City Of Northfield Minnesota

Proposal for

2022 NW Area Mill and Overlay Project

May 21, 2021

Contents

BOLTON & MENK

Real People. Real Solutions.

Contact:
Brian Hilgardner, PE
612-328-4729
Brian.Hilgardner@bolton-menk.com

12224 Nicollet Avenue | Burnsville, MN 55337-1649
Ph: (952) 890-0509 | Fax: (952) 890-8065 | Bolton-Menk.com

BOLTON & MENK
Real People. Real Solutions.

12224 Nicollet Avenue
Burnsville, MN 55337-1649

Ph: (952) 890-0509
Fax: (952) 890-8065
Bolton-Menk.com

May 21, 2021

Sean Simonson
Engineering Manager
801 Washington St.
Northfield, MN 55057

RE: Proposal for 2022 NW Area Mill and Overlay Project

Dear Mr. Simonson:

The 2022 NW Area Mill and Overlay Project will improve the City of Northfield's street aesthetics, pedestrian movements, bicycle routes, drainage, and structural strength. Like you, Bolton & Menk, Inc. takes great pride in designing and managing projects that are safe, sustainable, and beautiful. As you know, our experience dealing with the railroad and working with the city to develop on-street bikeway options that best serve the community will be critical to this project. We have worked through the same challenges presented by this project on the 2019 Street Reclamation and the 2020 Mill and Overlay Project and successfully delivered these projects for the city. This will create efficiencies with the city's project process and save time for city staff. We have the experience and understand what needs to be accomplished for successful completion of the 2022 NW Area Mill and Overlay Project.

Strong Working Relationship with City Staff – We have developed a strong working relationship with city staff, gaining a thorough understanding of the city's values, goals, and standards. I have worked on Northfield projects for the past 15 years. The entire team has worked on multiple projects within the City of Northfield. Recent projects we've successfully delivered in Northfield include

- 2016 Woodley Street Reconstruction
- 8th and Division Street Improvements
- 2019 Street Reclamation Project
- 2020 Mill and Overlay Project

Complete Understanding of the Project Process – We have completed the proposed process with the city on previous projects. We helped the city develop its standard specifications, details, and CAD standards. Our comprehensive understanding of your process allows us to efficiently complete the project, allowing time to be spent on other important items within your department. These efficiencies save money for the city in ways not illustrated in our proposal.

Experienced Team – We have a strong background in municipal engineering. Our strength is derived from our talented and experienced staff, extensive project experience, and relationships with governmental and regulatory agencies. We have assembled a team of qualified professionals for the 2022 NW Area Mill and Overlay Project who will bring their extensive knowledge and similar rehabilitation experience to the project.

In continued service to the City of Northfield, we are excited at the opportunity to complete the 2022 NW Area Mill and Overlay Project. I will serve as your principal-in-charge. Please contact me at 612-328-4729 or brian.hilgardner@bolton-menk.com if you have any questions regarding our proposal.

Sincerely,

Brian Hilgardner, P.E.
Principal Engineer

UNDERSTANDING OF GOALS AND OBJECTIVES

The project location map on the following page details the streets needing improvement and outlines the various construction methods to be used.

We understand most streets in the project area will receive a mill and overlay rehabilitation. Additional streets will include sidewalk, trail, and on-street bikeway construction. We will also complete a full intersection detail design where there are existing sidewalks to ensure ADA compliance. Two locations are identified for improvements adjacent to the railroad, one location is identified for storm sewer/drainage improvements, and four locations are identified for evaluation to provide performance and safety improvement recommendations. We will retain a geotechnical subconsultant to provide recommendations on the proposed improvements and an arborist subconsultant to identify existing tree conditions and provide construction impact recommendations for each tree. We will complete this as a part of the feasibility report, as it may have implications on the overall project cost.

On-street bikeways are planned for Thye Parkway, St. Olaf Avenue, Lockwood Drive, and Forest Avenue. We will analyze each street corridor and develop multiple design options during the feasibility study process and provide a recommendation based on the functioning ability of the bikeways. We will reference the current City of Northfield Pedestrian, Bike, and Trail System Plan for guidance on design options. Having previously been through this process with the city, we are well-educated on national design guidance and accepted industry practices for bikeways. We will reference the recently updated MnDOT 2020 Minnesota Bicycle Facility Design Manual for specific guidance to design safe bicycle facilities. We will also reference the city's 2019 Street Reclamation Project and 2020 Mill and Overlay Project to develop consistent facilities through the city as many of the proposed 2022 bikeways tie into bicycle facilities installed as part of the 2019 Street Reclamation Project.

The two locations identified for improvements adjacent to the railroad include pedestrian crossings on Greenvale Avenue and street improvements in preparation for a future quiet zone on St. Olaf Avenue. We have successfully delivered on improvements within the railroad right-of-way for the city in the past, as part of the 2019 Street Reclamation project. We know the proper communication channels and the necessary steps to accomplish these improvements and will begin on this work right away. It should be noted that work within the railroad right-of-way is completely dictated by the railroad authority and the schedule will also be dependent upon the railroad. We will work as efficiently as possible with the railroad to get this work permitted as soon as possible.

Bolton & Menk will ensure the streets listed as part of the 2022 Mill and Overlay Project list will be brought up to a service life of 15 years. We will deliver the project according to the tasks laid out in our detailed work plan on schedule and on budget, including all items detailed in the project schedule. The anticipated bid date for this project is early 2022. An early bid date is preferred due to the current highly competitive bidding climate.

We have worked through this project process with the city on numerous previous projects and understand how city staff like to see tasks completed. This project will follow the City of Northfield's project process. Bolton & Menk will follow the required project steps and assist the city with presentations at city council meetings and public open houses, as required.

Project Location Map

WORK **PLAN**

Bolton & Menk understands the importance of not only achieving the desired outcome of each of the following tasks but also completing them on time and within budget. It is our commitment to facilitate a successful process for the City of Northfield and the 2022 NW Area Mill and Overlay Project. We will put special emphasis on working with city staff to ensure the project's success. A summary of our approach to key project elements is outlined in the task descriptions below.

Feasibility Study ($37,700)

Work under this task includes identifying proposed improvements, identifying issues or risks to the project's success requiring greater exploration during final design, and communication of these elements to project stakeholders. We will perform preliminary design in coordination with city staff to determine if the project is necessary, feasible, and cost-effective. We will deliver a feasibility report that discusses each segment of the project, the research and analysis that was performed, and the recommended improvements for each segment. Specific time will be allocated for the analysis of on-street bikeways on Thye Parkway from Eveleth Avenue to Lockwood Drive, Lockwood Drive from Gill Lane to Thye Parkway, Saint Olaf Avenue from Lincoln Street to Linden Street, and Forest Avenue from Lincoln Street to just west of Odd Fellows Lane. Multiple design options will be generated for consideration.

