

**6.0
MEASURES TO MINIMIZE ADVERSE EFFECTS**

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Section 6 discusses measures to minimize harm during construction and also lists commitments that are made as part of the NEPA process. In the 2010 FEIS, this was designated as Section 5. This section is essentially the same as presented in the 2010 FEIS except sections have been updated as more information has become available through the design process. Updates include the following:

- The revised MOA changes some commitments made for St. Mary's Springs Academy.
- WisDOT and WisDNR will perform some additional surveys as a result of current coordination regarding Threatened and Endangered Species.
- More information is known regarding wetland mitigation opportunities.

Maroon text signifies updates addressing changed conditions or analysis, clarifications, or additional information. Items that are considered revisions that target specifically identified issues in the January 19, 2012 Notice of Intent to prepare an LS EIS are shown in blue text.

Yellow highlight signifies updates from the LS SDEIS to this combined LS SFEIS and ROD (LS SFEIS/ROD). For tables and figures, the title of the Table or Figure has been shown in maroon or blue to indicate whether it has been revised since the 2010 FEIS.

Section 101(b) of the NEPA requires that federal agencies incorporate into project planning all practicable measures to mitigate adverse environmental impacts resulting from the proposed action. Section 6 summarizes concept-level impact mitigation commitments for the WIS 23 improvement project and also lists specific commitments. Proposed mitigation measures reflect comments received from the public and agencies.

Agency coordination since the 2010 FEIS has consisted of the following:

1. An updated wetland delineation with WDNR along the corridor in July of 2010.
2. A series of field reviews with USACE of potential wetland mitigation sites in the summer and fall of 2012.
3. Coordination with WDNR regarding updating rare species within the corridor in late fall of 2012 and winter of 2013.
4. Coordination with WDNR and USACE in spring and summer of 2013 alerting them of the release of the LS SDEIS and the content that would be incorporated in the document. Coordination will continue through the release of this LS SFEIS/ROD.
5. Additional information was provided to USACE regarding the justification for the Old Plank Road Trail extension, as well as alternatives evaluated for the location of the trail. This information is included in Sections 1.3 and 2.5 of this LS SFEIS/ROD.

A public informational meeting was also held on April 29, 2013, at the UW Fond du Lac since the release of the 2010 FEIS. The public meeting highlighted design updates, which mostly focused on intersection treatments being employed at the high volume intersections. It also presented Section 4(f) impacts, measures to minimize harm, and proposed mitigation for the Section 4(f) properties along the corridor. Finally, the revised indirect and cumulative effects analysis was provided for review.

A public hearing in a hybrid format for providing testimony was held with the release of the LS SDEIS on August 28, 2013. Section 7 contains a summary of the comments received at the hearing. WisDOT will continue agency coordination efforts as well as opportunities for public comment into the detailed design phase through the construction phase of the project.

6.1 TRANSPORTATION

A transportation management plan (TMP) will be developed and implemented to ensure reasonably convenient access to residences, businesses, farm parcels, community services, and local roads during construction. Work will be staged to minimize disruption during the construction period. To minimize delays to emergency vehicles, WisDOT will coordinate construction activities, staging, and traffic management plans with local fire, police, and emergency rescue districts. Traffic flow will be maintained during construction to the maximum extent possible. Lengthy detours will be minimized; however, it is

anticipated that, for various durations, side-road connections will be closed to accommodate construction activities **directly at the intersection**.

Changes to local road access, field access, and design and location of frontage roads and grade-separated crossings will be constructed giving full consideration to input from the public, local governments, agencies, and other interested parties.

Specific Project Commitments: At least two lanes of traffic (one lane in each direction) will be open on WIS 23 during construction. **Short-term closures may be needed for beam placement at overpasses and interchanges**. Side-road access to WIS 23 will be intermittently closed to accommodate construction activities. **A TMP is being developed and will be implemented during construction**.

6.2 AESTHETICS

Measures to minimize adverse aesthetic impacts will include roadway design features to blend existing landscape, planting, and natural vegetation of the cut and fill slopes. Vegetative screening will be considered where practicable to minimize the impacts to adjacent properties, and WisDOT will preserve the existing vegetation as much as possible. Planting of local nonnative conifer species will be discouraged and to the extent possible, new plantings will be of native grasses, wildflowers, shrub species, and native wetland plant species in disturbed wetlands and mitigation sites.

Specific Project Commitments: Efforts will be made to minimize potential aesthetic impacts of the WIS 23 expansion in the area of the Niagara Escarpment. This will include following the existing topography to the extent possible.

6.3 NOISE AND AIR QUALITY

To reduce the short-term impacts of construction noise, the special provisions for this project will require that motorized equipment be operated in compliance with all applicable local, state, and federal laws and regulations on noise levels permissible within and adjacent to the project construction site.

For projected traffic noise, a noise analysis was performed for the proposed Build Alternative for this project. The analysis indicates the Noise Abatement Criteria found in **WisDOT's Noise Policy FDM Chapter 23** will be approached or exceeded at various locations throughout the project corridor. Therefore, the project will result in noise impacts or exacerbation of existing impacts.

Since it has been determined that noise impacts will result from this project, WisDOT analyzed whether noise mitigation was reasonable, feasible, and likely to be incorporated into the project. Noise mitigation may be achieved through a variety of measures that modify the noise source, noise path, or receiver characteristics. The most common type of noise mitigation in Wisconsin is the construction of noise barriers. The analysis showed that noise barriers are not considered reasonable for WIS 23 receptors exceeding the Noise Abatement Criteria.

For a noise barrier to be reasonable, the total cost for a project may not exceed \$30,000 per benefited receptor and meet the following criteria:

1. A minimum of 1 receptor or common use area achieves the department's noise reduction design goal of 9 decibels.
2. The noise barrier reduces noise levels by a minimum of 8 decibels for each benefiting receptor used in the cost calculation.
3. For purposes of reasonableness determination,
 - a. Each individual residence benefited is counted as one benefited receptor.
 - b. Each dwelling unit benefited in a multifamily dwelling is counted as one benefited receptor.
 - c. Each dwelling unit in a multifamily complex eligible to use the benefited common use area is counted as one benefited receptor.
 - d. Each discrete parcel benefited in Land Use Categories A, C, D, and E is counted as one benefited receptor.

- e. Section 4(f) properties as identified in Land Use Category C will be evaluated on a case-by-case basis to determine the location of equivalent receptors on the discrete parcel that will each count as one (1) benefited receptor.

The noise barrier analysis indicated that effective noise barriers for this project would either require walls that are too high to be feasible or would cost about \$60,000 per benefiting receptor, which is above the \$30,000 reasonableness criteria. Because mitigation techniques on this project are not feasible and reasonable, noise abatement is not proposed.

Related to air quality, the WIS 23 is exempt from a CO hot spot analysis according the repealed NR 411, which continues to serve as WisDOT's screening criteria for air quality. Sheboygan County is in non attainment for 8-hour ozone.

The Preferred Alternative will have greater traffic volumes than the No-Build Alternative, and consequently more vehicle emissions. Advances in motorvehicle technology may offset the effect of these emissions. The WIS 23 project is included in the Sheboygan Area MPO conformity analysis, which seeks to bring Sheboygan County into attainment for 8-hour ozone. See Section 4.4 and Section 4.6 D-1 for more information regarding air quality.

