Trunk Highway (TH) 23 Bridge Replacement and Deer Creek Restoration Project

Environmental Assessment Worksheet (EAW)

Issued on July 23, 2018

Prepared by the Minnesota Department of Transportation

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I. Environmental Assessment Worksheet

This State of Minnesota Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Minnesota Environmental Quality Board's website[1]. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form. Cumulative potential effects can either be addressed under each applicable EAW item, or can be addressed collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

A. Environmental Assessment Worksheet

1. Project Title:

TH 23 Bridge Replacement and Deer Creek Restoration Project

2. Proposer

Proposer: Minnesota Department of Transportation District 1
Contact Person: Randy Costley
Title: Project Manager
Address: 1123 Mesaba Ave
City, State, ZIP: Duluth, MN 55811
Phone: 218-725-2747
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3. RGU

Proposer: *Same as Proposer*

4. Reason for EAW Preparation (Check One)

Required:	Discretionary:	
☐ EIS Scoping	☐ Citizen petition	
☒ Mandatory EAW	☐ RGU discretion	☐ Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s): Minnesota Rules, part 4410.4300, subpart 26 (Stream Diversion)

5. Project Location

County: Carlton
City/Township: Wrenshall Township
PLS Location (¼, ¼, Section, Township, Range): NE ¼ of the SE ¼ of Section 29, Township 47N, Range 16W
Watershed (81 major watershed scale): Nemadji River (Major Watershed No. 5)
GPS Coordinates: Not applicable (linear project)
Tax Parcel Number: Not applicable (MnDOT right of way)

[1] http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm

The project map that includes the general location, county, and USGS Survey is located in ***Appendix A – Figure 1: Project Location Map***.

Site Plans showing all significant project elements and natural features are found in ***Appendix A – Figure 2: Preliminary Layout and Figures 3-4: Proposed Stream Alignment Plan and Profile***.

6. Project Description

a. Provide the brief project summary to be published in the EQB Monitor (approximately 50 words)

The project will consist of the replacement of the bridge on State Trunk Highway 23 over Deer Creek and the restoration of approximately 1,140 linear feet of Deer Creek. The bridge replacement will remove an existing structurally deficient box culvert that conveys Deer Creek under State Trunk Highway 23. The stream restoration will restore natural stream geomorphology, improve overall ecological function, and enhance fish passage and habitat. Deer Creek will be realigned to include a restored meander of the watercourse with rock riffles and pools to provide a stream profile that will allow trout passage through the area.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Project Description

The project includes the bridge replacement of the structurally deficient rural two-lane bridge (Bridge 8501) on State Trunk Highway 23 (TH 23) and the associated stream restoration of Deer Creek that crosses under the highway. Along TH 23, the bridge replacement project limits extend approximately 610 feet north and 400 feet south of the existing culvert. The Minnesota Department of Transportation (MnDOT) will replace the existing box culvert structure (Bridge 8501) over Deer Creek with a new 200 foot long two-lane single-span bridge, Bridge 09020.

The Deer Creek restoration limits extend approximately 440 feet upstream and 700 feet downstream from the respective culvert ends. The Minnesota Department of Natural Resources (MNDNR) has identified this segment of Deer Creek as a top priority for habitat restoration because biological characteristics of the stream have degraded over time. The restoration of Deer Creek will involve realigning and meandering a portion of the channel under the new TH 23 Bridge. Other components include reducing the stream profile to an average grade of approximately 1.9 percent with the construction of rock riffles and pools to create fish passage through the area. Woody debris from trees removed by construction may be salvaged to create in-stream cover, define channel boundaries and may even constrict the channel where needed. Vegetation plantings adjacent to the restored channel will consist of native riparian flora appropriate to the habitat and region. Hard armor surfaces (stone rip rap) along the channel will be used to protect the bridge abutments from potential erosion and scouring.

The project is located in Wrenshall Township in Carlton County and is adjacent to the portion of the Blackhoof River Wildlife Management Area (WMA) that is managed as the Blackhoof River Aquatic

Management Area (AMA). Bridge replacement will take place within MnDOT right of way; stream restoration will take place within both MnDOT right of way and extend outward into the WMA. No right of way acquisition will be required.

During construction, a temporary bypass will be constructed to maintain traffic flow along this segment of TH 23. However, it is anticipated that a detour will also be needed during a portion of construction. The detour will be from County Road 4 on the south to County Road 8 on the north. See ***Appendix A – Figure 5: Planned Detour Route***. The approximate 30-mile detour route is planned to utilize existing county roads. The intent is to use the detour only when construction activities limit the use of the temporary bypass. The timing and duration of the detour has not yet been determined as final construction staging plans hare not complete.

Construction Methods

The construction work will consist of removing the existing roadway surface and subgrade and excavating and grading soil to allow for the construction of the new single-span bridge structure. The existing culvert (Bridge 8501) will remain functional during construction of the bridge and stream restoration. Following construction, the existing culvert will be abandoned in place. A new single-span bridge (Bridge 09020) will be constructed over the stream.

Stream restoration of approximately 1,140 feet of Deer Creek will include constructing a stream meander in place of the existing culverted channel, along with floodplain restoration, bank stabilization, and modification of the stream profile with riffles and pools to allow fish passage and spawning upstream.

Temporary and permanent best management practices (BMPs) will be used to control construction related sedimentation/erosion and turf areas will be re-established (see EAW Item 11.b.ii. on page 11 for more information).

Some trees and vegetation will be removed as part of the project. Tree and vegetation removal are discussed in EAW Item 13.c., on page 17.

Project Schedule

The following highlights the schedule for key project activities.

Project Activity	Scheduled Date
Preliminary Design Studies	November 2017
EAW	July 2018
Public Comment Period	July/August 2018
Plans, Specifications & Estimate	Summer 2018
Permits	Fall 2018
Letting	October 2018
Construction Start	Spring/summer 2019
Construction Finish	Fall 2019

c. Project magnitude:

Total Project Acreage*	**5.15 acres**
Linear Project Length	0.19 miles of TH 23 1,140 feet of Deer Creek
Number and Type of Residential Units	N/A
Commercial Building Area (in square feet)	N/A
Industrial Building Area (in square feet)	N/A
Institutional Building Area (in square feet)	N/A
Structure Height(s)	N/A

* Total project acreage includes new bridge construction and stream restoration

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

TH 23 is an important highway for northeast Minnesota and serves as an alternative route to Interstate 35 for area residents and businesses on the east side of Carlton County. The TH 23 corridor connects many rural communities across east-central and northeastern Minnesota. TH 23 terminates in the city of Duluth. Traffic volumes measured in a 2016 study along the corridor generated approximately 600 daily trips; this would be consistent with existing traffic volumes in 2018. Maintaining the existing infrastructure on this highway is necessary for preserving these connections and ensuring safety for users now and in the future.

The purpose of this project is to improve the structural condition of highway infrastructure over Deer Creek while enhancing environmental quality of Deer Creek for both water and wildlife resources associated with this aquatic resource. The preferred action must be consistent with meeting the identified needs discussed below.

- ***Bridge Condition*** – Maintaining existing infrastructure is a priority objective of MnDOT in managing the State Trunk Highway System. The TH 23 Bridge over Deer Creek (Bridge 8501) was given a sufficiency rating of 52.2 and is classified as structurally deficient. The need to address the deficiency of the bridge is the primary reason for initiating this project.

- ***Stream Restoration*** – Deer Creek is a MNDNR Public Water, designated Trout Stream, and is a headwater stream that converges with the Nemadji River. The secondary need of the project is to restore a portion of Deer Creek that passes under Bridge 8501, including restoration actions extending slightly upstream and downstream of the bridge crossing. The primary objectives of the improvements to this segment of Deer Creek are to restore the natural stream geomorphology in this location, improve overall ecological function, to enhance fish habitat/passage, particularly for trout with a more naturalize stream channel through this transportation corridor.

- ***Wildlife Movement*** – The project is located adjacent to the Blackhoof River WMA. Parts of this area are also managed as the Blackhoof River Aquatic Management Area (AMA). These areas are habitats for species that are typical of upland forests like deer, bear, birds, and other small game. Deer Creek, the Blackhoof River, and the Nemadji River are designated trout streams by the MNDNR. An important consideration of the project includes wildlife passage under the TH 23 Bridge for area species through Deer Creek.

Current and future motorists along the highway will benefit from the replacement of a structurally deficient bridge with a safe facility. The Deer Creek restoration activities will benefit the natural environment including wildlife habitat, animal movement, and fish passage.

e. Are future stages of this development including development on any other property planned or likely to happen? ☐ *Yes* ☒ *No*
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? ☐ *Yes* ☒ *No*
If yes, briefly describe the past development, timeline and any past environmental review.

7. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

Table 1: Cover Types (in acres)*

Cover Type	Before	After	Gain/Loss
Wetlands	0	0	0
Deep water/streams	0.35	0.47	+.012
Wooded/Forest	1.18	0.63[a]	-0.55
Brush/Grassland	2.57	3.0	+0.43
Cropland	0	0	0
Stormwater Pond	0	0	0
Impervious	1.05	1.05	0
Other (describe)	0	0	0
Total	**5.15**	**5.15**	0

* The area of interest encompasses land within the project construction limits. Estimated with ESRI ArcMap.

[a] Acreage values for the Wooded/Forest cover type are estimated based on aerial images and impacted areas along Deer Creek will be replanted and/or will naturally regenerate with trees following the stream restoration work.

Source: Minnesota Land Cover Classification System (MLCCS)

The "Before" and "After" area totals listed in ***Table 1*** above are preliminary estimates based on existing land cover data and preliminary design files and are subject to change through more detailed design and construction. Note "Before" and "After" acreage totals may not equal the sum of individual cover types due to factors like variability in data availability and rounding.

8. Permits and Approval Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 2: Permits and Approvals Required

Permit/Approval Type	Unit of Government	Action Required
Federal		
Categorical Exclusion	Federal Highway Administration (MnDOT Delegated Authority)	Approval
Section 4(f) Temporary Occupancy	Federal Highway Administration	Approval
Section 106 (Historical/Archaeological)	Federal Highway Administration (MnDOT Delegated Authority)	No Effect Determination
Section 7 Review	Federal Highway Administration (MnDOT Delegated Authority)	No Effect Determination
Section 404 Permit	U.S. Army Corps of Engineers	Approval
State		
EAW Document	MnDOT	Approval
EIS Need Decision	MnDOT	Findings of Fact and Conclusions
Construction Plans – Roadway/Geometric Layout	MnDOT	Approval
Public Waters Work Permit (General Permit 2004-0001)	MNDNR	Approval
Cultural Resources Review (Historic/Archaeological)	MnDOT	No Adverse Effect Determination
Section 401 Water Quality Certification	MPCA	Certification
WMA Impacts – Section 4(f) Temporary Occupancy	MNDNR	Approval
NPDES Construction Stormwater Permit	MPCA	Approval

9. Land Use

a. Describe: i) Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands; ii) Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency; iii) Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

Land Use and Development

Existing land use and development in and surrounding the project area is rural in nature. Agricultural, low-density residential uses, and recreational and the Deer Creek restoration will extend into the Blackhoof

River Wildlife Management Area (WMA). Portions of the WMA property lying adjacent to Deer Creek are managed by the MNDNR as the Blackhoof River Aquatic Management Area (AMA). Smaller WMAs, AMAs and state forests are also located in the project area. Larger natural areas like the Nemadji State Forest south of the project area and Jay Cooke State Park and Fond Du Lac State Forest north of the project area also exist.

