



## Routing & Siting

### *Public Outreach*

Please refer to <http://www.atcllc.com/E1.shtml> for information regarding our public outreach efforts.

### *Siting process*

Please refer to <http://www.atcllc.com/E1.shtml> for information regarding our siting process.

### *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-15](#) identify the approximate end-points and study areas for each project for which high-level environmental screening information is provided.

### *Existing right-of-way*

[Table RS-3](#) lists the new, rebuilt or reconductored 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 115-kV line from new Woodmin Substation to the Clear Lake Substation     | 7.5                  | 7.5     | 2012             | 2012                      | 1             | No                                | PSCW Approved                                |
| 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                              | Construct 18th Road-Chandler double circuit 138-kV lines and operate at 138/69     | 4                    | 4       | 2014             | 2014                      | 2             | Yes                               |  |
| economic benefits  | Construct Pleasant Prairie-Zion Energy Center 345-kV line                          | 7                    | 7       | 2014             | 2014                      | 5             | Yes                               |  |
| T-D interconnection request  | Construct double-circuit 138-kV line to serve Milwaukee County T-D interconnection | 2                    | 2       | 2015             | 2015                      | 5             | Yes                               |  |
| 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     | 2018             | 2018                      | 3             | Yes                               |  |
| accommodate new generation   | Construct Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line                    | 18                   | 18      | 2018             | 2018                      | 4             | Yes                               |  |
| policy benefits  | Construct Badger Coulee 345-kV line  | 118                  | 118     | 2018             | 2018                      | 3             | Yes                               |  |
| relieve overloads or low voltages under contingency                              | Construct Fairwater-Mackford Prairie 69-kV line                                    | 4                    | 4       | 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      | 2019             | 2019                      | 35            | Yes                               |  |
| relieve overloads or low voltages under contingency                              | Construct a Lake Delton-Birchwood 138-kV line                                      | 5                    | 5       | 2020             | 2020                      | 31            | Yes                               |  |
| policy benefits  | Construct Dubuque-Spring Green-Cardinal 345-kV line                                | 80                   | 80      | 2020             | 2020                      | 3             | Yes                               |  |
| relieve overloads or low voltages under contingency                              | Construct second Dunn Road-Egg Harbor 69-kV line                                   | 12.66                | 12.66   | 2021             | 2021                      | 4             | 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*

**18th Road to Chandler Double Circuit 138/69 kV Line**

|    |  |   |
|----|--|---|
|    | General Description                      | New line  |
|    | Length (miles)                           | approximately 4   |
| #1 | Screening Area (Sq. mi.- length X width) | approximately 15.8  |
| #2 | Corridor Sharing Opportunities           | Federal, state, & County highways, railroads, and existing transmission line rights-of-way offer opportunity for corridor sharing.                      |
| #3 | Public Lands                             | A State of Michigan owned boat landing and park is located in the project area.   |
| #4 | Sensitive Resources                      | The Escanaba River, Reno Creek and associated tributaries and wetlands are located in the screening area.   |
| #5 | Cultural Resources                       | No known cultural resources have been identified in the project area however the potential exists for sites to exist along the Escanaba River corridor. |
|    | Miscellaneous                            | West Gladstone airport is in the screening area.  |

**Pleasant Prairie - Zion Energy Center 345-kV line**

|    |  |   |
|----|--|---|
|    | General Description                      | New 345 kV transmission line  |
|    | Length (miles)                           | Approximately 6   |
| #1 | Screening Area (Sq. mi.- length X width) | Approximately 11.3  |
| #2 | Corridor Sharing Opportunities           | Existing 345 kV and 138 kV corridors, a railroad corridor, a state highway corridor, and a county highway corridor provide sharing opportunities.<br>There are no state owned lands over which any of the proposed routes cross. There is a former landfill site owned by the City of Kenosha that may require special consideration. Otherwise, the corridor sharing opportunities described above fall within State Highway and RR rights-of-way. |
| #3 | Public Lands                             | Smaller, isolated wetland areas as well as small tributaries to the Des Plaines River are found within the study area.  |
| #4 | Sensitive Resources                      | There are several cultural resources within the study corridors. The potential for encountering these cultural and historic resources is low to medium.   |
| #5 | Cultural Resources                       | The possible routes identified traverse mainly industrial and agricultural land that include isolated pockets of wetland, including farmed wetlands.  |
|    | Miscellaneous                            |   |

Table RS-2

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

Western Milwaukee County Electric Reliability Project

|    |  |   |
|----|--|---|
|    | General Description                      | New 138 kV transmission line  |
|    | Length (miles)                           | Approximately 3   |
| #1 | Screening Area (Sq. mi.- length X width) | Approximately 2.6   |
| #2 | Corridor Sharing Opportunities           | Existing transmission lines, city streets, and state highway offer possible corridor sharing opportunities.   |
| #3 | Public Lands                             | DNR Forestry Education Center, Milwaukee County Grounds, and several county parks: Wisconsin Avenue, Cannon, and Gravel Sholes, Hansen Golf course are located in the screening area.   |
| #4 | Sensitive Resources                      | Rare Species Conservation Habitat, Underwood Creek/Parkway, Monarch Butterfly Habitat (nesting and foraging areas), and the Menomonee River are located in the screening area.  |
| #5 | Cultural Resources                       | There are several known burial areas and numerous historic areas and buildings located in the screening area.   |
|    | Miscellaneous                            | Milwaukee Regional Medical Center (MRMC) and MRMC Heliport are located in the screening area. Heavy residential development exists throughout study area. The proposed UWM research park; existing MMSD flood control facilities, Wauwatosa city Landfill, and Wisconsin Lutheran College also are located in the screening area. |



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

**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.   |

**Erdman-Howards Grove-Plymouth #4-Barnhart 138-kV line**

|    |                                |   |
|----|--------------------------------|---|
|    | General Description            | New Line  |
|    | Length (miles)                 | approximately 16.7  |
| #1 | Screening Area (Sq. mi.)       | approximately 105   |
| #2 | Corridor Sharing Opportunities | Various federal, state, and county highways, existing transmission line, and railroad rights-of-way offer possible sharing opportunities.                       |
| #3 | Public Lands                   | The Schuett Creek Fishery area and various county, city, town, and village parks are located in the project area.   |
| #4 | Sensitive Resources            | The Sheboygan, Mullet, & Pigeon rivers and Otter, Fisher, and Seven Mile creeks along with associated tributaries and wetlands are located in the project area. |
| #5 | Cultural Resources             | The WHS database identifies a number of known archaeological and historic resources in the study area, particularly located near the Sheboygan River corridor.  |
|    | Miscellaneous                  | Sheboygan County memorial airport and Feldmann Field are located in the project area.   |

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

**Badger Coulee 345-kV line**

|    |  |   |
|----|--|---|
|    | General Description                      | New 345 kV transmission line  |
|    | Length (miles)                           | Approximately 118   |
| #1 | Screening Area (Sq. mi.- length X width) | Approximately 4,234   |
| #2 | Corridor Sharing Opportunities           | Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities.<br>Richard J Dorer SP (MN), O L Kipp SP (MN), Perrot SP (WI), Wildcat Mountain SP (WI), Rocky Arbor SP (WI), Mirror Lake SP (WI), Natural Bridge SP (WI), Devils Lake SP (WI), Bluemounds SP (WI), Lake Kegonsa SP (WI), Governor Nelson SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge, The Leopold Wetland Management District, and Ft Mc Coy Military Reservation are among the federal lands located in the screening area. |
| #3 | Public Lands                             | Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.   |
| #4 | Sensitive Resources                      | The Cultural Map of Wisconsin identifies numerous cultural resources within the screening area. The potential for encountering cultural and historic resources is high within the screening area.   |
| #5 | Cultural Resources                       | Principal ecological landscapes include the southwest savanna, western coulee and ridges, central sand plains, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi River valley.  |
|    | Miscellaneous                            |   |

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

**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.  |

**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                            |   |

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

**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*

**Dubuque-Spring Green-Cardinal 345-kV line**

|    |  |   |
|----|--|---|
| #1 | <p>General Description<br/>Length (miles)<br/>Screening Area (Sq. mi.- length X width)</p> | <p>New 345 kV transmission line<br/>Approximately 80<br/>Approximately 2,351</p>  |
| #2 | <p>Corridor Sharing Opportunities</p>  | <p>Various federal, state, and county highways, existing transmission line, railroad, and pipeline rights-of-way offer possible sharing opportunities.</p>  |
| #3 | <p>Public Lands</p>  | <p>White Pine Hollow State Forest Preserve (IA), Mines of Spain SP (IA), Governor Dodge SP (WI), Tower Hill SP (WI), (WI), Natural Bridge SP (WI), , Bluemounds SP (WI), Governor Nelson SP (WI), Belmont Mound SP (WI), numerous county parks, state natural areas, wildlife areas, trails, and recreational areas are located throughout the screening area. The Upper Mississippi River National Wildlife and Fish Refuge is also located in the screening area.</p> |
| #4 | <p>Sensitive Resources</p>   | <p>Large, contiguous wetland areas are concentrated near the Mississippi and Wisconsin Rivers and their tributaries. Numerous Wisconsin State Natural Areas exist in the route screening area. The probability of encountering threatened, endangered, and rare species is high.</p>  |
| #5 | <p>Cultural Resources</p>  | <p>The WHS database identifies archaeological and historic resources in the study area, particularly associated the Wisconsin and Mississippi River corridors.</p>  |
|    | <p>Miscellaneous</p>   | <p>Principal ecological landscapes include the southwest savanna, western coulee and ridges, and central sand hills in Wisconsin. The western portions of the screening area are located in Wisconsin's driftless area and the Mississippi and Wisconsin River valleys.</p>   |

*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.   |

**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             | Cultural Map of Wisconsin does not identify any sites within the screening area.   |
|    | Miscellaneous                  |  |

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

**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             | The WHS database identifies numerous archaeological, architectural and historic sites within the project area.            |
|    | Miscellaneous                  | There is a low to moderate probability of encountering endangered resources.  |

**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   | Partial rebuild Berlin-Wautoma 69-kV line                               | 22.9   | 2011             | 2011                      | 1             | Yes                               |          |
| asset renewal   | Partial rebuild Whitcomb-Deer Trail 69-kV line                          | 25.8   | 2010             | 2011                      | 1             | Yes                               |          |
| asset renewal   | Partial rebuild Nine Mile-Roberts 69-kV line                            | 54.6   | 2011             | 2012                      | 2             | Yes                               |          |
| asset renewal   | Partial rebuild Rio-North Randolph 69-kV line                           | 19.7   | 2011             | 2011                      | 3             | Yes                               |          |
| asset renewal   | Partial rebuild Spring Green-Stagecoach 69-kV line                      | 24.6   | 2010             | 2011                      | 3             | Yes                               |          |
| generation interconnection, relieve overloads or low voltages under contingency                           | Rebuild Brodhead to South Monroe 69-kV line                             | 18   | 2011             | 2012                      | 3             | Yes                               |          |
| relieve overloads or low voltages under contingency   | Rebuild Sunset Point to Pearl Ave 69-kV line                            | 2.37   | 2011             | 2012                      | 4             | Yes                               |          |
| asset renewal   | Underground cable replacement Sycamore-East Towne 69-kV                 | 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 | Partial rebuild Dane-Dam Heights 69-kV line                             | 5  | 2015             | 2012                      | 3             | Yes                               |          |
| economics, relieve overloads or low voltages under contingency  | Construct Monroe County-Council Creek 161-kV line                       | 17.9   | 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             | 2016                      | 3             | Yes                               |          |
| relieve overloads or low voltages under contingency   | Rebuild M38-Atlantic 69-kV line   | 22   | 2009             | 2013                      | 2             | Yes                               |          |
| relieve overloads or low voltages under contingency, replace aging facilities                             | Rebuild Sun Valley Tap to Oregon 69-kV line                             | 11   | 2020             | 2020                      | 3             | Yes                               |          |
| asset renewal   | Rebuild Edgewood-St. Martins 138-kV line                                | 7.2  | 2014             | 2017                      | 5             | Yes                               |          |
| asset renewal   | Rebuild Edgewood-Mukwonago 138-kV line                                  | 7  | 2014             | 2017                      | 5             | Yes                               |          |
| asset renewal   | Rebuild Concord-Cooney 138-kV line                                      | 10.9   | 2014             | 2015                      | 5             | Yes                               |          |
| asset renewal   | Rebuild St. Lawrence-Hartford 138-kV line                               | 5.2  | 2014             | 2014                      | 5             | Yes                               |          |
| asset renewal   | Underground cable replacement Redwood-First Avenue 69-kV 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   | Partial 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   | Partial rebuild Montello-Wautoma 69-kV line                             | 20   | 2017             | 2017                      | 1             | Yes                               |          |
| 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   | Underground cable replacement Danz-University 69-kV line                | 2.7  | 2017             | 2017                      | 4             | Yes                               |          |



