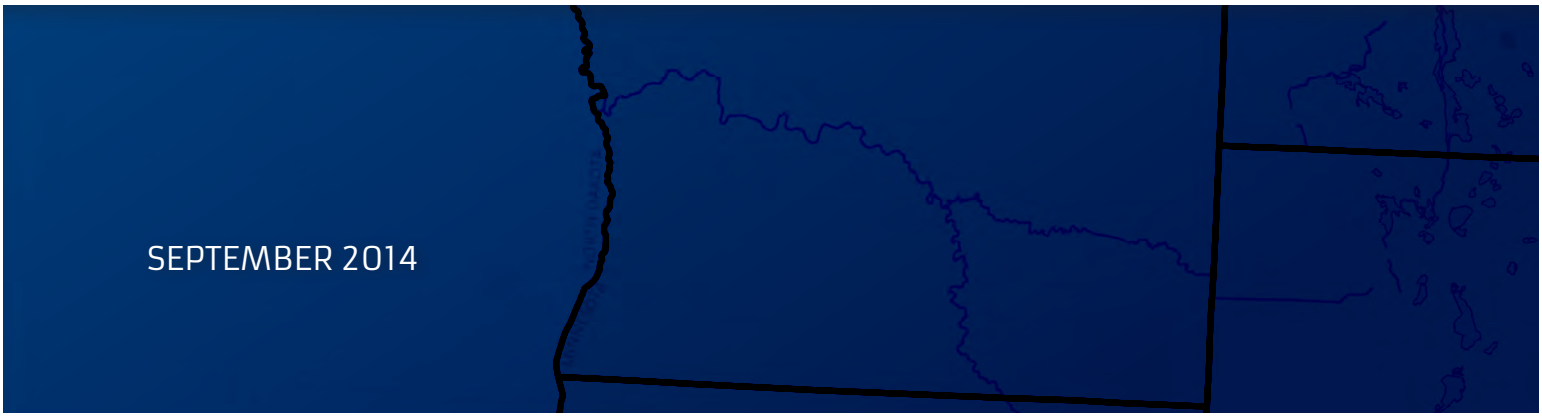
MINNESOTA DEPARTMENT OF TRANSPORTATION

TH 75 Highway Realignment

Environmental Assessment Worksheet



SEPTEMBER 2014

July 2013 Version

ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addressed collectively under EAW Item 19.

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

1. PROJECT TITLE

SP 8408-44, TH 75 Highway Realignment

2. PROPOSER

Proposer: Minnesota Department of Transportation District 4
Contact Person: Tom Pace
Title: Project Manager
Address: 1000 Highway 10 W
City, State, ZIP: Detroit Lakes, MN 56501
Phone: 218-846-3627
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3. RGU

RGU: Minnesota Department of Transportation District 4
Contact Person: Tom Pace
Title: Project Manager
Address: 1000 Highway 10 W
City, State, ZIP: Detroit Lakes, MN 56501
Phone: 218-846-3627
Fax: 218-847-1583
Email: tom.pace@state.mn.us

4. REASON FOR EAW PREPARATION

Check one:

Required:
☐EIS Scoping
☒Mandatory EAW

Discretionary:
☐Citizen petition
☐RGU discretion
☐Proposer initiated

If EAW or EIS is mandatory, give EQB rule category subpart number(s) and name(s): Minnesota Rules 4410.4300, subpart 22: Highway Projects

5. PROJECT LOCATION

County: Wilkin

City/Township: City of Kent, McCauleyville Township

PLS Location (¼, ¼, Section, Township, Range): Sections 2, 3, 11,& 12 Township 134N, Range 48W

Watershed (81 major watershed scale): Red River of the North

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

- **County map showing the general location of the project** (see **Figure 1**)**;**
- **US Geological Survey 7.5 minute, 1:24,000 scale map indicated project boundaries (photocopy acceptable)** (see **Figure 2**)**; and**
- **Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan** (see **Figures 3 through 6**)**.**

6. PROJECT DESCRIPTION

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

This project involves reconstructing 1.8 miles of Trunk Highway (TH) 75 on new alignment. Two new bridges, a bridge over the BNSF railroad and a bridge over Whiskey Creek, will be constructed. The project is located in and around Kent, Wilkin County, Minnesota.

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 and 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.

This project (SP 8408-44, TH 75) involves reconstructing TH 75 on new alignment for approximately 1.8 miles. Along the new alignment, two new bridges will also be built. The existing TH 75 bridge over Whiskey Creek will be removed and a new bridge will be built over the creek on the new alignment approximately 600 feet east of the in-place bridge. Because the new alignment crosses the Burlington Northern Santa Fe (BNSF) Railroad, a new bridge will also be constructed over the tracks at this location. A portion of the existing alignment of TH 75 will be abandoned, bituminous removed, and revegetated to a floodplain plant community (grasses, forbs, shrubs, and trees). The project will realign accesses to two private properties, CSAH 24, CSAH 1, 225th Street (township road), and various field entrances. The project will also include a mill and overlay of 1.5 miles of TH 75 south of the realignment, as shown in **Figure 2**.

Construction is planned for 2015 through 2016 and access to the city of Kent and the surrounding area will be maintained during construction.

c. Project magnitude

Measure	Magnitude
Total Project Acreage	128.3
Linear Project Length	1.8 miles new alignment; 1.5 miles mill and overlay on existing road
Number and Type of Residential Units	N/A
Commercial Building Area (square feet)	N/A
Industrial Building Area (square feet)	N/A
Institutional Building Area (square feet)	N/A
Other Uses – specify (square feet)	N/A
Structure Height(s)	N/A

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.

Bridge No. 5186 over Whiskey Creek is deficient and in need of replacement. The underpass of Bridge No. 5185 under the BNSF railroad has insufficient vertical clearance (14.0 feet). This segment of TH 75 floods most springs due to snowmelt and large rain events, and, as a result, TH 75 is detoured to nearby county, city, and township roads. As a result of the floods, the bituminous surface is severely deteriorated with cracks and potholes, and the inslope and riverbanks have numerous washouts that are in constant need of repair.

e. Are future stages of this development, including development on any other property, planned or likely to happen? ☐ Yes ☒ No

If yes, briefly describe future stages, relationship to present project, timeline, and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? ☐ Yes ☒ No

If yes, briefly describe the past development, timeline, and past environmental review.

7. COVER TYPES

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

Cover Type	Before (Acres)	After (Acres)
Wetlands	0	0
Deep Water/Streams	0.4	0.4
Wooded/Forest	2.4	0
Brush/Grassland	0	0
Cropland	84.3	0
ROW/Lawn/Landscaping	34.5	119.1
Impervious Surface	6.5	7.5
Stormwater Pond	0	0.5
Other (gravel road)	0.2	0.8
Total	128.3	128.3

8. 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.*

Unit of Government	Type of Application	Status
Federal		
U.S. Army Corps of Engineers	Section 404 Permit	To be submitted
State		
Minnesota Department of Transportation	EIS Need Decision	In progress
	Geometric Layout	In progress
	Construction Plans	In progress
	Section 106 (Historic/Archeological)	Complete
Minnesota Pollution Control Agency	Section 401	To be submitted
	National Pollutant Discharge Elimination System Stormwater Permit Construction Activities	In progress
Minnesota Department of Natural Resources	Public Waters Permit	To be submitted
	Water Appropriations Permit (if needed)	To be submitted
Local		
Buffalo-Red River Watershed District	Watershed District Approval	To be submitted

9. LAND USE

a. Describe:

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

The land use map in the Wilkin County Local Water Management Plan 2008-2017[1] shows the land use in the project area as mainly cultivated land. Other adjacent land uses include rural residential, wooded areas, Whiskey Creek, and the City of Kent.

Parks and Trails

No parks or trails are identified within the project study area or the vicinity of the project area.

Prime or Unique Farmlands

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, 12 of the 13 soil types within the study area are classified as prime farmland or farmland of statewide importance.

[1] Available at http://www.co.wilkin.mn.us/index.asp?SEC=961A1D64-87FC-49DB-B4C2-05D8223893E8&Type=B_BASIC

ii. Planned land use as identified in comprehensive plans (if available) and any other applicable plan for land use, water, or resource management by a local, regional, state, or federal agency.

The Wilkin County Comprehensive Plan primarily consists of the Local Water Management Plan as identified above. Planned land use is similar to existing land use with an emphasis on Flood Damage Reduction (FDR) and Natural Resource Enhancement (NRE). One goal and objective of the plan is to assist the Buffalo-Red River Watershed District in the implementation of FDR and NRE practices. The TH 75 realignment project is consistent with the FDR goals.

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

Shorelands

Whiskey Creek, the only water body within the project study area and is classified as a tributary. Tributaries are not regulated by the Wilkin County Shoreland Ordinances.

Floodplain

The 100-year floodplain of Whiskey Creek falls within the project study area. The 100-year floodplain elevation was calculated at 937.5 feet in the 2011 Minnesota Department of Natural Resources (DNR) Flood Study Model at the new bridge location. Currently, the FEMA floodplain maps are undergoing revisions to incorporate this new elevation; formal adoption is expected sometime in 2015. The objective of the project is to raise TH 75 out of the floodplain and reduce the frequency of highway closures in this area.

Wild and Scenic Rivers

There are no wild and scenic rivers within or directly adjacent to the project area.

Critical Area

There are no critical areas within or adjacent to the project area.

Agricultural Districts

The proposed road alignment will cross through agricultural lands. As outlined in the Wilkin County Zoning Ordinance,[2] Wilkin County has an "A" General Agriculture District, which has the purpose of protecting agricultural lands from "non-farm influences; retain major areas of natural ground cover for conservation purposes; prevent scattered non-farm growth; secure economy in governmental expenditures for public services, utilities and schools; deter abuse of water resources and conserve other natural resources of the County." No map was provided for the agricultural district in the Wilkin County Zoning Ordinance. The land use map in the Wilkin County Local Water Management Plan identified the project area as all agricultural.

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

The proposed improvements are consistent with the requirements of current zoning and goals of the Local Water Management Plan.

[2] Available at http://co.wilkin.mn.us/Zone2.doc

Floodplain

The net floodplain impact is estimated as a 21,000 cubic yard increase in floodplain storage volume. This is based on filling in the floodplain for bridge abutments and erosion control protection (riprap) and excavation within the floodplain within minor channel modifications, construct ditches for storm water management, and removal of pavement/roadbed of the abandoned section of existing TH 75, as shown on Exhibit A in **Appendix A**.

