Appendix D. Visual Impact Analysis Mirror Lake Bridge Replacement

I-39/90/94 Corridor Study

Technical Report

Visual Impacts Analysis Mirror Lake Bridge Replacement

May 2024

Wisconsin Department of Transportation

CONTENTS

TABLES

FIGURES

ATTACHMENT

1. Introduction

This document describes the existing visual conditions and aesthetic character of two bridges that carry Interstate(I)-90/94 across Mirror Lake southwest of Wisconsin Dells, Wisconsin, and qualitatively evaluates the visual effects of replacing the bridges.

1.1. Project Description

The Wisconsin Department of Transportation (WisDOT) and the Federal Highway Administration (FHWA) are conducting the I-39/90/94 Corridor Study between US Highway (US) 12/18 in Madison and US 12/ Wisconsin State Highway (WIS) 16 in Wisconsin Dells. The study will also evaluate I-39 from its split with I-90/94 (I-39 I-90/I-94 Split Interchange) to Levee Road near Portage. The study corridor is about 67 miles long and travels through Dane, Columbia, Sauk, and Juneau counties (Figure 1) and is described by geographic locations:

- South Section: I-39/90/94 between US 12/18 and WIS 60
- North Section: I-39/90/94 between WIS 60 and US 12/WIS 16, and I-39 from the I-39 I-90/I-94 Split to Levee Road

The north- and south-bound bridges over Mirror Lake are in Sauk County in the North Section between US 12 and State Route (SR) 23 (Figure 1; Mirror Lake is not shown at this scale). At the Mirror Lake crossing, I-90/I-94 would be widened from its existing two lanes in each direction to three lanes, and shoulders would also be widened on each side of both bridges. Bridge widths would be consistent with those proposed for the highway, which would generally follow the existing alignment. The existing southbound bridge would be removed, and the new southbound bridge would be offset into the existing median, closer to the northbound bridge (Figure 3). The existing northbound bridge would be replaced in its current location. The proposed bridges would be made of steel girders (sides) under a concrete deck (surface) and would span the water and hillsides entirely (Figure 2). The girders would likely have a faint rust color. Parapets, or safety barriers, lining both sides of each bridge would be solid concrete, as under existing conditions, but would be about 10 inches taller. Horizontal, uninterrupted bridge girders would connect to low-profile abutments that connect the bridge deck to the ground. No lighting or signs would be placed on the bridges, but existing driver navigation signs leading to them would be replaced. Yellow- and black-striped safety signs at the approach of each bridge are present due to existing narrow shoulders and would not be required or replaced because the new shoulders would be built to safety standards.

Nighttime construction may occur. Public access to the lake in proximity to the bridges would be closed during demolition and construction. No construction would occur within the waters of the lake. Construction is expected to last approximately two to three years and would occur year-round.

Figure 1. Study Corridor Geographic Location

Figure 2. Proposed Mirror Lake Bridge Design

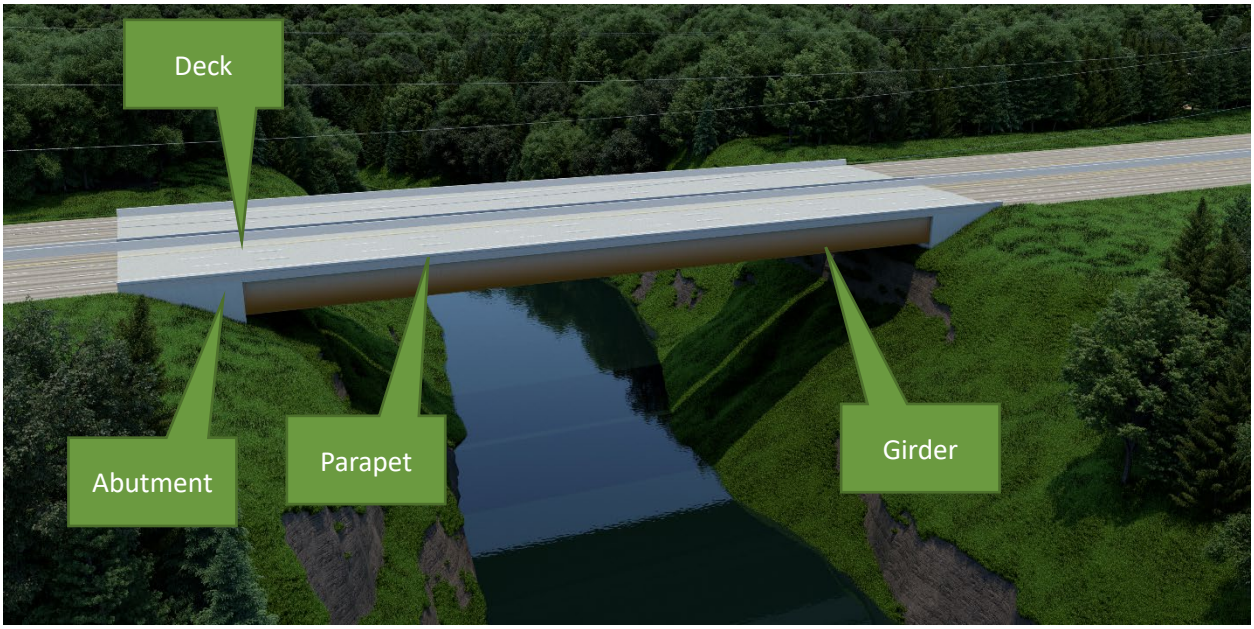
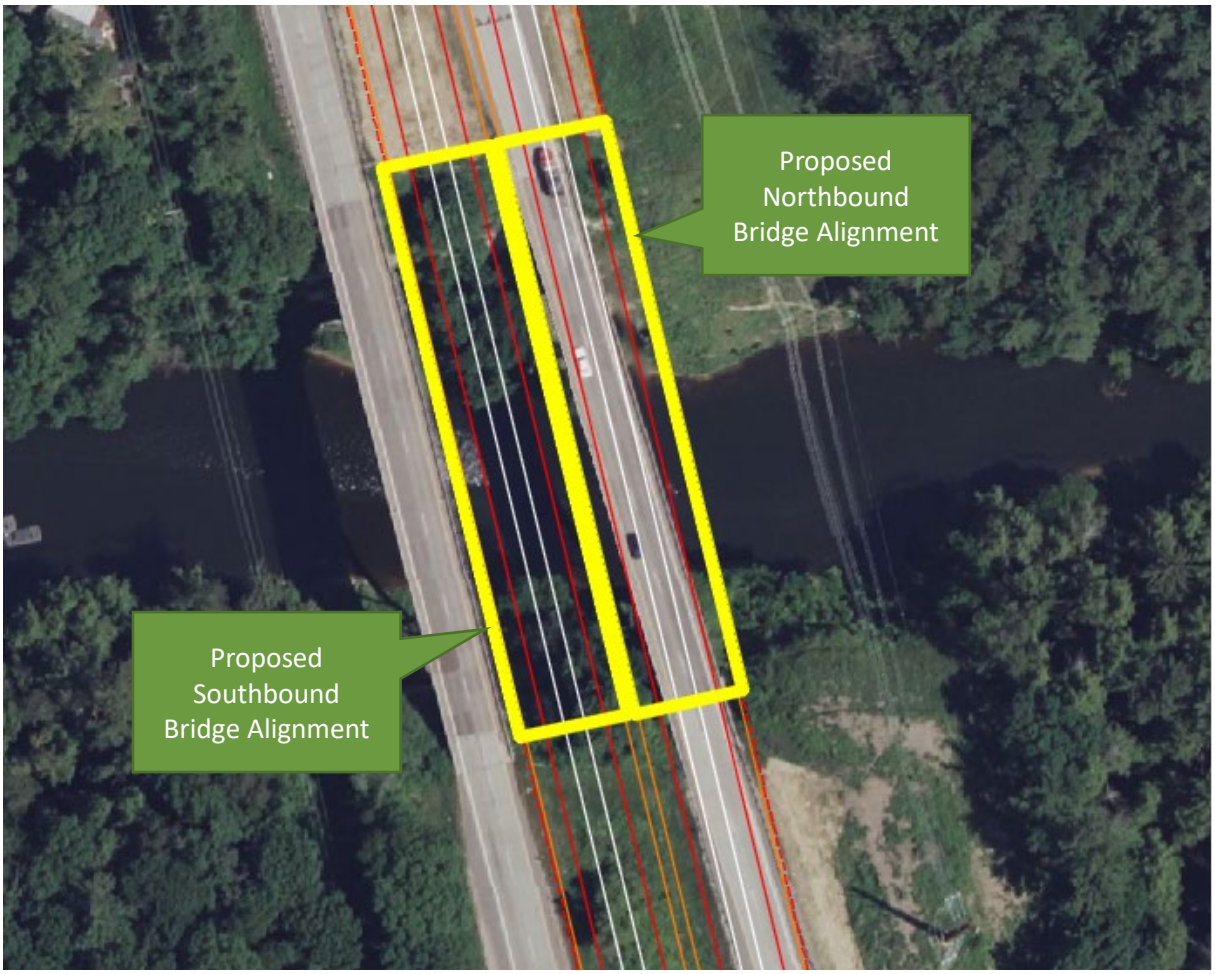