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

| Identified need   | Lines to be rebuilt/reconstructed 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 North Appleton-Butte Des Morts 138-kV line  | 11.9   | 2017             | 2017                      | 4             | Yes                               |          |
| asset renewal   | Partial rebuild Summit-Waukesha 138-kV line   | 14.7   | 2017             | 2017                      | 5             | Yes                               |          |
| relieve overloads or low voltages under contingency, replace aging facilities | Rebuild 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             | 2016                      | 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             | 2016                      | 5             | Yes                               |          |
| asset renewal   | Rebuild Plover-Whiting 115-kV line  | 5.7  | 2019             | 2019                      | 1             | Yes                               |          |
| relieve overloads or low voltages under contingency                           | Uprate Royster to Sycamore 69-kV line   | 3.35   | 2019             | 2018                      | 3             | Yes                               |          |
| asset renewal   | Underground cable replacement 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             | 2015                      | 4             | Yes                               |          |
| asset renewal   | Underground cable replacement Lodestar-Erdman 69-kV line  | 5.3  | 2019             | 2019                      | 4             | Yes                               |          |
| asset renewal   | Underwater cable replacement 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   | Underground cable replacement Erdman-Edgewater 69-kV line   | 0.7  | 2021             | 2021                      | 4             | Yes                               |          |
| asset renewal   | Rebuild Doylestown-Rio Pumping Station 69-kV line   | 11.5   | 2013             | 2013                      | 3             | Yes                               |          |
| asset renewal   | Partial rebuild Kirkwood-Trienda 138-kV line  | 16   | 2012             | 2012                      | 3             | Yes                               |          |
| relieve overloads or low voltages under contingency                           | Reconductor Kansas-Harbor 138-kV line   | 8.4  | TBD              | TBD                       | 5             | Yes                               |          |
| relieve overloads or low voltages under contingency                           | Rebuild Straits-Pine River lines 6904/5 for 138 kV and operate at 69 kV   | 25.3   | 2014             | 2014                      | 2             | Yes                               |          |
| accommodate new generation  | Convert Forest Junction-Howards Grove and part of Howards Grove-Holland 138-kV lines to double-circuit 345-kV operation | 51   | 2018             | 2018                      | 4             | Yes                               |          |
| relieve overloads or low voltages under contingency                           | Rebuild West Middleton-Pheasant Branch 69-kV line with double circuit   | 5  | 2022             | 2022                      | 3             | Yes                               |          |

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

| <u>Berlin-Wautoma 69-kV line partial rebuild</u>      |  |
|---|--|
| 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.   |
| <u>Whitcomb-Deer Trail 69-kV line partial rebuild</u> |  |
| 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*

| Nine Mile-Roberts 69-kV line partial 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.  |
| Rio-North Randolph 69-kV line partial 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

| Spring Green-Stagecoach 69-kV line partial 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                                    |   |
| #4 Sensitive Resources                             | 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.   |
| #5 Cultural 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. |
| Miscellaneous                                      | Several archaeological sites are listed by WHS as occurring along this route.<br>There is a very high probability of encountering rare species along this route due to the numerous waterways, wetlands, and other habitats.  |
| 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.   |
| 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.   |

Table RS-4

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

| Sycamore-East Towne 69-kV underground cable replacement |  |  |
|---|--|--|
|   | 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.  |
| 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                            |  |
| Dane-Dam Heights 69-kV line partial rebuild             |  |  |
|   | 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   |
| #4  | Sensitive Resources                      | The Wisconsin River, Spring Creek, and several unnamed   |
| #5  | Cultural Resources                       | There are several known archaeological sites located along the line  |
|   | Miscellaneous                            | There is a moderate to high likelihood of encountering rare species  |
| 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                      | wetland areas, including: Farmers Valley Creek, Silver Creek, Chub   |
| #5  | Cultural Resources                       | cities of Tomah and Sparta, along with the Elroy-Sparta state trail.   |
|   | Miscellaneous                            | 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.  |
| #5 | Cultural Resources                       | Wisconsin Historical Society information identifies several known |
|    | Miscellaneous                            | Due to the proximity of this route to Necedah National Wildlife   |

**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 Rock River, Mud Run Creek, and numerous wetlands.         |
| #5 | Cultural Resources                       | route.  |
|    | Miscellaneous                            | this route due to the numerous waterways, wetlands, and other |

Table RS-4

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

| M38-Atlantic 69-kV line rebuild             |   |
|---|---|
| General Description                         | Rebuild   |
| 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                      | with associated wetlands and tributaries.                     |
| #5 Cultural Resources                       | rivers located in the screening area.                         |
| Miscellaneous                               |   |
| Sun Valley Tap-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                             | USFWS land  |
| #4 Sensitive Resources                      | potential to encounter threatened and endangered species.     |
| #5 Cultural Resources                       | the vicinity of the existing line                             |
| Miscellaneous                               | Storytown airport, Spiegel, Peterson, and Mc Manus Hoonch-na- |
| 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                               | existing rare plant community, along this route.              |

Table RS-4

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

| 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                      | wetlands.   |
| #5  | Cultural Resources                       | The route crosses several archaeological sites.                 |
|   | Miscellaneous                            | route with the extensive wetlands and rare plant communities    |
| 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                      | project route, along with several tributaries and numerous      |
| #5  | Cultural Resources                       | occurring along this route.                                     |
|   | Miscellaneous                            | along this route due to the numerous waterways, wetlands, and   |
| 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                      | unnamed Rubicon River tributary as well as associated wetlands. |
| #5  | Cultural Resources                       | occurring along this route.                                     |
|   | Miscellaneous                            | route.  |



Table RS-4

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

| Redwood-First Avenue 69-kV underwater cable replacement |  |  |
|---|--|--|
|   | 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                       | route.   |
|   | Miscellaneous                            | 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                       | route.   |
|   | Miscellaneous                            | route due to the numerous waterways, wetlands, and other habitats. |
| 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                      | Sugar Creek, Olson Creek, the Red River, and the Ahnapee River.    |
| #5  | Cultural Resources                       | The route crosses several archeological sites according to WHS.    |
|   | 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*

| <b>Merrill Hills-Waukesha 138-kV line partial rebuild</b> |  |  |
|---|--|--|
|   | 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                      | to Pewaukee lakes, and also crosses several significant wetlands.  |
| #5  | Cultural Resources                       | occurring along this route.  |
|   | Miscellaneous                            | this route due to the waterways, wetlands, and other habitats.     |
| <b>Mears Corners-Sunset Point 138-kV line rebuild</b>     |  |  |
|   | 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                      | wetlands.  |
| #5  | Cultural Resources                       | archaeological site is in close proximity.                         |
|   | Miscellaneous                            | this route due to the waterways and wetlands.                      |
| <b>Woodenshoe-Mears Corners 138-kV line rebuild</b>       |  |  |
|   | 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                            | route.   |

Table RS-4

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

| <b>Wesmark-Manrap 69-kV line rebuild</b>       |  |   |
|--|--|---|
|  | 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 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 |
| <b>Oak Street-Highway V 69-kV line rebuild</b> |  |   |
|  | 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                      | River and the East River, and associated wetlands.                  |
| #5   | Cultural Resources                       | Several archaeological sites are crossed by this line.              |
|  | Miscellaneous                            | on or near this route.  |
| <b>Finger Road-Danz 69-kV line rebuild</b>     |  |   |
|  | 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                       | route.  |
|  | Miscellaneous                            | along this route due to the generally urban setting.                |

Table RS-4

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

| 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                       |  | along this route.  |
| Miscellaneous                               |  | route.   |
| Montello-Wautoma 69-kV line partial 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                             |  | area, the French Creek Wildlife Area, and lands along the shore of                             |
| #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.                          |

Table RS-4

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

| Danz-University 69-kV underground cable replacement |  |
|---|--|
| 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                              |  |
| #5 Cultural Resources                               | One large wetland complex is crossed by the existing line route.   |
| Miscellaneous                                       | One archeological site is crossed by the route according to WHS. Rare plants are known to occur along this route.                      |
| 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.  |
| Waukesha-Summit 138-kV line partial 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 archeological 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

| Colley Road-Brick Church 69-kV line rebuild |  |   |
|---|--|---|
|   | 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.  |
| 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.   |

Table RS-4

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

| 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.   |
| 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.  |
| 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. |

Table RS-4

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

| Royster to Sycamore 69-kV line uprate                         |  |
|---|--|
| 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.  |
| West Middleton-Stagecoach 69-kV underground cable replacement |  |
| 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  |  |
| #5 Cultural 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. 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   |  |



Table RS-4

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

| 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                      |   |
|  |  | The route crosses as many as 15 creeks and associated wetlands.   |
| #5   | Cultural Resources                       |   |
|  |  | 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. |
| Lodestar-Erdman 69-kV underground cable replacement  |  |   |
|  | 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 underwater cable replacement |  |   |
|  | 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.                       |

Table RS-4

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

| 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  |  |
| Erdman-Edgewater 69-kV underground cable replacement |  |
| 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.  |
| Doylestown-Rio Pumping Station 69-kV rebuild         |  |
| General Description                                  | asset renewal of 69-kV line  |
| Length (miles)                                       | 11.5   |
| #1 Screening Area (Sq. mi.- length X width)          | Existing corridor  |
| #2 Corridor Sharing Opportunities                    | N/A – existing transmission line corridor.   |
| #3 Public Lands                                      |  |
| #4 Sensitive Resources                               | Grassy Lake Wildlife area, Grassy Lake state natural area, and U.S. Fish & Wildlife Service owned Manthey, Doylestown, Ludwig Waterfowl production areas are located along the project route. The route passes near Grassy Lake Wildlife area, Grassy Lake state natural area, Manthey, Doylestown, and Ludwig Waterfowl production areas and associated wetlands. |
| #5 Cultural Resources                                | There are no known archaeological sites listed by WHS as occurring along this route.   |
| Miscellaneous  | There is a moderate probability of encountering rare species along this route. Gilbert Field and Higgins airports are located near the route.  |

