

**Wisconsin Department of Transportation
G—STREAMS AND FLOODPLAINS IMPACT EVALUATION**

1. Stream Name

Black Otter Creek

2. Stream Location

Crosses Existing WIS 15 in Hortonville west of Cherry Street, also already enclosed >150 feet under road and commercial property in Alonzo Park area of Hortonville near Warner Street.

Alternative 1-On alignment crossing of Black Otter Creek

Alternative 2-New crossing of Black Otter Creek/floodplain.

Alternative 3-New crossing of Black Otter Creek near city golf course and floodplains of Wolf River.

Alternative 4-Black Otter Creek is impoundment type Lake/wetland hear. Bridge and grade separation structure needed for streamthread and Wiouwash State Trail.

3. Stream Type (Indicate stream class if known)

Unknown Warm water Trout-Class Wild and Scenic River

4. Size of upstream Watershed Area

Permanent Flow (year-round) About 3 sq. miles

Temporary Flow (dry part of the year)

5. Stream Characteristics

a. Substrate

Sand Silt Clay Cobbles

Other-describe: Substrate and soils within stream thread vary. Silt/muck is most representative.

b. Average Water Depth

Approximately 3 feet in Hortonville and at existing piped crossings of Wiouwash State Trail.

c. Vegetation in Stream

Absent Present - If known describe: Submerged aquatics, bulrushes, cattail, sedges, and native vegetation in environmental corridor type areas of Trail and southeast Black Otter Lake.

d. Identify Fish Species Present

Rock bass, sunfish, and intolerant forage species such as Iowa darter and redbelly dace. Some Pike spawning possible.

e. If water quality data is available, include this information (e.g. WDNR or local discharger might have such records).

The Hortonville Waste Water Treatment Plant is located at 521 W. Cedar Street and outfalls to Black Otter Creek in northwest part of the city west of the intersection of N. Cherry and W. Cedar streets.

6. Are there any known endangered or threatened species affected by the project?

- No - per WDNR coordination and Internet database searches.
- Yes Identify the species and indicate whether it is on Federal or State lists. See above and WDNR Project Letters in agency coordination section.

Note: Northern areas near the Black Otter Creek crossing in Section 26 of Alternative 3 contain Aquatic Threatened and Endangered listings while the southern crossings of Black Otter Creek for Alts 1, 2, and 4 do not contain records of Threatened and Endangered species on the on-line version of WDNR Bureau of Endangered Species maps. Blandings or Wood turtles are the likely species for the reported north area, whereas Alignment 2 and 4 could contain habitat conducive to these or other species dependant on quality marsh and wet woodland habitat. The quality of habitat and general WDNR coordination confirms that screenings of most alternatives may or will be necessary.

- Section 7 coordination has been completed with the U.S. Fish & Wildlife Service (USFWS). Describe mitigation required to protect the federally listed endangered species.

Karner Blue Butterfly survey results were sent to USFWS on May 30, 2006.

- Coordination with WDNR has been completed. Describe mitigation required to protect the State listed species.

Pending: A habitat review for Lupine was conducted. Coordination regarding the presence of Blandings Turtles is ongoing. Utilization of experts associated with the Wolf River Biotic Resource Inventory would be utilized for future evaluations for preferred alternative(s) and potential mitigation techniques to minimize harm.

7. If bridge replacement, are migratory bird nests present?

- No
- Yes – Identify Bird Species present Estimated number of nests is:

8. Is a U.S. Fish & Wildlife Depredation Permit required to remove migratory bird nests?

- Not Applicable Yes No - Describe mitigative measures

9. Describe land adjacent to stream. If wetland, give type.

Alternative 1 (in town) has a Black Otter Creek Crossing at Miller Park which is a typical urban park. Land adjacent to the stream in Alternative 3 area (north) has more agricultural and commercial encroachment on the water bodies in that area, but is not excessive. Far north part of Creek passes through golf course and park then reaches Wolf River floodplain. Land adjacent in Alternatives 2 and 4 are substantially wilder and natural with some good stream buffers. Areas are categorized as environmentally sensitive by the regional planning agency, North East Wisconsin Regional Planning Commission (NEWRPC). Alternative 2 impacts narrower stream threads and wide floodplains south of Black Otter Lake that provide significant internal and adjacent habitat. Alternative 4 involves a wider channel area and portions of Black Otter Lake.

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

The only discharger or receiver is the Hortonville Waste Water Treatment Plant outfall that is in the northwest part of the City. Hortonville is listed as having the facilities reporting to the USEPA. The EPA's "Surf Your Watershed" and Environmental Mapper can be utilized for final design coordination.

11. Section 404 Permit

- Not Applicable - No fill to be placed in wetlands
- Applicable - Fill will be placed in wetlands. See Wetland Impact Factor Sheets and Table F-1.

Wetland Impact sites adjacent or specific to Black Otter Creek are:

Alternative 1 = No. 27

Alternative 3 = 0, 82, and 91

Alternative 2 = No. 29, 80 and 89

Alternative 4 = 0, 18, 46, and 78

- Individual Section 404 Permit required
- General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404
Indicate which GP or LOP required.
- | | |
|---|--|
| <input type="checkbox"/> Non-Reporting GP | <input type="checkbox"/> Provisional GP |
| <input type="checkbox"/> Provisional LOP | <input type="checkbox"/> Programmatic GP |

12. Section 10 Waters

For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

Not applicable – waterway is not a Section 10 navigable waterway.

13. 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: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal)

- Alternative 1 An expanded bridge would be required in this urban section. An expanded longitudinal encroachment would likely span the floodplain. Existing channel conditions would be maintained.
- Alternative 2 A grade separation structure would be needed here to facilitate continued use of Wiouwash State Trail. This would be a new crossing. As with Alternative 4, a multifaceted impact alternatives analysis would be used to determine the best appropriate structure and approaches.
- Alternative 3 A new bridge and crossing are required. Area is in close proximity of Lower Wolf River Bottomlands Natural Resource Area (LWRBNRA) floodplains.
- Alternative 4 New crossing. As with Alternative 2, a grade separation structure and a long bridge could be used to reduce some direct fill operations in this area.

14. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

Additional backwater would not be created in this situation, as the crossing structure would be designed for pass the flows within the 100-year floodplain.

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

Mapped floodplains border the project as noted below. No coordination has been initiated separate from the public involvement completed to date. A NEWRPC graphic illustrates the general floodplains located in the area (See Section 3).

Alternative	Width of Crossing	Length of Crossing	Comment/Coordination
A	R/W width of 160-225'	Minor channel of 5-8' in width	Small tributary to Wolf River.
B	R/W width of 160-225'	Small (300' +/-)	Riparian tributary to Wolf River.
1 (On)	Small (100')	Small (80-100')	Floodplain elevation of 771 for minor crossing of Black Otter Creek west of Cherry Street. Also expansion of existing encroachment northwest of Main and Warner would be increased w/o hydraulic impacts.
2 (Mid-South)	(225'+/-)	Small (200-400')	Zone A floodplain (No elevation given) of Black Otter Lake. Small crossing within broad wooded lowlands with minor floodplain but extensive floodplain habitat.
3 (North)	(225'+/-)	Moderate (1600-1800')	Floodplain elevation of 763+/- . Crossing would border and slightly infringe on Black Otter Creek as a minor longitudinal encroachment within the larger Wolf River floodplain. .
4 (Far South)	(225'+/-)	Med-Large (1500-2000')	Zone A floodplain. Moderate to significant floodplain and open water impacts to Black Otter Lake/Creek and it's tributaries west and east.

16. 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.

Alternative 2 and 4 would impact areas with most all of these values. Alternate 3 is near substantial habitat areas however has less fragmenting effect as it is a longitudinal encroachment. Acreages impacts are substantial but do not comprise a large portion of the floodplain or watershed.

