Wis. Stat. 84.295 Study

US 53

1195-00-07

Gordon to Bennet

Wascott/Gordon Town Line to 0.3 Miles South of Solon Springs/Bennett Town Line

Douglas County

84.295 Study Statement

This study is being initiated pursuant to the authorities and directives under Wisconsin State Statute 84.295 (1) (Wis. Stat. 84.295) which are more specifically described below.

As a function in the improvement of state trunk highways and connecting highways the Department is authorized to make investigations, surveys and studies of the present and anticipated needs for the improvement of desirable, probable additions to the state trunk highway system.

An 84.295 study is a long-range planning study that examines reasonable future expressway or freeway alternatives to resolve current and future operational and safety concerns on state highways. It identifies a purpose and need, beneficial or adverse environmental effects, and mitigation strategies to minimize or eliminate those impacts. It is supported and complemented through extensive public involvement and interagency coordination, and ultimately provides the Department with appropriate information to make a reasoned choice on evaluating and prioritizing reasonable alternatives.

In the interest of promoting public safety and convenience and the general welfare, and as a result of its investigations, the Department finds that there is a need to study improvements to the 12.1 miles of US 53 in Douglas County between the Wascott/Gordon town line and 0.3 miles south of the Solon Springs/Bennett town line. This segment of US 53 is currently built to expressway standards pursuant to Wis. Stat. 991.01(7a) and is designated an expressway pursuant to Wis. Stat. 84.295. This segment has experienced crashes at various at-grade intersections, and a study is necessary to determine how these locations can be improved to reduce or eliminate this crash potential.

If the Wis. Stat. 84.295 study identifies reasonable future improvements which address the operational and safety issues and the improvements require additional right-of-way to construct, the Department, pursuant to Wis. Stat. 84.295(10), may determine that in order to prevent conflicting costly economic development on those lands it should proceed to inform the public of the approximate location and widths of rights-of-way needed and proceed to establish such location and the approximate widths of rights-of-way in the following manner.

The Department may prepare a map showing the location of the approximate widths of the rights-of-way needed for the expressway improvements on US 53, other intersecting highways, frontage roads, and for the alteration or relocation of existing public highways. The map shall also show the existing highways and the property lines and record owners of lands needed. It shall hold a public hearing in the matter in a courthouse or other convenient public place in or near the region to be affected by the proposed change, which public hearing shall be advertised and held as are state trunk highway change hearings. The department shall consider and evaluate the testimony presented at the public hearing. Upon approval of the map by the Department, a notice of such action and the map showing the lands or interests therein needed in any county shall be recorded in the office of the register of deeds of such county.

A Wis. Stat. 84.295 Study uses the same evaluation metrics as does a NEPA or WEPA study, and thus borrows from the library of guidelines and worksheets developed for those types of studies. Use of these NEPA or WEPA documents, procedures, or terminologies does not imply that this Wis. Stat. 84.295 is being done as a NEPA or WEPA study.

This planning study document must be read entirely in order for the reader to fully understand how reasonable options are examined and prioritized.

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2. Abbreviations and Acronyms

Agency Acronyms

ACHP: American Council on Historic Preservation

DATCP: Department of Agriculture, Trade and Consumer Protection

DNR: Department of Natural Resources

EPA: Environmental Protection Agency

NPS: National Parks Service

NRCS: Natural Resources Conservation Service

SHPO: State Historic Preservation Office

USACE: United States Army Corps of Engineers

USCG: United States Coast Guard

USFWS: United States Fish and Wildlife Service

Other Acronyms

AADT: Average Annual Daily Traffic

AIS: Agricultural Impact Statement

AWDT: Average Annual Weekday Traffic

EA: Environmental Assessment

EIS: Environmental Impact Statement

ER: Environmental Report

FHWA: Federal Highway Administration

MOA: Memorandum of Agreement

MPO: Metropolitan Planning Organization

NHS: National Highway System

PLE: Permanent Limited Easement

ROW: Right-of-Way

RPC: Regional Planning Commission

TLE: Temporary Limited Easement

WisDOT: Wisconsin Department of Transportation

YOE: Year of Expenditure

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

PURPOSE AND NEED

1. Purpose and Need

Pursuant to Wis. Stat. 84.295[1] (1) thru (3), the purpose of this planning study on US 53 in Douglas County between Wascott/Gordon town line and 0.3 Miles South of Solon Springs/Bennett town line is to develop a plan for future improvements to reduce or eliminate existing and emerging crash issues and enhance operational performance. If additional right-of-way is necessary for those improvements, the Wisconsin Department of Transportation (WisDOT) may preserve the future right-of-way through authorities and rules granted under Wis. Stat. 84.295 (10).

This Wis. Stat. 84.295 planning alternative analysis is primarily focused on at-grade intersections within the study segment to address existing and emerging operational and safety concerns by:

- Developing a plan for future improvement options that reduce or eliminate the safety and operational concerns.
- Ensuring consistent land use for any planned improvements requiring new rights-of-way, and that said future rights of-way can be preserved for when needed.

A Wis. Stat. 84.295 study examines future improvement concepts in the context of assumptive construction in order to appropriately determine their respective level of impacts and validity as a reasonable alternative to address the safety or operational issues identified. However, the construction of any improvements identified in the Wis. Stat. 84.295 planning study would require approval of additional environmental evaluation documentation pursuant to Wisconsin Administrative Code Trans 400[2], and whose Purpose and Need was specifically identified as that of, "Design and Construction.'

Long-term highway planning and corridor preservation

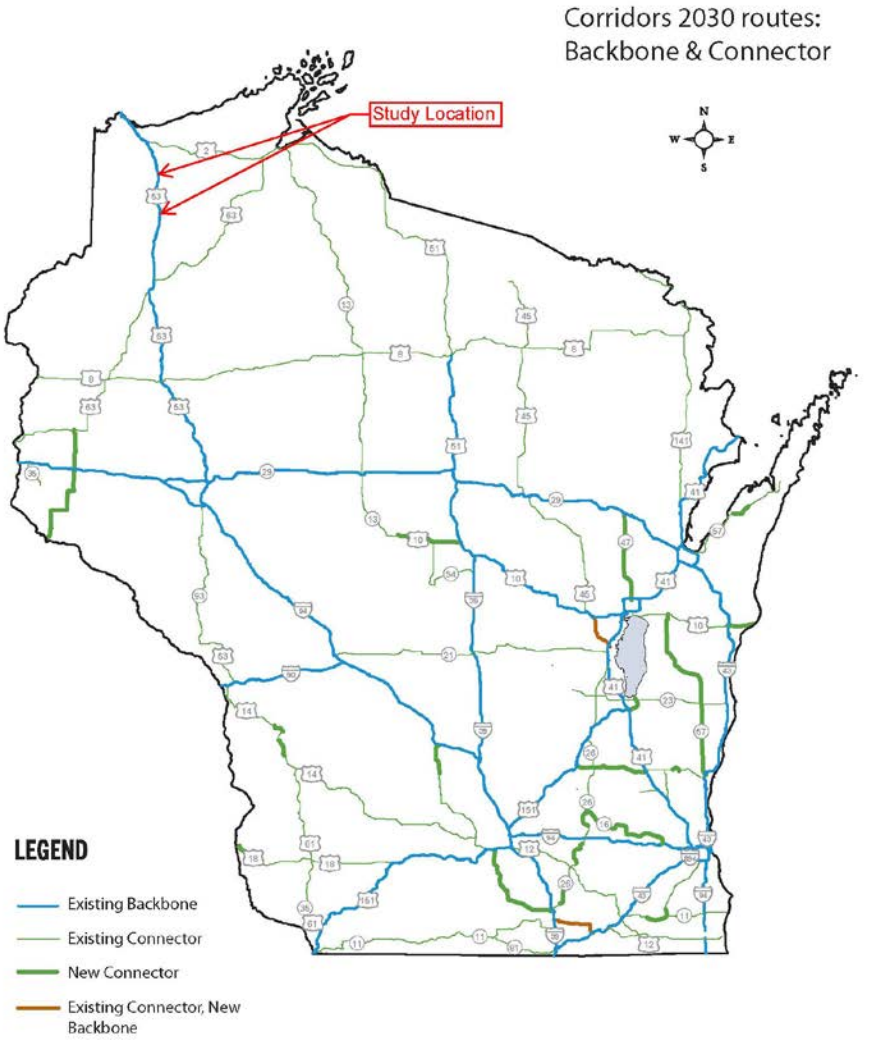
US 53 is on the National Highway System (NHS). As part of the NHS, US 53 not only links west central Wisconsin to the Twin Ports metropolitan area of Duluth, Minnesota and Superior, Wisconsin, but also links the Interstate System to the Strategic Highway Network (STRAHNET) corridors in northern Minnesota. STRAHNET is a network of highways which are important to the United States' strategic defense policy and provide defense access, continuity and emergency capabilities for defense purposes. US 53 is the only facility on the western side of the state that provides four-lane access to northern Wisconsin. As such, it is a priority transportation corridor for WisDOT. The Twin Ports are located approximately 60 miles north of the study area along US 53 and together are considered the largest freshwater port in the world. US 53 provides a critical link to the Twin Ports and the area's multimodal distribution network.

The Wisconsin Department of Transportation (WisDOT) classifies US 53 as a principal arterial highway with the primary purpose of providing interstate and interregional mobility. WisDOT's *Connections 2030 Long-Range Multimodal Transportation Plan* also designates US 53 as a Backbone route (Figure 1). This plan includes a network of existing and improved roadways that consists of a Backbone network and connector highways. The Backbone network consists of divided highways that connect each region of the state and major economic centers. The connector highways tie economic and tourism centers to that Backbone.

For decades, US 53 has been seen as the key high-speed, high-volume transportation connector between the entire northwest portion of Wisconsin and the other major metropolitan areas of the state. Traffic has continued to grow at a steady rate on US 53 due to increases in tourism, expanding commerce using this route as a critical link, and modest population increases in the corridor communities. Traffic volumes are projected to continue to increase as tourism, commerce, and population expand along this section of US 53.

The mobility role of arterials is preserved by having limited and well managed access points along the route. Developing a plan to limit closely spaced access points along the highway preserves the investment the public has already made in this facility and ensures that the best access solutions have not been precluded by earlier development decisions. By planning ahead, lands needed for local roads, interchanges, and overpasses can be preserved. Through the implementation of Wis. Stats. 84.295(10), the Leading Option would help protect and preserve US 53 through a proactive and comprehensive corridor management approach, rather than through a reactive and piecemeal approach.

Figure 1



Source: Connections 2030 Long-Range Multimodal Transportation Plan adopted October 2009

The study section of US 53 currently has numerous access points, including 18 intersecting roads. Under the Leading Option, direct access in this section of US 53 would be minimized and would only occur at a few well-spaced local roads and interchanges.

Emerging operational and safety concerns

Operational and safety needs for US 53 can be tied to existing and future traffic, the type, density, and location of land use along the corridor, and the number and severity of crashes. As shown in Table 1 below, traffic volumes along this section of US 53 in 2010 did not exceed 6,300 Average Annual Daily Traffic (AADT)[1]. Future traffic volumes are anticipated to increase to 8,000 by the year 2034.

Table 1 – Traffic Volume

[1] Traffic counts are reported as the number of vehicles expected to pass a given location on an average day of the year. This value is called the "annual average daily traffic" or AADT and are represented on traffic count or traffic volume maps. The AADT is based on a short-term traffic count, usually 48 hours, taken at the location. - http://www.dot.wisconsin.gov/travel/counts/

Segment	2010 AADT	2014 AADT	2024 Forecasted AADT	2034 Forecasted AADT
County E/Wasko Rd. to Nyquist Rd.	6,300	6,600	7,300	8,000
Nyquist Rd. to Boundary Rd.	5,800	6,100	6,700	7,400
Boundary Rd. to County A	5,200	5,400	5,900	6,400
County A to E. Baldwin Ave.	4,900	5,100	5,600	6,100
E. Baldwin Ave. to Bird Sanctuary Rd./Cut-A-Way Dam Rd.	5,400	5,700	6,300	7,000
Bird Sanctuary Rd./Cut-A-Way Dam Rd. to County M	5,600	5,900	6,600	7,350
County M to Tony's Crossing Rd.	6,200	6,500	7,100	7,800

Source: WisDOT Traffic Forecast Report, Traffic Forecasting Section; Bureau of Planning and Economic Development; Division of Transportation Investment Management, 08/13/12

As traffic volumes increase along this predominantly rural expressway facility, the ability to access or cross US 53 from connecting roads will likely become more difficult because the frequency and duration of gaps in US 53 traffic will decrease. At-grade intersections are already providing challenges and conflicts as drivers are forced to take greater risks to access the highway from side roads and driveways.

There is a direct relationship between increased traffic volumes and vehicle conflicts when direct access exists on a facility. These conflicts increase on four-lane, divided facilities such as US 53 when mainline traffic approaches 10,000 AADT and side road volumes approach 1,000 AADT.

Table 2 shows the intersection crash rate at specific intersections along the study corridor. The highest crash rate, per million entering vehicles, occurred at Baldwin Avenue. As a result, the west leg of Baldwin Avenue has been closed at this intersection. As traffic volumes increase along the corridor, it is likely that the rate and severity of crashes will increase, especially at intersections.

Table 2 - Intersection Crash Rates 2007-2011

Intersection	Rate per MEV*	Fatalities
County Y	0.49 MEV	1
County M	0.00 MEV	0
Baldwin Avenue^	0.72 MEV	0
County A	0.27 MEV	1

*Million Entering Vehicles (MEV)

^Baldwin Avenue intersection has recently been improved

Source: Wisconsin Traffic Operations and Safety Laboratory, August 2012

Local land use/transportation planning and coordination

Land use changes in the area are contributing to increases in traffic on US 53. Conversely, the presence of a four-lane highway can affect development patterns. Identifying future changes in access can help communities ensure that development plans are compatible with the planned transportation system. A principal benefit of the planning process is to provide certainty to land owners and local communities as to the location of access in the future and the right-of-way that would be needed for changes to the highway system. In turn, coordinating with local communities provides WisDOT opportunities to accommodate local growth/development in a manner that is both safe and efficient in the future.

If the plan for these future improvements requires additional rights-of-way, the Department may move forward with a preservation action to ensure development doesn't preclude implementation of that plan and lose the opportunity to preserve system safety and mobility. Wis. Stats. 84.295 (10) provides the Department the tool for that proactive and comprehensive corridor management approach, rather than through a reactive and piecemeal approach thereby exercising fiscal constraint by preventing costly economic development occurring in those areas needed for future rights-of-way.

2. Summary of Options

For this study, six options were considered for the County Y intersection and six options were considered for the County A intersection. Input from local official and public meetings, traffic volumes, and crash data were used in the selection of the County Y and County A intersections to be evaluated for grade-separated improvements. Baldwin Avenue was not included in the analysis as the west leg of the intersection has been permanently closed.

Grade-separated options were initially considered at County M. Further study was stopped upon knowledge that the adjacent property was purchased by Douglas County for forest and recreation purposes. There is no need to map this area due to the absence of development pressure.

Many of the options considered meet the study's Purpose and Need to varying degrees. A number of screening criteria were considered to aid in the selection of the Leading Option. Extensive public input throughout the study process helped develop a range of options and ultimately the Leading Option. Direct impacts to property and environmental resources were also assessed throughout the study area. Costs were also calculated and considered. The Leading Option does the best job of meeting the purpose and need for the study while also meeting the screening criteria.

County Y

The existing intersection at US 53 and County Y is an at-grade intersection that intersects US 53 at approximately 84 degrees with stop control on County Y. The median is approximately 65 feet in width and there are right and left turn lanes present on northbound and southbound US 53. The existing posted speed on County Y is 25 mph and 65 mph on US 53.

The existing AADT on US 53 varies from 6,200 south of County Y to 5,600 north of County Y (2010). The existing AADT on the west leg of County Y is 240 (2010) and 1,450 (2010) on the east leg of County Y. The forecasted AADT for a design year of 2034 on the west leg is approximately 300 vehicles per day and 1,950 on the east leg of County Y.

Existing development near the intersection consists of a convenience/gas station, two oil-related commercial businesses, a bowling alley, and two residential properties.

Options considered are described below and can be found in Exhibit 2, County Y Range of Options.

No-Build Option
Under the No-Build Option US 53 will continue to receive regularly scheduled maintenance, though no improvements will be made. This option does nothing to preserve the corridor and manage access and does not propose safety improvements where they are needed. Therefore, this option does not meet the purpose and need for the study. It does, however, serve as a baseline for a comparison of impacts.

Option 1: Interchange
Option 1 is a diamond interchange on existing alignment at the US 53/County Y intersection. County Y would be designed as a two-lane undivided roadway with a 35 mph design speed through the interchange. A map of this option can be found in Exhibit 2, page 64.

Due to proximity of existing access points to the proposed interchange, this option would require local road modifications and changes to existing access, including:

- Closed access to US 53 at Packer Avenue, Snowberry Lane, Spruce Drive, and River Bend Circle
- New road connection from County Y and Sundew Road
- New road connection from Spruce Drive to County Y
- Realignment of River Bend Circle to the north (not shown on exhibit)
- Widen NB structure over the Saint Croix River
- Evaluation and possible modification of all access points for 1,300 feet east of east ramp terminal

Option 2: Jug-handle #1
Option 2 consists of an overpass with jug-handle connections located at both the existing County Y intersection and the Snowberry Lane/Packer Avenue intersection. County Y would be rerouted onto portions of Snowberry Lane and Gate Drive. A grade-separated crossing of US 53 would be located approximately 800 feet south of existing County Y. The realigned portion of County Y including the grade separation would be designed as a two-lane roadway with a 30 mph design speed. A map of this option can be found in Exhibit 2, page 65.

This option would require the following local road modifications and changes to existing access:

- Closed access to US 53 from Packer Avenue at the north end
- Closed access to US 53 from Spruce Drive
- Cul-de-sac Packer Avenue north and south of existing County Y
- Construct connection of Spruce Drive to County Y
- Remove median crossover at existing County Y intersection

- Remove median crossover at existing South Packer Avenue/Snowberry Lane intersection

Option 2A: Jug-handle #2
This option is similar to Option 2 with the location of the overpass and connections, but rather than using Snowberry Lane, Sundew Road would be extended northwest to reroute County Y. Sundew Road and Gate Drive would be designated as County Y and there would be a grade-separated crossing approximately 800 feet south of existing County Y over US 53. The realigned County Y grade separation would be designed as a two-lane roadway with jug-handles and a 30 mph design speed. Right in/right out access on/off US 53 would be located at existing County Y and the Snowberry Lane/Gate Drive intersection with US 53. A map of this option can be found in Exhibit 2, page 66.

This option would require the following local road modifications and changes to existing access:

- New road extension from Sundew Drive to existing County Y
- Closed access to US 53 from Packer Avenue at the north end
- Closed access to US 53 from Spruce Drive
- Cul-de-sac on Snowberry Lane
- Cul-de-sac on Packer Avenue north and south of existing County Y
- Construct connection of Spruce Drive to existing County Y
- Remove median crossover at existing County Y intersection
- Remove median crossover at existing South Packer Avenue/Snowberry Lane intersection

Option 3: Jug-handle #3
Option 3 consists of an overpass and jug-handle connections located at existing County Y. County Y would be realigned and include a grade-separated crossing approximately 1,200 feet south of existing County Y over US 53. The overpass would be designed as a two-lane roadway with a 30 mph design speed. A map of this option can be found in Exhibit 2, page 67.

This option would require the following local road modifications and changes to existing access:

- New road extension from overpass location to existing County Y
- Close access to US 53 on Packer Avenue at the north end and approximately 1,000 feet south of existing County Y
- Close access to US 53 on Spruce Drive
- Close access to US 53 from Snowberry Lane
- Construct connection of Spruce Drive to existing County Y
- Remove median crossover at existing County Y intersection
- Cul-de-sac on Snowberry Lane

Option 4: Jug-handle #4
This option consists of an overpass at Harriett Lake Road approximately 2,600 feet south of existing County Y. Harriett Lake Road would be designated as County Y and would be a grade-separated crossing over US 53 and the Wild Rivers State Trail. The realigned County Y would extend approximately 0.25 miles west of the overpass and then turn north to intersect existing County Y. County Y would be designed as a two-lane roadway with a 30 mph design speed. Jug-handle connections to access to US 53 would be located in the SE and NW quadrants with a design speed of 25 mph. Right in/right out access from US 53 would also be located at the existing County Y intersection. A map of this option can be found in Exhibit 2, page 68.

This option would require the following local road modifications and changes to existing access:

- New road extension from overpass location on Harriett Lake Road to existing County Y on the west side of US 53
- Closed access to US 53 at Snowberry Lane connection
- Closed access to US 53 on Packer Avenue at the north and south
- Closed access to US 53 on Spruce Drive
- Construct connection of Spruce Drive to existing County Y
- Remove median crossover at existing County Y intersection
- Cul-de-sac on Snowberry Lane

County Y Options Screening

Many of the options considered meet the study's Purpose and Need to varying degrees. A number of screening criteria were considered to aid in the selection of the Leading Option. Extensive public input throughout the study process helped develop a range of options and ultimately the Leading Option. Direct impacts to property and environmental resources were also assessed throughout the study area. Costs were also calculated and considered. The Leading Option does the best job of meeting the purpose and need for the study while also meeting the screening criteria.

Evaluation and Screening of Diamond Interchange Option

Option 1 - Diamond Interchange at County Y
This option was recommended to be eliminated from further consideration for the following reasons: The existing low traffic volumes on County Y as well as the estimated planning year 2034 traffic volumes are anticipated to be only 1,950 AADT; Options with fewer impacts would maintain safety and mobility; Significant new right of way required with a diamond interchange (30-60% more than a jug-handle); Nine (9) residential and nine (9) commercial relocations would be necessary; and, approximately 17.7 percent of the Gordon population would be relocated due to the 13 residential relocations (U.S. Census – population of Gordon (CDP) was 176 in 2010 with 2.23 persons/household).

Further Evaluation and Screening of Jug-handle Options
The jug-handle options will adequately address future safety and mobility while minimizing natural and social impacts. Options described below are listed in the order they were dismissed.

Option 4: Jug-handle #4
This option would require three (3) residential relocations, impact wetlands, and have the greatest increase of fragmentation of wildlife habitat and forested areas (more than Options 2A and 3 due to the longer road). There will be some misdirection along County Y due to the jug-handles. Economic affects due to misdirection for business and residents would also be the greatest with this option. The misdirection would increase travel times to businesses at the current intersection of US 53 and County Y, and would make it less convenient for through traffic to stop at these businesses. Commuting distances/times for residents would increase for travel to work and to businesses, but the cost would not likely be significant. For these reasons Option 4 was not considered for further consideration.

Option 3: Jug-handle #3
Option 3 was developed to take advantage of terrain on the east side of US 53 which located the overpass further south than Options 2 and 2A. This requires the complete closure of the Snowberry Lane/Packer Avenue intersection which increases misdirection over Options 2 and 2A. Three (3) residential relocations would occur with this option as well as having greater fragmentation of wildlife habitat and forested areas than Option 2A. Due to these reasons, Option 3 was also eliminated from further consideration.

Option 2A: Jug-handle #2
This option was a slight modification of Option 2 that was developed to increase the length of the jug-handle connection of Option 2. With this modification, three (3) residential relocations would occur along with increased fragmentation of wildlife habitat and forested areas, and misdirection of traffic accessing US 53. The advantage of the increased length of the jug-handle does not outweigh the increase in the other impacts at this time due to the low traffic volumes. Therefore, Option 2A was not be carried forward at this time but should be reconsidered if traffic volumes or patterns significantly change in the future.

Option 2: Jug-handle #1 (Leading Option)
This option avoids fragmentation of wildlife habitat and forested areas while minimizing new road construction by using much of the existing road system. There would be some misdirection along County Y due to the rerouting of the roadway to the south. Option 2 is the Leading Option since this option minimizes new road construction, requires only one (1) relocation, avoids fragmentation of wildlife habitat and forested areas, and provides the least amount of misdirection.

County A

The existing intersection at US 53 and County A is an at-grade intersection that intersects US 53 at approximately 103 degrees with stop control on County A. The median opening is approximately 70 feet in width and there are right and left turn lanes present on northbound and southbound US 53. The existing posted speed on County A is 35 mph and 65 mph on US 53.

The existing AADT on US 53 varies from 5,200 south of County A to 5,800 north of County A (2010). The existing AADT on the west leg of County A is 330 (2010) and 970 (2010) on the east leg of County A. The forecasted AADT for a design year of 2034 on the west leg is approximately 430 vehicles per day and 1,350 on the east leg of County A.

Existing development near the intersection consists of a gas station, a church, a single story apartment complex, one

shed, and two residential properties.

Options considered are described below and can be found in Exhibit 3, County A Range of Options.

No-Build Option
Under the No-Build Option US 53 will continue to receive regularly scheduled maintenance, though no improvements will be made. This option does nothing to preserve the corridor and manage access and does not propose safety improvements where they are needed. Therefore, this option does not meet the purpose and need for the study. It does, however, serve as a baseline for a comparison of impacts.

Option 1: Interchange
This option is a diamond interchange on existing alignment at the US 53/County A intersection. County A would be designed as a two-lane undivided roadway with a 40 mph design speed through the interchange. A map of this option can be found in Exhibit 3, page 69.

Due to the proximity of existing access points to the proposed interchange this option would require local road modifications and changes to existing access, including:

- Closure of E. Baldwin Avenue connection with US 53, maintaining local connectivity with either a connecting road from 4th Street to Ryden Drive or an overpass for Baldwin Avenue and the Wild Rivers State Trail
- Closure of access points along County A between Ellen Smith Road and US 53 and providing alternate access via a new road from Ellen Smith Road
- Closure of all access points along County A between US 53 and S. 4th Street W. (Alternative access to existing properties not defined)
- Hughes Avenue extension to Limpach Drive
- Closure of N. Boundary Road intersection with US 53
- Realign Mertzig Parkway to accommodate 1,320 feet spacing from ramp terminals

Option 2: Jug-handle #1
This option is an overpass located on existing alignment. County A would cross over US 53 and be designed as a two-lane roadway with a 40 mph design speed. Jug-handle connections with right in/right out access to US 53 would be located in the SE and NW quadrants. A three-span bridge could be constructed over US 53 and the Wild Rivers State Trail or a two span bridge over US 53 and provide an alternate alignment for the Wild Rivers State Trail. Right turn lanes would be constructed on US 53. Jug-handle connections would be two-lane, two-way roadways with typical design speed of 30 mph. A map of this option can be found in Exhibit 3, page 70.

This option would require the following local road modifications and changes to existing access:

- Hughes Avenue extension to Limpach Drive
- Closure of access between the east jug-handle and Mertzig Parkway, possible alternative access provided by a new shared driveway from Mertzig Parkway

Option 3: Jug-handle #2
This option uses the existing County A alignment for the jug-handle connections and places an overpass approximately 500 feet south of existing County A. This overpass could be either a three span bridge over US 53 and the Wild Rivers State Trail or a two-span bridge over US 53 and provide an alternate alignment for the Wild Rivers State Trail. The realigned County A and overpass would be designed as a two-lane roadway with a 30 mph design speed. Realigned County A would connect to existing County A at both ends with stop controlled intersections. A map of this option can be found in Exhibit 3, page 71.

This option would require local road modifications and changes to existing access:

- Hughes Avenue extension to Limpach Drive
- Closure of access between the east jug-handle and Mertzig Parkway, possible alternative access provided by a new shared driveway from Mertzig Parkway

Option 3A: Jug-handle #3
Option 3A located the jug-handle connections and overpass at the same location as Option 3 but the realigned County A could be designed as a free-flow movement. The existing alignment of County A could be used for the jug-handle connection and the overpass would be located approximately 500 feet south of existing County A. The overpass could be

either a three-span structure over US 53 and Wild Rivers State Trail or a two-span structure and provide an alternate alignment for the Wild Rivers State Trail. The realigned County A would be designed as a two-lane roadway with jug-handles and a 40 mph design speed. A map of this option can be found in Exhibit 3, page 72.

This option would require local road modifications and changes to existing access:

- Hughes Avenue extension to Limpach Drive
- Closure of access between the east jug-handle and Mertzig Parkway, alternative access provided by a new shared driveway from Mertzig Parkway

Option 4 – Jug-Handle #4
This option is an overpass located at Baldwin Avenue. Baldwin Avenue would cross over US 53 and the Wild Rivers State Trail. The County A designation would be added to Cemetery Road and Baldwin Avenue with the County A designation removed on its existing location east of US 53. The newly designated county A would be designed as a two-lane roadway with a 40 mph design speed. Jug-handle ramps with right in/right out access to US 53 would be located in the SE and NW quadrants. Jug-handle connections would be two-lane, two-way roadways with typical design speed of 25 mph. A map of this option can be found in Exhibit 3, page 73.

County A Options Screening

Many of the options considered meet the study's Purpose and Need to varying degrees. A number of screening criteria were considered to aid in the selection of the Leading Option. Extensive public input throughout the study process helped develop a range of options and ultimately the Leading Option. Direct impacts to property and environmental resources were also assessed throughout the study area. Costs were also calculated and considered. The Leading Option does the best job of meeting the purpose and need for the study while also meeting the screening criteria.

<u>Evaluation and Screening of Diamond Interchange Option</u>

Option 1 – Interchange
Option 1 would require the acquisition of two (2) residences, one (1) commercial property (convenience store/gas station), and three (3) sheds. Impacts to the 100-year floodplain and two unnamed drainage channels north of County A would occur with this option.

Option 1 is recommended to be eliminated from further consideration for the following reasons:

- There are existing low traffic volumes on County A and planning year 2034 traffic volumes are anticipated to be less than 1,350 AADT
- Options with fewer impacts would maintain safety and mobility; a full interchange is not required to handle the forecasted traffic
- Numerous local road alterations would be required as well as a possible additional overpass at Baldwin Avenue
- Significant new right-of-way required with a diamond interchange (30-60% more than a jug-handle)
- Relocations/acquisitions of three (3) sheds, one (1) business, and two (2) residences would be necessary
- Significant access closures and driveway relocations would be necessary (15 closures)

<u>Further Evaluation and Screening of Jug-handle Options</u>
The jug-handle options will adequately address future safety and mobility while minimizing natural and social impacts. These options:

- Provide right in/right out access to US 53
- Avoid significant alterations at other local roads

Options described below are listed in the order they were dismissed.

Option 4 – Jug-Handle #4
Option 4 was developed to reduce the physical impact to the existing residential and commercial properties located at the County A intersection. While it does achieve this goal, different impacts occur that are of equal or greater significance. These impacts include misdirection along County A due to the jug-handles and the relocation of County A. This misdirection would increase travel times to businesses at the current intersection of US 53 and County A, and would make it less convenient for through traffic to stop at these businesses. Commuting distances/times for residents

would increase for travel to work and to businesses, but the cost would not likely be significant. Park Creek may be impacted from proposed improvements to Cemetery Road. Therefore, Option 4 was not considered for further evaluation.

Option 2 – Jug-handle #1
By using the existing alignment of County A for the location of the overpass this option requires the relocation of three (3) sheds. Impacts to the 100-year floodplain and two unnamed drainage channels on the north side of County A would occur with this option.

The jug-handle connections were placed in the NW and SE quadrants to accommodate driver expectancy of the ramp before the overpass. The jug-handle connection in the NW quadrant would impact a potentially hazardous materials site. To avoid the potentially hazardous materials site the jug-handle could be moved to the SW quadrant, but then it would require a commercial relocation in addition to the residential relocation. Despite not having a physical impact on the commercial operation in the SW quadrant to the vertical alignments the access would require modification and either result in a residential relocation or significant misdirection to avoid the residents. Due to the impacts and availability of options with fewer impacts, Option 2 was not considered for further study.

Option 3 – Jug-handle #2
By moving the overpass 500 feet south for Option 3 the physical impact to the residential and commercial properties are avoided. The re-route of County A with this option would require two, 90 degree turns at stop controlled intersections. This would interrupt the flow of County A as well as possible cause confusion to the motorist. With minor modifications this can be avoided as seen in Option 3A. Therefore, Option 3 was eliminated from further study.

Option 3A – Jug-handle #3 (Leading Option)
Option 3A takes advantage of the relocation of the overpass to the south of the existing alignment of County A to avoid physical impacts to the commercial and residential properties along existing County A, impacts to the potentially hazardous materials site, and impacts to the unnamed drainage channel on the north side of County A. These avoidances along with the free-flow alignment for County A is why Option 3A was the Leading Option selected to carry forward.

In summary, the Leading Option was developed from the Range of Options. It consists of Option 3A at the County A intersection and Option 2 at the County Y intersection (see Exhibit 4, Leading Option). Each of the intersections would have the Leading Option mapped as described above.

3. Description of Leading Option

The Leading Option consists of a plan and follow-up actions for improving US 53 from the Gordon/Wascott town line to 0.3 miles south of the Solon Springs/Bennett town line. The proposed improvements would be mapped under the process established in Wis. Stats. 84.295(10) to help preserve right-of-way for future transportation needs. This EA is being completed for the purpose of preserving and mapping future right-of-way. Due to the long-term nature of any future potential design and/or construction, additional environmental approvals and/or EA updates would be required when warranted and as funding becomes available.

The Leading Option was selected based on a variety of criteria. First, extensive public input throughout the study process helped develop a range of options and ultimately the Leading Option. Direct impacts to property and environmental resources were also assessed throughout the study area. The Leading Option does the best job of meeting the purpose and need for the study while also avoiding and minimizing direct impacts.

For purposes of this EA, direct impacts were calculated as if the Leading Option would be constructed, not just mapped. The mapping and expressway designation actions do not have direct effects. However, they could have indirect effects, which are discussed in the Pre-Screening Analysis for Indirect Effects Analysis (see Appendix A). The Leading Option does not include immediate programming of construction funds but is designed in such a way to allow incremental construction and funding over time. The long-term vision and management strategy used by this Leading Option allows incremental improvements and funding strategies to ultimately achieve the comprehensive system goal of improving the expressway facility. Traffic accommodations during construction, such as traffic control and detours, have not been determined at this point due to the long range of this planning project, but will be further evaluated during design once project has a scheduled date.

US 53 is on the National Highway System (NHS). Existing intersections at County A and County Y would be reconstructed as right-in/right-out only accesses. Two overpasses would be constructed to allow for traffic to cross US 53 near the County A and County Y intersections. County A would be rerouted to cross US 53 at an overpass 500 feet south of the

current intersection. The overpass could be either a three-span structure over US 53 and Wild Rivers State Trail or a two-span structure and provide an alternate alignment for the Wild Rivers State Trail. Traffic From County Y would be directed south to Sundew Road via Snowberry Lane and Gates Drive and would cross US 53 at an overpass that would be constructed at the current Sundew Road intersection. Cul-de-sacs would be constructed at the Spruce Drive intersection, on Packer Ave (north and south of County Y) and at the end of the proposed Hughes Avenue extension in order to reduce conflict points by limiting access to US 53. In addition, several sections of the existing local roadway system would be reconstructed or altered to insure internal local road system continuity and access to the expressway.

The Leading Option would require one (1) residential relocation and a total of eleven (11) driveways would be closed and relocated to control access.

4. Construction and Operational Energy Requirements

No Build Option
This option would require minimal construction energy (minor improvements and maintenance). Because the existing at-grade intersections would remain with this option, traffic operational characteristics would likely erode over time as volumes increase and gaps in traffic decrease. The erosion in operational characteristics would likely be due to increased cross traffic conflicts. Operational characteristics could include congestion and/or rapid acceleration/deceleration of traffic resulting in a higher consumption of energy.

Leading Option
The Leading Option would require the consumption of a large amount of energy during construction. However, the Leading Option would modify the existing at-grade intersections and greatly reduce the potential for conflicts with cross traffic. The result would be greater operational efficiency and lower energy needs over the No Build Option.

Energy requirements for the construction of the Leading Option would be greater than those required for the No Build Option. However, the No Build Option would result in the use of an inefficient transportation system, leading to more congestion, loss of travelers' time, higher consumption of energy, and increased crashes and safety issues. Over the design life of the facility, savings in operational energy would be greater than the energy required to construct the facility and thus in the long-term would result in net savings in energy usage.

The energy requirements and conservation potential of all of the action options considered are essentially the same; any differences among them would be negligible.

5. Land Use Adjoining the Project and Surrounding Area

The 12.1-mile corridor extends from the Gordon/Wascott town line to 0.3 miles south of the Solon Springs/Bennett town line in Douglas County. The corridor passes through the village of Solon Springs and the unincorporated community of Gordon. Existing land uses surrounding the US 53 corridor include mostly rural wooded uplands and wetlands, moderate amount of low density residential, and limited commercial/industrial development. The town of Gordon and the village of Solon Springs have areas with higher density residential and commercial uses in the vicinity of US 53 (see Exhibit 1, Study Location Map).