Table RS-4

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

| Kirkwood - Trienda 138-kV partial rebuild   |  |
|---|--|
| General Description                         | asset renewal of 138-kV line (str 796-812)   |
| Length (miles)                              | 1.8  |
| #1 Screening Area (Sq. mi.- length X width) | Existing corridor  |
| #2 Corridor Sharing Opportunities           | N/A – existing transmission line corridor.   |
| #3 Public Lands                             | The majority of the segment is located on Pine Island Wildlife area and Pine Island State Natural Area both owned by the Wisconsin Department of Natural Resources.              |
| #4 Sensitive Resources                      | The route passes through a designated state natural area, a state wildlife area, and crosses the Wisconsin River and associated wetlands.  |
| #5 Cultural Resources                       | There are no known archaeological sites listed by WHS as occurring along this route, however, the location along the Wisconsin River may contain previously un-identified sites. |
| Miscellaneous                               | There is a very high probability of encountering both terrestrial and aquatic rare species along this route.   |
| Kansas-Harbor 138-kV line reconductor       |  |
| General Description                         | Reconductor underground portion of existing 138-kV line  |
| Length (miles)                              | 5.8  |
| #1 Screening Area (Sq. mi.- length X width) | Existing corridor  |
| #2 Corridor Sharing Opportunities           | N/A – existing transmission line corridor.   |
| #3 Public Lands                             | The 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.   |

Table RS-4

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

| Straits-Pine River 69-kV rebuild   |  |
|--|--|
| General Description  | asset renewal of 69-kV line to 138-kV standards  |
| Length (miles)   | 25.3   |
| #1 Screening Area (Sq. mi.- length X width)  | Existing corridor  |
| #2 Corridor Sharing Opportunities  | N/A – existing transmission line corridor.   |
| #3 Public Lands  |  |
| #4 Sensitive Resources   | The majority of the line is located in the Hiawatha National Forest. The route passes through extensive wetlands and wooded lands, runs adjacent to Chain and Platz lakes, and crosses numerous streams including the Pine River and its tributaries.  |
| #5 Cultural Resources  | Based on the location of the line near the lake Michigan shoreline and tributary waterways there is a moderate to high probability of encountering archaeological sites along this route.  |
| Miscellaneous  | There is a high probability of encountering rare species along this route.   |
| Convert Forest Junction - Howards Grove and part of Howards Grove-Holland 138-kV lines to 345-kV operation |  |
| General Description  | Convert 138-kV lines to 345-kV operation   |
| Length (miles)   | 51   |
| #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  | The line does not cross any large public lands.  |
| #4 Sensitive Resources   |  |
| #5 Cultural Resources  | The line crosses the Pigeon, Sheboygan, Manitowoc, Mullet, Onion, Meeme, and Branch (OEWB) rivers, Mud Creek, and associated wetlands. The Brillion wildlife area is near the line route. There are a few known archaeological sites identified in the WHS records near or along the line route. |
| Miscellaneous  | Sheboygan County Municipal airport is near the line route.   |
| West Middleton - Pheasant Branch 69-kV line rebuild  |  |
| General Description  | asset renewal of 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  | Limited publically owned lands are located along the line route.   |
| #4 Sensitive Resources   | Black Earth Creek (an outstanding exceptional resource water), Pheasant Branch and scattered wetlands are present along the project route.   |
| #5 Cultural Resources  | The WHS records identify a few archaeological sites along the line route.  |
| Miscellaneous  | There is a low - moderate probability of encountering rare species. This line passes primarily through urban lands.  |

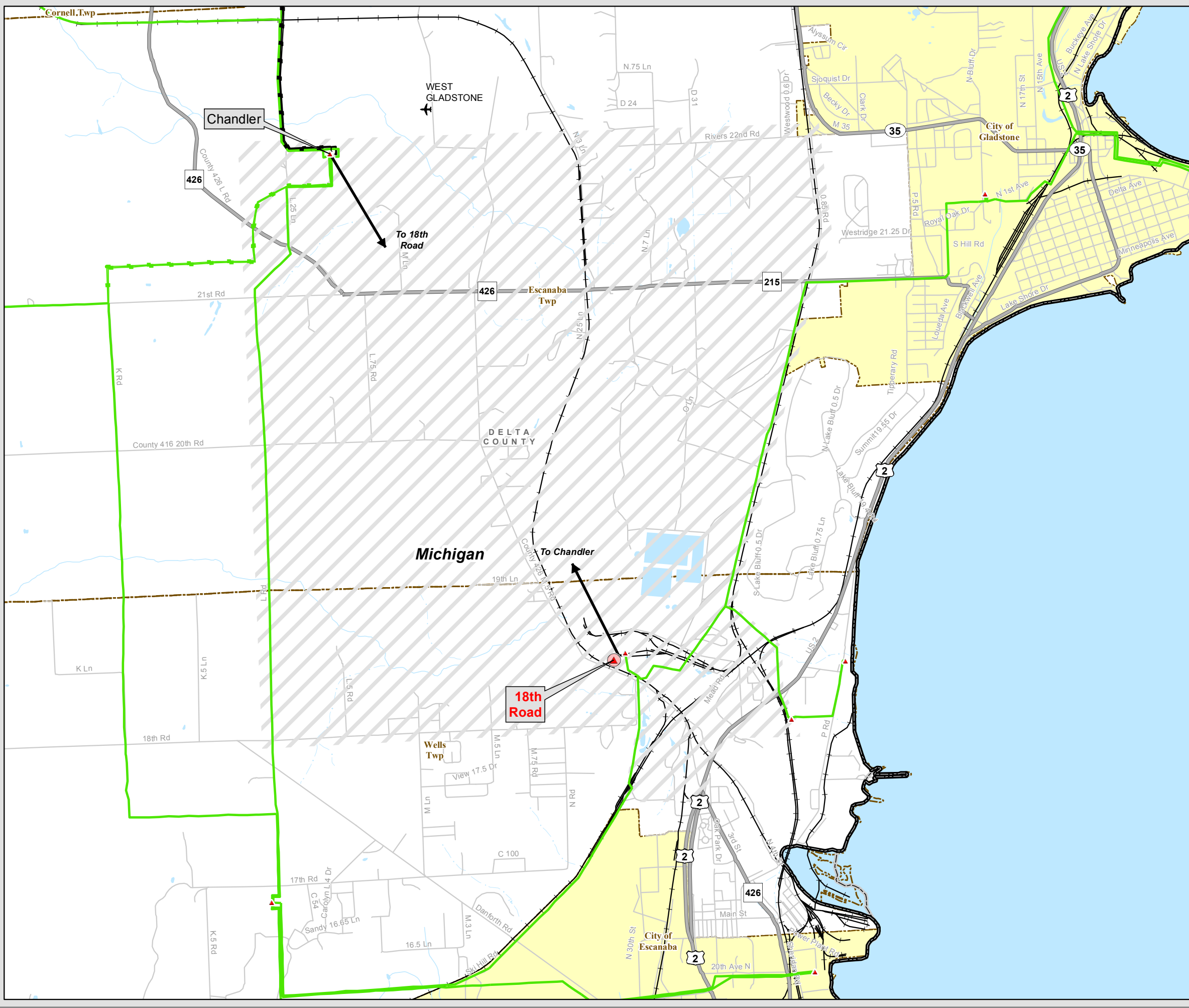
*Table RS-4*

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

**NOTES:**

- |    |                                 |  |
|----|---------------------------------|--|
| #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.  |

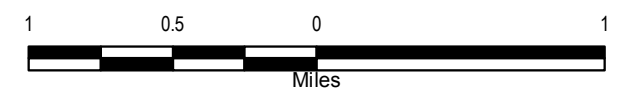
**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct 18th Road-Chandler  
 Double Circuit 138kV Lines and  
 Operate at 138/69kV*



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

- ▲ Proposed Substation
- ▨ Project Study Area

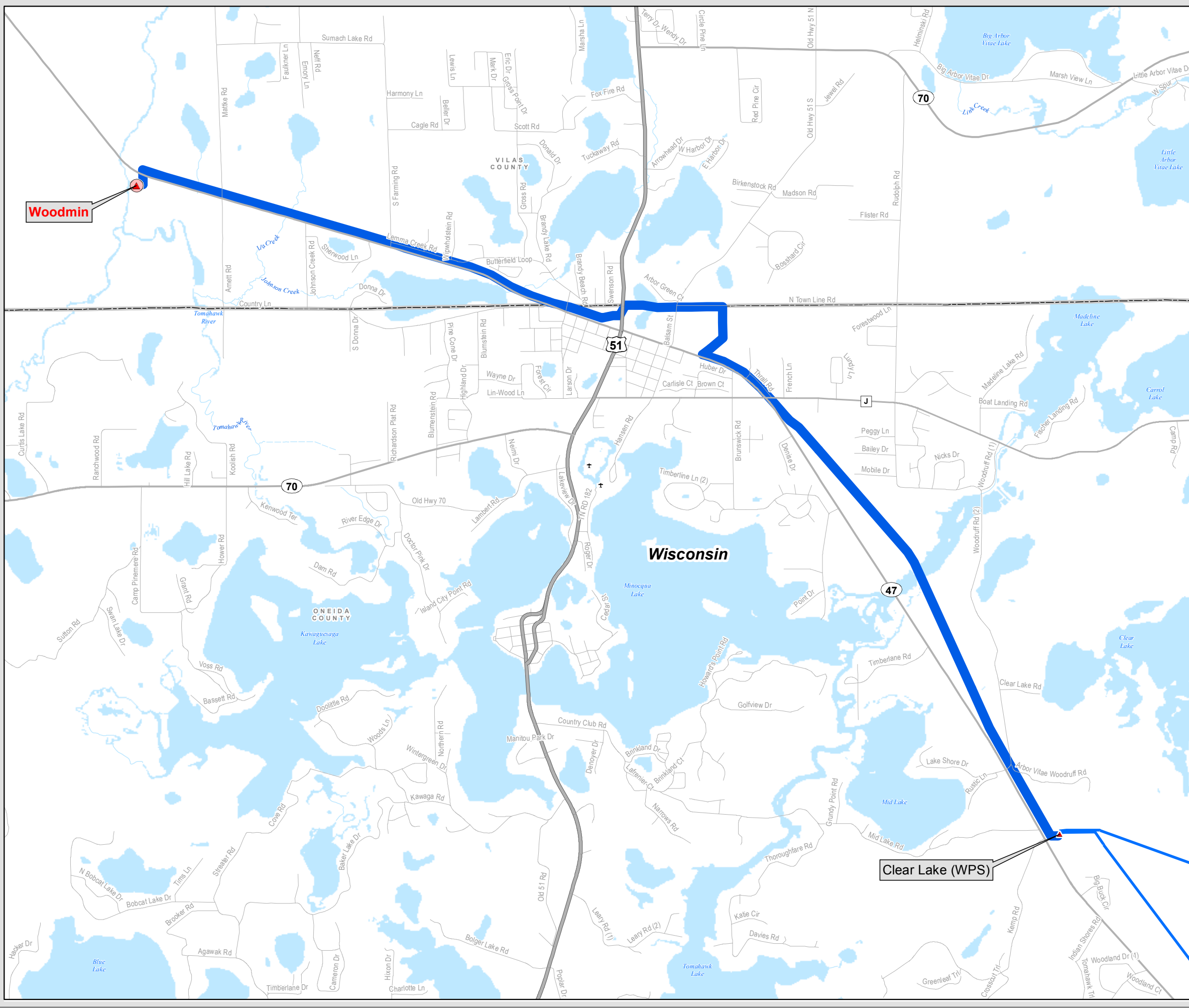
- Railroad
  - City/Village
  - Open Water
  - River/Stream
- Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI, FAA.



