

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

September 2008 10-Year Assessment www.atc10yearplan.com

Routing & Siting

Public Outreach

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

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

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

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

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

Siting process

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



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

1. Primary opportunities

- Existing transmission lines
- Pipelines

2. Secondary opportunities

- Highways
- Railroads

3. Tertiary opportunities

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

4. New corridors

Establish new corridors using section lines and/or property boundaries

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

New Right-of-Way

In addition, in siting and evaluating potential routes for transmission lines, consideration must be given to sensitive areas, which generally involve public or environmental issues. Information about sensitive areas can be found in <u>Table RS-2</u> 61k pdf).

<u>Figure RS-1</u> (30k pdf) 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-



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level and not nearly the level of investigation that will accompany a permit application to construct transmission facilities.

<u>Table RS-1</u> (61k pdf) 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.

<u>Table RS-2</u> (88k pdf) provides environmental screening information for the lines listed in <u>Table RS-1 (61k pdf)</u>. <u>Exhibits RS-1 through RS-13</u> (4.6M pdf) identify the approximate end-points and study areas for each project for which high-level environmental screening information is provided.

Existing Right-of-Way

<u>Table RS-3</u> 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. <u>Table RS-4</u> provides environmental screening information for the lines listed in Table RS-3.

The projects listed in <u>Tables RS-1 through Table RS-4</u> 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

		Approx. lin	e mileage		Projected		Environmental	Comments and/or
Identified need	Potential solutions	Total	New ROW	System need year	In-service year	Planning zone	screening provided?	Corresponding Exhibit Number
relieve overloads or low voltages under contingency	Construct a new 138-kV line from North Madison to Huiskamp	5	5	2008	2009	3	No	Environmental information included with filing at PSCW - CPCN approved.
relieve overloads or low voltages under contingency	Construct a Jefferson-Lake Mills-Stony Brook 138-kV line	12	12	2006	2009	3	No	Environmental information included with filing at PSCW - CPCN approved.
relieve overloads or low voltages under contingency, reduce service limitations	String a new 138-kV line from Clintonville- Werner West primarily on Morgan-Werner West 345-kV line structures	16	2	2004	2009	4	No	Environmental information included with filing at PSCW - CPCN approved.
relieve overloads or low voltages under contingency, reduce service limitations	Construct Morgan-Werner West 345-kV line	47	47	2004	2009	4	No	Environmental information included with filing at PSCW - CPCN approved.
T-D interconnection request	Construct 69-kV line from new Warrens Substation to the Council Creek-Tunnel City 69-kV line	4.5	4.5	2010	2010	1	Yes	Exhibit RS-1
T-D interconnection request	Construct Brandon-Fairwater 69-kV line	4	4	2010	2010	1	Yes	Exhibit RS-2
relieve overloads or low voltages under contingency	Construct new Oak Ridge-Verona 138-kV line and install a 138/69-kV transformer at Verona with a 100 MVA summer normal rating	9	3	2009	2010	3	No	Environmental information included with filing at PSCW - CPCN approved.
T-D interconnection request	Construct 115-kV line from new Arnett Road Substation to the Clear Lake Substation	7	7	2012	2012	1	Yes	Exhibit RS-3
relieve overloads or low voltages under contingency	Construct 345-kV line from Rockdale to West Middleton	35	35	2013	2013	3	No	Environmental information included with filing at PSCW.
T-D interconnection request	Construct a 69-kV line from SW Ripon to the Ripon-Metomen 69-kV line	1.5	1.5	2014	2014	1	Yes	Exhibit RS-4
relieve overloads or low voltages under contingency	Construct a Horicon-East Beaver Dam 138-kV line	9	9	2014	2014	3	Yes	Exhibit RS-5
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	3	2014	2014	3	Yes	Exhibit RS-6
relieve overloads or low voltages under contingency	Construct a Lake Delton-Birchwood 138-kV line	5	5	2015	2015	3	Yes	Exhibit RS-7
e overloads or low voltages under conting		9.94	9.94	2016	2016	4	Yes	Exhibit RS-8
relieve overloads or low voltages under contingency	Construct second Dunn Road-Egg Harbor 69-kV line	12.66	12.66	2016	2016	4	Yes	Exhibit RS-9
request,relieve overloads or low voltages	Lake Geneva 138-kV line	26.5	15	2018	2018	3 & 5	Yes	Exhibit RS-10
re overloads or low voltages under conting	Construct Fairwater-Mackford Prairie 69-kV line	5	5	2018	2018	1	Yes	Exhibit RS-11
relieve overloads or low voltages under contingency	Construct Evansville-Brooklyn 69-kV line	8	8	TBD	TBD	3	Yes	Exhibit RS-12
relieve overloads or low voltages under contingency	Construct Verona-North Monroe 138-kV line	20	20	TBD	TBD	3	Yes	Exhibit RS-13

	Environmental Servanine	Table RS-2 g Information for Lines Requiring New Right-of-Way
ew W	arrens Substation to Council Creek-Tunne	
	General Description	New line
	Length (miles)	approximately 10
#1	Screening Area (Sq. mi length X width)	approximately 69
#2	Corridor Sharing Opportunities	State and Federal highways, and existing transmission line rights-of-way offer opportunity for corridor sharing.
#3	Public Lands	Buckley, Gillette, and Veterans Park in Tomah, and Mill Creek State Fishery Are are found in the screening area.
#4	Sensitive Resources	Mill Creek State Fishery area and Mud Creek are located in the screening area.
#5	Cultural Resources	The Cultural Map of Wisconsin does lists several markers, the Harris G. Allen
		Telcommunications Museum, and the Little Red Schoolhouse in Gillette Park
		within the screening area. Several railroad related sites and local cemeteries ar
		known in the screening area.
		· · · · · · · · · · · · · · · · · · ·
	Miscellaneous	Mesner landing strip is in the screening area.
rando	Miscellaneous n-Fairwater 69-kV line	· · · · · · · · · · · · · · · · · · ·
rando		· · · · · · · · · · · · · · · · · · ·
rando	n-Fairwater 69-kV line	Mesner landing strip is in the screening area.
rando #1	General Description Length (miles) Screening Area (Sq. mi.)	Mesner landing strip is in the screening area. New line
	General Description Length (miles)	New line 4 17.78
#1	General Description Length (miles) Screening Area (Sq. mi.)	New line 4 17.78 Existing road and railroad corridors offer the best corridor sharing opportunities. Community Park, and WDNR Glacial Habitat Restoration Areas are located with
#1 #2	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities	New line 4 17.78 Existing road and railroad corridors offer the best corridor sharing opportunities. Community Park, and WDNR Glacial Habitat Restoration Areas are located with the screening area. Grand River, W. Branch Rock River, and unnamed streams are located within the screening area.
#1 #2 #3	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities Public Lands	New line 4 17.78 Existing road and railroad corridors offer the best corridor sharing opportunities. Community Park, and WDNR Glacial Habitat Restoration Areas are located with the screening area. Grand River, W. Branch Rock River, and unnamed streams are located within the study area.
#1 #2 #3	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities Public Lands Sensitive Resources	New line 4 17.78 Existing road and railroad corridors offer the best corridor sharing opportunities. Community Park, and WDNR Glacial Habitat Restoration Areas are located with the screening area. Grand River, W. Branch Rock River, and unnamed streams are located within the screening area.