Agricultural Land

The project will result in converting approximately 84 acres of cropland to roadway/road right-of-way. Nine different landowners will be affected by the purchase of right-of-way and the conversion of farmland into roadway and roadway right-of-way. The main crops in this area are soybeans and corn. For the 2014 growing season, these areas were planted with soybeans. Access to all affected agricultural fields in the area will be maintained and remaining parcels retain adequate size for continued farming. The project will convert about 40 acres of existing roadway to floodplain/grassland cover and local access. Using this linear strip of land for farming was determined not to be feasible based on size location and accessibility.

Therefore, the project is compatible with nearby land uses, zoning, and plans. All accesses to agricultural fields and residential properties, including those in the city of Kent, will be maintained or reconstructed as a result of the highway realignment project.

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

Measures to minimize impacts to the creek channel and floodplain have been implemented to the extent practicable. These measures include using a single span bridge and crossing the channel at the narrowest location within the vicinity of the existing bridge. The proposed project is compatible with the existing local plans. No mitigation is needed.

10. GEOLOGY, SOILS, AND TOPOGRAPHY/LAND FORMS

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

The project area is underlain by two separate landforms: Archean landforms consisting primarily of basalt and sedimentary rock in the southern portion of the project area and Cretaceous landforms consisting primarily of shale and sandstone in the northern portion of the project area. No sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions were identified within the project area.

In the project area the depth to a restrictive layer (including bedrock, cemented layers, dense layers, and frozen layers) is greater than 200 feet deep.

Maps referenced on the DNR website[3] show that the project location is underlain by a region of medium groundwater contamination susceptibility.

No groundwater impacts are anticipated.

[3] Available at http://www.dnr.state.mn.us/whaf/about/scores/geomorphology/gw_contamination.html

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 soil limitations, such as steep slopes or highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections, or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 11.b.ii.

Thirteen different soil types are present in the general project area. The slope in the project area is 0 to 5 percent. The majority of the soils within the project area have a slight erosion hazard, indicating that little or no erosion is likely. A small portion has a rating of moderate, indicating that some erosion is likely.[4] The soil types in the project area mainly consist of silty clays and loams, ranging from very fine sandy loam to silty clay.

The construction operations include filling along the new roadway segment to create the new roadway alignment and bridge approaches and some excavation in areas where the existing roadway and bridge will be removed. Approximately 162,000 cubic yards of excavation and 425,000 cubic yards of embankment will be required for the improvements.

Temporary stabilization measures such as erosion control blankets will be used on any impacted steep slopes to prevent erosion and sedimentation of ditches during construction. Vegetation establishment will be used to permanently stabilize side slopes, with proposed roadway ditches vegetated based on anticipated runoff velocities.

11. WATER RESOURCES

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

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

No lakes or wetlands were identified within the project study area. One creek, Whiskey Creek (a DNR public water), is within the project study area. Reaches of the Red River are within one mile of the project (**Figure 1** and **Figure 3**).

Both the current alignment and the proposed alignment of TH 75 cross over Whiskey Creek near Kent, Minnesota. Whiskey Creek is impaired for aquatic life, and the stressors or pollutants causing the impairment are dissolved oxygen (DO), turbidity, fecal coliform, and aquatic macroinvertebrate bioassessments. This creek is a major tributary to the Red River which is also listed on the Minnesota Pollution Control Agency's (MPCA) impaired waters list. The reaches of the Red River within one mile of the project site are impaired for aquatic life and aquatic consumption caused by stressors or pollutants such as mercury and PCB in fish tissues, *E. coli*, arsenic, and turbidity.

[4] USDA NRCS Web Soil Survey

The proposed project will not contribute to the impairment of the adjacent DNR Public Waters. Turbidity will be improved within the project area as a result of the construction of stormwater ponds and ditch check-dams along the new segment of TH 75.

ii. Groundwater – aquifers, springs, and seeps. Include 1) depth to groundwater; 2) if project is within a MDH well protection area; and 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.

Wells were identified within the project study area. Groundwater wells located just north of Whapeton and south of Wolverton (project vicinity) show groundwater depths ranging from 40 to 63 feet in Whapeton and 3 to 11 feet in Wolverton.[5] Wells located adjacent to the project site are shown on **Figure 3**.

The project is not in a wellhead protection area.

b. Describe effects from previous activities on water resources and measures to minimize or mitigate the effects below.

i. Wastewater – For each of the following, describe the sources, quantities, and composition of all sanitary, municipal/domestic, and industrial wastewaters projected 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.

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.

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

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

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

Receiving waters from the project include Whiskey Creek and the Red River.

[5] DNR ground water level data, available at http://www.dnr.state.mn.us/waters/groundwater_section/obwell/waterleveldata.html

The TH 75 project will have a net increase of 0.13 acres of impervious surfaces across the entire project area. With the small amount of net increase in impervious surfaces, there will be minimal rise in the amount of surface water run-off from the highway. The amount of surface water runoff entering Whiskey Creek will be similar to the existing roadway. The water eventually ends up in the Red River.

Two sedimentation basins and ditch blocks (check dams) will be installed along the alignment to control surface water runoff. Currently, surface water runoff from TH 75 is conveyed from the roadside ditches to Whiskey Creek. With the addition of the sedimentation ponds, water discharged from the roadside ditches to Whiskey Creek will be lower in turbidity and of higher quality than what is currently being discharged into the creek.

To mitigate the increase in runoff, sedimentation basins and check dams will be installed as part of a design for modified roadway ditches to detain the additional runoff volume and allow sediments to settle out. These best management practices will provide for the partial removal of phosphorous and total suspended solids to improve stormwater quality.

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. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

A water appropriation permit may be necessary as dewatering of Whiskey Creek may be needed for construction of the abutments. The length of time and volume of water to be dewatered is not known at this time. A DNR Water Appropriations permit will be applied for by the contractor if the permit thresholds are expected to be exceeded. Dewatering will not commence until applicable water appropriations permits are obtained. Standard erosion control measures will be implemented to treat the water before discharging to any surface water.

iv. Surface Waters

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

A wetland investigation was completed on June 25, 2014 with a Technical Evaluation Panel (TEP) review occurring on June 26, 2014. No wetlands were identified or delineated within the project study area.

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

Surface waters such as lakes and ponds are not anticipated to be impacted, altered, or indirectly impacted with the proposed roadway improvements. Approximately 280 linear feet of stream channel will be temporarily impacted by the project, including 100 feet where the existing bridge and abutments are removed and 180 feet in the area of new bridge construction. The Whiskey Creek channel was delineated at the top of bank for DNR jurisdiction purposes.

The Q2 (two-year storm event elevation) was calculated to identify the Army Corps of Engineers jurisdictional boundary of the creek. This elevation is higher than the DNR boundary. The Q2 elevation was derived from information included in the 2011 DNR Floodplain model and is set at 927.9 feet. Stream channel impacts, based on work proposed below the Q2 elevation, include an estimated 13,200 square feet (sf) of fill and 31,000 sf of excavation, resulting in a net gain of nearly 18,000 sf area at or below the Q2 elevation. Exhibit B in **Appendix A** illustrates the different cut and fill locations.

The 100-year floodplain at the existing TH 75 bridge crossing over Whiskey Creek, as defined in the 2011 DNR model, was at an elevation of 937.3 feet; at the new bridge location, the 100-year floodplain elevation is 937.5 feet. Floodplain impacts are shown on Exhibit A in **Appendix A**. The proposed new bridge will span 545 linear feet of the floodplain adjacent to Whiskey Creek. The net floodplain impact is estimated as a 21,000 cubic yard increase in floodplain storage volume. The estimated floodplain impact is based on filling in the floodplain for bridge abutments and erosion control protection (riprap). Excavation (transverse encroachment) within the floodplain includes minor channel modifications at the new bridge crossing, construction of ditches for stormwater management, and removal of pavement/roadbed of the abandoned section of existing TH 75 and the old bridge crossing Whiskey Creek, as shown on Exhibit A in **Appendix A**.

Measures to minimize impacts to the creek channel have been implemented to the extent practicable. These measures include using a single span bridge and crossing the channel at the narrowest location within the vicinity of the existing bridge.

Minor channel modifications will be completed to improve flow within the floodway and floodplain under the bridge as shown on Exhibit C in **Appendix A**. Best management practices (BMPs) as identified in the DNR General Public Waters Work Permit (GP 2004-0001) will be implemented to minimize impacts and avoid sedimentation of the creek channel during construction of the new bridge and

removal of the existing bridge over Whiskey Creek. These BMPs may include measures such as:

- Floating silt curtain, silt fence, mulch, erosion control blanket, and revegetation of disturbed areas
- Temporary sedimentation basin
- Temporary channel diversion

No impacts to the number or type of watercraft on any water body are anticipated.

12. 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 groundwater 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.

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 in the development of highway projects because of 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 during highway construction projects 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.

A Phase I Environmental Site Assessment (Phase I) provides information on potentially contaminated properties (defined as properties where soil and/or groundwater is impacted with pollutants, contaminants, or hazardous wastes). These properties are identified through review of historic land use records and air photos; Environmental Protection Agency (EPA), MPCA, and county/city records; as well as current property conditions.

A Phase I for the project area is currently being completed. Potentially contaminated properties identified in the Phase I will be evaluated to determine if they are likely to be impacted by construction and/or acquired as right-of-way. Any properties with a potential to be impacted by the project will be drilled and sampled (Phase II Investigation), if necessary, to determine the extent and magnitude of contaminated soil or groundwater in the areas of concern. The results of the Phase II Investigation will be used to determine if the contaminated materials can be avoided or the project's impacts to the properties minimized. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction in accordance with all applicable state and federal regulations.

According to MPCA and Minnesota Department of Agriculture (MDA) databases, there are no known contaminated sites within approximately 500 feet of the project area (email correspondence with Keri Aufdencamp from MnDOT, included in **Appendix B**.)

Due to the low risk of impacting potentially contaminated sites, no additional evaluation of the project site will be needed.

If previously unknown contaminated materials are encountered during construction, a contingency plan is in place that requires the Contractor to immediately stop work and notify the Project Engineer. MnDOT's Environmental Consultant will then evaluate the contamination, in consultation with MnDOT, and develop a plan for properly handing and treating contaminated soil and or/groundwater in accordance with all applicable state and federal regulations.

