



April 7, 2023

Via Email Only: jshoberg@duluthmn.gov

Mr. Jim Shoberg, PLA
Senior Parks Planner
City of Duluth | Property and Facilities Management
1532 W. Michigan Street
Duluth, MN 55860

Re: **Revised** Proposal for Engineering Services
Design and Construction Services for Spirit Mountain Snowmobile Trail

Dear Mr. Shoberg:

In response to your request, we propose to provide Engineering Services in connection with the full design and construction of the Spirit Mountain Snowmobile Trail (see exhibit), hereinafter called the Project. This Proposal supersedes our previous Proposals for this Project dated October 26, 2022 and February 27, 2023. Our services will be provided in the manner described in this Proposal subject to execution of a mutually-agreeable contract consistent with those previously executed with the City of Duluth. Hereinafter, the City of Duluth is referred to as the City.

I. PROJECT DESCRIPTION

The City is seeking Professional Engineering Services to assist with design and permitting to construct portions of the Spirit Mountain Snowmobile Trail as shown in yellow on the attached Snowmobile Trail Concept exhibit. The project will provide for system connectivity with the Fairmount Snowmobile Trail and includes approximately one mile of new snowmobile trail alignment. TKDA's team worked with the City on design and construction for the Fairmount Snowmobile Trail project through 2021.

The project also includes design of a bridge abutment to set an existing pre-fabricated steel truss snowmobile bridge over Knowlton Creek. The bridge was purchased and set temporarily as part of the Fairmount Trail project in 2021 and has structure and abutment requirements similar in nature to the bridge set under the Fairmount project. Geotechnical work for the bridge was completed in late 2020.

Our Professional Engineering Services will focus on the design of the new trail sections and abutment for the Knowlton Creek Bridge. We will walk the trail routes in the field with City staff to determine the most appropriate route and location for the trail connections and will utilize field topographic surveys to create an alignment for the trail route. We will also evaluate any necessary stream/stormwater crossings. Our team will develop trail alignment and grading plans in accordance with DNR Trail design guidelines. Project work tasks will include developing engineering design drawings and construction cost estimates. We will utilize Rob Peterson with GEI, Inc., to perform field delineation for identification of potential wetland impacts.

Our Project Team has extensive experience in delivering this type of project and is committed to delivering this project on the schedule established by the City. Our team has trail experience with the City of Duluth on the Western Waterfront Trail Renewal Project, Western Waterfront Vegetation Restoration Projects, Clyde Connector Trail, and Fairmount Snowmobile Trail which demonstrates our ability to listen to City staff, provide support where needed, and provide Engineering solutions tailored to match the City's budget for a project of this type.

II. SERVICES TO BE PROVIDED BY TKDA

Based on TKDA's understanding of the Project, we propose to provide the following services:

TASK A • FINAL DESIGN AND CONSTRUCTION FOR SPIRIT MOUNTAIN SNOWMOBILE TRAIL CONNECTIONS

After holding a kickoff meeting our team will focus on the route survey and design of the two (2) connector segments of the Spirit Mountain Snowmobile Trail with work tasks including field survey, trail grading and drainage, obtaining wetland delineation information to determine potential wetland impacts, and creating construction documents for the project work. In addition to the trail grading and drainage work, our team will also provide the following:

- Plan for ditching and roadway maintenance along the Cloquet water line service drive/snowmobile trail (AKA Puker) which is approximately 915 LF in length per the alignment and information included in the City's funding application.
- Evaluate the condition and use of a bridge structure salvaged by the City for installation as a temporary type structure north of Grand Avenue near the lower chalet. We propose making a structural assessment of the salvaged structure, visiting with City Staff regarding goals for this crossing, and making a determination as to whether temporary or permanent foundations are most suitable.
- We will also provide for construction staking, part-time field observation, and contract administration for the construction phase of the work.
- Alternate #1 in our Proposal includes the creation of a location map, and details for the grading, ditching, and culvert repairs on the existing system within the SMRA property at the 20 locations identified by City Staff and included on the Field Points List.