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.



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



**Transmission Facilities**

Transmission Sites

▲ Substation/Switching Yard

Transmission Lines

115 kV  
Single Circuit

▲ Proposed Substation

➤ PSCW Approved Route

City/Village

Open Water

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

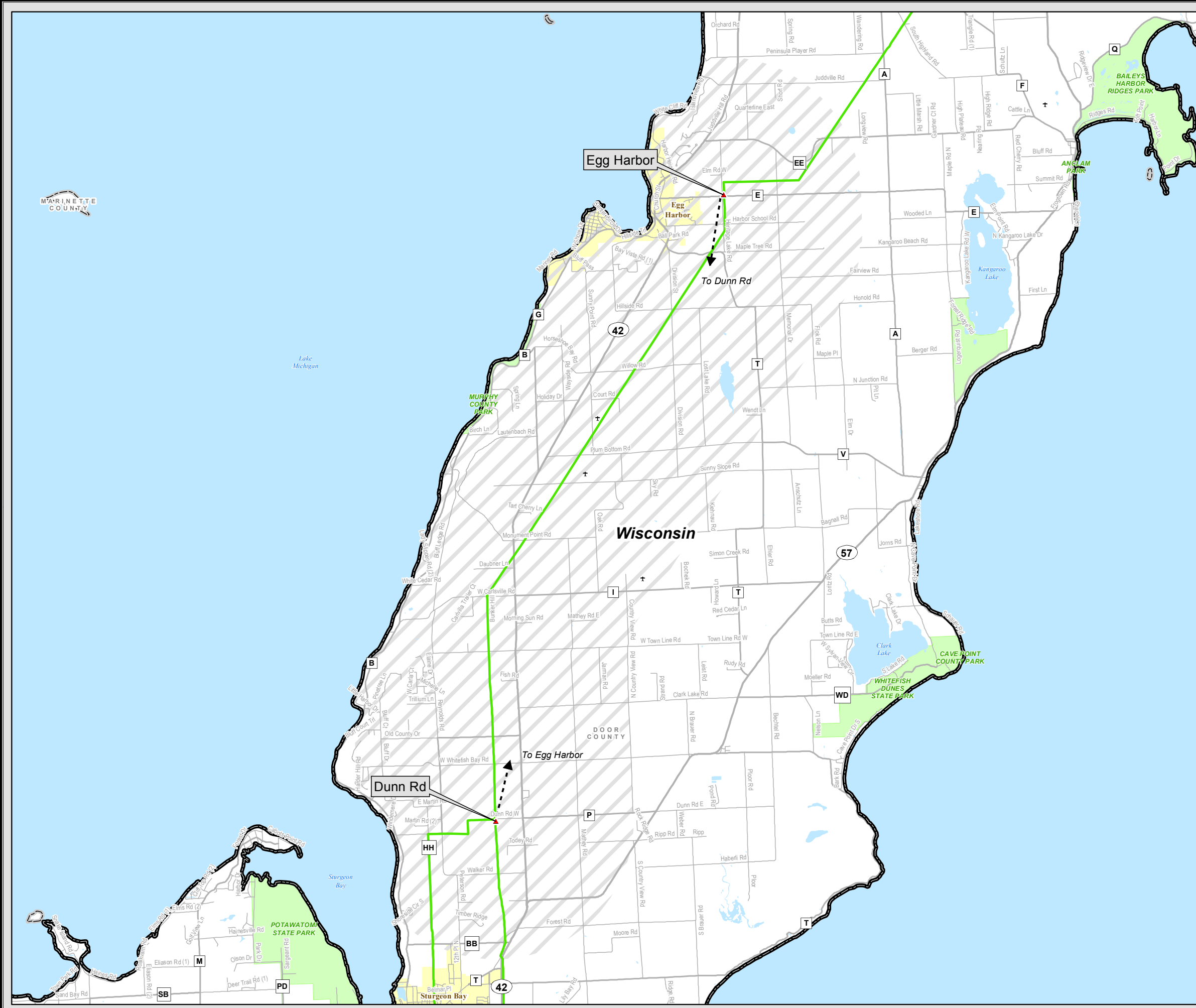


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Second Dunn Road-Egg Harbor  
69kV Line*



**Transmission Facilities**

Transmission Sites

- ▲ Substation/Switching Yard

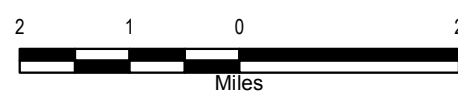
**Transmission Lines**

- 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.



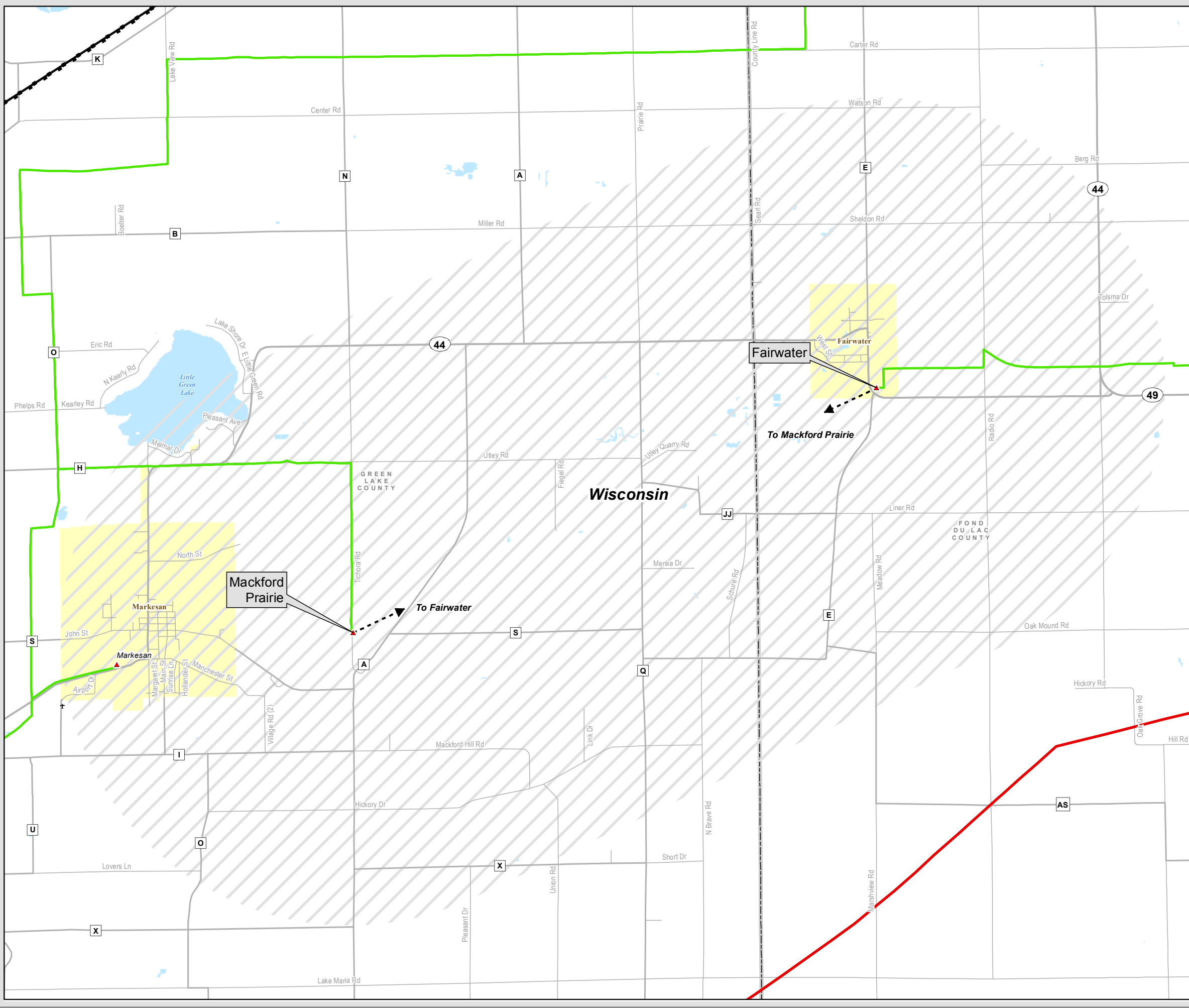
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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**

*Construct Fairwater-Mackford Prairie 69 kV Line*

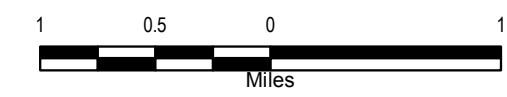


- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines**
- |                      |                       |                       |
|----------------------|-----------------------|-----------------------|
| 69 kV Single Circuit | 138 kV Single Circuit |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

- Preliminary Screening Area

- City/Village
- Open Water

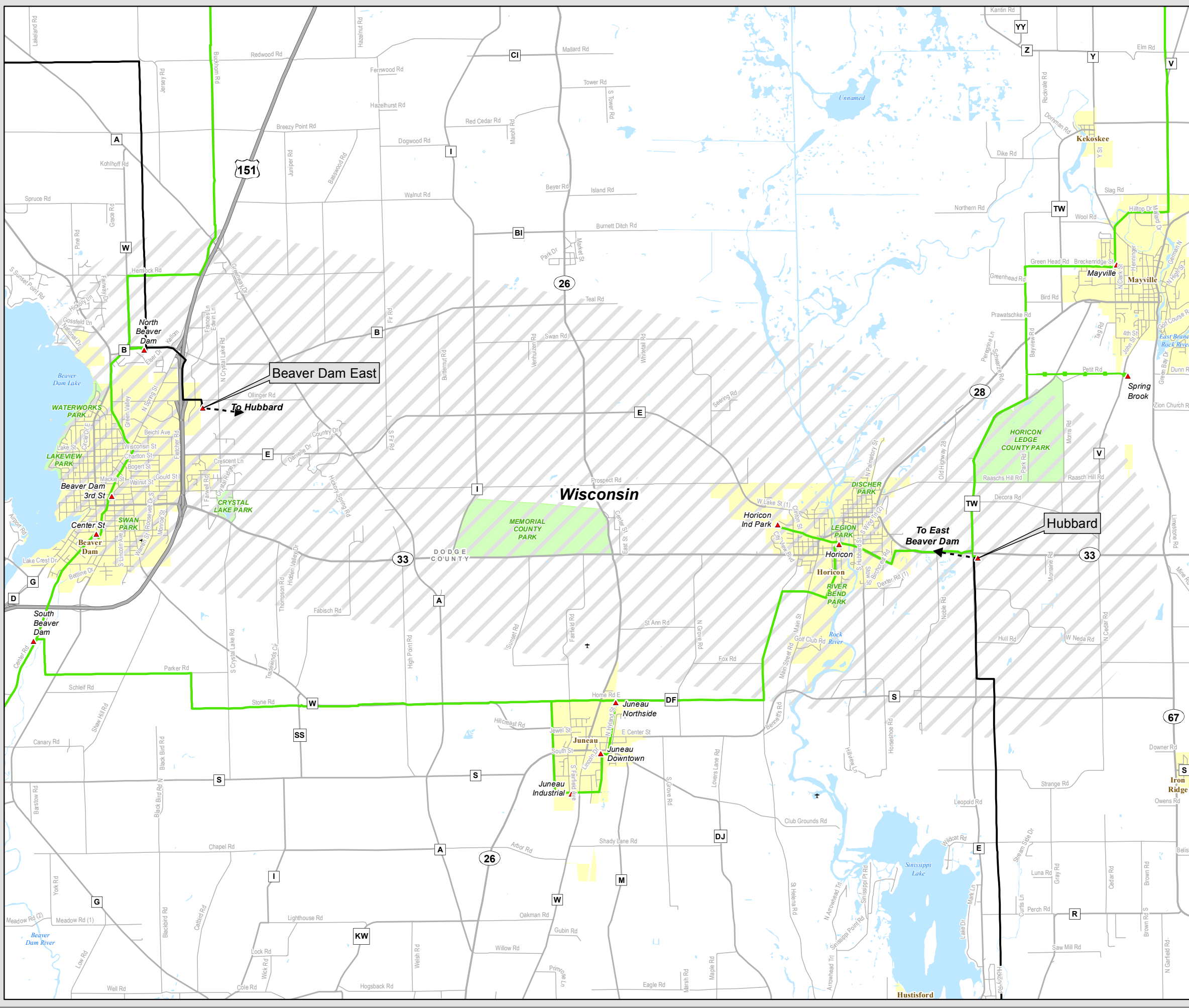
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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**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      ● Park Areas