	Table RS-2
Environm	ental Screening Information for Lines Requiring New Right-of-Way
Arnett Road-Clear Lake 115-kV lin	ie
General Description	New line

Length (miles) approximately 6
#1 Screening Area (Sq. mi.- length X width) approximately 51
#2 Corridor Sharing Opportunities State and county

#2 Corridor Sharing Opportunities State and county highways and local roads offer opportunities for corridor sharing.

#3 Public Lands

Nortern Highland - American Legion State Forest, Brandy Lake Park, Bearskin

Hiawatha Coop State Trail, local parks and recreational facilities are located in the

project area.

#4 Sensitive Resources Minocqua, Mud, Johnson, Snake, Bullhead, and several other lakes, numerous

streams and channels and wetlands are located within the study area.

#5 Cultural Resources The WHS database has identified architectural and historic sites within the study

area. The Lac du Flambeau reservation is located at the west edge of the

There is a moderate probability on encountering endangered resources.

screening area.

Miscellaneous There is a moderate probability of encountering endangered resources.

North Lake Geneva-South Lake Geneva 138-kV line

Miscellaneous

	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.

		Table RS-2
	Environmental Screening	Information for Lines Requiring New Right-of-Way
W Rip	oon to the Ripon-Metomen 69-kV line	, , , , , , , , , , , , , , , , , , , ,
	General Description	New line
	Length (miles)	1.5
#1	Screening Area (Sq. mi.)	4
#2	Corridor Sharing Opportunities	County and local roads provide opportunities for corridor sharing.
#3	Public Lands	Barlow Park and Kiwanis Park are within the study area.
#4	Sensitive Resources	Two unnamed streams & associated wetlands are located within the study are
#5	Cultural Resources	The WHS database identifies numerous architectural and historic sites within City of Ripon.
	Miscellaneous	
	Miscellarieous	There is a low probability of encountering endangered resources.
oricor		There is a low probability of encountering endangered resources.
oricor	n-East Beaver Dam 138-kV line	There is a low probability of encountering endangered resources.
oricor		New line
oricor	n-East Beaver Dam 138-kV line	
oricor #1	n-East Beaver Dam 138-kV line General Description	New line
	General Description Length (miles)	New line approximately 9 approximately 65 Highway 33, county highways, and a railroad right-of-way offer possible sharing
#1	General Description Length (miles) Screening Area (Sq. mi length X width)	New line approximately 9 approximately 65 Highway 33, county highways, and a railroad right-of-way offer possible sharin opportunities. Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose
#1 #2 #3	General Description Length (miles) Screening Area (Sq. mi length X width) Corridor Sharing Opportunities Public Lands	New line approximately 9 approximately 65 Highway 33, county highways, and a railroad right-of-way offer possible sharin opportunities. Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose Trail are within the screening area.
#1 #2	General Description Length (miles) Screening Area (Sq. mi length X width) Corridor Sharing Opportunities	New line approximately 9 approximately 65 Highway 33, county highways, and a railroad right-of-way offer possible sharir opportunities. Portions of Horicon Marsh and Shaw Marsh wildlife areas and the Wild Goose

		Table RS-2
	Environmental Screening	Information for Lines Requiring New Right-of-Way
Spring	Valley-Twin Lakes-South Lake Geneva 13	8-kV line
	General Description	New Line
	Length (miles)	approximately 18
#1	Screening Area (Sq. mi length X width)	approximately 113
#2	Corridor Sharing Opportunities	State and County roads located within the screening area offer the best possibilit 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 Lowe 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	
.ake D	elton-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 Scree	ening Information for Lines Requiring New Right-of-Way
oto-C	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 corridor sharing.
#3	Public Lands	Several local parks and the Manitowoc County Airport are located in the proje 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 arcahaeological, architectural and historic sites within the project area.
	Miscellaneous	There is a low to moderate probability of encountering endangered resources
ınn R	load-Egg Harbor 69-kV line	
	Load-Egg Harbor 09-kV line	
		Construct a second line
	General Description	Construct a second line 12.66
#1	General Description Length (miles)	
	General Description Length (miles) Screening Area (Sq. mi.)	12.66 82.7
#1	General Description Length (miles)	12.66 82.7 State Hwy 42 and existing transmission line X-24A provide the best opportuni
#1	General Description Length (miles) Screening Area (Sq. mi.)	12.66 82.7
#1 #2	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities	12.6682.7State Hwy 42 and existing transmission line X-24A provide the best opportuni for corridor sharing, along with county and local roads.None identified
#1 #2 #3	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities Public Lands	12.66 82.7 State Hwy 42 and existing transmission line X-24A provide the best opportuni for corridor sharing, along with county and local roads. None identified The study area is adjacent to Lake Michigan.
#1 #2 #3 #4	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities Public Lands Sensitive Resources	12.6682.7State Hwy 42 and existing transmission line X-24A provide the best opportuni for corridor sharing, along with county and local roads.None identified