Figure 3. Proposed Mirror Bridge Alignment



1.2. Methodology

Although no federal or state laws specifically direct the analysis of visual impacts, federal and state guidance provides a framework for evaluation. The methodology for assessing visual impacts is based on FHWA's 2015 *Guidelines for the Visual Impact Assessment of Highway Projects* and WisDOT's 2024 *Facilities Development Manual [FDM]*. *Section 27-10 Visual Impact Assessment* of the FDM provides guidance on conducting visual impact assessments (WisDOT 2002). *Chapter* 27 *Planting and Aesthetic Design Section 10 Visual Impact Assessment and Visual Quality Ratings/Inventory Sheet*. FHWA's guidelines include a Visual Impact Assessment (VIA) Scoping Questionnaire for determining the applicable level of effort for assessing visual impacts of proposed highway projects (see Attachment A). Results of the questionnaire completed for this project indicate that a VIA Memorandum is appropriate. As defined by FHWA, a VIA Memorandum is suitable when visual impacts are expected to be negligible. No specific methods or steps are defined for VIA Memoranda, other than inclusion of an explanation of the approach used to reach a negligible impact (FHWA 2015).

Section 10 of Chapter 27 of the WisDOT FDM states that "a VIA will be conducted when there are potentially significant impacts" resulting from transportation projects. The FDM provides a list of elements to consider when determining if a VIA should be conducted. The list notes "important natural or physical features," which includes lakes. "Important" is stated as being "defined by other agencies or the people of that area" (WisDOT 2002). Because no changes to Mirror Lake would occur, no significant impacts are expected to that natural feature. WisDOT guidelines include preparation of a Visual Quality Rating/Inventory Sheet to determine the visual quality rating of the project (see Attachment B).

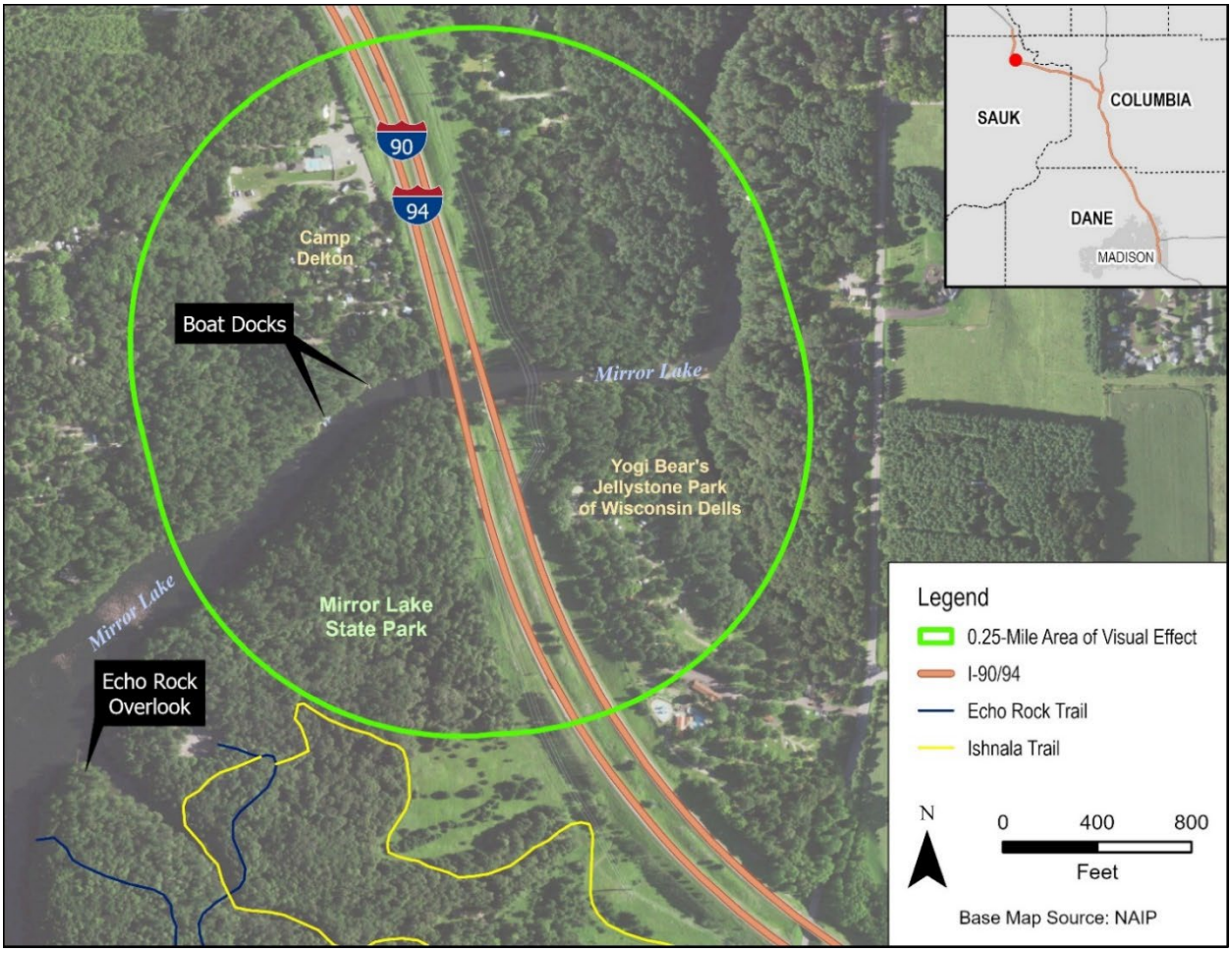
Both FHWA and WisDOT visual guidance documents define a similar VIA process and elements to address in a VIA, which were applied to the methodology for this analysis and documented in this VIA Memorandum as follows:

- Describe project elements (Section 1.1, Project Description).
- Describe the regulatory context, visually sensitive resources, existing landscape character and visual quality, key views, and viewer groups (Section 2, Affected Environment).
- Analyze impacts to visual character, visual quality, and viewers (Section 3, Impact Analysis).
- Describe any applicable mitigation measures and recommended aesthetic treatments/design options (Section 4, Mitigation Measures and Recommended Aesthetic Treatments).

2. Affected Environment

The study area, or area of visual effect (AVE), extends approximately 0.25 mile from each bridge where it crosses Mirror Lake (Figure 4). These limits incorporate views available to the two groups of viewers FHWA identifies as being affected by highway projects: neighbors and travelers. Neighbors are people who are adjacent to a highway and have views *of* the road. Travelers are people who use the highway and have views *from* the road (FHWA 2015). Neighbors for this project are recreationists using Mirror Lake and adjacent residents and campground visitors, while travelers are people driving on I-90/94 (described in more detail under Section 2.3). The 0.25-mile AVE limit encompasses the extent to which the bridges are visible for recreationists on Mirror Lake due to the lake's shape, topography, and dense surrounding vegetation. This limit also represents the extent to which travelers on I-90/94 can distinguish the existing bridges' concrete parapets from the metal guardrails leading to them, as the parapets are the only visible bridge elements for highway travelers. In addition, curves in I-90/94 preclude views beyond 0.25 mile from both the north and south end of the bridges.

Figure 4. Area of Visual Effect



Field work was conducted December 21 and 30, 2023, to verify the extent of the AVE and visibility from potential viewpoints, and to photo-document existing conditions and views of and from the bridges. The field work occurred when deciduous trees had dropped their leaves, which provides for the farthest possible viewing conditions.

2.1. Regulatory Context

2.1.1. Relevant Plans, Policies, and Regulations

State, local, and regional plans and policies pertaining to visual resources were reviewed to identify any protective measures addressing visual quality of the local character. The Sauk County 2009 *Comprehensive Plan* does not list any issues, goals, policies, or objectives related to visual resources, but includes a vision statement that reads, "Sauk County will remain one of the nation's most beautiful and significant natural resource areas." The plan also lists the following "theme": "Preserve the beauty, diversity and integrity of the ecological community" (Sauk County 2009a).

