Appendix D:

Environmental Assessment

Introduction

The Infrastructure Investment & Jobs Act (IIJA), the current federal transportation bill, and implementing rules governing the development of metropolitan or regional transportation plans include requirements related to environmental analysis of the plan. The requirements were first added under a prior bill, SAFETEA-LU, and have been continued under MAP-21, the FAST Act, and now the IIJA. Specifically, MPOs are required to consult with federal, state and county environmental and historic/cultural resource agencies in development of the regional transportation plan. The consultation is to include a comparison of the transportation plan with conservation and environmental protection plans and inventories of natural and historic resources. Plans are also required to include a discussion of potential environmental mitigation strategies, policies, and actions that, over time, will serve to avoid, minimize, or compensate for (by replacing or providing substitute resources) the impacts to or disruption of the human and natural environment associated with implementation of the plan. The strategies are intended to be regional in scope, even though the mitigation may address potential project-level impacts.

The objective of these requirements is to strengthen the linkage between regional transportation planning and the project development and associated environmental analysis process required by the National Environmental Policy Act (NEPA) by:

1. Improving accountability for the natural and human environment in transportation planning and decision making; and

2. Improving understanding and respect for the comprehensive system level analysis and public decision making that occurs during the transportation planning process as the foundation for individual project purpose and need during project development under the NEPA process.

Environmental Resources Inventory

Environmental resources were mapped in relation to proposed and potential capacity expansion projects and major transportation studies that might lead to such proposed projects. The resource inventory data and maps provide a baseline of existing conditions for later use during project scoping and environment assessment as required by NEPA. In the meantime, they allow an initial environmental screening of planned transportation projects to be conducted to identify those with the potential to negatively impact the natural and built environment.

Figure C-a details the geodata[1] used in each of the environmental resource screening maps, along with the source and date of the data.

1 Geodata is information about geographic locations that is stored in a format that can be used with a geographic information system (GIS).

Environmental Resources Inventory

Environmental Resource Screening Map	Geodata	Source Agency	Date
Agricultural Land	Agricultural Land Evaluation -	Natural Resource Conservation Service/Dane County Land and Water	2020
Agricultural Land	Existing Development	Capital Area Regional Planning Commission/Dane County	2015
Woodlands, Stream Water	Unprotected Native Prairie and	Dane County Parks	2012
Woodlands, Stream Water	Outdoor Recreation	Capital Area Regional Planning Commission/Dane County Planning and	2015
Woodlands, Stream Water	Woodlands	Capital Area Regional Planning Commission/Dane County Planning and	2015
Woodlands, Stream Water	Unprotected Grassland Areas	Dane County Parks	2012
Woodlands, Stream Water	Stream Water Assessments	Wisconsin Department of Natural Resources	2016
Parks and Open Space	Existing Bike or Pedestrian Trail	Greater Madison MPO	2020
Parks and Open Space	Ice Age Trail Corridor	Dane County Land and Water Resources Department	2020
Parks and Open Space	State Parks	Greater Madison MPO	2020
Parks and Open Space	County Parks	Dane County Parks	2020
Parks and Open Space	Native American Lands	Dane County Planning and Development	2020
Parks and Open Space	Public Lands	Dane County Planning and Development	2021
Parks and Open Space	Steep Slopes	Greater Madison MPO	2013
Parks and Open Space	Natural Resource Areas	Dane County Parks	2020
Parks and Open Space	County Wildlife Areas	Dane County Parks	2020
Parks and Open Space	Environmental Corridors	Capital Area Regional Planning Commission	2021
Parks and Open Space	State WIDNR Managed Lands	Wisconsin Department of Natural Resources	2021
Wetlands, Hydric Soils, Aquatic Live	Wetlands	Wisconsin Department of Natural Resources	2021
Wetlands, Hydric Soils, Aquatic Live	Hydric Soils	Natural Resource Conservation Service/Dane County Land and Water	2020
Wetlands, Hydric Soils, Aquatic Live	Stream Life	Wisconsin Department of Natural Resources	2016
Rare Species, Floodplains, Resource	Aquatic and or Terrestrial Rare	Wisconsin Department of Natural Resources	2021
Rare Species, Floodplains, Resource	100 year floodplain	Federal Emergency Management Agency	2016
Rare Species, Floodplains, Resource	Impaired waters 303 (d) Lakes	Wisconsin Department of Natural Resources	2021
Rare Species, Floodplains, Resource	Impaired waters 303 (d) Streams	Wisconsin Department of Natural Resources	2021
Rare Species, Floodplains, Resource	Outstanding and Exceptional	Wisconsin Department of Natural Resources	2019
Rare Species, Floodplains, Resource	Outstanding and Exceptional	Wisconsin Department of Natural Resources	2017
Historical Sites	Historical Sites	Wisconsin Historical Society	2022
All Maps	Water Body	Wisconsin Department of Natural Resources	2019
All Maps	Perennial Streams	Wisconsin Department of Natural Resources	2019

Figure D-a Environmental Resources Inventory

Environmental Assessment

Maps C-a to C-f show the location of major roadway projects and studies in relation to the county's agricultural, environmental, recreational, and historic/cultural resources. The maps were created from a GIS database developed from the resource inventories and plans listed and described above.

Map C-a, Major Roadway Projects and Studies shown with Agricultural Land, shows the agricultural land evaluation rating of all undeveloped lands in the county based on an assessment system that rates the soil-based qualities of a site for agricultural use. The ratings are separated into eight groups with Group I being the best soils for agriculture. According to the USDA Census of Agriculture, Dane County had a total of 2,566 farms in 2017[2] with a combined total of 506,688 acres of farmland – a marginal increase in acreage since 2012. The total market value of Dane County's agricultural products exceeded $509 million – the highest of any county in the state and in the top 4% among all counties nationwide.

Map C-b, Major Roadway Projects and Studies shown with Woodlands and Stream Water Assessments, shows outdoor recreation areas (including state, county, and local parks, etc.), woodlands, unprotected grassland areas and native prairie and savanna remnants, and stream water assessments.

Map C-c, Major Roadway Projects and Studies shown with Parks and Open Space, shows public and Native American lands, steep slopes, natural resource areas, water bodies, streams, and environmental/open space corridors. The natural resource areas include lands containing valuable natural resources or greenbelt corridors identified through a public process as part of development of the Dane County Parks and Open Space Plan. The environmental/open space corridor system is based on the recognition of the interrelatedness of adjacent landscape types and the importance of protecting valuable ecological units and linkages. The corridor system is therefore primarily associated with stream valleys and water features. The corridors include two distinct components: urban environmental corridors within urban service areas (USAs) and rural resource protection areas outside USAs. The urban environmental corridors are a continuous open space network based on natural features and environmental lands such as streams, lakes, shorelands, floodplains, wetlands, steep slopes, woodlands, parks, and publicly owned lands. The rural resource protection areas are based primarily on floodplains, wetlands, and shoreland areas together with existing or proposed publicly owned or controlled lands needed for resource protection, continuity, or public recreation. The two corridor elements combine to provide a continuous countywide network of open spaces and environmental resources considered to be the most critical for protection.

