoline range organic (GRO) compounds, petroleum volatile organic compounds (PVOCs), diesel range organic (DRO) compounds, semi-volatile organic compounds (SVOCs), polynuclear aromatic hydrocarbons (PAHs) and RCRA Metals. Table 1 lists our anticipated sampling matrix.
- Field tasks and documentation will be conducted in accordance with Barr's standard operating procedures (SOPs) applicable to the project.
- The analytical results from the soil samples collected during the sampling will be compared to MPCA published soil risk-screening criteria to determine whether impacted soil exists at the locations that are investigated and to evaluate the likelihood that impacted soil may be encountered during the Waseca Street extension project work.

Task 2 - Response Action / Construction Contingency Plan

- Our support services will be completed while maintaining communication and seeking appropriate approvals from the MPCA Voluntary Investigation and Cleanup (VIC) program.
- Prepare a letter report, which will present the findings and results from the soil screening and sampling and provide recommendations and conclusions for potential further actions based on these findings and results.
- Prepare a Response Action Plan (RAP) with environmental construction contingency plan (CCP) for review and approval by the MPCA VIC program.

Task 3 – Environmental Technical Specifications and Environmental Plan Sheet Assistance

- Evaluate environmental soil management needs with respect to the road extension plan.
- Prepare and present preliminary environmental soil management plan for discussion with City of Duluth and LHB including up to two meetings to discuss roadway and utility work related to environmental needs.
- Preparation of environmental engineering design drawings and technical specifications to a level of detail suitable for soliciting bids from contractors.
- Assist with preparation of engineer's estimate of probable environmental construction cost.
- Attend Pre-bid meeting and provide bidding assistance, including preparation of up to one addendum.
- MPCA VIC program and client communications.

Task 4 - Agency (MPCA) Liaison Assistance

- Because the project will occur on and adjacent to property which has an Environmental Covenant and Restrictions – institutional control, a letter will be prepared notifying the MPCA of the planned site investigation work. The required notification letter will outline the investigation work and note there will eventually be a Waseca Street extension project undertaken in the area.
- Under the assumption that impacts will be present within the street extension project area, we anticipate recommending entering the project into the VIC program. Therefore, we will prepare an MPCA VIC Application on behalf of the City.
- Attend up to two combined client/agency meetings to discuss soil boring results and MPCA requirements (one meeting may include the initial VIC Program kick off meeting / conference call with the MPCA project manager to discuss the project).
- Additional MPCA VIC program and client communications.

Project Assumptions

This scope of work includes the following assumptions:

- The drilling services and site access will be contracted and coordinated by LHB.
- Phase II investigation field work will take up to four 12-hour days to complete.
- LHB will mark all borings and provide a base map with boring coordinates for our report.
- Barr proposes to collect the samples for analysis of the parameters listed in Table 1, Proposed Sampling Matrix.
- A rush turnaround time is not required for the laboratory analyses.
- Analytical testing services in support of the environmental investigation will be subcontracted by Barr.
- Phase II soil investigation screening and sampling is designed to evaluate the potential presence of contamination. Because sampling will not evaluate areas lateral to the road corridor, the proposed scope of services may not define the full extent of contamination that may be present along the entire corridor.
- Our scope was developed based on our understanding of site conditions and assumptions made regarding anticipated MPCA requirements. It is possible the MPCA will require additional Phase II investigation phases. If the MPCA requires additional actions not included in the tasks above, that additional work would require an additional authorization.
- Additional soil screening and sampling activities will not be required by the MPCA VIC program prior to RAP/CCP approval.
- The RAP/CCP will use the results derived from the soil screening and sampling, together with our professional judgment, to guide the evaluation of development options with respect to environmental soil contamination management approaches and the construction.

Project Management and Staff Assignments

Barr approaches each project by assigning a team of professionals that is structured based upon the specific project needs. Each professional's experience is integrated to the project to achieve effective solutions to the project challenges. For the successful completion of any project, Barr provides an experienced and dedicated project team to provide services in a cost effective and timely manner.

The typical **Project Team** consists of a **Principal In Charge** (PIC), a **Project Manager**, and **Professional, Technical and Support Staff**, which collectively form the Project Team. Prior to starting a project, the PIC and Project Manager prepare a project plan which identifies the project scope, project tasks, level of effort, and specific personnel to be assigned to the project. The project plan will also highlight the

problem to be solved, the client's criteria for success, and things most likely to go wrong (together with the team's strengths and weaknesses), in order to prepare contingencies for the project.

The team concept has been successful at Barr because each member shares in direct responsibility and accountability for their share of the project to the Project Manager. The following is the list of consulting staff that will likely be used for this project. Specific staff assignments will be based on availability and project timing.

Team Members	Title	Chargeable Rate
Eric Dott	Principal in Charge	\$180.00
Lynette Carney	Project Manager / Senior Geologist	\$145.00
Eric Lund	Senior Environmental Engineer	\$140.00
Liz Metzen	Senior Geologist	\$120.00
Martin Bevis	Geologist	\$80.00
Various	Technicians and Administrative Support	\$65.00-\$120.00

Schedule

Barr is prepared to begin work on this project immediately. The field work will take place on the City of Duluth's and LHB's desired schedule. However, depending on subcontractor availability, property owner access and MPCA Environmental Covenant Easement, Barr anticipates that the field work could be conducted within two to four weeks after receiving your notice to proceed. Barr will provide a draft report for your review within approximately six to eight weeks of receiving laboratory data. A final report will be provided upon receipt of your comments.