Land west of I-90/94 and north of Mirror Lake is within the Village of Lake Delton (Figure 5) (Village of Lake Delton 2010). The Village's 2022 *Comprehensive Plan* zones this area as commercial (Village of Lake Delton 2021). The plan includes a Land Use Policy to "protect and respect natural resources and systems," which further states, "preserve environmental corridor features including waterways … steep slopes … scenic vistas, and mature woodlands" (Village of Lake Delton 2022).

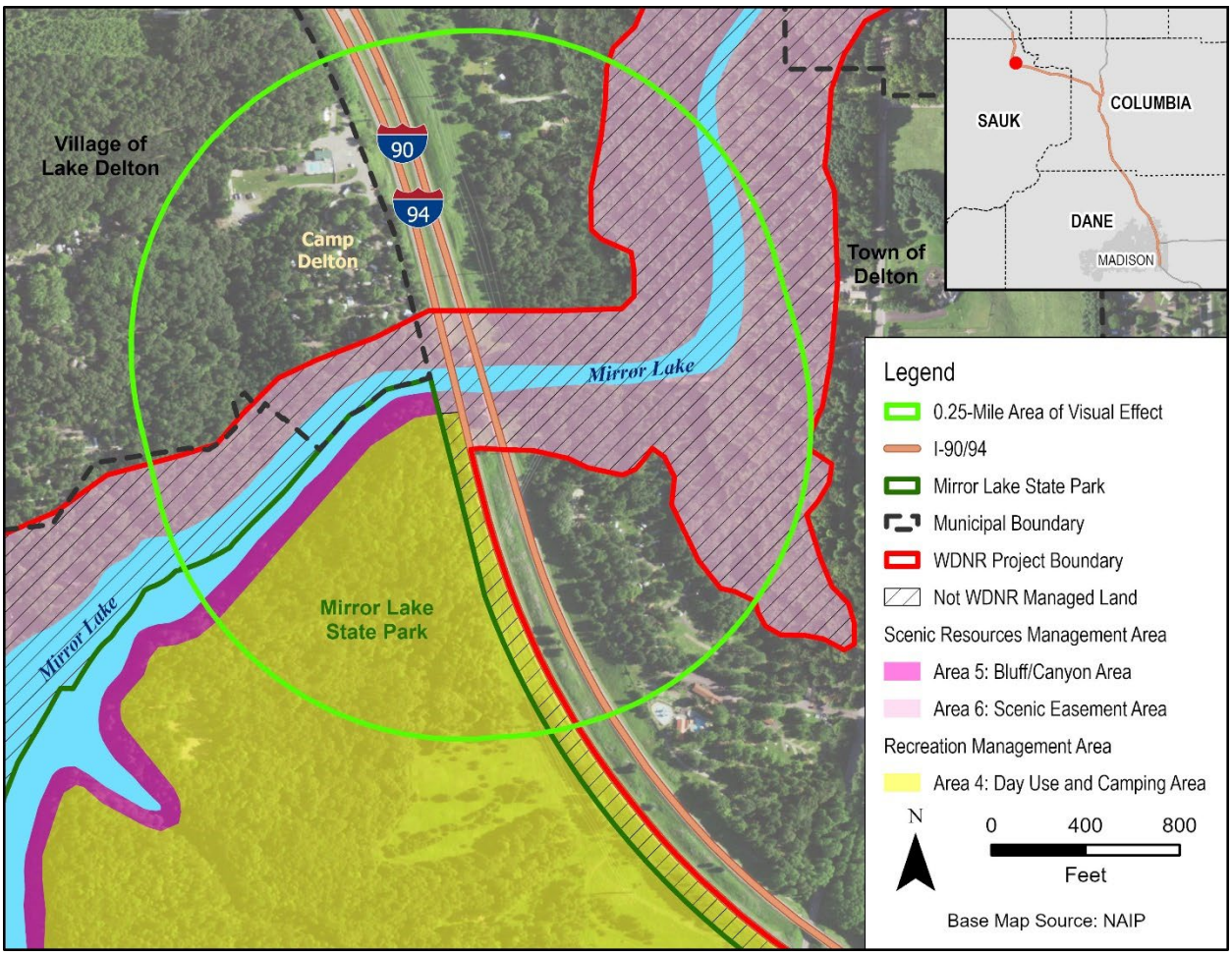
The remainder of the land within the AVE is within the Town of Delton. The town's 2009 *Comprehensive Plan* zones the land northeast of the bridges as single-family residential, southeast of the bridges as commercial, and southwest of the bridges as parks and open space (Town of Delton 2009a). The parks and open space land is occupied by Mirror Lake State Park. The plan includes a natural resources objective/policy (NRO-4) that states, "Protect the natural assets of Mirror Lake State Park including water quality, scenery leading up to the entrance of the park, [and] limited light pollution from nearby development…." The plan identifies "numerous environmentally sensitive areas, including areas of steep slopes" and "surface waters, including both lakes and streams." The town asked constituents' primary land use concerns. As noted in the comprehensive plan, "Protection of water resources was the primary issue followed by scenic beauty." The plan also states that "transportation networks…provide a convenient opportunity for visitors to view scenic landscapes…." (Town of Delton 2009b).

Most of Mirror Lake State Park lies within the Town of Delton (Town of Delton 2009b). The Wisconsin Department of Natural Resources (WDNR) defines public uses and authorizes resource management and facility development for WDNR properties in master plans. Mirror Lake State Park is addressed under the 2023 *Central Sand Plains Ecological Landscape Regional Master Plan*, which states that the park is "managed to provide a variety of nature-based, non-motorized recreational activities in a natural setting." WDNR identifies "project boundaries," which are "established areas on the landscape, created by a Natural Resources Board action, where the department may acquire land" (WDNR n.d.a). The WNDR *project* boundaries, rather than the *park* boundaries, for Mirror Lake State Park extend north of Mirror Lake and east of the highway, shown as hatched areas on Figure 5. Although outside WDNR's current management jurisdiction, the agency assigns Land Management Classifications to these areas as for the rest of the park.

The Land Management Classifications for Mirror Lake State Park identify lands within the AVE on the north side of the lake west of I-90/94 as Area 6, Scenic Easement Area (Figure 5). Both the north and south sides of the lake are designated as Area 6 on the east side of the bridges. However, Area 6 lands are not currently managed by WDNR, but are private lands with a WDNR scenic easement that is closed to the public. Scenic easement means the property owner needs to obtain WDNR permission before making changes to structures on their property or removing vegetation (I-39/90/94 Corridor Study Project Team 2022, Webb 2024). A narrow stretch of land on the south side of the lake west of the bridges is identified as Area 5, Bluff/Canyon Scenic Easement Area. The remainder of the state park land south of Area 5 is designated as a Day Use and Camping Area (Area 4). Area 5 and Area 6 are the only

two locations within the park designated as a Scenic Resources Management Area (SRMA), defined as lands "managed to protect, maintain, and enhance for long-term public enjoyment lands or waters having unique aesthetic qualities or outstanding scenic beauty, and lands where managing for aesthetics is a primary concern due to significant or special public use of the area. The SRMA classification is typically applied to lands or waters with outstanding scenic attractions (e.g., scenic lakes, rivers, highways, trails, vistas, etc.)" (WDNR 2023).

Figure 5. Applicable Land Management Designations



2.1.2. Designated Sensitive Visual Resources

No designated national or state scenic byways, national scenic or historic trails, national landmarks, or wild or scenic rivers are within the AVE or offer views of it (FHWA n.d., Scenic America 2024, National Park Service [NPS] 2010, NPS 2021, NPS 2023a, NPS 2023b). I-90/I-94 is not a state-designated "Rustic Road" (State of Wisconsin n.d.), and no state-designated scenic trails are within the AVE (Travel Wisconsin 2023). In addition, no "Dark Sky Places," as recognized by the International Dark-Sky Association, are within the AVE (International Dark Sky Association n.d.).

2.2. Landscape Character and Visual Quality

WisDOT defines visual character as a composition of landscape elements, including landform, water, vegetation, and cultural (human-made features). Visual quality "is measured by the overall impression, either positive or negative, retained during and after viewing an area" and serves as the basis for determining visual impacts. FDM 27-10 recommends using the WisDOT Visual Quality Rating System (VQRS) to rate specific features of the four landscape elements "based on how visually pleasing or displeasing they are" using visual values chosen from a pre-set numerical scale. The rating is multiplied by the how frequently the feature appears in a landscape, as the more often it appears, the greater the impression it makes. Therefore, visual quality is a result of 1) the frequency of views, and 2) visual value, as listed in Table 1 (WisDOT 2002).

