PLANNING AND ENVIRONMENT LINKAGES QUESTIONNAIRE
FEDERAL HIGHWAY ADMINISTRATION

This questionnaire is intended to act as a summary of the planning process and ease the transition from the planning study to a National Environmental Policy Act (NEPA) analysis. Often, there is no overlap in personnel between the planning and NEPA phases of a project, and much (or all) of the history of decisions, is lost. Different planning processes take projects through analysis at different levels of detail. Without knowing how far, or in how much detail a planning study went, NEPA project teams often redo work that has already been completed. Planning teams need to be cautious during the alternative screening process; alternative screening should focus on Purpose and Need/Corridor Vision that could include an alternative enhancement, fatal flaw analysis, and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the Purpose and Need/Corridor Vision cannot be considered viable alternatives, even if they reduce impacts to a particular resource. This questionnaire is consistent with the 23 Code of Federal Regulations (CFR) 450 (planning regulations) and other Federal Highway Administration (FHWA) policies on the Planning and Environment Linkage (PEL) process.

These questions have been used as a guide throughout the planning process, not just answered near completion of the process. When the Beltline PEL Study was started, this questionnaire was given to the Beltline PEL Study team. Some basic questions considered include: "What did you do?," "What did you not do?," and "Why?." When the team submits the study to FHWA for review, this completed questionnaire is included with the submittal. FHWA uses this questionnaire to assist in determining whether an effective PEL process has been applied before NEPA processes are authorized to begin. The questionnaire is included in the planning document as an executive summary.

This Beltline PEL Study was developed consistent with law, regulation, policy, and agency guidance applicable at the time the analysis for the study was conducted. Should the planning information in the Beltline PEL Study be used for future environmental review and permitting processes, environmental documentation will be prepared consistent with Title 42 of the United States Code (USC) 4321 et seq, 23 USC 139, 23 CFR 771, other applicable laws and regulations, executive orders, agency policy and guidance.

1.0 BACKGROUND

A. Who is the sponsor of the PEL study? (State DOT, Local Agency, Other)

The sponsors were the FHWA and Wisconsin Department of Transportation (WisDOT).

B. What is the name of the PEL study document and other identifying project information (e.g., sub-account or STIP numbers, long-range plan, or transportation improvement program years)?

The Madison Beltline Planning and Environment Linkages Summary Report (WisDOT Project I.D. Nos. 5304-02-01, 5304-02-02, and 5304-02-04 including) (Beltline PEL Study Summary Report) Statewide Transportation Improvement Program (STIP) amendment 041519 and Transportation Improvement Program [TIP] 111-19-021) involves a 20-mile study corridor of United States Highway (US) 12, 14, 18, and 151 beginning at the US 12 and US 14/University Avenue interchange in the city of Middleton and extending to the US 12/18 and County N interchange in the town of Cottage Grove. The State of Wisconsin Transportation Projects Commission (TPC) designated the Beltline for an environmental study as a potential major highways project in 2011.

C. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?

Beltline PEL Study team members with prominent roles are listed in Table 1. Refer to Appendix C of the Beltline PEL Study Summary Report for a list of agency, stakeholder, and consultant representatives invited to participate in the Beltline PEL Study.

Name	Representing	PEL Role
Jeff Berens	WisDOT SWR	Project Manager
Michelle Howe	WisDOT SWR	Project Supervisor
Brian Taylor	WisDOT SWR	Environmental Coordinator
Jonquil Johnston	WisDOT BTS	Environmental Liaison
Bethaney Bacher-Gresock	FHWA	Environmental Specialist
Lisa Hemesath	FHWA	Environmental Specialist
Jeff Held	Strand	Consultant Project Manager
Elizabeth Garfoot	Strand	PEL Document Lead
Joe Urban	Strand	Lead Traffic Engineer
Luke Hellermann	Strand	PEL Document Quality
Eric Hanson	Strand	Lead Design Engineer

SWR=Southwest Region
BTS=Bureau of Technical Services
Strand=Strand Associates, Inc.®

Table 1 Beltline PEL Study Team

D. Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.).

The Beltline PEL Study corridor is a 20-mile study corridor of US 12, 14, 18, 151. The project area includes 18 interchanges and several at-grade intersections. It begins at the US 12 and US 14/University Avenue interchange in the city of Middleton and extends to the US 12/18 and County N interchange in the town of Cottage Grove. Four US highway routes (US 12, 14, 18, and 151) are wholly or partially routed on the Beltline connecting the cities of Middleton, Madison, Fitchburg, and Monona, and the towns of Blooming Grove and Cottage Grove. In addition to serving as a major regional transportation link, the Beltline serves as a local transportation corridor for the communities it passes through. Because of the nature of the geography, lakes, and development surrounding the Beltline, it is the only continuous east to west route on the south side of the city of Madison. As a result, the Beltline is also a critical link for local traffic.

The Beltline is part of a system of high-priority, statewide multimodal intercity corridors. The Beltline is at the hub of a system of intercity corridors that connect Madison to the city of Beloit and Illinois; Iowa; the cities of Oshkosh and Green Bay; the cities of Lake Geneva and Chicago; the city of Eau Claire, the Twin Cities; the city of La Crosse; the city of Milwaukee; and northern Wisconsin. The Beltline corridor serves critical sectors of the economy and a major population center in Dane County and is also an important corridor for passenger and freight traffic. WisDOT's *Transportation Asset Management Plan* (adopted in April 2023) identifies US 12 as a Region 3R National Highway System (NHS) route west of

US 18/151/Verona Road and east of Interstate (I)-39/90 and a Backbone Route from US 18/151/Verona Road to I-39/90. The Beltline corridor is also a WisDOT designated long truck route and is part of the NHS as determined by FHWA.

The portion of the Beltline between the US 14/University Avenue interchange and the Whitney Way interchange is a four-lane rural cross section with outside shoulders and ditches for stormwater conveyance. This portion of the freeway was primarily constructed in the 1960s and 1980s. The portion between the Whitney Way interchange and the Beltline interchange with I-39/90 is a six-lane urban cross section with curb and gutter and storm sewer infrastructure for stormwater conveyance. This portion was constructed in the 1970s and mid-1980s, and also includes dynamic part-time shoulder use on the inside shoulders allowing traffic to use them as a travel lane during peak periods. This system was opened to traffic in 2022 and is known as the Beltline Flex Lane. The portion of the Beltline between the Beltline interchange with I-39/90 and the US 12/18 and County N interchange is a four-lane expressway with several at-grade intersections, an interchange constructed in the 1990s at County N, and an interchange constructed in the 2020s at County AB.

See the *Existing Conditions Report*, December 2015 for a complete description of the Beltline PEL Study area:

https://wisconsindot.gov/Pages/projects/by-region/sw/madisonbeltline/reports.aspx

E. Provide a brief chronology of the planning activities (PEL study) including the year(s) studies were completed.

1. Initiated the Beltline PEL Study–Early 2012
2. Finalized the Beltline PEL Study Work Plan–Winter 2011/2012
3. Completed Draft Environmental Justice (EJ) Plan–Fall 2013
4. Conducted Initial Local Government Briefings–Spring 2013
5. Conducted Initial Agency Coordination Meeting–Spring 2013
6. Revised EJ Plan–Summer 2013
7. Developed Initial Public Involvement Plan (PIP)–Summer 2013
8. Established Technical Advisory Committee (TAC) and Policy Advisory Committee (PAC)–Summer 2013
9. Initiated Project Team Monthly Progress Meetings–Summer 2013
10. Development of Study Website–Summer, 2013
11. Initiated TAC, PAC, and Public Involvement Meetings (PIM)–Fall 2013
12. Finalized Memorandum of Understanding (MOU) with Cooperating Agencies–Fall 2013
13. Conducted Second Agency Coordination Meeting–Fall 2013
14. Completed Draft Coordination Plan for Agency and Public Involvement–Fall 2013
15. Developed Existing Conditions Report–2013 to 2015
16. Developed Beltline PEL Study Problem Statement, Goals and Objectives–2013 to 2014
17. Conducted Public Survey of Dane County Residents with the University of Wisconsin (UW) Survey Center (UWSC)–Spring 2014 to Winter 2015
18. Revised EJ Plan–Summer 2014
19. Developed Femrite Drive Half-Diamond Interchange Technical Memorandum–Spring 2015

