

Environmental Assessment Worksheet

TH 97 Improvement Project

MnDOT Metro District

SP 8201-21

Washington and Anoka Counties
August 2024

Table of Contents

TH 97 Improvement Project i

1. Project Title: Trunk Highway 97 Improvement Project (Project)..... 1
2. Proposer:..... 1
3. RGU: 1
4. Reason for EAW Preparation: 1
5. Project Location: 2
6. Project Description: 3
7. Climate Adaptation and Resilience: 9
8. Cover Types:..... 14
9. Permits and Approvals Required: 15
10. Land Use:..... 16
11. Geology, Soils and Topography/Landforms:..... 23
12. Water Resources:..... 26
13. Contamination/Hazardous Materials/Wastes:..... 34
14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features): 39
15. Historic Properties: 48
16. Visual:..... 50
17. Air:..... 50
18. Greenhouse Gas (GHG) Emissions/Carbon Footprint:..... 55
19. Noise: 57
20. Transportation: 58
21. Cumulative Potential Effects:..... 62
22. Other Potential Environmental Effects:..... 64

List of Tables

Table 1 – Project Location.....	2
Table 2 – Project Magnitude.....	5
Table 3 - Existing Pavement in the Project area: Bituminous over Concrete (BOC).....	7
Table 4 - Segment Crash Data (2019-2023).....	7
Table 5 – Intersection Crash Data (2019-2023).....	8
Table 6 – Climate Considerations.....	12
Table 7 – Cover Types.....	14
Table 8 – Green Infrastructure.....	14
Table 9 – Tree Impacts.....	14
Table 10 - Permits and Approvals Required (Federal).....	15
Table 11 - Permits and Approvals Required (State).....	15
Table 12 - Permits and Approvals Required (Local/Regional).....	16
Table 13 - Soil Types.....	25
Table 14 – Wells Within 100 Feet of the Project Corridor.....	27
Table 15 - Delineated Aquatic Resources and Impacts (Wetlands).....	32
Table 16 - Delineated Aquatic Resources and Impacts (Wet Ditch).....	32
Table 17 – GHG Analysis Results.....	55
Table 18 – Typical Construction Equipment Noise Levels at 50 Feet.....	57
Table 19 – Project-Related Environmental Effects (Cumulative Potential Effects).....	63

Attachments

- A. Figures
- B. Geology Documentation
- C. Wetland Documentation
 - a. Wetland Assessment and Two Part Finding
- D. Contaminated Properties Documentation
 - a. Contaminated Materials Management Team (CMMT) Correspondence
 - b. Phase I Environmental Site Assessment (ESA)
 - c. Phase II ESA
- E. Section 7 Correspondence
- F. DNR Correspondence
- G. MnDOT Roadside Vegetation Management Review
- H. MnDOT Cultural Resources Unit (CRU) Correspondence and Section 106 Documentation
- I. Noise Determination Correspondence
- J. MnDOT Regulated Materials Unit Correspondence
- K. MnDOT Aeronautics Unit Correspondence
- L. Floodplain Documentation
- M. Preliminary Section 4(f) De Minimis Determination

List of Acronyms

Acronym	Definition
ACP	Asbestos Cement Pipes
ADA	Americans with Disabilities Act
AES	Area of Environmental Sensitivity
AMM	Avoidance and Minimization Measures
APE	Area of Potential Effect
AUAR	Alternative Urban Areawide Review
BGEPA	Bald and Golden Eagle Protection Act
BMP(s)	Best Management Practices
BOC	Bituminous over Concrete
CCAA	Candidate Conservation Agreement on Energy and Transportation Lands
CFR	Code of Federal Regulations
CIPP	Cured in place plastic
CMMT	Contaminated Materials Management Team
COE	Corps of Engineers
CRU	Cultural Resources Unit
CY	Cubic Yards
DNR	Department of Natural Resources
DWSMA	Drinking Water Supply Management Area
EAW	Environmental Assessment Worksheet
eDOCS	Electronic Document Management System (MnDOT's system for storing project information)
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EQB	Environmental Quality Board
ESA	Environmental Site Assessment
F	Fahrenheit
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GPS	Global Positioning System
MBTA	Migratory Bird Treaty Act
MDA	Minnesota Department of Agriculture
MDH	Minnesota Department of Health

Acronym	Definition
MEV	Million Entering Vehicles
MICE	Minnesota Infrastructure Carbon Estimator
MnCMAT	Minnesota Department of Transportation's Crash Mapping Analysis Tool
MnDOT	Minnesota Department of Transportation
MOVES	Motor Vehicle Emission Simulator
MPARS	Minnesota Department of Natural Resources Permitting and Reporting System
MPCA	Minnesota Pollution Control Agency
MPH	Miles per hour
MSAT	Mobile Source Air Toxics
MWI	Minnesota Well Index
NAAQS	National Ambient Air Quality Standards
NAVD88	North American Vertical Datum of 1988
NEPA	National Environmental Policy Act
NHEL	Not Highly Erodible Land
NHIS	Natural Heritage Information System
NOAA	National Oceanic Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
OES	Office of Environmental Stewardship
PBO	Programmatic Biological Opinion
PCB	Polychlorinated Biphenyls
PFOS	Perfluorooctane Sulfonate
PHEL	Potentially Highly Erodible Land
PLSS	Public Land Survey System
PM	Particulate Matter
PQI	Pavement Quality Index
Project	Trunk Highway 97 Improvement Project
RCP	Representative Concentration Pathway
RCWD	Rice Creek Watershed District
RGU	Responsible Government Unit
RMU	Regulated Materials Unit
ROW	Right of Way
RQI	Ride Quality Index
SHPO	State Historic Preservation Office
RSL	Remaining Service Life
SR	Surface Rating
SWPPP	Stormwater Pollution Prevention Plan
TAZ	Transportation Analysis Zone
TH	Trunk Highway

Acronym	Definition
UA	Urbanized Area
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Society
WCA	Wetland Conservation Act
WMA	Wildlife Management Area
WHPA	Wellhead Protection Area

Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's (EQB) website at: <https://www.eqb.state.mn.us/> The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to 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 21.

Note to reviewers: Comments must be submitted to the Responsible Governmental Unit (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 Environmental Impact Statement (EIS).

1. Project Title: Trunk Highway 97 Improvement Project (Project)

2. Proposer:

Contact Person: Jeffrey Olson
Title: Program Supervisor, MnDOT Metro
Address: 1500 County Road B2
City, State, ZIP: Roseville, MN 55113
Phone: 651-234-7676
Fax: NA
Email: jeffrey.olson@state.mn.us

3. RGU:

Contact Person: Jeffrey Olson
Title: Program Supervisor, MnDOT Metro
Address: 1500 County Road B2
City, State, ZIP: Roseville, MN 55113
Phone: 651-234-7676
Fax: NA
Email: jeffrey.olson@state.mn.us

4. Reason for EAW Preparation:

Required:

EIS Scoping
 Mandatory EAW
Proposer initiated

Discretionary:

Citizen petition
RGU discretion

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

4410.4300, Subpart 27. A (Public Waters, public waters wetland, and wetlands): "For projects that will change or diminish the course, current, or cross-section of one acre or more of any public water or public waters wetland."

5. Project Location:

- **Counties:** Washington, Anoka
- **Cities:** Forest Lake, Columbus
- **PLSS Location (¼, ¼, Section, Township, Range):** See **Table 1**.
- **Watershed (81 major watershed scale):** Upper Mississippi River Basin
- **GPS Coordinates:** 45°15'09.94"N, 93°00'07.69"W (approximate Project center)
- **Tax Parcel Number:** NA

Table 1 – Project Location

Range	Township	Section	Quarter-Quarter Section
21W	32N	17	SWSW
21W	32N	17	SESW
21W	32N	17	SWSE
21W	32N	19	NENE
21W	32N	19	NWNE
21W	32N	19	NENW
21W	32N	19	NWNW
21W	32N	20	NWNE
21W	32N	20	NENW
21W	32N	20	NWNW
22W	32N	24	NENE

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project, **Attachment A:**
 - **Figure 1 – Area Map**
- U.S. Geological Survey (USGS) 7.5 minute, 1:24,000 scale map indicating project boundaries, **Attachment A:**
 - **Figure 2 –USGS Map**
- Site plans showing all significant project and natural features. Preconstruction site plan, **Attachment A:**
 - **Figure 3 – Project Map**
 - **Figure 4 – Aerial Project Map**
- Site plans showing all Project and natural features. Post-construction site plan, **Attachment A:**
 - **Figure 5 – Proposed Project Layout**
 - **Figure 6 – Right of Way Impacts**
- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).

6. Project Description:

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

Reconstruct TH 97 from a two-lane, undivided, rural highway to a two-lane, divided, urban highway in the cities of Forest Lake and Columbus. The Project includes construction of a single-lane roundabout at Fenway Ave N, a multiuse trail for pedestrians/bicyclists, dedicated right- and left-turn lanes at key intersections, intersection lighting, American with Disabilities Act (ADA) accessibility, signal improvements, and stormwater treatment.

- 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.**

The proposed Project is located within Washington and Anoka Counties. Approximately 0.12 mile on the western end of the Project is in the city of Columbus in Anoka County. The remaining 1.7-mile (approximate) portion of the Project is in the city of Forest Lake in Washington County.

More details on the Project are provided in the following paragraphs and shown in **Attachment A, Figure 5**.

The proposed Project includes these key elements:

1. **Reconstruct TH 97.** Reconstruct TH 97 from a two-lane, undivided, rural highway to a primarily two-lane, divided, urban highway from Hornsby St NE to approximately 0.1 mile east of Forest Rd N. Curb and gutter would be incorporated for much of the corridor.

As shown in **Figure 5**, a portion of the Project crosses the Lamprey Pass Wildlife Management Area (WMA), managed by the Minnesota Department of Natural Resources (DNR). As part of the reconstruction, TH 97's through lanes east of Lamprey Pass WMA would be widened from 11 feet to 13 feet in each direction. Within the Lamprey Pass WMA, they would remain 11 feet to minimize impacts.

2. **Make Intersection Improvements at Key Locations.** The Project would incorporate several intersection improvements including the following:

- Replace the existing traffic signal at TH 97 and Everton Ave N and add high-visibility crosswalks, ADA accommodations, and push button signals with countdown timers.
- Replace the existing signalized intersection at TH 97 and Fenway Ave with a single-lane roundabout with pedestrian crossing elements at all approaches.
- Shift the traffic signal poles at the intersection of TH 97 and Hornsby St N to accommodate a new multiuse trail along the south side of TH 97.
- Construct dedicated left- and right-turn lanes at Fondant Ave N.

- Convert Falcon Ave N, Floral Bay Dr N, and Forest Rd N to right-in/out intersections.
 - Construct pedestrian crossings with refuge islands at the intersections of Falcon Ave N, Floral Bay Dr N, Fondant Ave N, and Forest Rd N.
 - Construct a right-turn lane into a future industrial development site (approximately 0.14 mile east of Fondant Ave N).
3. **Construct a Multiuse Trail.** The Project would construct a 10-foot-wide multiuse trail along the south side of TH 97 for its entire length – from Hornsby Street NE at the western limits to the Hardwood Creek Trail bridge at the eastern limits. The Project would also include some multiuse trail construction on the north side of TH 97 near Falcon Ave N, between Fenway Ave N and Floral Bay Dr N, and near Forest Rd N to the Hardwood Creek Trail bridge. The Project would also construct a multiuse trail along the east side of Forest Rd N from its intersection with TH 97 to the Hardwood Creek Trail. This is the connection pedestrians and bicyclists would use to access the trail. The Hardwood Creek Trail is a major recreational trail corridor in the region (**Attachment A, Figure 3**).
 4. **Drainage Culverts.** Replace 11 existing drainage culverts along the TH 97 corridor to better facilitate water flow. One of the culverts to be replaced is large enough (36-inch box culvert) to serve as a wildlife crossing for the state endangered Blanding’s Turtle and would be used for this purpose as well. The culvert is located approximately 0.05 mile east of the Hornsby St N intersection within the Lamprey Pass WMA.
 5. **Install Wildlife Culverts and Fencing.** In addition to replacing the 11 existing drainage culverts (see #4 above), the Project would add a new culvert for passage of the Blanding’s Turtle. This new crossing would be approximately 0.10 mile east of the Hornsby St N intersection. Wildlife fencing would also be installed to encourage turtles to use the two crossing locations and reduce turtle mortality. The crossings and fencing are in the Lamprey Pass WMA portion of the Project. The fencing extends further to the east on both sides of the roadway (beyond the WMA) due to the presence of wetlands and turtle habitat. DNR staff can access the WMA via a new access gate that would be provided on the north side of TH 97.
 6. **Drainage Ponds and Infiltration Basin.** The Project would incorporate ponding and infiltration basins for roadway drainage. A wet pond would be located on the north side of TH 97 just west of Everton Ave N. Additional ponds would be located on the south side of TH 97 at the Forest Rd N intersection. Wet ponds would be located east of Forest Rd N and an infiltration basin would be constructed on the east side of Forest Rd N. Fencing would be provided around the ponds.
 7. **Excavate Unsuitable Soils and Fill.** Soils in the eastern portion of the corridor from Hornsby Street NE to Everton Ave N and a few pockets further to the east, are not suitable for roadway beds. The soils are highly organic and contain peat. If left in place, the soils would result in settling of the roadway and trail, likely at different rates and depths, which would result in ongoing maintenance issues. To address the problem, the Project would use lightweight fill to replace soil that is removed along with granular backfill in areas where soils are not as unsuitable.

The Project would also include access modifications and new driveway connections throughout the corridor. There would be one driveway closure, approximately 0.01 mile east of Fenway Ave N.

Construction methods for the Project will consist of excavation and major grading for the reconstruction of the roadway and its associated improvements. The Project would not include significant demolition, removal, or remodeling of existing structures; however, the Project would include the removal of access to TH 97 for one driveway.

Construction activities are anticipated to start in Spring 2025 and continue through 2026.

c. **Project magnitude:**

Table 2 – Project Magnitude

Description	Number
Total project acreage	30.3 acres
Linear project length	1.72 miles
Number and type of residential units	NA
Residential building area (in square feet)	NA
Commercial building area (in square feet)	NA
Industrial building area (in square feet)	NA
Institutional building area (in square feet)	NA
Other uses – specify (in square feet)	NA
Structure height(s)	Varies – limited to fencing by ponds and for wildlife, lighting at roundabouts, and traffic signal poles. No buildings are being constructed.

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.**

PROJECT PURPOSE

The purpose of the TH 97 Project is to accomplish the following:

- Address deteriorating pavement and roadway base conditions to provide safe travel for users.
- Improve motor vehicle safety along the corridor.
- Meet current drainage requirements.
- Provide opportunities for non-motorized users.
- Address ADA deficiencies.

PROJECT NEEDS

Several needs have been identified for TH 97, including pavement and drainage condition, motor vehicle safety, walkability and bikeability. Primary needs are the main transportation problems to be solved – essentially the reason the project was initiated. Secondary needs are other transportation problems or opportunities for improvements within the project area that may be able to be addressed, if feasible, at the same time as the primary needs are addressed. TH 97 has two primary needs and two secondary needs. Primary needs include pavement/roadway condition and motor vehicle safety. Secondary needs include drainage and walkability/bikeability. They are discussed in the following subsections.

Pavement Condition / Base Roadway (Primary Need)

Pavement condition is an important component of a roadway's function. Poor pavement condition can lead to safety problems and make driving an unpleasant experience for users. To ensure roadways meet the expectations of the travelling public, to make cost-effective investments in pavement condition, and to help maintain the safety of its roadways, MnDOT uses four different measures to monitor and track pavement condition. These measures include: ride quality index (RQI), surface rating (SR), pavement quality index (PQI), and remaining service life (RSL).

Ride Quality Index (RQI)¹

RQI measures the smoothness of the pavement. It uses a scale from 0 to 5, with higher values indicating smoother roads. An RQI of 4.1 to 5.0 is considered "Very Good," 3.1 to 4.0 is "Good," 2.1 to 3.0 is "Fair," 1.1 to 2.0 is "Poor," and 0.1 to 1.0 is "Very Poor." When pavement reaches a RQI of 2.5, it has deteriorated to a point where most people feel it is uncomfortable to drive and needs major rehabilitation. RQI is calculated from the longitudinal profile of the pavement surface, measured by laser height sensors.

Surface Rating (SR)

SR quantifies visible pavement distress such as cracks and ruts. The rating ranges from 0.0 to 4.0, with higher values indicating fewer defects. A road with no defects is rated at 4.0, while a road in need of major rehabilitation is rated below 2.5. SR is determined by analyzing digital images of the pavement surface.

Pavement Quality Index (PQI)

PQI is a composite index that combines RQI and SR to give an overall indication of pavement condition. It is calculated as the square root of the product of RQI and SR. PQI is rated on a scale of 0.0 to 4.5. A higher PQI indicates better pavement quality.

Remaining Service Life (RSL)

RSL estimates the number of years until the pavement's RQI reaches 2.5, which is generally considered the end of its design life. This estimate is based on historical deterioration curves and indicates how long the pavement is expected to last before requiring major rehabilitation.

MnDOT completed a mill and overlay project on TH 97 within the Project area in 2008. Since then, the pavement has deteriorated and the condition within the Project area is worsening and there are underlying unsuitable soils within the roadway base that contribute to the pavement problems on TH 97. Due to the age of the road, reflective cracking has been identified as a concern. Reflective cracking is a type of pavement failure that occurs in asphalt pavements that also have cracking in the base pavement below the roadway surface. This issue would persist regardless of future mill and overlay activities if the underlying pavement failures are not addressed.

The present ride quality index (RQI – pavement smoothness) on TH 97 within the Project area ranges from 2.4 - 3.0 (2023) placing the roadway in the lower end of the fair category. The current ride is rough due to numerous multiple thermal and random alligator cracks reflecting through the current overlay, which is starting to fail, and the longitudinal joint is raveling open in most areas. Unsuitable silty soils in the subgrade have led to the accelerated deterioration of the current overlay and rutting through the less well-drained areas.

¹ For more information on pavement measures and how they are calculated: [Pavement Management - Materials & Road Research - MnDOT \(state.mn.us\)](https://www.mn.gov/transportation/pavement-management-materials-road-research)

The remaining service life (RSL – years the pavement is expected to last) of the current pavement is three years. This indicates the pavement has little life left. Surface rating (SR – visible pavement defects) while currently categorized as “good” is expected to decrease in the near term due to underlying unsuitable soils that will continue to reflect up through the pavement surface. Data from 2023, shown in **Table 3**, summarizes existing pavement metrics for TH 97.