TKDA Work Tasks & Responsibilities:

- Review onsite information, walk with City Staff to develop the proposed trail route, and to review any related stream or stormwater crossings. We will obtain topographic survey information for the entire length of the trail and at the proposed connection locations, near the proposed swing bridge location, and the access roadway/ditching work.
- Provide for wetland delineation and permitting through our sub-consultant, GEI (Rob Peterson).
- Work in Alternate #1 (if accepted), would include obtaining topographic survey information collected at waypoints 87, 88, 89, 90, 92, 93, 100, 101, and 102 to facilitate culvert repairs. We will also create a location map and construction details for making repairs on the Field Points List. We have included time (16 hrs) for analyzing culvert sizes for the 10 locations noted on the list. We have assumed that nine (9) of these culvert crossings are on upland drainage swales and that only one (1) is located on a DNR-protected waterway. We have included time for permitting one of the crossings in our proposal. If others require public waters permitting it would be considered additional work.
- Evaluate the City's salvaged bridge structure for suitability for use as a trail crossing, review project goals for its use, and determine if a temporary or permanent foundation are most appropriate. We've included time for specifying temporary structure anchoring but not for the design of a permanent bridge foundation.
- Create construction documents suitable for the City's use in obtaining contractor bids for the project.
- TKDA will assist the City with seeking contractor pricing, hosting a pre-bid meeting and answering questions during the bidding process.
- We estimate eight (8) weeks of construction for the trail and system repairs. TKDA will provide for part-time onsite construction observation (8 hrs/week) and we have included 66 hours in our fee estimate for this work. Our proposal also includes 35 hours for staking the trail and abutments for construction.
- TKDA will provide construction administration (review submittals, prepare change orders, and review pay applications) for the project and we have included 14 hours in our proposal for this effort.

City Responsibilities:

- Attend the kick-off meeting; assist in providing background information relevant to Project, review updated design reports and construction plans, and submit funding applications.
- Provide TKDA with access to the site as necessary to perform site observations.



TASK B • FINAL DESIGN AND CONSTRUCTION—KNOWLTON CREEK BRIDGE ABUTMENTS

TKDA's team previously prepared construction plans, specifications, and cost estimates as necessary for the construction of concrete abutments for support of the Knowlton Creek Bridge on the Fairmount Snowmobile Trail. The structure was set on a temporary basis in 2021. Our team would need to revisit and update plans and specifications for changes in materials and construction methods and requirements to the current date.

TKDA Responsibilities:

- TKDA will update our original design and construction documents and specifications for construction of the bridge abutments and trail tie-ins.
- TKDA will assist the City with seeking contractor pricing, hosting a pre-bid meeting and answering questions during the bidding process.
- TKDA will provide for part-time onsite construction observation (estimated hours to be spread over the project construction time line at an additional 10 hrs/week for bridge construction items for 4-week construction schedule), construction administration (review submittals, prepare change orders, and review pay applications).
- Prepare documentation of the project kick-off meeting and the data provided by the City to the TKDA Team. We will prepare and maintain a detailed project schedule.

City Responsibilities:

- Provide any additional background/record drawing information that may be required to complete the design work.
- Attend design review meeting and provide plan reviews and feedback promptly to maintain the project schedule.

III. ADDITIONAL SERVICES AND ASSUMPTIONS

If authorized in writing by the City, we will furnish or obtain from others Additional Services of the types listed below which are not considered as basic services under this Proposal. Additional Services shall be billable on an Hourly Time and Materials basis and such billings shall be over and above any maximum amounts set forth in this Proposal.

- A. Additional construction staking work.
- B. Additional construction observation if required by Client, contractor's schedule, or other unforeseen circumstances.
- C. Additional Geotechnical evaluation for the proposed bridge, the trail alignment, or repairs at the list of Snowmobile Field Points if necessary to design the repairs.
- D. Additional field wetland delineation and permitting or banking/replacement plan development.
- E. Construction permitting for drainage crossings shown on the Field Points List would be an additional service if required for these crossings.
- F. Preliminary and Final Design plans and specifications for construction of additional segments of the trail.
- G. Preliminary and Final Design plans and specifications for a permanent foundation/abutments at the site where the City's salvaged bridge structure is proposed for use.
- H. Field survey of topographic information on additional routes or segments beyond those identified in our fee estimate or property boundaries.
- I. Trail easement descriptions or exhibits.