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

For the through town alternative 1 and north alternative 3, existing floodplain use remains, for the most part in the same state as before construction. The project would have minimal effect on the floodplain, with some grading up to the floodplain for the additional lanes in these areas. As indicated above, Alternatives 2 and 4 would impact floodplains that would have/will remain in an underdeveloped state thus serving to act as a buffer to development within an environmental corridor or environmentally sensitive area.

18. 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.

Water quality will strive to be maintained during construction. Impacts and discharges will be minimized using erosion control devices. Post construction impacts would be the same as the existing river crossing in through town alternative. The degradation of conditions is assumed based on the need for a substantial grade separation structure at Alternative 2 or 4's crossing with the Wiouwash State Trail. Standard conditions as contained within the standard specifications (sub-sections 107.18 Env. Protection, 107.20 Erosion Control, and 204.3.11 Disposal of Surplus Material) will be followed during construction.

19. Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Erosion control or storm water management measures that will be used to protect the stream are shown on Factor Sheet K and in Section 4.4. Efforts will include those described and required under Wisconsin Administrative Code Trans 401 (Construction Site Erosion Control and Storm Water Management Procedures for Department Actions). Appropriate earthwork staging salvaged wetland topsoil removal and replacement and overseeding with native wetland mixes could minimize adverse effects at the stream crossing's. Because of the forested nature of some of the crossing there could be an effort to re-establish impacted forested/shrub habitats within the right-of-way or fill slopes beyond the clear zone (in sensitive areas). Otherwise a dense grassy or herbaceous planting could be used to minimize establishment of woody evasive species. It is noted that "Deep Stormwater Basins" signs exist southwest of the Wiouwash State Trail south of Hortonville within existing wetlands and woodlands of the floodplain and or floodway. It is not known if these are actual basins or just excavated marsh areas.

Coordination with WDNR/Staff or village staff consultants would be involved in final design to minimize any loss in the treatment ability of these basins while also incorporating any additional measures necessary as a result of this project.

20. Erosion control or storm water management measures which will be used to protect the stream are shown on the Erosion Control Factor Sheet and the Stormwater Management Factor Sheet:

Yes

No

Briefly Describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

**Wisconsin Department of Transportation
G—STREAMS AND FLOODPLAINS IMPACT EVALUATION**

1. Stream Name

Unnamed Tributary to the Wolf River

2. Stream Location

Crosses Existing WIS 15 north of Cross Road on west side of Hortonville. Area drains through agricultural areas.

Option A – Crosses WIS 15 at the east end of Option A.

Option B – Crosses WIS 15 at the east end of Option B.

3. Stream Type (Indicate stream class if known)

Unknown Warm water Trout-Class Wild and Scenic River

4. Size of upstream Watershed Area

Permanent Flow (year-round)

Temporary Flow (dry part of the year)

5. Stream Characteristics

a. Substrate Sand Silt Clay Cobbles Other-describe:

b. Average Water Depth

1 Foot

c. Vegetation in Stream

Absent Present - If known describe: Minor aquatics, reed canary grass and meadows adjacent.

d. Identify Fish Species Present

Unknown: Typical forage species, bullheads, suckers, panfish expected.

e. If water quality data is available, include this information (e.g. DNR or local discharger might have such records). Not provided from DNR.

6. Are there any known endangered or threatened species affected by the project?

No - per DNR coordination and Internet database searches.

Yes Identify the species and indicate whether it is on Federal or State lists.

Sections 19 and 20, the area of this crossing and tributary, contain DNR Aquatic T&E listings. No confirmed or designated species has been reported or investigated to date. There have been recent sitings and the know presence of Blanding's turtle, a state-threatened species, in the Wolf River Bottom lands northeast of this area. DNR coordination will help determine if protected species or critical habitat exists. The DNR project letter indicates screenings of alternatives and/or appropriate reviews will be necessary.

Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species. No habitat was found.

Karner Blue Butterfly Survey results were sent to USFWS on May 30, 2006.

Coordination with DNR has been completed. Describe mitigation required to protect the State listed species.

Pending: Coordination regarding the presence of Blandings Turtles is ongoing. Utilization of experts associated with the Wolf River Biotic Resource Inventory may be a good source of future evaluations for preferred alternative(s).

7. If bridge replacement, are migratory bird nests present?

No

Yes – Identify Bird Species present

Estimated number of nests is:

8. Is a U.S. Fish & Wildlife Depredation Permit required to remove migratory bird nests?

Not Applicable Yes No - Describe mitigative measures

9. Describe land adjacent to stream. If wetland, give type.

Floodplain containing disturbed reed grass and has been farmed for several years. The floodplain north of Option A and south of Option B is of greater quality than where alternatives cross.

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

None.

11. Section 404 Permit

Not Applicable - No fill to be placed in wetlands

Applicable - Fill will be placed in wetlands.

Indicate area of wetlands filled. 7 Acres (2.8 Hectares) for Option B. Less than 1 acre for Option A.

Individual Section 404 Permit required

General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404
Indicate which GP or LOP required.

Non-Reporting GP

Provisional GP

Provisional LOP

Programmatic GP

12. Section 10 Waters

For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

Not applicable – waterway is not navigable.

13. 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: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal)

The work required would be a new culvert and/or extension of the existing culvert. Wetland areas adjacent would need to be excavated.

14. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

Additional backwater would not be created in this situation, as the culvert would be designed to the 100-year floodplain.

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

No zoning coordination has been completed as of this time.

16. 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.

Actual construction within floodplains containing natural habitats will result in some significant losses due to construction. Long term or surrounding area impacts will seek to be minimized.

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

Existing floodplain use remains, for the most part in the same state as before construction. Wetland areas adjacent would need to be excavated.

18. 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.

Water quality will be monitored during construction and minimized using erosion control devices. Post construction impacts would be the same as the existing creek crossing.

19. Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Erosion control or storm water management measures that will be used to protect the stream are shown on Factor Sheet K and in Section 4.4. Efforts will include those described and required under Wisconsin Administrative Code Trans 401 (Construction Site Erosion Control and Storm Water Management Procedures for Department Actions).

20. Erosion control or storm water management measures which will be used to protect the stream are shown on the Erosion Control Factor Sheet and the Storm water Management Factor Sheet:

- Yes
- No Briefly Describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

**Wisconsin Department of Transportation
G—STREAMS AND FLOODPLAINS IMPACT EVALUATION**

1. Stream Name

Unnamed Tributary to the Rat River

2. Stream Location

3 branches of unnamed creek cross existing WIS 15 West of Hortonville near North Road.

Alternative 1, 2, 3 may effect this unnamed tributary.

3. Stream Type (Indicate Stream Class, if Known)

Unknown Warm water Trout-Class Wild and Scenic River

4. Size of upstream Watershed Area

Permanent Flow (year-round)
 Temporary Flow (dry part of the year)

5. Stream Characteristics

a. Substrate Sand Silt Clay Cobbles Other-describe:

b. Average Water Depth

0.5 feet

c. Vegetation in Stream

Absent Present - If known describe: Not known at this time

d. Identify Fish Species Present

Unknown

e. If water quality data is available, include this information (e.g. WDNR or local discharger might have such records).

Not provided from WDNR.

6. Are there any known endangered or threatened species affected by the project?

No - per WDNR coordination and Internet database searches.

Yes Identify the species and indicate whether it is on Federal or State lists.

Recent sitings/presence of Blanding's turtle, a state-threatened species, in the Wolf River Bottom lands north of Hortonville and near Alternative 3 indicates that this species is present at Givens Road and north. Blandings or wood turtles are not reported for Black Otter Creek/Lake areas on Alignments 2, 3, and 4. WDNR coordination will help determine if critical habitat exists. The WDNR project letter indicates screenings of alternatives and/or appropriate reviews will be necessary.

Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

Karner Blue Butterfly survey results were sent to USFWS on May 30, 2006. No habitat was found.

Coordination with WDNR has been completed. Describe mitigation required to protect the State listed species.

Pending: Coordination regarding the presence of Blandings Turtles is ongoing. Utilization of experts associated with the Wolf River Biotic Resource Inventory may be a good source of future evaluations for preferred alternative(s).

7. If bridge replacement, are migratory bird nests present?

No

Yes – Identify Bird Species present Estimated number of nests is:

8. Is a U.S. Fish & Wildlife Depredation Permit required to remove migratory bird nests?

Not Applicable Yes No - Describe mitigative measures

9. Describe land adjacent to stream. If wetland, give type.

Mostly used as a drainage ditch for surrounding farmland and some residential development.

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

None.

11. Section 404 Permit

Not Applicable - No fill to be placed in wetlands

Applicable - Fill will be placed in wetlands.
Indicate area of wetlands filled. Acres (Hectares)

Individual Section 404 Permit required (for cumulative project)

General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404 (for this crossing)
Indicate which GP or LOP required.

Non-Reporting GP

Provisional GP

Provisional LOP

Programmatic GP

12. Section 10 Waters

For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified?

Not applicable – waterway is not navigable.

13. 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: U.S. Coast Guard must be notified when Section 10 waters are affected by a proposal)

The work required would be a new culvert and/or extension of the existing culvert. Wetland areas adjacent would need to be excavated and filled.

14. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be consistent with NR 116, the National Flood Insurance Program, and Governor's Executive Order #73.

Additional backwater would not be created in this situation, as the culvert would be designed to the 100-year floodplain.

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

No zoning coordination has been completed as of this time.

16. 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.

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

Existing floodplain use remains, for the most part in the same state as before construction. Wetland areas adjacent would need to be excavated.

18. 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.

Water quality will be monitored during construction and minimized using erosion control devices. Post construction impacts would be the same as the existing creek crossing.

19. Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Erosion control or storm water management measures that will be used to protect the stream are shown on Factor Sheet K and in Section 4.4. Efforts will include those described and required under Wisconsin Administrative Code Trans 401 (Construction Site Erosion Control and Storm Water Management Procedures for Department Actions).

20. Erosion control or storm water management measures which will be used to protect the stream are shown on the Erosion Control Factor Sheet and the Stormwater Management Factor Sheet:

- Yes
 No
- Briefly Describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

Wisconsin Department of Transportation
H-LAKE OR WATER BODY IMPACT EVALUATION
(Lakes, Ponds, Impoundments, Flowages, etc.)

1. Name of Lake or Waterbody

Black Otter Lake

2. Location of Lake or Waterbody

Impact is to Lake's south flowage and wetlands about 0.6 miles south of WIS 15 in the Village of Hortonville.

Alternative:

- Alternative 1- Affects only Black Otter Creek (on-align) and excavated channel to lake.
Alternative 2- Affects only nearby tributaries and Black Otter Creek.
Alternative 3- Does not affect BOC, impacts portion of a private excavated pond.
Alternative 4- Lake Crossing Required.

3. Lake or Waterbody Type

Lake **Pond** **Impoundment** **Other-describe:** Dammed and Controlled by Village.

4. Area of Water body

30.35 Hectares (75 Acres)

- Permanent (year-round)**
 Temporary (dry part of year)

5. Lake or Water body Characteristics
Bottom:

Sand **Silt** **Clay** **Cobbles** **Other-describe:** Mainly muck, some gravel at Wiowash Trail.

Maximum Depth:

2.8 to 3.8 Meters (9 to 12 Feet)

Vegetation in Lake or Waterbody:

Absent **Present - If known describe:** About 1/2 to 2/3 of lake contains natural shoreline/natural vegetation buffer of trees and shrubs. Channels and water surface has submerged and emergent wetlands in south area. Vegetation communities would include scrub-shrub, forested wetland, and southern sedge meadow with reed canary grass, sedges, bulrush, and red osier dogwood common plant species.

6. Identify Fish Species Present:

Bluegill, Largemouth Bass, Northern Pike and Panfish are common

7. If water quality data is available, include this information (e.g. DNR or local discharger might have such records).

Water quality is fair to good. Not degraded.

8. Are there any known endangered or threatened species affected by the project?

- Yes - Identify the species and indicate whether it is on Federal or State lists.
- No - No official notification of rare species near lake provided by DNR to date. WisDOT/DNR is aware of other project areas with potential presence of Blanding's turtle. This state-threatened species could be expected to inhabit the lake margins of Alternative 4 at Black Otter Lake/Creek and/or other project or alternative areas.

9. Has Section 7 coordination been completed with the U.S. Fish and Wildlife Service?

- Yes - Describe mitigation required to protect the federally listed endangered species.
- No - NA

10. Has coordination with DNR been completed?

- Yes - Describe mitigation required to protect the State listed species.
- No - Coordination initiated in 2003. Formal coordination is ongoing.

11. Will the project rehabilitate or replace a bridge or box culvert?

- Yes-Crossings at the Wiowash Trail would need to avoid or include modifications to three large 36- to 48-inch equalizer pipes that currently exist within railroad/trail right-of-way. This may take the form of a box culvert or bridge.
- No

12. Are migratory bird nests present?

- Yes - Estimated number of nests is:
- No

13. Is a U.S. Fish & Wildlife Depredation Permit required to remove migratory bird nests?

- Yes No - Describe measures to mitigate harm Not Applicable

14. Describe land adjacent to Lake or Water body that would be affected by the project. If wetland, give type.

Land around Black Otter Lake is mainly residential on the west side of the lake. The north side is a mix of public park land and residential development. The east side of Black Otter Lake and the portion south of the railroad crossing transitions into shallow and deep marsh area and into wooded surroundings. About two-thirds of this area is composed of moderately high-quality natural wet meadow, shrub, and wet/mesic forested communities. Alternative 2 or 4 impacts to WisDOT banking types Riparian Palustrine Emergent (RPE), Riparian Palustrine Forested (RPF), Wooded Swamp (WS), and Wetland Meadow (WM) could include takings of about 15 to 25 acres.

15. Describe proposed work in, over, or adjacent to lake or water body.

Alternative 4 is the only corridor that directly affects Black Otter Lake. Others infringe on floodplains bordering the Lake. Alternative 4 will require a bridge crossing the southern portion of the lake. Substantial fill of adjacent wetlands would be necessary to construct the bridge approaches and crossing of the lake and Wiowash State Trail. The trail is a multi-modal trail that allows horses, ATVs, and snowmobiles in addition traditional bike and pedestrian use. Depending on the actual grade separation used for fill, impacts could include substantial overexcavation to provide suitable grade stabilization. Much open water habitat SM/DM/AB/WM would be filled by this alternative.

16. Section 404 Permit

Not Applicable - No fill to be placed in waterbody

Applicable - Fill will be placed in wetlands.

Indicate area of wetlands filled: Approx. 5 to 6 Acres of aquatic bed/wm/sm (2 Hectares)

Additional adjoining wetland habitats would be impacted to the extent of 15 to 25 acres from this Alternative (4). Fragmentation of wooded and shrub habitats would also occur.

Total impacts for the alternative impacting Black Otter Lake (Alt. 4) totals 118 acres (see Table F.2-1).

Individual Section 404 Permit required

General Permit (GP) or Letter Of Permission (LOP) required to satisfy Section 404

Indicate which GP or LOP required

Non-Reporting GP

Provisional GP

Provisional LOP

Programmatic GP

17. Section 10 Waters

For navigable waters of the United States (Section 10) indicate whether the U.S. Coast Guard has been notified? Not Applicable

Indicate whether Preconstruction Notification (PCN) to the U.S. Corps of Engineers (USACE) is:

Required Submitted on (Date) NA

Status of PCN

USACE has made the following determination on (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

18. Discuss probable direct impacts to water quality in the waterbody, both during and after construction. Indicate the probable effects on plants and animals inhabiting or dependent upon the lake or water body.

