



Routing & Siting

Public Outreach

We believe it is beneficial to solicit input from individuals who may be impacted by transmission system improvements and additions. As a natural extension of the involvement of transmission system customers in the planning process, we also involve the broader public in our planning process.

Public examination and discussion of transmission plans in advance of the commencement of work enhances awareness of the needs for transmission system improvements, helps eliminate surprises and can improve projects by involving the perspectives of those most familiar with impacted areas. Even for projects subject to public discussion and review as part of a state's formal regulatory process, opportunities for the public to help shape decisions prior to the official start of the regulatory process can be helpful.

By increasing the level of public understanding of the need for a project and by vetting specific solutions to be proposed, time spent in early discussions also can save project time overall.

Our public outreach efforts may involve sharing and exchanging information about specific planned transmission line work with those who may be impacted. Depending on the work to be done, potentially impacted parties may include landowners or other community residents in the vicinity of an existing or a proposed new transmission line, local public officials, utility regulators and natural resource agencies, environmental or conservation groups, customers and other interested members of the public.

Our public outreach efforts with various stakeholders can include a variety of interactions such as one-on-one or small group meetings, public open houses, newsletters and other communication activities. The overall goal is to maintain communication with those who may benefited or be impacted by transmission system plans – with respect to needs, possible alternative solutions, or the tailoring of specific project initiatives as they proceed through the planning, siting and regulatory approval stages leading to construction.

Siting process

When transmission infrastructure improvements or additions require new right-of-way, the job of siting the facilities is a sensitive one. We follow a careful and deliberate process that provides guidance for identifying and analyzing potential options for siting and routing of transmission facilities. Through input received from agencies, the public and other stakeholders, siting criteria are developed that are applicable and appropriate for the location and issues associated with a particular project.

Legislation passed in 2003 (Wisconsin Act 89) outlined priorities for selecting locations for new transmission lines. As outlined in Act 89, Section 1.12 (6), we and the regulatory agencies are required to *“evaluate, to the greatest extent feasible consistent with economic and engineering considerations, reliability of the electric system and protection of the environment, the following corridors in the following order of priority:”*



10-Year Assessment

An annual report summarizing proposed additions and expansions to the transmission system to ensure electric system reliability.

2010

September 2010 10-Year Assessment
www.atc10yearplan.com

1. Primary opportunities

- Existing transmission lines
- Pipelines

2. Secondary opportunities

- Highways
- Railroads

3. Tertiary opportunities

- Recreational trails where rights-of-way, environmental considerations and engineering/cost feasibility warrant

4. New corridors

- Establish new corridors using section lines and/or property boundaries

A copy of Act 89 is available at the state legislature's Web site:
<http://www.legis.state.wi.us/2003/data/acts/03Act89.pdf>

New right-of-way

In addition, in siting and evaluating potential routes for transmission lines, consideration must be given to sensitive areas, which generally involve public or environmental issues. Information about sensitive areas can be found in [Table RS-2](#).

[Figure RS-1](#) provides an overview of our siting process for identifying new electric transmission corridors and indicates the opportunities for public input.

When new transmission line projects involve new rights-of-way, we gather environmental screening information. The environmental assessments provided in this section are high-level and not nearly the level of investigation that will accompany a permit application to construct transmission facilities.

[Table RS-1](#) lists the new transmission lines requiring new right-of-way and whether high-level environmental screening information is provided in this report or can be found in application materials already filed with the Public Service Commission.

[Table RS-2](#) provides environmental screening information for the lines listed in [Table RS-1](#). [Exhibits RS-1 through RS-12](#) identify the approximate end-points and study areas for each project for which high-level environmental screening information is provided.



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Existing right-of-way

Table RS-3 lists the new, rebuilt or recondoctored transmission lines requiring no new right-of-way, and whether high-level environmental screening information is provided in this report or can be found in application materials already filed with the Public Service Commission. Table RS-4 provides environmental screening information for the lines listed in Table RS-3.

The projects listed in Tables RS-1 through Table RS-4 do not reflect the entire number of projects included in this assessment that will require some level of environmental assessment. Rather, these projects will require selection of new rights-of-way and are likely to result in new environmental impacts. The environmental screening information highlights some of the environmental concerns that will need to be considered during any route identification process for these projects. Other projects will require environmental assessment, and those assessments will be conducted in the course of finalizing the scope for each of those projects.

Table RS-1
Identified Needs and Transmission Lines Requiring New Right-of-Way

Identified need	Potential solutions	Approx. line mileage		System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments and/or Corresponding Exhibit Number
		Total	New ROW					
T-D interconnection request	Construct 69-kV line from new Warrens Substation to the Council Creek-Tunnel City 69-kV line	7.3	7.3	2010	2010	1	Yes	
T-D interconnection request	Construct 115-kV line from new Woodmin Substation to the Clear Lake Substation	7.5	7.5	2012	2012	1	Yes	
relieve overloads or low voltages under contingency	Construct 345-kV line from Rockdale to West Middleton	32.4	32.4	2013	2013	3	No	PSCW Approved - Under construction
relieve overloads or low voltages under contingency	Rebuild Straits-Pine River 138-kV lines 6904/5	25.3	25.3	2014	2014	2	Yes	New line must be built next to existing line, then the old line can be removed.
relieve overloads or low voltages under contingency	Construct 18th Road-Chandler double circuit 138-kV lines and operate at 138/69	4	4	2014	2014	2		
T-D interconnection request	Construct a 69-kV line from SW Ripon to the Ripon-Metomen 69-kV line	1.5	1.5	2015	2015	1	Yes	
relieve overloads or low voltages under contingency	Construct Gwinn-Forsyth second 69-kV line	0.84	0.84	2016	2016	2	Yes	Existing row to be expanded
relieve overloads or low voltages under contingency, T-D interconnection request	Construct new 138-kV line from North Lake Geneva to South Lake Geneva Substation	3.4	3.4	2016	2016	35	Yes	
relieve overloads or low voltages under contingency	Construct second Dunn Road-Egg Harbor 69-kV line	12.66	12.66	2018	2018	4	Yes	
relieve overloads or low voltages under contingency	Construct Fairwater-Mackford Prairie 69-kV line	0	5	2018	2018	1	Yes	
T-D interconnection request,relieve overloads or low voltages under contingency	Construct Spring Valley-Twin Lakes-South Lake Geneva 138-kV line	24.0	15	2018	2018	35	Yes	
relieve overloads or low voltages under contingency	Construct a Lake Delton-Birchwood 138-kV line	5	5	2020	2020	31	Yes	
relieve overloads or low voltages under contingency	Construct a Hubbard-East Beaver Dam 138-kV line	10	10	2022	2022	34	Yes	
relieve overloads or low voltages under contingency, economics	Construct Shoto to Custer 138-kV line	6.9	6.9	2022	2022	4	Yes	

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

New Warrens Substation to Council Creek-Tunnel City 69-kV line

	General Description	New line
	Length (miles)	approximately 7.3
#1	Screening Area (Sq. mi.- length X width)	approximately 69
#2	Corridor Sharing Opportunities	State and Federal highways, and existing transmission line rights-of-way offer opportunity for corridor sharing.
#3	Public Lands	Buckley, Gillette, and Veterans Park in Tomah, and Mill Creek State Fishery Area are found in the screening area.
#4	Sensitive Resources	Mill Creek State Fishery area and Mud Creek are located in the screening area.
#5	Cultural Resources	The Cultural Map of Wisconsin does lists several markers, the Harris G. Allen Telcommunications Museum, and the Little Red Schoolhouse in Gillette Park within the screening area. Several railroad related sites and local cemeteries are known in the screening area.
	Miscellaneous	Mesner landing strip is in the screening area.

Woodmin -Clear Lake 115-kV line

	General Description	New line
	Length (miles)	approximately 6
#1	Screening Area (Sq. mi.- length X width)	approximately 51
#2	Corridor Sharing Opportunities	State and county highways and local roads offer opportunities for corridor sharing.
#3	Public Lands	Northern Highland - American Legion State Forest, Brandy Lake Park, Bearskin Hiawatha Coop State Trail, local parks and recreational facilities are located in the project area.
#4	Sensitive Resources	Minocqua, Mud, Johnson, Snake, Bullhead, and several other lakes, numerous streams and channels and wetlands are located within the study area.
#5	Cultural Resources	The WHS database has identified architectural and historic sites within the study area. The Lac du Flambeau reservation is located at the west edge of the screening area.
	Miscellaneous	There is a moderate probability of encountering endangered resources.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Rebuild Straits-Pine River 138-kV lines 6904/5

General Description	Rebuild adjacent to existing lines
Length (miles)	25.3
#1 Screening Area (Sq. mi.)	na. - follows existing route
#2 Corridor Sharing Opportunities	Existing transmission line corridor.
#3 Public Lands	Project area lies within the Hiawatha National Forest.
#4 Sensitive Resources	Extensive woodlands, wetlands and several streams are crossed on the line route. The route also crosses remnant dunes and several high quality natural habitats.
#5 Cultural Resources	There is a moderate - high probability of encountering archaeological resources along the near-shore area of Lake Michigan and near waterway crossings.
Miscellaneous	There is a high probability of encountering rare species along this route due to the waterways, wetlands, and other habitats.

Southwest Ripon to the Ripon-Metomen 69-kV line

General Description	New line
Length (miles)	1.5
#1 Screening Area (Sq. mi.)	4
#2 Corridor Sharing Opportunities	County and local roads provide opportunities for corridor sharing.
#3 Public Lands	Barlow Park and Kiwanis Park are within the study area.
#4 Sensitive Resources	Two unnamed streams & associated wetlands are located within the study area.
#5 Cultural Resources	The WHS database identifies numerous architectural and historic sites within the City of Ripon.
Miscellaneous	There is a low probability of encountering endangered resources.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Gwinn-Forsyth second 69-kV line

General Description	Add second circuit along existing route
Length (miles)	0.84
#1 Screening Area (Sq. mi.)	na. - follows existing route
#2 Corridor Sharing Opportunities	Existing transmission line corridor.
#3 Public Lands	Escanaba River State Forest
#4 Sensitive Resources	The line route crosses a limited amount of wetland
#5 Cultural Resources	Based on the setting of the route, there is a low to moderate probability of encountering endangered resources.
Miscellaneous	There is a low to moderate probability of encountering endangered resources.

North Lake Geneva-South Lake Geneva 138-kV line

General Description	New line
Length (miles)	approximately 3.4
#1 Screening Area (Sq. mi.)	approximately 21
#2 Corridor Sharing Opportunities	US Hwy 12 and State Hwy 120, along with other roads offer opportunities for corridor sharing, along with the existing transmission line Y-152
#3 Public Lands	Big Foot Beach State Park and other WDNR owned lands are located within the study area.
#4 Sensitive Resources	Lake Geneva, Lake Como, White River, and a number of large wetland complexes are located within the study area.
#5 Cultural Resources	The WHS database identifies archaeological and historic resources in the study area, particularly located near Lake Geneva.
Miscellaneous	There is a moderate probability on encountering endangered resources.

Table RS-2

Environmental Screening Information for Lines Requiring New Right-of-Way

Dunn Road-Egg Harbor 69-kV line

	General Description	Construct a second line
	Length (miles)	12.66
#1	Screening Area (Sq. mi.)	82.7
#2	Corridor Sharing Opportunities	State Hwy 42 and existing transmission line X-24A provide the best opportunities for corridor sharing, along with county and local roads.
#3	Public Lands	None identified
#4	Sensitive Resources	The study area is adjacent to Lake Michigan.
#5	Cultural Resources	The WHS database identifies several architectural and historic sites within the study area, many are located near State Hwy 42.
	Miscellaneous	There is a high probability of encountering endangered resources.