IV. CITY RESPONSIBILITIES

These responsibilities include, but are not limited to, the following:

- A. Designate one (1) individual to act as a representative with respect to the work to be performed, and such person shall have complete authority to transmit instructions, receive information, interpret and define policies, and make decisions with respect to critical elements pertinent to the Project.
- B. Provide TKDA with access to the site as required to perform services listed in SECTION II.
- C. Provide reviews of materials furnished by TKDA in a reasonable and prompt manner so that the Project schedule can be maintained.

V. PERIOD OF SERVICE

We would expect to start our services promptly upon receipt of your written acceptance of this Proposal and estimate to complete SECTION II services as follows:

- Develop final design and construction documents for Spirit Mountain Snowmobile Trail and Knowlton Creek bridge abutments by December of 2023 so the City can advertise for contractor bids to construct the trail and bridge abutments.
- Trail and abutment construction is anticipated to occur between May and September of 2024. Construction-phase work (staking, observation, administration) would be performed based on contractor schedule between May and September of 2024, with project close-out by October 31, 2024.

VI. COMPENSATION

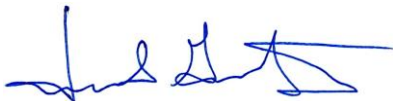
Compensation to TKDA for services provided as described in SECTION II of this Proposal shall be on an Hourly Time and Materials basis in an amount not to exceed \$64,400 for the total of the project scope identified in our proposal. We have shown the work scope and costs for the trail segment in the detailed Project Fee Estimate Hourly Rate attached to this proposal.

The level of effort required to accomplish SECTION II services can be affected by factors which are beyond our control. Therefore, if it appears at any time charges for services rendered under SECTION II will exceed the above, we agree we will not perform services or incur costs which will result in billings in excess of such amount until we have been advised by you additional funds are available and our work can proceed.

VII. CONTRACTUAL INTENT

We thank you for the opportunity to submit this Proposal. We agree that your issuance of a mutually agreeable contract in our previously negotiated format will be our notice to proceed. This Proposal will be open for acceptance for 30 days, unless the provisions herein are changed by us in writing prior to that time. Please feel free to contact Jeff Goetzman directly at 218.390.9295 or jeff.goetzman@tkda.com if you have any questions.

Sincerely,



Jeff Goetzman, PE
Project Manager



Douglas W. Fischer, PE
Vice President—Municipal, Utility and Planning Division

Attachments: Project Fee Estimate
Snowmobile Trail Concept Exhibit
Snowmobile Field Points List





Project Fee Estimate

Client:	City of Duluth					Date:	4/7/2023	
Project:	Revised--Spirit Mountain Snowmobile Trail - Final Design/Construction w/Knowlton Creek Bridge Abutments					Prepared By:	JSG	
	Estimated Person Hours Required						Total Hours	Total Dollars
Task	Task Description	Sr Reg Eng	Tech III	Reg Eng	Tech II	Reg Eng		
A	Spirit Mountain Snowmobile Trail Design							
	Kickoff Meeting	2			1	3	6	\$ 819
	Field Route Survey & Base Map (2 trips)	2	8			8	18	\$ 2,078
	Trail Layout/Grading	2	2			32	36	\$ 4,155
	Drainage/Stormwater/Ditching on Waterline Access Road	4	4			36	44	\$ 5,198
	Temporary Bridge (City-Salvaged)							
	Condition Assessment & Capacity Analysis	1	4	10			15	\$ 2,009
	Recommendation on Use--Temp or Permanent Foundation	2		4			6	\$ 967
	SWPPP	1				8	9	\$ 1,090
	Review Meetings	4		1		6	11	\$ 1,611
	Construction Documents (P/S/E)	4		8	4	40	56	\$ 6,719
B	Knowlton Creek Bridge Abutments							
	Update Plans/Specifications	3		24			27	\$ 3,998
C	Bidding							
	Pre-Bid Meeting and Contractor Questions	4		1		6	11	\$ 1,611
D	Construction Phase (Trail and Abutments)							
	Construction Staking	1	32			2	35	\$ 3,571
	Construction Observation (44 hrs bridge/64 hrs trail)	2		4		104	110	\$ 12,527
	Contract Administration	4				10	14	\$ 1,915
	Project Closeout	1				12	13	\$ 1,535
ALT #1	Repair Sites--Field Points List--Mapping, Details (.KMZ file/list)							
	Topographic Survey, Mapping, Repair Notes, Culvert Analysis	3	8			64	75	\$ 8,503
	SUBTOTAL HOURS	40	58	52	5	331	486	
	SUBTOTAL LABOR FEES							\$ 58,306
Total Person Hours		40	58	52	5	331	486	
Billing Rate/Hr x Multiplier		\$ 201	\$ 98	\$ 141	\$ 84	\$ 111		
Total Billable for Charged Time		\$ 8,030	\$ 5,706	\$ 7,357	\$ 422	\$ 36,791		\$ 58,306
Expenses:								
Mileage		Mileage at:	400					\$ 256
Survey Equipment		Hours at:	8					\$ 320
Wetland Delineation and Permitting (GEI Subconsultant)								\$ 5,500
Total Project Fees								\$ 64,382
Total Not to Exceed								\$ 64,400