Zoning

According to county maps, zoning within the project area and immediately south is classified as A-1: Agriculture/Forest Management District. This zoning district provides for uses that allow forest production and management programs, agricultural farms and related uses, and single family homes. Just north of the project area, the zoning is A-2 Agriculture/Rural Residential District. The A-2 District allows for suitable uses of the County to be used for agricultural, forest management, large-lot residential home sites, and other land uses appropriate in a rural environment.

Located adjacent to Deer Creek, a Shoreland Overlay zoning district (within 300 feet of a river) is present on both sides of the watercourse. The proposed stream restoration activities are an allowable use and special construction best management practices will be utilized for temporary and permanent erosion control and water quality.

Floodplain

There is no designated floodplain for Deer Creek.

Parks and Trails

The project is adjacent to the Blackhoof River WMA, a 4,025-acre recreational area with active forest management and hunting grounds maintained by the MNDNR. As provided by Minnesota Statutes, Section 86A.05, WMAs are established “to protect those lands and waters which have a high potential for wildlife production and to develop and manage these lands and waters for the production of wildlife, for public hunting, fishing, and trapping, and for other compatible outdoor recreational uses.” The Blackhoof River WMA contains aspen-spruce/fir and riparian forests types with many upland openings and is dissected with steep river valleys and ravines. Besides hunting, the WMA also offers remote areas, scenic views, and mature forest. The WMA also has an extensive trail system with more than 12 miles of trails and carry-in canoe access to the Blackhoof and Nemadji Rivers. These access points are located outside the project area.

The portion of the WMA within the project area is managed as the Blackhoof AMA. AMAs are riparian shoreline parcels maintained by the MNDNR. As provided by Minnesota Statutes, Section 86A.14, AMA properties are established to "protect, develop and manage lakes, rivers, streams, and adjacent wetlands and lands that are critical for fish and other aquatic life for water quality, and for their intrinsic biological value, public fishing, or other compatible outdoor recreational uses." The Blackhoof River AMA includes much of Deer Creek, the Blackhoof River, and the Nemadji River and their surrounding land. These watercourses are all designated trout streams by the MNDNR.

A local grant-in-aid snowmobile trail has been located within the project area. At this portion, the trail has historically run parallel to TH 23 before heading directly north and adjoining with other snowmobile trails. The designation and location of these trails are not permanent and can change from year to year based on landowner agreements.

The Willard Munger State Trail is a collection of multi-use trails that run between Hinckley and Duluth. While the trail mostly follows Interstate 35, the Alex Laveau Trail Segment connects to TH 23 approximately five miles north of the project area. The trail is owned and operated by the MNDNR.

The SOO Line Trail Southern Route is an all-terrain vehicle trail that is a converted rail-trail that runs between Central Minnesota (near the town of Royalton) and the Minnesota–Wisconsin state line east of Pleasant Valley. The trail intersects with TH 23 about a mile north of the project area.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

The project is not expected to cause changes in land use within the surrounding area. It is not anticipated to lead to the development of any commercial, industrial, residential or other development. Access will not be changed. The project is consistent with local and/or regional comprehensive plans including the Carlton County Soil and Water Conservation District Nemadji River Watershed Guide.

The Minnesota Aquatic Management Area Acquisition Plan 2008-2033, a report prepared by the MNDNR Division of Fish and Wildlife, recommended that the MNDNR continue to acquire and protect shoreland, including trout streams. Restoration of a portion of Deer Creek, a designated trout stream within the Blackhoof River AMA, is compatible with the recommendations of the report.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

Not applicable.

10. Geology, Soils and Topography/Land Forms

a. Geology – Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.

According to the MNDNR Ecological Classification System, the project area is located within the Glacial Lake Superior Plain Subsection of the Laurentian Mixed Forest Province.[2] These units of land are defined by using major climate zones, native vegetation, biomes such as prairies, deciduous forests, or boreal forests, glacial deposits, regional elevation, and distribution of plants.

Almost all of the Glacial Lake Superior Plain Subsection bedrock is covered by a glacial lake plain (Hobbs and Goebel 1982, Farrand 1982). Bedrock underlying the subsection is diverse and ranges from 50 to 100 feet. Bedrock consists of Precambrian (Middle Proterozoic) sedimentary bedrock, primarily feldspathic to quartzose sandstone and shale, and includes sandstone and siltstone (Morey et all 1982).[3]

No geologic hazards that could result in groundwater impacts (e.g., sinkholes, shallow limestone

[2] Source: MNDNR, Ecological Classification System, http://www.dnr.state.mn.us/ecs/212/index.html
[3] Source: MNDNR Ecological Classification System, http://www.dnr.state.mn.us/ecs/212Ja/index.html

formations or near-surface karst conditions) have been identified.

b. Soils and Topography – Describe the soils on the site, giving NRCS (SCS) classifications and description, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

A Soil Classification System soils map can be found in ***Appendix A – Figure 6: Soils Map***. ***Table 3*** below summarizes soil type information within the study area. According to the NRCS Soil Survey for this area of Carlton County, the majority of the project area consists of Udorthents with minor amounts of Ontanagon silty clay (less than 0.5 acres). Three soil map units were identified within the study area.

Table 3: Study Area NRCS Soil Types

Map unit symbol	Map unit name	Percent of Study Area
303	Ontonagon silty clay, 0 to 2 percent slopes	0.2%
303E	Ontonagon silty clay, 12 to 25 percent slopes	1.9%
1020	Udorthents	96.1%

Steep Slopes

Steep slopes and unstable soils exist within the project area, which may have contributed to erosion and bank failure along the roadway embankment and Deer Creek. The stream restoration portion of this project will repair this erosion and bank failure. Graded slopes associated with the proposed improvements will generally be at 1:3 to 1:4 slope ratio. A section under the new bridge will have 1:2 reinforces slopes (riprap protection).

Topography

Topography ranges from level to gently rolling, except along rivers and streams, where water has cut deep valleys. The immediate project area is characterized by rolling hills on either side of TH 23.

Earthwork Estimates

The project area within the preliminary construction limits is approximately 5.15 acres. Construction activities associated with the bridge replacement and stream restoration will excavate approximately 35,000 cubic yards of material (soil, sand, gravel, etc.) and fill/relocated approximately 15,000 cubic yards of material. These earthwork quantity estimates are based on preliminary design and related construction limits. These estimates are subject to increases or decreases as the final design progresses and excavation quantity refinements are made.

11. Water Resources

a.i. Describe surface water features on or near the site – lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 miles of the project. Include DNR Public Waters Inventory number(s), if any.

Deer Creek is the only surface water feature located within the project area. Six other surface water features are located within one mile of the project area, including four unnamed streams, the Blackhoof River, and the Nemadji River. Three of the unnamed streams are headwaters of Deer Creek and one is headwaters of Rock Creek, located north of the project area. The Nemadji River and the Blackhoof River are both located within the Blackhoof River AMA. Blackhoof River converges with the Nemadji River in the AMA and just east of TH 23; Deer Creek converges with Nemadji River just east of TH 23, but outside of the AMA.

These rivers, streams, and other surface waters located within one mile of the project area are summarized in ***Table 4***.

Table 4: Project Area Surface Waters

No.	Name	PWI ID/Assessment Unit	Public Water	303d Impaired Water
1	Deer Creek	09081a / 04010301-531	Y	Y
2	Unnamed Stream	04010301-616	Y	N
3	Unnamed Stream	04010301-576	Y	N
4	Unnamed Stream	04010301-615	Y	N
5	Unnamed Stream	04010301-532	Y	N
6	Blackhoof River	09077a / 04010301-511	Y	N
7	Nemadji River	09062a / 04010301-758	Y	N

As noted in ***Table 4*** above, Deer Creek is the only impaired water defined by the MPCA "Draft" 2018 TMDL (303(d)) List within one mile of the project. This draft list is not yet approved by EPA and therefore is not in effect. Deer Creek was previously listed for turbidity and a TMLD was completed and approved in 2013. The TDML Implementation Plan was adopted in April 2014.

Deer Creek is a designated trout stream; its pollutant or stressor is fish bio-assessments. For this project, discharge to Deer Creek is considered to be construction related parameters and the project may require additional best management practices (BMPs) for compliance with the NPDES Construction Permit. Temporary and permanent BMPs will be further designed in the engineering plans and specification and detailed for inclusion into the permit applications for the project. It should also be noted that by the time this project is constructed it is likely a new NPDES Construction Stormwater permit may be in effect.

a.ii. Describe groundwater – aquifers, springs, seeps. Include 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

Depth to Groundwater/Wells

A review of the Minnesota Department of Health (MDH) County Well Index was completed to determine the location of wells in the area. One MNDNR water-level observational well was identified within the project area on Deer Creek with a drilled depth of 14 feet[4]. Current water level data was not available for this well.

MDH Wellhead Protection Area

Wellhead Protection Areas (WPAs) were investigated to determine if nearby municipal wells had delineated protection areas that fall within or are located in close proximity to the proposed project. Based on MDH mapping, there are no WPAs located within five miles of the project area.

Additional Well Information

No additional wells were identified in the project area besides the observational well according to the public well index. Numerous private and public wells are known to exist in the surrounding residential areas. If any wells are found within the construction limits, they will be addressed in accordance with Minnesota Rules, Chapter 4725.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in item b.i through item b.iv below.

b.i. Describe effects from project activities on water resources and measures to minimize or mitigate the effects of wastewater – For each of the following describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

Not applicable.

2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

Not applicable.

[4] https://apps.health.state.mn.us/cwiinfo/index.xhtml?wellId=0000243667

3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

No impacts to existing wastewater treatment or conveyance systems are anticipated.

b.ii. Describe effects from project activities on water resources and measures to minimize or mitigate the effects of stormwater. Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

Quantity and Quality of Runoff

The project will result in no net change in impervious area post construction. The runoff from the project area will not contribute additional pollutant loads. Drainage patterns will primarily remain unchanged as surface water runoff from the rural roadway section will be conveyed to grass ditches designed to provide some biofiltration that will ultimately discharge to Deer Creek. As part of the final design, a detailed drainage/hydraulic plan is being developed that considers special ditch grades, natural slopes, and/or a storm water runoff rate control structure designed to reduce the velocity of discharge to Deer Creek. This plan is being developed by MnDOT and will be completed during the final design stage to ensure compliance with the NPDES permit requirements.

Other Water Quality Best Management Practices

Erosion and sedimentation on all exposed soils within the project corridor will be minimized by utilizing the appropriate best management practices (BMPs) during construction. Implementation of BMPs will be in accordance with an erosion control plan and MnDOT standard specifications.

The project will disturb one or more acres of land. A "General Storm Water Permit for Construction Activity (#MNR10001)" will be obtained. The MPCA NPDES general permit for authorization to discharge stormwater associated with construction activities (permit MNR10001) recognizes there are “work in water restrictions” during specified fish migration and spawning time frames for areas adjacent to water as set forth by the MNDNR. During the restriction period, all exposed soil areas that are within 200 feet of the water’s edge and drain to these waters, must have erosion prevention stabilization activities initiated immediately after soil disturbing activity has ceased (and be completed within 24 hours).

