

SECTION 8
SUMMARY OF RECOMMENDATIONS

8.01 RECOMMENDATIONS FOR ELEMENTS TO CARRY FORWARD INTO NEPA ANALYSIS

This section summarizes the recommendations of the Beltline PEL Study. Refer to the following report sections for additional information:

- Section 1–Introduction and Process
- Section 2–Public, Local Municipalities, and Agency Involvement
- Section 3–Goal, Objectives, and Strategy Package Development
- Section 4–Traffic Data Summary
- Section 5–Stand-Alone Strategy Screening
- Section 6–Components
- Section 7–Strategy Packages and NEPA

A. Beltline Problem Statement, Goal, and Objectives

The Beltline PEL Study team worked with local stakeholders, including the TAC and PAC, to develop the Problem Statement, Goal, and Objectives for the study. The TAC and PAC provided the Beltline PEL Study team guidance and local input on the Problem Statement, Goal, and Objectives. The TAC consisted of technical staff from agencies and local municipalities and the PAC consisted of local elected officials and other municipal and stakeholder representatives.

After review of the Problem Statement, Goal, and Objectives by the TAC and PAC, these items were circulated for comment to state and federal agencies and Native American Tribe contacts involved in the Beltline PEL Study. Comments were addressed and the Problem Statement, Goal, and Objectives were refined. To further broaden input, the draft document was presented to focus groups for transit, bicycles and pedestrians, and representatives of groups that serve EJ populations (minority populations or low-income populations). See Section 3–Goal, Objectives, and Strategy Package Development of this Beltline PEL Study Summary Report for additional information.

1. Beltline PEL Study Problem Statement

The Beltline links southwest Wisconsin to the NHS and provides an important connection among neighborhoods, businesses, communities, and regions. Initially constructed in the 1950s, it became the main east-west highway in the Madison area. Motorists use the Beltline to travel to work, school, shopping, and recreational destinations. Sections of the Madison Beltline carry a yearly average of 127,000 vpd¹. Without the Beltline, a far more robust system of local streets and arterials would be needed to bear the burden of this traffic.

A *2008 Madison Beltline Needs Assessment Report* documented a number of deficiencies associated with this freeway corridor. The deficiencies grew to a level that, in November 2011, Wisconsin's Transportation Projects Commission authorized the study of long-term solutions for the Beltline from US 14 in the city of Middleton to County N in the town of Cottage Grove. Solutions are needed to address the following Madison Beltline issues:

¹2012 Beltline traffic count collected by WisDOT between Fish Hatchery Road and Park Street. In 2024, yearly average traffic between Seminole Highway and Todd Drive was 145,000 vpd.

- a. Roadway safety concerns.
- b. Increasing travel demand and congestion.
- c. Limited or insufficient accommodations for alternative travel modes.

These issues led to high crash rates, unreliable travel times, higher travel costs, and negative economic and environmental consequences for area residents, commuters, businesses, and freight movements.