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.

Roadways and bridges do not generate substantial quantities of solid waste during typical operation. During construction, all waste materials will be collected and stored in dumpsters. Dumpsters will be emptied as needed and the waste will be hauled off site and disposed of properly. All sanitary waste shall be collected from the portable units as required by local regulation.

c. Project Related Use/Storage of Hazardous Materials – Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location, and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spills or releases 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.

Any hazardous waste materials generated or encountered during construction shall be disposed of in the manner specified by local or state regulation or by the manufacturer. Whenever possible, vehicle refueling and maintenance should not be performed on the construction site. However, any vehicle refueling or maintenance that must take place on the construction site must have proper spill prevention controls in place prior to commencing work. The Contractor's personnel shall be instructed in these practices and the Contractor's Erosion Control Supervisor shall be responsible for seeing that these practices are followed.

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 wastes 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 (paint, contaminated rags, acids, bases, herbicides, and pesticides) will likely be used during site preparation and road construction. Although spills of these materials are not planned, any spills of reportable quantities that occur will be reported to the Minnesota Duty Officer and the contractor will clean up spilled material according to state requirements.

Toxic or hazardous substances may be used during project construction (petroleum products such as diesel fuel, hydraulic fluid, and chemical products such as sealants).

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

The Contractor's site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

There will be regulated waste that will need to be removed for bridge demolition. This includes both asbestos and treated wood.

Asbestos

The material must be removed by a MnDOT certified asbestos abatement contractor and disposed of at an MPCA permitted mixed municipal solid waste landfill or MPCA permitted industrial landfill. This material needs documentation showing the company's MDH asbestos license, individual MDH certifications/hard cards, daily sign in sheets, work plan, and landfill that received the material.

Treated Wood

Treated wood must be disposed of at an MPCA permitted mixed municipal solid waste landfill or MPCA permitted industrial landfill. Documentation showing the landfill that received the treated wood would be required by MPCA.

13. FISH, WILDLIFE, PLANT COMMUNITIES, AND SENSITIVE ECOLOGICAL RESOURCES (RARE FEATURES)

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

Habitat

Whiskey Creek and associated floodplain areas may provide habitat corridors to a variety of common wildlife species. The vegetation along the proposed new alignment consists mainly of agricultural/cultivated areas with a small strip of woodland along Whiskey Creek. Roadside right-of-way, residential areas, wooded areas, and open space support wildlife, though the habitat is considered relatively low quality. Common species include game birds, ducks, songbirds, sparrows, robins, rabbits, squirrels and other small rodents, deer, raccoon, and skunk.

There are no existing wetland habitats in the project limits. There are several wetlands near the project site that consist primarily of riverine wetlands that occur mainly alongside Whiskey Creek, freshwater forest/shrub wetland along the Red River, and small patches of fresh emergent wetland and freshwater ponds. These wetlands may provide habitat for species such as turtles, geese, amphibians, snakes, birds, and small mammals.

Vegetation

The new road alignment crosses primarily through cultivated areas with row crops of soybeans or corn. Along fence lines, the rail corridor, and the creek there are some deciduous trees and shrubs and disturbed area vegetation.

The vegetation consists of volunteer and planted deciduous trees and shrubs and mowed and non-native turf grasses.

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

There were no state listed species, rare features, or sensitive ecological resources found in or nearby the project area (see correspondence from the DNR in **Appendix B**).

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

Aquatic Life

No game fish species have been identified within Whiskey Creek. No impacts to fish species are anticipated from this project.

Wildlife

All work will be conducted either within existing state right-of-way or in low quality habitats such as farm fields. Therefore, no impacts to the local wildlife are anticipated. The project will result in minimal loss of maintained roadside right-of-way, tree cover, and farm fields. Based on the minimal extent of the project construction limits, the low quality of existing habitat within the right-of-way, and the availability of similar adjacent habitat, impacts to wildlife habitat will be negligible.

Vegetation

There will be some vegetation loss along the boundaries of the project area, including the proposed new alignment and the existing roadway. Small amounts of tree and shrub loss and turf disruption are anticipated.

Rare Features and Ecosystems

There are features within one mile of the project location; however, the DNR does not believe the project will negatively affect any known occurrences of these features. **Appendix B** provides a copy of the DNR response to the Early Notification Memo that documents this finding.

Invasive Species

It is anticipated that some of the more common noxious weeds (i.e., Canada thistle, spotted knapweed, common tansy, and common buckthorn) may be encountered within the area of this project. Further disturbance in this area is likely to facilitate the spread of these invasive species.

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

Aquatic Life

Work exclusion dates for working within non-trout streams are from March 15 to June 15. No work will be completed within Whiskey Creek during this time to avoid interfering with fish spawning within the creek.

Erosion and sedimentation BMPs will be taken to minimize sediment entering adjacent waters. These practices will be maintained to ensure the integrity of these control measures as identified in the DNR Public Waters Permit (GP 2004-0001).

Wildlife

A wildlife passage bench has been incorporated into the project design to accommodate the wildlife movement in the area. Design guidance from the "Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001" will be used for the passage bench.

Vegetation

Efforts will be made to protect and minimize the loss of existing vegetation. As construction limits are defined, the presence or lack of areas of natural vegetation and/or trees to be protected will be verified. If necessary, vegetation and trees will be protected with fencing. At a minimum, fencing will be placed as close as possible to the construction limits, and this fencing will not be removed or crossed by construction activities (Standard Specification 2572.3).

When tree roots are encountered, all root cutting will be done as cleanly as possible and the roots covered immediately to prevent excess drying (Standard Specification 2572.3 A.2). In addition and where practical, supplemental water may be provided to landscape trees in maintained landscapes where root systems are disrupted (Standard Specification 2572.3 A.3).

Any disturbed soils near public waters will be re-vegetated with native species.

Sensitive Ecological Resources

The proposed project will not negatively impact any known rare features.

Invasive Species

The following guidelines will help to limit the spread of noxious weeds during the construction phase:

- Identify where weeds are present
- Prioritize these areas for weed control before construction begins
- Prevent movement of soil harboring a strong seed bank (soil under a weed infestation)
- Prevent the spread of reproductive weed parts (seed and roots) by cleaning equipment before it is moved from one site to another
- Post construction monitor for noxious weeds and control as necessary
- Prevent mixing of soil from weed infested areas with soil from weed-free areas
- Prevent the use of infested soils to be used as top soil. Infested soils may be buried three feet under final grade.

14. HISTORIC PROPERTIES

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

A Phase I cultural resources survey has been completed. One archaeological site and one architectural/structural property met initial requirements for potential eligibility on the National Register of Historic Places (NRHP). Both the archaeological site (21WL55) and the architectural property were found not eligible for listing in the NRHP. It has been determined that there will be no historic properties affected by the proposed project (see letter in **Appendix B**).

15. VISUAL

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

There are no existing scenic overlooks or views of note within any of the project sections. The project will not create any vapor plumes or intense lighting. Therefore, no mitigation is required.

16. AIR

a. **Stationary Source Emissions – Describe the type, sources, quantities, and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. 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.**

   Not applicable.

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.**

   Motorized vehicles affect air quality by emitting air borne pollutants. Changes in traffic volumes, travel patterns, and roadway locations affect air quality by changing the number of vehicles and the congestion levels in a given area. The air quality impacts from the project are analyzed by addressing criteria pollutants, a group of common air pollutants regulated by the EPA on the basis of criteria (information on health and/or environmental effects of pollution). The criteria pollutants identified by the EPA are ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Potential impacts resulting from these pollutants are assessed by comparing projected concentrations to National Ambient Air Quality Standards (NAAQS).

   In addition to the criteria air pollutants, the EPA also regulates air toxics. The Federal Highway Administration (FHWA) provides guidance for the assessment of Mobile Source Air Toxic

(MSAT) effects for transportation projects in the National Environmental Policy Act (NEPA) process. A qualitative evaluation of MSATs has been performed for this project as documented below. The scope and methods of the analysis performed were developed in collaboration with MnDOT and MPCA.

NAAQS Criteria Pollutants

Ozone

Ground-level ozone is a primary constituent of smog and is a pollution problem throughout many areas of the United States. Exposures to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate preexisting respiratory diseases such as asthma. Ozone is not emitted directly from vehicles but is formed as volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. Transportation sources emit NO_X and VOCs and can therefore affect ozone concentrations. However, due to the phenomenon of atmospheric formation of ozone from chemical precursors, concentrations are not expected to be elevated near a particular roadway.

The MPCA, in cooperation with various other agencies, industries, and groups, has encouraged voluntary control measures for ozone and has begun developing a regional ozone modeling effort. Ozone concentrations in the lower atmosphere are influenced by a complex relationship of precursor concentrations, meteorological conditions, and regional influences on background concentrations. MPCA states in *Air Quality in Minnesota: 2013 Report to the Legislature* (January, 2013) that:

> *"All areas of Minnesota currently meet the federal ambient 8-hour standard for ozone but Minnesota is at risk for being out of compliance. In 2008, EPA tightened the federal eight-hour ambient air standard for ozone to 75 parts per billion (ppb). EPA plans to propose a revised ozone standard in September 2013, with a final standard planned for 2014. Preliminary documents indicate that EPA believes the scientific evidence on the health impacts of ozone shows that the current ambient standard is insufficient to protect public health. EPA's Clean Air Scientific Advisory Committee has recommended that a new ambient standard be set in the range of 60-70 ppb to ensure public health protection with an adequate margin of safety. In 2010, EPA proposed a revised ozone standard in the range of 60-70 ppb but withdrew the proposal in fall 2011. Many areas of Minnesota would not meet the revised standard if the EPA sets the standard at the lowest end of the advisory committee's recommended range."*

The project is located in an area that has been designated as an unclassifiable/attainment area for ozone. This means that the project area has been identified as a geographic area that meets the national health-based standards for ozone levels, and, therefore, is exempt from performing further ozone analyses.

Particulate Matter

Particulate matter (PM) is the term for particles and liquid droplets suspended in the air. Particles come in a wide variety of sizes and have been historically assessed based on size, typically measured by the diameter of the particle in micrometers. $PM_{2.5}$ or fine particulate matter refers to particles that are 2.5 micrometers or less in diameter. PM_{10} refers to particulate matter that is 10 micrometers or less in diameter.