Residential
The majority of residential land uses can be classified as widely distributed, low density uses with on-site septic systems typical of wooded and agricultural areas. Higher concentrations of residential development are located in neighborhoods along County Y in the town of Gordon and Baldwin Ave., and County A/George Ave. in the Solon Springs area.

Commercial/Industrial
Limited commercial and industrial land uses can be found adjacent to US 53 near the town of Gordon and the village of Solon Springs. Within the town of Gordon services include a gas station and a bowling alley. Solon Springs has a gas station with groceries located adjacent to the County A intersection.

Agricultural/Forestry
Agricultural land accounts for 21 percent of land in Douglas County. Douglas County is home to the largest county forest in Wisconsin with 270,000 acres. Lands are managed for multiple-use recreation as well as timber production.

Parks and Recreation
Local recreational trails in the study area include:

North County Trail – The North County Trail was designated a National Scenic Trail by congress in 1980 and is administered by the National Park Service (NPS). The trail travels from North Dakota to New York

and includes an at-grade crossing of US 53 south of Solon Springs (See Exhibit 1, Study Location Map).

Wild Rivers State Trail – This 94-mile state managed rails-to-trails facility is open to hiking, mountain biking, ATV's and snowmobile use and connects Rice Lake to Solon Springs. The trail can be accessed in Spooner, Trego and various other locations paralleling US 53. Motorized and non-motorized activities are allowed on the trail (See Exhibit 1, Study Location Map).

The land uses surrounding the study area are similar to that of the immediate area, and include a variety of residential and recreational land uses. Residential uses include pockets of small neighborhoods as well as widely dispersed farmsteads and other rural residential land uses.

Urban areas surrounding the study limits include the town of Gordon and the Village of Solon Springs. Solon Springs is located at the north end of the study area which is a regional employment and retail hub with some commercial and industrial development.

6. Planning and Zoning

US 53 is identified as a backbone route in the WisDOT *Connections 2030* plan (see Figure 1). Backbone routes are recognized for their importance to the state's transportation infrastructure and economic vitality, and are high priority corridors for determining improvement needs and maintaining safe and efficient travel on the statewide transportation system.

The US 53 Preservation Study is compatible with county and local goals of providing a safe transportation system that sustains the vehicular traffic needed for a successful future. The Leading Option is consistent with (and/or does not conflict with) the following plans and land use controls/regulations for the communities within the study area. This conclusion was based on research of the following available plans:

Plan/Ordinance Name	***Agency/Year***
Village of Solon Springs Comprehensive Plan http://www.solonsprings.net/government.html	Solon Springs (Town and Village) 2010
Douglas County Comprehensive Plan http://www.douglascountywi.org/DocumentCenter/Home/View/840	Northwest Regional Planning Commission 2009

Zoning

Zoning District	Name	Acres	Percent of County
A-1	Agricultural	165,095	21.08%
C-1	Commercial	2,477	0.32%
F-1	Forestry	535,262	68.34%
I-1	Industrial	1,074	0.14%
R-1	Residential	6,028	0.77%
R-2	Residential	40,562	5.18%
PUD	Planned Unit Dev.	75	0.01%
RR-1	Recreational-Residential	24,319	3.11%
W-1	Resource Conservation	8,297	1.06%

Source: Douglas County Zoning Department, page 370 of:
http://www.douglascountywi.org/DocumentCenter/Home/View/840
See Exhibit 6, Douglas County Zoning Map

Population

Municipality	2015	2020	2030
Town of Gordon	813	870	927
Town of Wascott	935	1009	1085
Village of Solon Springs	583	585	588
County of Douglas	45,532	46,281	47,062

Source: Wisconsin Department of Administration (2015-2020), NWRPC (2030)

7. Indirect Effects and Cumulative Effects

If any of the following boxes are checked, the Pre-Screening Worksheet for EA and ER Projects For Determining the Need to Conduct a Detailed Indirect Effects Analysis found in Appendix A of the WisDOT report titled *Guidance for Conducting an Indirect Effects Analysis* must be completed and attached to this environmental document.

An option being carried forward for detailed consideration includes;

- ☐ Economic development as a purpose and need element of the proposed project.
- ☐ Construction of one or more new or additional through lanes.
- ☐ Construction of a new interchange or elimination of an existing interchange.
- ☐ Construction of one or more additional ramps or relocation of a ramp lane to a new quadrant on an existing interchange.
- ☐ Changing an at-grade intersection to a grade-separation with no access or a grade-separation to an at-grade intersection.
- ☒ Construction of one or more additional intersections along the mainline created by a new side road access.
- ☒ One or more new access points along a side road within 500' of the mainline.

☐ None of the above boxes have been checked, it has therefore been concluded that the Leading Option will not result in indirect effects or cumulative effects.

☒ The Leading Option may result in indirect effects or cumulative effects. The Pre-Screening Worksheet for EA and ER Projects For Determining the Need to Conduct a Detailed Indirect Effects Analysis attached as indicates a detailed indirect effects and cumulative effects analysis is not required.

☐ The Leading Option may result in indirect effects or cumulative effects. It has been determined that a detailed indirect effects and cumulative effects analysis is required. See for the detailed analysis.

8. Environmental Justice

How was information obtained about the presence of populations covered by EO 12898? *(check all that apply)*	
☒ US Census Data	☐ Survey Questionnaire
☐ Real Estate Company	☐ WisDOT Real Estate
☒ Public Involvement Meeting	☐ Local Government
☒ Official Plan(NWRPC, Douglas County Comprehensive Plan, 2009)	☒ Windshield Survey*
☐ Human Resources Agency Identify agency: Identify plan, approval authority and date of approval:	
☐ Other – Identify:	

*Conducting only a windshield survey is not sufficient to make a determination regarding whether or not populations are present.

Based on data obtained from the methods above, are populations covered by EO 12898 present in the project area?

a. ☐ No
b. ☒ Yes – Environmental Justice analysis must be completed.

9. Title VI of the 1964 Civil Rights Act, the Americans with Disabilities Act or the Age Discrimination Act

Indicate whether or not issues have been identified or concerns have been expressed related to Title VI of the 1964 Civil Rights Act, the Americans with Disabilities Act or the Age Discrimination Act.

a. ☒ No – Issues related to the above laws were not identified and concerns were not expressed.
b. ☐ Yes – Issues related to the above laws were identified and/or concerns were expressed. Explain:

10. Public Involvement

A. Public Meetings

The involvement effort included public involvement meetings (PIM) and local official meetings (LOM). In addition to letters mailed to property owners along the corridor, information pertaining to meetings was also released to the Superior Telegram Newspaper. Three PIM's were held for the study. The purpose of the first meeting was to identify local needs from members of the community. The second meeting was to gather public input on the range of options developed for the study. The third meeting presented the Leading Option. A list of all meetings is listed below:

Date (m/d/yy)	Meeting Sponsor (WisDOT, RPC, MPO, etc.)	Type of Meeting (PIM, Public Hearings, etc.)	Location	Approx. Number of Attendees
10/16/12	WisDOT	Trail Coordination with NPS	NPS – Madison	3
10/24/12	WisDOT	LOM #1	School District of Solon Springs	10
10/24/12	WisDOT	PIM #1	School District of Solon Springs	30
8/7/13	WisDOT	PIM #2	School District of Solon Springs	30
8/27/13	WisDOT	LOM #2	Solon Springs Community Center	10
5/22/14	WisDOT	LOM #3	School District of Solon Springs	10
5/22/14	WisDOT	PIM #3	School District of Solon Springs	40

B. Other methods such as those identified in the Public Involvement Plan and Environmental Justice Plan (if applicable):

None

C. Identify groups that participated in the public involvement process. Include any organizations and special interest groups including but not limited to:

None Identified

D. Indicate plans for additional public involvement, if applicable:

No additional public involvement is planned at this time.

11. Briefly summarize the results of public involvement.

A. Describe the issues, if any, identified by individuals or groups during the public involvement process:

<u>County Y Interchange</u>

1. Several comments indicated that diamond interchanges would eliminate too much development in each community (Gordon and Solon Springs).

<u>County A Interchange</u>

1. One comment indicated the best location for an overpass would be 1,300 feet north of County A in Solon Springs.
2. Several comments indicated that diamond interchanges would eliminate too much development in each community (Gordon and Solon Springs).
3. A few comments were received that indicated the future industrial park location west of US 53 between County A and Baldwin Avenue.

<u>General Comments</u>

1. Bike and pedestrian facilities on the overpasses were requested on several comment cards.
2. One concern expressed by residents include ensuring safety at the US 53 airport intersection (Bus 53).
3. Comments noted the importance of ensuring access to businesses on US 53 frontage roads.

B. Briefly describe how the issues identified above were addressed:

<u>County Y Interchange</u>

1. Diamond interchanges were not selected as the Leading Options for County Y

County A Interchange

1. Further development of this option was not pursued for the following reasons:
   - Open water
   - Wetlands
   - Former site of hazardous materials and town dump
   - Misdirection for Solon Springs residents
2. Diamond interchanges were not selected as the Leading Options for County A.
3. The planned land use for this area would have adequate and reasonable access from Ellen Smith Road.

General Comments

1. Design of sidewalks and bike lanes on the overpass structures will be evaluated at the time of project scheduling.
2. Crashes at this intersection were reviewed and due to the limited number of crashes, further evaluation was not pursued.
3. Options were developed to minimize access changes to businesses on the US 53 frontage roads.

12. Local/regional/tribal/federal government coordination

A. Identify units of government contacted and provide the date coordination was initiated.

Unit of Government (MPO, RPC, City, County, Village, Town, etc.)	**Coordination** Correspondence Attached	**Coordination Initiation Date** (m/d/yy)	**Coordination Completion Date** (m/d/yy)	**Comments**
Northwest RPC	☒ Yes ☐ No	8/24/12	Ongoing	None
Douglas County -UW Extension -Sheriff -EMS -Highways -Historical Assn. -Planning/Zoning -Supervisors	☒ Yes ☐ No	8/24/12	Ongoing	None
Village of Solon Springs -President -Clerk -Public Works -Fire -Police -Solid Waste -Trustees -Airport -School District	☒ Yes ☐ No	8/24/12	Ongoing	None
Town of Bennett -Chair -Clerk -Supervisors	☒ Yes ☐ No	8/24/12	Ongoing	None
Town of Gordon -Chair -Clerk -Supervisors	☒ Yes ☐ No	8/24/12	Ongoing	None
Town of Wascott -Chair -Clerk -Supervisors	☒ Yes ☐ No	8/24/12	Ongoing	None

B. Describe the issues, if any, identified by units of government during the public involvement process:

1. Local officials explained that residents have voiced concern over the barricade at W. Baldwin Avenue. ATV's, bikes, and pedestrians were traveling through the ditch to get around the barrier.

C. Briefly describe how the issues identified above were addressed:
1. Final closure of the west leg of the intersection has been completed, removing the barriers that restricted bicycle and pedestrian movements.

D. Indicate any unresolved issues or ongoing discussions:
None

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

TRAFFIC SUMMARY MATRIX

	Options: County A (Solon Springs)					
	No Build	**Option 1**	**Option 2**	**Option 3**	**Option 3A Leading Option**	**Option 4**
TRAFFIC VOLUMES						
Existing AADT Yr. 2010	5,200	5,200	5,200	5,200	5,200	5,200
Const. Yr. AADT Yr. 2014	5,400	5,400	5,400	5,400	5,400	5,400
Const. Plus 10 Yr. AADT Yr. 2024	5,900	5,900	5,900	5,900	5,900	5,900
Design Yr. AADT Yr. 2034	6,400	6,400	6,400	6,400	6,400	6,400
DHV Yr. 2034	762	762	762	762	762	762
TRAFFIC FACTORS						
K [☐ 30 /☒ 100/☐ 200] (%)	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%
D (%)	61/39%	61/39%	61/39%	61/39%	61/39%	61/39%
Design Year T (% of AADT)	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
T (% of DHV)	14.4%	14.4%	14.4%	14.4%	14.4%	14.4%
Level of Service	A	A	A	A	A	A
SPEEDS						
Existing Posted	65	65	65	65	65	65
Future Posted	65	65	65	65	65	65
Design Year Project Design Speed	65	65	65	65	65	65
OTHER *(specify)*						
P (% of AADT)	N/A	N/A	N/A	N/A	N/A	N/A
K_8 (% OF AADT)	N/A	N/A	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A	N/A	N/A

AADT = Average Annual Daily Traffic
DHV = Design Hourly Volume
K [$_{30/100/200}$] : K_{30} = Interstate, K_{100} = Rural, K_{200} = Urban, % = AADT in DHV
D = % DHV in predominate direction of travel
T = Trucks
P = % AADT in peak hour
K_8 = % AADT occurring in the average of the 8 highest consecutive hours of traffic on an average day (required only if CO analysis is required).

	Options: County Y (Gordon)					
	No Build	**Option 1**	**Option 2 Leading Option**	**Option 3**	**Option 3A**	**Option 4**
TRAFFIC VOLUMES						
Existing AADT Yr. 2010	6,200	6,200	6,200	6,200	6,200	6,200
Const. Yr. AADT Yr. 2014	6,500	6,500	6,500	6,500	6,500	6,500
Const. Plus 10 Yr. AADT Yr. 2024	7,100	7,100	7,100	7,100	7,100	7,100
Design Yr. AADT Yr. 2034	7,800	7,800	7,800	7,800	7,800	7,800
DHV Yr. 2034	928	928	928	928	928	928
TRAFFIC FACTORS						
K [☐ 30 /☒ 100/☐ 200] (%)	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%
D (%)	61/39%	61/39%	61/39%	61/39%	61/39%	61/39%
Design Year T (% of AADT)	15.3%	15.3%	15.3%	15.3%	15.3%	15.3%
T (% of DHV)	14.4%	14.4%	14.4%	14.4%	14.4%	14.4%
Level of Service	A	A	A	A	A	A
SPEEDS						
Existing Posted	65	65	65	65	65	65
Future Posted	65	65	65	65	65	65
Design Year Project Design Speed	65	65	65	65	65	65
OTHER *(specify)*						
P (% of AADT)	N/A	N/A	N/A	N/A	N/A	N/A
K_8 (% OF AADT)	N/A	N/A	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A	N/A	N/A

AADT = Average Annual Daily Traffic
DHV = Design Hourly Volume
K [$_{30/100/200}$] : K_{30} = Interstate, K_{100} = Rural, K_{200} = Urban, % = AADT in DHV
D = % DHV in predominate direction of travel
T = Trucks
P = % AADT in peak hour
K_8 = % AADT occurring in the average of the 8 highest consecutive hours of traffic on an average day (required only if CO analysis is required).

1. Identify the agency that generated the data included in the Traffic Summary Matrix.
   WisDOT Traffic Forecast Report, Traffic Forecasting Section; Bureau of Planning and Economic Development; Division of Transportation Investment Management.

2. Identify the date (month/year) that the traffic forecast data included in the Traffic Summary Matrix was developed.
   08/13/2012

3. Identify the methodology and/or computer program(s) used to develop the data included in the Traffic Summary Matrix.
   The WisDOT Traffic Forecasting Information System was used to predict future traffic volumes.

4. If a metric other than Annual Average Daily Traffic (AADT) is used for describing traffic volumes such as Average Annual Weekday Traffic (AWDT), explain why a different metric was used and how it compares to AADT.
   N/A

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

AGENCY AND TRIBAL COORDINATION

Agency	Coordination Required?	Correspondence Attached?	Comments
WisDOT			
Region Real Estate Section	☐ No	N/A	Coordination is not required because there will be no Fee, PLE or TLE acquisitions.
	☒ Yes	☐ Yes ☒ No	Coordination occurred throughout the Conceptual Stage Relocation Plan process. An in-depth and up-to-date analysis of the residential relocations would be completed closer to design/construction.
Bureau of Aeronautics	☐ No	N/A	Coordination is not required. The project is not located within 5 miles of a public or military use airport.
	☒ Yes	☒ Yes ☐ No	BOA provided a letter discussing the Solon Springs Municipal Airport. It stated that the airport sponsor planning for the future did not include runway extension or other projects that would be affected by the highway. It also stated that its main concern would be the development of attractants to wildlife that are hazardous to aircraft and that any such attractants must comply with separation distances required by FAA's Advisory circular AC 150/5200-33B. See Appendix C1
Railroads and Harbors Section	☐ No	N/A	Coordination is not required because no railways or harbors are in or planned for the project area.
	☒ Yes	☐ Yes ☒ No	The Canadian National Railroad runs along US 53 through parts of the study area and crosses US 53 near the northern end of the study area. The Wild Rivers State Trail is a Rails-to-Trails route that travels along the length of US 53. This route is mostly owned by WisDOT and can be converted to an active rail line at any time.
STATE AGENCY			
Natural Resources (DNR)	☒ Yes	☒ Yes ☐ No	The WDNR was invited to provide comments as well as attend all agency, local official and public meetings. WDNR provided a list of sensitive resources within the study area on 12/4/2012. WDNR also sent a letter on 9/16/2013 which provided a response to the range of options. See Appendix C2
State Historic Preservation Office (SHPO)	☒ Yes	☒ Yes ☐ No	The Wisconsin State Historical Society and the Douglas County Historical Association have both been invited and involved throughout the environmental documentation process. SHPO concurred with "Documentation for Determination of No Adverse Effect on historic properties" on 9/11/15. See Appendix D, Section 106 documentation
Agriculture (DATCP)	☒ Yes ☐ No	☐ Yes ☒ No	Opportunity for review and comment was extended to DATCP as part of the formal scoping process. An Agricultural Impact Notice (AIN) was submitted to DATCP while options for County M were being considered. Further study was stopped at County M upon knowledge that the adjacent land was purchased by Douglas County for forest and recreation purposes. There is no need to map this area. Additional future coordination would occur closer to design/construction if agricultural land would be affected by the Leading Option.

FEDERAL AGENCY			
U.S. Army Corps of Engineers (USACE)	☒ Yes ☐ No	☐ Yes ☒ No	USACE was invited to the agency scoping meeting. Agency officials were invited to provide comments throughout all phases of the study.
U.S. Fish and Wildlife Service (USFWS)	☒ Yes ☐ No	☒ Yes ☐ No	USFWS responded with a comment letter on 9/26/2012. The letter stated that no current listed, proposed or candidate endangered species or critical habitats occur within the study area. It also stated that the study area includes wetlands, and that efforts should be made to avoid these wetlands. This was taken into consideration during design and evaluation of options. Since the coordination letter was received in 2012, USFWS has added species such as the Gray Wolf and the Northern Long-Eared Bat, among others, to their lists. Further coordination will be necessary at the time of scheduled construction. See Appendix C3
Natural Resources Conservation Service (NRCS)	☐ Yes ☒ No	☐ Yes ☒ No	The NRCS was invited to the agency scoping meeting. Agency officials were invited to provide comments throughout all phases of the study. Form CPA-106 was not submitted to NRCS because the Leading Option does not affect farmland.
U.S. National Park Service (NPS)	☒ Yes ☐ No	☒ Yes ☐ No	The North County Trail crosses US 53 in the study area. A letter was received on 9/28/12 detailing plans for the trail in this area. A meeting was held on 10/16/12 to discuss the trail. See Appendix C4
U.S. Coast Guard (USCG)	☐ Yes ☒ No	☐ Yes ☒ No	No coordination needed.
U.S. Environmental Protection Agency (EPA)	☐ Yes ☒ No	☐ Yes ☒ No	EPA did not request coordination with this study.
Advisory Council on Historic Preservation (ACHP)	☐ Yes ☒ No	☐ Yes ☒ No	No coordination needed.
SOVEREIGN NATIONS			
American Indian Tribes	☒ Yes	☒ Yes	All tribes that have indicated an interest in projects in this area were sent coordination letters. One response was received from Lac du Flambeau Band of Lake Superior Chippewa Indians of Wisconsin. See Appendix C5 for tribal response letter dated 8/30/12

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

OPTION COMPARISON MATRIX

All estimates including costs are based on conditions described in this document at the time of preparation in the year of expenditure (YOE). Additional agency or public involvement may change these estimates in the future.

PROJECT PARAMETERS	Unit of Measure	Options: County A (Solon Springs)					
		No Build[1]	Option 1	Option 2	Option 3	Option 3A Leading	Option 4
Project Length	Miles	0	12.1	12.1	12.1	12.1	12.1
PRELIMINARY COST ESTIMATE (YOE)							
Construction	Million $	0	8.272	4.419	4.318	11.804	4.159
Real Estate	Million $	0	0.620	0.640	0.010	0.122	0.010
TOTAL	Million $	0	8.892	5.059	4.328	11.926	4.169
LAND CONVERSIONS							
Wetland Area Converted to ROW	Acres	0	0	0	0	0	0
Upland Habitat Area Converted to ROW	Acres	0	22.18	16.87	8.96	19.02	10.19
Other Area Converted to ROW	Acres	0	2.72	0.71	0.00	0.09	0.00
Total Area Converted to ROW	Acres	0	24.90	17.58	8.96	19.11	10.19
REAL ESTATE							
Number of Farms Affected	Number	0	0	0	0	0	0
Total Area Required From Farm Operations	Acres	0	0	0	0	0	0
AIS Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Farmland Rating	Score	N/A	N/A	N/A	N/A	N/A	N/A
Total Buildings Required	Number	0	3	2	0	0	0
Housing Units Required	Number	0	1	0	0	0	0
Commercial Units Required	Number	0	1	1	0	0	0
Other Buildings or Structures Required	Number & Type	0	1 (shed)	1 (shed)	0	0	0
ENVIRONMENTAL FACTORS							
Indirect Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Cumulative Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Environmental Justice Populations		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Historic Properties	Number	0	0	0	0	0	0
Archeological Sites	Number	0	0	0	0	0	0
Burial Site Protection *(authorization required)*		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
106 MOA Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
4(f) Evaluation Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
6(f) Land Conversion Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Flood Plain		☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Total Wetlands Filled	Acres	0	0	0	0	0	0
Stream Crossings	Number	0	0	0	0	0	0
Endangered Species		☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Design Year Noise Sensitive Receptors							
No Impact	Number	0	Not Modeled	Not Modeled	Not Modeled	12	Not Modeled
Impacted	Number	0				1	
Contaminated Sites	Number	0	4	4	4	4	4

[1]The estimated cost of routine maintenance through the design year should be included in the "Construction" box for the No Build Option.

PROJECT PARAMETERS	Unit of Measure	Options: County Y (Gordon)					
		No Build[1]	Option 1	Option 2 Leading	Option 2A	Option 3	Option 4
Project Length	Miles	12.1	12.1	12.1	12.1	12.1	12.1
PRELIMINARY COST ESTIMATE (YOE)							
Construction	Million $	0	5.538	7.403	4.695	4.630	5.032
Real Estate	Million $	0	1.380	0.127	0.120	0.120	0.130
TOTAL	Million $	0	6.918	7.530	4.815	4.75	5.162
LAND CONVERSIONS							
Wetland Area Converted to ROW	Acres	0	0.53	0	0	0	.47
Upland Habitat Area Converted to ROW	Acres	0	4.91	7.76	3.21	2.38	0.00
Other Area Converted to ROW	Acres	0	12.83	0.74	3.21	4.15	12.54
Total Area Converted to ROW	Acres	0	18.27	8.50	6.42	6.53	13.01
REAL ESTATE							
Number of Farms Affected	Number	0	0	0	0	0	0
Total Area Required From Farm Operations	Acres	0	0	0	0	0	0
AIS Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Farmland Rating	Score	N/A	N/A	N/A	N/A	N/A	N/A
Total Buildings Required	Number	0	21	2	4	4	4
Housing Units Required	Number	0	14	1	3	3	3
Commercial Units Required	Number	0	6	0	0	0	0
Other Buildings or Structures Required	Number & Type	0	2 (sheds)	1 (shed)	1 (shed)	1 (shed)	1 (shed)
ENVIRONMENTAL FACTORS							
Indirect Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Cumulative Effects		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Environmental Justice Populations		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Historic Properties	Number	0	1	1	1	1	0
Archeological Sites	Number	0	0	0	0	0	0
Burial Site Protection *(authorization required)*		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
106 MOA Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
4(f) Evaluation Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
6(f) Land Conversion Required		☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Flood Plain		☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Total Wetlands Filled	Acres	0	2.74	0	0.11	0.11	0.58
Stream Crossings	Number	0	0	0	0	0	0
Endangered Species		☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Design Year Noise Sensitive Receptors							
No Impact	Number	0	Not	12	Not	Not	Not
Impacted	Number	0	Modeled	1	Modeled	Modeled	Modeled
Contaminated Sites	Number	4	4	4	4	4	4

[1]The estimated cost of routine maintenance through the design year should be included in the “Construction” box for the No Build Option.

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

SIGNIFICANCE CRITERIA

In determining whether a Leading Option is a "major action significantly affecting the quality of the human environment," the Leading Option must be assessed in light of the following criteria (1) if significant impact(s) will result, the preparation of an environmental impact statement (EIS) should commence prior to any further action. Indicate whether the issue listed below is a concern for the Leading Option or option and (2) if the issue is a concern, explain how it is to be addressed or where it is addressed in the environmental document.

1. Will the Leading Option stimulate substantial indirect environmental effects?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

2. Will the Leading Option contribute to cumulative effects of repeated actions?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

3. Will the creation of a new environmental effect result from this Leading Option?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

4. Will the Leading Option impact geographically scarce resources?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

5. Will the Leading Option have a precedent-setting nature?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

6. Is the degree of controversy associated with the Leading Option high?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

7. Will the Leading Option be in conflict with official agency plans or local, state, tribal, or national policies, including conflicts resulting from potential effects of transportation on land use and transportation demand?
   - ☒ No
   - ☐ Yes – Explain or indicate where addressed.

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

ENVIRONMENTAL COMMITMENTS

Attach a copy of this page to the design study report and the PS&E submittal package.

Environmental Factors	**Commitment** (If none, include "No special or supplemental commitments required.")
A-1 General Economics	No commitments needed
A-2 Business	No commitments needed
A-3 Agriculture	No commitments needed
B-1 Community or Residential	An in-depth and up-to-date analysis of the residential relocation would be completed closer to design/construction. Additional/more accurate property information would need to be obtained in order to determine the specifications for a suitable replacement to the one acquisition.
B-2 Indirect Effects	No commitments needed
B-3 Cumulative Effects	No commitments needed
B-4 Environmental Justice	The potential for low-income and/or minority populations exists in the study area. The demographic makeup of the area would be re-evaluated closer to design/construction by the designer.
B-5 Historic Resources	No commitments needed
B-6 Archaeological/Burial Sites	No commitments needed
B-7 Tribal Coordination/Consultation	The tribes will be contacted as appropriate if any archeological sites or resources are identified at any stage in the process, including construction.
B-8 Section 4(f) and 6(f) or Other Unique Areas	No commitments needed
B-9 Aesthetics	No commitments needed
C-1 Wetlands	No commitments needed
C-2 Rivers, Streams and Floodplains	No commitments needed
C-3 Lakes or other Open Water	No commitments needed
C-4 Groundwater, Wells and Springs	Two private wells were identified in the project area that may need to be abandoned. Licensed well drillers and pump installers would fill and seal wells under Wisconsin Law (NR 812.26).
C-5 Upland Wildlife and Habitat	No commitments needed
C-6 Coastal Zones	No commitments needed
C-7 Threatened and Endangered Species	Further coordination with the USFWS will need to be conducted to determine if timing restrictions or other preventative measures may apply to the active Bald Eagle nests, Northern Long-Eared Bat, and the Gray Wolf. Also, an updated list of T&E species would be acquired closer to design/construction by the designer. Additional survey would also be required closer to design/construction by the designer.
D-1 Air Quality	No commitments needed
D-2 Construction Stage Sound Quality	No commitments needed
D-3 Traffic Noise	A copy of the written notification shall be included with the final environmental document.
D-4 Hazardous Substances or Contamination	Phase 2 or 2.5 subsurface investigations would be completed closer to final design and/or property acquisition.
D-5 Storm Water	WisDOT would be required to develop and submit a stormwater management plan that addresses the applicable post-construction performance standards of TRANS 401.

D-6 Erosion Control	Construction site erosion and sediment control would be part of the study's design and construction as set forth in TRANS 401 Wis. Adm. Code and the WisDOT/WDNR Cooperative Agreement. An Erosion Control Implementation Plan (EICP) would be prepared by the contractor and approved by WDNR prior to construction.

EVALUATION OF ENVIRONMENTAL FACTORS FOR REASONABLE FUTURE OPTIONS *(continued)*

ENVIRONMENTAL FACTORS MATRIX *(check all that apply)*

Environmental Factors	Adverse	Benefit	None Identified	Evaluation Attached	Note: If the effects on the environmental factor can't be adequately summarized in several sentences, an evaluation for the environmental factor must be included. Effects
A. ECONOMIC FACTORS *A-1, General Economics, must be included if A-2 or A-3 is completed.*					
A-1 General Economics	☒	☒	☐	☒	The Leading Option would have economic benefits and disadvantages. It would ensure the economic viability of the area by promoting safe and efficient transportation of, people, goods, and services. It would also accommodate current and planned economic growth and development and provide safe and efficient access to surrounding communities for people, emergency services, and businesses and commercial operations. Disadvantages of the Leading Option would include the relocations of some current private access to local roads, increased travel time to and from some locations, required major capital investment by WisDOT, and temporary disruptions during construction.
A-2 Business	☒	☒	☐	☒	The Leading Option is likely to support the existing and planned land uses along US 53. Conversion of existing US 53 and local road intersections to overpasses and cul-de-sacs could reduce the likelihood of highway-oriented commercial land uses from locating along US 53. The Leading Option is consistent with planned land uses for the areas where such plans exist.
A-3 Agriculture	☐	☐	☒	☐	No agricultural land would be affected by the Leading Option.
B. SOCIAL/CULTURAL FACTORS					
B-1 Community or Residential	☒	☐	☐	☒	The Leading Option would support local land use plans of communities along US 53, have a minor effect on the character and traffic patterns of some county and local roadways, balance misdirection from access changes with additional safe crossings of US 53 for the provision of emergency response services, and cause minor changes for other transportation modes such as bicycle and snowmobile by changing the locations at which US 53 could be crossed. One (1) residential relocation is proposed near County Y in the town of Gordon.
B-2 Indirect Effects	☒	☒	☐	☐	See Indirect Effects Analysis, Appendix A
B-3 Cumulative Effects	☒	☒	☐	☐	See Indirect Effects Analysis, Appendix A
For B-5 through B-8, if any of these resources are present on the project, involve the REC early because of possible project schedule implications.					
B-4 Environmental Justice	☐	☐	☒	☒	The potential for low-income and/or minority populations exists in the study area. The demographic makeup of the area would be re-evaluated closer to design/construction by the designer. According to 2011 American Community Survey estimates, 12.9% of all people in Douglas County are below the poverty level. The rate for census tract 303 (Gordon-Solon Springs) was just 7.6%. The analysis did not reveal any disproportionately high impacts to date. No minority populations would be subject to such impacts either. The Leading Option would provide safer crossing of US 53 for the surrounding community.
B-5 Historic Resources	☐	☒	☐	☒	18 previously identified historic/architectural resources were identified within the study area. One of these, the Gordon Depot/Soo Line Railroad Depot, has been deemed eligible for listing in the NRHP. A Determination of No Adverse Effects (DNAE) was prepared. The SHPO signed the Section 106 on 9/11/15.

					See Appendix D, Section 106 documentation
B-6 Archaeological/Burial Sites	☐	☐	☒	☐	45 previously identified archaeological and cemetery/burial sites exist within a one-mile buffer of the study area. None of these sites would be affected as a result of implementing the Leading Option. The SHPO signed the Section 106 on 9/11/15. See Appendix D, Section 106 documentation
B-7 Tribal Coordination /Consultation	☐	☐	☒	☐	The Lac du Flambeau Band of Lake Superior Chippewa Indians sent a letter expressing concerns for any historic and cultural properties within the study area of potential effect. None of these properties are affected by the Leading Option (see Appendix C5 and Appendix D, Section 106 documentation).
B-8 Section 4(f) and 6(f) or Other Unique Areas	☐	☐	☒	☐	No Section 4(f) or 6(f) land will be affected by the Leading Option.
B-9 Aesthetics	☐	☐	☒	☐	The landscape in the study area is comprised of gently rolling land and forested areas, as well as low-lying wetlands along stream banks. Other elements in the viewshed include scattered site housing, highway-oriented commercial development concentrated near existing intersections and low density urban development near the Village of Solon Springs. The proposed improvements are not expected to substantially affect the aesthetics of the environment.
C. NATURAL RESOURCE FACTORS					
C-1 Wetlands	☐	☐	☒	☐	Shallow open water communities, deep marshes, shallow marshes, and bogs are found throughout the study area. No wetlands would be converted to right of way or filled with the Leading Option. Wetlands would be delineated closer to design/construction to ensure no wetlands would be impacted by the Leading Option.
C-2 Rivers, Streams and Floodplains	☒	☐	☐	☒	The current alignment of US 53 travels over an unnamed drainage way just north of the County A intersection.
C-3 Lakes or Other Open Water	☐	☐	☒	☐	The Upper Saint Croix Lake, Saint Croix Flowage, One Mile Lake, Two Mile Lake and Harriet Lake are all located within a one-mile buffer of the study area, but will not be affected by the Leading Option.
C-4 Groundwater, Wells, and Springs	☐	☐	☒	☐	A GIS analysis did not identify any wells or springs within the study area; however, there are likely private wells and groundwater monitoring wells throughout the study area that would be identified during final design. The Douglas County Comprehensive Plan 2010-2030 identifies areas within the study area as highly susceptible to groundwater contamination.
C-5 Upland Wildlife and Habitat	☒	☐	☐	☒	Wildlife associated with the study area land types include a variety of game and non-game species of birds, mammals, fish, reptiles and amphibians that typically live in Douglas County. The Leading Option would degrade small areas of habitat throughout the study area. The overall effect of the eventual implementation of the Leading Option is expected to be minor.
C-6 Coastal Zones	☐	☐	☒	☐	No coastal zones are present in the study area.
C-7 Threatened and Endangered Species	☒	☐	☐	☒	Species have been identified in the study area; please see included evaluation. An endangered and threatened species evaluation would be conducted closer to design/construction.
D. PHYSICAL FACTORS					
D-1 Air Quality	☐	☐	☒	☐	The study is exempt from permit requirements under Wisconsin Administrative Code – Chapter NR 411. No effect to air quality is expected.
D-2 Construction Stage Sound Quality	☒	☐	☐	☒	To reduce the potential impact of construction noise, the special provisions for this study would require that motorized equipment would

					be operated in compliance with all applicable local, state, and federal laws and regulations relating to noise levels. Given that the study area is predominantly rural, there would be a relatively limited number of persons that could be potentially affected by increased noise levels during construction. Persons that could be affected primarily include residents in nearby households and agricultural operators. Any potential effects are anticipated to be localized, temporary, and transient in nature.
D-3 Traffic Noise	☒	☐	☐	☒	A detailed noise analysis was required for this project. Four receptors would be affected at County Y and one receptor at County A.
D-4 Hazardous Substances or Contamination	☐	☐	☐	☒	A phase 1 Hazardous Materials Assessment (HMA) has been completed. A total of 13 potential hazardous materials sites were identified. Eight (8) sites within the study area are recommended for Phase 2 or 2.5 analyses.
D-5 Stormwater	☒	☐	☐	☒	A Stormwater Management Plan would be developed and incorporated into the study's design to reduce or minimize runoff effects to surrounding waters from construction of the Leading Option.
D-6 Erosion Control and Sediment Control	☒	☐	☐	☒	Construction site erosion and sediment control would be part of the study's design and construction as set forth in TRANS 401 Wis. Adm. Code and the WisDOT/WDNR Cooperative Agreement.