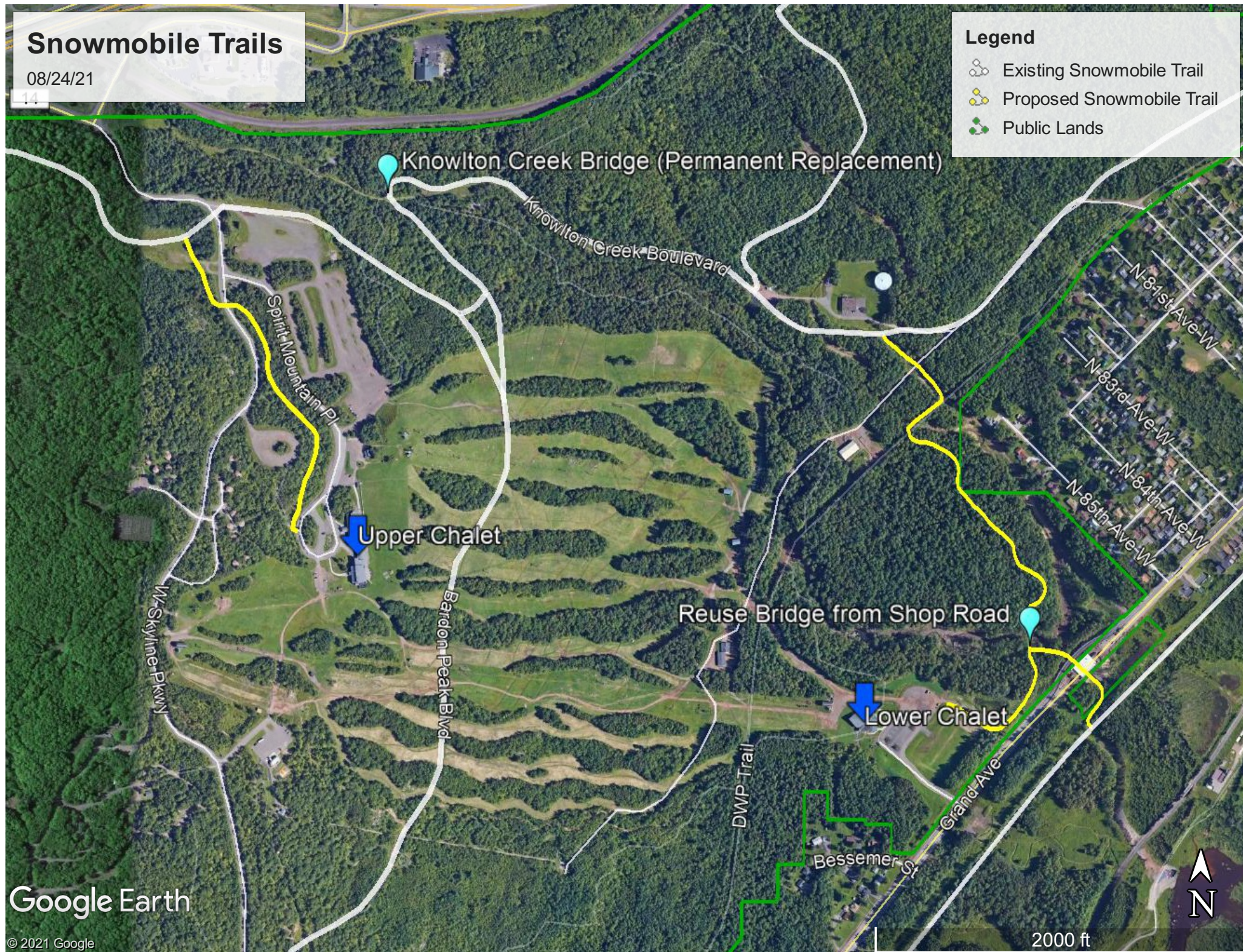
Snowmobile Trails

08/24/21

14

Legend

- Existing Snowmobile Trail
- Proposed Snowmobile Trail
- Public Lands



Snowmobile Field Points/Notes

- 87 culvert needed
- 88 culvert needed
- 89 culvert
- 90 culvert and dirt work needed to fill large mud hole
- 91 ledge rock lip, needs fill
- 92 culvert and mud hole
- 93 big culvert needed
- 94 big mud-hole, needs fill
- 95 washed out ditch along trail leading down to bridge (add rock checks in ditch)
- 96 big washout below culvert outlet
- 97 swing out corner and make wider
- 98 move trail over add culvert and ditch, brush left side and move trail toward the hill away from the creek, clean out ditch.
- 99 round out corner
- 100 big culvert needed
- 101 big culvert needed
- 102 big culvert needed
- 103 reset bridge to DNR temp standards (timbers on site)
- 104 big washout, needs fill, on existing trail (no longer part of grant-in-aid system and not groomed for use)
- 105 replace culvert and make corner wider
- 106 add ditch to upper side

Outstanding Questions

- Can we use Dirt at snowmobile round lot, ask Spirit
- Keep Knowlton bridge same elevation as it currently sits (note to TKDA for abutment design)
- Lower Norton Park trail no longer part of grant in aid system, club doesn't groom any longer, remove from snowmobile GIS trail data
- Proposed connectors not groomed by club need to have discussion about who maintains and grooms



April 11, 2023

Via Email Only: jshoberg@duluthmn.gov

Mr. Jim Shoberg, PLA
Senior Parks Planner
City of Duluth | Property and Facilities Management
1532 W. Michigan Street
Duluth, MN 55860