Motor vehicles (i.e., cars, trucks, and buses) emit direct PM from their tail pipes, as well as from normal brake and tire wear. Vehicle dust from paved and unpaved roads may be re-entrained, or re-suspended, in the atmosphere. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur dioxide, nitrogen oxides, and VOCs. $PM_{2.5}$ can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:

- Premature death in people with heart or lung disease
- Nonfatal heart attacks
- Irregular heartbeat
- Aggravated asthma
- Decreased lung function
- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing[6]

On December 14, 2012, the EPA issued a final rule revising the annual health NAAQS for fine particles ($PM_{2.5}$). The EPA website states:[7]

> *With regard to primary (health-based) standards for fine particles (generally referring to particles less than or equal to 2.5 micrometers (mm) in diameter, $PM_{2.5}$), the EPA is strengthening the annual $PM_{2.5}$ standard by lowering the level to 12.0 micrograms per cubic meter ($\mu g/m^3$). The existing annual standard, 15.0 $\mu g/m^3$, was set in 1997. The EPA is revising the annual $PM_{2.5}$ standard to 12.0 $\mu g/m^3$ so as to provide increased protection against health effects associated with long- and short-term exposures (including premature mortality, increased hospital admissions and emergency department visits, and development of chronic respiratory disease), and to retain the 24-hour $PM_{2.5}$ standard at a level of 35 $\mu g/m^3$ (the EPA issued the 24-hour standard in 2006). The EPA is revising the Air Quality Index (AQI) for $PM_{2.5}$ to be consistent with the revised primary $PM_{2.5}$ standards.*

The EPA also retained the existing standards for coarse particle pollution (PM_{10}). The NAAQS 24-hour standard for PM_{10} is 150 $\mu g/m^3$, which is not to be exceeded more than once per year on average over three years.

The Clean Air Act conformity requirements include the assessment of localized air quality impacts of federally-funded or federally-approved transportation projects that are located within $PM_{2.5}$ nonattainment and maintenance areas and deemed to be projects of air quality concern. The project is located in an area that has been designated as an unclassifiable/attainment area for PM. This means that the project area has been identified as a geographic area that meets the national health-based standards for PM levels, and therefore is exempt from performing PM analyses.

Nitrogen Dioxide (Nitrogen Oxides)

Nitrogen oxides, or NO_X, are the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary sources of NO_X are motor vehicles,

[6] http://www.epa.gov/air/particlepollution/health.html
[7] http://www.epa.gov/pm/actions.html

electric utilities, and other industrial, commercial, and residential sources that burn fuels. The MPCA's *Air Quality in Minnesota: 2013 Report to the Legislature* (January 2013) indicates that

> *"On road gasoline vehicles and diesel vehicles account for 44% of NO_X emissions in Minnesota. In addition to being a precursor to ozone, NO_X can worsen respiratory irritation, and increase risk of premature death from heart or lung disease".*

Nitrogen dioxide (NO_2), which is a form of nitrogen oxide (NO_X), is regularly monitored. Minnesota currently meets federal nitrogen dioxide standards, according to the *2013 Annual Air Monitoring Network Plan* (July 2012). A monitoring site meets the annual NAAQS for NO_2 if the annual average is less than or equal to 53 parts per billion (ppb). The 2011 Minnesota NO_2 monitoring site averages ranged from 5 ppb to 9 ppb; therefore, Minnesota currently meets the annual NAAQS for NO_2."

The EPA's regulatory announcement, EPA 420-F-99-051 (December 1999), describes the Tier 2 standards for tailpipe emissions, and states:

> *"The new tailpipe standards are set at an average standard of 0.07 grams per mile for nitrogen oxides for all classes of passenger vehicles beginning in 2004. This includes all light-duty trucks, as well as the largest SUVs. Vehicles weighing less than 6000 pounds will be phased-in to this standard between 2004 and 2007".*

> *"As newer, cleaner cars enter the national fleet, the new tailpipe standards will significantly reduce emissions of nitrogen oxides from vehicles by about 74 percent by 2030. The standards also will reduce emissions by more than 2 million tons per year by 2020 and nearly 3 million tons annually by 2030."*

Within the project area, it is unlikely that NO_2 standards will be approached or exceeded based on the relatively low ambient concentrations of NO_2 in Minnesota and on the long-term trend toward reduction of NO_X emissions. Because of these factors, a specific analysis of NO_2 was not conducted for this project.

Sulfur Dioxide

Sulfur dioxide (SO_2) and other sulfur oxide gases (SO_X) are formed when fuel containing sulfur, such as coal, oil, and diesel fuel is burned. Sulfur dioxide is a heavy, pungent, colorless gas. Elevated levels can impair breathing, lead to other respiratory symptoms, and at very high levels aggravate heart disease. People with asthma are most at risk when SO_2 levels increase. Once emitted into the atmosphere, SO_2 can be further oxidized to sulfuric acid, a component of acid rain. Emissions of sulfur oxides from transportation sources are a small component of overall emissions and continue to decline due to the desulphurization of fuels.

MPCA monitoring shows ambient SO_2 concentrations at 32 percent of federal standards in 2011, consistently below state and federal standards.[8] MPCA also states that about 70 percent of SO_2 released into the air comes from electric power generation. Therefore a much smaller proportion is attributable to on-road mobile sources. The MPCA has concluded that long-term

[8] *Air Quality in Minnesota: 2013 Report to the Legislature*, January 2013

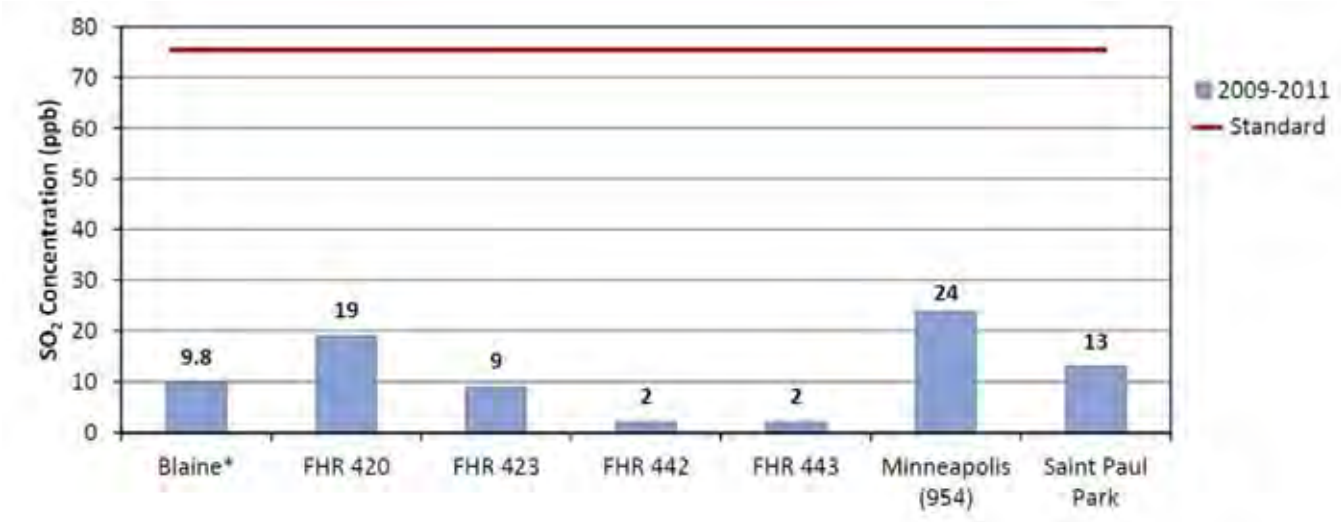
trends in both ambient air concentrations and total SO_2 emissions in Minnesota indicate steady improvement.

In the *Annual Air Monitoring Network Plan for Minnesota* (2013), it states the following with regard to SO_2:

> *"On June 2, 2010, the EPA finalized revisions to the primary SO_2 NAAQS. EPA established a new 1-hour standard which is met if the three-year average of the annual 99th percentile daily maximum 1-hour SO_2 concentration is less than 75 ppb. In addition to creating the new 1-hour standard, the EPA revoked the existing 24-hour and annual standards. Figure 24* [**Figure 5** below] *describes the 2009-2011 average 99th percentile 1-hour SO_2 concentration and compares them to the 1-hour standard. Minnesota averages ranged from 2 ppb at FHR 442 and FHR 443 to 24 ppb in Minneapolis (954); therefore, all Minnesota sites currently meet the 1-hour NAAQS for SO_2."*

Because of these factors, an analysis for sulfur dioxide was not conducted for this project.

Figure 5. One-Hour SO_2 Concentrations Compared to the NAAQS



* The monitoring site did not meet the minimum completeness criteria for design value calculations. A site meets the completeness requirement if 75 % of required sampling days are valid for each calendar quarter included in the design value calculation. SO2 at Duluth was part of a one year assessment and not intended to collect 3 years of data for design value calculations.

Lead

Due to the phase out of leaded gasoline, lead is no longer a pollutant associated with vehicular emissions.

Carbon Monoxide

This project is not located in an area where conformity requirements apply, and the scope of the project does not indicate that air quality impacts would be expected. The results of the screening procedure demonstrate that traffic volumes are below the threshold of 79,400 ADT and do not require a detailed hotspot analysis. Therefore, no further air quality analysis is necessary.

Improvements in vehicle technology and in motor fuel regulations continue to result in reductions in vehicle emission rates. The EPA MOVES2010b emissions model estimates that emission rates will continue to fall from existing rates through year 2030. Consequently, year 2030 vehicle-

related CO concentrations in the study area are likely to be lower than existing concentrations even considering any increase in development-related and background traffic.

Mobile Source Air Toxics[9]

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 has assessed this expansive list in their latest 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 listed in their Integrated Risk Information System (IRIS).[10] In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA).[11] These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and maybe adjusted in consideration of future EPA rules.