Map C-d, Major Roadway Projects and Studies shown with Wetlands, Hydric Soils, and Aquatic Life in Streams, shows wetlands, hydric soils, and warm and cold water fisheries based on WisDNR's stream classification system. Hydric soils include soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. As such, they are potential wetland restoration sites. A combination of the hydric soil, hydrophytic vegetation, and hydrology criteria defines wetlands. Locating hydric soils assists in conservation planning, assessment of potential wildlife habitat, and overall land use planning.

Map C-e, Major Roadway Projects and Studies shown with Rare Species, Floodplains, and Resource Waters, shows those PLSS sections in the county within which aquatic and/or terrestrial rare or threatened species are located according to the Wisconsin Natural Heritage Program Inventory. Exact locations are not published in order to protect the resources. Also shown are the 100-year floodplains defined by FEMA and resource waters based on WisDNR's stream classification system. The stream classification system is based on aquatic organisms and was established by WisDNR under chapter NR 102 of the state Administrative Code. Both Outstanding

2 The Census of Agriculture is conducted every five years. 2022 data is not yet available.

Resource Waters (ORWs) and Exceptional Resource Waters (ERWs) are listed in the code.

Map C-f, Major Roadway Projects and Studies shown with Historical and Archeological Sites, shows historical sites identified by the Dane County Historical Society, Madison Historic Landmarks, and Research Sites. Buildings and sites on the State and National Registers of Historic Places are included.

The resource maps illustrate the sensitivity of the western, driftless part of the county. They also show the large number of streams and wetlands in the Yahara River valley in the central part of the county and in the drumlin area in the eastern part of the county. The streams in the central and eastern parts of the county are flatter and more sluggish, and fewer are spring-fed. Their water quality is affected by runoff from the extensive agricultural lands in these areas.

The environmental resource maps provide an overall picture of the location of environmentally sensitive areas in relation to proposed or potential future roadway improvements and corridor studies. An analysis was done both for proposed capacity expansion projects as well as corridors simply identified for right of way preservation and access management due to potential longer term need for widening or uncertainty about needed cross-section in the case of new streets. The analysis was not done for programmed projects, such as the USH 51 (McFarland to Stoughton) reconstruction project, or the potential freeway conversion corridors as more detailed project level environmental analyses were already completed for those projects. Of all of the local roadways corridors that traverse and could potentially impact the largest number of sensitive areas, the only two that are recommended for capacity expansion are CTH K (CTH M to USH 12), part of the "North Mendota Parkway" corridor, and Sprecher Road (on realignment from Wyalusing Rd. to CTH AB). The short segment of Sprecher Road is planned for a new alignment to avoid a drumlin area and connect directly to CTH AB.

The longest and most significant of the local capacity projects is the CTH K corridor. It is uncertain at this time whether the project, if constructed, would be in the CTH K right of way or on new alignment as envisioned as part of the North Mendota Parkway concept. Back in 2009-'13, studies were done on the North Mendota Parkway concept, including an Implementation Study to identify the route in the general CTH K corridor on new alignment that would minimize the impacts to environmental and agricultural resources. Following the studies, in order to address growth management issues and minimize indirect impacts to these resources in the larger North Mendota Parkway Corridor, including STH 113 and STH 19, local communities in the corridor adopted an intergovernmental agreement that committed the communities to implementing the land use/transportation planning recommendations from the implementation study. These included:

- Adoption of a transportation policy that provides for access control on all identified future collector roadways;
- Official mapping of the North Mendota E-Way to preserve open space system sites; and
- Adoption of a North Mendota Area Plan with a 50-year time horizon that includes a development plan map depicting development areas, permanent preservation areas (including sensitive environmental areas, farmland protection areas, and significant historic/cultural resources), and other "indefinite future areas."

Dane County and area communities adopted resolutions supporting the recommendations of the North Mendota Parkway Implementation Oversight Committee, which had been set up to identify the E-Way corridor and the roadway corridor. The E-Way or North Mendota Natural Resources Area was incorporated by the county into the Dane County Parks and Open Space Plan. A specific route for the roadway was not identified for the section of the corridor between CTH Q and USH 12, but rather just a general area. No further activities have been undertaken to implement the above recommendations or identify a specific route for the roadway. The RTP recommends

that this study be updated and a corridor identified and officially mapped with eventual construction of the roadway or expansion of CTH K if a route on new alignment cannot be secured. More in depth environmental analysis would be done as part of the update to that study and eventual project design.