Re: **Revised** Proposal for Engineering Services—Costs for Bridge Abutment Work
Design and Construction Services for Spirit Mountain Snowmobile Trail

Dear Mr. Shoberg:

In response to your request, I am sending this clarification to our Proposal for Engineering Services related to the Spirit Mountain Snowmobile Trail project. As part of the project scope, our team is to provide engineering services to update the previously prepared construction plans and specifications for concrete bridge abutments at Knowlton Creek. The proposal also includes time for staking and construction observation of the abutments. The clarification you sought is to separate out/show the costs for the design and construction administration of this element of the project separately.

From our fee estimate for the proposal, costs related to the design and construction of abutments for the Knowlton Creek bridge are as follows:

Proposal Item B: Update Plans/Specifications (entire line item): \$3,998
Proposal Item C: Pre-bid Meeting/Contractor Questions (1 hour for bridge designer): \$141
Proposal Item D: Construction Phase
Construction Staking (8 hrs of the 32 shown): \$784
Construction Observation
(second line-4 hours Bridge Designer, 40 hours Reg Engineer): \$5,004

Total Estimated Fee for Bridge Scope: \$9,927

We thank you for the opportunity to submit this Proposal and clarification. Please feel free to contact me at 218.390.9295 or jeff.goetzman@tkda.com if you have any questions regarding the information included in this letter or in the proposal submitted on April 7, 2023.

Sincerely,

Jeff Goetzman, PE
Project Manager

cc: Ted Blenkush, City of Duluth