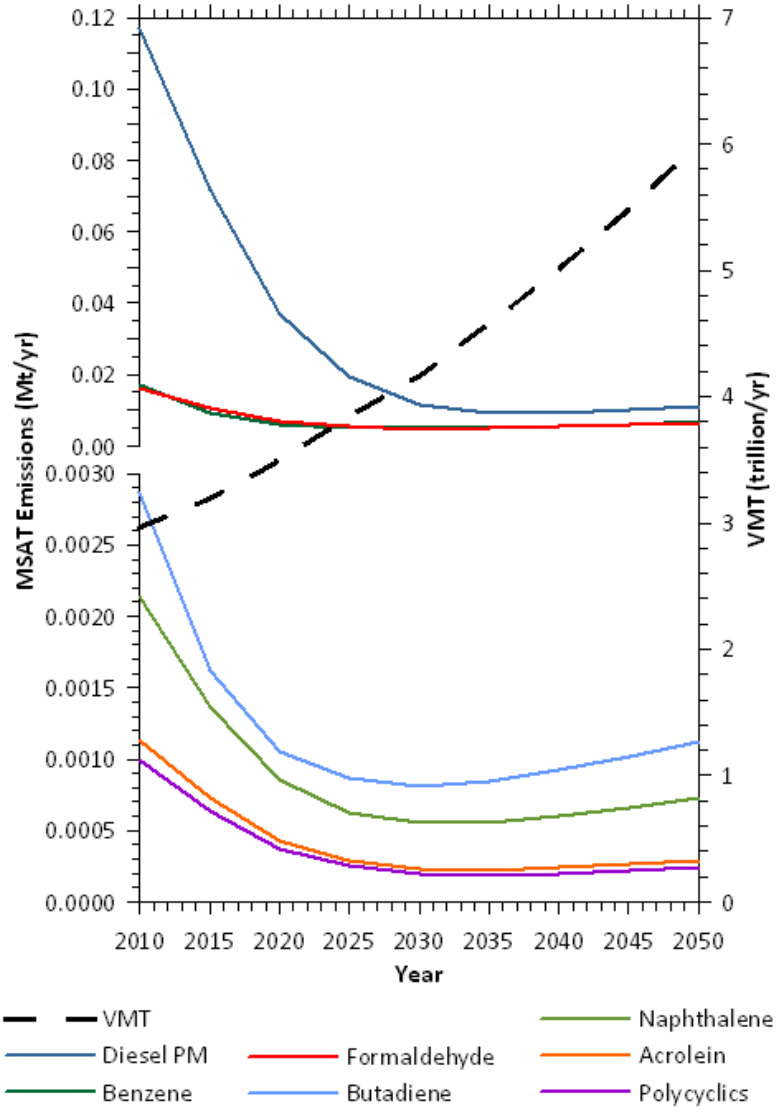
Motor Vehicle Emissions Simulator (MOVES)

According to EPA, MOVES improves upon the previous MOBILE model in several key aspects: MOVES is based on a vast amount of in-use vehicle data collected and analyzed since the latest release of MOBILE, including millions of emissions measurements from light-duty vehicles. Analysis of this data enhanced EPA's understanding of how mobile sources contribute to emissions inventories and the relative effectiveness of various control strategies. In addition, MOVES accounts for the significant effects that vehicle speed and temperature have on PM emissions estimates, whereas MOBILE did not. MOVES2010b includes all air toxic pollutants in NATA that are emitted by mobile sources. EPA has incorporated more recent data into MOVES2010b to update and enhance the quality of MSAT emission estimates. These data reflect advanced emission control technology and modern fuels, plus additional data for older technology vehicles.

Based on an FHWA analysis using EPA's MOVES2010b model, as shown in **Figure 6**, even if vehicle-miles travelled (VMT) increases by 102 percent as assumed from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the priority MSAT is projected for the same time period.

[9] Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA, December 6, 2012
[10] http://www.epa.gov/iris/
[11] http://www.epa.gov/ttn/atw/nata1999/

Figure 6. National MSAT Emission Trends 1999- 2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model[12]



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.

The implications of MOVES on MSAT emissions estimates compared to MOBILE are: lower estimates of total MSAT emissions; significantly lower benzene emissions; significantly higher diesel PM emissions, especially for lower speeds. Consequently, diesel PM is projected to be the dominant component of the emissions total.[13]

[12] EPA MOVES2010b model runs conducted during May-June 2012 by FHWA. http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/nmsatetrends.cfm

[13] http://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/aqintguidmem.cfm

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 be raised on highway projects during the NEPA process. Even as the science emerges, we are duly expected by the public and other agencies to address MSAT impacts in our 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

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. NEPA also requires federal agencies to use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment. NEPA requires and FHWA is committed to the examination and avoidance of potential impacts to the natural and human environment when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, we must also take into account the need for safe and efficient transportation in reaching a decision that is in the best overall public interest. FHWA policies and procedures for implementing NEPA are contained in regulation at 23 CFR Part 771.

Incomplete or Unavailable Information for Project Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects."[14] Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile Source Air Toxic analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT

[14] EPA, http://www.epa.gov/iris/

compounds at current environmental concentrations[15] or in the future as vehicle emissions substantially decrease.[16]

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI.[17] As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA[18] and the HEI[19] have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Qualitative MSAT Analysis

For the Build Alternative in this EAW, the amount of MSAT emitted would be proportional to the average daily traffic, or ADT, assuming that other variables such as fleet mix are the same. The

[15] HEI, http://pubs.healtheffects.org/view.php?id=282
[16] HEI, http://pubs.healtheffects.org/view.php?id=306
[17] http://pubs.healtheffects.org/view.php?id=282
[18] http://www.epa.gov/risk/basicinformation.htm
[19] http://pubs.healtheffects.org/view.php?id=282

ADT estimated for the Build Alternative does not differ from that for the No Build Alternative. Since no change in ADT is expected through the project corridor, or along parallel routes, no changes in MSAT emissions are expected compared to the No Build Alternative. There is a potential for lower MSAT emission rates due to increased speeds; according to EPA's MOVES2010b model, emissions of all of the priority MSAT decrease as speed increases. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA- projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

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

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

17. NOISE

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.

Reconstruction of TH 75 will result in decreases in traffic noise levels at existing residential receptors in Kent and an increase at two rural residential receptors north of Kent compared to existing conditions. Daytime and nighttime modeled noise levels for the new TH 75 alignment are predicted to range from 45.4 dBA (L_{10}) to 53.6 dBA (L_{10}) and 40.2 dBA (L_{10}) to 48.0 dBA (L_{10}), respectively in Year 2032. Modeled L_{10} and L_{50} noise levels are not predicted to exceed state daytime or nighttime standards at any of the 10 existing residential modeled receptor locations with the future Preferred Alternative. Modeled L_{10} and L_{50} noise levels are not projected to approach or exceed the Federal Noise Abatement Criteria for Activity Category B (residential land uses) at any of the 10 existing residential modeled receptor locations within or north of Kent. One rural residential receptor location (R09) located northeast of Kent is projected to experience a substantial increase (5.6 dBA) in traffic noise levels from existing conditions to the future TH 75 alignment. Because of this substantial increase, mitigation for R09 was considered. However the mitigation failed to meet the minimum 7 dBA noise reduction design goal to be considered reasonable. Therefore, the analyzed barrier is not proposed.

The Noise Report can be found on the project website.[20]

[20] http://www.dot.state.mn.us/d4/projects/hwy75kent/

Construction Noise

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

The following table (**Table 1**) shows peak noise levels monitored at 50 feet from various types of construction equipment. This equipment is primarily associated with site grading/site preparation, which is generally the roadway construction phase associated with the greatest noise levels.

Table 1. Typical Construction Equipment Noise Levels at 50 feet

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

Source: United States Environmental Protection Agency and Federal Highway Administration

Elevated noise levels are, to a degree, unavoidable for this type of project. MnDOT will 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 the practice to require contractor(s) to comply with applicable local noise restrictions and ordinances to the extent that is reasonable. Advanced notice will be provided to affected communities of any planned abnormally loud construction activities. It is anticipated that night construction may sometimes be required to minimize traffic impacts and to improve safety. However, construction will be limited to daytime hours as much as possible. This project is expected to be under construction for two construction seasons.

Any associated high-impact equipment noise, such as pile driving, pavement sawing, or jack hammering, will 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 1, 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 will be prohibited during nighttime hours.

18. TRANSPORTATION

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

This project is proposed as a flood control measure rather than for capacity or safety reasons. As such, roadway capacity and speed will not be affected by the proposed project. No parking or traffic generators are proposed as part of the project.

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

No impact to traffic congestion is anticipated.

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

No traffic impacts are anticipated; therefore, no mitigation is necessary.

19. CUMULATIVE POTENTIAL EFFECTS

Note: Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items.

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 defined as "the impact on the environment which result from incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or persons undertakes such actions". The geographic areas considered are those areas directly adjacent to and near TH 75 in the timeframe of the next few years. The project impacts described herein for the TH 75 project include impacts to increased impervious surfaces, floodplain impacts, and increased stormwater runoff.

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 proposed project presents opportunities to improve existing conditions or mitigate potential impacts. Required stormwater management techniques will be implemented to reduce impacts of increased impervious surface and remove pollutants. The minor channel modifications under the bridge will improve the floodway and floodplain constrictions in this area.

Any present or future development projects are required to go through local development review process. No specific projects in the area have been identified. Farming practices will continue in the area around the project. The potential cumulative effect of impacts would be mitigated by each project. No cumulative effects are anticipated as a result of project specific mitigation being implemented.

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.

There are no other specific development projects that have been identified in or near the project area. Farming practices will continue. Other actions to improve/reduce flooding in the area may occur over the long-term. None of these practices are expected to have a cumulative effect on agricultural lands or the project area when considered in conjunction with the proposed project.

20. OTHER POTENTIAL ENVIRONMENTAL EFFECTS

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

Not applicable.