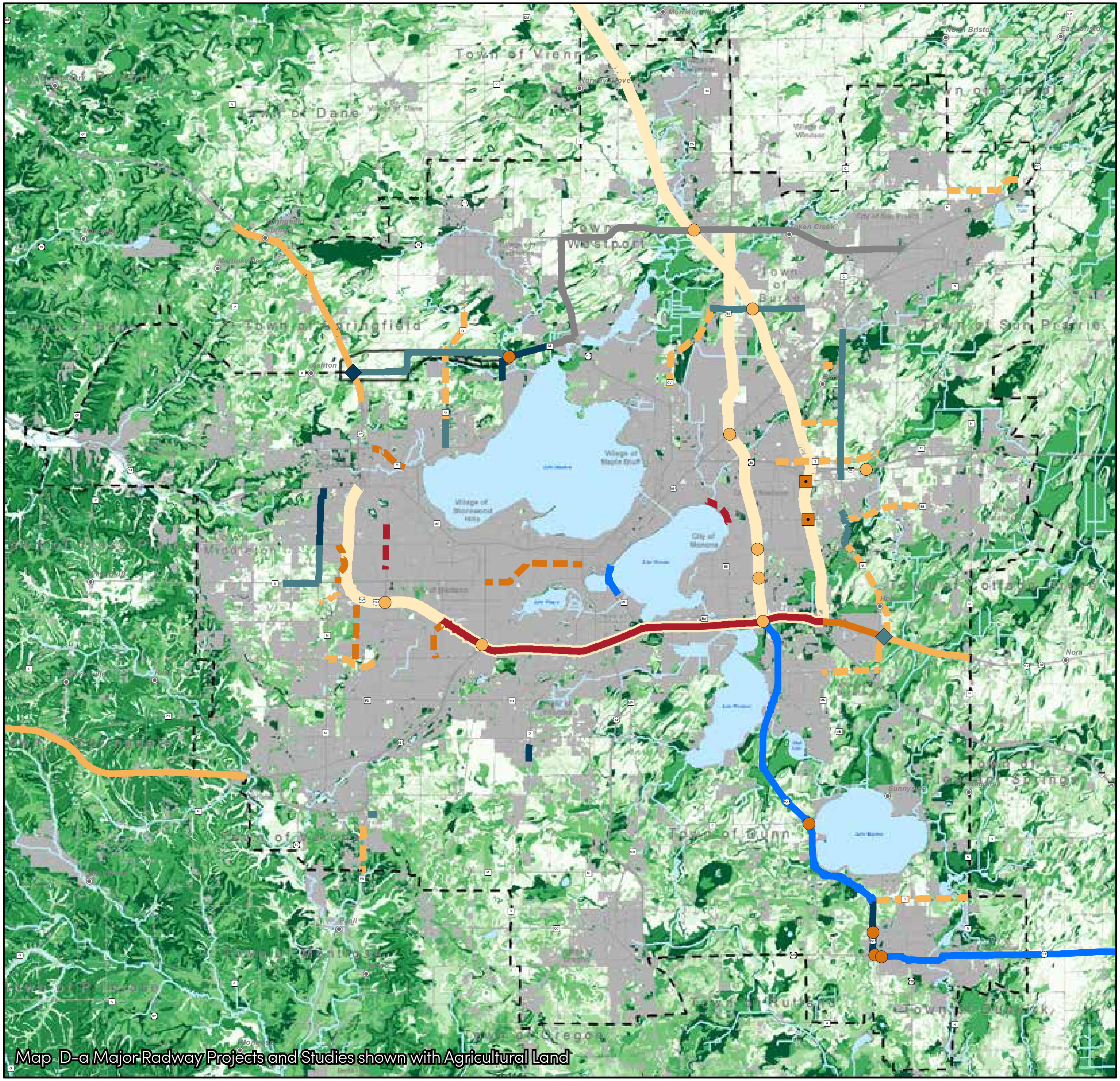
The northeastern segment of the North Mendota Parkway along STH 113 and STH 19 is recommended for a future major corridor study as that is a corridor already experiencing congestion, which will worsen in the future. It is not anticipated that this study would occur in the near future. More detailed environmental analysis would be conducted as part of such a study before any specific improvements would be recommended.

With the possible exception of CTH K, all of the plan's recommended major local arterial capacity expansion projects involve reconstruction of existing roadways to provide additional travel lanes rather than new roadways on new alignment. Again with the exception of CTH K, these local arterial projects are located in developing areas or in areas planned for future urban development within the next 30 or so years. None of these projects is of a scale or nature that would be expected to result in significant indirect and/or cumulative impacts to environmental or agricultural resources located outside these planned areas of development.

Corridors identified for right of way preservation, access management, and official mapping where appropriate that have traverse larger numbers of resources include: CTH AB (Sprecher Rd. to USH 12/18 and USH 12/18 to Siggelkow Rd.; CTH B (USH 51 to CTH N); CTH Q (Bishops Bay Pkwy. to Meffert Rd.); and CTH BB (Sprecher Rd. to Damascus Trl.). Potential impacts to these environmental, agricultural, and historic resources would need to be considered in the future if and when a roadway widening project were undertaken.

The state highway corridors for which major studies are currently in process (Beltline, USH 51/Stoughton Rd., and Interstate) all traverse a large number of environmental resources. Detailed environmental analysis is or will be done as part of those studies.

Major Roadway Projects and Studies shown with Agricultural Land



Map D-a Major Radway Projects and Studies shown with Agricultural Land

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- MPO Boundary
- Perennial Stream
- Open Water
- Existing_Development_2015

Agricultural Land Evaluation*

- 1 (Best)
- 2
- 3
- 4
- 5
- 6
- 7
- 8 (Worst)

* The soils in Group 1 are the best soils for agriculture.

The original rankings were created by joining tables with Land Evaluation (LE) information by soil map unit with the soils polygon layer.

Land Evaluation (LE) is a component of the Land Evaluation Site Assessment (LESA) system and rates the soil-based qualities of a site for agricultural use. The factors used to determine agricultural Land Evaluations were developed by the NRCS with cooperation from the Dane County Land Conservation Department (DCLCD). Ratings were based on information from the Land Evaluation and Site Assessment: A Guidebook for Rating Agricultural Lands, Second Edition, published by the Soil and Water Conservation Society (1996).

LE ratings for each soil map unit were created based on three factors:
1. prime farmland (10%)
2. soil productivity for corn and alfalfa (45%)
3. land capability class (45%)

In 2019 the LE ratings were changed and normalized into groups from the top 10 percent of the county. DCLCD and Dane County Planning placed the new LE rating into one of the 8 groups to be consistent with the previous categories.

* Improvements Pending EIS and Funding

Prepared by staff to the:

Date Revised: 3/10/2022

Source Info:
Major Projects: 2022 (MPO)
Street Base: 2021 (MPO//DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Agricultural Soils: 2019 (NRCS/DCLCD).
Land Use: 2015 (CARPC).