Table 1: Visual Quality Components

Frequency of Views	Visual Value
Does not occur	Extremely Pleasing
Singular occurrence or seldom occurring	Moderately Pleasing
Occurs quite frequently	Slightly Pleasing
Occurs constantly or within viewing range at all times	Neither Pleasing nor Displeasing
	Slightly Displeasing
	Moderately Displeasing
	Extremely Displeasing

The ratings for all four landscape elements (landform, water, vegetation, and cultural) are then averaged and are added together, resulting in a Visual Quality Rating (VQR) for the entire landscape. The ensuing overall VQR ranges as follows (WisDOT 2002):

- Adverse Visual Quality: Less than 0
- Low Visual Quality: 0-7.99
- Medium Visual Quality: 8-11.99
- High Visual Quality: 12 or more

2.2.1. Landscape Character

I-90/94 within the AVE is divided. A grassy expanse with a cluster of deciduous trees at each end of the bridges separates north- and south-bound traffic, which is comprised of two lanes each direction. The landform rises slightly beside the highway, which, along with dense trees, obscures farther views. Transmission lines parallel and cross the interstate, and their tall brown monopoles reach above the trees and create notable but not unique vertical elements. No streetlights line the bridges or the interstate within the AVE. The highway is pale gray concrete, and bridge pavement is slightly darker where asphalt covers the concrete. The asphalt has cracked and peeled in some areas, revealing lighter-colored concrete beneath. Metal guardrails intermittently line the highway, particularly on both sides of

the freeway where they approach the bridges. The metal guardrails give way to light beige, solid concrete parapets along both sides of each bridge. Bright yellow- and black-striped safety signs mark the guardrail transitions, and navigation and identification signs intermittently line the roadside (Figure 6, Figure 7). Motor vehicles are constant visual elements. As noted in the Purpose and Need chapter of the EIS prepared for this project, the Wisconsin Dells (just northeast of the AVE) is a premier tourist destination, which is reflected in congestion on Fridays and Sundays in the summer. Few other human-made elements are visible from the highway. A member-only mobile home/recreational vehicle (RV) park (Camp Delton) is on the north side of the lake west of I-90/94, and a public RV and tent campground (Yogi Bear's Jellystone Park of Wisconsin Dells) is on the south side of the lake east of I-90/94. A low-density residential area is on the north side of the lake east of I-90/94. Vegetation and/or topography obscure most views of these areas from the interstate, and vice versa.

The AVE is densely wooded on both sides of I-90/I94, with a swath of manicured grass forming a treeless buffer in the interstate right-of-way of varying widths. The surrounding forest consists of mature, visually impenetrable evergreen and deciduous trees, which forms an undulating horizon line in the foreground. This abundant vegetation creates a landscape of greenery during the summer, with a variety of shapes and textures. Colors change to autumnal shades in the fall (i.e., yellow, orange, red, brown), and leafless trees show the gray of barren branches during winter (Figure 6, Figure 7), when the landscape may also be covered in varying amounts of snow.

Figure 6. I-90/I-94 Approaching Mirror Lake Bridge, Southbound

Source: Jacobs; field work conducted December 30, 2023

Figure 7. I-90/I-94 Approaching Mirror Lake Bridge, Northbound

Source: Jacobs; field work conducted December 30, 2023

The forest canopy abruptly opens at Mirror Lake, which appears more like a river than a lake within the AVE, and is approximately 125 feet wide where the highway crosses the waterbody at a near perpendicular angle. The lake narrows to the east and widens to the west, but retains an elongated shape. The banks of the lake within the AVE are flanked by dense forests, similar to those surrounding the I-90/94 right-of-way. Much of the lake is not readily visible from the bridges due to their height above water and curves in the waterbody, which obscure most views of the lake beyond a few hundred feet in each direction (Figure 8, Figure 9). Few human-made elements are readily visible from the bridges, other than some small boat docks and a partially obscured building to the west. The bridges' concrete parapets also partially hinder views toward the lake. The bridge deck and parapets are the most visible components of the bridges as viewed from the highway. The smooth, burnt orange bridge girders, which form slight arching shapes, are partly visible on the bridge traveling the opposite direction. Views of the opposing bridge preclude farther views (e.g., the southbound bridge hinders views to the west for northbound travelers) (Figure 10, Figure 11). However, more water is visible to the east for southbound travelers.

Figure 8. Looking West toward Mirror Lake, Southbound I-90/I-94

Source: Jacobs; field work conducted December 30, 2023

Figure 9. Looking East toward Mirror Lake, Northbound I-90/I-94

Source: Jacobs; field work conducted December 30, 2023

Figure 10. Looking West toward Mirror Lake, Northbound I-90/I-94

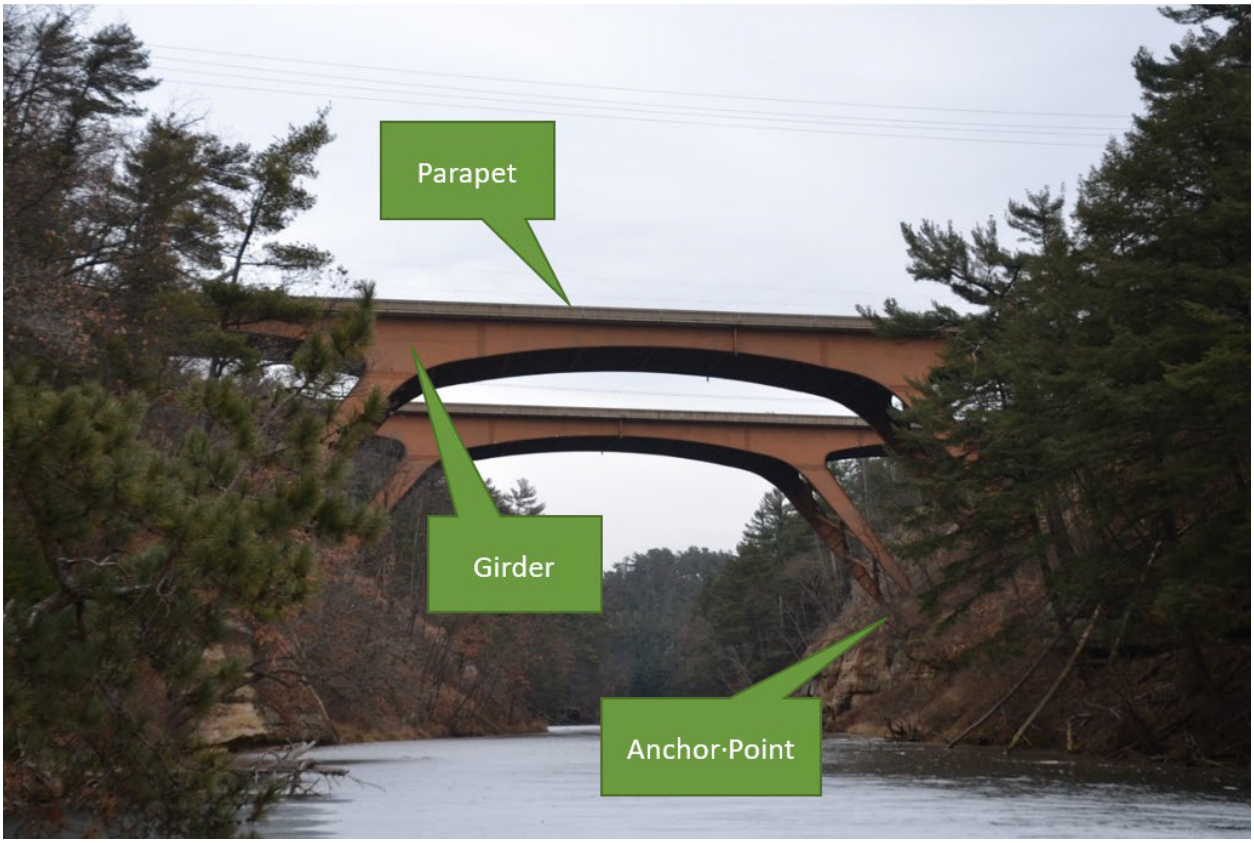
Source: Jacobs; field work conducted December 30, 2023

Figure 11. Looking East toward Mirror Lake, Southbound I-90/I-94

Source: Jacobs; field work conducted December 30, 2023

Most of the bridges' structural elements are visible from the lake depending on viewpoint, except for the abutments, which may be behind trees depending on viewpoint (Figure 12). The bridges share an identical design. Each bridge consists of two metal girders paralleling both sides of the highway and forming a slight arch in the center. Metal supports appear to seamlessly angle from the girders toward the steep slopes of the hillside, where they are anchored. The hills are covered with thick vegetation, including evergreen and deciduous trees. The bridge supports do not enter the water, and taper toward the hill. The girders between the supports and bridge abutments (where the bridge connects to land) also form a slight arch. A series of crisscrossing metal beams connect the supports from one side of the bridge to the other, but are most visible only when directly under the bridges. All of these elements share the same smooth surface and burnt orange color. The beige concrete parapets are a lighter shade of the burnt orange and parallel the straight line formed by the tops of the girders, creating a visual linear cap.