Because of the substantial size of the proposed project and the needed grade separation structure at the Wiowash Trail there will be direct impacts from earthen fill within the floodplain, pier or bridge/culvert structure installations, and employment of the various protective techniques (silt fence, ditch check, silt curtain, and others). Means and methods of the contractor would be required to describe impacts in detail. However, the assumption can be made that some in-water construction would be required. It is assumed that water depths in portions of Black Otter Lake would be too shallow to employ construction equipment on barges. Water quality will be monitored during construction and minimized using erosion control devices. Post construction impacts would be the same as the existing river crossing.

Direct impacts to water quality during construction could involve:

- (1) removing buffer vegetation and open water and shoreline vegetation that serves either food, water, or shelter for animals dependent on such vegetation;
- (2) siltation from dredging, grading, and filling operations;
- (3) water quality or quantity alterations as a result of diversions, dewatering, pumping or other required construction efforts for a bridge or causeway;

- (4) stone and earthen fill as required for construction of the ultimate roadway and structure design;
- (5) temperature effects from isolating or altering runoff.

As noted in other project descriptions, approximately 5-6 acres of productive wet meadows, shallow marsh, and aquatic bed will be removed from within the Black Otter Lake environs. This will include loss of shoreline and buffer habitat. Wetland replacement and site restoration needs will likely reutilize the vegetation contained therein. No rare habits or known T&E species are known to be dependent on projected impact areas.

Direct impacts to water quality will likely be temporary because less than 5% of the collective surface or shoreline of Black Otter Lake will be disturbed. Minor long-term impacts to water quality from roadway maintenance runoff will exist after stabilization and employment of needed stormwater controls. Management of road salts and development of salt tolerant roadway areas will be necessary. The final revegetation plan and the contractor's erosion control and staging efforts should seek to control or minimize adverse effects of this project.

19. Describe proposed measures to minimize adverse effects or to enhance beneficial effects.

Construction site erosion and sediment control methods and stormwater management measures will be used to minimize and reduce runoff impacts. Re-establishment of native vegetation where ROW maintenance (mowing or drainage) is not required will minimize impacts to surrounding vegetation communities and animals inhabiting the lake, near shore areas, and wetlands. Maintaining (and/or not impacting) adjacent uplands and wooded lands will do much to minimize impacts to the surrounding water shed and environment. The contractors clearing operations within adjoining oak woods should be timed to avoid conditions that could contribute to development or spread of oak wilt (No pruning/clearing between April 15 to June 15 where possible). Clearing in other environments should involve standard vegetation management techniques to prevent the import or spread of invasive species (including buck thorn, honey suckle, purple loosestrife, reed canary grass, thistles, spotted Knapweed and others).

The projects bridges or culverts will be sized to accommodate both the multiuse Wiowash Trail and the subject improvement. Because of relatively stable lake conditions there should be little to no effect on existing backwater elevations. Thus remaining in compliance with NR 116 and NR 320. Appropriate sizing and placement of structures will be incorporated into the project design to minimize alterations to animal and reptile movements along the corridor's waterways. With proper design, the impacts of the project corridor are expected to be minimal, but some ecological effects may be realized.

20. Erosion control or storm water management measures to be used to protect the water body are shown on Erosion Control Factor Sheet and the Stormwater Management Factor Sheet :

Yes

No Briefly describe measures to be used such as sheet piling, cofferdam, turbidity barrier, barges, construction blackout window, etc.

**Wisconsin Department of Transportation
I–UPLAND HABITAT IMPACT EVALUATION**

1. 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).

For the sake of this discussion, upland habitat is viewed as vegetational areas that have substantial size or vegetation quality so as to provide habitat (food and cover) for an abundance of species or a specific uncommon species. Examples of such areas would be upland woods managed or maintained in a beneficial state or extensive habitat privately managed, developed or governmentally owned.

The No Build Alternative requires no upland conversion and has no direct upland impacts.

Option A There is a glacial escarpment of exposed rock along the existing highway with a forested red/white pine upland above the ledge, south of the road. Pines and hardwoods also provide a screening effect separating parcels to the north from the roadway.

Option B This alternative shares the same proximity to the upland described in Option A with both A/B impacting pine plantations that serve some wildlife benefit while screening properties from the roadway.

Alternative 1 This alternative, along the existing highway has an upland stand of trees approximately 4 acres in size along the south side of the road, between North and Julius Roads. Smaller areas adjacent to the roadway do not form habitat needs or contain rare habitat or rare species.

Alternative 2 Upland mesic hardwood trees typical of the central hardwoods region are present adjacent to wetland complexes and on some steep, odd-shaped, less farmable portions on this alignment. There is a recently, established, and improved private wildlife parcel that has invested in significant pine and oak plantings bordering lands near Commerce Drive east of the intersection County TT/T. There may be some impacts to this specific area, but in general, it describes the general commitment to upland habitat improvement by the owner and/or large and small parcel rural land owners in the region.

Alternative 3 The alternative passes near and on the lower slopes of a hilly area, unique to Outagamie County. The idle upland habitat present on Givens Road serves somewhat of a buffering capacity on the adjoining wet wooded lowlands of the Lower Wolf River Bottomlands Natural Resource Area (LWRBNRA). The majority of this hilly area is agriculture, but includes some woodlands and some residential parcels associated with small farms. The WDNR describes all areas within the LWRBWRA north of WIS 15 to be significant in regard to their protection of resources within the area.

Alternative 4 This alternative will impact an old growth stand of white oaks found east of Black Otter Lake and south of the railroad tracks. This 5-acre area and others associated with this project contains upland that transition into the wetlands along Black Otter Lake. Other small wood lots similarly occur scattered throughout the corridor.

2. Identify and describe any observed or expected wildlife associations with the plant community(ies.)

Option A Limited to no habitat as based on proximity to roadway and existing land management. No unique wildlife associations have been identified during the project.

Option B No wildlife associations unique to uplands were identified for this area. Some uplands buffer wetlands and thus may harbor typical small mammal populations dependent on uplands during their life cycle.

- Alternative 1 Wildlife and road mortality typical of urban and rural arterials could be expected.
- Alternative 2 The area southeast of Black Otter Lake is an excellent waterfowl nesting area and migratory path as well as a natural environmental corridor capable of providing birds, reptiles, small and large animals with all the requirements for their home range. Cranes, deer, songbirds, reptiles, and amphibians utilize wetlands during stages of their life cycle. Tree nesting birds and raptor/owls as well as a wide variety of avian species would be expected to use the extensive wooded habitat.
- Alternative 3 Ospreys have been seen in this alternative area north and east of Givens Road. As extensive blocks of the Wolf River habitat areas exist ≤ 0.25 miles to the north almost any terrestrial species of Central Wisconsin as documented in the LWRBNRA could be observed.
- Alternative 4 This alternative crosses Black Otter Lake that supports a diverse community of wildlife associated as described for Alternative 2. Keeping this area intact and avoiding fragmentation (the lake and surrounding forest and wetlands) will help support the long term continued use of the area by wildlife populations while minimizing the exposure to invasive species.

3. Identify the dominant plant community(ies) and estimate existing and proposed area of each dominant plant community to be altered.

Upland plants in the corridor can vary but are generally representative of non-rare upland plant communities of the Central Lake Michigan Coastal and Central Sand Hills ecological landscapes. See Wolf River Basin Biotic Inventory and Analysis and other DNR publications discussed in Section 3. Observed plant communities within forested areas are diverse and generally devoid of major invasive species. Avoiding large blocks of upland areas will help keep the plant communities intact. Except those of the Wolf River, forested blocks are not exceedingly large. About 5 sites on alignment areas are 50 to 150 acres in size.