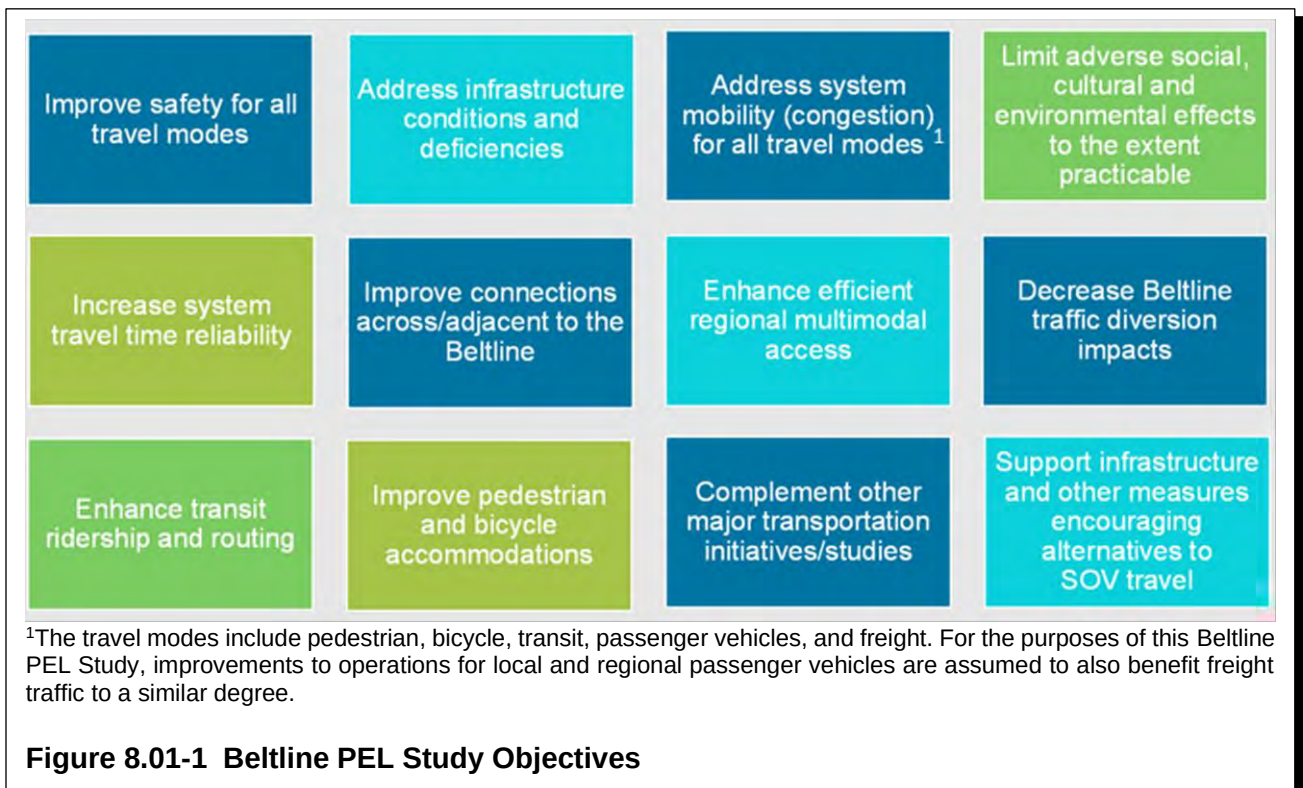
2. Goal and Objectives

a. Goal

The Goal of the Beltline PEL Study is to improve multimodal travel and safety along and across the Beltline corridor in a way that supports economic development, acknowledges community plans, contributes positively to the area's quality of life, and limits adverse environmental and social effects to the extent practicable.

b. Objectives

The Beltline PEL Study Objectives are shown in Figure 8.01-1.



Because several of the Objectives overlap or have similarities that could lead to duplication in the screening process, the 12 Objectives were synthesized into the following seven root Objectives and desired outcomes:

1. Improve safety for all travel modes.
2. Address Beltline infrastructure condition and deficiencies.
3. Improve system mobility for all modes.
4. Limit adverse social, cultural, and environmental effects to the extent practicable.
5. Enhance efficient multimodal access to economic centers.
6. Decrease Beltline diversion impacts to neighborhood streets.
7. Complement other major transportation initiatives and studies in the Madison area.

B. Stand-Alone Strategies

The Beltline PEL Study examined nine Stand-Alone Strategies with high people-moving potential that, if constructed, might eliminate or reduce the need to complete additional Madison Beltline mainline improvements to satisfy Beltline PEL Study Objectives for improving safety and reducing traffic congestion. The Stand-Alone Strategies considered included:

1. North Mendota Corridors Strategy
2. South Reliever Corridors Strategy
3. Rail (Passenger Rail) Strategy
4. BRT Strategy
5. Transit (Bus) Service on the Beltline Strategy
6. Scenario Planning for Alternative Land Uses Strategy
7. Scenario Planning for Alternative Mode Choices Strategy
8. Combined Off-Corridor Strategies
9. Beltline Corridor Strategy

Many of the Stand-Alone Strategies were found to have merit on their own as a transportation investment, and some portions of the concepts were used as Components in the overall Strategy Packages. However, each of the Stand-Alone Strategies were eliminated from further consideration for one or more of the following reasons:

- It would have had minimal impact, or mixed results for traffic volume reduction on the Beltline and a limited ability to fully address Beltline PEL Study Objectives
- It would have resulted in ROW and natural resource impacts and infrastructure costs that were disproportionate to the benefits received.
- It would not address the Beltline PEL Study Objectives for alternate modes.

See Section 5–Stand-Alone Strategy Screening for more information.

C. Strategy Packages Recommended for Future NEPA Documentation

The Beltline PEL Study Goal and 12 Objectives address many different modes. The Beltline PEL Study considered different improvements at specific locations on, near, or across the Beltline that, when combined, would address the Study Goal and Objectives. The Beltline PEL Study team called these Components. It is impossible for a single infrastructure Component to satisfy all Beltline PEL Study Objectives; they must be assembled into Packages that are multifaceted in both the type of

improvements and the Objectives they satisfy. The Beltline PEL Study team assembled the various Components into Strategy Packages creating a long-term vision for multimodal improvements on and near the Beltline corridor. See Section 6—Components for more information regarding the Component priorities and how they were assembled into four Strategy Packages. See Section 7—Strategy Packages and NEPA for more information regarding how the Strategy Packages were evaluated.