Table 3 - Existing Pavement in the Project area: Bituminous over Concrete (BOC)

Pavement Condition Metric (2023)	Metric Value ⁽¹⁾	Metric Condition
Remaining Service Life	3	Low
Ride Quality Index	2.8	Fair
Pavement Quality Index	2.8	Good
Surface Rating	2.8	Good

(1) Average along TH 97 in the Project area. Actual levels vary along sections of the corridor.

Vehicle Safety (Primary Need)

Crash information from MnDOT’s Crash Mapping Analysis Tool (MnCMAT) for the five-year period from 2019 – 2023 was used to conduct a safety analysis. An analysis of crashes was conducted for roadway segments as well as at key intersections in the Project area.

Roadway Segment Crashes

A roadway segment crash rate and critical crash rate were calculated for TH 97 using crash data from 2019 – 2023. As shown in **Table 4**, both segments of TH 97 have crash rates (noted in orange shading) above the average crash rate for similar roadway facilities statewide. Rates above the statewide average, that are approaching the critical crash rate, suggest there is potentially an emerging safety concern.

Table 4 - Segment Crash Data (2019-2023)

Segment	Roadway Type	Total Crashes	Crash Rate ⁽¹⁾	Statewide Average Crash Rate ⁽²⁾	Critical Crash Rate ⁽³⁾	Critical Crash Rate Index
Hornsby Ave N to Everton Ave N	2-Lane Undivided	27	1.40*	1.22*	1.89*	0.74*
Everton Ave N to US Hwy 61	2-Lane Undivided	49	1.25*	1.22*	1.68*	0.74*

(1) The crash rate is the number of crashes per million entering vehicles (MEV).

(2) The statewide average crash rate is the average for each roadway type based on statewide crash data.

(3) The critical crash rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference.

(4) * indicates a crash rate above average crash rate

As shown in **Table 4**, there were a total of 76 crashes in the Project area. Of the crashes, 52 (68 percent) were property damage only crashes, meaning that nobody was identified as being injured. Seventeen of the crashes (22 percent) indicated a potential injury and seven crashes (9 percent) resulted in an injury. There were no fatal crashes nor severe injury crashes reported during the five-year period between 2019 and 2023. Most of the roadway segment crashes were rear end crashes (44; 58 percent).

Intersection Crashes

Crashes at intersections were also reviewed for safety problems using MnDOT’s data from 2019 to 2022. **Table 5** shows crash data at various intersections within the Project. The intersection at Forest

Rd N (Row 7 in the table) has a crash rate above the critical rate (noted in red shading in the table), indicating there is a sustained crash problem at this intersection. The intersection at Floral Bay (Row 5 in **Table 5**) is above the statewide average (noted in orange shading in **Table 5**), indicating that a safety problem could be emerging at this location.

Table 5 – Intersection Crash Data (2019-2023)

Intersection with TH 97	No. of Crashes	Calculated Crash Rate ⁽³⁾	Average Crash Rate ⁽⁴⁾	Critical Crash Rate ⁽⁵⁾	Critical Crash Rate Index ⁽⁵⁾
Hornsby St NE ⁽¹⁾	9	0.23	0.55	0.87	0.26
Everton Ave N ⁽¹⁾	23	0.51	0.55	0.84	0.61
Falcon Ave N ⁽²⁾	2	0.06	0.14	0.32	0.19
Fenway Ave N ⁽²⁾	8	0.25	0.55	0.90	0.28
Floral Bay Dr N ⁽²⁾	1	0.31	0.14	0.32	0.97
Fondant Ave N ⁽²⁾	2	0.06	0.14	0.32	0.19
Forest Rd N	14	0.48	0.14	0.33	1.45

- (1) Intersection type is a traffic signal, low volume (<20,000 on the trunk highway)
- (2) Intersection type is a thru/stop (traffic on TH 97 is not required to stop, but traffic from the side street does) in an urban area
- (3) The crash rate is the number of crashes per million entering vehicles (MEV).
- (4) The statewide average crash rate is the average for each intersection type based on statewide data.
- (5) The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference.

As shown in **Table 5**, there were 59 crashes at intersections along TH 97 between 2019 and 2023. Of the crashes, 35 (59 percent) were property damage only crashes. Sixteen (27 percent) likely had an injury and eight (14 percent) resulted in a non-incapacitating injury. There were no fatal or severe crashes at intersections.

Walkability and Bikeability (Secondary Need)

Existing pedestrian and bicycle facilities are limited within the Project limits. However, just to the west and east of the Project there are multiuse trails, including a state trail, the Hardwood Creek Trail, located at the eastern limits of the Project. To the west, there is a trail that starts west of the interchange with I-35 and continues to the western leg of Hornsby St NE. At Hornsby St NE, the trail turns north and continues along Hornsby St NE, leaving no trail facilities along TH 97 east of Hornsby St NE. The only option for bicyclists and pedestrians who travel along TH 97 is to use the road shoulder, which presents an uncomfortable experience.

Along with the lack of pedestrian and bicycle facilities through much of the corridor, at locations where facilities at intersections are present, many do not comply with ADA guidelines. As a result of these conditions, the corridor is not fully ADA accessible.

Drainage Infrastructure (Secondary Need)

There are several conditions on TH 97 that result in poor drainage and occasional flooding. Existing hydraulic infrastructure does not perpetuate water flow in some circumstances. Because the roadway was constructed under different drainage rules and guidance, existing facilities do not address current water collection and treatment practices, nor do they provide climate resiliency. The existing drainage infrastructure is unable to accommodate additional impervious surfacing such

as widening for intersection, turn-lane, or trail improvements that are needed to address other problems on TH 97.

PROJECT BENEFICIARIES

The beneficiaries of the proposed Project include local and regional motor vehicle travelers using TH 97 in the Project area as well as pedestrian and bicyclists that need to or wish to travel along and/or across TH 97 to access local and regional destinations. The DNR also benefits from increased access to its Lamprey Pass WMA.

- e. **Are future stages of this development including development on any other property planned or likely to happen?** Yes No
- f. **Is this project a subsequent stage of an earlier project?** Yes No

7. Climate Adaptation and Resilience:

- a. **Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.**

Current and projected future changes in Minnesota's climate include greater intensity rainfall events, more localized flooding, more frequent (repeated) freeze/thaw cycles, lack of snow cover, extreme heat, drought, and other factors that may damage infrastructure and create safety risks. For transportation infrastructure, the two primary concerns are the projected changes in temperature and precipitation.

Climate scientists use mathematical models to understand the likely range of future climate conditions. It is important to note that climatological scale (patterns over the next 30 years) is different than meteorological scale (hours, days, weeks, months) and meteorological events. The global climate models combine the complex processes and relationships of our integrated ocean/earth/atmosphere system with different scenarios for future greenhouse gas concentrations, along with other human and natural activity on the planet. This allows scientists to estimate possible future conditions. The climate is complex, and no single model can represent all possible inputs. Because of this, different scientific teams maintain their own models and compare the results to better understand climate projections.

Climate models are designed to help us understand the general trajectories of climatic changes expected, based on greenhouse gas (GHG) concentrations and other influences, but they are not designed to predict specific climatic conditions for a specific place and time; nor are they designed to predict individual weather events that contribute to flooding. Virtually all models agree that Minnesota will continue getting warmer in the future, but none can tell us with any certainty what exact temperature can be expected.²

² Information in this section is adapted from the *Minnesota Climate Explorer Frequently Asked Questions*, available at: <https://www.dnr.state.mn.us/climate/climate-explorer-faq.html>

TEMPERATURE CHANGES

The graphs in **Figure 7, Attachment A** display nine different temperature projections per time period for the Mississippi River Watershed – Twin Cities³ using the *Minnesota Climate Explorer* tool. These include one "Model Mean," representing the average of eight models, plus the outputs from each of the individual models. For each time period and model, the graph displays the average and "range" of values. Each time period has 20 years of data per model. The Model Mean, displayed in blue and on the left side of each time period, is the most important single plot to examine for any future scenario, because it contains information from all the other models.

Based on the *Minnesota Climate Explorer* tool, the "Modeled Present" mean value is 45.38 degrees Fahrenheit (F), and the "Late-Century (RCP 8.5)" mean value is 55.13 degrees F.⁴ Representative Concentration Pathway (RCP) 4.5 and 8.5 refer to two different GHG emissions scenarios. RCP 4.5 is a moderate scenario where emissions peak around 2040, and RCP 8.5 is the highest baseline emissions scenario which assumes rising emissions through the 21st century. The difference in average annual temperature is 9.75 degrees F. This potential increase in temperature is not expected to affect the stability of the Project; however more extreme heat days are also projected to increase and could mean an increase in the risk of pavement buckling.⁵

PRECIPITATION

Annual Precipitation

The historical average annual precipitation within the Mississippi River Watershed – Twin Cities between 1895 and 2023 was approximately 29.5 inches, based on the *Minnesota Climate Explorer* metadata using precipitation data from the National Oceanic Atmospheric Administration (NOAA). Between 2010 and 2023, the annual average precipitation rose to 31.8 inches. The average annual precipitation is projected to continue to rise in the foreseeable future based on the climate models discussed above. In 2040-2059, average annual precipitation under RCP 4.5 is projected to increase to 32.4 inches. In 2080-2099, this measurement is projected to increase to 33.1 inches under RCP 4.5 or 35.7 inches under RCP 8.5.

Extreme Rainfall Events – Depth, Intensity, Duration

Precipitation factors relating to the projected changes in Minnesota climate include increased precipitation depths, rainfall intensities, and storm duration. While these factors are largely independent, they could be interrelated in their effects on hydrologic and hydraulic systems. In Minnesota, the number of storms greater than 3-inches in 24-hours increased significantly between 2010 and 2023. Additionally, precipitation in the Project area also supports that there is an increasing frequency of higher intensity rainfall events, based on rainfall gauge data collected by the DNR State Climatology Office.

There is not an agreed upon standard of practice for how best to incorporate projected precipitation increases into projects. A resiliency check storm was analyzed to identify and reduce climate vulnerability risks to the Project. There were no significant changes in overtopping except

³ The Project is located within the Mississippi River Watershed, which was selected as the analysis area for the Minnesota Climate Explorer. More information about Minnesota's watersheds is available at:

<https://www.dnr.state.mn.us/watersheds/map.html>

⁴ Minnesota Department of Natural Resources, *Minnesota Climate Explorer tool*. Accessed 10/20/2023. [Minnesota Climate Explorer \(state.mn.us\)](https://www.dnr.state.mn.us/climateexplorer/)

⁵ Buckling is primarily a concrete pavement problem. Visit the following website for more information:

<http://www.dot.state.mn.us/pavementbuckle/>.

for the west pond. The west pond is being evaluated for expansion to provide additional storage capacity and an improved overflow route.

Drainage Infrastructure and Stormwater Management Design

Increased precipitation depth, rainfall intensity and storm duration are expected to impact drainage infrastructure in cases where existing storm sewer and stormwater management areas have been designed to standards of less extreme events. Temporary ponding and overtopping on roadways and exceeding storage capacity of stormwater management areas may occur due to any (or combination) of the factors discussed above.

Drainage from the corridor ultimately flows to one of three major waterbodies, with elevations measured using NAVD88, the North American Vertical Datum of 1988, ensuring uniform elevation standards:

- Judicial Ditch 4 on the west side of the corridor. Rice Creek Watershed District (RCWD) modeled floodplain elevation 895.62 NAVD88;
- Clear Lake located north of Fenway Ave intersection (RCWD modeled flood elevation 892.26 NAVD88),
- Hardwood Creek on the east side of the corridor. The proposed improvements do not extend to Hardwood Creek; however, the east portion of the Project drains to the creek.

Increases in depth, intensity and duration of rainfall could impact floodplain elevations for these waterbodies, reduce the amount of freeboard, or result in short duration ponding on the roadway. Additionally, increases in floodplain elevations of these waterbodies could impact the performance of the stormwater management system along the corridor due to higher tailwater.

b. For each Resource Category in the table below: Describe how the project's proposed activities and how the project's design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

[The rest of this page intentionally left blank]

Table 6 – Climate Considerations

Resource Category	Climate Considerations	Project Information	Adaptations
Project Design	Risks and vulnerabilities associated with warming temperatures and increased frequency of high-heat days and freeze-thaw events include increased pavement cracking and road buckling. Additionally, extreme heat events and cracked or icy pavements can create hazards and challenges for pedestrian accessibility.	<p>The Project would involve reconstructing and reconfiguring the existing transportation corridor. According to MnDOT more frequent (repeated) freeze/thaw cycles associated with climate change would result in detrimental impacts on pavement.</p> <ul style="list-style-type: none"> ○ Elevated road surface temperatures, especially where braking happens and along high-volume corridors, may accelerate the deterioration of road surfaces, causing rutting, structural damage, and reduced pavement life. 	MnDOT is studying the effects of increased freeze/thaw cycles on pavement; as design standards are updated to address negative effects, they would be implemented on projects at a statewide level.
Land Use	No critical facilities (i.e., facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are located within the Project area.	Not applicable.	Not applicable.
Water Resources	Existing risks and vulnerability with the increased frequency and intensity of precipitation events include transportation infrastructure damage, closures due to roadway flooding, washouts, slope failures, and others.	<p>Temporary increased ponding on roadways and overtopping of roadway may occur due to conveyance capacity of drainage systems and storage capacity of stormwater management areas and adjacent wetlands being exceeded.</p> <p>The Project is anticipated to increase impervious surface by 2.8 acres.</p> <p>Prolonged increases in precipitation could also increase flood risk associated with Clear Lake, Judicial Ditch 4, and the WMA wetland.</p>	<p>Best Management Practices (BMPs) would be constructed in compliance with the RCWD and National Pollutant Discharge Elimination System (NPDES) Construction Stormwater permit⁶. Defined overflow routes would be incorporated into the design along with the appropriate erosion protection. Existing drainage patterns would be maintained; RCWD has indicated it is critical to not increase drainage flow to Judicial Ditch 4.</p> <p>There is remaining space within the right of way for the west BMP to allow for potential expansion for additional flood storage. There is space for potential expansion of the east filtration basin, although it would require utility coordination with the overhead lines.</p> <p>Muck excavation is proposed for a portion of the corridor within the Lamprey Pass WMA based on geotechnical review. The muck excavation would improve the road subgrade and reduce potential for failure due to saturated conditions. There have been drainage issues along TH 97 within the WMA due to saturated conditions. This muck excavation would also provide resiliency against future potential water level increases in Judicial Ditch 4 and the WMA wetland. The turtle crossings are larger than hydraulically required. Therefore, if water levels increase, the additional capacity in the turtle crossings and culverts could also be utilized for conveyance.</p> <p>The flood risk associated with the WMA, Judicial Ditch 4, and Clear Lake is reduced by the fact that the road profile is currently set a minimum of approximately 7-feet above the estimated floodplain elevation. Although floodplain elevations are anticipated to increase, the freeboard provided to the road exceeds standards and allows an additional level of resiliency.</p>

⁶ When stormwater drains off a construction site, it carries sediment and other pollutants that can harm lakes, streams, and wetlands. The Minnesota Pollution Control Agency issues coverage to construction site owners and their operators under the Construction Stormwater general permit to prevent stormwater pollution during and after construction, and to protect Minnesota’s water resources. To learn more about this permit and efforts to protect water resources during construction, please visit: [Construction Stormwater Permit overview \(state.mn.us\)](https://www.pca.state.mn.us/construction-stormwater-permit-overview) and [Construction stormwater | Minnesota Pollution Control Agency \(state.mn.us\)](https://www.pca.state.mn.us/construction-stormwater).

Resource Category	Climate Considerations	Project Information	Adaptations
Contamination / Hazardous Materials/ Wastes	Increased frequency and intensity of precipitation events has the potential to increase the risk of hazardous materials entering waterways within the Project area.	Project activities would generate wastes and debris typical of road construction operations, such as asphalt, paints, gasoline, diesel fuel, and other petroleum-based products.	In compliance with the NPDES Construction Stormwater General Permit (MNR100001), products that have the potential to leach pollutants would be stored under cover, hazardous materials would be stored in sealed containers and would have secondary containment to prevent spills, solid wastes would be collected and disposed of properly, and vehicle and equipment washing would not be allowed on site. Appropriate measures would be taken during construction to avoid spills that could contaminate groundwater or surface water in the Project area. The Project would have a Spill Prevention Plan.
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Current Minnesota climate trends and anticipated climate change in the general location of the Project may influence the local species and suitable habitat. Suitable habitat for species may become unsuitable due to land use changes, increased temperature, and increased runoff.	The Project crosses the Lamprey Pass WMA. The DNR has indicated potential for Blanding's turtles in this portion of the corridor.	The Project would provide a new 3'x3' box culvert for wildlife crossing and convert two existing culverts to accommodate turtle passage. Fencing along TH 97 in the WMA and areas just beyond (as noted in the project description) would minimize turtle crossings on the roadway.

8. Cover Types:

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

Table 7 – Cover Types

Cover Types	Before (acres)	After (acres)
Wetlands and shallow lakes (<2 meters deep)	3.3	0
Deep lakes (>2 meters deep)	0	0
Wooded/forest	0	0
Rivers/streams	0	0
Brush/Grassland	0	0
Cropland	0.7	0
Livestock rangeland/pastureland	0	0
Lawn/landscaping	14.6	14.9
Green infrastructure TOTAL (see Table 8)	0	0.4
Impervious surface	11.7	14.5
Stormwater Pond (wet sedimentation basin)	0	0.5
Other (describe)	0	0
TOTAL	30.3	30.3

Figure 8, Attachment A shows the National Land Cover Database Land Cover Class for areas along TH 97. New green infrastructure and impacts on trees are summarized in Tables 8 and 9, respectively.

Table 8 – Green Infrastructure

Green Infrastructure	Before (acres)	After (acres)
Constructed infiltration systems (infiltration basins /infiltration trenches / rainwater gardens / bioretention areas without underdrains / swales with impermeable check dams)	0	0.4
Constructed tree trenches and tree boxes	0	0
Constructed wetlands	0	0
Constructed green roofs	0	0
Constructed permeable pavements	0	0
Other (describe)	0	0
TOTAL	0	0.4

Table 9 – Tree Impacts

Trees	Acres	Number
Percent tree canopy removed or number of mature trees removed during development	1.34	91
Number of new trees planted		0

9. Permits and Approvals 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.

The Project would require the permits/approvals listed in **Tables 10 (federal), Table 11 (state) and Table 12 (local/regional)**.