		Table RS-2
		g Information for Lines Requiring New Right-of-Way
airwat	er-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 line routes located within the screening corridor offer the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor of the potential for corridor sharing the screening corridor sharing the screening corridor of the screening corridor sharing corridor s
#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
	Miscellaneous	identify any sites within the screening area. There is a moderate probability on encountering endangered resources.
		identify any sites within the screening area.
vansv	Miscellaneous ille-Brooklyn 69-kV line	identify any sites within the screening area.
vansv	ille-Brooklyn 69-kV line	identify any sites within the screening area. There is a moderate probability on encountering endangered resources.
vansv	ille-Brooklyn 69-kV line General Description	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line
	ille-Brooklyn 69-kV line General Description Length (miles)	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8
#1	General Description Length (miles) Screening Area (Sq. mi.)	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8 55.08
#1 #2	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8 55.08 US Hwy 14, and numerous county and local roads, along with a railroad corrid offer opportunities for corridor sharing.
#1	General Description Length (miles) Screening Area (Sq. mi.)	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8 55.08 US Hwy 14, and numerous county and local roads, along with a railroad corridor.
#1 #2	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8 55.08 US Hwy 14, and numerous county and local roads, along with a railroad corridoffer opportunities for corridor sharing.
#1 #2 #3	General Description Length (miles) Screening Area (Sq. mi.) Corridor Sharing Opportunities Public Lands	identify any sites within the screening area. There is a moderate probability on encountering endangered resources. New line 8 55.08 US Hwy 14, and numerous county and local roads, along with a railroad corrid offer opportunities for corridor sharing. Evansville Wildlife Area Allen Creek and Tributaries, and a tributary of Badfish Creek are located within

		Table RS-2
		ening Information for Lines Requiring New Right-of-Way
Verona	a-North Monroe 138-kV line	
	General Description	New Line
	Length (miles)	22
#1	Screening Area (Sq. mi.)	Approximately 173
#2	Corridor Sharing Opportunities	Existing transmission corridors, state and local highways offer the best opportunity for corridor sharing.
#3	Public Lands	New Glarus Woods State Park, Brooklyn State wildlife Area, Sugar River State Trail, Badger Trail, and the Ice Age Trail are all located in the project screening area.
#4	Sensitive Resources	Olson Woods and Sugar River Wetlands state natural areas are located in the screening area. The Sugar River drainage and associated wetlands, along with several identified prairies are located in the project area.
#5	Cultural Resources	The Swiss Historical Village and the Chalet of the Golden Fleece in New Glarus are identified on the Cultural Map of Wisconsin. The WHS data indicates that numerous archaeological sites that are primarily associated with waterways and numerous historical sites are located within the screening area.
	Miscellaneous	There is a moderate probability of encountering endangered resources.
NOTES		
INO I E O	•	
#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

			ı				ı
11 22	Lines to be rebuilt/reconductored on existing	Approx. mileage of		Projected		Environmental	
Identified need	ROW	rebuilt, reconductored or	System	In-service	Planning	screening	
		uprated lines	need year	year	zone	provided?	Comments
reduce service limitations, relieve							Environmental
overloads or low voltages under	Construct Gardner Park-Hwy 22 345-kV line	47	2009	2009	1	No	information included
contingency, improve transfer capability	Oblishadi Gardiler Falk Flwy 22 545 kV iiile	٦,	2003	2003	•	140	with filing at PSCW -
and Weston stability							CPCN approved.
	Convert Rock River to Bristol to Elkhorn 138-						Environmental
relieve overloads or low voltages under	kV operation; rebuild Bristol with a new 138	27.74	2008	2009	3	No	information included
contingency	kV bus	27.74	2008	2009	3	NO	with filing at PSCW -
	kv bus						CPCN approved.
							Environmental
relieve overloads or low voltages under	Rebuild Crivitz-High Falls 69-kV double circuit	145	2000	2000	4	No	information included
contingency	line	14.5	2009	2009	4	No	with filing at PSCW -
							CPCN approved.
relieve overloads or low voltages under	Rebuild 2.37 miles of 69 kV from Sunset	0.07	0000	0000	4	V	
contingency	Point to Pearl Ave with 477 ACSR	2.37	2009	2009	4	Yes	
							Environmental
	December 201, Creek Allerten 420 h./ line	F 44	2000	2000	-	Nia	information included
accommodate new generation	Reconductor Oak Creek-Allerton 138-kV line	5.41	2009	2009	5	No	with filing at PSCW -
							CA approved.
	Loop Ramsey5-Harbor 138-kV line into						Environmental
	Norwich and Kansas to form a new line from	5.70	0000	0000	_		information included
accommodate new generation	Ramsey-Norwich and Harbor-Kansas 138-kV	5.72	2009	2009	5	No	with filing at PSCW -
	lines						CA approved.
							Environmental
	December 1 and October 1 December 1 400 IV/I'm	0.5	0000	0000	-	NI-	information included
accommodate new generation	Reconductor Oak Creek-Ramsey 138-kV line	8.5	2009	2009	5	No	with filing at PSCW -
							CA approved.
maintenance	Rebuild Arpin-Rocky Run 345-kV line	20	2010	2010	1	Yes	
							Environmental
relieve overloads or low voltages under	Rebuild/convert Conover-Plains 69-kV line to	70	2040	2040	0	Nia	information included
contingency, transfer capability	138 kV	73	2010	2010	2	No	with filing at PSCW -
							CPCN approved.
	Occasional access d De delegis De dedele 045 137						Environmental
	Construct second Paddock-Rockdale 345-kV	0.5	0040	0040	0	NI-	information included
economics	line and replace 345/138-kV transformer T22	35	2010	2010	3	No	with filing at PSCW -
	at Rockdale Substation						CPCN approved.
							Environmental
	United Oak Creak Nichalaan 100 IV/Es	0.0	2040	2040	_	Nia	information included
accommodate new generation	Uprate Oak Creek-Nicholson 138-kV line	6.8	2010	2010	5	No	with filing at PSCW -
							CA approved.
relieve overloads or low voltages under	Rebuild the Y-119 Verona to Oregon 69-kV	4.4	0000	0044	•	V	
contingency, maintenance	line	11	2008	2011	3	Yes	
generation interconnection, relieve							
overloads or low voltages under	Rebuild Y-33 Brodhead to South Monroe 69-	18	2011	2011	3	Yes	
contingency	kV line						
		ı	·	l			ı