20. Developed Travel Demand Model (TDM) and Forecasts–Spring 2014 to Summer 2015
21. Conducted Second Round of TAC, PAC, and PIMs–Fall 2014
22. Conducted Third Agency Coordination Meeting–Fall 2014
23. Completed Traffic Modeling Software Comparison Technical Memorandum–Fall 2014
24. Completed Design Hour Volume (DHV) for the Beltline PEL Technical Memorandum–Winter 2014/2015
25. Completed Traffic Forecast Technical Memorandum–Winter 2014/2015
26. Developed and Evaluated Stand-Alone Strategies–2014 to 2015
27. Completed Vehicle Occupancy Study–Spring 2015
28. Conducted Southwest Wisconsin Freeway Design Workshop–Summer 2015
29. Conducted Third Round of TAC, PAC, and PIMs–Fall 2015
30. Revised PIP–Winter 2015/2016
31. Revised EJ Plan–Winter 2015/2016
32. Paramics Modeling Methodology Technical Memorandum–Winter 2015/2016
33. Completed Coordination Plan for Agency and Public Involvement–Winter 2016/2017
34. Completed Draft Madison Beltline PEL Study Summary Report–Summer 2016
35. Completed Draft Stand-Alone Strategies Screening Report–Summer 2016
36. Began Initial Tier 1 Environmental Impact Statement (EIS) for the Beltline Corridor–Winter 2016/2017
37. Paused Beltline PEL Study and Tier 1 EIS activities as part of a Statewide Reevaluation of Planning Priorities–Spring 2017
38. Restarted Beltline PEL Study–Spring 2020
39. 2018 versus 2019 Origin-Destination (O-D) Comparison Technical Memorandum–Fall 2020
40. Updated and Finalized Beltline PEL Goal, Objectives, and Screening Report–Winter 2020/2021
41. Updated and Finalized Stand-Alone Strategies Screening Report–Winter 2020/2021
42. 2019 versus 2016 and 2012 Speed Comparisons Technical Memorandum–Spring 2021
43. Completed Crossings and Connections Options Technical Memorandum–Spring 2021
44. Completed Bicycle and Pedestrian Options Technical Memorandum–Spring 2021
45. Completed Transit and Managed Lanes Options Technical Memorandum–Summer 2021
46. Finalized Impact Analysis Methodology Report–Summer 2021
47. Revised EJ Plan–Fall 2021
48. Updated and Finalized *Beltline Improvements Investigation Memorandum* (BIIM)–Fall 2021
49. Completed Base Year Traffic Data Review Technical Memorandum–Fall 2021
50. Completed 2050 Traffic Volume Development Technical Memorandum–Fall 2021
51. Completed Park and Ride Option Technical Memorandum–Winter 2021/2022
52. Conducted Fourth Round of TAC and PAC Meetings–Summer 2021
53. Completed Madison Beltline High Occupancy Vehicle (HOV) Demand Volumes Technical Memorandum–Summer 2021
54. Conducted Fifth Round of TAC and PAC Meetings and Fourth Round of PIMs–Spring 2022
55. Provided Agency Email Update–Spring 2023
56. Conducted Sixth Round of TAC and PAC Meetings and Fifth Round of PIMs–Spring 2023
57. Conducted Indirect and Cumulative Impacts Expert Panel Workshop–Summer 2023

58. Completed Madison Beltline PEL Travel Time Reliability Analysis Technical Memorandum–Summer 2023
59. Updated and Finalized Coordination Plan for Agency and Public Involvement–Fall 2023
60. Conducted Fourth Agency Coordination Meeting–Fall 2023
61. Conducted Seventh Round of TAC and PAC Meetings and Sixth Round of PIMs–Spring 2024
62. Updated and Finalized Interchange Improvements Investigations Memorandum–Spring 2024
63. Conducted Fifth Agency Coordination Meeting–Summer 2024
64. Completed EJ Report–Summer 2024
65. Updated and Finalized EJ Plan–Winter 2024/2025
66. Updated and Finalized PIP–Winter 2024/2025
67. Updated and Finalized Mainline and Interchange Improvements Refinement Report–Winter 2024/2025
68. Updated and Finalized Madison Beltline PEL Accessibility Analysis Technical Memorandum–Winter 2024/2025
69. Conducted Eighth Round of TAC and PAC Meetings and Seventh Round of PIMs–Summer 2025
70. Conducted Sixth Agency Coordination Meeting–Summer 2025
71. Finalized Beltline PEL Study–DATE

F. Are there recent, current or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?

WisDOT is conducting other studies and projects in Dane County that intersect the Beltline PEL Study corridor. These studies provided information for Beltline PEL Study and/or the Beltline PEL Study provided information for these studies. These include the following (Web page links accessed January 31, 2025):

1. ID 5410-08-01/5410-06-00, US 51–Stoughton Road Studies from Voges Road to I-39/90/94.

At the time of this report, these studies are in the NEPA (north study) and pre-NEPA (south study) documentation stages. The limits of ID 5410-08-01 (north study) extend from WIS 30 in Madison to I-39/90/94 in the town of Burke while the limits of ID 5410-06-00 (south study) extend from Voges Road in the village of McFarland to WIS 30 in Madison. The studies are evaluating safety and mobility improvements to Stoughton Road.

https://wisconsindot.gov/Pages/projects/by-region/sw/us51-corridor/default.aspx

2. ID 5845-16-01/02/04/06, US 51 Stoughton to the village of McFarland Project from I-39/90 to US 12/18 (Beltline Highway)

This project completed the NEPA documentation stage in 2021 that evaluated safety and mobility improvements on US 51 as it travels through the village of McFarland and

the city of Stoughton. At the time of this report, this project is in the design and construction phase.

https://wisconsindot.gov/Pages/projects/by-region/sw/us51-danecounty/default.aspx

3. ID 1012-05-00/1012-05-01/1012-05-02, I-39/90/94 Study from US 12/18 (Beltline Highway) to WIS 16/US 12 (Wisconsin Dells)

This study initiated NEPA documentation in 2022. The study evaluated potential improvements to the I-39/90/94 corridor in Dane, Columbia, Sauk and Juneau counties from the Beltline to Wisconsin Dells. The study assessed how best to address existing and future traffic demands, safety issues and aging and outdated infrastructure along I-39/90/94. A Final EIS/Record of Decision was released by WisDOT and FHWA on December 5, 2024.

http://wisconsindot.gov/Pages/projects/by-region/sw/399094/default.aspx

2.0 METHODOLOGY USED

A. What was the scope of the PEL study and the reason for completing it?

The basic reasons for conducting the Beltline PEL Study were the increasing congestion and safety concerns on the facility and limited or insufficient accommodations for alternate travel modes.

Because of these concerns, WisDOT initiated a Beltline PEL Study that would broadly evaluate regional transportation strategies and feed into future NEPA environmental studies of the Beltline and/or other corridors. The Beltline PEL Study products:

- Establish a foundation for the development of the NEPA Purpose and Need
- Determine whether the development of alternative corridors and multimodal travel options satisfy the needs of the Beltline corridor (preliminary screening)
- Identify a range of multimodal Components and Strategies that show promise in satisfying the needs of the Beltline corridor to be further analyzed in NEPA

The Beltline PEL Study scope included the key steps listed in response to Question 2.0 E in the following paragraphs. Agency coordination and public involvement were conducted continuously throughout the Beltline PEL Study process.

B. Did you use NEPA-like language? Why or why not?

WisDOT (in cooperation with FHWA) developed equivalent terminology using similar but slightly different terms than NEPA so that the planning study would not be confused with subsequent NEPA processes.

C. What were the actual terms used and how did you define them? (Provide examples or list)

Table 2 lists the terms used in the Beltline PEL Study compared to the standard language in a NEPA document.

