

**TASK ORDER No. 44: Lake Susan Park Pond Stormwater
Reuse Inlet Configuration Improvements
Pursuant to Agreement for Engineering Services
Riley Purgatory Bluff Creek Watershed District and BARR Engineering Company.
January 26, 2023**

This Task Order is issued pursuant to Section 1 of the above-cited engineering services agreement between the Riley Purgatory Bluff Creek Watershed District (District) and BARR Engineering Company (Engineer) and incorporated as a part thereof.

1. Background:

The Riley Purgatory Bluff Watershed District (District) authorized construction of the Lake Susan Park Pond (LSP) Watershed Treatment and Stormwater Reuse Project in Spring of 2018 as part of implementing the capital improvement program (CIP) of the current 10-year plan. The CIP project involved water pumping and conveyance from the Lake Susan Park Pond to a park irrigation system and an iron enhance sand filtration system. The system hydraulic conveyance includes a floating suction intake located in the park pond that is installed and removed seasonally, underground conveyance piping and inline suction pumps located inside an at-grade utility building approximately 50-feet inland from the Lake Susan Park Pond normal water level. The City worked closely with the contractor during the first couple years of operations to resolve operational concerns. However, each subsequent season the hydraulic system was observed to lose prime and not operate as designed. In 2022, the District established a contract with the original installation contractor to undertake some trouble shooting. Because of the timing of the contracting, the trouble shooting did not occur and a corrective solution has not been implemented.

2. Description of Services:

Barr will work with District and city staff to complete a data collection final engineering, design and permitting services to implement improvements to the inlet configuration of the existing reuse system at LSP. Barr's intent for this project is to provide design, quote acquisition, and construction administrative services to implement a correction for the observed hydraulic system issues while meeting the system parameters (flow and pressure requirements) required for the original Lake Susan Park Pond Watershed Treatment and Stormwater Reuse Project objective.

There are several proposed Project tasks to meet the Project goals. The work involved with each Project Task is outlined below, including suggested optional tasks. Barr's activity is divided into four phases:

- Phase 1: Project Kick-off and Data Collection
- Phase 2: Final Design and Permitting
- Phase 3: Quote Requests /Quote Opening/Recommendation to Board
- Phase 4: Construction Administration Services
- Optional Tasks: Troubleshooting Investigation and Conceptual Design

3. Scope of Services:

Engineer's services under this task order shall include:

Phase 1 – Project Kickoff and Data Collection

Task 1.1: Project Kickoff

A project kickoff meeting will be held virtually with RPBCWD, City staff and Barr staff.

Task 1.2: Data Collection

Barr staff will interview operations staff to confirm scenarios for system operation issues and previous troubleshooting procedures conducted. This project does not include a site survey. All topographic and utility data to be utilized from prior project records.

Phase 1 Meetings:

- One (1) kickoff meeting attended by RPBCWD and city of Chanhasen

Phase 1 Deliverables:

- Kickoff meeting minutes

Phase 2 - Final Design and Permitting

Task 2.1: Preparation of Construction Plans and Specifications

Barr will prepare design drawings and specifications for construction and obtaining quotes. The scope of design includes providing construction documents describing requirements to install an intake structure at the shoreline of the pond and including a suction strainer to be installed seasonally into the intake structure. The new suction strainer assembly will connect to the existing pipe anchor flange coupling designed and constructed as part of the previous project. All existing upstream piping and equipment will remain unchanged. No troubleshooting exercises on piping or equipment upstream of the existing pipe anchor will be conducted under the base scope of this task order.

We anticipate there being one design review meeting with Barr, RPBCWD, and city of Chanhasen staff at approximately 90% design. We have estimated that the plan set will be no more than 4 sheets and these drawings will be provided electronically (PDF format) approximately one (1) week prior to the scheduled design review meeting. We have assumed that the design review meeting will occur at the RPBCWD offices and will last up to one (1) hour.

Complete (100%) design plans and specifications could be available at the April 2023 meeting, where the Board could authorize the solicitation of quotes. The timing will be coordinated with the Administrator.

Barr will provide technical specifications and a project quote form for the project. All contractual requirements for the quote package will be drafted by District legal counsel. It is assumed that District Counsel will provide one round of edits and review comments.

Meetings:

- One (1) 90% design meeting attended by Barr, RPBCWD, and city of Chanhasen.