Fairwater-Mackford Prairie 69-kV line

	General Description	New line
	Length (miles)	5
#1	Screening Area (Sq. mi.- length X width)	44.9
#2	Corridor Sharing Opportunities	State and County roads, railroad corridor, and existing electrical distribution lines routes located within the screening corridor offer the potential for corridor sharing.
#3	Public Lands	WDNR owns several parcels of "scattered wildlife" lands along the Grand River corridor.
#4	Sensitive Resources	The Grand river and associated wetlands are located in the project area.
#5	Cultural Resources	The WHS database identifies numerous arcahaeological, architectural and historic sites within the screening area. Cultural Map of Wisconsin does not identify any sites within the screening area.
	Miscellaneous	There is a moderate probability on encountering endangered resources.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Spring Valley-Twin Lakes-South Lake Geneva 138-kV line

	General Description	New Line
	Length (miles)	approximately 15 miles of new line
#1	Screening Area (Sq. mi.- length X width)	approximately 113
#2	Corridor Sharing Opportunities	Existing transmission lines, state and county roads located within the screening area offer the best possibility of corridor sharing.
#3	Public Lands	Numerous local parks, the New Munster state wildlife area and Camp Lake, Hooker Lake, and Silver Lake state fishery areas are located within the screening area.
#4	Sensitive Resources	Silver Lake, Camp Lake, Center Lake Lake Mary and Powers Lake and the Lower Fox (Illinois) River drainage basin are found within the screening area. The New Munster Bog Island, Silver Lake Bog, and Peat Lake State Natural Areas also are located in the screening area.
#5	Cultural Resources	The WHS database identifies archaeological and historic resources in the study area, particularly associated with lakes and rivers.
	Miscellaneous	

Lake Delton-Birchwood 138-kV line

	General Description	New line
	Length (miles)	approximately 5
#1	Screening Area (Sq. mi.- length X width)	approximately 41
#2	Corridor Sharing Opportunities	Interstate Highway 90/94, US Highway 12, State Highway 23, several county highways and local electrical distribution lines.
#3	Public Lands	Mirror Lake State Park, Dell Creek wildlife area, Hulburt Creek Woods State Natural Area and Hulburt Creek fishery area.
#4	Sensitive Resources	State Natural Areas and State Parks, Dell Creek, Harrison Creek, Lake Delton, Mirror Lake, Lake Blass, International Crane Foundation are located within the screening area.
#5	Cultural Resources	Cultural Map of Wisconsin identifies Dawn Manor, Seth Peterson cottage, International Crane Foundation, and the H.H. Bennett Studio within the screening area.
	Miscellaneous	Ho Chunk tribal lands and the Baraboo Dells Airport are located in the screening area.

*Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way*

Hubbard - East Beaver Dam 138-Kv line

	General Description	New line
	Length (miles)	10
#1	Screening Area (Sq. mi.)	approximately 65
#2	Corridor Sharing Opportunities	Highway 33, county highways, and a railroad right-of-way offer possible sharing opportunities.
#3	Public Lands	Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose Trail are within the screening area.
#4	Sensitive Resources	Horicon and Shaw Marsh, Rock River, Pratt Creek, Schulz Creek, Crystal Creek, Park Creek and Beaver Dam River are located in the screening area.
#5	Cultural Resources Miscellaneous	Cultural Map of Wisconsin does not identify any sites within the screening area.

Shoto-Custer 138-kV line

	General Description	New line
	Length (miles)	6.9
#1	Screening Area (Sq. mi.)	54.3
#2	Corridor Sharing Opportunities	Existing transmission lines, state, county and local roads provide opportunities for corridor sharing.
#3	Public Lands	Several local parks and the Manitowoc County Airport are located in the project area.
#4	Sensitive Resources	The Manitowoc River, Wet Twin River, several unnamed tributaries and associated wetlands are located in the project area.
#5	Cultural Resources Miscellaneous	The WHS database identifies numerous archaeological, architectural and historic sites within the project area. There is a low to moderate probability of encountering endangered resources.

Table RS-2
Environmental Screening Information for Lines Requiring New Right-of-Way

NOTES:

- | | | |
|----|---------------------------------|---|
| #1 | Screening Area Width: | For lines 0-5 miles long, screening area width equals length of segment: for lines 5-15 miles long, screening area width equals 5 miles; for lines > 15 miles long, screening area width equals 30% of line length. |
| #2 | Corridor Sharing Opportunities: | Identify dominant corridor types. |
| #3 | Public Lands: | Identify properties by name. |
| #4 | Sensitive Resources: | List major stream crossings, significant topographic features, designated natural areas, etc. |
| #5 | Cultural Resources: | List resources shown on the statewide cultural resources map. |

**Table RS-3
Transmission Line Rebuilds/Reconductors, New Circuits and Voltage Conversions on
Existing Right-of-Way**

Identified need	Lines to be rebuilt/reconducted on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments
asset renewal	Rebuild Rock Branch-Forward 69-kV line	24.6	2010	2010	3	Yes	
relieve overloads or low voltages under contingency	Construct second Shorewood-Humboldt 138-kV underground cable	2.7	2012	2010	5	Yes	
asset renewal	Rebuild Berlin-Wautoma 69-kV line	22.9	2011	2011	1	Yes	
asset renewal	Rebuild Whitcomb-Deer Trail 69-kV line	25.8	2010	2011	1	Yes	
asset renewal	Rebuild Nine Mile-Roberts 69-kV line	54.6	2011	2011	2	Yes	
asset renewal	Rebuild Rio-North Randolph 69-kV line	19.7	2011	2011	3	Yes	
asset renewal	Rebuild Spring Green-Stagecoach 69-kV line	24.6	2010	2011	3	Yes	
ATC proposal with Madison	Replace two overhead Blount-Ruskin 69-kV lines with one underground 69-kV line	2	2010	2011	3	Yes	
generation interconnection, relieve overloads or low voltages under contingency	Rebuild Y-33 Brodhead to South Monroe 69-kV line	18	2011	2011	3	Yes	
relieve overloads or low voltages under contingency	Rebuild 2.37 miles of 69 kV from Sunset Point to Pearl Ave with 477 ACSR	2.37	2011	2011	4	Yes	
asset renewal	Reconductor Sycamore-East Towne 69-kV underground lines	0.45	2012	2012	3	Yes	
relieve overloads or low voltages under contingency	Construct Canal-Dunn Road 138-kV line	7.64	2012	2012	4	Yes	
relieve overloads or low voltages under contingency, asset renewal, potential T-D interconnection request	Rebuild part of the Y-8 Dane-Dam Heights 69-kV line	5	2015	2012	31	Yes	
economics, relieve overloads or low voltages under contingency	Construct Monroe County-Council Creek 161-kV line	17.3	2013	2013	1	Yes	
economics, relieve overloads or low voltages under contingency	Uprate Council Creek-Petenwell 138-kV line	32	2013	2013	1	Yes	
asset renewal	Rebuild Concord-Rubicon 138-kV line	13	2013	2013	3	Yes	
relieve overloads or low voltages under contingency	Increase ground clearance of M38-Atlantic 69-kV line from 120 to 167 degrees F	22	2009	2014	2	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild the Y-119 Verona to Oregon 69-kV line	11	2008	2014	3	Yes	
asset renewal	Rebuild Edgewood-St. Martins 138-kV line	7.2	2014	2014	5	Yes	
asset renewal	Rebuild Edgewood-Mukwonago 138-kV line	7	2014	2014	5	Yes	
asset renewal	Rebuild Concord-Cooney 138-kV line	10.9	2014	2014	5	Yes	
asset renewal	Rebuild St. Lawrence-Hartford 138-kV line	5.2	2014	2014	5	Yes	
asset renewal	Reconductor Redwood-First Avenue 69-kV submarine line	0.8	2015	2015	4	Yes	
asset renewal	Rebuild Butte des Morts-Neevin 138-kV line	3	2015	2015	4	Yes	
asset renewal	Rebuild Dyckesville-Sawyer 69-kV line	24.8	2015	2015	4	Yes	
asset renewal	Rebuild Merrill Hills-Waukesha 138-kV line	12.3	2015	2015	5	Yes	
asset renewal	Rebuild Mears Corners-Sunset Point 138-kV line	4.1	2016	2016	4	Yes	
asset renewal	Rebuild Woodenshoe-Mears Corners 138-kV line	2.7	2016	2016	4	Yes	
asset renewal	Rebuild Wesmark-Manrap 69-kV line	19.7	2016	2016	4	Yes	
asset renewal	Rebuild Oak Street-Highway V 69-kV line	6	2016	2016	4	Yes	
asset renewal	Rebuild Finger Road-Danz 69-kV line	3.7	2016	2016	4	Yes	
asset renewal	Rebuild Neevin-Woodenshoe 138-kV line	3.4	2016	2016	4	Yes	
asset renewal	Rebuild Montello-Wautoma 69-kV line	20	2017	2017	1	Yes	

**Table RS-3
Transmission Line Rebuilds/Reconductors, New Circuits and Voltage Conversions on
Existing Right-of-Way**

Identified need	Lines to be rebuilt/reconducted on existing ROW	Approx. mileage of rebuilt, reconducted or uprated lines	System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments
relieve overloads or low voltages under contingency, economic benefits	Construct 69-kV double-circuit line between McCue and Lamar substations	4.0	2017	2017	3	Yes	
asset renewal	Reconductor Danz-University 69-kV underground line	2.7	2017	2017	4	Yes	
asset renewal	Rebuild North Appleton-Butte Des Morts 138-kV line	11.9	2017	2017	4	Yes	
asset renewal	Rebuild Summit-Waukesha 138-kV line	14.7	2017	2017	5	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Y-32 Colley Road-Brick Church 69-kV line	19.7	2018	2018	3	Yes	
asset renewal	Rebuild Dam Heights-Portage 69-kV line	23.5	2018	2018	3	Yes	
asset renewal	Rebuild Hillman-Eden 69-kV line	28	2018	2018	3	Yes	
asset renewal	Rebuild Paris-Albers 138-kV line	12.4	2018	2018	5	Yes	
asset renewal	Rebuild Plover-Whiting 115-kV line	5.7	2019	2019	1	Yes	
relieve overloads or low voltages under contingency	Uprate the 6986 Royster to Sycamore 69-kV line to 115 MVA	3.35	2019	2019	3	Yes	
asset renewal	Reconductor West Middleton-Stagecoach 69-kV line	4.3	2019	2019	3	Yes	
asset renewal	Rebuild Goodman-Caldron Falls 69-kV line	21.3	2019	2019	4	Yes	
asset renewal	Rebuild New Holstein-Custer 69-kV line	21.8	2019	2019	4	Yes	
asset renewal	Reconductor Lodestar-Erdmann 69-kV line	5.3	2019	2019	4	Yes	
asset renewal	Reconductor Straits-McGulpin 69-kV line	6.2	2020	2020	2	Yes	
relieve overloads or low voltages under contingency	Construct Cardinal-Blount 138-kV line	5	2020	2020	3	Yes	
asset renewal	Reconductor Erdman-Edgewater 69-kV underground cable	0.7	2021	2021	4	Yes	
relieve overloads or low voltages under contingency	Reconductor Ramsey-Harbor 138-kV line	8.4	TBD	TBD	5	Yes	

Table RS-4
Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Berlin-Wautoma 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	22.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several waterways including the Fox River, several unnamed streams, and associated wetlands.
#5 Cultural Resources	One known archaeological site is listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route.
Rock Branch-Forward 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	24.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	York Prairies State Natural Area is adjacent to the line route.
#4 Sensitive Resources	The route crosses numerous waterways including the Yellowstone River, East Branch Pecatonica River, Otter Creek, Brager Branch, McPeace Valley Creek, and Kittleson Valley Creek (a trout stream), and several additional unnamed streams.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.
Rio-North Randolph 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	19.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses the State owned Peter Helland Wildlife area.
#4 Sensitive Resources	The route crosses numerous waterways including Jennings Creek (a trout stream), the North Branch Duck Creek, and associated wetlands.
#5 Cultural Resources	One archaeological site is listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

20th Street-Sauk Trail 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	1.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route passes through a highly urbanized, residential to commercial area, and crosses the Sheboygan River.
#5 Cultural Resources	One large archaeological site is listed by WHS as occurring along this route. However, the site has likely been previously disturbed due to the urban land uses.
Miscellaneous	There is a very low probability of encountering rare species along this route.