The NPDES permit has both temporary directives used primarily during construction, as well as permanent requirements, which the final project must meet. Below is a summary of the requirements and sediment control methods that may be used for this project:

- Horizontal slope grading, construction phasing, and other techniques designed to reduce erosion and sedimentation.

- Implementation of temporary controls to protect exposed soil areas, such as mulch cover, cover crop seeding, hydromulching, erosion control blanket, silt fence, bio-rolls and stabilization of steep slopes.
- Perimeter barriers for sediment control BMPs will be in place on down gradient perimeters where runoff will discharge off site before construction disturbance begins.
- Minimization of vehicle soil tracking onto paved surfaces will occur by limiting construction equipment use on paved roads and using rock construction entrances throughout the project.
- Permanent cover will be provided post construction using topsoil, seed and mulch, erosion control blanket, sod or hydroseeding.
- Discharges to Deer Creek (turbidity and fishes bio-assessments) are considered to be construction related parameters and may require additional best management practices found in the NPDES Construction Permit. New permit requirements may be adopted prior to the construction of the project. If applicable, a review of the new permit BMPs will be conducted and incorporated into design plans.

A Storm Water Pollution Prevention Plan (SWPPP) that includes erosion control and sediment management practices will be created as part of design and implementation of proposed improvements. Erosion control measures will be in place and maintained throughout the entire construction period. Soil stabilization methods will be applied to all exposed side slopes and stock piles of erodible or loose granular materials. Upon completion of construction, all disturbed areas will be revegetated, leaving temporary erosion control structures in place until vegetation has been established.

The construction areas will be inspected periodically to verify the functionality of the BMPs and assess the risks for erosion and sediment mobilization. The plan will be reviewed at each construction meeting and ad hoc adjustment will be implemented based on the specific circumstances.

b.iii. Describe effects from project activities on water resources and measures to minimize or mitigate the effects of water appropriation. Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

Temporary dewatering may be required during construction. Should dewatering become required and exceed the Minnesota permit threshold of withdrawing more than 10,000 gallons of water per day or 1 million gallons per year, a water appropriation permit application will be completed and submitted to the MNDNR for approval prior to any dewatering activities taking place. Dewatering will comply with the MPCA NPDES Construction Stormwater Permit, and shall be discharged in a manner that does not create nuisance conditions or adversely affect the receiving water or downstream properties. No known private or permanent public wells will be affected or installed by the project.

b.iv. Describe effects from project activities on water resources and measures to minimize or mitigate the effects of surface waters.

The secondary need of the project is the restoration Deer Creek from a degraded and confined (box culvert) channel to a naturalized meandered stream course within the project area. The impacts of the project would be positive with the proposed realignment under the bridge, channel meandering, profile adjustment and bank stabilization. This is intended to directly restore natural stream geomorphology, improve overall ecological function, and enhance fish passage and habitat within the project area, and indirectly as beneficial improvements that enhance the overall Deer Creek watercourse. The stream restoration plans are being analyzed and modeled so that the design is anticipated to provide sediment continuity through the site, maintain the geomorphology as intended and will substantially minimize future maintenance needs. Furthermore, the improvements will include rock riffles, pools, and possibly wood structures to support fish passage and improved trout habitat.

1) Wetlands -- Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

A Level 2 Wetland Delineation of the investigation area was completed for the project following the procedures set forth in the *Minnesota Local Road Authority Reference Guide to U.S. Army Corps of Engineers (Corps) Clean Water Act Section 404 & Rivers and Harbors Act Section 10 Permits, Version 1.a* (U.S. Army Corps of Engineers and Minnesota Department of Transportation (2014). The results of the investigation concluded no wetlands were found within the project area. However, the Level 2 delineation did identify Deer Creek, which is the only aquatic resource in the project area.

2) Other surface waters -- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number of type of watercraft on any water body, including current and projected watercraft usage.

As described above in EAW Items 11.b.ii. and 11.b.iv., the project will include restoration of a portion of Deer Creek, which is a public water, designated Trout Stream, and headwaters of the Nemadji River. The restoration process includes bank stabilization and modification of the stream profile to allow for fish passage. Stream restoration is intended to reduce erosion, bank failure, and to improve fish passage. No negative physical affects to any surface water features are anticipated.

For work below the ordinary high water level, appropriate BMPs will be incorporated in the work area subject to MNDNR and MPCA requirements and permits.

The project will not change the number or type of watercraft usage on Deer Creek.

12. Contamination/Hazardous Materials/Waste

a. Pre-project site conditions – Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

A review of the MPCA and Minnesota Department of Agriculture (MDA) databases was conducted to determine if known contaminated sites exist in the project area. Based on this review, it was determined that the project has a low risk of impacting potentially contaminated sites. The rural and minimally developed area of the project decreases the chances of encountering hazardous materials (contaminated soil and/or groundwater). Based on the database review, there are no known contaminated sites within 500 feet of the project area. The project will not have a high risk of causing direct or indirect impacts to human health of sensitive environmental resources due to encountering contaminated materials.

As the final design develops, excavation locations and depths will be used by MnDOT in determining whether any Phase II Environmental Site Assessment drilling investigations will be needed for the project. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction in accordance with all applicable state and federal requirements.

b. Project related generation/storage of solid wastes – Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Excess materials generated as a result of construction (e.g. concrete, granular, bituminous, and soil) may be exported from the project for disposal or reuse. Excess materials generated by construction deemed as a waste will be properly disposed of at a MPCA permitted solid waste landfill. Reusable excess material can be recycled outside of the construction limits at the contractor's discretion with a management plan approved by the Project Engineer. Project demolition of concrete, asphalt, and other potentially recyclable construction materials will be directed to the appropriate storage, crushing, or renovation facility for recycling or reuse. It is common for the construction contractor to reuse material onsite; the extent of reuse is dependent on the condition of the material and its suitability to the project's needs.

c. Project related use/storage of hazardous materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

All chemical products present at the construction site, including fuels and lubricants need to be stored in a designated area safe from construction activities. Appropriate safety measures will be followed during construction to avoid spills. Leaks, spills, or other releases would be responded to in accordance with MPCA spill, containment and remedial action procedures.

d. Project related generation/storage of hazardous wastes – Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage or hazardous waste including source reduction and recycling.

No above- or below-ground storage tanks are planned for permanent use in conjunction with this project. Temporary storage tanks for petroleum products may be located in the project area for construction equipment during construction. Appropriate measures, such as requiring secondary containment for tanks, will be taken during construction to avoid spills that could contaminate groundwater or surface water in the project area. In the event that a leak or spill occurs during construction, appropriate action to remediate the situation would be taken immediately in accordance with MPCA guidelines and regulations.

If existing guardrail posts are made of treated wood, then this material must be separated and disposed of at an MPCA-permitted sanitary or industrial waste landfill. Any coatings on the interior or exterior of any of the culverts will be sampled/analyzed for asbestos.

13. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.

Fish and Wildlife

The project area is located within the Laurentian Mixed Forest Province as defined by the MNDNR Ecological Classification System. Land use in the project's immediate area is forestry and recreation. North and south of the project area, agricultural and residential land uses are scattered along TH 23 and adjoining roads. Substantial portions of the surrounding area remain undeveloped. The project is located mostly in MnDOT right of way; however, stream restoration activities extend into the Blackhoof River WMA. Portions of this area are also managed as the Blackhoof River AMA. Species in the area are those typical of upland forests. The WMA provides habitat for species like deer, bear, forest upland birds, turkey, and other small game. Deer Creek, the Blackhoof River, and the Nemadji River are MNDNR designated trout streams.

Vegetation

The Blackhoof River WMA adjacent to the project area is mostly native plant communities of aspen-spruce/fir and riparian forest types, and northern wet-mesic boreal hardwood-conifer forest types. Near the project area, vegetation is mostly comprised of native species. Along this stretch of TH 23, roadside vegetation is comprised of primarily naturally occurring herbaceous (non-woody) grasses and forbs, as well as both coniferous and deciduous trees and shrubs.

b. Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-722) and/or correspondence number (ERDB) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

Per correspondence with MNDNR Ecological and Water Resources, the Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area (see ***Appendix B*** for additional information). The database query identified 12 native plant communities and three state listed species within 1 mile of the project area. However, none of these records are within the immediate project area. In order to prevent the inadvertent release of the location of specific listed or rare species contained in the NHIS, the species or their location have not been identified. The rare features identified in the query may be impacted by the proposed project.

According to GIS information obtained from the Minnesota Geospatial Commons, the majority of the project area is designated as Minnesota Biological Survey (MBS) Sites of Outstanding Biodiversity. Outstanding sites are "sites that contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most ecologically intact or functional landscapes." These are considered areas of sensitivity (AES). An AES is a generic term to be utilized on plans to identify an area as containing unique characteristics that may need to be protected during construction. These areas may be unique due to habitat, wildlife, cultural resources/properties, ecological significance, geological features, visual quality, or its sensitivity to disturbance. The final design will determine the project construction limits, including areas needed for construction staging. Areas outside of the highway right of way and the proposed construction limits will be designated as AES on the design plan for protection during construction.

See ***Appendix B*** for correspondence related to rare features.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

Fish and Wildlife Impacts

Typical roadway construction activities (grading, paving, drainage, etc.) that encompass the nature of this project can affect wildlife habitats. Potential erosion and sediment impacts to Deer Creek could occur from the construction activities related to the bridge replacement, potentially impacting fish species in the project area. However, no new right of way will be acquired and all construction will occur

adjacent to the existing roadway. Therefore, wildlife corridors will not experience further fragmentation. The portion of Deer Creek in the project area will be include a channel meander and bed/bank restoration in order to reduce the stream profile. The proposed Deer Creek restoration is anticipated to result in beneficial effects on fish and wildlife. See EAW Item 13.d below for avoidance, minimization, and mitigation measures that can be taken implemented to address potential impacts.

Vegetation Impacts

No significant adverse impacts to natural/native plant communities, landscape and ornamental plantings, vegetation providing an engineering function, or vegetation of exceptional visual quality is anticipated with the proposed improvements. Grading and earthwork adjacent to the stream channel will re-establish native riparian vegetation. The project will require the removal of approximately 1.18 acres of trees. **See Appendix A – Figure 5: Tree Clearing**. Following stream restoration work it is assumed that trees will naturally regenerate along the disturbed slopes and stream banks.

Temporary construction-related impacts would occur as a result of staging areas and heavy equipment access. Soils disturbed from earthmoving can provide conditions suitable for infestations of invasive plant species. It is anticipated there will be tree-covered areas requiring clearing and grubbing. See EAW Item 13.d below for avoidance, minimization, and mitigation measures that can be taken implemented to address these impacts.

Invasive Species

A MnDOT review of the project area determined there were no known noxious weed locations within the project. To help limit the spread of noxious weeds during the construction phase, the following activities will be integrated into construction activities:

- Identification of weeds locations;
- Prioritization of these areas for weed control before construction begins;
- Prevention of movement of soil harboring the potential for a seed bank containing exotic or otherwise noxious weed species;
- Prevention of the spread of reproductive parts of vegetation by cleaning equipment; and,
- Monitoring for noxious weeds after construction to control their encroachment as necessary

Threatened and Endangered Species Impacts

During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. This bat is opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns, sheds, and bridges. The pup season is from June 1 to August 15. They spend winter hibernating in caves and mines. Given the location of the proposed project, the project is not anticipated to adversely affect any known occurrences of rare features. Per the U.S. Fish and Wildlife Service, MNDNR correspondence, and other available data, there are no documented roost trees or hibernacula in the project area.