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None Identified	

1. Briefly describe the existing economic characteristics of the area around the project:

Economic Activity	Description
a. Agriculture	Douglas County farmers own and manage 8.5 percent of the county's land. This includes cropland, pasture, tree farms, farm forests, and wetlands. Douglas County agriculture accounts for $37.9 million, or 2.2 percent, of the county's total income. Agriculture jobs provide 3.3 percent of the county's jobs. (http://anre.uwex.edu/files/2015/01/Douglas_2014.pdf). No farmland exists in the study area.
b. Retail business	Retail business exists in the town of Gordon and the village of Solon Springs.
c. Wholesale business	Not prevalent in the study area
d. Heavy industry	Not prevalent in the study area
e. Light industry	Not prevalent in the study area
f. Tourism	The St. Croix Flowage near Gordon, a number of resorts on inland lakes, and the Wild River State Trail (runs parallel to US 53) are the main tourism drivers of the area. These resources accommodate many activities like canoeing, kayaking, fishing, biking, camping, hiking, and snowmobiling.
g. Recreation	Approximately 300 miles of multiple-use recreational trails are located throughout Douglas County. The Forestry Department oversees the development and maintenance of 300 miles of snowmobile and seasonal ATV trails, ten miles of cross-country ski trails, and numerous nature-hiking trails. Aside from the traditional functions, the trails are also used for snow shoeing, dog sledding, horseback riding, nature and wildlife viewing, hiking, and bicycling. The Gordon Dam Park offers a boat landing for fishing on the St. Croix Flowage.
h. Forestry	About 5,000 acres of nearly pristine forests, pine barrens, wetlands, and bogs in Douglas County have been permanently preserved as State Natural Areas. The areas were designated through work done by the county's Forestry Department and the State Department of Natural Resources. County forest land is preserved between Gordon and Solon Springs; including the Douglas County Wildlife Area. Douglas County owns more forested land than any other county in Wisconsin.

2. Discuss the economic advantages and disadvantages of the Leading Option and whether advantages would outweigh disadvantages. Indicate how the project would affect the characteristics described in item 1 above:

The Leading Option would have numerous economic benefits over the existing conditions:

- Assist in ensuring the economic viability of the region by promoting safe and efficient travel on the US highway system.
- Promote the efficient transportation of raw materials, goods, and services between markets.
- Provide safe and efficient access to the towns of Gordon and Solon Springs and surrounding areas.
- Accommodate the current and planned economic growth/development for the area.
- Assist in ensuring safe and efficient access of police, fire, and emergency services to the area.
- Provide safe access to businesses and commercial operations along US 53.

The Leading Option's disadvantages include:

- Require the relocation of some current private access to local roads causing slight indirection for vehicles accessing some of the property along the corridor.
- Increased travel time to/from some locations along the US 53 corridor.

- Require a major capital investment by WisDOT that could not be expended elsewhere.
- Cause temporary disruptions during construction.

3. What effect will the Leading Option have on the potential for economic development in the project area?

☒ **The proposed project will have no effect on economic development.**

☐ **The proposed project will have an effect on economic development.**

☐ Increase, describe: _____

☐ Decrease, describe: _____

The Leading Option is consistent with the goals of local land use plans and development trends in the area. The Leading Option will support planned economic development in the area and would likely have a very small overall effect on economic development in the area.

Changes in access along the US 53 corridor may initially influence the location of certain types of development such as highway-oriented businesses. These businesses would likely avoid locations which eventually would not provide direct access to US 53 (See Appendix A). Existing businesses and commercial operations in the study area would benefit from safe access to/from their operations. The separation of traffic destined to local commercial areas from regional traffic would improve mobility and circulation for customers destined to these locations.

BUSINESS EVALUATION

Wisconsin Department of Transportation

A-2

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. Is a Conceptual Stage Relocation Plan attached to this document?

☐ Yes

☒ No – No Businesses will be relocated as a result of the Leading Option

2. Describe the economic development or existing business areas affected by the Leading Option:

The Leading Option will be constructed incrementally over time as funds become available. This phasing of the plan will allow communities and property owners to make long-term planning decisions that are compatible with the future plans for the highway.

A number of businesses exist at the US 53 intersections with County A and County Y. Some indirection would result from the Leading Option, but is not expected to have a significant impact on these businesses, their customers, or their employees. Access would be provided to these businesses during construction and the resulting in temporary indirection which is also expected to be minor.

3. Identify and discuss existing modes of transportation and their traffic within the economic development or existing business area:

The primary mode of transportation within the areas of existing businesses includes automobiles and truck traffic. Bicycle and pedestrian traffic is also present to some degree in the village of Solon Springs. Snowmobile access is available during winter months while ATV access is available during summer months.

4. Identify and discuss effects on the economic development potential and existing businesses that are dependent upon the transportation facility for continued economic viability:

☐ The proposed project will have no effect on a transportation-dependent business or industry.

☒ The Leading Option may change the conditions for a business that is dependent upon the transportation facility. Identify effects, including effects which may occur during construction.

Changes in access at the US 53 intersections with County A and County Y could increase travel times to business currently located there. Misdirection would be minor and is not expected to have a significant impact on these businesses, their customers, or their employees.

5. Describe both beneficial and adverse effects on:

A. The existing business area affected by the Leading Option. Include any factors identified by business people that they feel are important or controversial.

The Leading Option is likely to support the existing and planned land uses along US 53. Conversion of existing US 53 and local road intersections to overpasses and cul-de-sacs could reduce the likelihood of transportation oriented commercial land uses from locating along US 53. The Leading Option is consistent with planned land uses for the areas where such plans exist.

Businesses at the main intersections will benefit from being located on a safer transportation system. Indirection will occur for access to some businesses but will not have a significant impact on travel times.

Preliminary design includes right of way impacts for a property that includes a full-service residential and commercial plumbing business located in the town of Gordon. The proposed right of way expansion would require acquisition of the current driveway for the business. Two options are offered on the preliminary design plans to mitigate the impact if it is present in the final design: move the building's garage doors to the other side or build a retaining wall.

B. The existing employees in businesses affected by the proposal. Include, as appropriate, a discussion of effects on minority populations or low-income populations.

The Leading Option would benefit employees by providing a safer transportation system for travel to/from work. No businesses will be acquired as a result of the Leading Option and travel times to existing businesses will not see a significant change.

6. Estimated number of businesses and jobs that would be created or displaced because of the project:

Business/Job Type	Businesses			Jobs	
	Created	Displaced	Value	Created	Displaced
Retail	0	0		0	0
Service	0	0		0	0
Wholesale	0	0		0	0
Manufacturing	0	0		0	0
Other (List)	0	0		0	0

7. Are any owners or employees of created or displaced businesses elderly, disabled, low-income or members of a minority group?

☒ No
☐ Yes – If yes, complete B-4, Environmental Justice Evaluation.

8. Is Special Relocation Assistance Needed?

☒ No
☐ Yes – Describe special relocation needs.

9. Identify all sources of information used to obtain data in item 8:

☐ WisDOT Real Estate Conceptual Stage Relocation Plan
☐ Multiple Listing Service (MLS)
☐ Newspaper listing(s)
☒ Other - Identify: Douglas County Land Records

10. Describe the business relocation potential in the community:

A. Total number of available business buildings in the community. N/A

B. Number of available and comparable business buildings by type and price (Include business buildings in price ranges comparable to those being dislocated, if any).
Number of available and comparable type business buildings in the price range of _____
Number of available and comparable type business buildings in the price range of _____
Number of available and comparable type business buildings in the price range of _____

11. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24. Check all that apply:

N/A

☐ Business acquisitions and relocations will be completed in accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended." In addition to providing for payment of "Just Compensation" for property acquired, additional benefits are available to eligible displaced persons forced to relocate from their business. Some available benefits include relocation advisory services, reimbursement of moving expenses, replacement of business payments. In compliance with State law, no person would be displaced unless a comparable replacement business would be provided.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners will be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired will be inspected by one or more professional appraisers. The property owner will be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Reasonable cost of an owner's appraisal will be reimbursed to the owner if received within 60 days of initiation of negotiations. Based on the appraisal(s) made, the value of the property will be determined, and that amount offered to the owner.

☐ Describe other relocation assistance requirements, not identified above.

12. **Identify any difficulties relocating a business displaced by the Leading Option and describe any special services needed to remedy identified unusual conditions:**
    N/A

13. **Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated. Also discuss accommodations made to minimize adverse effects to businesses that may be affected by the project, but not relocated:**
    N/A

COMMUNITY OR RESIDENTIAL EVALUATION

Wisconsin Department of Transportation

B-1

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. **Give a brief description of the community or neighborhood affected by the proposed action:**

Name of Community/Neighborhood
Douglas County
Incorporated
☒ Yes ☐ No

Total Population
44,159

Demographic Characteristics

Census Year 2010	% of Population
White	92.5
Non-White/Minority	7.5
Age 65+	14.4
Below poverty level	12.9

Name of Community/Neighborhood
Census Tract 303 (Gordon-Solon Springs)
Incorporated
☐ Yes ☒ No (Census tracts are not incorporated; however, some areas of this tract are incorporated.)

Total Population
5,093

Demographic Characteristics

Census Year 2010	% of Population
White	91.8
Non-White/Minority	8.2
Age 65+	20.0
Below poverty level	7.6

2. Identify and discuss existing modes of transportation and their importance within the community or Neighborhood:

The primary mode of transportation within the community includes automobile and truck traffic. This traffic includes both local and regional trips on US 53 as well as county and local roadways. US 53 primarily serves local/regional trips for a variety of purposes. It also serves travelers from more distant locations for recreational, business, and long-haul truck trips.

The Canadian National Railway passes through Douglas County east of the study area and connects Superior, WI with Green Bay, WI and other rail junctions across the state. The nearest passenger rail services are available in Minneapolis-St. Paul through Amtrak.

No scheduled passenger flights are available to residents within Douglas County. The nearest airports providing regular scheduled passenger flights are located in Eau Claire, WI, Duluth, MN, and Minneapolis-St. Paul, MN.

Bike facilities including the Wild Rivers State Trail exist near the study area. The Wild Rivers State Trail is a 40-mile rails-to-trails facility located between Rice Lake and Superior and roughly parallel to US 53. The trail is open to snowmobile use during the winter season.

The Duluth Transit Authority provides bus service between Duluth, MN and Superior, WI.

3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:

The implementation of the Proposed Action would not likely change the mode of travel used. There would likely be some minor changes in automobile and truck traffic patterns on the local road system, and some added indirection and changes in travel times to and from some locations in the study area.

Automobiles and trucks serve as the primary transportation mode. This consists of the primary arterial US 53 as well as other county and local roads. US 53 serves the area for a variety of purposes, such as recreational, business and long-haul truck trips. In 2014, AADT reached 6,600 for US 53 in the study area. Traffic volume is projected to increase to 7,800 in 2034, and traffic on county highways that intersect US 53 is expected to increase as well.

According to 2012 ACS 5-Year Estimates, the primary mode of transportation to work in the village of Solon Springs was driving via automobile alone, at 74.9%. Carpooling was second with 16.0%, walking was third with 7.2%.

There is no passenger rail service in the area. The nearest commercial rail system is in Superior, WI and Duluth, MN. The nearest passenger rail service is located in Minneapolis, MN.

There are no airports within the county with commercial passenger service, with the nearest airport with public service being in Duluth, Minnesota. There are six airports located in the county and three of them provide public service. One of these is located in the town of Solon Springs.

There are many multi-use recreational trails located in the area servicing bicycles, pedestrians, snowmobiles, and ATV's.

The only transit options within the area are located in Superior, WI and Duluth, MN. These cities also provide dedicated transportation for the elderly and disabled.

4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:

In general, land use within the project area will not change. The acquisition of land along the corridor is not expected to affect the overall character of the area. Likewise, the existing pattern of scattered residential rural development and residential developments in Solon Springs and Gordon is not expected to change as a result of the Proposed Action.

5. Address any changes to emergency or other public services during and after construction of the proposed project:

Changes to emergency services include indirection (altered travel routes/distance) during construction, and after access changes have been completed. Additional safe crossings of US 53 balance the safety and efficiency of emergency service responses with the potential indirection caused by those access changes.

6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:

The Proposed Action includes changes in direct access onto US 53 for some existing intersections in the study area, including local roads, driveways, and agricultural access. In a few locations, access to property will change to be located onto local roads that do not access US 53. Because of the rural nature of the area, there are no sidewalks or terraces to be affected.

7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:

Community facilities are not affected by implementation of the Proposed Action.

8. Identify and discuss factors that residents have indicated to be important or controversial:

Residents expressed interest in maintaining access to businesses on US 53 frontage roads. The project will provide safe and efficient access to businesses.

9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.

None

10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:

a. ☐ None identified.
b. ☐ No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
c. ☒ Occupied residential building(s) will be acquired. Provide number and description of buildings, e.g., single family homes, apartment buildings, condominiums, duplexes, etc.

11. Anticipated number of households that will be relocated from the occupied residential buildings identified in item 10c, above:

Total Number of Households to be Relocated.
1*

*****Note: Complete records for the property identified for relocation were not available. It is estimated that the existing structure is a residence, but additional information cannot be speculated with the currently available information.

a. Number by Ownership

Number of Households Living in Owner Occupied Building	Number of Households Living in Rented Quarters

b. Number of households to be relocated that have.

1 Bedroom	2 Bedroom	3 Bedroom	4+ Bedrooms	Unknown

c. Number of relocated households by type and price range of dwelling.

Number of Single Family Dwelling. 1	Price Range Land + Improvements = $59,200
Number of Multi-Family Dwellings 0	Price Range
Number of Apartment 0	Price Range

12. Describe the relocation potential in the community:

It is not possible to determine the potential to relocate to a similar residence without more information about the existing property and its improvements.

a. Number of Available Dwellings

1 Bedroom	2 Bedrooms	3 Bedrooms	4 or More Bedrooms

b. Number of Available and Comparable Dwellings by Location

within	within
within	within

c. Number of Available and Comparable Dwellings by Type and Price. (Include dwellings in price ranges comparable to those being dislocated, if any.)

Single Family Dwellings	Price Range
Multi-Family Dwellings	

Apartments

13. Identify all the sources of information used to obtain the data in item 12:

☐ WisDOT Real Estate Conceptual Stage Relocation Plan ☐ Multiple Listing Service (MLS)
☐ Newspaper Listing(s) ☐ Other – Identify

14. Indicate the number of households to be relocated that have the following special characteristics:

☒ None identified.
☐ Yes – __ total households to be relocated. Complete table below

Special Characteristics	Number of Households with Individuals with Special Characteristics
Elderly	
Disabled	
Low income	
Minority	
Household of large family (5 or more)	
Not Known	
No special characteristics	

15. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24:

☒ Residential acquisitions and relocations will be completed in accordance with the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act), as amended." In addition to providing for payment of "Just Compensation" for property acquired, additional benefits are available to eligible displaced persons required to relocate from their residence. Some available benefits include relocation advisory services, reimbursement of moving expenses, replacement housing payments, and down payment assistance. In compliance with State law, no person would be displaced unless a comparable replacement dwelling would be provided. Federal law also requires that decent, safe, and sanitary replacement dwelling must be made available before any residential displacement can occur.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners would be contacted and given an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired would be inspected by one or more professional appraisers. The property owner would be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Based on the appraisal(s) made, the value of the property would be determined, and that amount offered to the owner.

☐ Identify other relocation assistance requirements not identified above.

16. Identify any difficulties or unusual conditions for relocating households displaced by the proposed action:

When the property was purchased by the current owner, the deed only described the land directly to the east of the existing residence. Additional/more accurate property information would need to be obtained in order to determine the specifications for a suitable replacement.

17. Indicate whether Special Relocation Assistance Service will be needed. Describe any special services or housing programs needed to remedy identified difficulties or unusual conditions noted in item #14 above:

☒ None identified
☐ Yes - Describe services that will be required

18. Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected:

None

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. **Identify and give a brief description of the populations covered under Executive Order 12898 (EO 12898). Include the relative size of the populations and their pertinent demographic characteristics: (Check all that apply.)**

   The potential for low-income and/or minority populations exists in the study area. The demographic makeup of the area would be re-evaluated closer to design/construction by the designer.

Population Groups	Low Income	Elderly	Disabled
☒ Black (having origins in any of the black racial groups of Africa) Describe: 1.9% (101 people) of Census Tract 303	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race) Describe: 1.6% (83 people) of Census Tract 303	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ Asian American (origins in any of the original peoples of the Far East, SE Asia, the Indian subcontinent, or the Pacific Islands) Describe: 0.8% (42 people) of Census Tract 303	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ American Indian and Alaska Native (having origins in any of the original people of North American and who maintains cultural identification through tribal affiliation or community recognition) Describe: 1.7% (89 people) of Census Tract 303	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☒ White and any combination of the above. Describe: 7.8% (394 people) of Census Tract 303 are below the national poverty level.	Yes ☒ No ☐	Yes ☐ No ☐	Yes ☐ No ☐
☐ Non-minority low-income population Describe:		Yes ☐ No ☐	Yes ☐ No ☐

	Wisconsin	Douglas County	Census Tract 303 Gordon-Solon Springs
LOW INCOME			
Population for whom poverty status is determined: Total	5,554,566	42,454	5,059
Population for whom poverty status is determined: Income in past 12 months below poverty level	723,730	6,395	394
Percent Low Income	13.0%	15.1%	7.8%
Potential Low Income EJ Impact?		YES	YES

	Wisconsin	Douglas County	Census Tract 303 Gordon-Solon Springs
MINORITY			
Total population	5,706,871	43,994	5,204
Population: Not Hispanic or Latino, White Alone	4,736,069	40,632	4,826
Number Non-white/minority	970,802	3,362	378
Percent Non-white/minority	17.0%	7.6%	7.3%
Potential Minority EJ Impact?		YES	YES

Source: 2013 ACS 5-year estimate

2. **How was information on the Leading Option communicated to populations covered by Executive Order 12898. Check all that apply:**
   - ☐ Advertisements
   - ☐ Brochures
   - ☐ Newsletters
   - ☒ Notices
   - ☐ Utility Bill Inserts
   - ☐ E-mails
   - ☐ Public Service Announcements
   - ☒ Direct Mailings
   - ☐ Key Persons
   - ☒ Other, identify Public Involvement Meetings

3. **How was input from populations covered by EO 12898 obtained? Check all that apply:**
   - ☐ Mailed Surveys
   - ☐ Targeted Small Group Information Meetings

☐ Door-to-door interviews
☐ Focus Group Research
☐ Public Hearings
☐ Other, identify _____
☐ Targeted Workshop/conferences
☒ Public Meetings
☐ Key Person Interviews

4. Indicate any special accommodations made to encourage participation from populations covered by EO 12898. Check all that apply:

☐ Interpreters
☒ Accessibility for Elderly & Disabled
☐ Child Care Provided
☐ Other, _____
☐ Listening Aids
☐ Transportation Provided
☒ Sign Language

5. If there is a project advisory committee, identify and describe committee members from populations covered by EO 12898

☒ None identified
☐ Yes - Check all that apply and describe below:
- ☐ Black
- ☐ Hispanic
- ☐ Asian-American
- ☐ American Indian or Alaska Native
- ☐ White and any combination of the above
- ☐ Non-minority low-income

Describe: _____

6. As a result of public involvement and inter-agency coordination, identify and describe issues of concern or controversy to populations covered by EO 12898:

A. Economic Development and Business

☒ No issues of concern or controversy identified.
☐ Yes - Issues of concern or controversy identified.

1. List effects on businesses and populations covered by EO 12898:
   - ☐ None identified.
   - ☐ Yes.

     List and discuss - _____

Population Groups	Number of Businesses **Created** That Will:		Number of Businesses **Displaced** That:	
	Employ	Serve	Employ	Serve
Elderly				
Disabled				
Low income				
Minority				

2. List other effects.
   - ☐ None identified.
   - ☐ Yes

     List and discuss - _____

B. Agriculture

☒ No issues of concern or controversy identified.
☐ Yes - Issues of concern or controversy identified.

1. List effects on agricultural operations owned by members of populations covered by EO 12898.
   - ☐ None identified.
   - ☐ Yes

     List and discuss - _____
2. List effects on agricultural operations which employ members of populations covered by EO 12898, including migrant workers
   - ☐ None identified.
   - ☐ Yes

     List and discuss - _____
3. List other effects on members of populations covered by EO 12898:
   - ☐ None identified.
   - ☐ Yes

List and discuss - _____

C. Community/Residential

☒ No issues of concern or controversy identified.

☐ Yes - Issues of concern or controversy identified.

List and discuss - _____

1. List relocation effects on households covered by EO 12898:

☐ None identified.

☐ Yes

List and discuss - _____

Population Groups	Number of Households Relocated
Elderly	
Disabled	
Low income	
Minority	

2. List other effects on members of populations covered by EO 12898.

☐ None identified.

☐ Yes

List and discuss - _____

D. Other

☒ No issues of concern or controversy identified.

☐ Issues of concern or controversy identified.

List and discuss - _____

7. Indicate whether effects on populations covered by EO 12898 are beneficial or adverse:

A. Beneficial effects.

☒ Describe effects on populations and discuss whether they are direct, indirect or cumulative. Include a discussion of any measures to enhance beneficial effects. Describe methods used to determine beneficial effects resulting from the proposed project. (If only beneficial effects, process is complete.)

US 53 would be improved with safer crossings, creating a direct benefit for all demographics in the area. The demographic makeup of the area would be re-evaluated closer to design/construction.

B. Adverse effect.

☒ 1. Adverse Effects are proportional or disproportionately low. Identified adverse effects are proportionate or disproportionately low to those experienced by the general population.

Describe effects on populations and discuss whether they are direct, indirect or cumulative. Describe methods used to determine adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate adverse effects. (If only beneficial or proportional or disproportionately low effects, process is complete.)

Approximately 80 residential homes and/or property owners may be affected by noise during construction. Those homes in close proximity to the proposed new or modified intersections could expect to be those most affected. The demographic makeup of the area would be re-evaluated closer to design/construction.

☐ 2. Adverse Effects are disproportionately high. A disproportionately high and adverse effect means an adverse effect that:

a.) is predominately borne by populations covered by EO 12898; or

b.) will be suffered by populations covered by EO 12898 and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by population not covered by EO 12898.

Describe disproportionately high and adverse effects on populations covered by EO 12898 and discuss whether they are direct, indirect or cumulative. Describe methods used to determine adverse effects resulting from the proposed project. Include a discussion of any measures to avoid, minimize, or mitigate disproportionately high and adverse effects or enhance beneficial effects.

8. Will the option be carried through final design even with disproportionately high and adverse effects on populations covered by EO 12898?

A. ☐ No, the option will not be carried out because of disproportionately high and adverse effects on populations covered by EO 12898.

1. ☐ Another option with less severe effects on populations covered by EO 12898 can meet the purpose and need of the proposed option and is practicable.
2. ☐ Other.
   Describe. _____

B. ☐ Yes, the option will be carried out with the mitigation of disproportionately high and adverse effects on populations covered by EO 12898.

1. ☐ All disproportionate effects will be mitigated by the following measures.
   List and discuss measures:
2. ☐ The option will be carried through final design without fully mitigating disproportionately high and adverse effects. A substantial need for the option exists based on the overall public interest. Options that would have less adverse effects on populations covered by EO 12898 have either:
   a) ☐ Adverse social, economic, environmental, or human health impacts that are more severe.
   b) ☐ Would involve increased costs of an extraordinary magnitude.

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

Section 106 Form or other documentation, with all necessary approvals, must be attached to the Environmental Document for all projects.

1. Parties contacted:

Parties Contacted	Date Contacted	Comments Received		
		No	Yes	Check if Attached
Douglas County Historical Society	12/20/2013	X		☐
Gordon-Wascott Historical Society (Nancy Hasbrouck – Chairperson)	2/10/2014		X	☒ See Section 106 documentation

2. Property Name: Gordon Depot/Soo Line Railroad Depot

3. Location: 9672 E. County Rd Y

4. Use: Museum

5. Property type:
- ☐ Bridge
- ☒ Building
- ☐ Historic District
- ☐ Other: _____

6. Property Designations:
- ☐ National Historic Landmark (NHL)
- ☐ National Register of Historic Places (NRHP)
- ☐ State Register of Historic Places
- ☐ Local Registry
- ☐ Tribal Registry

7. A Determination of Eligibility (DOE) has been prepared:
- ☐ No - Property is already on NRHP or NHL.
- ☒ Yes - DOE prepared.
- ☐ Other: _____

8. Describe the significance of the structures and/or buildings:

Railroad connections were important in the development of Douglas County. They served as a means of transportation and shipping. Two major rail lines passed through Gordon and Solon Springs, and played a major role in their development.

9. In compliance with the requirements of Section 106, of the National Historic Preservation Act, the proposed project's effects on the historic property, (e.g., structure or building) have been evaluated in the following report, a copy of which is:
- ☐ In the project file, or
- ☒ Attached to this document:
  - ☐ Documentation for determination of no historic properties affected (Reported on the Section 106 Review Form).
  - ☒ Documentation for determination of no adverse or conditional no adverse effect to historic properties.
  - ☐ Documentation for Consultation about adverse effect(s). A Memorandum of Agreement has been completed.
    - ☐ No. Consultation about effects is continuing.
    - ☐ Yes, a copy of the MOA is attached to this document. Summarize MOA stipulations below:

10. Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?

☐ No

- ☐ Project is not federally funded.
- ☒ No right-of-way or Permanent Limited Easements will be acquired from the property and the project will not substantially impair the characteristics that qualify the property for the NRHP.
- ☐ Right-of-way will be acquired from the NRHP property but a *de minimus* finding has been proposed.
- ☐ Other – Explain:

☐ Yes – Complete evaluation for Section 4(f) and 6(f) or other Unique Areas.

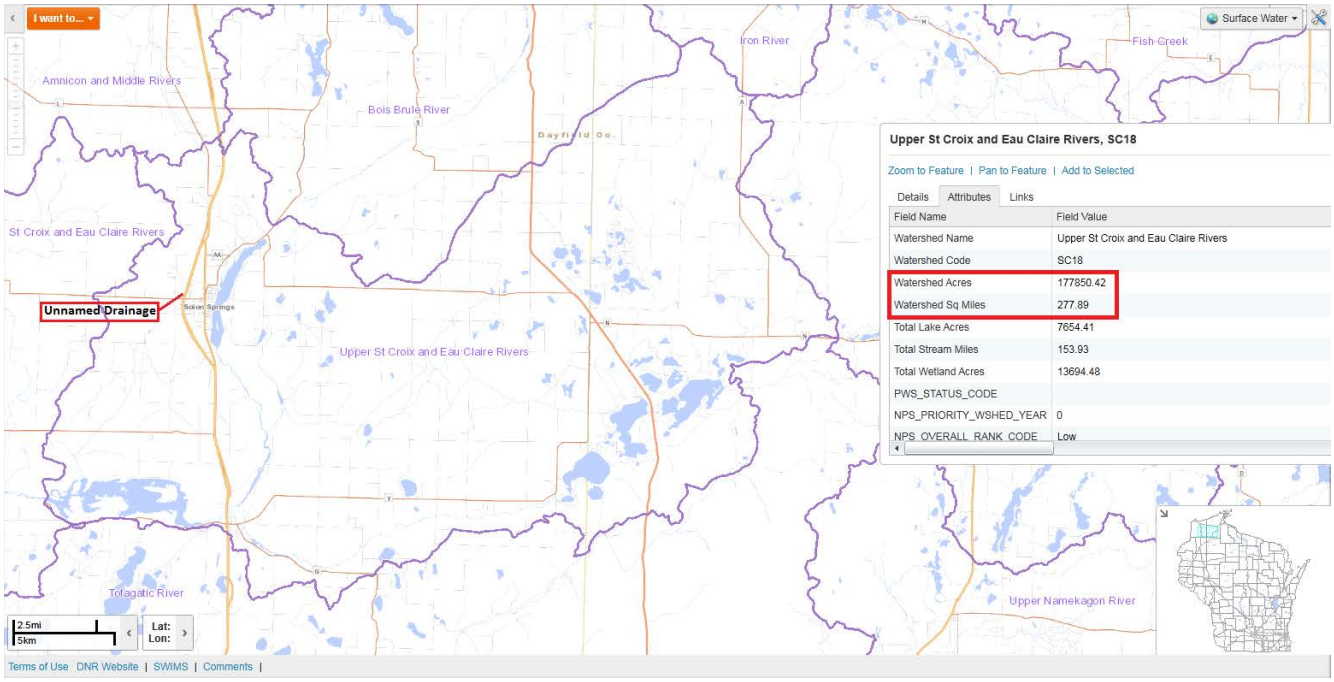
County A – Option 3A	Total Length of Center Line of Existing Roadway 12.1miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. **Stream Name:** Unnamed drainage (WDNR ID: WBIC 5002469)

2. **Stream Type: (Indicate Trout Stream Class, if known)**
   - ☒ Unknown
   - ☐ Warm water
   - ☐ Cold water
     If trout stream, identify trout stream classification: _____
   - ☐ Wild and Scenic River

3. **Size of Upstream Watershed Area:**

The stream is located within the Upper St. Croix and Eau Claire Rivers watershed, which encompasses 177,850 acres. The stream itself is just 3,700 feet in length and its upstream watershed area accounts for only a miniscule fraction of the watershed as a whole.



4. **Stream flow characteristics:**
   - ☐ Permanent Flow (year-round)
   - ☒ Temporary Flow (dry part of year)

5. **Stream Characteristics:**
   A. Substrate:
      1. ☐ Sand
      2. ☐ Silt
      3. ☐ Clay
      4. ☐ Cobbles
      5. ☒ Other-describe: Grass-filled swale

   B. Average Water Depth: The stream functions as a drainage way during storm events. Water depth varies by the intensity and duration of each event.

C. Vegetation in Stream
☐ Absent
☒ Present - If known describe: Grass-filled swale

D. Identify Aquatic Species Present: None identified

E. If water quality data is available, include this information: Not available

F. Is this river or stream on the WDNR's "Impaired Waters" list?
☒ No
☐ Yes - List: _____

6. If bridge or box culvert replacement, are migratory bird nests present?
☐ Not Applicable
☒ None identified
☐ Yes – Identify Bird Species present
Estimated number of nests is:

7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?
☒ Not Applicable
☐ Yes
☐ No - Describe mitigation measures:

8. Describe land adjacent to stream*:*

Much of the land adjacent to the drainage is residential. Most of this land is wooded. Where the drainage crosses US 53, it runs along a property with a commercial storage building.

9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site

The stream discharges into a small detention pond on the east side of US 53. The pond falls completely outside of any proposed right of way expansion.

10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, C-1, Question 8.]

Proposed work will cross the drainage, but is not within a 100-year floodplain. Project involves lengthening the right turn lane over the stream. Slope grading would occur between US 53 and the Wild River State Trail in the area of the crossing.

11. Discuss the effects of any backwater which would be created by the Leading Option. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:

The Leading Option will not create additional backwater.

12. Describe and provide the results of coordination with any floodplain zoning authority:

Continuous coordination with WDNR has occurred throughout the entire project. They have provided several letters describing the various waterways and floodplains in the project area. These areas have largely been avoided during the design phase.

13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?
☒ No impacts would occur.
☐ Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
☐ Significant flooding with a potential for property loss and a hazard to life.
☐ Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:

N/A

15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:

N/A

16. Are measures proposed to enhance beneficial effects?

☒ No
☐ Yes. Describe: _____

GROUNDWATER, WELLS AND SPRINGS EVALUATION

Wisconsin Department of Transportation

C-4

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. Groundwater Protection Elements in Comprehensive Land Use Planning and Transportation:

A. Is project located in an area that has or is developing a:

Groundwater Plans, Programs and Ordinances	Yes	No
WDNR Approved Well Head Protection Plan		X
WDNR Source Water Assessment		X
Groundwater Management Plan		X
Ordinance to protect wells, aquifers or sensitive groundwater recharge zones?		X
Wisconsin Groundwater Guardian Community Program		X

If yes, explain and describe future coordination needs for each category, above:

The Douglas County Comprehensive Plan 2010-2030 identifies the creation of a wellhead protection plan as one of its future goals. No such plan has yet been adopted.

B. Will project location, or likely infrastructure, construction method, or stormwater management practices encroach upon or affect protected areas or well locations resulting in non-compliant Plans or wells? Note, there are minimum separation distance requirements for wells, springs, depth to bedrock, and karst features in State Codes (see NR 151, Trans 401, NR 809, NR 811, and NR 812)?

☒ No - Explain why: No plans exist which protect these features. Setbacks from wells do exist in the area. Further analysis of minimum separation distance requirements and well location identification would occur closer to design/construction.

☐ Yes - Explain why:

C. Does the Leading Option conflict with items described in A, above?

☒ No - Explain why: No groundwater plans, programs, or ordinances were identified for the project area.

☐ Yes - Explain why:

D. Have the local units of Government, businesses, or property owners been notified of potential conflicts with items described in A or B?

☒ No

☐ Yes - Explain:

E. How will the project avoid, minimize, or mitigate potential impacts?

2. Identification and Inventory of Wells:

A. Identify wells located within existing and proposed right of way of Leading Option and provide date of well inventory survey (12/14/15):

The DATCP site, https://datcpgis.wi.gov/maps/?viewer=wcr was used to overlay GIS data onto the Leading Option. This data includes wells installed circa 1988. One well location exists along the proposed extension of Hughes Avenue (NE, SW, Sec. 26 T45N R12W) in Solon Springs. Additionally, one well location exists along the existing and proposed NW corner of Sundew Road and Snowberry Lane (NE, NE, Sec. 1 T43N R12W) in Gordon.

High capacity well GIS information was obtained from the WDNR on 12/14/15 and overlayed onto the Leading Option. None of these wells were located within the existing or proposed right-of-way.

Well Category	# in existing ROW	# in proposed ROW
Private Potable Wells	2 (DATCP verified)	1 (DATCP verified)
Municipal High Capacity Wells	0 (WDNR verified)	0 (WDNR verified)
Industrial or Agricultural Wells	0	0
Community Shared Wells	0	0
Groundwater Monitoring Wells	0	0
Research Monitoring Wells	0	0
Free-Flowing or Artesian Wells	0	0
Other (describe)	0	0

B. Will the Leading Option interfere or damage well locations or use? Is there potential for physical damage to the wells, alteration of pumping capacity, or degradation of water quality produced from the wells?

Two private wells were identified which would be interfered with in the project area. Further analysis and well location identification would occur closer to design/construction.

C. Identify the number and type of wells that will likely need to be abandoned and describe how that will be coordinated and who will be responsible to abandon the wells per State code? This must be listed as an environmental commitment.

Two private wells were identified in the project area that may need to be abandoned. Licensed well drillers and pump installers would fill and seal wells under Wisconsin Law (NR 812.26).

3. Identification and Inventory of Springs:

A. Are there known springs in or adjacent to the proposed project limits?
- ☒ None identified
- ☐ Yes, explain how many and describe characteristics and location of springs:

B. Is there a spring critical for an outstanding resource water (ORW), exceptional resource water (ERW), a cold-water fishery (trout stream), a sensitive aquatic habitat, a calcareous fen, a wetland, or other outstanding natural resources and endangered species?
- ☒ None identified
- ☐ Yes - How many and explain:

C. Will the Leading Option and likely grade changes, stormwater management practices, or construction methods affect a spring location, flow rate, or water chemistry (e.g., blasting, filling, cut-sections, drain pipes, structure placement, driving foundation footings or cofferdams, reducing infiltration to spring, etc)?
- ☒ No
- ☐ Yes - Explain (temporary or permanent affect?):

D. Describe coordination with the WDNR, Federal Resource Agencies, and local Government or other interest groups. How will spring impacts be avoided, minimized or mitigated?

The WDNR was invited to provide comments as well as attend all agency, local official, and public meetings. Coordination with WDNR took place on 9/6/2013. WDNR provided a list of sensitive resources within the study area on 12/4/2012. WDNR sent a letter on 9/16/20136 which provided a response to the range of options. However, no springs were identified that would require attention during this coordination.

The WDNR provided GIS well data on 12/14/2015. This information was analyzed and overlayed onto the current Leading Option.

4. **Groundwater Flow Conditions, Changes and Potential Impacts:**

A. Are there likely construction de-watering needs?
- ☒ No – It is not likely that there will be dewatering needs during construction. There are no permanent streams in in the Leading Option area and the groundwater is likely low enough as to not be encountered during construction. Actual dewatering needs will be determined closer to final design and construction.
- ☐ Yes - Explain duration of de-watering and likely pumping rates:

B. Will construction dewatering affect known groundwater contamination migration from leaking underground storage tanks or pumps islands at gasoline service stations or other contaminated properties?

☐ No
☒ Yes - Explain:

Five sites near the project area have identified leaking underground storage tanks. Two of these sites have been recommended for a Phase 2.5 Hazardous Materials Assessment closer to design and construction

C. Will there be a need to consider alternative highway design (exception to standards) or construction methods to avoid, minimize, or mitigate groundwater flow impacts?

No, alternative highway design will not need to be considered.

UPLAND WILDLIFE AND HABITAT EVALUATION

Wisconsin Department of Transportation

C-5

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None Identified	

1. Proposed Work in Upland Areas:

A. Describe the nature of proposed work in the upland habitat area (e.g., grading, clearing, grubbing, etc.):

The Leading Option includes the acquisition of right-of-way for local access roads and overpasses. The Leading Option would require clearing vegetation, removal of top soil and grading in upland areas during construction and would require the permanent conversion of approximately 26.78 acres of uplands

2. Vegetation/Habitat:

A. Give a brief description of the upland habitat area. Include prominent plant community(ies) at the project site (list vegetation with a brief description of each community type if more than one present).