● Open Water

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

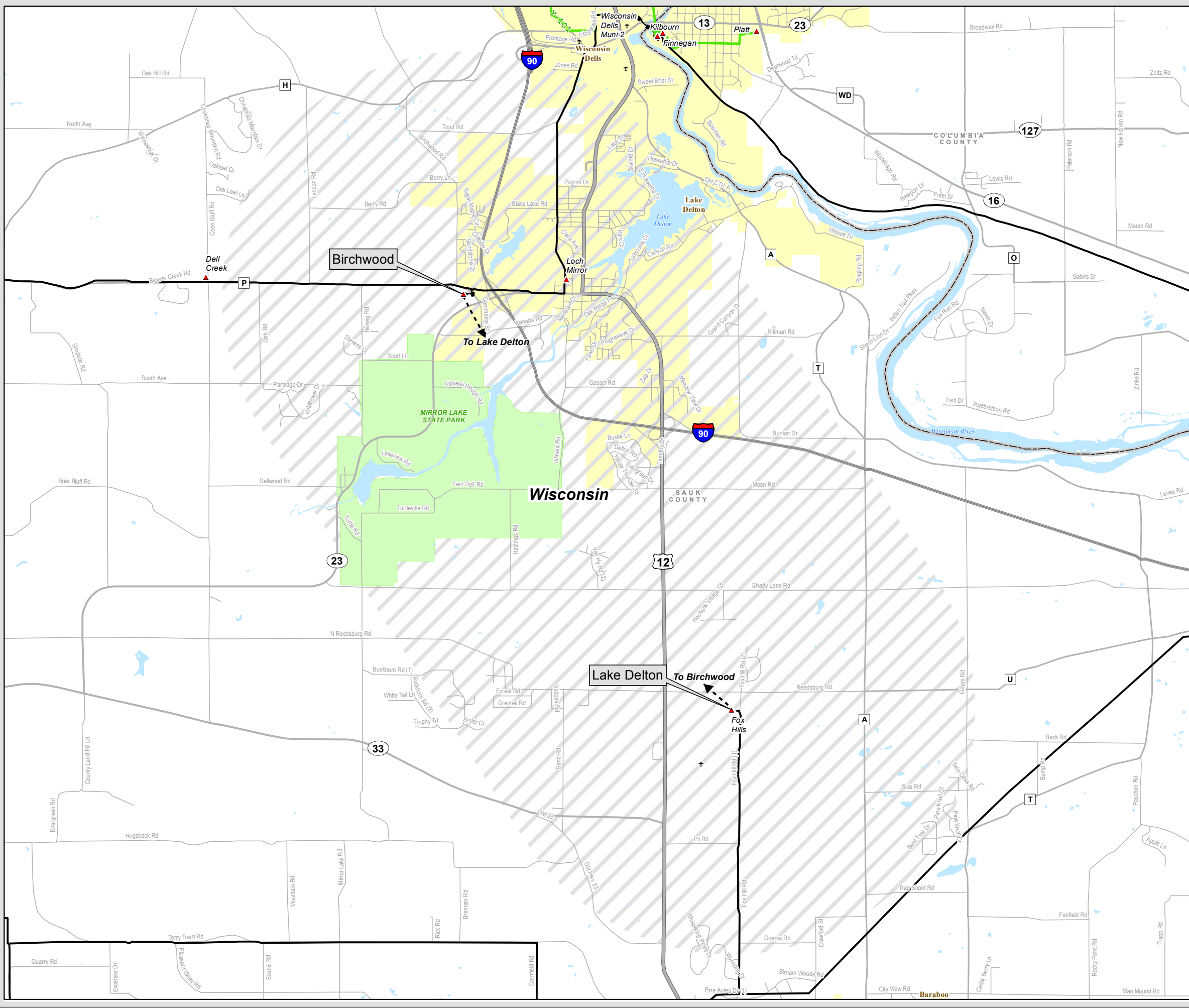


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**

*Construct Lake Delton-Birchwood 138kV Line*



**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

**Transmission Lines**

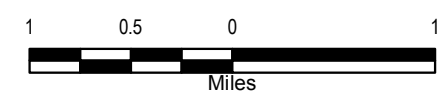
- 69 kV Single Circuit (thin green line)
- 69 kV Double Circuit (double thin green lines)
- 138 kV Single Circuit (thick black line)
- 138 kV Double Circuit (double thick black lines)

- Preliminary Screening Area (diagonal hatching)

**Legend**

- City/Village (yellow oval)
- Park Areas (green oval)
- Open Water (blue oval)

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

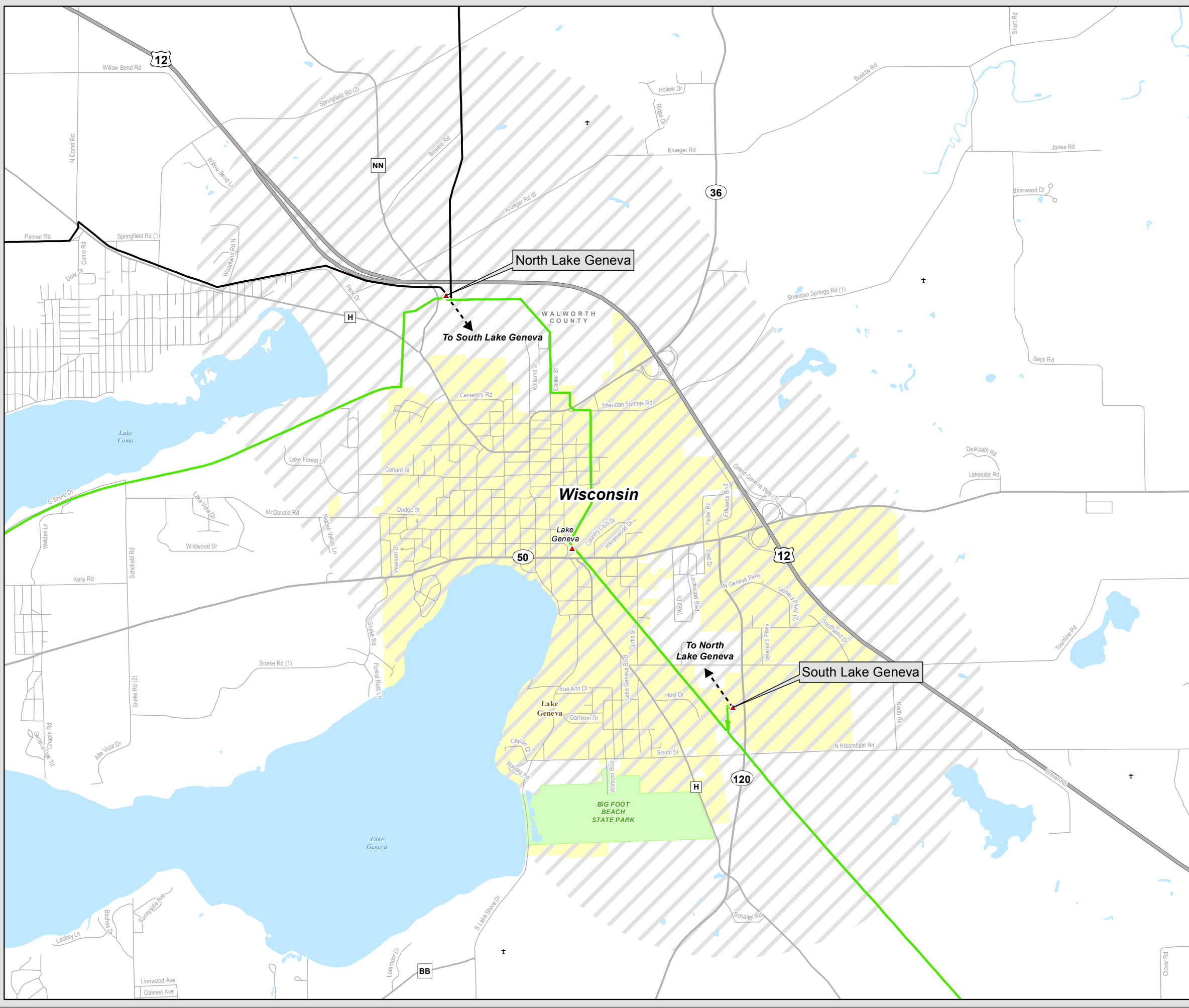


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
Construct North Lake Geneva-South Lake Geneva  
New 138 kV Line



- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard

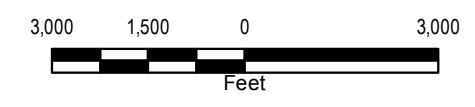
- Transmission Lines**
- 69 kV Single Circuit (solid green line)
  - 69 kV Double Circuit (dashed green line)
  - 138 kV Single Circuit (solid black line)
  - 138 kV Double Circuit (dashed black line)