The wood turtle is a state-listed threatened species that has been reported in the Nemadji River Watershed, including near the project area. As a result, wood turtles may be encountered on site. State laws and rules will be followed to ensure no adverse impact to the species. Appropriate measures will be taken in accordance with MNDNR guidance.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Fish and Wildlife - Mitigation

Where reasonable and feasible, design modifications have been incorporated into the design of the proposed roadway improvements to avoid and minimize impacts to fish and wildlife habitat. Wildlife-friendly erosion control materials will be used where applicable. Work Exclusion Dates (September 15 through June 30) established by the MNDNR within the General Public Waters Work Permit (GP 2004-0001) will be followed. Further, the MPCA NPDES General Storm Water Permit for Construction Activity (MNR10001) recognizes the Work Exclusion Dates. During these exclusion dates, the permit mandates all exposed soil areas within 200 feet of the water's edge and drains to these waters must have erosion prevention stabilization activities initiated immediately after construction activity has ceased and be in place within 24 hours. Ongoing coordination with the MNDNR will occur during more detailed design and permitting to ensure BMPs applicable to the site are incorporated into the final design.

Vegetation - Mitigation

Minimizing the construction footprint to the extent practicable including construction staging areas and heavy equipment access routes will diminish potential impacts to plant communities in the project area. Selection of construction staging areas that are already disturbed will also help to minimize impacts to plant communities. Vegetation protection measures will be based on MnDOT Standard Specification 2572, including but not limited to temporary fence (2572.3A.1) and clean root cutting (2572.3A.2). The Standard Plan sheet 5-297.302 related specifically to vegetation protection and restoration will be followed. Additional coordination will occur with the MnDOT Office of Environmental Stewardship to ensure best practices are followed to minimize impacts to the areas of sensitivity (AES). Rigorous weed control in construction areas will help to minimize the potential for infestations of noxious plant species (see above discussion on invasive species). Post-construction re-grading and rapid establishment of appropriate native vegetation will minimize potential impacts. As necessary, appropriate revegetation may also include woody vegetation, like trees and shrubs, native riparian vegetation, in addition to other grasses and/or forbs.

Threatened and Endangered Species - Mitigation

State laws and rules prohibiting the destruction of the threatened or endangered species will be followed if encountered on site. Records of state-listed species are limited to wood turtle and northern long-eared bat that have suitable habitat nearby, but no known occurrences are within the project area. If however, any motile fauna species are in imminent danger during construction, they will be allowed to move out of harm's way; otherwise, all fauna species will be left undisturbed. The stream restoration design includes wildlife benches on both sides of Deer Creek that will allow for wildlife passage under the bridge. This is an improvement from the existing conditions, which requires wildlife to cross TH 23 through a 10'x10' box culvert or directly across the roadway surface. The design also includes a modification to the stream profile to allow for fish passage and spawning upstream. There are no records of state-listed flora in the project area; therefore, no mitigation is anticipated.

14. Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The project has undergone a cultural resources and historic properties review process to help determine if historic or archaeological resources could be impacted. The detailed Section 106 review was required per the National Historical Preservation Act, as amended (36 CRF 800), and per the terms of the applicable Programmatic Agreements between the Federal Highway Administration (FWHA), MnDOT, and the Minnesota State Historic Preservation Office (SHPO). The Section 106 review fulfills MnDOT's responsibilities under the Minnesota Historic Sites Act, the Minnesota Private Cemeteries Act, and the Minnesota Field Archaeology Act. MnDOT also conducted tribal consultation for the proposed project. Findings of the cultural resources review are summarized below.

The MnDOT Cultural Resources Unit has determined that Bridge 8501 is not eligible for the National Register of Historic Places (NRHP). Because the vast majority of construction work will occur within previously disturbed right-of-way, it is unlikely that the area of potential effects (the proposed construction area) contains intact, significant archeological resources. No historic structures were found in the project area and no historic properties will be affected by the project.

See ***Appendix C*** for communication from MnDOT Cultural Resources Unit.

15. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual impacts.

The project site offers views from TH 23 into the Blackhoof River WMA and the surrounding area. Views include gently rolling grassy hills, a variety of tree types in densely forested areas, and Deer Creek.

The proposed project follows the existing TH 23 alignment and will have no adverse impacts to the visual quality of the area. No vapor plumes, glare, or major grade changes are proposed with the preferred alternative. The project will replace the existing culvert structure with a single span bridge structure. No impact to the visual resources of the natural, cultural, and project environments are anticipated. No substantial impact to the ability of the affected population to view visual resources is anticipated. Therefore, no mitigation is required.

Visual impacts associated with construction would include the introduction of heavy construction equipment and disruption of the landscape. These impacts would be noticeable to drivers traveling through the area. This may present a temporary visual impact, however traffic is anticipated to be detoured during a couple stages of construction.

16. Air

a. Stationary source emissions – Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollution, and any greenhouse gases. Discuss efforts to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used to assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary sources emissions.

The proposed project is a highway project and therefore, will not generate stationary source emissions in the project area.

b. Vehicle emissions – Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

The project is not located in an area in which conformity requirements apply, and the scope of the project does not indicate that air quality impacts would be expected. Therefore, no further air quality analysis is necessary.

c. Dust and odors – Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

Dust generated during construction will be minimized through standard dust control measures such as applying water to exposed soils and limiting the extent and duration of exposed soil conditions. Construction contractors will be required to control dust and other airborne particulates in accordance with MnDOT specification in place at the time of project construction. After construction is complete, dust levels are anticipated to be minimal because all soil surfaces exposed during construction would be in permanent cover (i.e., paved or re-vegetated areas).

17. Noise

a. Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Noise During Construction

The construction activities associated with implementation of the proposed project will result in increased noise levels relative to existing conditions. These impacts will primarily be associated with construction

equipment and pile driving. The duration of the project is anticipated to last up to two construction seasons with work occurring during daylight hours. No nighttime construction is anticipated at this time.

Table 5 shows peak noise levels monitored at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, which is generally the roadway construction phase associated with the greatest noise levels.

Table 5: Typical Construction Equipment Noise Levels at 50 feet

Equipment Type	Manufacturers Sampled	Total Number of Models in Sample	Peak Noise Level Range (dBA)	Peak Noise Level Average (dBA)
Backhoes	5	6	74-92	83
Front Loaders	5	30	75-96	85
Dozers	8	41	65-95	85
Graders	3	15	72-92	84
Scrapers	2	27	76-98	87
Pile Drivers	N/A	N/A	95-105	101

Source: United States Environmental Protection Agency and Federal Highway Administration

Any associated high-impact equipment noise, such as pavement sawing, or jack hammering, will be unavoidable with construction of the proposed project. High-impact noise construction activities will be limited in duration to the greatest extent possible, which construction planned during daylight hours.

Traffic Noise Analysis

The potential changes to existing and future traffic noise levels and impacts, due to the proposed project, were evaluated. The evaluation was done using FHWA criteria (http://www.dot.state.mn.us/environment/noise/pdf/2017-noise-requirements.pdf) on page 4 of the guidance, which allows for the determination of significant adverse changes to the noise environment, due to the proposed project. The results of the evaluation indicate that no significant adverse changes to the traffic noise will result from the referenced project and, therefore, no noise analysis is required for this project.

18. Transportation

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in estimates, and 5) availability of transit and/or alternative transportation modes.

Not applicable. Increased traffic volumes will not be generated by the proposed project. This project is maintenance of existing infrastructure and restoration of Deer Creek.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: http://www.dot.state.mn.us/accessmanagement/resources.html) or a similar local guidance.

Not applicable. The project has no effect on traffic congestion and no traffic control improvements are necessary.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

While there are no permanent traffic-related impacts, traffic will be temporarily impacted during construction of the project. A temporary bypass will be constructed to maintain traffic flow along this segment of TH 23. However, it is anticipated that a detour will be needed during a portion of construction. The timing and duration of the detour will not be known until final construction staging plans are complete. Traffic along TH 23 will be detoured using Carlton Country Road 8, County Road 11, County Road 6 , County Road 3 and County Road 4 (see ***Appendix A – Figure 5: Highway 23 Detour Route***). The intent is to minimize use of the detour and complete as much of the construction as possible with the temporary bypass in place.

MnDOT has consulted with the Carlton County Engineer on the use of the proposed detour route as it involves the use of county roads. Once the construction staging plans have been developed, MnDOT will coordinate with the local school district, emergency service providers, and area residents to ensure they are aware of the detour route and anticipated duration.

MnDOT is also coordinating an independent project (SP 0901-62) with the Deer Creek Project in order to take advantage of the detour route and minimize travel impacts to motorists. State Project 0901-62 involves the removal of an old Soo Line Railroad Bridge (Bridge No. 5468) over TH 23.

19. Cumulative Potential Effects

a. Describe the geographic scales and timeframes of the project-related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

Cumulative potential effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or persons undertakes such actions." The planning efforts and potential projects discussed within this section are consistent with the Minnesota State Supreme Court ruling regarding cumulative potential effects inquiry under state statute, i.e., the projects: 1) are either existing, actually planned for, or for which a basis of expectation has been laid; 2) are located in the surrounding area; and 3) might reasonably be expected to affect the same natural resource.

The geographic areas considered are those that are directly adjacent to TH 23 and near the project area, and within the timeframe of the next few years.

b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.

Planning documents utilized to identify applicable projects include Minnesota's 2018-2021 STIP (September 2017), existing city and county comprehensive plans, direct communications with Carlton County Public Works, and capital improvement plans.

MnDOT has an independent project (SP 0901-62) along TH 23 that involves the removal of an old Soo Line Railroad Bridge (Bridge 5468) over Highway 23. The removal of the Soo Line Bridge and the Deer Creek improvements are mutually exclusive of one another. MnDOT is coordinating the construction schedules merely simply to take advantage of the proposed detour described above in EAW Item 18.c., which will provide travel benefits to the motoring public.

Carlton County has no immediate future public works projects that would interact with the environmental effects of the proposed project area.

c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

During the development of this EAW, no potentially significant adverse cumulative potential effects to the resources affected by this project have been identified. Beneficial effects are anticipated to fisheries/stream habitat and passage as a result of improving the creek alignment, profile, and failing bank erosion.

20. Other Potential Environmental Effects

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

MnDOT Bicycle Pedestrian Section

The MnDOT Bicycle and Pedestrian Division was contacted to provide comments on the project. The Carlton County Bicycle Map was also reviewed. The 2015 map designates TH 23 as a roadway with shoulders greater than four feet with daily traffic counts in the range of 751 - 2500 vehicles (i.e., 3 cars/min). MnDOT commented that TH 23 has bikeable shoulders (adequate paved width) and the corridor is a popular bike route. The project will maintain adequate shoulder widths, but bicycle movements may be temporarily impacted during construction.

RGU Certification

(The Environmental Quality Board will only accept SIGNED Environmental Assessment Worksheets for public notice in the EQB Monitor.)

