



## STEELE COUNTY BOARD OF COMMISSIONERS WORK SESSION AGENDA

Administration Center - 630 Florence Avenue – Owatonna, MN 55060

*Steele County's Mission:  
Driven to deliver quality services in a respectful and fiscally responsible way.*

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TUESDAY, MAY 23, 2023 AT 4:00 PM  
County Boardroom, Steele County Administration Center

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### Agenda

1. Call to Order
2. Professional Services Contract with WHKS for Preliminary Design to Replace CR 180 Bridge (pg. 2)
3. Fleet Vehicle Policy (pg. 57)
4. Local Housing Trust Fund (pg. 61)
5. Other Business

### Adjourn

*Disclaimer: This agenda has been prepared to provide information regarding an upcoming meeting of the Steele County Board of Commissioners. This document does not claim to be complete and is subject to change.*



## Steele County Agenda Item

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**Subject: Approve Professional Services Contract with WHKS for Preliminary Design to Replace CR 180 Bridge**

**Department:** Highway

**Committee Meeting Date:** May 11, 2023

**Board Meeting Date:** May 23, 2023

**Consent Agenda:** ☐ Yes ☒ No

**Resolution:** ☐ Yes ☒ No

### **Policy Committee Recommendation:**

Move to Board Workshop

### **Recommendation:**

Approve Professional Services Contract with WHKS for Preliminary Design to Replace CR 180 Bridge.

### **Background (*Including Budget Impact*):**

The 2023-2027 Highway Capital Improvement Program includes a project to replace Bridge 4686, a box culvert under CR 180 over Izaak Walton Creek. The bridge is structurally deficient and County Board Resolution on 11/22/2022 placed it on the Prioritized Bridge Replacement List. However, this bridge is directly under a Canadian Pacific Railroad Bridge with only 12 feet of vertical clearance between the bridge and road. Minimum state aid standards require 14'6" of clearance. The road is also prone to frequent flooding.

During 2022 a feasibility study considered several concepts including using alternative routes, going over, under or across the track. Ultimately the feasibility study recommended replacing the box culvert and the railroad bridge but left many questions unanswered about how to address roadway flooding concerns. Staff reevaluated an overpass option and determined it needed further consideration.

Staff requested proposals to further evaluate these two options and proceed with preliminary design of the chosen option. Three firms (Michael Baker International, TKDA, and WHKS) responded with a proposal for the work. The proposals are attached.

A selection committee comprised of representatives of the County and the City independently evaluated and rated each proposal. Selection of the consultant was based on the following criteria:

#### 1. Project Approach

2. Qualifications, specialized experience, and professional competence
3. Project team experience and availability of project manager and project personnel
4. Completeness and overall feasibility of project work plan identifying deliverables
5. Proposed cost of engineering services

Based on these criteria, WHKS's proposal scored the best. WHKS was also the lowest cost proposal at \$213,162. This project was programmed for \$300,000 of Sales Tax in the Highway CIP for 2023.

**Attachments:**

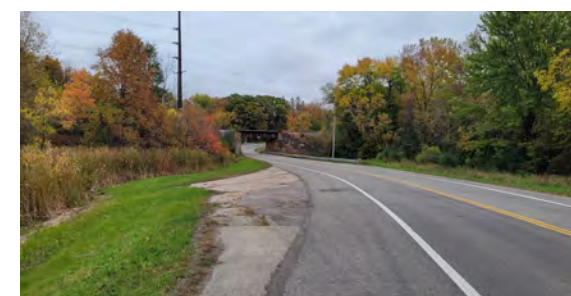
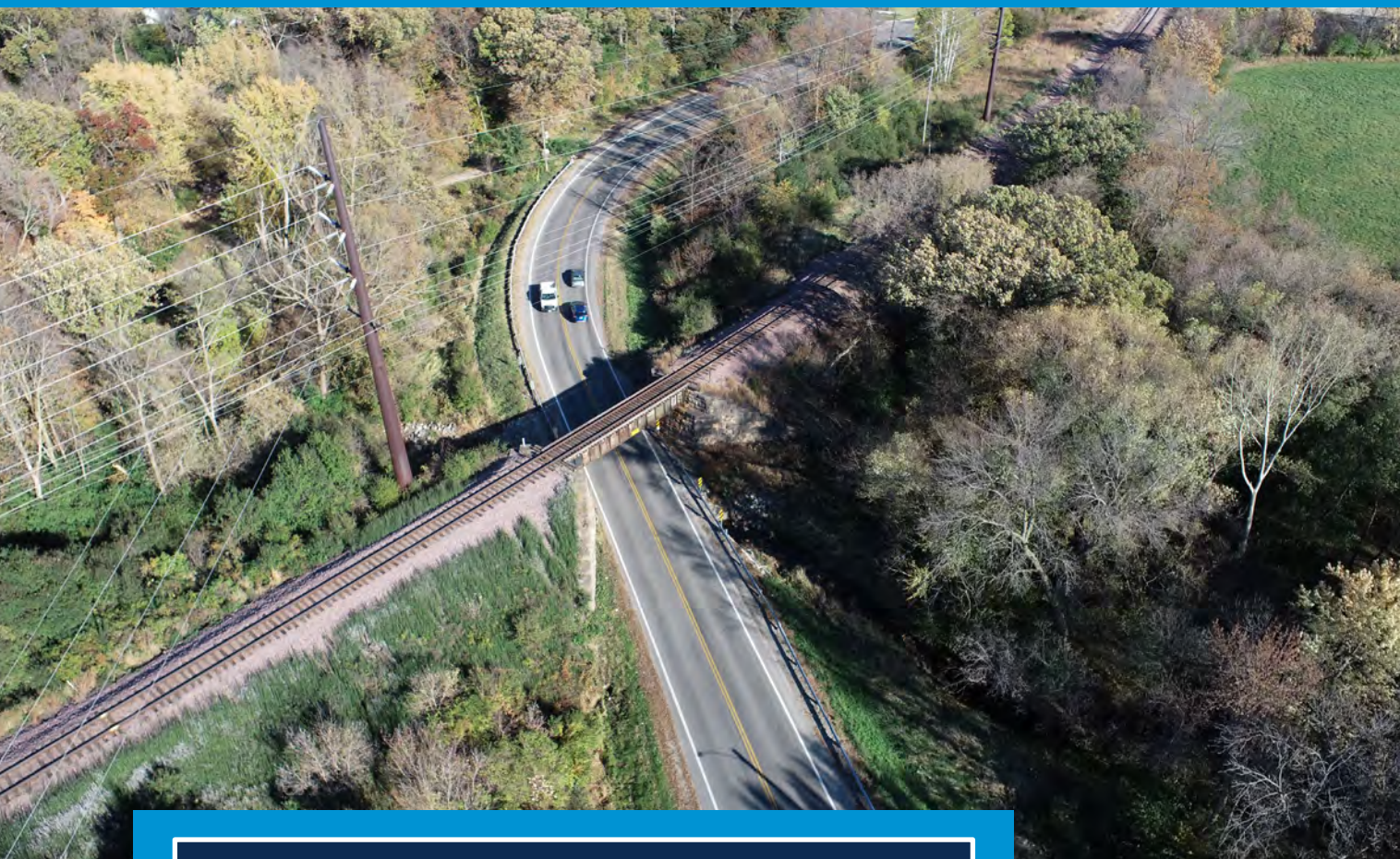
Michael Baker Proposal

TKDA Proposal

WHKS Proposal



APRIL 21, 2023



## PROPOSAL

# PROFESSIONAL ENGINEERING SERVICES FOR PRELIMINARY DESIGN TO REPLACE CR 180 BRIDGE

SUBMITTED TO  
**Steele County Highway Department**

SUBMITTED BY

**Michael Baker**  
INTERNATIONAL



Paul Sponholz, PE  
Assistant County Engineer  
Steele County Highway Department  
Via Email

# PROFESSIONAL ENGINEERING SERVICES FOR PRELIMINARY DESIGN TO REPLACE CR 180 BRIDGE

APRIL 21, 2023

## RE: PROFESSIONAL ENGINEERING SERVICES FOR PRELIMINARY DESIGN TO REPLACE CR 180 BRIDGE

Dear Mr. Sponholz,

The Steele County Highway Department (Steele County/the County) has been diligently preparing to replace and upgrade Bridge No. 4686 that carries County Road (CR) 180 over the Izaak Walton Creek. By partnering with the Michael Baker International, Inc. (Michael Baker) team, we can offer improved safety for commuters and reduced potential flooding from the creek through a structurally sound new bridge while maintaining Steele County's schedule and budget. Michael Baker has assembled a proven team of professionals with extensive county and railroad bridge experience and with projects of similar scope. Our team offers Steele County:



**Extensive Project Understanding** – Steele County can trust that our well-qualified, local team of experts will be available and ready to get this project moving from preliminary design through final design. Our team is heavily invested in this project through our involvement in scope development, detailed analysis in ConceptStation, and multiple in-person site visits with County staff to study the issues and listen to concerns, where we have proactively considered a wide array of questions and solutions. We have taken the opportunity to prioritize Steele County during the scope development phase and our project knowledge will prove to be an important resource for the County moving forward.



**Budget and Schedule Control** – Steele County will receive effective delivery of project tasks in an efficient and cost-effective manner with the Michael Baker team. We understand the importance of achieving aggressive delivery times and staying within budget. Our approach to securing the schedule and budget on this project is through the careful selection of our design professionals who fully understand how to navigate the complexities of this project while recognizing what it will cost and how long it will take. This experience will instruct expectations appropriately and uncover challenges that may be concealed to a less experienced team. Additionally, we can aid Steele County in seeking grant funding to reduce the cost share through expert grant writers who have already brought in over \$10M for St. Louis County in bridge funding.



**Trusted Key Personnel** – The Michael Baker team offers trusted and experienced partners that Steele County can count on. Our key personnel have established professional relationships with Steele County personnel, specifically Pete Lemke with Paul Sponholz and Kevin Anderson and Jon Schelkoph with Greg Ilkka. These relationships pave the way for effective communication, better meetings, and strong project delivery. This familiarity will also be backed by WSB's extensive experience with Steele County on projects such as CSAH 48 (Bixby Road) & 18th Street and CSAH 34/CSAH 1, positioning our team to hit the ground running upon notice to proceed. For these reasons, we are confident that there is no better match than the Michael Baker team for this project.

By partnering with the Michael Baker team, Steele County will receive an expert design team that is well-versed in bridge and highway standards and the ability to deliver this project to your specifications on time and on budget. Michael Baker certifies the information provided within this proposal remain valid for a period of no less than 60 days from the date of this submittal. We appreciate this opportunity to submit our capabilities, if you have questions regarding this proposal or require additional information, please contact Pete Lemke at [Peter.Lemke@mbakerintl.com](mailto:Peter.Lemke@mbakerintl.com) or (763) 477.8281.

Sincerely,

MICHAEL BAKER INTERNATIONAL, INC.

*Pete M Lemke*

Pete Lemke, PE, PTOE, RSP1  
Project Manager  
120 South 6th Street, Suite 1710,  
Minneapolis, MN 55402  
[Peter.Lemke@mbakerintl.com](mailto:Peter.Lemke@mbakerintl.com)  
(763) 477.8281

*Kevin D. Anderson*

Kevin Anderson, PE, DBIA  
Office Executive, Authorized to Sign  
[Kevin.Anderson@mbakerintl.com](mailto:Kevin.Anderson@mbakerintl.com)  
(612) 845.8343

## Project Understanding & Approach



**Technical Expertise** – Our team provides Steele County and the City of Owatonna a team of experienced professionals with experience in recent alternatives analysis projects. In addition, we have experience coordinating with Class I Railroads throughout the U.S. We will focus this expertise and deep understanding of the goals and challenges for this project to work closely with you to determine the preferred alternative and carrying the project through final design.

Steele County, in close coordination with the City of Owatonna, is implementing public involvement, alternatives analysis, and preliminary engineering and design to identify a preferred alternative for bridge, roadway, and hydraulics improvements to replace Box Culvert Bridge (No. 4686) carrying CR 180 over Izaak Walton Creek.

### Project Background

CR 180 is an important east-west minor-collector within the City of Owatonna that provides local access and connectivity between CSAH 48 (Bixby Road) and the east side of the City, including TH 14. Steele County's 2020-2040 Transportation Plan depends on this crossing of CP Railroad and recommends upgrading the functional class to major collector. The current crossing only provides ~12' of the 14'6" statutory vertical clearance required, and the railroad (RR) bridge has been hit several times by vehicles.

These issues, among others, led Steele County to perform a Feasibility Study for this area to study alternatives. Two of the study's recommendations have been identified for further investigation: Alternative 2, which replaces both the box culvert and the RR bridge; and Alternative 6, which realigns CR 180 to pass over CP Railroad's facilities. Each alternative may require relocation of the existing tower(s) for the high voltage overhead power that crosses CR 180.

### Project Issues and Opportunities

**Canadian Pacific (CP) Railway:** Regardless of the alternative selected, coordination with the railroad will be a critical aspect of this project. CP owns the bridge over CR 180 and in spite of its age (115 years) has told the County that they have no current plans to repair or replace the bridge. **Michael Baker's experience includes designing rail bridge projects throughout the U.S. for Class 1 Railroad clients including the recent RR bridge over TH 10/75 in Moorhead, MN.**



Michael Baker and CP Rail are located in the same location, Canadian Pacific Plaza, enhancing communication and streamline project processes.

**City of Owatonna:** We understand that implementation and delivery of this project will be completed in partnership with the City of Owatonna and for this preliminary design phase, the City and County will both participate in the public involvement, give input into selection of the preferred alternative, and approve the geometric layout.

**Replacing the Railroad Bridge:** We understand that Steele County desires to study and evaluate an overpass alternative that leaves the 115-year-old RR bridge in place. From our experience with RR agreements and project coordination, we anticipate that the RR will be reluctant to sign an agreement that does not replace the existing bridge. Our RR coordination will engage the CP Railway and work to identify the right solution.

**Floodplain and Hydraulic Analysis:** Located within Zone AE of the Izaak Walton Creek floodplain, this project will require a detailed analysis of the existing and proposed hydraulic conditions of the waterway of the selected alternative. Alternatives 2 and 6 impact the 1% Floodway. Michael Baker's team has the experience to manage these impacts and understands the local, state, and federal regulations pertaining to work.

**Other Roadway Considerations:** Horizontal and vertical geometry limit sight lines for westbound traffic to approximately 250-feet. Although this is one of the few grade-separated track crossings in the area, the existing condition provides inadequate pedestrian and bicycle facilities. Our design will replace the existing condition and provide a multi-use trail for non-motorized transportation.

**CR 180 (School Street) Connection to CSAH 48 (Bixby Road):** This project presents an opportunity to explore a revised CR 180 connection to Bixby Road/Main Street north of the existing connection. This revised connection would allow for a roundabout traffic control at CSAH 48 and potential RR overpass.

**Southern Minnesota Municipal Power Agency (SMMPA):** SMMPA owns a high voltage overhead transmission line running along the CP rail line. Reconstructing the RR bridge (Alternative 2) will likely impact the overhead tower in the northwest quadrant while Alternative 6 would require additional towers to provide required clearance to power lines (see Issues Map).

SMMPA Overhead Transmission Tower in NW Quadrant of Existing Bridge



This project will require focused coordination and ongoing communication with SMMPA to coordinate options to maintain the line over CR 180. Michael Baker has in-house staff that deliver transmission line projects across the Country that can be engaged to support this project, if needed.

**Public and Private Utilities:** Through our discussion with County staff during our multiple site visits, we know there is a sanitary line crossing under CR 180 following the creek and an insulated watermain running inside the box culvert. We completed a Gopher State One Call design locate for this area and identified the following utility owners: Arvig, Charter Communications, Centurylink, Jaguar Communications, City of Owatonna Utilities (Electric, Gas, Sewer, Water, Fiber), Metro Fibernet, and Steele-Waseca Coop.

| Project Goals                                                                    | Michael Baker Solutions                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Determine an effective alternative for the crossing.                             | Use our proven alternatives analysis process that recently determined preferred alternatives for the MnDOT TH 10/75 11th St. Underpass CMGC Project and the Mississippi River Crossing for the Riverview Corridor Streetcar Project.                         |
| Meet vertical clearance requirements for crossings over or under the CP Railway. | Daniel Baxter and our bridge team will evaluate each alternative based on this requirement and work with Jon Schelkoph and the roadway team to ensure the approach roadways are designed match in.                                                           |
| Coordinate with CP Railway to meet the RR requirements for the crossing.         | Kevin Anderson and Lisa Hoekenga will lead the railroad coordination so that AREMA requirements and CP Railway's needs are met.                                                                                                                              |
| Provide effective utility coordination to maintain the crossings in the area.    | Pete Lemke will lead a utility coordination process with the utilities in the area including SMMPA and the City of Owatonna to determine utility impacts. This process will include early communication with utility owners to provide input to the project. |
| Provide a safe and ADA-compliant pedestrian walkway across Izaak Walton Creek.   | The Alternative Analysis will include alternatives for the pedestrian path over the creek. Each will be evaluated through the alternatives analysis process.                                                                                                 |

## Project Approach

We have tailored our approach based on the RFP and conversations with Steele County before RFP release, and through our successful history delivering bridge and roadway projects on county highways throughout Minnesota.

### Steps:

### How we will accomplish each step:

## Step 1



Obtain all data and information and confirm issues and solutions

Before proceeding with identifying solutions and analysis of alternatives, we will develop a well-rounded understanding of existing conditions. We will leverage our team's knowledge and carefully review information about the CP railroad bridge and the box culvert bridge carrying CR 180 over Izaak Walton Creek to fully understand project context.

## Step 2



Affirm Project Goals and Objectives

For this step, Steele County can expect our team to affirm project goals and objectives and begin to identify bridge replacement alternatives that are consistent with each goal.

## Step 3



Develop and Evaluate Alternatives

The first stage of the alternative development process is to identify the evaluation criteria that will be used in the Alternatives Analysis matrix. In this step, we will also refine bridge replacement alternatives and identify constraints and opportunities for each alternatives that minimize impacts, are sensitive to cost, and recognize project goals. This will include alternatives for an overpass and underpass.

## Step 4



Complete Preliminary Design

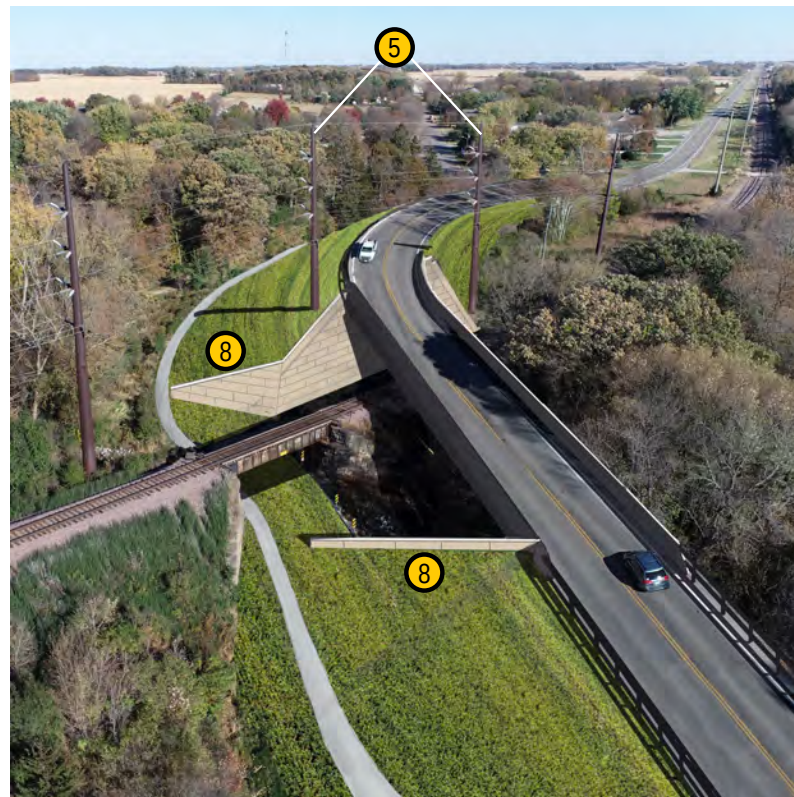
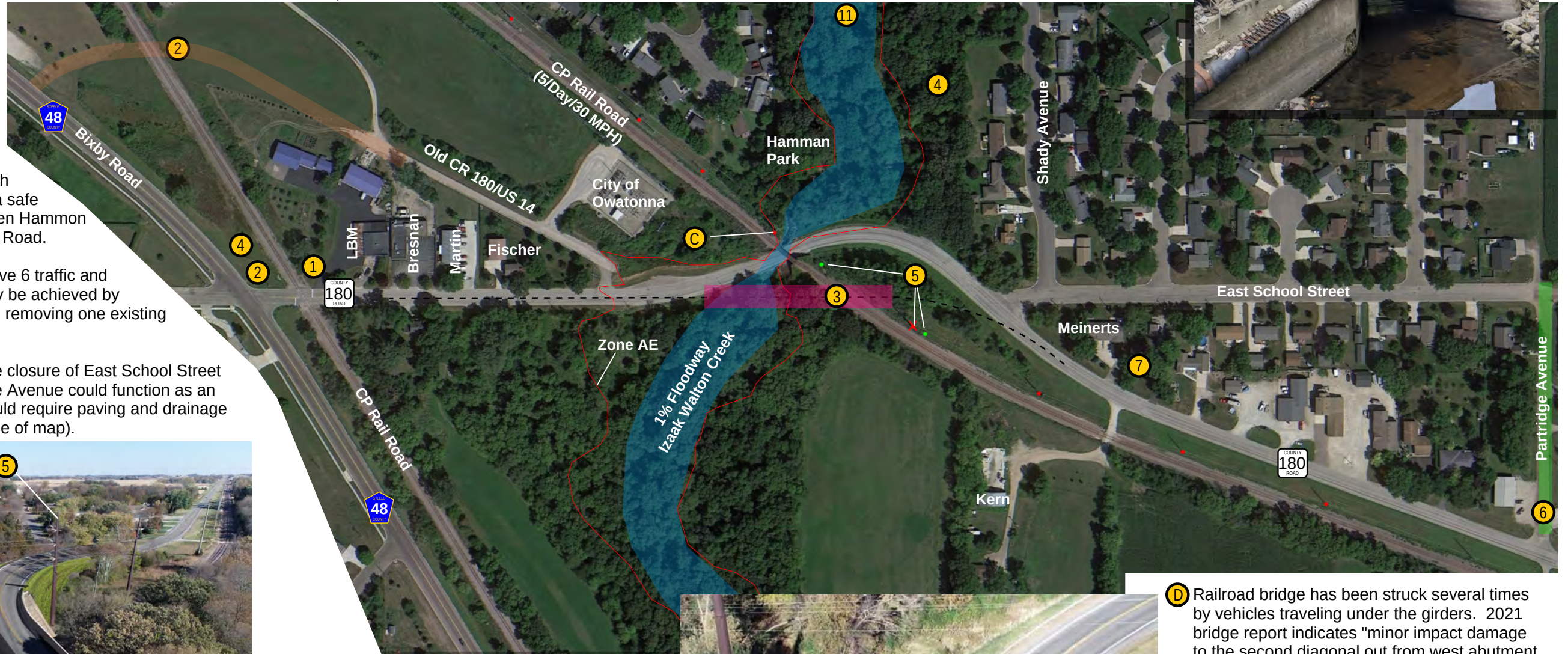
With the decision on a preferred alternative, we can complete our preliminary design and prepare a conceptual bridge plan and the geometric layout along with associated costs for staff and agency approval.

Once we have the evaluation criteria and viable alternatives identified, we can begin to measure impacts with each alternative and develop our Alternatives Analysis matrix as detailed in our Work Plan. We will also reference the evaluation criteria to measure impacts that can be utilized in the environmental documentation. Alternatives will be categorized as underpass or overpass and we will examine a minimum of two alternatives in each category. We will perform a bridge type study for each alternative with the preferred alternative refined and presented in a geometric layout.



## Issues and Opportunities Map

- ① At-grade rail crossing will be upgraded with crossing gates through HGCSIP in 2025
- ② County vision of potential CH 48/180 roundabout intersection is limited by close proximity of CP track crossing. Future improvements may allow for relocation of this intersection further north via expansion of Old CR 180/ US 14 corridor.
- ③ Alternative 6 Bridge must span the tracks, the 1% Floodway, and the Railroad ROW. Ideally, the wetlands, and entire floodplain (Zone AE) would be spanned as well, but this is not necessary provided hydraulic modeling demonstrates upstream and downstream impacts have been properly mitigated.
- ④ City of Owatonna hopes to construct a multi-use trail with this project that would offer a safe crossing of the tracks between Hammon Park (Shady Ave) and Bixby Road.
- ⑤ Clearance between Alternative 6 traffic and the overhead power line may be achieved by constructing new towers and removing one existing tower.
- ⑥ Alternative 6 may require the closure of East School Street access to CR 180. Partridge Avenue could function as an alternative access. This would require paving and drainage improvements (see right edge of map).
- ⑦ Property owned by John and Linda Meinerts will need a steeper driveway to access CR 180. Alternative 6 alignment goal will be to limit impacts to this parcel by providing an acceptable driveway profile grade.
- ⑧ Wingwalls off overpass abutment should parallel the flow path of the 1% floodway under the bridge.
- ⑨ Slope repaired with concrete pavement to address erosion problem.
- ⑩ Owatonna watermain running through existing box culvert will be replaced with this project.
- ⑪ Izaak Walton Creek at CR 180 is likely tail-water controlled. Consideration should be given to the interaction between the CR 180 box culvert bridge and the box culvert bridge 74J04 at E Rice Lake Road downstream to the north. There may be opportunity to mitigate project impacts by slight modifications downstream.

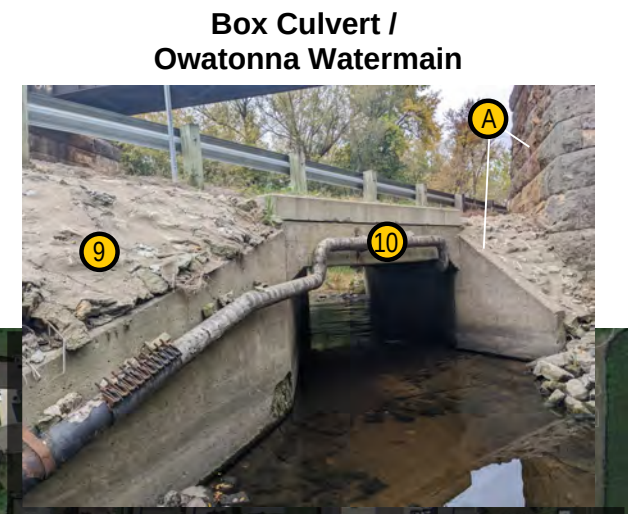


Alternative 6 Rendering Showing Potential Overpass

- Ⓐ Considerations for Alternative 2 include the age of the existing RR structure. The block wall abutment was built in 1908 and is showing signs of degradation. Replacement of the culvert must be performed with care to protect the existing structure.
- Ⓑ Storm events have generated channel flows with high velocity depositing riprap downstream of the box culvert.
- Ⓒ The SMPPA tower will likely need to be relocated in Alternative 2 due to its proximity to the existing and proposed abutment.



UAS Photo of Existing RR Bridge



Box Culvert /  
Owatonna Watermain

- Ⓓ Railroad bridge has been struck several times by vehicles traveling under the girders. 2021 bridge report indicates "minor impact damage to the second diagonal out from west abutment and impact damage to the third diaphragm".



Looking South from  
Izaak Walton Creek



## Project Team, Experience, and Availability

 **Trusted Key Personnel** – The Michael Baker team provides Steele County with professionals who have a deep understanding of the project requirements, the known and possible challenges and opportunities ahead, and the standards and requirements needed to ensure your project's success. Our personnel have years of proven experience completing projects of similar scope and will leverage their knowledge to provide the County with exceptional project delivery.

### ORGANIZATIONAL CHART



#### Legend

1 Michael Baker International, Inc. | 2 WSB



#### Project Manager Pete Lemke, PE, PTOE, RSP1

Pete is a senior transportation project manager with over 27 years of experience leading preliminary and final design projects and has extensive MnDOT and county highway engineering experience. He has led and delivered traffic engineering studies and recommendations, preliminary design including MnDOT Level 1 and Level 2 layouts, bridge projects, and roadway final design including utility coordination, ADA design, pavement design, project specifications, and special provisions on projects throughout Minnesota. Pete will be the main point of contact with the Steele County Project Manager.

Pete has relevant county government experience as a Design Engineer for Anoka County for four years delivering all aspects of county highway expansion projects and 10 years with Hennepin County as both a Design Engineer delivering highway designs and Senior Transportation Engineer managing the overall county highway system.

#### Pete's Relevant Experience:

**TH 58 Red Wing. MnDOT District 6. PROJECT MANAGER.** Pete led his team in the delivery of a CATEX including 4(f) and 6(f) parks impacts, determination of ROW impacts and needs, ROW acquisition, ADA field walk and detail design, Rapid Rectangular Flashing Beacon design at two locations, and final design plans for construction. Pete also led numerous interactions with property owners related to project impacts and achieving the successful outcome of agreement with right of way impacts and takings.

**TH 61 Grand Marais. MnDOT District 1. PROJECT MANAGER.** Responsible for leading his team to complete ADA design, traffic signal design and plans (temporary and permanent), and construction staging and traffic control. Pete identified a solution for MOT in the restricted downtown area that included keeping eastbound traffic on TH 61 and moving westbound traffic north to nearby parallel street. This solution minimized economic impacts to the downtown businesses during the City's summer season.

#### 27 Years of Experience



- ✓ Trusted partner with Paul Sponholz for 10 years
- ✓ Extensive County and MnDOT experience on bridge and highway projects including:
  - » Anoka CSAH 13
  - » I-94 Bridges Rehabilitation
  - » TH 24 Annandale Hemlock Street Roundabout



### Quality Manager Kevin Western, PE

Kevin has over 35 years of experience in bridge design, construction, and technical service. He has been the Design Manager for several major river crossings including the I-35W Bridge and the St. Croix River Crossing. He has also served on several technical committees and task forces for AASHTO, ASBI, and NCHRP. Kevin's experience includes:

**TH 53 Relocation CMGC Project.** *MnDOT.* BRIDGE DESIGN MANAGER. Managed design, review, and plan development for a 1,135-foot steel girder bridge. With the roadway sitting approximately 330 feet above the bottom of the floor of the mine, this is MnDOT's highest bridge. Project utilized the CMGC project delivery method for incorporating contractor means and methods, and potential efficiencies into the plans.

