TASK ORDER No. 32B – Upper Riley Creek Ecological Enhancement Project: Final Design, Permitting, and Agreement Support Services Pursuant to Agreement for Engineering Services Riley Purgatory Bluff Creek Watershed District and BARR Engineering Company.

This Task Order is issued pursuant to Section 1b 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. Description of Services:
   Barr will work with District staff to complete the engineering design and permitting as well as provide private property owner support services to restore an approximately 8,600 foot reach of upper Riley Creek, referred to as Reach R4, in Chanhassen, Minnesota. The project is located between Highway 5 and Lake Susan, on property owned by multiple landowners, including both private owners and the City of Chanhassen (City). This portion of Riley Creek was identified for restoration in the Creek Restoration Action Strategy (CRAS) and RPBCWD's capital improvement program in the 10-year plan. Erosion was observed throughout this reach, with detrimental effects on in-channel and riparian habitat, as well as poor in-stream water quality and degraded water quality in Lake Susan, where upper Riley Creek outlets. This project would provide final design for ecological restoration of Reach R4, project area pond dredging, and addressing the Lake Susan sediment delta based on the findings of the May 2021 Ecological Enhancement Plan. Project design would be followed by preparation of bid documents. Barr would also prepare required permit applications and would support the District's lead in obtaining easements in advance of project construction.

   Barr's proposed scope of work activities are divided into three phases:

   Phase 1: Upper Riley Creek Ecological Enhancement Plan (Previous completed under Task Order 32A)
   Phase 2: Final Design, Permitting, and Easement Assistance (This Task Order 32B);
   Phase 3: Construction Administration Services (Future Task Order).

2. Scope of Services:
   Engineer's services under this task order leverage the knowledge and lessons learned from recent RPBCWD restoration projects, including but not limited to Lower Riley Creek, Middle Riley Creek, Bluff Creek Tributary, and Scenic Height Forest restorations. As a result, Task Order 32B scope of services expands the level of effort relative to the prior projects and shall include:

   PHASE 2. FINAL DESIGN, PERMITTING AND AGREEMENT ASSISTANCE

   Final design, permitting, and easement assistance includes multiple tasks in order to develop a resilient design, and that key stakeholders (District, City, Met Council, Minnesota Department of Natural Resources [MNDNR], and U.S. Army Corps of Engineers [USACE]) can provide input and feedback during the design process. These tasks are described below.

   Task 2-1. Kick-off Meeting

A design kick-off meeting will be held with District, City, and Barr staff to discuss the overall project, intermediate deadlines and deliverables for each deadline. The meeting will also provide an opportunity to define initial roles to be filled by District Staff and Barr Staff.

Task 2-2. Site Visits and Data Collection

Barr staff will complete up to three site visits to verify suitability of proposed design elements and to complete field assessments necessary to populate parameters in the Minnesota Stream Quantification Tool (SQT), a relatively new tool being used by the Minnesota Board of Soil and Water Resources (BWSR) and USACE, to establish existing-condition functional category scores (e.g., hydrology) for the channel and estimate its potential functional lift. It is anticipated that one site visit would be completed prior to 60% design and up to two additional site visits would be completed prior to final design. District staff will be notified of the site visits and invited to participate at their discretion.

Barr staff conducted topographic survey of the entire 8,600 linear foot reach in late March and mid-April 2021. Areas requiring additional survey will be identified during site visits, and may include areas where topography has changed or additional information is needed for final design. Additional survey of property boundaries will be completed to help develop legal easements of the work areas. The design will utilize LiDAR data outside of surveyed footprint.

Barr staff will also complete a tree inventory within the project extents for the purpose of identifying trees to be impacted by the project, quantification of trees available for use on the project (root wads/toe wood), and to develop tree replacement strategies as will be required to meet City permitting requirements. Barr will coordinate with the District in advance of the tree inventory to determine if District staff have capacity to support Barr with this effort.

Barr will work with RPBCWD staff to collect representative soil samples along the reach to document pre-project soil health conditions, compaction and infiltration capacity. The district would send the samples to the Cornell Soil Lab (http://soilhealth.cals.cornell.edu/testing-services/comprehensive-soil-health-assessment/) for analysis of the following one of their established soil health analysis testing packages (note Cornell charges between $100-$140 per sample analyzed). This information will help inform elements of the restoration design. If staff capacity is limited, Barr will request Administrator approval to conduct the investigation by either adjusting other scope items or adding these services on a time and material basis. Other than possible hand augers (up to 2), no soil borings will be conducted and no geotechnical analysis will be needed to support the restoration design.