RGU CERTIFICATION

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

I hereby certify that:

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

Signature _____ Date 9/8/2014

Title Chief Environmental Officer

Figures

Figure 1. Project Location

TH 75 Highway Realignment:
Environmental Assesment Worksheet

Kimley»Horn

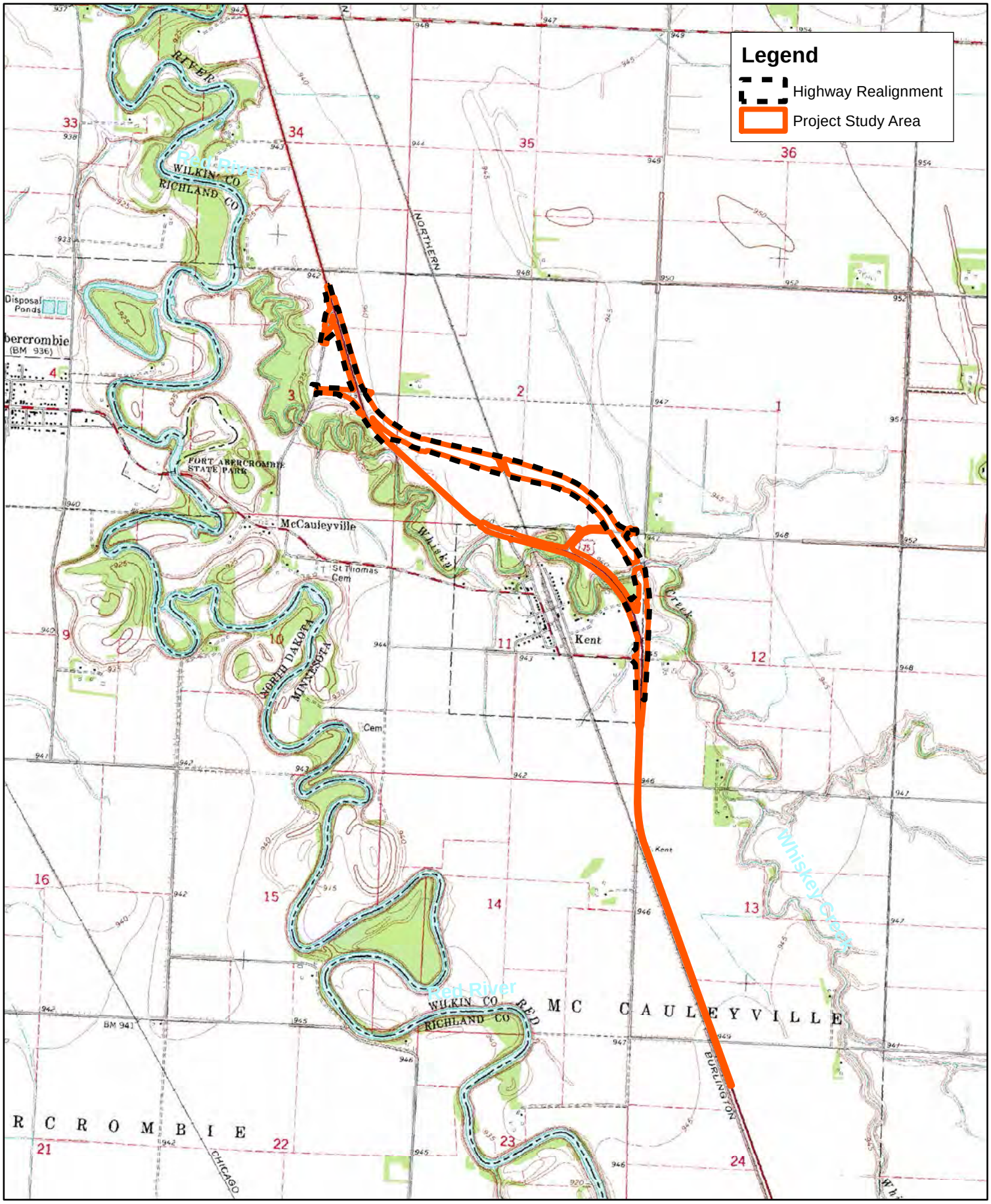


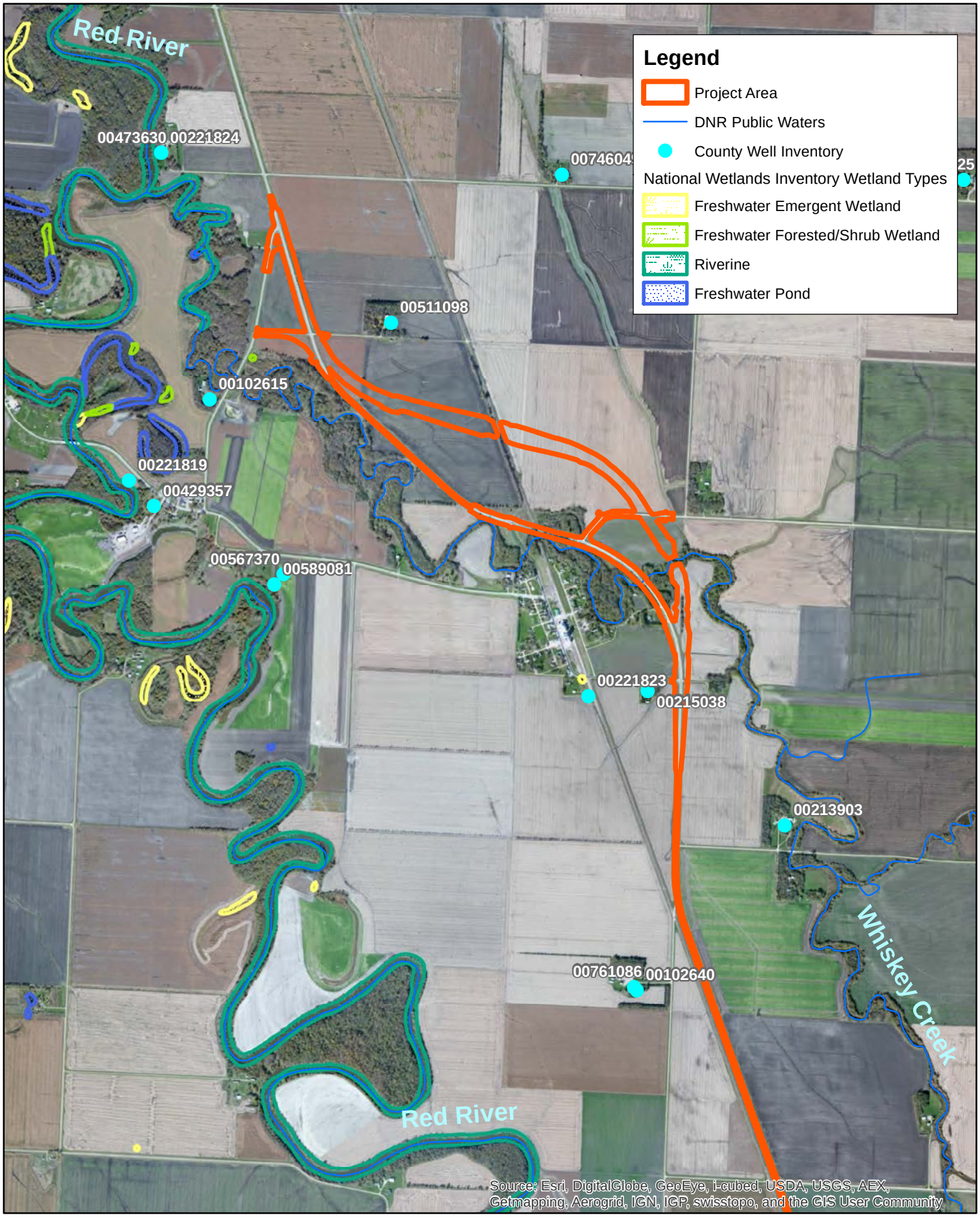
Figure 2.USGS 7.5 Minute Topographical Map