1. Preserve and Maintain Strategy Package (SP 1)

This Strategy Package would address the existing and future transportation infrastructure needs and keep the Beltline as it is currently. It includes pavement and bridge replacements, where needed. Figure 8.01-2 shows the Preserve and Maintain SP 1 and the Components included.

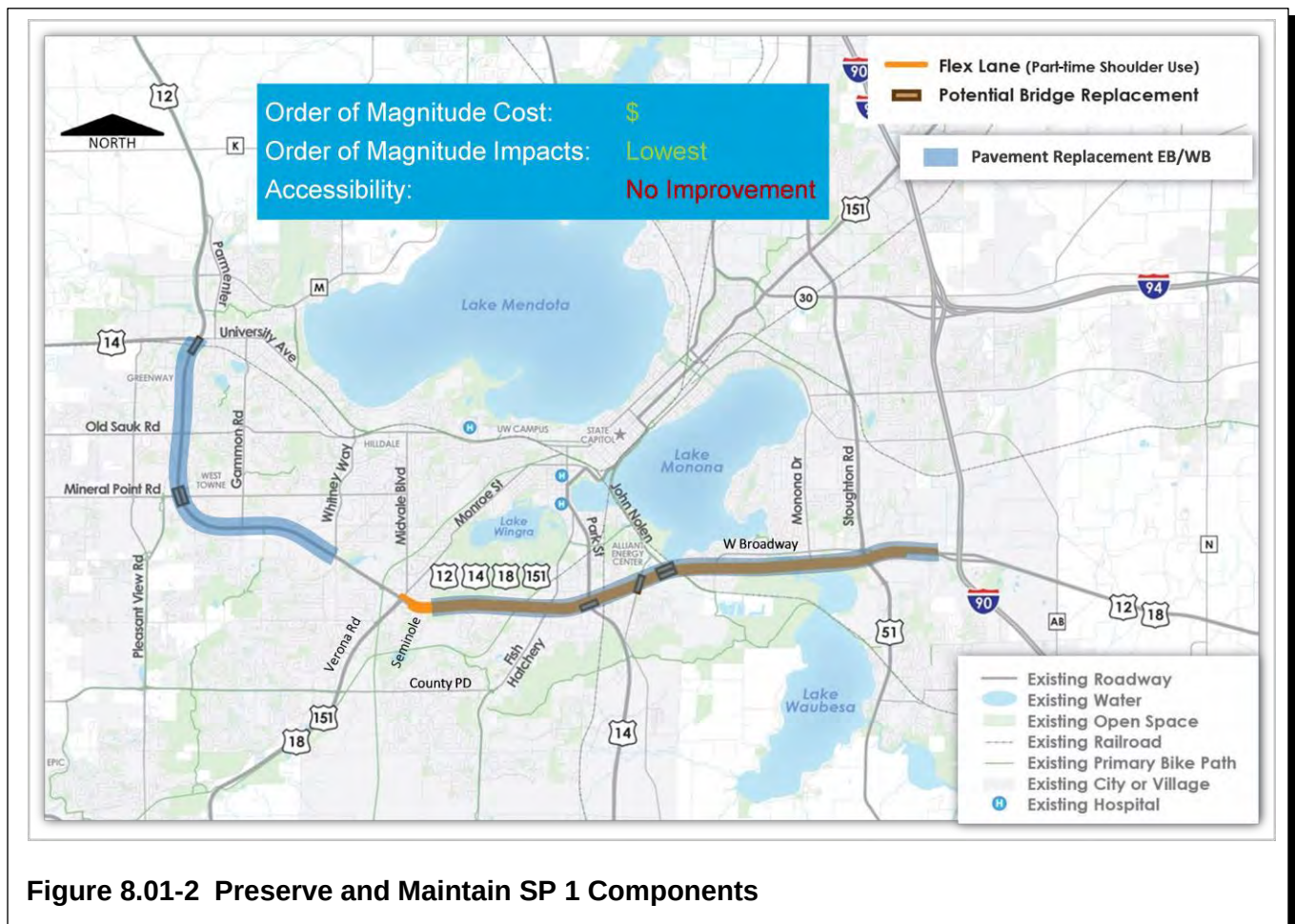


Figure 8.01-2 Preserve and Maintain SP 1 Components

2. Preferred Strategy Package

Figure 8.01-3 shows the Components included in the Preferred Strategy Package. See Section 7 for additional details.