Shorewood-Humboldt 138-kV second underground	
General Description	Add a second underground circuit along existing route
Length (miles)	0.75
#1 Screening Area (Sq. mi.- length X width)	Existing transmission line corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Most of the existing line route is located in Estabrook Park.
#4 Sensitive Resources	Estabrook Park, The Milwaukee River, and an associated wetland along the west side of the river.
#5 Cultural Resources	The line crosses a known archaeological site identified in the WHS records west of the Milwaukee River.
Miscellaneous	

Whitcomb-Deer Trail 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	25.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses State owned Wiouwash State Trail and the Mountain Bay Recreational Trail.
#4 Sensitive Resources	The route crosses numerous waterways listed as Outstanding or Exceptional (OER)Resource waters as well as numerous trout streams. Sensitive resources are extensive along this route, as OERs are crossed 8 times.
#5 Cultural Resources	One archaeological site is listed by WHS as occurring along this route.
Miscellaneous	Because of the sensitive resource waters there is a high probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Spring Green-Stagecoach 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	24.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Arena Pines Sand Barrens State Natural Area is identified along the route. The route also crosses State owned lands in the Black Earth Creek Fishery area and the Lower Wisconsin Riverway.
#4 Sensitive Resources	The route crosses numerous waterways including several trout streams. Named waterways include The Wisconsin River, Blue Mounds Creek, Black Earth Creek, Halfway Prairie Creek, and Vermont Creek. In addition, Garfoot Creek, an Exceptional Resource Water, is crossed near Stage Coach SW.
#5 Cultural Resources	Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a very high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Replace two overhead Blount-Ruskin 69-kV lines with	
General Description	Replace Overhead circuits with underground line
Length (miles)	2.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	Existing transmission line corridor, public roads and railroad corridors.
#3 Public Lands	Burr Jones park and the Yahara River Parkway are located along the existing route.
#4 Sensitive Resources	The Yahara River is crossed along the existing route
#5 Cultural Resources	The WHS records identify one archaeological site and several historic properties along the line route.
Miscellaneous	There is a low probability of encountering rare species. This line passes through urban lands.

Brodhead-South Monroe 69-kV line rebuild	
General Description	Rebuild
Length (miles)	18
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	None identified
#4 Sensitive Resources	The existing line crosses a number of streams.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic sites in and around the City of Monroe.
Miscellaneous	There is a low potential for encountering endangered resources.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Sunset Point-Pearl Avenue 69-kV line rebuild	
General Description	Rebuild a portion of the line
Length (miles)	2.37
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Riverside Cemetery
#4 Sensitive Resources	The existing line is adjacent to the Fox River, and passes through a few wetland areas.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies several historic sites located in the vicinity of the existing corridor along the Fox River.
Miscellaneous	The existing line passes through primarily urbanized areas.

Verona-Oregon 69-kV line rebuild	
General Description	Rebuild
Length (miles)	11
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A-Existing transmission line corridor.
#3 Public Lands	Hook Lake and Grass Lake Wildlife Area and Natural Area, USFWS land
#4 Sensitive Resources	Potential crossing of a few unnamed streams, limited wetlands, low potential to encounter threatened and endangered species.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies no historic resources in the vicinity of the existing line
Miscellaneous	The Muck Farms Airport, Tesmer Field, and Ha-Rail Field are located in the screening area.

Sycamore-East Towne 69-kV underground line rebuild	
General Description	asset renewal of 69-kV underground line
Length (miles)	0.45 miles of underground cable
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The majority of the route crosses a wetland complex along Starkweather creek but the line is located under a city street in this area.
#5 Cultural Resources	No known archaeological sites are listed by WHS as occurring along the underground segment of the route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Canal-Dunn Road 69-kV line	
General Description	Construct line
Length (miles)	7.64
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	None identified
#4 Sensitive Resources	The existing line crosses Sturgeon Bay and one unnamed stream.
#5 Cultural Resources	There is low probability of encountering endangered resources.
Miscellaneous	
Rebuild part of the Y-8 Dane-Dam Heights 69-kV line	
General Description	Rebuild 69-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Lodi Marsh Wildlife area is located along the route and Lodi Marsh State Natural Area is located near the line.
#4 Sensitive Resources	The Wisconsin River, Spring Creek, and several unnamed tributaries, and associated wetlands are located along the line route.
#5 Cultural Resources	There are several known archaeological sites located along the line route. There is a moderate to high likelihood of encountering archaeological resources on this route.
Miscellaneous	There is a moderate to high likelihood of encountering rare species on this route.
Monroe County-Council Creek 161-kV line	
General Description	Construct line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Elroy-Sparta State Trail, Fort McCoy Barrens State Natural Area
#4 Sensitive Resources	The existing line crosses a number of waterways and associated wetland areas, including: Farmers Valley Creek, Silver Creek, Chub Creek, Council Creek, South Fork Lemon weir River, and some unnamed streams.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies historic sites within the cities of Tomah and Sparta, along with the Elroy-Sparta state trail.
Miscellaneous	There is a moderate probability of encountering endangered resources.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Uprate Council Creek-Petenwell 138-kV line	
General Description	Rebuild 138-kV line
Length (miles)	32
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line crosses Kreyer Creek, Lemonweir River, Beaver Creek, S. Branch Yellow River, Yellow River, the West Petenwell Ditch (trout stream) and numerous unnamed tributaries along with associated wetlands. Much of the route passes through currently undeveloped woodlands and wetlands.
#5 Cultural Resources	Wisconsin Historical Society information identifies several known archaeological sites in the area with one near Necedah crossed by the line route.
Miscellaneous	Due to the proximity of this route to Necedah National Wildlife Refuge, Meadow Valley State Wildlife Area, Mill Bluff State Park, and the numerous streams, wetlands, and undeveloped lands located along this route, there is a moderate to high likelihood of encountering rare species on this route.
Uprate M38-Atlantic 69-kV line from 120 to 167	
General Description	Line Uprate
Length (miles)	22
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Copper Country State Forest
#4 Sensitive Resources	The existing line crosses the Pike, Otter, and Sturgeon Rivers along with associated wetlands and tributaries.
#5 Cultural Resources	Cultural resources may be found in the area in the proximity of the rivers located in the screening area.
Miscellaneous	
Nine Mile-Roberts 69-kV line rebuild	
General Description	Asset renewal of 69-kV line
Length (miles)	54.6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	There are numerous significant wetlands and waterways along the project route.
#5 Cultural Resources	Due to the undeveloped nature of much of the lands and the number of waterways along this line route, there is a moderate probability of identifying archaeological and historic sites in the vicinity of the corridor.
Miscellaneous	Several rare species are known to exist along the project route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Concord-Rubicon 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	13
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses numerous waterways including two crossings of the Rock River, Mud Run Creek, and numerous wetlands.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Edgewood-St. Martins 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	7.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	Muskego Park Hardwoods is adjacent to the route
#4 Sensitive Resources	Several wetlands are crossed by the existing route.
#5 Cultural Resources	The route crosses several archaeological sites.
Miscellaneous	One historic occurrence of a rare plant occurs, as well as an existing rare plant community, along this route.

Edgewood-Mukwonago 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Mukwonago and Fox Rivers and significant wetlands.
#5 Cultural Resources	The route crosses several archaeological sites.
Miscellaneous	There is a high probability of encountering rare species along this route with the extensive wetlands and rare plant communities occurring along the route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Concord-Cooney 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	10.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	Two major rivers - the Rock and Oconomowoc, are crossed by this project route, along with several tributaries and numerous significant wetlands.
#5 Cultural Resources	Several historic and archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate to high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Paris-Albers 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	12.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several waterways including the Kilbourn Road Ditch, Pike Creek, and several relatively small wetlands.
#5 Cultural Resources	Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low to moderate probability of encountering rare species along this route.

St. Lawrence-Hartford 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	5.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the West Branch Rubicon River and an unnamed Rubicon River tributary as well as associated wetlands.
#5 Cultural Resources	One archaeological site and one historical site is listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Redwood-First Avenue 69-kV submarine line	
General Description	asset renewal of 69-kV line
Length (miles)	0.8
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The submarine portion of the line crosses Sturgeon Bay.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the project crossing Sturgeon Bay.

Butte De Morts-Neevin 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses two unnamed creeks and associated wetlands.
#5 Cultural Resources	One archaeological site is listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Waukesha-Summit 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	14.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several unnamed waterways and associated wetlands and runs adjacent to three lakes.
#5 Cultural Resources	Several archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Mears Corners-Sunset Point 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	4.1
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several unnamed creeks and associated wetlands.
#5 Cultural Resources	No cultural resources are identified along this route, though one archaeological site is in close proximity.
Miscellaneous	There is a moderate probability of encountering rare species along this route due to the waterways and wetlands.

Woodshoe-Mears Corners 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	2.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses four unnamed waterways.
#5 Cultural Resources	No historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Wesmark-Manrap 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	19.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The line route crosses a number of significant waterways including the Manitowoc River.
#5 Cultural Resources	The route crosses several archeological sites according to WHS.
Miscellaneous	There is a low to moderate possibility of encountering rare species on this route, based on several known occurrences in and adjacent to the project route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Oak Street-Highway V 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	6
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses several significant waterways including the Fox River and the East River, and associated wetlands.
#5 Cultural Resources	Several archaeological sites are crossed by this line.
Miscellaneous	Several rare plant species are known to have historically occurred on or near this route.

Finger Road-Danz 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	3.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Baird creek and a small wetland.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low to moderate potential of encountering rare species along this route due to the generally urban setting.

Neevin-Woodenshoe 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	3.4
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses six small, unnamed waterways and one wetland.
#5 Cultural Resources	No archaeological or historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Montello-Wautoma 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses State owned lands in the White River Fishery area, the French Creek Wildlife Area, and lands along the shore of the Fox River.
#4 Sensitive Resources	The route crosses numerous waterways and associated wetlands.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

McCue-Lamar 69-kV double-circuit line	
General Description	Add second circuit
Length (miles)	3.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor along railroad.
#3 Public Lands	No state-owned lands were identified along the route.
#4 Sensitive Resources	There are no significant waterways or wetlands crossed along the route.
#5 Cultural Resources	There are no archaeological sites located along the line route identified in the WHS database.
Miscellaneous	There is a low likelihood of encountering rare species on this route.

Danz-University 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	2.7
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	One large wetland complex is crossed by the existing line route.
#5 Cultural Resources	One archeological site is crossed by the route according to WHS.
Miscellaneous	Rare plants are known to occur along this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

North Appleton-Butte de Morts 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	11.9
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses numerous waterways and associated wetlands. No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Merrill Hills-Summit 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	12.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Brandy Brook (a trout stream) and runs adjacent to two lakes: Nagawicka and Nemahbin, and also crosses several significant wetlands.
#5 Cultural Resources	Several historic and archaeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the waterways, wetlands, and other habitats.

Rebuild Y-32 Colley Road-Brick Church 69-kV line	
General Description	Rebuild 69-kV line
Length (miles)	20
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state-owned lands are crossed along the route.
#4 Sensitive Resources	The line route crosses Spring Brook, Little Turtle Creek (Outstanding/Exceptional Water Resource), a few unnamed streams and wetlands associated with the waterways. Most of the line route is located along public roads or in agricultural lands.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies the Clinton Village Hall and the Jefferson Prairie Norwegian Settlement near the existing corridor.
Miscellaneous	Due to the primarily agricultural setting of this line, there is a moderate likelihood of encountering rare species on this route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Dam Heights-Portage 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	23.5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The route crosses portions of the State owned Pine Island Wildlife area and the Federally owned Leopold Wetland Management District.
#4 Sensitive Resources	Numerous wetlands and waterways exist along this route. One of these waterways is a trout stream.
#5 Cultural Resources	Several archaeological sites are crossed by this line.
Miscellaneous	Numerous rare plant and animal species are known to occur along this route.

Cardinal-Blount 138-kV line	
General Description	Construct 138-kV line
Length (miles)	5
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The existing line parallels a recreational trail and golf course.
#4 Sensitive Resources	This line is primarily through a highly urbanized area, much of the existing line is underground. There are a few small wetlands and unnamed streams near the existing overhead portions east of West Middleton.
#5 Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic resources in the vicinity of the existing corridor.
Miscellaneous	

Hillman-Eden 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	28
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	The line crosses the State owned Pecatonica State Trail near Belmont.
#4 Sensitive Resources	The route crosses numerous waterways including the Galena River, associated wetlands, and several unnamed trout streams.
#5 Cultural Resources	Several historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Plover-Whiting 115-kV line rebuild		
	General Description	asset renewal of 115-kV line
	Length (miles)	5.7
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	The route crosses the Little Plover River, an exceptional resource water and trout stream, the Plover River Flowage, and significant floodplain wetlands.
#5	Cultural Resources	The route crosses several archaeological sites including several burial mounds.
	Miscellaneous	There is a high probability of encountering rare species along this route, as many rare species occurrences are documented throughout the route, with significant undisturbed wetland and forest habitats.
Uprate Royster to Sycamore 69-kV line to 115 MVA		
	General Description	Uprate existing line
	Length (miles)	3.4
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state-owned lands were identified along the route.
#4	Sensitive Resources	Starkweather Creek and associated wetlands are located along the line route.
#5	Cultural Resources	There is one known archaeological sites located along the line route.
	Miscellaneous	A portion of the route is located along a bike trail.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

West Middleton-Stagecoach 69-kV line reconductor	
General Description	Reconductor 69-kV line
Length (miles)	4.28
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses Black Earth Creek, an outstanding resource water, and its associated wetlands, as well as several smaller tributaries.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There is a high probability of encountering rare species along this route.