Barr staff will conduct a bathymetric survey of the sediment zone in Lake Susan and the one stormwater pond identified for improvement in the May 2021 enhancement plan (the pond located southeast of the City public works building). Up to 130 hours have been allotted for the completion of bathymetric, property boundary, and additional topographic surveys.

Sediment deposited in Lake Susan and the stormwater pond in the project area may contain chemicals (e.g., metals, polychlorinated biphenyl compounds, etc.) from runoff or discharge within the watershed. The characteristics of these sediments can be critical for evaluating the feasibility of sediment management options. If contaminated sediment is present, additional management or disposal of removed sediments may be necessary. Two sediment cores will be collected during

open-water conditions in Lake Susan, inspected, and logged by Barr. Up to two sediment cores will be collected, inspected and logged at the stormwater pond. The collected samples will be submitted for chemical laboratory analysis in accordance with MPCA's guidance for managing dredged material in the State of Minnesota. These results will be compared to the applicable criteria for determining whether sediment is suitable for reuse or if it must be disposed at an approved site. The samples collected in Lake Susan will be used to inform potential future restoration actions at the lake delta that could be added to this project or deferred to a future project.

Task 2-3. Stakeholder Meetings

District Staff will coordinate a meeting with key project stakeholders to facilitate early discussion about the project and identify critical stakeholder concerns. This task assumes one virtual stakeholder meeting at approximately 60% design with the District Staff, City, Met Council, MNDNR, USACE and any other public entities with a stake in the project and separate virtual open house for adjacent private property owners and other interested stakeholders. The kick-off meeting in Task 2-1 will help establish a tentative schedule for each meeting and identify key dates to provide notices and/or send information to stakeholders. It is assumed each agency stakeholder meeting will be approximately 1 hour long will be held via teleconference.

Task 2-4. Preliminary (60%) Design and Opinion of Probable Cost

The preliminary design will be advanced based on District, City, and stakeholder input. The current version of the SQT will be used to determine an existing condition functional category (e.g., hydrology, hydraulic, and geomorphic) score (ECS) for the reach, as well as a proposed conditions score (PCS) to be achieved post-construction. As part of the USACE's review and permitting process they have indicated a strong preference for using the SQT to evaluate changes in ecosystem functions (functional lift) related to channel improvements associated with projects of this nature.

Hydraulic modeling will be conducted to inform the stream restoration design. In particular, it will be used to evaluate flow depths and estimate existing and proposed erosive forces. This will help to develop proposed restoration measures that can withstand anticipated creek flows while minimizing impacts to adjacent private properties. A preliminary opinion of probable construction cost will be prepared. The 60% design drawings will be provided electronically in pdf format to the District Administrator and City for additional feedback. It is assumed that comments will be provided within two weeks of submitting the drawings.

Data obtained from pond core samples will inform the design to address sediment in one stormwater pond (i.e., dredging design and/or outlet modifications). Additionally, we will provide a one-page summary of sampling results from the Lake Susan investigation, along with recommendations for future actions to address sediment. The memo will help inform the district on science-based alternatives for remedial actions related to the sediment delta (e.g., removal of materials, aquatic vegetation management, etc.) that could be added to the current project or deferred to a future action.

Task 2-5. EAW Preparation

An Environmental Assessment Worksheet (EAW) will likely be required for this project due to the potential length of affected stream channel. The EAW will be prepared based on the project concept described in the Ecological Enhancement Plan, with access accounted for to the extent feasible at the time of preparation. The allocated budget and process outlined below is based on the wetland delineation, desktop threatened and endangered species review, Phase I cultural resources inventory, and Phase I environmental site assessment completed for the Ecological Enhancement Plan being sufficient for EAW and all permit application development. If it is determined there is less than 1 acre of total impact to public waters then an EAW would not be required by Mn Rule 4410.4300 Subp. 27 and this task will be eliminated and permit applications will be submitted sooner.