**St. Croix Crossing.** *MnDOT.* DESIGN MANAGER. Responsible for managing design, review, and plan development of unique 3,365-foot long Extradosed Bridge crossing the St. Croix River, including roadway components. The Extradosed Bridge is the first in the United States to utilize precast segmental post-tensioned boxes. During construction, managed shop drawing review, RFI responses, and technical guidance.



### Value-Added

Kevin has over 35 years in bridge design experience with MnDOT including **six years as the MnDOT State Bridge Design Engineer.** He will provide technical and quality reviews of the alternatives to assist in determining the most effective solution for the new crossing.



### Roadway Engineer Jon Schelkoph, PE

Jon is experienced leading transportation work including five years as the County Design Engineer and Project Manager for Scott County where he was the Engineer of Record on many federally funded projects. His process orientated approach and leadership ability make him an excellent roadway engineer. Jon's experience includes:

**Redefine 169 Elk River 197th Interchange.** *MnDOT.* LEAD ROADWAY ENGINEER. Responsible for Plans / Special Provisions including detailed plan review, verification of calculations, sight line and stopping distance analysis, and managed QA/QC process for cross street and ramps.

**I-94 Gap (Monticello to Albertville) Geometric Layout.** *MnDOT.* LEAD ROADWAY ENGINEER. Managed the quality and development of MnDOT's first Geometric Layout in Open Roads Designer, analysis of pavement conditions, coordinated review of alternatives with MnDOT staff. Managed the QA/QC process of the Level 1 Layout for 10 miles of Interstate.



### Preliminary Design and Alternatives Analysis - Bridge Daniel Baxter, PE, SE

Daniel is experienced in complex concrete and steel bridge engineering. He has been involved in the rehabilitation, design, and load rating of reinforced concrete arch bridges for numerous projects. He is an expert on complex finite element analysis including construction staging, and time-dependent 3D analysis of major concrete and steel river bridges. Daniel's experience includes:

**TH 10/75 11th Street Underpass CMGC Project, Moorhead.** *MnDOT.* LEAD BRIDGE DESIGN ENGINEER. Led the bridge design team for the new rail bridge carrying the double tracks for the BNSF Railroad KO Subdivision over TH 10/75. Led the development of the preliminary bridge plans and the final bridge plans.

**2nd Street Pedestrian Bridge.** *City of Fargo.* LEAD BRIDGE DESIGN ENGINEER. Led bridge concept development for the design of a new pedestrian bridge connecting downtown Fargo with the Red River Greenway. He developed bridge concepts including concrete and steel box girder structures and a steel I-girder structure on a variety of different alignments.

**Riverview Corridor Mississippi River Bridge.** *Ramsey County.* LEAD BRIDGE DESIGN ENGINEER. Led the concept development for a new river crossing carrying a Streetcar line over the Mississippi River. Concepts included steel plate girder structures with sidewalks and double-deck steel trusses and steel box girder structures with an upper deck for pedestrians.



### Environmental Screening / Wetland Delineation Alison Harwood

Alison is experienced in the natural resources field, leading field studies as well as helping clients navigate wetland delineation, environmental review, and permitting processes. She has extensive knowledge of local, state, and federal permit requirements including local watersheds, Wetland Conservation Act, MN Department of Natural Resources, Federal Section 404, Section 10, and Section 401 permitting, and consultation regarding Section 7 and Section 106 resources. Alison's experience includes:

**CSAH 48 and 18th Street SE Roundabout.** *Steele County.* ENVIRONMENTAL LEAD. Alison provided overall coordination for the project memo and provided QA/QC for the wetland delineation. WSB delineated and gained boundary approval for wetlands along this project corridor.

**CSAH 12 Reconstruction.** *Steele County.* ENVIRONMENTAL LEAD. Alison provided overall coordination for the project memo and provided QA/QC for the wetland delineation and permitting. WSB coordinated with the DNR Corps of Engineers, County Ditch Authority, Minnesota Pollution Control Agency (MPCA), City of Medford, and any other impacted permitting agencies as required for project approval.





### Railroad Coordination Lead Kevin Anderson, PE, DBIA

32  
Years of  
Experience

Kevin is experienced in managing all aspects of transportation projects. He worked for MnDOT for 18 years in various aspects of design and construction including 10 years of experience in bridge design and inspection. Additionally, Kevin has led the design for numerous bridge and roadway projects including the I-35W Bridge Replacement, High Bridge Redecking, and the I-94 Maple Grove to Rogers DB Project. Kevin's experience includes:

**TH 10/75 11th Street Underpass CMGC Project.** *MnDOT.* BRIDGE DESIGN OVERSIGHT MANAGER. Managing coordination of the bridge design teams and leading the bridge design for Br. 14017 carrying the double tracks for the BNSF Railroad KO Subdivision over 11th Street. The project includes a bridge type study, preliminary bridge plans, and the final bridge plans. This work includes coordination with BNSF Railroad for the design of two new rail bridges.

**Northern Lights Express (NLX) Hinckley Loop Feasibility Study.** *MnDOT.* PROJECT MANAGER. Led study to determine the feasibility of adding a bypass on the NLX corridor from the mainline BNSF corridor to the Grand Casino-Hinckley. Included coordination with BNSF Railroad for preliminary design of bypass connections to/from the BNSF mainline tracks. The work also included transportation planning, environmental planning, and alternatives analysis.

**I-494 Design-Build – TH 5 to I-394.** *MnDOT.* MNDOT PROJECT MANAGER. Managed all aspects of design and construction for a \$136-million design-build project involving the reconstruction of a major urban interstate from preliminary design through completion of the final design and construction. This included coordination with BNSF railroad for the design and construction of two new bridges over the BNSF railroad corridor.



### Hydraulic Analysis Jordan Jessen, PE

10  
Years of  
Experience

Jordan is experienced in water resources and stormwater management and specializes in hydrologic and hydraulic (H&H) modeling, storm sewer and best management practice (BMP) design, and permitting. He has extensive experience with complex drainage design in the state of Minnesota and performing modeling on multiple projects requiring FEMA permitting. Jordan's experience includes:

**Enclave on the Greenway and Greenway West.** *Pulte Homes.* DRAINAGE ENGINEER. Responsible for HEC-RAS modeling and large culvert sizing within a new housing development. Worked with the client to develop the most economical solution for the crossings and developed reports and exhibits necessary to acquire LOMR-F.

**TH 75 Lake Benton Preliminary Storm Sewer Design.** *MnDOT.* LEAD DRAINAGE ENGINEER. Directed the preliminary design of the storm sewer and performed watershed-level analysis in HydroCAD and developed a matrix of solutions to make final recommendations at identified problem areas, including improvements to the existing city storm sewer system and an existing railroad box culvert. Conducted QC checks, verified calculations, and developed the Stormwater Drainage Report.



### Railroad Bridge Engineer Lisa Hoekenga, PE, SE

18  
Years of  
Experience

Lisa is a structural engineer specializing in railroad bridge design, bridge rehabilitation, load rating, and inspection. She has worked on both transit and freight rail structures and is very familiar with project requirements unique to rail bridges, including minimizing any obstructions to operations and producing innovative construction method solutions, all while maintaining a strong focus on safety. Lisa's experience includes:

**Norfolk Southern Railway bridge over Opportunity Corridor Design-Build.** *Ohio DOT.* PROJECT MANAGER/ENGINEER OF RECORD. Responsible for design of proposed Norfolk Southern bridge over Opportunity Corridor. As lead designer, Michael Baker is designing five miles of new roadway, which included six new bridges, maintenance of traffic (MOT) challenges, roadway and pedestrian lighting, geotechnical design, drainage, and environmental coordination.

**Conrail Railroad Bridges over I-94.** *Michigan DOT.* PROJECT MANAGER/ENGINEER OF RECORD. Responsible for the design of the Conrail bridge over proposed I-94 corridor. The preferred bridge is comprised of three through plate girder spans and one deck beam span supporting two tracks separately. The structure will require full-height substructures and design of temporary shoring to construct those substructures adjacent to active shoofly tracks. Michael Baker provided design and engineering services for the replacement of two Conrail bridges over I-94, alternatives analysis, railroad coordination, ROW acquisition, and MOT.



### Value-Added

Lisa has been the Engineer of Record for **over 20 rail bridges** across the U.S. She will use this experience to provide technical direction for the potential conceptual, preliminary, and final design for the rail bridge.



## Floodplain Analysis Tatiana Papakos, PE, CFM

23  
Years of  
Experience

Tatiana is experienced in water resources engineering and project management. She has served as the H&H modeler and drainage / stormwater designer for department of transportation, municipal, and industrial clients in support of numerous projects. She will provide early coordination with agencies and establish recommendations to ensure the final design of the project continues uninterrupted. Tatiana's experience includes:

**U.S. 51 Cairo Bridge Replacement. Kentucky Transportation Cabinet. HYDRAULIC ENGINEER.** Responsible for the hydrologic analysis of the coincident storm events at the confluence of the Upper Mississippi River and Ohio River. Performed a statistical and joint probability analysis. In addition, responsible for the Mississippi River no-rise hydraulic analysis to determine and mitigate impacts due to the project on the Mississippi River floodplain.

**Bridge PT-220.75 over Little Juniata River Design Engineering Services for Emergency Repair Plans. Norfolk Southern Corporation. HYDRAULIC ENGINEER.** Provided technical assistance for HEC-RAS and guidance and direction for the modeling of the Little Juniata River and railroad bridge structures using HEC-RAS and development of a CLOMR associated with the water surface impacts resulting from the project.



### Value-Added

Tatiana has extensive experience working with FEMA and developing floodplain related solutions. She will ensure all risks associated with the federal permitting process will be identified and thoroughly vetted during preliminary design.



## Survey Crew Chief Joe Schreiber, NSPS CST Level III

25  
Years of  
Experience

Joe is a National Society of Professional Surveyors (NSPS) Level III Certified Survey Technician (CST) and Survey Crew Chief. He manages a survey crew performing preliminary design surveys, right-of-way surveys, and construction staking on large, complex transportation projects. Joe's experience includes:

**CSAH 48 at 18th Street SE Roundabout. Steele County. SURVEY CREW CHIEF.** Joe completed the topographic design survey for the CSAH 48 at 18th Street SE Roundabout design which included surveying all necessary above ground features as well as utility locates.



## Public Involvement Lead Hans Thomsen

15  
Years of  
Experience

Hans is experienced in building intentional relationships and crafting messages that resonate with stakeholders. He has worked in rural and urban communities and can clearly articulate complex issues while building trust in a short period of time. He has been involved with the Minneapolis Chamber of Commerce for the past seven years and has served as the Co-Chair of Leadership Twin Cities, a program focused on promoting opportunities for economic development and infrastructure investment in the region. Hans' experience includes:

**TH 10/75 11th Street Underpass CMGC Project. MnDOT. ENGAGEMENT AND COMMUNICATIONS LEAD.** Hans has been in direct contact with key stakeholders; to hear their concerns, identify opportunities to collaborate, and leverage their networks to advance the projects. His engagement activities have included public Open Houses, developing communications materials that effectively communicate the need for and desired outcomes of these projects, as well as creating interactive online feedback opportunities.

**Broadway Avenue Reconstruction. City of Rochester. ENGAGEMENT LEAD.** Hans is leading engagement for the City of Rochester as they prepare for the next phase of reconstruction for Broadway Avenue. His engagement efforts have included a community Open House, targeted business outreach, communication and collaboration with community groups, and an interactive online site to gather feedback.



## Railroad Track Engineer Chris Coppock, PE

10  
Years of  
Experience

Chris is a track engineer specializing in railroad track design, track rehabilitation, construction oversight, and inspection.

He has experience on both freight and passenger track infrastructure and is very familiar with the necessary project requirements involved with working around various railroad operating environments. Chris' experience includes:

**Red Line West Track Rehabilitation Program. Greater Cleveland Regional Transit Authority (GCRTA). PROJECT MANAGER / TRACK ENGINEER.** Responsible for all phases of the program from the development through construction. Developed the design construction documents for each phase of the project including drawings, specifications, and engineer's estimate for rehabilitation of the track structure and special trackwork from West 25th Street to Cleveland Hopkins Airport for approximately 19 miles and 8 turnouts. Coordinated safety and outage discussions between GCRTA Operations and the Contractor to ensure all safety processes were followed and that revenue operations were minimally impacted.

**Twin Cities Service Unit - Engineering, Minnesota-Iowa. Union Pacific Railroad. TRACK MAINTENANCE MANAGER.** Chris' responsibilities included managing track maintenance operations for 200 miles of mainline freight track including rail yards and siding connections to industries. He also developed plans for track maintenance and material lists for maintenance activities utilizing the track inspection reports, detector car reports, and geometry car evaluations.



## Overall Company Project Experience



### MnDOT TH 10/75 11th Street Underpass CMGC Project

*Moorhead, Minnesota*

This project converts two at-grade railroad crossings to grade separated structures over 11th Street for the BNSF Railroad KO and Hillsboro subdivisions. Michael Baker is serving as Bridge Design Oversight Manager, coordinating the bridge design teams, and providing the final bridge design for Br. 14017 carrying the double tracks. WSB is the Lead Designer providing roadway, track, drainage, traffic, and structural design. The project includes an alternatives analysis, preliminary bridge plans, and the final bridge plans. The bridge design includes developing a 3D model of the bridge using OpenBridge Modeler with the 2D construction plans developed from the 3D model. The project will reconstruct the three intersections on 11th Street at 1st Avenue, Center Avenue, and Main Avenue using new signalized intersections. Local roadways will be reconstructed with ADA-accessible routes including a 10' trail and a 6' sidewalk along 11th Street under the bridges.

#### PROJECT RELEVANCE

- Alternatives Analysis
- Retaining Wall Design
- RR Bridge Design
- RR Coordination
- Utility Coordination



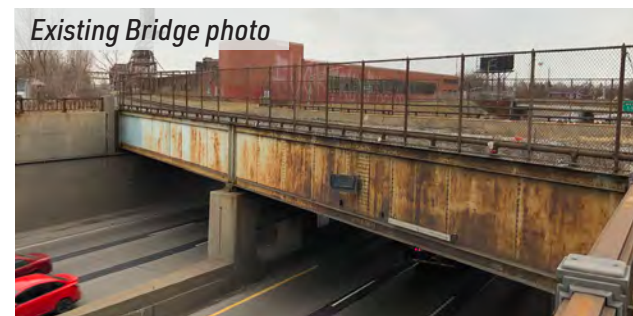
### Norfolk Southern Railway Bridge over Opportunity Corridor DB Project

*Cleveland, Ohio*

Led by our Lead Railroad Bridge Engineer, Lisa Hoekenga, Michael Baker was the Lead Bridge Designer responsible for the design of the Norfolk Southern Railway bridge over Opportunity Corridor. The bridge is two span railroad bridge using steel plate deck girders with a maximum span length of 70' and an overall bridge length of 136'. The structure was constructed using top-down construction and track shooflies. The substructures and retaining walls are supported on 50" drilled shafts. The railroad bridge was part of the larger Opportunity Corridor – Section 3 Design-Build Project where Michael Baker was the Lead Designer. Stretching from East 93rd Street to I-490, the new five-lane urban boulevard improves the roadway network within a historically under-served area in the City of Cleveland. As Lead Designer, Michael Baker designed two miles of new roadway including seven bridges, maintenance of traffic, roadway and pedestrian lighting, geotechnical design, and environmental coordination.

#### PROJECT RELEVANCE

- RR Bridge Design
- RR Coordination
- Environmental Coordination



### Conrail Railroad Bridges Over I-94 Project

*Detroit, Wayne County, Michigan*

Michael Baker provided design and engineering services for the replacement of two Conrail bridges over I-94 as part of a larger project on the corridor to improve mobility and enhance the economic viability of Detroit. Michael Baker provided significant railroad and stakeholder coordination to satisfy mobility, design, and specification requirements. The bridges service two major manufacturing plants—the Chrysler engine plant and the General Motors Assembly plant in Detroit— and require continuous rail operations for the duration of construction. A top-down construction method was initially proposed to limit the shoring required of the adjacent shoofly tracks and minimize the need for excavation and temporary walls prior to full highway modernization construction. The new substructures were held to a maximum deflection of half an inch to limit any potential movement and disruption to the track profile. Each bridge was designed for two tracks at each location, and the preferred alternative consisted of two independent through-girder superstructures.

#### PROJECT RELEVANCE

- RR Bridge Design
- Alternatives Analysis
- RR Coordination
- ROW Acquisition
- Maintenance of Traffic

## Detailed Work Plan and Schedule



**Budget and Schedule Control** – Steele County will receive effective delivery of project tasks in an efficient and cost-effective manner through our recent and proven experience completing alternatives analysis for the MnDOT TH 10/75 11th Street Underpass CMGC Project and the Riverview Corridor Streetcar Project. We will successfully secure schedule and budget through careful selection of our design professionals who fully understand how to navigate the complexities of this project while recognizing what it will cost and how long it will take.

Our team will perform all scoped tasks and prepare the work necessary to complete the deliverables to ensure successful project completion. We will achieve the required municipal, state, and federal approvals and develop clear conceptual plans to evaluate and to determine the preferred alternative for the project. The dates for each task can be found in our schedule graphic at the end of this section.

### Task 1: Project Management

Pete Lemke will be responsible for day-to-day project management and overall leadership of the team. His project management tasks will include regular budget and invoice reviews, resource management, schedule review and progress reports, and weekly project coordination with the Steele County Project Manager.

Additionally, Kevin Anderson will provide task leadership on agency engagement. Pete and Kevin will collaborate on a schedule that will guide our meetings throughout the project and ensure project partners including Steele County, City of Owatonna, MnDOT State Aid, and Canadian Pacific Railway are engaged in the general coordination of this project.

Project meetings include the following: Project Management Team meetings; agency coordination meetings; utility meetings; and other required meetings necessary to complete the scoped deliverables within budget and schedule. Meeting agendas and

materials will be distributed at least two days prior to each meeting and meeting minutes will be provided within three business days.

Our team will follow our internal quality management process and Steele County quality requirements. We will develop a project-specific Quality Management Plan and a Project Management Plan (PMP) for this project and only change personnel after providing written notice and receiving concurrence from Steele County.

### Task 2: Alternatives Analysis

A successful conceptual design for the roadway and structures will result in economical and constructable alternative that requires minimal changes during final design. Selection of the preferred CP Rail crossing solution will need to consider accelerated bridge construction methods to minimize necessary track outages and increase chances of approval by CP. The conceptual design must also include close coordination with the proposed bridge, track, and roadway design to ensure that the correct track, roadway, survey, foundation, utility, and drainage design information is incorporated into the concept plans. This coordination will include interdisciplinary reviews of the track and roadway plans to verify that alignments, profiles, lane and shoulder widths, and retaining wall locations match the bridge plans.

**Figure 1. Michael Baker's Proposed Alternatives Analysis Matrix**

| Steele County - CR 180 Bridges Alternatives Analysis Matrix |                             |                     |        |       |                                  |                     |                    |                 |                                                                            |                   |                                       |                                 |                            |            |                                                 |
|-------------------------------------------------------------|-----------------------------|---------------------|--------|-------|----------------------------------|---------------------|--------------------|-----------------|----------------------------------------------------------------------------|-------------------|---------------------------------------|---------------------------------|----------------------------|------------|-------------------------------------------------|
| Concept No.                                                 | Brief Narrative Description | Planning-Level Cost |        |       | High-Level Environmental Impacts |                     |                    |                 | Consistency with Project Goals                                             |                   |                                       |                                 |                            |            |                                                 |
|                                                             |                             | Roadway             | Bridge | Total | Wetlands Impacts                 | 100-Year Flood Fill | Right of Way Needs | Utility Impacts | Meet State Aid Rules and Guidance (no variance or design exception needed) | Construct-ability | Meets Canadian Pacific Rail Standards | Road out of 100-year Floodplain | Roadway Clearance Achieved |            | Incorporates Non-motorized Transportation Modes |
|                                                             |                             | \$                  | \$     | \$    | Acres                            | Cubic Feet          | Acres              |                 |                                                                            |                   |                                       |                                 | 14-ft 6-in                 | 16-ft 6-in | Pedestrian Bicycles                             |
| 1                                                           | Alternative 2               |                     |        |       |                                  |                     |                    |                 |                                                                            |                   |                                       |                                 |                            |            |                                                 |
| 2                                                           | Alternative 6               |                     |        |       |                                  |                     |                    |                 |                                                                            |                   |                                       |                                 |                            |            |                                                 |
| 3                                                           | No Build                    |                     |        |       |                                  |                     |                    |                 |                                                                            |                   |                                       |                                 |                            |            |                                                 |

Figure 1 is an example of our proposed Alternatives Analysis Matrix. We will work with the County to refine this Matrix during the Alternatives Analysis. This matrix will capture the results of the alternatives evaluation and serve as a record of how each alternative scored. This matrix will document how each alternative meets key project goals and can be used to inform decisions makers. With our experience leading alternatives analysis on recent projects, Steele County will benefit from our proven evaluation process.



We will complete a bridge type study for all the proposed alternatives and prepare an alternative analysis matrix for each alternative. The bridge type study will summarize the superstructure types, substructure types, and foundation options considered for the bridges. For Alternative 6, Michael Baker will evaluate superstructure types including prestressed concrete beams and continuous steel beams. Michael Baker will evaluate a through-plate girder superstructure for Alternative 2. Foundation options will be dictated by the geotechnical conditions, but pile-supported foundations are expected to be used given the expected low strength soils in the creek and wetland areas. For the potential RR bridge, it is expected that parapet abutments will be utilized.

The Alternatives Analysis Matrix provides criteria that is reviewed and scored for each option. The criteria will be selected based on the most important factors for this project. An example of the alternative analysis matrix is shown on the previous page. We will work Steele County and the City of Owatonna to refine the ranking criteria at the beginning of the project. Input on the rankings in the matrix will be gathered in meetings with Steele County, City of Owatonna, utility companies, environmental agencies, and CP Railway. Using the Alternatives Analysis matrix, recommendations for the Preferred Alternative will be selected and documented. An Alternative Analysis Report will be provided that details the process used for selection of the Preferred Alternative, the reasoning for the criteria that were selected, and the reasoning behind the criteria scoring and the recommended options.

### Task 3: Survey

WSB will complete the survey and provide an existing conditions base map using the collected data. The collected data and base map will conform to Steele County's layers and point codes. This work will include:

- » *Collect, review, and establish survey control points necessary to perform topographic survey along the project length.*
- » *Perform topographic survey along the project corridor using total station equipment. Survey will include roadway, bridges, tracks and embankment, roadway approaches, creek cross-sections and utilities.*
- » *The extents of the survey on the roadway will be right of way to right of way. Survey will continue around radius of intersections at the project limits. Size and type will be provided for the trees in the corridor.*
- » *Use topography survey data as well as County GIS data and record drawings to develop an existing conditions base map.*

The base map should include the survey points, line work (with survey figures, where applicable), and existing ground surface.

**Utility Data Collection:** Data collection will include the following. The collected data, along with the topographic information, will be used to provide an existing utilities base map.

- » *Data pertaining to the city's storm sewer, sanitary sewer, and water main will be collected in the field. This data includes rim elevations, invert elevations, pipe sizes, and structure sizes.*
- » *Private and other utilities (gas, telephone, electric, cable, etc.) will be collected with design level locates.*

### Task 4: Hydraulics

The Michael Baker drainage team, led by Jordan Jessen, will be responsible for the hydraulic modeling and design elements of the project. He will also provide analysis and recommendations for the requested alternatives. Additionally, Tatiana Papakos will provide guidance and assist with floodplain impacts and early coordination with FEMA. Under each alternative, Michael Baker has the experience and expertise to develop an economical solution that meets federal and state requirements.

For Alternative 2, careful consideration will need to be given in balancing the project needs. Lowering the roadway to accommodate vertical clearance under the bridge will exacerbate existing overtopping and freeboard issues for the proposed roadway. These issues may be mitigated by increasing the size of the hydraulic opening for the crossing or constructing an embankment on the upstream side of the roadway as a dike, these options may result in detrimental impacts to water surface elevations both upstream and downstream of the crossing. With these concerns, early coordination with permitting authorities will be critical.

For Alternative 6, impacts to the floodplain resulting from the raised roadway embankment will need to be considered. However, this option will eliminate freeboard and overtopping concerns for the roadway, and drastically reduce the potential for detrimental impacts due to changes in water surface elevations on either side of the crossing.



Existing box culvert beneath CR 180, looking downstream

## Task 5: Environmental

WSB will delineate all aquatic resources within the project area, including the top bank of Izaak Walton Creek and adjacent wetlands. Delineation will be completed per the US Army Corps of Engineers (USACE) Wetland Delineation Manual and Midwest Regional Supplement. Soils, hydrology, and vegetation data will be collected and the boundaries of wetlands will be demarcated with pink pin flags. The boundaries of all water resources will be surveyed using sub-foot accuracy handheld GIS. Data gathered during the field review will be compiled into an aquatic resources delineation report and provided to the County for review prior to submittal to the review agencies (USACE, MN Department of Natural Resources, and the Board of Water and Soil Resources and Steele County SWCD (for Wetland Conservation Act (WCA)). WSB will coordinate with the review agencies, attend a field review to verify boundaries, if requested, and respond to agency comments on the boundaries. Following approval, an electronic file (shapefile or .dwg) will be provided to the County and design team for use in project design.

WSB will also review the project alternatives and provide recommendations to the design team for aquatic resource avoidance and minimization. If impacts are proposed, WSB will evaluate the mitigation needs.

## Task 6: Public and Private Utility Identification and Coordination

Pete will lead public and private utility identification and coordination including identifying and mapping utility facilities and identifying significant impacts for each alternative. We will coordinate with facility owners to determine relocation and mitigation strategies and cost for compensable relocations.

## Task 7: Preliminary Roadway and Bridge Design

**Preliminary Roadway Design:** We will provide conceptual-level layouts for two options for both Alternative 2 and Alternative 6. Each of these will account for the railroad and creek crossing and the passage of the SMPPA transmission line over the roadway. Conceptual-level cost estimates will be provided based length-width-depth dimensions for the roadway design.

After selection of the Preferred Alternative, Jon Schelkoph will lead the preliminary roadway design and development of the Staff Approved Geometric Layout. The Layout will meet MnDOT standards. The preliminary design will engage County staff and stakeholders for feedback. This layout will be provided as a 3D Roadway Model in OpenRoads Designer (ORD). Once complete, this layout and model can be used as the basis for the final design of the project.

With Pete's project delivery, leadership, and experience with transportation engineering and the MnDOT State Aid project delivery process, our team will work hard to identify and implement the right preliminary design solutions for bridge and road corridor improvements and reflect those in layout development.

### Experienced Team of Trusted Professionals



Michael Baker recently provided preliminary bridge plans for the two new BNSF Railroad Bridges over TH 10/75 in Moorhead for TH 10/75 11th Street Underpass CMGC Project. This experience further highlights our understanding of project requirements, resulting in efficient project delivery for Steele County.

**Conceptual Bridge Design:** In conjunction with the Alternatives Analysis, we will complete the conceptual bridge plans. This will include up to two alternatives for both Alternatives 2 and 6. They will follow MnDOT standards and will include a General Plan and Elevation Sheet with a Typical Section.

Submission of the conceptual bridge plans will include a conceptual-level cost estimates based on bridge area. The conceptual bridge design will include careful consideration of the constructability and access challenges of the project site.

*Rendering of the I-494/35W Interchange Project from OpenRoads Designer Model.*



### Value-Add

Our team is committed to leveraging the latest technology for Steele County to provide rich 3D models. Michael Baker and WSB have been teaming on digital delivery projects in Minnesota for several years, including the TH 169 Elk River and I-94 Gap projects. Last fall, Michael Baker held a Digital Delivery training webinar for MnDOT and County staff across the state. We are leading MnDOT's first Design-Build Project in ORD for the 494-35W Interchange, and we will bring this passion for excellence to Steele County and this project.



## Task 8: Public Involvement

The Michael Baker public involvement team, led by Hans Thomsen, in coordination with Steele County, will develop a robust Public and Agency Involvement Plan (PIP) that presents information, asks for and receives feedback on issues and solutions, and coordinates with stakeholders to ensure we are addressing the issues necessary to move this project forward.

Michael Baker will lead the development and implementation of our PIP with the end goals of sharing information, listening, and ultimately achieving informed consent for project documentation, layouts, and the preferred alternative.

Our PIP will identify stakeholders, convey transparency in decision making and solutions, and meet people through the use of traditional methods such as Open House events while also considering new technology, such as virtual public meetings and the use of online tools such as MetroQuest or socialpinpoint.com. Our online presence would include an interactive map, a survey, area for comments, and updated information as it becomes available.

The Michael Baker plan will include several key elements essential to conveying information and building informed consent. We believe a picture is worth a thousand words, especially with helping non-technical people understand technical issues. We will use high quality graphics to help explain complex situations related to a planned RR crossing, roadway enhancements, and other improvements. To connect with community members, we communicate and share information in a way that is easy to understand and inspires stakeholder participation.