Kimley»Horn

N

0 0.25 0.5 Miles

TH 75 Highway Realignment:
Environmental Assesment Worksheet



Kimley»Horn

N

0 1,000 2,000 Feet

Figure 3. Water Resources

TH 75 Highway Realignment:
Environmental Assesment Worksheet

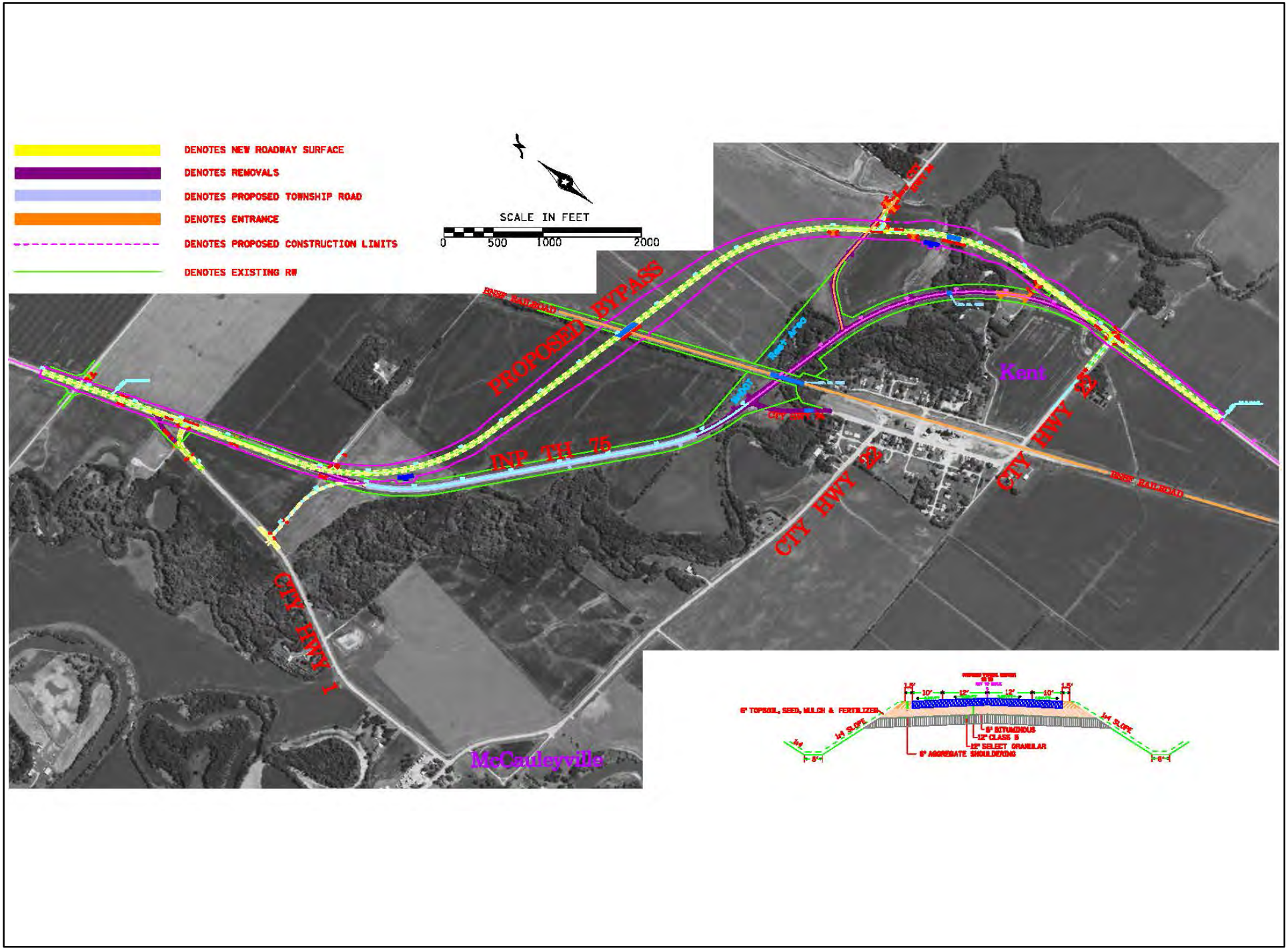


Figure 4. Project Limits

TH 75 Highway Realignment:
Environmental Assesment Worksheet

Kimley»Horn

Appendix A

PLOTTED/REVISED ******DATE******

CONSTRUCTION LIMITS

N

250

SCALE IN FEET

DEBRIS

LEGEND

- CONSTRUCTION LIMITS
- FLOODPLAIN BOUNDARY
- CUT AREA
- FILL AREA

IMPACTS ALONG INPLACE TH 75	
FLOODPLAIN ELEVATION USED = 937.3	
FLOODPLAIN STORAGE VOLUME GAIN OR (LOSS)	28,834 CY
IMPACTS ALONG PROPOSED TH 75	
FLOODPLAIN ELEVATION USED = 937.5	
FLOODPLAIN STORAGE VOLUME GAIN OR (LOSS)	(7,963) CY
PROJECT TOTAL FLOODPLAIN STORAGE VOLUME GAIN OR (LOSS)	20,871 CY

FILE*****PATH\FILENAME*****

Kimley»Horn

ISTHMUS Engineering, Inc.

MINNESOTA DEPARTMENT OF TRANSPORTATION

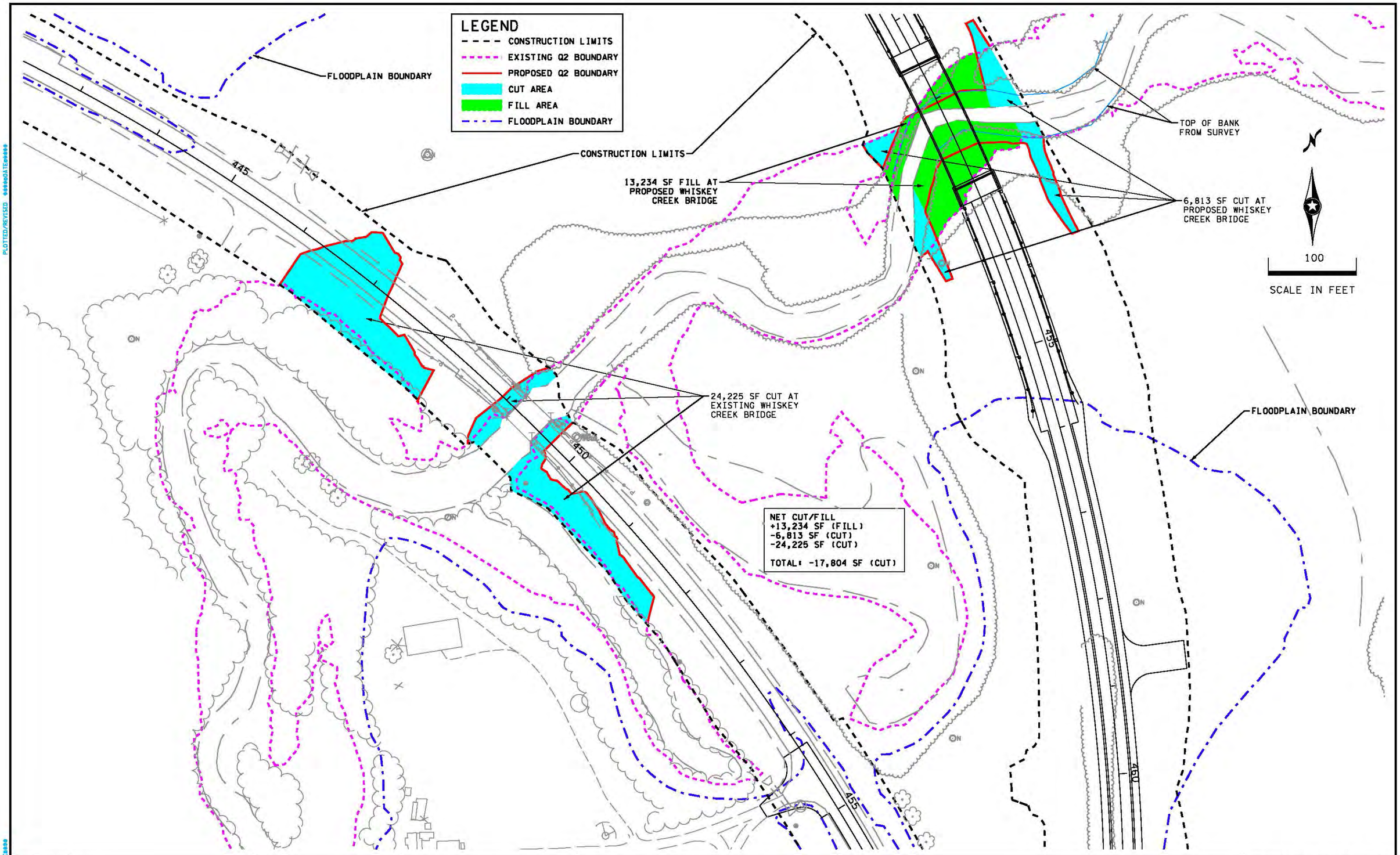
MINNESOTA DEPARTMENT OF TRANSPORTATION

TH75 KENT BYPASS

S.P. 8408-44

Exhibit A

WATER STORAGE VOLUME CHANGE WITHIN FLOODPLAIN BOUNDARY



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Kimley»Horn

ISTHMUS engineering, inc.

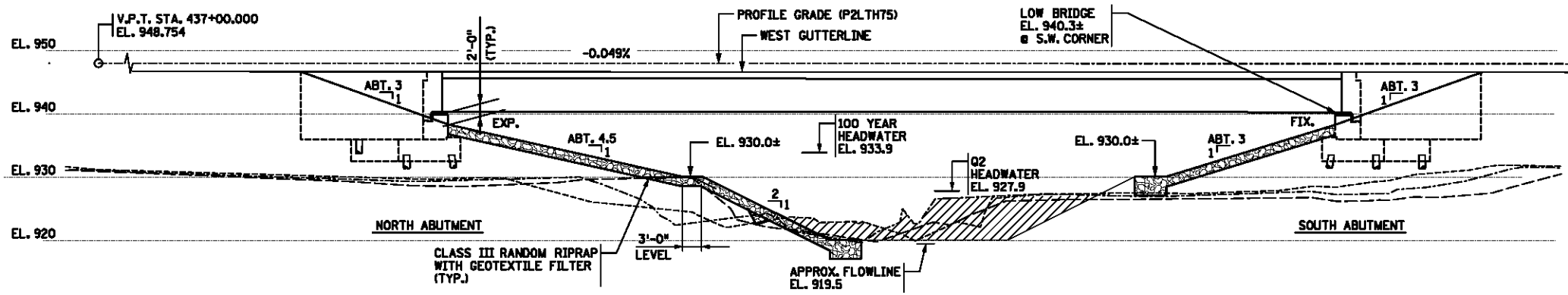
MINNESOTA DEPARTMENT OF TRANSPORTATION

TH75 KENT BYPASS

Exhibit B

S.P. 8408-44 (T.H.75)

SHEET . OF 288



GENERAL ELEVATION

Exhibit C

Appendix B

Payne, Ashley

Sent:
To:
Cc:
Subject:

Attachments:

From: Leete, Peter (DOT) [mailto:peter.leete@state.mn.us]
Sent: Monday, January 07, 2013 1:44 PM
To: Munsterteiger, Paul (DOT)
Cc: Straumanis, Sarma (DOT); Vogel, Mark (DOT); Troyer, Brett (DOT); Stenlund, Dwayne (DOT); Sullivan, Dan (MPCA); Joyal, Lisa (DNR); Kestner, Nathan (DNR); Wolters, Jim (DNR); Webb, Melody (DNR); Aadland, Julie A (DNR); Schultz, Don F (DNR)
Subject: DNR Comment on MnDOT Early Notification Memo, TH75 relocation at Kent (SP8408-44), Wilkin Co

Paul,
This email is the DNR response for your project records. I have not sent this out for full DNR review, however I've looked at the information in the Early Notification memo regarding the proposed relocation of TH75 near the City of Kent, Wilkin County. This project will require an EAW, though I have the following information and comments for project development:

1. For MnDOT planning purposes, I have attached a map of the project area (DNRbasemap.pdf) showing locations of DNR concern such as Public Waters (in dark blue), designated aquatic invasive species (red), snowmobile Trails (in pink), green shaded polygons for areas of Biodiversity Significance, and various polygons of rare features from the Natural Heritage Information System (NHIS) database (in magenta). In order to protect the inadvertent release of the location of listed species contained in the NHIS, I have not labeled any rare features on the attached maps. If you have any questions regarding polygons, please give me a call. Your GIS folks also can access most of this data from the DNR's Data Deli website at http://deli.dnr.state.mn.us/. The following files will allow the creation of the same map and ease your cross reference for road locations.
   MCBS Railroad Rights-of-Way Prairies
   MCBS Native Plant Communities
   MCBS Sites of Biodiversity Significance
   Public Waters Inventory (PWI) Watercourse Delineations
   Public Waters Inventory (PWI) Basin Delineations
   Wildlife Management Areas
   Snowmobile Trails

2. Whiskey Creek is a Public Waters and as such a Public Waters Work Permit will be required. As the project moves forward, design of the replacement crossing and removal of the existing crossing should meet the conditions listed in GP 2004-0001. Authorization for the project under this permit will require final review of the project at a later date. Guidance for conditions of the GP (including guidance on design and flood level reporting) may be found in the Manual "Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001". A pdf version of this manual may be found at: http://www.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_manual.html