Figure 12. Looking East toward Mirror Lake Bridge from Boat Dock at Camp Delton



Source: Jacobs; field work conducted December 21, 2023

2.2.2. Visual Quality

The abundant dense vegetation within the AVE creates a natural-appearing landscape seen by both the neighbors and travelers, creating a strong sense of natural harmony. However, the homogeneity of the forest cover, which acts as a unifying element, tends to lack vividness (memorability). General frequency of views from the bridges is very high based on an average annual daily traffic (AADT) of 47,000 (WisDOT 2021). However, frequency of individual landscape features varies depending on viewpoint, which can reveal or obscure some features, and viewer attention. For example, frequency of views of the water

varies depending on direction of view given the height of the bridges, bend in the water channel, and narrowness of the crossing. Drivers who remain focused north or south in the direction of travel would not experience views of the steep hills and lake that are visible to the east and west, which add the most visual interest. Views would be fleeting for any drivers who momentarily glance to the east or west. Views would be of longer duration for passengers, but still quick given the bridges' short span. Visual quality would also vary based on view direction. For example, north- or south-facing views, such as Figure 7, do not include the water and landforms seen in east- or west-facing views, such as Figure 8, that increase visual quality. North- and south-facing views include signs, overhead utilities, and pavement discrepancies, none of which are memorable features that demonstrate high visual values. The presence of the bridges is barely perceptible from the highway, indicated only by concrete parapets and a more open view. For these reasons the VQR of the landscape viewed from the bridges receives a rating of 7.25, as it considers both north-south views, which would receive the highest view frequency, and east-west views (see Attachment B). The result is an existing level of existing visual quality that is in the upper range of "low" for views from the highway.

Views of the bridges for neighbors are restricted primarily to non-motorized boaters visiting Mirror Lake State Park during warm weather months; therefore, frequency of views are "seldom occurring" overall (WisDOT 2002). Viewed from the lake, the bridges represent a human-made intrusion, but demonstrate an orderly, coherent composition that does not negatively encroach upon the scene, adding a moderate degree of visual interest. The absence of bridge piers in the water minimizes the bridges' visual intrusion into an otherwise natural-appearing landscape with its steep hills, rock outcrops, and coniferous forest punctuated with deciduous trees. The bridges' smooth, slightly curving lines and sleek shapes exhibit a simple elegance, and the crisscross pattern adds some visual interest. The repeating color, shapes, and lines unify the structures. Few other human-made element intrude upon the view other than faint horizontal utility lines that parallel the lines of the bridges. For these reasons the VQR of views toward the bridges from the lake is rated 19 (see Attachment B). The resulting existing visual quality of views from the lake is considered high.

2.3. Key Views and Viewer Groups

Due to the constrained nature of topography and vegetation within the AVE, key views are limited to:

- Views from the bridge to the east and west (travelers)
- Views of the bridge from Mirror Lake (neighbors)

Groups of people with views from the bridges are travelers on I-90/94, including commuters, tourists, and freight haulers. Pedestrians and bicyclists are not allowed to travel over the bridges, which would also be the case under the proposed action. Motor vehicle drivers focus less on the view outside the vehicle (FHWA 2015), as they are primarily paying attention to the activity of driving and views of the road ahead of them. Within the AVE, drivers would be focused north or south depending on their travel direction, away from the lake. Passengers would have views toward the lake of longer duration. Although the number of travelers experiencing this view is high, views from the bridges are fleeting. The bridges are approximately 325 feet (0.06 mile) long, and the speed limit is 70 miles per hour. Therefore, views from the bridge for highway travelers last approximately 3.5 seconds. Views of longer duration would occur when traffic is congested. Views from the bridges are not considered a highly sensitive visual resource due to viewer activity (driving), awareness (fleeting views), and limited visibility that obscures views of the water (values), per FDM Chapter 27 (WisDOT 2002).

Recreationists visiting Mirror Lake State Park, specifically non-motorized boaters accessing this area of the lake, have views of the bridges. The park's proximity to I-90/94 and US 12 make it easily accessible

from local and regional population centers, including "the tourism community of Wisconsin Dells" (WDNR 2023). The park "is managed to provide a variety of nature-based, non-motorized recreational activities in a natural setting," which includes pine-oak forests, cliffs, and water (WDNR 2023). The lake, noted for its calm, mirror-like surface, "reflects a wooded shoreline with cliffs up to 50 feet high" (WDNR 2024b). WDNR staff noted that "some Mirror Lake visitors comment that they like the I-90/94 bridge over Mirror Lake" and "suggested that WisDOT consider the appearance of the new I-90/94 bridge over Mirror Lake" (I-39/90/94 Corridor Study Project Team 2022). Mirror Lake State Park is open from 6:00 a.m. to 11:00 p.m. year-round and provides winter and summer recreation opportunities, including boat, canoe, and kayak rentals in summer. Boating on the lake is popular with both private residents on the lake and recreational boaters (I-39/90/94 Corridor Study Project Team 2022). Two trails access the northeast area of the park and include a short route to a scenic overlook (Echo Rock Overlook) on the south side of the lake. Field work conducted in December 2023 confirmed that no views of the bridges are available from these trails or the overlook. The park's two boat landings, as well as a campground and swimming beach, are outside the AVE (WDNR 2024b). Views within the park are considered a sensitive visual resource due to activity, awareness, and values (non-motorized boating and the presence of water in a natural-appearing landscape), per FDM Chapter 27 (WisDOT 2002).

Camp Delton is a private, membership-owned mobile home "vacation park" offering more than 500 sites on 93 acres on the north side of Mirror Lake and west side of I-90/I-94 (Camp Delton 2023). The camp is in the thick forest cover typical of the AVE. The closest mobile home sites to Mirror Lake are approximately 275 feet from the water's edge; thick, forested vegetation occupying this space obscures views of the lake and the bridges. Boat and canoe storage is available, and two boat docks provide access to the lake (Camp Delton 2023). Field work conducted for this project confirmed that the bridges are fully visible from the easternmost boat dock and only partially visible from the western dock (Figure 4). Therefore, most residents of Camp Delton would only experience views of the lake as recreationists using the boat docks or paddling the lake. Field work conducted in December 2023 confirmed that views of the bridge from the group of western-most boat docks are partially obscured by topography and vegetation.

3. Impact Analysis

This section analyzes long- and short-term impacts of the Build alternative (bridge replacement under the Modernization Plus Added General-Purpose Lane) and No Build alternative as beneficial, adverse, or neutral per FHWA guidelines based on impacts to visual character, visual quality, and viewers, as defined by WisDOT and defined in Section 2.2. Per FHWA, a beneficial impact may enhance visual resources or create better views of them and improve the experience of visual quality by viewers. An adverse impact would degrade visual resources or obstruct or alter desired views (FHWA 2015). A neutral impact would result in no or little perceptual change of the visual environment. Per WisDOT, adverse ("negative") and beneficial ("positive") impacts can range from "major to minor in scale" (WisDOT 2002). This section also analyzes consistency with the regulatory context described in Section 2.1.

To assist in analyzing visual impacts, renderings were created to approximate views from the bridge with the Project in place. Because the southbound bridge would be demolished and rebuilt farther east, closer to the northbound bridge, photographs for southbound views were taken from the existing southbound bridge. Photos could not be taken from the proposed southbound bridge because nothing currently exists at that location. Therefore, the southbound views would be shifted slightly farther east.

3.1. Build Alternative

The Build alternative design calls for single-span bridges. As described in the discussion that follows, the new bridges would neither enhance nor degrade visual resources, resulting in neutral visual impacts. Visual quality would remain low for views from the bridges and high for views from the water. Views for recreational boaters on Mirror Lake may be slightly enhanced, as the new bridges would intrude less on the natural-appearing landscape, but would remove a slight degree of visual interest, rendering them somewhat less visually pleasing. The visual quality of the landscape viewed from Mirror Lake would remain high.

The following figures depict views from the bridges and renderings that approximate how the views would change under the Build Alternative. The four views include two for northbound travelers — one looking east and one looking west; and two for southbound travelers — also one looking east and one looking west.