As we develop our plan, we will work with the County to include traditional and innovative approaches and technologies for our public engagement plan and approach which may include:

| ENGAGEMENT TOOL                          | MICHAEL BAKER'S PLAN                                                                                                                                                                                                                 | BENEFIT TO STEELE COUNTY                                                                                                                                      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Public Open Houses                       | In-person or virtual events supporting achievement of informed consent for layout and construction limits, and the environmental documentation process.                                                                              | Opportunity for the public to voice their concerns and opinions, full community engagement.                                                                   |
| Issues and Opportunities Matrix          | Iterative tool that will measure benefits and impacts of potential solutions based on pre-determined criteria including costs. Matrix development will be developed by both preliminary design and the environmental review process. | Ability to find areas where we can save Steele County money by identifying and mitigating potential issues.                                                   |
| Project Newsletters and Public Notices   | Periodic communication of project information in support of project and NEPA process.                                                                                                                                                | Continual updates regarding project tasks, keeping Steele County informed throughout project life-cycle.                                                      |
| Website                                  | Support updates with information, exhibits, and layouts for posting online.                                                                                                                                                          | Clear understanding of project tasks through visuals.                                                                                                         |
| Narrated Videos and Online Presentations | A series of online videos communicating project issues, opportunities, and solutions viewable over an extended period.                                                                                                               | Opportunity for community members to stay up to date on project concerns.                                                                                     |
| Drone Tours                              | A live remote fly-through of the project where participants can observe issues and discuss solutions.                                                                                                                                | This format allows viewing County Road 180 without risks to safety or influencing the operations of CR 180 with having a large group of participants on site. |
| Social Media                             | Online presence with options for dialogue and a targeted audience (Twitter, Facebook, etc.).                                                                                                                                         | Opportunity for residents to be involved with project updates.                                                                                                |

## How We Will Include Property Owners and the Public



### Meet with Property Owner to Discuss Project Improvements

Pete will meet in person with property owners affected by this project to present preliminary designs and listen to stakeholder concerns on impacts and modifications. With the goal to reach agreement on project improvements, we will say “yes” when we can and “no” when needed in response to input received from property owners. We will prepare, participate in, and provide notes for these meetings.



### Educate and Engage the Public and Agencies; Receive Public and Landowner Input; Identify Public Support; and Build Consensus

The Michael Baker team will host a public Open House in an accessible location near the project. We will present handouts, displays, and layouts showing project alternatives for the public to view and comment on. We will prepare a draft Open House brochure at least 3-weeks prior to the Open House for County review. We anticipate mailing approximately 200 notices 2-3 weeks prior to the Open House event.



## Task 9: Railroad Coordination

The Michael Baker team, led by Kevin Anderson, will develop and carry-out a focused railroad coordination plan that seeks to collaborate closely with Canadian Pacific Railroad representatives. We will provide consistent and effective communication to convey the goals of this project. Through this coordination with the railroad, we will ensure the reconstruction work can be carried out safely and while minimizing disruptions to the project schedule, train operations, and impacts to adjacent roadways and driveways. In addition, in coordination with Steele County, our plan will establish clear lines of communication between all parties involved in the project, including the construction team, railroad personnel, and local authorities, to ensure that any issues that arise can be addressed quickly and effectively. We assume there will be one submittal of the plans to CP Rail for review and comment.



Project Manager, Pete Lemke, and Railroad Coordination Lead, Kevin Anderson, visiting the project site, further emphasizing our familiarity with project challenges through our site visits and extensive discussions about solutions.

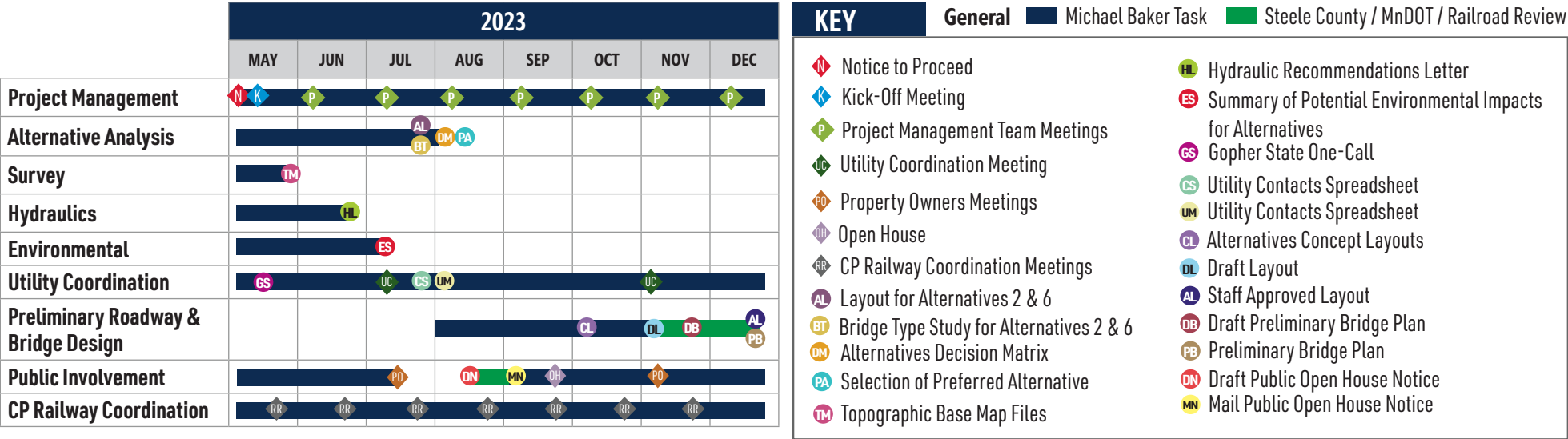
## Task 10: Additional Tasks

Based on discussions with the County prior to release of the RFP and having given input into the RFP process, we are comfortable with the tasks identified and confident in our ability to meet the County’s goals, coordinate with stakeholders, select a Preferred Alternative, and deliver a successful project.

**Preliminary Bridge Design:** After completion of the bridge type study, we will complete the preliminary bridge plans. They will follow MnDOT standards and will include a General Plan and Elevation Sheet, Typical Section(s), Bridge Survey Sheet, Bridge Construction Staging, Aesthetic Detail Sheets, and Bridge Borings.



Effective project management is the key to delivering successful, high quality services on time and within budget. Our experienced personnel understand local standards and how to effectively scope, staff, and execute assignments to maximize schedule efficiencies.



Summary

From Task 1: Project Management to Task 10: Additional Tasks and everything in between, the Michael Baker team is prepared and ready to hit the ground running upon NTP to get this project moving from preliminary design through final design. We are confident our team can offer Steele County a group of capable, talented professionals to deliver each project task successfully.

BY PARTNERING WITH OUR TEAM, STEELE COUNTY WILL RECEIVE:

Extensive Project Understanding and Experience

Our team has a developed a passion for the success of this project through our participation in developing the scope, our detailed analysis using the ConceptStation tool, and our numerous site visits and conversations with Steele County.

Our teaming partner, WSB, has 13 years of experience working with Steele County.

Efficient and Cost-Effective Project Delivery

\$10M

 collectively saved for St. Louis County in bridge funding through Michael Baker's grant writing experience.

Quick delivery times through our team's extensive review and preparation of project tasks.

Trusted Key Personnel

Our Project Manager, Pete Lemke, has long-standing professional experience working alongside Steele County Project Manager, Paul Sponholz, spanning back 10 years.

Michael Baker has successfully delivered 39 recent projects with railroad involvement.

+++

Michael Baker INTERNATIONAL

STEELE COUNTY HIGHWAY DEPARTMENT

PROFESSIONAL ENGINEERING SERVICES FOR PRELIMINARY DESIGN TO REPLACE CR 180 BRIDGE

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## Steele County Preliminary Design to Replace CR 180 Bridge



| TASK  | TASK DESCRIPTION                                                     | MICHAEL BAKER INTERNATIONAL |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                | WSB                     |                                                |                    |                                |                      |             |                                       | TOTAL |
|-------|----------------------------------------------------------------------|-----------------------------|-----------------|-----------------|-----------------|-------------------|---------------------------------|-------------------------|-----------------------------|------------------------|--------------------------|-------------------|-------------------------------|-----------------------------------------|----------------|-------------------------|------------------------------------------------|--------------------|--------------------------------|----------------------|-------------|---------------------------------------|-------|
|       |                                                                      | PROJECT MANAGER             | QUALITY MANAGER | ROADWAY MANAGER | DESIGN ENGINEER | CIVIL/HIGHWAY EIT | RAILROAD AND AGENCY COORDINTION | RAILROAD TRACK ENGINEER | LEAD BRIDGE DESIGN ENGINEER | SENIOR BRIDGE ENGINEER | RAILROAD BRIDGE ENGINEER | BRIDGE TECHNICIAN | LEAD WATER RESOURCES ENGINEER | SENIOR HYDRAULICS ENGINEER (FLOODPLAIN) | ADMINISTRATION | PUBLIC INVOLVEMENT LEAD | PUBLIC INVOLVEMENT / COMMUNICATIONS SPECIALIST | ENVIRONMENTAL LEAD | SENIOR ENVIRONMENTAL SCIENTIST | SENIOR LAND SURVEYOR | SURVEY CREW | GIS SPECIALIST/SURVEY/CADD TECHNICIAN |       |
|       | RATES                                                                | \$73                        | \$96            | \$77            | \$45            | \$35              | \$96                            | \$65                    | \$80                        | \$59                   | \$80                     | \$35              | \$55                          | \$65                                    | \$35           | \$155                   | \$100                                          | \$183              | \$122                          | \$192                | \$235       | \$140                                 |       |
| 1.0   | Project Management                                                   |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 1.1   | Administration                                                       | 14                          |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         | 8              |                         |                                                |                    |                                |                      |             |                                       | 22    |
| 1.2   | General Coordination                                                 | 52                          |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 52    |
| 1.3   | Meetings                                                             | 32                          |                 | 8               |                 |                   |                                 |                         | 8                           |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 48    |
| 1.4   | Quality Assurance and Quality Control Functions (QA/QC)              | 1                           | 16              |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 17    |
|       | TASK 1 SUBTOTAL                                                      | 99                          | 16              | 8               | 0               | 0                 | 0                               | 0                       | 8                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 8              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 139   |
| 2.0   | Alternatives Analysis                                                |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 2.1   | Feasibility Study Review and Recommendations                         | 1                           |                 | 2               |                 |                   |                                 | 4                       | 4                           |                        | 4                        |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 15    |
| 2.2   | Alternative 2 - Underpass (Up to two variations)                     | 1                           |                 | 4               | 8               | 32                | 1                               | 4                       | 6                           | 20                     | 10                       |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 86    |
| 2.2.1 | Track Raise Feasibility Evaluation                                   | 1                           |                 |                 |                 |                   |                                 |                         | 8                           |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 9     |
| 2.2.2 | Stream Crossing Optimization                                         | 1                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   | 8                             |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 9     |
| 2.3   | Alternative 6 - Overpass (Up to two variations)                      | 1                           |                 |                 |                 |                   | 1                               |                         | 4                           | 16                     | 32                       | 34                |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 88    |
| 2.4   | Bridge Type Study                                                    | 1                           |                 |                 |                 |                   |                                 |                         | 1                           | 8                      | 4                        | 32                |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 46    |
| 2.5   | Alternatives Analysis Matrix                                         | 1                           |                 | 2               | 16              |                   |                                 |                         |                             | 4                      |                          | 16                |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 39    |
|       | TASK 2 SUBTOTAL                                                      | 7                           | 0               | 8               | 24              | 32                | 2                               | 16                      | 15                          | 48                     | 50                       | 82                | 8                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 292   |
| 3.0   | Survey                                                               |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 3.1   | Setup and Control                                                    |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                | 2                    |             | 2                                     | 4     |
| 3.2   | Topographic Field Survey                                             |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    | 2                              | 52                   |             |                                       | 54    |
| 3.3   | Survey Processing                                                    |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    | 2                              |                      |             | 30                                    | 32    |
|       | TASK 3 SUBTOTAL                                                      | 0                           | 0               | 0               | 0               | 0                 | 0                               | 0                       | 0                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 6                    | 52          | 32                                    | 90    |
| 4.0   | Hydraulics                                                           |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 4.1   | Hydraulic Flood Analysis                                             | 1                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   | 32                            | 10                                      |                |                         |                                                |                    |                                |                      |             |                                       | 43    |
| 4.2   | Hydraulic Risk Assessment                                            | 1                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               | 16                                      |                |                         |                                                |                    |                                |                      |             |                                       | 17    |
| 4.3   | Scour Analysis                                                       |                             |                 |                 |                 | 6                 |                                 |                         |                             |                        |                          |                   | 2                             |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 8     |
| 4.4   | Hydraulic Structure Sizing and Type                                  |                             |                 |                 |                 | 6                 |                                 |                         |                             |                        |                          |                   | 4                             |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 10    |
| 4.5   | FEMA Mapping and Recommendations                                     | 2                           |                 |                 |                 | 8                 |                                 |                         |                             |                        |                          |                   |                               | 12                                      |                |                         |                                                |                    |                                |                      |             |                                       | 22    |
|       | TASK 4 SUBTOTAL                                                      | 4                           | 0               | 0               | 0               | 20                | 0                               | 0                       | 0                           | 0                      | 0                        | 0                 | 38                            | 38                                      | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 100   |
| 5.0   | Environmental                                                        |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 5.1   | Environmental Screening                                              |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                | 1                  | 6                              |                      |             |                                       | 7     |
| 5.2   | Wetland Delineation and Report                                       |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                | 2                  | 46                             |                      |             |                                       | 48    |
| 5.3   | Design Recommendations                                               |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                | 3                  |                                |                      |             |                                       | 3     |
|       | TASK 5 SUBTOTAL                                                      | 0                           | 0               | 0               | 0               | 0                 | 0                               | 0                       | 0                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 0                       | 0                                              | 6                  | 52                             | 0                    | 0           | 0                                     | 58    |
| 6.0   | Public and Private Utility Identification and Coordination           |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 6.1   | Utility identification and Mapping                                   | 1                           |                 |                 | 1               | 14                |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 16    |
| 6.2   | Alternatives Impacts Analysis                                        | 1                           |                 |                 | 2               | 8                 |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 11    |
| 6.3   | Mitigation Identification and Relocation Coordination                | 1                           |                 |                 | 8               | 12                |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 21    |
| 6.4   | Relocation Cost Estimates                                            | 1                           |                 |                 | 2               | 16                |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 19    |
| 6.5   | SMPPA Coordination                                                   | 2                           |                 |                 | 2               | 8                 |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 12    |
|       | TASK 6 SUBTOTAL                                                      | 6                           | 0               | 0               | 15              | 58                | 0                               | 0                       | 0                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 79    |
| 7.0   | Preliminary Roadway and Bridge Design                                |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 7.1   | Preliminary Roadway Design                                           | 2                           |                 | 8               | 32              | 108               |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 150   |
| 7.2   | Preliminary Bridge Design                                            | 2                           |                 |                 |                 |                   |                                 |                         | 8                           | 40                     | 18                       | 112               |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 180   |
| 7.3   | Alternative Concept Layouts (Up to Four)                             | 2                           |                 | 8               | 16              | 150               |                                 |                         | 4                           | 8                      |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 188   |
| 7.4   | Preferred Alternative Staff Approved Layout                          | 2                           |                 | 2               | 8               | 110               |                                 |                         | 4                           |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 126   |
|       | TASK 7 SUBTOTAL                                                      | 8                           | 0               | 18              | 56              | 368               | 0                               | 0                       | 16                          | 48                     | 18                       | 112               | 0                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 644   |
| 8.0   | Public Involvement                                                   |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 8.1   | Property Owner Meetings                                              | 10                          |                 |                 | 4               |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 14    |
| 8.2   | Public and Agency Involvement Plan                                   | 1                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                | 6                       | 18                                             |                    |                                |                      |             |                                       | 25    |
| 8.3   | Focused Meetings Affected Landowners and Other Stakeholders (Est. 4) | 4                           |                 |                 | 4               |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 8     |
| 8.4   | Local Agency Meetings (Est. 4)                                       | 8                           |                 | 4               | 8               |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 20    |
| 8.5   | Informational Brochure                                               | 1                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                | 4                       | 18                                             |                    |                                |                      |             |                                       | 23    |
| 8.6   | Public Open House Meeting                                            | 4                           |                 | 2               | 2               |                   |                                 | 2                       | 2                           |                        |                          |                   |                               |                                         |                | 16                      | 36                                             |                    |                                |                      |             |                                       | 64    |
| 8.7   | Public and Website Updates                                           | 8                           |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                | 2                       | 16                                             |                    |                                |                      |             |                                       | 26    |
|       | TASK 8 SUBTOTAL                                                      | 36                          | 0               | 6               | 18              | 0                 | 0                               | 2                       | 2                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 28                      | 88                                             | 0                  | 0                              | 0                    | 0           | 0                                     | 180   |
| 9.0   | Railroad Coordination                                                |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 9.1   | Project Coordination                                                 | 4                           |                 |                 |                 |                   | 10                              | 66                      |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 80    |
| 9.2   | Meetings (Est. 4)                                                    | 4                           |                 |                 |                 |                   | 4                               | 4                       |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 12    |
| 9.3   | Railroad ROW Access Flagging and Permits                             | 1                           |                 |                 |                 |                   | 1                               | 28                      |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 30    |
|       | TASK 9 SUBTOTAL                                                      | 9                           | 0               | 0               | 0               | 0                 | 15                              | 98                      | 0                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 122   |
| 10.0  | Additional Tasks                                                     |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       |       |
| 10.1  |                                                                      |                             |                 |                 |                 |                   |                                 |                         |                             |                        |                          |                   |                               |                                         |                |                         |                                                |                    |                                |                      |             |                                       | 0     |
|       | TASK 10 SUBTOTAL                                                     | 0                           | 0               | 0               | 0               | 0                 | 0                               | 0                       | 0                           | 0                      | 0                        | 0                 | 0                             | 0                                       | 0              | 0                       | 0                                              | 0                  | 0                              | 0                    | 0           | 0                                     | 0     |
|       | TOTAL HOURS                                                          | 169                         | 16              | 40              | 113             | 478               | 17                              | 116                     | 41                          | 96                     | 68                       | 194               | 46                            | 38                                      | 8              | 28                      | 88                                             | 6                  | 52                             | 6                    | 52          | 32                                    | 1,704 |

| Total Labor Cost per Classification                         | \$12,337                    | \$1,536 | \$3,080 | \$5,085 | \$16,730 | \$1,632 | \$7,540 | \$3,280 | \$5,664 | \$5,440 | \$6,790 | \$2,530 | \$2,470 | \$280 | \$4,340 | \$8,800 | \$1,098 | \$6,344 | \$1,152 | \$12,220 | \$4,480 | \$112,828 |
|-------------------------------------------------------------|-----------------------------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|-------|---------|---------|---------|---------|---------|----------|---------|-----------|
|                                                             | MICHAEL BAKER INTERNATIONAL |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal Hours                                              | 1,440                       |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Labor Cost =                                                | \$74,394.00                 |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Overhead (152.354%) =                                       | \$113,342.23                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal Labor + OH =                                       | \$187,736.23                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Profit (10%) =                                              | \$18,773.62                 |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal Labor Cost =                                       | \$206,509.86                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Direct Expenses (Mileage) =                                 | \$1,310.00                  |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Direct Expenses (Railroad Flagman) =                        | \$3,000.00                  |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Direct Expenses (Railroad Protective Liability Insurance) = | \$0.00                      |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal (Michael Baker) =                                  | \$210,819.86                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
|                                                             | WSB                         |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal Hours                                              | 264                         |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal Labor Cost (Based on Fully Loaded Bill Rates) =    | \$38,434.00                 |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Direct Expenses =                                           | \$0.00                      |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Subtotal (WSB) =                                            | \$38,434.00                 |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
|                                                             |                             |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Total Hours =                                               | 1,704                       |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Total Labor Cost =                                          | \$244,943.86                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Total Direct Expenses =                                     | \$4,310.00                  |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |
| Total Project Cost =                                        | \$249,253.86                |         |         |         |          |         |         |         |         |         |         |         |         |       |         |         |         |         |         |          |         |           |

Assumptions:

Railroad Protective Liability Insurance will not be required for this phase.

Railroad flagging will be required for two days at an estimated \$1,500/day

For Task 2, we plan to evaluate 4 alternatives (anticipate two underpass and two overpass)

This project will require up to 8 coordination meetings (anticipate monthly but will occur as needed)

Task 9 Railroad Coordination assumes that Alternative 6 without replacement of the existing railroad bridge is the preferred alternative

For Task 8, we anticipate 10 1-hour property owner meetings





April 21, 2023

[paul.sponholz@co.steele.mn.us](mailto:paul.sponholz@co.steele.mn.us)

Mr. Paul Sponholz, PE  
Steele County Highway Department  
P.O. Box 890  
3000 Hoffman Drive NW  
Owatonna, MN 55060-0890

Re: Proposal for Preliminary Design to Replace CR 180 Bridge  
Steele County

Dear Mr. Sponholz and Selection Committee Members:

We appreciate the opportunity to submit our proposal for the Preliminary Design to Replace the CR 180 Bridge Project. Our TKDA Team is composed of experienced and committed project leaders and design staff who strive to deliver innovative, high-quality results. To help best address the requested services, we have partnered with SEH and Braun Intertec as key members of the TKDA Team. SEH will lead the preliminary roadway and traffic design and perform wetland delineation services. Braun Intertec will provide their expertise for options that may utilize ground improvements. We have teamed with SEH and Braun Intertec on several complex projects within the past five years, including the Twin Ports Interchange and Vernon Avenue over Canadian Pacific (CP) Railway projects (SEH); and (Braun Intertec) on the Foley Boulevard (CSAH 11)-BNSF Grade Separation and Warner Road over BNSF, CP, and UP Railroad projects as further described in the Project Experience section of our proposal.

We have brought together our most experienced engineers to tackle the challenges of this complex project. Our Project Manager, Matt Christensen, has a wealth of experience in developing creative solutions for roadways that cross over or under railroad tracks. The hydraulic challenges of this project are also a top priority, and Matt Wassman, who has 27 years of experience on some of Minnesota's most complex water resource projects, will lead the hydraulics design.

While the feasibility study primarily focused on the roadway underpass, we agree with Steele County that the long-term benefits of a roadway overpass needs to be fully explored. Matt Christensen has a proven track record of utilizing innovative approaches to design and construction to make overpasses feasible where they seemed unachievable. The Warner Road, Foley Boulevard, and Twin Ports Interchange projects are just a few examples of projects that required innovative design and construction approaches to work around railroads and minimize costs. We are confident that the TKDA Team is the perfect choice for this project.

We are excited for the opportunity to collaborate with Steele County and project partners to develop a preferred alternative that meets the goals and objectives of the project. If you have any questions or require additional information, please feel free to contact Matt Christensen at 651.307.8345 or [matt.christensen@tkda.com](mailto:matt.christensen@tkda.com).

Thank you for your consideration.

Sincerely,

A blue ink signature of Matthew J. Christensen, written in a cursive style.

Matthew J. Christensen, PE, SE  
Project Manager, Vice President, Surface Transportation



# STEELE COUNTY: PRELIMINARY DESIGN TO REPLACE CR 180 BRIDGE

## CONTACT INFORMATION

Toltz, King, Duvall, Anderson and Associates, Inc.  
(TKDA)  
444 Cedar Street, Suite 1500  
Saint Paul, MN 55101

Matt Christensen, PE, SE  
651.307.8345  
matt.christensen@tkda.com

## PROJECT UNDERSTANDING AND APPROACH

### PROJECT UNDERSTANDING

Steele County plans to replace Bridge 4686, a 12-foot span concrete box culvert constructed in 1925 that carries CR 180 over Izaak Walton Creek. At the same location, Bridge 6037 carries the Canadian Pacific (CP) Railway over the stream and highway. The bridge has substandard vertical clearance and has been struck by trucks multiple times. Additionally, CR 180 is prone to flooding at this location. Based on FEMA's Flood Insurance Study and mapping, Izaak Walton Creek overflows CR 180 during events greater than the 10-year and less than the 50-year. The hydraulic profiles of Izaak Walton Creek at Bridge 4686 are heavily influenced by high tailwater conditions caused by the undersized downstream crossing at Rice Lake Road. The overarching goal of this project is to replace Bridge 4686, optimize the vertical clearance for the roadway, and mitigate flooding, all while carefully weighing the costs against the benefits.

In 2022, Steele County and its partners conducted a feasibility study to consider alternatives for addressing the structurally deficient box culvert bridge and low clearance CP Railway Bridge. The study looked at alternatives and their impacts exploring options to get CR 180 over, under or around the existing low clearance underpass. The study recommended Alternative 2, which includes replacing Bridge 4686 and Bridge 6037, increasing vertical clearance between the road and the railroad bridge, constructing a multiuse trail, replacing the watermain, and replacing the railroad bridge with a three-span, through-plate-girder bridge. The study also recommended exploring options for lowering tailwater elevations and increasing flood resiliency of CR 180 under the CP Railway railroad bridge.

The Feasibility Study initially dismissed Alternative 6, which involved an overpass structure spanning over the tracks, stream, wetlands, and floodplain. But after

further analysis and discussions between the County and Southern Minnesota Municipal Power Agency (SMMPA), the County has decided to explore this option further as part of this preliminary design contract. It's clear there will be impacts to driveways and the School Street/Shady Avenue intersection, but the overpass is still considered feasible. CP Railway has specific clearance requirements for the bridge. Relocating the SMMPA transmission line within the railroad right-of-way would be a compensable cost, but raising or relocating the transmission line is feasible, with SMMPA preferring to keep the line within the railroad right-of-way and proposing taller towers on each side of the overpass to accommodate the clearance.

| PROJECT GOALS AND OBJECTIVES                                                                       |
|----------------------------------------------------------------------------------------------------|
| Provide a transportation facility that meets current and future functional and operational needs.  |
| Improve safety and mobility for motorists, bicyclists, and pedestrians.                            |
| Increasing flood resilience of CR 180.                                                             |
| Optimize vertical clearance of railroad grade separation.                                          |
| Minimize wetland and floodplain impacts.                                                           |
| Address structural deficiency of Bridge 4686.                                                      |
| Provide for public utilities.                                                                      |
| Minimize private utility impacts.                                                                  |
| Work with the County and City to develop an alternative that maximizes benefits relative to costs. |

The County desires to take the feasibility study one step further and continue to evaluate alternatives for achieving the goals and objectives of the project.



PROJECT CONSIDERATIONS MAP - CR 180



|    | Key Challenges                                                                                                                                                                                                       | Considerations / Mitigating Strategies                                                                                                                                                                                                                                                                 |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | CR 180 is lacking pedestrian facilities, only providing a narrow shoulder on a roadway with limited sightlines.                                                                                                      | Pedestrian accessibility and safety are key to the City's trail system master plan. The importance of pedestrian facilities will be considered with each design alternative. City desires a multiuse trail from CSAH 48 to Shady Ave.                                                                  |
| 2  | High voltage transmission lines located along CP Railway tracks.                                                                                                                                                     | Relocating the transmission lines requires further coordination with SMMPA and will add cost to the project, however, the relocation is feasible and should be studied further.                                                                                                                        |
| 3  | CR 180 is prone to flooding at this location. Preliminary analysis of the existing crossing indicates events greater than the 10-yr overtop CR 180.                                                                  | Hydraulic analysis of bridge alternatives will be evaluated to mitigate flooding/overtopping.                                                                                                                                                                                                          |
| 4  | Vertical clearance of CP Railway Bridge 6037 is substandard and has been hit several times. The clearance also limits emergency vehicles from using this corridor.                                                   | As design alternatives are evaluated, vertical clearance will be a crucial consideration. Coordination with CP Railway will be ongoing throughout design to ensure maximum vertical clearance can be achieved.                                                                                         |
| 5  | The existing box culvert under Rice Lake Road (Bridge 74J04) creates a high tailwater condition for Bridge 4686 at CR 180 limiting the ability to lower the water surface elevation with a larger hydraulic opening. | Decreasing the hydraulic tailwater elevation between Rice Lake Road and CR 180 will be significant in improving the flood resiliency of the CR 180 crossing.                                                                                                                                           |
| 6  | Izaak Walton Creek is identified as FEMA Zone AE with detailed modeling and defined floodway.                                                                                                                        | Changes to the crossing will require coordination with the MnDNR and potentially FEMA. Floodplain map revisions or "No Rise" certification will be considered as bridge alternatives are evaluated.                                                                                                    |
| 7  | Bridge 4686 is a structurally deficient 12' span x 10' high box culvert built in 1925.                                                                                                                               | Advanced deterioration and flooding of CR 180 has created the need for bridge replacement.                                                                                                                                                                                                             |
| 8  | City watermain passes through Bridge 4686 and sanitary sewer follows the stream alignment on the east side of the box culvert.                                                                                       | Utility coordination and relocation will be necessary.                                                                                                                                                                                                                                                 |
| 9  | Project is located within City of Owatonna MS4 boundary.                                                                                                                                                             | Alternative designs will be evaluated for land disturbance, new and reconstructed impervious surface. If greater than one-acre of new and reconstructed impervious surface, the project must satisfy the stormwater treatment requirements of the MPCA MS4 general permit which requires infiltration. |
| 10 | Proximity to wetlands.                                                                                                                                                                                               | The project is located in close proximity to wetlands. Alternative designs will be evaluated for wetland impacts in coordination with Steele County SWCD and USACE.                                                                                                                                    |
| 11 | Right-of-way impacts.                                                                                                                                                                                                | Alternative designs and alignments will impact the need for additional right-of-way or easements.                                                                                                                                                                                                      |
| 12 | Reported complaints of additional cut through traffic and speeding issues along roadway.                                                                                                                             | Changes to CR 180 alignment may alter travel patterns in the area.                                                                                                                                                                                                                                     |
| 13 | Trail improvements along CR 180 near CSAH 48 should be coordinated with crossing improvements scheduled for 2025.                                                                                                    | Location of trail may have impacts on proposed gate arm locations.                                                                                                                                                                                                                                     |



# PROJECT UNDERSTANDING AND APPROACH

## PROJECT APPROACH

Our team's approach to delivering a successful project for Steele County prioritizes finding an alternative that maximizes vertical clearance for the roadway, minimizes flooding, and balances costs versus benefits. This will be achieved through diligent project management, effective communication, technical investigation and analysis, community outreach, and consensus-building. We will remain flexible and collaborate with relevant agencies and stakeholders to build consensus for a solution.

Collaboration between TKDA, SEH, and Braun Intertec brings together a diverse range of skills and experience from engineers, designers, project managers, environmental specialists, and other professionals. We will leverage our expertise in transportation design, hydraulics, environmental engineering, public involvement, geotechnical engineering, and railroad coordination to successfully complete the project.