Figure 8.01-3 All Components Included in the Preferred Strategy Package

a. Mainline Travel Lanes

For the end of the Beltline mainline west of Verona Road, the Preferred Strategy Package includes a Beltline Flex Lane extension or the addition of one GP lane in each direction, shown by the yellow line in Figure 8.01-3. On the east end, this Package includes extending the existing Beltline Flex Lane east to the Beltline interchange with I-39/90 (shown by the brown line) and either a Beltline Flex Lane (no build) option or potentially adding one GP lane in each direction (shown by the dashed red line).

Corridor needs for the section between the Beltline interchange with I-39/90 and County N interchange were addressed as part of the US 12/18 and County AB interchange project and a US 12 freeway conversion study that identified some spot improvements that could be made farther east if the need arose in the future.

b. Weave Components

The Preferred Strategy Package includes Weave Components in each location where simply adding a mainline lane of capacity is not expected to be sufficient to eliminate poor operations in 2050. This includes both mainline directions between:

- Old Sauk Road and Mineral Point Road
- Whitney Way and US 151/Verona Road
- Fish Hatchery Road and US 14/Park Street
- John Nolen Drive and West Broadway
- Monona Drive and US 51/Stoughton Road

Figure 8.01-3 shows the Weave Components with a yellow circle symbol.

c. Interchange Components

The Preferred Strategy Package assumes improvement Components at each interchange. Most locations are anticipated to be a conventional expansion, such as adding turn lanes or through lanes on the crossing streets at the ramp terminals. These are shown in darker blue on the map in Figure 8.01-3. Locations where more substantial changes are being considered are shown in light blue. These locations include:

- Gammon Road
- Whitney Way
- Verona Road
- Stoughton Road (which was being evaluated as part of a separate major study at the time of this Beltline PEL Study)
- Beltline Interchange with I-39/90

d. Local Road System Crossings and Connections Components

The Preferred Strategy Package includes new Local Road System Crossings and Connections Components. Potential new Local Road System Crossings and Connections Components accommodating motor vehicles, pedestrians, and bicycles include:

- West of Gammon Road
- East of Gammon Road or West of Whitney Way
- West of Park Street
- Crossing of US 14 south of the Beltline

They are shown by the brown arrows in Figure 8.01-3, except for the Components west of Gammon Road and west of Whitney Way that are shown by a dashed brown line where the two will be evaluated and compared further in NEPA to determine the best location for this crossing. Madison received a grant in spring 2024 to study and design the West of Park Street Component.

e. Pedestrian and Bicycle Components

The Preferred Strategy Package includes nearly all of the Pedestrian and Bicycle Components that were evaluated for inclusion in the Strategy Packages. The following locations are included and are shown by green arrows in Figure 8.01-3.

- North of Old Sauk Road
- South of Old Sauk Road
- Extension of the West Towne path from Mineral Point Road to Gammon Road²
- Crossing of Whitney Way north of the Beltline
- Connection from Whitney Way to the Southwest Commuter Path
- Connection from Seminole Highway to the Cannonball Path and Fish Hatchery Road North or South of the Madison Beltline³
- Connection from West Broadway to the Upper Yahara River Trail through the CSSRA
- Connection from Monona Drive to Stoughton Road and south to the village of McFarland

In addition, each of the Local Road System Crossings and Connections Components shown in Figure 8.01-3 and listed previously include accommodations for pedestrians and bicyclists.

f. Park and Ride Components

The Park and Ride Components included in the Preferred Strategy Package are shown in Figure 8.01-3. They include:

- US 14/University Avenue at the Madison Beltline
- US 151/Verona Road at County PD
- Fish Hatchery Road at County PD
- US 14 at McCoy Road

A park and ride near Mineral Point Road and Junction Road was constructed in 2024 as part of the city of Madison East-West BRT project.

g. Transit Priority Components

The Transit Priority Components included in the Preferred Strategy Package are shown in Figure 8.01-3. They include:

- US 14/University Avenue at the Beltline
- Mineral Point Road (BRT crossing)

²Madison plans to construct the first portion of this path from Highpoint Road to Zor Shrine Place in 2025.

³The Pedestrian and Bicycle Components between Seminole Highway and the Cannonball Path may impact the UW-Arboretum property, a National Historic Landmark. They are shown as an “or” option to allow flexibility in future NEPA evaluation.