4. Are there any known endangered or threatened species affected by the project?

- No
- Yes – Identify the species and indicate whether it is on Federal or State lists.

USFWS coordination indicates that they have records of federally threatened bald eagle and the federally endangered Karner blue butterfly in the county. The bald eagle has been delisted by the DNR. The DNR has adopted a Habitat Management Plan and “incidental take” permit or other arrangements for cooperating agencies for the Karner blue butterfly.

No specific nesting sites for bald eagles have been reported. There would likely be seasonal use of the Wolf River Bottomlands by this species. Records of Karner blue butterfly indicate the potential presence near County JJ on the far east segment east of Hortonville. Habitat evaluations for their host plant (Lupine) have been requested by the USFWS and were completed by WisDOT in Spring 2006. No lupine or other appropriate habitat for Karner blue butterfly was found (see correspondence in Section 7). No wetland/aquatic/upland threatened and endangered species are known for this alternative based on WDNR coordination to date.

No Build Alternative No effects

Option A Rare aquatic (endangered or threatened) species are documented on the WDNR’s T&E Species Occurrence Map provided in the Affected Environment (Section 3). WDNR maps list the following sections as containing the occurrence: Section 20, 21, 26, and 28 of T22N, R15E (Hortonia). The occurrences are believed to be for Blandings turtles. Residents south of Givens Road have observed and reported Blandings turtles to the WDNR regarding their property on Alignment 3. This is Section 27 with no current observances for that Section.

However it is less than 0.5 mile from the extensive habitat of the LWRBNRA. WDNR coordination will be advanced during the balance of the DEIS/EIS process. No wetland/aquatic/upland threatened and endangered species are known for this alternative based on WDNR coordination to date.

Option B

See Above.

Alternative 1

The June 8, 2004 correspondence from the USFWS documents that the federally endangered Karner blue butterfly is known to be present near the intersection of the existing WIS 15 and County JJ. Habitat evaluations for their host plant (Lupine) have been requested by the USFWS and were completed during Spring of 2006. No lupine or other appropriate habitat for Karner blue butterfly was found (see correspondence in Section 7). No wetland/aquatic/upland threatened and endangered species are known for this alternative based on WDNR coordination to date.

Alternative 2

This area does not intersect reported occurrences of T&E species, nor have agencies otherwise identified the area as likely containing such. The Black Otter Creek floodplains contain a diverse and well functioning mix of habitats and sizes of habitats. These areas could contain rare species and will likely be included in future evaluations and coordination with the WDNR. No wetland/aquatic/upland threatened and endangered species are known for this alternative based on WDNR coordination to date.

Alternative 3

The June 8, 2004 correspondence from the USFWS documents that the federally threatened Karner blue butterfly is known to be present near the intersection of the existing WIS 15 and County JJ. Habitat evaluations for their host plant (Lupine) have been requested by the USFWS and were completed during the Spring of 2006. No lupine or other appropriate habitat for Karner blue butterfly was found (see correspondence in Section 7). No wetland/aquatic/upland threatened and endangered species are known, other than the potential presence of Blanding's Turtle (or other species near the LWRBNRA.).

Alternative 4

The June 8, 2004 correspondence from the USFWS documents that the federally endangered Karner blue butterfly is known to be present near the intersection of the existing WIS 15 and County JJ. Habitat evaluations for their host plant (Lupine) have been requested by the USFWS and were completed during the Spring of 2006. No lupine or other appropriate habitat for Karner blue butterfly was found (see correspondence in Section 7). No wetland/aquatic/upland threatened and endangered species are known for this alternative based on WDNR coordination to date.

- Section 7 coordination has been completed with the U.S. Fish & Wildlife Service. Describe mitigation required to protect the federally listed endangered species.

Survey results were sent to USFWS on May 30, 2006.

- Coordination with WDNR had been completed. Describe mitigation required to protect the State listed species.

Pending: A habitat review for Lupine was conducted. Coordination regarding the presence of Blandings Turtles is ongoing.

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

For all of the build alternatives, the additional lanes to be built generally require some clearing and grubbing of trees. Grading work would include flattening of slopes and ditching. Some rock excavation could be necessary in shallow bedrock areas.

- Option A This alternative would require rock excavation/blasting of the glacial escarpment, including clearing of the wood uplands adjacent to the area.
- Option B This alternative would require rock excavation/blasting of the glacial escarpment, including clearing of the wood uplands adjacent to the area.
- Alternative 1 Clearing and grubbing of some large stands of trees and isolated fencelines are likely.
- Alternative 2 Pine plantations would be cleared and grubbed. If areas of significant rare, pristine, or substantially large forests or trees are identified, areas could be protected if beyond the slope intercept.
- Alternative 3 Clearing and grubbing of the large tracts of forested land south of Givens Road and farther northeast near the forest resources of the wooded corridor north and west of the parks and Grandview Golf Course near Olk Street is required. Substantial cuts and slope retaining would occur in this hilly area northeast of Hortonville.
- Alternative 4 Clearing and grubbing of some large stands of trees on the south of WIS 15 west of Hortonville is likely. This alternative would also require clearing and grubbing of the old growth white oaks east of Black Otter Lake and would require using fill to bring the roadway grade up to necessary elevation. Various wet-mesic and mesic forest and shrub areas would also be cleared and altered in obtaining the necessary grade. Substantial numbers of woodlots associated with rural properties would also be impacted.

6. Identify and describe any known wildlife or waterfowl use areas or movement corridors that would be severed or eliminated by the proposed action. Include a discussion of the proposed action's effects upon the areas or corridors.

- Option A Existing wildlife corridors would not be substantially affected by this expansion. Four-lanes of traffic would need to be crossed and could increase road mortality.
- Option B This alternative shares the same effects described in Option A.
- Alternative 1 Existing wildlife corridors are few and would not be severed by this option. Four-lanes of traffic would need to be crossed by animals increasing the potential for road mortality of regional wildlife.
- Alternative 2 The pine plantations west of the corporate limits of Hortonville would be severed, thus reducing the general size of a small forested block. The area of the crossing at Black Otter Lake and southeast of Black Otter Lake is an extensive corridor that provides significant habitat. Impacts to nesting, foraging, and resident wildlife could be expected as much as the potential invasion of non-native species in this area
- Alternative 3 This alternative, where it runs adjacent to Givens Road, longitudinally impacts a substantial wildlife corridor to the Wolf River Basin to the north. Fencing and/or using culverts for critter crossing may be helpful in minimizing the effects upon the wildlife.
- Alternative 4 This alternative will impact the wetlands and highland areas closest and bordering wetlands of Otter Lake. Timber and upland habitat value of rural residential woodlots east of Black Otter Lake and its connection to County TT involves impacts to upland

forest resources. Both of these areas are used as a transitional wildlife corridor in and out of Black Otter Lake area. Fragmentation east and the current plans for residential development for some lands by Old Mill Road may diminish the quality of habitat and its use by aquatic and terrestrial species in the near future. Coordination with this development would be necessary both to reduce residential relocations if this alternative is selected and to determine appropriate corridor management for wildlife passage.

7. Discuss other direct impacts on wildlife and estimate significance.

In general, the existing agricultural and urban nature of the area does not contain rare habitat types or species extremely sensitive to fragmentation or urban sprawl.

8. Identify and discuss any probable secondary impacts that may be expected due to the project.

Cumulative impacts to uplands and wetland complexes of larger sizes will involve habitat degradation by invasive species. Adherence to the environmental protection directives of the standard specification can serve to alleviate or minimize such secondary impacts such as oak wilt or windthrowing in forest stands.