   Additional design considerations and information on specific GP conditions are:

a. At this point it has not been determined what type of design the new crossing will be. The DNR would prefer to see an open bottom culvert (or open span bridge) to multiple box culverts as concerns with placement depth, movement of stream bed load and species passage requirements do not become an issue. Guidance can be found in Chapter 2 of the manual "Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001" (web link provided above).

b. The river and associated floodplain forest is a travel corridor for wildlife. There has been a request that a 'passage bench' be incorporated into the project. This is now a typical feature in MnDOT design in abutment riprap specifications, though passage bench design guidance can be found in Chapter 1 pages 16-18 of the manual "Best Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001" (web link provided above).

c. It is unknown how much of the proposed project will require work within the stream banks (EG in the water). However construction methods should be discussed in order that acceptable demolition and/or reconstruction methods for the bridge can be identified in design and project bid letting documents. Bridge demolition guidance has been attached to the cover email.

d. In addition to items in '1.a.' above a hydrologic analysis, including 2yr velocities, will be required for review prior to authorization under the GP.

e. An issue we see with project scheduling is work in or adjacent to the water often conflicts with fish spawning dates. For construction purposes, Work Exclusion dates for non-trout streams in DNR Region 1 is March 15 through June 15. These dates are to allow for fish migration and spawning. Work shall not occur adjacent to, or in the water during this time without prior written approval of the DNR.

f. To meet DNR Erosion and Sediment Control Requirements, at the start of the project adequate practices to prevent sediment from entering the river must be installed concurrently or within 24hrs of the start of the project. These practices shall be maintained or improved as needed for the duration of the project. Practices that adhere to the MPCA Stormwater Program for Construction Activity (General Stormwater Permit for Construction Activity (MNR100001)] will meet DNR erosion and sediment concerns.

g. At areas adjacent to Public Waters, revegetate disturbed soil with native plant species suitable to the local habitat.

3. The Minnesota Natural Heritage Information System (NHIS) has been queried to determine if any rare plant or animal species, native plant communities, or other significant natural features are known to occur within an approximate one-mile radius of the project area. Based on this query, rare features have been documented within the search area. See the attached file 'DNRbasemap.pdf'. For details on any of the polygons shown, please contact me. However, given the nature and location of the proposed project, we do not believe the project will negatively affect any known occurrences of rare features. The NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. If information becomes available indicating additional listed species or other rare features, further review may be necessary.

4. The DNR may comment at a later date as the project is reviewed through the state environmental review process.

DNR folks, if I've missed anything, please respond ASAP to Paul, and myself

Contact me if you have questions

peter

Peter Leete
Transportation Hydrologist
DNR Ecological & Water Resources
Ph: 651-366-3634

Office location: MnDOT's Office of Environmental Stewardship

Minnesota Department of Transportation

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

Office Tel: (651) 366-3614
Fax: (651) 366-3603

July 28, 2014

Paul Munsterteiger
MnDOT District 4
1000 US Highway 10 West
Detroit Lakes, MN 56501

Regarding: S.P. 8408-44 (TH 75, Wilkin County)
Realignment and bridge building around Kent (Kent Bypass)
T. 134 N., R. 48 W., S. 1, 2, 11, 12, McCauleyville Twp.

Dear Mr. Munsterteiger:

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the Programmatic Agreement (PA) between the FHWA and the Minnesota State Historic Preservation Office (SHPO) (June 2005). The project involves the realigment of TH 75 around the town of Kent. In addition to the new road, two new bridges will be constructed, one over the BNSF Railroad and another over Whiskey Creek.

Summit Envirosolutions, Inc. conducted a Phase I architectural survey and subcontracted a Phase I archaeological survey to HDR Engineering, Inc. The results of this work will be reported in a forthcoming report. Due to delays in completing the report, a draft Phase I report was reviewed by MnDOT. This report identified a non-eligible precontact archaeological site (21WL55) and a potentially eligible historic property (TH 75). The preliminary evaluation of TH 75 indicates that it is not eligible for listing in the National Register of Historic Places. This Phase II evaluation of TH 75, along with the Phase I architecture and archaeology work, will be included in a single forthcoming report.

We have determined that there will be **no historic properties affected** by the project as currently proposed. As there are no historic properties within the project APE, the section 106 review of this project is now complete and no SHPO comment period and response are required under the terms of the new PA. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

Craig Johnson
Cultural Resources Unit (CRU)

cc: MnDOT CRU Project File

Minnesota Department of Transportation

MEMO

OFFICE OF ENVIRONMENTAL STEWARDSHIP
Roadside Vegetation Management Unit
MS 620
395 John Ireland Boulevard
St. Paul, MN 55155

Office Tel: (651) 366-3631
Fax: (651) 366-3603

Date: July 2nd, 2013

To: Paul Munstertieger – Environmental Coordinator
MnDOT District 4 – Project Development Unit

From: Paul Voigt
NRS/Program Coordinator
Roadside Vegetation Management Unit - Office of Environmental Stewardship

Subject: S.P. 8408-44 T.H. 75 - vegetation review (Early Notification Memo).

As requested I reviewed the areas of concern for the above referenced project for potential impacts to woody vegetation for purposes of your early notification memo dated December 27th, 2012. I reviewed the site on the morning of July 2nd, 2013, using information from the early notification memo, the 2012 MnDOT Videolog as well as GIS and Google mapping/images.

Project Description/Existing Vegetation

This project involves reconstructing T.H. 75 on a new alignment for about 1.8 miles as well as 2 new bridges being built (replacement of an existing bridge & a new bridge).

The vegetation along the existing rights of way (areas where existing T.H. 75 will be removed or turned over for township roads) for this proposed project is a mix of different species of volunteer and planted deciduous trees and shrubs as well as mowed, non-native turf grasses. This vegetation would be classified as Category 1(Native Plant Communities) and Category 2 (Landscape Vegetation) according to the HPDP. The majority of the areas along the proposed new alignment are currently agricultural fields with a couple of short stretches crossing through small wooded areas.

With the large amount of open space in the area of the proposed new alignment, blowing snow issues should be considered as part of the road design. Dan Gullickson, Office of Environmental Stewardship (Living Snow Fence Program Coordinator) can help determine if blowing snow and drifting would be a problem with this road. Dan can be reached at (651) 366-3610.

Potential Impacts to Vegetation

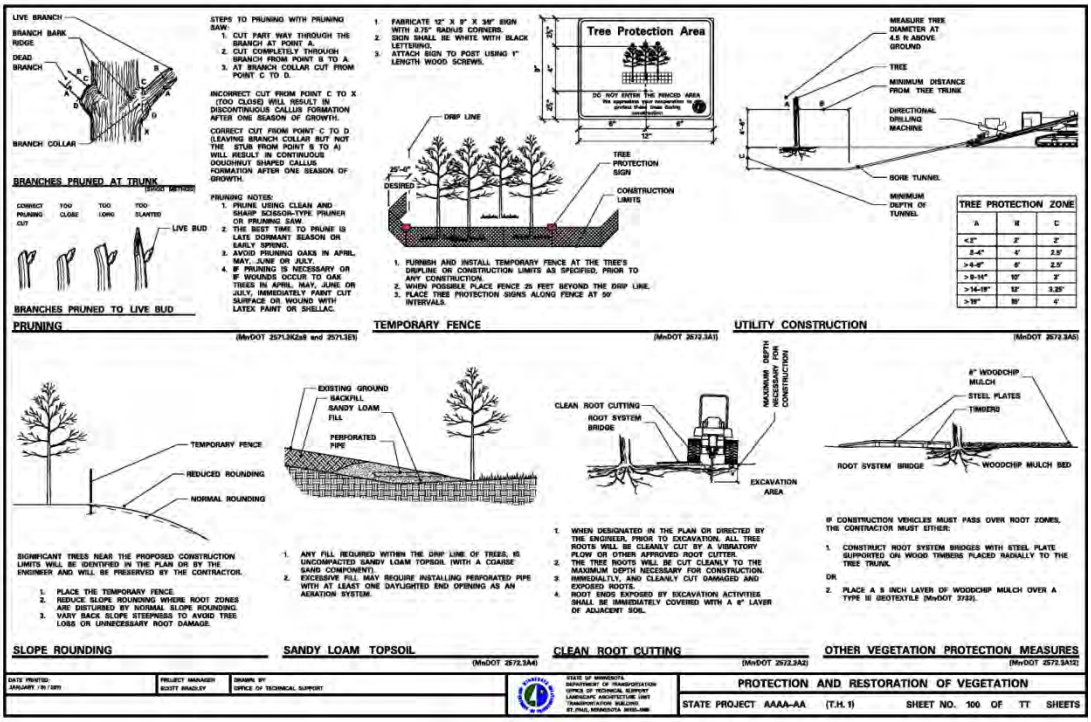
Based on the limited information supplied in the early notification memo in terms of construction limits, and the project description it would appear that there will be impacts to some of the existing vegetation (small amount of tree and shrub loss, turf disruption) along the proposed project, both on existing rights of way as well as proposed new rights of way.

Protection of Vegetation

It is assumed that as a result of this project, there will be some tree/shrub loss and potentially negative impacts to vegetation left in place as well as disruption to existing turf areas. During the design process, all efforts should be made to create a plan that will minimize these losses and impacts. For the trees and shrubs that are just outside the limits of construction, every effort should be made to minimize the impacts to them by including proper protection measures in the plan.

Vegetation protection will best be accomplished by utilizing all necessary protection items from Mn/DOT Standard Specification for Construction 2572. Special attention should be paid to 2572.3A, including but not limited to the use of clean root cutting and temporary fence for tree protection. Once the limits of construction are determined, a tree protection and salvage review should be conducted so that tree protection measures can be identified and included in the Construction Plan. Standard detail sheets are available for these vegetation protection items and should be included in the plan package if applicable. (See example below).

Please feel free to contact the Roadside Vegetation Management Unit once more detailed designs are being developed and we can give precise recommendations as to where and what kind of tree protection and other vegetation related items should be included.



Standard Vegetation Protection Detail Sheet

Please feel free to contact me if you have any questions regarding my observations and recommendations, and thank you for the opportunity to review this project for vegetation concerns.

Cc. Lynn Clarkowski, R.V.M. Unit