- Gammon Road
- Whitney Way
- Midvale Boulevard/US 151/Verona Road
- Fish Hatchery Road (BRT crossing)
- Rimrock Road
- West Broadway
- Stoughton Road

8.02 RECOMMENDATIONS FOR NEPA SECTIONS AND TIMING

The Beltline PEL Study is a high-level analysis preceding future NEPA studies. The Preferred Strategy Package is not a preferred construction alternative. It consists of many Components that the Beltline PEL Study team believes are the most viable and have the most potential for addressing the Beltline PEL Study Goal and Objectives and warrant more detailed evaluation during future NEPA studies. The Components in the Preferred Strategy Package represent the starting point for developing the range of alternatives in future NEPA studies.

For example, the Beltline PEL Study may have identified potential wetland impacts with a specific Component but have not determined how many acres could be potentially impacted compared to other Components. In turn, a general location for a crossing of the Madison Beltline has been identified in the Beltline PEL Study, but a preferred location has not been identified where this crossing has the least amount of social, cultural, and environment effects. The Preferred Strategy Package is not what WisDOT proposes for future construction, and some Components may change or could be dropped during future NEPA analyses.

It is also a desired outcome of the Beltline PEL Study that there be an understanding of the limits or termini on the Beltline during subsequent NEPA studies based on when needs are anticipated to arise in the future (meaning not all the Components are anticipated to be studied further or constructed at the same time). Projects as defined by 23 CFR 771.111(f) must consider logical termini and independent utility. Based on these criteria, the Beltline PEL Study team proposes the NEPA sections shown in Figure 8.02-1.

Factors that influence prioritization of the subsequent NEPA studies include:

- Safety—This would include needing to address high crash rates in specific areas of the corridor.
- Mainline and Interchange Traffic Capacity—If a specific area of the corridor is not meeting minimum or desired operational levels, or an interchange ramp is backing up onto the Beltline causing safety concerns or delays, this area might be prioritized earlier than other areas of the Beltline.
- Pavement and Structure Deficiencies—Some parts of the underlying Beltline pavement and structures are older than other areas and replacement in these areas may need to be prioritized.

The Beltline PEL Study includes the following recommendations (shown in Figure 8.02-1) for how the Beltline PEL Study Components could be split into multiple NEPA termini and the potential project prioritization. However, the Beltline and its safety concerns and needs can change over time; therefore,

the termini and timing of construction may be adjusted accordingly as the safety concerns and needs arise. WisDOT must also balance needs of the Beltline with the needs of other important corridors throughout the state. See Section 7–Strategy Packages and NEPA for additional information on the proposed NEPA sections and timing, including discussion of the concepts of logical termini and independent utility.