Topographic Survey ($48,000)

Work under this task includes gathering pertinent field information on city infrastructure, physical features in the right-of-way, contours, and private small utilities. Underground utility information will be located and described per available as-builts, field markings, and private utility map information facilitated through Gopher State One Call. Manhole reports will not be completed for located manholes and catch basins. Right-of-way and property lines will be illustrated based on either found field monumentation within full topographic survey limits, plat information received from the city, and/or Rice County GIS parcel linework. No title research will be performed. Areas that will be topographically surveyed include

- All intersections and existing pedestrian ramps within the street mill and overlay project segments
- All manhole and catch basin locations within the street mill and overlay project segments
- Full topographic survey on the Highland Avenue/Ivanhoe Drive, and Greenvale Avenue/Spring Street sidewalk corridors
- Full topographic survey on the North Avenue, and Liberty Park trail corridors
- Full topographic survey on the Woodland Trail storm sewer improvements area
- Full topographic survey on the Greenvale Avenue, and St. Olaf Avenue railroad crossing improvements

Topographic survey data of the mid-block areas and cul-de-sacs of the streets identified for mill and overlay and the on-street bikeway corridors will not be collected. Additional topographic survey that results from the pedestrian crossing/route analyses and intersection analysis are not included, but a fee can be negotiated based on submitted hourly rates depending on city direction. Bolton & Menk will establish horizontal control on Rice County coordinates together with vertical control based on NAVD 88 datum. We will generate a drafted survey base drawing which will include topographic and right-of-way survey information.

Arborist Report ($5,000)

Work under this task includes evaluation of all trees within the right-of-way along the entire project corridor by a trained arborist. The arborist report will provide the overall existing tree condition and a projection of fate/recommendation of tree health due to construction impacts for each tree. The trees will be individually identified and correlated to shape file deliverable that identifies each tree's location with the required information. We have partnered with Davey Resource Group for arborist services on this project.

Design ($162,200)

Existing Plans

A base plan will be prepared to be used in preliminary and final design by using the collected topographic and right-of-way survey information. The base plan will identify locations and elevations of the required existing physical features in and around the project area. LiDAR data will be used to show existing profiles beyond the topographic collection areas.

Preliminary and Final Design Plans and Specifications

Our team will prepare plans and specifications to supplement the city's standard construction documents. Major design components include:

- Roadway alignments and widths
- Profiles and intersection layouts with curb and gutter elevations
- Cross-sections for all new sidewalk and trail installation areas
- Removals of existing features
- Identify locations of casting adjustments, structure grouting, and ring replacements based on city provided maintenance recommendations
- Storm sewer upgrades near Woodland Trail based on the 2020 Neighborhood Flooding Study
- Sanitary sewer casting adjustments
- Water system gate valve box adjustments
- Communication with all small utilities to coordinate relocations and display these utilities on the plans based on information provided by the utility companies and marked in the field
- Location of signing and striping, including on-street bikeways
- Sidewalk and trail designs based on the current City of Northfield Safe Routes to School Plan and the current City of Northfield Pedestrian, Bike, and Trail System Plan
- Intersection designs including ADA design of all pedestrian ramp facilities
- Stormwater Pollution Prevention Plan (SWPPP) for all portions of the project
- Traffic control and construction phasing plans, as necessary
- Landscape plans incorporating a 2:1 tree replacement schedule using the City of Northfield Acceptable Boulevard Tree List
- Statement of Estimated Quantities

Prepare Contract Documents

Our team will work with city staff to prepare the overall contract documents for bidding and construction purposes based on the city's standards.

Submit to City for Review and Approval

The project manager will submit preliminary and final plans to the city for review and approval at the following design stages

- 30% plan submittal
- 60% plan submittal
- 95% plan and specification submittal

Each submittal will be accompanied by a cost estimate reflective of the current design stage. A design review meeting with city staff will take place with each submittal to discuss the submitted materials and receive direction on the design elements.

Deliverables
Our team will deliver a full electronic set of approved plans and specifications resulting from the design work. The city has indicated they will produce and distribute copies of the plans and specifications for bidding purposes using the City of Northfield's One Office software. The city will also maintain and provide a plan holders list.

Obtain All Required Permits
Our team will prepare permit applications, secure city signatures, and submit them to governing agencies for all required permits related to the project (permit fees to be paid for by the city).

Prepare Opinion of Probable Construction Costs
Our team will prepare an opinion of probable construction costs based on past City of Northfield bid information, current contractor pricing, and overall knowledge of the city, local contractors, and site conditions.

Bidding Administration ($5,000)
Work under this task includes preparation of an advertisement for bids in the City of Northfield format, answering bidder's questions, issuing addenda as required, and preparation of a letter of award recommendation.

The city has indicated they will submit the advertisement for bids to the required publication, distribute addendums, and conduct the bid opening and tabulation.

Construction Services ($193,400)
Construction Administration
Our team's project manager will perform the following construction administration responsibilities
- Attend preconstruction conference
- Perform on-site review pertaining to the project's work and progress as needed
- Attend weekly progress meetings as needed
- Prepare change orders and written directives as needed
- Approve shop drawings, material lists, and all information on materials to be used for construction

We will provide copies of meeting notes, change orders, directives, shop drawings, materials lists, and supplier's lists.

Field Staking
Our survey crews will complete construction staking on the following features:
- City utilities including storm sewer, sanitary sewer, and watermain
- New concrete curb and gutter and pedestrian ramps
- New sidewalks and trails
- Signage and pavement markings

Survey crews will provide construction stakes with alignment and grade, as necessary, and documentation of all survey points installed.

Construction Observation

We will provide a highly-qualified individual to serve as construction site representative (CSR) to perform construction observation of the contractor's work and day-to-day coordination. The CSR will be on-site throughout the various stages of construction to observe and review the quality of work. All of our CSRs are MnDOT certified and have extensive training and experience. The CSR will perform the following tasks:

- Provide day-to-day construction observation and coordination between contractor, city, and residents/property owners
- Maintain good public relations with residents/property owners/developers
- Maintain daily construction logs and documentation of pay item quantities
- Work with the contractor and city staff to prepare partial pay estimates
- Coordinate and document materials testing requirements and material certifications

The CSR will provide inspection notes, photos, and other field records.

Project Close-Out ($4,200)

Conduct Final Review of Project

Work under this subtask includes completing a review of the project site with the city and the contractor. We will walk the site with project stakeholders and identify any punch list items that need to be addressed. We will provide a copy of all punch lists and review the items until acceptable by the city.

Obtain Record Information from Field Representatives

Work under this subtask includes obtaining record drawing information from field representatives. Our team will gather field information prepared by the contractor, subcontractors, and construction observation staff for use in preparing record drawings.

Record Drawings

Work under this subtask uses record information to prepare final record drawings. We will prepare record drawings in electronic format and provide electronic and/or paper drawings to the city.