Goodman-Caldron Falls 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	21.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The existing route crosses three trout streams, two of which are Outstanding or Exceptional Resource Waters. In addition the Peshtigo River near Caldron Falls and two other streams and associated wetlands are crossed by the route. A number of rare species are identified as occurring along and adjacent to the route.
#5 Cultural Resources	No cultural resources were identified along the route. However, the proximity of the route to a number of waterways raises the possibility of unknown cultural resources occurring.
Miscellaneous	

New Holstein-Custer 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	21.8 miles
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	
#5 Cultural Resources	The route crosses as many as 15 creeks and associated wetlands. The route crosses several archeological sites according to WHS.
Miscellaneous	There is a moderate likelihood of encountering rare species on this route, based on several known occurrences in and adjacent to the project route.

Table RS-4

Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Lodestar-Erdmann 69-kV line rebuild	
General Description	asset renewal of 69-kV line
Length (miles)	5.3
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The route crosses the Pigeon River, but does not cross any significant wetlands.
#5 Cultural Resources	No archeological sites are listed by WHS as occurring along this route.
Miscellaneous	There are historic occurrences of several rare plant species along this route.

Straits-McGulpin 138-kV line rebuild	
General Description	asset renewal of 138-kV line
Length (miles)	6.2
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	The overhead portion of the route crosses wooded areas, while the underground portion crosses under Lake Michigan to McGulpin.
#5 Cultural Resources	There is a moderate - high probability of encountering archaeological resources along the near-shore area of Lake Michigan.
Miscellaneous	There is a high probability of encountering rare species along this route due to the waterways, wetlands, and other habitats.

Erdmann-Edgewater 69-kV underground line rebuild	
General Description	asset renewal of underground 69-kV line
Length (miles)	0.65 (Underground portion only)
#1 Screening Area (Sq. mi.- length X width)	Existing corridor
#2 Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3 Public Lands	No state owned lands identified on the route.
#4 Sensitive Resources	One unnamed creek is crossed (underneath) by this route.
#5 Cultural Resources	No archaeological or historic sites are listed by WHS as occurring along this route.
Miscellaneous	There is a low probability of encountering rare species along this route.

Table RS-4

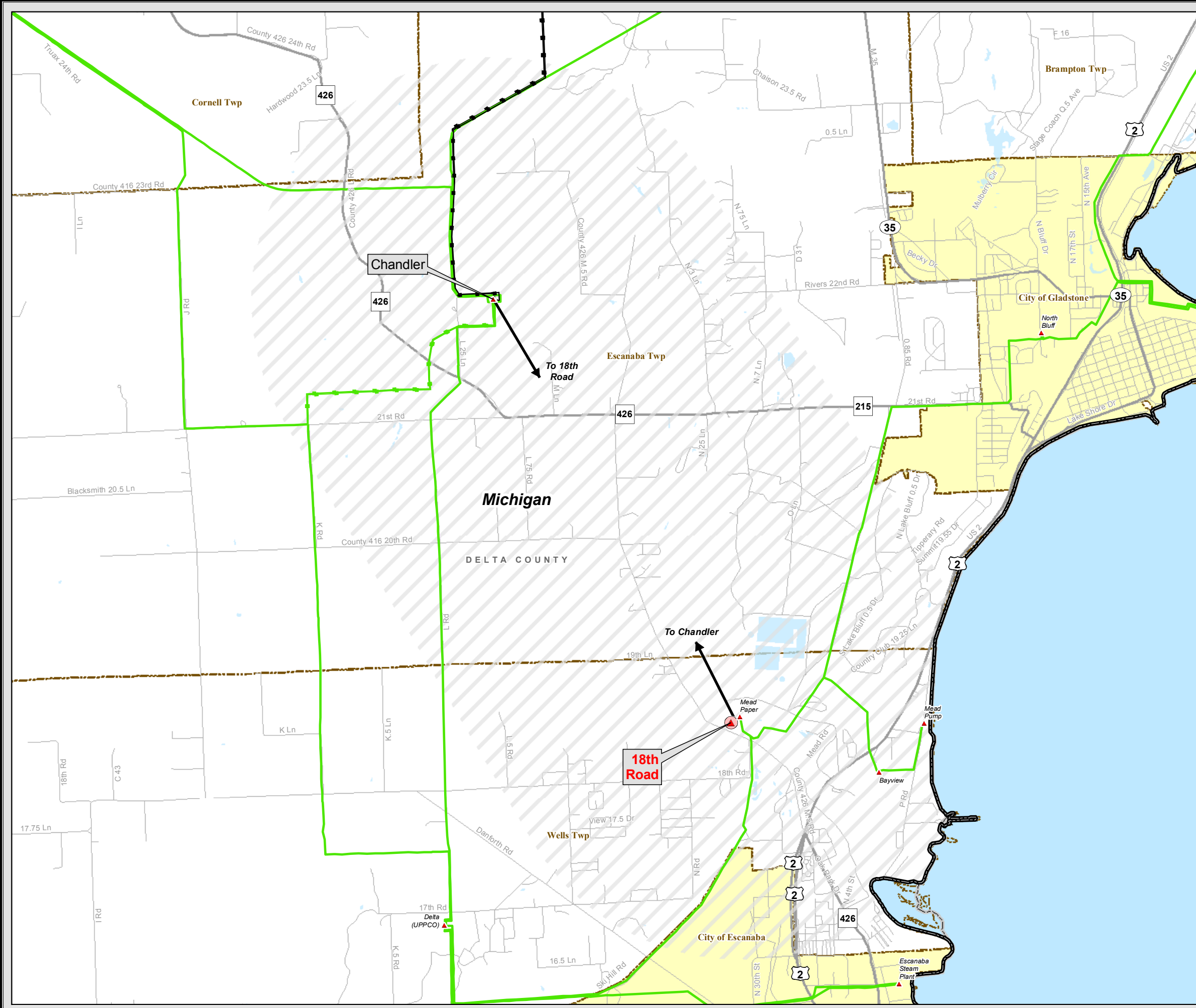
Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

Dyckesville-Sawyer 69-kV line rebuild		
	General Description	asset renewal of 69-kV line
	Length (miles)	24.8
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state owned lands identified on the route.
#4	Sensitive Resources	The line route crosses numerous significant waterways including Sugar Creek, Olson Creek, the Red River, and the Ahnapee River. The route also crosses numerous wetlands of both large and small scale.
#5	Cultural Resources	The route crosses several archeological sites according to WHS.
	Miscellaneous	Several rare species are known to exist along the project route.

Ramsey-Harbor 138-kV line reconductor		
	General Description	Reconductor underground portion of existing 138-kV line
	Length (miles)	8.4
#1	Screening Area (Sq. mi.- length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	The majority of the existing line is located below public roads.
#4	Sensitive Resources	The line route crosses under the Kinnikinnic River in the Milwaukee Harbor.
#5	Cultural Resources	Due to the location of the line primarily under public roads, there is a low probability of identifying intact archaeological sites in the vicinity of the corridor.
	Miscellaneous	There is a low probability of encountering rare species. This line passes through primarily developed urban areas.

- | | | |
|----|---------------------------------|--|
| #1 | Screening Area Width: | For projects on existing rights-of-way the screening area consists of the current location and lands immediately adjacent. |
| #2 | Corridor Sharing Opportunities: | Identify dominant corridor types. |
| #3 | Public Lands: | Identify properties by name. |
| #4 | Sensitive Resources: | List major stream crossings, significant topographic features, designated natural areas, etc. |
| #5 | Cultural Resources: | List resources shown on the statewide cultural resources map. |

PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
 Construct 18th Road-Chandler Double Circuit 138kV Lines and Operate at 138/69kV

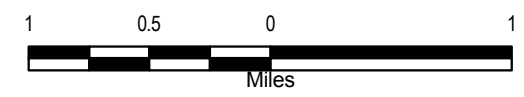


- Transmission Facilities**
- Transmission Sites
 - ▲ Substation/Switching Yard
- Transmission Lines**
- 69 kV Single Circuit (thin green line)
 - 69 kV Double Circuit (thick green line)
 - 138 kV Single Circuit (thin black line)
 - 138 kV Double Circuit (thick black line)

- ▲ Proposed Substation
- ▨ Preliminary Screening Area

- City/Village (yellow shaded area)
- Open Water (blue shaded area)

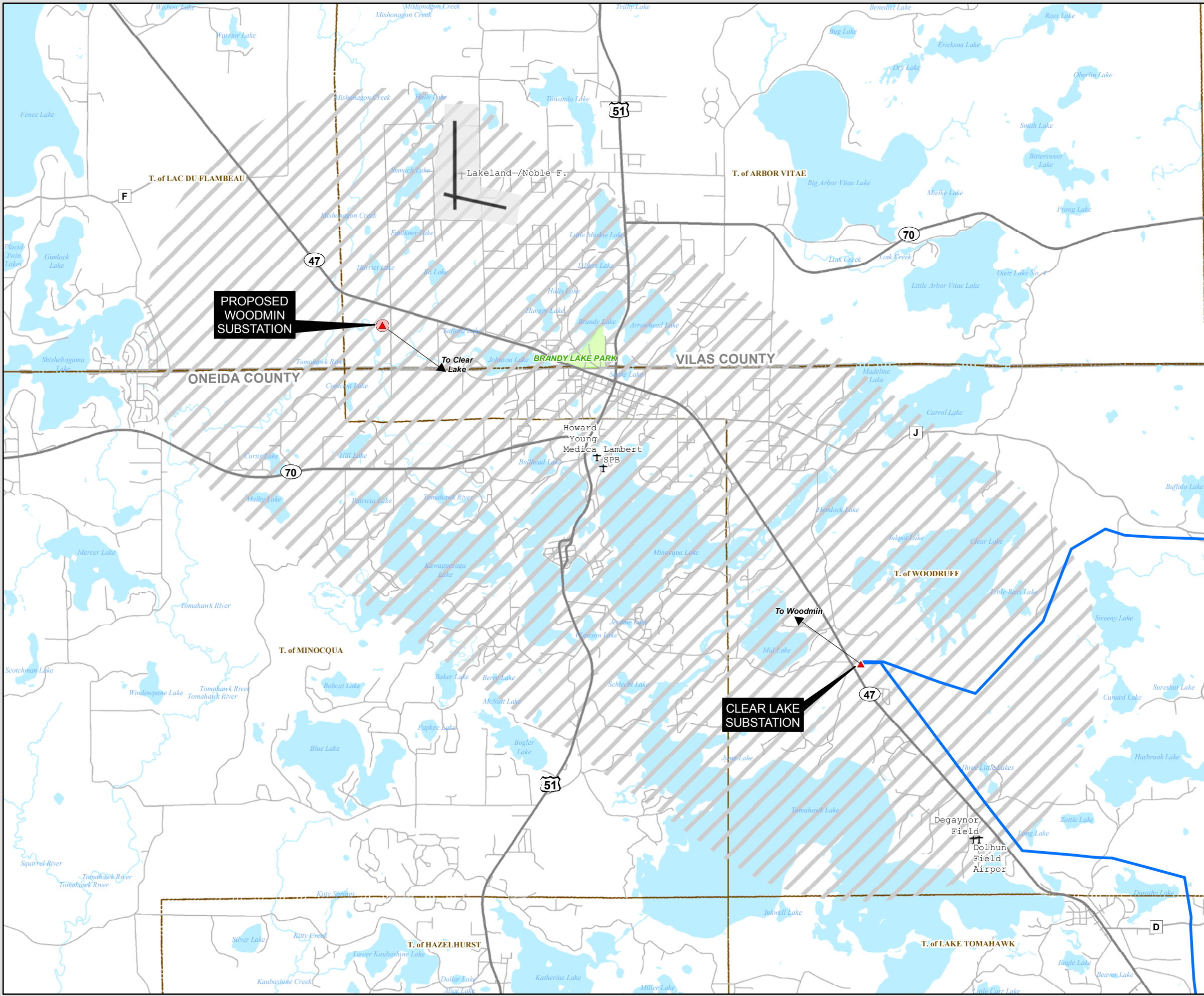
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



The information presented in this map document is advisory and is intended for reference purposes only. American Transmission Company owned and operated facility locations are approximate.