Several examples of voluntary control measures contractors could implement to reduce the emissions of diesel vehicle pollutants will be cited in the Construction Contract Special Provisions for the project. These voluntary control measures include reducing idling, properly maintaining equipment, using cleaner fuel, and retrofitting diesel engines with diesel emission control devices. By reducing unnecessary idling at the construction site, emissions will be reduced and fuel will be saved. Proper maintenance of the diesel engine will also allow the engine to perform better and emit less pollution through burning fuel more efficiently. Switching to fuels that contain lower levels of sulfur reduces particulate matter. Using ultra-low sulfur diesel does not require equipment changes or modification. Using fuels that contain a lower level of sulfur also tend to increase the effectiveness of retrofit technologies. Retrofitting off-road construction equipment with diesel emission control devices can reduce particulate matter, nitrogen oxides, carbon monoxide or hydrocarbons, and other air pollutants. Diesel particulate filters can be used to physically trap and oxidize particulate matter in the exhaust stream, and diesel oxidation catalysts can be used to oxidize pollutants in the exhaust stream.

Dust control will be accomplished in accordance with the WisDOT Standard Specifications, which require application of water or other approved dust control methods during grading operations on haul roads and, in the case of WIS 23, the mainline. The location and operation of asphaltic batch plants will follow the Standard Specifications and any special provisions developed during coordination with WDNR regarding air quality standards and emissions. Any portable material plants will be operated in accordance with WDNR air quality requirements and guidelines. Demolition and disposal of structures are regulated under the WDNR's asbestos renovation and demolition requirements (Wisconsin Administrative Code, Chapter NR 447). WisDOT has considered this with razing contracts for 18 structures since the 2010 FEIS and will continue to consider this in future razing contracts.

Specific Project Commitments: A notice has been sent to adjacent municipalities notifying them that noise levels adjacent to the roadway will impact properties and that they should consider these impacts in their land use plans.

6.4 PROPERTY ACQUISITION

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended provides for payment of just compensation for property acquired for a federal aid project. In addition to acquisition price, costs for the replacement dwelling or business location, moving expenses, increased rental or mortgage payments, closing costs, and other valid relocation costs are covered. No person or business will be displaced unless a comparable replacement dwelling or business location, or other compensation where a suitable replacement business location is not practicable, is provided. The above compensation is available to all displaced persons without discrimination.

Before property acquisition activities begin, property owners are contacted with an explanation of the details of the acquisition process and Wisconsin's Eminent Domain Law under Section 32.05, Wisconsin Statutes. One or more professional appraisers inspect any property acquired. The property owner is invited to accompany the appraiser during the property inspection. An independent property appraisal by

the owner can also be provided. Based on the appraisal(s) made, the value of the property will be determined and an amount offered to the owner.

Property acquisition not involving residential, business, or other building relocations is also compensated in accordance with state and federal laws. In consultation with affected landowners, the required right of way or access rights will be appraised and the owner compensated at fair market value. The property owner may obtain an independent appraisal. If the fair market value cannot be reached, the property owner will be advised promptly of the procedure to follow in making an appeal.

Any septic tanks, drain fields, or wells on properties to be acquired will be abandoned by state regulations and local zoning standards.

Currently a plat has been prepared for the rural portion of the project (east of Taft Road) and it has 169 parcels, of which 57 have been purchased since the release of the 2010 FEIS and ROD. Twelve of these have been residential relocations and 1 of them was a business relocation. The area west of Taft Road is urban, and a right of way acquisition plat has not yet been completed except for relocations. Nine residences and 1 businesses have been relocated west of Taft Road since the release of the 2010 ROD. The acquisition that has occurred to date will not, and has not, influenced decisions related to the selection of the Preferred Alternative.

Specific Project Commitments: None. There are no specific project commitments above the standard commitments listed above. Many property owners have requested that their property be acquired early before the plat has been prepared and acquisition has begun in that section. WisDOT has accommodated these requests to the extent possible.

6.5 MATERIAL SOURCE/DISPOSAL SITES

Selection of borrow material sites is the responsibility of the construction contractor subject to approval by WisDOT. The expansion of WIS 23 will be a borrow job. The entire corridor will consist of approximately 1.7 million cubic yards of borrow. The WIS 23 portion in Sheboygan County will require 560,000 cubic yards of borrow, the WIS 23 rural portion in Fond du Lac County will require 270,000 cubic yards of borrow, and WIS 23 portion in urban Fond du Lac County will require 870,000 cubic yards of borrow.

Federal Rule 23 CFR 635.407 requires that the contractor be allowed to select borrow sites. It is therefore the contractor's responsibility to choose a borrow site and obtain necessary environmental clearance (including permits) for the selected site. Those responsibilities are detailed in Section 208.2.2 (Borrow, Source) and Section 107.3 (Permits and Licensing) of the State of Wisconsin *Standard Specifications for Highway and Structure Construction* manual. An exception to that rule can be made only when there is a public interest finding initiated by the state DOT and approved by the FHWA. It is anticipated that borrow will be obtained locally from existing sites that are properly zoned.

WisDOT makes the arrangements to have archival and literature searches conducted for off-site construction activity areas such as borrow sites, batch plants, and waste sites to determine whether archaeological sites, burials, or mounds may be present. The contractor is notified with the research results. When necessary, the contractor is responsible for coordination with the State Historical Society and for obtaining the services of an archaeologist.

The contractor in accordance with the *Standard Specifications For Road and Bridge Construction* or project special provisions will dispose of unusable excavated material to ensure protection of wetlands and waterways. The contractor is responsible for identifying the appropriate disposal site and obtaining written permission from the property owner.

All waste and demolition material from project construction activities will be disposed of in approved upland areas or at licensed solid waste disposal sites under the Standard Specifications or project special provisions, which consider the protection of wetlands, waterways, and other resources.

Erosion control and stormwater management will be followed at the borrow site or waste area as set forth in Trans 401, Wisconsin Administrative Code and the WisDOT/WDNR Cooperative Agreement. The contractor's Erosion Control Implementation Plan (ECIP) for borrow sites and waste areas will cover erosion control. The ECIP will establish the schedule of implementation for temporary and permanent

erosion control devices on the highway project and at the project borrow or waste sites. The ECIP will become part of the contract and will be submitted to WisDOT for approval and to WDNR for concurrence.

Revegetation of the project site, **as well as** borrow pit sites and waste areas, will be incorporated as a component of the project's erosion control plan, ECIP, and construction contract.¹ Revegetation and stabilization of cleared and graded areas shall be accomplished by using a combination of seed, mulch, erosion mat, or sod. Revegetation will occur as soon as practicable following the grading operations of the project.

Specific Project Commitments: There are none **other than the general commitments stated above.**

6.6 WATER QUALITY, HYDROLOGY, AND HYDRAULICS

WisDOT through Trans 401, Wisconsin Administrative Code and the WisDOT/WDNR Cooperative Agreement will comply with the substantive requirements of Chapter 147, Wisconsin Statutes, Wisconsin Pollutant Discharge Elimination System (WPDES). WisDOT, according to the WisDOT/WDNR Cooperative Agreement, will contact the area WDNR liaison and coordinate with the WDNR **before** performing construction activities that may adversely affect waters of the state.