Geotechnical & Testing Services ($54,000)

Work under this task includes soil borings to a depth three feet and a summary of findings with recommendations. Construction field testing will also be performed following the project specifications and MnDOT Schedule of Materials Control. We have partnered with Braun Intertec for geotechnical and construction materials testing services on this project. Braun has extensive experience performing these tasks following MnDOT's Schedule of Materials Control on other projects. In addition to the testing of materials, they will document materials certifications and verify conformity of materials and construction outcomes with MnDOT standards and requirements.

A full scope of services and assumptions from Braun is included at the end of this proposal.

PROPOSED FEE ($509,500)

In accordance with the City of Northfield's project requirements, Bolton & Menk proposes to complete the scope of work as described above for a not-to-exceed hourly fee of $509,500.

PROJECT TEAM AND **EXPERIENCE**

We have assembled a highly-motivated and experienced group of professionals for the 2022 Mill and Overlay Project. Our team values and understands the importance of achieving your vision with full stakeholder support. Our team will be led by Brian Hilgardner and supported by key individuals. This team is 100 percent available and committed to performing and overseeing the work they have been identified to lead. Project team member bios are included in the following pages of this section. Full résumés of all staff can be provided upon request.

Brian Hilgardner, PE

Principal-in-Charge

Brian will direct personnel and resources to accomplish the work plan within your schedule. He will monitor progress, schedule, and budget to ensure critical issues are promptly addressed. Brian will maintain consistent communication with city staff and project partners. He has served as project manager on several projects with the City of Northfield and understands your preferred project process. His coordination and leadership on the 2022 Mill and Overlay Project will ensure its successful delivery.

An engineer since 1998, Brian has gained a range of experience in project administration. His background includes development and design of municipal reconstruction projects, including street construction, sanitary sewer systems, lift stations, water distribution systems, stormwater collection systems, and pedestrian facility construction. His administrative duties include preliminary engineering reports, cost estimates, preliminary and final design, presentations, attendance at city council meetings, bidding assistance, and construction administration. In addition, Brian assists in training young EITs on proper construction observation skills. He is an expert in trenchless technology techniques.

Similar Experience:

- Riverfront Renaissance Project, City of Hastings (2018 APWA Project of the Year)
- Multiple projects in the City of Northfield
- 2017 Street Reconstruction, City of Prior Lake
- 2017 & 2019 Street Improvements, City of West St. Paul

Brad Fisher, PE

Project Manager

Brad will oversee the project team and manage overall project delivery. He will establish and maintain communication with city staff so that the City of Northfield's needs are met during design and construction. Brad will also lead project design, focusing on quality control and quality assurance, and guide the plan and specification preparation. He will also coordinate the design with the developer and their engineering firm to ensure conformance with the final grading plan. Brad will remain involved throughout construction to conduct construction administration and oversee the successful completion of the project.

Brad began his career as a design engineer in 2014. He has worked on many municipal projects consisting of roadway design, including municipal state aid design and utilities such as sanitary sewer, watermain, and storm sewer. Brad is passionate about listening to his client's needs and delivering their vision. As a project manager, Brad is responsible for managing projects from conception through construction. He completes project planning, design, preparation of construction plans and specifications, bidding assistance, and construction administration. His design experience includes preliminary and final design, preliminary layout and design preparation of feasibility reports, preparation of construction plans and specifications, preparation of quantity take-offs and cost estimates, and project documentation. In addition to his design experience, Brad has provided construction administration services on various projects.

Similar Experience:

- 2019 Street Reclamation, 2020 Mill & Overlay, 2021 Reclamation & Overlay, and Bluff View Street & Utility Improvements, City of Northfield
- 170th Street Improvement Project, City of Prior Lake
- 2019 Street & Utility Improvements, City of Hampton
- 2019 Street Improvements, Empire Township
- 2018 & 2019 Street Improvement Projects, City of West St. Paul
- 2017 Street & Utility Improvements, City of Prior Lake
- NW Area Improvements, City of Inver Grove Heights
- Riverfront Renaissance Project, City of Hastings (2018 APWA Project of the Year)

Brian Schmit, EIT
Design Engineer

Brian will be responsible for the project design and plan production, specifically focusing on conformance with the project requirements and preparation of the plans.

Brian began his career as a design engineer in 2019, gaining experience with a variety of public works projects. He has provided construction services on new development and street and utility reconstruction projects. Brian has performed construction observation, recorded quantities, taken as-built measurements, and created record drawings. He has considerable experience in maintaining good public relations with residents and managing public communications. Brian also has experience in the use of Civil3D for all aspects of design and plan production. Brian has a high attention to detail and enjoys working with coworkers, city staff, contractors, and residents to deliver successful designs and construction projects.

Similar Experience:
- 2021 Reclamation & Overlay Project, 2020 Mill & Overlay Project, and Hills of Spring Creek 9th Addition, City of Northfield
- 5th Ave SW Street & Utility Improvements,
- City of Pipestone
- 2020 Twelve Oaks Area Improvements, City of Minnetonka
- 2019 Street Improvements, Empire Township
- 2019 Pavement Rehabilitation, City of Elko New Market

Bryan Nemeth, PE
Transportation Engineer

Bryan will evaluate existing traffic conditions and/or crash history at specified locations and recommend performance and safety improvements. Bryan will also analyze the four corridors identified for on-street bikeways and provide options and recommendations on the facility designs.

Bryan is a principal traffic engineer who began his career in 1998. He leads the Bolton & Menk traffic group, managing both planning and design projects for cities, counties, and MnDOT. Bryan has led or co-led multiple research and innovative design projects including the Evaluation of Uncontrolled Pedestrian Crossings, bike signals, emergency vehicle hybrid beacons, and mini-roundabout design. His passions include traffic safety, critical methodology analysis, and innovative intersection designs. He also has experience in traffic forecasting, operational analysis, traffic design, and street lighting design.

Similar Experience:
- 2020 Bikeway Evaluation, Multimodal Transportation Plan, TH 3 & 19 Multimodal Transportation Study, and Various Street Improvement Projects, City of Northfield
- Downtown Improvement Studies, City of Prior Lake
- 18th Avenue NW Reconstruction, City of Rochester and Olmsted County

Tim Olson, PE, CFM
Water Resources Engineer

Tim will provide all water resources engineering on the project. He will verify the capacity of the existing systems and make improvement recommendations.