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

Identified need	Lines to be rebuilt/reconductored on existing ROW	Approx. mileage of rebuilt, reconductored or uprated lines	System need year	Projected In-service year	Planning zone	Environmental screening provided?	Comments
T-D interconnection request	A second distribution transformer at Somers Substation requires a rebuild of the Racine- Somers-Albers 138-kV line; extend Albers 138-kV bus to permit connecting the Racine- Somers-Albers radial line to the Albers 138- kV bus	8	2011	2011	5	Yes	
economics, relieve overloads or low voltages under contingency	Construct Monroe County-Council Creek 161- kV line	20	2012	2012	1	Yes	
economics, relieve overloads or low voltages under contingency	Uprate Council Creek-Petenwell 138-kV line	32	2012	2012	1	Yes	
relieve overloads or low voltages under contingency	Increase ground clearance of M38-Atlantic 69 kV line from 120 to 167 degrees F	. 22	2009	2013	2	Yes	
pads or low voltages under contingency, i	Rebuild Y-32 Colley Road-Brick Church 69- kV line	19.7	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	Construct second Shorewood-Humboldt 138- kV underground cable	2.8	2012	2012	5	Yes	
relieve overloads or low voltages under contingency	Rebuild/reconductor X-12 Town Line Road- Bass Creek 138-kV line	9	2010	2013	3	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild Blaney Park-Munising 69 kV to 138 kV	50	2014	2014	2	Yes	
relieve overloads or low voltages under contingency	Rebuild part of the Y-8 Dane-Dam Heights 69 kV line	5	2015	2015	3	Yes	
relieve overloads or low voltages under contingency	Uprate the 6986 Royster to Sycamore 69-kV line to 115 MVA	3.35	2016	2016	3	Yes	
relieve overloads or low voltages under contingency, replace aging facilities	Rebuild/convert Bayport-Suamico-Sobieski- Pioneer 69-kV line to 138 kV	21.5	2016	2016	4	Yes	
relieve overloads or low voltages under contingency	Construct 69-kV double-circuit line between McCue and Lamar substations	4	2017	2017	3	No	
relieve overloads or low voltages under contingency	Construct West Middleton-Blount 138-kV line	5	2017	2017	3	Yes	
relieve overloads or low voltages under contingency	Reconfigure the North Randolph-Ripon 69-kV line to form a second Ripon-Metomen 69-kV line and retire the circuit between Metomen and the Mackford Prairie tap	5	2018	2018	1	Yes	
relieve overloads or low voltages under contingency	Convert Indian Lake-Hiawatha 69-kV line to double-circuit 138-kV operation, construct new Hiawatha 138-kV Substation	40	TBD	TBD	2	Yes	
relieve volta	Replace two overhead Blount-Ruskin 69-kV lines with one underground 69-kV line	2	TBD	TBD	3	No	
relieve overloads or low voltages under contingency	Uprate 138-kV line from Kewaunee to East Krok	8.4	TBD	TBD	4	Yes	
relieve overloads or low voltages under contingency	Reconductor Ramsey-Harbor 138-kV line	8.4	TBD	TBD	5	Yes	

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

prate egrees	M38-Atlantic 69-kV line from 120 to 167 s F	
	General Description Length (miles)	Line Uprate 22
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	Copper Country State Forest
#4	Sensitive Resources	The existing line crosses the Pike, Otter, and Sturgeon Rivers alon with associated wetlands and tributaries.
#5	Cultural Resources	Cultural resources may be found in the area in the proximity of the rivers located in the screening area.
	Miscellaneous	

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

Rebuild	Arpin-Rocky Run 345-kV line	
	General Description	Rebuild 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 were identified along the line route.
#4	Sensitive Resources	The existing line crosses Mill Creek, Bear Creek, and Rocky Run and extensive associated wetlands.
#5	Cultural Resources	The Cultural Map of Wisconsin does not identify any resources along this line route.
	Miscellaneous	This route passes primarily thorough agricultural and undeveloped lands.

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

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

	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 site in and around the City of Monroe.
	Miscellaneous	There is a low potential for encountering endangered resources.

	General Description	Rebuild 138-kV line
	Length (miles)	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 were identified along the route.
#4	Sensitive Resources	The Pike River, several unnamed tributaries, and associated wetlands are located along the line route.
#5	Cultural Resources	There are several known archaeolpgical sites located along the lin route. There is a moderate to high likelihood of encountering archaeological resources on this route.
	Miscellaneous	There is a moderate to high likelihood of encountering rare specie on this route.

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

lonro	e County-Council Creek 161-kV line	
	General Description	Construct line
	Length (miles)	20
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	Elroy-Sparta State Trail, Fort McCoy Barrens State Natural Area
#4	Sensitive Resources	The existing line crosses a number of waterways and associated wetland areas, including: Farmers Valley Creek, Silver Creek, Chub
		Creek, Council Creek, South Fork Lemon weir River, and some unnamed streams.
#5	Cultural Resources	
	Miscellaneous	The Cultural Map of Wisconsin identifies historic sites within the cities of Tomah and Sparta, along with the Elroy-Sparta state trail. There is a moderate probability of encountering endangered
	Miscellaneous	resources.

	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, Branch Yellow River, Yellow River, the West Petenwell Ditch (tro stream) and numerous unnamed tributaries along with associated wetlands. Much of the route passes through currently undevelop woodlands and wetlands.
#5	Cultural Resources	Wisconsin Historical Society information identifies several known archaeological sites in the area with one near Necedah crossed the line route.
	Miscellaneous	Due to the proximity of this route to Necedah National Wildlife Refuge, Meadow Valley State Wildlife Area, Mill Bluff State Park and the numerous streams, wetlands, and undeveloped lands located along this route, there is a moderate to high likelihood of encountering rare species on this route.