Creek, slough, and wetland involvement associated with the proposed project is subject to individual permits under Section 404 of the Clean Water Act (33 USC 1344). The permit program, administered by the **USACE**, covers the discharge of fill material into the waters of the United States, including wetlands. Issuance of Section 404 permits is contingent on receipt of water quality certification from WDNR under Section 401 of the Clean Water Act and Wisconsin Administrative Code Chapter NR 299. Individual 404 permits will be required for this project. Coordination with the WDNR in this regard is accomplished under the Cooperative Agreement. **The USACE is using this documentation for its NEPA documentation requirements for a Section 404 permit. WisDOT is continuing coordination with the USACE regarding wetland mitigation options and the issuance of the Section 404 permit.**

Structure sizing will be performed in accordance with local, state, and federal guidelines regarding floodplain encroachment and hydraulic capacity. All new **and modified** structures over navigable waters will be consistent with the provisions of the Wisconsin Administrative Code Chapter NR 116 as administered under the Cooperative Agreement between WisDOT and **the** WDNR. WisDOT will mitigate project impacts to waterways. **When regional 100-year flood levels rise above 0.01 feet, affected property owners and the local floodplain zoning authority will be notified of the rise in the floodplain. This will occur with the Sheboygan River crossing yet flood level increases will be contained within WisDOT right of way.**

Drainage systems, including ditches on private lands, will be maintained, restored, or reestablished in a manner that will not impound water. Permanent retention facilities will be considered in areas adjacent to streams and wetlands so **that** roadway runoff will be intercepted before entering the waterway. Because of the rural nature of the project corridor, it is not anticipated that stormwater management measures will be required outside of the proposed right of way. The care and treatment of bridge runoff will be consistent with the latest federal and state laws and regulations. Selection of construction staging areas will be performed in accordance with the Standard Specifications or special provisions to ensure that they will not adversely affect wetlands, streams, or drainageways.

Coordination with **the** WDNR will continue **as** the engineering design phase **progresses** and will include obtaining **its** input on erosion control, structure plans, and construction sequencing to avoid critical fish spawning periods.

Specific Project Commitments: Precautions will be taken at the Sheboygan River **and** Mullet River Creek crossings to preclude erosion and stream siltation. Crossing work will be coordinated with the WDNR to protect fish habitat and water quality. Impacts to water quality will be minimized through the implementation of erosion control measures according to the **ECIP** included in the construction contract, the Standard Specifications, and project special provisions. In addition, construction near surface waterways will be avoided during periods of high snowmelt or rains. Erosion control devices will be installed before erosion-prone construction activities begin, **the devices will be maintained and repaired, as needed, throughout the life of the contract,** and areas will be promptly restored to grass or permanent cover.

¹ Revegetation is performed at borrow sites unless the site continues to provide borrow material for other public or private project.

Finding of No Practicable Alternative, Floodplains: Presidential Executive Order 11988 and 23 CFR 650 Subpart A require federal agencies to avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains. In implementing the Executive Order, it is the FHWA policy to:

1. Encourage prevention of uneconomic, hazardous, or incompatible use and development in the floodplain.
2. Avoid longitudinal or other significant encroachments where practicable.
3. Minimize impacts that adversely affect base floodplains.
4. Restore and preserve the natural and beneficial floodplain values.
5. Avoid support of incompatible floodplain development.
6. Be consistent with the intent of the Standards and Criteria of the National Flood Insurance Program and local floodplain management.

Each of the 4-lane expansion alternatives carried forward involves crossings in the floodplain of the Mullet and Sheboygan Rivers. **These encroachments may have** adverse impacts on natural floodplain values such as flood storage, open space, riparian habitat, and agriculture.

This section sets forth the basis for a finding that there is no practicable alternative to the construction of WIS 23 improvements in the floodplain; that the highway proposal includes all practicable measures to minimize harm to these resources; and that the action will conform to applicable state and local floodplain protection standards. **The Sheboygan River encroachment includes an additional bridge for the Old Plank Road Trail, which will increase the regional 100-year flood level by 1 foot and is considered significant. The floodplain elevation increase will occur entirely within WisDOT right of way and the floodplain zoning authority will be notified. The Mullet River encroachment will consist of extending the existing box culvert and no increase will occur to the regional 100-year flood level.**

Floodplain

1. Reasons Why Proposed Action Must be Located in the Floodplain

The WIS 23 corridor addressed in this document is an east-west corridor that travels from the city of Fond du Lac to the city of Plymouth. Within this WIS 23 corridor area, both the Sheboygan River and the Mullet River travel northeasterly. It is impossible to add roadway capacity without adding an additional crossing of these rivers and affecting the adjacent floodplains.

2. Alternatives and Practicability

As discussed in Section 2, the alternative development process included scoping and preliminary development of a broad range of alternatives. Alternatives that were not feasible and reasonable were dismissed. Detailed study was then done for a range of reasonable alternatives. These detailed study alternatives, as well as other alternatives not selected for detailed study, are described in Section 2.

Floodplain impacts occur for all the Build Alternatives carried forward for detailed study. After the 2004 DEIS for this project was published and following the public hearing, review agency comments, and additional analysis, Alternative 1 (4-lane expansion) was identified as the Preferred Build Alternative in the 2010 FEIS. Since this is a **LS SFEIS/ROD** whose primary purpose is to clarify the purpose and need and update relevant sections of the document, Alternative 1 remains the Preferred Build Alternative in this **LS SFEIS/ROD**.

The following bullets summarize the alternatives considered and whether they are practicable.

- The No-Build Alternative would have no effect on the streams and floodplains yet it is not practicable because it does not satisfy the project purpose and need.
- The Passing Lane Alternative, which was not brought forward as a detailed evaluation alternative, would have minimal effect on the streams and floodplains because this alternative

does not add capacity expansion. This alternative is not practicable because it does not satisfy the project purpose and need. See Section 2.6 of this **LS SFEIS/ROD**.

- Alternative 2 (4-Lane expansion) would require the same Sheboygan River bridge and Mullet River **3 cell culvert extension** as the Preferred Build Alternative (4-lane expansion). At an unnamed tributary to the Sheboygan River, a new box culvert crossing would be required, located north of the existing WIS 23 box culvert. This alternative is practicable because it satisfies the project purpose and need. Because it has greater overall impacts, including floodplain impacts, it is not selected as the Preferred Build Alternative
- Alternative 3 (4-Lane expansion) would require two new bridge crossings of the Sheboygan River, south of existing WIS 23. Alternative 3 would require the same Mullet River culvert extension as the Preferred Build Alternative (4-lane expansion). Also, just as in Alternative 2, Alternative 3 would require a new box culvert, located north of the existing WIS 23 box culvert, at an unnamed tributary to the Sheboygan River. This alternative is practicable because it satisfies the project purpose and need. Because it has greater overall impacts, including floodplain impacts, it is not selected as the Preferred Build Alternative
- Preferred Build Alternative (4-lane expansion), listed in the 2010 FEIS, which remains the Preferred Build Alternative, would require an additional bridge crossing of the Sheboygan River adjacent to the existing bridge crossing and an additional box culvert extension of the Mullet River. **The unnamed tributary to the Sheboygan River would receive two new 54 inch culverts, which would replace the existing 36 inch culvert and adjacent cattle crossing.** The Preferred Build Alternative is practicable because it satisfies the project purpose and need and has the least overall effect on floodplains within the WIS 23 corridor.