Tim has been a water resources engineer with Bolton & Menk since 2006. His experience includes project management in both design and construction of complex water resources and environmentally sensitive projects. He specializes in comprehensive surface water management planning; innovative best management practice design; detailed hydraulic and hydrologic modeling; drainage design and construction plan review; NPDES Phase I & II MS4 and construction stormwater permitting requirements; and coupling GIS techniques with water resources design and analysis. Tim has a passion for stormwater and water quality

Similar Experience:
- Bluff View Street & Utility Improvements, 2020 Golf Course & Parmeadow Pond Dredging, and Stormwater Modeling and Stormwater Pond Assessment, City of Northfield
- Cooper Ridge, Compass Point, Southridge, and Bridlewood Farms Developments, City of Woodbury
- Waters Edge at Central Park, South Prominence, and Palisades at Nottingham Developments, City of Maple Grove
- 2021 Street & Utility Improvements, City of Apple Valley
- CSAH 8 (Wentworth Ave) Reconstruction, Dakota County and City of West St. Paul
- Worked directly with Dave Bennett on several water resources related projects at the City of Northfield

education and participates in several stormwater-related steering committees and stakeholder groups. He enjoys facilitating partnerships, developing new relationships, and collaborating with stakeholders to define a common vision and work toward shared goals.

Eric Wilfahrt, LS
Project Surveyor

Eric will serve as the project surveyor and perform topographic survey, base mapping, and construction staking.

Eric likes to complete projects that have complex and challenging right-of-way and boundary determinations. He is a project surveyor who manages survey operations for the firm's south metro locations. He began his surveying career in 2004. He is responsible for researching, preparing, calculating, interpreting, and writing legal descriptions related to ALTA, topographic, plats, boundary, and engineering surveys. He has additional quality control and oversight duties. Eric is proficient in AutoCAD, AutoCAD Map, COGO, CG-Survey for AutoCAD, Eagle Point Software, Civil 3D, Trimble Business Center, Leica Cyclone 9, and Leica Topo II Software.

Similar Experience:
- 2021 Reclamation & Overlay Project, 2020 Mill & Overlay Project, 2019 Street Reclamation Project, and Woodley Street Improvements, City of Northfield
- Downtown Improvements, City of Red Wing

Arianna Christian, EIT
Construction Project Representative

Arianna will serve as construction project representative. Her responsibilities will include daily construction observation, pay item tracking, field measurements, communication between the contractor and stakeholders, and coordination of materials testing.

Arianna is a graduate engineer, beginning her career with Bolton & Menk in 2020. She has performed construction observation services on new developments and street and utility reconstruction projects. Arianna is detail-oriented and provides clear and accurate construction notes/diaries, project quantities, and as-built measurements. She takes great pride in ensuring projects are constructed properly following the plans and specifications. Arianna also has design experience using Civil3D to design street corridors and overall plan production.

Similar Experience:
- 2021 Reclamation & Overlay Project, City of Northfield
- 2021 ADA Pedestrian Ramp Improvements, City of Minneapolis
- 2020 Infrastructure Improvements and 190th Street Trail, City of Jordan
- Meridian Fields Development, City of Carver
- Distinctive Shores Development, City of Prior Lake

PROJECT **SCHEDULE**

As indicated in the RFP, we will follow the project schedule below.

STEP	DELIVERY DATE
Order Preparation of Feasibility Report	June 1, 2021
Approve Scope of Services Contract	June 1, 2021
Neighborhood Meeting #1	July 14, 2021
Council Direction on Draft Feasibility Report	August 10, 2021
Accept Feasibility Report and Order Preparation of Plans and Specifications	September 7, 2021
Neighborhood Meeting #2	January 5, 2022
Approve Plans and Order Advertisement for Bids	February 1, 2022
Publish Ad for Bid in Northfield News	February 9, 16, & 23, 2022
Bid Opening	March 3, 2022
Accept Bids and Award Contract	March 15, 2022
Property Owner Meetings	April 2022
Construction	May - October 2022

PROJECT **FEES**

Client: City of Northfield Project: 2022 NW Area Mill & Overlay Project		Bolton & Menk, Inc.											
Task No.	**Work Task Description**	**Principal-in-Charge**	**Project Manager**	**Design Engineer**	**Transportation Engineer**	**Water Resources Engineer**	**Project Surveyor**	**Survey Technician**	**Survey Crew**	**Construction Site Representative**	**Clercial**	**Total Hours**	**Total Cost**
1.0	Feasibility Study	16	50	160	24	16	0	0	0	0	4	270	$37,652
2.0	Topographic Survey	0	0	0	0	0	34	66	220	0	0	320	$48,044
3.0	Arborist Report	*Arborist Sub Consultant*											$5,000
4.0	Design	38	212	936	12	8	0	24	0	0	12	1242	$162,240
5.0	Bidding Administration	3	16	14	0	0	0	0	0	0	4	37	$4,964
6.0	Construction Services	0	200	0	0	0	14	40	240	1000	0	1494	$193,448
7.0	Project Close-Out	0	4	24	0	0	0	0	0	5	0	33	$4,192
8.0	Geotechnical Services	*Geotechnical Sub Consultant*											$54,000
	Total Hours	57	482	1134	36	24	48	130	460	1005	20	3396	
	Average Hourly Rate	$184.00	$142.00	$126.00	$190.00	$157.00	$172.00	$106.00	$160.00	$120.00	$94.00		
	Subtotal	$10,488	$68,444	$142,884	$6,840	$3,768	$8,256	$13,780	$73,600	$120,600	$1,880		

SUBTOTALS	
Design Services (Tasks 1-2 & 4-5)	$252,900
Aroborist Services (Tasks 3)	$5,000
Construction Services (Tasks 6-7) **Includes construction staking* **Includes 10 hours per week of construction administration for 20 weeks* **Includes 50 hours per week of Resident Project Representative for 20 weeks*	$197,640
Geotechnical Services (Task 8) **Includes soil borings and geotechnical report* **Includes consruction materials testing in accordance with MnDOT Schedule of Materials Control*	$54,000
Total Fee	**$509,540**

Corporate Headquarters
295 South Water Street, Suite 300
Kent, OH 44240
800-828-8312

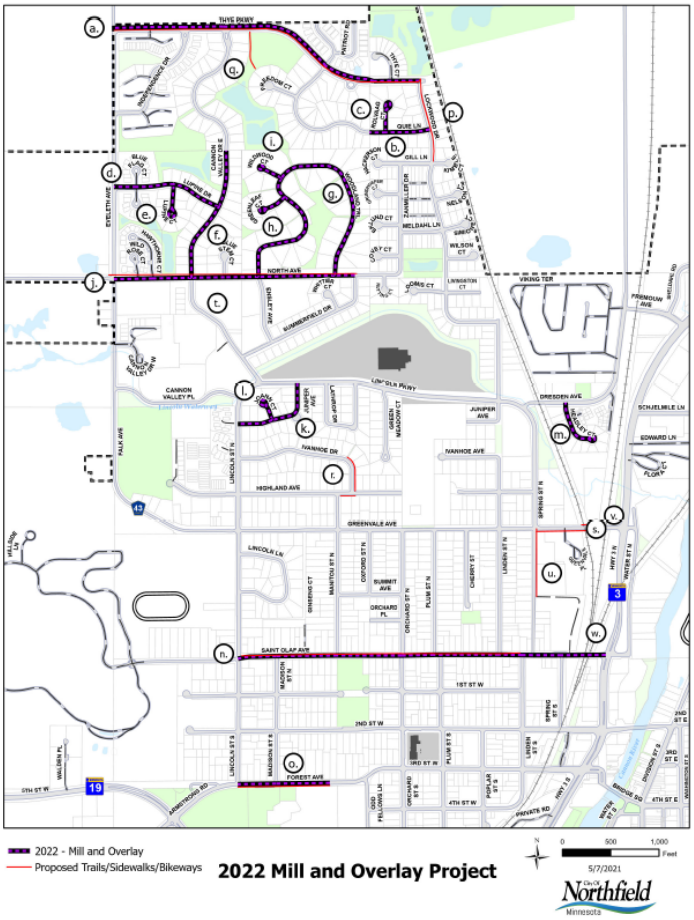
Local Office
1196 7th St E
St. Paul, MN 55106
1-800-966-2021