PEL Terms	Equivalent NEPA Terms
Agency Comment Points	Agency Concurrence Points
Problem Statement, Goal, and Objectives	Purpose And Need
Stand-Alone Strategies	On- And Off-Corridor Alternatives
Components	Location And Mode-Specific Alternatives
Strategy Packages	Range of Alternatives
Preferred Strategy Package	Alternatives that Warrant Further Investigation and Used to Create the Range of Alternatives in NEPA
Environmental Resource Impacts	Environmental Impacts Analysis

Table 2 WisDOT Equivalent Terminology Approach

D. How do you see these terms being used in NEPA documents?

The Beltline PEL Study equivalent terms will be used as input to NEPA documents, as described in Table 2. For example, the Problem Statement, Goal, and Objectives identified in the Beltline PEL Study will be used in developing the Purpose and Need in NEPA.

NEPA experts at WisDOT, FHWA, and other federal and state resource agencies will review the language in the NEPA documents to avoid misinterpretation or the misuse of terminology in the NEPA documents.

E. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps?

The Beltline PEL Study process established two advisory committees to help the team develop the Problem Statement, Goal, and Objectives, as well as develop and review improvement Components and Strategies. The TAC was made up of staff members from local municipalities and agencies such as the Wisconsin Department of Natural Resources (WDNR). The PAC was made up of elected officials and community representatives from local municipalities. Along with these two advisory committees, the study process included numerous meetings with agencies, local government committees and boards, neighborhoods, and stakeholder groups. Decisions were made by the study team with input from the advisory committees, agencies, local government committees and boards, neighborhoods, and stakeholder groups.

The following is a summary list of the key steps and Comment Points in the Beltline PEL Study process:

Comment Point 1 Project Approach–Work Plan, Coordination Plan, Problem Statement, Goal and Objectives, and Memorandum of Understanding

Comment Point 2 Screening Criteria–Approach to Evaluating Potential Improvements Both On- and Off-Corridor

Comment Point 3 Stand-Alone Strategies–Development and Evaluation of On- and Off-Corridor Stand-Alone Strategies

Comment Point 4 Components and Strategy Packages–Develop and Evaluate Location and Mode-Specific Improvement Components and Assemble into Strategy Packages

Comment Point 5 Draft and Final Summary Report–Recommended Preferred Strategy Package for Further Evaluation in the NEPA Phase

The major steps in the Beltline PEL Study process are shown in Figure 1. Each step has been reviewed by the PAC, TAC, agencies, and other stakeholders. Notable steps include development of the Goal and Objectives (equivalent to Purpose and Need in NEPA), review of Stand-Alone Strategies, Components, and Strategy Packages (equivalent to Alternatives Evaluation in NEPA), and documentation of the Preferred Strategy Package in the Beltline PEL Study (equivalent to the Range of Alternatives in NEPA).

Figure 1 Major Steps of the Beltline PEL Study

For more information on study coordination, refer to the Coordination Plan for Agency and Public Involvement, September 2023 at

https://wisconsindot.gov/Documents/projects/by-region/sw/madisonbeltline/coordinationplan.pdf

F. How should the PEL information below be presented in NEPA?

Beltline PEL Study information and planning products will be adopted or incorporated by reference in the NEPA document. The Beltline PEL Study products:

- Establish a foundation for the development of the NEPA Purpose and Need
- Assess whether the development and enhancement of alternative corridors and/or multimodal travel modes satisfy the needs of the Beltline corridor (preliminary screening)
- Identify a range of multimodal Components and Strategies that show promise in satisfying the needs of the Beltline corridor to be further analyzed in NEPA

Refer to Attachment A for a list of Beltline PEL Study products and how they are anticipated to be used in any future NEPA processes.

3.0 AGENCY COORDINATION

A. Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.

Figure 2 shows the key points of the Beltline PEL Study process where regulatory and resource agencies reviewed and commented on Beltline PEL Study activities and documents. The key points are discussed under Question 2.0 E.

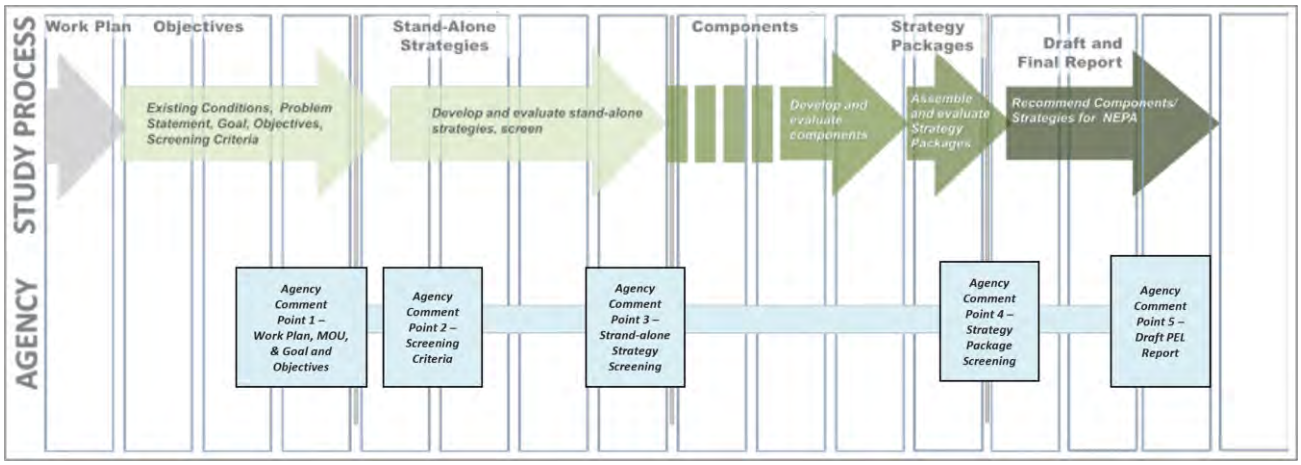

Figure 2 Study Steps and Agency Coordination

In addition to the coordination activities described, the Beltline PEL Study obtained a MOU that fostered communication and collaboration in the Beltline PEL Study process among the state and federal resources agencies. Signatories on the MOU included:

- FHWA
- United States Environmental Protection Agency (USEPA)
- United States Army Corps of Engineers (USACE)
- United States National Park Service (NPS)
- Federal Transit Administration (FTA)
- WisDOT
- WDNR
- Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP)

The Beltline PEL Study involved coordination with Wisconsin's Native American Tribes by providing an opportunity to review the Problem Statement, Goal, Objectives, Draft Strategies, and Components being considered and potential cultural resource aspects.

Environmental data (wetlands, hazardous materials, protected resources, etc.) were obtained from the resource agencies including the USACE and WDNR, as well as Dane County, the Greater Madison MPO, and the UW Arboretum. These data were combined with records research and limited field reviews to identify the types and potential order of magnitude of environmental impacts that may result from the improvement Components evaluated in this Beltline PEL Study.

For further information, refer to the Coordination Plan for Agency and Public Involvement, September 2023 at:

https://wisconsindot.gov/Documents/projects/by-region/sw/madisonbeltline/coordinationplan.pdf.

Also see Section 1 of the Beltline PEL Study Summary Report.

B. What transportation agencies (e.g., for adjacent jurisdictions) did you coordinate with or were involved in the PEL study?

Transportation agencies involved in the Beltline PEL Study included WisDOT; Greater Madison Metropolitan MPO; Capital Area Regional Planning Commission (CARPC); Dane County; the cities of Fitchburg, Madison, Middleton, Monona, Stoughton, Sun Prairie and Verona; the Villages of Cottage Grove, McFarland, Oregon, Waunakee and Windsor; and the towns of Cottage Grove, Dunn, Middleton, Pleasant Springs, Springfield, Verona, and Westport. These agencies and local municipalities within the study area were represented on the TAC and PAC and involved in key steps in the Beltline PEL Study process.

C. What steps will need to be taken with each agency during NEPA scoping?

Scoping meetings will be conducted with federal and state agencies, Native American Tribes, and local municipalities during NEPA to inform them and seek comment on the traditional NEPA scoping process as well as the planning products produced by the Beltline PEL Study. This will consist of planning products being considered for adoption, including but not limited to:

- Problem Statement, Goal, and Objectives (Purpose and Need)
- Stand-Alone Strategies Screening Report
- Beltline PEL Study (Range of Alternatives [including alternatives eliminated or retained])

4.0 PUBLIC COORDINATION

A. Provide a synopsis of your coordination efforts with the public and stakeholders

The study developed a PIP to guide coordination with the public and stakeholders. The PIP is multifaceted to meet the needs of a diverse range of issues, milestones, and stakeholders.