All alternatives cross corridor floodplains and present encroachments. The Preferred Build Alternative is a practicable alternative that satisfies the project purpose and need and creates the least overall harm to WIS 23 corridor floodplains.

3. Floodplain Impacts

The Preferred Build Alternative (Alternative 1, 4-Lane expansion) and Alternatives 2 and 3 all have crossings of the Sheboygan River, the Mullet River, and an unnamed tributary to the Sheboygan River that could potentially impact the floodplains.

Sheboygan River: For the Preferred Build Alternative, a new single span bridge is proposed for the Sheboygan River crossing for the extra set of lanes. A new bridge would be constructed over this river to carry the extension of the Old Plank Road Trail. The combination of the three bridges at this location (eastbound, westbound, and the Old Plank Road Trail) will cause an increase of 1 foot of backwater for a 100-year flood to occur between the westbound and eastbound WIS 23 bridges. This increase should be contained to the highway right of way and should not flood any adjacent property. The backwater immediately downstream of the westbound structure for a 100-year flood increases by approximately 0.05 feet. Between the eastbound WIS 23 and Old Plank Road Trail structures, the backwater increase for a 100-year flood is between 0.07 feet to 0.26 feet. This backwater increase should be contained on the highway right of way between the roadway and the trail. Upstream of the Old Plank Road Trail structure, the backwater increase for a 100-year flood is approximately a maximum of 0.23 feet immediately upstream of the structure and then dissipates to normal existing levels approximately 0.7 mile upstream. Since the added lanes primarily match the existing profile of the existing WIS 23 roadway, a similar profile is desired to avoid reconstruction of the existing WIS 23 bridge. Different profile alternatives were considered, such as raising bridge profiles, but effects to backwater were negligible and structure costs increased significantly so they were dismissed. Raising the profile also made it more difficult to construct a single span bridge.

Tributary to Sheboygan River: No backwater analysis was performed at the tributary to the Sheboygan River because it is not in a mapped floodplain. Currently one 36-inch pipe carries the flow of this tributary; a cattle pass exists west of the pipe is not designed for drainage but sometimes carries water. The cattle pass is not being used, so it will be removed. Normal culvert pipe sizing indicated two 54-inch pipes would adequately carry the flow of this tributary. The size increase was necessary to accommodate the increased length of the culvert as a result of the additional lanes.

Mullet River: The Preferred Alternative will extend the existing three cell box culvert. The three cells are each 12 feet wide by 8 feet high inside dimensions and the extension will be about 100 feet long. Because the extension is matching the existing structure, the bottom is planned to be at the same elevation as the existing box culvert. A hydraulic analysis was performed for the Mullet River and no backwater effects resulting in floodplain increases will occur with the Preferred Alternative.

4. Measures to Minimize Harm

The new bridge over the Sheboygan River will be a single-span structure, eliminating the need to place piers within the river or floodplain. Additionally, the replacement culvert being installed for the unnamed tributary to the Sheboygan River has been sized to avoid any backwater effects to the tributary. There are limited measures available at the Mullet River crossing since a culvert extension is being planned.

5. Conformity to Applicable State and Local Floodplain Regulations

The Wisconsin Administrative Code NR 116 recognizes floodplain zoning is a necessary tool to protect human life and health and minimize property damages and economic losses. Counties, cities, and villages within Wisconsin are required to adopt reasonable and effective floodplain zoning ordinances within their jurisdictions, and such ordinances are in place. For this project, regulated floodplains fall under the jurisdiction of the city of Fond du Lac as well as Fond du Lac and Sheboygan counties.

Coordination will continue with WDNR, FEMA, and the USACE to solicit comments and to inform these regulatory agencies the proposed improvement impacts. For the Sheboygan River crossing, this will require revision of official floodplain maps and zoning ordinances. This action would be in conformance with federal, state, and local floodplain standards. WisDOT will:

- a. Perform hydraulic calculations and notify affected property owners. Affected property will be compensated in accordance with the WisDOT/WDNR Cooperative Agreement as amended in 1995.
- b. Provide hydraulic analysis information to Fond du Lac and Sheboygan counties so that they can amend, as appropriate, the official floodplain maps as well as floodplain zoning ordinances.

The Sheboygan River crossing will increase the backwater elevation for the regional 100-year flood by 1 foot. These impacts will be fully within WisDOT right of way and should not affect adjacent property owners.

WisDOT is currently performing the required analysis to revise the regulated floodplain in accordance with the criteria in Wisconsin Administrative Code NR 116.11. For the Sheboygan River floodplain, WisDOT will coordinate with the WDNR and Fond du Lac County to obtain permission to revise the regulated floodplain and to complete the required revision. No coordination is required with the Mullet River floodplain since the hydraulic modeling indicates the culvert extension will not increase floodplain elevations.

Natural and beneficial floodplain values associated with wetlands, such as wildlife habitat and floodwater storage, will be mitigated as noted above.

6. Floodplain Findings

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction in floodplains and that the proposed action includes all practicable measures to minimize harm to floodplains that may result from such use.

6.7 FISH, WILDLIFE, AND THREATENED AND ENDANGERED SPECIES

The construction contractor's plan of operations will identify the location of all haul roads, material storage sites, and any other lands that may be disturbed outside the construction zone. WDNR and WisDOT will review the plan to assure the construction impacts to fish and wildlife habitat are minimized. To the

maximum extent possible, the highway construction zone will be limited to minimize direct losses to wetland sites and other sensitive habitats.

Mitigation measures proposed to protect water quality, wetlands, and upland vegetation will directly benefit fish and wildlife resources. These measures will help to maintain the quality of surface waters needed by aquatic flora and fauna. These measures will also minimize wetland loss and degradation and will help preserve the functional integrity of upland wildlife habitats.

Mitigation measures considered to reduce impacts to wildlife include scheduling construction during nonbreeding seasons and using effective erosion control measures. Section 4.6 C-7 of this LS SFEIS/ROD details commitments being made to reduce impacts to rare species as coordinated with the WDNR over the winter of 2013. Coordination with WDNR and USACE also includes wetland delineation and potential wetland mitigation sites, which will help minimize and mitigate adverse effects to upland habitat.

Where appropriate, the revegetation program will use special seed mixtures that will enhance roadside wildlife habitat value. Seed selection will be the responsibility of WisDOT, with guidance as appropriate from the WDNR. The WDNR encourages the use of native species.

Construction site erosion and sediment control procedures will be followed as set forth in TRANS 401, Wisconsin Administrative Code, and the WisDOT/WDNR Cooperative Agreement. During project design, an ECIP plan will be developed in consultation with the WDNR. Appropriate techniques and best management practices as described in WisDOT's FDM will be used to prevent erosion and minimize siltation to any drainageways to be crossed by this project. These techniques may include the use of temporary and permanent sediment traps, turbidity barrier, silt fence, sodding, ditch checks, erosion mat, temporary and permanent seeding, and other means to prevent erosion and retard sediment transport. Revegetation will be incorporated as a component of the construction contract.