PLANNED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
Construct 115kV Line from Clear Lake Substation to New Woodmin Substation



Transmission Facilities

Transmission Lines	Transmission Sites
115 kV	▲ Substation/Switching Yard
— Single Circuit	
— Double Circuit	
▲ Proposed Substation	
▨ Preliminary Screening Area	

— Perennial Stream	■ Park Areas
— Intermittent Stream	▭ Town Boundary
● Open Water	

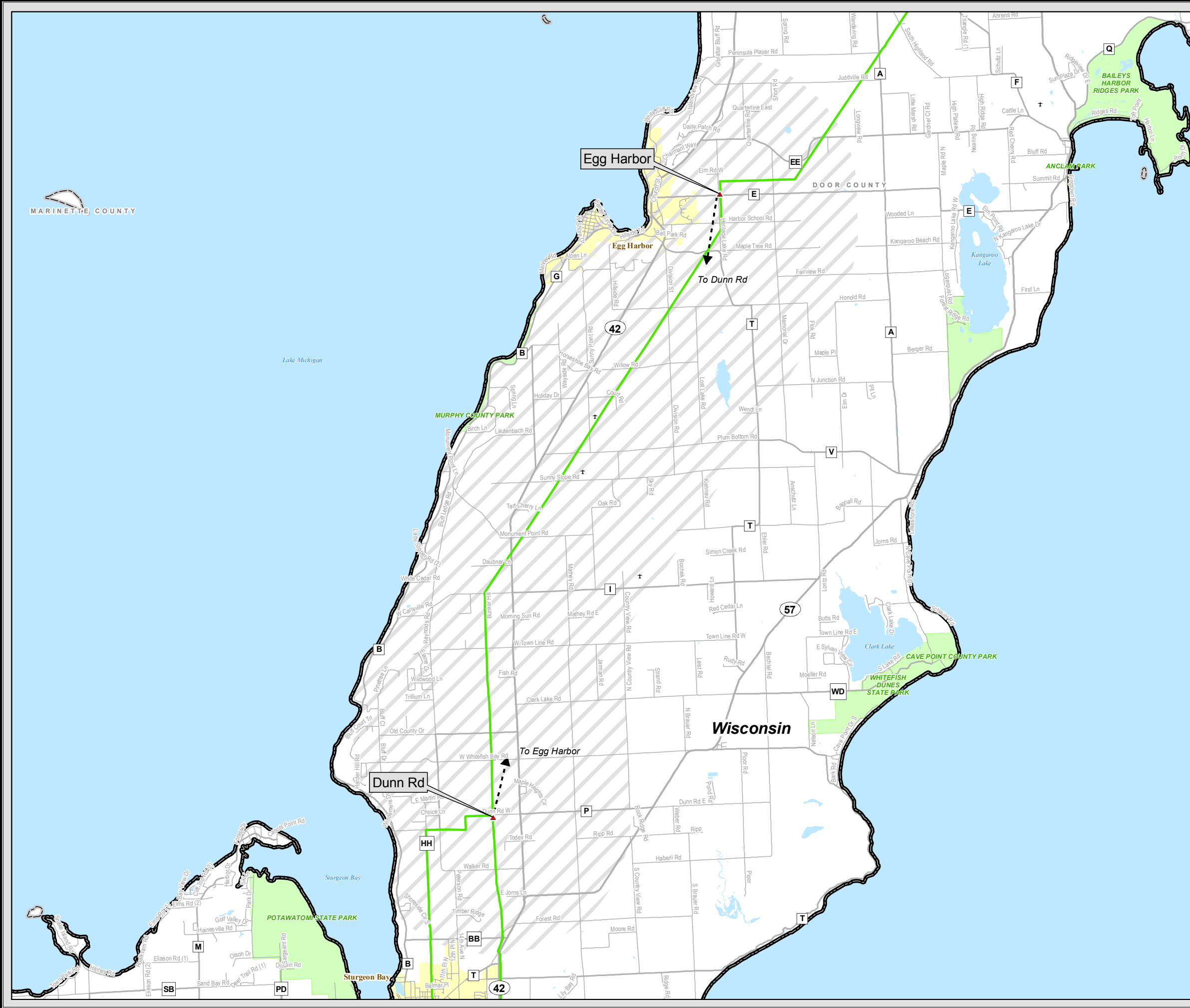
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
Construct Second Dunn Road-Egg Harbor 69kV Line



Transmission Facilities

Transmission Sites

- ▲ Substation/Switching Yard

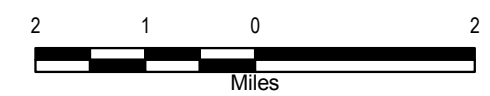
Transmission Lines

- 69 kV
- Single Circuit
- Double Circuit

○ Preliminary Screening Area

● City/Village	● Park Areas
● Open Water	

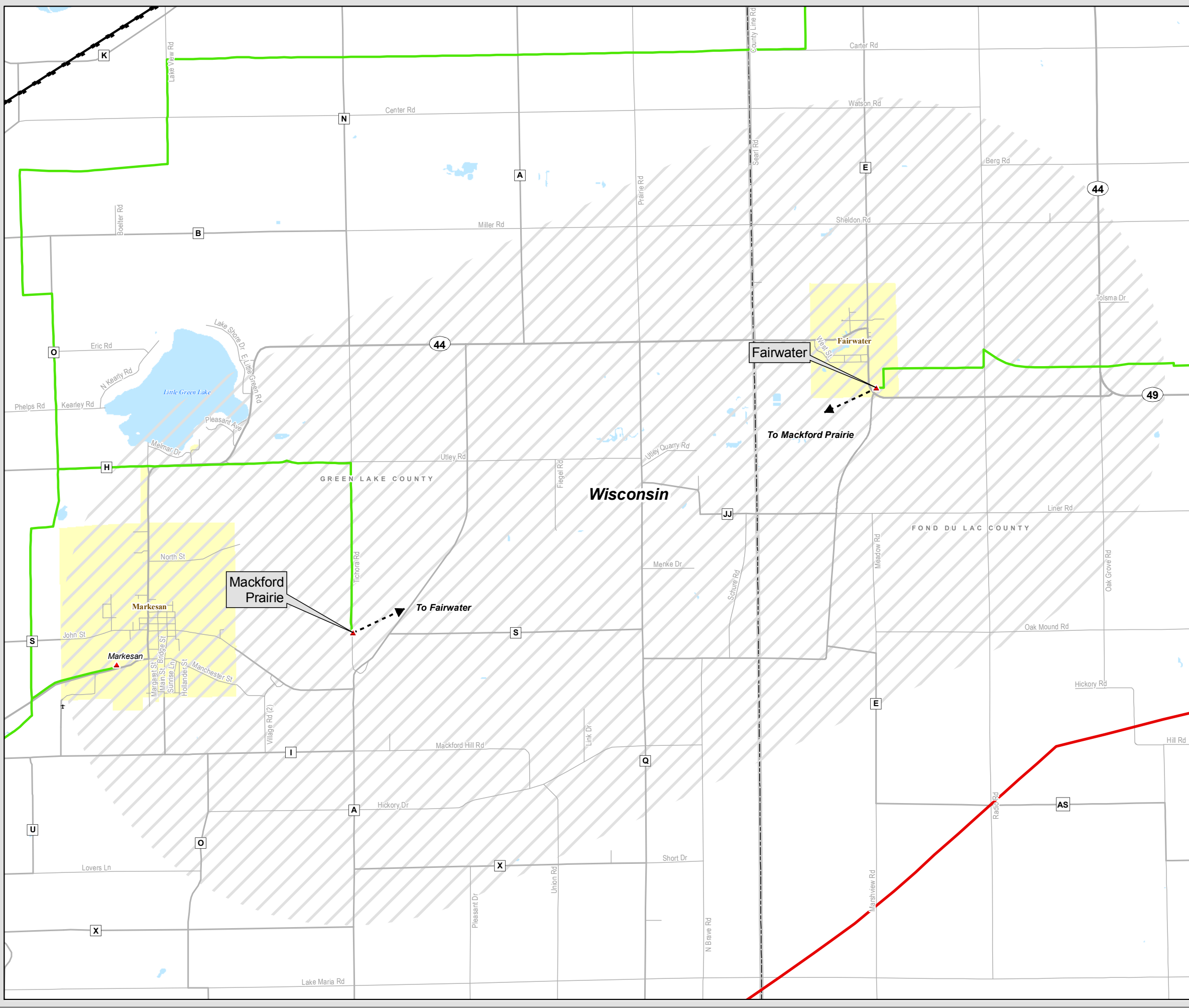
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
Construct Fairwater-Mackford Prairie 69 kV Line



- Transmission Facilities**
- Transmission Sites
 - ▲ Substation/Switching Yard
- Transmission Lines**
- 69 kV Single Circuit (Green line)
 - 69 kV Double Circuit (Green line with double dashes)
 - 138 kV Single Circuit (Black line)
 - 138 kV Double Circuit (Black line with double dashes)
 - 345 kV Single Circuit (Red line)
 - 345 kV Double Circuit (Red line with double dashes)

○ Preliminary Screening Area

● City/Village (Yellow)

● Open Water (Blue)

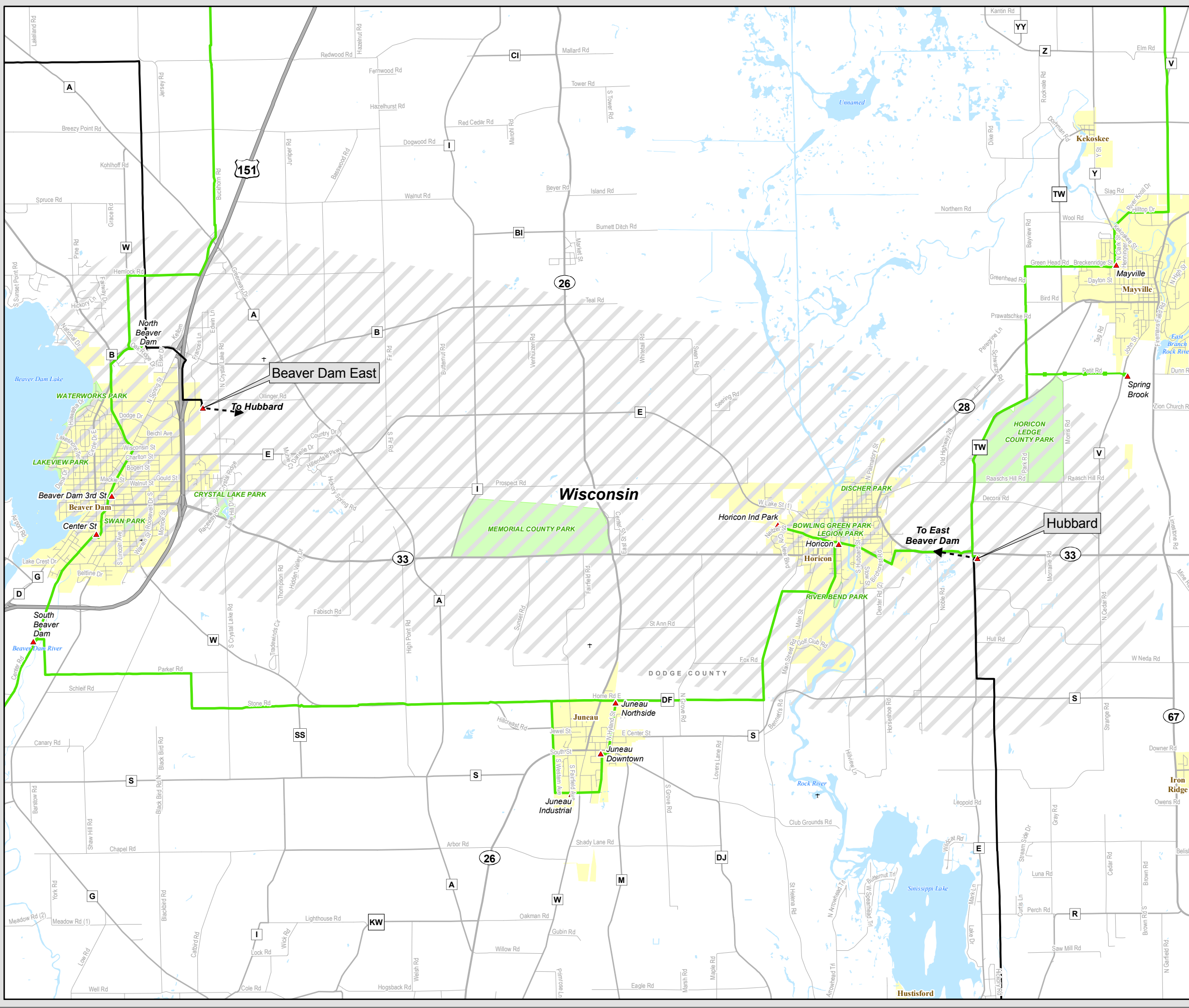
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