5/18/2021

RE: City of Northfield Mill and Overlay Tree Inventory

Dear Bolton & Menk,

Thank you for contacting Davey Resource Group, Inc. "DRG" regarding a tree inventory for the city of Northfield mill and overlay project. Through DRG and our dedicated team of arboricultural specialists, you will be assured of quality arborist services and professional assessments to help you achieve your long-term goals.



Map of areas included in the Tree Inventory

Tree Inventory

A DRG International Society of Arboriculture (ISA) Certified Arborist will inspect and catalog all trees within the Right of Way of all streets included in the mill and overlay or proposed sidewalk project The arborist will perform a visual assessment of their current condition, health, and size.

The data collection will include

- A Tree Tag # affixed to each tree.
- Tree Species
- Tree DBH (diameter at Breast Height)
- Tree Condition
- Arborist Recommended Fate (save or remove)
- Tree location with XY coordinates
- Notes; including identifying existing hazards and defects to the tree

The arborist will record the above data and place the inventoried trees into a Geographic Information System (GIS) and integrate with the site design you provide (map illustration). The trees condition assessment can be provided in your preferred data format (options include kmz, excel, or other GIS formats).

Summary Report

The data and observations will also be used to prepare a summary report to provide an overview of the tree data that was collected.

Experience and Expertise

Davey Resource Group, Inc is the arboricultural and horticultural consulting subsidiary to The Davey Tree Expert Company. With extensive experience assisting private and commercial properties and other entities including municipalities and utilities, we work with asset managers around the country and provide customized solutions to managing and tracking vital environmental assets. Our urban forestry services have provided clients nationwide with the ability to accurately and sustainably manage their critical 'green' infrastructure.

The DRG team is devoted to providing excellent customer service through our technical expertise and our passion for innovative solutions. We recognize that our success depends on meeting your needs and we are excited about the opportunity to collaborate with you on your project. Please feel free to contact me with any questions.

Sincerely,

Ryan Gustafson
Project Developer
Davey Resource Group, Inc.
ISA Board Certified Master Arborist MN-4145BM
www.daveyresourcegroup.com

Authorization to Proceed

The following pricing options have been developed for consultations and reports as requested. Any additional consultation or effort would be priced at our consulting rate of $105 per hour. A

City of Northfield Mill and Overlay Tree Inventory

Tree Inventory, Summary Report, Maps, and Data Delivery	$4,550

By signing this form, I do hereby acknowledge acceptance of the terms described above and authorize work to be performed.

Client Name:

Authorizing Signature:

Title:

Date:

Davey Resource Group, Inc.

Name/Title:

Date:

TERMS AND CONDITIONS

- All pricing is valid for 60 days from the date of this proposal.
- Time and materials (T&M) estimates may fluctuate and will be billed accordingly. Fixed fee contract prices will be billed as shown.
- Invoicing will be submitted monthly for work performed, unless otherwise agreed upon.
- Payment terms are net 30 days.
- If prevailing wage requirements are discovered after the date of this proposal, we reserve the right to negotiate our fees.
- The client is responsible for any permit fees, taxes, and other related expenses, unless noted as being included in our proposal.
- The client shall provide 48 hours' notice of any meetings where the consultant's attendance is required.
- Unless otherwise stated, one round of revisions to deliverables is included in our base fee. Additional edits or revisions will be billed on a time and material (T&M) basis.
- All reports are provided only to the client unless otherwise directed.

LIMITED WARRANTY

Davey Resource Group, Inc. ("DRG") provides this limited warranty ("Limited Warranty") in connection with the provision of services by DRG (collectively the "Services") under the agreement between the parties, including any bids, orders, contracts, or understandings between the parties (collectively the "Agreement").

Notwithstanding anything to the contrary in the Agreement, this Limited Warranty will apply to all Services rendered by DRG and supersedes all other warranties in the Agreement and all other terms and conditions in the Agreement that conflict with the provisions of this Limited Warranty. Any terms or conditions contained in any other agreement, instrument, or document between the parties, or any document or communication from you, that in any way modifies the provisions in this Limited Warranty, will not modify this Limited Warranty nor be binding on the parties unless such terms and conditions are approved in a writing signed by both parties that specifically references this Limited Warranty.

Subject to the terms and conditions set forth in this Limited Warranty, for a period of ninety (90) days from the date Services are performed (the "Warranty Period"), DRG warrants to Customer that the Services will be performed in a timely, professional and workmanlike manner by qualified personnel.

To the extent the Services involve the evaluation or documentation ("Observational Data") of trees, tree inventories, natural areas, wetlands and other water features, animal or plant species, or other subjects (collectively, "Subjects"), the Observational Data will pertain only to the specific point in time it is collected (the "Time of Collection"). DRG will not be responsible nor in any way liable for (a) any conditions not discoverable using the agreed upon means and methods used to perform the Services, (b) updating any Observational Data, (c) any changes in the Subjects after the Time of Collection (including, but not limited to, decay or damage by the elements, persons or implements; insect infestation; deterioration; or acts of God or nature [collectively, "Changes"]), (d) performing services that are in addition to or different from the originally agreed upon Services in response to Changes, or (e) any actions or inactions of you or any third party in connection with or in response to the Observational Data. If a visual inspection is utilized, visual inspection does not include aerial or subterranean inspection, testing, or analysis unless stated in the scope of work. DRG will not be liable for the discovery or identification of non-visually observable, latent, dormant, or hidden conditions or hazards, and does not guarantee that Subjects will be healthy or safe

under all circumstances or for a specified period of time, or that remedial treatments will remedy a defect or condition.

To the extent you request DRG's guidance on your permitting and license requirements, DRG's guidance represents its recommendations based on its understanding of and experience in the industry and does not guarantee your compliance with any particular federal, state or local law, code or regulation.

DRG may review information provided by or on behalf of you, including, without limitation, paper and digital GIS databases, maps, and other information publicly available or other third-party records or conducted interviews (collectively, "Source Information"). DRG assumes the genuineness of all Source Information. DRG disclaims any liability for errors, omissions, or inaccuracies resulting from or contained in any Source Information.