Specific Project Commitments: Current mitigation arrangements developed in coordination with the WDNR during Winter of 2013 are summarized below and provided in detail according to species in the Threatened and Endangered species factor sheet.

1. Bridge and culvert construction will be scheduled to avoid migratory bird species nesting and brooding seasons. Work on existing structures will be restricted during the bird nesting/brooding seasons or netting will be used to discourage nesting under structures.
2. WisDOT will work with the WDNR regarding tree removal within the Mullet River and wooded environment of the Kettle Moraine State Forest. Clearing and grubbing will be avoided during nesting season to prevent disturbance to nests of species that are state listed. These species are protected from disturbance during the nesting and breeding season by the Migratory Bird Treaty Act. Construction activities may occur inside these windows provided work does not include tree clearing.
3. Construction Measures to Minimize Impacts to Rare Reptile Species—The WDNR Natural Heritage Inventory and WDNR coordination indicates the State Threatened Blanding's turtle (*Emydoidea blandingii*) occurs within the Upper Sheboygan River Basin. During construction and during the breeding season, the contractor will place nonnetted silt fence a suitable distance as appropriate based on site conditions from delineated wetlands with a riparian connection. Turtles that become trapped within a disturbance area will be carefully removed and relocated outside the silt fence.
4. WisDOT will conduct rare plant surveys for the state-threatened snow trillium (*Trillium nivale*) at habitat areas near the Mullet River and associated floodplain.
5. The WDNR will conduct final freshwater mussel surveys to clarify presence or absence of slippershell (*Alasmidonta viridis*), ellipse (*Venustaconcha ellipsiformis*), and rainbow shell (*Villosa iris*) mussels in the Sheboygan and Mullet Rivers. If mussels are found, the WDNR will translocate species as necessary upstream of the Sheboygan River bridge site and the Mullet River culvert extension.

6.8 WETLANDS

Executive Order 11990, Protection of Wetlands, requires federal agencies “...to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands wherever there is a practicable alternative...”. The Order states further that where wetlands cannot be avoided, the proposed action must include all practicable measures to minimize harm to wetlands in accordance with state and federal agency policies and regulations for wetland preservation, including the Section 404 (b) (1) Guidelines for Specifications of Disposal Sites for Dredged or Fill Material (40 CFR, Part 230).

During construction, impacts to wetlands from erosion and sediment transport will be minimized or prevented by implementing erosion control **best management practices** as specified in the construction contract and by ensuring that the practices implemented conform to the contract’s special provisions and the WisDOT’s *Standard Specifications for Road and Bridge Construction*. These protection efforts are described in **this document**. **Avoidance and minimization of impacts to wetlands related to wetland fill are discussed as follows.**

A. Specific Project Commitments

1. Avoidance

This document provides **an updated** delineation of wetlands that will be impacted (see **Section 4.6 C-1**). Because the reasonable Build Alternatives are generally oriented to the existing WIS 23 corridor, and there are scattered wetlands along both sides of the highway, it is not possible to avoid wetland impacts completely. **Avoidance of wetlands was first investigated through the construction of a lower-build 2-lane alternative. These alternatives did not satisfy the project purpose and need. Wetlands were avoided through the selection of the WIS 23 alignment location, on-alignment versus off-alignment.**

- a. For the WIS 23 expansion, the Preferred Build Alternative, on-alignment alternative (Alternative 1), when compared to off-alignment Alternatives 2 and 3, has fewer direct impacts (filling). It also has fewer indirect impacts (alteration of associated recharge, buffering, or critical habitat protection) to more ecologically significant wetlands such as wooded swamp, riparian recharge areas, and shrub/scrub habitats.
- b. The Preferred Build Alternative, Alternative 1, has impacts to more easily restorable wetland habitats such as wet meadow and shallow marsh. Both types are easily restorable through altering hydrology at a determined mitigation site containing hydric soils. The wetland impacts of the off-alignment Alternatives 2 and 3 included wooded swamps and riparian floodplains that are more difficult to restore and/or mitigate.

Further avoidance occurred in the selection of where the additional lanes would be constructed. Generally the additional 2 lanes were placed where the least amount of wetland impacts would occur and included:

- a. Placing the additional lanes on the north side of the existing highway near the Old Wade House mitigation site to minimize impacts to the wetland mitigation site on the parklands.
- b. Placing the additional lanes on the south side of the existing highway near Pit Road to avoid impacts to the Pit Road Wetland Mitigation Site.

The selection of Alternative 1 as the Preferred Alternative reduced wetland impacts by **0.8 to 27.4** acres compared to other 4-lane Build Alternatives, depending on which off-alignment alternative it is being compared to. Altering the placement of lanes is estimated to avoid 3 to 5 additional acres at specific wetland mitigation areas.

Even with these avoidance measures, there is no practicable alternative to avoid all the affected wetlands.

2. Minimize Wetland Impacts

WisDOT, in coordination with the WDNR, has identified wetland sites that will be affected by the proposed alternatives. Through detailed mapping, these wetlands were evaluated during this

environmental review and actual limits were updated in summer of 2011. Specific wetland minimization efforts are noted on the WIS 23 wetland type and alignment maps provided in Section 4.6, Figures 4.6 C-1.2 to 4.6 C-1.6 and Figures 4.6 C-1.7 to 4.6 C-1.18. Areas where design modifications minimized wetlands impacts include:

- a. Steepened slopes near Pit Road.
- b. Steepened slopes on WIS 23 between Poplar Road and Hinn Road.
- c. Alignment modifications and shifts to the north at County U and east of Scenic View Drive.
- d. Steepened slopes near the Mullet River crossing with an extended box culvert.

It is estimated that an additional 3 to 5 acres of wetlands were saved based on increases in side slopes.

3. Wetland Compensation

Compensation for unavoidable wetland loss will be carried out in accordance with the interagency *Wetland Mitigation Banking Technical Guideline* developed as part of the WisDOT/WDNR *Cooperating Agreement on Compensatory Wetland Mitigation*. Unavoidable wetland loss will be fully compensated at an appropriate replacement ratio that would be no less than 1:1 (one acre restored/created for each acre lost). The final ratio could vary depending on the criteria presently in place in the *Wetland Mitigation Banking Technical Guidelines*. The replacement ratio can range from 1.5:1 to as high as 3:1 depending on the risk assessment and replacement types needed. The preliminary wetland mitigation evaluation for this project has used restoration site screening practices typical of WisDOT guidance and wetland mitigation protocol.

WisDOT is planning on-site mitigation at two sites in Fond du Lac County to compensate for all the wetland impacts associated with the Preferred Build Alternative. One of the two on-site mitigation locations would be on property owned by WisDOT and has approximately 50 acres that could be used for mitigation. This site would be mostly wetland creation and is in the Mullet River watershed. The second on-site mitigation location is in the town of Empire. About 70 acres was acquired and mitigation will focus on wetland restoration. About 10 acres of the site is currently wetlands where a preservation credit may be pursued. The other acreage was previously wetlands that have been ditched and drained. With these acres which an enhancement credit will be pursued. This second site is in the Sheboygan River watershed.

It is anticipated that the first property could provide about 20 acres of credit and that the second property could provide more than 40 acres of credit. The two sites appear to be fully sufficient for mitigation needs. WisDOT plans to start construction on at least one of the sites prior to, or concurrent with, construction of the highway project.