This scope of services allots time for Barr to provide procedural support to the Responsible Government Unit (RGU) tasked with administering the EAW process. Per Minnesota Rules, the project requires an EAW under Subpart 27 (i.e. more than 1 acre of impact to a public water) and the local government unit responsible for administering the Wetland Conservation Act (WCA) shall be the EAW RGU. As such, the RGU for this project would be the City. To support the City, Barr will facilitate the following items in addition to preparation of the EAW:

- Revisions to the Draft EAW based on District and City review comments. It is assumed the City will deem the Draft EAW complete after one iteration of comments and associated updates.
- Barr will facilitate EAW submittal to the Minnesota Environmental Quality Board (EQB) for publication in the EQB Monitor, which initiates a 30-day public review and comment period.
- Barr will support the City by preparing responses to comments received during the EAW public review period.
- Barr will prepare a finding of facts and EIS decision document for the City's review and approval. The City and District will be responsible for presenting this document should the City decide to bring the decision before City Council. This scope of services presumes that the resulting Record of Decision (ROD) will determine that the project does not have potential for significant environmental effects, and that an Environmental Impact Statement (EIS) will not be required.
- Barr will facilitate submittal of the City's EIS need determination to the EQB to finalize the EAW process.

After the ROD is issued, permit applications can be submitted.

Task 2-6. Permitting Assistance

Barr will complete permit applications for the project, including the development of a stormwater pollution prevention plan (SWPPP). A MNDNR Work in Public Waters Permit, WCA Permit and USACE Section 404 Permit may be required, as well as local permits such as the RPBCWD and City permits. Because the MnDNR's Work in Public Waters permit will address District's Rules E (dredging), F (shoreline and streambank stabilization), and G (waterbody crossing and structures), the scope presumes a separate District permit will not be required to address these rules. This scope of work includes completing permitting materials for compliance with RPBCWD's rules B (floodplain), C (erosion prevention and sediment control) and D (wetland and creek buffers). Since

wetlands were not previously assessed using MnRAM, MnRAM assessment for the five delineated wetlands to facilitate District permitting for wetland buffer determinations.

The District's timely review of permit application materials prior to submittal and designation of Barr as its authorized agent for permitting (as applicable) will allow Barr to submit permit applications and maintain the project efficiency and schedule. To further facilitate timely submittal of permit applications, permit fees will be paid by the Barr and invoiced to the District as a direct expense in addition to the estimated budget for this task order.

Permit applications will be prepared following completion of 60% design and EAW processes. Due to the potential magnitude of impacts to public waters and needed USACE section 404 approval, it is anticipated that permitting may take up to 180 days for full approval and authorization to complete the work.

Task 2-7. Final Engineering and 90% Design

After gaining additional input from stakeholders regarding the advanced design, Barr will continue to refine the design and prepare the 90% drawings and opinion of cost for review by District and City staff.

Task 2-8. Final Construction Drawings and Engineer's Opinion of Probable Cost

Upon review and approval of the 90% design by District staff, Barr will complete the final construction drawings (bid-ready). Upon completion of the final design, Barr will prepare an Engineers Opinion of Probable Cost. This cost estimate will accompany the finished plan set for final approval by the District.

Task 2-9. Technical Specifications and Construction Documents

Barr will provide technical specifications and a project bidding form for the project. Barr will develop technical specification sections using Construction Specifications Institute (CSI) format including all "upfront" sections such as general conditions, supplementary conditions, summary of work and those related to bidding and contracting. The development of the technical specification will be coordinated with the District Administrator and Counsel. Barr assumes specifications will be in CSI format with Engineers Joint Contract Documents Committee (EJCDC) general conditions. Barr reserves the right to modify budget if technical specification format is other than stated in this paragraph. Specifications will be provided for review in conjunction with the Final Construction Drawings and include up to one set of revisions.

Task 2-10. Bidding Assistance

Barr will conduct: a mandatory pre-bid meeting and site visit (if warranted); prequalification of bidders, if appropriate; review of bids; and follow-up inquiries with bidders. Advertising and bidding dates will be coordinated with District Administrator. It is presumed that advertising for bids would occur in the District's official newspapers. To facilitate timely submission and publication, ad fees will be paid by the Barr and invoiced to the District as a direct expense in addition to the estimated budget for this task order.

Barr will conduct the bid opening, review bids, and prepare recommendations on contractor selection for the board of Manager's consideration.

Task 2-11. Private Property Owner Agreement Support

Barr will assist District staff's lead in facilitating a one-on-one meeting with the up to five (5) private property owners adjacent to the project to discuss potential implications on their properties, such as access, construction, maintenance, and buffer dedication. These meetings will occur early in the design phase with findings used to inform access and easement agreement development. It is assumed each property owner meeting will be approximately 1 hour long and will occur either on-site at the property, at the District's office, or virtually.