Broad-leaved deciduous forest, and grassland as well as mixed deciduous-coniferous forest are the dominate land cover within the project area. To a lesser degree, small pockets of shrub wetland and barren land can be found. The forested cover types are made up of a variety of size classes (regeneration, sapling-pole, and saw timber) and structure (canopy, layers, ground vegetation, dead and downed material, and inclusions). Forest cover types associated with project area include aspen, northern hardwoods, oak, swamp hardwoods, white and red pine, and spruce-fir.

B. Will the project result in changes in the vegetative cover of the roadside?

The Leading Option would result in changes to the vegetative cover of the roadside throughout the entire length of the project area. Changes to the vegetative cover of the roadside would likely be concentrated in the areas where the proposed interchange, overpass and new local road connections would be implemented. The disturbed areas would be re-seeded after construction.

3. Wildlife:

A. Identify and describe any observed or expected wildlife associations with the plant community(ies) listed in question #1:

Wildlife associated with the project corridors land types include a variety of game and non-game species of birds, mammals, fish, reptiles and amphibians that typically live in Washburn County. Common types of wildlife include whitetail deer, wild turkeys, wolf, raccoon, squirrels, songbirds, waterfowl, and raptors. In addition, migrating birds use habitat in the corridor for food, shelter, and resting stops during seasonal migration.

B. Identify and describe any known wildlife or bird use areas or movement corridors that will be severed or affected by the Leading Option:

The St. Croix River and Flowage is considered a migration corridor within the project area. The Leading Option will degrade small areas of habitat throughout the project area. The overall effect of the eventual implementation of the Leading Option is expected to be minor.

C. Discuss other direct impacts on wildlife and estimate significance:

Direct impacts to wildlife in the form of habitat loss are expected to be minor. The degree of habitat loss would be greater in those areas where new facilities such as local roadways, overpasses, or the interchange are proposed to be constructed.

Wildlife movement takes place throughout the project corridor and will likely continue to do so once the Leading Option is implemented. However, it should be recognized that transverse crossings of streams in the corridor will impact movement corridors for wildlife. This is also true for transverse crossings of wetlands. These areas are especially important to consider for amphibians, mussels, and turtles. The Leading Option has been designed to minimize impacts to wetlands, and care in design of the facilities will be important for the preservation of wildlife movement corridors.

D. Identify and discuss any probable indirect impacts on wildlife in the area expected due to the project:

No indirect impacts on wildlife are expected as a result of the Leading Option. It is possible that further habitat loss may occur if the Leading Option spurs commercial or residential development in the immediate vicinity. However, there is no reason to believe that the Leading Option itself would attract new development other than what might occur if the current intersections with US 53 remain as they are today.

E. Describe measures to avoid and/or minimize adverse effects or to enhance beneficial effects:

The Leading Option was designed and routed to avoid and minimize impacts to upland habitats wherever feasible. As the improvements are implemented in the design/construction phase, right-of-way width for local roads and overpass and interchange designs may be optimized to minimize impacts to adjacent habitats.

THREATENED AND ENDANGERED SPECIES EVALUATION

Wisconsin Department of Transportation

C-7

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. Are there any known threatened or endangered species in the vicinity of the project?

☐ None identified

☒ Yes - Identify the species and indicate its status on Federal or State lists:

Species Common Name	Species Scientific Name	Federal Status	State Status	Affected by Project? Y/N
Plants				
Arrow-Leaved Sweet Coltsfoot	Petasites sagittatus		Threatened	N
Marsh Horsetail	Equisetum palustre		Special Concern	N
Animals				
Bald Eagle	Haliaeetus leucocephalus	Protected	Special Concern	N
Weed Shiner	Notropis texanus		Special Concern	N
Least Bittern	Ixobrychus exilis		Special Concern	N
Northern Long-Eared Bat	Myotis septentrionalis	Threatened	Threatened	N
Other				
Pronghorned Clubtail	Gomphus graslinellus		Special Concern	N

Additional species list obtained from USFWS IPaC Trust Resource Report on 9/30/15.
http://ecos.fws.gov/ipac/gettingStarted/index

2. Explain How a Species Is or Is Not Affected by the Action:

☒ Species Not Affected: A biological assessment would need to be conducted to identify how and to what extent species listed above could or might be affected be the Leading Option. Since the USFWS 2012 letter provided for the project, species lists have changed and new animals are included such as the Northern Long-Eared Bat and the Gray Wolf. No critical habitat is within the project area according to the USFWS IPaC Trust Report dated 9/30/15. Additionally, no large tracts of forest would be removed with the Leading Option; a habitat indicative of the Northern Long-Eared Bat and the Gray Wolf.

☐ Species Affected:

3. Describe Coordination:

U.S. Fish & Wildlife Service (USFWS):

☐ Has Section 7 coordination been completed?

☒ No

☐ Yes - Describe mitigation required to protect the federally listed endangered species:

WDNR

☒ Has coordination with DNR been completed?

☐ No

☒ Yes - Describe mitigation required to protect the state-listed species:

Endangered Species coordination with the WDNR has been ongoing and would continue to occur if a future Leading Option is initiated within this proposed Wis. Stats. 84.295 preservation corridor.

Any future Leading Option within the preservation corridor will require detailed study to determine the presence of endangered species that could be affected. A biological assessment will likely be initiated, should species identified above and/or critical habitat be present in the area of influence of any proposed future action. The biological

assessment will be conducted to determine if the future Leading Option is likely to adversely affect species or critical habitat. As may be determined by the biological assessment, a formal consultation would be initiated to determine appropriate mitigation measures for any endangered species impacted.

CONSTRUCTION STAGE SOUND QUALITY EVALUATION

Wisconsin Department of Transportation

D-2

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None Identified	

1. Identify and describe residences, schools, libraries, or other noise sensitive areas near the Leading Option and which will be in use during construction of the Leading Option. Include the number of persons potentially affected:

Approximately 80 residential homes and/or property owners may be affected by noise during construction. Those homes in close proximity to the proposed new or modified intersections could expect to be those most affected.

2. Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels:

The noise generated by construction equipment will vary greatly depending on equipment type/model/make, duration of operation, and specific type of work effort. However, typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet.

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects. Check all that apply:

- ☒ WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
- ☐ WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to _____ P.M. until _____A.M.
- ☐ WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to _____ P.M. until _____A.M.
- ☐ Special construction stage noise abatement measures will be required. Describe:

TRAFFIC NOISE EVALUATION

Wisconsin Department of Transportation

D-3

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None Identified	

1. Need for Noise Analysis:

A. Is the Leading Option considered a Type I project? (A Type I project is defined as a project that involves construction of a roadway on new location or the physical alteration of an existing highway which substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes).
- ☐ No – Complete D-2, Construction Stage Sound Quality Impact Evaluation.
- ☒ Yes – Complete D-2, Construction Stage Sound Quality Impact Evaluation, and the rest of this sheet.

2. Traffic Data:

A. Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on Traffic Summary Matrix*:*
- ☒ No
- ☐ Yes – Indicate volumes and explain why they were used:

Automobiles	Veh/hr
Trucks	Veh/hr
Or Percentage (T)	%

B. Identify and describe the noise analysis technique or program used to identify existing and future sound levels: (See attached receptor location map as Exhibit 5). A receptor location map must be included with this document.

Both existing and future noise levels were predicted primarily through modeling. Existing noise levels in the areas of new roads were measured in the field.
Model used: FHWA Traffic Noise Model (TNM), Version 2.5, Serial # 66074

C. Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic sound: (See attached receptor location map as Exhibit 5).

D. If this proposal is implemented will future sound levels produce a noise impact?
- ☐ No
- ☒ Yes - The impact will occur because:
  - ☒ The Noise Abatement Criteria (NAC) is approached (1 dBA less than the NAC) or exceeded.
  - ☐ Existing sound levels will increase by 15 dBA or more.

E. Will traffic noise abatement measures be implemented?
- ☐ Not applicable – Traffic noise impacts will not occur.
- ☒ No – Traffic noise abatement is not reasonable or feasible because of lack of population density and cost. Additional analysis is found in Exhibit 5. In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes.
  A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THE STUDY
- ☐ Yes – Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures which are proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented:

			Sound Level L_{eq}[1] (dBA)			Impact Evaluation		
Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.)	Number of Families or People Typical of this Receptor Site	Noise Abatement Criteria [2] (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Abatement Criteria (Col. e minus Col. d)	Impact[3] or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	129	1 Business	72	71	70	1	-1	I
2	130	1 Family	67	63	63	0	-4	N
3	131	1 Family	67	58	58	0	-9	N
4	132	1 Family	67	59	59	0	-8	N
5	133	1 Business	72	65	65	0	-7	N
6	135	8 Family	67	58	59	-1	-9	N
7	136	1 Church	67	56	58	-2	-11	N
8	901	1 Family	67	60	61	-1	-7	N
9	902	1 Family	67	54	58	-4	-13	N
10	903	1 Business	72	60	60	0	-12	N
11	904	1 Family	67	52	50	2	-15	N
12	1621	1 Family	67	58	59	-1	-9	N
13	1622	1 Family	67	54	56	-2	-13	N
14	255	1 Business	72	69	69	0	-3	N
15	400	3 Family	67	67	66	1	0	I
16	500	1 Business	72	69	69	0	-3	N
17	79	1 Business	72	67	67	0	-5	N
18	74	2 Business	72	70	70	0	-2	N
19	48	1 Business	72	68	68	0	-4	N
20	39	1 Business	72	68	69	-1	-4	N
21	77	1 Business	72	69	69	0	-3	N
22	45	1 Business	72	66	65	1	-6	N
23	96	3 Family	67	67	67	0	0	I
24	335	1 Family	67	61	59	2	-6	N
25	384	1 Family	67	59	58	1	-8	N
26	224	1 Business	72	60	66	-6	-12	N
27	108	1 Business	72	60	63	-3	-12	N
28		1 Family	67	59	61	-2	-8	N
29		1 Family	72	60	65	-5	-12	N
30		1 Family	67	57	57	0	-10	N
31		1 Family	67	57	57	0	-10	N
32		1 Family	67	60	59	1	-7	N
33		1 Business	72	65	65	0	-7	N
34		1 Business	72	62	62	0	-10	N
35		2 Business	72	59	59	0	-13	N

[1] Use whole numbers only.
[2] Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.
[3] An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Abatement Criteria ("approach" is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is –1 db or greater). I = Impact, N = No Impact.

HAZARDOUS SUBSTANCES OR CONTAMINATION EVALUATION Wisconsin Department of Transportation

D-4

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 miles Length of This Option 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None Identified	

1. Briefly describe the results of the Phase 1 Hazardous Materials Assessment for this option. Do not use property identifiers (owner name, address or business name):

Site Reference #	Land Use of Concern (Past or Present)	Contaminants of Concern	Phase 1 Recommendations	Phase 2 Recommended? Y/N
1	Sporting goods company with boat repair and storage	Unknown	Phase 2	Y
2	Vacant vehicle repair facility	Leaded and unleaded gasoline, fuel oil, diesel	Phase 2.5	Y
3	Vacant school building	Fuel oil, very small quantity of hazardous waste	No Further Investigation	N
4	Gasoline station	Unleaded gasoline, kerosene, diesel	Phase 2.5	Y
5	Trucking/truck repair	Leaded and unleaded gasoline, diesel, small quantity of hazardous waste	Phase 2	Y
6	Douglas County Highway Department/Forestry Field Shop	Unleaded Gasoline, diesel,	No Further Investigation	N
7	Garage	Diesel	Phase 2	Y
8	Past logging company (currently residence)	Diesel, gasoline	No Further Investigation	N
9	Gasoline station/auto glass & accessories retail shop	Unleaded gasoline, diesel	Phase 2	Y
10	Past bulk plant	Leaded gasoline, fuel oil, ethyl, motor oil	No Further Investigation	N
11	Trucking/construction equipment repair	Unknown	Phase 2	Y
12	Maintenance garage/past landfill	Leaded gasoline, fuel oil, hazardous waste	Phase 2	Y
13	Construction materials staging yard	Unknown	No Further Investigation	N

Attach additional sheets, if necessary
Additional comments: _____

2. Were any parcels not included in the Phase 1 assessment?

☒ No
☐ Yes - How many:
Why were they not reviewed?

3. Have Phase 2 or 2.5 Assessments been completed? Discuss the results:

Phase 2 or 2.5 subsurface investigations would be completed closer to design and/or property acquisition.

Site Reference #	Phase 2/2.5 Recommendations	Remediation Recommended?		Is WisDOT a Responsible Party?	
		Yes	No	Yes	No

4. Describe the results of any additional investigations performed by WisDOT or others: (Include the number of sites investigated, the level of investigation and results for each site)

None

5. Describe Leading Option to avoid hazardous materials contamination:

Phase 2 or 2.5 subsurface investigations should be performed closer to design or property acquisition on eight (8) sites (reference #'s: 1, 2, 4, 5, 7, 9, 11, and 12) identified in the Phase 1 Hazardous Materials Assessment (HMA). If contaminated soil is encountered during construction activities, it will need to be sampled and disposed of in accordance with applicable statutes and rules, and may be considered a solid or hazardous waste.

6. Describe the remediation and waste management practices to be included in the design for areas where contamination cannot be avoided (e.g., waste handling plan, remediation of contamination, design changes to minimize disturbances):

WisDOT will work with all concerned parties to ensure that any petroleum contamination is resolved to the satisfaction of the WDNR, WisDOT BTS, and FHWA before acquisition of any questionable site, and before advertising the project for letting. Nonpetroleum sites will be handled on a case-by-case basis with detailed documentation and coordination with FHWA as needed.

7. List any parcels with known contamination, proposed for acquisition:

Although several parcels are proposed to be acquired with the Leading Option, none of these have known contamination.

8. Bridge Projects Only: Has the structure been inspected for the presence of asbestos containing materials (ACMs)?

☐ No - Explain
☐ Yes:
Were regulated ACMs identified?
☐ No
☐ Yes:
State the standard language to be incorporated in the special provisions of the project:

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway – 12.1 miles Length of This Option – 12.1 miles
Leading Option ☒ Yes ☐ No ☐ None identified	

1. Indicate whether the affected area may cause a discharge or will discharge to the waters of the state (Trans 401.03).

Special consideration should be given to areas that are sensitive to water quality degradation. Provide specific recommendations on the level of protection needed.

☐ No water special natural resources are affected by the option.
☒ Yes - Water special natural resources exist in the project area.
- ☒ River/stream
- ☒ Wetland
- ☐ Lake
- ☐ Endangered species habitat
- ☐ Other – Describe _____

Grass swales would be used to filter out suspended solids from reaching water resources. Additional permanent water quality control methods deemed necessary at the time of design and construction would also be used.

2. Indicate whether circumstances exist in the project vicinity that require additional or special consideration, such as an increase in peak flow, total suspended solids (TSS) or water volume.

☐ No additional or special circumstances are present.
☒ Yes - Additional or special circumstances exist. Indicate all that are present.

☒ Areas of groundwater discharge	☒ Areas of groundwater recharge
☐ Stream relocations	☒ Overland flow/runoff
☒ Long or steep cut or fill slopes	☐ High velocity flows
☐ Cold water stream	☐ Impaired waterway
☐ Large quantity flows	☐ Exceptional/outstanding resource waters
☐ Increased backwater	

☐ Other - Describe any unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances. _____

3. Describe the overall stormwater management strategy to minimize adverse effects and enhance beneficial effects.

Coordination with WDNR would occur closer to design/construction for compliance with Trans 401 and the WisDOT/WDNR Cooperative Agreement.

WisDOT would make every effort to design improvements so that runoff would be contained through runoff basins and directed ditching.

Final determination of these measures would be made closer to design and construction.

4. Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 requirements.

The stormwater management plan would implement best management practices. It would be designed, installed, and maintained to control and reduce total suspended solids carried in runoff by the appropriate percent defined in Trans 401. Exact treatments would be determined during design and construction to meet the requirements of Trans 401.

Water quality certification from WDNR and applicable Army Corps of Engineer permits would be applied for as applicable for discharge and fill into U.S. inland waters.

5. Identify the stormwater management measures to be utilized.

☒ Swale treatment (parallel to flow) Trans 401.106(10)
☐ Vegetated filter strips (perpendicular to flow)
☐ Constructed storm water wetlands
☒ Buffer areas – Trans 401.106(6)
☐ In-line storm sewer treatment, such as catch basins, non-mechanical treatment systems.
☒ Detention/retention basins – Trans 401.106(6)(3)
☐ Distancing outfalls from waterway edge
☐ Infiltration – Trans 401.106(5)
☒ Other - Final treatments would be determined closer to design and construction

Describe - _____ _____

6. Indicate whether any Drainage District may be affected by the project.

☒ No - None identified
☐ Yes
Has initial coordination with a drainage board been completed?
☐ No - Explain _____
☐ Yes - Discuss results _____

7. Indicate whether the project is within WisDOT's Phase I or Phase II stormwater management areas.

Note: See Procedure 20-30-1, Figure 1, Attachment A4, the Cooperative Agreement between WisDOT and WDNR. Contact Regional Stormwater/Erosion Control Engineer if assistance in needed to complete the following:

☒ No - Project is outside of WisDOT's stormwater management area.
☐ Yes - The project affects one of the following and is regulated by a WPDES stormwater discharge permit, issued by the WDNR:
☐ A WisDOT storm sewer system, located within a municipality with a population greater than 100,000.
☐ A WisDOT storm sewer system located within the area of a notified owner of a municipal separate storm sewer system.
☐ An urbanized area, as defined by the U.S. Census Bureau, NR216.02(3).
☐ A municipal separate storm sewer system serving a population less than 10,000.

8 Has the effect on downstream properties been considered?

☐ No
☒ Yes - Coordination with the WDNR is in process.

9. Are there any property acquisitions required for storm water management purposes?

☒ No
☐ Yes - Complete the following:
☐ Safety measures, such as fencing are <u>not</u> needed for potential conflicts with existing and expected surrounding land use.
☐ Safety measures <u>are</u> needed for potential conflicts with existing and expected surrounding land use.
Describe:

EROSION CONTROL EVALUATION

Wisconsin Department of Transportation

D-6

County Y Option 2 County A Option 3A	Total Length of Center Line of Existing Roadway 12.1 Length of This Option 12.1
Leading Option ☒ Yes ☐ No ☐ None identified	

1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.

Soil types for the Leading Option area include 174B, 475C, 475D, 100B, 100C, 100D, 825A, and 896A. These soils are generally sandy and stony with slopes of less than 6%. Soil Types 475C and 475D are sandy with larger slopes (6-15% and 15-30% respectively).

The landscape in the project area comprises of gently rolling land, some forested areas, and low-lying wetlands along stream banks. Existing and proposed slopes vary by road classification type, traffic volume, and vertical height of the roadway.

The Leading Option would follow standard design criteria of 4:1 fill slopes within the clear zone and would be steepened beyond the clear zone as practical and permissible to minimize the effects on quality wetland, agricultural land, commercial and residential properties. Longitudinal slopes will vary from -6% to +6% dependant on local road locations. Overpass locations would be designed with the maximum longitudinal slopes permissible in order to minimize impacts to previously undisturbed sections of land, wetland and other natural resources. Generally, the steeper slopes adjacent to overpass structures follow design criteria of 2.5:1.

2. Indicate all natural resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.

- ☐ No - there are no sensitive resources affected by the proposal.
- ☒ Yes - Sensitive resources exist in or adjacent to the area affected by the project.
  - ☒ River/stream
  - ☐ Lake
  - ☒ Wetland
  - ☐ Endangered species habitat
  - ☐ Other - Describe _____

Measures would be taken to ensure sediment doesn't leave the construction site and enter wetland or water resources. The erosion control plan would be determined closer to design and construction.

3. Are there circumstances requiring additional or special consideration?

- ☐ No - Additional or special circumstances are not present.
- ☒ Yes - Additional or special circumstances exist. Indicate all that are present.
  - ☐ Areas of groundwater discharge
  - ☒ Overland flow/runoff
  - ☒ Long or steep cut or fill slopes
  - ☒ Areas of groundwater recharge (fractured bedrock, wetlands, streams)
  - ☐ Other - Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances_____

4. Describe overall erosion control strategy to minimize adverse effects and/or enhance beneficial effects.

Temporary and permanent erosion control methods may include but are not limited to:

- Silt fence and/or silt screen at the toe of fill slopes to avoid accumulation in wetland or undisturbed areas.
- Erosion mat for sheet flow conditions on long fill slopes adjacent to wetland areas.
- Inlet protection measures at all crossing culvert and area drains as required.
- Temporary ditch checks, erosion mat and rip rap would be used as appropriate for reducing particle transmission and sedimentation along swale drainage and ditches.
- Permanent seed or sod would be used on finished topsoil surfaces.

- WisDOT would make every effort to design the interchange so that any runoff from the interchange would be contained within the interchange area through runoff basins and directed ditching.

Final determination of these measures would be made closer to design and construction.

Standard WisDOT erosion control methods would be used during construction as per WisDOT Standard Specifications. Coordination with WDNR would also occur closer to the design and construction phases of these improvements in compliance with Trans 401 and the WisDOT/WDNR Cooperative Agreement. Common erosion control measures would include but not be limited to: using silt fence at the toe of fill slopes or silt screen where unavoidable wetland, stream, or pond impacts would occur. The contractor's Erosion Control Implementation Plan (ECIP) would address individual concerns brought about during the design phase of the intended work.

Borrow sites or waste areas would follow practices as set forth in Trans 401, Wisconsin Administrative Code, and the WisDOT/WDNR Cooperative Agreement. The contractor's ECIP for borrow sites and waste areas would cover erosion control. The ECIP would establish the schedule of implementation for temporary and permanent erosion devices on the highway project and at the project borrow or waste sites. The ECIP would become part of the contract and would be submitted to WisDOT for approval and to WDNR for concurrence. Revegetation of the project site, including borrow pit sites and waste areas could be incorporated as a component of the project's erosion control plan, ECIP and construction contract. Revegetation and stabilization of cleared and graded areas shall be accomplished by using a combination of seed, mulch, erosion mat, or sod. Revegetation would occur as soon as practicable following the grading operation of the projects as they commence.

5. Erosion control measures reached consensus with the appropriate authorities as indicated below:

The erosion control plan would be determined closer to design and construction with cooperation from the WDNR and US Army Corps of Engineers.

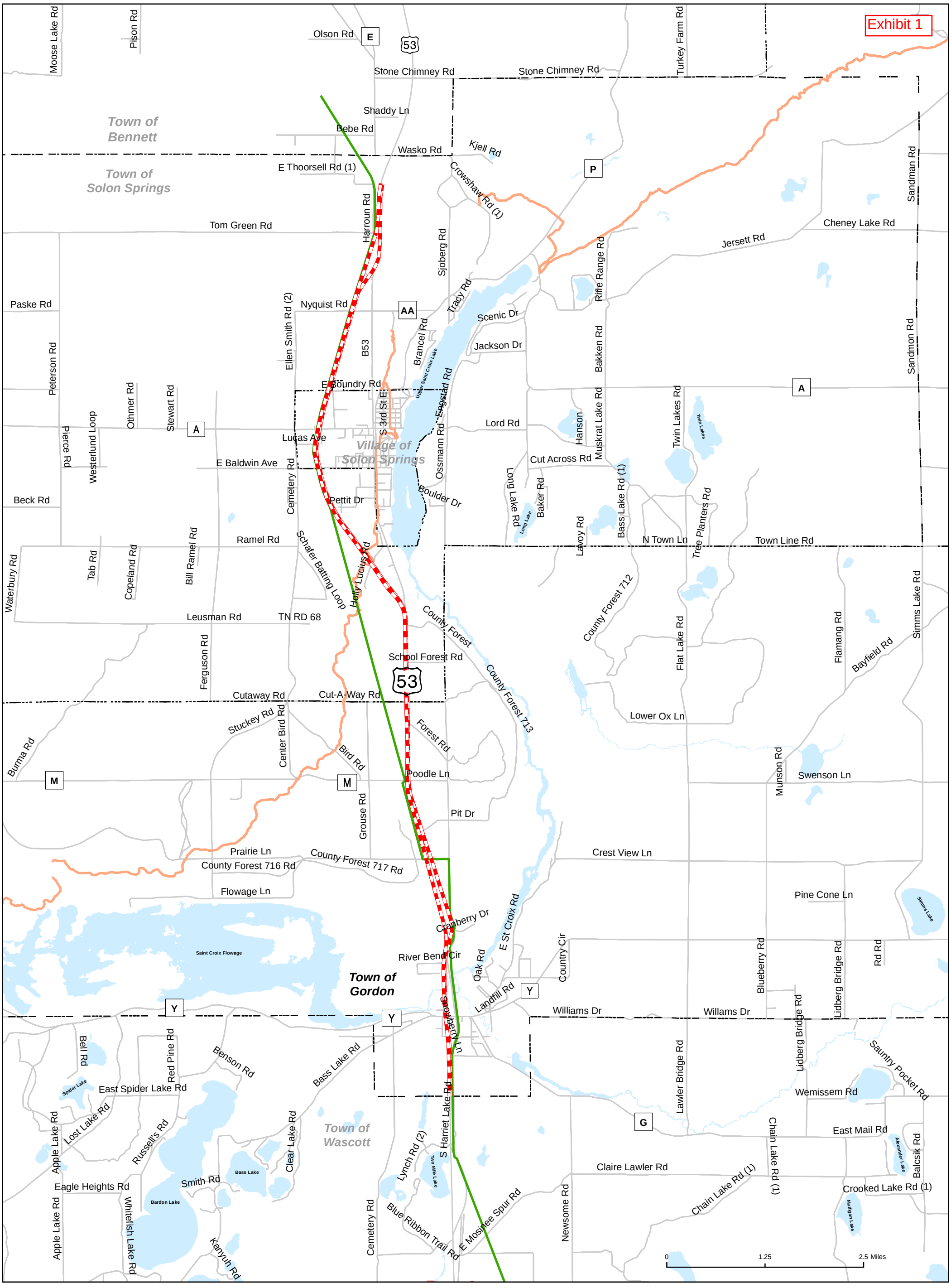
- ☐ WDNR
- ☐ County Land Conservation Department
- ☐ American Indian Tribe
- ☐ US Army Corps of Engineers

Note: All erosion control measures (i.e., the Erosion Control Plan) shall be coordinated through the WisDOT-WDNR liaison process and TRANS 401 except when Tribal lands of American Indian Tribes are involved. WDNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor to prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WDNR and to WisDOT 14 days prior to the preconstruction conference (Trans401.08(1)) and must be approved by WisDOT before implementation. On Tribal lands, coordination for 402 (erosion) concerns are either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (EPA). EPA or the tribes have the 401 water quality responsibility on Trust lands. Describe how the Erosion Control/Storm Water Management Plan can be compatible.

6. Identify the temporary and permanent erosion control measures to be utilized on the project.

- ☐ Minimize the amount of land exposed at one time
- ☐ Temporary seeding
- ☐ Silt fence
- ☐ Ditch checks
- ☐ Erosion or turf reinforcement mat
- ☐ Ditch or slope sodding
- ☐ Soil stabilizer
- ☐ Inlet protection
- ☐ Turbidity barriers
- ☐ Temporary settling basin
- ☐ Mulching
- ☐ Detention basin
- ☐ Vegetative swales
- ☐ Pave haul roads
- ☐ Dust abatement
- ☐ Rip rap
- ☐ Buffer strips
- ☐ Dewatering – Describe method
- ☐ Silt screen
- ☐ Temporary diversion channel
- ☐ Permanent seeding
- ☒ Other - Final treatments will be determined closer to design/construction

Exhibit 1

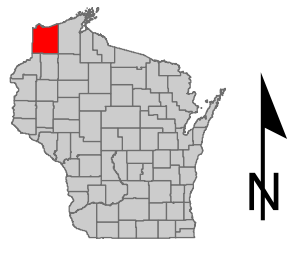


US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO 0.3 MILES SOUTH OF SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

APPROX. 12 MILES

LEGEND

- US 53 Study Location
- Wild Rivers State Trail
- North Country Trail
- Municipal Boundary
- Roads
- Water



N

Exhibit 2

COUNTY Y
OPTION 1: INTERCHANGE

Y

River Bend Cir

River Bend Cir

Saint Croix River

53

Eau Claire River

Oak Rd

Acorn Dr

Saint Croix River

Old Hwy 53

Finstad Rd

S Cosgrove Rd

N Circle Dr

Omaha Ln

Spruce Dr

CLOSE

CLOSE

CLOSE

N Circle

Y

Y

Bass Lake Rd

Two-span bridge over
NB and SB US 53

Sundew Rd

Gate Dr

School House Dr

Eau Claire River

G

Antoine Cir

Terry Dr

Packer Ave

Snowberry Ln

CLOSE

CLOSE

CLOSE

Berquist Dr

Lockman Dr

Chippewa Dr

Cheever Dr

Town of Gordon

EMS

Ball Park Dr

Harriet Lake Rd

0 0.125 0.25 Miles

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Building and Access Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Water
- WDNR Managed Lands
- Wetlands

N

Y

COUNTY Y
OPTION 2: JUG HANDLE #1

Two-span bridge over NB and SB US 53

EMS

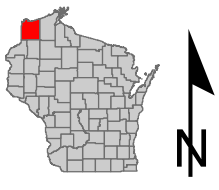
Town of Gordon

0 0.125 0.25 Miles

Image courtesy of USGS Earthstar Geographics SIO © 2015 Microsoft Corporation

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access and Building Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Water
- WDNR Managed Lands
- Wetlands



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COUNTY Y
OPTION 2A: JUG HANDLE #2

Y

Saint Croix River
Oak Rd
Acorn Dr
53
Eau Claire River
Saint Croix River
Old Hwy 53
Finstad Rd
S Cosgrove Rd
N Circle Dr
Omaha Ln
Spruce Dr
CLOSE
CLOSE
CLOSE
Packer Ave
N Circle
Y
Y
Bass Lake Rd
Snowberry Ln
Gate Dr
School House Dr
G
Sundew Rd
Two-span bridge over
NB and SB US 53
Antoine Cir
Terry Dr
Berquist Dr
Lockman Dr
Chippewa Dr
Cheever Dr
Eau Claire River
Town of Gordon
EMS
Ball Park Dr
Harriet Lake Rd

0 0.125 0.25 Miles

Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

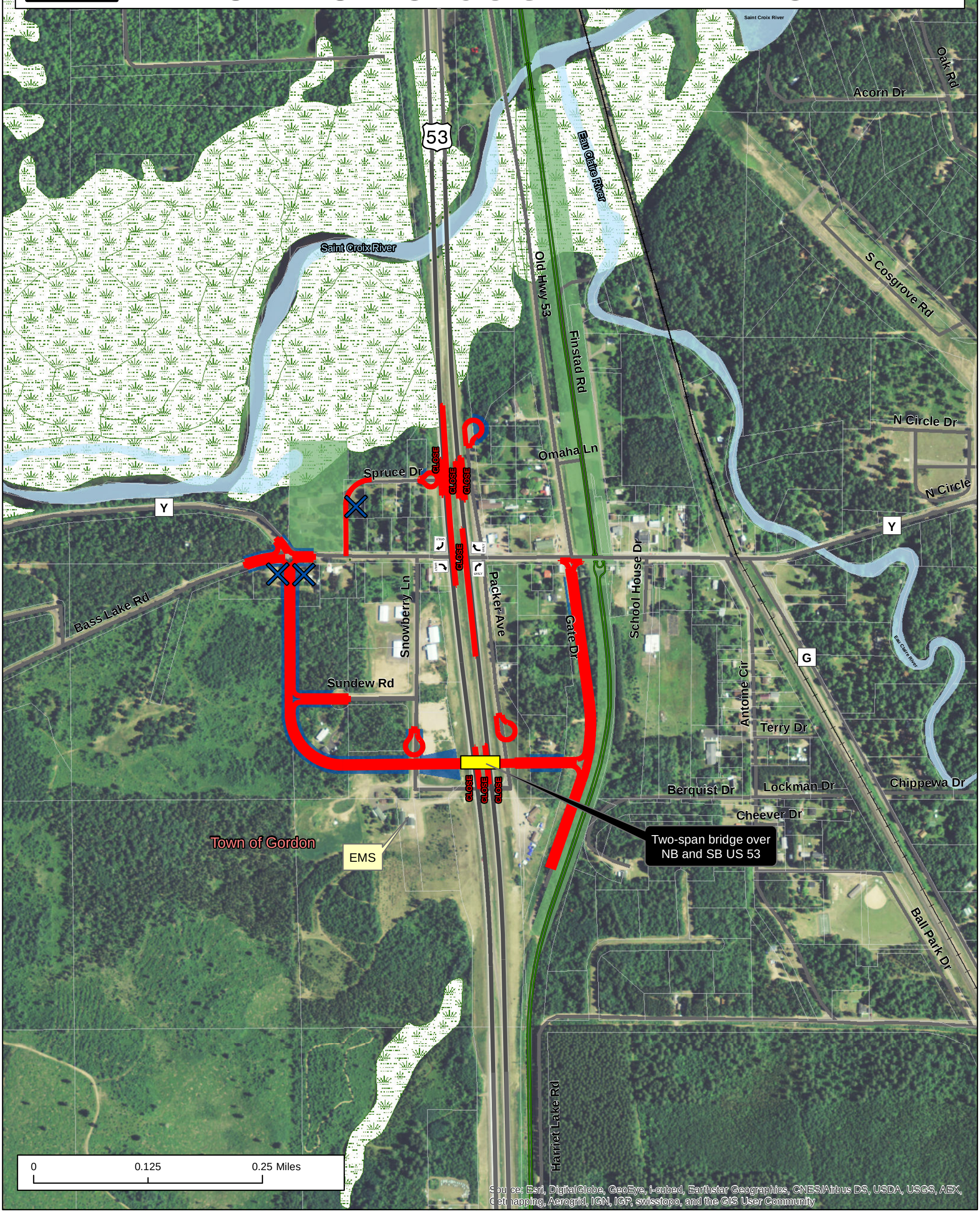
US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access and Building Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Water
- WDNR Managed Lands
- Wetlands

Acce ss Rd

Y

COUNTY Y
OPTION 3: JUG HANDLE #3



US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access and Building Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Water
- WDNR Managed Lands
- Wetlands

N

Acce ss Rd

COUNTY Y
OPTION 4: JUG HANDLE #4

Three-span bridge over NB and SB US 53 and Wild Rivers State Trail

OR

Two-span bridge with relocated Wild Rivers State Trail

EMS

0 0.125 0.25 Miles

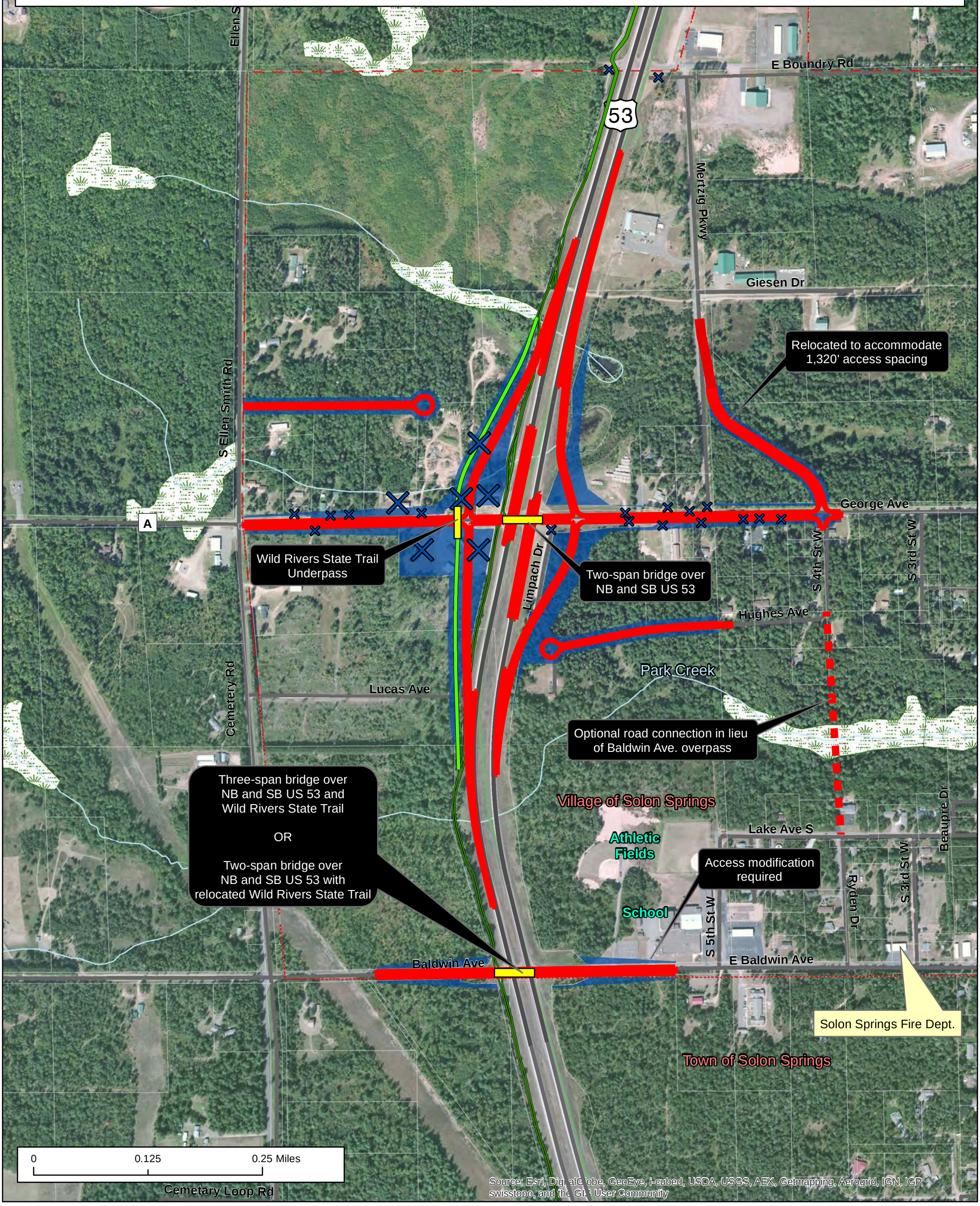
US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access and Building Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Water
- WDNR Managed Lands
- Wetlands