○ Preliminary Screening Area

City/Village
  Park Areas

Open Water

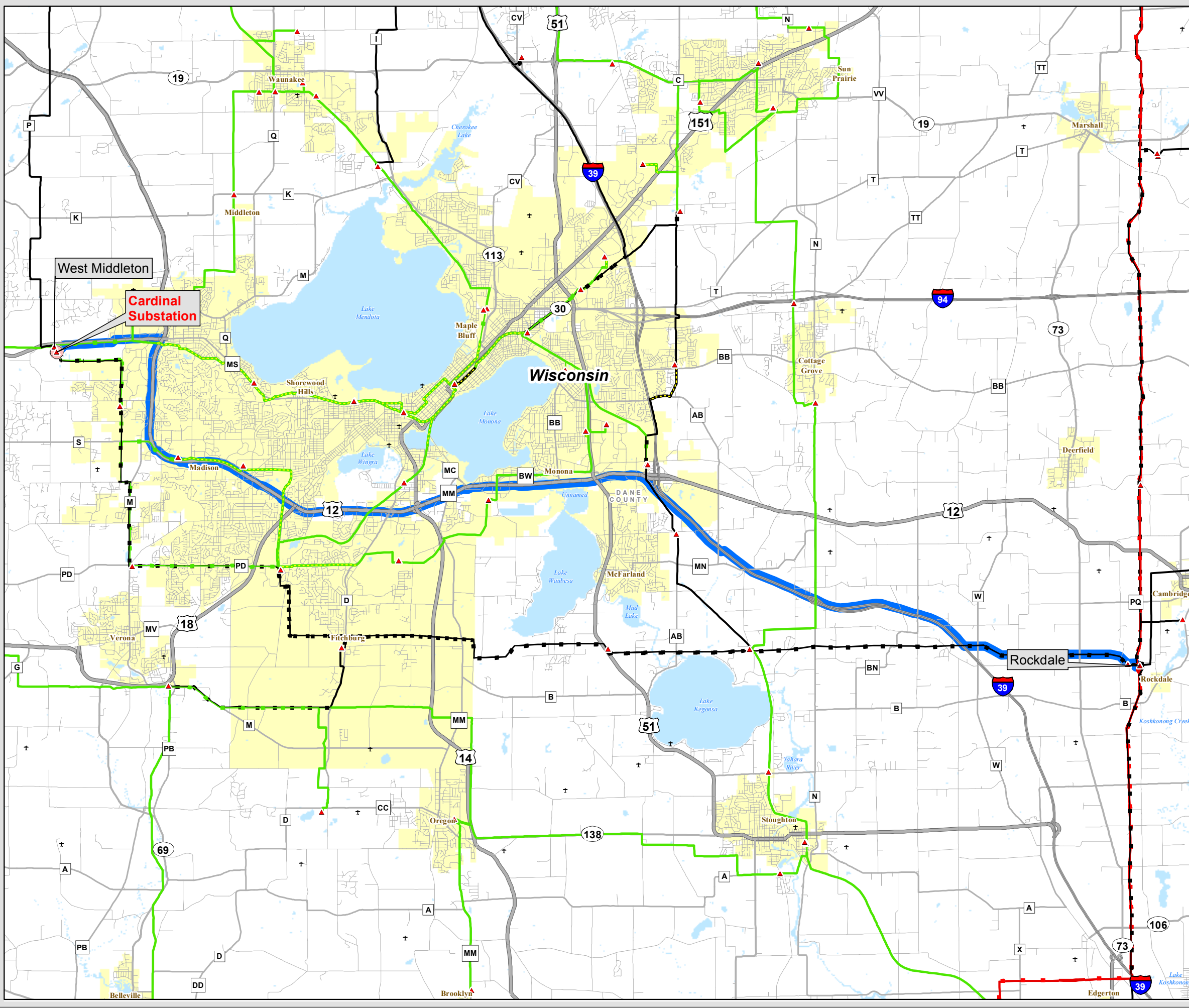
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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

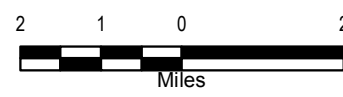


- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines**
- |                |                |                |
|----------------|----------------|----------------|
| 69 kV          | 138 kV         | 345 kV         |
| Single Circuit | Single Circuit |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

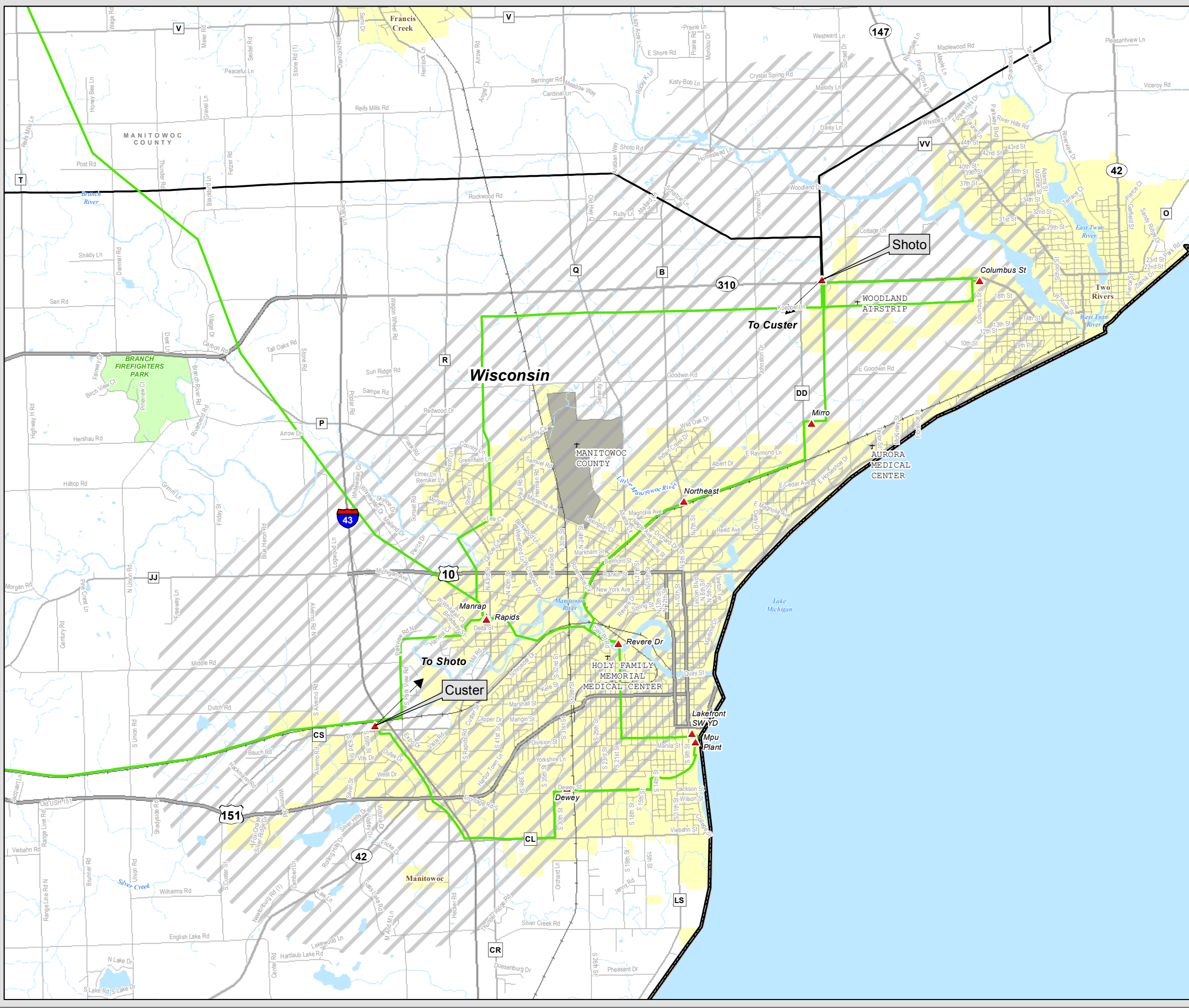


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Shoto to Custer 138 kV Line*

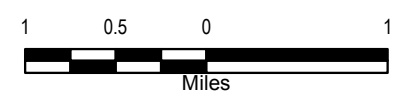


- Transmission Facilities**
- Transmission Sites
  - ▲ Substation/Switching Yard
- Transmission Lines**
- 69 kV Single Circuit (solid green line)
  - 69 kV Double Circuit (dashed green line)
  - 138 kV Single Circuit (solid black line)
  - 138 kV Double Circuit (dashed black line)

- ▲ Proposed Substation
- ▨ Preliminary Screening Area

- City/Village
- Park Areas
- Open Water

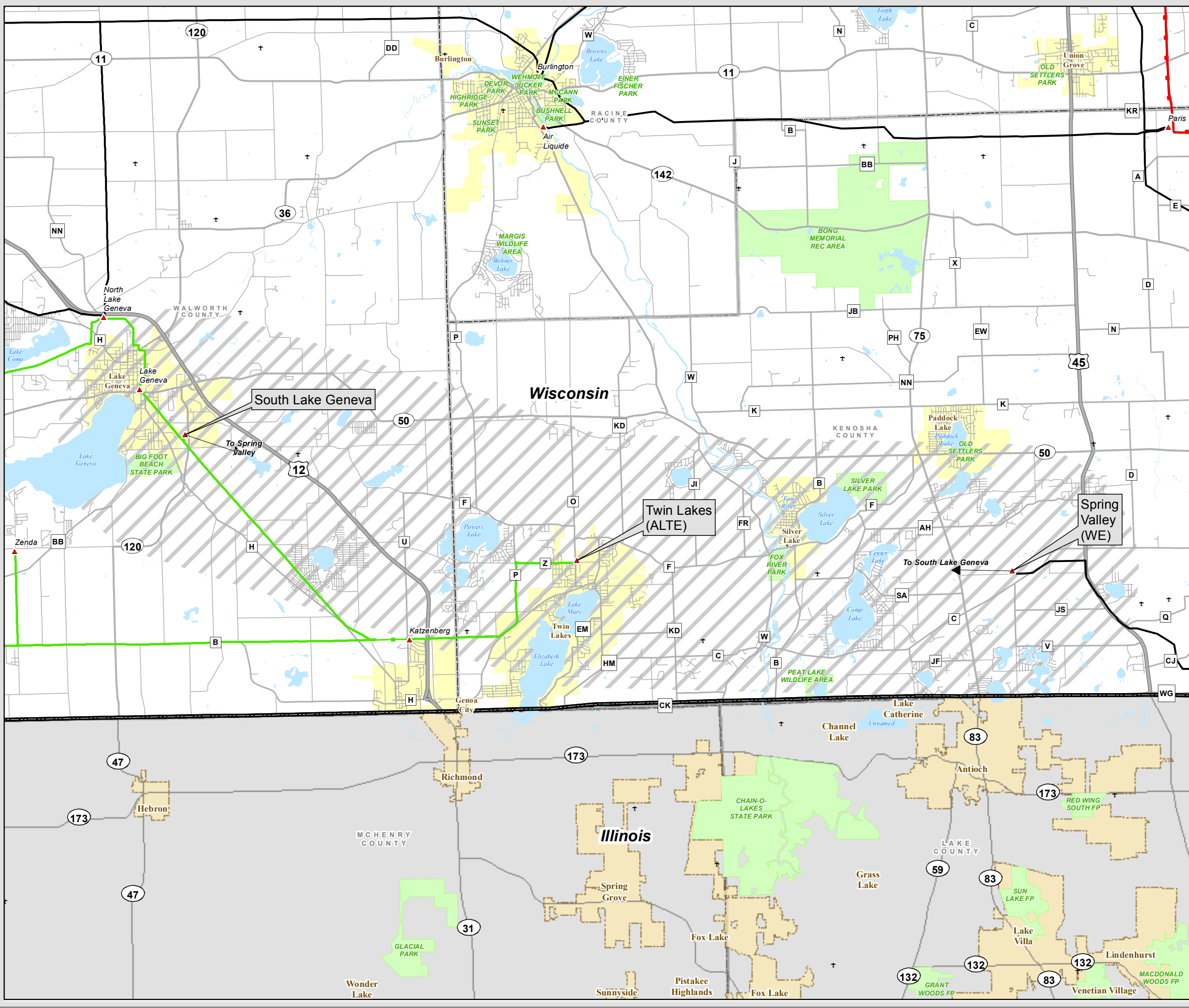
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI.