District staff will coordinate with affected property owners (up to 5) to assist District legal counsel in developing easement agreements to allow for the ecological enhancement and maintenance of upper Riley Creek. This task will be led by District staff and counsel, but Barr staff will support by providing input on technical components during development of the agreement, as well as figures and other support, as requested. The individual agreement will specify the responsibilities of each organization, as well as the long-term inspection and maintenance of the restoration efforts.

Because the level of effort associated with this task is dependent on the agreeability of the affected property owners, Barr has allocated an allowance of 60 hours to provide the District with support as requested for meeting attendance and easement development. Should support beyond the allowance be requested by the District, Barr will provide the services on a time and expense basis pursuant to Section 1a of the above-cited engineering services agreement between the District and Barr.

Task 2-12. Cooperative Agreement Support

Barr will assist the District Administrator with working with legal counsel to develop a cooperative agreement between the District and City for activities related to construction, operation, and maintenance of the project. Barr assumes that this agreement would establish procedures for performing specific tasks, define responsibilities of each organization, and allow access to City property for construction. Barr has included an allowance of 40 hours to support the cooperative agreement development. If Barr's assistance is needed beyond this allowance, additional services would be provided on a time and expense basis.

Task 2-13. QA/QC Review

Barr will leverage other experienced stream restoration staff not directly involved in the design of the project to provide QA/QC review at the 60%, 90% and final design phases.

In addition, Barr will implement QAQC processes for permitting document and private property owner support tasks. As part of QAQC for these items, work products will be reviewed by a qualified senior team member prior to submittal to the District for review.

Task 2-14. Project Management

Project management is a key component to help meet project milestones. In addition, project management will help make sure the work meets the expectations of District staff and other

stakeholders and that work 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. Barr will provide the District with monthly progress reports and budget status updates as part of the monthly invoicing process. Barr will solicit District Staff feedback on an ongoing basis to maintain clear and timely communication.

Optional Task 2-15. Drone Imagery and Video

As an optional task, Barr could mobilize one FAA certified Part 107 UAS pilot staff and one observer to collect UAS photographs and videos of the ecological enhancement area. The objective of the UAS mission will be to obtain high resolution aerial videos and photos of the stream stabilization reaches pre and post construction. Due to the tree canopy and reed canary grass coverage in the project area, drone technology is unable to collect topographic information for the project. If the optional drone flight services are requested:

- A pre-construction drone flight would take place in Spring 2022 before leaf-on, and a post-construction flight would take place after construction (anticipated Fall 2023).
- RPBCWD will be responsible for contacting property owners adjacent to drone flight areas to inform them of planned drone flights. Barr will provide figures highlighting the flight area.
- No flight over people, private residences, or moving vehicles will be performed.
- Collection of topographic information is not included in the current UAS flight scope due to tree cover.

Assumptions

Barr has made several assumptions scope of work items in this agreement. Assumptions relating to individual work tasks are listed above in the task detailed descriptions. However, additional assumptions that do not correspond with a single work task are listed below:

- The anticipated services include in this task order are based on the preliminary ecological enhancement concepts in the May 2021 Ecological Enhancement Plan.
- This EAW will not participate in an optional 2022 pilot program to evaluate an updated EAW form and a public meeting for the EAW process will not be held.
- There will be no changes to the wetland boundaries or types as approved in the Minnesota Wetland Conservation Act Notice of Decision issued by the City on November 4, 2020.
- The Phase I cultural resources inventory completed for the project included a literature review, as well as a pedestrian survey with soil borings completed by a qualified archaeologist. Due to the level of review completed and the project's location in an intensely developed setting, additional cultural resources inventory to support permitting is not expected.
- No property acquisition will be needed for the project.
- City of Chanhassen will provide all available data related to the pond identified for dredging in the ecological enhancement plan, including but not limited to bathymetry, record drawings, easements, GIS, modeling, etc.
- The District will provide all available and applicable GIS and CAD files to Barr in an electronic format.

- All services related to construction administration or preparation of a maintenance plan are excluded from this current task order.
- If specialty subcontracting services are needed (e.g., cultural resources specialist, etc.), Barr will seek approval by the District Administrator prior to engaging a subcontractor. A subcontractor mark-up of 10% will be used to cover additional risks and costs of sub-consultants on design projects.
- The proposed budget includes costs for mileage reimbursement for site visits and additional data collection, as needed. Mileage will be charged according to the United States Business Standard Mileage Rate established by the IRS.