We are committed to working closely with all stakeholders to ensure that their needs and concerns are heard and addressed. Our team will regularly communicate with the County and its partners, facilitate public meetings, and engage with property owners to consider their concerns in the project design and development.

Overall, our team is dedicated to delivering a high-quality project that meets the needs of the County and its residents while minimizing environmental impacts and maintaining the safety and functionality of the roadway and bridge infrastructure. The following paragraphs outline our approach to each major project component.

### 1. APPROACH TO PROJECT MANAGEMENT

A successful project requires a dedicated and experienced project manager that can efficiently direct and coordinate team members and can effectively communicate with the client, stakeholders, and the public. Matt Christensen's 23 years of experience with all aspects of project delivery from preliminary design through construction are an ideal fit for this project. He has extensive experience in multidiscipline transportation projects and will successfully guide the team and coordinate the preliminary design process. Matt will maintain regular contact with County staff to coordinate work and maintain the project schedule. He will facilitate the project kick-off meeting, lead Project Management Team (PMT) meetings, and engage key project stakeholders as appropriate, coordinate with all members of the TKDA Team, County, and City staff. He will monitor project schedule and budget, and prepare progress reports and invoicing.

Matt Wassman will assist Matt Christensen with organization of teaming partners, task tracking, scheduling, and meetings. TKDA recognizes the importance of an Assistant Project Manager for

projects that entail dynamic tasks and significant design challenges.

Mark Daubenberger will serve as the Quality Manager for the project. His role will be to establish and oversee a quality control program that is specifically tailored to the project's requirements. He will prepare a Quality Management Plan (QMP) that outlines daily and periodic QA/QC procedures, which will be shared with the project team. Mark will ensure that each deliverable undergoes an internal quality check for accuracy and completeness.

To ensure effective and efficient project delivery, we have included Doug Fischer to the PMT to serve as an advisor to the County. Doug has 37 years of industry experience, including several railroad grade separation projects, and served as Anoka County Engineer. He will meet with County leadership, with a focus on the following areas:

**Needs Assessment:** Conduct regular assessments to review the project's goals, objectives, and priorities to ensure the design team is progressing correctly.

**Project Delivery Planning:** In collaboration with the County, Doug will draw on his 25 years of experience as a County Engineer to develop a roadmap and timeline for project delivery, including design and project funding opportunities.

**Client Support:** Provide support to ensure that the project team is meeting the County's needs, and that the client is able to achieve their desired results.

**Continuous Improvement:** Monitor the design team's progress and identify opportunities for further improvements.

### 2. APPROACH TO ALTERNATIVE ANALYSIS

#### 2.1 Beginning of the Alternative Analysis

The alternative analysis will start with a site visit to the project area to review existing conditions, including the layout of the roadway and bridge, topography, drainage, and utilities. Site visits are an important part of the design process, as it enables the project team to gather first-hand information about the project area and existing conditions. This information is essential for developing accurate design plans and identifying any potential issues or challenges that may need to be addressed.

The alternative evaluation process will begin with a thorough review of the existing and future projected traffic patterns along CR 180. With several large transportation projects programmed for the surrounding area, including the potential east side corridor, it will be imperative to understand the future traffic demands along the CR 180 corridor. This evaluation will help determine if additional safety or operational needs should also be considered with this project.

# PROJECT UNDERSTANDING AND APPROACH

Depending on future roadway traffic volume projections, additional alignment alternatives could be scoped for analysis. This would include evaluating the County's long-term plan to restore the Old US 14 alignment connecting into CSAH 48 (Main Street) near Jaycee Park. This long-term plan will also be taken into consideration when identifying a preferred alternative that could support that change of alignment sometime in the future.

Our team will develop and assess two variations for each of the two alternatives (Alternatives 2 and 6) selected by the County, with the aim of identifying the optimal design solution that satisfies requirements for safety, environmental impact, right-of-way impact, conformity with planned development, and improved capacity/operations. The TKDA Team has extensive experience in this process, including coordinating with reviewing and approving agencies, which is crucial to ensuring project schedules are met. Our success is attributed to the expertise and experience of our individual Discipline Leads, who work collaboratively under the guidance of our experienced Project Manager.

## 2.2 Alternative 2 Development

Alternative 2 is based on the Thru Plate Girder concept recommended in the original feasibility report. The primary objective of this option is to provide at least 16'-0" of vertical clearance for the new railroad bridge. The original report had suggested a vertical clearance of 15.85' without raising the track or lowering the roadway profile. To achieve the desired clearance, the hydraulic analysis will determine the feasibility of a wider hydraulic opening. This would help reduce the frequency of overtopping and could allow the proposed roadway to be lowered, thereby increasing the vertical clearance.

Another potential solution to increase the clearance is to raise the rail profile. TKDA will continue to coordinate with CP Railway to determine if a grade raise can be accommodated. Based on our preliminary review of the surveyed profile, a grade raise appears feasible.

Once the roadway and railroad alignments and profiles have been established, TKDA will develop two bridge alternatives to achieve a vertical clearance of 16'-0". It is important that the construction of the bridge fits within the railroad track schedule. To minimize the required railroad work window, TKDA will use precast and standard rail components for the construction of the bridge.

Furthermore, TKDA will develop concept staging sequences within each bridge option considered. This will include anticipated work window requests. Additionally, pile bents will be placed behind existing abutments to allow for pile driving before the larger reconstruction window.

## 2.3 Alternative 6 Development

Developing a highway overpass option is the main focus of Alternative 6. To ensure its feasibility, effective coordination with CP Railway is necessary to achieve maximum benefit for the County. CP Railway's "Proposed Overhead Structure Clearances for New Construction" dictates that substructures be located outside of the right-of-way. Although, to optimize the overpass's feasibility, it is preferable to have the substructure components within the railway right-of-way while taking into account the railway's future plans for the corridor.

The concept alignment for this option shows that the distance to span the existing 100' right-of-way is approximately 174', due to the skew of the roadway overpass in relation to the railroad alignment. Therefore, without substructures in the railroad right-of-way, the structure depth for this option will be substantial, leading to an increased profile grade to achieve the necessary vertical clearance over the rail.

Another alignment option to consider would follow the existing roadway alignment. This alignment crosses the railroad at a smaller skew, reducing the span over the right-of-way to approximately 116'. This option has the added benefit of reducing the structure depth and minimizing the approach grades, but comes with significant curves in the roadway alignment.

During the development of the overpass option, it is foreseeable that an alignment somewhere between the existing alignment and the concept alignment in the RFP may be the most suitable. This option could potentially become the preferred alternative in an effort to balance the project goals and challenges. During alternatives analysis, all disciplines will coordinate to develop designs that minimize approach grades, limit impacts on right-of-way, provide trail access and ensure required railroad clearances are met.

## 2.4 Conclusion of the Alternative Analysis

For each alternative, the TKDA Team will conduct detailed analyses of roadway alignments, profiles, cross sections, and bridge types for each variation. We will also develop a matrix of potential alternatives that will capture important decisions and considerations related to cost, constructability, staging, flooding, vertical clearance, future maintenance, right-of-way impacts, utility impacts, wetland and floodplain impacts, funding, and more.

Our team will prepare preliminary layouts and cost estimates for each variation after evaluating decisions and considerations outlined in the matrix of potential alternatives. We will then seek feedback from affected stakeholders, such as the County, City, Owatonna Public Utilities (OPU), railroad, and property owners, as well as input from the general public through open house and project website feedback. This feedback will be used to refine and further develop the design alternatives.



# PROJECT UNDERSTANDING AND APPROACH

## 3. APPROACH TO SURVEY

TKDA will augment the survey data collected previously by the County and TKDA during the Feasibility Study to the extent necessary to provide needed information for the alternatives analysis. The supplemental survey is anticipated to be focused on stream bed profile, stream cross sections, and utilities. TKDA acquired a sufficient amount of survey data within the railroad right-of-way for use in the alternatives analysis. Therefore, we do not anticipate the need to obtain right-of-entry and flagging.

## 4. APPROACH TO HYDRAULICS

Our team of hydraulic engineers, led by Matt Wassman, will conduct a hydraulic flood analysis of Isaak Walton Creek using HEC-RAS software and the regulatory model obtained from the Minnesota Department of Natural Resources (MnDNR). The hydraulic analysis will play a vital role in assessing variations of the underpass, for Alternative 2. Our team will explore alternative bridge designs for CR 180 to establish an optimal crossing that reduces the frequency of flooding and maximizes vertical clearance under the railroad structure. Additionally, due to a known constriction downstream creating a high tailwater condition, we will examine options for hydraulic improvements at the Rice Lake Street crossing in conjunction with the CR 180 crossing. The combined improvements at both locations could result in floodplain elevations that differ significantly from existing conditions.

Effective communication with the County, City, State and Floodplain Manager at MnDNR will be critical to ensure that all stakeholders are in agreement with the appropriate approach and methodology selected for designing the replacement structures. We will use Drainage Overview Maps (DOMs) of existing and proposed conditions to establish the project baseline in terms of criteria, elevations, flow rates, floodplain impacts, and outfall locations. The existing condition DOM will also document any limitations, constraints, or concerns during meetings with stakeholders and the PMT. Crossing alternatives and associated drainage improvements will be summarized in a preliminary hydraulic report which will include risk assessments and scour analysis for each alternative.

## 5. APPROACH TO ENVIRONMENTAL

SEH will complete a wetland delineation of the project corridor using the 1987 Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. This will delineate and map all wetlands that may be present.

After the completion of the field delineation, SEH will prepare a wetland delineation report. This report will describe the site conditions, identify the wetland boundaries, and serve as the basis for follow up permitting if unavoidable wetland impacts occur. The delineation report will be provided to the Steele County Soil and Water Conservation District (SWCD), which administers

the Minnesota Wetland Conservation Act (WCA), in addition to their local requirements. The United States Army Corps of Engineers (USACE) also regulates the wetlands in the project area and will be provided a copy of the report. A request will be made at submittal to complete a field review of the wetland boundaries. This meeting may serve as a pre-application discussion to expedite the project schedule.

Stream impacts will be assessed consistent with the Minnesota Stream Quantification Tool and Debit Calculator (MNSQT). Function-based parameters will be evaluated at the impact site and used to estimate the functional loss resulting from the project. The results of the MNSQT assessment will be provided for eventual use with the Clean Water Act Section 404 and State Public Water Work permit applications.

If the field review results in any adjustments to the wetland boundary, they will be modified by SEH, and provided in electronic format as the final approved boundary. It is presumed that the draft boundaries will serve for planning prior to the final boundary approval.

## 6. APPROACH TO PUBLIC AND PRIVATE UTILITY IDENTIFICATION AND COORDINATION

Construction projects like this one are often plagued by utility issues, leading to claims and delays. To avoid or minimize such impacts without compromising the design, our task leaders and designers are familiar with utility issues and will work together to consider potential impacts from the beginning of the design process. To engage private utility owners early in the project, Ron will start with a Gopher State One Call to identify utility owners, request maps and field markings. During the follow-up call, each utility will be informed about the project, its schedule, and its potential impacts on their facilities. Alternatives will be communicated to utility owners when they are developed, focusing on potential impacts and identifying existing easement rights. TKDA will work with utility owners to develop cost estimates for relocations eligible for reimbursement.

The selection of an alternative for this project may depend on significant reimbursable costs. One such cost is the relocation of the overhead transmission line, which has been identified as potentially significant. Additionally, it is important to note that relocation of the watermain and modification of the sanitary trunk sewer will likely be performed by the contractor and included in the overall project cost. Transmission cooperatives such as Owatonna Public Utilities that have underbuilt on the Southern Minnesota Municipal Power Agency (SMMPA) transmission line may be eligible for reimbursement. Furthermore, relocation of other utilities may require reimbursement due to existing easement rights. It is important to identify and account for such significant compensable costs to ensure that the alternatives are fairly compared.

# PROJECT UNDERSTANDING AND APPROACH

## 7. APPROACH TO PRELIMINARY ROADWAY AND BRIDGE

SEH's Scott Hotchkin, with assistance from Chad Jorgenson, will be responsible for completing preliminary roadway design. Meanwhile, Matt Volz from TKDA, with design review from SEH's Mark Maves, will be responsible for completing preliminary bridge design for each alternative or variation under consideration. The tasks for each option will include performing preliminary engineering design work to determine the type, size, location, and geometrics of the required bridges, as well as pertinent roadway design information, such as alignment and profile data.

Our team will develop up to four alternative concept layouts, on which the PMT will review and comment. These layouts will be presented during public information meetings and will outline general roadway and bridge features, dimensions, right-of-way requirements, and potential environmental impacts. Our team will collaborate with the PMT to ensure that the concept layouts meet their specifications and that any concerns are addressed promptly. We recognize the significance of public input in the design process and will ensure that the concept layouts are clear and accessible to all stakeholders.

Once the preferred alternative has been selected, our team will begin preparing a Staff Approved Layout. This layout will include preliminary bridge type, size, and location, as well as the roadway layout with geometrics, alignments, and profile, drainage requirements, major utility relocations, right-of-way needs, construction limits, and any other relevant information.

## 8. APPROACH TO PUBLIC INVOLVEMENT

Our public engagement team, led by Sam McKinney, is committed to implementing effective public and stakeholder engagement strategies to ensure a successful outcome for the CR 180 project. We recognize that open and transparent communication with the corridor's stakeholders is crucial in building consensus and achieving project goals.

To this end, we will begin by developing a comprehensive Public Involvement Plan (PIP) that outlines our engagement approach. This plan will identify key stakeholders, establish clear messaging and branding for the project, provide a schedule of engagement events, and establish methods for tracking progress.

Throughout the project, we will provide multiple opportunities for stakeholders to engage with us and provide input. We will strive to offer a variety of touchpoints to ensure that we reach as many interested parties as possible.

### 8.1 Property Owners

Our team will work closely with the County to determine the appropriate number and format of in-person or virtual meetings with property owners to better understand their concerns and to inform them about the project. We will also collaborate with the County to determine who should be invited to participate in these meetings to ensure that all relevant stakeholders are included.

### 8.2 Public and Agency Involvement

Our team plans to hold an open house at the start of the project to gather feedback and gain insight into the area's main concerns. In addition to an in-person open house, we will also offer a self-led online platform to engage with the project for those unable to attend in person. Our team has utilized similar hybrid techniques on previous projects with high participation rates, resulting in valuable data.

Click the links below (or copy and paste into a browser)

[Cloquet Area Transportation Design](https://storymaps.arcgis.com/stories/a23a38d31c4944d4a134c4fef0f286be)

<https://storymaps.arcgis.com/stories/a23a38d31c4944d4a134c4fef0f286be>

[TH 610 & East River Road](https://storymaps.arcgis.com/stories/beb4471ffd5b49d18a16ee661f970694)

<https://storymaps.arcgis.com/stories/beb4471ffd5b49d18a16ee661f970694>

[Eastbound Kellogg RiverCentre Bridge](https://storymaps.arcgis.com/stories/f621088b327c40aca74ebca668bc55a5)

<https://storymaps.arcgis.com/stories/f621088b327c40aca74ebca668bc55a5>



Our team will also work closely with the County to ensure that all communication materials, including social media content, graphics/visualizations, postcards, and mailings, are provided in a timely and accessible manner. We have experience in developing materials that are easy to understand and meet all ADA accessibility requirements.

We will summarize all data gathered during the engagement process into a final report that will provide insights into the concerns and priorities of the community and stakeholders. This report will be a valuable tool for decision-making throughout the project and ensure that the project outcomes align with the needs of the community.

## 9. APPROACH TO RAILROAD COORDINATION

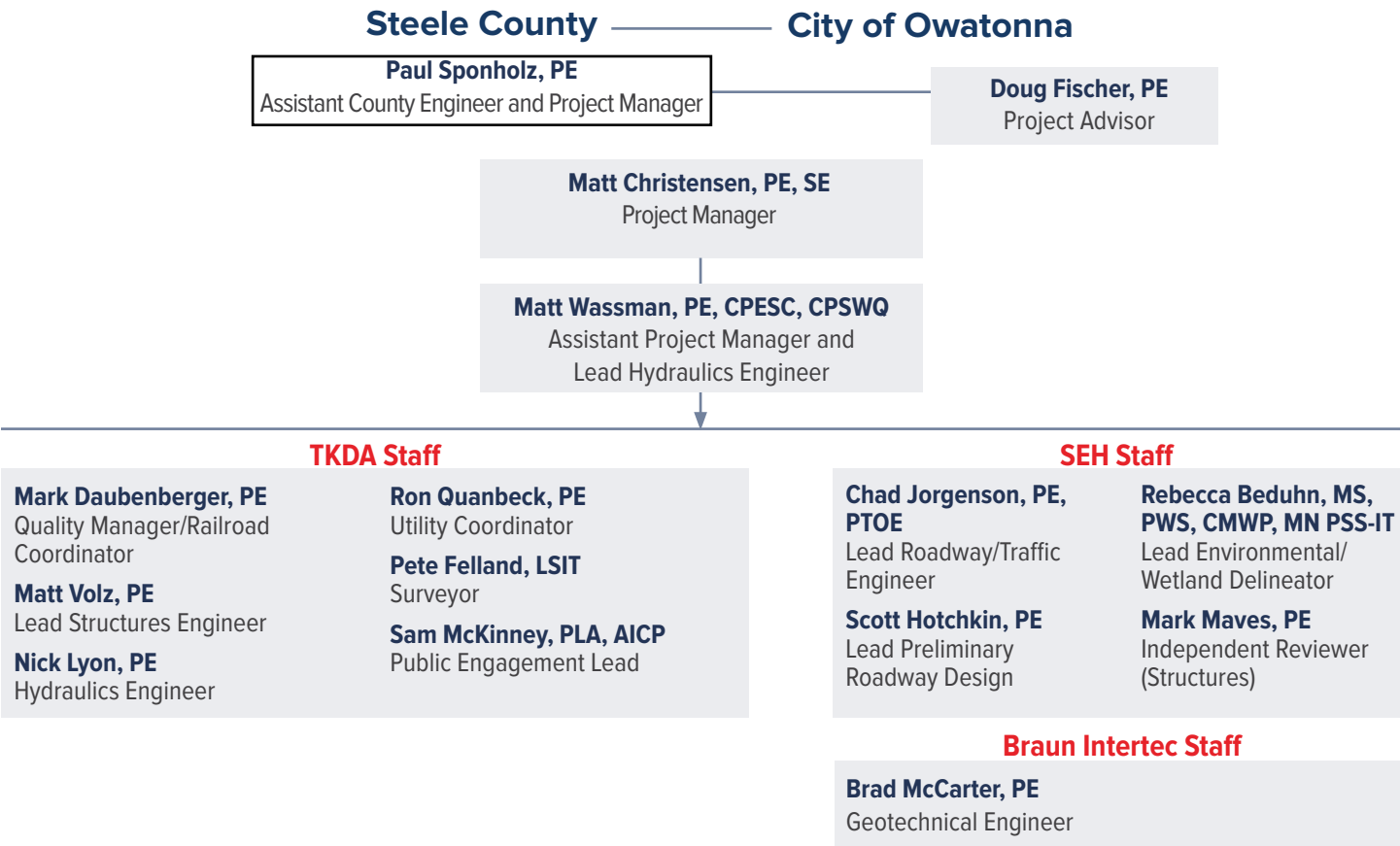
Mark Daubenberger is well versed in coordinating public projects with railroads, especially with CP Railway. He will continue coordination efforts that he initiated with Brian Osborne in the feasibility study. It is anticipated that the two options and variations will be presented via a virtual meeting.

If the overpass alternative necessitates, a variance request will be submitted to the railroad for approval. The TKDA Team understands the railroad requirements and has been successful with variance requests on several recent projects. Mark also knows the key CP Railway personnel involved in the project and the various design standards, guidelines, and procedures that need to be followed.

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# PROJECT TEAM, EXPERIENCE, AND AVAILABILITY



# PROJECT TEAM, EXPERIENCE, AND AVAILABILITY



**Doug Fischer, PE**  
Project Advisor

Doug Fischer is Vice President of TKDA's Municipal, Utility, and Planning Services Division. He works on highway, bridge, street, drainage, and utility projects with 36 years of experience.

From planning, preliminary engineering, environmental review, final design, funding, construction, and construction administration, Doug's vast experience and knowledge is invaluable in assisting clients with the delivery of projects. Doug's previous work in the public sector brings an in-depth understanding of client's needs and pressures that accompany many projects and provides real-world working solutions navigating through complex legal, regulatory, and political situations to accomplish project goals.

## RELEVANT EXPERIENCE:

- Transportation Division Manager, Anoka County (2013-2019)
- County Engineer, Anoka County (2001-2019)

**AVAILABILITY ON PROJECT: 20%**



**Mark Daubenberger, PE**  
Quality Manager/Railroad Coordinator

Mark is a Civil Engineer with 30 years of experience on bridge, roadway, trail, and railroad projects. In addition to the array of project types, Mark's involvement often spans the project

duration. His roles include project management, quality management, agency coordination, public engagement, environmental documentation, preliminary and final design, cost estimating, and construction administration. Having spent his entire career at TKDA, Mark shares the firm's commitment to client satisfaction and quality. Worksheets. Mark was responsible for initial coordination with CP Railway and railroad bridge type study in the feasibility study phase of the Steele County CR 180 project.

## RELEVANT EXPERIENCE:

- Railroad Coordination/Quality Manager, **Vernon Avenue Bridge Over CP Railway**, Hennepin County, Edina, MN
- Project Manager/Railroad Coordination/Environmental Documentation, **Robert Piram Trail over UPRR**, Dakota County, South Saint Paul, MN
- Railroad Coordination/Environmental Documentation, **Lexington Parkway Realignment (Phase 2) - CP Railway**, Ramsey County, Saint Paul, MN

**AVAILABILITY ON PROJECT: 15%**



**Ron Quanbeck, PE**  
Utility Coordinator

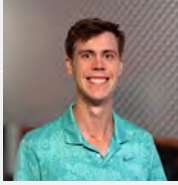
Ron Quanbeck is a Civil Engineer who serves as a city engineer, project manager, and project engineer on street, water resources, sanitary sewer, and watermain projects with 40 years of

experience. He provides municipal planning, infrastructure design including pipe evaluation and rehabilitation, and construction management. Ron also oversees utility coordination on numerous trunk highway projects. He communicates effectively with residents and stakeholders through both individual meetings and public hearings on project issues.

## RELEVANT EXPERIENCE:

- Utility Coordinator, **TH 52 Preliminary Design and Environmental Documentation**, MnDOT, MN
- Utility Coordinator, **Foley Boulevard (CSAH 11) - BNSF Grade Separation**; Anoka County, Coon Rapids, MN
- Utility Coordinator, **Dale Street Bridge Reconstruction**, MnDOT, Ramsey County, Saint Paul, MN

**AVAILABILITY ON PROJECT: 50%**



**Matt Volz, PE, SE**  
Lead Structures Engineer

Matt Volz is a structural engineer with 11 years of experience, specializing in the design of bridge structures and retaining walls. He is skilled in providing preliminary and final designs for a wide

range of bridge types and components, such as prestressed concrete beams, curved steel beams, abutments, piers, and retaining walls. Matt developed his expertise working with State and Local agencies and Class 1 Railroads. He is proficient in analysis and drafting software, including MicroStation, LEAP Bridge Concrete and Steel, STAAD, Group, Mathcad, and Lusas, and has extensive experience in 3D finite element modeling. Matt has an ability to develop innovative and practical design solutions for challenging conditions that are also easy to construct.

## RELEVANT EXPERIENCE:

- Structures Engineer, **Miller and Coffee Creek Box Culvert, Twin Ports Interchange**, MnDOT, Duluth, MN
- Bridge Engineer, **Warner Road over BNSF, CP and UP Railroads**, Ramsey County, Saint Paul, MN
- Lead Bridge Engineer, **West Bound Ramp Curved Steel Bridge at East Bush Lake Road**, City of Bloomington, Bloomington, MN

**AVAILABILITY ON PROJECT: 70%**



**Pete Felland, LSIT**  
Surveyor

Pete Felland conducts field surveys with over 17 years of engineering and design experience. Over the last decade, Pete's railroad work experience includes extensive land and field

surveys, site and track design, and construction management of projects. He designs, develops, and coordinates a variety of projects in both the private and government sectors with an eye on environmentally sustainable projects. Peter is versed in AutoCAD, ESRI ArcGIS, Civil 3D, MicroStation, GeoPak, Trimble Survey Equipment, and Trimble Business Center software.

## RELEVANT EXPERIENCE:

- Surveyor, **Feasibility Study of CR 180 Bridges and Mineral Springs Road Railroad Bridge**, Steele County, Owatonna, MN
- Surveyor, **Warner Road over BNSF, CP and UP Railroads**, Ramsey County, Saint Paul, MN
- Surveyor, **Foley Boulevard (CSAH 11) - BNSF Grade Separation**, Anoka County, Coon Rapids, MN

**AVAILABILITY ON PROJECT: 25%**



# PROJECT TEAM, EXPERIENCE, AND AVAILABILITY



**Samantha McKinney, PLA, AICP**  
Public Involvement Lead

Samantha McKinney is a planner and landscape architect by trade but a people person by choice and brings a unique, people-first focus to her projects. Sam is passionate for community engagement and project communication and believes it as at the core of all great plans. She has over 10 years of experience working on transportation systems and community engagement across Minnesota and brings energy and enthusiasm to any project team. Sam strives to empower communities to build consensus and create innovative, data-driven solutions. Sam understands the communication and organization necessary to lead a multi-pronged research and planning processes.

## RELEVANT EXPERIENCE:

- Transportation Planner/Community Engagement Lead, **Jackson Street Reconstruction**, Ramsey County, MN
- Project Manager/Transportation Planner/Community Engagement Lead, **Cloquet Transportation Plan**, Arrowhead Regional Development Commission, Cloquet, MN
- Community Engagement Lead, **Vernon Avenue Bridge Over CP Railway**, Hennepin County, Edina, MN

**AVAILABILITY ON PROJECT: 50%**



**Nick Lyon, PE**  
Hydraulics Engineer

Nick is a registered engineer with over eight years of experience in land development, roadway, bridge, rail, and water resources engineering projects for public and private clients. He is well versed in hydrologic and hydraulic modeling analyses associated with culvert and bridge replacement projects. Nick possesses a thorough knowledge of FEMA rules, regulations, and the review process for FEMA flood map revisions. He brings a broad range of experience spanning multiple regions of the U.S. to the project team, and enjoys developing creative solutions to complex engineering problems.

## RELEVANT EXPERIENCE:

- Hydraulics Engineer, **TH 29 and TH 71 Bridge Replacements**, MnDOT D8, Montevideo and Sanborn, MN
- Hydraulics Engineer, **Highland Bridge Mississippi River Bridge Crossing City of Saint Paul**, Saint Paul, MN
- Hydraulics Engineer, **2022, 2023, and 2024 BNSF Bridge/Structure Replacement Programs**, BNSF, MN, SD, ND, MT, NE, MO, IA, WI

**AVAILABILITY ON PROJECT: 50%**



**Chad Jorgenson, PE, PTOE (SEH)**  
Lead Roadway/Traffic Engineer

Chad will lead preliminary traffic analysis to support the alternative analysis and preliminary roadway layouts. He is a project manager and senior traffic engineer with 10 years of wide ranging experience including traffic signal timing and optimization, traffic operations analysis, safety analysis, traffic impact studies, preliminary design, constructing staging and

traffic control plans, and signing and pavement marking plans. Chad is knowledgeable in software programs including Synchro/SimTraffic, Highway Capacity Software (HCS), AutoCAD Civil 3D, MicroStation, SignCAD, and VISSIM.

## RELEVANT EXPERIENCE:

- Lead Roadway/Traffic Engineer, **CSAH 48 (Main Street) Feasibility Study**, Steele County, MN
- Lead Roadway/Traffic Engineer, **TH 43 (Main Street) through Downtown Winona Scoping Study**, MnDOT D6, MN
- Lead Roadway/Traffic Engineer, **15th Street Feasibility Study and Preliminary Design**, Sartell, MN

**AVAILABILITY ON PROJECT: 60%**



**Scott Hotchkin, PE, (SEH)**  
Lead Preliminary Roadway Design

Scott will lead the preliminary roadway design development. He is a design engineer with 24 years transportation engineering experience with SEH for the design and coordination of all aspects of roadway design, from conceptual alternatives and analysis to final plans. Scott specializes in complex interchange design along with alternative intersection and roundabout analysis and design.

## RELEVANT EXPERIENCE:

- Lead Roadway Design, **Steele County Bridges Design-Build**, MnDOT D6, MN
- Lead Roadway Design, **CSAH 48 (Main Street) Feasibility Study and Preliminary Roadway Layout**, Steele County, MN
- Lead Roadway Design, **Blatnik Bridge Preliminary Design**, MnDOT D1, Duluth, MN

**AVAILABILITY ON PROJECT: 65%**



**Rebecca Beduhn, PWS, CMWP, MN PSS-IT, (SEH)**  
Lead Environmental/Wetland Delineator

Rebecca will lead the Level II wetland delineation and environmental coordination. She is a professional wetland scientist and Minnesota-certified wetland delineator with 11 year of experience in wetland science, wetland regulatory administration, environmental review and policy. She primarily provides wetland services such as delineations, permitting, and quality assessments. Rebecca has completed delineations on hundreds of projects resulting in thousands of wetland basins delineated in over six states.

## RELEVANT EXPERIENCE:

- Wetland Scientist, **Steele County Bridges Design-Build**, MnDOT D6, Steele County, MN
- Wetland Scientist, **CSAH 9**, Olmsted County, Rochester, MN
- Wetland Scientist, **Trunk Highway 169 Environmental Assessment**, MnDOT D7, Mankato to St. Peter, MN

**AVAILABILITY ON PROJECT: 50%**

# PROJECT TEAM, EXPERIENCE, AND AVAILABILITY



**Mark Maves, PE, (SEH)**  
Independent Reviewer (Structures)

Mark is a project manager/designer with 37 years experience in the transportation industry – primarily in the areas of conceptual, preliminary, and final bridge design for state departments of transportation, counties, and cities. He has a long history working with the MnDOT State Aid Bridge Office and thoroughly understands the bridge design development process and State Aid review and approval process. His design expertise includes superstructure and substructure design for straight and curved bridges and includes the following bridge types: pre-stressed concrete beam, concrete slab, welded steel plate girder, and steel truss. He also has performed studies for a wide assortment of bridge projects including alternative analysis studies and rehabilitation reports for historical bridges.