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



**Transmission Facilities**

- Transmission Sites
- ▲ Substation/Switching Yard

**Transmission Lines**

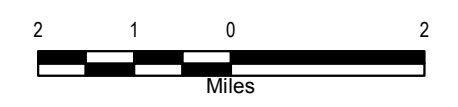
- 69 kV Single Circuit (solid green line)
- 69 kV Double Circuit (dashed green line)
- 138 kV Single Circuit (solid black line)
- 138 kV Double Circuit (dashed black line)

- Preliminary Screening Area (hatched pattern)

**Legend**

- City/Village (yellow outline)
- Park Areas (green outline)
- Open Water (blue outline)

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

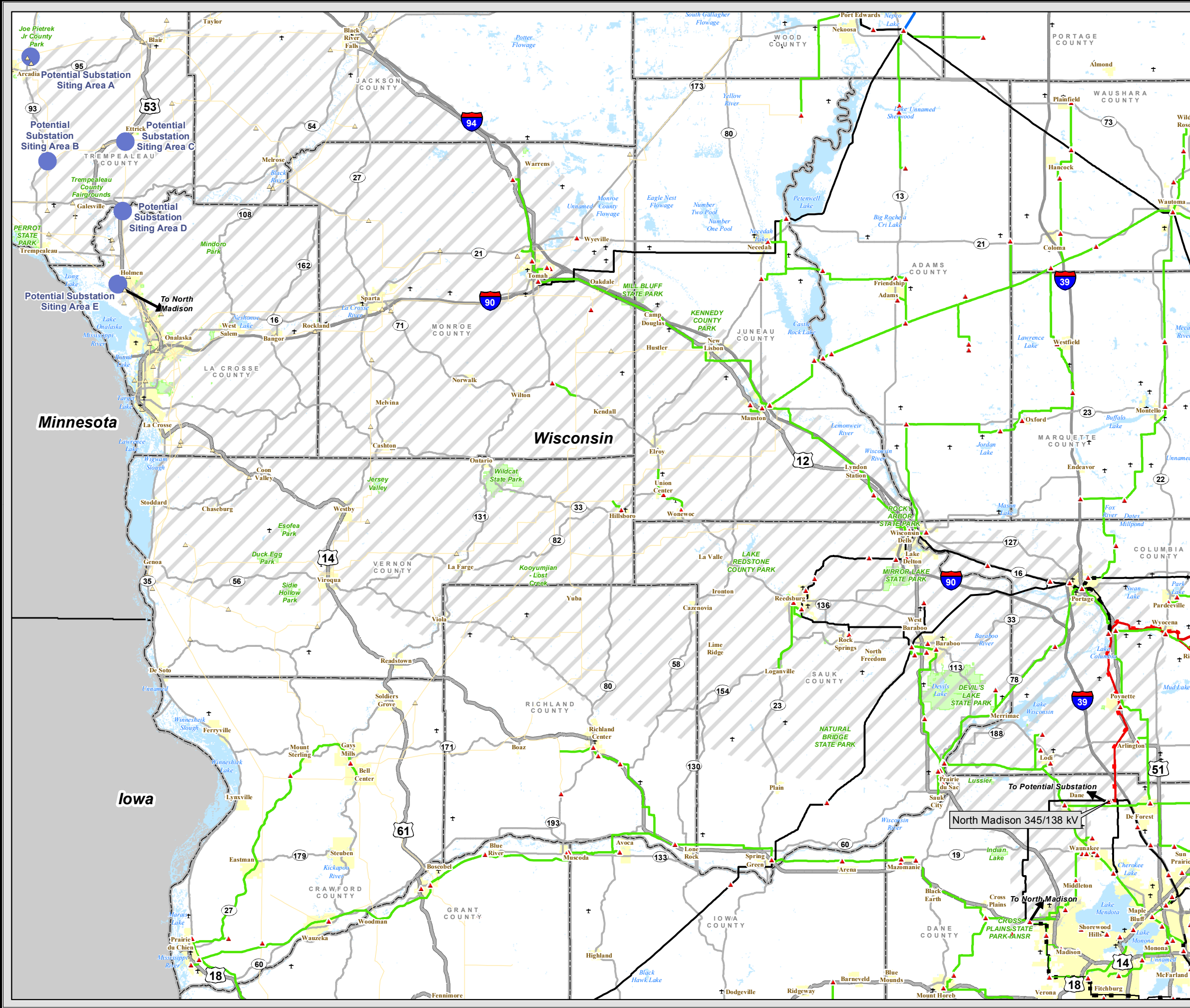


The information presented in this map document is advisory and is intended for reference purposes only. American Transmission Company owned and operated facility locations are approximate.





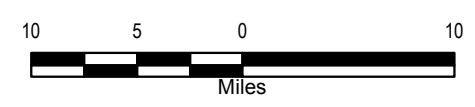
**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Badger Coulee 345kV Line*



**Transmission Facilities**

- Transmission Sites**
  - ▲ Substation/Switching Yard
  - △ Non-ATC Substation
- Transmission Lines**
  - 69 kV: Single Circuit (green line), Double Circuit (green line with two parallel lines)
  - 138 kV: Single Circuit (black line), Double Circuit (black line with two parallel lines)
  - 345 kV: Single Circuit (red line), Double Circuit (red line with two parallel lines)
  - Non-ATC Transmission Line (yellow line)
- Other Symbols**
  - Blue oval: Potential Substation Siting Area
  - Diagonal hatched area: Study Area
  - Green oval: Park Areas
  - Yellow oval: City/Village
  - Blue oval: Open Water

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

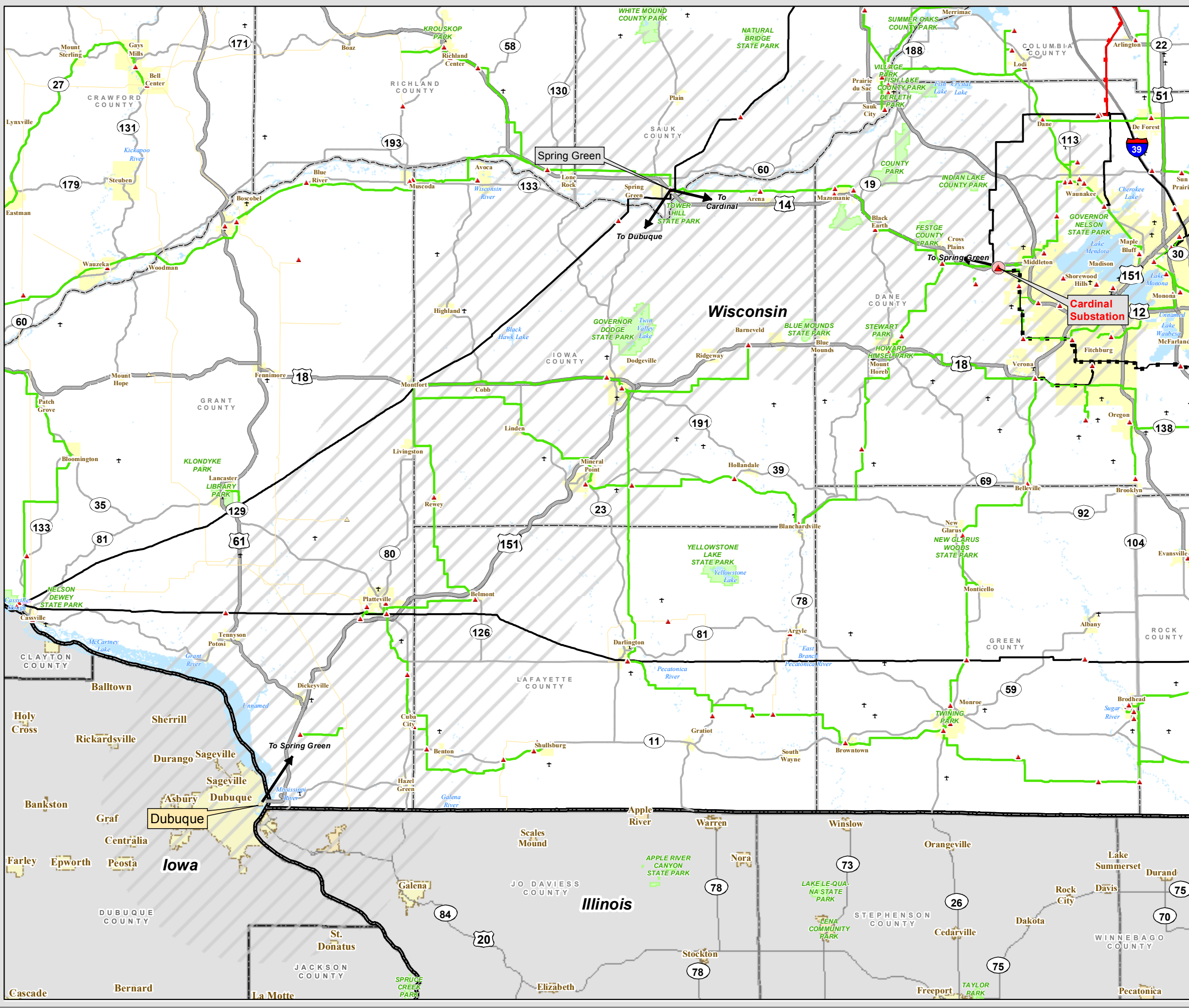


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Dubuque-  
Spring Green-Cardinal 345kV Line*



**Transmission Facilities**

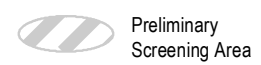
**Transmission Sites**

- ▲ Substation/Switching Yard
- ▲ Non-ATC Substation

**Transmission Lines**

- 69 kV Single Circuit (Green line)
- 69 kV Double Circuit (Green line)
- 138 kV Single Circuit (Black line)
- 138 kV Double Circuit (Black line)
- 345 kV Single Circuit (Red line)
- 345 kV Double Circuit (Red line)
- Non-ATC Transmission Line (Yellow line)

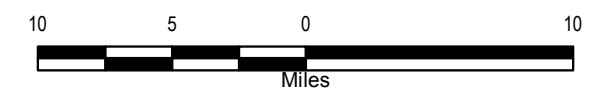
▲ Proposed Substation



Legend for map features:

- Park Areas (Green circle)
- City/Village (Yellow circle)
- Open Water (Blue circle)