If it is determined that DRG has breached this Limited Warranty, DRG will, in its reasonable discretion, either: (i) re-perform the defective part of the Services or (ii) credit or refund the fees paid for the defective part of the Services. This remedy will be your sole and exclusive remedy and DRG's entire liability for any breach of this Limited Warranty. You will be deemed to have accepted all of the Services if written notice of an alleged breach of this Limited Warranty is not delivered to DRG prior to the expiration of the Warranty Period.

To the greatest extent permitted by law, except for this Limited Warranty, DRG makes no warranty whatsoever, including, without limitation, any warranty of merchantability or fitness for a particular purpose, whether express or implied, by law, course of dealing, course of performance, usage of trade or otherwise.

Braun Intertec Corporation
11001 Hampshire Avenue S
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

May 19, 2021 Proposal QTB139329

Brad Fisher, PE,
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001

Re: Proposal for a Geotechnical Evaluation and Construction Materials Testing Services
City of Northfield – 2022 NW Area Mill & Overlay
Northfield, Minnesota

Dear Mr. Fisher:

Braun Intertec Corporation respectfully submits this proposal to complete a geotechnical evaluation and provide construction materials testing for the 2022 NW Area Mill & Overlay project in Northfield, Minnesota.

Our Understanding of Project

This project will include spot curb and gutter repair, spot sidewalk repair, American Disabilities Act (ADA) upgrades to existing pedestrian facilities, and a mill and overlay of street pavements along with various other improvements in Northfield, Minnesota, including trail/sidewalk/bikeway improvements on various street segments where pavement improvements are not being proposed. We understand there will be minor storm sewer improvements in the Wildwood Court area, otherwise there are no planned watermain, storm or sanitary improvements associated with this project.

The streets and sidewalks/trails included in this project are shown in Figures 1 through 3; red lines represent the sidewalk/trail improvements. We estimate the length of mill and overlay at 15,700 feet based on these maps.

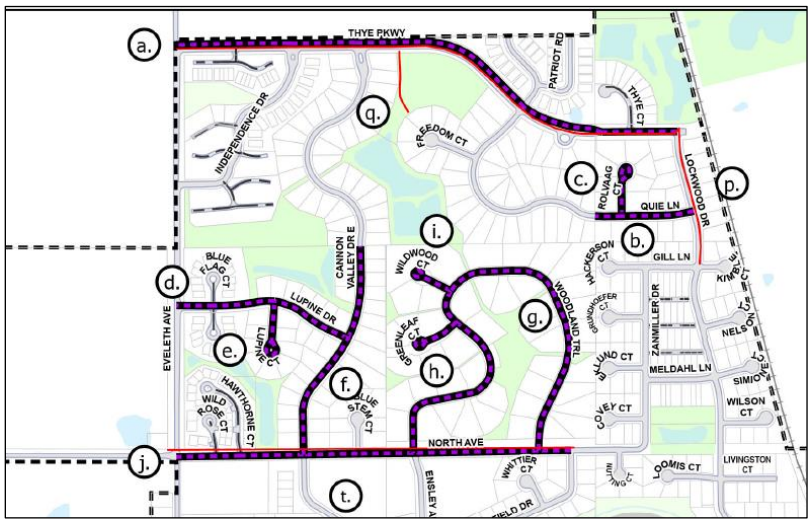


Figure 1. Streets and Trails/Sidewalks in the 2022 Mill and Overlay Project (1/3)

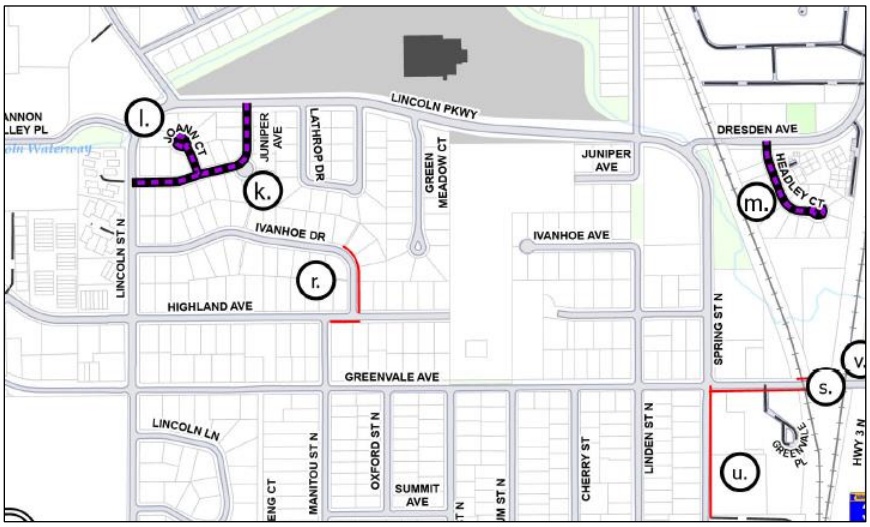


Figure 2. Streets and Trails/Sidewalks in the 2022 Mill and Overlay Project (2/3)

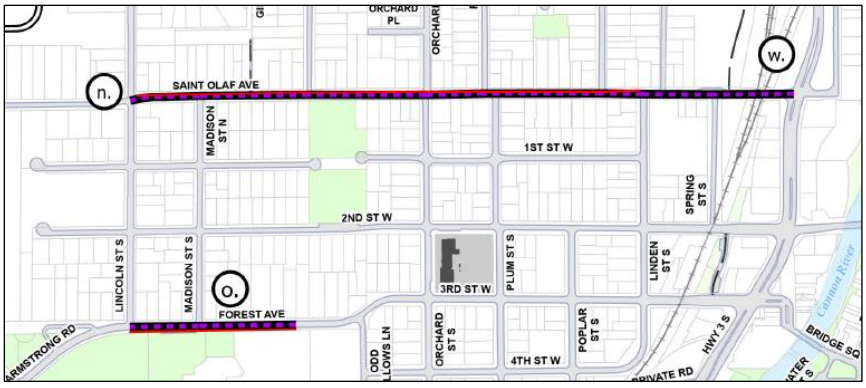


Figure 3. Streets and Trails/Sidewalks in the 2022 Mill and Overlay Project (3/3)

Geotechnical Evaluation - Purpose

The purpose of this evaluation will be to measure the pavement or topsoil thicknesses and sample shallow subsurface materials using coring and hand auger borings, and to use this information to provide geotechnical information for the 2022 NW Area Mill & Overlay project in Northfield, Minnesota.

Geotechnical - Scope of Services

The following tasks are proposed to help achieve the stated purpose. If unfavorable or unforeseen conditions are encountered at any point during the completion of the tasks that lead us to recommend an expanded scope of services, we will contact you to discuss the conditions before resuming work.