## RELEVANT EXPERIENCE:

- Lead Bridge Engineer, **Steele County Bridges Design-Build**, MnDOT D6 , Steele County, MN
- Lead Bridge Engineer, **I-35 over DM & E Railroad, Bridges 74835 & 74836**, MnDOT Bridge Office, Owatonna, MN
- Lead Bridge Engineer, **BNSF Railroad Bridge over TH 169**, MnDOT Bridge Office, Grand Rapids, MN

**AVAILABILITY ON PROJECT: 25%**



**Brad McCarter, PE (Braun)**  
Senior Geotechnical Engineer

Brad is a Director at Braun Intertec with 20 years of experience on projects in the transportation industry as well as in the commercial, industrial, and residential markets. He has geotechnical experience in both project management and execution on similar highway improvements projects including bridges, box culverts, retaining walls and approach embankments.

## RELEVANT EXPERIENCE:

- Geotechnical Engineer, **TH 13/CR 101 Design-Build Overpass Bridge**, Scott County, MN
- Geotechnical Engineer, **CR 14 Design-Build Bridge**, Anoka County, MN
- Geotechnical Engineer, **CP Railway Bridge Replacements**, Hennepin and Scott County, Various sites, MN

**AVAILABILITY ON PROJECT: 25%**

## PROJECT EXPERIENCE

### Foley Boulevard (CSAH 11) - BNSF Grade Separation

Anoka County, Coon Rapids, MN

TKDA worked with Anoka County to complete the preliminary and final design for the reconstruction of Foley Boulevard in the City of Coon Rapids, from East River Road to Coon Rapids Boulevard. Construction was substantially completed in fall of 2022, resulting in Foley Boulevard becoming a four-lane divided section that is grade separated from the BNSF railroad tracks.

The project involved the replacement of the BNSF railroad double track at-grade crossing of Foley Boulevard with a roadway overpass, spanning over one of the busiest segments of rail in the state. The railroad line experiences a high volume of freight traffic throughout the day, and also serves Northstar commuter and Amtrak rail traffic. In response to the increasing safety and operational concerns at this location, Anoka County recognized the need for a grade-separated railroad crossing.

To reduce construction and long-term maintenance costs, the west approach to the bridge was constructed using MSE walls on ground improvements. This area was previously a wetland with insufficient soils to support an embankment. The implementation of this approach not only resulted in reduced construction costs, but also resulted in a significant reduction in the length of the bridge by over 300 feet.





# PROJECT TEAM, EXPERIENCE, AND AVAILABILITY

## I-35, I-535, Hwy 52 Twin Ports Interchange

MnDOT D1, Duluth, MN

MnDOT is reconstructing the Twin Ports Interchange in Duluth, MN, with the purpose of addressing two key issues: replacing structurally deficient and load restricted bridges, and fixing geometric deficiencies in the interchange. Recognizing TKDA's extensive experience and history of coordinating with Class I railroads for government agencies, TKDA was tasked by MnDOT to lead the railroad coordination for the project.

A range of staging and track realignment options were designed by TKDA and presented to BNSF and MnDOT. In the course of regular project coordination meetings, a layout was developed that proved advantageous to both BNSF and MnDOT. Specifically, MnDOT's bridge pier locations align well with the proposed Twin Ports Interchange layout, enabling optimization of bridge span lengths. Meanwhile, BNSF benefits from the new configuration with a 4-track corridor (two existing tracks and two future tracks), which represents an improvement over the existing track corridor.



Additionally, TKDA led preliminary and final hydraulic design and retaining wall design for the \$440M project. TKDA designed 30 plus retaining walls of varying types including CIP walls supported on pile and spread footings, mechanically stabilized earth (MSE) retaining walls, and reinforced soil slopes. Hydraulic design included temporary and permanent stormwater management, providing hydraulic evaluations and recommendations, designing stormwater treatment ponds, identifying utility conflicts, creating wetland permit exhibits, and conducting hydrology and hydraulics analyses for Miller and Coffee Creeks. As part of the analysis, TKDA, in coordination with the DNR, determined the appropriate size for a replacement structure for Miller and Coffee Creeks that were combined upstream of the TPI area. Furthermore, TKDA designed an open channel trout stream to transport Coffee Creek to Miller Creek, as well as modeled fish passage. After the two creeks combine, they will flow through the new Miller/Coffee Creek box culvert bridge situated under I-35 and the rail yard, eventually reaching the St. Louis Bay.

## Warner Road over BNSF, CP, and UP Railroads

Ramsey County, Saint Paul, MN

Ramsey County collaborated with TKDA to replace the old eastbound Warner Road Bridge and build two new trail bridges. The new bridge now spans over nine Class 1 railroad tracks, with more than 100 trains passing through daily.

TKDA managed the project in two phases. In the first phase, they conducted a feasibility study for the bridge replacement, developed a construction staging plan, and completed preliminary engineering and plans for all the bridges. In the second phase, TKDA finished the final design and negotiated agreements with the Railroads and the Saint Paul Port Authority. During construction, TKDA provided construction inspection and administration services.

Before negotiations with the Railroads could commence, TKDA led all aspects of the railroad coordination process for the project layout, construction staging and schedule, railroad work window requests, and temporary easement requirements. Once the Railroads approved the project, TKDA assisted the County in negotiating agreements with the Railroads and the Saint Paul Port Authority.

To minimize disruptions to the railroads during construction, TKDA employed innovative solutions. For example, micropiles were used to construct deep foundations for the piers in the railroad corridor, and they were installed from the existing bridge deck to avoid any impact on the railroads. Micropiles were also utilized to support the substructures surrounding the MCES main sewer line, which is approximately 10 feet below grade between pier 6 and the east abutment, to reduce vibrations to the MCES infrastructure.





# DETAILED WORK PLAN

The TKDA Team proposes to complete this project by efficiently executing the below work plan in adherence to our proposed schedule. The general schedule captures the major tasks and their duration. Deviations from and value added to the requested scope of work are noted in **GREEN** text.

## TASK 1: PROJECT MANAGEMENT

### 1.1 Administration

- Perform day-to-day management of the project to ensure completion on time and within budget, while adhering to state and federal laws, rules, and regulations.
- Develop and maintain a project schedule, updating it monthly to reflect progress and changes in scope.
- Document all communication related to the project, including emails, phone calls, and meetings.
- Coordinate with subconsultants involved in the project, ensuring that their work is completed on time and within budget.
- Prepare monthly progress reports and invoices, providing updates on project status and billing for work completed.

### 1.2 General Coordination

- Schedule monthly PMT meetings, agency coordination meetings, utility meetings, and other meetings as needed.
- Prepare and distribute meeting agendas, handouts, and minutes for meetings.
- **Hold weekly update calls with County Project Manager (PM). PM calls will be less than 30 minutes in length and no minutes will be prepared.**

### 1.3 Quality Assurance and Quality Control Functions (QA/QC)

- Develop a project-specific QMP that outlines the procedures for maintaining quality throughout the project, utilizing components such as project documentation, the detailed project schedule, PMT meetings, staff meetings, and a well-defined checking process.
- Perform Discipline Coordination Reviews of preliminary roadway layouts and bridge design plans to ensure that all aspects of the design are coordinated and integrated.
- Perform QA oversight to verify that the QC process has been followed, ensuring that all project deliverables meet the required quality standards.

**Key Deliverables:** Monthly invoicing and progress reports, project meeting schedule, project schedule and monthly updates, meeting agendas, handouts, minutes and QMP documentation

## TASK 2: ALTERNATIVES ANALYSIS

### 2.1 Alternative 2 - Underpass

- Review existing and future projected traffic.
- Task Leads will conduct a site visit to review existing conditions, including the roadway, bridges, stream, topography, drainage, and utilities.
- **Evaluation and development of future traffic forecasts along CSAH 180 to help support future operational and safety needs assessment.**
- Evaluate the feasibility of raising the track grade to maximize vertical clearance.

- Evaluate the optimal road stream crossing structure that will minimize flooding and maximize vertical clearance under the railroad, considering a box culvert with a distribution slab and short concrete slab structure.
- Prepare recommendations and costs for Rice Lake Street box culvert replacement.
- Prepare matrix of alternatives for two variations of the underpass.

### 2.2 Alternative 6 - Overpass

- Explore CR 180 overpass concepts including a curved structure.
- Explore multiuse trail concepts including trail constructed on existing roadbed using the existing box or replacing the box with a short pedestrian bridge.
- Prepare matrix of alternatives for two variations of the overpass.

**Key Deliverables:** Matrix of potential alternatives, preliminary layouts, and cost estimates

## TASK 3: SURVEY

- Perform supplemental topographic survey and mapping within the project limits including stream bed profile, stream cross sections, and utilities.
- **We have assumed that all survey has been completed within CP Railway right-of-way and no entry agreement or flagging is required.**

**Key Deliverables:** Survey data file and base mapping

## TASK 4: HYDRAULICS

- Coordination meetings with County, City, MnDNR (meetings included in Task 1).
- HEC-2 to HEC-RAS model conversion, cleanup, and calibration of the regulatory model obtained from the MnDNR.
- Create pre-project existing conditions model by incorporating surveyed cross sections and other surveyed topography.
- Proposed conditions modeling for Alternatives 2 and 6. Determine the appropriate size and type of stream crossing structure needed to minimize or eliminate flooding of CR 180.
- Proposed conditions modeling including increasing the capacity of the box culvert under Rice Lake Street.
- Perform hydraulic risk assessment and scour analysis for each alternative to identify potential risks and to develop appropriate mitigation strategies.
- Identify floodplain impact for each of the alternatives being considered including developing recommendations to avoid, minimize, or mitigate floodplain impacts.
- Meet with MnDNR to review the hydraulic flood analysis and modeling and discuss any necessary changes to the FEMA mapping (meetings included in Task 1).
- Preliminary stormwater conveyance and treatment system design.
- Prepare drainage overview map (DOM).
- Prepare comprehensive hydraulic report summarizing the findings of the hydraulic flood analysis, including identified flood risks, recommended stream crossing structure type and size, mitigation strategies, and results of scour.

# DETAILED WORK PLAN

**Key Deliverables:** Preliminary hydraulic report including risk assessment and scour analysis, DOM

## TASK 5: ENVIRONMENTAL

- Conduct a wetland delineation of the project limits including field visit to identify potential wetland areas. Perform wetland delineation according to U.S. Army Corps of Engineer's Wetland Delineation Manual and Regional Supplements. Prepare Wetland Delineation Report.
- Identify wetland impacts for each of the alternatives being considered and recommend design changes to avoid, minimize, or mitigate impacts.
- Coordinate with the regulatory agencies for their input and approval.

**Key Deliverables:** Wetland Delineation Report

## TASK 6: PUBLIC AND PRIVATE UTILITY IDENTIFICATION AND COORDINATION

The goal of this task is to identify and coordinate with public and private utility owners in order to avoid conflicts and potential issues during the construction phase. The following activities will be performed:

- Perform Gopher State One Call to identify utility owners and request maps and field markings. This will allow us to obtain information on the location and depth of underground utilities, as well as the location of overhead utilities.
- Incorporate in-place utility locations into the project base map. This will enable us to develop a comprehensive understanding of the existing utility infrastructure.
- Meet with individual utility owners as needed to address issues specific to them. We will schedule and attend meetings with utility owners to discuss any concerns or issues they may have related to the project.
- Schedule and facilitate utility coordination meetings including providing plans to utility owners prior to meetings. We will schedule and facilitate coordination meetings with utility owners to review the design plans and discuss any potential conflicts or issues.
- Identify needed adjustments for public utilities. Design and plans for relocations of public utilities are not included.
- Coordinate with utility owners to develop cost estimates for relocations eligible for reimbursement.

**Key Deliverables:** Utility mapping, utility impact identification, and cost estimates for eligible utility relocations

## TASK 7: PRELIMINARY ROADWAY AND BRIDGE DESIGN

- Complete preliminary roadway design including alignment and profile for each alternative or variations being considered.
- Complete preliminary bridge design including type, size, location, and geometrics for each alternative or variation being considered.
- Prepare four alternative concept layouts for PMT review and for use at public information meetings. Layouts shall include roadway and bridge features, dimensions, right-of-way, and environmental impacts.
- Prepare staff approved layout of the preferred alternative which shall include preliminary bridge features, roadway

layouts with roadway geometrics, alignments and profile, drainage requirements, major utility relocations, right-of-way needs, construction limits, and other pertinent information.

**Key Deliverables:** Four alternative concept layouts, staff approved layout of the preferred alternative

## TASK 8: PUBLIC INVOLVEMENT

### 8.1 Conduct Property Owner Meetings

- Schedule, prepare materials, and facilitate in-person or virtual meetings with property owners affected by the project to understand their concerns and notify them of the project. Prepare meeting minutes.

### 8.2 Public Involvement Plan

- Develop a PIP that outlines who to engage with, project messaging and branding, schedule of engagement events, and progress tracking.
- Finalize the PIP after input from key stakeholders.

### 8.3 Public Open House Meeting

- Plan, prepare and print notices for public open house meeting (200 postcards are included).
- Coordinate meeting logistics, prepare written and graphic display materials, conduct the meeting, summarize comments, and prepare responses. One meeting is included.

### 8.4 Project Website Content

- Provide content for the project website hosted by Steele County. The content includes project updates, schedules, layouts, FAQ sections, links, and graphics. Three website updates are included.

**Key Deliverables:** Property owner meeting minutes, public involvement plan (PIP), public open house comments and responses, website content

## TASK 9: RAILROAD COORDINATION

- Schedule a virtual meeting with CP Railway to present the two options being considered.
- If necessary, prepare and submit a variance request that includes written justification and supporting documentation for the railroad's consideration and approval.
- Coordinate with the railroad to obtain their response and any necessary approvals.

**Key Deliverables:** Meeting minutes and, if necessary, a variance request with written justification and supporting documentation

## TASK 10: ADDITIONAL TASKS

Brad McCarter will perform desktop study review of publicly available information and provide team anticipated geologic conditions that will likely be encountered. Provide team the following considerations for the overpass:

- Bridge abutments
- Approach embankments
- Retaining walls



# SCHEDULE

The TKDA Team has closely evaluated the project tasks and deliverables to create a realistic project schedule with completion by December 2023. As shown in the table below, our schedule estimates starting and completion dates for key tasks and allows for critical review time by County and City staff and other agencies. As shown, our project schedule assumes authorization to proceed in May 2023.

| PRELIMINARY DESIGN TASKS                                              | 2023 |     |     |     |     |     |     |     | 2024 | 2025 |
|-----------------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|------|------|
|                                                                       | May  | Jun | Jul | Aug | Sep | Oct | Nov | Dec |      |      |
| <b>1.0 PROJECT MANAGEMENT</b>                                         |      |     |     |     |     |     |     |     |      |      |
| Project Management and QA/QC                                          |      |     |     |     |     |     |     |     |      |      |
| Kickoff Meeting (County, City)                                        | ○    |     |     |     |     |     |     |     |      |      |
| PMT Meetings (County, City, others as needed)                         |      | ○   | ○   | ○   | ○   | ○   | ○   | ○   |      |      |
| Weekly Update Calls to County PM                                      |      |     |     |     |     |     |     |     |      |      |
| <b>2.0 ALTERNATIVE ANALYSIS</b>                                       |      |     |     |     |     |     |     |     |      |      |
| Further Evaluate Alternative 2 - Underpass                            |      |     |     |     |     |     |     |     |      |      |
| Further Evaluate Alternative 6 - Overpass                             |      |     |     |     |     |     |     |     |      |      |
| Prepare Matrix of Potential Alternatives                              |      |     |     |     | ◆   |     |     |     |      |      |
| Agency Review/Comment                                                 |      |     |     |     |     |     |     |     |      |      |
| Draft Preliminary Layouts and Cost Estimates                          |      |     |     |     | ◆   |     |     |     |      |      |
| Finalize Preliminary Layouts and Cost Estimates                       |      |     |     |     |     |     |     | ◆   |      |      |
| <b>3.0 SURVEY</b>                                                     |      |     |     |     |     |     |     |     |      |      |
| Topographic Survey (incl. Stream Bed Profile and Cross Sections)      |      |     |     |     |     |     |     |     |      |      |
| Utilities Survey                                                      |      |     |     |     |     |     |     |     |      |      |
| Base Mapping                                                          |      |     |     |     |     |     |     |     |      |      |
| <b>4.0 HYDRAULICS</b>                                                 |      |     |     |     |     |     |     |     |      |      |
| Hydraulic flood analysis                                              |      |     |     |     |     |     |     |     |      |      |
| Hydraulic Risk Assessment and Scour Analysis                          |      |     |     |     |     |     |     |     |      |      |
| MnDNR Meetings (2)                                                    |      | #   |     |     | #   |     |     |     |      |      |
| Prepare Drainage Overview Maps                                        |      |     |     |     | ◆   |     |     |     |      |      |
| Prepare Draft Hydraulic Report                                        |      |     |     |     | ◆   |     |     |     |      |      |
| Prepare Final Hydraulic Report                                        |      |     |     |     |     |     |     | ◆   |      |      |
| <b>5.0 ENVIRONMENTAL</b>                                              |      |     |     |     |     |     |     |     |      |      |
| Wetland Delineation and Report                                        |      | ◆   |     |     |     |     |     |     |      |      |
| Prepare Wetland Impact Figures for each alternative                   |      |     |     |     |     |     |     | ◆   |      |      |
| Prepare Floodplain Impact Figures for each alternative                |      |     |     |     |     |     |     | ◆   |      |      |
| <b>6.0 PUBLIC AND PRIVATE UTILITY IDENTIFICATION AND COORDINATION</b> |      |     |     |     |     |     |     |     |      |      |
| Gopher State One Call and Map Utilities                               |      |     |     |     |     |     |     |     |      |      |
| Coordinate with SMMPA High Voltage Transmission Line Utility          |      |     |     |     |     |     |     |     |      |      |
| Coordinate with other Utility Companies                               |      |     |     |     |     |     |     |     |      |      |
| Identify Costs of Compensable Relocations                             |      |     |     |     |     |     |     |     |      |      |
| <b>7.0 PRELIMINARY ROADWAY AND BRIDGE DESIGN</b>                      |      |     |     |     |     |     |     |     |      |      |
| Preliminary Roadway and Bridge Design                                 |      |     |     |     | ◆   |     |     |     |      |      |
| Four Alternative Concept Layouts                                      |      |     |     |     |     |     |     |     |      |      |
| Agency Review/Comment                                                 |      |     |     |     |     |     |     |     |      |      |
| Staff Approved Layout of Preferred Alternative                        |      |     |     |     |     |     |     | ◆   |      |      |
| <b>8.0 PUBLIC INVOLVEMENT</b>                                         |      |     |     |     |     |     |     |     |      |      |
| Public and Agency Involvement Plan                                    |      |     |     |     |     |     |     |     |      |      |
| Property Owner Meetings                                               |      |     |     |     |     |     |     |     |      |      |
| Open House Meeting                                                    |      |     |     |     | X   |     |     |     |      |      |
| Provide County Project Updates                                        |      |     |     |     |     |     |     |     |      |      |
| <b>9.0 RAILROAD COORDINATION</b>                                      |      |     |     |     |     |     |     |     |      |      |
| CP Railway Coordination                                               |      |     |     |     |     |     |     |     |      |      |
| <b>10 ADDITIONAL TASKS</b>                                            |      |     |     |     |     |     |     |     |      |      |
| Geotechnical Investigations                                           |      |     |     |     |     |     |     |     |      |      |
| <b>FINAL DESIGN</b>                                                   |      |     |     |     |     |     |     |     |      |      |
| Prepare Final Plans                                                   |      |     |     |     |     |     |     |     |      |      |
| <b>CONSTRUCTION</b>                                                   |      |     |     |     |     |     |     |     |      |      |
| Construct Project                                                     |      |     |     |     |     |     |     |     |      |      |

■ Consultant Work      ○ Meetings      # DNR Meeting  
◆ Submittals      X Open House

COST OF SERVICES

| Client:                |                                                                                    | Steele County                               |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         | Date:            |                    | 4/21/2023 |       |
|------------------------|------------------------------------------------------------------------------------|---------------------------------------------|--------------|------------|---------|-----------------------|-----------|------------|------------|---------|-------------------|---------------|------------|---------------|-----------|------------------|--------------------|-----------------------|-------------------------|------------------|--------------------|-----------|-------|
| Project:               |                                                                                    | Preliminary Design to Replace CR 180 Bridge |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         | By:              |                    | MAW       |       |
| Task                   | Task Description                                                                   | Estimated Person Hours Required             |              |            |         |                       |           |            |            |         |                   |               |            |               |           | Total Hours TKDA | Total Dollars TKDA | Total Hours SEH/Braun | Total Dollars SEH/Braun | Total TEAM Hours | Total TEAM Dollars |           |       |
|                        |                                                                                    | Project Management                          |              |            |         | Hydraulics / Drainage |           | Structures | Utilities  |         | Public Engagement |               | Survey     | Support Staff |           |                  |                    |                       |                         |                  |                    |           |       |
|                        |                                                                                    | PM                                          | Assistant PM | Sr Reg Eng | Advisor | Sr Reg Eng            | Reg Eng   | Sr Reg Eng | Sr Reg Eng | Reg Eng | Sr Trans Planner  | Trans Planner | Eng Spec I | Grad/Tech     | Admin     |                  |                    |                       |                         |                  |                    |           |       |
|                        |                                                                                    | Billing Rates                               |              | \$ 255     | \$ 202  | \$ 184                | \$ 247    | \$ 202     | \$ 126     | \$ 147  | \$ 207            | \$ 151        | \$ 129     | \$ 78         | \$ 140    |                  |                    |                       |                         |                  |                    | \$ 93     | \$ 81 |
| 1 Project Management   |                                                                                    |                                             |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         |                  |                    |           |       |
| 1.1                    | Administration                                                                     | 16                                          | 48           | -          | -       | -                     | -         | -          | -          | -       | -                 | -             | -          | -             | -         | 2                | 66                 | \$ 13,924             | -                       | \$ -             | 66                 | \$ 13,924 |       |
|                        | Perform day-to-day management of the project                                       | 8                                           | 16           |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | 24                 | \$ 5,268              |                         |                  | 24                 | \$ 5,268  |       |
|                        | Develop and maintain a project schedule                                            | 2                                           | 8            |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | 10                 | \$ 2,124              |                         |                  | 10                 | \$ 2,124  |       |
|                        | Document all communications (emails, phone calls, meetings)                        | 2                                           | 8            |            |         |                       |           |            |            |         |                   |               |            |               |           | 2                | 12                 | \$ 2,286              |                         |                  | 12                 | \$ 2,286  |       |
|                        | Coordinate with subconsultants                                                     | 2                                           | 8            |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | 10                 | \$ 2,124              |                         |                  | 10                 | \$ 2,124  |       |
|                        | Prepare monthly progress reports and invoices                                      | 2                                           | 8            |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | 10                 | \$ 2,124              |                         |                  | 10                 | \$ 2,124  |       |
| 1.2                    | General Coordination                                                               | 12                                          | 10           | 8          | 4       | 4                     | 8         | -          | 8          | -       | 2                 | -             | -          | -             | 2         | -                | 58                 | \$ 11,448             | 35                      | \$ 6,441         | 93                 | \$ 17,889 |       |
|                        | Monthly PMT meetings (assume 8 virtual)                                            | 8                                           | 8            | 2          |         |                       |           |            |            | 2       |                   | 2             |            |               |           |                  | 22                 | \$ 4,694              | 20                      | \$ 3,915         | 42                 | \$ 8,609  |       |
|                        | Prepare and manage project meeting schedule                                        |                                             | 2            |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | 2                  | \$ 403                | 4                       | \$ 638           | 6                  | \$ 1,041  |       |
|                        | Utility coordination meeting                                                       |                                             |              |            |         |                       |           |            |            | 6       |                   |               |            |               |           | 2                | 8                  | \$ 1,426              | 1                       | \$ 160           | 9                  | \$ 1,586  |       |
|                        | Canadian Pacific Railway meetings(s)                                               |                                             |              | 6          |         |                       |           |            |            |         |                   |               |            |               |           |                  | 6                  | \$ 1,101              | 4                       | \$ 725           | 10                 | \$ 1,826  |       |
|                        | DNR meeting(s)                                                                     |                                             |              |            |         | 4                     | 8         |            |            |         |                   |               |            |               |           |                  | 12                 | \$ 1,816              | 6                       | \$ 1,003         | 18                 | \$ 2,819  |       |
|                        | Bi-weekly 15 minute update call meetings with County PM                            | 4                                           |              |            | 4       |                       |           |            |            |         |                   |               |            |               |           |                  | 8                  | \$ 2,007              |                         |                  | 8                  | \$ 2,007  |       |
| 1.3                    | Quality Assurance and Quality Control Functions (QA/QC)                            | 4                                           | -            | 16         | -       | 4                     | -         | 4          | 2          | -       | -                 | -             | -          | -             | -         | -                | 30                 | 5,767                 | 4                       | 725              | 34                 | \$ 6,492  |       |
|                        | Develop project specific QMP                                                       |                                             |              | 8          |         |                       |           |            |            |         |                   |               |            |               |           |                  | 8                  | \$ 1,469              |                         |                  | 8                  | \$ 1,469  |       |
|                        | Perform DCRs                                                                       | 4                                           |              |            |         | 4                     |           | 4          | 2          |         |                   |               |            |               |           |                  | 14                 | \$ 2,829              | 4                       | \$ 725           | 18                 | \$ 3,554  |       |
|                        | Perform QA oversight                                                               |                                             |              | 8          |         |                       |           |            |            |         |                   |               |            |               |           |                  | 8                  | \$ 1,469              |                         |                  | 8                  | \$ 1,469  |       |
|                        | SUBTOTAL HOURS                                                                     | 32                                          | 58           | 24         | 4       | 8                     | 8         | 4          | 10         | -       | 2                 | -             | -          | -             | 2         | 2                | 154                |                       | 39                      |                  | 193                |           |       |
|                        | SUBTOTAL COST                                                                      | \$ 8,166                                    | \$ 11,695    | \$ 4,406   | \$ 986  | \$ 1,613              | \$ 1,010  | \$ 588     | \$ 2,068   | \$ -    | \$ 259            | \$ -          | \$ -       | \$ -          | \$ 186    | \$ 162           |                    | \$ 31,139             |                         | \$ 7,166         |                    | \$ 38,305 |       |
| 2 Alternative Analysis |                                                                                    |                                             |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         |                  |                    |           |       |
| 2.1                    | Alternative 2 - Underpass                                                          | -                                           | 6            | -          | -       | -                     | 6         | 32         | -          | -       | -                 | -             | -          | -             | 44        | -                | 88                 | \$ 10,754             | 46                      | \$ 8,280         | 134                | \$ 19,034 |       |
|                        | Task Lead site visit                                                               |                                             | 6            |            |         |                       | 6         | 6          |            |         |                   |               |            |               |           |                  | 18                 | \$ 2,849              | 4                       | \$ 812           | 22                 | \$ 3,661  |       |
|                        | Evaluation and development of future traffic forecasts                             |                                             |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  | -                  | \$ -                  | 4                       | \$ 638           | 4                  | \$ 638    |       |
|                        | Evaluate feasibility of raising track grade                                        |                                             |              |            |         |                       |           | 4          |            |         |                   |               |            |               |           |                  | 4                  | \$ 588                | 4                       | \$ 812           | 8                  | \$ 1,400  |       |
|                        | Evaluate optimal road stream crossing structure                                    |                                             |              |            |         |                       |           | 10         |            |         |                   |               |            |               | 24        |                  | 34                 | \$ 3,697              | 10                      | \$ 2,538         | 44                 | \$ 6,235  |       |
|                        | Prepare recommendations and costs for Rice Lake Street box culvert replacement     |                                             |              |            |         |                       |           | 4          |            |         |                   |               |            |               |           |                  | 4                  | \$ 588                |                         |                  | 4                  | \$ 588    |       |
|                        | Prepare underpass matrix of alternatives including cost estimates                  |                                             |              |            |         |                       |           | 8          |            |         |                   |               |            |               | 20        |                  | 28                 | \$ 3,032              | 24                      | \$ 3,480         | 52                 | \$ 6,512  |       |
| 2.2                    | Alternative 6 - Overpass                                                           | -                                           | -            | -          | -       | -                     | -         | 44         | -          | -       | -                 | -             | -          | -             | 84        | -                | 128                | \$ 14,262             | 80                      | \$ 12,267        | 208                | \$ 26,529 |       |
|                        | Explore CR 180 overpass concepts                                                   |                                             |              |            |         |                       |           | 24         |            |         |                   |               |            |               | 40        |                  | 64                 | \$ 7,240              | 32                      | \$ 5,307         | 96                 | \$ 12,547 |       |
|                        | Explore multiluse trail concepts                                                   |                                             |              |            |         |                       |           | 12         |            |         |                   |               |            |               | 24        |                  | 36                 | \$ 3,991              | 24                      | \$ 3,480         | 60                 | \$ 7,471  |       |
|                        | Prepare overpass matrix of alternatives including cost estimates                   |                                             |              |            |         |                       |           | 8          |            |         |                   |               |            |               | 20        |                  | 28                 | \$ 3,032              | 24                      | \$ 3,480         | 52                 | \$ 6,512  |       |
|                        | SUBTOTAL HOURS                                                                     | -                                           | 6            | -          | -       | -                     | 6         | 76         | -          | -       | -                 | -             | -          | -             | 128       | -                | 216                |                       | 126                     |                  | 342                |           |       |
|                        | SUBTOTAL COST                                                                      | \$ -                                        | \$ 1,210     | \$ -       | \$ -    | \$ -                  | \$ -      | \$ 757     | \$ 11,170  | \$ -    | \$ -              | \$ -          | \$ -       | \$ -          | \$ 11,878 | \$ -             |                    | \$ 25,015             |                         | \$ 20,547        |                    | \$ 45,562 |       |
| 3 Survey               |                                                                                    |                                             |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         |                  |                    |           |       |
| 3.1                    | Supplemental topographic surveys                                                   |                                             |              |            |         |                       |           |            |            |         |                   |               | 4          |               |           |                  | 4                  | \$ 559                |                         |                  | 4                  | \$ 559    |       |
| 3.2                    | Utilities survey                                                                   |                                             |              |            |         |                       |           |            |            |         |                   |               | 12         |               |           |                  | 12                 | \$ 1,678              |                         |                  | 12                 | \$ 1,678  |       |
| 3.3                    | Hydraulic Survey (stream bed profile and cross sections at CR180 and Rice Lake St) |                                             |              |            |         |                       |           |            |            |         |                   |               | 12         |               |           |                  | 12                 | \$ 1,678              |                         |                  | 12                 | \$ 1,678  |       |
| 3.4                    | Prepare base mapping of survey collected                                           |                                             |              |            |         |                       |           |            |            |         |                   |               | 8          |               |           |                  | 8                  | \$ 1,119              |                         |                  | 8                  | \$ 1,119  |       |
|                        | SUBTOTAL HOURS                                                                     | -                                           | -            | -          | -       | -                     | -         | -          | -          | -       | -                 | -             | 36         | -             | -         |                  | 36                 |                       | -                       |                  | 36                 |           |       |
|                        | SUBTOTAL COST                                                                      | \$ -                                        | \$ -         | \$ -       | \$ -    | \$ -                  | \$ -      | \$ -       | \$ -       | \$ -    | \$ -              | \$ -          | \$ 5,034   | \$ -          | \$ -      |                  |                    | \$ 5,034              |                         | \$ -             |                    | \$ 5,034  |       |
| 4 Hydraulics           |                                                                                    |                                             |              |            |         |                       |           |            |            |         |                   |               |            |               |           |                  |                    |                       |                         |                  |                    |           |       |
| 4.1                    | HEC-2 to HEC-RAS Model Cleanup and Calibration                                     |                                             |              |            |         |                       | 4         |            |            |         |                   |               |            |               |           |                  | 4                  | \$ 505                |                         |                  | 4                  | \$ 505    |       |
| 4.2                    | Pre-project Existing Conditions Modeling (Corrected Effective)                     |                                             |              |            |         | 2                     | 10        |            |            |         |                   |               |            |               |           |                  | 12                 | \$ 1,665              |                         |                  | 12                 | \$ 1,665  |       |
| 4.3                    | Proposed conditions modeling Alternatives 2 and 6                                  |                                             |              |            |         | 2                     | 24        |            |            |         |                   |               |            |               |           |                  | 26                 | \$ 3,432              |                         |                  | 26                 | \$ 3,432  |       |
| 4.4                    | Rice Creek Street crossing hydraulic analysis                                      |                                             |              |            |         | 2                     | 6         |            |            |         |                   |               |            |               |           |                  | 8                  | \$ 1,161              |                         |                  | 8                  | \$ 1,161  |       |
| 4.5                    | Hydraulic risk assessment and scour analysis                                       |                                             |              |            |         | 4                     | 12        |            |            |         |                   |               |            |               |           | 2                | 18                 | \$ 2,483              |                         |                  | 18                 | \$ 2,483  |       |
| 4.6                    | Identify floodplain impacts for each alternative                                   |                                             |              |            |         |                       | 4         |            |            |         |                   |               |            |               |           |                  | 4                  | \$ 505                |                         |                  | 4                  | \$ 505    |       |
| 4.7                    | Prelim stormwater conveyance and treatment system design                           |                                             |              |            |         | 8                     | 16        |            |            |         |                   |               |            |               | 12        |                  | 36                 | \$ 4,746              |                         |                  | 36                 | \$ 4,746  |       |
| 4.8                    | Prepare Drainage Overview Map                                                      |                                             |              |            |         | 2                     | 4         |            |            |         |                   |               |            |               | 8         |                  | 14                 | \$ 1,651              |                         |                  | 14                 | \$ 1,651  |       |
| 4.9                    | Prepare preliminary hydraulic report summarizing findings                          |                                             |              |            |         | 8                     | 4         |            |            |         |                   |               |            |               | 4         |                  | 16                 | \$ 2,489              |                         |                  | 16                 | \$ 2,489  |       |
|                        | SUBTOTAL HOURS                                                                     | -                                           | -            | -          | -       | 28                    | 84        | -          | -          | -       | -                 | -             | -          | -             | 24        | 2                | 138                |                       | -                       |                  | 138                |           |       |
|                        | SUBTOTAL COST                                                                      | \$ -                                        | \$ -         | \$ -       | \$ -    | \$ 5,646              | \$ 10,602 | \$ -       | \$ -       | \$ -    | \$ -              | \$ -          | \$ -       | \$ -          | \$ 2,227  | \$ 162           |                    | \$ 18,637             |                         | \$ -             |                    | \$ 18,637 |       |