Table 10 - Permits and Approvals Required (Federal)

Unit of Government	Type of Application	Status
Federal Highway Administration (FHWA)	National Environmental Policy Act documentation - Categorical Exclusion	In progress
FHWA / Minnesota Department of Natural Resources	Section 4(f) Recreational Resource – De Minimis Determination (Lamprey Pass Wildlife Management Area)	Complete
FHWA / Minnesota State Historic Preservation Office	Section 4(f) Historical Resource – Temporary Occupancy (Forest Lake Airport)	In progress
Minnesota Department of Transportation (MnDOT) Office of Environmental Stewardship on behalf of the FHWA	Endangered Species Act Section 7 Determination	Complete
MnDOT Cultural Resources Unit on behalf of FHWA	Section 106 (Historic/Archaeological) Determination	In progress
MnDOT Office of Aeronautics on behalf of the Federal Aviation Administration	Notice of Proposed Construction or Alteration (Form 7460-1)	To be requested
US Army Corps of Engineers	Section 404 Permit	To be requested

Table 11 - Permits and Approvals Required (State)

Unit of Government	Type of Application	Status
MnDOT	Staff Approved Layout	In progress
MnDOT	Final Construction Plan Review	To be requested
MnDOT	Environmental Assessment Worksheet	Draft complete
MnDOT	Issue Record of Decision on Need for Environmental Impact Statement	To be requested
MnDOT	Wetland Conservation Act Public Road Project Notification	To be requested
MnDOT	Groundwater Appropriation Permit	To be requested
Minnesota Department of Natural Resources	Public Waters Work Permit	To be requested
Minnesota Pollution Control Agency (MPCA)	National Pollutant Discharge Elimination Permit Construction Stormwater Permit	To be requested
MPCA	Section 401 Certification	To be requested

Table 12 - Permits and Approvals Required (Local/Regional)

Unit of Government	Type of Application	Status
Rice Creek Watershed District	Permit	To be requested
City of Forest Lake	Municipal Consent	To be requested

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

10. Land Use:

a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.

EXISTING LAND USES

Attachment A, Figure 9, shows existing land uses along TH 97 in the cities of Columbus and Forest Lake. Land uses are varied along the north side of TH 97. There are sections of single-family residential, the Lamprey Pass WMA operated by the DNR, wetlands, open space, and a commercial site. Much of the area located immediately adjacent to TH 97 is undeveloped due to the presence of multiple wetlands as shown in **Attachment A, Figures 3 and 4**.

Land uses south of TH 97 vary. West of Everton Ave N, there is a large wetland complex, a portion of which is part of the Lamprey Pass WMA. East of Everton Ave N to Fenway Ave N, there are commercial uses and undeveloped land. East of Fenway Ave N is the Forest Lake Airport (airport identifier - 25D) and a limited number of single-family homes. There is one commercial contracting business located near Forest Rd N. Other areas are currently undeveloped or in agricultural use.

PARKS AND TRAILS

There are several public parks near TH 97. Parks and trails include:

- Summerfield Park is located directly south of Falcon Ave, approximately 0.25 mile south of TH 97.
- Fenway Park is located approximately 0.50 mile south of TH 97, to the east of Fenway Ave N.
- Clear Lake Park is situated approximately 0.20 mile north of TH 97, just west of Forest Rd N.
- Lamprey Pass WMA is located north and south of TH 97 at the western end of the Project near the border between Anoka and Washington Counties. The total size of the WMA is approximately 1,277 acres.
- Hardwood Creek Regional Trail is located just east of Forest Rd N, which crosses TH 97 with a pedestrian bridge.

The new multiuse trail constructed for the Project (**Figure 5, Appendix A**) would establish a connection to the Hardwood Creek Regional Trail from Forest Rd N.

PRIME OR UNIQUE FARMLANDS

Agricultural land uses are mixed within the Project area. Several areas along TH 97, primarily east of Everton Ave N, have been identified as prime farmland, prime farmland if drained, and farmland of statewide importance based on soil types and slopes. It should be noted that many of these areas have been developed and contain homes and commercial establishments, and likely no longer suitable for agriculture.

On the south side of TH 97 between Everton Ave N and Fenway Ave N, the land use features a farmstead with two parcels actively being used for agriculture—one situated to the northeast and the other to the southwest. **Figure 10, Attachment A** shows areas of prime farmland, prime farmland if drained, and farmland of statewide importance.

- 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.**

Future land uses (**Attachment A, Figure 11**) from the 2040 comprehensive plans for the cities of Columbus and Forest Lake were reviewed. Future land uses include highway commercial zones along a substantial section of the southern segment of TH 97, extending east from Everton Ave N to Forest Rd N. The Forest Lake Airport would remain public/institutional and exempt from these changes. South of TH 97, from Everton Ave to the existing Lamprey Pass WMA, there are plans for low- to medium-density residential uses. The area north of TH 97 is planned for mixed-use development. Moving from Everton Ave N to the east, the area up to Forest Rd N is identified for low-density residential development.

Neither Anoka County nor Washington County identify future land uses as TH 97 is within the municipal boundary of the cities of Columbus and Forest Lake, which have jurisdiction over future land use.

- iii. **Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.**

CITY OF FOREST LAKE

Within the city of Forest Lake, the existing zoning north of the TH 97 corridor, moving from west to east, are Conservancy District for the Lamprey Pass WMA, General Mixed-Use District from the WMA to Everton Ave N. East of Everton Ave N to Forest Rd N, the zoning shifts to a Single-Family Residential District for all parcels.

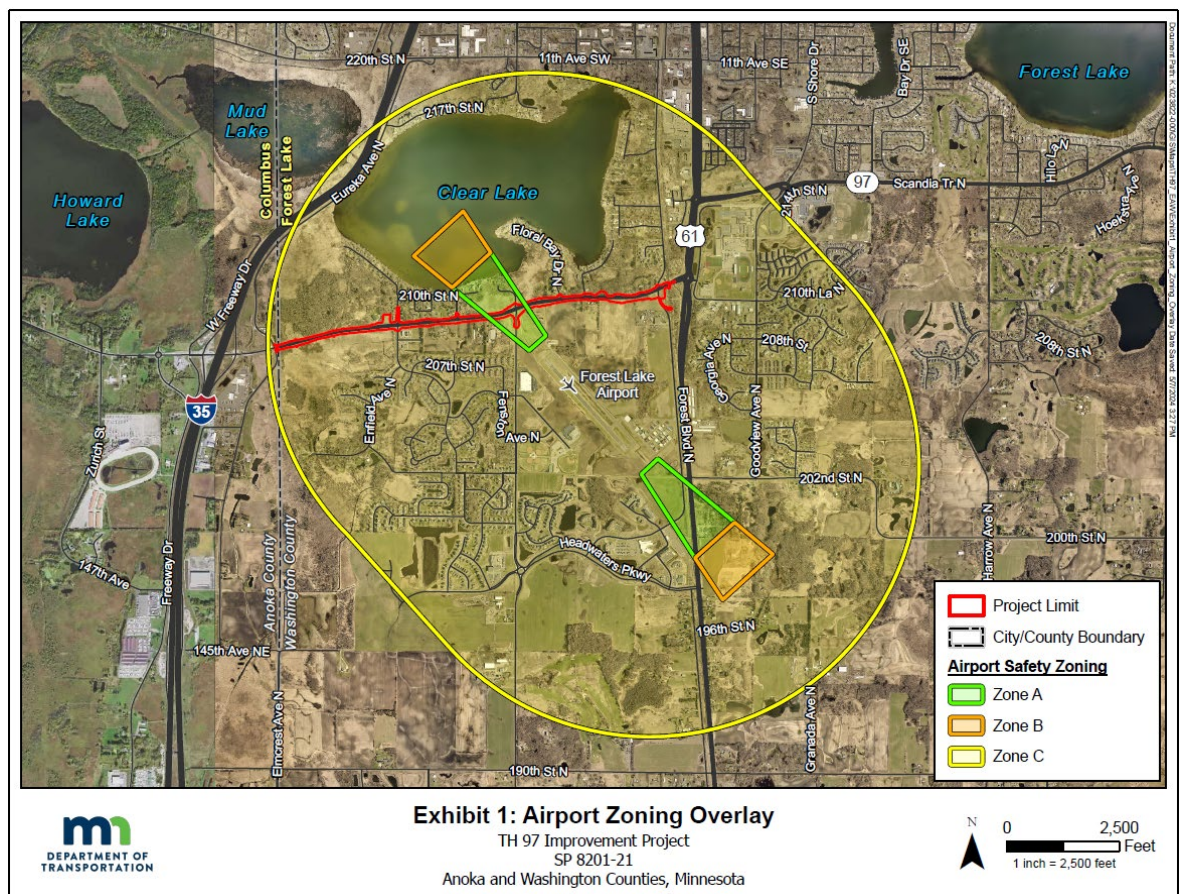
South of TH 97, the existing zoning moving from west to east, are Conservancy District for the Lamprey Pass WMA, a Mixed Residential, Single and Townhouse District from the Lamprey Pass WMA to Everton Ave N. Everton Ave N to Fenway Ave N is zoned as a Highway Business District. The remaining parcels east to Forest Rd N are zoned as an Industrial District. Sections of the northern and southern TH 97 Project area are also situated within the Shoreland Overlay⁷ and Floodplain zoning district⁸ and FEMA Zone A floodplain. The city of Forest Lake's zoning map is included as **Figure 12, Attachment A**.

⁷ The city of Forest Lake Shoreland Overlay District is discussed in Chapter 153.343 of the city code: https://codelibrary.amlegal.com/codes/forestlake/latest/forestlake_mn/0-0-0-34228

⁸ The city of Forest Lake floodplain overlay districts are discussed in Chapter 154 of the city code: https://codelibrary.amlegal.com/codes/forestlake/latest/forestlake_mn/0-0-0-34637

The Forest Lake Airport is located south of TH 97 and east of Fenway Ave N, within the industrial district. There is an airport zoning overlay which covers the entire TH 97 corridor within the Project area. The airport zoning overlay is intended to protect the operational safety of aircraft and to limit land uses and density in the runway approach areas. Zones A and B are tied to the length of the runway and are in alignment with the runway approach. Zone C is the area between the runway approaches. A small portion of Zone A (shown in green) crosses TH 97 over Fenway Ave N. Zone A includes land in alignment with the runway approach. Zone B (shown in orange) is outside the TH 97 Project. Most of the corridor is covered by Zone C (shown in yellow). Zone C is the horizontal zone See **Exhibit 1**. Please refer to Section 15 of this EAW for more information about the Forest Lake Airport property.

Exhibit 1: Airport Zoning Overlay



Within Zone A there are several restrictions, most of which limit buildings and lighting within the area. In Zone A, the following are not allowed:

- Buildings
- Exposed transmission lines
- Uses that interfere with radio or electronic facilities on the airport or between the airport and aircraft
- Lighting that results in glare in pilot's eyes
- Temporary structures
- Assembled groups of people
- Lighting that makes it difficult for pilots to distinguish between airport lights and other lights
- Lighting that impairs visibility in the airport facility

The Project would not include any of the disallowed uses.

Within Zone C, restrictions are focused on lighting and uses that interfere with communications as noted above. The Project would not include items that are restricted.

CITY OF COLUMBUS

Within the city of Columbus, zoning for the western edge of the project area is categorized as Medium Density Residential Mixed-Use north of TH 97, and General Commercial south of TH 97. The project area does not cross any shoreland zones within the city of Columbus. There is floodplain located south of TH 97.⁹ The city of Columbus's zoning map is included as **Figure 12, Attachment A**.

- iv. **If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.**

No new buildings would be constructed as part of the proposed Project.

- b. **Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 10a above, concentrating on implications for environmental effects.**

LAND USES AND ZONING

The Project aligns with current zoning regulations and future land use plans for Forest Lake and Columbus, which both anticipate continued development. This includes the transition of vacant and agricultural land into commercial and residential areas. The Project is compatible with applicable shoreland and floodplain ordinances.

The Project would require acquisition of property for some of the improvements. Most of the right of way (property to be acquired) needed would be in areas immediately adjacent to TH 97, with some larger acquisitions occurring for drainage ponds or infiltration basins. **Figure 6 in Attachment A** shows property that would need to be acquired to construct the Project. Right of way acquisition would follow state and federal requirements. **Figure 6** shows the area of property to be acquired and lists the amount of land in acres required from each parcel. It also includes temporary easements required to construct the Project. Temporary easements are only needed for use during construction but are not required after construction. The property remains under the ownership of the property owner.

⁹ The city of Columbus floodplain districts are discussed in Section 7F of the city code:
https://codelibrary.amlegal.com/codes/columbusmn/latest/columbus_mn/0-0-0-4809

City of Forest Lake 2040 Comprehensive Plan (2020)¹⁰

The city of Forest Lake's 2040 Comprehensive Plan details the history of TH 97 and anticipated development along the corridor. The plan highlights two prior reviews of the corridor: the 2002 TH 97 and Surrounding Area Study by MnDOT and the 2005 Forest Lake Southwest Development Area Final Alternative Urban Areawide Review (AUAR) prepared by the city of Forest Lake. Both studies advocated for intersection improvements along TH 97 at Everton Ave N and Fenway Ave N. The city is also not currently planning an expansion of TH 97 to four or five lanes between I-35 and 11th Street SE to accommodate future traffic.¹¹

The AUAR specifically examined expected development across approximately 1,300 acres, generally bounded by the Forest Lake/Columbus border to the west, 202nd Street to the north, TH 61 to the east, and 190th Street to the south (approximately 0.70 mile south of the TH 97 Project area). Two development scenarios were assessed, encompassing a mix of residential, institutional, office, and light industrial land uses, with residential as the predominant use. However, due to the economic recession that began in 2008, development in the area experienced delays. The proposed Project is designed to meet the anticipated development needs in the immediate area. However, if further development occurs, future projects may explore expanding roadway capacity.

The Project is not anticipated to impact airport operations, as it does not include uses that would interfere with airport communications, nor does it include lighting that would cause glare for pilot's eyes or cause confusion between airport lights and other lights. Lighting would be provided at the roundabout at Fenway Ave N; however, it would be focused on lighting the pavement around the roundabout and is circular – not in a strip as one would typically see along a runway.

City of Columbus 2040 Comprehensive Plan (2019)¹²

The city of Columbus 2040 Comprehensive Plan notes that that development is predominantly taking place in the I-35 freeway area, and there is potential for development in all four quadrants of I-35 and TH 97. The proposed improvements to TH 97 are designed to help facilitate anticipated development near the interchange with I-35.

PARKS/MANAGEMENT AREAS

Section 4(f) Background

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 that set the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development. The law, now codified in two places (49 USC 303 and 23 USC 138), is implemented by the Federal Highway Administration (FHWA) through regulations found at 23 CFR Part 774.

FHWA defines Section 4(f) "use" as either a direct use or constructive use. Direct use occurs when land is permanently incorporated into a transportation facility or when there is a temporary occupancy of land that is adverse to a resource protection under Section 4(f). Constructive use occurs when a project's proximity impacts are so severe that the protected activities, features or attributes that qualify a resource for protection under Section 4(f) are "substantially impaired."

¹⁰ [Comp-Plan-Complete \(forest-lake.mn.us\)](https://forest-lake.mn.us/Comp-Plan-Complete)

¹¹ A five-lane roadway includes two lanes in each direction plus a center left-turn lane.

¹² [2040 Comprehensive Plan - Columbus, MN](#)

Before approving a project that “uses” a Section 4(f) resource, FHWA must find that there is no prudent and feasible alternative and that the selected alternative minimizes harm to the resource. If there is a prudent and feasible alternative that completely avoids Section 4(f) resources, it must be selected. If there is no prudent and feasible alternative that avoids Section 4(f) resources, FHWA has some discretion in selecting an alternative that causes the least harm to those resources.

In addition, FHWA regulations state that when a Section 4(f) use is anticipated, applicable regulations also require consultations with the official having jurisdiction over the resource to verify the site’s significance and coordinate conclusions on use of the land, including efforts to avoid or mitigate the impacts. MnDOT would be working with FHWA and the DNR about Project-related impacts to Lamprey Pass WMA and efforts to avoid and mitigate impacts to the extent practicable.

Lamprey Pass WMA (Park and Recreational Land)

Lamprey Pass WMA, a Section 4(f) resource, is approximately 1,277 acres and owned and managed by the DNR. The WMA is located on the west side of the Project corridor, directly adjacent to TH 97 (southern end of the WMA) and Hornsby St NE (west side of the WMA). The location of the WMA in relation to the Project area is shown in **Attachment A**; detailed maps are included as **Figures 13** and **14**. The proposed Project would impact this resource, requiring approximately 0.48 acre of permanent right of way, and 0.12 acre of temporary easement for construction.

Construction of the trail associated with the Project would result in approximately 0.47 acre of wetland fill which would be permitted and mitigated through federal Section 404 and State Wetland Conservation Act (WCA) rules. Compared to the overall size of the WMA, the amount of land impacted is less than 0.1 percent. Apart from a minor amount of wetland loss, the Project would not disturb the functions or activities the WMA offers to users. Impacts to Lamprey Pass WMA are shown in **Figure 14, Attachment A**. Mitigation for impacts would be provided as identified under Item 10c.

Recreational activities in the WMA outside of the impacted area include a walking path and trails, bird watching areas, hunting area, and a dock for nonmotorized boating opportunities. There are two main access points to Lamprey Pass for people walking or using wheelchairs, both of which are outside the Project area. The first access point is located off Lake Dr, approximately 1 mile west of the TH 97 exit off I-35. The second access point is a parking lot located on Freeway Dr, just west of the I-35 interchange. This lot provides access to a 1.5-mile walking loop through the WMA, which is also connected to longer trails heading northwest. None of these resources would be impacted by the proposed project.

MnDOT has coordinated with FHWA and the DNR regarding the Lamprey Pass WMA. MnDOT developed a Section 4(f) De Minimis document which provides detailed impacts associated with the Project and mitigation proposed to address the impacts. FHWA has determined that the identified impacts would constitute a De Minimis Section 4(f) impact. A public comment period was held through June 6, 2024, providing an opportunity for property owners, residents and other interested parties to comment on impacts and mitigation to the Lamprey Pass WMA. **Attachment M** contains FHWA’s determination of a Section 4(f) De Minimis and the DNR’s concurrence.

Forest Lake Airport (Historic Site)

As described in Section 15 of this EAW, in consultation with the Minnesota SHPO, the Forest Lake Airport property is eligible for listing on the National Register of Historic Places. As such, impacts to the property require review under Section 4(f). Please refer to Section 15 for a discussion regarding Section 4(f) related to temporary use of the airport property.