Deliverables:

- 90% submittal set for authorization to request quotes at RPBCWD board meeting (by Barr) and submittal to RPBCWD, and city of Chanhasen for review and comment (by Barr)
- Final drawing set (100%) and specifications
- Engineer's Estimate of Cost developed (by Barr)

Task 2.2: Permitting Assistance

Because the work potentially involves land-disturbing activity of more than 50 cubic yards and work below the 100-year floodplain of LSPP, RPBCWD permit will likely be required. Additionally, depending on the amount of disturbance, a city of Chanhassen permits for excavation/grading will likely be needed along with a permit for the installation of utilities/underground construction permit for any work on City property.

Deliverables:

- City of Chanhassen & RPBCWD permits

Task 2.4: Project Management

Project Management will continue to be a key component to help meet project milestones will help to ensure the work meets the expectations of District staff and other stakeholders, and that it is completed in a satisfactory manner, within the project timeline and within the agreed-upon budget.

Barr will continue to provide updates to the project team that document project progress and coordinate tasks. We will provide monthly progress reports and budget status updates as part of the monthly invoicing process. We will solicit feedback from you on an ongoing basis to ensure clear and timely communication.

Deliverables:

- Monthly progress reports and budget status updates

Phase 3 – Quote Acquisition/Quote Review/Recommendation to Board

Barr will lead the quote process by preparing the quote documents for distribution, by responding to comments during the quote period.

The quote process is anticipated from early April 2023 to early May 2023, with the approval of the recommended contractor estimated to occur at the May 2023 RPBCWD board meeting. Notice of Award would follow the RPBCWD meeting with a Notice to Proceed potentially by early May 2023.

Meetings:

- One (1) quote review

Deliverables:

- Compiled quote package (by Barr)
- Quote summary tabulation following submittals (by Barr)
- Recommended contractor to RPBCWD Board (by Barr)
- Review contractor submittals and draft Notice of Award/Notice to Proceed

Phase 4 - Construction Administration, Observation and Project Closeout Services

Barr will lead construction administration, construction observation and project closeout for the project including the following services:

- Construction Administration
 - Review shop drawings, fabrication drawings, and product data submittals and coordinate with RPBCWD and city of Chanhassen, as needed
 - Review requests for information (RFIs) and issue addendums, as needed
 - Review Contractor Pay requests

- Construction Observation and Meetings
 - Preconstruction meeting following contractor notice of award
 - Construction progress meetings with Contractor, RPBCWD and City Staff
 - Observe construction and document completed tasks
- Project Closeout
 - Submit record drawings based on contractor provided information to RPBCWD upon project completion
 - Complete a punch list walk-through with RPBCWD and the contractor
 - Observe system start-up following substantial completion
 - Provide updated O&M exhibit to be provided as an attachment to the previous project manual

The notice to proceed is expected in -mid-May with construction beginning in late June. The timeframe prior to construction is to allow for materials procurement. Specifics related to construction schedule will need to be coordinated with the city of Chanhassen. The timeline allows for an eight (8) week construction window for shop drawings, material lead times, and project substantial completion to allow system operation during the watering season. Site restoration and other construction tasks not required for system startup will follow substantial completion during a forthcoming agreed upon final project completion date. We have assumed a two (2) week active construction period that would require periodic site observation.

RPBCWD, Barr, and the city of Chanhassen will need to work closely during the entire process to achieve a successful project. Following completion of construction, a construction documentation memorandum will be developed to document construction activities, RFIs, any change orders, as-built drawings and operations & maintenance procedure.

Meetings:

- One (1) preconstruction meeting (virtual)
- Two (2) construction progress meetings (virtual)
- Two (2) construction observation site visits
- One (1) punch list review and system start-up site visit

Deliverables:

- Reviewed and redlined construction documents such as shop drawings, RFIs, etc.
- Record drawings based on information provided by the contractor
- Initial punch list and approved punch list
- O&M manual including product manuals, etc. provided by the contractor
- Pay applications from contractor(s), up to three
- Change orders (if necessary), up to one

Optional Task 1: Troubleshooting Investigation

Based on feedback from the City and Peterson Construction it is our understanding that the hydraulic issue leading to systems underperformance is connected to the intake features. However, the exact cause of the hydraulic issue has not been pinpointed. As an optional task, we suggest implementing a strategic troubleshooting study to improve the likelihood of understanding the source of the issue and ascertain if the existing piping and equipment can be reused with no or minimal modifications.