COST OF SERVICES

| Client:                                         |                                                                                                 | Steele County                               |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         | Date:            |                    | 4/21/2023 |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------|--------------|------------|---------|-----------------------|-----------|------------|------------|----------|-------------------|---------------|------------|---------------|--------|------------------|--------------------|-----------------------|-------------------------|------------------|--------------------|-----------|--|--|--|--|--|--|--|--|--|--|--|--|-----------|------------|--|--|--|--|
| Project:                                        |                                                                                                 | Preliminary Design to Replace CR 180 Bridge |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         | By:              |                    | MAW       |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| Task                                            | Task Description                                                                                | Estimated Person Hours Required             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | Total Hours TKDA | Total Dollars TKDA | Total Hours SEH/Braun | Total Dollars SEH/Braun | Total TEAM Hours | Total TEAM Dollars |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 |                                                                                                 | Project Management                          |              |            |         | Hydraulics / Drainage |           | Structures | Utilities  |          | Public Engagement |               | Survey     | Support Staff |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 |                                                                                                 | PM                                          | Assistant PM | Sr Reg Eng | Advisor | Sr Reg Eng            | Reg Eng   | Sr Reg Eng | Sr Reg Eng | Reg Eng  | Sr Trans Planner  | Trans Planner | Eng Spec I | Grad/Tech     | Admin  |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Billing Rates                                                                                   | \$ 255                                      | \$ 202       | \$ 184     | \$ 247  | \$ 202                | \$ 126    | \$ 147     | \$ 207     | \$ 151   | \$ 129            | \$ 78         | \$ 140     | \$ 93         | \$ 81  |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 5                                               | Environmental                                                                                   |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 4.1                                             | Conduct wetland delineation and prepare report                                                  |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | -                | \$ -               | 44                    | \$ 6,125                | 44               | \$ 6,125           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 4.2                                             | Prepare wetland impact figures                                                                  |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | -                | \$ -               | 5                     | \$ 696                  | 5                | \$ 696             |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 4.3                                             | Regulatory agency coordination                                                                  |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | -                | \$ -               | 12                    | \$ 1,670                | 12               | \$ 1,670           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | -                                           | -            | -          | -       | -                     | -         | -          | -          | -        | -                 | -             | -          | -             | -      | -                |                    | 61                    |                         | 61               |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ -                                        | \$ -         | \$ -       | \$ -    | \$ -                  | \$ -      | \$ -       | \$ -       | \$ -     | \$ -              | \$ -          | \$ -       | \$ -          | \$ -   |                  | \$ -               |                       | \$ 8,491                |                  | \$ 8,491           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 6                                               | Public and Private Utility Identification and Coordination                                      |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 6.1                                             | Perform GSOC and identify and map utilities                                                     |                                             |              |            |         |                       |           |            | 8          | 4        |                   |               |            | 24            |        | 36               | \$ 4,484           |                       |                         | 36               | \$ 4,484           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 6.2                                             | Identify significant impacts of each alternative                                                |                                             |              |            |         |                       |           |            | 12         | 4        |                   |               |            |               |        | 16               | \$ 3,084           |                       |                         | 16               | \$ 3,084           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 6.3                                             | Utility owner coordination                                                                      |                                             |              |            |         |                       |           |            | 36         |          |                   |               |            | 8             |        | 44               | \$ 8,185           |                       |                         | 44               | \$ 8,185           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 6.4                                             | Identify costs of compensable relocations                                                       |                                             |              |            |         |                       |           |            | 4          | 4        |                   |               |            | 8             |        | 16               | \$ 2,173           |                       |                         | 16               | \$ 2,173           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | -                                           | -            | -          | -       | -                     | -         | -          | 60         | 12       | -                 | -             | -          | 40            | -      | 112              |                    | -                     |                         | 112              |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ -                                        | \$ -         | \$ -       | \$ -    | \$ -                  | \$ -      | \$ -       | \$ 12,405  | \$ 1,810 | \$ -              | \$ -          | \$ -       | \$ 3,712      | \$ -   |                  | \$ 17,927          |                       | \$ -                    |                  | \$ 17,927          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 7                                               | Preliminary Roadway and Bridge Design                                                           |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 7.1                                             | Preliminary roadway design including alignment and profile for each alternative and variation   |                                             |              |            |         |                       |           | 8          |            |          |                   |               |            | 16            |        | 24               | \$ 2,661           | 32                    | \$ 4,408                | 56               | \$ 7,069           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 7.2                                             | Preliminary bridge design including type, size, and location for each alternative and variation | 4                                           |              | 4          |         |                       |           | 28         |            |          |                   |               |            | 60            |        | 96               | \$ 11,439          | 14                    | \$ 3,248                | 110              | \$ 14,687          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 7.2                                             | Prepare alternative concept layouts (4)                                                         |                                             |              |            |         |                       |           | 8          |            |          |                   |               |            |               |        | 8                | \$ 1,176           | 122                   | \$ 16,516               | 130              | \$ 17,692          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 7.3                                             | Prepare staff approved layout of preferred alternative                                          | 2                                           | -            | -          | -       | 2                     | 4         | 16         | 2          | 4        | -                 | -             | -          | -             | -      | 30               | \$ 4,787           | 238                   | \$ 30,914               | 268              | \$ 35,701          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Bridge features                                                                                 | 2                                           |              |            |         |                       |           | 4          |            |          |                   |               |            |               |        | 6                | \$ 1,098           | 2                     | \$ 406                  | 8                | \$ 1,504           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Roadway layouts, alignments, profile                                                            |                                             |              |            |         |                       |           | 4          |            |          |                   |               |            |               |        | 4                | \$ 588             | 152                   | \$ 20,416               | 156              | \$ 21,004          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Incorporate Drainage requirements/Recommendations                                               |                                             |              |            |         | 2                     | 4         |            |            |          |                   |               |            |               |        | 6                | \$ 908             | -                     | \$ -                    | 6                | \$ 908             |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Incorporate Utility relocations and recommendations                                             |                                             |              |            |         |                       |           |            | 2          | 4        |                   |               |            |               |        | 6                | \$ 1,017           | -                     | \$ -                    | 6                | \$ 1,017           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Right-of-way needs                                                                              |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | -                | \$ -               | 22                    | \$ 2,726                | 22               | \$ 2,726           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | Construction limits                                                                             |                                             |              |            |         |                       |           | 8          |            |          |                   |               |            |               |        | 8                | \$ 1,176           | 62                    | \$ 7,366                | 70               | \$ 8,542           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | 6                                           | -            | 4          | -       | 2                     | 4         | 60         | 2          | 4        | -                 | -             | -          | 76            | -      | 158              |                    | 406                   |                         | 564              |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ 1,531                                    | \$ -         | \$ 734     | \$ -    | \$ 403                | \$ 505    | \$ 8,819   | \$ 414     | \$ 603   | \$ -              | \$ -          | \$ -       | \$ 7,053      | \$ -   |                  | \$ 20,062          |                       | \$ 55,086               |                  | \$ 75,148          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 8                                               | Public Involvement                                                                              |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 8.1                                             | Conduct property owner meetings (preparation, attendance, mintutes)                             | 4                                           | 8            |            |         |                       |           |            |            |          | 20                | 20            |            |               | 2      | 54               | \$ 6,948           |                       |                         | 54               | \$ 6,948           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 8.2                                             | Public involvement plan                                                                         |                                             | 1            |            |         |                       |           |            |            |          | 2                 | 8             |            |               | 1      | 12               | \$ 1,168           |                       |                         | 12               | \$ 1,168           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 8.3                                             | Public open house meeting                                                                       | 4                                           | 4            |            |         |                       |           |            |            |          | 8                 | 16            |            |               | 3      | 35               | \$ 4,358           |                       |                         | 35               | \$ 4,358           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 8.4                                             | Project website content (website hosted by Steele County)                                       |                                             |              |            |         |                       |           |            |            |          | 4                 | 20            |            |               | 2      | 26               | \$ 2,245           |                       |                         | 26               | \$ 2,245           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | 8                                           | 13           | -          | -       | -                     | -         | -          | -          | -        | 34                | 64            | -          | -             | 8      | 127              |                    | -                     |                         | 127              |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ 2,042                                    | \$ 2,621     | \$ -       | \$ -    | \$ -                  | \$ -      | \$ -       | \$ -       | \$ -     | \$ 4,395          | \$ 5,011      | \$ -       | \$ -          | \$ 650 |                  | \$ 14,719          |                       | \$ -                    |                  | \$ 14,719          |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 9                                               | Railroad Coordination                                                                           |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 9.1                                             | Prepare and submit variance request                                                             | 2                                           |              | 12         |         |                       |           | 8          |            |          |                   |               |            | 8             |        | 30               | \$ 4,631           |                       |                         | 30               | \$ 4,631           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 9.2                                             | Railroad coordination                                                                           | 2                                           |              | 14         |         |                       |           | 12         |            |          |                   |               |            |               |        | 28               | \$ 4,844           |                       |                         | 28               | \$ 4,844           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | 4                                           | -            | 26         | -       | -                     | -         | 20         | -          | -        | -                 | -             | -          | 8             | -      | 58               |                    | -                     |                         | 58               |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ 1,021                                    | \$ -         | \$ 4,773   | \$ -    | \$ -                  | \$ -      | \$ 2,940   | \$ -       | \$ -     | \$ -              | \$ -          | \$ -       | \$ 742        | \$ -   |                  | \$ 9,476           |                       | \$ -                    |                  | \$ 9,476           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 10                                              | Additional Tasks                                                                                |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| 10.1                                            | Geotechnical Support                                                                            |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        | -                | \$ -               | 12                    | \$ 2,400                | 12               | \$ 2,400           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL HOURS                                                                                  | -                                           | -            | -          | -       | -                     | -         | -          | -          | -        | -                 | -             | -          | -             | -      | -                |                    | 12                    |                         | 12               |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | SUBTOTAL COST                                                                                   | \$ -                                        | \$ -         | \$ -       | \$ -    | \$ -                  | \$ -      | \$ -       | \$ -       | \$ -     | \$ -              | \$ -          | \$ -       | \$ -          | \$ -   |                  | \$ -               |                       | \$ 2,400                |                  | \$ 2,400           |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | TOTAL LABOR HOURS                                                                               | 50                                          | 77           | 54         | 4       | 38                    | 102       | 160        | 72         | 16       | 36                | 64            | 36         | 278           | 12     | 999              |                    | 644                   |                         | 1,631            |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
|                                                 | TOTAL LABOR COSTS                                                                               | \$ 12,760                                   | \$ 15,526    | \$ 9,913   | \$ 986  | \$ 7,662              | \$ 12,874 | \$ 23,517  | \$ 14,887  | \$ 2,413 | \$ 4,654          | \$ 5,011      | \$ 5,034   | \$ 25,798     | \$ 974 |                  | \$ 142,009         |                       | \$ 93,690               |                  | \$ 235,699         |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| Expenses:                                       |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           |            |  |  |  |  |
| Travel & Subsistence                            |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           | \$ 700     |  |  |  |  |
| Printing and Postage                            |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           | \$ 1,000   |  |  |  |  |
| Survey Equipment (GPS Unit)                     |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           | \$ 640     |  |  |  |  |
| TOTAL TKDA TEAM PROJECT COST (TASKS 1-9)        |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           | \$ 235,639 |  |  |  |  |
| TOTAL TKDA TEAM PROJECT COST (TASK 10)          |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  |           | \$ 2,400   |  |  |  |  |
| OPTIONAL TASK - GEOTECHNICAL BORINGS AND REPORT |                                                                                                 |                                             |              |            |         |                       |           |            |            |          |                   |               |            |               |        |                  |                    |                       |                         |                  |                    |           |  |  |  |  |  |  |  |  |  |  |  |  | \$ 13,250 |            |  |  |  |  |



# SUMMARY | WHY SELECT THE TKDA TEAM?

We firmly believe that partnering with the TKDA Team is the perfect fit for the County and stakeholders to ensure a successful project delivery. Led by our experienced Project Manager, Matt Christensen has a proven track record in managing complex projects, our team is well-equipped to tackle the task at hand.

What sets our team apart is the unique perspectives and diverse expertise that each team member brings to the table. We have fostered strong relationships among our team members over the years, transcending typical teaming arrangements. With experts in various disciplines, our team is not only focused on excelling in their individual roles, but also in supporting each other to achieve overall success.

Our approach is backed by thorough research, consultations with project partners, on-site assessments, and a thorough understanding of the project requirements. TKDA's prior involvement in the Feasibility Study of CR 180 Bridges and Mineral Springs Road Railroad Bridge Project has provided us with the necessary background and experience to successfully complete the next phase of this crucial project.

We are committed to prioritizing staff resources and successfully delivering this project for the County.

The vast majority of TKDA's clients are repeat customers. These relationships are built on trust, responsiveness, fairness, honesty, and quality services. We offer this same commitment to the County.

If awarded the project, TKDA looks forward to negotiating a mutually agreeable contract with the County.



# whks

engineers + planners + land surveyors

+



## Feasibility Study of CR 180 Bridge

Request for Proposals

» **SUBMITTED TO:**

Steele County Highway Department  
Attn: Paul Sponholz, P.E.  
3000 Hoffman Drive NW, P.O. Box 890  
Owatonna, MN 55060-0890  
Email: paul.sponholz@co.steele.mn.us

April 21, 2023

Left: Image from WHKS InfraWorks model of proposed CR 180 bridge overpass (Alternative 6). Right: Existing CR 180 Railroad Bridge.





2905 South Broadway  
Rochester, MN 55904-5515  
Phone: 507.288.3923  
Email: rochester@whks.com  
Website: www.whks.com



April 21, 2023

Mr. Paul Sponholz, P.E., Assistant County Engineer  
Steele County Highway Department  
P.O. Box 890  
3000 Hoffman Drive NW  
Owatonna, MN 55060-0890

RE: Steele County, MN  
Preliminary Design for Replacement of CR 180 Bridge  
**Response to Request for Proposals**

Dear Mr. Sponholz and Members of the Selection Committee:

As fellow engineers, it may not surprise you that many of us are often described as being "unemotional". "Really into the details." "Hyper-focused on all the possibilities".

Yes. We are all of these things.

We also like solving problems. It's why we became engineers. Finding solutions for challenges is why come to work every day.

What we didn't expect, is that over the past month, we've been **super demonstrative** with our feelings.

We can't **stop** talking about alternatives for CR 180 with anyone that's willing to listen. The same people that think we don't express our emotions are thinking we're overly invested in this project.

They aren't wrong. We're always invested in the outcome of improvements in our communities, but we're especially engaged when it involves our favorite design components!

The CR 180 study was the project that got away from us in 2021. Like all engineers, we have thought about the project long after selection was made. We rarely get the opportunity to take those thoughts, further investigate them, and present them as concepts to our clients. View the possibilities for Alternative 6:

<https://www.youtube.com/watch?v=eUO-tgXxMhQ>

WHKS has teamed with nationally-renowned railroad engineering leaders, Hardesty & Hanover, to provide Steele County and the City of Owatonna with a fresh look at the CR 180 bridge replacement. Our proposal outlines our project approach, our understanding of the key issues, and our team's credentials.

The WHKS Team will be led by Brandon Theobald, a familiar face around the communities of Steele County. If you have any questions or require additional information about the information in our proposal, please contact Brandon at 507.288.3923 or by email at [btheobald@whks.com](mailto:btheobald@whks.com).

Sincerely,

**WHKS & co.**

A handwritten signature in blue ink, appearing to read "Timothy A. Hruska".

Timothy A. Hruska, P.E., L.S.  
Vice President and Rochester Office Manager



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## Introduction to WHKS Team

We've reviewed Alternatives 2 and 6 in the previously-prepared Feasibility Study and we've come up with a few ideas on the following pages.

Utilizing staff the County and City know and trust, WHKS will lead the services related to alternative evaluation, survey, roadway and trail analysis, public outreach, and utility and constructibility review.

The services of WHKS are complemented by Hardesty & Hanover who has delivered over 50 projects including passenger and freight railroad bridge design and inspection nationwide in the past 10 years, including work for the Canadian Pacific Railway.



Image from WHKS InfraWorks model of proposed CR 180 bridge overpass (Alt. 6)

Our fresh perspective is a big advantage to selecting the WHKS Team. So is having a truly local consultant, one that is invested in the outcomes in the communities where we live, work, and play.

The best part of consulting engineering in our backyard is knowing that we will suggest the right solutions for the right reasons.

## General Requirements

### WHKS Team Contact Information

Brandon Theobald, P.E., Project Manager  
WHKS & Co., 2905 South Broadway, Rochester, MN 55904  
507-288-3923, btheobald@whks.com

### Proposal Statement and Authorized Signature

This proposal is valid for 60 days from April 21, 2023. This proposal is signed by a person authorized to bind WHKS to the terms of this proposal.

## All Aboard!

WHKS and Hardesty & Hanover are all aboard and ready for the next adventure in Steele County, MN!

With WHKS and H&H combining forces, Steele County will have a project team that is:

### LOCAL

WHKS staff are familiar faces to County and City staff. We've worked with Steele County and the City of Owatonna and are ready to do it again!



### INNOVATIVE

WHKS and H&H will provide a fresh perspective to the project team.



### RECOGNIZED

H&H is a nationally-recognized firm with rail and transit at the core of their practice. WHKS is widely regarded as a regional leader in structural and municipal engineering.



### PUBLIC OUTREACH EXPERTS

We know the key ingredient to a successful project is a well-communicated public outreach campaign and we know how to deliver it.



## Project Understanding and Approach

The study will investigate options to replace the structurally deficient box culvert carrying CR 180 over Izaak Walton Creek while maximizing the vertical clearance for the roadway and minimize flooding concerns. The work will build upon some of the work previously completed by others and investigate additional considerations.

We suggest the following key components be further investigated during the course of the Study.

### Key Component 1: Alternative 2 - Underpass



#### Key Considerations:

- Knowledge for Accelerated Bridge Construction methods
- Railroad bridge ownership
- Increase vertical clearance
- Review flood mitigation impacts
- Bike and pedestrian facilities
- Upgrade utilities
- Hydraulics and flood impacts

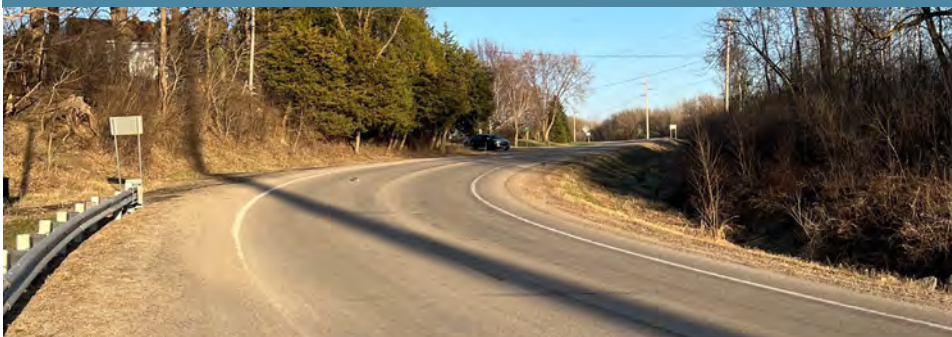
### Key Component 2: Alternative 6 - Overpass



#### Key Considerations:

- Impacts to stream, wetlands, flood plain, and CP track
- Significant impacts to local streets and driveway access
- Review vertical clearances / CP Railroad requirements
- Work with SMMPA on solutions for relocating the utility line

### Key Component 3: Constructibility



#### Key Considerations:

- Shoofly
- Short railroad construction windows
- Raise bridge and track
- Utilities
- Impacts to private property

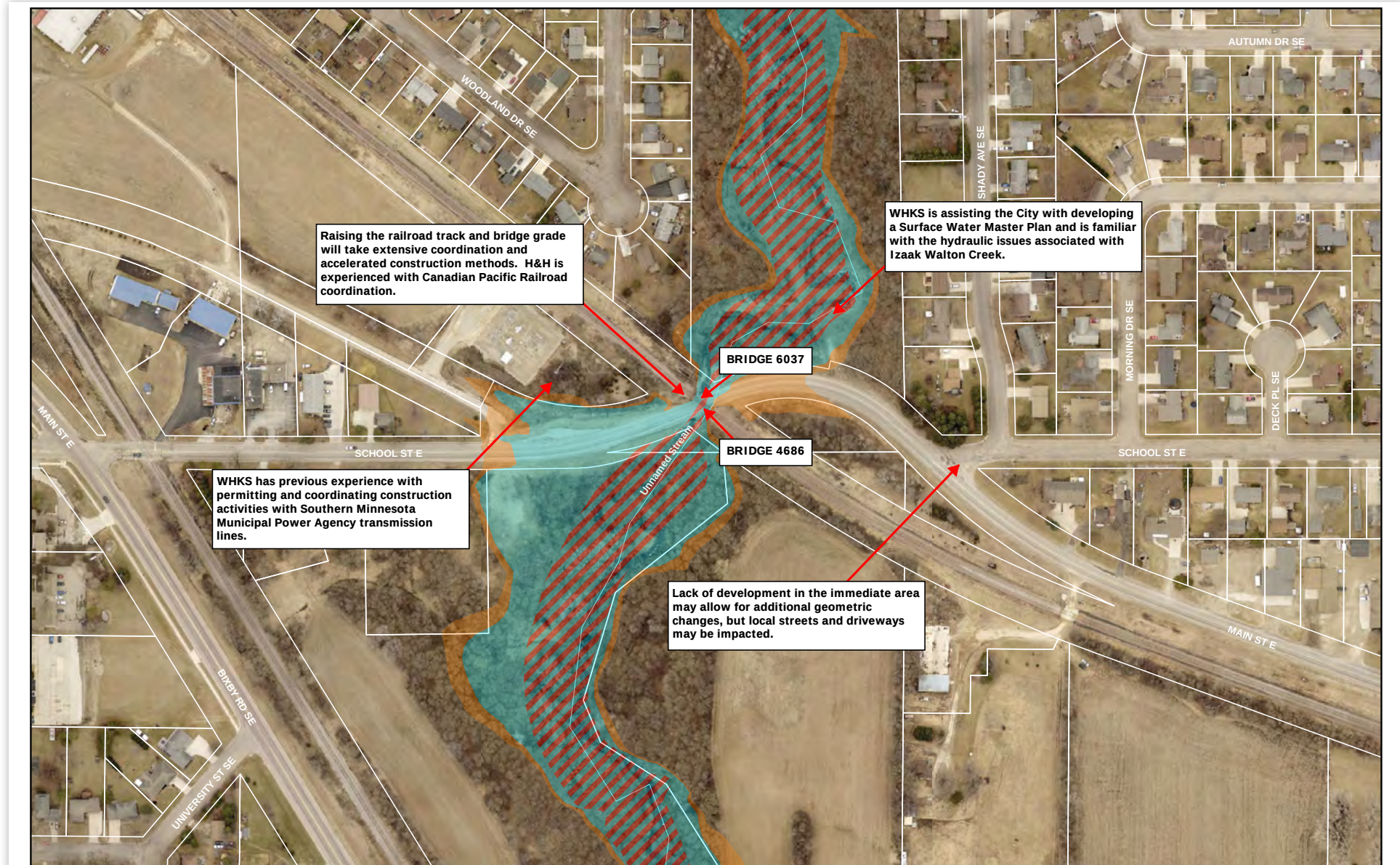
## Key Issues and Solutions

We have visited the project site and identified the key issues on the following page. Our approach to providing solutions are provided in this section. For a link to our flyover InfraWorks model showing possibilities for Alternative 6, click here:

<https://www.youtube.com/watch?v=eUO-tgXxMhQ>



## Key Issues and Solutions - County Road 180







## Bringing in the Big Dogs

Most of H&H's rail structures are vital links on busy passenger and freight lines, carrying hundreds of trains per day.



H&H's rail expertise and ingenuity allows them to implement complex rehabilitation and replacement schemes while maintaining uninterrupted service.



They also actively participate in the development of railroad design standards, through leadership in prestigious industry organizations including AREMA.



H&H is currently working with MnDOT on the Stillwater Vertical Lift Bridge, providing an evaluation study and repair recommendations associated with the festoon cable system on the bridge.

## Railroad Coordination

Early and frequent coordination with the CP Railroad will keep them informed of the project's schedule and impacts. Our team members are familiar with CP Railroad's engineering requirements and guidelines. We have worked with CP Railroad and other Class I railroads on numerous projects throughout the United States and understand their needs, design criteria, and protocol.

The proposed structure and track design will be reviewed to minimize railroad impacts and construction costs. Concepts will be submitted to the CP representative for review and meeting minutes will document project discussions.

## Survey

Survey crews will proceed immediately with topographic survey tasks. WHKS will:

- Develop project control using Steele County Coordinates and City of Owatonna vertical datum.
- Provide necessary topographic surveying. Traffic control may be required to obtain data within the traveled roadway.
- Create base mapping utilizing field survey, County GIS, and record plans.
- Contact Gopher State One Call and locate utilities within the project corridor.
- Surveyed utility locations will be supplemented with existing utility maps from the County, City, and utility companies.
- Property pins and other information will be gathered during the field survey. Record research will be conducted to determine the existing right-of-way lines.

“ WHKS staff provided exceptional professional services throughout all phases of the 19th Street Overpass Bridge project. Project Engineers managed and coordinated relocation of several utilities, as well as the general bridge contractor. The City was very pleased with the responsiveness and attention to details related to this complex project.