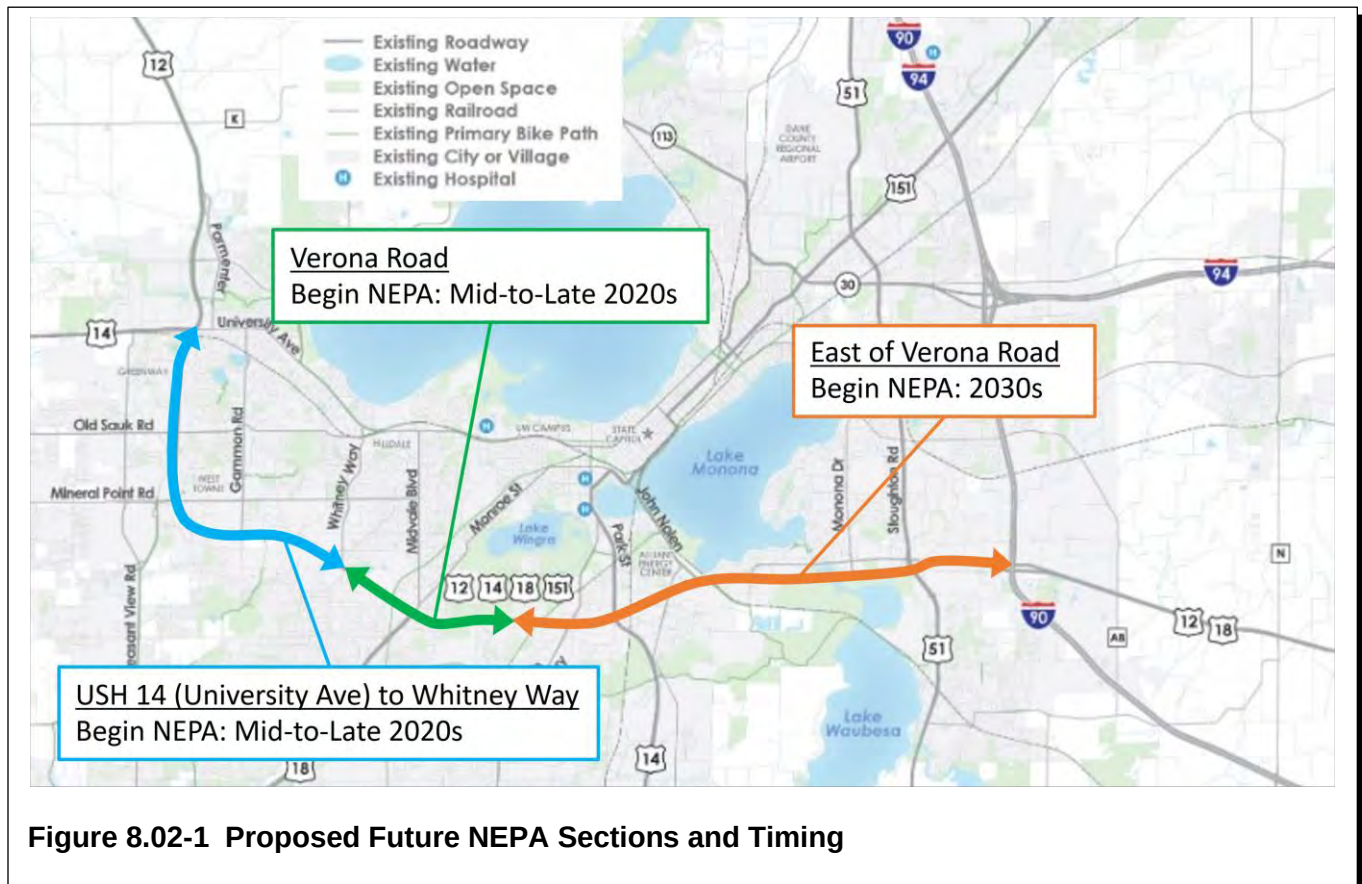


Figure 8.02-1 Proposed Future NEPA Sections and Timing

A. West of Verona Road Area

The Beltline PEL Study team recommends the West of Verona Road corridor from north of US 14/University Avenue to Whitney Way for a NEPA study in the mid to late 2020s. In the Verona Road area Verona Road Stages 1 and 2 were recently completed making improvements to the Verona Road interchange with the Beltline and US 151/Verona Road south of the Beltline. Within the Verona Road area and east of the Verona Road area, the Beltline Flex Lane was opened to traffic in July 2022 adding capacity during peak travel periods. The west portion of the Beltline is the only area that has not had recent significant improvements completed. Also, in general, a larger share of the needs within the west portion of the Beltline are anticipated to occur before 2040.

These limits would be revisited in a pre-NEPA phase and it is possible this section would be studied concurrently with the Verona Road area section. It is also anticipated that the west/north limits may extend

to north of Parmenter Street based on the anticipated limits of the Mainline Components or range of alternatives.

Based on the anticipated timing of some needs west of the Verona Road area, WisDOT may choose to proceed with interim or spot improvements sooner than the long-term improvements identified previously. These areas and potential interim and spot improvements are discussed in further detail in Section 7. They include:

1. Pavement Replacement

WisDOT is beginning design for a pavement rehabilitation project from Terrace Avenue to Gammon Road. This routine maintenance project will not add capacity and will have minimal impacts. This improvement would address a known maintenance need as well as potential safety needs. Therefore, this improvement would have value on its own without the need for additional future improvements. It would also be planned and designed to not preclude or induce future reasonably foreseeable projects.

2. Westbound (Northbound) Beltline Bridge over WSOR

The westbound Beltline bridge over the WSOR railroad near Terrace Avenue will reach the end of its design life by 2038. WisDOT may elect to complete an interim bridge rehabilitation or replacement project to address this, depending on the ultimate timing of a larger future NEPA study of this portion of the Beltline. This improvement would address a known maintenance need as well as potential safety needs. Therefore, this improvement would have value on its own without the need for additional future improvements. It would also be planned and designed to not preclude or induce future reasonably foreseeable projects.

B. Verona Road Area

It is important to remember that a staged alternative was recommended in the 2011 Verona Road FEIS/ROD. Stages 1 and 2 have already been constructed. Construction of Stage 3 was anticipated in approximately 2030, but current traffic volumes for some movements at the interchange have already reached or exceeded those forecasted volumes⁴, which is why interim improvements are currently being investigated.

The Beltline PEL Study team recommends the Verona Road Area from Whitney Way to Todd Drive for a NEPA study in the mid to late 2020s since traffic volumes traveling through the Verona Road interchange have grown quicker than forecasted. WisDOT evaluated interim improvements but none of the concepts were sufficient to address the issues in this area of the corridor for future volumes in order to warrant their further evaluation and potential future design and construction.