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200. Subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer: _____

Lynn P. Clarkowski, P.E.
MnDOT Chief Environmental Officer

Date: July 12, 2018

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for EAW Guidelines, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or www.mnplan.state.mn.us

List of Appendices

Appendix A – Project Mapping

Figure 1: Project Location Map

Figure 2: Preliminary Layout

Figures 3-4: Proposed Stream Alignment Plan and Profile

Figure 5: Planned Detour Route

Figure 6: Soils Map

Figure 7: Tree Clearing

Appendix B – MNDNR and USFWS Coordination

Appendix C – MnDOT Cultural Resources Findings

Appendix A— Project Mapping

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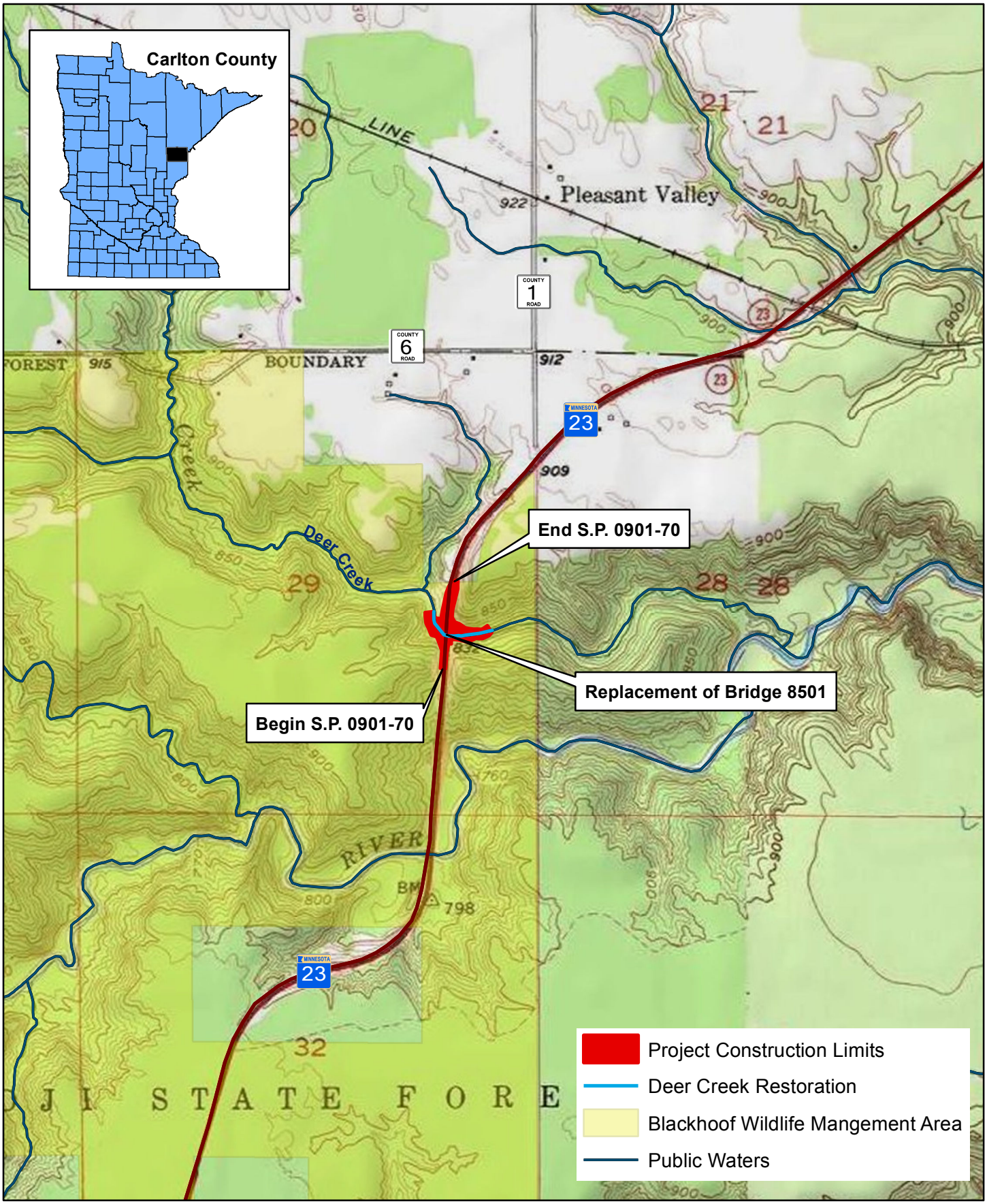
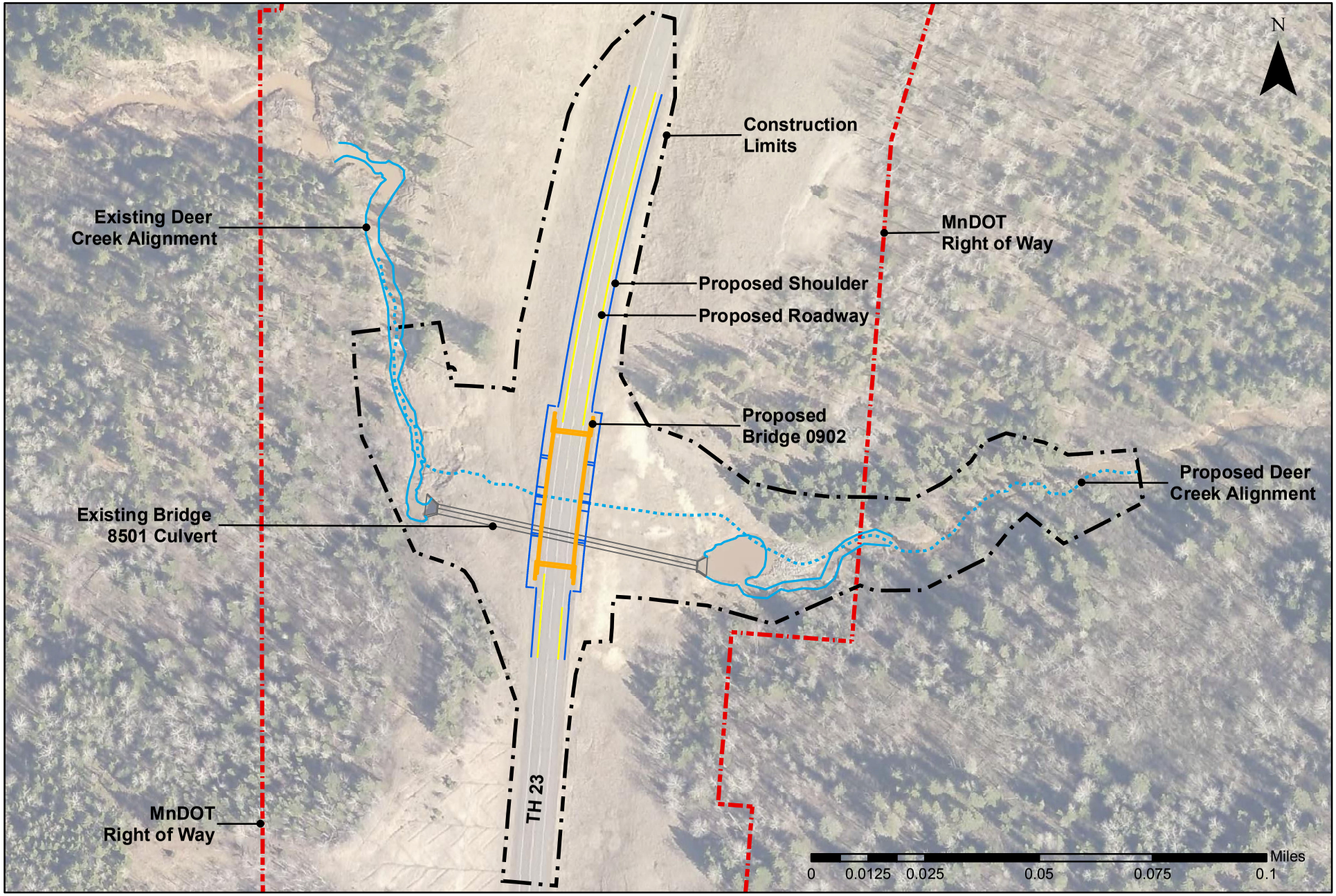


SEH	3535 VADNAIS CENTER DR. ST. PAUL, MN 55110 PHONE: (651) 490-2000 FAX: (888) 908-8166 TF: (800) 325-2055 www.sehinc.com	Project: SP 0901-70 Map by: ES Projection: Carlton County Coords Source: MnDNR, MnDOT	**Project Overview Map** **TH 23 Bridge Replacement at Deer Creek** **Carlton County, Minnesota**	Figure 1



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FAX: (651) 490-2150
WATTS: 800-325-2055
www.sehinc.com

S.P. 0901-70
Print Date: 5/16/2018

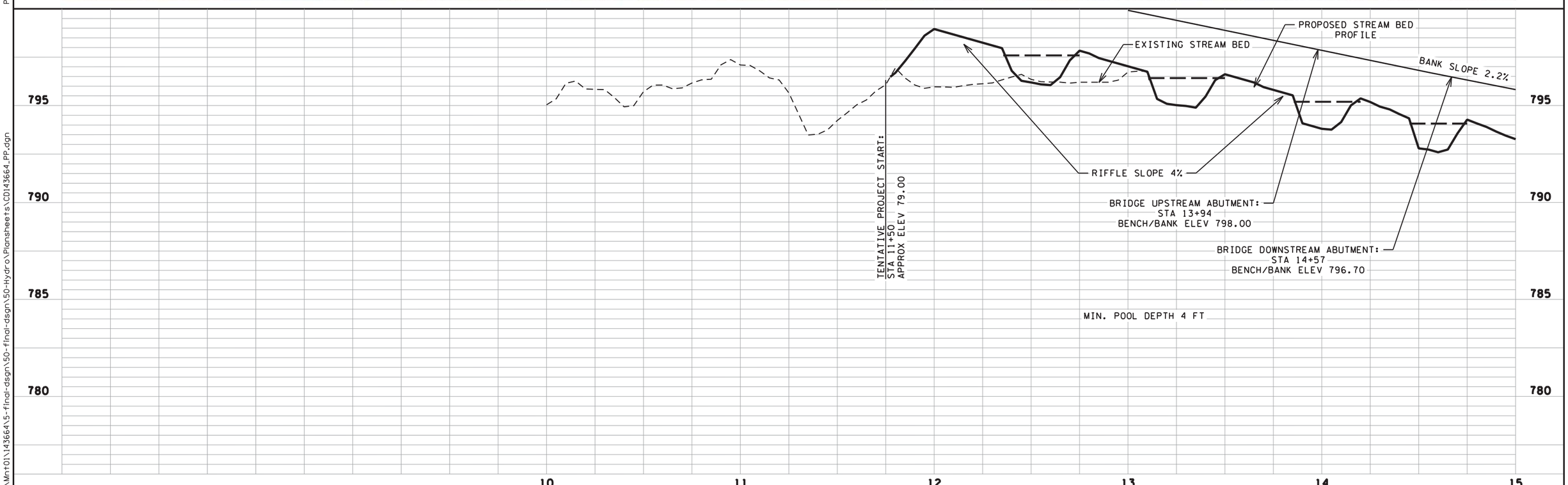
Map by: ES
Projection: Carlton County Coords
Source: MnDNR, MnDOT

Preliminary Layout

TH 23 Bridge Replacement and Deer Creek Restoration Project
Carlton County, Minnesota

Figure 2

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.