3. Deliverables:
   The following deliverables will be prepared and provided to the District:

   Phase 2: Final Design and Permitting

   - Kickoff meeting agenda and notes
   - SQT worksheets (ECS and PCS)
   - Sediment core lab results
   - Bathymetric and topographic survey data incorporated into design drawings
   - Tree inventory and replacement plan incorporated into design drawings
   - Stakeholder meeting agendas, materials preparation, and meeting minutes (up to 2 meetings)
   - 60% design drawings and Engineer's Opinion of Probable Cost (PDF, up to 30 sheets)
   - One-page summary of sampling results for Lake Susan and recommendations for future actions for ecology enhancement
   - Draft EAW, EAW responses to comments, finding of facts document, and EIS need determination documentation
   - MnDNR Work in Pubic Waters, WCA, USACE, SWPPP, District, and City permit applications
   - 90% design drawings and Engineer's Opinion of Probable Cost (PDF, up to 48 sheets)
   - Final design drawings and Engineer's Opinion of Probable Cost (PDF, up to 48 sheets)
   - Technical specifications and provisions
   - Contract documents for the bid process
   - Up to 5 legal descriptions for private property owner easement
   - Review and comment on the cooperative agreement
   - Bid tabulation and recommendations memorandum for contractor selection.

4. Budget:
   Services under this Task Order will be compensated for in accordance with the engineering services agreement and will not exceed $339,700, without authorization by the Administrator or Board of Managers except as footnoted below. Barr understands the importance of working as efficiently as possible while providing the services needed for design and construction of a resilient project. Therefore, we will look for cost saving during the entire design process in an effort to avoid unneeded duplication of past efforts, such as looking to the City of Chanhassen to supply any existing soil boring information of the area or having District staff collect data. The following table provides a breakdown of the anticipated cost for major tasks associated with scope of services describe above.

Task	Task Description	Anticipated Budget	Anticipated Completion Date
Phase 2: Final Design, EAW Preparation and Permitting			
2-1	Kick-off Meeting	$1,300	Early 2022
2-2	Site Visits and Data Collection	$41,600	Spring/Summer 2022
2-3	Stakeholder Meetings	$4,800	Summer 2022
2-4	60% Design and Cost Estimate	$102,400	Summer 2022
2-5	EAW Preparation	$25,600	Spring 2022
2-6	Permitting Assistance[1]	$28,300	Summer 2023
2-7	90% Design and Cost Estimate	$49,600	Winter 2022/2023
2-8	Final Construction Drawings and Cost Estimate	$18,700	Spring 2023
2-9	Technical Specifications and Construction Documents	$15,700	Spring 2023
2-10	Bidding Assistance[1]	$6,300	Spring/Summer 2023
2-11	Private Property Owner Agreement Support[2]	$17,000	Fall 2022
2-12	Cooperative Agreement Support[2]	$6,900	Spring/Summer 2022
2-13	QAQC Review	$3,100	Ongoing
2-14	Project Management	$18,400	Ongoing
Task Order 32B Subtotal[1, 2]		**$339,700**	
2-15	OPTIONAL – Drone Survey	$5,900	Spring 2022/Fall 2023
Task Order 32B Total[1, 2]		**$347,600**	

[1] To facilitate timely submission and publication, permitting and ad fees will be paid by the Barr and invoiced to the District as a direct expense in addition to the estimated budget listed above.

[2] Because the level of effort associated with this task is dependent on the agreeability of the affected property owners, Barr has allocated a budget allowance for this task. Should support beyond the allowance be requested and approved by the District Administrator, Barr will provide the services on a time and expense basis.

5. Schedule and Assumptions Upon Which Schedule is Based

   The project schedule is based on the substantial construction occurring during the winter of 2023, with final site restoration being completed in Spring 2024. The schedule outlined above assumes project initiation will occur in February 2022. The schedule may be modified depending on actual initiation of project work, stakeholder reviews, permit approvals, and stakeholder coordination efforts. The schedule will be further developed as part of project initiation and reviewed with the District as part of Task 2-1.

IN WITNESS WHEREOF, intending to be legally bound, the parties hereto execute and deliver Phase 2 of this Agreement.

CONSULTANT

By_____

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

By_____

Its__Vice President_____ Its_____

Date: Date:

APPROVED AS TO FORM & EXECUTION

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