1 0.5 0 1 Miles

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PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
 Construct Hubbard-East Beaver Dam 138kV Line



Transmission Facilities

- Transmission Sites
- ▲ Substation/Switching Yard

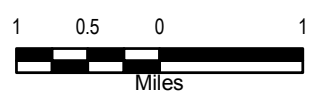
Transmission Lines

- 69 kV Single Circuit
- 138 kV Single Circuit
- 69 kV Double Circuit
- 138 kV Double Circuit

- Preliminary Screening Area

City/Village
 Open Water
 Park Areas

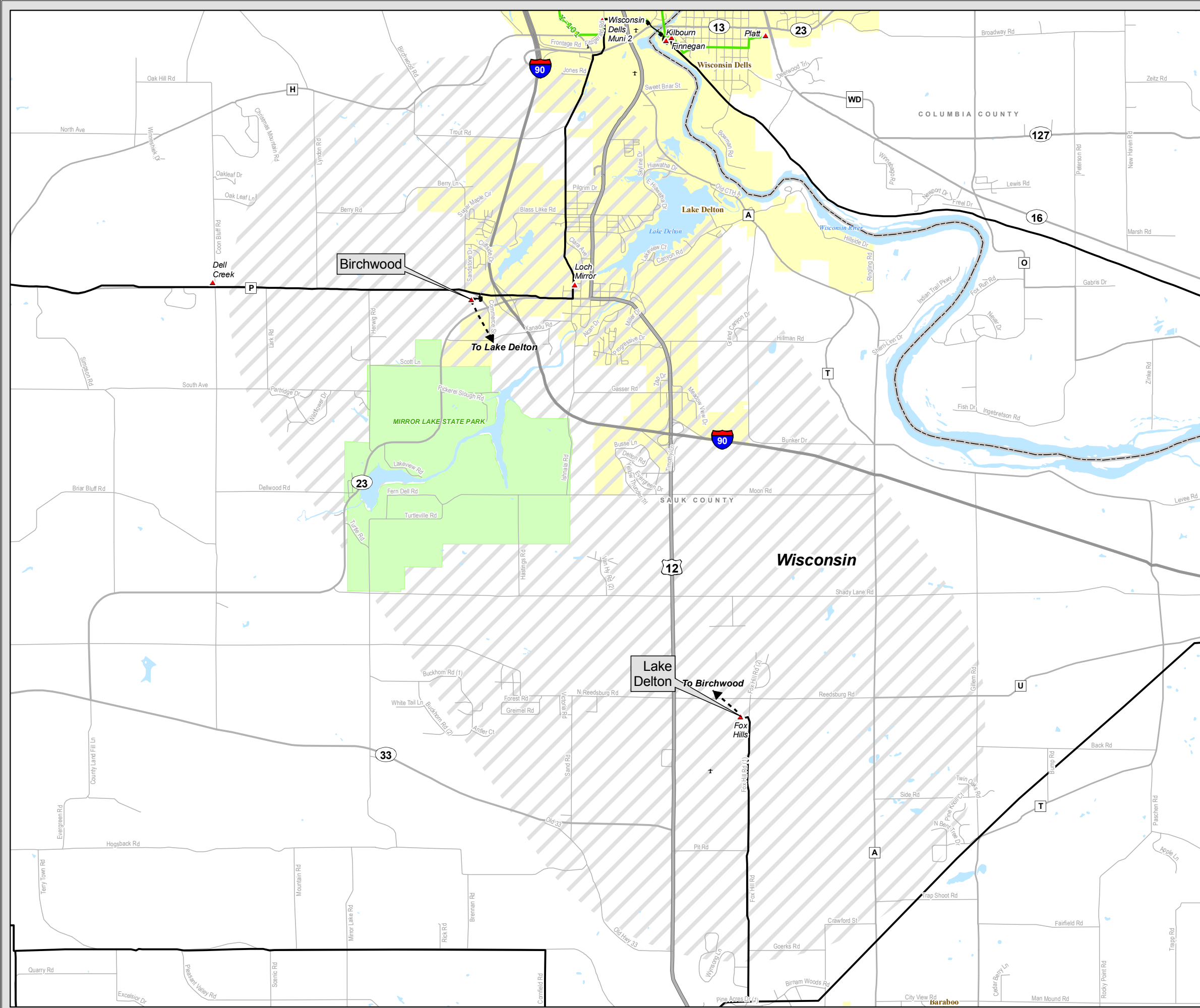
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
 Construct Lake Delton-Birchwood 138kV Line



Transmission Facilities

Transmission Sites

▲ Substation/Switching Yard

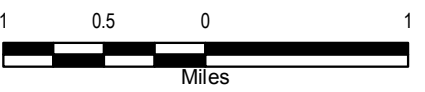
Transmission Lines

69 kV Single Circuit
 69 kV Double Circuit
 138 kV Single Circuit
 138 kV Double Circuit

○ Preliminary Screening Area

City/Village
 Open Water
 Park Areas

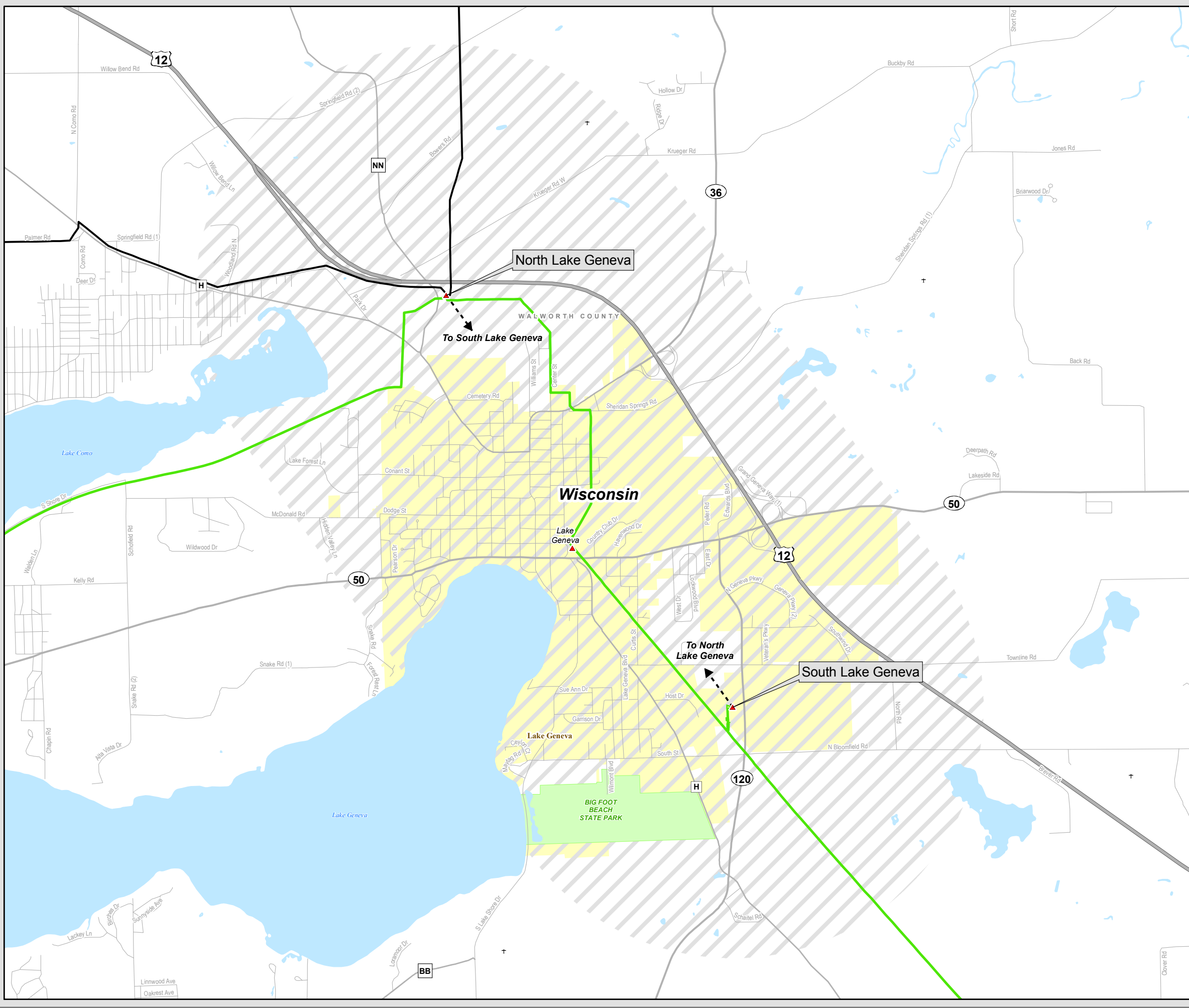
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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PROPOSED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
 Construct North Lake Geneva-South Lake Geneva
 New 138 kV Line



Transmission Facilities

- Transmission Sites
- ▲ Substation/Switching Yard

Transmission Lines

- 69 kV Single Circuit (solid green line)
- 69 kV Double Circuit (dashed green line)
- 138 kV Single Circuit (solid black line)
- 138 kV Double Circuit (dashed black line)

○ Preliminary Screening Area

- City/Village
- Park Areas
- Open Water

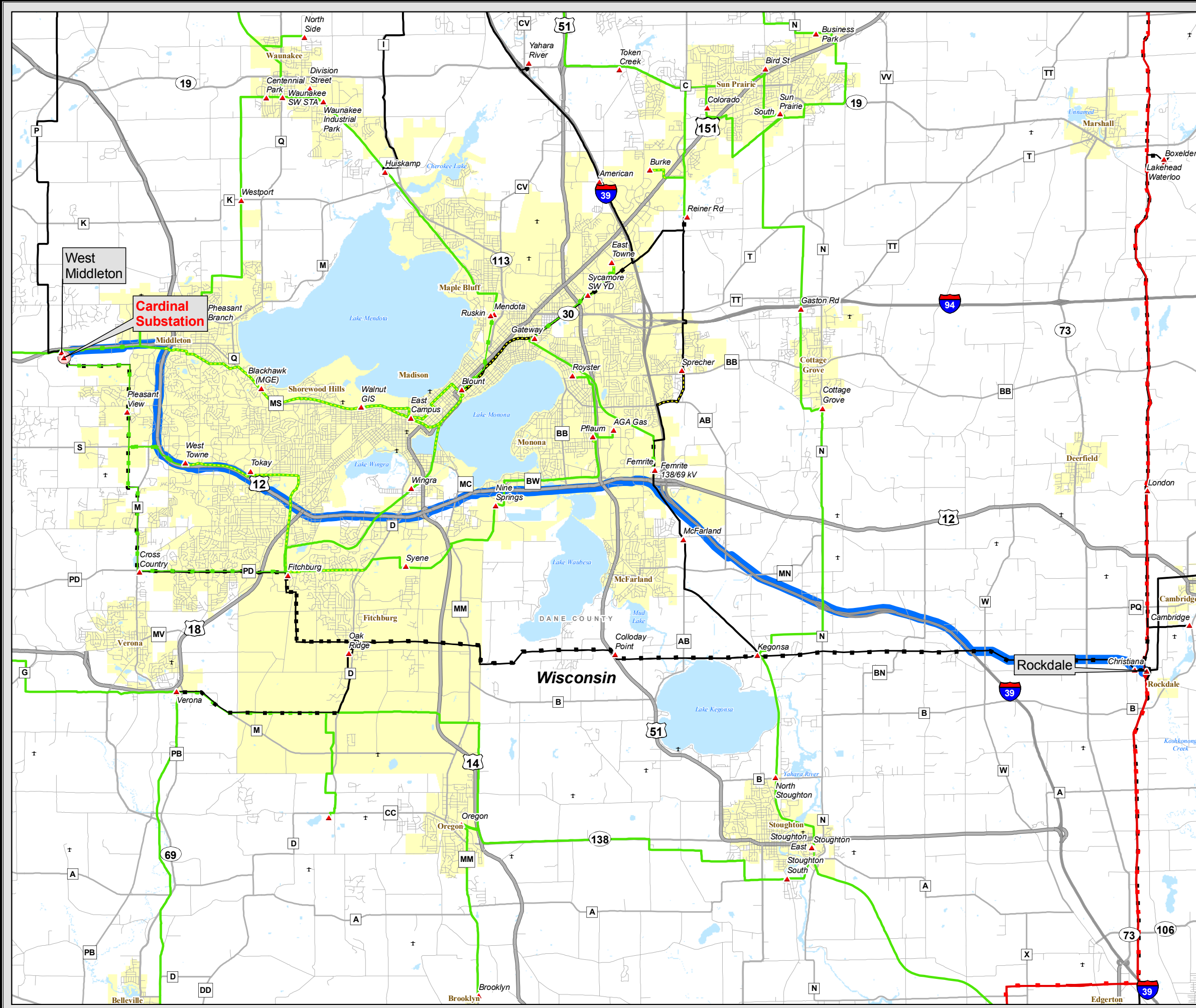
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

3,000 1,500 0 3,000
 Feet

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PLANNED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
Construct 345kV Line from Rockdale to West Middleton



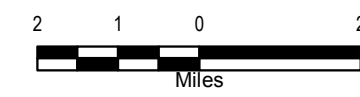
- Transmission Facilities**
- Transmission Sites
 - ▲ Substation/Switching Yard
- Transmission Lines**
- | | | |
|----------------|----------------|----------------|
| 69 kV | 138 kV | 345 kV |
| Single Circuit | Single Circuit | Single Circuit |
| Double Circuit | Double Circuit | Double Circuit |
| Underground | Underground | Underground |

- Proposed Substation
- PSCW Approved Route

City/Village

Open Water

Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.