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Miles

Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

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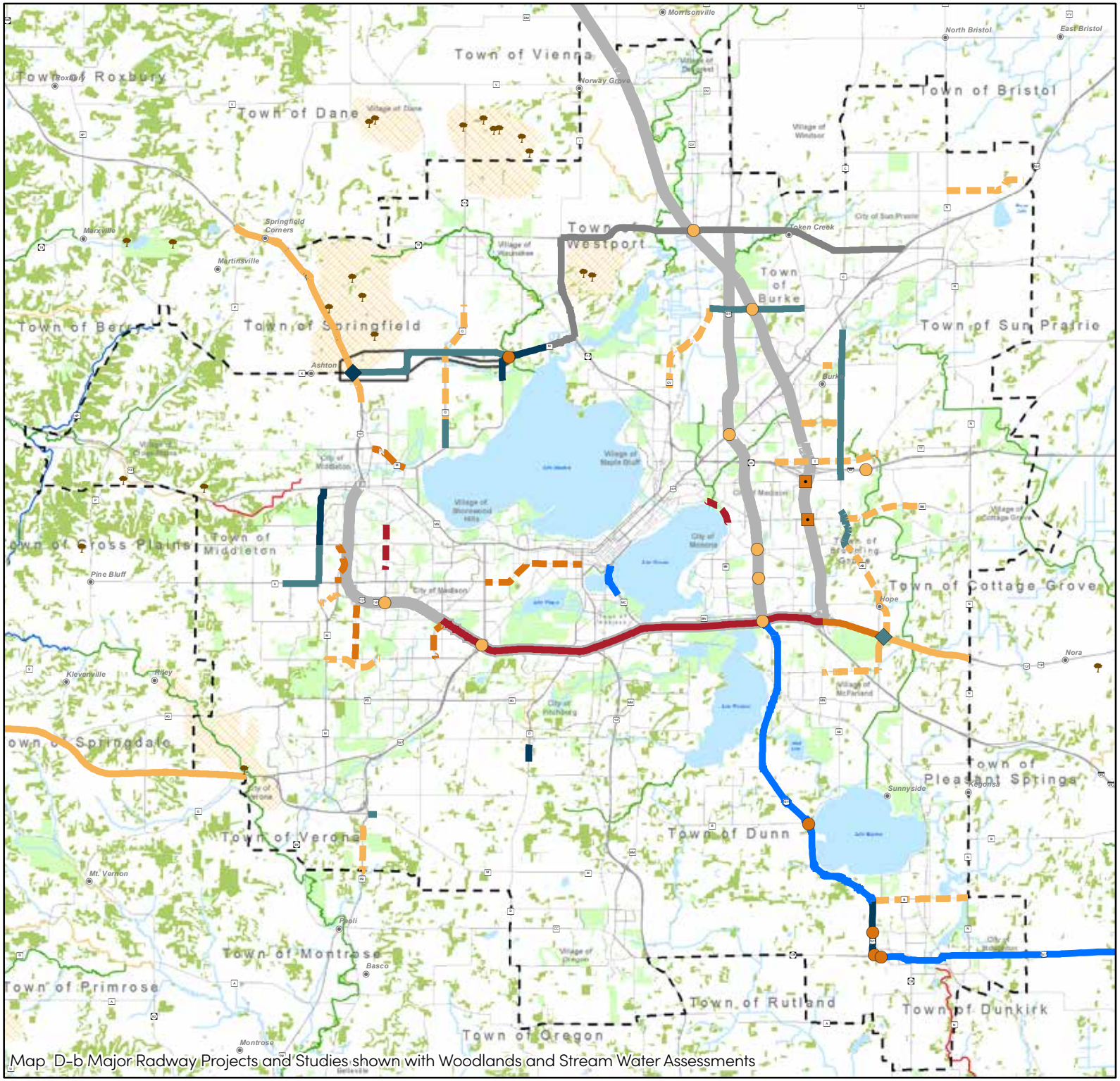

Major Roadway Projects and Studies shown with Woodlands and Stream Water Assessments

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- Unprotected Native Prairie and Savanna Remnants
- MPO Boundary

Stream Water Assessments

- Excellent
- Fair
- Good
- Poor
- Open Water
- Outdoor Recreation
- Woodland
- Unprotected Grassland Areas

* Improvements Pending EIS and Funding

Prepared by staff to the:

Date Revised: 3/10/2022

Source Info:
Major Projects: 2022 (MPO).
Street Base: 2021 (MPO/DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Native Prairie, Savanna Remnants, Grasslands: 2012 (Dane County Parks).
Woodlands: 2015, Land Use Inventory (CARPC).
Recreation: 2015, Land Use Inventory (CARPC).
Stream Water Assessments: 2016 (WIDNR).
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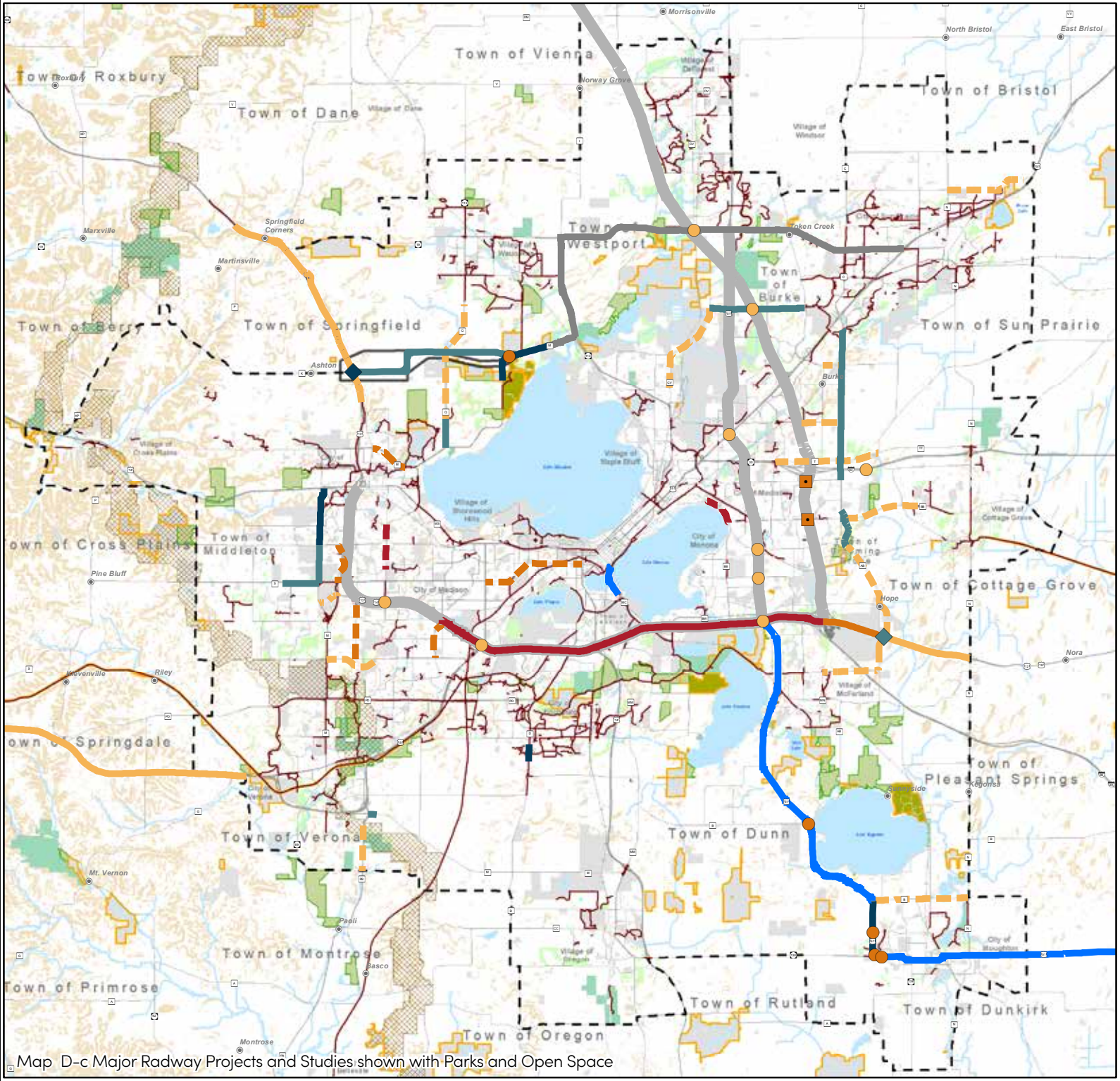
Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

Map D-b Major Radway Projects and Studies shown with Woodlands and Stream Water Assessments