DESIGN TEAM				
DRAWN BY: SAS				
DESIGNER: DAC				
CHECKED BY: ---	NO.	BY	DATE	REVISIONS

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Certified By: _____ Lic. No. _____
Licensed Professional Engineer

Printed Name: _____ Date: _____

SEH

PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CARLTON COUNTY
TH 23 DEER CREEK
STREAM RESTORATION
S.P. 0901-70

PLAN + PROFILE

FILE NO. MNT01143664

PP1 OF PP2

Figure 3

2:29:50 PM 6/26/2018 PP1

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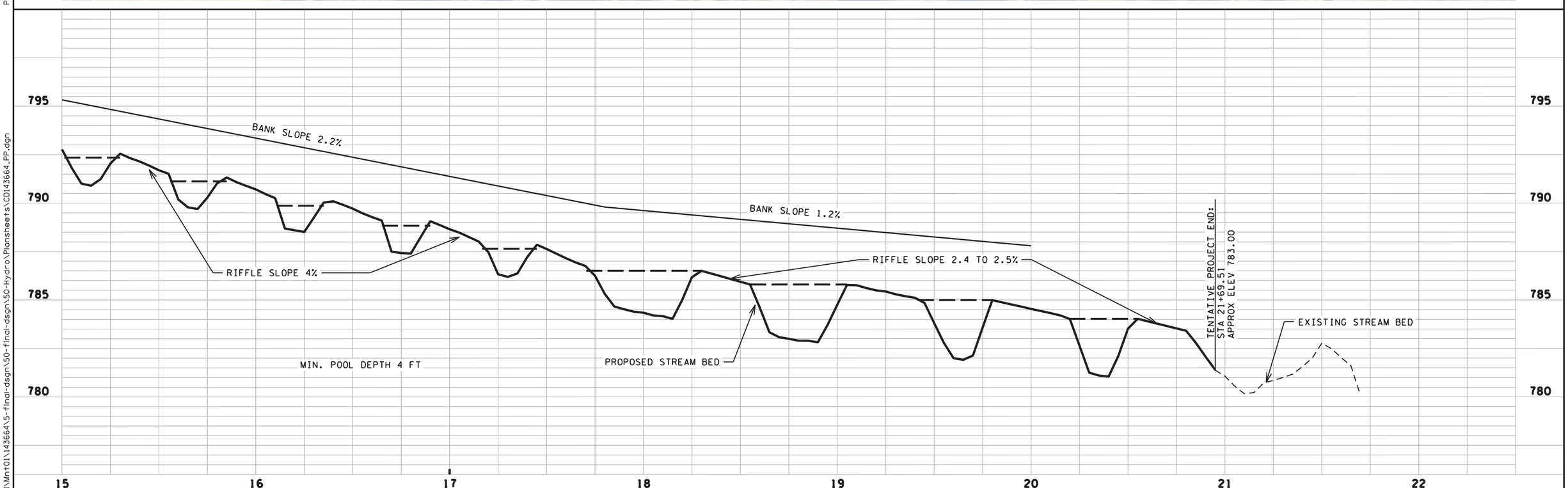

DESIGN TEAM				
DRAWN BY: SAS				
DESIGNER: DAC				
CHECKED BY: ---	NO.	BY	DATE	REVISIONS

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Certified By: _____ Lic. No. _____
Licensed Professional Engineer

Printed Name: _____ Date: _____

SEH

PHONE: (651)490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CARLTON COUNTY
TH 23 DEER CREEK
STREAM RESTORATION
S.P. 0901-70

PLAN + PROFILE

FILE NO. MNT01143664

PP2 OF PP2

Figure 4

2:30:22 PM 6/26/2018 PP2

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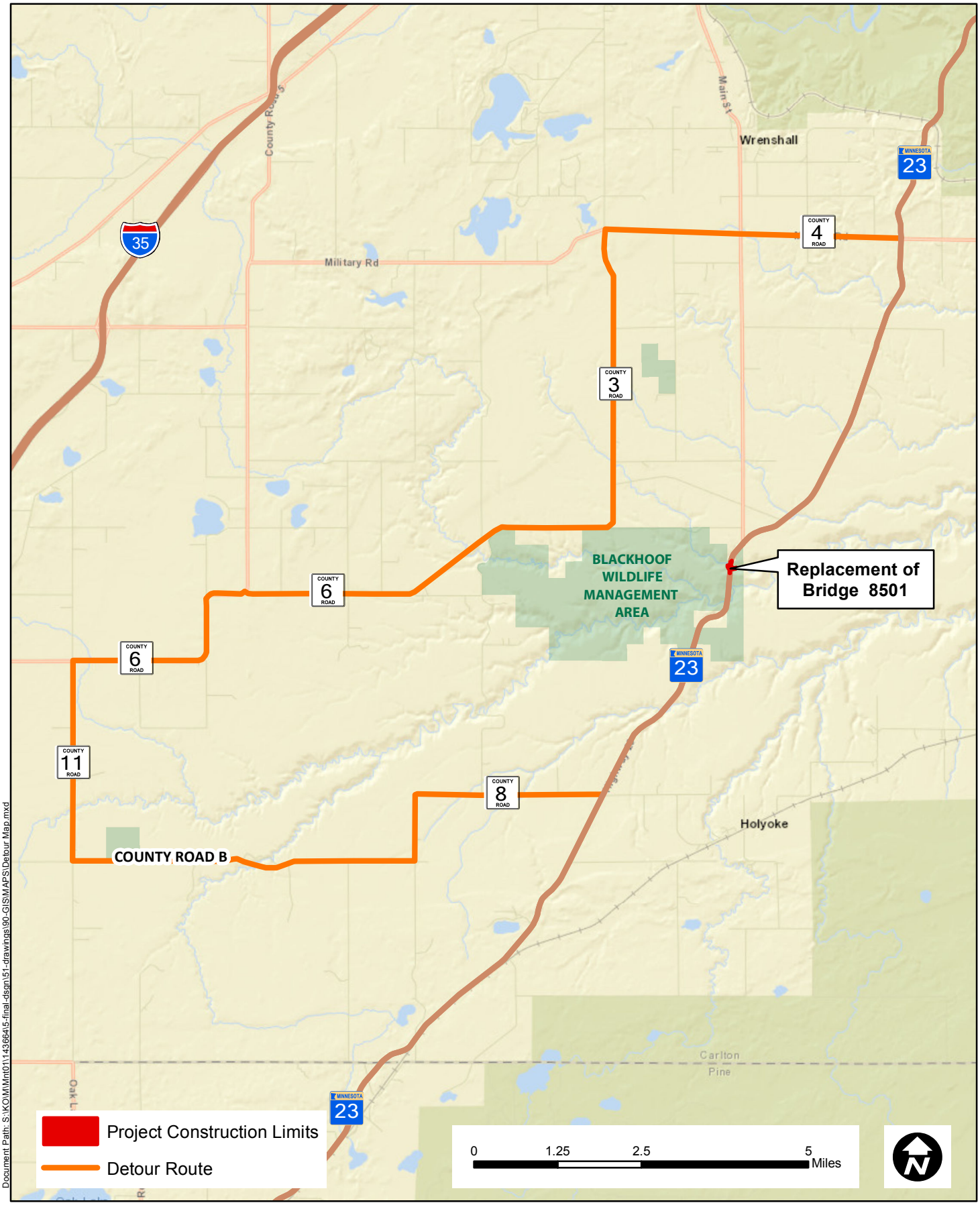

Document Path: S:\KO\M\Mn\011436645-final-dsgn\51-drawings\90-GIS\MAPS\Detour Map.mxd

SEH

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S.P. 0901-70
Print Date: 2/27/2018