The public involvement efforts included the following activities:

1. Provide study information and obtain comments from local residents, interested parties, special interest groups and organizations, traveling public, business and industry, tourism, state and federal agencies, local and state officials, other interested stakeholders on a timely and regular basis through a variety of methods. Methods included but were not limited to:

    a. Focus group meetings
    b. Neighborhood meetings
    c. PIMs
    d. Bus advertisements
    e. Print media
    f. Social media and networking
    g. E-mail distribution lists
    h. Mailed surveys
    i. Website

2. Inform stakeholders about the Beltline PEL Study and encourage participation and feedback as part of the public process.

3. Design and implement media and communications strategies to create and maintain study awareness.

A total of seven series of PIMs were held with the formats ranging from virtual/online only to multiple meetings at between two and six locations per series. See the summary under Question 1.0 E. of this Questionnaire and Table 2.01-2 in the Beltline PEL Study Summary Report. Each meeting included an opportunity to provide comments in person or via a paper or online form. Online surveys were also conducted during the fourth, fifth, sixth, and seventh series of PIMs.

In addition to the surveys associated with PIMs, the Beltline PEL Study also included the following paper and/or online surveys and interviews:

1. 2014 UW Survey Center paper survey of general public travel preferences and patterns, Beltline usage, and choices regarding alternate travel modes.

2. 2021 UW Survey Center paper survey of residents of neighborhoods with higher minority populations and/or lower income populations regarding travel preferences and patterns, Beltline usage, and preferences for various Beltline PEL Study improvement Components.

3. 2024 online interviews of representatives from organizations serving EJ populations regarding preferences for various Beltline PEL Study improvement Components.

The public involvement efforts included identification of existing EJ populations with the potential to be impacted by/or interested in participating in the study. Specialized communication methods and interaction opportunities were provided to the EJ community throughout the study process. Examples of outreach to EJ populations included distribution of information brochures and posters, meetings with EJ organizations, website updates, media announcements, news releases at milestones, mailed and online surveys, online interviews as described above, and PIMs. Refer to the Madison Beltline PEL Study website for more public involvement information at:

https://wisconsindot.gov/Pages/projects/by-region/sw/madisonbeltline/public.aspx.

5.0 PURPOSE AND NEED FOR THE BELTLINE PEL

A. What was the scope of the PEL study and the reason for completing it?

Refer to Question 2.0 A. in this document.

B. Provide the Purpose and Need Statement, or the corridor vision and transportation Goals and Objectives to realize that vision.

The Beltline PEL Study developed a Problem Statement, Goal, and Objectives in coordination with the PAC and TAC, as well as feedback from resource agencies and the public.

1. Problem Statement for the Beltline PEL Study

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 to west highway in the Madison area. Motorists use the Beltline to travel to work, school, shopping, and recreational destinations. Sections of the Beltline carry a yearly average of 127,000 vehicles per day (vpd)[1]. 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 deficiencies associated with this freeway corridor. Deficiencies had grown to a level so that in November of 2011 Wisconsin's Transportation Projects Commission authorized the study of long-term solutions for the Madison 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 Beltline issues:

- Roadway safety concerns
- Travel demand and congestion increase
- Limited or insufficient accommodations for alternate travel modes

These issues lead 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

Goal–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.

Objectives–The study investigated the ability of multiple Strategies and corridors to satisfy the Beltline Problem Statement, Goal, and Objectives. Specific, measurable Objectives for the Beltline include the following:

1. Improve safety for all travel modes.
2. Address Beltline infrastructure condition and deficiencies.
3. Address system mobility (congestion) for all travel modes.

[1]2012 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. Pedestrian
b. Bicycle
c. Transit
d. Local and regional passenger vehicles
e. Freight

4. Limit adverse social, cultural, and environmental effects to the extent practicable.
5. Increase system travel time reliability for regional and local trips.
6. Improve connections across and adjacent to the Beltline for all travel modes.
7. Enhance efficient regional multimodal access to Madison metropolitan area economic centers.
8. Decrease Beltline traffic diversion impacts to neighborhood streets.
9. Enhance transit ridership and routing opportunities.
10. Improve pedestrian and bicycle accommodations.
11. Complement other major transportation initiatives and studies in the Madison area
12. Support infrastructure and other measures that encourage alternatives to single-occupancy vehicle (SOV) travel.

For the purposes of screening Stand-Alone Strategies, Components, and Strategy Packages, the 12 Objectives were combined into seven Root Objectives. Root Beltline PEL Study Objectives were associated with improving mobility, safety and infrastructure conditions. Additional information can be found in the Beltline Goal, Objectives, and Screening Report, December 2020 at:

https://wisconsindot.gov/Documents/projects/by-region/sw/madisonbeltline/goals-objectives-screening-120720.pdf.

C. <u>What steps will need to be taken during the NEPA process to make this a project-level Purpose and Need statement?</u>

The Problem Statement, Goal, and Objectives will form the foundation for the Purpose and Need in the subsequent NEPA environmental documentation processes. Scoping meetings will be conducted during NEPA to inform the local municipalities, general public, resource and regulatory agencies, and Native American Tribes of the results of the Beltline PEL Study and to discuss the draft NEPA Purpose and Need. After the findings and draft NEPA Purpose and Need have been agreed to by the lead agencies, they will be used in future NEPA environmental documents. When a specific project is proposed for implementation in the corridor the primary source of information for the project Purpose and Need will be the corridor planning documents; however, the Purpose and Need may be further refined to the project level.

The scoping meetings will also be used to discuss the environmental resources in the study area and the range of alternative Strategies evaluated during the Beltline PEL Study. Data collection may be necessary in areas where the Beltline PEL Study data is considered to be out of date.

6.0 RANGE OF ALTERNATIVES

Planning teams need to be cautious during the alternatives screening process; alternative screening should focus on the Purpose and Need/Corridor Vision, fatal flaw analysis, and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the Purpose and Need/Corridor Vision will not be considered reasonable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria, and screening process, including:

A. What types of alternatives were looked at? (Provide a one or two sentence summary and reference document)

The alternatives considered are referred to as Stand-Alone Strategies, Components, and Strategy Packages in this Beltline PEL Study and included various options in the study area including motor vehicle, bicycle, pedestrian, local street system, transit, and transportation demand management. Each were reviewed by the TAC, PAC, resource agencies, local municipalities, stakeholders, and general public. Section 5 (Stand-Alone Strategies), Section 6 (Components), and Section 7 (Strategy Packages) of the Beltline PEL Study Summary Report, DATE, describe the development and evaluation process.

B. How did you select the screening criteria and screening process?

The screening criteria were based on the corridor Goal and Objectives. The criteria were jointly developed by members of the TAC, PAC, federal and state agencies, and local transportation professionals. In addition, the study consulted the latest research on performance measurement published by FHWA, American Association of State Highway and Transportation Officials (AASHTO), Transportation Research Board (TRB) and the Strategic Highway Research Program 2 (SHRP 2). The selection of criteria also followed the federal guidance included in the Moving Ahead for Progress in the 21st Century Act (MAP 21). The screening criteria were reviewed by the PAC, TAC, local, state, and federal transportation and resource agencies, stakeholders, and general public.

The screening criteria are described in detail in the Goals, Objectives, and Screening Criteria Report, December 2020. The screening report summarizes the development of the Problem Statement, Goal, and Objectives and screening criteria; development of Strategies; screening of Strategies; and dismissal of Components that did not satisfy the screening criteria associated with the Objectives.

C. For alternatives(s) that were screened out, briefly summarize the reasons for eliminating the alternatives(s). (During the initial screenings, this generally will focus on fatal flaws.)

The Strategy Package development process had three parts:

1. Developing and testing Stand-Alone Strategies to see whether they have the ability to satisfy Beltline PEL Study Objectives. Stand-Alone Strategies were improvements with the potential to transport large numbers of people within the metropolitan area. Successful Strategies would have the potential to draw enough traffic from the Beltline to eliminate or greatly reduce the need for additional Beltline improvements. Beltline PEL Study Root Objectives were associated with improving mobility, safety, and infrastructure conditions.