Due to winter conditions, it is unlikely that the hydraulic system will be capable of operation. We propose to pressure test existing piping with the use of pipe plugs and pressurized air. We will investigate proper manufacturer equipment troubleshooting methods and implement for field testing. Barr staff will conduct one site visit to inspect the site and monitor pressure testing of the hydraulic system. To mitigate potential cost, it is presumed that City operations staff will be responsible for performing all testing on the existing system. The troubleshooting activities could also be included in a construction contract as an initial step toward modifying the inlet configuration, thus leveraging the experience of the contractor as well.

The Barr team will maintain a site investigation report and develop a brief memo outlining our findings from the troubleshooting investigation.

Meetings

- One (1) troubleshooting results meeting

Optional Deliverables:

- Troubleshooting Results Memo
- Site investigation report

City Responsibility:

- Conduct necessary pressure testing of existing piping

4. Assumptions:

We have made several assumptions in preparing the scope of work for each work item in this agreement. Assumptions relating to individual work tasks are listed along with the detailed description. However, additional assumptions that do not correspond with a single work task are listed below:

- The existing site soil borings will be utilized for design of the intake structure. If soil stability concerns persist, the intake structure foundation will be conservatively designed to reduce soil bearing pressures.
- Post-construction survey will not be completed because the construction documents will require the contractor to supply information
- One presentation for the District Board prior to final approval before quote the project.
- Meetings with stakeholders will last approximately 1 hour and will be held virtually.
- The project site is free from contamination.
- An EAW/EIS will not be needed for this project.
- Total time required to complete construction administration and associated documentation will not exceed 16 hours, based on an assumed total construction timeframe.
- USACE permit is not required.
- No property acquisition or easements will be needed for the project.
- The proposed budget includes costs for mileage reimbursement for site visits and site observation.
- Comments on the conceptual and 90% design will be provided within one week of supplying the information.
- Permit fees will be paid for directly by the District. If needed to expedite the application process, Barr could pay the permit fees and charge that expense to the District as needed. This effort will be coordinated with the Administrator on a time and expense basis.

5. Budget:

Services under this Task Order will be compensated for in accordance with the engineering services agreement and will not exceed \$23,900 without written authorization by the Administrator. The estimated fee for each task is:

Phase	Subtask	Anticipated Budget	Tentative Completion
Phase 1 - Data Collection, Troubleshooting Investigation & Conceptual Design			Feb-23
	Kickoff Meeting	\$740	
	Data Collection and Review	\$770	
Phase 2 - Final Design, Permitting and Project Management			Mar-23
	Preparation of Construction Plans and Specifications	\$10,370	
	Permitting Assistance	\$1,630	
	Project Management	\$2,660	
Phase 3 – Bidding /Bid Opening/Recommendation to Board			Apr-23
	Bidding Services	\$1,950	
Phase 4 - Construction Administration and Observation			Jul-23
	Construction Administration	\$2,160	
	Construction Observation and Meetings	\$2,040	
	Project Closeout	\$1,580	
Task Order 44 Total Budget		\$23,900	

Optional services as described in this Task Order will be included as Barr services for additional compensation at the discretion of the Administrator and will be compensated for in accordance with the engineering services agreement and will not exceed \$6,460 without written authorization by the Administrator. The estimated fee for the optional task is:

Phase	Subtask	Anticipated Budget	Tentative Completion
Optional Task 1 - Troubleshooting Investigation			Feb-23
	Troubleshooting Investigation	\$3,020	
	Troubleshooting Results Memo	\$2,800	
	Troubleshooting Review Meeting	\$640	
Optional Task 1 Total Budget		\$6,460	

6. Schedule:

The proposed schedule (above) is based on the construction occurring during the late spring and early summer of 2023. The schedule outlined above assumes project initiation will occur in February 2023. The schedule may be modified depending on actual initiation of project work, permit approvals, and stakeholder coordination efforts.

IN WITNESS WHEREOF, intending to be legally bound, the parties hereto execute and deliver of this Agreement.

CONSULTANT

**RILEY PURGATORY BLUFF CREEK
WATERSHED DISTRICT**

By _____

By _____

Its Vice President _____

Its _____

Date:

Date:

APPROVED AS TO FORM & EXECUTION