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

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

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	

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

General Description Length (miles) Screening Area (Sq. mi length X width)	Add a second underground circuit along existing route 0.75 Existing transmission line corridor
3 \ ,	
Screening Area (Sg. mi - length X width)	Existing transmission line corridor
borooning rapa (eq. iiii. longar re waar)	Existing transmission line comdo
Corridor Sharing Opportunities	N/A – existing transmission line corridor.
Public Lands	Most of the existing line route is located in Estabrook Park.
Sensitive Resources	Estabrook Park, The Milwaukee River, and an associated wetland along the west side of the river.
Cultural Resources	The line crosses a known archaeological site identified in the WHS records west of the Milwaukee River.
Miscellaneous	
200	corridor Sharing Opportunities ublic Lands ensitive Resources ultural Resources

	General Description	Rebuild 138-kV line
	Length (miles)	9
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	WDNR owns lands along the existing line.
#4	Sensitive Resources	The existing line crosses Bass Creek, and a few streams and associated wetlands. Much of the existing line is adjacent to Bass Creek. Ressler Railroad Prairie is located along the line route.
#5	Cultural Resources	The Cultural Map of Wisconsin identifies no cultural resources in the project area. The route does pass near several known archaeological sites.
	Miscellaneous	There is a moderate to high likelihood of encountering rare specion this route.

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

	General Description	Rebuild to 138 kV
	Length (miles)	50
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	Hiawatha National Forest, Escanaba River State Forest, Lake Superior State Forest, and Seney National Wildlife Refuge.
#4	Sensitive Resources	The existing line passes through numerous wetlands.
#5	Cultural Resources	None identified
	Miscellaneous	There is high potential for encountering rare species.

	General Description	Rebuild 69-kV line
	Length (miles)	5
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	Lodi Marsh Wildlife area is located along the route and Lodi Marsh State Natural Area is located near the line.
#4	Sensitive Resources	The Wisconsin River, Spring Creek, and several unnamed tributaries, and associated wetlands are located along the line route.
#5	Cultural Resources	There are several known archaeolpgical sites located along the lin route. There is a moderate to high likelihood of encountering archaeological resources on this route.
	Miscellaneous	There is a moderate to high likelihood of encountering rare specie on this route.

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

rate	Royster to Sycamore 69-kV line to 115 MVA	
	General Description	Uprate existing line
	Length (miles)	3.4
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No state-owned lands were identified along the route.
#4	Sensitive Resources	Starkweather Creek and associated wetlands are located along the line route.
#5	Cultural Resources	There is one known archaeolpgical sites located along the line route.
	Miscellaneous	A portion of the route is located along a bike trail.

	General Description	Rebuild/Convert to 138 kV
	Length (miles)	21.5
#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 numerous wetlands and streams, including the Fox, Oconto, Pensaukee, Suamico, and Little
		Suamico Rivers; Duck, Haller, Spring, Brookside, and Kirchner Creeks, and several unnamed streams.
#5	Cultural Resources	
		Due to the proximity of this route to Green Bay near the mouth of the Fox River, there is a moderate to high likelihood of encountering archaeological resources on this route. The Cultural Resources Map of Wisconsin identifies one historic site within the Town of Suamico
	Miscellaneous	Due to the proximity of this route to Green Bay and the Fox River, there is a moderate to high likelihood of encountering rare species on this route.

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

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

	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 Wes Middleton.
#5	Cultural Resources	The Cultural Map of Wisconsin identifies a number of historic resources in the vicinity of the existing corridor.

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

confi	gure the North Randolph-Ripon 69-kV line to	
	General Description	Add 1/2 mile of new line or replace single circuit with double circu for 4-miles.
	Length (miles)	5
#1	Screening Area (Sq. mi length X width)	Existing corridor or public road
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor or existing road.
#3	Public Lands	No state-owned lands or major parklands are crossed on this rou
#4	Sensitive Resources	No wetlands or permanent waterways are located along the route Landuse is primarily agricultural.
#5	Cultural Resources	The WHS records do not identify any known archaeological sites along the line route.
	Miscellaneous	There is a low potential of encountering endangered resources.

Jonver	t Indian Lake-Hiawatha 69-kV line to double-	
	General Description	Convert existing line to double circuit 138 kV
	Length (miles)	40
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	Lake Superior State Forest lands are crossed.
#4	Sensitive Resources	The existing line crosses the Manistique River, several streams and numerous wetland.
#5	Cultural Resources	Due to the undeveloped nature of much of the lands along this line route, there is a moderate to high probability of identifying archaeological and historic sites in the vicinity of the corridor.
	Miscellaneous	There is a high probability of encountering rare species. This line passes through primarily undeveloped forested areas.

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

Jprate Kewaunee-East Krok 138-kV Line		
	General Description	Uprate 138-kV Line
	Length (miles)	8.2
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	No public lands were identified along the line route.
#4	Sensitive Resources	
		Few intermittent streams and wetlands are located along the route.
#5	Cultural Resources	The WHS records do not identify any known archaeological sites along the line route.
	Miscellaneous	There is a low probability of encountering rare species. This line passes through primarily agricultural lands.