2. Developing and evaluating location and mode-specific improvement Components in and near the Beltline corridor to see whether and to what extent they have the ability to satisfy one or more Beltline PEL Study Objectives

3. Assembling improvement Components into Strategy Packages. These Strategy Packages, taken as a whole, have the potential to address all Beltline PEL Study Objectives.

The Strategy Package development process is shown in Figure 3.

Figure 3 Strategy Package Development Process

The Beltline PEL Study examined nine Stand-Alone Strategies. The Stand-Alone Strategies considered included:

- North Mendota Corridors Strategy
- South Reliever Corridors Strategy
- Rail (Passenger Rail) Strategy
- BRT Strategy
- Transit (Bus) Service on the Beltline Strategy
- Scenario Planning for Alternative Land Uses Strategy
- Scenario Planning for Alternative Mode Choices Strategy
- Combined Off-Corridor Strategies
- Beltline Corridor Strategy

All of the Stand-Alone Strategies were eliminated from further consideration because implementing them would not remove enough Beltline traffic to allow the existing facility to adequately meet transportation demands without substantial additional improvements.

A complete description of this analysis process is included in Section 5 of the Beltline PEL Study Summary Report, DATE.

D. Which alternatives should be brought forward into NEPA and why?

Sections 5, 6, and 7 of the Beltline PEL Study Summary Report, DATE describe the development and evaluation process including which Components (alternatives) are the most reasonable and best satisfy the Beltline PEL Study Goal and Objectives. The Components were prioritized based on screening them against the Beltline PEL Study Objectives, feedback provided by stakeholders and the public, estimated

impacts, and analysis of the potential benefits to accessibility that they would provide. The Beltline PEL Study team developed Strategy Packages that proposed combinations of Components that resulted in different levels of improvements ranging from a Strategy Package that keeps the Beltline as it is today with only essential improvements and maintenance to a Strategy Package that does more to improve motor vehicle operations on the Beltline while offering a higher level of mobility and accessibility to all modes of travel. After presenting and getting feedback on the Strategy Packages from the PAC, TAC, public, and agencies and completing additional accessibility analysis on the Strategy Packages, the Beltline PEL Study team developed a Preferred Strategy Package. The Preferred Strategy Package includes Components that warrant further investigation and will be used to create the range of alternatives in NEPA. The report describes in more detail why the Components in the Preferred Strategy Package are recommended to be brought forward into NEPA.

The following describes the Components that are recommended to be carried forward into the NEPA study for further evaluation and those that are recommended for elimination from further consideration.

1. Mainline Components

    a. Carry forward into NEPA
        (1) Extend the existing Flex Lane
        (2) Add one general purpose (GP) lane in each direction

    The existing Beltline Flex Lane and potential extensions could remain open to GP traffic, or during NEPA, other operational designations such as Bus-Only, HOVs, or High Occupancy Toll (HOT) lanes could be evaluated.

    b. Eliminate from Further Study–New Bus-Only lanes

2. Weaving Components

    Weaving areas occur when traffic entering the Beltline mixes or weaves with traffic wishing to exit the Beltline at a downstream off-ramp, often in a relatively short distance between on- and off-ramps. These areas are often the first to experience operational and/or safety issues as traffic demand increases over time.

    a. Carry Forward into NEPA
        (1) Old Sauk Road to Mineral Point Road (both directions)
        (2) Whitney Way to US 18/151/Verona Road (both directions)
        (3) Fish Hatchery Road to US 14/ Park Street (both directions)
        (4) John Nolen Drive to West Broadway (both directions)
        (5) Monona Drive to US 51/ Stoughton Road (both directions)
    b. Eliminate from Further Study–All other areas between successive on- and off-ramps (both directions)

3. Interchange Components

   a. Carry Forward into NEPA
      (1) US 14/University Avenue–Conventional Improvements
      (2) Greenway Boulevard–Conventional Improvements
      (3) Old Sauk Road–Conventional Improvements
      (4) Mineral Point Road–Conventional Improvements
      (5) Gammon Road
         (a) Conventional Improvements
         (b) Interchange Reconfiguration and/or System Ramps
      (6) Whitney Way
         (a) Conventional Improvements
         (b) Interchange Reconfiguration and/or System Ramps
      (7) US 18/151/Verona Road–Interchange Reconfiguration and/or System Ramps
      (8) Seminole Highway–Conventional Improvements
      (9) Todd Drive–Conventional Improvements
      (10) Fish Hatchery Road–Conventional Improvements
      (11) US 14/151/Park Street–Conventional Improvements
      (12) Rimrock Road–Conventional Improvements
      (13) John Nolen Drive–Conventional Improvements
      (14) West Broadway–Conventional Improvements
      (15) Monona Drive–Conventional Improvements
      (16) Stoughton Road
         (a) Conventional Improvements
         (b) Interchange Reconfiguration and/or System Ramps
      (17) I-39/90 (also referred to as the Beltline interchange with I-39/90)–Conventional Improvements to Existing System Ramps

   b. Eliminate from Further Study–Interchange Reconfiguration and/or System Ramps at locations not listed above

4. Local Road System Crossings and Connections Components

Potential new Local Road System Crossings and Connections would accommodate motor vehicles, pedestrians, and bicycles.

   a. Carry Forward into NEPA
      (1) Beltline Crossing west of Gammon Road
      (2) Beltline Crossing east of Gammon Road or West of Whitney Way
      (3) Beltline Crossing west of Park Street
      (4) Crossing of US 14 south of the Beltline
   b. Eliminate from Further Study–Connection between John Nolen Drive and West Broadway north of the Beltline

5. Pedestrian and Bicycle Components

In addition to the pedestrian and bicycle accommodations included with the new roadway crossings and connections listed previously, the following pedestrian- and bicycle-only facilities are proposed for further study.

a. Carry Forward into NEPA
   (1) North of Old Sauk Road
   (2) South of Old Sauk Road
   (3) Extension of the West Towne path from Mineral Point Road to Gammon Road[2]
   (4) Crossing of Whitney Way, north of the Beltline
   (5) Connection from Whitney Way to the Southwest Commuter Path
   (6) Connection from Seminole Highway to the Cannonball Path and Fish Hatchery Road, north or south of the Beltline[3]
   (7) Connection from West Broadway to the Upper Yahara River Trail through the Capitol Springs Recreation Area
   (8) Connection from Monona Drive to Stoughton Road and south to the village of McFarland

b. Eliminate from Further Study–East to west path between Femrite Drive and County N east of the Beltline interchange with I-39/90

6. Park and Ride Components

a. Carry Forward into NEPA
   (1) US 14/University Avenue at the Beltline
   (2) US 18/151/Verona Road at County PD
   (3) Fish Hatchery Road at County PD
   (4) US 14 at McCoy Road.

b. Eliminate from Further Study
   (1) County M at Mid Town Road
   (2) US 51/Stoughton Road at Marsh Road

7. Transit Priority Components

a. Carry Forward into NEPA
   (1) US 14/University Avenue at the Beltline
   (2) Mineral Point Road (Bus Rapid Transit [BRT] Crossing)
   (3) Gammon Road
   (4) Whitney Way
   (5) Midvale Boulevard/US 18/151/Verona Road
   (6) Fish Hatchery Road (proposed BRT Crossing)
   (7) Rimrock Road

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

(8) West Broadway
(9) Stoughton Road

b. Eliminate from Further Study
(1) Seminole Highway
(2) Todd Drive

8. Strategy Packages

a. Carry Forward into NEPA
(1) Strategy Package No. 1–Preserve and Maintain (No Build)
(2) Preferred Build Strategy Package[4]

b. Eliminate from Further Study
(1) Strategy Package No. 2–Higher-Priority Components
(2) Strategy Package No. 3–Mid to High Priority Components
(3) Strategy Package 4–All Retained Components

E. Did the public, stakeholders and agencies have an opportunity to comment during this process?

The Beltline PEL Study team held meetings with the PAC, TAC, resource agencies, local municipalities, stakeholders and the public throughout the Beltline PEL Study process to develop the Problem Statement, Goal, and Objectives and evaluate improvement Components and Strategy Packages. The Beltline PEL Study Summary Report, DATE, provides additional detail on the study outreach conducted and the feedback received in Section 2 and Appendix C.