Exhibit 3

A

COUNTY A
OPTION 1: INTERCHANGE



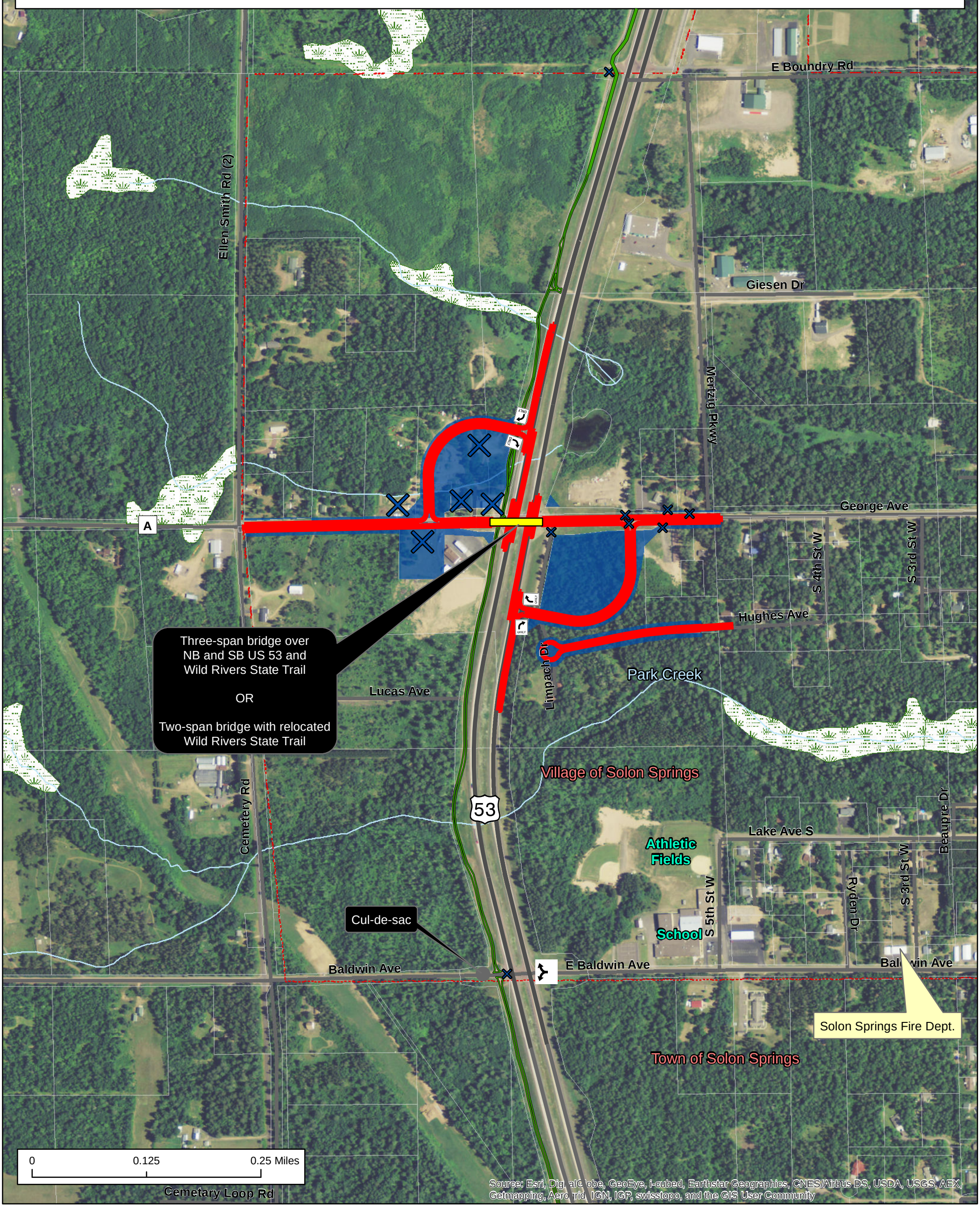
US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Relocated WRST
- US 53
- Option
- Proposed Grade Separation
- New Right of Way Area
- Building and Access Removal
- Access Removal
- Wild Rivers State Trail
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Rivers
- Water
- Wetlands

N

A

COUNTY A
OPTION 2: JUG-HANDLE #1



US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- Wild Rivers State Trail
- New Right of Way Area
- Building and Access Removal
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Rivers
- Water
- Wetlands

N

A

COUNTY A
OPTION 3: JUG-HANDLE #2

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Rivers
- Water
- Wetlands

N

A

COUNTY A
OPTION 3A: JUG HANDLE #3

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- US 53
- New Right of Way Area
- Wild Rivers State Trail
- Access Removal
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Rivers
- Water
- Wetlands

N

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A

COUNTY A
OPTION 4: JUG-HANDLE #4

Giesen Dr
Ellen Smith Rd (2)
Mertzig Pkwy
County A designation removed
S 7th St W
CLOSE
George Ave
Limpach Dr
S 4th St W
S 3rd St W
Hughes Ave
Park Creek
Village of Solon Springs
Cemetery Rd
Lucas Ave
Lake Ave S
Athletic Fields
S 5th St W
Ryden Dr
Beaupre Dr
School
Baldwin Ave
County A designation added
Solon Springs Fire Dept.
Three-span bridge over NB and SB US 53 and Wild Rivers State Trail
OR
Two-span bridge with relocated Wild Rivers State Trail
Town of Solon Springs
53
Cemetery Loop Rd
Biller Loop
Oak Hill Rd
Kaidike Dr
Pettit Dr
0 0.125 0.25 Miles
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO
0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

- Proposed Road
- Proposed Grade Separation
- Existing US 53
- New Right of Way Area
- Wild Rivers State Trail
- Municipal Boundary
- Canadian National Railroad
- Parcel Boundary
- Roads
- Rivers
- Water
- Wetlands

N

Exhibit 4

COUNTY A - Solon Springs Leading Option (3A)

LEGEND

- PROPOSED TRAFFIC LANE PAVEMENT
- PROPOSED SHOULDER PAVEMENT
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- PROPOSED DRIVEWAY ASPHALT/GRAVEL
- SLOPED INTERCEPT (CONSTRUCTION GRADING LIMIT)
- POTENTIAL WETLAND AREA

N

WISCONSIN DEPARTMENT OF TRANSPORTATION
US HIGHWAY 53 PRESERVATION STUDY
(Wascott/Gordon Town Line to 0.3 miles
South of Solon Springs/Bennett Town Line)

PROJECT I.D. 1195-00-07
USH 53 - CTH A INTERCHANGE
Douglas County
May 20, 2015

COUNTY A INTERCHANGE OVERVIEW
Preferred Alternative 3a

BACKGROUND IMAGE SOURCE: LICENSED BY SEH INC FROM BING MAPS

LEGEND

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- TEMPORARY LIMITED EASEMENT (TLE)
- PROPERTY LINE
- PROPOSED ROAD CLOSURE/REMOVAL

COUNTY Y - Gordon
Leading Option (2)

LEGEND

- PROPOSED TRAFFIC LANE PAVEMENT
- PROPOSED SHOULDER PAVEMENT
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- PROPOSED DRIVEWAY ASPHALT/GRAVEL
- SLOPED INTERCEPT (CONSTRUCTION GRADING LIMIT)
- POTENTIAL WETLAND AREA

N

ST CROIX RIVER

COUNTY Y

SUNDEW RD

SPRUCE DR

Relocation

SNOWBERRY LN

CTH Y (SNOWBERRY LN)

SNOWBERRY ACCESS

USH 53 SB

USH 53 NB

53

N PACKER AV

S PACKER AV

GATE RD ACCESS

CTH Y

GATE RD

WILD RIVERS TRAIL

CTH Y (GATE RD)

OLD HWY 53

CANADIAN NATIONAL RR

EAU CLAIRE RIVER

ANTOINE CIR

LEGEND

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- TEMPORARY LIMITED EASEMENT (TLE)
- PROPERTY LINE
- X X X X X PROPOSED ROAD CLOSURE/REMOVAL

WISCONSIN DEPARTMENT OF TRANSPORTATION
US HIGHWAY 53 PRESERVATION STUDY
(Wascott/Gordon Town Line to 0.3 miles
South of Solon Springs/Bennett Town Line)

PROJECT I.D. 1195-00-07
USH 53 - CTH Y INTERCHANGE
Douglas County
May 20, 2015

COUNTY Y INTERCHANGE OVERVIEW
Preferred Alternative 2

BACKGROUND IMAGE SOURCE: LICENSED BY SEH INC FROM BING MAPS

1195-00-07 USH 53 DOUGLAS PLOT SCALE = 1 IN = 80 FT

Exhibit 5

Building a Better World for All of Us®

MEMORANDUM

TO: Marc Bowker, Wisconsin Department of Transportation (WisDOT) Project Manager

FROM: Savannah Hallock

DATE: May 22, 2015

RE: Traffic Noise Impact Evaluation for US-53 (Gordon to Bennett)
Douglas County, Wisconsin
WisDOT Project I.D. 1195-00-07
SEH No. WITNW 121665 14.00

Short Elliott Hendrickson Inc. (SEH®) has completed a Highway Noise Analysis for the proposed US Highway 53 (US 53) and County A/County Y construction within Douglas County, Wisconsin.

PROJECT DESCRIPTION

The project study begins at the Wascott/Gordon town line and extends north along US 53 to 0.3 miles south of the Solon Springs/Bennett town line in Douglas County. The official mapping for this project will be limited to two intersection areas, which are US 53 and County Y in the Town of Gordon and US 53 and County A in the Town of Solon Springs. See Figure 1, Project Overview Map for noise modeling locations.

The existing intersection at US 53 and County Y is an at-grade intersection that intersects US 53 at approximately 84 degrees with stop control on County Y. The median is approximately 65 feet in width and there are right and left turn lanes present on northbound and southbound US 53. The existing posted speed on County Y is 25 mph and 65 mph on US 53.

Existing development near US 53 and County Y intersection consists of a convenience/gas station, a few commercial businesses, a bowling alley, and a few scattered residential properties.

The existing intersection at US 53 and County A is an at-grade intersection that intersects US 53 at approximately 103 degrees with stop control on County A. The median opening is approximately 70 feet in width and there are right and left turn lanes present on northbound and southbound US 53. The existing posted speed on County A is 35 mph and 65 mph on US 53.

Existing development near the US 53 and County A intersection consists of a gas station, a church, a single story apartment complex, one shed, and a few scattered residential properties. Adjacent to US 53 on the west-side of the highway is the WDNR Wild Rivers State Trail.

Existing intersections at County A and County Y would be reconstructed as right-in/right-out only accesses. Two overpasses would be constructed to allow for traffic to cross US 53 near the County Y and County A intersections. County A would be re-routed to cross US 53 at an overpass 500 feet south of the current intersection. Traffic From County Y would be directed south to Sundew Road via Snowberry Lane and Gate Drive and would cross US 53 at an overpass that would be constructed at the current Sundew

Road intersection. Cul-de-sacs would be constructed at the Spruce Drive intersection, on Packer Ave (north and south of County Y) and at the end of the proposed Hughes Avenue extension in order to reduce conflict points by limiting access to US 53. In addition, several sections of the existing local roadway system would be reconstructed or altered to insure internal local road system continuity and access to the expressway.

METHODOLOGY

Version 2.5 of the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) was used to predict future noise impacts at 35 representative receptor locations along the corridor. Thirteen receptors were used at the US 53/County A project location, as shown on Figure 2A. Twenty-two receptors were used at the US 53/County Y project location, as shown on Figure 2B. Sensitive receptors in the project study area include single and multiple family residences, a church, a trail crossing and commercial businesses.

TNM computes highway traffic noise at nearby receptors. As a source of noise, the model includes the following vehicle types: automobiles designed to carry nine or fewer passengers (including light trucks), medium trucks designed with two axles and six tires, and heavy trucks with three or more axles.

Noise emission levels consist of A-weighted sound from an average pavement type with lawn as the default ground type. A-weighted measurements approximate noise readings in the same manner as the human ear and provide a reasonably good assessment of speech interference and community disturbance conditions. TNM includes the effects from full-throttle noise combined with speed computations accounting for roadway grades and acceleration away from traffic control devices.

Input to the model includes traffic volumes, expected speeds, stop conditions within the corridor, parameters for existing and future road design, terrain, and receptor locations.

Roadway coordinates reflect the centerline of the lane in both directions of traffic. Receptor coordinates are placed approximately 10 ft. in front of a building, between the building and the proposed roadway. Traffic noise is estimated at an ear height of approximately 5 ft. above ground level.

Traffic volume input, representing the design hourly volume (DHV) was calculated from average daily traffic (ADT) and truck classification information supplied by WisDOT for both existing and design year volumes. See Attachment 1, “WisDOT Traffic Forecast Report.” Using peak turning movement percentages from traffic counts completed by WisDOT in October 2011, future peak traffic volumes were calculated for the proposed traffic movements. For the side roads located within the project area, a maximum peak hourly volume of 5 cars, 1 medium truck, and 1 heavy truck was assumed and used in the existing model. A 1% growth rate was also applied to these roadways for the design year model. Sound level results output from the TNM model run are included as Table 1, “Traffic Noise Impact Evaluation Summary.”

IMPACT EVALUATION

The future noise range predicted by the TNM Model indicated on Figures 2A and 2B is from 51 dBA to 71 dBA. Receptor locations that are impacted by future noise levels are represented on Figure 2 in red; non-impacted locations are indicated in bluee. Noise levels at receptors are highly dependent on the distance that the receptor is from the traffic source and the topography of the land surface.

Noise abatement criteria (NAC) has been developed by the FHWA for various activity categories. The criterion for developed properties (Category E), such as commercial parcels, is 72 dBA. The criterion for more sensitive receptors, such as residences, parks, schools, day care centers, and recreation areas (Category B and C), is 67 dBA. Since future development may take place in the area, receptors representative of existing residences as well as receptors placed in areas of potential development were

modeled as being in the more sensitive Category C. Impacts to receptors occur when the sound level approaches or exceeds the NAC. “Approach” is defined as future levels exceeding 1 dBA less than the NAC, or when future sound levels exceed existing sound levels by 15 dBA or more. Table 1, Column (g) indicates there are no impacts resulting from an increase in future sound levels. However, comparison of future predicted noise levels to the NAC indicate that there are 5 receptor locations that approach or exceed the criteria (see Table 1, Column (h)).

NOISE ABATEMENT

This noise evaluation predicted that 1 location at US 53 and County A and 4 locations at US 53 and County Y may be impacted by future traffic noise as indicated on Figures 2A and 2B.

When traffic noise impacts occur, measures to reduce or eliminate impacts should be considered by the project sponsor where such impacts are determined to be feasible and reasonable. “Feasibility” is based on whether or not the noise control measures are compatible with the project purpose and need, meet design criteria, or result in other impacts, such as safety considerations that would offset noise reduction benefits. For a noise control barrier to be “reasonable,” construction of noise barriers must reduce noise levels by a minimum of 8 dBA at a cost of $30,000 per benefitted receptor unit or less.

At the intersection of US 53 and County A, there was one exceedance, located along the Wild Rivers State Trail on the west side of US 53. Trails and trail crossing fit within the Category C NAC of 67 dB. Since the trail is located adjacent to US 53, noise from the highway is audible from the trail. Although a noise impact occurs at this location (for both existing and future traffic volumes), a barrier analysis was not completed at this location. Based on traffic counts that were performed from WisDOT in 2011 there were no pedestrians or bicyclists during the study period. In addition, based on public questioning, people indicated the majority of users are neither bicyclists nor pedestrians on the trail, but rather use it for snowmobiling and ATV-ing. Also, there is no available data indicating the average amount of users of the trail in order to calculate a cost/benefitted receptor.

A noise barrier analysis was conducted at three locations within the US 53 and County Y intersection area using the TNM model. As provided by WisDOT, an estimated barrier cost of $18 per square foot was assumed in the analysis. The barrier was placed within either the existing ROW or proposed ROW, which is needed based on roadway improvements.

At the intersection of US 53 and County Y, Receptor 14 is a residence that has an operating business located within the same building. The building was analyzed based on the criteria for residential, as Category B is the lower criteria to be met.

Documentation of the barrier design analysis is included as Table 2, “Barrier Analysis Documentation.” The second row of residences back from US 53 Southbound near Spruce Drive were not found to be impacted by sound. Based on noise barrier modeling and the number of receptor units benefiting from each individual barrier, none of the noise barriers modeled meet both the 8 dBA reduction requirement and the reasonable cost limit of $30,000 per benefitting unit, as shown in Table 2. Because mitigation techniques on this project are not feasible and reasonable, noise abatement is not proposed.

CONSTRUCTION NOISE

Noise generated by construction equipment would vary greatly depending on the equipment type and model, mode, duration of operation, and specific type of work in progress. Typical sound levels at 50 ft. would be in the 67 to 105 dBA range. See Table 3, “Construction Equipment Noise Levels,” for typical construction equipment sound levels for various equipment types.

It is important to note that construction sound levels refer to instantaneous maximum sound levels, as opposed to hourly average sound levels used to describe traffic noise. The loudest construction sound

levels would occur during operations such as pile driving or breaking concrete. Adverse impacts resulting from construction noise are anticipated to be localized, temporary, and transitory.

LETTER TO LOCAL UNITS OF GOVERNMENT

A sample letter and graph, which could be distributed to local units of government in currently undeveloped areas, has been provided for your use. This letter is included as Attachment 2. The information can be used by local officials for future land use planning and compatibility purposes. The graphs represent the “worst case” traffic noise prediction in the project area for US 53/County A and US 53/County Y, respectively. We have also included a reprint of “The Audible Landscape: A Manual for Highway Noise and Land Use.” This FHWA document can also assist local government officials in their land use planning efforts.

sh
Attachment
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Tables

Table 1
Traffic Noise Impact Evaluation Summary

Receptor Location or Site Identi-fication (See Figure 2A-E)	Distance from C/L of Near Lane to Receptor in feet (ft.)	Number of Families or People Typical of this Receptor Site	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d)	Impact or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	46	1 Trail Crossing	67	71	71	0	4	I
2	80	1 Family	67	62	62	0	-5	N
3	70	1 Family	67	57	55	2	-10	N
4	86	1 Family	67	58	57	1	-9	N
5	155	1 Business	72	64	64	0	-8	N
6	57	8 Family	67	58	59	-1	-9	N
7	99	1 Church	67	56	58	-2	-11	N
8	190	1 Family	67	58	60	-2	-9	N
9	151	1 Family	67	53	54	-1	-14	N
10	275	1 Business	72	58	59	-1	-14	N
11	262	1 Family	67	51	48	3	-16	N
12	71	1 Family	67	58	56	2	-9	N
13	105	1 Family	67	54	57	-3	-13	N
14	105	1 Family	67	68	68	0	1	I
15	78	1 Family	67	66	65	1	-1	I
16	42	1 Business	72	67	68	-1	-5	N
17	80	1 Business	72	65	66	-1	-7	N
18	104	2 Business	72	68	68	0	-4	N
19	59	1 Business	72	67	68	-1	-5	N
20	18	1 Business	72	67	68	-1	-5	N
21	39	1 Family	67	68	68	0	1	I
22	95	1 Business	72	64	64	0	-8	N
23	154	1 Family	67	66	66	0	-1	I
24	68	1 Family	67	61	57	4	-6	N
25	90	1 Family	67	58	57	1	-9	N
26	37	1 Business	72	65	66	-1	-7	N
27	37	1 Business	72	65	63	-2	-7	N
28	87	1 Family	67	61	61	0	-6	N
29	40	1 Business	72	64	66	-2	-8	N
30	87	1 Family	67	59	57	2	-8	N
31	174	1 Family	67	57	56	1	-10	N
32	255	1 Family	67	59	58	1	-8	N
33	61	2 Business	72	63	61	2	-9	N
34	79	1 Family	67	63	61	2	-4	N
35	76	1 Family	67	62	59	3	-5	N

I = Impact N = No Impact

An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or** future sound levels approach or exceed the Noise Abatement Criteria (“approach” is defined as 1 dB less than the Noise Abatement Criteria, therefore an impact occurs when Column (h) is –1 dB or greater).

Table 2
Barrier Analysis Documentation

Noise Barrier Number	Wall Length Modeled (ft)	Average Wall Height Modeled (ft)	Estimated Wall Cost @ $18/SF	Receptor Number Protected	# of Units Represented by Each Receptor	Noise Reduction at Each Unit (dBA)	Noise Reduction Goal for Reasonableness (dBA)	Does Barrier Meet Reasonableness Decibel Reduction Goal? (Y/N)	Average Barrier Cost per Unit	Is Barrier Cost Reasonable (<$30,000/Unit) (Y/N)
1	600	23	$244,790	15 23	1 1	3.1 8.0	8	N Y	$122,395	N
2	340	26	$160,348	14	1	5.3	8	N	$160,348	N
3	300	21	$111,587	21	1	5.7	8	N	$111,587	N

Table 3
Construction Equipment Noise Levels

Construction Equipment	Sound Level at 50 ft. dBA
Air Compressor – Quiet > 500 cfm	73
Air Compressor – Standard > 500 cfm	87
Back Hoe/Loader	81
Back-up Alarms	Variable (typically 5-10 dBA above ambient at equipment site)
Concrete Mixer Truck	80-85
Concrete Pumper	70
Concrete Vibrators	77
Cranes – Mobile	81
Dump Truck	80-83
Generator	82
Hammering	86 (max)
Jackhammer	88
Pile Driver	100 (max)
Radial Arm Saw	80

Figures

US 53/County A
Noise Modeling

US 53/County Y
Noise Modeling

Town of Bennett
Town of Solon Springs
Village of Solon Springs
Town of Gordon
Town of Wascott

Moose Lake Rd
Pison Rd
Olson Rd
E
53
Stone Chimney Rd
Turkey Farm Rd
S
Shaddy Ln
Bebe Rd
Wasko Rd
Kjell Rd
P
E Thoorsell Rd (1)
Crowshaw Rd (1)
Sandman Rd
Tom Green Rd
Harroun Rd
Sjoberg Rd
Cheney Lake Rd
Jersett Rd
Riffle Range Rd
Paske Rd
Nyquist Rd
AA
Tracy Rd
Scenic Dr
Ellen Smith Rd (2)
B53
Brancel Rd
Jackson Dr
Peterson Rd
Bakken Rd
Sandmon Rd
E Boundry Rd
Upper Saint Croix Lake
Engstad Rd
A
Othmer Rd
Stewart Rd
S 3rd St E
Lord Rd
Hanson
Muskrat Lake Rd
Twin Lakes Rd
Pierce Rd
Westerlund Loop
Lucas Ave
Ossmann Rd
Cut Across Rd
E Baldwin Ave
Cemetery Rd
Pettit Dr
Boulder Dr
Long Lake Rd
Baker Rd
Bass Lake Rd (1)
Beck Rd
Ramel Rd
Schafer Batting Loop
Holly Lucius Rd
Lavoy Rd
N Town Ln
Tree Planters Rd
Town Line Rd
Waterbury Rd
Tab Rd
Copeland Rd
Bill Ramel Rd
Leusman Rd
TN RD 68
County Forest
County Forest 712
Flat Lake Rd
Flamang Rd
Bayfield Rd
Simms Lake Rd
Ferguson Rd
School Forest Rd
53
Cutaway Rd
Cut-A-Way Rd
County Forest 713
Lower Ox Ln
Stuckey Rd
Center Bird Rd
Forest Rd
Burma Rd
Bird Rd
Munson Rd
Swenson Ln
M
M
Poodle Ln
Grouse Rd
Pit Dr
Prairie Ln
County Forest 716 Rd
County Forest 717 Rd
Crest View Ln
Flowage Ln
Pine Cone Ln
Cranberry Dr
E St Croix Rd
Saint Croix Flowage
River Bend Cir
Oak Rd
Country Cir
Blueberry Rd
Lidberg Bridge Rd
Rd Rd
Landfill Rd
Y
Y
Y
Williams Dr
Willams Dr
Cowboy Ln
S Harriet Lake Rd
Saunty Pocket Rd
Wemissem Rd
Bell Rd
Red Pine Rd
Benson Rd
Bass Lake Rd
East Spider Lake Rd
Spider Lake
Apple Lake Rd
Lost Lake Rd
Russells Rd
Clear Lake Rd
Lynch Rd (2)
Two Mile Lake
Chain Lake Rd (1)
East Mail Rd
Alexander Lake
Balcsik Rd
Claire Lawler Rd
Eagle Heights Rd
Smith Rd
Bass Lake
Bardon Lake
Cemetery Rd
Blue Ribbon Trail Rd
E Mosinee Spur Rd
Newsome Rd
Crooked Lake Rd (1)
Milligan Lake
Apple Lake Rd
Whitefish Lake Rd
Kanyuh Rd

0 1.25 2.5 Miles

US 53 PRESERVATION STUDY
WASCOTT/GORDON TOWN LINE TO 0.3 MILES SOUTH OF
SOLON SPRINGS/BENNETT TOWN LINE
DOUGLAS COUNTY
WISDOT ID: 1195-00-07

APPROX. 12 MILES

LEGEND

- US 53 Study Location
- Municipal Boundary
- Roads
- Water

N

Figure 1

LEGEND

IMPACTED NOISE RECEPTOR LOCATIONS

NON-IMPACTED NOISE RECEPTOR LOCATIONS

N

S ELLEN SMITH RD

CEMETERY RD

7TH ST W

WILD RIVERS TRAIL

USH 53 SB

USH 53 NB

MERTZIG PKWY

LIMPACH DR

CTH A

HUGHES AV

APARTMENT DRIVE

NB JUGHANDLE

SB JUGHANDLE

105'A'

110'A'

115'A'

120'A'

125'A'

130'A'

135'A'

305'ASB'

310'ASB'

400'ANB'

405'ANB'

10'AD'

190'SB'

190'NB'

185'SB'

185'NB'

180'SB'

180'NB'

205'AHE'

200'AHE'

REC 1
71 dB

REC 2
62 dB

REC 3
57 dB

REC 4
58 dB

REC 5
64 dB

REC 6
58 dB

REC 7
56 dB

REC 8
58 dB

REC 9
53 dB

REC 10
58 dB

REC 11
51 dB

REC 12
58 dB

REC 13
54 dB

STRUCTURE
B-16-TBD

WISCONSIN DEPARTMENT OF TRANSPORTATION
US HIGHWAY 53 PRESERVATION STUDY
(Wascott/Gordon Town Line to 0.3 miles
South of Solon Springs/Bennett Town Line)
PROJECT I.D. 1195-00-07
USH 53 - CTH A INTERCHANGE
Douglas County
May 22, 2015

COUNTY A INTERCHANGE OVERVIEW

PROJECT NO: 1195-00-07	HWY: USH 53	COUNTY: DOUGLAS	NOISE RECEPTOR LOCATION MAP - USH 53 AT CTH A	FIGURE 2A	E

SAVE FOLDER PATH: P:\UZ\W\MITNW\121665\ENVIRONMENTAL\NOISE\REPORT\EXHIBITS

FILE NAME : 020201_PO_CTH A.DWG | PLOT DATE : 5/21/2015 4:24 PM | PLOT BY : SEH INC | LAYOUT NAME : 020201_PO | PLOT SCALE : 1 IN:200 FT | WISDOT/CADDS SHEET 42

LEGEND

IMPACTED NOISE RECEPTOR LOCATIONS

NON-IMPACTED NOISE RECEPTOR LOCATIONS

PROPOSED NOISE WALL

N

CTH Y

SPRUCE DR

805'YSD'

SUNDEW RD

SNOWBERRY LN

305'YSL'

310'YSL'

CTH Y (SNOWBERRY LN)

15'YW'

SNOWBERRY ACCESS

XXXXX

STRUCTURE B-16-TBD

BARRIER 1

BARRIER 2

BARRIER 3

160'SB' USH 53 SB

155'SB'

150'SB'

145'SB'

140'SB'

135'SB'

USH 53 SB

160'NB'

USH 53 NB

155'NB'

150'NB'

145'NB'

140'NB'

135'NB'

XXXX

1110'YNP'

N PACKER AV

S PACKER AV

1100'YSP'

105'YO'

111'YO'

EXISTING ROADWAY TO BE OBLITERATED (TYP)

BEGIN PROJECT 1195-00-07
STA 134+74.05'NB'

GATE RD ACCESS

GATE RD

205'YGR'

210'YGR'

215'YGR'

220'YGR'

CTH Y (GATE RD)

WILD RIVERS TRAIL

25'YE'

REC 14
68 dB

REC 15
66 dB

REC 16
67 dB

REC 17
65 dB

REC 18
68 dB

REC 19
67 dB

REC 20
67 dB

REC 21
68 dB

REC 22
64 dB

REC 23
66 dB

REC 24
60 dB

REC 25
58 dB

REC 26
65 dB

REC 27
65 dB

REC 28
61 dB

REC 29
64 dB

REC 30
59 dB

REC 31
57 dB

REC 32
59 dB

REC 33
63 dB

REC 34
63 dB

REC 35
61 dB

WISCONSIN DEPARTMENT OF TRANSPORTATION
US HIGHWAY 53 PRESERVATION STUDY
(Wascott/Gordon Town Line to 0.3 miles South of Solon Springs/Bennett Town Line)
PROJECT I.D. 1195-00-07
USH 53 - CTH Y INTERCHANGE
Douglas County
May 22, 2015

COUNTY Y INTERCHANGE OVERVIEW

PROJECT NO: 1195-00-07	HWY: USH 53	COUNTY: DOUGLAS	NOISE RECEPTOR LOCATION MAP - USH 53 AT CTH Y	FIGURE 2B	E

FILE NAME : 020202_PO_CTH Y.DWG | PLOT DATE : 5/21/2015 4:28 PM | PLOT BY : SEH INC | LAYOUT NAME : 020201_PO | PLOT SCALE : 1 IN:200 FT | WISDOT/CADDS SHEET 42

SAVE FOLDER PATH: P:\UZ\WI\TNW\12165\ENVIRONMENTAL\NOISE\REPORT\EXHIBITS

Attachment 1

TRAFFIC FORECAST REPORT

PROJECT ID(S): 1195-00-07
ROUTE(S): USH 53

DISTRICT/COUNTY(IES): NW/Douglas
LOCATION: USH 53, Wascott to Bennett
COMPLETED: 8/13/12

Traffic Forecasting Section; Bureau of Planning and Economic Development; Division of Transportation Investment Management

Developed by: Karl Buck
E-Mail ID: karl.buck@dot.wi.gov
Phone: 608-266-1379
FAX #: 608-267-0294

Design Values (%'s)

ROUTE(S):	USH 53		
Design Volume(s):	8000	--	--
K250	10.5	--	--
K100	11.9	--	--
K30	13.3	--	--
T(DHV)	14.4	--	--
D (Dsgn hr)	61/39	--	--
K8(ADT)	--	--	--
T(A8HV)	--	--	--

Truck Class %'s

Truck Class	USH 53	Seg 2.	Seg. 3
2D	3.4	--	--
3AX	0.5	--	--
2S1+2S2	2.4	--	--
3-S2	8.8	--	--
DBL-BTM	0.3	--	--
TOTAL	15.3%	--	--

Last Count/Forecast Years:
{000} 2010 AADT *000* 2011 AADT
(000) 2014 AADT
-000- 2024 AADT
000 2034 AADT

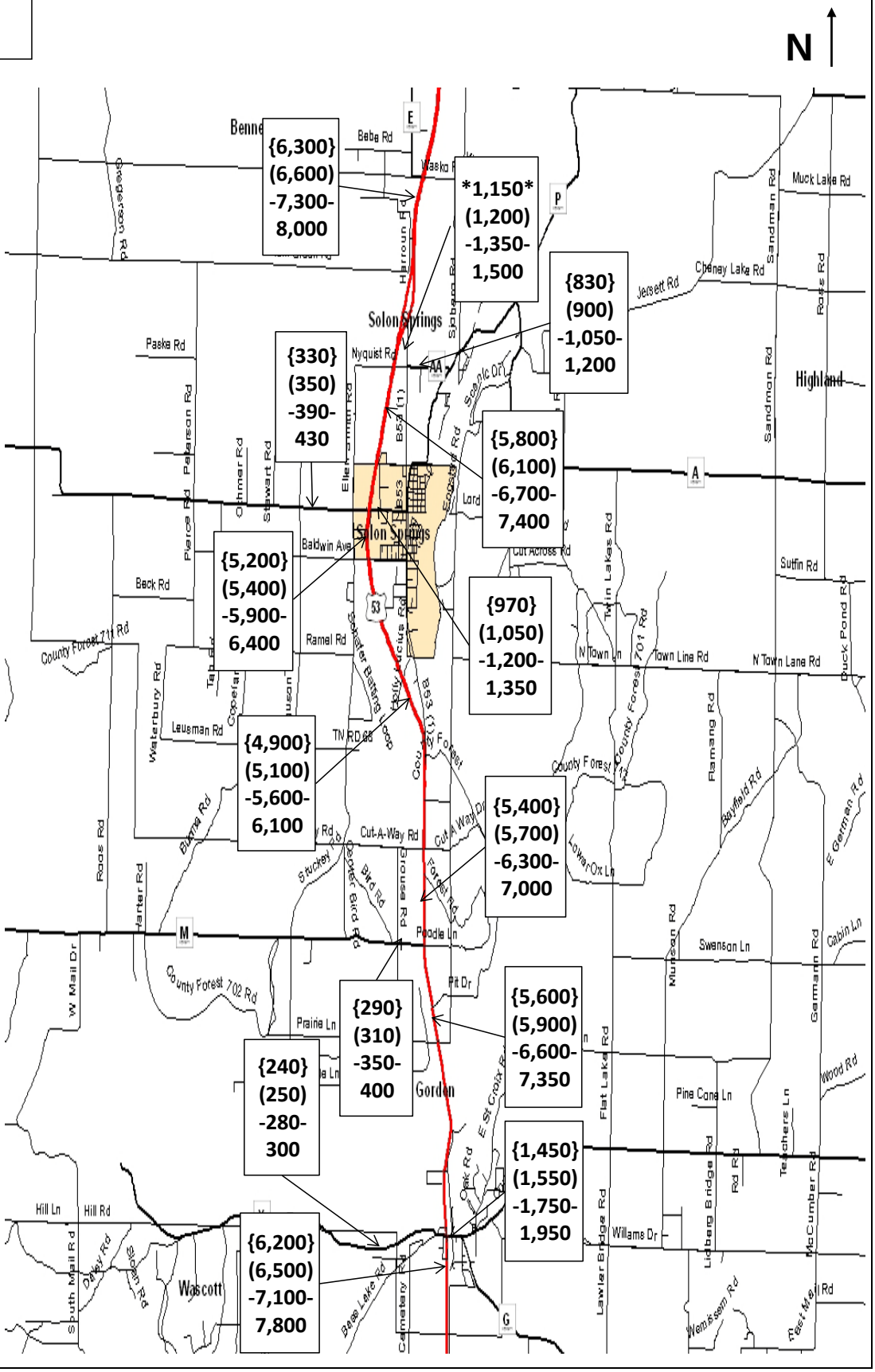
Notes on the Forecast:

1. This projection assumes that no major new traffic generators will be developed in the area served by the roadway or intersections over the course of the planning period.