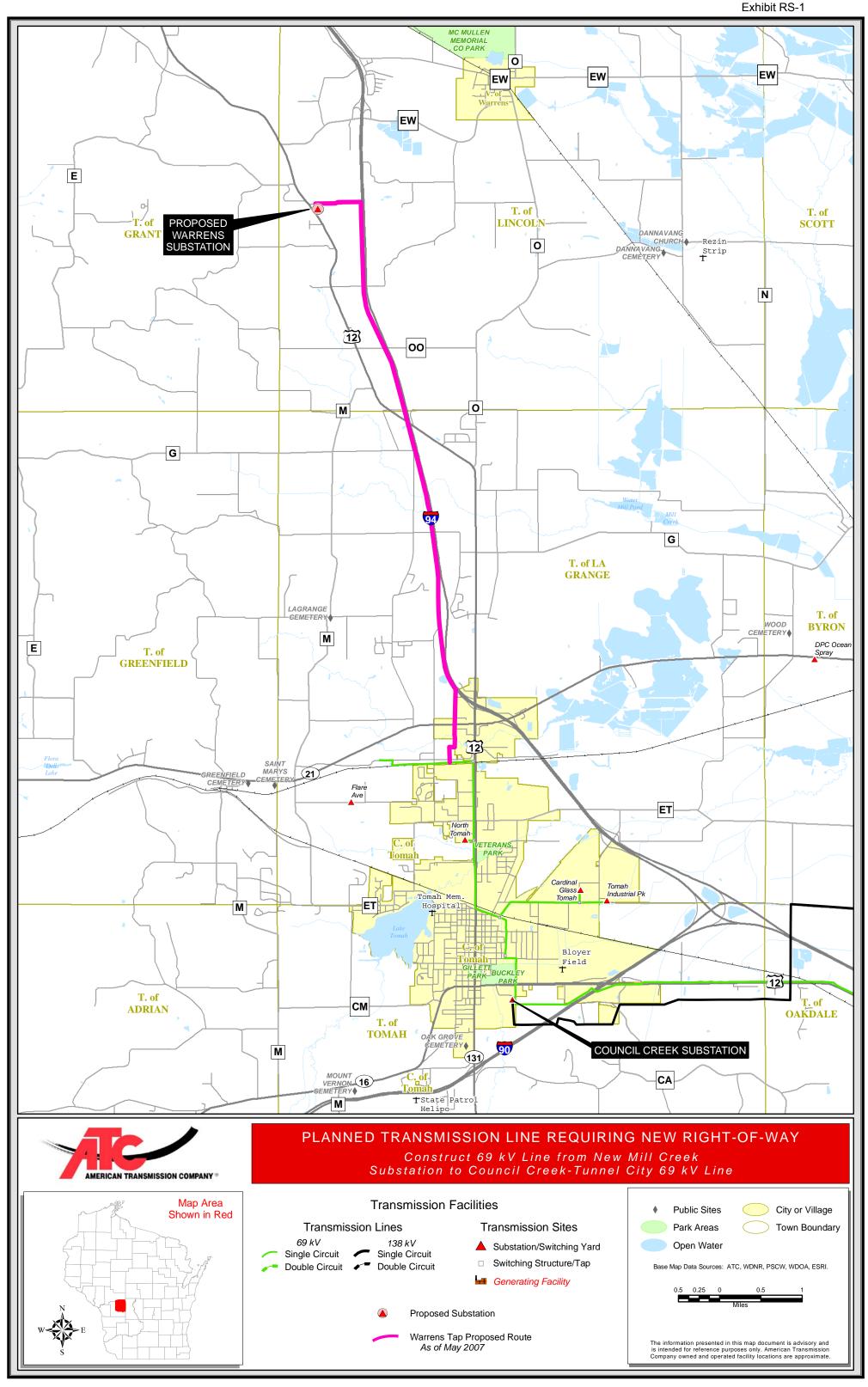
	General Description	Add second circuit
	Length (miles)	3.5
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor along railroad.
#3	Public Lands	No state-owned lands were identified along the route.
#4	Sensitive Resources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

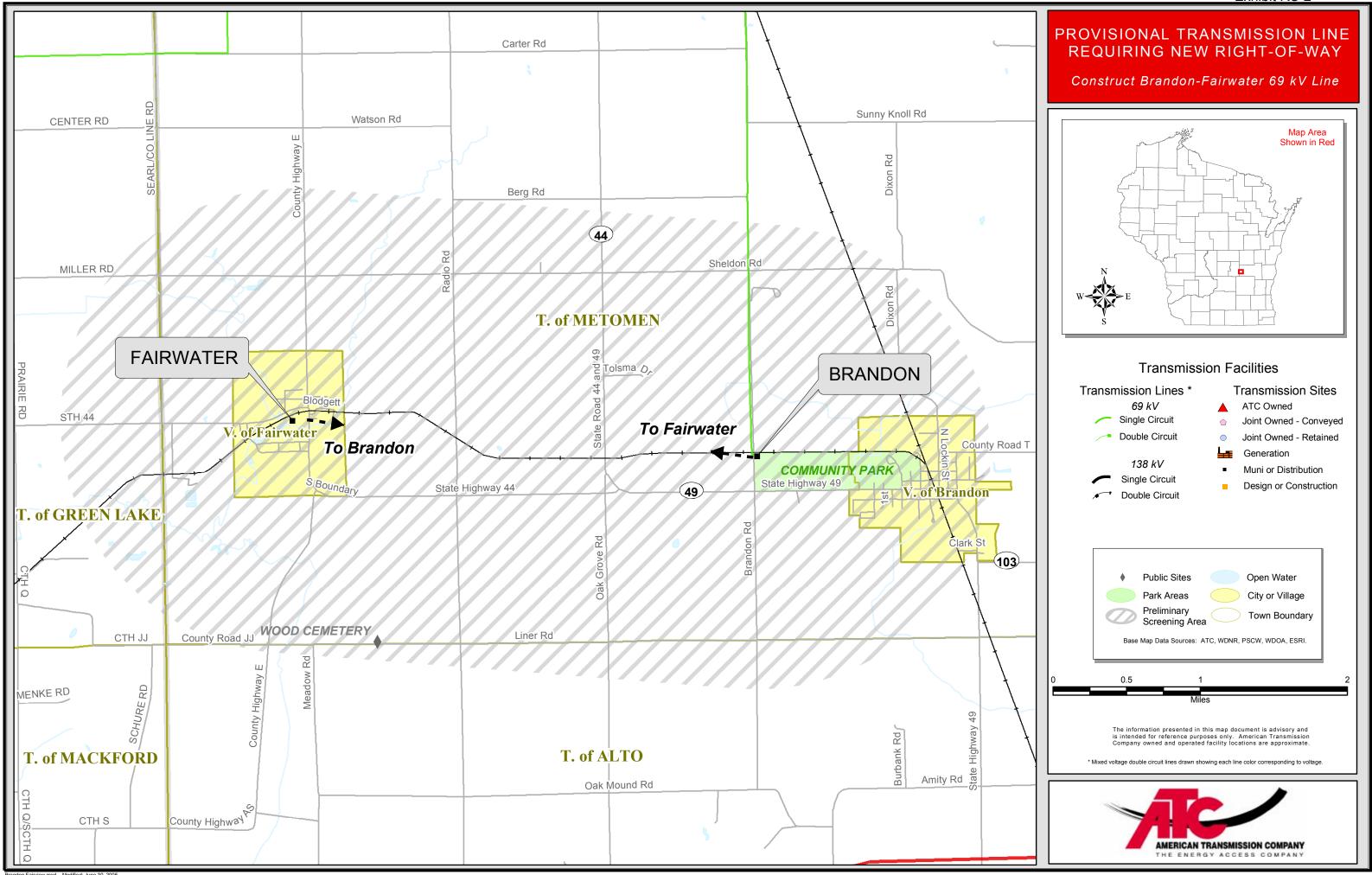
Table RS-4
Environmental Screening Information for New Lines, Rebuilds/Reconductors on Existing Right-of-Way