F. Were there unresolved issues with the public, stakeholders and/or agencies?

There were no unresolved issues regarding the Beltline PEL Study. Interaction with the public, stakeholders, and agencies will continue during the NEPA phase.

7.0 PLANNING ASSUMPTIONS AND ANALYTICAL METHODS

A. What is the forecast year used in the PEL study?

The forecast year for the Beltline PEL Study is 2050. This will be reviewed in future NEPA studies to determine if updates are necessary.

B. What method was used for forecasting traffic volumes?

1. Traffic Volume Forecasts

The Beltline forecasts were developed using a combination of Traffic Analysis and Forecasting Information System (TAFIS) and Travel Demand Model (TDM) forecasts. TAFIS uses a regression of previous traffic counts to develop horizon year forecasts. The TDM is based on Traffic Analysis Zones (TAZ) that produce trips and route them on a modeled roadway network.

[4]Additional information regarding development of the Preferred Strategy Package is included in Section 7 of the PEL Summary Report.

The TDM is based on the current and projected land uses and the existing (or future) transportation network. The model is calibrated to existing roadway volumes as well as origin and destination data. Chapter 9 of the WisDOT *Transportation Planning Manual* provides a detailed explanation of traffic forecasting process and planning data.[5]

2. Demand Modeling of Strategies and Scenarios

The primary tool for the Strategy and Component screening was the TDM. A TDM predicts how different roadway network and land use scenarios would change area travel patterns. For example, a new roadway can be added to the network and the TDM will predict how much traffic the new roadway would attract.

The Beltline PEL Study used the Greater Madison MPO TDM. The TDM is a Time of Day model, in which traffic volumes are separated into four daily periods, rather than reported as a single daily volume. The TDM primarily used for the Beltline PEL Study analysis had a 2010 base year and a 2050 horizon year.

C. Are the planning assumptions and the corridor vision/Purpose and Need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?

The planning assumptions, Problem Statement, Goal, and Objectives are consistent with WisDOT's "Connect 2050", (also known as the Statewide Long-Range Multimodal Transportation Plan), the Greater Madison MPO's "Connect Greater Madison" (also known as the 2050 Regional Transportation Plan), the 2023 to 2032 WisDOT Transportation Asset Management Plan, as well as additional local planning documents. See Appendix G of the Beltline PEL Study Summary Report for additional information.

D. What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs, and roadway network expansion?

1. Land Use Data

The Beltline PEL Study considered local land use and transportation plans when developing and screening Components. Copies of these plans are available from the WisDOT SWR or local agency by request. Key plans reviewed include:

- *North Mendota Parkway Alternatives Study*, Dane County (2003)
- *Transport 2020 New Starts Application (2008)* by Madison, Dane County, and WisDOT
- *Connections 2030 Statewide Long-Range Transportation Plan*
- *Capital Area Regional Planning Commission North Yahara Future Urban Development Area Planning,* FUDA Study (2012)
- Greater Madison MPO Madison Transit Corridor Study (2013)

[5]WisDOT Transportation Planning Manual: https://wisconsindot.gov/Documents/projects/data-plan/plan-res/tpm/9.pdf. Accessed October 27, 2020.

- Greater Madison MPO, 2013-2017 Transit Development Plan for the Madison Urban Area (2013)
- Greater Madison MPO, Bicycle Transportation Plan (2015)
- City of Monona Comprehensive Plan 2016 to 2036 (2016)
- Madison in Motion, the City's Sustainable Transportation Plan (2017)
- CARPC, Vision 2020: Dane County Land Use and Transportation Plan (Amended 2017)
- Imagine Madison, City of Madison Comprehensive Plan (2018)
- City of Fitchburg Comprehensive Plan (2020)
- City of Middleton Comprehensive Plan Update (2021)
- Connect 2050, Wisconsin's Statewide Long-Range Transportation Plan (2022)
- Greater Madison MPO, Connect Greater Madison 2050 Regional Transportation Plan (2022)
- 2023 to 2032 WisDOT Transportation Asset Management Plan (2023)

Future NEPA phases will reassess consistency with local land use and transportation plans.

2. TDM Data Assumptions

Greater Madison MPO's TDM was a primary analysis tool for the Beltline PEL Study. Key inputs into the TDM include current and future households and employment. The household forecasts were provided by the Wisconsin Department of Administration (WDOA), Demographic Services Center. The household forecasts were then locationally allocated within each jurisdiction by Greater Madison MPO staff, in consultation with planning staff representing various Dane County communities.

The employment forecasts were developed by the CARPC based on local employment trends and reviewed by Greater Madison MPO and Wisconsin Department of Workforce Development staff. CARPC's employment forecast is based on a labor supply forecast derived from the WDOA's population by age forecasts and assumptions regarding changes to labor force participation rates by age and workers commuting in from adjacent counties. The employment forecasts were also regionally allocated by Greater Madison MPO staff based on WDOA's and CARPC's urban service area population forecasts, municipal employment trends since 1990, and land use plans with input from local planning staff.

3. Madison Scenario Planning

City of Madison staff developed a sustainable master transportation plan called *Madison in Motion*. This effort considered two alternative land use development scenarios. Scenario A assumed current land use trends consisting of mainly peripheral development in undeveloped lands, and Scenario B consisted primarily of redevelopment within infill areas. The Beltline PEL Study team modeled the two land use scenarios in the TDM to understand how more compact infill land use development patterns would influence area traffic volumes. The analysis showed that the more compact development increased BRT ridership but also increased Beltline traffic volumes because many high growth infill areas are directly served by the Beltline.

For additional information on data assumptions, refer to Section 4 of the Beltline PEL Study Summary Report, DATE.

8.0 ENVIRONMENTAL RESOURCES (WETLANDS, CULTURAL, ETC.) REVIEWED. FOR EACH RESOURCE OR GROUP OF RESOURCES REVIEWED, PROVIDE THE FOLLOWING:

A. In the PEL study, at what level of detail was the resource reviewed and what was the method of review?

Dane County and its natural environment (wetlands, uplands, savanna/forests, waterways, geology, springs, cultural resources, and wildlife) have been well studied and documented on a state, regional, and local level. These studies and documents were used to review and document resources in the corridor. In addition, meetings were held with resource agencies such as the WDNR and the UW Arboretum to discuss resources further. Section 8 of the Beltline Existing Conditions Report, December 2015 summarizes each resource in the study area:

https://wisconsindot.gov/Pages/projects/by-region/sw/madisonbeltline/reports.aspx.

1. Stand-Alone Strategies

Generally, the Stand-Alone Strategies, improvement Components, and Strategy Packages have been designed to only a conceptual level, and direct impacts have been broadly assessed on a yes/no basis and/or an order-of-magnitude scale. The *Beltline PEL Impact Analysis Methodology Report*, August 2021 (https://wisconsindot.gov/Documents/projects/by-region/sw/madisonbeltline/ImpactAM.pdf) summarizes the level of detail used in the Beltline PEL Study for potential impacts to various environmental resources.

The *Stand-Alone Strategies Screening Report*, December 2020 (https://wisconsindot.gov/Documents/projects/by-region/sw/madisonbeltline/stand-alone-strategies-screening-120720.pdf) lists environmental resources in the study area including sources of the data and geographic information system (GIS) maps. This report describes each Stand-Alone Strategy and potential environmental impact to resources such as agriculture and water resource lands and public resource areas.

For additional information refer to Section 5 of the Beltline PEL Study Summary Report, DATE.

2. Components

The Beltline PEL Study team assessed planning-level direct impacts, such as the need for new public right-of-way for transportation improvements. Potential impacts associated with the Mainline and Interchange Components are documented in supporting technical memos for this report including the *Beltline Improvements Investigations Memorandum* (BIIM), *Interchange Improvement Investigations Memorandum* (IIIM), and *Mainline and Interchanges Improvements Refinement Report* (MIIRR).

For the Local Road System Crossings and Connections and Pedestrian and Bicycle Components, the Beltline PEL Study team reviewed potential impacts to wetlands, Section 4(f) protected property, residential and commercial buildings, potential ROW acquisition, and length of roadway, structure, retaining wall and path construction. This planning-level assessment determined whether impacts are anticipated to wetlands or Section 4(f) properties, but not the anticipated number of acres impacted. Each category of impact was assigned a specific number of points. Points were tallied for each Component and a priority based on impacts alone was determined.