Cost Estimate

Based on our experiences on similar projects, Barr has prepared the following cost estimate for consulting tasks required to complete the proposed scope of work. Barr proposes to provide our professional services on a time and materials basis in accordance with our current standard fee schedule (attached). In the event that significant changes to scope and corresponding budget estimates are identified through implementation of the work, recommendations for scope and budget adjustments will be presented to the City for review and consideration. If additional work is mutually agreed upon, additional work orders will be prepared for your review and authorization.

Barr Estimated Costs by Task

Task	Estimate
Task 1 – Phase II Investigation and Reporting	\$35,000
Task 2 – Response Action / Construction Contingency Plan	\$20,000
Task 3 – Environmental Specifications and Environmental Plan Sheet	\$20,000
Task 4 - Agency (MPCA) Liaison Assistance	\$10,000
Total	\$85,000

The City of Duluth should also include budget to fund the MPCA VIC staff review and oversight time (at \$125 per hour). Based on similar projects you should assume up to 25 hours of VIC staff time may be needed. Our estimated cost range reflects a range of site conditions and construction assumptions made by Barr and assumptions made regarding anticipated MPCA requirements and RAP comments or requests. It is possible the MPCA will require additional phases of soil screening or sampling phases prior to approving a RAP/CCP. If the MPCA requires additional actions not included in the tasks above, this work will be completed at an additional cost.

Invoicing

Barr will invoice the City once every four weeks, and each invoice will include a preamble describing the work performed and the number of hours worked by each individual employee.

Thank you again for the opportunity to provide assistance on your project. If you have any questions, please call me at 218-529-7141 (or email at LCarney@barr.com) or Eric Dott at 218-529-8234 (EDott@barr.com).

Sincerely,

Barr Engineering Company



Lynette Carney, P.G.
Senior Geologist



Eric Dott, P.G.
Vice President

Enclosures:

- Table 1 Proposed Sampling Matrix
- Barr 2018 Standard Fee Schedule

**Table 1
Proposed Sampling Matrix
Phase II Investigation
Waseca Street Extension Project
Duluth, Minnesota**

Number of Borings	Sample Depth (feet bgs)	Soil Sample Type		Analytes						
				RCRA Metals	GRO	DRO	VOCs ¹	PAHs	SVOCs	Lead
		Discrete	Comp-osite							
Soil										
10	0-2'	X		X	X	X		X		
5	0-2'	X		X	X	X	X		X	
7	2-4'	X		X		X		X		
8	2-4'		X	X				X		
4	12-14'	X		X						
Total				34	15	22	5	25	5	
Groundwater										
5	Water table	X		X			X	X		
5	Water table	X					X			
Total				5	0	0	10	5		

bgs below ground surface VOCs volatile organic compounds
 DRO diesel range organics RCRA Metals Resource Conservation Recovery Act metals
 GRO gasoline-range organics SVOCs semi-volatile organic compounds
 PAHs polyaromatic hydrocarbons

¹VOCs will be analyzed if PID measurements are greater than 10 parts per million (ppm). Assume 50% of soil borings and hand auger composite sample locations.

Note the actual number of samples and parameters analyzed will be determined by field observations and field conditions encountered.



Fee Schedule—2018

Rev. 12/30/17

Description	Rate* (U.S. dollars)
Principal	\$145-295
Consultant/Advisor.....	\$155-250
Engineer/Scientist/Specialist III.....	\$125-150
Engineer/Scientist/Specialist II.....	\$95-120
Engineer/Scientist/Specialist I.....	\$65-90
Technician III.....	\$125-150
Technician II.....	\$95-120
Technician I	\$50-90
Support Personnel II	\$95-150
Support Personnel I	\$50-90

Rates for litigation support services will include a 30% surcharge.

A ten percent (10%) markup will be added to subcontracts for professional support and construction services to cover overhead and insurance surcharge expenses.

Invoices are payable within 30 days of the date of the invoice. Any amount not paid within 30 days shall bear interest from the date 10 days after the date of the invoice at a rate equal to the lesser of 18 percent per annum or the highest rate allowed by applicable law.

Reimbursable expenses including, but not limited to, the actual and reasonable costs of transportation, meals, lodging, parking costs, postage, and shipping charges will be billed at actual cost. Materials and supplies charges, printing charges, and equipment rental charges will be billed in accordance with Barr's standard rate schedules. Mileage will be billed at the IRS-allowable rate.

Principal category includes consultants, advisors, engineers, scientists, and specialists who are officers of the company.

Consultant/Advisor category includes experienced personnel in a variety of fields. These professionals typically have advanced background in their areas of practice and include engineers, engineering specialists, scientists, related technical professionals, and professionals in complementary service areas such as communications and public affairs.

Engineer/Scientist/Specialist categories include registered professionals and professionals in training (e.g. engineers, geologists, and landscape architects), and graduates of engineering and science degree programs.

Technician category includes CADD operators, construction observers, cost estimators, data management technicians, designers, drafters, engineering technicians, interns, safety technicians, surveyors, and water, air, and waste samplers.

Support Personnel category includes information management, project accounting, report production, word processing, and other project support personnel.

*Rates do not include sales tax on services that may be required in some jurisdictions.