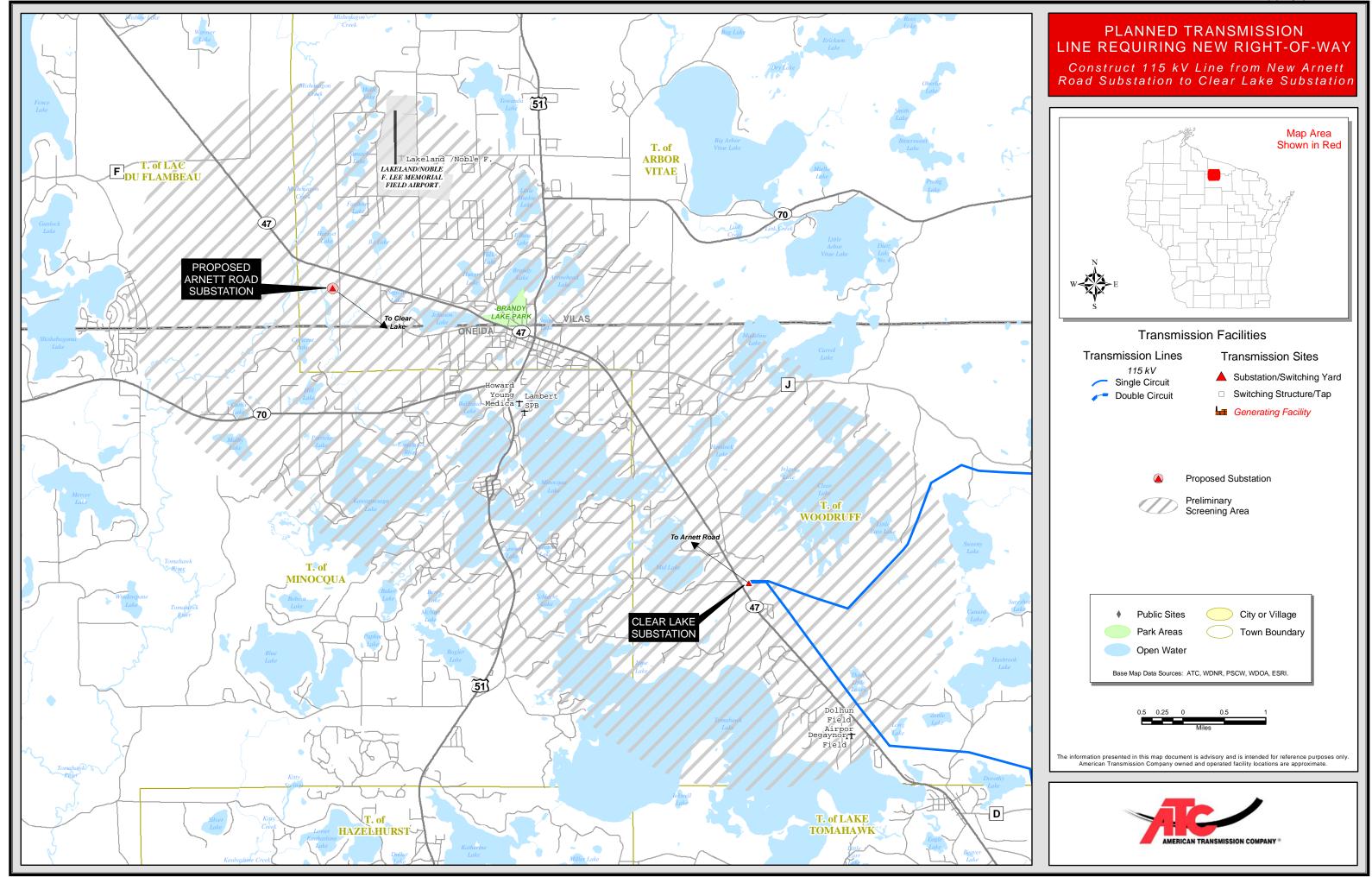
Ramse	y-Harbor 138-kV line reconductor	
	General Description	Reconductor underground portion of existing line138-kV Line
	Length (miles)	8.4
#1	Screening Area (Sq. mi length X width)	Existing corridor
#2	Corridor Sharing Opportunities	N/A – existing transmission line corridor.
#3	Public Lands	The majority of the existing line is located below public roads.
#4	Sensitive Resources	The line route crosses under the Kinnikinnic River in the Milwauke 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.