Map D-c Major Radway Projects and Studies shown with Parks and Open Space

Major Roadway Projects and Studies shown with Parks and Open Space

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- Bike and/or Ped Path
- MPO Boundary
- Ice Age Trail Corridor
- County Park
- State Park
- Native American Lands
- Natural Resource or Wildlife Area
- Perennial Stream
- Open Water
- Public Lands (includes local parks)
- Slope GTE 12%
- Environmental Cooridors

* Improvements Pending EIS and Funding

Prepared by staff to the:

Date Revised: 3/10/2022

Source Info:
Major Projects: 2022 (MPO)
Street Base: 2021 (MPO/DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Bike/Ped Paths: 2022 (MPO).
Ice Age Trail Corridor: 2022 (Ice Age Trail Foundation).
Parks, Resource/Wildlife Areas: 2022 (Dane County Parks, MPO).
Public Lands: 2022 (DCLIO).
Native American Lands: 2021, Dane County Parcels (DCLIO, MPO).
Environmental Corridors: 2021 (CARPC).
Slopes: 2013 (MPO).
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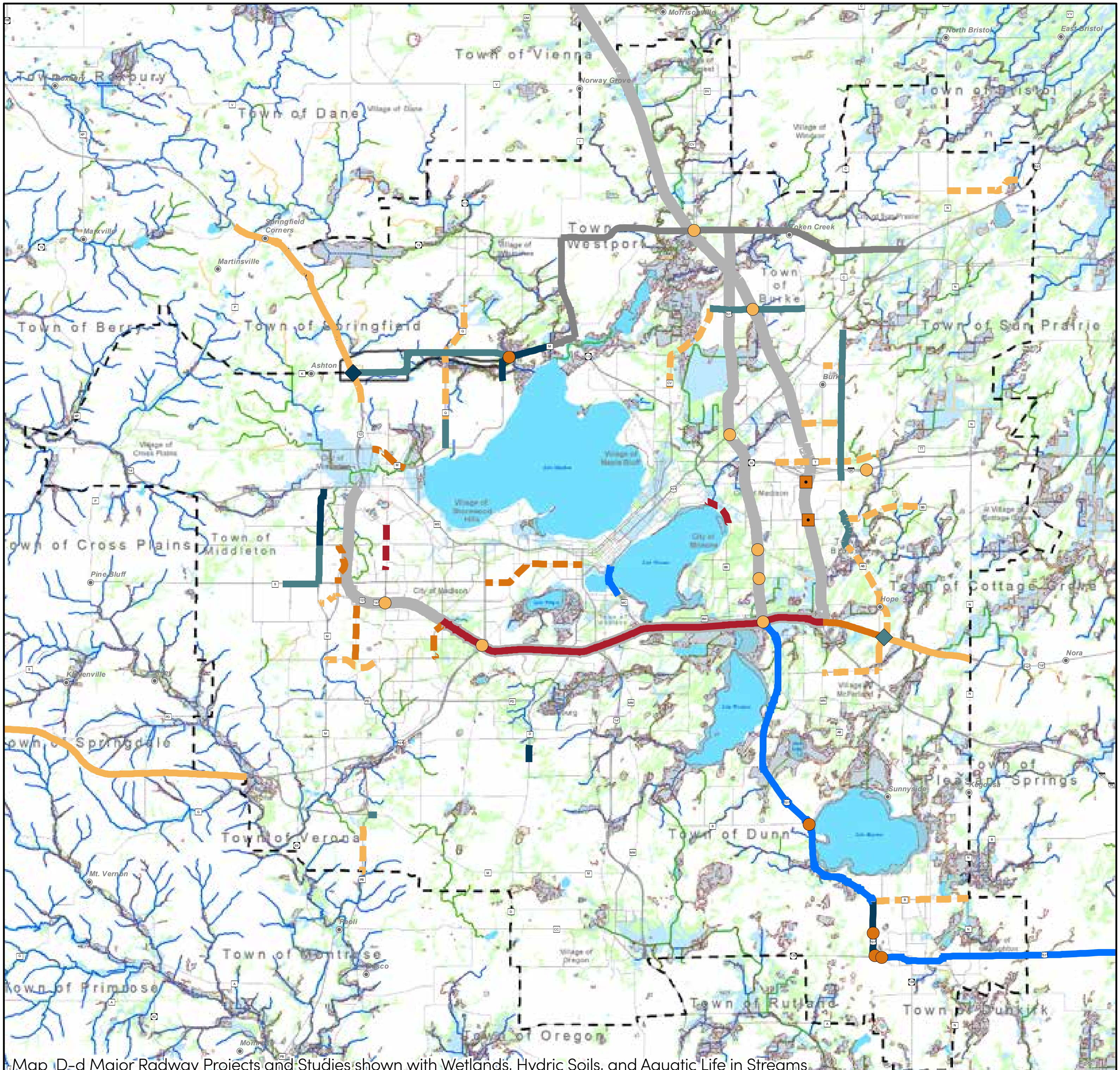
Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

Major Roadway Projects and Studies shown with Wetlands, Hydric Soils, and Aquatic Life in Streams



Map D-d Major Radway Projects and Studies shown with Wetlands, Hydric Soils, and Aquatic Life in Streams

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- MPO Boundary
- Wetland

Stream Natural Communities

- Cold; Cool-Cold
- Cool-Warm
- Warm
- Open Water

Hydric Soils

- Hydric or Predominantly Hydric
- Partially Hydric or Predominantly Non-hydric

* Improvements Pending EIS and Funding

Prepared by staff to the:

mpo

Date Revised: 3/10/2022

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Miles

Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

Source Info:
Major Projects: 2022 (MPO)
Street Base: 2021 (MPO//DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Wetlands: 2021 (WIDNR).
Hydric Soils: 2021 (DCLWRD).
Stream Communities: 2016 (WIDNR).
Author: pldms
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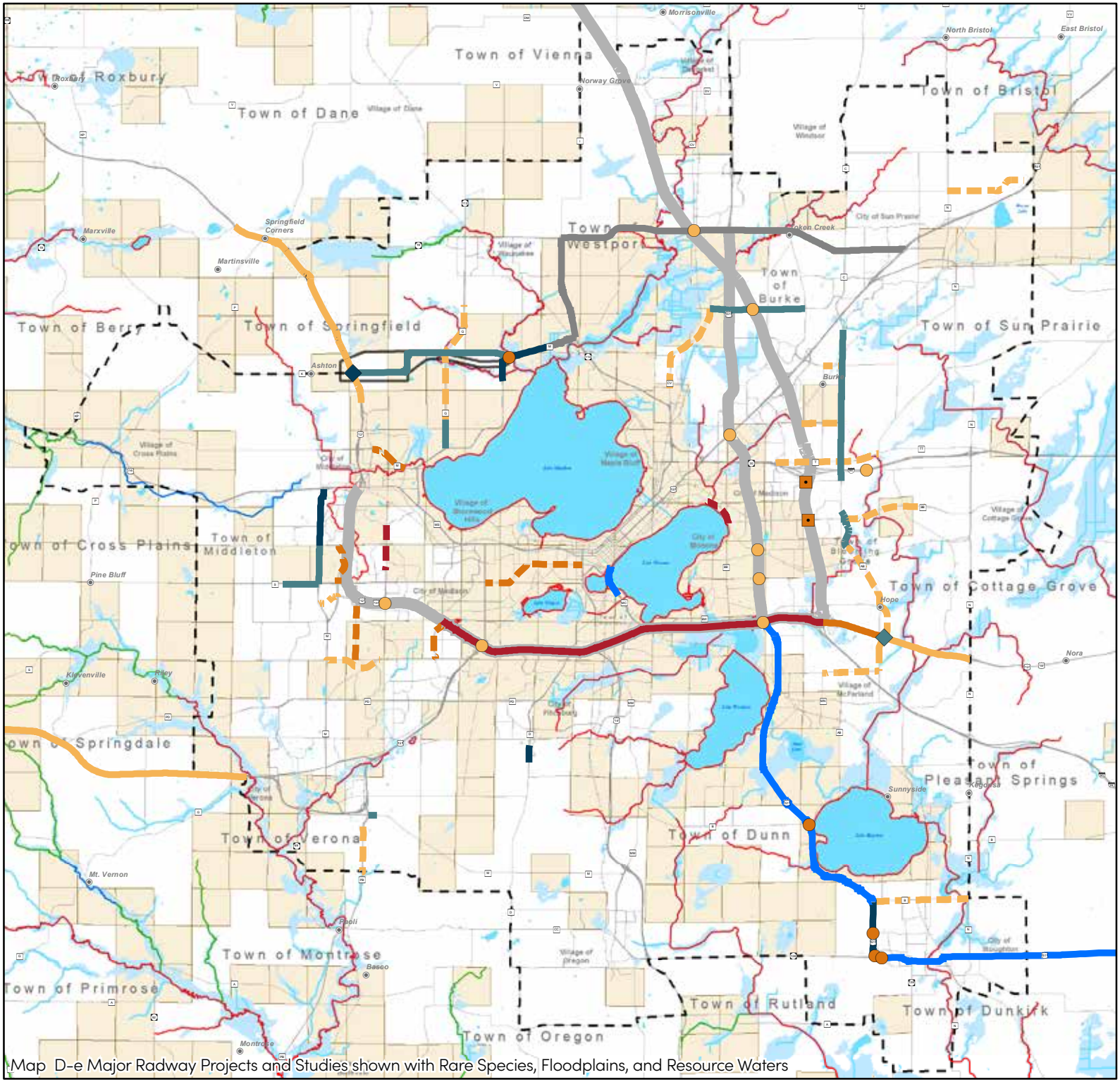

Map D-e Major Radway Projects and Studies shown with Rare Species, Floodplains, and Resource Waters

Major Roadway Projects and Studies shown with Rare Species, Floodplains, and Resource Waters

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- Listed Impaired Waters 303(d)
- Exceptional Resource Waters
- Outstanding Resource Waters
- MPO Boundary
- Open Water
- 100 Year Floodplain
- Aquatic and/or Terrestrial Rare Species**

* Improvements Pending EIS and Funding

**Rare Species found within the PLSS Section Indicated

Prepared by staff to the:

mpo

Date Revised: 3/13/2022

Source Info:
Major Projects: 2022 (MPO)
Street Base: 2021 (MPO/DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Resource Waters: 2017-2019 (WIDNR).
Rare Species: 2021 (WIDNR).
Floodplain: 2016 (FEMA).

Author: plcms
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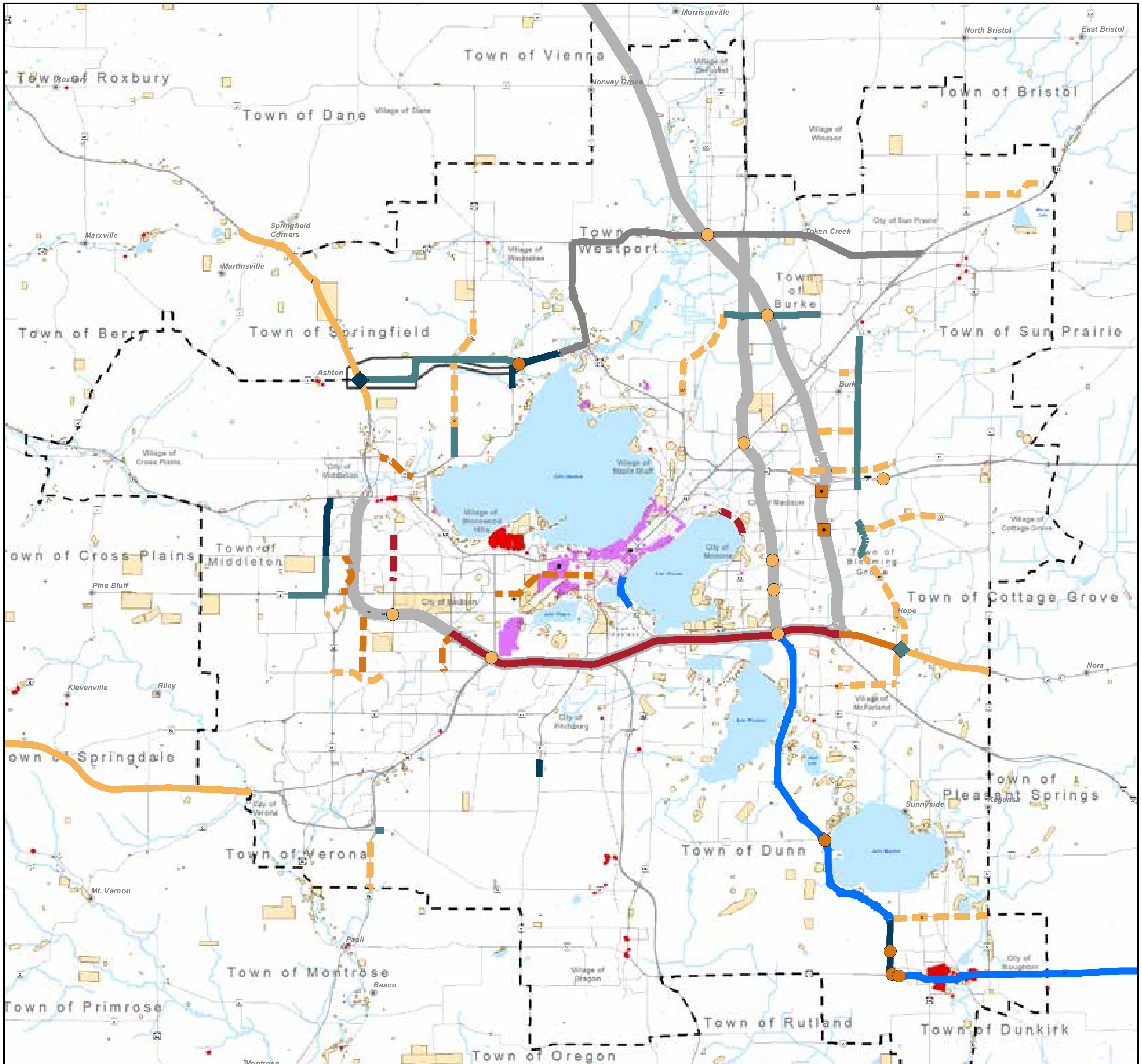
Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