--Mark A. Rahm, P.E.  
City Engineer, Mason City, Iowa

”

## A Picture is Worth a Thousand Words and Visualizing It Can Save You Thousands of Dollars

WHKS created several 3D site models and renderings for the Wagon Wheel Trail and Pedestrian Bridge in La Crescent, Minnesota.



Creating a 3D site model and renderings of the proposed project concept for the City helped with public buy-in and support for the project.



3D site models and renderings allow Clients to visualize the proposed project before making final design decisions, saving them time and money!



Constructed Bridge 2022

## Alternatives Analysis

WHKS will evaluate proposed alternatives for each project location, balancing impacts and costs, including:

- Short/long-term costs including design, construction, and life cycle
- Relocation and right-of-way acquisition
- Utility impacts
- Environmental impacts (stream, wetlands, floodplain)
- Constructibility (including shoofly)
- Public outreach
- Future growth

H&H will review the previously-prepared Feasibility Study's conclusions and make recommendations to improve them with respect to Alternative 2.

- Track
  - Online Option with Grade Raise
  - Offline Option with Grade Raise (outside curve)
  - Conceptual Cost Estimate for both options
- Bridge
  - Review Feasibility Study railroad bridge options and update recommendations and reflect allowable track grade raise
  - Consideration for online and offline construction sequencing
  - Conceptual Cost estimate for both options

The objective of the alternatives analysis is to provide layouts that meet the needs of the County and City while enhancing safety and minimizing costs and effects on adjacent landowners. Recommendations will be included in a decision/alternatives matrix to assist decision makers. The phase will conclude with producing an approved layout.

WHKS's approach will focus on sustainability and resiliency. This seeks effective, multimodal transportation solutions by working with stakeholders to develop, build, and maintain cost-effective transportation facilities, fitting into and reflecting the project's surroundings and context.

Given the effects on access and other impacts that the construction could have on adjacent properties and stakeholders, a robust public outreach process will provide creative and innovative solutions to complex design issues.



## Advocating for You!

WHKS is no stranger when it comes to assisting public agencies with funding efforts for infrastructure projects.

Brandon Theobald recently represented the community at the Bonding Bill hearings for the Owatonna-Medford Wastewater Treatment Regionalization.



Photo Courtesy of MN State Senate

## We Don't just Design, We Innovate!

The Lateral Slide Design Project for IL 115 over Gar Creek, Kankakee Co. IL

The high profile Accelerated Bridge Construction project was the 2ND ABC project by the Illinois DOT but the 1ST to be completed in days rather than weeks.



Winner of Best ABC Project Award in the Lateral Slide Technology Category (Highway Bridge) at the 2019 International ABC Conference!

See the time lapsed video here:  
<https://www.youtube.com/watch?v=DiT3BQuNS5I>

## Bridge Preliminary Design

After the preferred alternative is identified and roadway alignment and grades are set, preliminary bridge and track layouts will be developed and submitted to the County, City, CP Railroad, and MnDOT for review. The layouts will identify the bridge length, width, horizontal and vertical clearances, type of superstructure, number of spans, wall types and geometry, pedestrian facilities, and type of substructure.

Construction methods for bridge layouts and potential impacts to the railroad will be coordinated with CP Railroad and the layouts will be provided for their concurrence and approval.

Design will be in conformance with the current *MnDOT State Aid Standards*, *Design Guides and Specifications*, *AREMA Manual for Railway Engineering*, and the *CP Railroad Guidelines*.

## Roadway/Utilities Preliminary Design

Preliminary design for the alternatives will continue with the refinement of roadway, bicycle and pedestrian traffic; right-of-way impacts; utility impacts; and public involvement.

Sustainable and resilient elements identified in the Alternatives Analysis will be continued in the preliminary design of the roadway. A preliminary construction cost estimate will be developed. The concepts will be based on estimated costs, right-of-way impacts, traffic operations and safety, public involvement and comments, desirable and minimum design criteria, and maintenance of traffic issues.

## Hydraulics

WHKS is well-versed in urban and rural storm water conveyance and design standards. An effective and efficient conveyance system will make sure that any existing drainage issues are not exacerbated, and no new issues are created downstream.

Stormwater will be considered during preliminary alignment configurations, providing for a robust roadway design. Floodplain modeling will be conducted in the area of the proposed structures. WHKS is currently assisting the City of Owatonna with updating their *Surface Water Master Plan*.

## Environmental

WHKS will identify any potential environmental impacts for each location and provide recommendations for minimizing or mitigating impacts. WHKS has in-house certified wetland delineation staff if these services are needed.

## We Showed Them The

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WHKS assisted the City of Mason City, IA apply for and receive funding for the construction of two UPRR Overpasses:

### 12th Street UPRR Overpass

- ✓ **60%** State and Federal Funding  
Total Construction Cost: \$3.8 Million



### 19th Street UPRR Overpass

- ✓ **40%** State and Federal Funding  
Total Construction Cost: \$8.2 Million



WHKS assisted the City by:

- Completing Feasibility Studies
- Preparing funding applications
- Meeting with Federal representatives
- Coordinating UPRR cost-sharing

### WHKS Is Experienced With Other Funding Sources, Including:

- MnDOT State Aid
- MN LRIP
- Mn DEED
- State Bonding Bill
- MnDOT LPP

## Utility Coordination

WHKS will utilize the MnDOT Utility Coordination Process and will contact utility companies early in the project. All existing utilities will be located and included in all surveys and/or resultant concepts. Copies of topographic survey base sheets will be provided to all utility companies for review.

## Right-of-Way

Right-of-Way acquisition needs will be identified. WHKS will determine property lines, existing ROW, and existing ownership information.

## Preliminary Roadway and Bridge Design

The selected alternative will be refined into a staff-approved layout.

## Funding Sources

WHKS is prepared to vigorously pursue additional sources of funding. We routinely assist our clients with project funding through MnDOT, State Bonding Bill, and other state and federal programs.

WHKS provided services to the Cities of Mason City and Boone, IA on three grade separation projects that are similar in scope to the CR 180 project. WHKS completed the feasibility studies, prepared funding applications, and met and corresponded with legislators to assist in obtaining and securing funds for the projects.

## Additional Services

WHKS offers the following expertise that we believe would be beneficial for these projects:

- **Desktop Geotechnical Analysis.** Using a geotechnical consultant, perform a desktop review of soil conditions and potential impacts.
- **3D Modeling and Design Visualization.** Particularly during the public outreach phase, the power of imagery can convey a lot of meaning to interested parties and regulators.
- **ADA Compliance Review.** Did you know WHKS is the On-Call Consultant to MnDOT to augment the State's ADA Unit? Tim Hruska leads the efforts across the state and will provide his expertise for the trail connection.

## Availability

WHKS can begin work upon Notice to Proceed.

## Project Team

The following section provides a brief overview of the qualifications and expected work tasks for the WHKS Team.

No changes in the WHKS key personnel will be made without written approval of the Steele County Engineer.

|                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                    | <p><b>Brandon Theobald, P.E. - Project Manager (WHKS)</b><br/>Work Tasks: Alternative Analysis, Funding Investigations, Public Involvement, Report Preparation</p> <table> <tr> <td data-bbox="332 646 889 856"> <p><b>Education:</b><br/>B.S. Degree, Civil Engineering, 2005</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 18 Years</p> </td><td data-bbox="889 646 1520 856"> <p><b>Qualifications:</b> Brandon's design and project management experience includes urban and rural street design and maintenance, State Aid projects, utility design, drainage, erosion control, and construction engineering. He is experienced with grant and loan funding assistance and public outreach activities.</p> </td></tr> </table>   | <p><b>Education:</b><br/>B.S. Degree, Civil Engineering, 2005</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 18 Years</p>                                                                           | <p><b>Qualifications:</b> Brandon's design and project management experience includes urban and rural street design and maintenance, State Aid projects, utility design, drainage, erosion control, and construction engineering. He is experienced with grant and loan funding assistance and public outreach activities.</p> |
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|                                                                                                                                                                                   | <p><b>Timothy Hruska, P.E., L.S. - Project Principal, Roadway QA/QC, Surveyor (WHKS)</b><br/>Work Tasks: Right-of-Way Determination, Public Involvement, Report QA/QC</p> <table> <tr> <td data-bbox="332 999 889 1209"> <p><b>Education:</b><br/>B.S. Degree, Civil Engineering, 2001</p> <p><b>Registration:</b><br/>Professional Engineer/Surveyor: Minnesota</p> <p><b>Number of Years of Experience:</b> 23 Years</p> </td><td data-bbox="889 999 1520 1209"> <p><b>Qualifications:</b> Tim has an extensive project record with managing MnDOT State Aid projects and is the Project Manager for WHKS' ongoing projects with the Minnesota Department of Transportation (MnDOT), including roadway, survey, and ADA staff augmentation projects.</p> </td></tr> </table>                        | <p><b>Education:</b><br/>B.S. Degree, Civil Engineering, 2001</p> <p><b>Registration:</b><br/>Professional Engineer/Surveyor: Minnesota</p> <p><b>Number of Years of Experience:</b> 23 Years</p>                                                                  | <p><b>Qualifications:</b> Tim has an extensive project record with managing MnDOT State Aid projects and is the Project Manager for WHKS' ongoing projects with the Minnesota Department of Transportation (MnDOT), including roadway, survey, and ADA staff augmentation projects.</p>                                        |
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|                                                                                                                                                                                  | <p><b>Bret Farmer, P.E. - Rail Project Manager (H&amp;H)</b><br/>Work Tasks: Railroad Bridge Analysis, Rail Coordination</p> <table> <tr> <td data-bbox="332 1352 889 1598"> <p><b>Education:</b> B.S. and M.S. Degrees, Civil/Construction Engineering, 1991 and 1992<br/>MBA, Marketing/Strategic Management, 2004</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 30 Years</p> </td><td data-bbox="889 1352 1520 1598"> <p><b>Qualifications:</b> Bret has provided railroad coordination and design for several major railroad corridors in MN and across the country. He has led several study and preliminary design projects, including the Warner Avenue Bridge Replacement Study in Ramsey County, MN.</p> </td></tr> </table> | <p><b>Education:</b> B.S. and M.S. Degrees, Civil/Construction Engineering, 1991 and 1992<br/>MBA, Marketing/Strategic Management, 2004</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 30 Years</p> | <p><b>Qualifications:</b> Bret has provided railroad coordination and design for several major railroad corridors in MN and across the country. He has led several study and preliminary design projects, including the Warner Avenue Bridge Replacement Study in Ramsey County, MN.</p>                                       |
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|                                                                                                                                                                                  | <p><b>Justin Zimmerman, P.E., S.E. - Structural Engineer (WHKS)</b><br/>Work Tasks: Alternative Analysis and Layouts</p> <table> <tr> <td data-bbox="332 1730 889 1938"> <p><b>Education:</b> B.S. Degree, Civil Engineering, 2004<br/>M.S. Degree, Civil (Structural) Eng., 2006</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 17 Years</p> </td><td data-bbox="889 1730 1520 1938"> <p><b>Qualifications:</b> Justin has designed and managed major highway, County and City bridge improvements, including several structures over railroads. He has conducted feasibility and planning-level studies and led the design of new bridges and bridge repair/rehabilitation projects.</p> </td></tr> </table>                         | <p><b>Education:</b> B.S. Degree, Civil Engineering, 2004<br/>M.S. Degree, Civil (Structural) Eng., 2006</p> <p><b>Registration:</b><br/>Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 17 Years</p>                                | <p><b>Qualifications:</b> Justin has designed and managed major highway, County and City bridge improvements, including several structures over railroads. He has conducted feasibility and planning-level studies and led the design of new bridges and bridge repair/rehabilitation projects.</p>                            |
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|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>Fouad Daoud, P.E., S.E. - QA/QC Engineer and Railroad/Funding Coordination (WHKS)</b><br/>           Work Tasks: Report QA/QC, Funding Investigations, Railroad Coordination</p> <p><b>Education:</b><br/>           B.S. Degree, Civil Engineering, 1985<br/>           M.S. Degree, Civil (Structural) Eng., 1987</p> <p><b>Registration:</b><br/>           Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 36 Years</p> <p><b>Qualifications:</b> Fouad has been the Project Principal/Project Manager for over 400 bridge design and rehabilitation projects, including grade separation structures, and structures over railroads. He has an extensive project record of railroad coordination and funding application assistance for state and local infrastructure improvements.</p> |
|    | <p><b>Scott Sweet, P.E. - Roadway Project Engineer (WHKS)</b><br/>           Work Tasks: Alternative Analysis and Layouts</p> <p><b>Education:</b><br/>           B.S. Degree, Civil Engineering, 1988</p> <p><b>Registration:</b><br/>           Professional Engineer: Minnesota</p> <p><b>Number of Years of Experience:</b> 35 Years</p> <p><b>Qualifications:</b> Scott led the alternatives analysis tasks and feasibility study preparation for UPRR overpasses in Mason City and Boone, IA. He has been the project manager/principal for over 300 projects including MnDOT assignments and MnDOT State Aid projects.</p>                                                                                                                                                                                                |
|   | <p><b>Brian Birkland, P.E. - Drainage and Hydraulics Engineer (WHKS)</b><br/>           Work Tasks: Drainage, Hydraulic and Floodplain Analysis</p> <p><b>Education:</b><br/>           B.S. Degree, Civil Engineering, 2000</p> <p><b>Registration:</b><br/>           Professional Engineer: Iowa</p> <p><b>Number of Years of Experience:</b> 23 Years</p> <p><b>Qualifications:</b> Brian conducted complex drainage and hydraulic analyses for 2 UPRR overpasses. Additionally, he led the field survey and preliminary roadway design tasks for the Snedden Drive UPRR grade separation in Boone, IA.</p>                                                                                                                                                                                                                  |
|  | <p><b>Howard Swanson, P.E., S.E. - Senior Railroad Bridge Engineer (H&amp;H)</b><br/>           Work Tasks: Railroad Bridge Analysis and Preliminary Design</p> <p><b>Education:</b><br/>           B.S. Degree, Civil Engineering, 1986</p> <p><b>Registration:</b><br/>           Professional Engineer: GA &amp; 11 Other States</p> <p><b>Number of Years of Experience:</b> 36 Years</p> <p><b>Qualifications:</b> Howard worked for the Norfolk Southern Railroad for 32 years and most recently served as the Assistant Chief Engineer of Bridge and Structures. His knowledge of railroad operations gives him unparalleled experience in solving constructibility issues and navigating the railroad coordination processes.</p>                                                                                        |
|  | <p><b>Devin Plantamura, P.E. - Senior Rail Track Designer (H&amp;H)</b><br/>           Work Task: Track Layout Evaluation</p> <p><b>Education:</b><br/>           B.E. Degree, Civil Engineering, 2005<br/>           M.E. Degree, Trans. System Eng., 2009</p> <p><b>Registration:</b><br/>           Professional Engineer: NY &amp; 2 Other States</p> <p><b>Number of Years of Experience:</b> 14 Years</p> <p><b>Qualifications:</b> Devin provides trackwork design for freight, passenger, and high speed rail clients and has worked on projects from conceptual planning through final design and construction phase services.</p>                                                                                                                                                                                      |

## Project Experience

Following are three project examples of similar projects.

### WHKS Team Members:

- » Fouad Daoud, P.E., S.E.
- » Brian Birkland, P.E.

### Services:

- » Feasibility study
- » Alternative analysis/layouts
- » Railroad coordination
- » Survey, mapping, right-of-way
- » Bridge and roadway design
- » Hydraulic analysis
- » Environmental assessment
- » Utility coordination
- » Funding application assistance



*12th Street NW UPRR Overpass*

### WHKS Team Members:

- » Fouad Daoud, P.E., S.E.
- » Scott Sweet, P.E.
- » Justin Zimmerman, P.E., S.E.
- » Brian Birkland, P.E.
- » Tim Hruska, P.E., L.S.

### Services:

- » Feasibility study
- » Alternative analysis/layouts
- » Railroad coordination
- » Survey, mapping, right-of-way
- » Bridge and roadway design
- » Hydraulic and traffic analysis
- » Environmental assessment
- » Utility coordination
- » Funding application assistance

## 12th Street NW UPRR Overpass, Mason City, IA

WHKS assisted the City of Mason City to resolve the traffic delays on 12th Street NW at the Union Pacific Railroad (UPRR) tracks.

Previously, WHKS studied a railroad underpass concept, which consisted of two bridges in close proximity of each other. The plans were prepared and approved by the Union Pacific Railroad and the City of Mason City, but neither bridge was constructed.

WHKS prepared a feasibility study which determined that an overpass would reduce traffic congestion and improve safety and air quality. 12th Street NW is a major east-west route on the north side of Mason City, and is one of only three east-west streets that have a continuous alignment across the City. Expanding commercial development on the west side of the City increased the importance of uninterrupted traffic movement on 12th Street.

The project extended 6½ blocks with the major focus being a 661-foot long overpass bridge structure. The bridge and associated roadway width provides for four traffic lanes, but operates as a three-lane roadway.

## 19th Street SW UPRR Overpass, Mason City, IA

WHKS provided planning, design, and construction engineering services for a grade separation structure on 19th Street SW. This major east-west route was recognized as an important traffic artery due to continuing development along the corridor and increasing volumes at the UPRR crossing.

WHKS prepared a feasibility study outlining construction options, which the City used to secure funding from the Iowa Clean Air Attainment Program.

WHKS designed a pre-stressed concrete beam bridge overpass structure with mechanically stabilized earth (MSE) retaining walls at each abutment. The roadway consists of four 12-foot lanes with attached curb and gutter for through traffic, plus a 16-foot variable width median to provide left turn lanes at the Pierce Avenue intersection.



*19th Street SW UPRR Overpass*





### Connecticut River Railroad Bridge Replacement, Old Saybrook, CT

As prime consultant, H&H designed the replacement of the existing substructure, truss approach spans, and main span across the Connecticut River. The final design was based upon an off-alignment replacement to the south of the existing to reduce impacts to railroad operations and the coastal environment. Single-track service through the project limits were necessary for cut-over and tie-in of the new tracks. The design included a new 11,600-foot, two-track alignment on an embankment with tie-in points at the view Interlocking at the western project limit and the existing Lieutenant River Bridge, east of the main crossing.

The staged two-wire simple catenary system replacement included two-track operations during construction. The signal system design and staged construction allowed the current system to remain in place during installation and initial testing of the new system, minimizing the effort necessary to ready the new bridge for service. Ballasted and non-ballasted alternatives were considered for the track on the bridge superstructure. An open deck with bridge timbers was chosen for the bascule span, and a ballasted track on reinforced concrete was chosen for the approach spans. Mitre rails for high-speed rail were also installed.

### Project Spotlight

#### Similar Project Elements to CR 180!

#### NEC Morrisville Bridge Replacements, Morrisville, PA

H&H is currently providing design services for two bridges that are beginning to show signs of fatigue and have carrying capacities that are not capable of sustaining Amtrak's new ICT train set. Both structures have low vertical underclearance which must be improved to mitigate future bridge strikes by overheight vehicles.



H&H is assisting the client throughout the entire Capital Delivery Process, from Conceptual Alternatives Analysis through Final Design and Construction Support Services.

#### H&H Team Members:

- » Howard Swanson, PE, S.E.
- » Giancarlo Schiano, P.E.
- » Steve Harlacker, P.E., S.E.
- » David Marcie, P.E., S.E.

#### Services:

- » Railroad bridge design
- » Structural design
- » Signal system design
- » Alternatives analysis
- » Staged construction

### Your MN Railroad Experts!

H&H has a regional office located in Roseville, Minnesota and is currently working with MnDOT on the Stillwater Vertical Lift Bridge, providing an evaluation study and repair recommendations associated with the festoon cable system on the bridge. H&H has also recently completed the Rainy River Bascule Bridge Phase 1 Replacement/Expansion Study project for the Canadian National Railway bridge located at the MN/Canada border crossing in Rainer, MN.





## Team Experience with Additional Work Tasks Related to Feasibility Studies

| Projects / Locations                                                                                   | Alternative Analysis | Preliminary Layouts | MnDOT Coordination | Railroad Coordination | Survey/ROW | Hydraulics | Environmental Review | Utility Coordination | Traffic Analysis | Public Outreach | Funding Application |
|--------------------------------------------------------------------------------------------------------|----------------------|---------------------|--------------------|-----------------------|------------|------------|----------------------|----------------------|------------------|-----------------|---------------------|
| Relevant WHKS Project Experience                                                                       |                      |                     |                    |                       |            |            |                      |                      |                  |                 |                     |
| Albert Lea, MN - US 65 Improvements                                                                    | X                    | X                   | X                  |                       | X          | X          | X                    | X                    | X                | X               |                     |
| Byron, MN - East Avenue Reconstruction and Roundabout                                                  | X                    | X                   | X                  |                       | X          | X          | X                    | X                    | X                | X               |                     |
| Byron, MN - 10th Ave & 7th St NE Roundabout                                                            | X                    | X                   | X                  |                       | X          | X          | X                    | X                    | X                | X               |                     |
| Eyota, MN - Utility Extension                                                                          |                      |                     | X                  | X                     | X          |            |                      |                      |                  |                 |                     |
| Eyota, MN - West Side Trail Connection                                                                 |                      |                     | X                  | X                     | X          |            |                      |                      |                  |                 | X                   |
| Kasson, MN - 16th Street NE Improvements                                                               |                      |                     | X                  |                       | X          | X          | X                    | X                    |                  | X               | X                   |
| Kasson, MN - East Main Storm Sewer                                                                     |                      |                     | X                  | X                     | X          |            |                      | X                    |                  |                 |                     |
| Kasson, MN - TH 57 Improvements                                                                        | X                    | X                   | X                  | X                     | X          | X          | X                    | X                    | X                | X               | X                   |
| Rochester, MN - North Broadway Sanitary Sewer Phases 3/4                                               | X                    | X                   | X                  | X                     | X          |            |                      | X                    | X                |                 |                     |
| Winona Co. MN - CSAH 15 Improvements                                                                   |                      |                     | X                  |                       | X          | X          | X                    | X                    |                  | X               |                     |
| Winona, MN - Riverview Drive Reconstruction                                                            |                      | X                   | X                  |                       | X          | X          |                      | X                    | X                |                 | X                   |
| Boone, IA - Snedden Drive/UPRR Grade Separation Study                                                  | X                    | X                   |                    | X                     | X          | X          | X                    | X                    | X                | X               | X                   |
| Mason City, IA - UPRR Grade Feasibility Study (2 Locations)                                            | X                    | X                   |                    | X                     |            |            |                      | X                    | X                | X               |                     |
| Waverly, IA - 12th Street NW Improvements                                                              |                      | X                   |                    | X                     | X          |            |                      | X                    |                  |                 |                     |
| Waverly, IA - Bremer Avenue (IA 3) Improvements                                                        | X                    | X                   |                    | X                     | X          | X          |                      | X                    | X                | X               |                     |
| Relevant H&H Project Experience                                                                        |                      |                     |                    |                       |            |            |                      |                      |                  |                 |                     |
| Rainer, MN - Rainy River Bascule Bridge Phase 1 Replacement/Expansion Study, Canadian National Railway | X                    | X                   |                    | X                     |            |            | X                    |                      |                  |                 |                     |
| Various Locations - Bridge Inspection/Repairs for Canadian Pacific Railway                             |                      |                     |                    | X                     |            |            |                      |                      |                  |                 |                     |
| Perth South Amboy, NJ - Raritan River Bridge                                                           | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| East Lyme, CT - Connecticut River Bridge                                                               | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| East Lyme, CT - Niantic River Bridge, Amtrak                                                           | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| Ft. Lauderdale, FL - CSX New River Bridge                                                              | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| Miami, FL - Miami River Bridge                                                                         | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| Essex County, MA - Saugus River Bridge                                                                 | X                    | X                   |                    | X                     | X          | X          | X                    | X                    |                  | X               |                     |
| New Haven, CT - Tomlinson Bridge, P&W Railroad                                                         | X                    | X                   |                    | X                     | X          | X          | X                    | X                    | X                | X               |                     |
| Cleveland, OH - Waterfront Line Bridge Rehabilitation                                                  | X                    | X                   |                    | X                     |            |            |                      | X                    |                  |                 |                     |



| Task                                                            | Deliverable                                                                                                                                 | Start    | End      | 2023 |     |     |     |     |     |     |     |     |  | 2024 |  |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|------|-----|-----|-----|-----|-----|-----|-----|-----|--|------|--|
|                                                                 |                                                                                                                                             |          |          | May  | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan |  |      |  |
| Steele County/Owatonna CR 180 Railroad Bridge Feasibility Study |                                                                                                                                             | 5/1/23   | 12/31/23 |      |     |     |     |     |     |     |     |     |  |      |  |
| Project Management                                              | Meeting Documentation                                                                                                                       | 5/1/23   | 12/31/23 |      |     |     |     |     |     |     |     |     |  |      |  |
| Public Involvement                                              | Public Involvement Plan, Open House and Meeting Documents                                                                                   | 7/1/23   | 12/31/23 |      |     |     |     |     |     |     |     |     |  |      |  |
| Alternative Analysis                                            | Layouts of Alternatives, Memo of Decision Matrix on Preferred Alternative                                                                   | 5/1/23   | 11/3/23  |      |     |     |     |     |     |     |     |     |  |      |  |
| Railroad Coordination                                           | Memorandum Documenting Railroad Coordination Process                                                                                        | 5/31/23  | 12/31/23 |      |     |     |     |     |     |     |     |     |  |      |  |
| Surveys and Mapping                                             | Topographic Survey                                                                                                                          | 7/1/23   | 8/3/23   |      |     |     |     |     |     |     |     |     |  |      |  |
| Preliminary Hydraulics                                          | Hydraulics Memo                                                                                                                             | 7/1/23   | 11/3/23  |      |     |     |     |     |     |     |     |     |  |      |  |
| Environmental Impact Review                                     | Environmental Impact Memo                                                                                                                   | 7/1/23   | 11/3/23  |      |     |     |     |     |     |     |     |     |  |      |  |
| Public and Private Utility Identification and Coordination      | Utility Design Meeting Memo                                                                                                                 | 8/1/23   | 11/1/23  |      |     |     |     |     |     |     |     |     |  |      |  |
| Right-of-Way                                                    | [Address in Feasibility Study]                                                                                                              | 8/1/23   | 11/1/23  |      |     |     |     |     |     |     |     |     |  |      |  |
| Preliminary Design/Layout                                       | Feasibility Study - Concept Layouts, Hydraulics, Bridge Type, Decision Matrices, Cost Estimates, Schedules, Funding, Preferred Alternatives | 10/31/23 | 12/31/23 |      |     |     |     |     |     |     |     |     |  |      |  |

Detailed Work Plan

The fees have been calculated on a Direct Labor Multiplier Basis plus expenses. If selected to perform this work, invoices will be issued monthly to the City.

Assumptions

- o H&H will prepare two track alignment options for Alternative 2 - Underpass. One option will be an online rail bridge replacement that will match the existing horizontal track geometry. A new track profile will be designed to achieve the desired roadway clearance. The second option will be an offline rail bridge replacement southwest of the existing rail bridge. This option will include a new horizontal track alignment design in addition to a new profile.
- o H&H will further analyze the bridge options outlined in the original feasibility study and make recommendations for improvements. It is likely that a span arrangement including a through girder span with a shallow structure depth will provide the greatest vertical clearance.
- o The track design work will begin with analysis of available existing documentation made available by the railroad, which may include track charts, valuation maps, car geometry data, recent inspection reports, design and construction standards, and standard track plans. H&H will prepare a design criteria report that will summarize the applicable standards.
- o H&H will perform a horizontal and vertical regression analysis on the top of rail survey shots to find a best fit alignment for the existing condition, which will serve as the basis for the development of the alignment designs for both options.
- o H&H will prepare a conceptual horizontal alignment for the offline option that meets the geometry criteria for the design speed and achieves the necessary separation from the existing bridge to allow for offline construction to the southwest.
- o H&H track design engineers will coordinate with bridge and roadway designers to establish the minimum required top of rail to achieve the desired roadway vertical clearance, and will design a profile to raise the top of rail elevation. The designed profile will be different for each option as the roadway crossing will be at different locations and the structure depth for each option may also be different.
- o H&H designers will consider the construction staging of the work in preparing the designs to minimize rail operational impacts.
- o For Alternative 6, H&H design engineers will coordinate with highway bridge designers to ensure that the proposed pier layout and vertical and horizontal clearances meet railroad requirements.
- o H&H will provide input to the construction cost estimate for each option as it relates to the track and railroad bridge construction.
- o Bridge Type, Size and Location plans, and track geometrics plan/profile sheets will be prepared for each option and submitted as part of the alternatives analysis and matrix.
- o H&H will advance the preferred option and prepare a staff approved layout, which will include preliminary railroad bridge and track design. The hours included in the cost proposal assume that Alternative 2 is selected with the offline bridge option. If either the online option for Alternative 2 or Alternative 6 is selected, the track design scope would be reduced.
- o The preliminary design will consist of preliminary railroad bridge plans and track alignment and profile presented on plan/profile sheets and curve data tables. The plan set will also include general notes, legend, and abbreviations, drawing index and key plan, track typical sections, and trackwork details. The deliverable will also include track staging plans. The preliminary design will not include cross sections.