2. The historical traffic count trends will continue increasing at a decreasing rate. Box-Cox regression is used to project past count data.

3. Truck classification percentages were taken from the 2006 Wisconsin Vehicle Classification Data (Site # 160002-USH 53, 0.5 miles north of CTH L, Douglas County).

4. USH 53 is a factor group VI (recreational-other) highway indicating high fluctuation in traffic from a seasonal perspective. It is functionally classified as a rural principal arterial (2) for count purposes.



Attachment 2

«Date»

RE: US 53 Preservation Study
Noise Evaluation
Douglas County, Wisconsin
WisDOT Project ID # 1195-00-07
SEH Project No. WITNW 121665

«First_Name» «Last_Name»
«Professional_Title»
«Organization»
«Address»
«City», «State» «Zip_Code»

WisDOT Northwest Region – Spooner Office
W7102 Green Valley Road
Spooner, WI 54801

Dear «First_Name» «Last_Name»:

A corridor preservation plan is being developed as part of the above-referenced study. In the process, we have evaluated sound levels for developed lands to minimized sound impacts on these lands as much as practical.

We believe it is vitally important to do all we can to ensure that the future sound levels we foresee adjacent to the proposed interchange are compatible with future development on presently undeveloped lands. Accordingly, we are providing you with information which will help us to achieve this goal.

Local governments have traditionally been responsible for exercising land development controls and zoning within their jurisdictions. Through their authority in these areas, local governments can do much to ensure that future land uses and development are compatible with the noise environment of the area.

We have included with this letter a graph that shows future sound levels at varying distances from the proposed improvements. Many variables influence the level of sound impacting a receiver, including roadway elevation, surrounding terrain elevation, distance from all noise sources, noise sources in the community other than traffic noise, and ground cover.

The Wisconsin Department of Transportation (WisDOT) has adopted a sound level of 67 dBA Leq for residential areas and areas more sensitive to noise levels including among others, day care centers, hospitals, parks, schools, and churches as its noise level criteria. A sound level of 72 dBA Leq has been adopted for commercial/industrial areas. Any location along a highway capacity or new interchange project with a noise level which approaches or exceeds this threshold due to traffic noise must be investigated for feasible and reasonable noise abatement measures in the development of the project. WisDOT has determined “approach” to be defined as 1 dBA less than the noise abatement criteria. Noise abatement measures will not be included in this project because no areas of noise impact were identified.

The enclosed graph may be helpful in understanding the noise levels that could be expected in the vicinity of the US 53 project. Local governments may find it prudent to avoid permitting certain kinds of uses in close proximity to the corridor because of expected noise levels. You can use this sound level information to ensure that the desired compatibility between future development and anticipated interchange sound levels is achieved.

Keep in mind that the predicted levels of noise on the enclosed graph ***only represent traffic noise.*** Future ambient noise from the community is ***not*** included in the prediction. On undeveloped land, we recommend

that no future noise sensitive development be constructed within the areas that will approach or exceed the criteria indicated on the graph.

There are several types of administrative controls available, including the use of exclusive zoning, public ownership, and various forms of legal controls such as building codes, subdivision regulations, health codes, etc. These and others are described in a publication produced by the Federal Highway Administration (FHWA) entitled “Entering the Quiet Zone.” The purpose of this publication is to assist local government officials, developers, and designers in dealing with noise-sensitive land uses near highways.

For your convenience, we have included a copy of this booklet with this letter. It is an excellent tool to assist local government officials by indicating ways in which they can guide the development of undeveloped land in the vicinity of existing highways. More detailed information about noise-compatible planning can be found at the FHWA website: http://www.fhwa.dot.gov/environment/noise/ncp/index.htm.

In summary, we urge you to use the enclosed sound level information to the greatest extent possible in the interest of ensuring a less noisy environment for all.

If you have any further questions in regard to this subject or regarding this project in general, please feel free to contact me at (715) 635-4975.

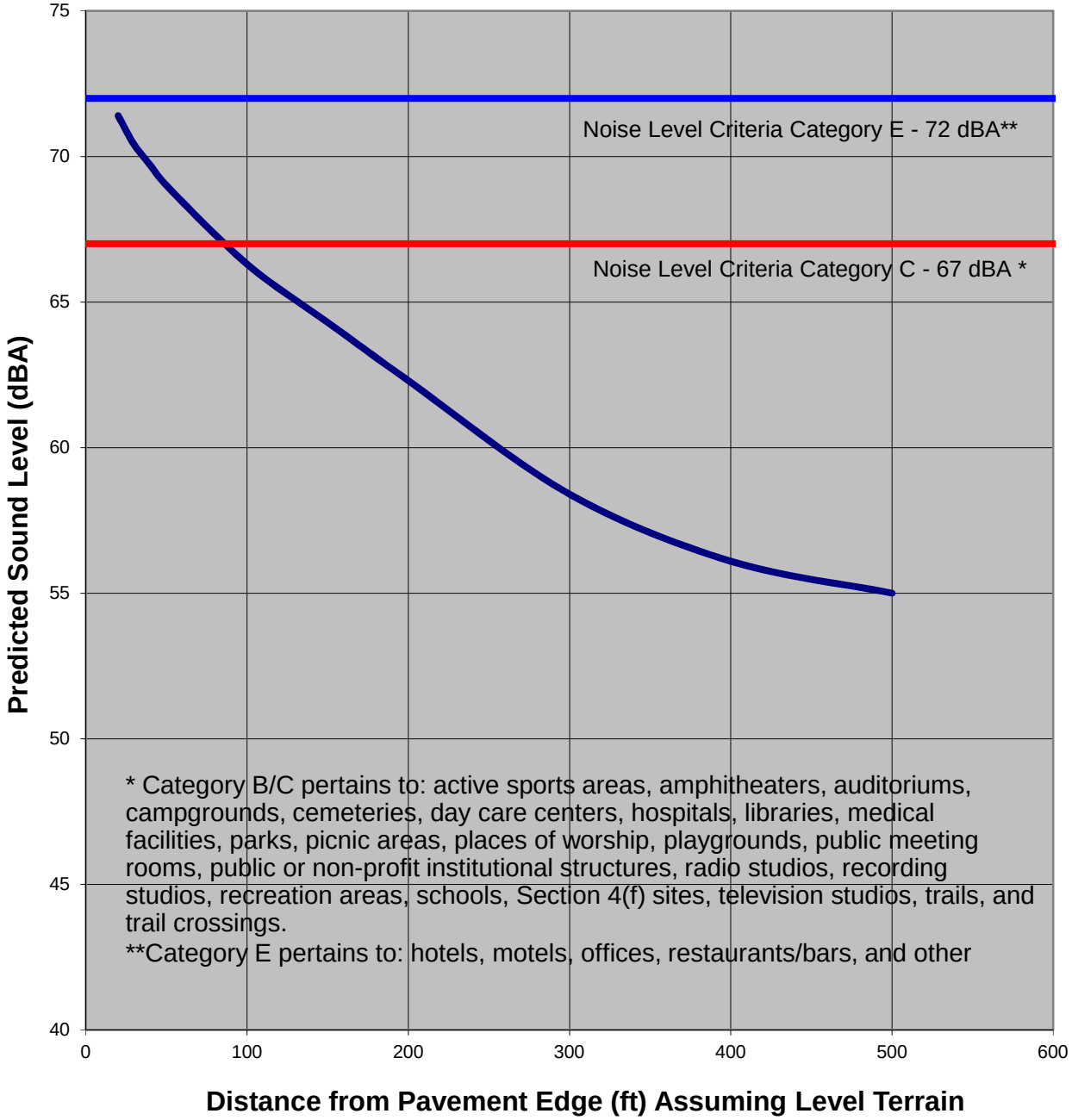
Sincerely,

Marc Bowker
Project Manager
WISDOT - NW Region

Enclosure

PREDICTED SOUND LEVEL (dBA)

US 53 PRESERVATION STUDY
US 53 AND COUNTY A INTERCHANGE PROJECT
WISDOT I.D. 1195-00-07

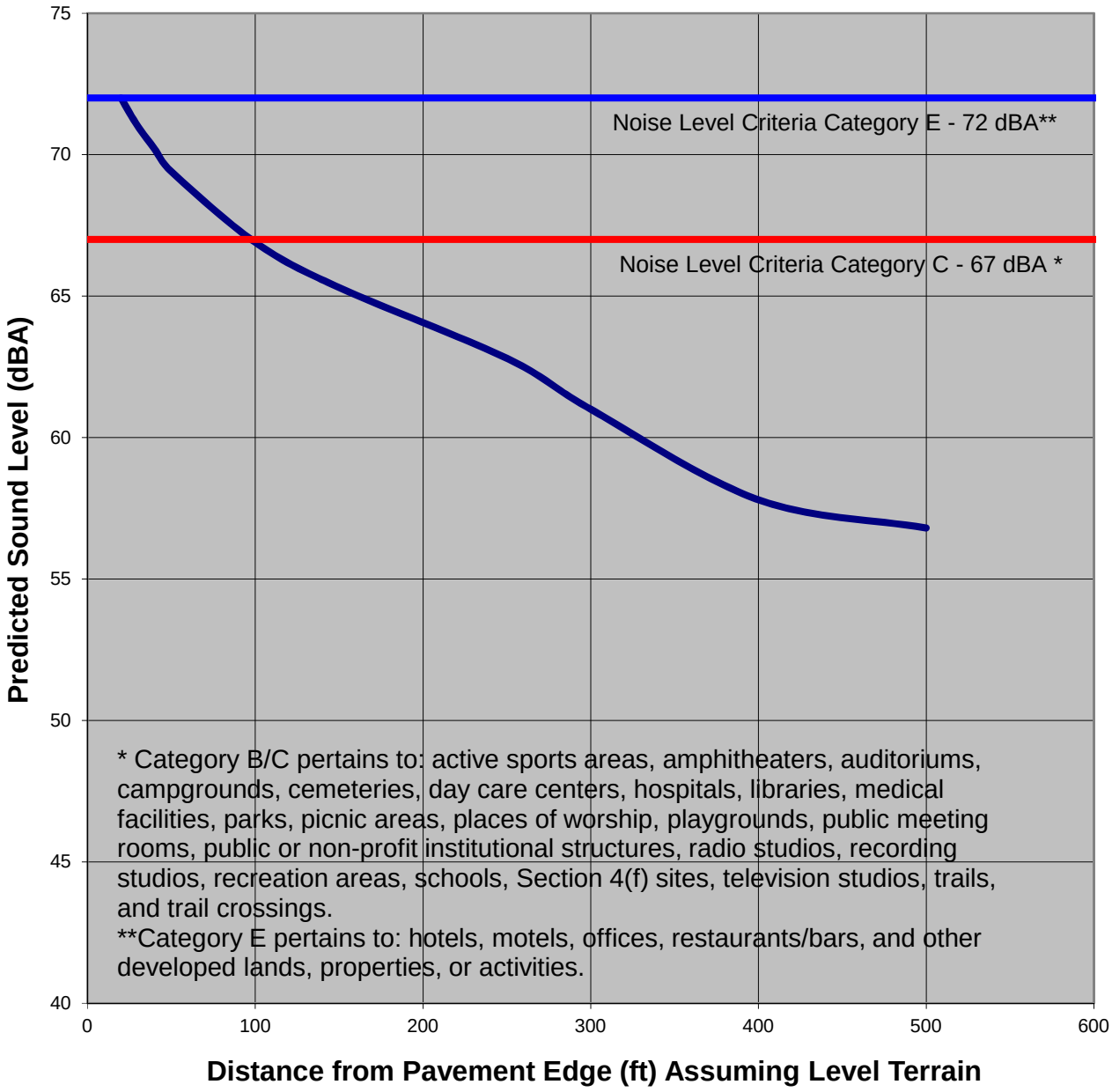


* Category B/C pertains to: active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, recreation areas, schools, Section 4(f) sites, television studios, trails, and trail crossings.

**Category E pertains to: hotels, motels, offices, restaurants/bars, and other

PREDICTED SOUND LEVEL (dBA)

US 53 PRESERVATION STUDY
US 53 AND COUNTY Y INTERCHANGE PROJECT
WISDOT I.D. 1195-00-07



* Category B/C pertains to: active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, recreation areas, schools, Section 4(f) sites, television studios, trails, and trail crossings.

**Category E pertains to: hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities.

Entering the Quiet Zone: Noise Compatible Land Use Planning

Noise Compatible Land Use Planning -- What It Is and Why You Should Consider It

Introduction

Highway traffic noise is an important issue for communities across America. If not properly addressed, highway noise can disrupt our daily routines by interrupting sleep, recreational activities, and even our conversations.

Local planners, developers, and residents attend numerous meetings and spend many hours considering methods to address existing or anticipated noise from nearby roads.

Effective control of highway traffic noise requires a three-part approach:

1. Implementing source control and quieting vehicles at the source.
2. Incorporating noise reduction measures in highway construction projects.
3. Developing land adjacent to highways in a manner that reduces or eliminates noise problems (i.e., noise-compatible land-use planning).

Much emphasis has been given to the first two parts. First, trucks and tires have become quieter. Second, through the end of 1998, 44 State departments of transportation and the Commonwealth of Puerto Rico have constructed more than 1,620 linear miles of barriers at a cost of more than $1.4 billion. However, sufficient attention is often not given to the noise compatible land use planning option.

Avoiding a problem is frequently more effective than trying to correct an existing one. Though we accept that new growth and development often occur next to busy, existing highways, we can help communities address highway traffic noise before -- rather than after -- a frustrating noise problem has occurred.

FHWA wants developers, government officials, planners, and private citizens to know that the best way to reduce highway traffic noise is usually by advance planning and shared responsibility. Local government and developers working cooperatively with Federal and State governments can plan, design, and construct new development projects and new roadways so that traffic noise is reduced. How? One key way is by using **noise compatible land use planning**.

FHWA has prepared this booklet to explain noise compatible land use planning, offer strategies, and outline advantages of a proactive approach for sharing in and actively influencing land use next to highways. Read on to learn the "what," "how," and "why," of this important noise-control method.

There's something else to consider that reduces noise? Noise compatible land use planning!

What is Noise Compatible Land Use Planning?

Noise compatible land use planning is planning that eliminates or reduces the undesirable effects of highway traffic noise by:

- Encouraging the location of less noise-sensitive land uses next to highways.
- Promoting the use of open space or special building construction techniques to minimize noise impact.

Entering the Quiet Zone: Noise Compatible Land Use Planning

What Is Noise Compatible Land Use Planning, and How Is It Done?

Noise compatible land use planning is a community planning method that helps reduce or eliminate traffic noise along highways. This type of planning means considering land-use options and noise issues more effectively so that the right kinds of development are set up next to highways. Several strategies can be used if you want to start using noise compatible land use planning.

A good first step when beginning this process is to identify land uses that are well suited for areas adjoining highways -- uses that are less sensitive to highway traffic noise. Many times, these uses can create a benefit from their proximity to the roadway and the access it provides. Shopping malls or office space, for instance, are good choices near highways.

Another useful early strategy is to designate open space next to a highway so there is room for noise to dissipate before it reaches sensitive areas.

Local governments can use the following approaches to encourage noise compatible land use planning in their communities:

- Planning, zoning, or other legal means (such as, subdivision or development standards, building codes, health codes, or occupancy permits).
- Municipal controls that include land or easement purchases or the acceptance of land donations.
- Community education to inform citizens, developers, and local planners of the options for structures and land uses that will be harmonious next to a roadway.
- Acoustical site planning, architectural design, or acoustical construction.

Question: What is Noise Compatible Land Use Planning?

Answer: Reducing noise in areas along highways by using adjacent land for activities, services, or businesses that are not disrupted by noise.

These construction-related techniques address where structures are located, how structures are designed, and what types of materials are used in the structures.

Entering the Quiet Zone: Noise Compatible Land Use Planning

What Are the Benefits of Noise Compatible Land Use Planning?

Noise compatible land use planning can have positive effects on a community's finances, aesthetics, and quality-of-life.

For instance, when communities use noise compatible land use planning to create a "quiet zone" instead of buying noise barriers, State departments of transportation can use the money saved for additional roadway improvements or maintenance programs. Noise compatible land use planning can be used to attractively design open space next to a road or highway for both passive and active recreational uses. Open spaces can also be designed to make commercial or business properties more visible to existing and future customers.

Reduce the Noise and Create a Quiet Zone

Effective noise compatible land use planning can reduce the need for construction of many noise barriers in highway programs

Open space, slightly depressed construction.

Using land in planned, predetermined ways allows greater development flexibility for neighboring communities, since the planning practices are known in advance.

Finally, noise compatible land use planning provides appealing alternatives for reducing traffic noise when compared to noise barriers, which are more visually and physically restrictive.

As vacant land in many communities disappears, the pressure to use areas next to highways may increase. But communities can use noise compatible land use strategies creatively, with very positive results.

Entering the Quiet Zone: Noise Compatible Land Use Planning

What Are the Costs of Noise Compatible Land Use Planning?

Several types of costs that need to be considered before a community undertakes noise compatible land use planning. The following is a summary of costs that communities and developers can expect:

- Local governments may need to fund administrative costs for including noise compatible land use standards in their guidelines and ordinances.
- Developers may bear a cost for design alternatives that result in fewer homes (or the same number of homes, if denser development is allowed).
- Developers may incur costs for using different materials in construction that are more sound-absorbent than traditional materials. In many instances, however, these costs can be offset by an increase in rental or sales rates, resulting from the reduced effects of highway traffic noise. When developers set a standard for sensitivity and high quality in initial construction, these actions can contribute to long-term value.

Windowless rear exterior; fence to bottom of first floor rooflines.

Why Noise Compatible Land Use? Because it . . .

- Improves community character
  - Protects neighborhood from highway noise.
  - Eliminates restrictive, "hemmed-in" feeling created by noise walls.
  - Reduces complaints about noise from highway neighbors.
- Frees money for other highway needs
- Provides value now and later
  - Enhances commercial and retail visibility and easy access to the highway.
  - Improves aesthetics.
  - Designing quieter structures helps to secure current and increase future property value.
- Complies with changing Federal requirements
  - Recent legislation often prohibits most Federal funding of noise barriers next to existing highway

Entering the Quiet Zone: Noise Compatible Land Use Planning

Has Noise Compatible Land Use Planning Been Used Successfully?

The implementation of formal programs for noise compatible land use planning has been limited. However, there are examples where noise compatible land use practices have been used. Commercial entities, industrial space, office parks, and open space are the most common and desirable uses near roadways. These activities, which benefit from locations next to a highway, do not require a quiet ambiance, so highway traffic noise is usually not disruptive.

As vacant land becomes scarcer in many communities, new residential development is frequently constructed adjacent to highways. Modern construction techniques allow residential properties to coexist next to highways, using strategies other than traditional noise barriers.

Illustrations from Eugene, Oregon; Houston, Texas; and Kansas City, Missouri, offer innovative concepts that can be used as models by other communities wanting to apply noise compatible land use planning principles. Houston and Kansas City are typical large urban communities, with populations of 1.7 million and 500,000, respectively. Eugene is a small urban area with a population of 130,000. Examples from Houston and Kansas City illustrate typical designs for commercial developments near roadways, while examples from Eugene and Houston illustrate typical designs of residential developments near roadways.

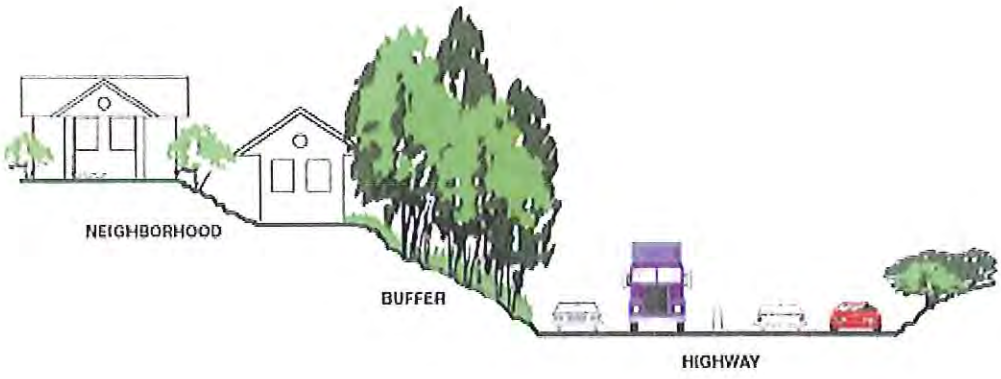
Important Note:

Federal legislation bans FHWA from participating in construction of most noise barriers related to development or construction next to existing highways.

Entering the Quiet Zone: Noise Compatible Land Use Planning

Why Use Noise Compatible Land Use Planning Now?

Communities across the country are seeking non-traditional solutions to traditional challenges. Effective planning before development occurs can help create more livable communities, with improved aesthetics and a greater sense of openness. Municipalities and developers can benefit from noise compatible land use planning--and, almost always, the benefits will far outweigh the initial costs. If communities want to eliminate that "walled in" feeling from the use of noise barriers, this noise reduction strategy will be a good fit.



Residential neighborhood separated from highway traffic noise by space and terrain.

Some communities are beginning to reexamine the use of noise barriers for this reason and due to a loss of visibility for commercial establishments. Residents can be happier, and complaints about noise can go down. Limited highway funds can be used for needs other than noise abatement. Developers can market "quiet developments" and can recover additional development costs in sales and rental prices.

Noise barriers are often perceived as an answer to eliminating or reducing highway traffic noise impacts. Many miles and types of barriers have been constructed over the years. However, there are indications that Federal and State funding that finance noise barriers may be restricted. In fact, Federal legislation has already been enacted to prohibit participation in the construction of most noise barriers for new development that occurs next to existing highways.*

Entering the Quiet Zone: Noise Compatible Land Use Planning

Commercial, Industrial, and Retail Noise Compatible Land Uses -- What Has Worked?

Commercial, industrial or retail developments can act to cushion the effects of highway traffic noise on adjacent buildings that may be used for activities sensitive to noise. Municipalities can implement zoning, other control ordinances, or financial incentives to encourage land uses that are more compatible with noise from roadways. Vegetation between commercial, industrial, or retail land uses can serve as a visual buffer.

Commercial uses can include office space or consumer-oriented retail, as found in many locations in Houston and Kansas City. This strategy is particularly valuable when applied before roadway construction. When communities can plan or anticipate roadways, they gain greater benefits from exercising control over land use. The reason is simple. They can ensure that transportation and commercial growth conforms with local goals -- all while minimizing the effects of highway traffic noise.

Highway noise does not pose a problem for many retail establishments.

Retail use benefits from highway access and visibility.

Highway adjacent to low density commercial.

Entering the Quiet Zone: Noise Compatible Land Use Planning

Residential Strategies

In many areas of the country, competitive use of land means that residential areas are being developed next to highways. This proximity is a benefit for residents, because it helps increase their mobility.

Today many cities feature well-designed residential developments near highways. One example is Eugene, Oregon. Community leaders in Eugene are aware of the impact of noise pollution on adjacent residential development. While no official rules govern residential development near major arterials in Eugene, developers consistently work to reduce the negative impacts of noise from nearby roadways and freeways. Open space buffers are widely used along I-5, a north-south arterial in the city's east side.

Another important method of noise abatement used in Eugene involves the positioning and design of buildings. Along I-5, developers designed multi-family buildings with no windows on the sides facing highways. One development of townhomes is uniquely constructed to curb the noise from I-5, which is directly behind the units. In addition to the solid blocks used as the outside building surface, several layers of high quality, sound-absorbent insulation almost eliminates roadway noise from the interior of the townhomes. Also, a row of existing trees was left to serve as a visual buffer.

Exterior wall of townhomes (seen between the trees) is designed to reduce effect of highway traffic noise. Trees and vegetation act as a visual buffer.

Side and rear view of townhomes. Rear wall has special insulation; in addition to solid surface.

Developers in Houston address the negative impacts of noise and the visual effects along roadways. Although Houston has no zoning or ordinances requiring design modifications in such locations, the developers use the design of their developments to lessen the impact of highway traffic noise. Homes are designed so they do not face the freeway right-of-way (ROW). Homes that back-up to the ROW are completely bricked on the rear exterior surfaces. This serves two purposes: (1) visually the homes are more desirable because of the greater quantity of brick exterior and (2) the presence of the brick material minimizes the effects of traffic noise. Another design feature that minimizes noise is increasing the height of the residential property fences facing the ROW. Fences facing the ROW are 10 feet tall, as compared to 6 feet throughout the remainder of the housing development, providing both mitigation and privacy.

Entering the Quiet Zone: Noise Compatible Land Use Planning

Open Space Strategies

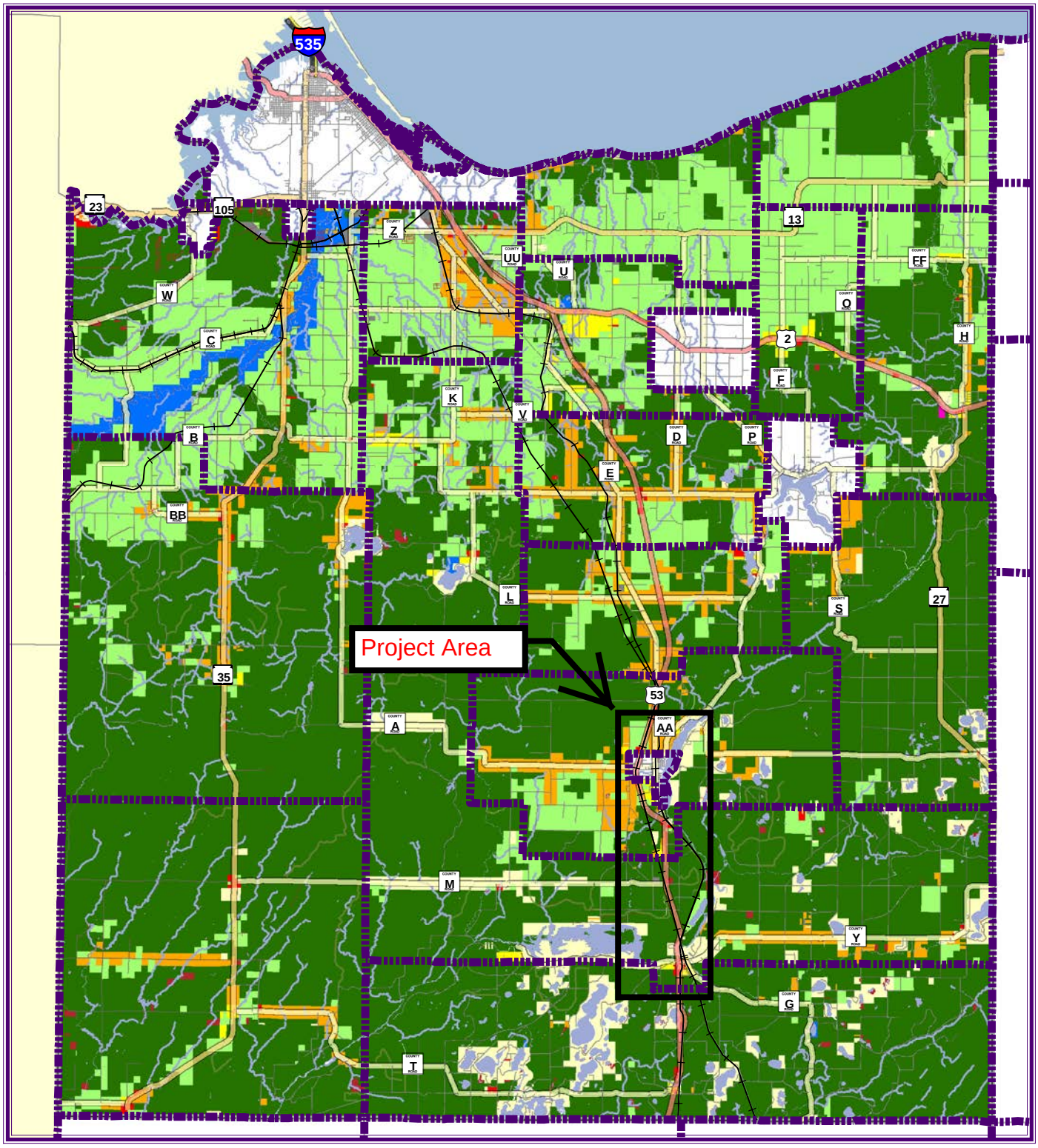
Open space reduces highway traffic noise levels by increasing the distance between the noise source and the noise sensitive activity. An open space method of noise reduction can be used in combination with commercial/ industrial, residential, or construction mitigation strategies to reduce impacts from highway traffic noise.

Planners, decision makers, and community stakeholders should think innovatively about open space and look for ways to put it to productive use. Examples of successful uses include walking trails, bike paths, and other leisure options. Planners and designers should take advantage of natural features, such as "rolling hills" -- or should feel free to create such effects. Adding vegetation to the open space strategy can dramatically increase its attractiveness. For example, trees planted intermittently can provide shade for recreational activities and give a linear park appearance.

Open space buffer between highway and residential community.

Douglas County

Exhibit 6



Zoning

A1 · C1 · F1 · HWY · I1 · PUD · R1 · R2 · RR1 · Unknown · W1

N

0 5 10 20 Miles

Northwest Regional Planning Commission
an economic development district

US 53 Preservation Study

WisDOT ID: 1195-00-07

Indirect Effects Pre-Screening Worksheet

This analysis was performed using a template provided by the Wisconsin Department of Transportation's Guidance for Conducting an Indirect Effects Analysis, Appendix A: Pre-Screening Worksheet for EA Projects for Determining the Need to Conduct a Detailed Indirect Effects Analysis. This template is found as Exhibit 1. Data for this analysis was gathered from comprehensive plans, the Wisconsin Department of Administration, U.S. Census Bureau, and meetings with community officials.

1. **Project Design Concepts and Scope**

   Do the project design concepts include any one of the following: additional thru travel lanes (expansion), new alignment, new and/or improved interchanges and access, bypass alternatives?

   No additional thru lanes will be added on US 53. However, new access roads will be constructed to replace removed connections.

   US 53 will not be realigned, but County Y and County A will both be realigned. County Y will be rerouted to Snowberry Lane and Gate Road. It will cross US 53 with an overpass located approximately 800 ft. to the south of the current intersection. County A will be rerouted to cross US 53 approximately 500 ft. to the south of the current intersection and will cross US 53 with an overpass.

   Access to US 53 will be removed from Spruce Drive and from the north end of Packer Avenue. Cul-de-sacs will be placed on Packer Avenue to the north and south of County Y. New access will be added from Spruce Drive to County Y. A cul-de-sac will be added to Hughes Avenue at the current Limpach Drive intersection. Access will be removed between the east jug handle and Mertzig parkway. Alternative access will be provided by a new shared driveway from Mertzig Parkway.

2. **Project Purpose and Need**

   Does the project purpose and need include economic development, in part or full?

   The purpose of this study is to determine the Preferred Alternative for preserving US 53. This study will include recommendations for the future of the US 53 facility, including potential new grade separated crossings, access roads, relocated driveway access, and modifications to the local road network. Those recommendations will allow development decisions and updates to local land use plans to be consistent with the future needs of the roadway facility and preserve the ability to upgrade the system in the future.

   The project's purpose and need does not include economic development. However, the study will address the development planned by the area municipalities in the project area.

3. **Project Type**

   An Environmental Assessment (EA) is being prepared.

4. Facility Function

WisDOT's Connections 2030 plan identifies US 53 as a backbone route. Backbone Routes serve as multi-lane divided highways interconnecting all regions and major state economic centers, with links to the national system.

5. Project Location

US 53 is a four-lane north-south United States highway that runs from La Crosse, Wisconsin to northern Minnesota. Other major cities located on US 53 include Eau Claire, WI and Duluth, MN. In the immediate project area, it runs from the Town of Gordon to the Town of Bennett, passing through the Village of Solon Springs.

A majority of the area surrounding the project corridor is rural with scattered development. Undeveloped land is primarily forest or wetland.

The project corridor runs through the Towns of Bennett, Gordon, and Solon Springs and the Village of Solon Springs. These are communities of under 1,000 people.

US 53 intersects County Y in the Town of Gordon on the south end of the project. It intersects County A in the Village of Solon Springs near the north end of the project.

6. Improved Travel Times to an Area or Region

Will the proposed project provide an improvement of 5 or more minutes?

The proposed project is not expected to improve travel times by more than five minutes. County A and County Y would be re-routed at their intersections with US 53 and access to US 53 from these roads would be re-established by jug-handle interchanges. It is anticipated that travel times through these areas may increase slightly.

7. Land Use Planning

a. Existing Land Use

Existing land uses surrounding the US 53 corridor include rural wooded uplands and wetlands, low density residential, and limited commercial/industrial development. The Town of Gordon and the Village of Solon Springs have areas with higher density residential and commercial uses in the vicinity of US 53. In the Village of Solon Springs, residential uses are the largest contributor to overall land use, with 31.8% of all land being reported as single-family residential in the village's 2008 land use profile. Water was the second largest use category with 21.8% followed by Transportation with 15.7%.

b. Future Land Use

The Douglas County Comprehensive Plan 2010-2030 includes a vision statement for land use in the future, in which it states, "Douglas County will continue to maintain its rural character and natural resources through its respect of private and public land ownership and its responsibility to

sound resource management." The plan emphasizes the preservation of water, forest, and park resources on federal, state and county lands.

The Village of Solon Springs Comprehensive Plan 2010-2030 has identified five major categories to facilitate its land use vision in the future. These include residential, commercial/industrial, protected, recreational, and smart growth property. The goal of these categories is to encourage a variety of residential uses, promote a mix of business and light industrial uses in key areas, protect natural and recreation areas and facilitate redevelopment and smart growth.

c. Zoning

The Village of Solon Springs zones 492.6 acres of its 936.8 total acres of land as residential. 84.9 acres are zoned commercial, 300.6 acres are zoned industrial and 42.8 acres are zoned for roads.

Most of the project area that falls under county zoning jurisdiction is zoned F-1 (forestry) or R-2 (large-lot residential for encouraging forest management programs).

d. Would the project potentially conflict with plans in the project area? (e.g. in areas in which agricultural preservation is important to local government(s)?)

The Douglas County Comprehensive Plan 2010-2030 identifies the county's road system as the largest component of its transportation system. It explains how good transportation is paramount to rural development and standard of living.

The plan also stresses the importance of forestry, agriculture and watershed conservation. The project would require the acquisition of approximately 301 acres of land for an expanded right of way. Most of this land is zoned F-1 (forestry) and A-1 (agriculture).

The county as a whole has over 535,000 acres zoned for forestry and over 165,000 for agriculture. The proposed right of way would impact 0.0004% of this area while helping to achieve the counties transportations goals.

Furthermore, no land along the project corridor is zoned W-1 (resource conservation) and none of this land will be affected by the project.

8. <u>Population/Demographic Changes</u>

a. Have population changes over the past 5, 10 and 20 years been high, medium or low growth rate vs. the state average over the same period?

Place	1990 Population	2000 Population	2010 Population	2000-2010 Change (%)	1990-2010 Change (%)
Town of Bennett	525	622	597	-4.0	13.7
Town of Gordon	553	645	636	-1.4	15.0
Town of Solon Springs	619	807	910	12.8	47.0
Village of Solon Springs	575	576	600	4.2	4.3
Douglas County	41,758	43,287	44,159	2.0	5.7
Wisconsin	4,891,769	5,363,675	5,686,986	6.0	16.3

Source: U.S. Census Bureau

The Towns of Gordon and Bennett both have similar growth rates to the state of Wisconsin between 1990 and 2010, however, between 2000 and 2010, both towns experienced negative growth compared to the state's small, yet positive growth rate for that time period. The Village of Solon Springs grew significantly faster than the state from 1990-2010 and from 2000-2010. The Town of Solon Springs grew slower than the state did for these time periods and saw virtually no growth from 1990-2000.

b. What are the projections for future population? (Use Wisconsin DOA projections)

Wisconsin's population is expected to grow by over 800,000 (approximately 14%) from 2010 to 2040. Most of this growth will take place in the first 20 years. It is expected to grow by more than 685,000 (approximately 12%) from 2010 to 2030. Douglas County is expected to grow by nearly 3,000 (approximately 6.5%) between 2010 and 2030.

Sources:
A Report on Projected State and County Populations and Households for the Period 2000-2035 and Municipal Populations, 2000-2030, Wisconsin DOA, Oct. 2008

Wisconsin's Future Population, Projections for the State, Its Counties and Municipalities, 2010 – 2040, Wisconsin DOA, Dec. 2013

c. Have there been considerable changes for population demographics and employment over the past 10-20 or more years?