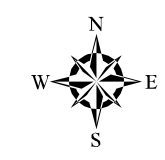
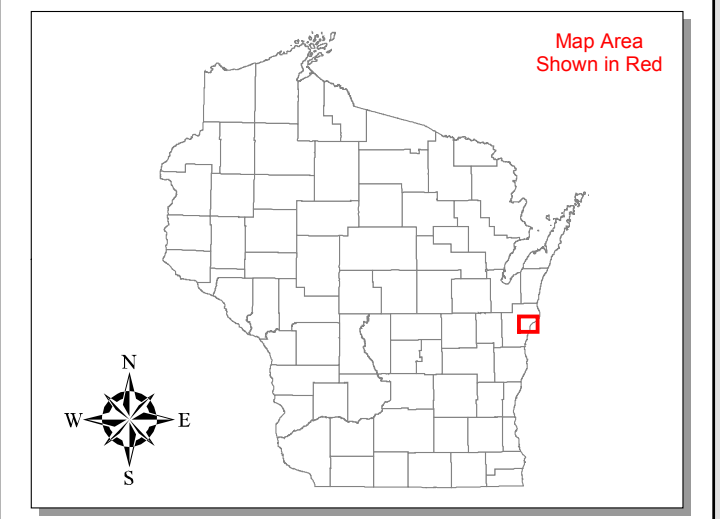


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**PROVISIONAL TRANSMISSION LINE
REQUIRING NEW RIGHT-OF-WAY**

*Construct Shoto to Custer
138 kV Line*



Transmission Facilities

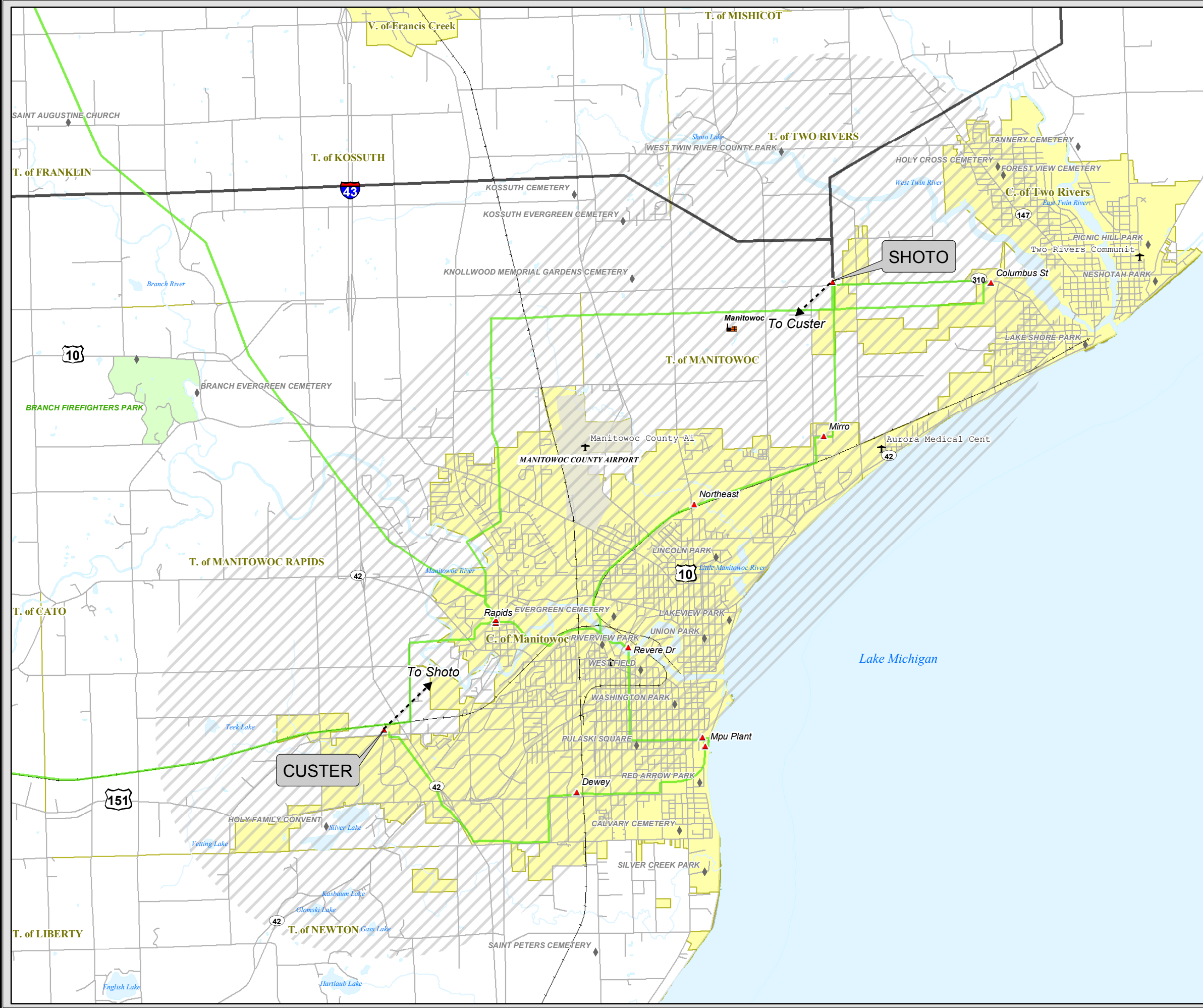
- | | |
|-----------------------------|-----------------------------|
| Transmission Lines * | Transmission Sites |
| 69 kV | ▲ Substation/Switching Yard |
| Single Circuit | □ Switching Structure/Tap |
| Double Circuit | 🏭 Generation |
| 138 kV | |
| Single Circuit | |
| Double Circuit | |

- | | |
|------------------------------|-------------------|
| ◆ Public Sites | 🌊 Open Water |
| 🌳 Park Areas | 🏘 City or Village |
| 🚧 Preliminary Screening Area | 📏 Town Boundary |
- Base Map Data Sources: ATC, WDNR, PSCW, WDOA, ESRI.

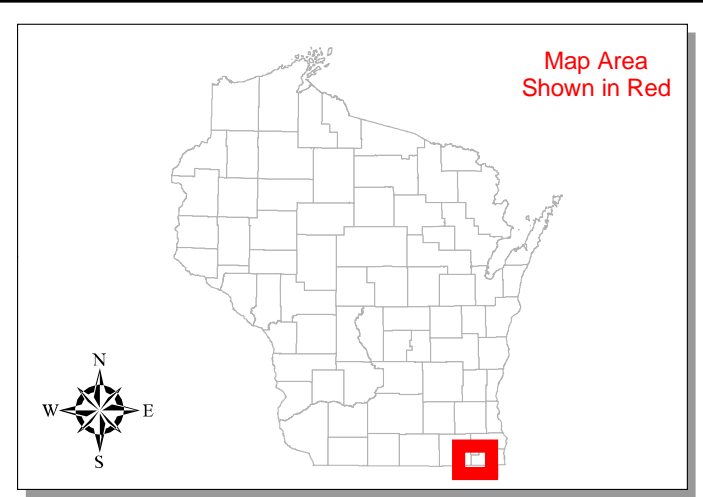
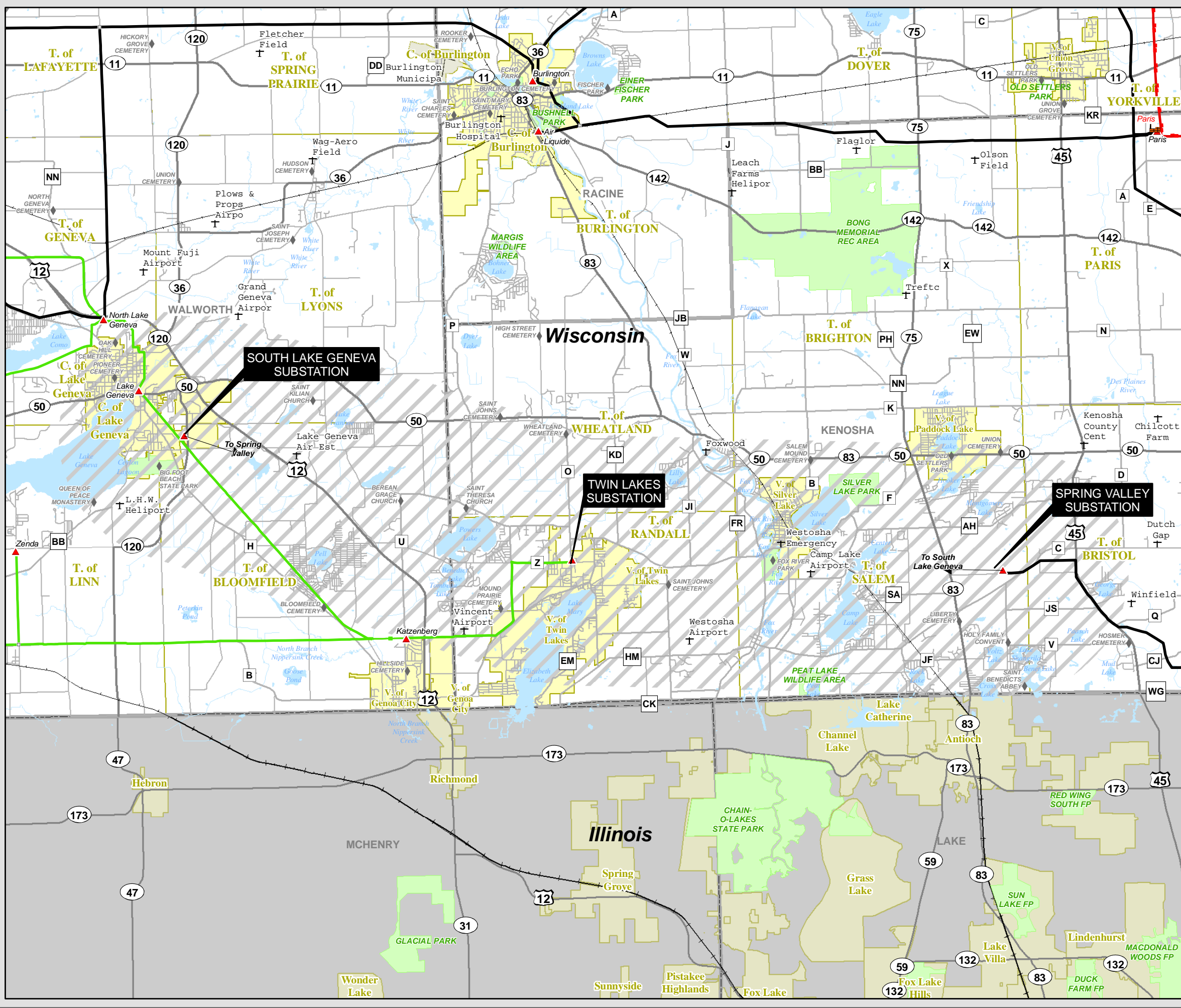


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* Mixed voltage double circuit lines drawn showing each line color corresponding to voltage.