Major Roadway Projects and Studies shown with Historical and Archaeological Sites



Map D-f Major Radway Projects and Studies shown with Historical and Archaeological Sites

- Bridge Capacity Expansion (Planned)
- Major Intersection Improvement (Programmed)
- New or Improved Interchange (Programmed)
- New or Improved Interchange (Planned)
- Study Potential Interchange or Intersection Improvement
- Freeway Capacity Expansion: Flex Lanes (Programmed)
- Freeway Conversion (Programmed)
- Official Map For Potential Freeway Conversion
- Major Arterial Roadway Reconstruction (Programmed)
- Arterial Roadway Capacity Expansion (Programmed)
- Arterial Roadway Capacity Expansion (Planned)
- Reserve ROW Official Map, Manage Access
- Arterial Roadway Capacity Reduction (Programmed or Planned)
- Study Potential Capacity Reduction
- Major Corridor Studies (Recommended)
- Major Corridor Studies (Current)*
- Potentially On New Alignment
- Frank Lloyd Wright Building

Architecture and History Inventory (AHI)

- Dane County Historical Site
- Madison Historical Site
- MPO Boundary

Archaeological Sites Inventory (ASI)

- Archaeological and Burial Sites
- Perennial Stream
- Open Water

* Improvements Pending EIS and Funding

Prepared by staff to the:

Greater Madison mpo

Date Revised: 3/10/2022

N

0 1 2
Miles

Lambert Conformal Conic Projection
WISCRS- Dane, NAD 83(91)

Source Info:
Major Projects: 2022 (MPO)
Street Base: 2021 (MPO//DCLIO).
Hydrography: 12/00, 1:24,000 (WIDNR).
MPO Boundary: 2013 (MPO).
Historical and Archaeological Sites: 2022 (SHPO).

Author: pldms
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Environmental Screening of Projects

MPO staff conducted an environmental screening of planned capacity expansion roadway projects and studies using the MPO's geographic information system (GIS) database. The purpose of this screening was to identify those projects that have the potential to negatively impact the natural and built environment, with the intent of minimizing such impacts. The environmental screening results also inform the MPO Policy Board, WisDOT, and local governments of possible environmental impacts associated with these improvements to the region's roadway system.

Following consultation with CARPC staff, the following environmental resources or features were chosen for the environmental screening as further described above:

- Best agricultural soils (based upon the agricultural land evaluation rating system)
- Wetlands and water bodies
- Environmental corridors
- Steep slopes
- Streams
- Parks and other recreational areas
- Tribal lands
- General location (PLSS section) where rare or threatened species have been located
- Historic properties
- DNR Managed Lands

Burial sites were not included in this analysis as the sites are not made public. However, they are a protected resource under section 157.70 of the Wisconsin Statutes, and must be considered when evaluating potential projects.

There is overlap among the selected environmental features, since environmental corridors are based on natural features and environmental lands such as streams, lakes, floodplains, wetlands, steep slopes, woodlands, parks, and other publicly owned lands. However, it was decided to separately screen for some of these features since not all of them are included within environmental corridors. This ensured that the screening captured all potentially environmentally significant lands.

For the screening, a buffer of 125 feet on either side of the roadway centerline was used, making for a 250- foot wide buffer overall. This is about twice the size of the typical 120-foot right of way used for a four-lane, divided urban street. This buffer width was used to account for minor discrepancies in environmental resource mapping, as well as areas outside the right of way that could potentially be affected by construction activity and storm water runoff.

Figure C-b lists all of the planned or potential future roadway capacity expansion projects, including capacity improvement studies, and indicates those that appear to have one or more of the above-listed resources within the buffer zone of the project. This screening does not eliminate the need for the project sponsor to complete an in-depth environmental assessment that meets the requirements of the NEPA and the Wisconsin Environmental Policy Act (WEPA), where applicable.[3]

All planned roadway projects are adjacent to at least three environmental resources or features. Steep slopes and highly rated agricultural soils fall within the buffers of all of the projects that were evaluated, and all but five would potentially disturb environmental corridors. None of the projects is adjacent to tribal land. It should be noted that the screening process did not include a detailed review of orthophoto maps showing the resource features and project buffers.

The screening was conducted to provide an early warning about projects for which impacts to resources will need to be assessed further. The location of one or more environmental features within the buffer zone may influence the design (e.g., width of median), alignment, timing, and/or cost of planned projects. The assessment does not prevent a project from moving forward, but identifies potential impacts that may need to be addressed as the project goes into the design and preliminary engineering phase.

3 Chapter 21 of the Wisconsin Facilities Development Manual provides the procedures for preparing and processing environmental documents required by NEPA and WEPA.