If changes occur that prevent the implementation of these plans, WisDOT would continue the pursuit of other on-site mitigation opportunities. If efforts fail to locate willing landowners during the engineering design phase, WisDOT will direct the wetland impacts to be debited to either the Hope Marsh wetland mitigation site in Marquette County or the Peshtigo/Brook site in Oconto County.

B. Finding of No Practicable Alternative, Wetlands

Based on the previously summarized analyses, there appears to be no other practicable alternative that addresses the project's purposes and need while minimizing wetland impacts. Slope adjustments, stream relocation minimization, natural resource area avoidance, and best management practices will further minimize harm for the Preferred Alternative during final design.

Based on the information provided in this finding, the Preferred Build Alternative is the least environmentally damaging practicable alternative in terms of providing a balance among sound engineering design, environmental evaluation and impacts, public input, and agency coordination while addressing long-term project purpose and need objectives in the WIS 23 corridor. WisDOT has received and incorporated needed agency comments and design refinements to document compliance with WEPA/NEPA coordination. Coordination has continued beyond the publishing of the 2010 FEIS in updating the wetland delineation and investigating potential wetland mitigation locations. Further, it is anticipated there will be sufficient wetland restoration areas to fully compensate wetland loss for the

Preferred Build Alternative. Compensation will be through either creating/restoring replacement wetland within an approximate 2.5-mile to 5-mile distance of the **project corridor** or in combination with using an established or future wetland bank site. It is anticipated that mitigation, regardless of location or method, will be available for debiting impacts of the WIS 23 project prior **or concurrent with** to construction.

Based on the above consideration in accordance with Presidential Executive Order 11990, Protection of Wetlands, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands that may result in such use.

6.9 UPLANDS AND WOODLANDS

Mitigation for upland habitat disruption includes the replacement of disturbed vegetation within the right of way under the Wisconsin *Standard Specifications for Road and Bridge Construction*. During construction, cleared and graded areas will be seeded or sodded. The seeding or sodding will be staged to follow the grading operations to the maximum extent possible. Revegetation measures will minimize upland wildlife habitat loss. Native species will be used within the seeding and restoration standards for the project. It is anticipated the habitat will return after the construction is completed.

Specific Project Commitments: There are no project-specific commitments regarding uplands and woodlands other than those listed in Section 6.7. This section discusses clearing restrictions during nesting periods.

6.10 CONTAMINATED SITES

In the event petroleum sites are located prior to construction, WisDOT will work with all concerned to ensure that the disposition of any petroleum contamination is resolved to the satisfaction of the WDNR, WisDOT Bureau of Environment, 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. If any contaminated soils are identified during construction, they will be disposed of under applicable state and federal laws and guidelines.

Specific Project Commitments: Four Phase 2 or 2.5² investigations have been completed and one is pending. The pending Phase 2 investigation is at Site 5 which has been fully purchased by WisDOT. The need for a Phase 2 investigation will be evaluated once the limits of road construction for this parcel are fully known.

A Phase 2 was performed on Site 12. Contamination was discovered and an BRRS case was opened. WisDOT is not the Responsible Party. The property is a total acquisition and WisDOT purchased the property in highway easement. The Responsible Party does not have the ability to proceed with the investigation; WisDOT will complete the remaining items necessary for site closure at the time of construction.

Site 16 is in the corridor preservation area, and a Phase 2 is not needed for implementation of the Preferred Build Alternative. A Phase 2 investigation will be performed when and if improvements associated with corridor preservation are implemented.

Phase 2 investigations were also performed at sites 21 and 22 and no remediation is recommended. Impacts to the highway project will be minimized by avoiding contaminated sites to the extent possible. Where avoidance is not possible, such as on Site 12, the remediation measures will depend on the extent, magnitude, and type of contamination impacting the roadway.

WisDOT is seeking to avoid the limits of contamination on contaminated parcels. Investigation of contaminated sites and the management of any excavated contaminated material will be completed in accordance with the FDM and the NR 700 Series of Wisconsin Administrative Codes. The management of excavated contaminated materials on transportation projects typically involves reuse of the materials

² A Phase 1 includes the research and documentation of sites exhibiting potential hazardous material threats to WisDOT project operations mainly right of way acquisition and excavation requirements. Phase 2 investigations are conducted to determine **whether** a parcel suspected of being contaminated really is. It includes soil borings within the potential areas of concern as identified in the Phase 1 investigation. The Phase 2.5 is done to determine the feasibility of doing a limited cleanup in the proposed or existing right of way.

on the project, disposal of the materials in a landfill, or treatment of the materials at a biopile site. If the contaminated material is classified as a solid waste, activities related to the management of excavated contaminated material will also follow the NR 500 Series of Wisconsin Administrative Codes. If the contaminated material is classified as a hazardous waste, activities related to the management of excavated contaminated material will follow the NR 600 Series of Wisconsin Administrative Codes rather than the NR 500 Series. More information is contained in Section 4.6 D-4.

6.11 UTILITIES

Utility relocations and coordination with utility owners are done in accordance with Wisconsin Administrative Code TRANS 220, *Utility Facilities Relocation*, WisDOT's Guide to Utility Coordination, and WisDOT's FDM Chapter 18, *Utility Coordination*.

Under these regulations and guidelines, WisDOT is responsible for notifying utility owners about the project, obtaining information on existing utilities in the project corridor, providing final plans showing potential utility conflicts, providing a list of approvals required by governmental agencies, and ultimately reviewing/approving the utility relocation plans.

Both compensable and noncompensable³ utility lines are located along the WIS 23 project corridor will need to be relocated. There are sensitive resources along the project corridor, but it is anticipated that the majority of these relocations will occur within or directly adjacent to the proposed right of way.

The following paragraphs describe the utilities along the corridor and their need for relocation.

US 151 to Taft Road (Fond du Lac County–Urban)

For this section, the following comments are a preliminary review of utility conflicts. The right of way plat would be needed to determine compensable/non-compensable facilities along this corridor.

- Alliant (WP&L)–Has overhead and some underground electric facilities from US 151 to Taft Road. There are conflicts with these facilities. Has gas facilities from US 151 to approximately 2000 LF east of County UU. There are conflicts with these facilities.
- American Transmission Company –Has overhead facilities from US 151 to County UU. There are conflicts with these facilities with the recreational trail and interchange at County K.
- AT&T–Has buried telephone and fiber-optic facilities from US 151 to Taft Road. There are conflicts with these facilities.
- Charter–Has overhead and some underground facilities from US 151 to Taft Road. There are conflicts with these facilities.
- City of Fond du Lac–Has water main and sanitary sewer facilities from US 151 to Whispering Springs Boulevard. There are conflicts with these facilities at the County K interchange.
- Mary Hill Park Sanitary District–Has sanitary sewer facilities from County K to Mary Hill Park Drive and water main located at Mary Hill Park Drive. There are conflicts with the sanitary sewer at the County K interchange and the access road to Mary Hill Park Drive. There is a potential conflict with the water main on Mary Hill Park Drive. The sanitary district is unable to field locate the water main facilities, because it is not traceable.