Secondary and cumulative impacts are further discussed in Section 4.4.

9. Describe measures to minimize adverse effects or enhance beneficial effects.

WisDOT will be working with WDNR, the USEPA and the USFWS to minimize the adverse effects of any of the alternatives. Bridges or culverts could be designed to entice wildlife crossings in a safe manner, rather than across the new highway. The possible use of fencing along the highway would help funnel wildlife to the crossing. Exclusion of construction equipment from interior forest areas and requirement for prompt restoration of cover at forest edges could minimize the potential for invasive species degradation of valuable forested habitats.

**Wisconsin Department of Transportation
K–STORMWATER MANAGEMENT**

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 proposal.
 Yes – Water special natural resources exist in the project area.
 River/stream Wetland Lake Endangered species habitat
 Other - Describe

The WIS 15 corridor appears to be in the medium to high category for susceptibility to groundwater contamination given the high water table that occurs within sections of this corridor. Water resources such as the Black Otter Creek, Black Otter Lake, tributaries to the Wolf River and specific wetland areas are described in factor sheets G, H, and F, respectively. WDNR recommendations include:

- Reducing the number of wetland acres impacted by avoidance first, minimizing second and finally mitigation for those wetlands that cannot be avoided. Similarly, mitigate wetlands on the project site.
- Exercise care in areas highly susceptible to erosion (due to the topography and soils in the area) and make the designers aware of these locations.
- All wells, drain fields, and septic systems disturbed by the construction must be abandoned in compliance with applicable state and local regulations.

2. Identify 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.
- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Areas of groundwater discharge | <input checked="" type="checkbox"/> Areas of groundwater recharge | <input checked="" type="checkbox"/> Stream relocations |
| <input checked="" type="checkbox"/> Overland flow/runoff | <input type="checkbox"/> Long or steep cut or fill slopes | <input type="checkbox"/> High velocity flows |
| <input type="checkbox"/> Cold water stream | <input type="checkbox"/> Impaired waterway | <input type="checkbox"/> Large quantity flows |
| <input type="checkbox"/> Exceptional/outstanding resource waters | | <input type="checkbox"/> Increased backwater |
- Other – Describe and unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances. Dependent on the alternative chosen, a multi-phase appropriately suitable treatment system should be developed to protect aquatic resources in the area.

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

To be determined after corridor is chosen.

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

To be determined after corridor is chosen.

5. Identify the storm water management measures to be utilized on the project.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Swale treatment (parallel to flow) Trans 401.106(10) | <input type="checkbox"/> In-line storm sewer treatment, such as catch basins, non-mechanical treatment systems |
| <input checked="" type="checkbox"/> Vegetated filter strips (perpendicular to flow) | <input checked="" type="checkbox"/> Detention/retention basins – Trans 401.106(6)(3) |
| <input checked="" type="checkbox"/> Distancing outfalls from waterway edge | <input checked="" type="checkbox"/> Buffer areas – Trans 401.106(6) - Describe |
| <input type="checkbox"/> Constructed storm water wetlands | <input checked="" type="checkbox"/> Infiltration – Trans 401.106(5) |
| | <input checked="" type="checkbox"/> Other – Describe: Economical and feasible measures will be developed during design and will utilize measures presented above. |

To be finalized after corridor is chosen.

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

- No - There will be no effects to a recognized drainage district.
 Yes - Identify the affected drainage district

7. Indicate whether the project is within DOT's storm water management area.

- No - The project is outside of WisDOT's storm water management area.
 Yes - The project affects one of the following regulated by a WPDES storm water discharge permit issued by the DNR.

8. Has the effect of downstream properties been considered?

- No
 Yes – Coordination is in process.

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

- No - There are no property acquisitions acquired for Storm Water Management purposes.
 Yes - Complete the following:
- Safety measures, such as fencing for flooding, are not needed for potential conflicts with existing and expected surrounding land use.
- Safety measures are needed for potential conflicts with existing and expected surrounding land use.

Describe proposed safety measures: It is anticipated that surplus right-of-way will be obtained at strategic locations to provide land for stormwater management (subject to alternative selected).

**Wisconsin Department of Transportation
L-AIR QUALITY IMPACT EVALUATION**

1. CARBON MONOXIDE – EXEMPTION FROM WISCONSIN ADMINISTRATIVE CODE NR 411

Is this project exempt from air quality analysis under Wisconsin Administrative Code - NR 411?

- No - NR 411 exemptions do not apply**
 Yes - NR 411 exemption(s) apply - Identify exemption(s) and explain why project is exempt.

The entire WIS 15 expansion project is exempt from indirect source permit requirements under NR 411 because:

- The modified highway located in Outagamie County (a metropolitan county), the increase in peak hour volume is less than 1200 motor vehicles per hour for all segments.
- Where there is a shift in intersection approach legs:
 - The highway segment has no more than 2 approach lanes.
 - Any potential receptor is located more than 25 feet from the nearest proposed roadway edge.
 - The peak hour volume on each approach is less than 1200 motor vehicles per hour for all segments.

2. CARBON MONOXIDE AND REGIONAL IMPACTS – AIR QUALITY ANALYSIS

An air quality analysis was required.

- No**
 Yes - Identify the air quality modeling technique or program used to perform the analysis. (Attach Carbon Monoxide Worksheet to this Factor Sheet to illustrate results.)

The project is exempt from NR411 requirements and does not require further analysis.

3. CARBON MONOXIDE – CONSTRUCTION PERMIT

If an air quality analysis was performed, will a Construction Permit be required to address air quality before the project may proceed?

- No**
 Letter of concurrence from DNR Bureau of Air Management requested. (See attached request letter - Exhibit Pending.
 Letter of concurrence received from DNR Bureau of Air Management. (See attached Exhibit Pending.
 Yes - Indicate:

(DATE) **Date permit requested**

OR

(DATE) **Date of Permit**

4. OZONE – NON-ATTAINMENT

Is the project located in a county that is designated non-attainment or maintenance for ozone?

No (Outagamie County is in attainment)

Yes - If yes one of the following boxes must be checked.

This project is included in the (NAME TRANSPORTATION PLAN) and in the (NAME TRANSPORTATION IMPROVEMENT PROGRAM [TIP]) endorsed by the (NAME OF MPO), the region's Metropolitan Planning Organization. The TIP was found to conform by the FHWA and FTA (Date). The project is included in the TIP as project number (TIP PROJECT NUMBER).

This project is located outside of a Metropolitan Planning Organization's boundaries and has received a positive conformity determination per the rural conformity section of the WisDOT/WDNR Memorandum Of Agreement regarding determination of conformity.

This project is exempt per 40 CFR 93.134.

Other, describe.

5. MOBILE SOURCE AIR TOXICS (MSAT)

Discuss the potential MSAT effects of this project.

According to the February 2, 2006 FHWA Memorandum regarding Interim Guidance on Air Toxic Analysis in NEPA Documents, this project is considered to have low potential MSAT emissions. Generally these projects are those that (a) do not qualify as having no or very minimal changes in MSAT emissions, but (b) are not expected to be associated with meaningful differences in emissions for project alternatives. The types of projects that fall into this category of low potential MSAT emissions are those efforts that improve operations of highways, or freight facilities without adding substantial new capacity. Examples include minor widening projects or new interchanges replacing signalized intersection on surface streets.

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project. A more detailed explanation of the status of MSAT study and understanding is included in Appendix G.

As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT emissions—if any—from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at: www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

Qualitative Assessment for Minor Widening Projects

For each alternative in this EIS, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

Because the estimated VMT under each of the Alternatives are nearly the same, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSATs could be higher under certain Build Alternatives than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections that would be built at the existing alignment, under Alternative one, and along the bypass under Alternatives two, three, and four. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-build alternative cannot be accurately quantified due to the inherent deficiencies of current models. In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

**Wisconsin Department of Transportation
M–CONSTRUCTION STAGE SOUND QUALITY IMPACT EVALUATION**

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

Option A Noise from the construction of the alternative would have an impact on the nearby residential area.