Site Access, Staking and Utility Clearance

We will stake prospective subsurface exploration locations and obtain surface elevations at those locations using GPS technology. For purposes of linking the GPS data to an appropriate reference, we request that you provide CAD files indicating location/elevation references appropriate for this project.

Prior to coring, we will contact Gopher State One Call and arrange for notification to the appropriate utility vendors to mark and clear the exploration locations of public underground utilities. You, or your authorized representative, are responsible to notify us before we begin our work of the presence and location of any underground objects or private utilities that are not the responsibility of public agencies.

Pavement Cores and Hand Auger Borings

We propose to perform 30 cores at approximate 500-foot intervals to help characterize the in-place pavement thicknesses. Additionally, we will photograph the cores and examine them for any material deficiencies.

Following core extraction, we will perform a dynamic cone penetrometer (DCP) test in every other core location to estimate material stiffness. We will then extend hand augers to a maximum depth of 3 feet from the top of the roadway for material sampling.

For new sidewalk/trail installations, we propose to perform six hand augers to approximately 3 feet. We assume these will be in City ROW or boulevards where we have access permission.

Laboratory Testing

To help classify the subgrade soils and identify their engineering properties, we have budgeted for 10 moisture content tests and six sieve analyses (through a #200 sieve only).

Traffic Control

It appears most of the streets are residential, and we do not expect traffic control to be required for our coring operation. The somewhat higher traffic volume on St. Olaf Avenue may require us to perform cores near curb lines to allow for efficient and safe traffic movement.

If we require traffic control to complete any of our proposed borings, we will need to revise our proposal.

Core Abandonment

Upon backfilling coreholes, we will fill holes in pavements with a temporary patch.

Over time, subsidence of core backfill may occur, requiring surface grades to be re-leveled or bituminous or concrete patches to be replaced. Braun Intertec is not assuming responsibility for re-leveling or re-patching after initial backfilling and patching long term.

Reporting

Data obtained from cores and hand auger borings will be used to prepare a report including:

- A CAD sketch showing the location of pavement cores.

- Photos of the pavement cores and summary of core thicknesses and hand auger observations.

- Logs and/or summary of the hand auger borings and DCP results.

- Report including recommendations for design and construction of pavement mill and overlay and sidewalks/trails considering the pavement thickness and soils information.

We will submit an electronic copy of the report to you.

Geotechnical Evaluation - Schedule

We anticipate the field exploration can begin within approximately three weeks of written authorization; the field exploration will take two to three days to complete. Sample classification, laboratory testing, engineering analyses, and report preparation will likely take an additional week. We will pass along results, however, as they are obtained and reviewed. We anticipate we can submit our report by approximately five to six weeks following authorization.

If our proposed scope of services cannot be completed according to this schedule due to circumstances beyond our control, we may need to revise this proposal prior to completing the remaining tasks.

Construction Materials Testing - Scope of Services

Available Project Information

This proposal was prepared using the following documents and information.

- Request for Proposals Letter prepared by the City of Northfield dated May 7, 2021.

- We were not provided with any plans, specifications or other quality control documents for this project as they have not been developed. We request an opportunity to review the final plans and specification once they are completed and revise our construction materials testing scope of services and cost estimate as needed upon review of these documents.

Construction Materials Testing - Scope of Services

Services are performed under the direction of a licensed professional engineer. Testing services will be performed an on-call, as-needed basis as requested and scheduled by you or your on-site project representative. After reviewing available information our scope of services for the project will be limited to the tasks defined below.

Soil Related Services

- Measure the in-place dry density, moisture content and relative compaction of fill placed for pavement and/or utility support, and of utility backfill for compliance with the project

documents. This task includes performing laboratory Proctor tests to provide maximum dry densities from which the relative compaction of fill can be determined, as well as the use of a nuclear density gauge to measure in-place dry densities and moisture contents.

- Sample and test select granular borrow and aggregate base materials for compliance with the project documents. This task includes laboratory gradation testing of these materials.

- Perform MnDOT dynamic cone penetrometer (DCP) tests on aggregate base material.

Concrete Related Services

- Sample and test fresh concrete associated with pavement and/or curb-and-gutter for compliance with the project documents and cast test cylinders for laboratory compressive strength testing. We assume that we will be able to appropriately dispose of excess concrete (and associated wash water) on site at no additional cost to us.

- Measure and report the compressive strength of the concrete test cylinders for compliance with the project documents. A set of three cylinders will be tested at 28 days for each set cast. If field cure cylinders are requested, each additional cylinder will be charged at the unit price listed in our cost estimate.

Bituminous Related Services

- Sample and test bituminous pavement materials for compliance with the project documents. This task includes Rice specific gravity, Gyratory density, fine aggregate angularity, percent crushed, asphalt content and extracted aggregate gradation tests of the bituminous.

- Obtain cores and measure the thickness and density of the compacted bituminous pavement by the core method for compliance with the project documents. We assume the bituminous contractor will cut the cores and that we will mark the cores using MnDOT's random core worksheet with information provided by your onsite full-time inspector.

Consulting, Project Communication and Reporting Services

- Project management, including scheduling of our field personnel.

- Review test reports and communicating with you and the parties you may designate such as the project contractor(s), and other project team members, as needed.
- Transmit test results to the project team on a weekly basis.

Construction Materials Testing - Basis of Scope of Work

The costs associated with the proposed scope of services were estimated using the following assumptions. If the construction schedule is modified or the contractor completes the various phases of the project at different frequencies or durations than shown in this proposal, we may need to adjust the overall cost accordingly. The scope of work and number of trips required to perform these services are as shown in the attached table. Notable assumptions in developing our estimate include:

- We assume it will take eight trips to complete the nuclear density gauge testing on this project.
- We assume compaction testing on aggregate base material will be performed using the Dynamic Cone Penetration (DCP) method; a minimum of six tests will be conducted each trip with two trips assumed.
- We assume forty sets of concrete tests will be required to complete the project.
- We assume the rebar observations before concrete placements will be completed by the project representative's construction oversight manager.
- We assume your full-time on-site construction observer will observe the test rolling for this project.
- We assume bituminous paving will be completed in fourteen days for this project.
- We assume the project engineer of record will review and approve contractor's quality control submittals and test results.
- We assume 10% of the total existing curb and gutter and sidewalk will need to be replaced as part of this project.
- We assume the mill and overlay will be to a depth of 2" for this project.
- We assume MnDOT Concrete or Bituminous Plant Monitoring will not be required for this project and if required MnDOT Metro Inspections will provide the plant monitoring.
- You, or others you may designate, will provide us with current and approved plans and specifications for the project. Modification to these plans must also be sent to us so we can review their incorporation into the work.
- We will require a minimum of 24 hours' notice for scheduling inspections for a specific time. Shorter than 24 hours' notice may impact our ability to perform the requested services, and the associated impacts will be the responsibility of others.