Map by: ES
Projection: Carlton County Coords
Source: MnDNR, MnDOT

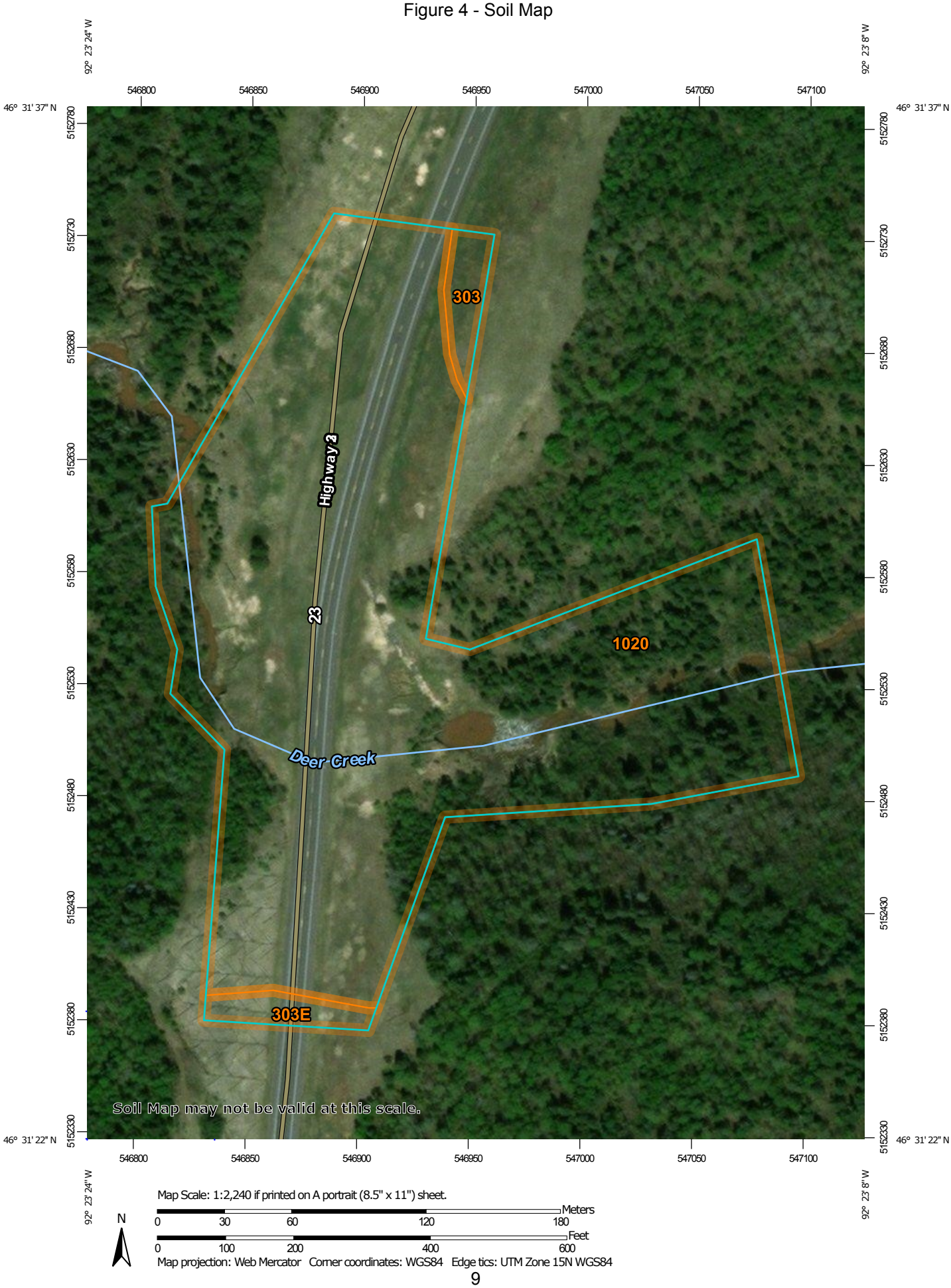
Planned Detour Route

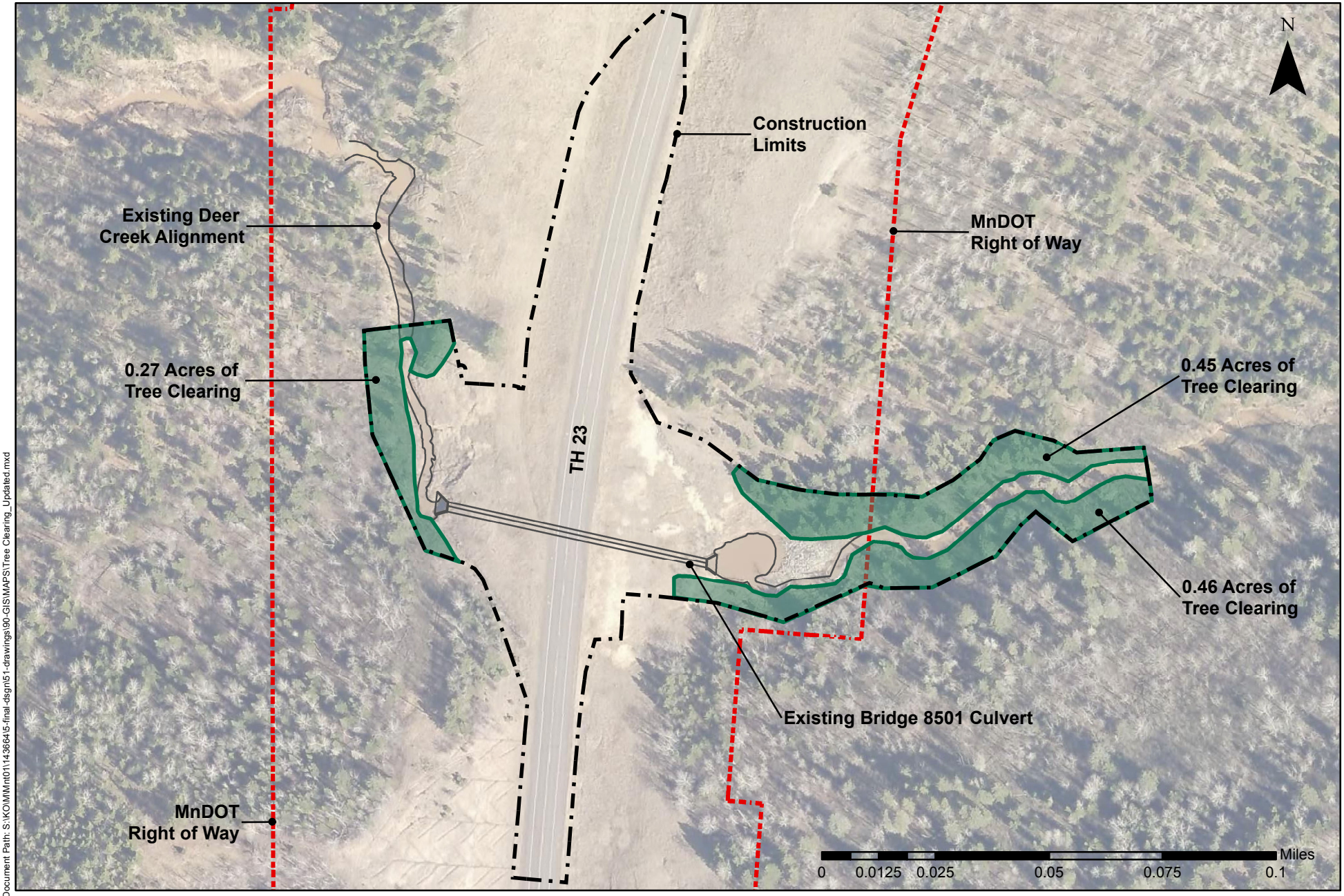
S.P. 0901-70: TH 23 Bridge Replacement at Deer Creek
Carlton County, Minnesota

Figure 3

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

Figure 4 - Soil Map





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S.P. 0901-70
Print Date: 5/16/2018

Map by: ES
Projection: Carlton County Coords
Source: MnDNR, MnDOT

Tree Clearing

TH 23 Bridge Replacement and Deer Creek Restoration Project
Carlton County, Minnesota

Figure 5

This map is neither a legally recorded map nor a survey map and is not intended to be used as one. This map is a compilation of records, information, and data gathered from various sources listed on this map and is to be used for reference purposes only. SEH does not warrant that the Geographic Information System (GIS) Data used to prepare this map are error free, and SEH does not represent that the GIS Data can be used for navigational, tracking, or any other purpose requiring exacting measurement of distance or direction or precision in the depiction of geographic features. The user of this map acknowledges that SEH shall not be liable for any damages which arise out of the user's access or use of data provided.

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Appendix B – MNDNR and USFWS Coordination

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From:	Leete, Peter (DOT)
To:	Alcott, Jason (DOT)
Cc:	Balzer, Christian (DNR); Hendrickson, Deserae L (DNR); Meyer, Matthew (DOT); Costley, Randy (DOT); Straumanis, Sarma (DOT); Smith, Christopher E (DOT); Joyal, Lisa (DNR); Orne, Benjamin G MVP; Coyle, Margi (Anne) (DNR); Torgerson, M.C (DNR); Fowler, Patricia L (DNR); Crozier, Gaea (DNR)
Subject:	DNR Comments on MnDOT Early Notification Memo, replacement of TH23 crossing of Deer Creek (SP0901-70)
Date:	Wednesday, October 18, 2017 11:00:45 AM
Attachments:	0901-70 ENM Revision 2.pdf DNRbasemap(2017).pdf AES (w veg protection sheet).pdf image001.png DNR GP2004-0001copy.pdf PassageBench-lessonslearned.pdf

Jason,
When I received this revision, I figured it would just be a short email to state that the addition of a bypass road during construction does not change previous comments… However, I see that I had not sent out a formal ENM comment letter. Though the project is very familiar, as DNR and MnDOT have been cooperatively working on plans for this site for more than four years….

This email is the DNR response for your project records and documentation. The following comments are a summary of existing conditions and previous communications regarding the proposed replacement of the TH23 Deer Creek culvert in Carlton County. Please incorporate the following comments into final designs and special provisions as they are developed. Though most of this is not new and in fact already been done:

1. For MnDOT planning purposes, attached to this email is a map of the project area (DNRbasemap.pdf) showing nearby locations of DNR areas concern (if they exist), such as Public Waters (in blue), waterbodies designated as infested with aquatic invasive species (AIS), snowmobile Trails (in pink), and various green shaded polygons for Sites of Biodiversity Significance. This map may be shared or included in project documentation, as all information is from publically available data layers. Most of this information is also available on the MnDOT georilla website (http://georilla/metrogis/#) in the natural resources catalog (DNR ENM). The Natural Heritage Information System (NHIS) database has been reviewed, though in order to prevent the inadvertent release of a rare features location, those details are not shown on the map. Comments on potential impacts to rare features listed in the NHIS comments are below. If you have questions regarding proposed work near any of the data shown, please give me a call.

2. Deer Creek is a Public Waters, as such a DNR Public Waters Work Permit will be required. The DNR through earlier project review, conversations, and subsequent meetings have stated that the replacement of this crossing shall be made fish passable. The current bridge design is a result of those meetings. Through verbal agreement MnDOT will be providing a 22ft wide opening at bankfull elevation between north and south abutment riprap slopes for DNR to design a new fish passable channel. MnDOT will be constructing this channel as part of the overall project. The channel will be shifted out of the culvert, though remain on essentially the same alignment within the historical stream corridor. The majority of the culvert may be left in place as long as it is sealed and covered with suitable material such as riprap to prevent it from being exposure in the future. All these details are being communicated separately as design progresses.

    a. Authorization for the project under the DNR General Permit (GP2004-0001) will require final review at a later date. Please enter the project into the DNR online permitting system (MPARS) when there is enough information to do so: www.dnr.state.mn.us/mpars. A copy of GP2004-0001 is attached, please review all the conditions of this permit and integrate their requirements into project design. Please contact me if you have questions on any of its requirements. Specific

items to incorporate into design and construction are:

b. As the project moves forward, design of the crossing should meet the conditions listed in GP 2004-0001: http://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/General_Permit_2004-0001.pdf. Additional information, including options on how to meet the conditions of the GP are presented in the collection of ' Best Practices for Meeting GP 2004-0001', at http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html

-

c. We typically limit work in the water (Work Exclusion dates) to allow for undisturbed fish migration and spawning. Deer Creek is a designated Trout Stream. As such, these dates are Sept 15 through June 30. While we may revise these dates for a particular project, there may still be limitations on the types of work during this time.

   Please be aware that the MPCA NPDES general permit for authorization to discharge stormwater associated with construction activities (permit MN R10001) recognizes the DNR "work in water restrictions" during specified fish migration and spawning time frames for areas adjacent to water. During the restriction period, all exposed soil areas that are within 200 feet of the water's edge and drain to these waters, must have erosion prevention stabilization activities initiated immediately after soil disturbing activity has ceased (and be completed within 24 hours).

d. Construction and demolition methods shall be submitted for review and approval at a later date. See the GP2004-0001 condition 'TEMPORARY IMPACTS DURING CONSTRUCTION' and items 'A' though 'L' for subjected conditions. This is normal procedure for bridge or culvert projects as we recognize that construction methods are not finalized until a contractor is chosen. Construction contractors shall be made aware of this condition as they may be held responsible for compliance.

e. Revegetation of disturbed soils should include native mixes in areas that are not proposed for mowed turf grass. Please utilize the native recommendations developed by BWSR (http://www.bwsr.state.mn.us/native_vegetation/) or MnDOT' in the 'Vegetation Establishment Recommendations' – dated November 13, 2015 (http://www.dot.state.mn.us/environment/erosion/seedmixes.html). In addition, for meeting DNR concerns, revegetation may include woody vegetation (trees and shrubs) in addition to grasses and/or forbs. Please contact your Districts representatives for the Erosion Control & Stormwater Management Unit, Roadside Vegetation Management Unit, and the Districts Maintenance staff to help determine appropriate permanent revegetation plans. Additionally, any use of Category 3 or 4 erosion control blanket shall be limited to 'bio-netting' or 'naturalnetting' types (category 3N or 4N), and specifically not allow plastic mesh netting.

f. The incorporation of passage benches into bridge design has been required to provide the option for wildlife passage under the bridges. The passage bench is now a standard design feature in MnDOT bridge plans. However, we have also learned much on this design since it became a standard feature. I have attached an information sheet for folks in project design and construction. Also note that with a concern for wood turtles that may be in the area, we should discuss passage bench and riprap design at an appropriate time in the design process (see #3 c below).