Figure 13: View for Northbound Travelers Looking East, Existing Conditions

Figure 14: View for Northbound Travelers Looking East, Build Alternative in Place

Figure 15: View for Northbound Travelers Looking West, Existing Conditions

Figure 16: View for Northbound Travelers Looking West, Build Alternative in Place

Figure 17: View for Southbound Travelers Looking East, Existing Conditions

Figure 18: View for Southbound Travelers Looking East, Build Alternative in Place

Figure 19: View for Southbound Travelers Looking West, Existing Conditions

Figure 20: View for Southbound Travelers Looking West, Build Alternative in Place

3.1.1. Impacts to Visual Character and Quality

Trees in the median at each end of the bridges would be removed, but no tree removal would occur outside of the highway right-of-way, retaining the abundance of dense vegetation and the natural-appearing visual character adjacent to the bridges. As seen from the highway, the presence of the bridges would be more pronounced as a result of the parapets being 10 inches taller. Although the Build Alternative would not remove or alter elements of the landscape, the taller parapets would appear like a solid, concrete wall that fills approximately half of the view, blocking views of the water and decreasing views of the forested steep hills that lead to the lake. The parapets would be a more prominent visual element and would therefore change the character of the landscape looking east and west from the bridges. No bridge girders or other structures would be visible. The existing VQR would be reduced from 7.25 to 2.5, within the "low" range, as a result of eliminating views of the water, decreasing views of the forested hills, and increasing views of the parapets, whose visual value would also decrease (see Attachment A).

Viewed from the lake, the new bridges would continue to represent a human-made intrusion, but demonstrate an orderly, coherent composition. Replacing the bridges' burnt orange color with a similar rust color would continue to help the bridges blend into the surrounding environment. No piers would extend into the hillsides, creating a more open, unimpeded landscape with reduced visual encroachment compared to existing conditions, resulting in a beneficial impact. However, the existing piers and their crisscrossing supports, as well as the slight arch design, create visual interest that would be removed. For these reasons, the bridges would be consistent with the existing surrounding visual character. No change would occur to the features of the landscape elements except the bridges themselves, whose visual value would be reduced from "moderately pleasing" to "neither pleasing nor displeasing." As a result, the overall VQR would be reduced from 19 to 17.67 but visual quality would remain "high" (see Attachment B).

3.1.2. Impacts to Viewers

The number of vehicles seen traveling over the bridges would not change, but their placement would change because an additional lane would carry traffic in each direction. Views toward the lake for center-lane travelers would be more obscured by vehicles on the right and left lanes. Replacing the bridges would raise the concrete parapets an additional 10 inches, creating a solid wall effect that blocks views of the water and decrease views of the forested steep hills that lead to the lake.

However, drivers would still be focused north or south, rather than east or west toward the lake. Passengers would be more affected, but views from the bridges would typically last less than five seconds. In addition, under existing conditions, the lake is only partially visible from the bridges due to their height above water and bends in the waterbody. This change would primarily affect locals who repeatedly cross the bridge and are familiar with these views. Other than smoother pavement, no visual elements of the bridges would be evident to highway travelers. The existing yellow- and black-striped safety signs at the approach to each bridge would be removed, eliminating a small degree of visual encroachment. Changes would result in an overall neutral impact for drivers who would be facing primarily north-south, and adverse for passengers who look to the east or west.

Recreationists boating on Mirror Lake, including visitors to the state park and residents of Camp Delton, would experience more open views of the landscape as described for Section 3.1.1 due to removal of the piers extending into the hillside. Although the visual interest present in the existing bridges would be removed, resulting in a minor adverse impact, the new bridges would encroach less upon views of the landscape, resulting in a minor beneficial impact. The resulting overall neutral impacts would occur

primarily in summer when the state park provides boat, canoe, and kayak rentals. During this time, deciduous trees would be leafed-out, which would obscure farther views and minimize impacts.

3.1.3. Construction Impacts

Construction would occur year-round and last two to three years, potentially including nighttime work. Short-term visual impacts would occur during construction and demolition and would include views of heavy equipment such as cranes, large construction vehicles, staging and stockpiling areas, detour and safety signing, and construction workers. Staging and stockpiling areas would be located within the highway right-of-way. Views for travelers may be of slightly longer duration during construction than operations due to a slower traffic speed through the construction zone, which may also result in views of more vehicles. Travelers would experience more visual impacts than recreationists, as access to the lake in proximity to the bridges would be closed during construction and demolition, and most boating use of the lake occurs during summer. No in-water construction is planned. No barges would be launched from within Mirror Lake State Park for construction purposes. Any nighttime construction would require lighting, making construction visible from farther distances than daytime work.

3.1.4. Consistency with Regulatory Context

The proposed bridge design would span Mirror Lake, be aesthetically consistent with the current bridges, and would not add permanent lights. Although trees within the median on either side of the bridges would be removed, an abundance of vegetation consisting primarily of mature trees, would remain along the outer edges of the highway. Therefore, as called for in area plans, the proposed design would help “preserve the beauty, diversity and integrity of the ecological community,” “protect and respect natural resources and systems,” “preserve environmental corridor features including waterways … steep slopes … scenic vistas, and mature woodlands,” and “protect the natural assets of Mirror Lake State Park including water quality, scenery leading up to the entrance of the park, [and] limited light pollution from nearby development….” (Sauk County 2009a, Village of Lake Delton 2022, Town of Delton 2009a). The bridge design would continue to “blend into the overall landscape in terms of color, material or style” (Town of Delton 2009a) by elimination of piers and use of a color similar to existing conditions, particularly as viewed by boaters on Mirror Lake. The “scenic beauty” (Town of Delton 2009b) of the AVE would be retained because the visual character would not change. No change would occur to the SRMA designations defined for Mirror Lake State Park, because “waters with unique aesthetic qualities or outstanding scenic beauty” and “outstanding scenic attractions (e.g., scenic lakes)” would not be affected, as the bridges would continue to span the lake. In addition, no views from trails or vistas would be affected. The proposed bridge design would maintain the park’s existing “natural setting” (WDNR 2023).

3.2. No Build Alternative

Under the No Build Alternative, the I-90/94 bridges would not be replaced, with no visual changes to bridges. The visual condition of the pavement would worsen or improve depending on preventative maintenance measures. As noted in the Purpose and Need chapter of the EIS prepared for this project, proximity of the Wisconsin Dells results in congestion on Fridays and Sundays in the summer, and parts of the interstate operate at undesirable levels of service, which is expected to worsen by 2050. The result would be more views of traffic congestion within the AVE, particularly over holidays or summer weekends, with a minor adverse impact. Slower travel speeds resulting from traffic congestion would increase the amount of viewing time from the bridges toward the lake to varying degrees, particularly

for passengers. However, the views would not change, resulting in continuation of the visual quality rating of "low." No change would occur to recreational boaters on Mirror Lake. Therefore, visual quality would remain high.

Routine maintenance on the bridge would continue under the No Build Alternative. Bridge or deck replacement may be needed in about 15 years depending on condition. Other than temporary views of construction equipment and crews, the bridge with a replaced deck would appear the same to those who view it from Mirror Lake and adjacent residences. Drivers on I-90/94 would notice new concrete but otherwise the view for drivers would remain the same. The steel supports holding up the bridge would need to be repainted every 20 to 25 years. The color of the steel may change, but its shape would remain the same for viewers of the bridge. If the bridge is replaced in the future, views of and from the would likely be similar to the Build alternative described above.

4. Mitigation Measures and Recommended Aesthetic Treatments

Temporary visual impacts from construction would be minimized by restricting construction activities to daylight hours when possible and adhering to local regulations. Because neutral impacts are expected in the long term, no long-term mitigation measures were identified. WisDOT will coordinate with WDNR on bridge aesthetics that is compatible with the Mirror Lake State Park aesthetic.

5. References

Camp Delton. 2023. "Camp Delton Club." https://www.campdelton.com/.

Federal Highway Administration (FHWA). 2015. *Guidelines for the Visual Impact Assessment of Highway Projects*. January. https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx#appc.

Federal Highway Administration (FHWA). n.d. "National Scenic Byways & All-American Roads, Wisconsin." https://fhwaapps.fhwa.dot.gov/bywaysp/StateMaps/Show/98?stateId=WI. Accessed March 14, 2024.

I-39/90/94 Corridor Study Project Team. 2022. "Meeting Minutes: DNR Mirror Lake and Rocky Arbor State Parks." August 24. Attendees: WDNR, WisDOT, Kapur, Jacobs. On file with Jacobs.

International Dark Sky Association. n.d. "All International Dark Sky Places, Midwest U.S." https://darksky.org/what-we-do/international-dark-sky-places/all-places/?_location_dropdown=midwest-united-states. Accessed March 14, 2024.