The Hispanic or Latino population in Douglas County increased by 179 (56.8%) between 2000 and 2010. The Black or African American population in the county during this time period increased by 240 people (97.6%).

Douglas county saw a decrease in the school age population (17 years and under) and the post-retirement age population (62 years and over) between 1990 and 2000. It saw an increase in the college age population (18-24 years) and the working age population (18-62). The Village of Solon Springs showed similar trends.

In the Towns of Bennett, Gordon, and Solon Springs, the population of all of these age groups increased by significant percentages during this time period.

9. <u>Rate of Urbanization</u>

a. Developments proposed for the project study area?

No future developments were identified in any of the county or local plans. Additionally, none of the future land use maps showed inconsistency with existing conditions along the project corridor.

b. What are the main changes in developed area vs. undeveloped areas over the past 5, 10 and 20 years? Have there been significant conversations of agricultural land uses to other land use types, such as residential or industrial?

US 53 was a two lane highway throughout the entire project corridor until 20 years ago. Since then, it has been expanded to become a four-lane divided highway.

In the past 20 years, several areas along the project corridor have been developed. A BP gas station was built at the intersection of US 53 and County A on the southwest corner lot within the last 15 years. On the northern border of the Village of Solon Springs, a large area of agricultural land on the east side of US 53 has undergone commercial construction in the last 20 years. Several lots in this area have been developed and other lots have been prepared for development with tree removal and grading.

A new single-family home was constructed just east of US 53 at 9431 Stone Chimney Road in the last 15 years.

10. <u>Public, State and Federal Agency Concerns</u>

Have local officials, federal and/or state agencies, property owners, stakeholders or others raised concerns related to potential indirect effects from the project? (e.g., land use changes, "sprawl", increase traffic, loss of farmland, etc.)

There have been local official meetings, public involvement meetings, and coordination with property owners, state agencies, tribal leaders and local stakeholders as part of this preservation study.

Common concerns identified by the public that relate to indirect effects include effects on local businesses and schools, traffic flow, access to the village by traffic on US 53, emergency response time, and effects on wetlands rivers and lakes.

Individual concerns include pedestrian safety crossing US 53, interference with a pipeline system in the area, effects on Native American fishing, the crossing for the North Country National Scenic Trail, and preservation of an old spruce on a nearby residential property.

<u>Conclusion</u>

Through screening analysis using WisDOT's pre-screening for indirect effects procedure and FDM guidance on indirect effects, it is concluded that the factors of the project, its location and other conditions do not warrant further detailed analysis of the potential for indirect effects.

The project will not have the likelihood to result in significant indirect effects as defined by NEPA. This conclusion was based on the evaluation of 10 pre-screening factors including project design concepts and scope; project purpose and need; project type; facility function (current and planned); project location; improved travel times to an area; local land use and planning considerations; population and demographic considerations; rate of urbanization; and public/agency concerns. The data and evaluation supporting this conclusion are attached. Therefore, further evaluation of indirect effects in a detailed analysis is not warranted. If changes are made to the project design and alternatives, this screening will be re-examined for sufficiency.

EXHIBIT 1

APPENDIX A: WisDOT's Pre-Screening Worksheet for EA and ER Projects For Determining the Need to Conduct a *Detailed* Indirect Effects Analysis

Prepared by Environmental Policy and Community Impacts Analysis Section
Bureau of Equity & Environmental Services
Division of Transportation System Development
Wisconsin Department of Transportation

NEPA requires the assessment of indirect effects of all projects under CEQ regulations. **All EIS documents require a detailed indirect effects analysis.** However, not all, non-EIS environmental reviews for transportation projects will warrant a *detailed analysis* of indirect effects. This pre-screening guidance will assist the Study Team in determining whether a more detailed analysis is necessary in order to comply with NEPA requirements. Refer to the complete indirect effects analysis guidance document and FDM (chapter 25-5-17) for further information.

This pre-screening worksheet may be helpful in scoping for the analysis. If the Study Team is uncertain what level of analysis the project will need, do not make an assumption that the project doesn't require the analysis. Contact the Environmental Policy and Community Impacts Section staff and the regional environmental coordinator for more assistance.

The factors listed below are not in any order of importance. Each EA and ER project needs to be examined individually to understand whether a particular factor or combination factors requires detailed analysis for indirect effects.

Factors to Consider

1. Project Design Concepts and Scope
2. Project Purpose and Need
3. Project Type (Categorical Exclusions, etc.)
4. Facility Function (Current and Planned—principal arterial, rural arterial, etc.)
5. Project Location
6. Improved Travel Times to an Area
7. Local Land Use and Planning Considerations
8. Population and Demographic Considerations
9. Rate of Urbanization
10. Public Concerns

1. Project Design Concepts and Scope

Do the project design concepts include any one of the following?

- ✓ Additional thru travel lanes (expansion)
- ✓ New alignment
- ✓ New and/or improved interchanges and access
- ✓ Bypass alternatives

2. Project Purpose and Need

Does the project purpose and need include:

- ✓ Economic development –in part or full (i.e. improved access to a planned industrial park, new interchange for a new warehouse operation).

3. **Project Type**
   What is the project document "type"?
   - ✓ EIS project—a detailed indirect effects analysis is warranted.
   - ✓ Many EAs will require a detailed indirect effects analysis (However, it also depends on the project design concepts and other factors noted here.)
   - ✓ If a Categorical Exclusion applies, a detailed assessment is not generally warranted, however documentation must be provided that addresses this determination including basic sheet information.

4. **Facility Function**
   What is the primary function of the existing facility? What is the proposed facility?
   - ✓ Urban arterial
   - ✓ Rural arterial

5. **Project Location (Location can be a combination.)**
   - ✓ Urban (within an Metropolitan Planning Area)
   - ✓ Suburban (part of larger metropolitan/regional area, may or may not be part of an metropolitan planning area)
   - ✓ Small community (population under 5000)
   - ✓ Rural with scattered development
   - ✓ Rural, primarily farming/agricultural area

6. **Improved travel times to an area or region**
   - ✓ Will the proposed project provide an improvement of 5 or more minutes? (Based on research, improvements in travel time can impact the attractiveness of an area for new development.)

7. **Land Use and Planning**
   - ✓ What are the existing land use types in project area?
   - ✓ What do the local plans, neighborhood plans, and regional plans, indicate for future changes in land use?
   - ✓ What types of permitted uses are indicated in the local zoning?
   - ✓ Would the project potentially conflict with plans in the project area? (e.g., capacity expansion in areas in which agricultural preservation is important to local government(s)?)

8. **Population/Demographic Changes**
   - ✓ Have the population changes over past 5, 10 and 20 years been high, medium, low growth rate vs. state average over same period? (i.e. USDA defines high growth in rural areas as greater than annual population growth of 1.4 %.)
   - ✓ What are the projections for the future for population? (Use Wisconsin DOA projections.)
   - ✓ Have there been considerable changes for population demographics and employment over the past 10 – 20 or more years?

9. **Rate of Urbanization**
   - ✓ Does the project study area contain proposed new developments?

- ✓ What are the main changes in developed area vs. undeveloped areas over past 5, 10 and 20 years?
- ✓ Have there been significant conversions of agricultural land uses to other land use types, such as residential or industrial?

10. Public, State and/or Federal Agency Concerns

- ✓ Have local officials, federal and/or state agencies, property owners, stakeholders or others raised concerns related to potential indirect effects from the project? (e.g., land use changes, "sprawl", increase traffic, loss of farmland, etc.)

Documenting Pre-Screening

The results of pre-screening require documentation both in the project file and within the document itself. In the documentation, it is important to include various data sources used and summarize the rationale for determining level of analysis required.

Some projects, especially EAs may need additional analysis, but will not reach the level required in an EIS project. The analysis should be catered to the level of project indirect impacts anticipated.

If concluded through the pre-screening process that further analysis is not needed, environmental documents should include the following language in addition to the various data sources and summary of rationale from this pre-screening:

> "Through screening analysis using WisDOT's pre-screening for indirect effects procedure and FDM guidance on indirect effects, it is concluded that the factors of the project, its location and other conditions do not warrant further detailed analysis of the potential for indirect effects.
>
> The project will not have the likelihood to result in *significant* indirect effects as defined by NEPA. This conclusion was based on the evaluation of 10 pre-screening factors including project design concepts and scope; project purpose and need; project type; facility function (current and planned); project location; improved travel times to an area; local land use and planning considerations; population and demographic considerations; rate of urbanization; and public/agency concerns. The data and evaluation supporting this conclusion are attached. Therefore, further evaluation of indirect effects in a detailed analysis is not warranted. If changes are made to the project design and alternatives, this screening will be re-examined for sufficiency."

If the Study Team is uncertain what level of analysis the project will need or if the results of the screening are appropriate, the Study Team should not make an assumption. Contact BEES' Environmental Policy and Community Impacts Section staff and the regional environmental coordinator for more assistance.

Contacts:

Kassandra Walbrun
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kassandra.walbrun@dot.state.wi.us

Pat Trainer
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patricia.trainer@dot.state.wi.us

August 24, 2012

ATTN
PROFESSIONAL TITLE
ORGANIZATION
STREET ADDRESS
CITY, STATE ZIP CODE

RE: US 53 Freeway Preservation Study
Wascott/Gordon town line to
0.3 miles south of Solon Springs/Bennett town line
Douglas County
Project ID: 1195-00-07

Salutation:

The Wisconsin Department of Transportation, Northwest Region (WisDOT) is beginning a freeway preservation study for US 53 from the Wascott/Gordon town line to 0.3 miles south of Solon Springs/Bennett town line in Douglas County. A study location map is enclosed.

The intent of this project is to officially map enhancements to the existing expressway under Wisconsin State Statute 84.295. This official mapping is a planning and preservation action to identify the requisite improvements and associated right-of-way needs.

Although improvements would likely not be made for many years, WisDOT is conducting the study now to ensure long-term improvement options are not precluded as land uses change along the corridor over time, and to help the communities plan development in a way that will be compatible with future changes to these highways.

WisDOT is performing an Environmental Analysis (EA) for this study. We are seeking your comments specific to needs and issues that should be considered as part of the study. Your input is vital in avoiding, minimizing, or mitigating negative impacts to the environment, as well as maximizing benefits for the public and users of the highway. The area of potential impact could include anything within the study area shown on the enclosed study location map.

Archeological investigations conducted for the project will enable WisDOT to determine whether archaeological resources are located in the project area and to assess the project's effect upon these resources. Other environmental studies will also be conducted and include historical building survey, endangered species survey, contaminated material investigations, soil testing, and right-of-way surveys. Information obtained from these studies will assist engineers in design to avoid or minimize the proposed project's effect upon cultural and natural resources.

We would be pleased to receive any comments regarding this project or information you wish to share pertaining to archaeological resources located in the area. Please contact us if you would like to set up a meeting to discuss this project. If your tribe would like to become an interested party under Section 106 of the National Historic Preservation Act or if you would like to receive additional information regarding this proposed study, please contact Marc Bowker at:

WisDOT
W7102 Green Valley Road
Spooner, WI 54801

Sincerely,

Marc Bowker

Marc Bowker
Project Manager, WISDOT - NW Region

Enclosures

First Name	Last Name	Professional Title	Organization	Address	City	State	Zip Code
Edith	Leoso	Tribal Historic Preservation Officer	Bad River Band of Lake Superior Chippewa Indians of Wisconsin	PO Box 39	Odanah	WI	54861
Jason	Hollinday	Tribal Historic Preservation Officer	Fond du Lac Band of Lake Superior Chippewa in Minnesota	1720 Big Lake Road	Cloquet	MN	55720
Mike	Alloway	Tribal Historic Preservation Officer	Forest County Potawatomi Community of Wisconsin	Tribal Office, PO Box 340	Crandon	WI	54520
Jerry	Smith	Tribal Historic Preservation Officer	Lac Courte Oreilles Band of Lake Superior Chippewa Indians of Wisconsin	Tribal Office, 13394 W. Trepania Road	Hayward	WI	54843
Melinda	Young	Tribal Historic Preservation Officer	Lac du Flambeau Band of Lake Superior Chippewa Indians of Wisconsin	Tribal Historic Preservation Office, PO Box 67	Lac du Flambeau	WI	54538
giiwegiizhigookway	Martin	Tribal Historic Preservation Officer	Lac Vieux Desert Band of Lake Superior Chippewa Indians - Keteqitigaaning Ojibwe Nation	PO Box 249	Watersmeet	MI	49969
Dave	Grignon	Tribal Historic Preservation Officer	Menominee Indian Tribe of Wisconsin	PO Box 910	Keshena	WI	54135
Steve	Ortiz	Chairman, NHPA Rep.	Prairie Band Potawatomi Nation	16281 Q Road	Mayetta	KS	66509
Larry	Balber	Tribal Historic Preservation Officer	Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin	88385 Pike Road, Highway 13	Bayfield	WI	54814
Jane	Nioce	Chairperson	Sac and Fox Nation of Missouri in Kansas and Nebraska	305 N. Main	Reserve	KS	66434
Sandra	Massey	NAGPRA Representative	Sac and Fox Nation of Oklahoma	RR 2, Box 246	Stroud	OK	74079
Jonathan	Buffalo	NAGPRA Representative	Sac and Fox of the Mississippi in Iowa	349 Meskwaki Road	Tama	IA	52339-9629
		Attn: Cultural Resource Director	Sokaogon Chippewa Community Mole Lake Band	3051 Sand Lake Road	Crandon	WI	54520
Wanda	McFaggen	Tribal Historic Preservation Officer	St. Croix Band Chippewa Indians of Wisconsin	Tribal Historic Preservation Office, 24663 Angeline Ave.	Webster	WI	54893-9246

September 17, 2012

ATTN
PROFESSIONAL TITLE
ORGANIZATION
STREET ADDRESS
CITY, STATE ZIP CODE

RE: US 53 Freeway Preservation Study
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WisDOT is performing an Environmental Analysis (EA) for this study. We are seeking your comments specific to needs and issues that should be considered as part of the study. Your input is vital in avoiding, minimizing, or mitigating negative impacts to the environment, as well as maximizing benefits for the public and users of the highway. The area of potential impact could include anything within the study area shown on the enclosed study location map.

We would be pleased to receive any comments regarding this project or information you wish to share pertaining to the EA. Please submit any comments you may have in writing by September 24, 2012, to:

Darren Fortney, AICP
Short Elliott Hendrickson Inc. (SEH)
6808 Odana Road, Suite 200
Madison, WI 53719
Email: dfortney@sehinc.com

Enclosed is a list of those who have received this letter as part of the formal agency coordination process. If you feel we should be seeking comment from others not on the list included with this packet please contact Darren Fortney, listed above, and we would be happy to contact them.

Please do not hesitate to contact me at (715) 635-4975 with any questions, or if you wish to discuss this project in further detail. Thank you in advance for your cooperation.

Sincerely,

Marc Bowker

Marc Bowker
Project Manager, WISDOT - NW Region

Enclosures

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John Walt
Fire Chief
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Solon Springs, WI 54873

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Julie Lefler
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August 7, 2014

By electronic mail only

MR. DARREN FORTNEY
SHORT ELLIOT HENDRICKSON INC.
6802 ODANA ROAD, SUITE 200
MADISON, WISCONSIN 53719

Re: US 53 Freeway Preservation Study
Project ID 1195-00-07

Dear Mr. Fornney:

Thank you for sharing you proposed plans for the freeway planning study for US 53 near Solon Springs, Wisconsin with the Bureau of Aeronautics (BOA). BOA's concerns for potential future impacts are directed at potential effects on Solon Springs Municipal Airport. Airport sponsor planning for the airport's future does not include runway extension or other expansion projects that would potentially be affected by highway projects.

Future highway projects that may affect the Solon Springs Municipal Airport would likely be concerned with the development of attractants to wildlife hazardous to aircraft using the airport. In particular, the development of ponds for stormwater management of resulting from removal of borrow material may present habitat for waterfowl that often present a hazard to aviation. BOA would object to projects that would increase the potential for increase in habitat for wildlife hazardous to aircraft.

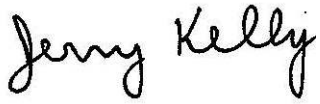
FAA's Advisory Circular AC 150/5200-33B: *Hazardous Wildlife Attractants on or near Airports* requires that a minimum separation distance be maintained between public use airports and potential wildlife hazards to aviation. These separation distances are as follows:

- 5,000 feet for any hazardous wildlife attractant for an airport serving piston-powered aircraft;
- 10,000 feet for any hazardous wildlife attractant for an airport serving turbine-powered aircraft;
- 5 statute miles for all airports between the edge of the airport's Air Operations Area and attractants that could cause hazardous wildlife movement into or across the approach or departure airspace.

Solon Springs Municipal Airport provides services to piston -powered aircraft, and portions of the US 53 Freeway Preservation Study area lie within that distance. BOA opposes the development of potential projects that would increase the wildlife hazards to airports.

As the US 53 Freeway Preservation Study proceeds, you may develop specific projects or highway features for which BOA can provide more specific guidance. We would be happy to share our concerns and opinions with you. Please let me know if you have any questions or need any additional information.

Sincerely,



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cc: Stacey Miller, BOA
Marc Bowker, WisDOT-NW Region

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WISCONSIN DEPT. OF NATURAL RESOURCES

December 4, 2012

Darren Fortney
SEH
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RE: **I.D. # 1195-00-07**
USH 53 Corridor Preservation Study (Wascott - Bennett)
Douglas County

Dear Darren:

This letter is in response to your inquiry for preliminary environmental comments on the above referenced study. Our comments identify existing resources within a two mile radius of the corridor that was shown in the map included with the preliminary information submitted to us on August 24, 2012. Please keep in mind that this is a very broad overview of potential resource issues. When an alternatives analysis is provided we will conduct a more in-depth field investigation and review.

Surface Waters - The following surface waters are located within the study area starting at the south end near Solon Springs:

- Bergen Springs – A small, shallow, gravel-bottomed spring pond that is considered to be Class II brook trout water.
- St. Croix River – A cool (warm transition) mainstem stream that is an Outstanding Resource Water (ORW). It contains a diverse population of warmwater fish species, mussels, wildlife and waterfowl habitat, and wild rice and wild rice habitat. It also contains invasive aquatic plant species such as curly leaf pondweed and eurasian water milfoil, and other invasives such as Chinese mystery snail and Japanese mystery snail.
- Eau Claire River – A cool (cold transition) mainstem stream with a diverse population of warmwater fish. It also contains Rusty crayfish, which is an invasive species.
- Leo Creek – The headwaters of this stream down to Cemetery Road (Sec. 10/11) is Class III brook and brown trout water, and from Cemetery Road down to Upper St. Croix Lake is Class II trout water.
- Upper St. Croix Lake – This soft water natural drainage lake is the headwaters of the St. Croix River. It has a diverse warm water fish population, but also contains some trout near the areas where trout streams flow in. It is an ORW, but also contains invasive species such as curly leaf pondweed, Chinese mystery snails, and Banded mystery snails.
- Park Creek – Class II brook and native brown trout stream from headwaters down to the pond in Solon Springs, from that point to Upper St. Croix Lake is Class III trout water.

- Spring Creek – Class II native brook and brown trout stream from its headwaters down to Upper St. Croix Lake.
- Rock Cut Creek – Class I native brook trout stream from its headwaters down to Upper St. Croix Creek.
- Beebe Creek – A Class I trout stream that flows into Upper St. Croix Lake and contains native populations of brook and brown trout. It is also an Exceptional Resource Water (ERW).
- Catlin Creek – A Class I trout stream that flows into Upper St. Croix Lake and contains native populations of brook trout. It is also an ERW.
- Porcupine Creek – A warmwater drainage that flows into Catlin Creek. Fish populations are limited due to damaging flow extremes and the small size of the stream.
- St. Croix Creek – A small Class I brook trout stream that flows into Upper St. Croix Lake. It is also an ERW.
- East Fork Moose River – A warmwater drainage stream that is mainly minnow water.
- Kaspar Creek – A warmwater drainage stream that is mainly minnow water.

State Properties and State Natural Areas (SNA) – The following state properties are found within the project limits:

- **Wild Rivers State Trail** - The Wild Rivers State Trail (WRT) provides opportunities for activities such as ATV riding, snowmobiling and hiking. The WRT is in the Rails to Trails Program. Any crossings of the WRT should be a separated grade and span the entire right-of-way. This would preserve the railroad corridor for any future restoration of rail services.
- **Brule River State Forest** – This DNR property is located mainly on the north side of Upper St. Croix Lake. However, there is a small parcel called the "Gordon Unit" which is located in Sec. 5, T43N, R11W). Land and Water Conservation funds (LAWCON) have been spent on acquisition/development projects within the state forest. Therefore, any impacts to this state property would be subject to 6(f) provisions.
- **Douglas County Wildlife Area** – This state wildlife area is located between Solon Springs and Gordon in Douglas County. The property is approximately 4,005 acres (994 owned, 3,011 leased from Douglas County) of pine barrens. While sharp-tailed grouse are a focus species of pine barrens habitat and this property many other plant and animal species require or use this habitat type to meet their life cycle requirements. Federal monies were used to purchase this property, so any impacts to this area could be subject to 6(f) provisions.

Mapped Floodplains – There are mapped floodplains located through the study area, mainly associated with the waterways listed above. Any changes or impacts to these mapped floodplains may require a hydraulic and hydrologic (H&H) analysis.

Wetlands - Several wetland types are found throughout the entire project area. Shallow open water communities, deep marshes, shallow marshes, ephemeral ponds, cedar bogs and spruce/tamarack bogs are examples of the wetland types that are found throughout this segment of the USH 53 corridor. Wetlands are often associated with threatened and endangered plant and bird species, as we discuss in the next section. These areas are also very

important for waterfowl production, furbearers, frogs, turtles and aquatic invertebrates, as well as providing floodwater retention and filtering of stormwater. All efforts should be made to avoid wetland impacts.

Threatened/Endangered/Special Concern Species – Several bird, insect and plant species have been previously surveyed within the project area. Surveys will be required if the proposed improvements are located near the listed areas or have the potential to impact habitat that could support any of these or other listed species. Specific locations and species are listed below:

- **T43N, R12W** –
  - Section 13 -**Torrey's Bulrush** (*Scirpus torreyi*), a State Special Concern plant, is found on the sandy shores of shallow lakes and lagoons. Blooming occurs late June through late July; fruiting occurs throughout August. The optimal identification period for this species is early July through late August.
  - Section 14 – **Bald Eagle** (*Haliaeetus leucocephalus*), a bird listed as Special Concern in Wisconsin and federally protected by the Bald & Golden Eagle Protection Act, prefers large trees in isolated areas in proximity to large areas of surface water, large complexes of deciduous forest, coniferous forest, wetland, and shrub communities. Large lakes and rivers with nearby tall pine trees are preferred for nesting. In northern Wisconsin, the recommended avoidance period is from March 15 - August 1.

- **T43N, R11W** –
  - Section 5 – **Dwarf Milkweed** (*Asclepias ovalifolia*), a State Threatened plant, is found in oak barrens, open pockets within pine barrens, periodically brushed areas, and rights-of-way areas. Blooming occurs early June through early July; fruiting occurs late June through late August. The optimal identification period for this species is throughout June.
  - Section 6 – **Bald Eagle** (see information above)

- **T44N, R11W** –
  - Section 6 – **Trumpeter Swan** (*Cygnus buccinators)*, is a special concern bird in Wisconsin. Trumpeter Swans are migratory birds that arrive in their breeding grounds in late April soon after ice melt in early spring and leave for their northern wintering grounds in September shortly before freeze. The pairs begin building their six foot diameter nests in mid-April on top of muskrat or beaver lodges or on mounds of emergent vegetation. The cygnets hatch in June and fledge at about 14 weeks of age. Ideal habitat for Trumpeters include shallow wetlands one to three feet deep in isolated areas away from human disturbance with a diverse mix of emergent vegetation and open water that support a rich variety of submergent plants. The recommended avoidance period is from late April - Sept.
  - Section 6/7 – **Bald Eagle** (see information above)
  - Section 8/17 – **Lapland Buttercup** (*Ranunculus lapponicus*), a State Endangered plant, is found in white cedar swamps. It is usually found near or within mucky depressions, seeps, groundwater springs, and similar cool, wet pockets, particularly where Sphagnum mosses are abundant and form extensive beds. Blooming occurs throughout June; fruiting occurs throughout July. The optimal identification period for this species is throughout June.
  - Section 20 – **Bald Eagle** (see information above)

- Section 30 – **Bald Eagle** (see information above)

- Section 31 – **Arrow-leaved sweet coltsfoot** (*Petasites sagittatus*), a State Threatened plant, is found in cold marshes and swamp openings, often forming large clones. Blooming occurs throughout May; fruiting occurs throughout June. The optimal identification period for this species is late May through late August.

- Section 31 – **Weed shiner** (*Notropis texanus*), a fish listed as Special Concern, prefers sloughs, lakes, and still to sluggish sections of medium streams to large rivers, over substrates of sand, mud, clay, silt, detritus, gravel or boulders. Spawning occurs from late June through July at approximately 18 degrees Celsius.

-

- **T44N, R12W** -
  - Section 1 – **Greater Redhorse** (*Moxostoma valenciennesi*), is a fish listed as Threatened in Wisconsin. This species prefers clear water of medium to large rivers and lakes at depths of less than 3 feet, over bottoms of sand, gravel, or boulders. Spawning occurs in May or June in moderately rapid waters.

  - Section 1/12 – **Bald Eagle** (see information above)

  - Section 2 – **Hooker's Orchid** (*Platanthera hookeri*), a State Special Concern plant, is found in a variety of dry to moist, mostly mixed coniferous-hardwood forests. Blooming occurs late May through late July; fruiting occurs early July through late August. The optimal identification period for this species is early June through early September.

  - Section 10/11/15/23 – **Sharp-tailed Grouse** (*Tympanuchus phasianellus*), a Special Concern bird in Wisconsin, requires a mosaic of dense grass and shrubs with rich forb and insect foods during nesting and brood-rearing and a bare open area for lekking. During winter they often rely on riparian areas and other sites that support deciduous trees and shrub for feeding, roosting, and escape cover; also utilizes non-native cultivated grains and hedgerow species. The recommended avoidance period is from early March to late September.

  - Section 10/11/12 – **Chryxus Arctic** (*Oeneis chryxus*) is a butterfly species of special concern in Wisconsin and is found in dry grass habitats, cutovers, jack pine barrens, rocky and grassy openings in forest especially along ridges. Its host plants consist of grasses and perhaps sedges. Populations are localized in northern Wisconsin. Adults fly mid-May to the first week in June, with peak flight usually occurring in late May, perhaps more abundantly in even-numbered years.

  - Section 11/14/15/22/23/24 – **Woodland Jumping Mouse** (*Napaeozapus insignis*), a state Special Concern mammal, is found in forested or brushy areas near water, wet bogs, stream borders.

  - Section 11/12/13 – **Dusted Skipper** (*Atrytonopsis hianna*), a State Special Concern butterfly, has been found in dry, open sandy areas, dry prairie, pine barrens. Its host plants are big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachryium scoparius*). The adults are in flight from late May to early June in Wisconsin when few other skippers are present. Fully grown caterpillars hibernate and pupate in a sealed case 1-3 inches above the ground at the base of the host plant.

  - Section 11 – **Prairie Skink** (*Plestiodon septentrionalis*) is a species of special concern in Wisconsin. They have been previously surveyed in the Douglas County Wildlife Area, but little is known about their life history.

- Section 11 – **Midwestern Fen Buckmoth** (*Hemileuca nevadensis ssp. 3*) a moth of special concern in Wisconsin. They have been previously surveyed in the Douglas County Wildlife Area, but little is known about their life history.

- Section 12/13 – **Cobweb Skipper** (*Hesperia metea*), a State Special Concern butterfly, has been found in pine barrens and oak savanna. Its host plants are big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachyrium scoparium*). Adults are present from mid-May to early June. Fully grown caterpillars hibernate.

- Section 14/15 – **Rocky Mountain Sprinkled Locust** (*Chloealtis abdominalis*) is a small light brown grasshopper of special concern in Wisconsin. They can be found in jackpine barrens, pine forest openings in the northern highland. Adults are present from July through September.

- Section 15/23 – **Blandings Turtle** (*Emydoidea blandingii*) is listed as a Threatened species in Wisconsin. They utilize a wide variety of aquatic habitats including deep and shallow marshes, shallow bays of lakes and impoundments where areas of dense emergent and submergent vegetation exists, sluggish streams, oxbows and other backwaters of rivers, drainage ditches (usually where wetlands have been drained), and sedge meadows and wet meadows adjacent to these habitats. This species is semi-terrestrial and individuals may spend a good deal of time on land. They often move between a variety of wetland types during the active season, which can extend from early March to mid-October. They overwinter in standing water that is typically more than 3 feet in deep and with a deep organic substrate but will also use both warm and cold-water streams and rivers where they can avoid freezing. Blanding's turtles generally breed in spring, late summer or fall. Nesting occurs from about mid-May through early July depending on spring temperatures. They strongly prefer to nest in sandy soils and may travel up to 900 feet from a wetland or waterbody to find suitable soils. Hatching occurs from early August through mid-October.

- Section 15/23/24 – **Upland Sandpiper** (*Bartramia longicauda*), a bird listed as Special Concern, prefers tallgrass prairies, sedge meadows, unmowed alfalfa/timothy fields and scattered woodlands. The recommended avoidance period is from April 15 - August 30.

- Section 26/35 – **Bald Eagle** (see information above)

- Section 27 – **Arrow-leaved sweet coltsfoot** (information above)

- Section 27 – **Marsh grass of Parnassus** (*Parnassia palustris*), a State Threatened plant, is found on clay bluffs along Lake Superior, and in cold northern fens, and calcareous sand or gravel pits. Blooming occurs early August through early September; fruiting occurs throughout September. The optimal identification period for this species is throughout August.

- Section 35/36 – **Least Bittern** (*Ixobrychus exilis*), a Special Concern bird in Wisconsin. This species prefers freshwater marshes where cattails and reeds predominate in swamps and marshes and dense emergent vegetation. The recommended avoidance period is from April 25 – July 31.

- Section 35 – **Black Tern** (*Chlidonias niger*), a bird listed as Special Concern, prefers large shallow marshes with abundant vegetation adjacent to open water. The recommended avoidance period is from May 15 to July 31.

- Section 36 – **Marsh Horsetail** (*Equisetum palustre*), a State Special Concern plant, is found in fens, alder tickets, wet sedge meadows, bog and swamp margins, and wet swales near the Great Lakes. The optimal identification period for this species is late May through late September.

- Section 36 – **Pronghorned Clubtail** (*Gomphus graslinellus*), a State Special Concern dragonfly has been found in slow moving streams, ponds or lakes. The flight period is early June through late July.

- Section 36 – **Weed Shiner** (see information above)

- Section 36 – **Bald Eagle** (see information above)

- **T45N, R11W** –
  - Section 6/7 – **A predaceous diving beetle** (*Hydroporus pseudovilis*) is of special concern in Wisconsin. Little is known about its life history.

  - Section 7/18 – **Bald Eagle** (see information above)

  - Section 7 – **A Lepidostomatid Caddisfly** (*Lepidostoma libum*) is of special concern in Wisconsin. Little is known of its life history.

  - Section 8/17/18 – **Mountain Cranberry** (*Vaccinium vitis-idaea ssp. minus*), a State Endangered plant, is found on mossy cliffs along Lake Superior and in conifer swamps inland. Blooming occurs early May through late June; fruiting occurs late July through early September. This species can be identified year-round.

  - Section 17/18 – **Fairy Slipper** (*Calypso bulbosa*), a State Threatened plant, is found only in old growth white cedar swamps. Blooming occurs early May through July; fruiting occurs late June through late July. The optimal identification period for this species is late May through early June.

  - Section 17 – **Pronghorned Clubtail** – please see section above for life history information.

  - Section 30 – **Little Brown Bat** (*Myotis lucifugus*) is threatened in Wisconsin. This insectivorous bat weighs 5.0-12.5 grams, and has tan, reddish-brown or dark brown fur. This species commonly uses artificial structures such as attics and barns as summer roosting sites, but will also roost in crevices and cavities of trees. In fall, little brown bats make local long-distance migrations of up to 270 miles to caves and mines where they will hibernate for the winter.

We look forward to continued coordination on this corridor preservation study. If you have any questions regarding the information in this letter, please feel free to call me at 715-635-4229.

Sincerely,

Amy Cronk

Amy Cronk
Environmental Review Coordinator

T45N, R12W (From 2/5/13 email)

Section 36: Bald Eagle
Section 25: Pronghorned Clubtail, Special Concern (Upper St. Croix Lake)
Northern Dry-Mesic Forest (St. Croix Flowage)
Little Brown Bat, Threatened (Upper St. Croix Lake)

cc: Amy Adrihan, DOT Northwest Region – Superior
Marc Bowker, DOT Northwest Region - Spooner

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WISCONSIN DEPT. OF NATURAL RESOURCES

September 16, 2013

Darren Fortney
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RE: **I.D. # 1195-00-07**
USH 53 Preservation Study (Gordon - Bennett)
Comments on Alternatives
Douglas County

Dear Darren:

This letter is in follow-up to your submittal of conceptual alternatives for the project referenced above. The purpose of this letter is to provide comments on the alternatives that were submitted as part of this study.

COMMENTS ON ISSUES COMMON TO ALL ALTERNATIVES:

WETLANDS - TRANS 401.106(6) describes the buffer zones that are needed to provide protection to wetlands and other surface waters that are located adjacent to proposed construction projects. It is our expectation that these standards will be incorporated into all aspects of this study. In addition, wetland impacts must be avoided and minimized to the maximum extent practicable.

Please note that the Wisconsin Wetland Inventory maps are not always complete and may not show the locations of all wetlands. The locations of wetlands in some of the areas along the proposed interchange locations may need to be field verified.

STORMWATER MANAGEMENT – Many of the alternatives presented would require new roads to be constructed. This new construction may require DOT to incorporate the post-construction performance standards of TRANS 401 for stormwater management into the design of the project. This may require DOT to purchase additional right-of-way to accommodate stormwater management practices such as detention ponds or swales. Alternatives which include larger areas of road realignment or new construction would likely require more stormwater management practices to be incorporated into the design phase.

WILD RIVERS TRAIL – We support the proposals to build a bridge or box culvert to accommodate the Wild Rivers Trail that is shown on most of the proposed alternatives. We recommend that the structures be sized large enough to accommodate trail grooming equipment, including graders.

COMMENTS ON CTH A ALTERNATIVES:

Alternative 1: Interchange –

Private access: There are private residences along CTH A that may lose access as a result of the proposed interchange. As with previous preservation studies on USH 53, we request that this study includes mapping future access to their residences. Identifying and resolving these types of private access issues should be included in these studies to aid the local municipalities with future land use planning. In addition, due to increasing development throughout the area, it may be even more difficult to identify an alternative access route for private residents when these interchanges are built.

Park Creek and mapped floodplains: The southbound on-ramp may cause improvements to be made to the structure on USH 53 over Park Creek. Park Creek is a Class II trout stream and is located within a mapped floodplain. As required under Chapter NR 116, Wisconsin's Floodplain Management Program, if the road alignment would be raised or any fill would need to be brought into this area, it may be necessary to conduct a study to determine if these activities would change the upstream flood elevations. If this alternative is chosen, DNR would request that both the southbound and northbound structures on USH 53 be assessed for fish and other aquatic organism passage and to verify that the structures are sized properly. If these structures are impeding fish passage or causing detrimental impacts to stream morphology, DNR may recommend DOT to replace both of these structures as part of the project.

The optional road connection in lieu of the Baldwin Avenue overpass would cross Park Creek, which includes a mapped riparian forested/scrub shrub wetland complex and a mapped floodplain in this area. A wetland delineation and functional values analysis would need to be conducted to determine the impacts of a new crossing at this site. In addition, a hydrologic and hydraulic analysis would need to be completed to assure any structure would not increase the upstream flood elevations. In this case, it appears that the resource impacts would be less severe if the option to construct the USH 53 bridge over Baldwin Avenue was chosen instead of building this new road connection.

Flood hazard area: There is a mapped flood hazard area that starts at the wetlands in the northeast quadrant of the CTH A/USH 53 intersection (see black cross-hatched area on attached map). It appears there could be impacts to this flood hazard area from the northbound on-ramp and the Mertzig Parkway relocation.

Unnamed drainages: There are two unnamed drainages located north of CTH A, both of which cross USH 53. There are no known fisheries in these drainages, and flow is intermittent. However, they do have an important function by maintaining hydrologic connections between several wetland areas and the mapped flood hazard on the east side of USH 53.

Alternative 2: Jug-Handle –

Flood hazard area: It appears that the road providing access to the three residences in the northeast quadrant of the intersection may be within the boundary of the flood hazard area. See comments under Alternative 1 regarding this item.