When considering priority for Park and Ride and Transit Priority Components, preliminary impacts were not estimated. Impacts for the new park and rides were anticipated to be approximately the same at each location considered. Inclusion of transit priority in the draft Strategy Packages was based primarily on BRT route crossings and frequency of local service routes crossing at Beltline interchanges in the Metro network redesign. Transit priority was also anticipated to involve minimal strip ROW or minimal impacts with improvements using the existing pavement to the extent possible to fit an additional transit-only lane through the interchange or queue-jump lane at signalized intersections.[6]

For additional information refer to Section 6 of the Beltline PEL Study Summary Report, DATE.

3. Strategy Packages

The direct impacts of the Strategy Packages are anticipated to increase as more Components are added. This means that Strategy Package (SP) 1 Preserve and Maintain would have the fewest direct impacts, while SP 4 All Retained Components would have the most direct impacts.

The Beltline PEL Study completed only a planning-level assessment of direct impacts. For example, potential wetland impact locations due to individual Components associated with a Strategy Package have been identified but not how many acres could potentially be impacted or how those impacts compare impacts to other Components. As another example, a general location for a new roadway crossing of the 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.

a. SP 1 has the lowest amount of direct impacts because it does not expand the footprint of the Beltline, or any of the interchanges, and it does not include any of the other multimodal Components.
b. SP 2 would have approximately four times the direct impacts of SP 1.
c. SP 3 would have approximately five times the direct impacts of SP 1, and 1.25 times the impacts of SP 2.
d. SP 4 would have approximately eight times the direct impacts of SP 1, twice the direct impacts of SP 2, and 1.6 times the direct impacts of SP 3.

[6]At the time of this report, Wisconsin Statute s. 347.385 prohibits non-emergency vehicles from using transmitters for the purposes of altering the normal sequencing of the traffic signals. There are differing opinions on whether Transit Signal Priority (TSP) technically meets this definition. Additional coordination will be needed in future study phases regarding options for implementing TSP at Beltline interchanges.

Sections 5, 6, and 7 of the Beltline PEL Study Summary Report, DATE, include additional discussion of direct impacts of the improvement Components that make up the Strategy Packages considered in the Beltline PEL Study.

B. Is this resource present in the area and what is the existing environmental condition for this resource?

The location and condition of environmental resources is documented at a planning level in Section 8 of the Beltline Existing Conditions Report, December 2015:

https://wisconsindot.gov/Pages/projects/by-region/sw/madisonbeltline/reports.aspx.

C. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?

The Beltline PEL Study recommends the primary travel mode, primary travel corridors, and a range of multimodal Components to be evaluated in NEPA. The NEPA study or studies will need to locationally refine the Beltline roadway and other multimodal Components to determine a more refined range of direct impacts.

The NEPA study or studies will evaluate a broad range of socioeconomic and natural environment impacts associated with the Components and Strategy Packages recommended for further study once the direct impacts are known. Special attention will be needed for the following resource considerations:

a. Archeological Reconnaissance–The Beltline PEL Study did not perform field surveys for archeological resources. Determinations of eligibility and effect will need to be prepared as appropriate during the completion of the Section 106 process.
b. Historic Property Surveys–The Beltline PEL Study did not perform architectural surveys for adjacent buildings or potential historic districts. Determinations of eligibility and effect will need to be prepared as appropriate during the Section 106 process.
c. Status of the Capital Springs State Recreation Area (CSSRA) regarding Section 4(f) and Section 6(f) and potential impacts.
d. Effects and potential mitigation for the UW Arboretum, a Section 106 and Section 4(f) property and National Historic Landmark.
e. Wetlands and surface water impacts.
f. Air and noise analysis.
g. Indirect and cumulative impacts related to alternatives analyzed during the NEPA process.
h. Impacts to EJ populations.

D. How will the planning data provided need to be supplemented during NEPA?

Some resource data will need to be supplemented with more detail during NEPA through field surveys and other methods. Also, updated socioeconomic, traffic, and crash data will be needed for NEPA analysis.

9.0 LIST ENVIRONMENTAL RESOURCES YOU ARE AWARE OF THAT WERE NOT REVIEWED IN THE PEL STUDY AND WHY. INDICATE WHETHER OR NOT THEY WILL NEED TO BE REVIEWED IN NEPA AND EXPLAIN WHY.

During NEPA, more detailed studies will need to be conducted as particular projects are identified. Some resources, including the CSSRA and UW-Arboretum, are listed in Question 8.0 C.

10.0 WERE CUMULATIVE IMPACTS CONSIDERED IN THE PEL STUDY? IF YES, PROVIDE THE INFORMATION OR REFERENCE WHERE THE ANALYSIS CAN BE FOUND.

Indirect and Cumulative Impacts (ICI) were considered in the Beltline PEL Study. For the Beltline PEL Study ICI analysis, the Beltline PEL Study team assembled an expert panel. The prospective panelists included representatives from every community in the draft study areas, as well as representatives of the Dane County Planning Department, the Greater Madison MPO, CARPC, 1,000 Friends of Wisconsin, UW, Downtown Madison Incorporated, WDNR, and the DATCP. Representatives from other non-municipal organizations were invited due to their expertise in fields pertaining to the ICI analysis process such as environmental, land use, and economic issues.

After creating a draft map of the ICI analysis Beltline PEL Study boundary area, the expert panelists were asked to review the maps and comment on the appropriateness of the ICI analysis Beltline PEL Study boundary area. Web-based interactive mapping exercises were developed and shared with expert panelists before an in-person and online meeting was held. Panelists were also able to provide input on a hard copy of the mapping exercise. The panel gave comments on the location and type of cumulative impact anticipated within the ICI study area.

The *Indirect Impacts and Cumulative Impacts Report 2023-24* is included in Appendix H of the Beltline PEL Study Summary Report.

11.0 DESCRIBE ANY MITIGATION STRATEGIES DISCUSSED AT THE PLANNING LEVEL THAT SHOULD BE ANALYZED DURING NEPA.

Mitigation discussions were held early on during the Beltline PEL Study with the WDNR and the UW-Arboretum staff to discuss preliminary ideas for possible minimization and mitigation measures for possible future project impacts on the CSSRA and the UW-Arboretum, respectively.

As the NEPA study identifies a range of impacts, discussion will continue with UW-Arboretum, WDNR, and other appropriate federal, state, and local regulatory agencies and stakeholders. Other impacts and potential mitigation needs will be evaluated during NEPA, such as noise analysis, and air quality analysis, as appropriate.

12.0 WHAT NEEDS TO BE DONE DURING NEPA TO MAKE INFORMATION FROM THE PEL STUDY AVAILABLE TO THE AGENCIES AND THE PUBLIC? ARE THERE PEL STUDY PRODUCTS WHICH CAN BE USED OR PROVIDED TO AGENCIES OR THE PUBLIC DURING THE NEPA SCOPING PROCESS?

Beltline PEL Study products (such as decisions, analysis, and studies) that could be used in the NEPA process will be provided to the relevant agencies for review and comment during the NEPA scoping process. Beltline PEL Study products will be available to the public on the project website. Attachment A provides a detailed list of Beltline PEL Study products and their anticipated use in the NEPA process, either through adoption, incorporation by reference, or background for further analysis. Beltline PEL Study products anticipated to be directly adopted include:

- Goals, Objectives, and Screening Criteria Report
- Stand-Alone Strategies Screening Report
- Beltline PEL Study Summary Report

13.0 ARE THERE ANY OTHER ISSUES A FUTURE PROJECT TEAM SHOULD BE AWARE OF?

A. Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

Future project teams should be aware of the issues listed in Question 8.0 C. Key challenges will include avoidance and minimization of impacts to the UW-Arboretum, the CSSRA, and EJ/Title VI populations.

Future project teams should be aware that the Beltline corridor travels through wetlands that connect Lake Monona and Lake Waubesa on the Yahara Chain of Lakes. Depending on the ultimate preferred alternatives there is potential for impacts to wetlands and surface waters in areas that are publicly owned and used for recreation. This is a unique resource that may draw controversy.