FARMLAND IMPACTS

Minnesota Statutes, Section 17.82 does not require Minnesota Department of Agriculture (MDA) review of a project unless 10 acres or more of agricultural land is to be acquired (the Project would not acquire 10 or more acres). However, the law defines land in agricultural use very broadly, such that virtually any land outside the limits of a city may be agricultural land. As described earlier, the TH 97 Project corridor is located within the city limits of Columbus and Forest Lake. Additionally, all areas east of Everton Ave N, as well as the north side of TH 97 west of Everton Ave N are designated by the US Census as Urbanized Areas. According to the Farmland Protection Policy Act (FPPA), Subpart B, 523.10. B. ii., "Lands identified as "urbanized area" (UA) on Census Bureau maps are "Lands Not Subject to Provisions of FPPA." The remaining small areas designated by NRCS as "Prime farmland if drained" on the south side of TH 97 west of Everton Ave (**Figure 10, Attachment A**) are located within a large wetland complex and partially within the boundaries of the Lamprey Pass WMA which cannot be used for farming purposes. While lands subject to FPPA do not have to be currently in use as cropland, areas of water are not considered subject to FPPA.

- c. **Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.**

LAND USES AND ZONING

No potential incompatibilities in terms of land use and zoning were identified.

MnDOT would follow right of way acquisition processes as required by state and federal guidance. Property owners would be compensated for acquisition of any permanent right of way and temporary easements. While there has been one total take (entire parcel is required to be acquired) identified, the property is undeveloped and no one would need to be relocated.

Prior to construction MnDOT would file a construction permit with the Federal Aviation Administration (FAA). Form 7460-1 would be filed at least 60 days prior to construction. See **Attachment K** for MnDOT's aeronautical unit correspondence.

There is FEMA Zone A and RCWD floodplain designated within the Project area. RCWD provided input that their floodplain elevations for the area near Lamprey Pass WMA, Judicial Ditch 4 is 895.62 (NAVD88) and Clear Lake is 892.26 (NAVD88).

DNR Floodplain Staff provided input that the RCWD floodplain elevations should be used as the estimated FEMA Zone A floodplain as the best available data. The estimated floodplain fill in Judicial Ditch 4 is 845 cubic yards (CY). The proposed west wet pond is hydraulically connected to the floodplain and provides mitigation volume for the fill. In addition, conservatively assuming the fill volume is distributed over the footprint of the floodplain results in a no rise condition.

The estimate floodplain fill for Clear Lake is 4835 CY, largely due to the proposed roundabout at Fenway Ave N. It was not feasible to construct floodplain mitigation for Clear Lake due to the proximity to the airport and adjacent wetlands. Conservatively assuming the fill volume is distributed over the footprint of the floodplain results in a no rise condition.

The preliminary floodplain assessment is included as **Attachment L**. Based on the floodplain assessment no significant floodplain impacts are expected.

LAMPREY PASS WMA – SECTION 4(f)

MnDOT has been and will continue to coordinate with the DNR Division of Wildlife Area Supervisor for the WMA throughout the development of the TH 97 Project.

Figure 14, Attachment A shows anticipated right of way impacts to the WMA.

- **Planning to minimize harm:** The proposed Project seeks to minimize impacts on the natural environment, especially in the western segment within the WMA area. To reduce the right of way, floodplain, and wetland impacts through the WMA, several minimization efforts were implemented including converting the roadway from a rural to an urban section, maintaining through lane widths at 11 feet instead of 13 feet within the WMA, reducing the boulevard width to the minimum allowable for snow storage and safety, narrowing the center median and switching to a painted center median (versus raised). These minimization efforts reduced the road width needed by up to 28 feet. Additionally, the road profile was set to meet MnDOT minimum slope while still providing adequate depth for drainage which also reduced the amount of fill needed for the pavement section. The design speed for the roadway was reduced from 55 miles per hour (mph) to 45 mph to allow the use of the low-speed urban superelevation tables to reduce the roadway width.
- **Enhancement:** The proposed Project in the WMA would incorporate turtle crossing culverts at two locations to facilitate wildlife passage beneath the roadway. One culvert is a 36-inch-wide box culvert located approximately 0.05 mile east of the TH 97 and Hornsby St N intersection, designed to support turtle and wildlife crossings. Another 36-inch-wide reinforced concrete pipe culvert, positioned about 0.1 mile east of the TH 97 and Hornsby St N intersection, would also be adapted as a crossing point for turtles and other wildlife. Fencing would be provided to help reduce turtle mortality and promote wildlife to use provided crossings. In addition, a small parking pad and gate will be provided for DNR staff to access the WMA on the north side of TH 97.

As part of the federal environmental documentation for this Project, MnDOT developed a Section 4(f) De Minimis document which provided detailed impacts associated with the Project and the mitigation proposed to address the impacts. MnDOT worked with the DNR and FHWA on mitigation strategies and Section 4(f) documentation. **Attachment M** contains FHWA’s determination of a Section 4(f) De Minimis and the DNR’s concurrence.

11. Geology, Soils and Topography/Landforms:

- 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.**

The Washington County Geographic Atlas (Atlas C-39) and the Anoka County Geographic Atlas (Atlas C-27) were used for information in this section. The reference maps are plates 2 (bedrock geology), 3 (surficial geology), and 6 (depth to bedrock). The reference maps for both counties are provided in **Attachment B**.

The surficial geology is mainly mapped as Diamicton (Qnt) and fine-grained sand over yellowing to gray, loamy to sandy till (Qbt) within the New Ulm Formation. This sediment was deposited by the Grantsburg sublobe and modified by subglacial shearing. The areas around Clear Lake and southwest of the Project corridor are marked by peat (Qp), a dense, dark brown organic material with fine and coarse grains, unsorted, brownish-gray to gray. Additionally, silt, clay, and sand (Ql) is present which is typical in modern lake basins and wetland areas.

The bedrock geology in the western and eastern parts of the corridor is mapped as white to yellowish-gray, fine- to medium-grained, cross-stratified, generally friable quartz sandstone (Et and Etc). Moving across the central part of the corridor south of Clear Lake, the predominant bedrock geology is white to yellow, very fine- to coarse-grained, friable quartz sandstone (Ej). This is marked by coarsening-upward sequences with two interlayered facies. Surrounding the quartz sandstone in the middle of the corridor is mainly light gray to yellowish-gray and pale yellowish-green, dolomitic, feldspathic siltstone with interbedded, very fine-grained sandstone and shale (Es). The depth to bedrock ranges from 51 to 300 feet along the corridor.

The Minnesota Karst Lands Map depicts no karst lands (terrain with distinctive landforms and hydrology created primarily from the dissolution of soluble rocks) within the Project area. The Project area does not contain any known sinkholes, shallow limestone formations, or karst conditions. There should not be geologic conditions that impact or impede construction activities.

- b. **Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, 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 12.b.ii.**

EXISTING CONDITIONS

The topography of the TH 97 corridor remains relatively flat until just west of Fenway Ave N, where a slight depression is observed, followed by a modest gain in elevation after passing Fenway Ave N. The landscape levels out around Forest Rd N. The USDA Soil Survey of Washington and Anoka Counties, Minnesota identified the soil types listed in **Table 13** within the Project corridor. Soil units are mapped in **Attachment A, Figure 15**.

Table 13 - Soil Types

County	Map Symbol	Soil Unit Name	Erodibility ⁽¹⁾	Slope (%) ⁽²⁾
Anoka	Bm	Blomford loamy fine sand	NHEL	1
Washington	75	Bluffton loam	NHEL	0.5
Washington	113	Webster loam	NHEL	1
Washington	123	Dundas fine sandy loam	NHEL	1
Washington	132B	Hayden fine sandy loam, 2 to 6 percent slopes	NHEL	3
Washington	132C	Hayden fine sandy loam, 6 to 12 percent slopes	PHEL	9
Washington	169B	Braham loamy fine sand, 1 to 6 percent slopes	NHEL	3
Washington	170	Blomford loamy fine sand	NHEL	1
Washington	225	Nessel fine sandy loam, 1 to 4 percent slopes	NHEL	2
Washington	544	Cathro muck	NHEL	0.5

(1) Erodibility: NHEL – not highly erodible land; PHEL – potentially highly erodible land

(2) Average in Project area

SOIL EXCAVATION AND GRADING

Reconstructing TH 97 would require major grading beyond the current roadway footprint to accommodate the addition of dedicated turn lanes, multiuse trails, a roundabout, and stormwater facilities. Grading would also be needed to correct unsuitable soils in the western portion of the corridor. Construction of improvements would involve more than one acre of soil disturbance. Construction activities would disturb the existing ground cover, and some of this work would take place in wetlands. All necessary permits would be acquired, including coverage under the Minnesota Pollution Control Agency’s (MPCA) NPDES General Permit for Construction Stormwater (MNR100001). As required by the NPDES permit, a Stormwater Pollution Prevention Plan (SWPPP) would be developed. The SWPPP requires temporary and permanent erosion and sediment control Best Management Practices (BMPs) to be implemented by the contractor during all phases of construction. Erosion and sediment control measures recommended by the DNR, NPDES, and other applicable jurisdictions would be used. Erosion control measures are discussed in greater detail under Section 12.

Soils in the western portion of the corridor from Hornsby Street NE to Everton Ave N and a few pockets further to the east are not suitable for roadway beds. The soils are highly organic and contain peat. If left in place, the soils would result in settling of the roadway and trail, likely at different rates and depths, which would result in ongoing maintenance issues. To address the problem, the project would use lightweight fill to replace soil that is removed along with granular backfill in areas where soils are not as unsuitable.

- **NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 12 must be consistent with the geology, soils and topography/landforms and potential effects described in EAW Item 11.**

12. Water Resources:

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

- i. **Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

The National Wetlands Inventory (NWI) maps several wetland areas that are partially within the construction limits of the Project area. In addition, several wet-ditches, one unnamed public water wetland (PWI: 82019200), and one unnamed creek have been identified along the Project corridor. Judicial Ditch 4 is located south of TH 97 on the west side of the Project. FEMA Zone A floodplain is associated with Judicial Ditch 4 and Clear Lake. A preliminary floodplain assessment is included as **Attachment L**. Surface water resources and floodplain areas are shown in **Attachment A, Figure 16** and impacts are described in greater detail in Section 12.iv.b.

Other water resources in proximity to the Project area are described below.

- Clear Lake DNR Public Water (PWI: 82016300) – north of TH 97 approx. 0.1 mile
 - Clear Lake is listed on the MPCA’s 303d list as impaired for aquatic consumption due to mercury and perfluorooctane sulfonate (PFOS) found in fish tissues.¹³ There are no other impaired waters within one mile of the corridor. Eurasian watermilfoil is the only invasive species listed in Clear Lake.¹⁴

There are no outstanding resource value waters listed within one mile of the Project. There are no other impaired waters within one mile of the Project.

- ii. **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

According to data from the DNR, the water table depth within the Project corridor varies from 0 to 20 feet. Depths greater than 10 feet occur primarily in the eastern half of the corridor. Water tables depths along the corridor area shown in **Attachment A, Figure 17**.

WELLHEAD PROTECTION AREAS

There is a Minnesota Department of Health (MDH) Wellhead Protection Area (WHPA) and Drinking Water Supply Management Area (DWSMA) east of the TH 97 Project corridor. Specifically, the WPA is located approximately 0.40-mile northeast of Forest Rd N and the DWSMA is located approximately 825 feet east of Forest Rd N (see **Attachment A, Figure 18**).

¹³ Minnesota’s Impaired Waters List. <https://www.pca.state.mn.us/air-water-land-climate/minnesotas-impaired-waters-list>

¹⁴ Minnesota Department of Natural Resources Infested Waters List. <https://www.eddmaps.org/project/midwest/tools/infestedwaters/>

These figures are shown in **Attachment A, Figure 18**. This DWSMA is categorized as having a low vulnerability for outside contamination by the MDH. Vulnerability refers to the likelihood that activities at the land surface may degrade drinking water quality at a public water supply well. The Project would not extend into the DWSMA or the WPA areas.

WELLS

The MDH’s Well Index (MWI) identifies numerous verified and unverified wells along the corridor. **Table 14** lists verified wells located within approximately 100 feet of the corridor. **Figure 17** in **Attachment A** shows well locations near TH 97.

All wells within proposed MnDOT right of way would be capped. If a well is impacted but the balance of the site (and its associated uses) remains intact, the well would be mitigated by replacement in a new location. Known active wells near construction limits would be labeled on plan sheets as sensitive resources to prevent impacts due to potential changes during construction. Well abandonment would follow state and local guidelines.

If unidentified wells are encountered, the MPCA and MDH would be contacted to determine an appropriate course of action, which may include sealing, relocating, or preserving by a licensed well contractor according to Minnesota Rules Chapter 4725.

Table 14 – Wells Within 100 Feet of the Project Corridor

Well ID	Status	Well Type	Water Elevation (feet below sea level)
421242	Active	Domestic	920
520711	Active	Domestic	903
450626	Active	Domestic	902
637753	Sealed	Domestic	907
464220	Active	Domestic	906
450677	Active	Domestic	904
450645	Active	Domestic	904
825387	Active	Domestic	902.2
130911	Active	Domestic	902
150910	Active	Domestic	900
1000030089	Active	Domestic	896
565239	Active	Domestic	915
480406	Active	Domestic	905.1
540311	Active	Domestic	910
428481	Active	Domestic	905
430892	Active	Domestic	900
496367	Active	Domestic	904
423308	Active	Domestic	902
489002	Active	Domestic	905
473824	Active	Domestic	903
436571	Active	Domestic	904
808251	Active	Domestic	905.3

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.

i. 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.

Wastewater would not be produced or treated by this Project.

2) If the wastewater discharge is to a subsurface sewage treatment system (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion.

Wastewater would not be produced or treated by this Project.

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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.

Wastewater would not be produced or treated by this Project.

ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate, and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity, and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

The Project would result in approximately 2.8 acres of additional impervious surface. Construction of new travel lanes along the current TH 97 alignment would involve more than one acre of soil disturbance. Construction activities would disturb the existing ground cover, and

some of this work would take place in the vicinity of wetlands. All necessary permits would be acquired, including coverage under the MPCA's Construction Stormwater NPDES general permit. As required by the NPDES permit, a SWPPP would be developed for the Project. The SWPPP requires temporary and permanent erosion control BMPs to be implemented by the contractor during all phases of construction. Erosion control measures required by the DNR, NPDES, RCWD, and other applicable jurisdictions would be used on this Project.

Erosion and sedimentation of all exposed soils within the Project area would be minimized by implementing BMPs during construction. Implementation of BMPs greatly reduces the amount of construction-related sedimentation and helps to control erosion and runoff. Ditches, dikes, siltation fences, bale checks, sedimentation basins, and temporary seed could be utilized as temporary erosion control measures. BMPs contained in MnDOT's Standard Specifications, details, and special provisions would be used. As described under Reference 3 in the Standard Specifications, DNR recommends using 'bio-netting' or 'natural netting' types of erosion control products (category 3N or 4N) and excluding the use of plastic mesh netting.

Temporary and permanent erosion control plans would be identified in the final site grading and construction plans as required by the NPDES permitting for construction sites, in accordance with the MPCA. A SWPPP that includes erosion control and sediment management practices would be submitted with the application for coverage under the NPDES general permit as part of design and implementation of proposed improvements. The SWPPP would identify sensitive resources within the Project area, as applicable, to minimize disturbance. SWPPP designers, installers and inspectors are required to be certified through the University of Minnesota Erosion Control Program.¹⁵

Erosion and sediment control measures, including requiring erosion and sediment control plans and designating a site inspector and enforcer, would be in place and maintained throughout the entire construction process. Removal of temporary erosion and sediment control measures would occur only after all disturbed areas have been stabilized.

Permanent stormwater BMPs include using a combination of a filtration basin and two wet ponds. It is not feasible to construct infiltration basins on this Project due to the high groundwater and poorly draining soils. On the west portion of the corridor, it is not feasible to construct a filtration basin due to the lack of adequate depth to discharge the filtration basin drain tile. Therefore, a wet pond is proposed. **Figure 5 in Attachment A** shows the location of the filtration basin and wet ponds; the basin on the east side of Forest Rd is filtration, the other basins are wet ponds.

FAA Circular No. 150/5200-33C recommends wet ponds be constructed outside of a 5,000-foot area outside of aircraft operations areas due to wildlife hazards. The Forest Lake Airport is located within the Project limits. The west and east ponds are approximately 2,500 and 3,500-feet, respectively from the airport. The Forest Lake Airport generally tries to follow the guidance from the FAA Circular, although not required since it is a municipal airport and not regulated by the FAA. Several meetings were held with the municipal airport staff to discuss the project BMP locations and they agreed with what is proposed.

As feasible, recommendations from the FAA Circular have been incorporated into the design to

¹⁵ [Erosion and Stormwater Management Certification Program | Erosion and Stormwater Management Certification Program \(umn.edu\)](#)

minimize wildlife attractants, including:

- ponds are located outside of aircraft operations to the extent practicable,
- footprint is minimized,
- wet ponds are fenced,
- riprap bench along the east pond, and
- steepened side slopes

MnDOT reviewed climate trends, and though precipitation is projected to increase in rainfall intensity and volume, the Project is being designed using current standards. There is not yet an agreed upon standard of practice for how best to incorporate projected precipitation increases into projects. However, as discussed in Section 7, a resiliency check storm would be analyzed as the Project develops to identify and reduce climate vulnerability risks on the Project. The resiliency check storm is currently defined as a 15 percent increase in the 100-year design event, which is a statewide temporary placeholder until more robust precipitation frequency estimates based on nonstationary climate are published and assessed. As Project design advances, additional analysis would be completed, and improvements may be identified to address resiliency issues.

- iii. **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, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.**

Water appropriation (includes dewatering) may be required to complete culvert work near wetlands, waterways, and areas with shallow water tables. Dewatering BMPs would be identified in the SWPPP and a Project dewatering plan would be included with the construction documents. Any locations that are determined to require dewatering by the contractor would follow the dewatering plan. If dewatering rates exceed 10,000 gallons per day or one-million gallons per year, a DNR water appropriation permit would be obtained by the contractor for these temporary activities. Dewatering discharge would be treated to be free of suspended sediment before entering surface waters using methods consistent with the permit. Discharge rates would be controlled to prevent scour/erosion at the point of discharge.

Information on wells in the corridor is provided in Section 12a.

iv. Surface Waters

- a) **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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.

Wetland impacts that are unavoidable have been minimized to the extent practicable without compromising safety. The Project is expected to impact approximately 3.02 acres of wetland and 0.27 acre of wet ditch through placement of fill to support roadway improvements. Wetland impacts within the Lamprey Pass WMA have been minimized with the narrowing of the Project footprint in this section as the road narrows from nearly 90 feet to 63 feet. Additionally, the Project only incorporates ditches through the remainder of the corridor where offsite drainage is needed. This is possible since the roadway would include storm sewer along the entire corridor and serves to preserve wetland area through the Project corridor. Indirect impacts to the contiguous wetlands are not anticipated given the large size of each basin and their proximity to existing roadways. Impacts would be confined to areas along the existing roadway and will only impact portions of larger wetlands, therefore, the wetland remaining after the project would be sufficient in size to provide functions similar to existing conditions. Impacted wetlands would be replaced within the Bank Service Area and near the watershed if possible, to help retain wetland services in the area.