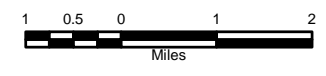


PROVISIONAL TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
Construct Spring Valley-Twin Lakes-South Lake Geneva 138 kV Line



- Transmission Facilities**
- | | |
|---------------------------|-----------------------------|
| Transmission Lines | Transmission Sites |
| 69 kV
Single Circuit | ▲ Substation/Switching Yard |
| 69 kV
Double Circuit | □ Switching Structure/Tap |
| 138 kV
Single Circuit | ■ Generating Facility |
| 138 kV
Double Circuit | |

- | | |
|----------------|-------------------|
| ◊ Public Sites | ● City or Village |
| ● Park Areas | ○ Town Boundary |
| ● Open Water | |
- Base Map Data Sources: ATC, WDNR, PSCW, WDOA, ESRI.

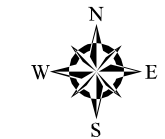
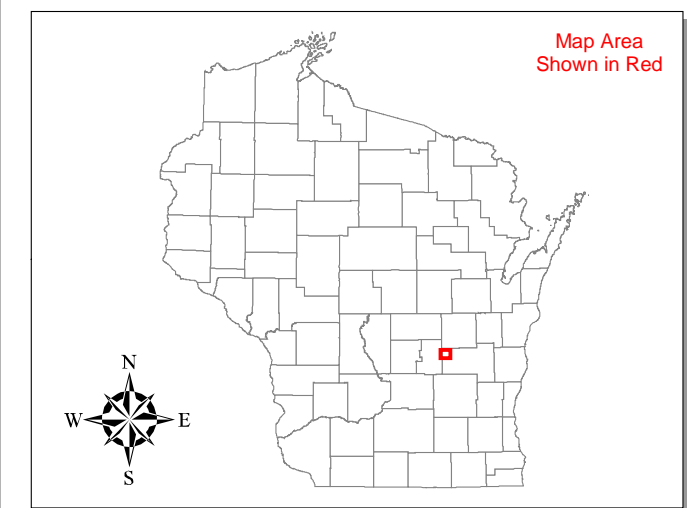


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**PROVISIONAL TRANSMISSION LINE
REQUIRING NEW RIGHT-OF-WAY**

*Construct 69 kV Line from SW Ripon to the
Ripon - Metomen 69 kV Line*

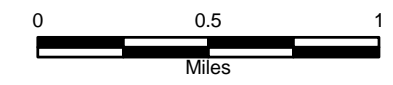


Transmission Facilities

- | | |
|-----------------------------|---------------------------|
| Transmission Lines * | Transmission Sites |
| 69 kV | ▲ ATC Owned |
| Single Circuit | ◆ Joint Owned - Conveyed |
| Double Circuit | ● Joint Owned - Retained |
| 138 kV | ■ Generation |
| Single Circuit | ■ Muni or Distribution |
| Double Circuit | ■ Design or Construction |

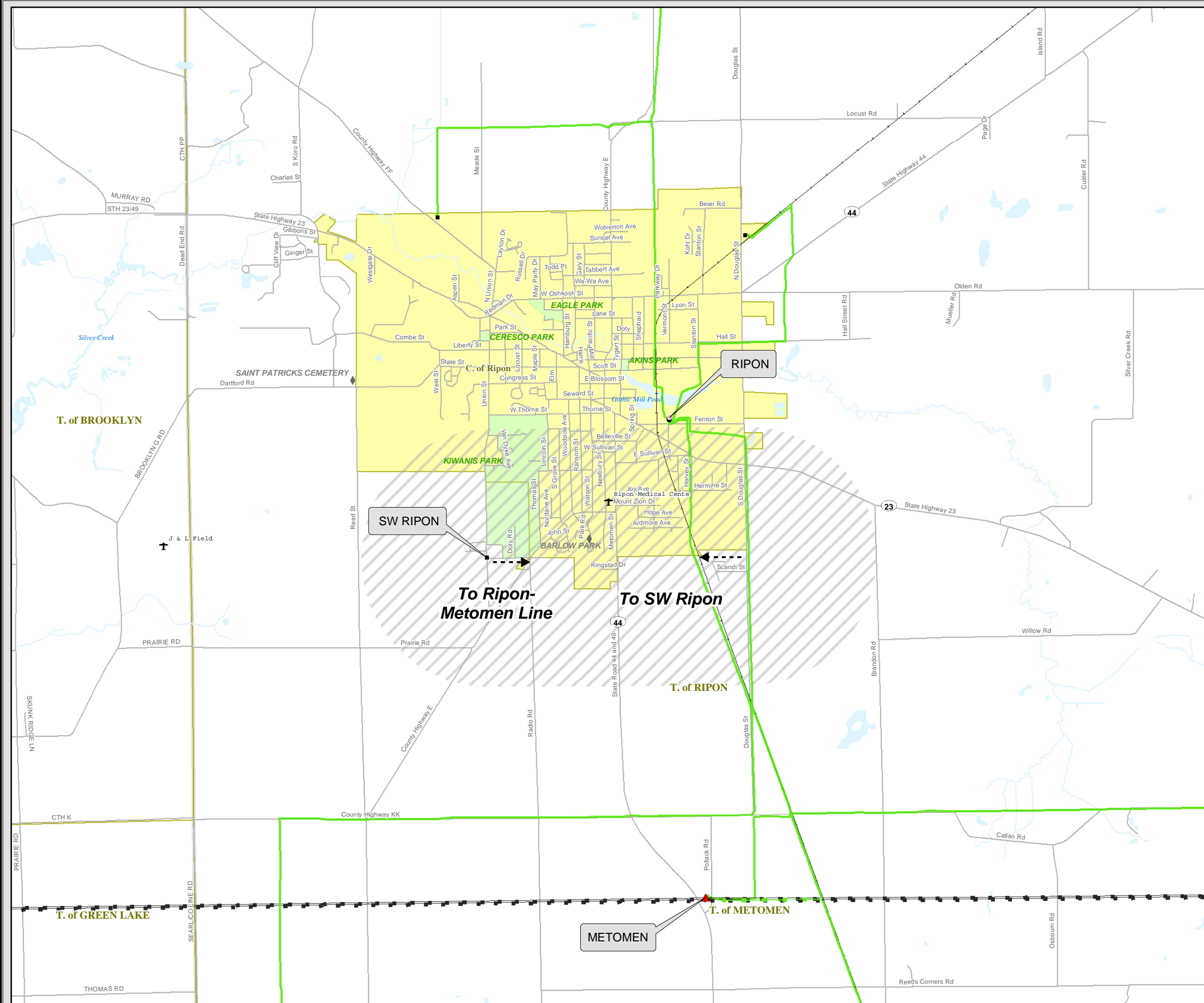
◆ Public Sites	● Open Water
● Park Areas	● City or Village
▨ Preliminary Screening Area	○ Town Boundary

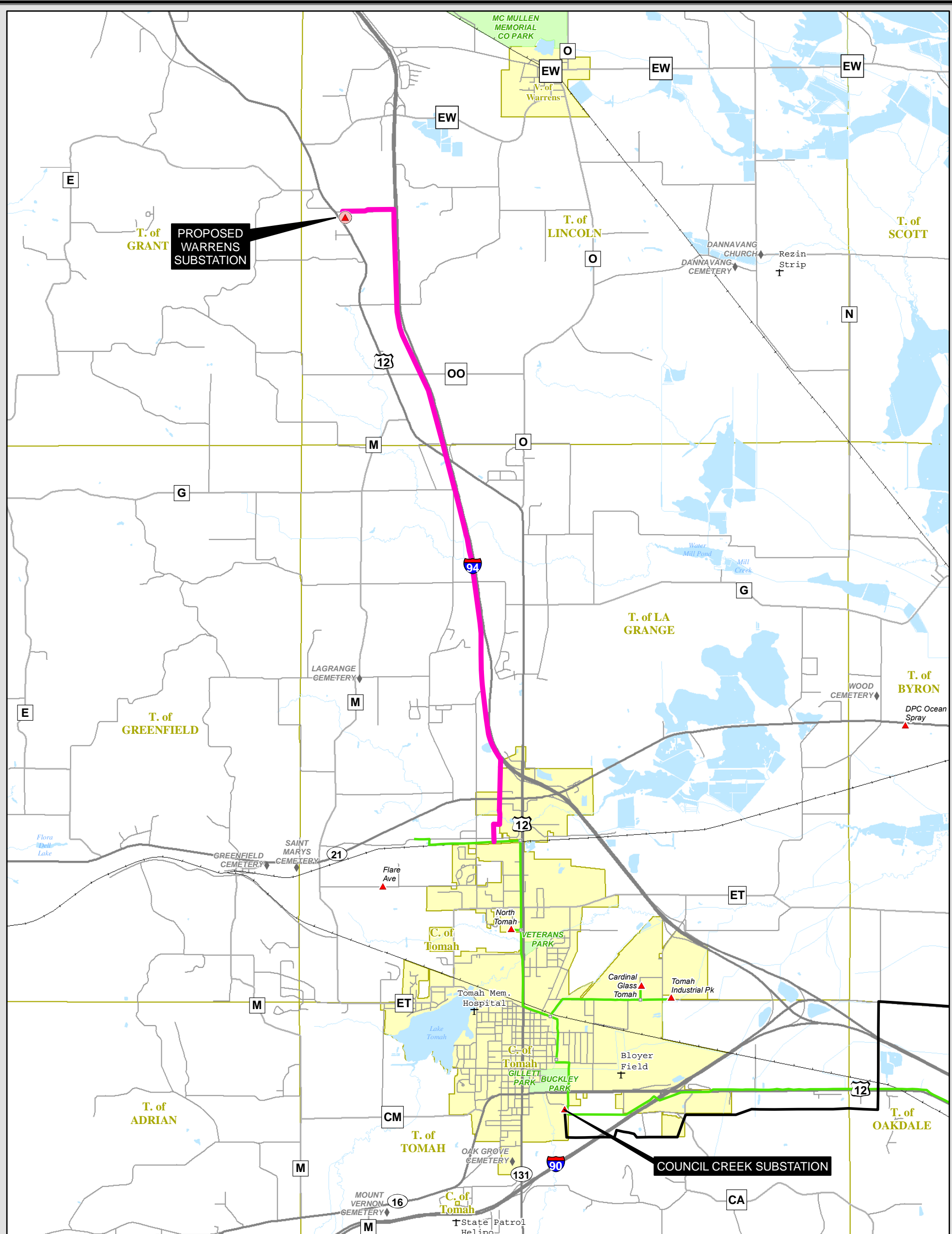
Base Map Data Sources: ATC, WDNR, PSCW, WDOA, ESRI.



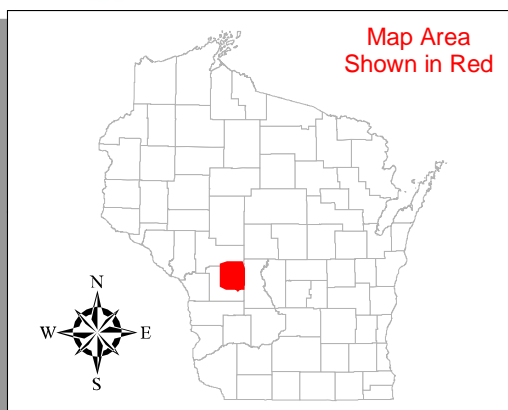
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* Mixed voltage double circuit lines drawn showing each line color corresponding to voltage.





PLANNED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY
 Construct 69 kV Line from Warrens Substation to Council Creek-Tunnel City 69 kV Line



- Transmission Facilities**
- | | | | |
|---------------------------|-----------------------|---|-----------------|
| Transmission Lines | | Transmission Sites | |
| 69 kV Single Circuit | 138 kV Single Circuit | Substation/Switching Yard | City or Village |
| 69 kV Double Circuit | 138 kV Double Circuit | Switching Structure/Tap | Town Boundary |
| | | Generating Facility | |
| | | Proposed Substation | |
| | | Warrens Tap Proposed Route As of May 2007 | |

Public Sites	City or Village
Park Areas	Town Boundary
Open Water	

Base Map Data Sources: ATC, WDNR, PSCW, WDOA, ESRI.

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