3. The Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any

rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area. There were a dozen native plant communities and three state listed species identified in this query. In order to prevent the inadvertent release of the location of specific listed or rare species contained in the NHIS, I have not identified the species or their location on the attached 'DNRbasemap.pdf'. If these details are needed for documentation, please contact me. Please note that the following rare features were identified in the query and *may* be impacted by the proposed project. Suggested avoidance and/or protection measures are also identified:

a. The Wood Turtle (*Glyptemys insculpta)*, a state-listed threatened species, has been reported in the Nemadji River Watershed, including near the project area. Thus they may be encountered on site. If they are found on the site, please remember that state law and rules prohibit the destruction of threatened or endangered species, except under certain prescribed conditions. If turtles are in imminent danger they should be allowed to move out of harm's way, otherwise they should be left undisturbed. More information on the wood turtle can be found at: http://www.dnr.state.mn.us/rsg/profile.html?action=elementDetail&selectedElement=ARAAD02020

b. Nearby lands are considered a Site of Biodiversity significance, also ranked 'outstanding', for its forest composition. 'Outstanding' sites contain the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most ecologically intact or functional landscapes. This area should be identified as an 'Area of Environmental Sensitivity' on plans. See the attached AES best practices guidance. The concern along this segment is that soil disturbance, incidental herbicide exposure, hydrologic alterations, tree disturbance, competition from non-native, sod-forming grasses, introduction of weed seeds, or shading by encroaching shrubs can all lead to degradation of these sites.

c. Additionally:

- The long slopes will likely have large areas of riprap for protection of the bridge abutments. I'd like to discuss riprap design, as large voids can entrap turtles. To address this, there may be standard design solutions or modifications, such as MnDOTs soil bioengineering system of root-rap (spec 2577.3 H) or use of smaller rock to fill the voids, such as Type 9 aggregate mulch (spec 3882) or similar.

- Any use of erosion control blanket should be limited to 'bio-netting' or 'naturalnetting' types (category 3N or 4N), and specifically not allow plastic mesh netting. Plastic mesh netting is a common component in erosion control blanket However, it is increasingly being documented that its interaction with reptiles and amphibians can be fatal. Thus its use must be avoided in this area.

- In water work should be staged to minimize downstream sediment transport, and any containment measures, such as silt curtain, should be removed as soon as possible to allow for turtle movement within the creek.

The Natural Heritage Information System (NHIS) is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. If information becomes available indicating additional listed species or other rare features, further review may be necessary.

4. The northern long-eared bat (*Myotis septentrionalis*), federally listed as threatened and state-listed as special concern, can be found throughout Minnesota. During the winter this species hibernates in caves and mines, and during the active season (approximately April-October) it roosts underneath bark, in cavities, or in crevices of both live and dead trees. Pup rearing is during June and July. Activities that may impact this species include, but are not limited to, any disturbance to hibernacula and destruction/degradation of habitat (including tree removal).

   The U.S. Fish and Wildlife Service (USFWS) has published a final 4(d) rule that identifies prohibited take. To determine whether you need to contact the USFWS, please refer to the USFWS Key to the Northern Long-Eared Bat 4(d) Rule (see links below). Please note that the NHIS does not contain any known occurrences of northern long-eared bat roosts or hibernacula within an approximate one-mile radius of the proposed project.

   Links: USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Non-Federal Activities
   http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEB.html
   USFWS Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions

   http://www.fws.gov/midwest/endangered/mammals/nleb/KeyFinal4dNLEBFedProjects.html
   USFWS Northern Long-eared Bat Website
   http://www.fws.gov/midwest/endangered/mammals/nleb/index.html
   USFWS Northern Long-eared Bat Fact Sheet
   http://www.fws.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html

5. The Early Notification Memo correctly states that the Blackhoof Wildlife Management Area (WMA) is adjacent to the project. Portions of this area are also managed as the Blackhoof Aquatic Management Area (AMA). As provided by Minnesota Statutes, section 86A.05, WMA's are established "to protect those lands and waters which have a high potential for wildlife production and to develop and manage these lands and waters for the production of wildlife, for public hunting, fishing, and trapping, and for other compatible outdoor recreational uses." and AMA's are established "to protect, develop, and manage lakes, rivers, streams, and adjacent wetlands and lands that are critical for fish and other aquatic life, for water quality, and for their intrinsic biological value, public fishing, or other compatible outdoor recreational uses." It is for these values that the DNR and MnDOT have been working to restore the ecological connection of Deer Creek at the TH23 crossing. MnDOT has been working with DNR fisheries on the design of this crossing (per #2 above), though for your information, the contact for the WMA is the Area Wildlife Manager at our Cloquet Office (Chris Balzer, 218-878-5665).

6. Please remind contractors that a separate water use permit is required for withdrawal of more than 10,000 gallons of water per day or 1 million gallons per year from surface water or ground water. GP1997-0005 (temporary water appropriations) covers a variety of activities associated with road construction and should be applied of if applicable. An individual appropriations permit may be required for projects lasting longer than one year or exceeding 50 million gallons. Information is located at: http://www.dnr.state.mn.us/waters/watermgmt_section/appropriations/permits.html

7. There is a local snowmobile trails in the project area. See the pink line in the attached DNRbasemap.pdf. Any proposed utility work, such as poles and support wires should be aware of this use in your right of way.

DNR folks, if I've missed anything, or have any suggestions for MnDOT to consider, please respond ASAP to Jason, and myself.

Peter Leete
Transportation Hydrologist (DNR-MnDOT Liaison) | Division of Ecological & Water Resources
Minnesota Department of Natural Resources
Office location: MnDOT Office of Environmental Stewardship
395 John Ireland Blvd., MS 620
St. Paul, MN 55155
Phone: 651-366-3634
Email: peter.leete@state.mn.us

image001

From:	Alcott, Jason (DOT)
To:	Lillegaard, Cindy (DOT)
Cc:	Moynihan, Debra (DOT)
Subject:	S.P. - ESA (Section 7) - Determination of No Effect
Date:	Thursday, September 19, 2013 10:35:03 AM

Endangered Species Act of 1973, as amended – Section 7 - Determination of No Effect
S.P. 0901-67, Trunk Highway 23, Replacement of Bridge 09015 and Associated Activities, Carlton County
S.P. 0901-70, Trunk Highway 23, Replacement of Bridge 8501, Carlton County
S.P. 0901-75, Trunk Highway 23, Replacement of Bridge 5554, Carlton County
S.P. 5803-35, Trunk Highway 23, Replacement of Bridge 5549, Pine County
S.P. 6937-101, Trunk Highway 2, Approach Ramp Work, St. Louis County

In response to your request, the proposed actions have been reviewed for potential effects to federally-listed threatened, endangered, proposed, candidate species and listed critical habitat. As a result of this review, a determination of **no effect** has been made.

Section 7 of Endangered Species Act of 1973, as amended, requires each Federal agency to review any action that it funds, authorizes or carries out to determine whether it may affect threatened, endangered, proposed species or listed critical habitat. Federal agencies, or their designated non-federal representatives (FHWA has delegated MnDOT) as their non-federal representative) must consult with the Service if any such effects may occur as a result of their actions. Consultation with the Service is not necessary if the proposed action will not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action will have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

Based on the information you have provided, it has been determined that no further action under Section 7 of the Act is required. However, if information becomes available indicating that federally-listed species or designated critical habitat may be affected, please contact this office and consultation with the Service will be initiated, if necessary.

Jason Alcott
Minnesota Department of Transportation
Office of Environmental Stewardship
395 John Ireland Boulevard
St. Paul, MN 55155
Phone: 651-366-3605
Email: Jason.alcott@state.mn.us

FW: Concurrence - ESA (Section 7) , S.P. 0901-70
Alcott, Jason (DOT) to: Bob Rogers 05/07/2018 03:02 PM
Cc: "Costley, Randy (DOT)"

History: This message has been forwarded.

From: Horton, Andrew [mailto:andrew_horton@fws.gov]
Sent: Thursday, May 03, 2018 1:08 PM
To: Smith, Christopher E (DOT) <christopher.e.smith@state.mn.us>
Subject: Re: Request For Concurrence - ESA (Section 7) , S.P. 0901-70

Chris,

I have looked over the information provided regarding the removal of an existing box culvert and construction of a new span bridge along TH 23 (SP 0901-70) located in Carlton County, Minnesota. You have made the determination that the proposed project may affect, but will not adversely affect the gray wolf (*Canis lupus*) and Canada lynx (*Lynx canadensis*).

We concur that this project may affect, but is not likely to adversely affect the Canada lynx and gray wolf. Based on the information provided, less than 1.25 acres of trees will be removed and the forested habitat is located directly adjacent to existing roadways and are disturbed and degraded. If these species utilize the habitat within the action area, we do not anticipated the loss of this sub-optimal habitat to have a significant impact to either species.

This concludes consultation under Section 7 of the Endangered Species Act, as amended. Please contact our office if this project changes or new information reveals effects of the action to proposed or listed species or critical habitat to an extent not covered in your original request.

- Andrew

Andrew Horton
U.S. Fish and Wildlife Service
Minnesota/Wisconsin Field Office
4101 American Blvd East
Bloomington, MN 55425-1665
(952) 252-0092, ext. 208

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Appendix C – MnDOT Cultural Resources Findings

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Office of Environmental Stewardship
Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155-1899

Office Tel: (651) 366-4291
Fax: (651) 366-3603

Jason Alcott
MnDOT District 1 Report Writer
1123 Mesaba Avenue
Duluth, MN 55811

October 12, 2017

Re: S.P. 0901-70 Bridge 8501 replacement, Wrenshall Township, Duluth

Dear Mr. Alcott,

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the applicable Programmatic Agreements between the FHWA and the Minnesota State Historic Preservation Office (SHPO). The Section 106 review fulfills MnDOT's responsibilities under the Minnesota Historic Sites Act (MS 138.665-.666), the Field Archaeology Act of Minnesota (MS 138.40); and the Private Cemeteries Act (MS 307.08, Subd. 9 and 10).

The proposed project will consist of the replacement of Bridge 8501 (a 1939 precast concrete box culvert), which carries Minnesota TH 23 over Deer Creek in Carlton County. To facilitate bridge construction, a temporary single bypass lane will be constructed within the existing road right-of-way. Associated grading will be completed with the bridge construction. The site is also a part of the larger Deer Creek Stream Restoration project. The project will not require the purchase of additional right-of-way.

On behalf of the FWHA, MnDOT CRU has studied all bridges in the state (on both the state and local systems) built prior to 1970 and has determined which bridges have historical significance. Only about 3 percent of the bridges in the state are historically significant and require further analysis. For the remaining 97 percent of pre-1970 bridges, determinations can be made with little delay. As long as historic bridges continue to be prioritized for preservation, this streamlining approach will remain in effect and will continue to benefit MnDOT and local agencies. Through this statewide bridge streamlining study, MnDOT CRU has determined that Bridge 8501 is not eligible for the National Register.

Based on our existing programmatic agreements with various tribal groups, we sent a consultation letter to the following tribes: Fond du Lac Reservation and Grand Portage
Reservation. We did not receive any response within the allotted time.

The area of potential effects (APE) for the project consists of the proposed construction area. Because all work will occur within previously disturbed right-of-way, it is unlikely that the APE contains intact, significant archaeological resources. There are no historic structures within the APE.

The finding of this office is that there will be **no historic properties affected** by the project as currently proposed. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

Renée Hutter Barnes

Renée Hutter Barnes, Historian
Cultural Resources Unit
renee.barnes@state.mn.us

cc: Randy Costley, MnDOT District 1 Project Manager
Daniel J. Erickson, MnDOT District 1 Project Designer
MnDOT CRU Project File