A Level 1 Wetland Delineation (desktop) identifying the wetlands and other aquatic resource boundaries was completed for the Project corridor and has been used to estimate wetland impacts (**Tables 15 and 16**). A Level 2 Delineation (field survey) will be completed for TH 97, specifically for wetlands *1b, 1c, 1d, 1e, 2, 3a, 3b, 5a, and 5b*, (see **Figure 19, Attachment A**), which are wetlands with proposed permanent impacts.

Several measures were employed during Project development and alternatives evaluation to reduce and minimize impacts to wetlands and other resources. This included narrowing the sections of roadway near larger wetland complexes, reducing lane widths to the minimum allowable in wetland areas, increasing the steepness of side slopes where feasible, from 1:4 to 1:3, and reducing the boulevard width adjacent to the minimum allowable for snow storage and safety. The roadway reconstruction would be constructed as an urban section which would also reduce the roadway footprint compared to a rural section, as described above. Additional measures would be considered as the design progresses.

As wetland impacts are expected, MnDOT proposes to provide wetland replacement under the WCA and would apply for a COE Section 404 permit. A DNR Public Waters Work permit would be required for impacts to wetlands 1B, 1C, and 1D.

It is anticipated that mitigation for unavoidable WCA and Section 404-regulated permanent wetland impacts would be required and provided at a 2:1 ratio within Bank Service Area 7 using compensatory wetland bank credits. The specific wetland credits to be used would be determined during Project permitting in consultation with the COE and MnDOT's Office of Environmental Stewardship (OES). **Tables 15** and **16** show wetland and aquatic resources and impacts. **Attachment C** includes a wetland two-part finding and shows proposed wetland impacts.

Table 15 - Delineated Aquatic Resources and Impacts (Wetlands)

ID	Wetland/ Ditch/Oth er Aquatic Resource	Wetland Type/ Existing Plant Community Type(s)	Permitting Jurisdiction (COE, DNR, WCA) ⁽¹⁾	Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet or linear feet for tributary impacts)
1B	Wetland	3/Shallow Marsh	DNR, COE/WCA	1.56 acres
1C	Wetland	3/Shallow Marsh	DNR, COE/WCA	0.12 acre
1D	Wetland	3/Shallow Marsh	COE/WCA	0.16 acre
1E	Wetland	3/Shallow Marsh	COE/WCA	0.17 acre
2	Wetland	3/Shallow Marsh	COE/WCA	0.18 acre
3A	Wetland	3/Shallow Marsh	COE/WCA	0.40 acre
3B	Wetland	3/Shallow Marsh	COE/WCA	0.41 acre
5A	Wetland	2 Fresh (wet) meadow	COE/WCA	0.03 acre
5B	Wetland	4/Deep Marsh	COE/WCA	36 sf

(1) COE is US Army Corps of Engineers; DNR is Minnesota Department of Natural Resources; WCA is Wetland Conservation Act

Total Permanent Wetland Impacts= 3.02 acres

Table 16 - Delineated Aquatic Resources and Impacts (Wet Ditch)

ID	Wetland/ Ditch/Othe r Aquatic Resource	Wetland Type/ Existing Plant Community Type(s)	Permitting Jurisdiction (COE, DNR, WCA) ⁽¹⁾	Size of Permanent Impact of the Preferred Alternative (Acres or Square Feet or linear feet for tributary impacts)
WD1	Wet Ditch	2 Fresh (wet) meadow	COE	564 sf
WD2	Wet Ditch	2 Fresh (wet) meadow	COE	1,356 sf
WD3.1	Wet Ditch	1L/Floodplain Forest	COE/WCA	624 sf
WD3.2	Wet Ditch	2 Fresh (wet) meadow /3 Shallow Marsh	COE	814 sf
WD4.2	Wet Ditch	2 Fresh (wet) meadow	COE	1,256 sf
WD5	Wet Ditch	3/Shallow Marsh	COE	1,316 sf
WD5	Wet Ditch	3/Shallow Marsh	COE	1,814 sf
WD8w	Wet Ditch	2 Fresh (wet) meadow	COE/WCA	651 sf
WD9	Wet Ditch	2 Fresh (wet) meadow	COE	723 sf
WD10.1w	Wet Ditch	3/Shallow Marsh	COE/WCA	189 sf
WD10.2w	Wet Ditch	2 Fresh (wet) meadow	COE/WCA	216 sf
WD11.1	Wet Ditch	2 Fresh (wet) meadow	COE	978 sf
WD11.2	Wet Ditch	3/Shallow Marsh	COE	378 sf

(1) COE is US Army Corps of Engineers; DNR is Minnesota Department of Natural Resources; WCA is Wetland Conservation Act

Total Permanent Wet Ditch Impacts= 0.27 acre

The project will likely require an Individual Permit under Section 404 of the Clean Water Act, therefore the MPCA would need to review the Project for Section 401 Certification independently from the COE permit review process. A pre-filing meeting would need to occur to discuss impacts and potential mitigation. The submittal can occur 30 days or more after the pre-filing request. Submittals required to the MPCA include the joint application form, supplement info form, DNR Permitting and Reporting System (MPARS) application, environmental review documents (preferred signed), and anti-degradation form. The MPCA would review for completeness and conduct an internal technical meeting. The MPCA would then determine a pathway forward based on their review: They may deny, certify with conditions (with 14-day public notice), or waive (certify without public notice) the application. The decision made by the MPCA would be sent to the COE.

- b) **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, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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 or type of watercraft on any water body, including current and projected watercraft usage.**

There is FEMA Zone A and RCWD floodplain designated within the Project area. RCWD provided input that their floodplain elevations for the area near Lamprey Pass WMA, Judicial Ditch 4 is 895.62 (NAVD88) and Clear Lake is 892.26 (NAVD88).

DNR Floodplain Staff provided input that the RCWD floodplain elevations should be used as the estimated FEMA Zone A floodplain as the best available data. The estimated floodplain fill in Judicial Ditch 4 is 845 CY. The proposed west wet pond is hydraulically connected to the floodplain and provides mitigation volume for the fill. In addition, conservatively assuming the fill volume is distributed over the footprint of the floodplain results in a no rise condition.

The estimate floodplain fill for Clear Lake is 4835 CY, largely due to the proposed roundabout at Fenway Ave N. It was not feasible to construct floodplain mitigation for Clear Lake due to the proximity to the airport and adjacent wetlands. Conservatively assuming the fill volume is distributed over the footprint of the floodplain results in a no rise condition.

The preliminary floodplain assessment is included as **Attachment L**. There are no significant anticipated floodplain impacts.

There are no other anticipated physical effects or alterations to surface water features beyond those listed in **Tables 15** and **16**.

13. Contamination/Hazardous Materials/Wastes:

- 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.**

CONTAMINATED PROPERTIES

The presence of potentially contaminated properties (defined as properties where soil and/or groundwater is impacted with pollutants, contaminants, or hazardous wastes) is a concern due to the potential liabilities associated with ownership of such properties, potential cleanup costs, and safety concerns associated with construction personnel encountering unsuspected wastes or contaminated soil or groundwater. Contaminated materials encountered must be properly handled and treated in accordance with state and federal regulations. Improper handling of contaminated materials can worsen their impact on the environment. Contaminated materials also cause adverse impacts to highway projects by increasing construction costs and causing construction delays, which also can increase project costs.

In June 2020, MnDOT's Contaminated Materials Management Team (CMMT) reviewed MPCA and MDA databases to check for known contaminated sites in the Project area. The databases searched included: leaking underground storage tank facilities, landfills, salvage yards, voluntary investigation and cleanup VIC sites, Superfund sites and dump sites. A review of these MPCA files is a component of a Phase I Environmental Site Assessment (Phase I ESA). A complete Phase I ESA includes at least two other components: research on historic land use, and site reconnaissance.

Given the nature and location of the Project area and based on criteria defined by MnDOT (see next section – Limited Phase I ESA), the Project was identified as having a medium to high-risk of impacting potentially contaminated sites, and CMMT noted an updated Phase I ESA and Drilling Investigation needed to be completed for the Project. Correspondence with CMMT is included in **Attachment D** and discussion regarding the Phase I ESA follows.

Limited Phase I Environmental Site Assessment

A Limited Phase I ESA was completed for MnDOT along TH 97, from the intersection of TH 97 and I-35 to the intersection of TH 97 and US 61 in Forest Lake and Columbus, MN. The ESA was conducted in March 2021 to identify possible sources of contamination that could impact the proposed Project. The ESA included review of environmental databases, historical records, interviews with individuals familiar with the Project area, and a reconnaissance of the Project area. Properties located within 500 feet of the Project area were incorporated in the review.

The Phase I ESA in this area revealed 9 sites of environmental concern, which were classified into high, medium, and low environmental risks:

- High risk: In general, sites with high environmental risks are properties that have documented releases of chemicals or hazardous or regulated substances (e.g., active and inactive state and federal cleanup sites, active and inactive dump sites, and active leaking underground storage tank sites), strong evidence of contamination (e.g., soil staining, stressed vegetation), or storage of large volumes of petroleum or other chemicals (e.g., bulk storage tank facilities).

- Medium risk: Sites of medium environmental risk are properties where smaller volumes of petroleum, chemicals, or hazardous materials are frequently stored and used (e.g., registered underground and aboveground storage tanks, vehicle repair facilities, metal working shops), but at which no evidence of spills or releases exists, or properties with documented releases that have been “closed” (signifying no further cleanup actions are deemed necessary) by the MPCA. Closed sites, such as closed leaking underground storage tank sites, are considered medium risks because residual soil or groundwater contamination may exist.
- Low risk: Low environmental risk sites include properties where minor volumes of chemicals or hazardous materials have been used or stored (e.g., hazardous waste generators, and possibly some farmsteads and residences).

Of the 9 total sites of environmental concern, the report identified 1 high-risk site, 4 medium-risk sites, and 4 low-risk sites. High-, medium-, and low-rank sites are recorded in the Phase I ESA tables and figures included in **Attachment D**. The full Limited Phase I ESA is available upon request.

Sites of concern were scattered throughout the corridor. The high-risk site is a former automotive core and metal recycling facility which contained a closed spill listing and inactive hazardous waste ID. The 4 medium-risk properties were identified as a current filling station with an active tanks ID and closed spill listing was identified near the intersection of Everton Ave North; a horseshoe manufacturer with an inactive leak ID and active hazardous waste ID; an airport with inactive leak ID and active tanks ID located near the intersection of Fenway Ave North; and a commercial parking lot maintenance company with active tanks and hazardous waste IDs is located at the eastern end of the Project corridor. The low-risk sites were primarily comprised of hazardous waste generators and former rail lines.

Phase II Environmental Site Assessment

A Phase II ESA was completed in October 2022 based on the results of the Phase I ESA. A total of 28 samples from 14 soil borings were collected and submitted for quantitative analysis. Supporting field activities included field and headspace screening, geological logging, and soil and underground sampling.

There was a higher than allowed level (100 mg/kg) of an MPCA Unregulated Fill Criterion in one soil sample (119 mg/kg); however, further analysis suggested that some of this substance might already exist naturally in the environment (67.7 mg/kg).

Groundwater was identified in 9 out of 14 borings, situated between 4.1 to 10 feet below ground. However, owing to limited water recharge, only 6 groundwater samples were obtained. Among these samples, two (TH97-B-02-GW and TH97-B-05-GW) exhibited higher levels of Diesel Range Organics (DRO), exceeding the permissible limit. However, the analysis indicated that some of this substance might have a natural presence in the area. Summary Phase II results are included in **Attachment D**. The full Phase II ESA is available upon request.

If contaminated soils are encountered during construction, the response would be handled consistent with MPCA requirements.

Phase II Environmental Site Assessment Update

Additional drainage design was conducted following the Phase II ESA. The updated design included new drainage BMPs such as ponds and infiltration basins (**Figure 5 – Attachment A**). A wet pond is planned on the north side of TH 97 just west of Everton Ave N and additional ponds are planned on

the south side of TH 97 at the Forest Rd N intersection. Wet ponds would also be east of Forest Rd N and an infiltration basin would also be constructed on the east side of Forest Rd N.

Because additional BMPs were added to the Project after the Phase II ESA was completed, the CMMT recommended additional drilling at the new BMP sites due to the potential risk of encountering building/construction debris, abandoned utility features, and/or asbestos-containing material. This work has not yet been completed but would be done prior to construction of the Project. Depending on the results of the additional sampling effort, design modifications, contaminated material special provisions, or construction oversight may be recommended. Please see **Attachment D** for correspondence on additional Phase II work to be completed.

- 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 because of construction (e.g., concrete, granular, bituminous, and topsoil) may be exported from the Project. It is anticipated that the existing pavement would be disposed of offsite. Storm sewer removals and existing lighting would be removed and disposed. All earthwork would stay onsite within MnDOT right of way.

Project activities would generate wastes and debris typical of construction operations. All waste and unused materials would be properly contained and disposed of off-site and not allowed to be carried by runoff to receiving waters.

The disposal of solid waste generated by clearing the construction area is a common occurrence associated with road construction projects. During Project construction, excavation of soil would need to occur within the Project limits. Preliminary design would consider selection of grade-lines and locations to minimize excess materials, and consideration would be given to using excess materials on the proposed Project or other nearby projects. Any excess soil material that is not suitable for use on the Project site or other nearby projects would be disposed of in accordance with state and federal requirements.

All solid waste generated by construction of the proposed Project would be disposed of properly in a permitted, licensed solid waste facility. Project demolition of concrete, asphalt, and other potentially recyclable construction materials would be directed to the appropriate storage, crushing, or renovation facility for recycling.

Excess materials and debris from this Project such as concrete and asphalt would be disposed of in accordance with MnDOT Standard Specifications for Construction, 2104.3C, Minnesota Rule 7035.2825.

The following materials may require special handling:

- Potential Asbestos Culverts: If plans indicate any of the culverts are asbestos bonded or if there are any coatings on the interior or exterior of them, MnDOT's Regulated Materials Unit (RMU) should be contacted, and a consultant may be hired to investigate.
 - Special Provision 2104 Abate Asbestos - Containing Pipes or Culverts would be used.
- Treated wood must be disposed of at an MPCA permitted mixed municipal solid waste landfill or MPCA permitted industrial landfill. This material needs documentation showing the landfill received the material. Use Spec Prov 2104.
- Traffic Signals/Lighting: If any known Transite™ or Asbestos Cement Pipes are removed under the signals, MnDOT's RMU would be contacted. A MnDOT Pre-Qualified contractor is required to oversee the removal.
 - The high-intensity discharge bulbs must be recycled with MnDOT's approved regulated waste contractor. This material needs documentation showing the recycler received the material.
 - The capacitors must be treated as a polychlorinated biphenyls (PCB) waste unless it states "No PCBs" on the capacitor. The capacitors must be recycled with MnDOT's approved regulated waste contractor, Green Lights Recycling. This material needs documentation showing the recycler received the material. If the capacitors state "No PCBs", they can be recycled or disposed of at an MPCA-permitted sanitary or industrial waste landfill. Documentation should be obtained that shows the material was handled properly and that documentation placed in the Project file for future reference.
- Electronics: Any of the electronic components that are being replaced must be handled by one of MnDOT's OES approved vendors. See link for approved list of waste contractors:
<http://www.dot.state.mn.us/environment/regulatedmaterials/wastemgmt.html>
 - Documentation that this waste was properly handled must be placed in the Project file for future reference. This same documentation should be input into MnDOT's eDOCS.

Following construction, the Project would not generate solid waste. Correspondence with MnDOT's RMU is included in **Attachment J**.

- 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 new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size, and age of existing tanks on the property that the project will use. 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.**

CONSTRUCTION

Products, materials, or wastes typical of construction sites would be present during the construction of this Project (e.g., gasoline, diesel fuel, oil, hydraulic fluid, portable toilets, etc.). In compliance with the NPDES Construction Stormwater permit, products that have the potential to leach pollutants would be stored under cover, hazardous materials would be stored in sealed containers and would have secondary containment to prevent spills. Solid wastes would be collected and disposed of properly, and vehicle and equipment washing would not be allowed on site.

Temporary storage tanks for petroleum products may be in the Project limits for refueling construction equipment during roadway construction. The potential for substantial fuel or other chemical spills during and after road construction activities is considered low. A spill kit would be kept near any storage tanks. Appropriate measures would be taken during construction to avoid spills that could contaminate groundwater or surface water in the Project area. If a leak or spill occurs during construction, appropriate action to remedy the situation would be taken immediately in accordance with MPCA guidelines and regulations.

Any contaminated spills or leaks that occur during construction would be the responsibility of the contractor, who would notify the Duty Officer and work with the MPCA to contain and remediate contaminated soil/materials.

OPERATION

Once the Project has been constructed there would be no above or below ground petroleum storage tanks within the site.

- 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 of hazardous waste including source reduction and recycling.**

Normal construction wastes are anticipated. Toxic or hazardous materials such as fuel for construction equipment and materials used in the construction of roads (e.g., paint, contaminated rags, acids, bases, herbicides, and pesticides) would likely be used during site preparation and road construction. Although spills of these materials are not common, any spills of reportable quantities that occur would be reported to the Minnesota Duty Officer and the contractor would clean up spilled material according to state requirements.

Measures to avoid adverse effects from storage of hazardous waste include the following:

- Products would be kept in their original containers unless they cannot be resealed. Original labels and Safety Data Sheets would be retained on site and would be accessible at all times as they contain important product and safety information. If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal would be followed. An effort would be made to store only enough products required to do the job.
- All materials stored onsite would be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure with secondary containment.
- Substances would not be mixed with one another unless recommended by the manufacturer.

- Whenever possible, all of a product would be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal would be followed.
- The contractor's site superintendent would inspect daily to ensure proper use and disposal of materials.

14. 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.

The predominant land uses in the Project corridor are rural/residential, interspersed with a few commercial businesses. The surrounding vegetation comprises a mix of naturally occurring native and non-native deciduous and coniferous trees and shrubs. Additionally, there are planted trees, mainly on nearby private properties. Herbaceous vegetation is primarily composed of non-native grasses and other herbaceous plants. The corridor also includes various land uses, such as wetland areas (refer to Item 12), industrial zones, retail/commercial establishments, semi-natural areas, parks/recreational/preserve spaces, and institutional properties.