Taft Road to Division Road (Fond du Lac County–Rural)

- Alliant (WP&L) Electric–All of its overhead and underground facilities from Taft Road to Division Road need to be relocated. Alliant has identified that 140 of the 256 poles are compensable for this area.
- Alliant (WP&L) Gas–There are no gas facilities in this area.

³ A compensable utility is one that is located on private land by easement and WisDOT must pay the utility to relocate its facility. A noncompensable utility is one that is located on WisDOT right of way and the utility must pay its own cost to relocate its facility.

- AT&T—Has telephone and fiber-optic facilities that need to be relocated from Taft Road to approximately 1,300 feet east of Hill View Road. Approximately 17,000 LF of underground telephone lines are compensable. The remaining facilities are noncompensable.
- Frontier (Verizon)—Has telephone and fiber-optic facilities that need to be relocated from approximately 1,300 feet east of Hill View Road to Division Road. Approximately 2,100 LF of underground telephone lines are compensable. Approximately 100 LF of fiber-optic line is compensable. The remaining facilities are non-compensable.

Division Road to Pioneer Road (Sheboygan County)

- We Energies—All of its overhead and underground facilities from Division Road to Sugarbush Road need to be relocated. A overhead crossing at County A needs to be relocated. Overhead and underground crossings between County A and Ridge Road need to be adjusted or relocated. We Energies has **five** poles that are identified as compensable on the right of way plat.
- ANR Pipeline—120 feet of casing pipe will be installed on the north side of STH 23 and 24 feet of casing pipe will be installed on the south side of STH 23 for the existing pipeline. The marker vent posts will also be relocated to the new right of way limits. This work is compensable.
- Northern Moraine Utility Commission—The sanitary sewer force main crossing at County A may need a section relayed to ensure proper clearance under the north ditch of STH 23. This work is noncompensable.
- Plymouth Utilities—Has underground and overhead electric facilities from County S to Pioneer Road that need to be relocated. Plymouth Utilities has **four** poles that are compensable and 100 LF of underground electric that is compensable.
- Time Warner Cable—Has an overhead line crossing at County A that needs to be relocated. This relocation is noncompensable.
- West Shore Pipeline—The pipeline crossing needs to be relocated. Approximately 600 LF of pipeline will be relocated from south of Plank Road to north of STH 23. Approximately 110 LF of the pipeline relocation is compensable.
- Wisconsin Public Service—A gas main crossing at County A needs to be relocated. WPS has a pole located in the northwest corner of STH 23 and County A that needs to be relocated. These relocations are noncompensable.
- Frontier (Verizon)—All of its telephone and fiber-optic facilities need to be relocated from Division Road to the west intersection of Plank Road. Telephone crossings between Sugarbush Road and Pioneer Road need to be adjusted or relocated. Frontier has approximately 8,500 LF of telephone that is compensable and approximately 800 LF of fiber-optic line that is compensable. The remaining facilities are noncompensable.

The utility owners are responsible for determining new locations and for obtaining any environmental clearances associated with relocating their facilities. Environmental information that has been developed by WisDOT for purposes of the project such as wetland delineations and archaeological survey results is made available to the utilities to assist them in determining where to relocate their facilities.

Specific Project Commitments: WisDOT and FHWA will continue coordination efforts with utilities, municipalities, and counties to avoid or minimize impacts to the utilities along WIS 23. For impacts that are unavoidable, WisDOT will coordinate with these parties to avoid or minimize interruptions in service during construction. WisDOT will compensate the owners of impacted utility lines as required.

6.12 HISTORICAL/ARCHAEOLOGICAL RESOURCES

WisDOT has made efforts throughout the project planning stages to avoid direct impacts to archaeological sites and historical sites. The only archaeological site that will be impacted by the Preferred Alternative is the Sippel Archaeological Site. Phase III data recovery will be completed at this site. No historic properties will be affected by the Preferred Build Alternative.

Specific Project Commitments: Section 106 requirements have been completed according to the agreement between FHWA, SHPO, and WisDOT. A revised MOA between the FHWA, SHPO, WisDOT, and St Mary's Springs has been signed in spring of 2013 fulfilling the project's Section 106 requirements.

This revised MOA can be seen in Appendix D. The following bullets list the provisions and commitments in the MOA that pertain to known archaeological sites.

- WisDOT will implement the project data recovery plan titled *The Sippel (47 SB 394) Site: A Mid Nineteenth Century Yankee Homestead in the Town of Greenbush, Sheboygan County*.
- Prior to construction, WisDOT or its agent will ensure that protective fencing is placed at the Storm Front (47 FD 497) to prevent inadvertent disturbances. A qualified archaeologist shall assist in the location and placement of the fence. This area shall not be used for the staging of equipment and personnel, sources of borrow, or a location for the placement of waste material or batch plant.
- The WisDOT Project Engineer (PE) or Project Manager (PM) shall notify all parties of this MOA in writing ten working days prior to the start of construction and monitoring.
- At preconstruction meetings, the WisDOT PE/PM shall ensure the stipulations contained in the MOA are reviewed with and understood by the responsible party(ies). Responsible parties also include subcontractors.
- Prior to construction, the WisDOT or authorized agent shall petition the Director of the Wisconsin Historical Society for permission to work within the recorded boundaries of two known uncatalogued burial sites, Academy Hill Mound (47 FD 17/BFD 0150) and the unnamed burial site (47 FD 245), in compliance with Wis. Stat. § 157.70. These activities include, but are not limited to, removal of the existing pavement, sidewalk, roadbed (subgrade and base course), parking surfaces, building foundation wall/floor removal, and any excavation below the ground/soil elevation for underground utilities or other designated features.
- A professional archaeologist, as defined in the Secretary of the Interior's Professional qualifications Standards (48 FR 44738), will monitor construction-related activities within the recorded boundaries of the Academy Hill Mound (47 FD 17 /BFD 0150) and unnamed burial site (47 FD 245).
- Upon completion of monitoring, the archaeologist will submit a summary report of the results of the monitoring.
- Upon discovery of a significant undisturbed archaeological resource, the archaeologist will inform the on-site WisDOT PE/PM to stop construction activities in the immediate area. The on-site WisDOT PE/PM shall ensure protective fencing is installed. The archaeologist will provide the on-site WisDOT PE/PM with a time estimate for completion of field activities. The area will remain fenced until field activities are completed. Upon completion, the archaeologist shall notify the WisDOT PE/PM that construction activities may resume.
- WisDOT will ensure that all construction contracts contain provisions describing potential delays to the contractor in the event of a discovery of archaeological materials or human remains during construction. This will include language to stop construction in the area of the discovery to permit implementation of mitigation measures. These provisions shall include the opportunity for consulting tribes to perform tribal ceremonial activities.
- The WisDOT on-site PE/PM will immediately notify WisDOT BTS who will notify all signatories of the MOA of any discoveries encountered during construction.
- All archaeological research undertaken for this project will meet the Wisconsin Archaeological Survey Guide for Public Archaeology in Wisconsin, as revised (dated 2012).
- WisDOT shall ensure a qualified archaeologist conducts archaeological surveys for all proposed borrow sites, batch plants, waste sites and staging areas to be used for this undertaking. Upon completion of these efforts, the archaeologists will submit a summary report of the results.
 - Non-tribal land:
 - If potentially significant archaeological materials unrelated to a human burial are discovered, the on-site WisDOT PE/PM in consultation with WisDOT BEES shall ensure Section 106 procedures pursuant to 36 CFR 800 will be followed or another area will be obtained.
 - If human remains are discovered, all activities will cease, and the on-site WisDOT PE/PM will ensure compliance with Wisconsin Statute 157.70

- Tribal Land: Prior to any proposal request, for any activity on tribal land, consultation with appropriate THPO or Tribal Representative is required.