Option B Noise from the construction of the alternative would have an impact on the nearby residential area.

Alternative 1 The Village of Hortonville lies along the Alternative 1 project corridor. The noise from the construction of the preferred alternative would have an impact on the Village's downtown area. Sensitive land uses in Hortonville include residential neighborhoods, parks and conservancies, and several schools.

Alternative 2 Noise from the construction of Alternative 2 would impact scattered residential areas and users of the Wiouwash State Trail.

Alternative 3 Noise from the construction of Alternative 3 would impact scattered residential areas and the Hortonville schools complex.

Alternative 4 Noise from the construction of Alternative 4 would impact scattered residential areas and users of the Wiouwash State Trail.

Table M.1-1 estimates how many residents, businesses, and public facilities would be affected by construction noise, for each alternative, if the construction were to begin today.

Option/Alternative	Approximate number of affected residents	Approximate number of affected businesses	Approximate number of affected public facilities
Option A	200	6	2
Option B	170	4	1
Alternative 1	760	60	17
Alternative 2	70	2	2
Alternative 3	370	14	3
Alternative 4	300	18	2

Table M.1-1 Summary of Potentially Affected Persons

These numbers are based on a width of 650 to 700 feet from the proposed edge of shoulder and a review of aerial photographs. The businesses are a combination of commercial and industrial use. The Public facilities are made up of parks, schools, and public buildings.

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.

Construction of the alternatives (A, B, 1, 2, 3, 4) could require the use of earth-moving equipment, materials handling equipment, stationary equipment, and impact equipment.

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 (15.2 meters).

Table M.2-1 shows typical noise levels for a variety of construction equipment. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

Equipment Powered by Internal Combustion Engines	Range Of Sound Levels (dBA) at 15 m (50 ft)
Earth Moving	
Compactors (Rollers)	72-75
Front Loaders	72-85
Backhoes	77-94
Tractors	76-97
Scrapers, Graders	80-94
Pavers	86-89
Trucks	54-95
Materials Handling	
Concrete Mixers	75-87
Concrete Pumps	81-84
Cranes (Movable)	76-86
Cranes (Derrick)	86-89
Stationary	
Pumps	67-72
Generators	72-82
Compressors	75-87
IMPACT EQUIPMENT	
Pneumatic Wrenches	82-89
Jack Hammers & Rock Drills	81-97
Impact Pile Drivers (Peaks)	95-105
OTHER	
Vibrator	69-81
Saws	72-83

Source: Figure 2-36, Report to the President and Congress on Noise, prepared by the U.S. EPA, February, 1972.

Table M.2-1 Construction Equipment Sound Levels

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects.

WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.

**Wisconsin Department of Transportation
N–TRAFFIC NOISE IMPACT EVALUATION**

1. Is the proposed action 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 lanes.)

- No - Complete only Factor Sheet M Construction Noise.
 Yes - Complete Factor Sheet M and the rest this Factor Sheet.

2. Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on the Traffic Summary Basic Sheet.

The Traffic Summary Basic Sheet was not used for this document.

3. Identify and describe the noise analysis technique or program used to identify existing and future sound levels. (See attached receptor location map as Figure N.3-1, N.3-2, and N.3-3.)

TNM 2.5 computer model was used to identify existing and future noise levels. Existing receptors were modeled using the methodology of noise contours at 50, 75, 100, 125, 200, and 300 feet from the existing and future roadways at equal elevations. Greater distances were not modeled because under Phase 1 of the validation study for TNM, it was determined that TNM under predicts for soft-ground sites at great distances. Noise measurements were taken at select sites for off-existing alignment alternatives in their existing conditions to determine the possible noise increase. The Hortonville schools were modeled separately using various elevations and distances to more accurately predict actual site conditions. See the Sound Analysis – Receptors Figure N.3-1 to N.3-3 for locations of receptors in the study area.

Criteria used to define traffic noise impacts have been established by WisDOT through Wisconsin Administrative Code-Chapter Trans 405, Siting Noise Barriers (Trans 405). Traffic noise impacts occur when the predicted equivalent sound levels approach or exceed the noise level criteria (NLC) established for a type of land use or when predicted sound levels substantially exceed existing levels. WisDOT has determined “approach” to be defined as 1 dBA less than the NLC. WisDOT has determined “substantial increase” to be 15 dBA or more than existing levels. Trans 405 was approved as WisDOT’s written policy by FHWA on February 29, 1996. Noise impacts for the various alternatives are compared based on the number of receptors that approach or exceed the activity category and/or experience a substantial increase. WisDOT defines noise receptors as “lower-level, front-abutting units” that receive highway noise.

4. Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic noise. (See attached receptor location map – Figures N.3-1, N.3-2, N.3-3.)

Sensitive receptors other than residences include the Hortonville Public Library on Main Street, the Hortonville School Complex (with an elementary, middle, and high school), the WIOUWASH Trail, and several churches located near most STH 15 corridor alternatives. These properties are all considered Land Use Category B under Ch. Trans 405 and subject to the Noise Level Criteria of 67 decibels. These properties will be considered during the design process and effects will be minimized as much as possible.

5. 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.

6. Will traffic noise abatement measures be implemented?

- Not Applicable - Traffic noise impacts will not occur.
- No - Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government are to be notified of predicted noise levels for land use planning purposes. (A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THIS DOCUMENT.)**

At most locations along WIS 15, noise abatement will not likely be reasonable or feasible because the corridor is mainly rural and the receptors are located very far apart from each other. Wis Admin Code Trans 401 requires abatement to provide an 8-decibel reduction and be feasible. With these requirements, the cost of building barriers is not reasonable. However, some methods, such as horizontal alignment shifts and depression of the roadway may be constructed to minimize noise impacts.

- Yes - Describe any traffic noise abatement measures that will be implemented.

Summary of Noise Impacts

	West Section		East Section			
	Option A	Option B	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Number of households within 325' of C/L	22	19	147	16	23	16
Number of households currently approaching or exceeding NAC	9	0	107	0	0	0
Number of impacted households with the alternative	9	17	107	9*	10*	8*
Net increase in number of impacted households	0	17	0	9	10	8
Number of businesses within 325' of C/L	6	4	31	4	0	2
Number of businesses currently approaching or exceeding NAC	2	0	7	3	0	0
Number of impacted businesses with the alternative	2	4	7	3	0	2
Net increase in number of impacted businesses	0	4	0	0	0	2

*Note: With the bypass Alternatives 2, 3 and 4, the noise levels inside Hortonville will be decreased from 2 to 5 dBA. This removes 50 households from being impacted that would have been impacted with the No Build Alternative or Alternative 1. This amounts to an overall decrease in impacted households of 37, 27, and 34 dBA for Alternatives 2, 3, and 4, respectively.