The Lamprey Pass WMA is situated on the western portion of the Project corridor, directly adjacent to both the north and south sides of TH 97. Covering an expanse of 1,277 acres, the WMA comprises 76 percent wetland, including two open water basins spanning over 600 acres. Woodland makes up 16 percent of the area, while grassland/food plot constitutes 8 percent. According to the DNR website¹⁶:

There is a major colonial bird rookery located on Howard Lake on the site. It has two shallow game lakes that are used by several species such as mallards, blue-winged teals, wood ducks, ringnecks, redheads, canvasbacks as well as gulls, green heron and American bittern. Along with waterfowl, there are also other bird species present on site, including: red-tailed hawks, kestrels, broad-winged hawks, great horned owls, barred owls, killdeer, mourning doves, eastern kingbirds, scarlet tanagers, and eastern meadowlark. Upland areas on site provide habitat for white-tailed deer, rabbits, squirrels, fox squirrels, red foxes, badgers, and gray foxes.

Based on the Project's proximity to the WMA, there are some areas of plant and wildlife habitat, particularly in the western portion of the Project area.

Two DNR public waters are in the Project area, Unnamed DNR Public Water Wetland and Clear Lake. Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported in the vicinity of the proposed Project and may be encountered on site. More information on state species of concern is provided in Section 14b.

The Project is within the range of four species listed as federally threatened, endangered, proposed or candidate species:

- Northern long-eared bat (*Myotis septentrionalis*) – endangered

¹⁶ [Minnesota DNR \(state.mn.us\)](https://state.mn.us)

- Tricolored bat (*Perimyotis subflavus*) – proposed endangered
- Monarch butterfly (*Danaus Plexippus*) – candidate for endangered
- Whooping crane (*Grus americana*) - endangered

The Project occurs within an area near a US Fish and Wildlife Service (USFWS) identified, ‘high potential area’ for the presence of rusty-patched bumble bee (*Bombus affinis*), a federally listed endangered species. The bee’s habitat typically occurs in grasslands and urban gardens with flowering plants from April through October, underground in abandoned rodent cavities or in clumps of grasses above ground as nesting sites, and in undisturbed soils for hibernating during the winter. MnDOT will continue to monitor populations of this species and will reinitiate consultation with the US Fish and Wildlife Service (USFWS), as required by law (50 CFR 402.16). The Project would follow MnDOT vegetation/seeding policy (use of native seeds versus using sod/turf) which would benefit pollinators.

Additional details on federally listed species are provided below and in Section C. Correspondence with MnDOT OES and USFWS is included in **Attachment E** and correspondence with the DNR is included in **Attachment F**.

The northern long-eared bat (*Myotis septentrionalis*), a federally threatened species, can be found throughout Minnesota. During the winter this species hibernates in caves and mines, and during the active seasons (approximately April-October) it roosts underneath bark, in cavities, or in crevices of both live and dead trees. According to the DNR and USFWS databases, no northern long-eared bat hibernacula and/or roost trees have been documented within the Project action area.

The Project may affect suitable habitat for the tricolored bat and monarch butterfly, but Project activities are not expected to appreciably diminish the quality or extent of available suitable habitat within the Project’s action area.

Similarly, the proposed Project area is within the range of a known non-essential experimental population for Whooping crane; however, no documented occurrences or critical habitat for this species exist within the Project area.

Correspondence with MnDOT OES and USFWS is included in **Attachment E**.

- b. **Describe rare features such as state-listed (endangered, threatened, or special concern) species, native plant communities, Minnesota 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-) and/or correspondence number (MCE) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.**

THREATENED AND ENDANGERED SPECIES, SPECIES OF SPECIAL CONCERN – STATE

A review of the Minnesota Natural Heritage Information System (NHIS) indicates there are rare features within an approximate one-mile radius of the Project area. See **Attachment F** for correspondence with the DNR.

On the eastern end of the proposed Project on the north side of TH 97 (between Fenway Ave. N. and Floral Bay Dr. N.) there is an identified native plant community adjacent to the road right of way (Willow/Dogwood Shrub Swamp); however, the Project impacts should be minimal to none. There are not likely to be any impacts to rare or endangered plant species or rare native plant

communities as part of the proposed work.

Two DNR Public Waters are located in the Project area:

- Unnamed DNR Public Water Wetland (Basin ID 82019200)
- Clear Lake DNR Public Water (Basin ID 82016300)

There are several DNR public water basins designated as infested with aquatic invasive species including Clear and Forest Lakes. These waters should be identified as 'designated infested waters' on Project plans and provisions. No work should be allowed in them if avoidable (including pumping water for construction purposes). Work at the outfall must follow best practices that have been developed for decontamination of construction equipment.

A public waters work permit would be required for work within these public waters. The DNR generally prohibits fill in DNR public waters, though may authorize minimal amounts if justified according to Minn. Rule 6115 and local comprehensive land use plans. However, a mitigation package that is of equal or greater public value is being coordinated with the DNR.

Blanding's turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported within the vicinity of the proposed Project and may be encountered on site. State law and rules prohibit the destruction of threatened or endangered species, except under certain prescribed conditions. Commitments related to the protection of turtles are listed Section D.

THREATENED AND ENDANGERED SPECIES – FEDERAL

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, or proposed species or listed critical habitat. Federal agencies (or their designated representatives) must consult with the USFWS if any such effects may occur as a result of their actions. Consultation with the USFWS is not necessary if the proposed action would not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action would have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

MnDOT OES, on behalf of USFWS, reviewed the proposed Project and provided a list of federally threatened, endangered, proposed and candidate species, and designated and proposed critical habitat that overlap with the Project area. The Project is within the range of four species. Determinations for each are provided below and correspondence with MnDOT OES and USFWS is included in **Attachment E**.

Northern long-eared bat (*Myotis septentrionalis*) – May Affect, Likely to Adversely Affect Determination

MnDOT issued a Request for Concurrence from USFWS for a *may affect, likely to adversely affect* determination for the northern long-eared bat. The northern long-eared bat roosts underneath bark, in cavities, or in crevices of both live and dead trees. No northern long-eared bat hibernacula and/or roost trees are documented within the Project Action Area. The proposed Project includes some tree removals (up to 2.0 acres) within 300 feet of existing roadsides. Additionally, tree removals would occur during the winter season November 1 to March 31, inclusive.

This Project review relies on the USFWS-issued species-specific rangewide programmatic agreement and associated biological opinion for FHWA, FRA, FTA Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.). On May 23, 2023, USFWS issued a letter concurring with the determination that the Project is likely to adversely affect the northern long-eared bat and that the Project's effects are consistent with those analyzed in the biological opinion. Tree removal associated with the Project is anticipated to cause incidental take of northern long-eared bats.

Tricolored bat (*Perimyotis subflavus*) – No Jeopardy Determination

The proposed Project *may affect* tricolored bats and/or suitable tricolored bat habitat. Stressors for the tricolored bat include tree clearing, noise (including percussives), lighting, and/or bridge work in areas of documented or presumed tricolored bat habitat. Based on the proposed scope of work, Project activities are not expected to appreciably diminish the quality or extent of available suitable habitat within the Project's action area. Additionally, the Project would incorporate bat specific Conservation Measures to further avoid and minimize impacts to this species. *Therefore, MnDOT on behalf of the FHWA, does not anticipate the proposed action will jeopardize the continued existence of this species.*

Monarch Butterfly (*Danaus plexippus*) – No Jeopardy Determination

The proposed Project *may affect* monarch butterflies and/or suitable monarch habitat. Ground and vegetation disturbing activities are not expected to appreciably diminish the quality or extent of available suitable habitat within the Project's Action Area. In addition, MnDOT is enrolled under the Nationwide Candidate Conservation Agreement on Energy and Transportation Lands (CCAA) and adopted lands and conservation measures agreed to under the CCAA are anticipated to result in a net conservation benefit to the species. *Therefore, MnDOT on behalf of the FHWA, does not anticipate the proposed action will jeopardize the continued existence of this species.*

Whooping Crane (*Grus americana*) – No Jeopardy Determination

The proposed Project area is within the range of a known no-essential experimental population for Whooping crane. No documented occurrences or critical habitat for this species exist within the Action Area. All Project activities are proposed to be completed in/on lands outside of a National Wildlife Refuge or National Park. Based on the proposed scope of work, Project activities are not expected to appreciably diminish the quality or extent of available suitable habitat within the Project's Action Area. *Therefore, MnDOT on behalf of the FHWA, does not anticipate the proposed action will jeopardize the continued existence of this species.*

Rusty-Patched Bumble Bee (*Bombus Affinis*)

The proposed Project occurs in an area near a USFWS identified 'high potential zone' for the presence of rusty-patched bumble bees, a species listed as endangered under the federal Endangered Species Act. MnDOT would review the USFWS High Potential Zone Map in the spring prior to construction to ensure the Project remains outside of an USFWS identified 'high potential zone'. If the Project is found to be within a newly identified High Potential Zone, MnDOT, on behalf of FHWA, would reinitiate consultation with USFWS, as required by law (50 CFR 402.16).

Federal Migratory Bird Treaty Act (MBTA)

The proposed Project was reviewed for potential impacts to birds protected under the MBTA. Based on the proposed scope of work and/or the timing of proposed work, impacts are not anticipated to birds protected under the Migratory Bird Treaty Act (16 U.S.C. 703-712). No further coordination is required. Avoidance measures are identified in Section d.

Bald and Golden Eagle Protection Act (BGEPA)

The proposed Project was reviewed for potential impacts to eagles protected under the BGEPA. Based on the best available information, the proposed action is not anticipated to disturb, harm, or destroy a bald eagle or a bald eagle nest protected under the BGEPA (16 U.S.C. 668-668d).

- c. **Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. 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.**

A Public Waters Work permit would be obtained for this Project. Additional conservation measures are addressed under Section 14.d.

Work in public waters may impact Blanding's turtles, which may be encountered in the Project area. The DNR has identified measures to avoid and minimize impacts to turtles, including the use of biodegradable or "natural net" erosion control blankets. These measures are outlined under Section 14.d.

No northern long-eared bat hibernacula and/or roost trees are documented within the Project Action Area; however, the Project would require removing 0.01 acre of trees between 100 and 300 feet from the highway to accommodate the construction of new stormwater ponds. Tree removals would occur during the winter season November 1 to March 31, inclusive. Other required avoidance and minimization measures are outlined in Section 14.d.

Because the Project would include activities such as tree removal, measures to avoid impacts to migratory birds have been identified.

There are not likely to be any impacts to rare or endangered plant species or rare native plant communities as part of the proposed work. There is an identified native plant community (Willow/Dogwood Shrub Swamp) on the north side of TH 97 between Fenway Ave N and Floral Bay Dr N. This location should be identified as an Area of Environmental Sensitivity (AES) on plan sheets.

It is possible that soil disturbance and vegetation clearance associated with the Project could create conditions that enable the spread of invasive species. Noxious weeds have been previously mapped within the limits of this Project. Methods to identify where weeds are present and avoid spreading noxious weeds and/or invasive species would be incorporated into Project specifications. The Project would follow all state requirements for the control and spread of state listed noxious weeds and/or invasive weeds if encountered during construction. Disturbed areas would be reestablished using appropriate native and stabilization seed mixes, contributing to improved climate change resilience and ecosystem health. The MnDOT Roadside Vegetation Management Unit review is included in **Attachment G**.

The western portion of the Project is adjacent to the Lamprey Pass WMA. There would be areas of impacts related to excavation and fill, culvert and ditching work, as well as vegetation/tree removal or opportunities for enhancements. This location should be identified as an AES on plan sheets.

Climate change impacts on natural resources are expected to vary between species, populations, and ecosystems. Both positive and negative impacts are anticipated and would depend on the specific species, populations, and ecosystems examined. Current and projected future changes in Minnesota's climate include greater intensity rainfall events, more localized flooding, more frequent (repeated) freeze/thaw cycles, lack of snow cover, extreme heat, and drought. In response to changing climate, more mobile wildlife and plant species may shift their ranges to track the conditions in which they are best adapted to survive. Less mobile species may not be able to migrate, and other interventions may be needed (e.g., assisted migration). The protection of movement corridors and population refugia, and efforts to increase landscape permeability, are expected to be of key importance in a changing climate ([Mawdsley et al. 2017](#)).

MnDOT seeks to maintain and enhance ecological connectivity on its projects through both programmatic approaches such as the standard use of wildlife passage benches under bridges spanning public waters and through project-specific designs components such as multi-use structures and dedicated wildlife crossing structures. Maintaining and enhancing ecological connectivity reduces barrier effects roads have on individual animals, populations, and ecosystems, which in turn improves natural resource resiliency.

As part of this Project, the 36-inch-wide box culvert, situated approximately 0.05 mile east of the TH 97 and Hornsby St N intersection, would promote a safe crossing for turtles and other wildlife. Another 36-inch-wide reinforced concrete pipe culvert, positioned around 0.01 mile east of the TH 97 and Hornsby St N intersection, would also be adapted to serve as a crossing point for turtles and other wildlife. Both of these wildlife-friendly culverts are situated within the Lamprey Pass WMA and are designed to achieve both hydrologic objectives and facilitate under-the-road movement of small to medium sized wildlife.

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

PUBLIC WATERS

- A Public Waters Work permit would be obtained for the Project.
- Appropriate erosion control and sediment prevention measures would be taken in areas that drain to public waters.
- No work would be performed in the water from April 1 – to June 30 for lakes to allow for fish migration and spawning.
 - The MPCA NPDES general permit for authorization to discharge stormwater associated with construction activities (permit MNR10001) 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 0.04 mile (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, be completed within 24 hours, and maintained for the duration.
- Contractors would be reminded that a separate DNR water use permit is required if the Project would require the use of more than 10,000 gallons of water per day or 1

million gallons per year from any surface water or ground water. Construction dewatering is considered as an appropriation that requires a DNR permit.

- The Project includes repair of existing culverts by lining them with cured in place plastic (CIPP). A general comment on CIPP lining projects is that installation methods may temporarily alter the chemical or thermal properties in the receiving water during the installation process, curing process, or initial flush. These by-products of installation have potential for adverse impacts to receiving waters. In extreme cases, impacts may result in a localized fish kill. To help assure that suitable containment or treatment prior to discharge to surface waters, special conditions would be written into construction specifications to prevent hot water precipitate or chemical containing precipitate (e.g., styrene or cement waste) from discharging into receiving waters.
- Construction and demolition methods shall be submitted for review and approval later in the design process to MnDOT. Construction contractors shall be made aware of this condition as they may be held responsible for compliance.
- All DNR Public Waters would be identified as an AES on plans. This designation assures special protection during construction through the Standard Specifications for Construction #1717 (Air, Land, and Water Pollution), #2573.3 (A.3 stage the work to minimize sediment entering these AES areas) and use native vegetation per vegetation establishment recommendations, as well as approved standards for temporary erosion control due to potential for impacts to small animals and concern for plastics to enter DNR public waters.
- There are several DNR public water basins designated as infested with aquatic invasive species including Clear and Forest Lakes. These waters would be identified as 'designated infested waters' on Project plans and provisions. No work would be allowed in them if avoidable (including pumping water for construction purposes). Work at the outfall would follow best practices that have been developed for decontamination of construction equipment. Should water be required elsewhere on the Project for construction purposes, waters that are not designated as infested would be identified for such use.

THREATENED AND ENDANGERED SPECIES, SPECIES OF SPECIAL CONCERN – STATE

Blanding's Turtles

- Due to entanglement issues with small animals, use of erosion control blanket shall be limited to biodegradable or "natural net" types, and specifically not allow products containing plastic mesh netting or other plastic components. The 2018 MnDOT Standards Specifications for Construction, Category 3N or 4N products meet these concerns. The new 2020 Standard Specifications no longer have plastic mesh in any temporary rolled product, as plastic mesh has been eliminated from all these categories. Thus, all categories of temporary rolled products now meet these concerns. Hydro-mulch products containing plastic fiber additives would not be utilized, as they could potentially re-suspend and make their way into Public Waters. Inspectors should be also looking for the presence of turtles when erosion control inspections occur. Further details for turtle protection would be provided by the DNR to the contractor.

- Construction areas, especially aquatic areas, should be thoroughly checked for turtles before the use of heavy equipment or ground disturbance. The [Blanding's turtle flyer](#) would be given to all contractors working in the area. Any turtle sightings would be reported to the [DNR Nongame Specialist](#). If in imminent danger, the turtles would be moved by hand out of harm's way. Otherwise, they would be undisturbed.
- Aquatic impacts would be avoided during hibernation season, between October 15 and April 15, unless the area is unsuitable for hibernation by a qualified wildlife biologist / herpetologist.
 - Timing of dewatering would take place between June 1 and August 31; or preferably July 1 through August 31.
 - Drawdowns would reach their lowest level by September 1 and stay dewatered through at least December 1.
 - Water would be drawn down to less than 14 inches deep in certain areas to discourage reptile overwintering.
 - The timing of any dewatering would take place between May 15 and September 15 unless the area is unsuitable for hibernation (less than 14 inches deep); and would avoid elevating water levels during active nesting season, May 15 to July 31.
- Relevant recommendations from the [Blanding's Turtle Fact Sheet](#) for avoiding and minimizing impacts would be applied, including a mountable curb design that allows animals to exit the roadway should they attempt to cross the road and oversized (minimum 36-inch culverts between wetlands and streets that allow the turtles to utilize these structures for safe passage under the road).
- Based on the nearby NHIS records of Blanding's turtles, potential turtle habitat near the Project, and the nature of Project activities, avoidance planning may be required by the DNR. Options to consider for this Project may include the following: suitably sized culvert underpasses (opening to length ratio consideration) and fencing; fencing during construction to keep turtles from moving into the construction zone for the duration of the Project; roads should be ditched, not curbed or below grade; if curbs must be used, 4 inch high curbs at a 3:1 slope are preferred (Blanding's turtles have great difficulty climbing traditional curbs; curbs and below grade roads trap turtles on the road and can cause road kills), and incorporating two culvert crossings designed to allow passage.

This Project would incorporate permanent measures to assist with turtle passage and to assist in reducing wildlife mortality. The Project has included larger culvert crossings for the passage of turtles, wildlife fencing along and just beyond the Lamprey Pass WMA and fencing around ponds. See **Figure 5, Attachment A**.

Rusty-patched Bumble Bee

- See federal species below.

THREATENED AND ENDANGERED SPECIES, SPECIES OF SPECIAL CONCERN – FEDERAL

Conservation measures outlined by MnDOT OES are listed below.

Required Avoidance and Minimization Measures (AMMs). See MnDOT boiler plate special provisions (e.g., Protection of Fish and Wildlife Resources).