Cost of Services



Detailed Work Plan

| Cost of Services                                                  |                                                            | PROJECT TITLE: Preliminary Design of CR 180 Bridge, Steele County, MN |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
|-------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------|-----------------|-----------------------|---------------------------------|-------------------------|------------------|-----------------------------|-------------------|--------------|----------------------------|---------------------------|---------------------------------|----------------------------|---------------------|--------------------------------|-------------------------|--------------|---------------|
|                                                                   |                                                            | WHKS & CO.                                                            |                 |                       |                                 |                         |                  |                             |                   |              | HARDESTY & HANOVER, LLC    |                           |                                 |                            |                     |                                |                         |              |               |
| DESCRIPTION OF PROFESSIONAL SERVICES OR TASKS                     |                                                            | Project Principal                                                     | Project Manager | Asst. Project Manager | Roadway / Trail Design Engineer | Utility Design Engineer | Enviro Scientist | Structural Project Engineer | Survey Supervisor | Technicians  | Railroad Project Principal | Railroad Project Engineer | Senior Railroad Bridge Engineer | Senior Structural Engineer | Structural Engineer | Senior Railroad Track Engineer | Railroad Track Engineer | Technicians  | Subtotals     |
|                                                                   |                                                            | Staff Assignment by Hours                                             |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 1 Project Management                                         |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 1.1                                                               | Administration                                             | 8.0                                                                   | 4.0             |                       |                                 |                         |                  |                             |                   |              | 8.0                        | 16.0                      |                                 |                            |                     |                                |                         |              | 36.0          |
| 1.2                                                               | General Coordination                                       | 2.0                                                                   | 6.0             |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 8.0           |
| 1.3                                                               | Quality Assurance and Quality Control Functions (QA/QC)    | 8.0                                                                   | 8.0             | 8.0                   |                                 |                         |                  |                             |                   |              |                            |                           |                                 | 8.0                        |                     |                                | 8.0                     |              | 40.0          |
| 1.4                                                               | Meetings                                                   |                                                                       | 20.0            |                       |                                 |                         |                  |                             |                   |              | 10.0                       | 2.0                       | 2.0                             |                            |                     | 2.0                            |                         |              |               |
| SUBTOTAL HOURS                                                    |                                                            | 18.0                                                                  | 38.0            | 8.0                   | 0.0                             |                         | 0.0              | 0.0                         | 0.0               | 0.0          | 18.0                       | 18.0                      | 2.0                             | 8.0                        | 0.0                 | 2.0                            | 8.0                     | 0.0          | 120.0         |
| SUBTOTAL FEE                                                      |                                                            | \$ 3,420.00                                                           | \$ 5,890.00     | \$ 1,000.00           | \$ -                            | \$ -                    | \$ -             | \$ -                        | \$ -              | \$ -         | \$ 5,670.00                | \$ 2,700.00               | \$ 490.00                       | \$ 1,800.00                | \$ -                | \$ 490.00                      | \$ 1,880.00             | \$ -         | \$ 23,340.00  |
| Task 2 Alternative Analysis                                       |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 2.1                                                               | Evaluate Proposed Alternatives                             | 2.0                                                                   | 4.0             | 4.0                   | 4.0                             | 4.0                     |                  | 4.0                         |                   | 4.0          | 2.0                        | 2.0                       | 4.0                             |                            | 8.0                 | 8.0                            |                         | 30.0         | 80.0          |
| 2.2                                                               | Refine Proposed Alternatives 2 and 6                       | 2.0                                                                   | 4.0             | 4.0                   | 20.0                            | 8.0                     |                  | 12.0                        |                   | 20.0         |                            | 2.0                       |                                 |                            | 16.0                | 14.0                           |                         | 120.0        | 222.0         |
| 2.3                                                               | Identify Impacts Associated with Alternatives              | 2.0                                                                   | 4.0             | 4.0                   | 8.0                             |                         |                  |                             |                   | 8.0          | 2.0                        | 2.0                       | 2.0                             |                            | 10.0                | 10.0                           |                         | 30.0         | 82.0          |
| 2.4                                                               | Bridge Type Study                                          | 2.0                                                                   | 4.0             |                       |                                 |                         |                  | 16.0                        |                   | 24.0         |                            |                           |                                 |                            |                     |                                |                         |              | 46.0          |
| SUBTOTAL HOURS                                                    |                                                            | 8.0                                                                   | 16.0            | 12.0                  | 32.0                            | 12.0                    | 0.0              | 32.0                        | 0.0               | 56.0         | 4.0                        | 6.0                       | 6.0                             | 0.0                        | 34.0                | 32.0                           | 0.0                     | 180.0        | 430.0         |
| SUBTOTAL FEE                                                      |                                                            | \$ 1,520.00                                                           | \$ 2,480.00     | \$ 1,500.00           | \$ 3,456.00                     | \$ 1,296.00             | \$ -             | \$ 4,608.00                 | \$ -              | \$ 4,368.00  | \$ 1,260.00                | \$ 900.00                 | \$ 1,470.00                     | \$ -                       | \$ 5,100.00         | \$ 7,840.00                    | \$ -                    | \$ 17,100.00 | \$ 52,898.00  |
| Task 3 Survey                                                     |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 3.1                                                               | Topo Survey                                                |                                                                       | 2.0             |                       |                                 |                         |                  |                             | 8.0               | 80.0         |                            |                           |                                 |                            |                     |                                |                         |              | 90.0          |
| 3.2                                                               | GIS Coordination                                           |                                                                       | 2.0             |                       |                                 |                         | 8.0              |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 10.0          |
| SUBTOTAL HOURS                                                    |                                                            | 0.0                                                                   | 4.0             | 0.0                   | 0.0                             | 0.0                     | 8.0              | 0.0                         | 8.0               | 80.0         | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 100.0         |
| SUBTOTAL FEE                                                      |                                                            | \$ -                                                                  | \$ 620.00       | \$ -                  | \$ -                            | \$ -                    | \$ 784.00        | \$ -                        | \$ 904.00         | \$ 6,240.00  | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 8,548.00   |
| Task 4 Hydraulics                                                 |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 4.1                                                               | Bridge Stream Hydraulics                                   | 1.0                                                                   | 2.0             | 8.0                   |                                 | 80.0                    |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 91.0          |
| 4.2                                                               | Rice Street Hydraulics                                     | 1.0                                                                   | 2.0             | 8.0                   |                                 | 20.0                    |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 31.0          |
| SUBTOTAL HOURS                                                    |                                                            | 2.0                                                                   | 4.0             | 16.0                  | 0.0                             | 100.0                   | 0.0              | 0.0                         | 0.0               | 0.0          | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 122.0         |
| SUBTOTAL FEE                                                      |                                                            | \$ 380.00                                                             | \$ 620.00       | \$ 2,000.00           | \$ -                            | \$ 10,800.00            | \$ -             | \$ -                        | \$ -              | \$ -         | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 13,800.00  |
| Task 5 Environmental                                              |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 5.1                                                               | Identify Environmental Impacts                             |                                                                       | 2.0             | 8.0                   |                                 |                         | 8.0              |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 18.0          |
| 5.2                                                               | Wetland Delineation                                        |                                                                       | 2.0             | 8.0                   |                                 | 60.0                    |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 70.0          |
| SUBTOTAL HOURS                                                    |                                                            | 0.0                                                                   | 4.0             | 16.0                  | 0.0                             | 0.0                     | 68.0             | 0.0                         | 0.0               | 0.0          | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 88.0          |
| SUBTOTAL FEE                                                      |                                                            | \$ -                                                                  | \$ 620.00       | \$ 2,000.00           | \$ -                            | \$ -                    | \$ 6,664.00      | \$ -                        | \$ -              | \$ -         | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 9,284.00   |
| Task 6 Public and Private Utility Identification and Coordination |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 6.1                                                               | One-Call and Utility Mapping                               |                                                                       | 2.0             |                       |                                 |                         |                  |                             | 2.0               | 8.0          |                            |                           |                                 |                            |                     |                                |                         | 0.0          | 12.0          |
| 6.2                                                               | Utility Design Meeting                                     |                                                                       | 2.0             | 6.0                   |                                 |                         |                  |                             | 4.0               |              |                            |                           |                                 |                            |                     |                                |                         |              | 12.0          |
| 6.3                                                               | Coordination with Electrical Transmission Line             | 2.0                                                                   | 20.0            | 10.0                  |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 32.0          |
| SUBTOTAL HOURS                                                    |                                                            | 2.0                                                                   | 24.0            | 16.0                  | 0.0                             | 0.0                     | 0.0              | 0.0                         | 6.0               | 8.0          | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 56.0          |
| SUBTOTAL FEE                                                      |                                                            | \$ 380.00                                                             | \$ 3,720.00     | \$ 2,000.00           | \$ -                            | \$ -                    | \$ -             | \$ -                        | \$ 678.00         | \$ 624.00    | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 7,402.00   |
| Task 7 Preliminary Roadway and Bridge Design                      |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 7.1                                                               | Four Alternative Concept Layouts                           | 4.0                                                                   | 8.0             | 10.0                  | 5.0                             | 8.0                     |                  | 16.0                        |                   | 36.0         |                            | 4.0                       | 2.0                             | 4.0                        | 16.0                | 20.0                           | 4.0                     | 110.0        | 247.0         |
| 7.4                                                               | Finalize Alternative Layouts                               | 2.0                                                                   | 8.0             | 10.0                  | 5.0                             | 8.0                     |                  | 8.0                         |                   | 28.0         | 2.0                        |                           | 2.0                             | 4.0                        | 12.0                | 16.0                           | 4.0                     | 70.0         | 179.0         |
| 7.3                                                               | Geometric Layout                                           | 2.0                                                                   | 8.0             | 20.0                  | 10.0                            | 8.0                     |                  | 8.0                         |                   | 60.0         |                            |                           |                                 |                            |                     |                                |                         |              | 116.0         |
| SUBTOTAL HOURS                                                    |                                                            | 8.0                                                                   | 24.0            | 40.0                  | 20.0                            | 24.0                    | 0.0              | 32.0                        | 0.0               | 124.0        | 2.0                        | 4.0                       | 4.0                             | 8.0                        | 28.0                | 36.0                           | 8.0                     | 180.0        | 542.0         |
| SUBTOTAL FEE                                                      |                                                            | \$ 1,520.00                                                           | \$ 3,720.00     | \$ 5,000.00           | \$ 2,160.00                     | \$ 2,592.00             | \$ -             | \$ 4,608.00                 | \$ -              | \$ 9,672.00  | \$ 630.00                  | \$ 600.00                 | \$ 980.00                       | \$ 1,800.00                | \$ 4,200.00         | \$ 8,820.00                    | \$ 1,880.00             | \$ 17,100.00 | \$ 65,282.00  |
| Task 8 Public Involvement                                         |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 8.1                                                               | Property Owners                                            |                                                                       | 8.0             | 16.0                  |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 24.0          |
| 8.2                                                               | Public and Agency Involvement Plan                         | 4.0                                                                   | 8.0             | 16.0                  |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              | 28.0          |
| SUBTOTAL HOURS                                                    |                                                            | 4.0                                                                   | 16.0            | 32.0                  | 0.0                             | 0.0                     | 0.0              | 0.0                         | 0.0               | 0.0          | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 52.0          |
| SUBTOTAL FEE                                                      |                                                            | \$ 760.00                                                             | \$ 2,480.00     | \$ 4,000.00           | \$ -                            | \$ -                    | \$ -             | \$ -                        | \$ -              | \$ -         | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 7,240.00   |
| Task 9 Railroad Coordination                                      |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 9.1                                                               | Coordination - Evaluation of Alternatives                  | 2.0                                                                   | 4.0             | 4.0                   |                                 |                         |                  | 8.0                         |                   |              | 10.0                       | 8.0                       | 16.0                            |                            |                     | 16.0                           |                         |              | 68.0          |
| 9.2                                                               | Coordination - Field Work                                  | 2.0                                                                   | 4.0             | 4.0                   |                                 |                         |                  |                             | 8.0               |              |                            |                           |                                 |                            |                     |                                |                         |              | 18.0          |
| SUBTOTAL HOURS                                                    |                                                            | 4.0                                                                   | 8.0             | 8.0                   | 0.0                             | 0.0                     | 0.0              | 8.0                         | 8.0               | 0.0          | 10.0                       | 8.0                       | 16.0                            | 0.0                        | 0.0                 | 16.0                           | 0.0                     | 0.0          | 86.0          |
| SUBTOTAL FEE                                                      |                                                            | \$ 760.00                                                             | \$ 1,240.00     | \$ 1,000.00           | \$ -                            | \$ -                    | \$ -             | \$ 1,152.00                 | \$ 904.00         | \$ -         | \$ 3,150.00                | \$ 1,200.00               | \$ 3,920.00                     | \$ -                       | \$ -                | \$ 3,920.00                    | \$ -                    | \$ -         | \$ 17,246.00  |
| Task 10 Additional Tasks                                          |                                                            |                                                                       |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| 10.1                                                              | 3D Model of Preferred Alternative                          | 2.0                                                                   | 4.0             | 2.0                   |                                 |                         |                  |                             |                   | 24.0         |                            |                           |                                 |                            |                     |                                |                         |              | 32.0          |
| SUBTOTAL HOURS                                                    |                                                            | 2.0                                                                   | 4.0             | 2.0                   | 0.0                             | 0.0                     | 0.0              | 0.0                         | 0.0               | 24.0         | 0.0                        | 0.0                       | 0.0                             | 0.0                        | 0.0                 | 0.0                            | 0.0                     | 0.0          | 32.0          |
| SUBTOTAL FEE                                                      |                                                            | \$ 380.00                                                             | \$ 620.00       | \$ 250.00             | \$ -                            | \$ -                    | \$ -             | \$ -                        | \$ -              | \$ 1,872.00  | \$ -                       | \$ -                      | \$ -                            | \$ -                       | \$ -                | \$ -                           | \$ -                    | \$ -         | \$ 3,122.00   |
| Project Total Hours                                               |                                                            | 48.0                                                                  | 142.0           | 150.0                 | 52.0                            | 136.0                   | 76.0             | 72.0                        | 22.0              | 292.0        | 34.0                       | 36.0                      | 28.0                            | 16.0                       | 62.0                | 86.0                           | 16.0                    | 360.0        | 1628.0        |
| Project Rates                                                     |                                                            | \$190.00                                                              | \$155.00        | \$125.00              | \$108.00                        | \$108.00                | \$98.00          | \$144.00                    | \$113.00          | \$78.00      | \$315.00                   | \$150.00                  | \$245.00                        | \$225.00                   | \$150.00            | \$245.00                       | \$235.00                | \$95.00      |               |
| Project Total Fee                                                 |                                                            | \$ 9,120.00                                                           | \$ 22,010.00    | \$ 18,750.00          | \$ 5,616.00                     | \$ 14,688.00            | \$ 7,448.00      | \$ 10,368.00                | \$ 2,486.00       | \$ 22,776.00 | \$ 10,710.00               | \$ 5,400.00               | \$ 6,860.00                     | \$ 3,600.00                | \$ 9,300.00         | \$ 21,070.00                   | \$ 3,760.00             | \$ 34,200.00 | \$ 208,162.00 |
| TASK SUMMARY                                                      |                                                            | Total                                                                 |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 1                                                            | Project Management                                         | \$23,340.00                                                           |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 2                                                            | Alternative Analysis                                       | \$52,898.00                                                           |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 3                                                            | Survey                                                     | \$8,548.00                                                            |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 4                                                            | Hydraulics                                                 | \$13,800.00                                                           |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 5                                                            | Environmental                                              | \$9,284.00                                                            |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 6                                                            | Public and Private Utility Identification and Coordination | \$7,402.00                                                            |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 7                                                            | Preliminary Roadway and Bridge Design                      | \$65,282.00                                                           |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 8                                                            | Public Involvement                                         | \$7,240.00                                                            |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 9                                                            | Railroad Coordination                                      | \$17,246.00                                                           |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
| Task 10                                                           | Additional Tasks                                           | \$3,122.00                                                            |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
|                                                                   | Subtotal                                                   | \$208,162.00                                                          |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
|                                                                   | Expenses                                                   | \$5,000.00 Mileage, Rail Road Flagging                                |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |
|                                                                   | TOTAL PROJECT COST                                         | \$213,162.00                                                          |                 |                       |                                 |                         |                  |                             |                   |              |                            |                           |                                 |                            |                     |                                |                         |              |               |



## Summary

### Why is the WHKS Team the Best Choice?

We respectfully ask you to select WHKS for this work based on our understanding of the project's key issues and our commitment to providing functional, cost-effective and accessible solutions.





## Steele County Agenda Item

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**Subject:** Fleet Vehicle/Mileage Reimbursement Policy Review

**Department:** Administrator's Office

**Committee Meeting Date:** N/A

**Work Session Date:** May 23, 2023

**Consent Agenda:** ☐ Yes ☒ No

**Resolution:** ☐ Yes ☐ No

**Policy Committee Recommendation:**

N/A

**Recommendation:**

To Approve the Fleet Vehicle Policy and make effective when the Fleet Management System is enacted.

**Background (*Including Budget Impact*):**

**Steele County Vehicle Policy:** This policy establishes the requirements associated with employees driving vehicles as part of performing duties for Steele County.

**Vehicle Procedure Manual:** The intent of this procedure manual is to assist County Employees through the expectations and procedures when traveling via motor vehicle while on Steele County business.

The County Board made a commitment to modernize the Steele County fleet vehicle system in 2018 which led to the current leasing system through Enterprise. With the investment of the vehicles, Steele County needs to develop a system/policy to use them to their full extent. The vehicle policy and procedure manual will build the infrastructure to make this utilization possible. The attachment vehicle policy provides the overall guidance for fleet vehicle usage and mileage reimbursements. Agile Fleet system will help to optimize our fleet vehicle usage through managing scheduling and access to the vehicles, as well as accountability/reporting; it is expected to be ready for operation in the June - July timeframe.

**Attachments:**

Steele County Vehicle Policy

## **Steele County Vehicle Policy**

**05/19/2023**

**Purpose of policy:** A Steele County employee may be required to drive a vehicle as a part of performing duties for Steele County. This policy establishes the requirements associated with such activity.

**Vehicle Use:** Employees are to use a County Fleet vehicle when traveling on Steele County business whenever a fleet vehicle is available unless prior authorization by a supervisor or department head has been given.

**Driver's License and Insurance:** Employees who drive a county vehicle must have a valid driver's license with appropriate classification. Employees who drive their personal vehicle while performing duties for Steele County are required to have a valid driver's license of appropriate classification and to carry sufficient personal vehicle insurance required by law. Employees may be required to submit a copy of their driver's license and/or personal vehicle insurance card to Steele County upon request. Employees who drive a county or personal vehicle without a valid driver's license of appropriate classification or a personal vehicle without proper vehicle insurance are subject to disciplinary action up to and including termination.

**Traffic Laws:** When an employee drives a county or personal vehicle while performing duties for Steele County they shall obey all traffic laws regarding operation of a motor vehicle including speed limits, use of seat belts, portable devices (including prohibitions on texting) and driving under the influence. Employees are responsible for all fines and penalties imposed for parking or traffic violations with respect to the vehicle, this also includes lockouts and lost keys.

### **Use of Steele County Vehicles:**

1. **Purpose:** Steele County vehicles are made available to employees to provide a safe and cost-effective means of transportation while performing duties for Steele County.
2. **Carpooling:** Carpooling is encouraged when practical.
3. **Passengers:** Passengers not associated with Steele County business are not allowed in Steele County vehicles
4. **Transportation of clients:** Employees are to use Steele County vehicles for transportation of clients.
5. **Incidental personal use:** Steele County vehicles shall not be used by an employee for personal use other than for very incidental use such as stopping for a meal while conducting Steele County business.
6. **Parking at Steele County sites:** When returning to the work site where the vehicle is stored, the employee shall park in the designated parking area.
7. **Fueling requirement:** An employee shall return Steele County vehicles to the parking area with at least  $\frac{3}{4}$ -full gas tank. *See Steele County Vehicle Fueling procedure.*
8. **Tidiness:** Each employee using a Steele County vehicle is responsible for keeping the



interior of the vehicle in a neat condition including removing trash from the vehicle upon its return.

9. **Keys:** Return all keys to their appropriate location.
10. **Reserving / Priority access:** Generally, Steele County vehicles are available on a first-come, first-reserved basis. *See the Steele County Vehicle Reservation Procedure.*
11. **Tobacco/Vaping:** Tobacco use of any kind and vaping is prohibited at all times in any Steele County vehicle.

#### **Personal Vehicle Use:**

1. Steele County will reimburse employees for mileage when a personal automobile is used when a fleet vehicle is not available, or the use of a personal automobile has been authorized by a supervisor or Department Head.
2. Steele County utilizes two reimbursement rates:
  - a. Rate 1: County Board approved IRS rate
  - b. Rate 2: Modified rate of 50% of Rate 1 rounded-up to the nearest hundredth.
3. Calculating mileage reimbursement shall follow IRS Reg. § 1.262-1(b) (5).

#### **Steele County Vehicle Maintenance and Repair:**

1. **Scheduling of maintenance and repair:** The Facilities and Fleet Director is responsible for scheduling routine maintenance and repairs for the Steele County vehicles.
2. **Non-urgent maintenance and repair:** If an employee notices the need for a Steele County vehicle to be repaired or maintenance done, such as a chip in the windshield or paint that does not impact their ability to complete a trip, the employee shall report the information to the Facilities and Fleet Director when the vehicle is returned.
3. **Urgent repair:**
  - a. After hours or during travels if an employee needs assistance with a county vehicle, such as a flat tire or engine stalling, they are to contact Roadside Assistance. Information is located in each car.
  - b. During business hours if an employee notices a repair that must be done to begin travel, such as a flat tire, the employee shall report the information to the Fleet Director. The Fleet Director will work with the employee to determine a course of action. If the employee is unable to reach the Fleet Director, the employee shall contact Administration for further instruction.

**Auto Accident / Auto Damage/ Theft Reporting:** An employee's safety is the first and most important priority. In the event of an **auto accident** while performing Steele County duties, an employee shall:

1. Take immediate steps to prevent further accidents.
2. Call 9-1-1.
3. Do NOT admit fault or make statements about the accident to anyone except law enforcement.
4. Obtain the following information:
  - a. Name and contact information of each driver, passenger, and witness.
  - b. Driver's license numbers for all drivers involved.

- c. Name of insurance company, policy number and license plate number for each vehicle involved.
- d. Take pictures of the damage, if safe to do so.
5. Write down other pertinent information including date, time, specific location, weather conditions and verbal statements made by other parties involved.
6. Provide your name, MCIT insurance policy information or personal insurance policy information and Steele County's contact information to the other driver(s.)

Report the accident as follows:

1. To the employee's supervisor as soon as possible. The employee's supervisor shall report the accident to the Emergency & Risk Management Director, (Facilities and Fleet Director, if unavailable) if there is damage to a Steele County vehicle, unless the employee indicates they are able and willing to report the incident directly.
2. To the Human Resources Department within 24 hours if the accident involves injury or suspected injury to a Steele County employee.
3. Upon return to the office, the employee shall complete and submit the MCIT Accident - Injury Report form to the Risk Management Director and if applicable the Accident – Injury Report form to Human Resources.

In case of **theft** or **damage** of county equipment/property while performing County duties, an employee shall:

1. Contact law enforcement.
2. Provide a statement to authorities and obtain the police report or report number.
3. Take pictures of the damage, if safe to do so.
4. Upon return to the office, complete MCIT Incident Report Form.

Steele County or MCIT will not cover physical damage, loss to personal vehicles or theft of personal property. The employee must file the claim with their personal insurance company.

#### **Additional information found in the Vehicle Procedure Manual**

- Commercial Driver's License (CDL) Requirements
- Notification of convictions for driver violations
- Mileage Rate Reimbursement
- Calculating Mileage for Reimbursement

#### **Additional Procedures**

- Vehicle Reservation Procedure
- Vehicle Fueling Procedure

#### **Forms**

- Driver's License / Insurance Verification
- Mileage Expense Report
- MCIT Accident / Theft Report Form
- Accident – Injury Report Form

**Legal references and authority.** MN Statutes, §§ 471.346, 471.666.



## Steele County Agenda Item

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**Subject: Set a Public Hearing Date of June 13, 2023 to Adopt a Local Housing Trust Fund Resolution & Ordinance**

**Department:** Administrator's Office

**Committee Meeting Date:** n/a

**Board Meeting Date:** May 23, 2023

**Consent Agenda:** ☐ Yes ☒ No

**Resolution:** ☐ Yes ☐ No

### **Recommendation:**

Set a Public Hearing date of June 13, 2023 to Adopt a resolution to establish a Local Housing Trust Fund Ordinance.

### **Background (*Including Budget Impact*):**

During the April 11 Steele County Board Work Session, Karina Schmitz, MNPrairie Housing Resource Specialist, provided details regarding the establishment of a Local Housing Trust Fund (LHTF) in conjunction with a recommendation to appropriate 90% of the member-county's Local Homeless Prevention Aid (LHPA) to seed the LHTF and appropriate the remaining 10% into a fund to be utilized for hotel shelter vouchers. While no formal resolution was adopted on April 11, there was a unanimous agreement among the commissioners to proceed with the subsequent steps in this process.

A next step towards establishment of a Local Housing Trust Fund entails following Steele County's procedure to officially adopt the ordinance.

### **Attachments:**

Local Housing Trust Fund Ordinance



**The Steele County Board of Commissioners does hereby ordain:**

**An Ordinance establishing a Local Housing Trust Fund to address needs for  
affordable housing within the County of Steele**

**SECTION 1.0 PURPOSE, AUTHORITY AND JURISDICTION**

**1.1 TITLE**

This Ordinance shall be known, cited, and referred to as the “Steele County Local Housing Trust Fund Ordinance”. When referred to herein, it shall be known as “this Ordinance”.

**1.2 STATEMENT OF PURPOSE**

This Ordinance is adopted for the purpose of establishing a fund which allows for the flexibility to respond in innovative ways to address local affordable housing needs.

**1.3 STATUTORY AUTHORITY**

This Ordinance is adopted pursuant to the authorization and policies contained in Minnesota Statutes, section 462C.16 and Minnesota Statutes 462A.201.

**1.4 JURISDICTION**

This ordinance shall apply to all areas in Steele County.

**SECTION 2.0 DEFINITIONS**

Affordability Period. The amount of time the project must meet affordability criteria.

Affordable Housing. Refers to housing that costs 30% or less of a household’s gross income.

Community Advisory Committee. A committee comprised of a mix of elected officials, administrator entity staff, housing organization staff, and residents with lived experience or some other housing expertise tasked with providing oversight of the Local Housing Trust Fund.

Elected officials. Refers to County Commissioners.

Fiscal Agent. The entity which establishes the Local Housing Trust Fund Account.

Fund Administrator. Entity responsible for administration of the Local Housing Trust Fund in accordance with Minnesota Statutes and the local County ordinance.

Local Homeless Prevention Aid. funding distributed to counties to help local governments ensure no child is homeless within a local jurisdiction by keeping families from losing housing and helping those experiencing homelessness find housing.

Local Housing Trust Fund. A fund established by a local government with one or more dedicated sources of public revenue for housing.

#### SECTION 3.0 ADMINISTRATION OF LOCAL HOUSING TRUST FUND

##### 3.1 THE AUTHORITY

[entity to be determined] (the “Fund Administrator”) shall administer the Local Housing Trust Funds on behalf of Steele County.

##### 3.2 REPORTING AND DOCUMENTATION REQUIREMENTS

The Fund Administrator shall report annually to the County on the use of the Local Housing Trust Fund, including total amount expended, types of expenses, number of households served, and number of new affordable housing units established.

##### 3.3 ADMINISTRATIVE EXPENSES

The Authority may charge up to 10% of the balance of the fund for program administrative expenses.

#### SECTION 4.0 OVERSIGHT AND ADVISORY

##### 4.1 COMMUNITY ADVISORY COMMITTEE

A Community Advisory Committee will be established to provide oversight of a LHTF

4.12 The Community Advisory Committee will provide recommendations to the County board regarding general provisions of the Local Housing Trust Fund.

4.13 The Community Advisory Committee will meet one time per year minimally.

4.14 Annually, the Community Advisory Committee will recommend Housing Trust Fund funding priorities and present a budget proposal to the County Board.

4.13 Members may include:

- (a) Elected officials
- (b) Administrator entity staff
- (c) Housing organization staff
- (d) Residents with lived experience
- (e) Residents with housing expertise

##### 4.2 COUNTY BOARD OF COMMISSIONERS

The County Board will make the final decision regarding:

- (a) Defining Housing Trust Fund Funding Priorities
- (b) Approving an annual budget for Housing Trust Fund expenditure priorities
- (c) Defining the housing activities eligible for support from the Local Housing Trust Fund
- (d) Defining target population(s) and establishing parameters about which types of households will be eligible to be served by Local Housing Trust Fund dollars.
- (e) Specify the types of organizations that are eligible to apply for and utilize the proceeds of funding awards.

- (f) Determine the form that a Local Housing Trust Fund award will take, such as grants or loans as well as the specific terms and conditions of these funding awards
- (g) Determine the required affordability period – the amount of time the project must meet affordability criteria.
- (h) Determine the responsibility of a loan grantee if the required affordability period is not fulfilled.

## SECTION 5.0 GENERAL PROVISIONS

### 5.1 FUNDING SOURCES

- 5.12 Public revenues from one or more sources must be dedicated to the Local Housing Trust Fund. Allocated revenues are protected for housing uses in the community.
- 5.13 90% of the annual County Local Homeless Prevention Aid will be dedicated to the Local Housing Trust Fund through 2028.
- 5.14 Prior to December 31, 2028, will take additional action to determine whether to continue with a Local Housing Trust Fund. If a decision is made to continue, the board will determine one or more sources of public revenues that will be dedicated to the Local Housing Trust Fund.
- 5.15 Other one-time or ongoing funding sources may include, but are not limited to:
  - (a) Donations
  - (b) Bond proceeds
  - (c) Grants and loans from a state, federal or private source
  - (d) Appropriates by a local government to the fund
  - (e) Investment earnings of the fund
  - (f) Housing and redevelopment authority levies
  - (g) Matching funds from a federal or state program designed to fund an affordable housing trust fund

### 5.2 DISTRIBUTIONS

- 5.21 Authorized expenditures outlined in MN Statutes 462C.16
  - (a) Administrative expenses, but not more than ten percent of the balance of the fund may be spent on administration
  - (b) Make grants, loans and loan guarantees for the development, rehabilitation, or financing of housing
  - (c) Match other funds from federal, state, or private resources for housing projects
  - (d) Provide down payment assistance, rental assistance, and home buyer counseling services



### 5.3 ANNUAL REPORTING

- 5.31 The Local Housing Trust Fund administrator entity must report annually to the County Board.
- (a) Illustrate the impact on the community's housing needs
  - (b) Characterize the nature of the housing projects and programs supported by the Local Housing Trust Fund
  - (c) Accomplishments in terms of households served
- 5.32 The County must post the annual report on its public website.

### SECTION 6.0 EXCEPTION AUTHORITY.

The County Board of Commissioners may review the Trust Fund at any time in its sole and unfettered discretion so long as such exceptions do not violate Minnesota Statutes 462C.16.