If the work is completed at different rates than described above, this proposal should be revised. If the pace of construction is different than described above, this proposal should be revised.

Cost

Table 1. Estimated Fee

Service	Fee
Staking and utility clearance	$1,946
Coring and Hand Augers	5,145

Service	Fee
Geotechnical Soil Tests	632
Engineering	2,608
Geotechnical Total	**$10,331**
Construction Materials Testing	**$43,672**
Total	**$54,003**

Our work may extend over several invoicing periods. As such, for work that is performed during each invoicing period, we will submit partial progress invoices.

Construction Materials Testing- Invoicing
The construction materials testing portion of this cost estimate was developed with the understanding that the scope of services defined herein will be required and requested during our normal work hours of 6:00 a.m. to 4:00 p.m., Monday through Friday. Services that we are asked to provide to meet the project requirements or the contractor's construction schedule **outside** our normal business hours will be invoiced using an overtime rate factor. The factor for services provided outside our normal work hours or on Saturday will be 1.25 times the listed hourly rate for the service provided. The factor for services provided on Sunday or legal holidays will be 1.5 times the listed hourly rate for the service provided. We have not included premiums for overtime in our cost estimate; however, we recommend that allowances and contingencies be made for overtime charges based on conversations with the contractor. You will be billed only for services provided on a time and materials basis.

Because our services are directly controlled by the schedule and performance of others, the actual cost may vary from our estimate. It is difficult to project all the services and the quantity of services that may be required for any project. If services are required that are not discussed above, we will provide them at the rates shown in the attached table or, if not shown, at our current Schedule of Charges. We will invoice you monthly.

General Remarks

We will be happy to meet with you to discuss our proposed scope of services further and clarify the various scope components.

We appreciate the opportunity to present this proposal to you. ***Please sign and return a copy to us in its entirety.***

The proposed fee is based on the scope of services described and the assumptions that our services will be authorized within 30 days and that others will not delay us beyond our proposed schedule.

Our work will be completed under the terms of the Subconsultant Master Agreement for Professional Services between Bolton & Menk Inc. and Braun Intertec Corporation dated January 1, 2021.

To have questions answered or schedule a time to meet and discuss our approach to this project further, please contact Neil Lund at 952.995.2284 or (nlund@braunintertec.com) or Andrew Valerius 952.995.2242 or (avalerius@braunintertec.com).

Sincerely,

BRAUN INTERTEC CORPORATION

Neil G. Lund, PE
Senior Engineer

Andrew M. Valerius

Andrew M. Valerius
Account Leader, Senior Project Manager

Attachments: Cost Estimate

The proposal is accepted, and you are authorized to proceed.

Authorizer's Firm

Authorizer's Signature

Authorizer's Name (please print or type)

Authorizer's Title

Date

BRAUN INTERTEC
The Science You Build On.

Project Proposal

QTB139329

Northfield 2022 NW Area Mill and Overlay Project

Client:	Work Site Address:	Service Description:
Bolton & Menk, Inc. Brad Fisher, PE 1960 Premier Drive Mankato, MN 56001	Various Streets Northfield, MN	Geotechnical Evaluation Construction Materials Testing

	Description	Quantity	Units	Unit Price	Extension
Phase 1	**Geotechnical Evaluation**				
Activity 1.1	**Site Layout - Staking - Utility Clearance - CADD**				**$1,946.00**
Activity 1.2	**Coring and Hand Augers**				**$5,145.00**
Activity 1.3	**Geotechnical Soil Tests**				**$632.00**
Activity 1.4	**Evaluation/Analysis/Reports**				**$2,608.00**
				Phase 1 Total:	**$10,331.00**
Phase 2	**MnDOT Testing**				
Activity 2.1	**Soil Testing**				**$5,712.00**
207	**Compaction Testing - Nuclear**	20.00	Hour	82.00	$1,640.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Utilities, Storm *4.00 Trips* *2.50* *10.00*				
	Subgrade Preparation- Trail, SGB *4.00 Trips* *2.50* *10.00*				
1308	**Nuclear moisture-density meter charge, per hour**	20.00	Each	24.00	$480.00
1861	**CMT Trip Charge**	15.00	Each	50.00	$750.00
217	**Compaction Testing - DCP's**	6.00	Hour	82.00	$492.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Aggregate Base *2.00 Trips* *3.00* *6.00*				
1228	**Topsoil Testing with nutrients, per sample**	1.00	Each	370.00	$370.00
1530AG	**Asphalt Content of Aggregate Base, per sample**	1.00	Each	150.00	$150.00
209	**Sample pick-up**	5.00	Hour	82.00	$410.00
1318	**Moisture Density Relationship (Proctor)**	4.00	Each	185.00	$740.00
1162	**Sieve Analysis with 200 wash, per sample**	5.00	Each	136.00	$680.00
Activity 2.2	**Concrete Testing**				**$16,560.00**
261	**Concrete Testing**	100.00	Hour	82.00	$8,200.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Flatwork Including Ped. Ramps *30.00 Trips* *2.50* *75.00*				
	Curb & Gutter *10.00 Trips* *2.50* *25.00*				
278	**Concrete Cylinder Pick up**	20.00	Hour	82.00	$1,640.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Cylinder Pickup *20.00 Trips* *1.00* *20.00*				
1861	**CMT Trip Charge**	60.00	Each	50.00	$3,000.00
1364	**Compressive strength of concrete cylinders, per specimen**	120.00	Each	31.00	$3,720.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Flatwork Including Ped. Ramps *30.00 Set* *3.00* *90.00*				
	Curb & Gutter *10.00 Set* *3.00* *30.00*				
Activity 2.3	**Pavement Testing**				**$16,846.00**
2689	**MnDOT Bituminous Verification, per sample**	14.00	Each	679.00	$9,506.00
1861	**CMT Trip Charge**	26.00	Each	50.00	$1,300.00
209	**Sample pick-up**	28.00	Hour	82.00	$2,296.00
	Work Activity Detail ***Qty Units*** ***Hrs/Unit*** ***Extension***				
	Verification Sample Pick-Up *14.00 Trips* *2.00* *28.00*				

Project Proposal

QTB139329

Northfield 2022 NW Area Mill and Overlay Project

	221	**Bituminous Coring**		36.00	Hour	104.00	$3,744.00
		Work Activity Detail	***Qty Units***	***Hrs/Unit***		***Extension***	
		Mark & Observe Contractor Coring & Testing	*12.00 Trips*	*3.00*		*36.00*	
Activity 2.4		**Project Management**					**$4,554.00**
	226	**Project Manager**		20.00	Hour	160.00	$3,200.00
	228	**Senior Project Manager**		2.00	Hour	185.00	$370.00
	238	**Project Assistant**		12.00	Hour	82.00	$984.00
						Phase 2 Total:	**$43,672.00**

Proposal Total:	**$54,003.00**