Unnamed drainages: Additional information provided to us regarding this alternative includes realigning CTH A in the northwest quadrant of the CTH A/USH 53 further north by approximately 50 feet to avoid impacts to the gas station located in the southwest quadrant. This option may impact the southernmost unnamed drainage discussed under Alternative 1. If any portions of this drainage would need to be realigned, DNR would recommend that the reconstructed portions be constructed to the same dimensions and continue to provide the same hydrologic functions that it does now.

Alternative 3: Jug-Handle – No comments.

Alternative 4: Jug-Handle at Baldwin Avenue

Park Creek: Improvements would likely be needed to upgrade both Cemetery Road and Baldwin Avenue up to county road standards if designated as the new alignment of CTH A. This upgrade, in addition to the turning lane for the jug-handle on the west side of USH 53, may result in improvements or changes to the structures on Park Creek. Please refer to our comments on Park Creek under Alternative 1.

Alternative 5: Intersection north of CTH A – DOT has requested DNR comments on an additional alternative that would construct a new interchange between CTH A and East Boundry Road. This proposal would likely require a new alignment of CTH A, and/or a new road accessing USH 53 on the west side, as well as upgrading town roads to county road standards. There would likely be wetland impacts and improvements needed for wetland and waterway structures. In addition, concerns with stormwater management and fragmentation of wildlife habitat would need to be addressed. There is also an old dump site located on the west side of USH 53 that could cause complications during the design/construction phases of this project.

COMMENTS ON CTH M ALTERNATIVES:

Alternative 1: Jug-Handle –It appears that this alternative would avoid impacts to the Douglas County Wildlife Area.

Alternative 2: Jug-Handle – This option could impact several acres within the Douglas County Wildlife Area. As mentioned in our initial comment letter, federal monies were used to purchase this property, so any impacts to this area could be subject to 6(f) provisions.

In addition, there are several species of special concern that could be affected by the proposed improvements. They are the Woodland jumping mouse, Dusted skipper (butterfly), cobweb skipper (butterfly), and the upland sandpiper (bird). Our initial comment letter dated December 4, 2012 contains specific information on the life cycles and host plants for these species. If this alternative is chosen, surveys would need to be conducted to determine if these species are located within the project limits, and if they would be affected by the proposed improvements.

COMMENTS ON CTH Y ALTERNATIVES:

DOT revised these options to include connecting the Gordon Ranger Station driveway to Spruce Drive, and then building a cul-de-sac on the east end of Spruce Drive to prevent direct access onto USH 53. There is currently little space between the field equipment building and the driveway at the Gordon Ranger Station. When DNR equipment backs out of the building, there are safety concerns with other vehicles or people that may be using the driveway. If the driveway was reconfigured as a town road, these safety concerns would potentially increase with additional vehicular use. In addition, the

proximity of the building may not meet standards for setbacks along town roads. The DNR recommendation and preference for this item would be to locate the new leg of Spruce Drive along the property line and relocate the driveway entrance for the Ranger Station onto Spruce Drive rather than CTH Y.

There are also active eagle nests located on the north side of CTH Y just west of the CTH Y/East Bass Lake Road intersection (see attached map). At the DU-38B site there are two eagle nests, both of which were active in 2013. Bald eagles are protected under the federal Bald and Golden Eagle Protection Act. Since these nests are relatively close to the project limits, coordination with the U.S. Fish & Wildlife Service would need to be conducted to determine if timing restrictions or other preventative measures may apply.

Alternative 1: Diamond Interchange –

St. Croix River: The USH 53 on/off ramps on the north side of CTH Y would likely require the southbound and northbound lanes to be widened. These ramps would be located within a large wetland complex adjacent to the St. Croix River, and it appears that the northbound bridge over the river would also need to be widened to accommodate the on-ramp.

There is a large mapped floodplain associated with the St. Croix River in this area. As required under Chapter NR 116, Wisconsin's Floodplain Management Program, if the road alignment would be raised or any fill would need to be brought into this area, it may be necessary to conduct a study to determine if these activities would change the upstream flood elevations.

In addition, this portion of the St. Croix River contains wild rice and wild rice habitat. DNR consultation with the Voigt Intertribal Task Force must occur if this alternative is chosen.

Alternative 2: Jug-Handle – With the exception of the two new east/west roads on the east side of USH 53, this option appears to utilize existing infrastructure and minimize new road construction. This option would avoid additional fragmentation of wildlife habitat and forested areas, and possibly result in fewer stormwater management requirements.

Alternative 2A: Jug-Handle – Extending Sundew Road up to CTH Y would increase new road alignment causing possible fragmentation of wildlife habitat and forested areas.

Alternative 3: Jug-Handle – Relocating CTH Y could increase habitat and forested areas disturbance potential even more than previously discussed for Alternative 2.

Alternative 4: Jug-Handle – This alternative would avoid many impacts on the east side of USH 53, but require new road alignment on the west side, which would increase the potential for concerns discussed above for Alternatives 2A and 3. In addition, there would be wetland impacts associated with the south end of this new road, which could be avoided by choosing other alternatives.

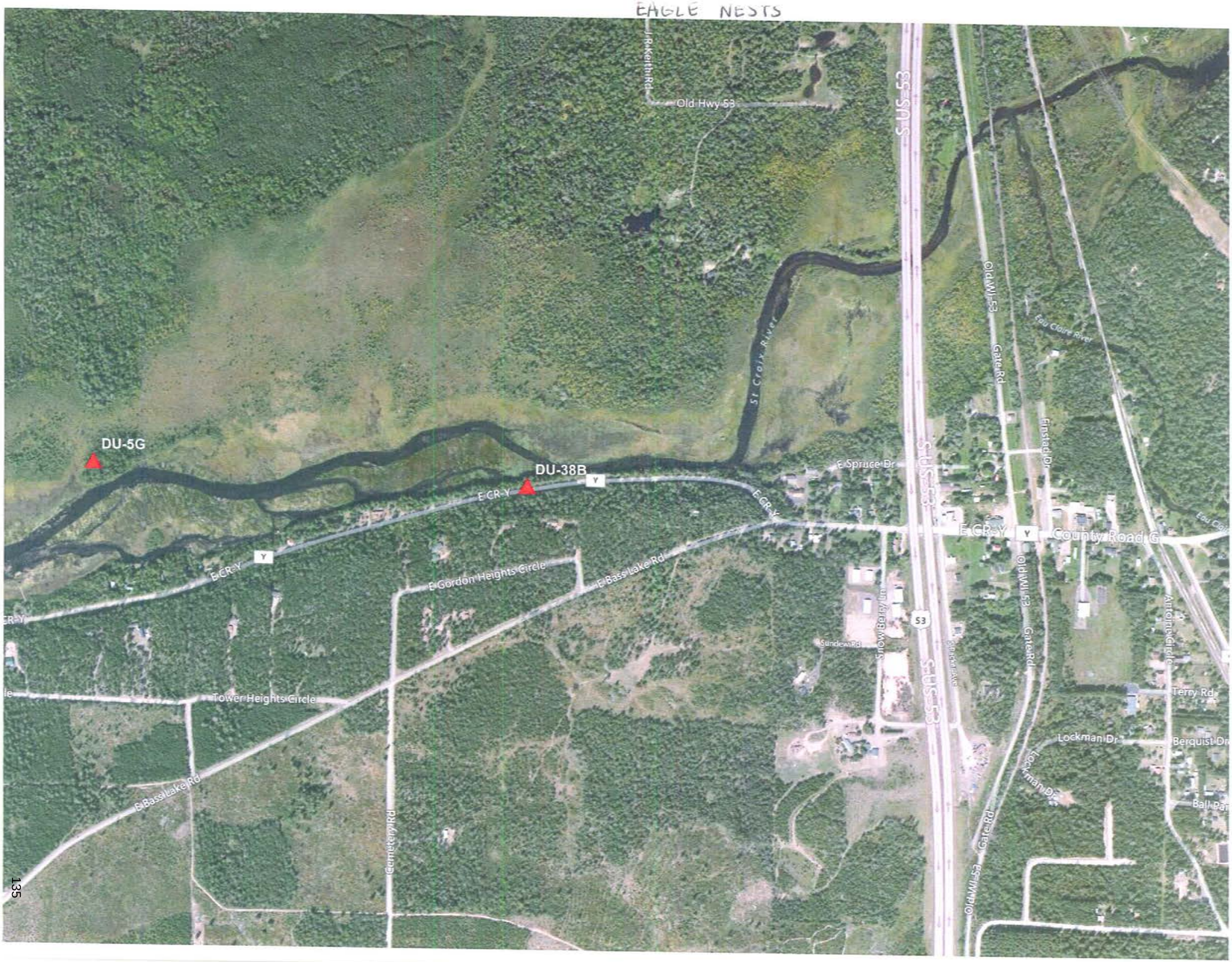
We thank you for the opportunity to comment on the preservation study. If you have any questions regarding this letter or the information we have requested, please feel free to contact me here in our Spooner office at (715) 635-4229.

Sincerely,

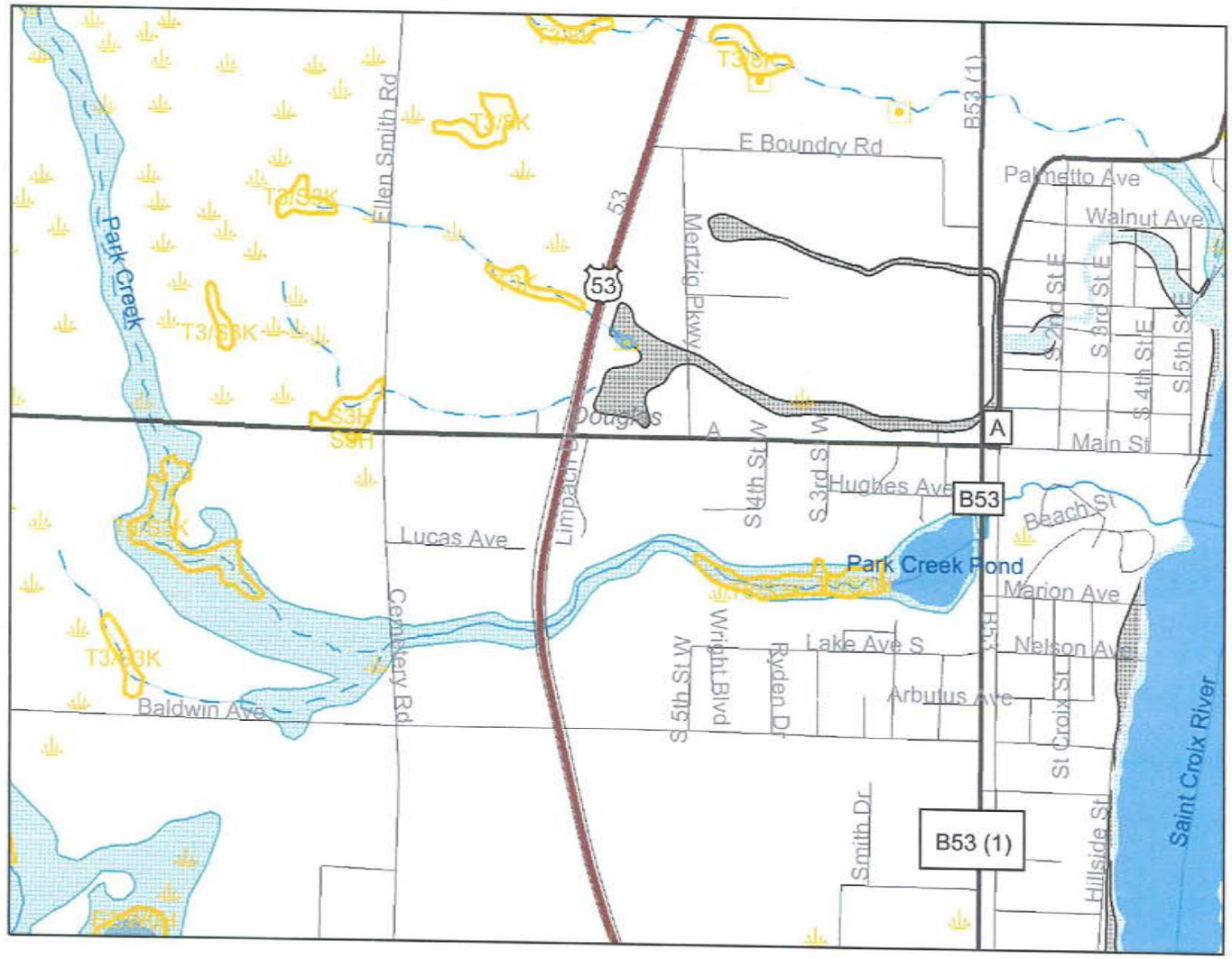
Amy Cronk

Amy Cronk
Environmental Review Coordinator

cc: Marc Bowker, DOT - Spooner
Amy Adrihan, DOT – Superior


EAGLE NESTS
Old Hwy 53
St Croix River
DU-5G
DU-38B
E CR-Y
E Spruce Dr
E Gordon Heights Circle
E Bass Lake Rd
Tower Heights Circle
Cemetery Rd
US 53
Old WI-53
Gate Rd
Eau Claire River
Finstad Dr
County Road G
Snow Berry Ln
Sundew Rd
Lockman Dr
Terry Rd
Berquist Dr
Antoinette Circle

Solon Springs area – Mapped wetlands and floodplains



Legend

Major Highways
- Interstate
- State Highway
- U.S. Highways
- County Roads
- Local Roads

Wetland Points
- Excavated Pond
- Dammed Pond
- Wetland Too Small to Delineate
- Filled Excavated Pond
- Filled Dammed Pond
- Filled Wetland Too Small to Delineate
- Filled or Drained Wetland

Wetland Areas
- Upland
- Wetland
- Filled or Drained Wetland

Rivers and Streams
- Intermittent
- Fluctuating
- Perennial

- 24K Open Water
- County Boundary

Digital Flood Boundaries
- 100 Year Floodplain
- 500 Year Floodplain
- Floodway

0 1750 3500 5250 ft.

Scale: 1:17,680

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Green Bay ES Field Office
2661 Scott Tower Drive
New Franken, Wisconsin 54229-9565
Telephone 920/866-1717 FAX 920/866-1710
http://www.fws.gov/midwest/GreenBay

To: Marc Bowker **USFWS Project ID:** 12-TA-0404

Regarding your: ☑ Letter ☐ E-mail ☐ FAX **Dated:** August 24, 2012

RE: Project ID 1195-00-07, US 53 Freeway Preservation Study, Wascott/Gordon Town Line, Douglas Cnty WI

Pursuant to the **Endangered Species Act of 1973,** the **Fish and Wildlife Coordination Act,** and the **Migratory Bird Treaty Act**, the U.S. Fish and Wildlife Service (Service) has reviewed the information provided for the project noted above. Our comments follow (see checked boxes below).

☑ Due to the project location, no federally-listed, proposed, or candidate species, or designated critical habitat occurs within the project area. We recommend checking our website (http://www.fws.gov/midwest/GreenBay/) every 6 months from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.

☐ If migratory birds are known to nest on any structures (*e.g.,* bridges) which may be disturbed by project construction, activities should begin (and be concluded) before the initiation of the breeding season for those species or after the breeding has concluded. Alternatively, the structures can be *tightly screened* before the breeding season (May 1 through August 30) to prevent nesting. If you will not be able to begin construction prior to or after the breeding season, please contact our office.

☐ Under the Migratory Bird Treaty Act of 1918, as amended, it is unlawful to take, capture, kill, or possess migratory birds, their nests, eggs, and young. If migratory birds are known to nest on any structures or habitat which may be disturbed by project construction, activities (e.g., tree removal) should begin and be completed before the initiation of the breeding season for those species or after breeding has concluded. Generally, we recommend that any habitat disturbance occur before May 1 or after August 30 to minimize potential impacts to migratory birds, but please be aware that some species may initiate nesting before May 1.

☐ We recommend, when possible, that bridges and abutments be designed and constructed in such a way as to allow terrestrial wildlife to pass under the bridge without entering the river during normal flow conditions. This may require lengthening the bridge, limitations on the use of exposed riprap, modifications to the surface of the riprap (e.g., grouting the surface or filling with soil or other natural materials), or modifications in the substrate and/or slope at the base of the abutments, as some wildlife species cannot or prefer not to traverse areas of riprap.

☐ The Service supports and encourages the maintenance or creation of habitat connectivity wherever possible. As such, we recommend installing bridges or culverts that do not impede the movement of water, sediments, or aquatic species along existing waterways. Specifically, we strongly recommend replacing failing culverts with bridges or bottomless culverts where possible. At minimum, we recommend new culverts be set at a zero slope, with a width that matches bank flow.

☑ We note that the project area includes wetlands. In refining and selecting project alternatives, efforts should be made to select an alternative that does not adversely impact wetlands. If no other alternative is feasible and it is clearly demonstrated that project construction resulting in wetland disturbance or loss cannot be avoided, a wetland mitigation plan should be developed that identifies measures proposed to minimize adverse impacts and replace lost wetland habitat values and other wetland functions and values.

USFWS Contact(s): Jill Utrup **Phone Number:** 920-866-1734

For the Field Supervisor: _____ **Date:** September 26, 2012

IN REPLY REFER TO:
(NOCO)

September 28, 2012

Darren Fortney, AICP
Short Elliot Hendrickson Inc.
6808 Odana Road, Suite 200
Madison, WI 53719
dfortney@sehinc.com

Dear Mr. Fortney,

I'm responding to your request for comments dated August 24, 2012 concerning your freeway preservation study for HWY 53 in Douglas County, WI. I appreciate your consideration of the North Country National Scenic Trail (NCNST) in your planning. We are just completing a cooperative project with the Village of Solon Springs to improve a trailhead on Village property near Highway 53. Related to this project was updating the signage for the site on highway 53. I have included the initial letter we wrote to WIDOT for that project with diagrams. I have also included a satellite image of the area with the North Country National Scenic Trail alignment overlaid. I believe there are plans to do some additional trail work in this area, which might change the crossing point of the trail on Hwy 53, but I'm not sure. We would definitely advocate for the safest, most attractive crossing and trailhead entrance for North Country Trail users that we could get.

The official trail partner of the NCNST is the North Country Trail Association, and I am ccing their Wisconsin Regional Representative, Bill Menke, who lives in Madison. He can tell you exactly what the plans are for the trail in that area, and coordinate with you on any information needed.

Sincerely,

Jeff McCusker
Trail Manager
jeff_b_mccusker@nps.gov
(616) 340-2004
Cc Bill Menke bmenke@northcountrytrail.org
Attachments

Brule Bog WI
Lake of the Woods
County Rd
Solon Springs
Upper Saint Croix Lake
Island Lake
Twin Lakes
Park Creek Pond
Douglas
Muskrat Lake
Crownhart Island
Ferguson Lake
53
Long Lake
Bass Lake
Flat Lake
Highway 53
Lower Ox Lake
© 2012 Google
9668 ft
Image USDA Farm Service Agency
Imagery Date: 8/28/2010 1992
46°20'33.04" N 91°48'34.74" W elev 1015 ft
Eye alt 42890 ft
Google earth

IN REPLY REFER TO:
(NOCO-WI)

July 12, 2012

Michael Ostrenga,
Northwest Region Superior Office
1701 N. 4th Street
Superior, WI 54880
715-392-7945

Dear Mr. Ostrenga,

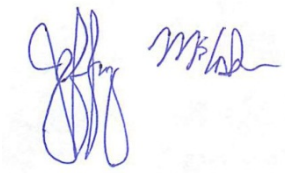
I'm writing to follow up on our call about installing signs for the North Country National Scenic Trail, at the Hwy 53 trailhead south of Solon Springs. The National Park Service is the administering agency for this trail; however we rely on local partners and agencies to help us get the trail developed.

We would like to get permission and have the layout approved for the signs and locations shown on the attachments. We have funding to fabricate the signs that must be used by September 30, 2012, so we'd like to get the sign layout approved as quickly as possible, so we can get those ordered. The signs will be laid out and fabricated as outlined in the interagency Memorandum of Understaind between the NPS and FHWA.

Feel free to call me at the number below with questions, or email Peter Nordgren pnordgre@yahoo.com, the North Country National Scenic Trail volunteer who is leading this project, and can answer any questions you have about the site and area.

Thanks for your help, and we will be flexible as to complying with any state standards or requirements for size, design, and location of these signs.

Sincerely,

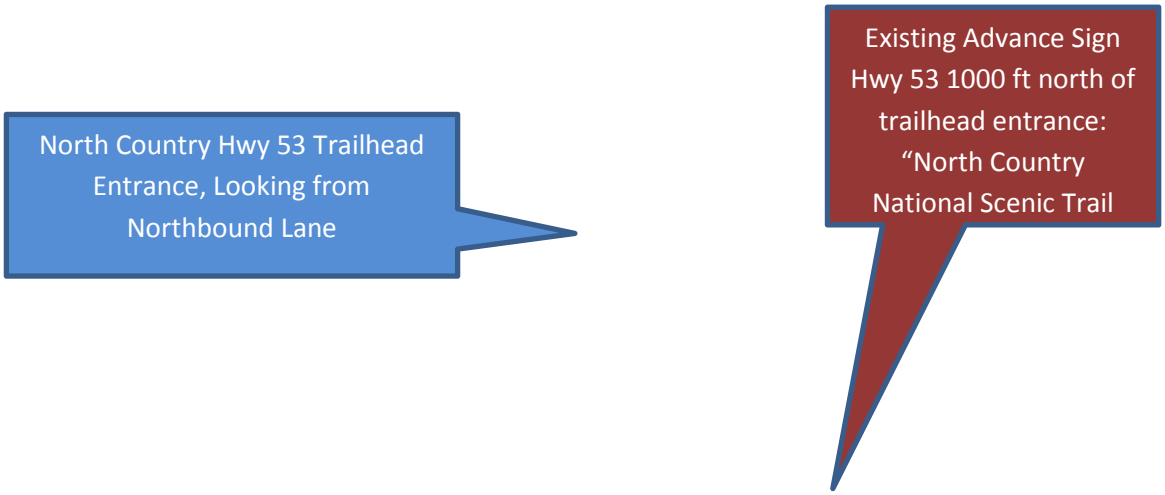


Jeff McCusker
Trail Manager
North Country National Scenic Trail
jeff_b_mccusker@nps.gov
(616) 340-2004

Attachments: aerial photos and sign layout

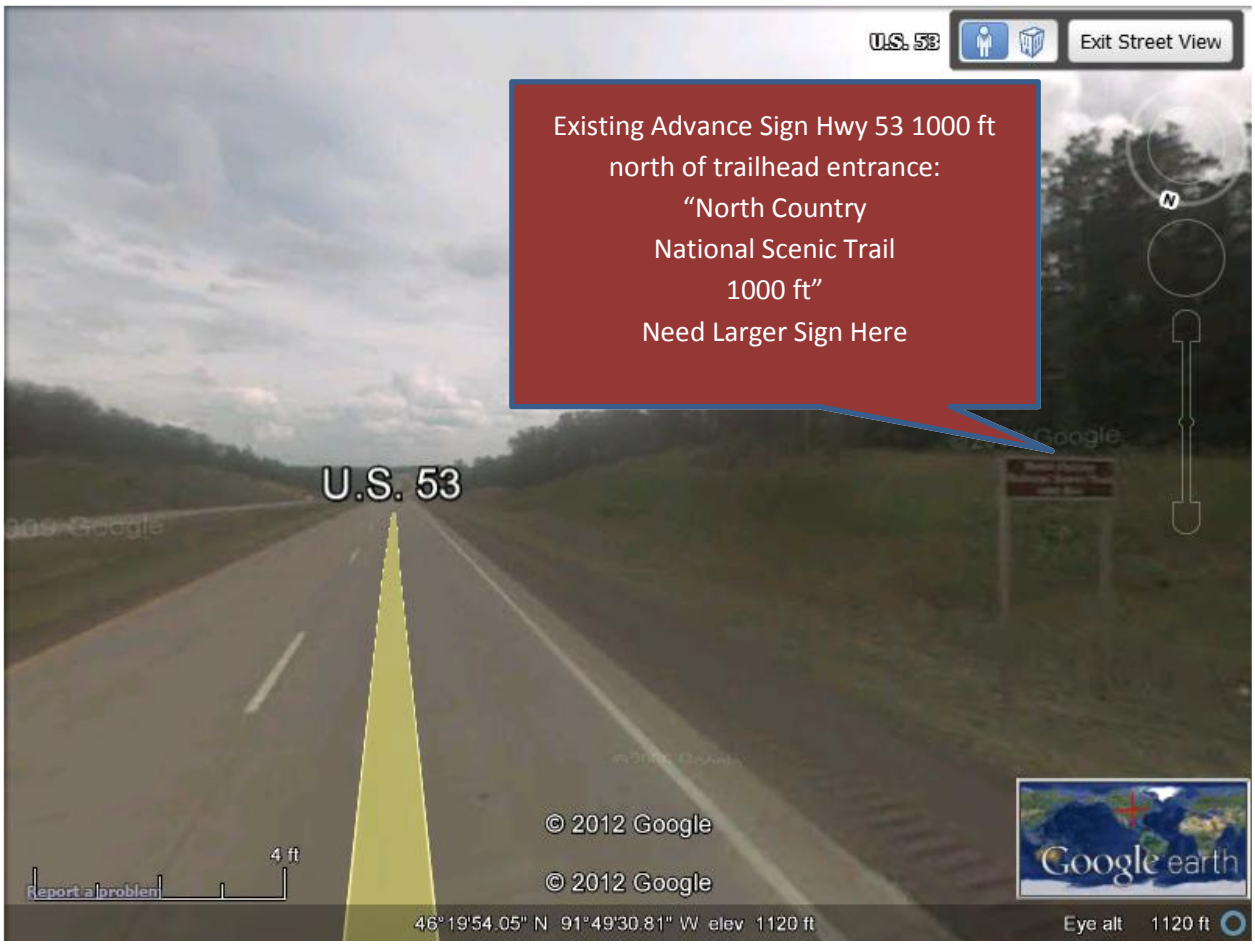
North Country National Scenic Trail Hwy 53 Trailhead Solon Springs
Sign Concept Plan

Prepared 6/28/2012 Jeff McCusker, NPS




U.S. 53
Exit Street View
North Country Hwy 53 Trailhead Entrance, Looking from Northbound Lane
Proposed New Sign: “North Country National Scenic Trail Next Left”
U.S. 53
© 2012 Google
4 ft
Report a problem
© 2012 Google
Google earth
46° 19'46.84" N 91°49'24.28" W elev 1132 ft
Eye alt 1109 ft


Existing Advance Sign Hwy 53 1000 ft south of trailhead entrance:
"North Country
National Scenic Trail
1000 feet"
Need Larger Sign Here
U.S. 53
Exit Street View
U.S. 53
© 2012 Google
© 2012 Google
4 ft
Report a problem
Google earth
46°19'39.71" N 91°49'13.58" W elev 1059 ft
Eye alt 1044 ft


U.S. 53
Exit Street View
Existing Advance Sign Hwy 53 1000 ft north of trailhead entrance:
"North Country
National Scenic Trail
1000 ft"
Need Larger Sign Here
U.S. 53
4 ft
Report a problem
© 2012 Google
© 2012 Google
Google earth
46°19'54.05" N 91°49'30.81" W elev 1120 ft
Eye alt 1120 ft

Rough Sketch Proposed New Advance Signs 8 inch high text

Rough Sketch Proposed Entrance Sign Hwy 53

North Bound 200 ft before turn

Appendix C5

LAC DU FLAMBEAU BAND OF LAKE SUPERIOR CHIPPEWA INDIANS
TRIBAL HISTORIC PRESERVATION

Division of Historic Preservation

August 30, 2012

Mark Bowker
WisDOT Project Manager
Northwest Region
W7102 Green Valley Road
Spooner, WI 54801

SUBJECT: **Project ID: 1195-00-07; US 53 Freeway Preservation Study; Wascott/Gordon Town Line to 0.3 Miles South of Solon Springs/Bennett Town Line; Douglas Co., WI**

Dear Mr. Bowker:

In response to your letter dated **August 24, 2012**, the Lac du Flambeau Band of Lake Superior Chippewa Indians would like to express concerns with any impacts to historic and cultural properties located within the project area of potential effect for the project mentioned above. This project is located within areas that have previously been occupied by the Northern Ojibwe Bands.

Please forward all results of an archival review and archaeological reports. Should there be an impact or effect to historic properties as a result of this project, we will request consultation pursuant to Section 106 of the National Historic Preservation Act, as amended,

However, if a review has not yet been completed, the Lac du Flambeau Tribal Historic Preservation Office is available to assist in the identification of cultural resources, or an archaeological/historical assessment or archival review for a fee.

Please contact us if you have any questions or concerns at (715) 588-2139. You may send the results of the archival review and archaeological report to:

Tribal Historic Preservation Office
P.O. Box 67
Lac du Flambeau, WI 54538

Or in digital format to: ldfthpo@ldftribe.com Thank you.

Sincerely,

Sarah Thompson for

Melinda J. Young
Tribal Historic Preservation Officer

P.O. Box 67
Lac du Flambeau, WI 54538

Phone: 715 588-2139 or 588-2270
Fax: 715 588-2419
E-Mail: ldfthpo@nnex.net

15-0805/06

SHPO

Appendix D

SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION

Wisconsin Department of Transportation
DT1635 6/2014

I. PROJECT INFORMATION

☐ Amended Submittal

(include new information only)

RECEIVED
AUG 13 2015
BY: _____

Project ID 1195-00-07	Highway – Street US 53 Preservation Study	County Douglas
Project Termini Gordon/Wascott town line to 0.3 miles south of the Solon Springs/Bennett town line, Douglas County		Region – Office Northwest Region
Regional Project Engineer – Project Manager Marc Bowker		(Area Code) Telephone Number (715) 635-4975
Consultant Project Engineer – Project Manager Darren Fortney, SEH		(Area Code) Telephone Number (608) 620-6191
Archaeological Consultant Katie Egan-Bruhy, CCRG		(Area Code) Telephone Number (414) 446-4121
Architecture/History Consultant Shelley Greene, CCRG		(Area Code) Telephone Number (414) 446-4121
Date of Need		SHSW Number
Return a Signed Copy of This Form to Darren Fortney, 6808 Odana Road, Madison, WI 53719		

II. PROJECT DESCRIPTION

Project Length	Land to be Acquired: Fee Simple	Land to be Acquired: Easement
12 miles	Approx. 14.77 acres	0 acres

Distance as measured from existing centerline	Existing	Proposed	Other Factors	Existing	Proposed
Right-of-Way Width	0'-320'	60'-300'	Terrace Width	N/A	6'
Shoulder	3'-9'	4'-6'	Sidewalk Width	N/A	5'
Slope Intercept	N/A	75'-250'	Number of Lanes	2	2
Edge of Pavement	12'	11'-17'	Grade Separated Crossing	0	2
Back of Curb Line	N/A	18.5'-19.5'	Vision Triangle acres	N/A	N/A
Realignment	N/A	630' (County A) 810' (County Y)	Temporary Bypass acres	N/A	N/A
Other – List:			Stream Channel Change	☐ Yes	☒ No
Attach Map(s) that Depict "Maximum" Impacts.	☐ Yes	☐ No	Tree Topping and/or Grubbing	☒ Yes	☒ Yes

Brief Narrative Project Description: Include all ground disturbing activities. For archaeology, include plan view map indicating the maximum area of ground disturbance and/or new right-of-way, whichever is greater. Include all temporary, limited and permanent easements. For amendments (e.g. design refinements, scope changes, etc) description should only include new/added project actions and materials.

WisDOT is undertaking a preservation study along the US 53 corridor to plan for future intersection improvements. The study includes identification and mapping of future grade-separated intersections along US 53 to preserve long-term mobility and safety of the highway. The study will result in preservation through official mapping under Wisconsin State Statute 84.295.

☐ Add continuation sheet, if needed.

SECTION 106 REVIEW ARCHAEOLOGICAL/HISTORICAL INFORMATION *(continued)*

Wisconsin Department of Transportation DT1635

III. CONSULTATION

How has notification of the project been provided to:

☒ Property Owners
- ☒ Public Information Meeting Notice
- ☒ Letter - Required for Archaeology
- ☐ Telephone Call
- ☐ Other:

☒ Historical Societies/Organizations
- ☐ Public Information Meeting Notice
- ☒ Letter
- ☒ Telephone Call
- ☒ Other: e-mail

☒ Native American Tribes
- ☐ Public Info. Mtg. Notice
- ☒ Letter
- ☐ Telephone Call
- ☐ Other:

Attach one copy of the base letter, list of addresses and comments received. For history include telephone memos as appropriate.

IV. AREA OF POTENTIAL EFFECTS – APE

ARCHAEOLOGY: Area of potential effect for archaeology is the existing and proposed ROW, temporary and permanent easements. Agricultural practices do not constitute a ground disturbance exemption.

HISTORY: Describe the area of potential effects for buildings/structures.

The APE includes those properties immediately adjacent to the proposed reconstruction.

V. PHASE I – ARCHAEOLOGICAL OR RECONNAISSANCE HISTORY SURVEY NEEDED

ARCHAEOLOGY	HISTORY
☒ Archaeological survey **is needed**	☒ Architecture/History survey **is needed**
☐ Archaeological survey **is not needed**	☐ Architecture/History survey **is not needed**
☐ Screening list (date)	☐ Screening list (date)
☐ Burial site in project area, Wis. Stat. 157.70 applies	☐ No structures or buildings of any kind within APE
	☐ Non-Survey History Documentation attached

VI. SURVEY COMPLETED

ARCHAEOLOGY	HISTORY
☒ **NO** archaeological sites(s) identified – ASFR attached	☐ **NO** buildings/structures identified – Report attached
☐ **NO** potentially eligible site(s) in project area – Phase I Report attached	☒ Potentially eligible buildings/structures identified in the APE – Report attached
☐ Potentially eligible site(s) identified-Phase I Report attached	☐ Avoided through redesign
☐ Avoided through redesign	☐ Previously listed/eligible property identified in the APE – Report attached
☐ Phase II conducted – go to VII (Evaluation)	
☐ Phase I Report – Cemetery/cataloged burial documentation	

VII. DETERMINATION OF ELIGIBILITY (EVALUATION) COMPLETED

☐ No arch site(s) eligible for NRHP – Phase II Report attached	☐ No buildings/structure(s) eligible for NRHP – DOE attached
☐ Arch site(s) eligible for NRHP – Phase II Report attached	☒ Building/structure(s) eligible for NRHP – DOE attached
☐ Site(s) eligible for NRHP – DOE attached	

VIII. COMMITMENTS/SPECIAL PROVISIONS – must be included with special provisions language

☐ Per Wis. Stat. 157.70 obtain burial authorization from WHS one year prior to construction.

IX. PROJECT DECISION

☐ No historic properties (historical or archaeological) in the APE.
☐ No historic properties (historical or archaeological) affected.
☒ Historic properties (historical and/or archaeological) may be affected by project;
- ☐ Go to Step 4: Assess affects and begin consultation on affects.
- ☒ Documentation for Determination of No Adverse Effects is included with this form. WisDOT has concluded that this project will have No Adverse Effect on historic properties. Signature by SHPO below indicates SHPO concurrence in the DNAE and concludes the Section 106 Review process for this project.

X. SIGNATURES

X _____ 7-14-15
(Regional Project Manager Signature) (Date – m/d/yy)

X _____ 8/11/15
(WisDOT Historic Preservation Officer Signature) (Date – m/d/yy)

X _____
(State Preservation Officer Signature) (Date – m/d/yy)
Sept 11 2015

X _____ 7-1-15
(Consultant Project Manager Signature) (Date – m/d/yy)

15-0805/D6

(Revised May 2013)

Wisconsin Historical Society
Determination of Eligibility Form

WisDOT Project ID #: 1195-00-07

WHS #:

RECEIVED
AUG 13 2015
BY:

Property Name(s): Gordon Soo Line Depot

Address/Location: 9672 County Y

City & County: Gordon, Douglas County **Zip Code:** 54838

Town: 43 North **Range:** 11 West **Section:** 6

Date of Construction: ca. 1910

WisDOT Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this request for Determination of Eligibility:

X Meets the National Register of Historic Places criteria.
___ Does not meet the National Register of Historic Places criteria.

for Rebecca Burkel, WisDOT Historic Preservation Officer — Date 8/11/15

State Historic Preservation Office

In my opinion, the property:

___ Meets the National Register of Historic Places criteria.
X Does not meet the National Register of Historic Places criteria.

Jim Draeger, State Historic Preservation Officer — Date 9/8/15

Comments (FOR AGENCY USE ONLY):

Division of Historic Preservation
Wisconsin Historical Society
816 State Street
Madison, WI 53706