National Park Service (NPS). 2010. "National Trails Map." https://www.nps.gov/subjects/nationaltrailssystem/upload/National-Trails-map.pdf.

National Park Service (NPS). 2021. "Interactive Map of NPS Wild and Scenic Rivers." December 27. https://www.nps.gov/orgs/1912/plan-your-visit.htm. Accessed March 14, 2024.

National Park Service (NPS). 2023a. "Ice Age National Scenic Trail, Wisconsin, Maps." https://www.nps.gov/iatr/planyourvisit/maps.htm. Accessed March 14, 2024.

National Park Service (NPS). 2023b. "National Historic Landmarks, List of NHLs by State." https://www.nps.gov/subjects/nationalhistoriclandmarks/list-of-nhls-by-state.htm#onthisPage-50.

Sauk County. 2009. *Comprehensive Plan*. Part I. https://www.co.sauk.wi.us/sites/default/files/fileattachments/conservation_planning_and_zoning/page/1385/part_i_entire.pdf.

Scenic America. 2024. "Wisconsin's Scenic Byways." https://www.scenic.org/state/wisconsin/.

State of Wisconsin. 2024 "Rustic Road maps and descriptions." https://wisconsindot.gov/Pages/travel/road/rustic-roads/maps.aspx. Accessed March 14, 2024.

Town of Delton. 2009a. "Town of Delton Zoning Map." https://www.co.sauk.wi.us/sites/default/files/fileattachments/conservation_planning_and_zoning/page/1390/11-5zoning.pdf.

Town of Delton. 2009b. *Town of Delton Comprehensive Plan*. https://www.co.sauk.wi.us/sites/default/files/fileattachments/conservation_planning_and_zoning/page/1390/delton.pdf.

Travel Wisconsin. 2023. "400 State Trail, Nearby Places." https://www.travelwisconsin.com/road-and-multi-use-trails/400-state-trail-204364.

Village of Lake Delton. 2010. "Village Limits Map." https://lakedeltonwi.gov/DocumentCenter/View/261/Village-Limits-Map-PDF.

Village of Lake Delton. 2021. "Zoning Map." https://lakedeltonwi.gov/DocumentCenter/View/260/Village-of-Lake-Delton-Zoning-Map-PDF.

Village of Lake Delton. 2022. *Village of Lake Delton, WI, 2042 Comprehensive Plan*. Draft February 7. https://lakedelton.org/wp-content/uploads/2022/05/LakeDelton_2041_CompPlan_DRAFT_2022_2_22_Optimized.pdf.

Webb, Charlie. 2024. Personal communication (email) between Charlie Webb, Senior Project Manager, and Patricia Steinholtz, Senior Environmental Planner. March 18.

Wisconsin Department of Natural Resources (WDNR). 2024a. "Property Planning Viewer." https://dnr.wisconsin.gov/topic/fl/PropertyPlanning/PropertyPlanningViewer#:~:text=NOTE%3A%20Project%20boundaries%20are%20established,land%20from%20willing%20sellers%20only. Accessed March 14, 2024.

Wisconsin Department of Natural Resources (WDNR). 2023. *Central Sand Plains Regional Master Plan*. February. https://widnr.widen.net/s/8pp2nw28lc/fl_mp_el_centralsandplains_regionalmasterplan_2023.

Wisconsin Department of Natural Resources (WDNR). 2024b. "Mirror Lake State Park." https://dnr.wisconsin.gov/topic/parks/mirrorlake.

Wisconsin Department of Transportation (WisDOT). 2002. *Facilities Development Manual, Chapter 27 Planting and Aesthetic Design, Section 10 Visual Impact Assessment*. December 30. https://wisconsindot.gov/rdwy/fdm/fd-27-10.pdf.

Wisconsin Department of Transportation (WisDOT). 2021. "WisDOT Traffic Counts Map." https://www.arcgis.com/apps/webappviewer/index.html?id=2e12a4f051de4ea9bc865ec6393731f8&extent=-9790707.0678%2C5545369.8777%2C-9784520.4459%2C5550180.6331%2C102100. Accessed March 14, 2024.

Attachment A. FHWA VIA Scoping Questionnaire

FHWA 2015 VIA Scoping Questionnaire

The following ten questions can be used to determine the appropriate level of effort for assessing the impacts on visual quality that may result from a proposed highway project. The first set of five questions is concerned with environmental compatibility impacts on the visual resources of the affected environment. The second set of five questions deals with the sensitivity of the affected population of viewers to those impacts. It is important that this scoring system be used as a preliminary guide only. The goal is to develop an analysis and document strategy that is appropriately thorough, efficient, and defensible.

Environmental Compatibility

1. Will the project result in a noticeable change in the physical characteristics of the existing environment?
(Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.)

☐ High level of permanent change (3)
☒ Moderate level of permanent change (2)
☐ Low level of permanent or temporary change (1)
☐ No Noticeable Change (0)

2. Will the project complement or contrast with the visual character desired by the community?
(Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.)

☐ Low Compatibility (3)
☒ Moderate Compatibility (2)
☐ High compatibility (1)

3. What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed?
(Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.)

☐ High concern (3)
☒ Moderate concern (2)
☐ Low concern (1)
☐ Negligible Project Features (0)

4. Is it anticipated that to mitigate visual impacts, it may be necessary to develop extensive or novel mitigation strategies to avoid, minimize, or compensate for adverse impacts or will using conventional mitigation strategies, such as landscape or architectural treatment adequately mitigate adverse visual impacts?

☐ Extensive Non-Conventional Mitigation Likely (3)
☐ Some non-conventional Mitigation Likely (2)
☒ Only Conventional Mitigation Likely (1)
☐ No Mitigation Likely (0)

5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character?
(Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.)

☐ Cumulative Impacts likely: 0-5 years (3)
☐ Cumulative Impacts likely: 6-10 years (2)
☒ Cumulative Impacts unlikely (1)

_____8_____ Environmental Compatibility Subtotal

Viewer Sensitivity

1. What is the potential that the project proposal may be controversial within the community, or opposed by any organized group?
(This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.)

☐ High Potential (3)
☐ Moderate Potential (2)
☒ Low Potential (1)
☐ No Potential (0)

2. How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project?
(Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other DOT staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.)

☐ High Sensitivity (3)
☒ Moderate Sensitivity (2)
☐ Low Sensitivity (1)

3. To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies, or standards?

☐ Low Compatibility (3)
☐ Moderate Compatibility (2)
☒ High compatibility (1)

4. Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?
(Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a storm water permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on Federal lands, such as impacts to Wild and Scenic Rivers.)

☐ Yes (3)
☒ Maybe (2)
☐ No (1)

10. Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?
(Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.)

☒ Yes (3)
☐ Maybe (2)

☐ No (1)

_____9_____ View Sensitivity Subtotal

_____17_____ Total

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all ten questions on the Visual Impact Assessment Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.

The level of the VIA can initially be based on the following ranges of total scores:

☐ Score 25-30
An Expanded VIA is probably necessary. It is recommended that it should be proceeded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

☐ Score 20-24
A Standard VIA is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

☒ Score 15-19
An Abbreviated VIA would briefly describe project features, impacts and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

☐ Score 10-14
A VIA Memorandum addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

☐ Score 6-9
No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A VIA Memorandum may be used to document that there is no effect and to explain the approach used for the determination.

Attachment B. WisDOT FDM 27-10 Visual Quality Ratings/ Inventory Sheets

MIRROR LAKE, views from the bridge, existing conditions

Region	County	Date
Southwest	Sauk	18-Mar-24
Highway	**Corridor**	
I-39/90/94		

FREQUENCY (MULTIPLIER)

0 = Does not Occur
1 = Singular occurrence or seldom occurring
2 = Occurs quite frequently
3 = Occurs constantly or within viewing range at all times

VISUAL VALUE

3 = Extremely Pleasing
2 = Moderately Pleasing
1 = Slightly Pleasing
0 = Neither Pleasing nor Displeasing
- 1 = Slightly Displeasing
- 2 = Moderately Displeasing
- 3 = Extremely Displeasing

VISUAL QUALITY RATING

Less than 0 = Adverse Visual Quality
0 – 7.99 = Low Visual Quality
8 – 11.99 = Medium Visual Quality
12 or more = High Visual Quality

LANDFORM							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Cliffs / Bluffs							
Rock Outcrops							
Steep Hills / Ridges	1		2		2		
Rolling Hills	1		1		1		
Ravines							
Valleys / Basins							
Plains / Flatland							
Beach							AVG
				TOTAL	3		1.5

WATER							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Bays / Inlets							
Lakes / Ponds	1		2		2		
Rivers / Streams							
Wetlands							
Waterfalls / Rapids							
Swamp							AVG
				TOTAL	2		2