New London to County T: Option A (On existing alignment)

Receptor Location or Site Identification (See attached Map)	Distance from C/L of Near Lane To Receptor	Number of Receptors at this distance from hwy	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC)	Future Noise Level	Existing Noise Level	Difference in Future and Existing Noise 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)
50 feet	50 feet	3	67	71	71	0	4	I
75 feet	75 feet	5	67	69	69	0	2	I
100 feet	100 feet	1	67	67	67	0	0	I
125 feet	125 feet	2	67	65	65	0	-2	NI
200 feet	200 feet	8	67	60	59	1	-7	NI
300 feet	300 feet	3	67	56	55	1	-9	NI
Businesses	50 feet	2	72	71	71	0	-1	I
	100 feet	4	72	67	67	0	-5	NI

New London to County T : Option B (Straightens curve at Cross Road/Ledge Hill Rd)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (i)
					From Readings	Worst Case Scenario		
50 feet	50 feet	3	67	71	45 - 52	26	4	I
75 feet	75 feet	2	67	69	45 - 52	24	2	I
100 feet	100 feet	1	67	67	45 - 52	22	0	I
125 feet	125 feet	2	67	65	45 - 52	20	-2	I
200 feet	200 feet	9	67	60	45 - 52	15	-7	I
300 feet	300 feet	2	67	56	45 - 52	11	-9	NI
Businesses	50 feet	1	72	71	45 - 52	26	-1	I
	100 feet	2	72	67	45 - 52	22	-5	I
	200 feet	1	72	62	45 - 52	15	-12	I
	300 feet		72	56	45 - 52	11	-16	NI

County T to Hortonville: Alternative 1 (On existing alignment)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (i)
50 feet	50 feet	1	67	71	71	0	4	I
75 feet	75 feet	5	67	69	69	0	2	I
100 feet	100 feet	2	67	68	68	0	1	I
125 feet	125 feet	1	67	65	65	0	-2	NI
200 feet	200 feet	0	67	61	60	1	-6	NI
300 feet	300 feet	1	67	56	55	1	-9	NI
Businesses	50 feet	2	72	71	71	0	-1	I
	100 feet	2	72	68	68	0	-4	NI

In Hortonville – 30 mph: Alternative 1 (On existing alignment)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (i)
50 feet	50 feet	50	67	66	65	1	-1	I
75 feet	75 feet	8	67	64	63	1	-3	NI
100 feet	100 feet	4	67	63	62	1	-4	NI
125 feet	125 feet	3	67	61	59	2	-6	NI
200 feet	200 feet	11	67	58	55	3	-9	NI
300 feet	300 feet	13	67	54	51	3	-13	NI
Businesses	50 feet	12	72	66	65	1	-6	NI
	100 feet	10	72	63	62	1	-9	NI

In Hortonville – 30 mph: WIS 15 Bypass around Hortonville (Alts 2, 3 or 4)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (*) (i)
					From Readings	Worst Case Scenario		
50 feet	50 feet	50	67	64	65	-1	-3	NI
75 feet	75 feet	8	67	62	63	-1	-5	NI
100 feet	100 feet	4	67	60	62	-2	-7	NI
125 feet	125 feet	3	67	58	59	-1	-9	NI
200 feet	200 feet	11	67	53	55	-2	-14	NI
300 feet	300 feet	13	67	49	51	-2	-18	NI
Businesses	50 feet	12	72	64	65	-1	-8	NI
	100 feet	10	72	60	62	-2	-12	NI

Alternative 2 (Far South Bypass)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (*) (i)
					From Readings	Worst Case Scenario		
50 feet	50 feet	3	67	67	45 - 52	22	0	I
75 feet	75 feet	0	67	65	45 - 52	20	-2	I
100 feet	100 feet	6	67	64	45 - 52	19	-3	I
125 feet	125 feet	0	67	61	45 - 52	16	-6	I
200 feet	200 feet	1	67	57	45 - 52	12	-10	NI
300 feet	300 feet	6	67	52	45 - 52	7	-15	NI
Businesses	50 feet	1	72	67	45 - 52	22	-5	I
	100 feet	2	72	64	45 - 52	19	-8	I
	200 feet	1	72	57	45 - 62	12	-15	NI
	300 feet		72	52	45 - 52	7	-20	NI

(*) From Wisconsin Administrative Code - TRANS 405.04 (2) (b)
(SITING CRITERIA AND POLICIES)

Alternative 3 (North Bypass) – North Section Only

Receptor Location or Site Identification (See Attached Map)	Distance from C/L of Near Lane To Receptor in meters (m)	Number of Receptors at this distance from hwy	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC)	Future Noise Level	Existing Noise Level	Difference in Future and Existing Noise 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)
					From Readings	Worst Case Scenario		
50 feet	50 feet	9	67	69	45 - 52	24	2	I
75 feet	75 feet	0	67	67	45 - 52	22	0	I
100 feet	100 feet	1	67	65	45 - 52	20	-2	I
125 feet	125 feet	0	67	63	45 - 52	18	-4	I
200 feet	200 feet	4	67	58	45 - 52	13	-9	NI
300 feet	300 feet	9	67	54	45 - 52	9	-13	NI
SCHOOL: Hwy 30 ft higher than school	332 feet (worst case scenario)	1	67	54	45	9	-13	NI
Hwy at equal elevation as school	332 feet	1	67	58	45	13	-9	NI
Businesses	50 feet	0	72	69	45 - 52	24	-3	I
	100 feet	0	72	65	45 - 52	20	-7	I
	200 feet	0	72	58	45 - 52	13	-14	NI
	300 feet	0	72	54	45 - 52	9	-18	NI

Alternative 4 (South Bypass)

Receptor Location or Site Identification (See attached Map)	Distance from C/L of Near Lane To Receptor	Number of Receptors at this distance from hwy	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC)	Future Noise Level	Existing Noise Level	Difference in Future and Existing Noise 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)
					From Readings	Worst Case Scenario		
50 feet	50 feet	2	67	69	45 - 52	24	2	I
75 feet	75 feet	0	67	67	45 - 52	22	0	I
100 feet	100 feet	6	67	65	45 - 52	20	-2	I
125 feet	125 feet	0	67	63	45 - 52	18	-4	I
200 feet	200 feet	5	67	58	45 - 52	13	-9	NI
300 feet	300 feet	3	67	54	45 - 52	9	-13	NI
Businesses	50 feet	1	72	69	45 - 52	24	-3	I
	100 feet	1	72	65	45 - 52	20	-7	I
	200 feet		72	58	45 - 52	13	-14	NI
	300 feet		72	54	45 - 52	9	-18	NI

(*) From Wisconsin Administrative Code - TRANS 405.04 (2) (b)
(SITING CRITERIA AND POLICIES)

Hortonville to County JJ: Alternative 1 (On existing alignment)

Receptor Location or Site Identification (See attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (*) (i)
50 feet	50 feet	8	67	72	73	-1	6	I
75 feet	75 feet	3	67	70	71	-1	3	I
100 feet	100 feet	8	67	69	69	0	2	I
125 feet	125 feet	1	67	66	67	-1	-1	I
200 feet	200 feet	3	67	61	61	0	-6	NI
300 feet	300 feet	0	67	57	57	0	-10	NI
Businesses	50 feet	3	72	72	73	-1	-1	I
	100 feet	2	72	69	69	0	-3	NI

County JJ to WIS 76: Alternative 1 (On existing alignment)

Receptor Location or Site Identification (See Attached Map) (a)	Distance from C/L of Near Lane To Receptor (b)	Number of Receptors at this distance from hwy (c)	SOUND LEVEL LEQ (dBA)			IMPACT EVALUATION		
			Noise Abatement Criteria (NAC) (d)	Future Noise Level (e)	Existing Noise Level (f)	Difference in Future and Existing Noise Levels (Col. e minus Col. f) (g)	Difference in Future and Existing Abatement Criteria (Col. e minus Col. d) (h)	Impact or No Impact (*) (i)
50 feet	50 feet	7	67	71	72	-1	4	I
75 feet	75 feet	7	67	69	70	-1	2	I
100 feet	100 feet	13	67	68	68	0	1	I
125 feet	125 feet	2	67	66	66	0	-1	I
200 feet	200 feet	3	67	61	60	1	-5	NI
300 feet	300 feet	3	67	56	56	0	-9	NI
Businesses	50 feet	2	72	71	72	-1	-1	I
	100 feet	1	72	68	68	0	-4	NI

(*) From Wisconsin Administrative Code - TRANS 405.04 (2) (b)
(Siting Criteria and Policies)