Future project teams should also be aware that some feedback received from the TAC, PAC, and the public was not in support of adding lanes to the Beltline, especially east of US 18/151/Verona Road. Some indicated they could accept extending the Beltline Flex Lane west.

In summer 2024, the Fitchburg Common Council passed resolution R-133-24 that states the council “opposes the widening of the Beltline and calls for the Wisconsin Department of Transportation to remove the proposed capacity expansion from the Beltline PEL Study and instead prioritize transit, biking, walking, and local road improvements”. The Beltline PEL Study team has chosen not to dismiss adding a GP lane from further evaluation in NEPA because it is anticipated to better address the Beltline PEL Study operational goals and not enough detailed analysis of the potential impacts versus potential benefits of this added lane has been completed in this Beltline PEL study.

ATTACHMENT A
MADISON BELTLINE PEL QUESTIONNAIRE

ATTACHMENT A–MADSION BELTLINE PEL QUESTIONNAIRE
Draft: 2025-05-08

Product Document	Latest Revision Date	Adopt in NEPA	Incorporate by Reference	Background Use (Available for Admin Record)	Type of Planning Product	23 CFR 450 Reference	23 USC 168 Reference	How it Will be Used
Coordination/Planning Documents								
• Work Plan	2/12			X	Record of Coordination	23 CFR 450.212(a)	23 USC 168 (d)(2)&(5)	Proof that products satisfy coordination requirements
• Memorandum of Understanding	7/15			X	Record of Coordination	23 CFR 450.212(b)(2)(i)	23 USC 168 (d)(2)&(5)	Proof that products satisfy coordination requirements
• Coordination Plan	9/23			X	Record of Coordination	23 CFR 450.212(b)(2)(i)	23 USC 168 (d)(2)&(5)	Proof that products satisfy coordination requirements
• Impact Analysis Methodology	8/21			X		23 CFR 450.212(a)		Proof that products satisfy coordination requirements
• Environmental Justice Plan	1/25			X	Record of Coordination	23 CFR 450.212(b)(2)(ii)	23 USC 168 (d)(4)&(5)	Proof that products satisfy coordination requirements
• Public Involvement Plan	8/24			X	Record of Coordination	23 CFR 450.212(b)(2)(ii)	23 USC 168 (d)(4)&(5)	Proof that products satisfy coordination requirements
• Environmental Justice Report	9/24			X	Record of Coordination	23 CFR 450.212(b)(2)(ii)	23 USC 168 (d)(4)&(5)	Proof that products satisfy coordination requirements
Existing Conditions Report	12/15							
• Economic Importance			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(B)	Background for Purpose and Need, Affected Environment
• Origin Destination			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Bicycle and Pedestrian			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Operations			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Transit			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Safety			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Geometry			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(A)	Background for Purpose and Need, Affected Environment
• Environment			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(E)&(F) 23 USC 168 (c)(1)(E)	Background for Purpose and Need, Affected Environment
• Land Use			X		Analysis	23 CFR 450.212(a)(4)	23 USC 168 (c)(2)(C)&(D)	Background for Purpose and Need, Affected Environment
Goal, Objectives, Screening Criteria Report	12/20	X			Decision	23 CFR 450.212(a)(1)	23 USC 168 (c)(1)(C)	Foundation for Purpose and Need
Paramics Modeling Methodology Memorandum	2/16		X		Analysis Decision	23 CFR 450.212(a)	23 USC 168 (d)(7) 23 USC (c)(1)(F)	Traffic operations modeling approach. Proof that analyses satisfy 23 USC 168 (d) reliability and scientific acceptability requirements A decision with respect to methodologies for analysis
Technical Memos								
• Femrite Half-Diamond Interchange	4/15			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Evaluation of alternative associated with the BIC interchange project.
• Software Comparison	9/14			X	Decision	23 CFR 450.212(a)	23 USC 168 (d)(7)	Evaluation of appropriate traffic modeling software to use.
• Traffic Forecasting Methods	2/14			X	Analysis	23 CFR 450.212(a)	23 USC 168 (c)(2)(A)&(B) 23 USC 168(d)(7)	Evaluation of travel demands Documentation that forecasts satisfy 23 USC 168(d)(7) scientific acceptability requirements
• Traffic Forecasting Memorandum	2/15			X	Analysis	23 CFR 450.212(a)	23 USC 168 (c)(2)(A)&(B) 23 USC 168(d)(7)	Evaluation of travel demands Documentation that forecasts satisfy 23 USC 168(d)(7) scientific acceptability requirements

ATTACHMENT A–MADSION BELTLINE PEL QUESTIONNAIRE
Draft: 2025-05-08

Product Document	Latest Revision Date	Adopt in NEPA	Incorporate by Reference	Background Use (Available for Admin Record)	Type of Planning Product	23 CFR 450 Reference	23 USC 168 Reference	How it Will be Used
• K200 Design Hour Volume	12/14			X	Decision	23 CFR 450.212(a)	23 USC 168 (c)(1)(F)	Basis for analysis used to determine which alternatives satisfy Project Purpose and Need
• Vehicle Occupancy Study	5/15			X	Analysis	23 CFR 450.212(a)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
• SW Wisconsin Freeway Design Workshop Summary	5/16			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary identification of improvement types/alternatives able to satisfy Project Purpose and Need
• UW Survey Center Beltline Survey Summary	1/15		X		Analysis	23 CFR 450.212(a)	23 USC 168 (A)(3)	Survey to understand public perceptions of travel conditions in the Madison Metropolitan Area
• Traffic Validation Memo	2/16		X		Decision	23 CFR 450.212(a)	23 USC 168 (d)(6)&(7)	Documentation to methods to test validity of (2012) traffic data vs. 2016 data
• Crossings and Connections Options	3/21	X			Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
• Bicycle and Pedestrian Options	6/21	X			Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
• Park and Ride Options	1/21	X			Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
• Transit and Managed Lanes Options	6/21	X			Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
• HOV Demand Volumes	8/21		X		Analysis	23 CFR 450.212(a)	23 USC 168 (c)(2)(A)	Data for evaluation of travel demand and alternatives
Stand-alone Strategies Screening Report	12/20							
• Introduction								
• North Mendota Parkway		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• South Reliever		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Transport 2020		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• BRT		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Beltline Buses		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Land Use Scenario Planning		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Increase Bike/Ped Scenario Planning		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Combined Strategies		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
• Beltline Corridor		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(B)&(D)	Preliminary screening and elimination of alternatives from further consideration
Beltline Improvement Investigation Tech Memo	9/21			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary identification of improvement types/alternatives potentially able to satisfy Project Purpose and Need
Interchange Improvements Investigation Tech Memo	4/24			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary identification of improvement types/alternatives potentially able to satisfy Project Purpose and Need
Mainline and Interchange Improvements Refinement Report	1/25			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary identification of improvement types/alternatives potentially able to satisfy Project Purpose and Need
Accessibility Analysis	2/25			X	Analysis	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary identification of improvement types/alternatives potentially able to satisfy Project Purpose and Need
Madison Beltline PEL Summary Report	7/25							

ATTACHMENT A–MADSION BELTLINE PEL QUESTIONNAIRE
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Product Document	Latest Revision Date	Adopt in NEPA	Incorporate by Reference	Background Use (Available for Admin Record)	Type of Planning Product	23 CFR 450 Reference	23 USC 168 Reference	How it Will be Used
• Section 1: Introduction and Process		X			Decision	23 CFR 450.212(a)(1)	23 USC 168 (c)(1)(C)&(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 2: Goals, Objectives, and Strategy Development		X			Decision	23 CFR 450.212(a)(1)	23 USC 168 (c)(1)(C)&(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 3: Traffic Data Summary		X			Decision	23 CFR 450.212(a)(1)	23 USC 168 (c)(1)(C)&(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 4: Stand-alone Strategy Screening		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 5: Components		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 6: Strategy Packages and NEPA		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section
• Section 7: Summary of Recommendations		X			Decision	23 CFR 450.212(a)(3)	23 USC 168 (c)(1)(D)	Preliminary screening and elimination of unreasonable alternatives for Alternatives section