These limits would be revisited in a pre-NEPA phase and it is possible this section would be studied concurrently with the West of Verona Road area section.

⁴In October 2023, the westbound left-turn, eastbound left-turn, eastbound right-turn, northbound left-turn, and northbound right-turn movements had reached or exceeded the 2030 horizon year forecasts used for the 2011 Verona Road FEIS/ROD.

Based on the anticipated timing of some needs west of the Verona Road area, WisDOT may choose to proceed with interim or spot improvements sooner than the long-term improvements identified previously. WisDOT may investigate a QWS on the westbound Beltline upstream of the westbound off-ramp to US 151/Verona Road southbound. Traffic growth has exceeded forecast volumes during peak periods for this movement and recurring congestion, slow moving traffic, and rolling queues that reach the Beltline occurs. A QWS may be a means to alert drivers to downstream congestion and slower moving traffic with the goal of reducing the risk of associated crashes. WisDOT may also investigate a queue flush system for the westbound Beltline off-ramp to US 151/Verona Road. This system would add detection along the westbound off-ramp that would be used to trigger a new signal timing plan at the interchange to clear out the westbound off-ramp queue. The eastbound off-ramp right-turn would likely also need improvements as part of this interim improvement. WisDOT is considering a potential spot improvement for the eastbound direction of travel, which would allow for a two-lane merge. The spot improvement would convert the leftmost GP lane at Whitney Way to the Flex Lane. A lane shift would then occur near the Verona Road merge to allow for two lanes to enter the eastbound Beltline from Verona Road. These improvements could address a known congestion need and potential safety needs and, therefore, have value on their own without the need for additional future improvements. They would also be planned and designed to not preclude or induce future reasonably foreseeable projects.

C. East of Verona Road Area

The Beltline PEL Study team recommends the east of Verona Road corridor from Todd Drive to the I-39/90 interchange for a NEPA study in the 2030s. With the recent construction and positive results of the Beltline Flex Lane, corridor-wide, long-term improvements are not anticipated to be needed for several years. Initial crash analysis indicates the Beltline Flex Lane has improved safety compared to 2015 to 2019 conditions. A full assessment of the Beltline Flex Lane's safety performance will occur once 5 years of crash data is available. That said, the Beltline Flex Lane is expected to provide acceptable operations until approximately 2030 to 2035; therefore, the Beltline PEL Study team would anticipate the NEPA study could begin in that timeframe. This also matches the anticipated timing of many of the corridor needs in this area.

Based on the anticipated timing of some needs east of the Verona Road area, WisDOT may choose to proceed with interim or spot improvements sooner than the long-term improvements identified previously. These areas and potential interim and spot improvements are discussed in further detail in Section 7. They include:

1. Beltline Mainline between Fish Hatchery Road and US 14/Park Street

WisDOT is considering potential spot weave improvements which could consist of basket-weaves.

2. Beltline Mainline between US 51/Stoughton Road and Monona Drive

WisDOT is considering a potential spot weave improvement which could consist of a basket-weave.

3. Beltline Interchange with I-39/90

WisDOT may consider spot improvements to the eastbound to northbound and southbound to westbound system ramps at the Beltline interchange with I-39/90. It is anticipated these improvements would consist of adding a third lane to the existing two-lane system ramps.

4. Beltline Mainline between Stoughton Road and I-39/90

WisDOT is considering an interim improvement that would extend the eastbound Beltline Flex Lane to the Beltline interchange with I-39/90. It is considered an interim improvement because it would not be compatible with the Beltline interchange with I-39/90 system ramp spot improvements discussed in Section 8.02 C, Item 3.

8.03 POTENTIAL FUTURE ADOPTION INTO NEPA DOCUMENT

NEPA was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental effects of their proposed actions before making decisions. Under NEPA, agencies evaluate the environmental and related social and economic effects of their proposed actions. The environmental documentation process during NEPA provides opportunities for the public and other interested agencies to review and comment.⁵

The FHWA adopted the policy of managing the NEPA project development and decision-making process as an "umbrella," under which all applicable environmental laws, executive orders, and regulations are considered and addressed before the final project decision and document approval. Conclusion of the NEPA process results in a decision that addresses multiple concerns and requirements. The FHWA NEPA process allows transportation officials to make project decisions that balance engineering and transportation needs with social, economic, and natural environmental factors. During the process, a wide range of partners including the public, businesses, interest groups, and agencies at all levels of government, provide input into project and environmental decisions.⁶

As mentioned in Section 1 of this Beltline PEL Study Summary Report, 23 CFR 450 documents the ability to adopt a planning product into a NEPA document.