VEGETATION							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Plantation							

Orchard				
Pasture				
Crop Land				
Prairie Remnant				
Coniferous Forest	2	2	4	
Deciduous Forest	2	2	4	AVG
		TOTAL	8	4

CULTURAL				
FEATURES	**FREQUENCY**	**X VISUAL VALUE**	**= FEATURE VQR**	
Village / City / Town				
Commercial				
Industrial (Factory / Plant)				
Institutional (School/Hosp.)				
Residential				
Farm Buildings				
Local/State/National Parks	1	2	2	
Historic / Archeol. Features				
Billboards				
Signs	2	-1	-2	
Bridges	1	1	1	
Dams				
Docks / Piers				
Salvage Yards				
Landfills				
Cemeteries				
Utilities	2	-1	-2	
Fences				
Walls				
Airports				
Railroads				
Recreational Paths				
Roadside Sites				
Forest Clearcuts				
Quarries				AVG
		TOTAL	-1	-0.25

AVERAGE FOR EACH FEATURE	
LANDFORM	1.50
WATER	2.00
VEGETATION	4.00
CULTURAL	-0.25
VISUAL QUALITY	**7.25**

MIRROR LAKE, views from the bridge, with Build Alternative

Region	County	Date
Southwest	Sauk	18-Mar-24
Highway	**Corridor**	
I-39/90/94		

FREQUENCY (MULTIPLIER)

0 = Does not Occur
1 = Singular occurrence or seldom occurring
2 = Occurs quite frequently
3 = Occurs constantly or within viewing range at all times

VISUAL VALUE

3 = Extremely Pleasing
2 = Moderately Pleasing
1 = Slightly Pleasing
0 = Neither Pleasing nor Displeasing
- 1 = Slightly Displeasing
- 2 = Moderately Displeasing
- 3 = Extremely Displeasing

VISUAL QUALITY RATING

Less than 0 = Adverse Visual Quality
0 – 7.99 = Low Visual Quality
8 – 11.99 = Medium Visual Quality
12 or more = High Visual Quality

LANDFORM							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Cliffs / Bluffs							
Rock Outcrops							
Steep Hills / Ridges	1		2		2		
Rolling Hills	1		1		1		
Ravines							
Valleys / Basins							
Plains / Flatland							
Beach							AVG
				TOTAL	3		1.5

WATER							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Bays / Inlets							
Lakes / Ponds	0		2		0		
Rivers / Streams							
Wetlands							
Waterfalls / Rapids							
Swamp							AVG
				TOTAL	0		0

VEGETATION							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Plantation							

Orchard				
Pasture				
Crop Land				
Prairie Remnant				
Coniferous Forest	1	2	2	
Deciduous Forest	1	2	2	AVG
		TOTAL	4	2

CULTURAL				
FEATURES	**FREQUENCY**	**X VISUAL VALUE**	**= FEATURE VQR**	
Village / City / Town				
Commercial				
Industrial (Factory / Plant)				
Institutional (School/Hosp.)				
Residential				
Farm Buildings				
Local/State/National Parks	1	2	2	
Historic / Archeol. Features				
Billboards				
Signs	2	-1	-2	
Bridges	1	-2	-2	
Dams				
Docks / Piers				
Salvage Yards				
Landfills				
Cemeteries				
Utilities	2	-1	-2	
Fences				
Walls				
Airports				
Railroads				
Recreational Paths				
Roadside Sites				
Forest Clearcuts				
Quarries				AVG
		TOTAL	-4	-1

AVERAGE FOR EACH FEATURE	
LANDFORM	1.50
WATER	0.00
VEGETATION	2.00
CULTURAL	-1.00
VISUAL QUALITY	**2.50**

MIRROR LAKE, views toward the bridge, existing conditions

Region	County	Date
Southwest	Sauk	18-Mar-24
Highway	**Corridor**	
I-39/90/94		

FREQUENCY (MULTIPLIER)

0 = Does not Occur
1 = Singular occurrence or seldom occurring
2 = Occurs quite frequently
3 = Occurs constantly or within viewing range at all times

VISUAL VALUE

3 = Extremely Pleasing
2 = Moderately Pleasing
1 = Slightly Pleasing
0 = Neither Pleasing nor Displeasing
- 1 = Slightly Displeasing
- 2 = Moderately Displeasing
- 3 = Extremely Displeasing

VISUAL QUALITY RATING

Less than 0 = Adverse Visual Quality
0 – 7.99 = Low Visual Quality
8 – 11.99 = Medium Visual Quality
12 or more = High Visual Quality

LANDFORM							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Cliffs / Bluffs							
Rock Outcrops	2		2		4		
Steep Hills / Ridges	3		3		9		
Rolling Hills	1		2		2		
Ravines							
Valleys / Basins							
Plains / Flatland							
Beach							AVG
				TOTAL	15		5

WATER							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Bays / Inlets							
Lakes / Ponds	3		2		6		
Rivers / Streams							
Wetlands							
Waterfalls / Rapids							
Swamp							AVG
				TOTAL	6		6

VEGETATION							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Plantation							

Orchard							
Pasture							
Crop Land							
Prairie Remnant							
Coniferous Forest	3		2		6		
Deciduous Forest	2		2		4	AVG	
				TOTAL	10	5	

CULTURAL							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Village / City / Town							
Commercial							
Industrial (Factory / Plant)							
Institutional (School/Hosp.)							
Residential							
Farm Buildings							
Local/State/National Parks	3		2		6		
Historic / Archeol. Features							
Billboards							
Signs							
Bridges	2		2		4		
Dams							
Docks / Piers							
Salvage Yards							
Landfills							
Cemeteries							
Utilities	1		-1		-1		
Fences							
Walls							
Airports							
Railroads							
Recreational Paths							
Roadside Sites							
Forest Clearcuts							
Quarries						AVG	
				TOTAL	9	3.00	

AVERAGE FOR EACH FEATURE	
LANDFORM	5.00
WATER	6.00
VEGETATION	5.00
CULTURAL	3.00
VISUAL QUALITY	**19.00**

MIRROR LAKE, views toward the bridge, with Build Alternative

Region	County	Date
Southwest	Sauk	18-Mar-24
Highway	**Corridor**	
I-39/90/94		

FREQUENCY (MULTIPLIER)

0 = Does not Occur
1 = Singular occurrence or seldom occurring
2 = Occurs quite frequently
3 = Occurs constantly or within viewing range at all times

VISUAL VALUE

3 = Extremely Pleasing
2 = Moderately Pleasing
1 = Slightly Pleasing
0 = Neither Pleasing nor Displeasing
- 1 = Slightly Displeasing
- 2 = Moderately Displeasing
- 3 = Extremely Displeasing

VISUAL QUALITY RATING

Less than 0 = Adverse Visual Quality
0 – 7.99 = Low Visual Quality
8 – 11.99 = Medium Visual Quality
12 or more = High Visual Quality

LANDFORM							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Cliffs / Bluffs							
Rock Outcrops	2		2		4		
Steep Hills / Ridges	3		3		9		
Rolling Hills	1		2		2		
Ravines							
Valleys / Basins							
Plains / Flatland							
Beach							AVG
				TOTAL	15		5

WATER							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Bays / Inlets							
Lakes / Ponds	3		2		6		
Rivers / Streams							
Wetlands							
Waterfalls / Rapids							
Swamp							AVG
				TOTAL	6		6

VEGETATION							
FEATURES	**FREQUENCY**	**X**	**VISUAL VALUE**	**=**	**FEATURE VQR**		
Plantation							

Orchard				
Pasture				
Crop Land				
Prairie Remnant				
Coniferous Forest	3	2	6	
Deciduous Forest	2	2	4	AVG
		TOTAL	10	5

CULTURAL				
FEATURES	**FREQUENCY**	**X VISUAL VALUE**	**= FEATURE VQR**	
Village / City / Town				
Commercial				
Industrial (Factory / Plant)				
Institutional (School/Hosp.)				
Residential				
Farm Buildings				
Local/State/National Parks	3	2	6	
Historic / Archeol. Features				
Billboards				
Signs				
Bridges	2	0	0	
Dams				
Docks / Piers				
Salvage Yards				
Landfills				
Cemeteries				
Utilities	1	-1	-1	
Fences				
Walls				
Airports				
Railroads				
Recreational Paths				
Roadside Sites				
Forest Clearcuts				
Quarries				AVG
		TOTAL	5	1.67

AVERAGE FOR EACH FEATURE	
LANDFORM	5.00
WATER	6.00
VEGETATION	5.00
CULTURAL	1.67
VISUAL QUALITY	**17.67**