- **General AMM 1:** Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. *Notify contractor(s) during the pre-construction meeting. Bat sightings (including sick, injured, and/or dead bats) on the Project must be reported to OES wildlife ecologist within 24 hours of discovery.*
- **Lighting AMM 1 and AMM 2:** Direct temporary lighting, if used, away from wooded areas during the bat active season (April 1 to Nov. 14, inclusive). If installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. *Please contact the MnDOT Lighting Engineer with questions about approved products.*
- **Tree Removal AMM 3:** Tree removal must be limited to that specified in Project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

Additional Required USFWS Conservation Measures:

- Winter tree clearing required tree clearing allowed November 15 to March 31, inclusive.
- The proposed Project, at the time of this review, falls very near to a USFWS identified High Potential Zone for the rusty-patched bumble bee. Note the USFWS updates these boundaries annually, typically in March. The Project Manager and Contractor must consult the USFWS High Potential Zone Map each spring to ensure the Project remains outside of an USFWS identified High Potential Zone for the rusty-patched bumble bee. Contact MnDOT OES at protectedspecies.dot@state.mn.us immediately if the Project is now within the boundaries identified by USFWS. Link to map: <https://www.fws.gov/species/rusty-patched-bumble-bee-bombus-affinis/map>

Additional Recommended USFWS Conservation Measures:

MnDOT agrees and is committed to implementing these additional recommended measures:

- If rolled control products are to be used, they should be limited to bio-netting, natural netting or woven type products without plastic mesh nettings or other plastic components. In the 2018 MnDOT Standards Specifications for Construction, Category 3N or 4N products meet these concerns. The new 2020 Standard Specifications no longer have plastic mesh in any temporary rolled product, as plastic mesh has been eliminated from all these categories. Thus, all categories of temporary rolled products now meet these concerns but be aware that hydro-mulch products may contain small plastic fibers to aid in its matrix strength. These loose fibers could potentially re-suspend and make their way into Public Waters. Please review mulch

- products and not utilize any materials with plastic fiber additives in areas that drain to Public Waters.
- Revegetation of disturbed soils should follow district Vegetation Establishment Recommendations (<http://www.dot.state.mn.us/environment/erosion/vegetation.html>) and use 3#-### series seed mixes that contain native species in areas that are not proposed for frequently mowed lawn. Include mowing and weed spraying as indicated in the District Vegetation Establishment Recommendations. For additional information, visit: <http://www.dot.state.mn.us/environment/erosion/vegetation.html>

BGEPA

If an eagle nest is found ahead of, or during construction, all work within 0.06 mile (300 feet) of the nest would be stopped and the MnDOT protected species team would be contacted.

15. 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.

MnDOT's Cultural Resource Unit (CRU) initiated Section 106¹⁷ review of the Project for the presence of historically significant archaeological and/or architectural resources in 2020 based on the original Project Area of Potential Effect (APE). The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE accounts for any physical, auditory, visual, or other relevant potential impacts to historic properties.

MnDOT's CRU completed Section 106 review in 2020; however, since that time, the Project has undergone substantial changes in scope and includes areas that were not previously reviewed. As such, MnDOT CRU expanded the Project APE and conducted a new Section 106 review in 2024. The following paragraphs summarize both the 2020 and 2024 reviews. Relevant correspondence is included in **Appendix H**.

2020 REVIEW (ORIGINAL APE)

Based on the original Project layout, all work would have occurred within areas previously disturbed by road and associated construction. As such, CRU determined the original APE had low archaeological potential, and that it was unlikely that the APE contained intact, significant archaeological resources. No known historic structures are located within the original APE. The original APE consisted of the first tier of properties adjacent to the Project.

Based on their existing programmatic agreements with various tribal groups, CRU sent a consultation letter to the following tribes: Fort Peck Tribes, Leech Lake Band of Ojibwe, Lower Sioux Indian Community, Mille Lacs Band of Ojibwe, Prairie Island Indian Community, Santee Sioux Nation, Shakopee Mdewakanton Sioux Community, Sisseton-Wahpeton Oyate Community, Turtle Mountain Band of

¹⁷ Of the National Historic Preservation Act of 1966. Section 106 review is required for the project, as it will receive federal funding and may require federal permits (e.g., COE)

Chippewa, and Upper Sioux Community. CRU did not receive any responses within the allotted time (30 or 45 days, depending on individual tribal agreements with FHWA). CRU also consulted with the Minnesota Indian Affairs Council (MIAC) and the Office of the State Archaeologist (OSA) regarding the presence of any archaeological or burial sites not contained within the SHPO database. Neither agency identified additional sites.

Based on the review conducted by CRU and consultation with the tribes and agencies listed above, CRU issued a findings letter dated July 2, 2020, concluding that there would be **no historic properties affected** by the Project as originally proposed (see **Appendix H**).

2024 REVIEW (EXPANDED APE) – ARCHAEOLOGY AND ARCHITECTURAL HISTORY

MnDOT's CRU conducted a review of the expanded APE for the Project in early 2024 (to account for areas not covered in the 2020 review) and submitted new consultation letters to the following Tribal Nations about the undertaking, pursuant to 36 CFR 800: Fort Peck Tribes, Leech Lake Band of Ojibwe, Lower Sioux Indian Community, Mille Lacs Band of Ojibwe, Prairie Island Indian Community. CRU specifically requested input into the process of identifying historic properties of religious or cultural significance and sought the Tribal Nation's interest in becoming a consulting party. Mille Lacs Band of Ojibwe responded and indicated that they would like to be consulted if there are project scope changes or is new information regarding historic properties that may be affected. CRU did not receive any responses from any other tribes within the allotted time (30 or 45 days, depending on individual tribal agreements with FHWA). In addition, neither MIAC nor the OSA identified additional sites.

Due to the areas within the expanded APE, MnDOT's CRU also commissioned cultural resources surveys (archaeology and architecture-history). The archaeological field survey was completed on parcels where survey access was granted in June 2024. No archaeological resources were identified. Based on the lack of findings and the fact that the pending parcels are of similar landforms and further away from waterbodies (lessens probability of findings), it was the archaeologist's professional opinion that the remaining areas have low potential for archaeology and the review is complete.

CRU also commissioned an architectural history review, which included properties with parcels intersecting the APE. Twelve (12) properties were inventoried, and all but one property were recommended as not eligible for individual inclusion in the National Register. The inventory forms resulting from these investigations were sent to the State Historic Preservation Office (SHPO) in June 2024. On July 15, 2024, SHPO indicated that 11 of the properties are not eligible for inclusion in the National Register. One property, the Forest Lake Airport, was identified as eligible for the National Register under criterion b (Important Person). The Project would not require any permanent right of way acquisition of the airport; however, would require a temporary easement of approximately 0.04 acre (of the total 141.8 acres of the airport property) for construction purposes.

Based on the archaeological and architectural reviews conducted by CRU and consultation with the tribes and agencies listed above for the expanded APE, CRU issued a findings letter dated August 16, 2024 concluding that there would be **no adverse effect** to the property by the Project. This updated review covers the full Project APE. The SHPO concurred with these findings in an MONTH/DATE response (see **Appendix H**).

MITIGATION AND COMMITMENTS

If cultural materials are encountered during construction, unanticipated discoveries protocols would be followed. If archaeological artifacts, features, or human remains are uncovered during construction, demolition, or earthmoving activities, ground disturbance at the location would cease and the state archaeologist would be contacted.

MnDOT would not acquire property from or cause any permanent impact to the Forest Lake Airport as part of the Project. A temporary construction easement would be acquired. In addition to obtaining a temporary easement, MnDOT will complete a Section 4(f) Temporary Occupancy letter for the site and request approval from SHPO. The Temporary Occupancy would explain how the impacts to the airport property are temporary in nature, that there will be no permanent impacts, and that the land would remain under the ownership of the airport. MnDOT is currently working with SHPO and anticipates submitting its Section 4(f) Temporary Occupancy letter for SHPO review/signature in August 2024.

16. 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 effects.

TH 97 is not a designated scenic byway, area, or easement. The immediate Project area does not contain scenic views or vistas. The Project improvements would take place in residential, commercial, industrial, or agricultural areas, or vacant land typical of a rural trunk highway corridor.

17. 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 pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used 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 source emissions.**

This Project does not include any stationary sources of air emissions.

- 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.**

NATIONAL AMBIENT AIR QUALITY STANDARDS

The Project conforms to the state implementation plan. This Project does not require an air quality analysis because it is exempt from Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS) transportation conformity requirements in 40 CFR 93 (Exempt Projects in 40 CFR 93.126, 40 CFR 93.127, or 40 CFR 93.128) or because the state of Minnesota is in full attainment as of September 24, 2022, and no longer has any maintenance areas for purposes of air quality conformity. Therefore, no air quality analysis related to the NAAQS has been performed.

Introduction to the Transportation Air Quality Analysis

Motorized vehicles affect air quality by emitting airborne pollutants. Changes in traffic volumes, travel patterns, and roadway locations affect air quality as the number of vehicles and the congestion levels in a given area change. The EPA regulates a category of pollutants known as air toxics, which are generated by emissions from mobile sources. The FHWA provides guidance for the assessment of Mobile Source Air Toxic (MSAT) effects for transportation projects in the National Environmental Policy Act (NEPA) process. The following sections describe the likely Project impacts on MSATs for the no-build vs. build alternatives.

Mobile Source Air Toxics

Background

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (IRIS).¹⁸

In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA).¹⁹ These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

Motor Vehicle Emissions Simulator (MOVES)

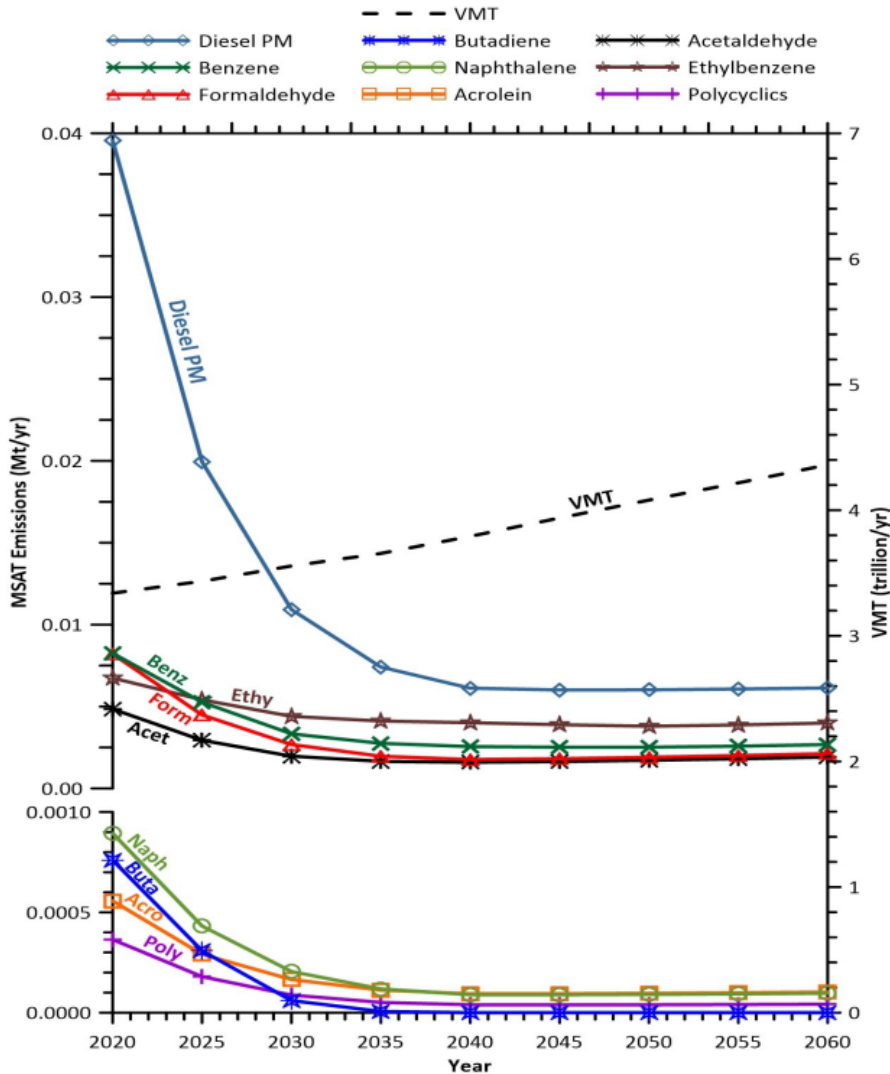
According to the EPA, MOVES3 is a major revision to MOVES2014 and improves upon it in many respects. MOVES3 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2014. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES3 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. In the November 2020 EPA issued MOVES3 Mobile Source Emissions Model Questions and Answers 4 EPA states that for on-road emissions, MOVES3 updated heavy-duty (HD) diesel and compressed natural gas (CNG) emission running rates and updated HD gasoline emission rates. They updated light-duty (LD) emission rates for hydrocarbon (HC), carbon monoxide (CO) and nitrogen oxide (NOx) and updated light-duty (LD) particulate matter rates, incorporating new data on Gasoline Direct Injection (GDI) vehicles.

Using EPA's MOVES3 model, as shown in **Exhibit 2**, FHWA estimates that even if VMT increases by 31 percent from 2020 to 2060 as forecast, a combined reduction of 76 percent in the total annual emissions for the priority MSAT is projected for the same time period.

¹⁸ Integrated Risk Information System: <https://www.epa.gov/iris>

¹⁹ 2011 National Air Toxics Assessment Results: <https://www.epa.gov/national-air-toxics-assessment/2011-nata-assessment-results>

Exhibit 2 – FHWA Projected National MSAT Emission Trends 2020-2060 for Vehicles Operating on Roadways Using EPA’s MOVES3 Model



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors
 Source: EPA MOVES3 model runs conducted by FHWA, March 2021.

Diesel PM is the dominant component of MSAT emissions, making up 36 to 56 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES3 will notice some differences in emissions compared with MOVES2014. MOVES3 is based on updated data on some emissions and pollutant processes compared to MOVES2014, and also reflects the latest federal emissions standards in place at the time of its release. In addition, MOVES3 emissions forecasts are based on slightly higher VMT projections than MOVES2014, consistent with nationwide VMT trends.

MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Nonetheless, air toxics concerns continue to arise on highway projects during the NEPA process. Even as the science emerges, the public and other agencies expect FHWA to address MSAT impacts in its environmental documents. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this field.

NEPA Context

The NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the federal government be interpreted and administered in accordance with its environmental protection goals, and that Federal agencies use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment (42 U.S.C. 4332). In addition to evaluating the potential environmental effects, FHWA must also take into account the need for safe and efficient transportation in reaching a decision that is in the best overall public interest (23 U.S.C. 109(h)). The FHWA policies and procedures for implementing NEPA are contained in 23 USC 139 and 23 CFR Part 771.

Mobile Source Air Toxics Analysis

The purpose of this Project is to address pavement condition, reduce crashes in the corridor, improve non-motorist travel, and provide an ADA compliant corridor by reconstructing the roadway, installing a roundabout at Fenway Ave, and installing a multiuse trail and pedestrian refuges along the corridor. This Project has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. As such, this Project would not result in changes in traffic volumes, vehicle mix, basic Project location, or any other factor that would cause a meaningful increase in MSAT impacts of the Project from that of the no-build alternative.

Moreover, EPA regulations for vehicle engines and fuels would cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES3 model forecasts a combined reduction of over 76 percent in the total annual emissions rate for the priority MSAT from 2020 to 2060 while vehicle-miles of travel are projected to increase by 31 percent (updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, January 18, 2023). This would both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this Project.

The Project would involve the use of construction equipment and construction crew vehicles. Traffic generated during construction would be at levels typical of this type of highway reconstruction effort. Construction vehicles would be fitted with factory-supplied mufflers and would be shut off when not in use.

- 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 17a). 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

There would be noise, dust, and air emissions associated with the construction activities. No unique concerns have been identified. Standard noise, dust, and air quality specifications would be followed, in addition to adherence to applicable local ordinances. Erosion and sedimentation would be controlled in accordance with an erosion control plan and MnDOT standard specifications.

Construction contractors would be required to control dust and other airborne particles in accordance with MnDOT specifications. This could include measures such as applying water to exposed soils and limiting the extent and duration of exposed soil conditions as previously noted. Contractors would be required to conform to all applicable federal, state, and local requirements.

The following dust control measures would be undertaken, as necessary:

- Minimize the duration and extent of soils being exposed or regraded at any one time.
- Spray construction areas and haul roads with water at a controlled rate, especially during periods of high wind or high levels of construction activity. Monitor to ensure runoff does not lead to off-site sedimentation.
- Minimize the use of vehicles on unpaved surfaces when feasible.
- Tarp trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard.
- Pave, apply water as needed, or apply (non-toxic) soil stabilizers on unpaved access roads, parking areas and staging areas at construction sites.
- Use water sweepers to sweep paved access roads, parking areas and staging areas at construction sites.
- Use water sweepers to sweep streets if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Utilize appropriate erosion control measures to reduce silt runoff to public roadways.
- Replant vegetation as quickly as possible to minimize erosion in disturbed areas.
- Use alternative fuels for construction equipment when feasible.
- Minimize equipment idling time.
- Maintain properly tuned equipment.

ODORS

Odors could be generated by exhaust from diesel engines engaged in construction activities, materials used in Project construction (e.g., asphalt, oil, etc.), and fuel storage areas but will end with construction. All machinery would be properly equipped and maintained to control emissions.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint:

- a. **GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.**

This section summarizes the GHG emissions associated with construction of and vehicle traffic associated with the proposed Project. It does not include an assessment of the potential climate effects of those emissions. In the case of GHGs and climate change, climate is driven by global cumulative changes of GHG concentrations in the atmosphere; the changes in emissions from one individual project are simply too small to justify calculation of resulting changes in temperature, sea level, precipitation, and other significant cumulative climate effects. However, estimation of emissions is still useful to the public and decision makers so that they can understand whether projects are contributing to progress in mitigating climate change.

MnDOT evaluates GHG emissions from projects due to concerns about current and future impacts of climate change in Minnesota. GHGs from transportation (e.g., carbon dioxide, methane, and nitrous oxide) contribute to warming of the atmosphere, which leads to effects in Minnesota that include increases in heavy precipitation, increased flooding, and more episodes of extreme heat. See Section 7 (Climate Resiliency) of this EAW for more information.

An analysis of operational and construction emissions (measured in carbon dioxide equivalents or “CO₂e”) was conducted for the No Build and preferred alternative using the Minnesota Infrastructure Carbon Estimator (MICE) tool. The results are shown in **Table 17**.