Environmental Screening of Projects

Project #	Facility	Segment	Best Ag. Soils	Wetlands / Water Body	Envi.Corr.	Steep Slopes	Stream	Parks/Rec. Facilities	Tribal Lands	Rare Species	Historic Properties	DNR Managed Land
Planned Projects												
Roadway Segments - Local												
1	***Mineral Point Rd. (CTH S)***	***Veritas Dr to Pleasant View Rd***	X		X	X				X		
2	***Pleasant View Rd***	***Old Sauk Rd to Mineral Pt Rd***	X			X				X	X	
3	***Sprecher Rd***	***Realignment - Wyalusing Rd to Buckeye Rd***	X	X	X	X		X			X	
4	CTH AB	Sprecher Rd to Sigglekow Rd	X	X		X	X	X			X	
5	Lien Rd	I-39/90/94 to Reiner Rd	X	X	X	X				X		
6	CTH B	US 51 to CTH N	X	X	X	X	X	X			X	
9	***Hoepker Rd***	***CTH CV to American Pkwy***	X		X	X				X	X	
10	Nelson Rd	Reiner Rd to Felland Rd	X			X						
11	***Reiner Rd/Sprecher Rd***	***Milwaukee St to O'Keefe Ave***	X	X	X	X				X		
13	Sigglekow Rd	Holscher Rd to CTH AB	X	X	X	X						
15	Watts Rd	Pleasant View Rd to Junction Rd	X		X	X						
16	CTH Q	Bishops Bay Pkwy to Meffert Rd	X	X	X	X	X			X	X	X
25	***CTH Q***	***Century Ave to Bishops Bay Pkwy***	X		X	X				X		
17	CTH T/Commercial Ave	Thompson Dr to CTH TT	X		X	X						
18	CTH BB/Cottage Grove Rd	Sprecher Rd (new alignment) to 0.15 mi west of Damascus Trl	X		X	X	X	X		X	X	
20	***CTH K***	***CTH M to US 12***	X		X	X	X			X	X	X
21	CTH PB	Rolling Oaks Ln to Sunset Dr	X		X	X		X				
22	Mid Town Rd	Realignment - Pleasant View Rd to Raymond Rd	X	X	X	X				X		
23	CTH CV	Tenneyson Ln to Hoepker Rd	X	X		X				X	X	
24	Egre Rd	CTH N to Elder Ln	X	X		X						X
Studies												
7	US 51	Beltline to STH 19	X	X	X	X	X	X		X	X	
8	STH 19	STH 113 to US 151	X	X	X	X	X	X		X	X	X
12	Beltline Hwy	US 14 to I-39/90	X	X	X	X	X			X	X	
14	I-39/90	Beltline Hwy to northern boundary of county (partly outside MPO Planning Area)	X	X	X	X	X	X		X	X	
19	STH 113	CTH M to STH 19	X	X	X	X		X		X	X	

Note: Only projects in ***italics*** are recommended for potential capacity expansion at this time; others are potential longer term projects or cross-section has not been determined.

Figure D-b Environmental Screening of Projects

Environmental Mitigation Strategies and Activities

Proposed roadway capacity expansion projects are developed through the regional transportation planning process to minimize impacts to environmentally sensitive resources. First, in terms of land use, the growth scenario used for development of the plan is based on CARPC's Regional Development Framework, which prioritizes growth in infill/redevelopment areas and in centers and multi-modal corridors with relatively high densities, minimizing the need for greenfield development. The vast majority of all future growth was allocated to existing urban service areas.

In developing the future year 2050 travel forecasts, implementation of the full bus rapid transit (BRT) system vision, addition of express bus service, and other planned service improvements totaling a 127% increase in service hours were assumed despite the fact that only the East-West and North-South BRT corridors and a fraction of the increase in other transit service are part of the financially constrained RTP as noted in Chapter 5, the financial analysis of the plan. The forecasts also assume an ambitious new bikeway network. To address remaining traffic congestion, the impacts of new two-lane collector street connections and extensions were tested prior to consideration of any major capacity expansion projects on the arterial roadway system. Consistent with the MPO's congestion management policy, capacity expansion projects are thus considered only to address the residual traffic congestion not addressed by these land use and transportation measures, including greatly expanded public transit.

As noted, this planning approach is consistent with the MPO's Congestion Management Process (see Appendix F) to utilize Transportation Demand Management (TDM), Transportation System Management & Operations(TSMO), and Intelligent Transportation Systems (ITS) or technology solutions prior to consideration of roadway capacity expansion. It is also the policy of the MPO to accept higher congestion levels (generally mid Level of Service E) during peak hours on major roadways before giving consideration to expanding or building new roadway facilities.

While inclusion of a recommended project in the regional transportation plan represents preliminary regional support for the project, projects go through several steps from conception to implementation and take many years to successfully complete. Detailed environmental analyses of individual projects occurs later in the project development process as they approach the preliminary engineering stage. At this stage, project design features may be refined and the environmental impacts and mitigation strategies can be identified.

During preliminary engineering and environmental studies of roadway capacity expansion projects with possible unavoidable impacts on environmentally sensitive resources, it is expected that efforts to eliminate or minimize any adverse impacts will be exhausted. Evaluation of alternatives should follow the fundamental NEPA hierarchy of avoid-minimize-mitigate. The scope of the necessary preliminary engineering and environmental studies would include the consideration of alternate alignments and cross-sections designed specifically to minimize the impacts on environmentally sensitive resources. To further minimize impacts, consideration should be given to the use of alternative design features or operational management measures. These might include special context sensitive design features, landscaping or screening to minimize impacts on parks or natural areas, or construction of a bridge over wetlands rather than a roadway on a filled embankment even if it significantly increases project costs. Another technique that should be considered to minimize impacts would be to seek exceptions or variances to design standards, which would reduce the roadway cross-section through the impacted area. Measures to reduce construction-related impacts should also be used.

Where environmentally sensitive resources will be unavoidably impacted, and for which mitigation is compensatory, efforts should focus on the preferred means of mitigation as identified by the federal and state regulatory

agencies. Types of mitigation typically considered include: (1) Enhancement of the remaining adjacent environmentally sensitive resources, which will not be impacted as part of the roadway project; (2) Re-creation of the impacted environmentally sensitive resources; (3) Creation of new environmentally sensitive resources; or (4) Acquisition and utilization of mitigation bank credits. Potential mitigation sites could include areas within or adjacent to environmental corridors, isolated natural resource areas, and other mitigation bank sites. Mitigation banks are used when compensation at or near the project site is not practicable and the loss of the wetland is unavoidable. Currently, there is one active wetland mitigation bank site in Dane County.

Established federal and state policy and guidelines exist with respect to compensatory mitigation of certain environmentally sensitive resources. With respect to wetlands, all wetland compensatory mitigation efforts must meet the Department of the Army (DA) requirements of Section 404 of the Clean Water Act, including the United States Environmental Protection Agency 404(b)(1) Guidelines at 40 Code of Federal Regulations (CFR) Part 230, and the April 2008 Federal Rule - Compensatory Mitigation for Losses of Aquatic Resources found at 33 CFR Part 332 (Federal Mitigation Rule), Section 10 of the Rivers and Harbors Act, and WisDNR requirements in Section 281.36 of the Wisconsin Statutes, Chapter NR 350 of the Wisconsin Administrative Code, 2011 State of Wisconsin Act 118, as well as other applicable federal and state statutes, regulations, guidelines, and ordinances.

For Wisconsin Department of Transportation (WisDOT) projects, compensatory mitigation efforts must meet the requirements of the WisDOT Wetland Mitigation Banking Technical Guidelines, which set out the operational criteria for wetland mitigation banks and the responsibilities of the federal and state resource and transportation agencies. These agencies include the Wisconsin Department of Natural Resources (WisDNR), U.S. Army Corps of Engineers, U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service, and Federal Highway Administration. The Guidelines were first developed in 1993 following the establishment of a state policy on wetland banking for WisDOT through an amendment to the cooperative agreement between WisDOT and WisDNR. The Guidelines have been revised twice, most recently in 2002. An interagency review team oversees the operation and maintenance of wetland banks.