WisDOT has committed to moving the Guardian Angel Statue to another location on the St. Mary's Springs Academy property.

In addition to the above stipulations, the Stockbridge Munsee Tribe will be notified if a Native American cultural site is uncovered.

6.13 PUBLIC USE LANDS

Specific Project Commitments: WIS 23 crosses the Northern Unit of the Kettle Moraine State Forest, the Ice Age Trail, and the State Equestrian Trail in Sheboygan County, and they cannot be avoided by any of the alternatives. WIS 23 improvements will include a grade-separated crossing for the trails (underpass beneath WIS 23 with a minimum width of 12 feet), improving functionality and safety of both trails. The underpass is compensation for impacts to the trails. Lands taken from the Kettle Moraine State Forest (6(f) and 4(f) lands) will be replaced in accordance with the National Park Service's Land and Water Conservation Fund Program conversion process.

WIS 23 passes by the Old Wade House State Park. The proposed WIS 23 expansion would take place on the north side of the existing highway near the Old Wade House State Park. The extension to the Old Plank Road Trail (trail extension to the Park and west to Fond du Lac) will be constructed adjacent to WIS 23 to minimize acquisition and impacts near the Old Wade House Wetland Mitigation Site on the south side of WIS 23.

Specific commitments related to Section 4(f) resources are discussed in Section 5 of this LS SFEIS/ROD.

6.14 AGRICULTURAL LAND

Minimizing agricultural impacts was a factor in the selection of the Preferred Build Alternative. During construction, reasonable access will be provided to agricultural land. Existing drainage systems (ditches and tiles) will be kept operational during construction. WisDOT will work with farm owners to minimize project impacts.

Specific Project Commitments: Consideration will be given to the 14 recommendations provided in DATCP's Final Agricultural Impact Statement and update. Many of these 14 recommendations were broad-reaching and directed to local jurisdictions. Of the 14, seven apply specifically to WisDOT as they consider the maintenance of farm activities and include the following:

1. *WisDOT should continue to consult with town of Greenbush officials and local residents about the intersection design that will be used at WIS 23 and Sugarbush Road to ensure that the fire department is not hindered in providing emergency services to local residents.*

The intersection at Sugarbush Road is being designed as a J-Turn, and will have mountable curb and gutter and thicker asphalt pavement within the island to allow emergency vehicles the ability to go straight through or turn west onto WIS 23 from the south if they so choose. The signs within the intersection will be positioned to allow the movements as well. The movement will not be signed for all traffic, but could be used by emergency vehicles if needed.

2. *WisDOT should allow the current operators to farm any acquired land until it is needed for highway construction as long as there is sufficient growing season for crops to mature and be harvested.*

Current operators are being allowed to continue to farm if owner requests it. If the previous owner is not farming the area then other area farmers are allowed to farm the land.

3. *The owners and operators of the affected farmland should be given advance notice of the acquisition and construction schedules so that farm activities can be adjusted accordingly. To the extent feasible, the timing of the construction should be coordinated with the farmers to minimize crop damage and disruption of farm operations.*

The affected owners and operators will be kept aware when construction will occur to minimize any crop damage and disruption of farm operations.

4. *Where access points must be relocated, WisDOT should consult with landowners to determine a new location that will be both safe and efficient for farm operations.*

WisDOT has consulted and will continue to consult with landowners during negotiations.

5. *WisDOT should consult with farmers when determining the locations of median crossovers. If the placement of median crossovers is a concern to a landowner, he or she should identify that concern during negotiations with WisDOT.*

Median crossovers have been identified throughout the corridor through the design and have been presented during design public information meetings. The median crossovers were placed in positions that tried to alleviate travel distance to residences. Median crossovers will be designed with turn lanes to aid residents to make turnarounds (accelerations lanes are not being added).

6. *In order to address potential drainage problems that may occur as a result of the proposed project, DATCP recommends that WisDOT representatives discuss design and construction plans with representatives of Fond du Lac County and Sheboygan County Land Conservation Departments during the design process.*

Sheboygan County and Fond du Lac County representatives have been made aware and will be kept involved with the proposed drainage on the project. The WisDOT maintenance department routinely discusses any drainage problems with Sheboygan and Fond du Lac County maintenance personnel so that design adjustments can be incorporated into the plan. Planned drainage channels should be the same as existing channels with the extending of culverts.

7. *The county conservationists should be consulted to ensure that construction of the facilities proceeds in a manner that minimizes crop damage, soil compaction, and soil erosion on adjacent farmland.*

The counties will be kept abreast of construction activities throughout the project. Erosion control measures (silt fence, erosion mat, riprap) will be incorporated within the project construction to help prevent soil erosion and crop damage to adjacent farmland. Construction grading practices will be monitored to assure proper compaction and grading are performed.

6.15 POLLUTION PREVENTION

WisDOT plans carefully avoid the creation of pollution and any subsequent environmental degradation. Review is given to the project's design criteria including geometric standards, construction standards and specifications, project sizing, and the location of the facility. Habitat is restored to maintain foliage, fish, and wildlife diversity. WisDOT reviews roadway treatment to assess and devise methods to channel runoff away from water resources. In highway projects, pollution prevention has automatically occurred because of the cost reduction efforts of WisDOT.

WisDOT uses coal incinerator ashes and foundry sand in various highway construction activities. Recycling of these ashes and foundry sand is considered by USEPA to be a pollution prevention initiative and a beneficial reuse initiative. These waste products (fly ash and foundry sand) otherwise would be disposed of in a landfill. WisDOT has used coal ash for the following: (1) fly ash (precipitant from the smoke stack) in place of Portland cement in concrete and (2) bottom ash (boiler ash) as a roadway embankment fill, and when mixed with asphalt, it has been used in place of chip sealing on town road maintenance projects. WisDOT has used foundry sand as roadway embankment fill and a replacement to select borrow.

This project has the potential for industrial byproduct reuse. Further evaluation of the potential use, location(s), type, quantity, and supplier will follow in the design phase of the project.

WisDOT has limited opportunity to use old tires in the construction of highways. WisDOT has used old tires in the construction of noise barriers and in limited asphaltic pavement designs. Wisconsin has a policy to incinerate used rubber tires as an energy fuel source for power generation at power plants throughout the state. Wisconsin was mandated to do away with all used rubber tire stockpiles by July 1, 1995. Wisconsin has met this commitment to comply with the mandate. The policy has been so successful that Wisconsin has started incinerating used tires from neighboring states.

Waste and demolition material that cannot be recycled through incorporation into the project's design and construction will be disposed of in accordance with WisDOT *Standard Specifications for Road and Bridge Construction*. Disposal will be in compliance with all applicable federal and state regulations relating to solid waste.

Specific Project Commitments: None other than what was listed above in the general commitments.