Table 17 – GHG Analysis Results

Operations emissions (base year and design year)	CO₂e (metric tons per year)
Base year (2024)	5,632
No build alternative (2044)	6,187
Build alternative (2044)	6,187
Difference build vs. no build	0
Cumulative difference over project lifetime (20 years)	0
Construction CO₂e emissions (total over the construction period)	CO₂e (total metric tons)
Build alternative	1,948

The proposed Project would reconstruct TH 97 to a two-lane, divided, urban highway with multiuse trails and intersection improvements (including ADA elements). The Project could improve travel time for TH 97 traffic by adding dedicated turn lanes at Fondant Ave N and a single-lane roundabout at Fenway Ave N, enhancing mobility and reducing vehicle idling. However, these enhancements are not enough to significantly increase traffic volumes beyond No-Build conditions or reduce operational GHG emissions compared to the No-Build alternative.

The purpose of the TH 97 Project is to address deficient transportation infrastructure along the corridor, which would resolve existing deficiencies related to pavement and drainage. The Project also seeks to enhance motor vehicle safety at specific locations along the corridor and promote non-motorized travel opportunities.

Construction GHG emissions would result from production and transportation of construction materials, and from fuel used in construction equipment.

b. GHG Assessment

i. Describe any mitigation considered to reduce the project's GHG emissions.

Plans for the proposed Project were approximately 30 percent complete at the writing of this document. No additional Project-specific mitigation measures have been identified at this time. Reuse of roadway materials or other measures may be considered to reduce emissions associated with construction.

Assessing GHG emissions from transportation projects is one of several strategies that MnDOT is pursuing to address the issue of climate change. Other strategies that MnDOT is pursuing include intermodal transportation, electric vehicle incentives and infrastructure, clean vehicle standards, and alternative fuels. MnDOT is also developing a process for evaluating flood risk to the agency's bridges, large culverts, and pipes. Studying the performance of infrastructure under predicted extreme events will help MnDOT gain knowledge and better assess the impacts of climate changes to plan, design, build, and maintain assets for resilience. More information regarding MnDOT's efforts to address climate change can be found at Sustainability at mndot.gov/sustainability.

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project's GHG emissions. Explain why the selected mitigation was preferred.

This information is not known at this phase of Project development.

iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

The Project's predicted GHG emissions are estimated (as shown in **Table 14**) at 6,187 CO₂e (metric tons per year). The Next Generation Energy Act requires the state to reduce GHG emissions in the state by 80 percent between 2005 and 2050, while supporting clean energy, energy efficiency, and supplementing other renewable energy standards in Minnesota. The MICE tool shows that the cumulative difference between the Build and No-Build scenarios over the proposed Project's lifetime is zero. The Project is not expected to negatively impact the achievement of Minnesota Next Generation Energy Act goals.

19. Noise:

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.

TRAFFIC NOISE

The proposed Project is classified as a Type 3 project under FHWA noise regulation 23 CFR 772 because the pavement edge would not halve the distance to noise sensitive receptors (i.e., substantial horizontal or vertical alignment change) nor will the Project add capacity. The Project will not have a substantial change to existing noise conditions along TH 97. The 2017 MnDOT Highway Noise Requirements were used as guidance in the evaluation of noise impacts for the Project. Correspondence with the MnDOT Metro District Noise/Air Quality Program Supervisor is included in **Attachment I**.

CONSTRUCTION NOISE

Activities associated with construction of the proposed Project would result in increased noise levels relative to existing conditions for the duration of the construction period. These impacts would primarily be associated with construction equipment. Anticipated construction activities include earthwork, concrete paving, storm sewer, concrete curb and gutter, signing, striping, lighting, signals, and turf establishment.

Table 18 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 with the greatest noise levels.

Table 18 – Typical Construction Equipment Noise Levels at 50 Feet

Equipment Type	Manufacturers Sampled	Total Number of Models in Sample	Range of Peak Noise Level (dBA) ¹	Average Peak Noise Level (dBA) ¹
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	NA	NA	95 – 105	101

Source: United States Environmental Protection Agency and Federal Highway Administration

¹ dBA: Unit of measurement for sound loudness based on the intensity of the sound and how the human ear responds. dBA is also referred to as A-weighted decibels. dBA measures are used when describing sound level recommendations for healthy listening.

Elevated noise levels are, to a degree, unavoidable for this type of Project. MnDOT would require that construction equipment be properly muffled and in proper working order. While MnDOT and its contractor(s) are exempt from local noise ordinances, it is common practice to require contractor(s) to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. Advanced notice would be provided to affected communities of any planned, abnormally loud construction activities. It is anticipated that night construction could sometimes be required, to minimize traffic impacts and to improve safety. It is anticipated that all major work would happen during the day, and construction would be limited to daytime hours as much as possible. This Project is expected to be under construction for up to two construction seasons. If necessary, a detailed nighttime construction mitigation plan would be developed during the Project final design stage.

Any noise associated with high-impact equipment, such as pile driving, pavement sawing, or jack hammering, would be unavoidable with construction of the proposed Project. Pile-driving noise is associated with any bridge construction and sheet piling necessary for retaining wall construction. While pile driving equipment results in the highest peak noise level, as shown in **Table 18**, it is limited in duration to the activities noted above (e.g., bridge construction). The use of pile drivers, jack hammers, and pavement sawing equipment would be prohibited during nighttime hours. Pile driving is not anticipated; however, may be required as part of box culvert installation.

Construction Noise Mitigation and Commitments

MnDOT would follow their Night Work special provisions which limit the work within 0.1 mile of residential areas and provide for communication when night work close to residential areas is unavoidable. MnDOT would coordinate with the cities of Forest Lake and Columbus as the construction staging/maintenance of traffic plans for the Project are developed.

Construction activities would be temporary in duration. Local noise ordinances would be complied with during the construction phase of the Project. MnDOT would require that construction equipment be properly muffled and in proper working order. Advanced notice would be provided to affected communities of any planned, abnormally loud construction activities. The use of pile drivers, jackhammers, and pavement sawing equipment would be prohibited during nighttime hours.

20. 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 the estimates, and 5) availability of transit and/or other alternativetransportation modes.**

EXISTING AND PROPOSED ADDITIONAL PARKING SPACES

The proposed Project is a highway project and would not generate additional parking spaces. The only parking included in the Project is a gravel pad inside the WMA for DNR staff to utilize when they access the site. The public will not have access to this area.

ESTIMATED TOTAL AVERAGE DAILY TRAFFIC GENERATED

The proposed Project would not generate new trips in the same way as a new development because the roadway improvements proposed are not a destination or end point like a business or residential neighborhood. The proposed Project would not provide any additional through traffic lanes which could attract additional traffic to the corridor.

ESTIMATED MAXIMUM PEAK HOUR TRAFFIC GENERATED AND TIME OF OCCURRENCE

As noted above, the proposed Project would not generate new trips. Based on traffic counts completed at key intersections in the Project area, the AM peak was generally between 6:00 am and 9:00 am. Approximately 3,550 vehicles travel on TH 97 during this time. The PM peak period was generally found to be 3:00 pm and 6:00 pm. Approximately 4,110 vehicles travel on TH 97 during this time.

INDICATE SOURCE OF TRIP GENERATION RATES USED IN THE ESTIMATES

Future traffic volumes were obtained from the Metropolitan Council's regional transportation forecasting model. Future volumes are based upon information contained in transportation analysis zones (TAZs). TAZs are geographic areas within the travel model for which socioeconomic data is reported. Information in the TAZ is focused on socioeconomic data related to existing and future households and employment centers. TAZ boundaries are usually major roadways; township, city, or county borders; or geographic boundaries (e.g., lakes, etc.). Estimates of socioeconomic data are developed for a base year (in this case 2018) and assigned to the appropriate TAZ. Future socioeconomic data for future years is developed for each TAZ. The future data is created based upon planned land uses provided by the community in which the TAZ is located.

The Metropolitan Council's current regional model is an activity-based model, which means it considers both work and recreational travel. It also takes into consideration what mode of travel is used (e.g., transit, car, walk/bike) and how transportation users would get to and from different locations.

TH 97 within the Project area has daily traffic volumes of 15,290 (2022) between Everton Ave N and Forest Rd N, which are projected to increase by 16.42 percent to 17,800 by 2040. Similarly, the volumes between Hornsby St NE and Everton Ave N have been recorded at 19,200 (2017) and are anticipated to grow by 17.71 percent to 22,600 by 2040.

By 2047, the traffic volumes between Everton Ave N and Forest Rd N are expected to reach approximately 18,800, showing an increase of about 22 percent from 2022. Between Hornsby St NE and Everton Ave N, the volume is projected to be around 23,600 by 2047, showing an increase of about 23 percent from 2017.

Because the Project is not adding travel lanes to TH 97, traffic is not anticipated to increase substantially because of the proposed Project, rather future traffic volume growth is attributable to the planned land uses along the corridor that are anticipated to develop over the course of the next 20 years. The exact timing of the development is currently unknown.

AVAILABILITY OF TRANSIT AND/OR OTHER ALTERNATIVE TRANSPORTATION MODES

Currently no fixed transit routes are provided in the Project area. Metro Mobility provides demand responsive service for certified riders with disabilities that prevent them from using the regular route system. Transit Link is the Twin Cities dial-a-ride minibus or van service for the general public, where regular route transit service is not available.

There are currently no multiuse trail facilities in most of the Project area. Just outside the Project area is the Hardwood Creek regional trail (east end of the Project) and a local trail network just west of the Project area. The proposed Project would provide a multiuse trail along the entire south side of TH 97 as well as some segments on the north side of the corridor to link areas near I-35 in Columbus to the Hardwood Creek Trail and destinations between.

- b. **Discuss the effect of 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.***

The proposed Project is not anticipated to create or generate additional traffic and would not generate new trips in the same way as a new development because the roadway improvements proposed are not a destination or end point like a business or residential neighborhood. The proposed Project would not provide any additional thru travel lanes which could attract additional traffic to the corridor.

EXISTING VOLUMES AND CONGESTION

Current daily traffic volumes in the Project area range from approximately 19,200 at the western limits of the Project to 15,300 east of Everton Ave N. There is presently very limited congestion within the corridor, as MnDOT reconstructed the interchange at I-35 and TH 97 (approximately 0.08 mile to the west of the Project). Congestion on TH 97 in the past had been concentrated near the interchange. The changes to the interchange accommodate heavier left-turn movements to south I-35E during the AM peak period. In addition, improvements at Hornsby Ave (as part of the interchange design) provided two thru lanes in the westbound direction, accommodating the heavier traffic flow approaching the interchange.

FUTURE VOLUMES AND CONGESTION

As noted in subpart a, future daily traffic volumes on the corridor are expected to be 23,600 west of Everton Ave N and 18,800 east of there by 2047. The volumes on the western end of the corridor are at or slightly higher than the capacity of a two-lane divided highway. Areas to the east are within the capacity of a two-lane divided highway. The western portion of TH 97 could experience congestion near the end of the 20-year time-period covered in this document. Intersections along the corridor with traffic signals (Hornsby St NE and Everton Ave N) and the new roundabout (Fenway Ave N) are expected to operate at acceptable levels of service.

PROPOSED TRAFFIC IMPROVEMENTS

The preferred alternative provides some additional capacity through constructing a center median which limits turning movements for driveways and some public streets. Reducing access provides for safer and more efficient traffic flow and enables the roadway to accommodate additional traffic from areas that are developing along and near TH 97. The new traffic signal at Everton Ave N and the roundabout at Fenway Ave would better facilitate traffic flow along and across TH 97 than existing conditions.

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

The purpose of the TH 97 Project is to accomplish improvements to the transportation network for all users. Key elements include:

- Address existing transportation infrastructure deficiencies associated with pavement and drainage to support current and future traffic.
- Improve motor vehicle safety along TH 97.
- Provide opportunities for and to encourage non-motorized travel.
- Address ADA deficiencies.

The Project would maintain sufficient capacity to accommodate much of the planned growth in the area without providing additional travel lanes along the corridor. Access management, the center median, and intersection improvements would enhance both mobility and safety. Where the Project would close or modify public and private access to TH 97, new or relocated driveways would be constructed to ensure continued access to properties in the area.

The proposed alternative would provide new infrastructure that would not need replacement or substantial repairs in the short- or mid-term by removing poor soils to better stabilize the roadway and minimize reoccurring maintenance. This would limit construction interruptions for TH 97 users over the long-term and improve infrastructure resiliency.

The proposed alternative would provide non-motorized users with more options and improve walkability and bikeability with construction of the trail on the south side of TH 97 and by filling in connections to intersecting roadways on the north side.

MnDOT would coordinate with the cities of Columbus and Forest Lake and area businesses to maintain direct access to parcels during construction. New or modified access would be provided to all affected properties as part of the Project. Detours would be minimized to the extent practicable. A traffic management plan would be developed and implemented, and additional information would be provided to the public as it becomes available. MnDOT would coordinate with emergency responders to ensure that access is provided to properties during construction should responders be called to one of the sites. As plans progress and construction staging plans are developed, MnDOT would meet with property owners and businesses within and near the Project area to identify their needs and concerns with construction activities.

21. 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 effects are “the effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects planned or for which a basis of expectation has been laid, regardless of who undertakes the projects or what jurisdictions have authority over the projects.”

There are two general geographic scales relevant to the Project. Some effects are limited to the area disturbed by the proposed Project. Areas outside the Project (such as undeveloped areas along the TH 97 corridor) could also be influenced by the Project depending on the nature of the resource or effect (e.g., water quality, traffic). There are also two general timeframes in which Project-related environmental effects could occur: effects that are related to construction activities but could last beyond the construction period, and effects that are related to long-term operation of the Project. Project-related environmental effects that could combine with other environmental effects are summarized in **Table 19**, along with the relevant geographic extent.

- 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.**

The existing and future land use maps in the comprehensive plans for the cities of Forest Lake and Columbus outline plans for the development of presently vacant and agricultural areas (refer to section 10) into mixed-use, highway commercial, low/medium density residential, and low-density residential zones. The land uses for the DNR’s Lamprey Pass WMA and the Forest Lake Airport are expected to remain unchanged. Currently, the timing for projects contributing to these land-use conversions is uncertain. Review and approval of any development activities will be provided through municipal planning processes and regulatory programs.

No planned transportation improvements were identified within the Project area in MnDOT’s Statewide Transportation Improvement Program or in its longer-term 10-year Capital Highway Investment Plan.

Table 19 – Project-Related Environmental Effects (Cumulative Potential Effects)

Reference (EAW Item)	Topic	Project-Related Environmental Effects	Geographic Extent and Future Potential Impacts
Item 11	Geology, Soils, and Topography	Ground/soil disturbance	Throughout Project area. Additional soil disturbance outside the Project footprint is possible because of future growth and development along TH 97. The timing of these potential effects is unknown.
Item 12	Water Resources	<ul style="list-style-type: none"> • Wetland fill • Increase in impervious surface area • Water appropriation during construction 	<p>Wetland fill at locations discussed in Item 12. Increase in impervious surface throughout the Project area. Water appropriation may be required to complete culvert work near the wetlands.</p> <p>As discussed in the “Land Use” topic above, there is potential for future development along TH 97 outside the Project footprint. The conversion of farmland and/or natural areas adjacent to the corridor to more intensive land uses would result in new areas of impervious surface, potential wetland impacts, and a potential need for water appropriation. The timing of these potential effects is unknown.</p>
Item 13	Contamination /Hazardous Materials	Disturbance of potentially contaminated soils	<p>Areas of risk for encountering contaminated soils are discussed in Item 13.</p> <p>Planned future development adjacent to TH 97 involving excavation could result in additional disturbance of contaminated soils or hazardous materials that may be present outside of the Project area. The timing of these potential effects is unknown.</p>
Item 14	Fish and Wildlife	Tree removal (potential impacts to Northern Long Eared Bat habitat)	<p>Tree removal at select locations.</p> <p>Planned future development (see Item 10) adjacent to TH 97 could result in additional tree removal outside the Project footprint. As noted in the “Water Resources” topic above, these developments could also create new areas of impervious surface outside the Project footprint. Additional impervious surface could impact the quality and volume of water entering wetlands. The timing of these potential effects is unknown.</p>
Item 19	Noise	Noise levels exceed federal standards	Planned future development outside the Project footprint but adjacent to TH 97 has the potential to generate additional traffic and associated traffic noise on TH 97. Future developments were considered in the development of traffic forecasts. If future highway expansion projects receiving federal funds are proposed in the area, noise impacts would have to be evaluated as part of these projects. MnDOT would evaluate noise impacts as part of future projects on TH 97 and US 61.
Item 20	Transportation	<ul style="list-style-type: none"> • Improved traffic operations, mobility, and safety • Access closure and modifications • Disruptions to traffic flow during construction 	<p>Safety and mobility improvements would be experienced on TH 97 throughout the Project area. Access closure and modifications at select locations as discussed in Item 20. Temporary construction impacts would be experienced throughout the Project area.</p> <p>Planned future development outside the Project footprint but adjacent to TH 97 has the potential to generate additional traffic on TH 97. This projected increase was accounted for in the development of growth factors for traffic volumes used in Project analyses.</p>

- 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.**

The pace and extent of future residential, industrial and commercial development along TH 97 in the vicinity of the proposed improvements is unknown and depends on a number of factors. Nonetheless, such development would be anticipated to result in the cumulative environmental effects outlined above including conversion of farmland, ground disturbance, water quality (increase in impervious surface), potential wetland impacts, vegetation removal, and increased traffic. These effects could combine with effects associated with construction of the proposed TH 97 improvements.

As discussed in **Table 19**, cumulative transportation impacts were accounted for to the extent feasible in modeling activities completed for the Project.

22. 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.

This Project is not believed to cause any anticipated adverse environmental impacts that have not been addressed by this EAW or the federal Categorical Exclusion document.

[The rest of this page intentionally left blank]

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

I hereby certify that:

- a. The information contained in this document is accurate and complete to the best of my knowledge.
- b. 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.
- c. Copies of this EAW are being sent to the entire EQB distribution list.

Signature _____

Date _____

Title Chief Environmental Officer

Attachments:

- A. Figures
- B. Geology Documentation
- C. Wetland Documentation
 - a. Wetland Assessment and Two Part Finding
- D. Contaminated Properties Documentation
 - a. Contaminated Materials Management Team (CMMT) Correspondence
 - b. Phase I ESA
 - c. Phase II ESA
- E. Section 7 Correspondence
- F. DNR Correspondence
- G. MnDOT Roadside Vegetation Management Review
- H. MnDOT Cultural Resources Unit (CRU) Correspondence and Section 106 Documentation
- I. Noise Determination Correspondence
- J. Regulated Materials Correspondence
- K. MnDOT Aeronautics Unit Correspondence
- L. Floodplain Documentation
- M. Section 4(f) De Minimis Determination