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

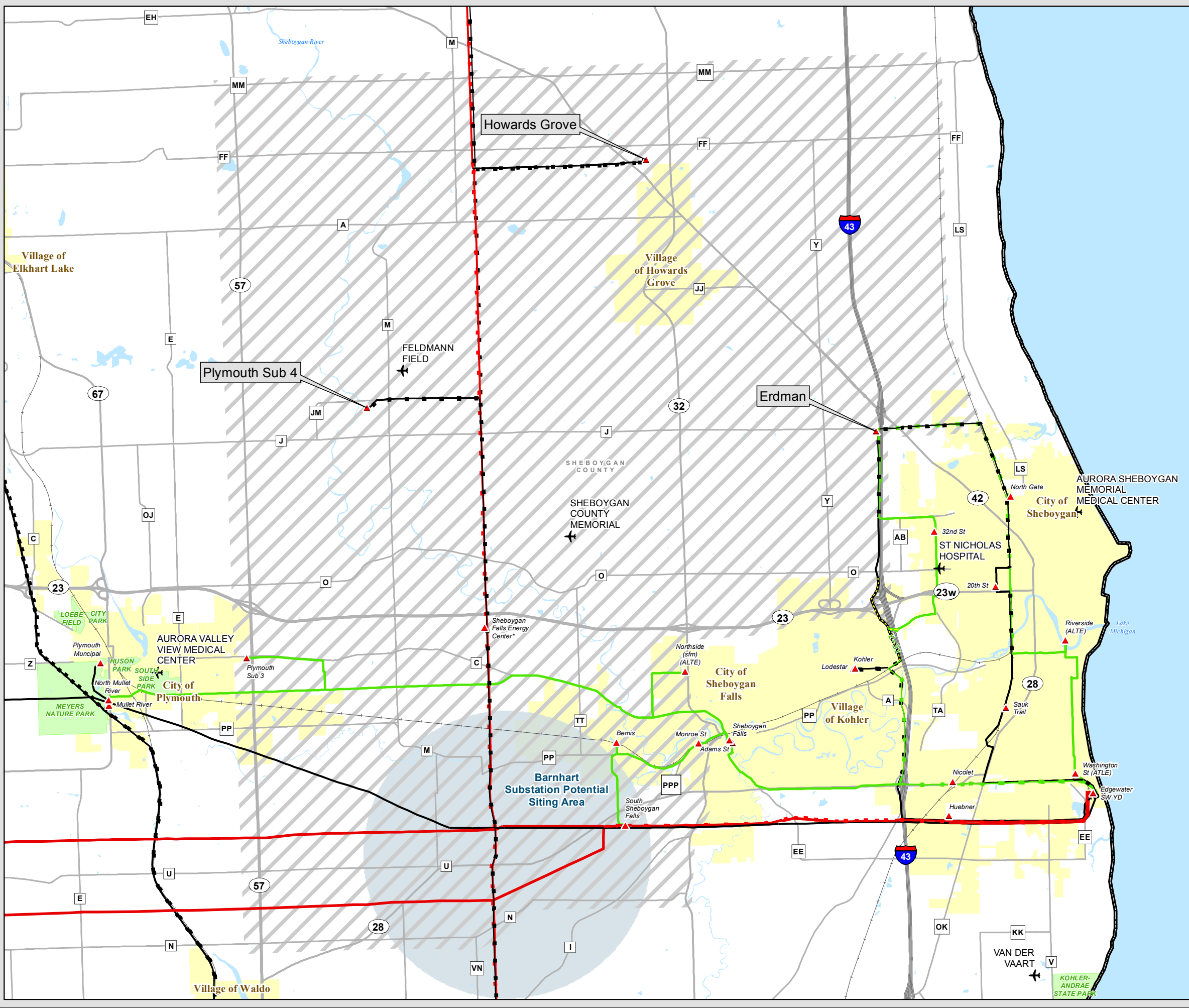


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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**

*Construct Erdman-Howards Grove-  
Plymouth #4-Barnhart 138kV Line*



**Transmission Facilities**

**Transmission Sites**

▲ Substation/Switching Yard

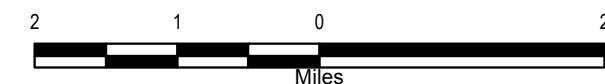
**Transmission Lines**

|                |                |                |
|----------------|----------------|----------------|
| 69 kV          | 138 kV         | 345 kV         |
| Single Circuit | Single Circuit | Single Circuit |
| Double Circuit | Double Circuit | Double Circuit |

○ Potential Substation Siting Area  
 ▨ Project Study Area

|                |                |
|----------------|----------------|
| — Railroad     | ● Park Areas   |
| ● City/Village | ● Open Water   |
|                | — River/Stream |

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



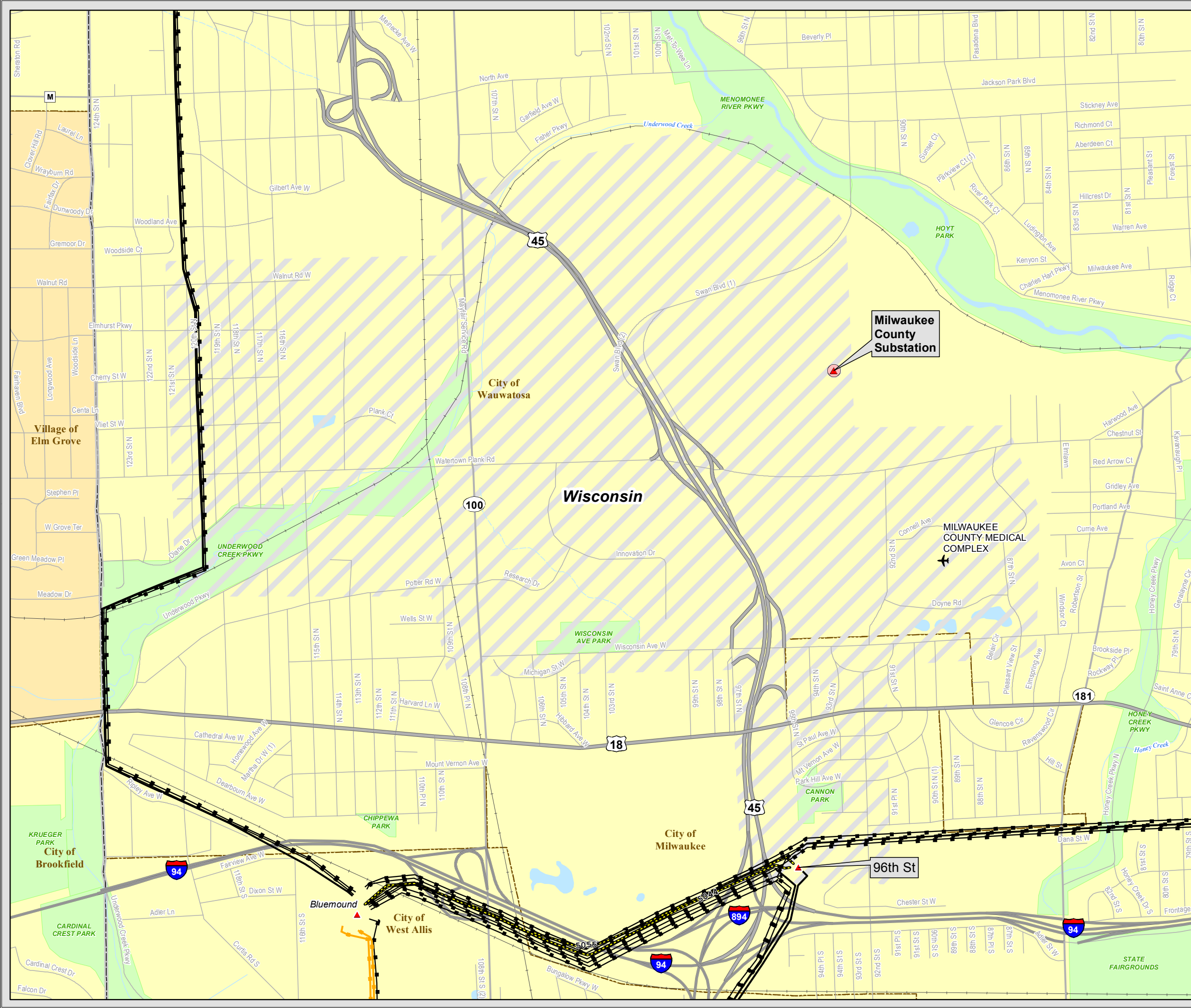
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**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**

*Construct Double Circuit 138 kV Line to  
Serve Milwaukee County T-D Interconnection*



**Transmission Facilities**

**Transmission Sites**

- ▲ Substation/Switching Yard

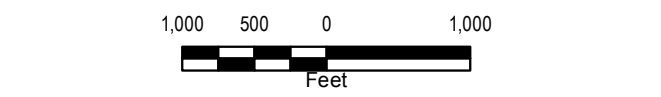
**Transmission Lines**

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |

- ▲ Proposed Substation
- ▨ Project Study Area

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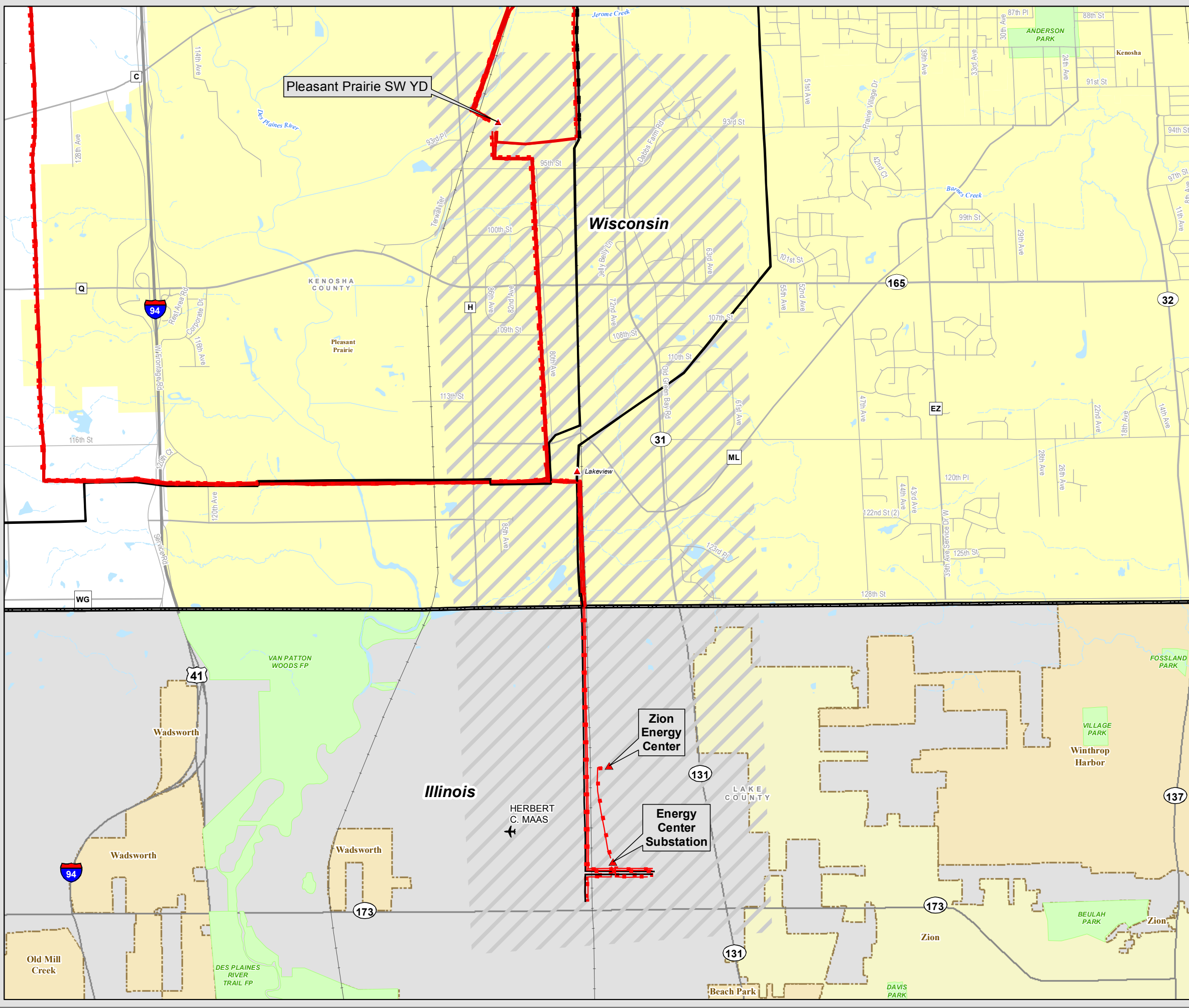
Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI, FAA.



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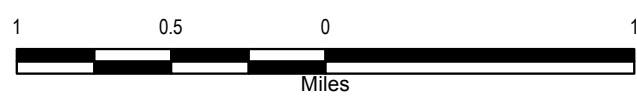


**TRANSMISSION LINE  
REQUIRING NEW RIGHT-OF-WAY**  
*Construct Pleasant Prairie-Zion Energy Center  
345kV Line*



- 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 |

- Project Study Area
- |              |              |
|--------------|--------------|
| Railroad     | Park Areas   |
| City/Village | Open Water   |
|              | River/Stream |
- Base Map Data Sources: ATC, WDNR, MDNR, PSCW, WDOA, ESRI, FAA.



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