“(a) The results or decisions of these transportation planning studies may be used as part of the overall project development process consistent with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) and associated implementing regulations (23 CFR part 771). Specifically, these corridor or subarea studies may result in producing any of the following for a proposed transportation project:

- (1) Purpose and need or goals and objective statement(s);
- (2) General travel corridor and/or general mode(s) definition (e.g., highway, transit, or a highway/transit combination);

⁵<https://www.epa.gov/nepa/what-national-environmental-policy-act> accessed September 5, 2024.

⁶https://www.environment.fhwa.dot.gov/nepa/trans_decisionmaking.aspx accessed September 5, 2024.

- (3) Preliminary screening of alternatives and elimination of unreasonable alternatives;
- (4) Basic description of the environmental setting; and/or
- (5) Preliminary identification of environmental impacts and environmental mitigation.”

Additionally, MAP 21 instituted 23 USC 168(c)(1) and (2), future revised by the FAST Act, which similarly allows the adoption of planning decisions.

“(1) PLANNING DECISIONS.—The relevant agency in the environmental review process may adopt or incorporate by reference decisions from a planning product, including—

- (A) whether tolling, private financial assistance, or other special financial measures are necessary to implement the project;
- (B) a decision with respect to general travel corridor or modal choice, including a decision to implement corridor or subarea study recommendations to advance different modal solutions as separate projects with independent utility;
- (C) the purpose and the need for the proposed action;
- (D) preliminary screening of alternatives and elimination of unreasonable alternatives;
- (E) a basic description of the environmental setting;
- (F) a decision with respect to methodologies for analysis; and
- (G) an identification of programmatic level mitigation for potential impacts of a project, including a programmatic mitigation plan developed in accordance with section 169, that the relevant agency determines are more effectively addressed on a national or regional scale, including—
 - (i) measures to avoid, minimize, and mitigate impacts at a national or regional scale of proposed transportation investments on environmental resources, including regional ecosystem and water resources; and
 - (ii) potential mitigation activities, locations, and investments.

(2) PLANNING ANALYSES.—The relevant agency in the environmental review process may adopt or incorporate by reference analyses from a planning product, including—

- (A) travel demands;
- (B) regional development and growth;
- (C) local land use, growth management, and development;
- (D) population and employment;
- (E) natural and built environmental conditions;
- (F) environmental resources and environmentally sensitive areas;
- (G) potential environmental effects, including the identification of resources of concern and potential direct, indirect, and cumulative effects on those resources; and

(H) mitigation needs for a proposed project, or for programmatic level mitigation, for potential effects that the lead agency determines are most effectively addressed at a regional or national program level.”

These laws and regulations provide many opportunities for Beltline PEL Study planning products that could be used in future NEPA documents. The Beltline PEL Study is following 23 CFR 450.

1. Portions or all of the Beltline PEL Study Problem Statement, Goal, and Objectives can form the basis for the purpose and need in a future NEPA document. The Beltline PEL Study Problem Statement, Goal, and Objectives were developed with extensive outreach to the community and agencies and well represent the transportation desires of these stakeholders.
2. Beltline PEL Study decisions regarding the general travel corridor or modes can be adopted within a future NEPA document. For example, the dismissal of Stand-Alone Strategies that do not meet the Beltline PEL Study Objectives could be carried forward into a NEPA document. This allows the document to focus on corridors and modal combinations that have the most potential to satisfy the project purpose and need. The Beltline PEL Study provides a preliminary screening of and eliminates unreasonable alternatives.
3. Other documents created under the Beltline PEL Study (such as the existing conditions report) can contribute to the description of the environmental setting (e.g., affected environment) in a future NEPA document.
4. The preliminary identification of potential environmental effects and potential mitigation measures can be identified and used as background for the environmental consequences of a future NEPA document.
5. Much of the analyses performed for the Beltline PEL Study in the evaluation of strategies can be adopted and used in further alternatives analyses during the NEPA phase. This includes travel demands; regional development and growth; local land use, growth management, and development; population and employment; natural and built environmental conditions; environmental resources and environmentally sensitive areas; and potential environmental effects, including the identification of resources of concern.

With the complicated transportation challenges in the city of Madison metropolitan area and the growing demands placed on the Beltline, the Beltline PEL Study process developed and reviewed solutions on a regional, modal, and corridor level. A wide range of components were considered that provide the basis for development of the Range of Alternatives in future NEPA studies.