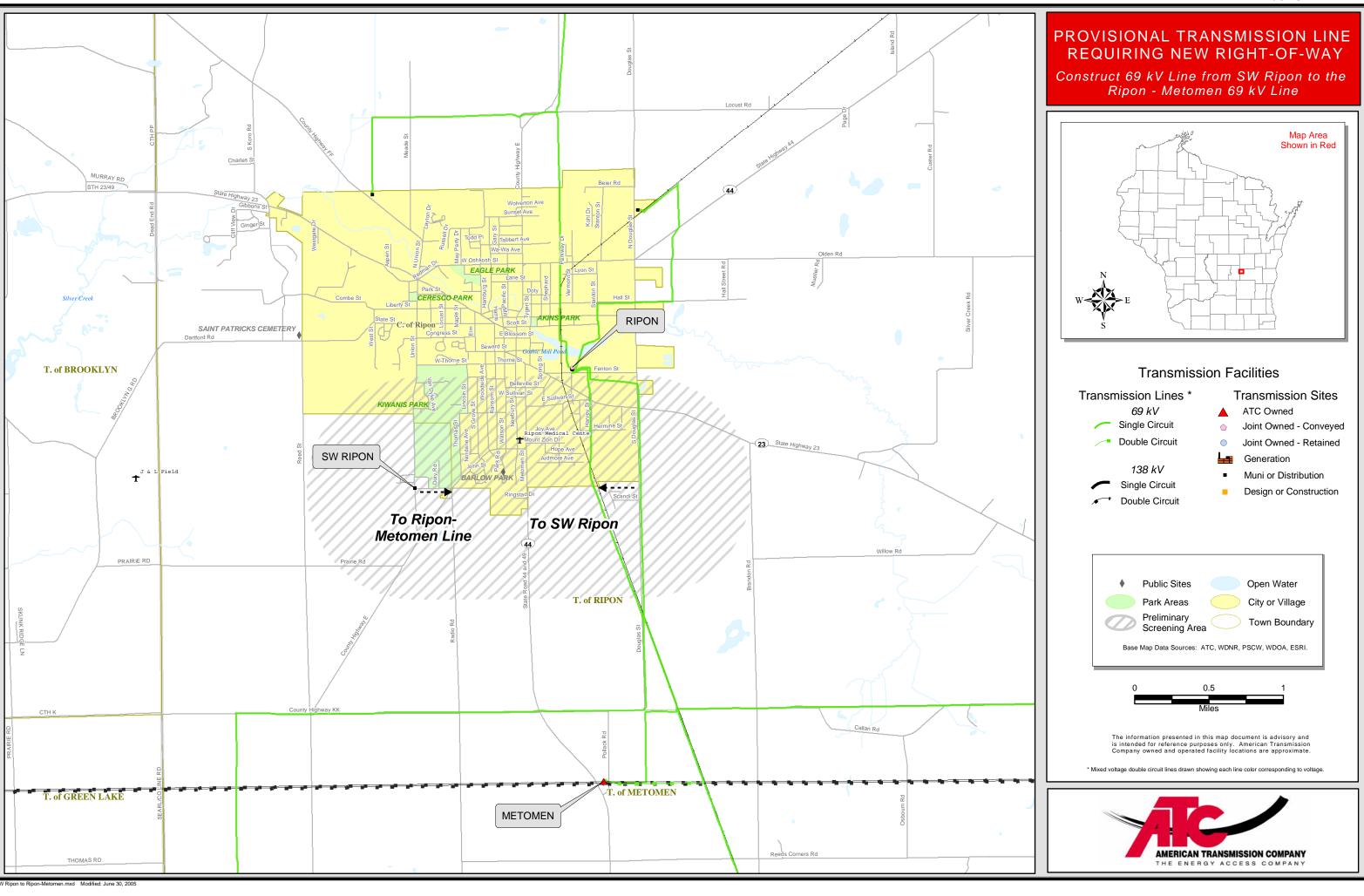
NOTES:

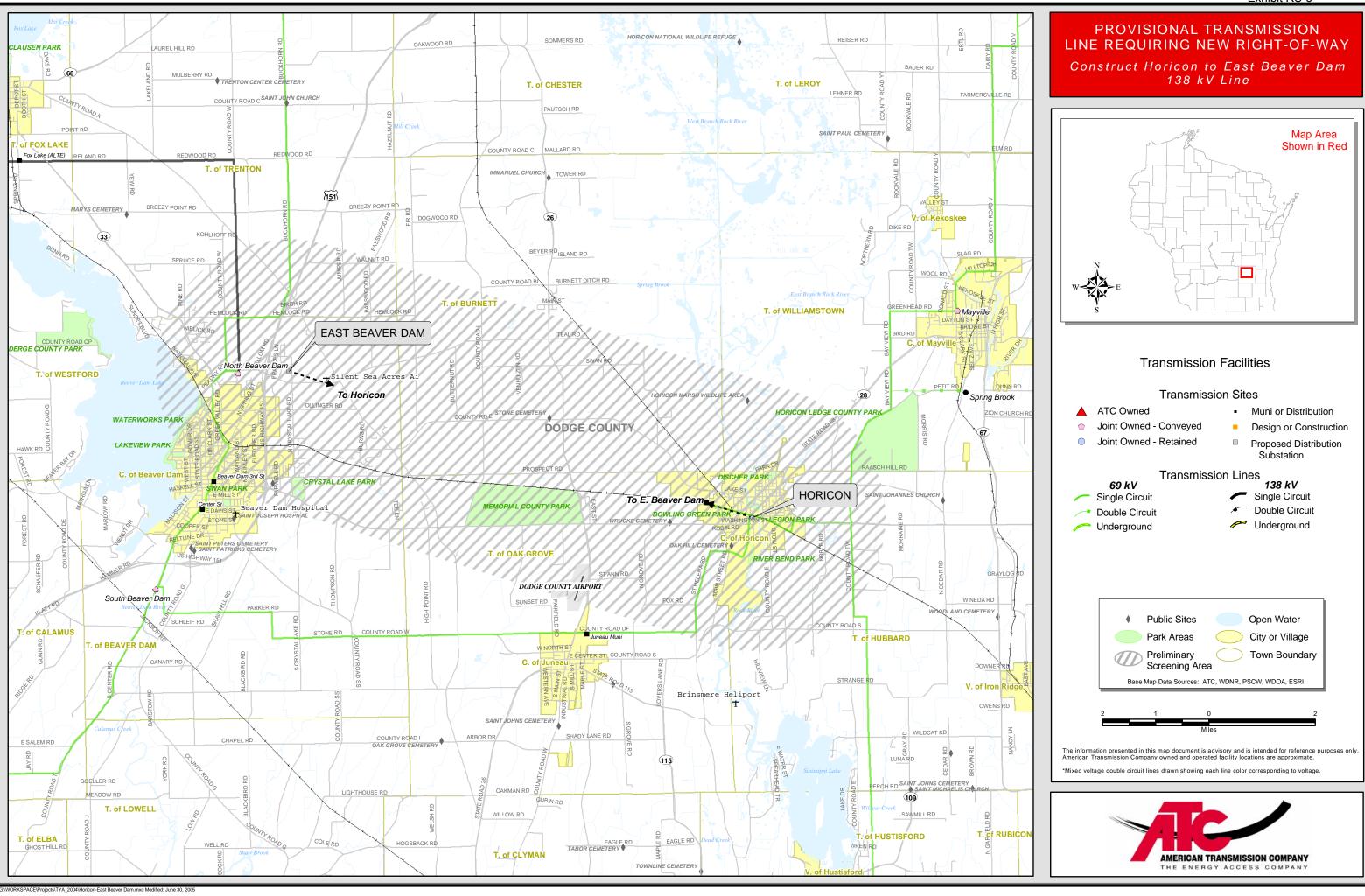
#1	Screening Area Width:	For projects on existing rights-of-way the screening area consists of
	_	the current location and lands immediately adjacent.
#2	Corridor Sharing Opportunities:	Identify dominant corridor types.
#3	Public Lands:	Identify properties by name.
#4	Sensitive Resources:	List major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

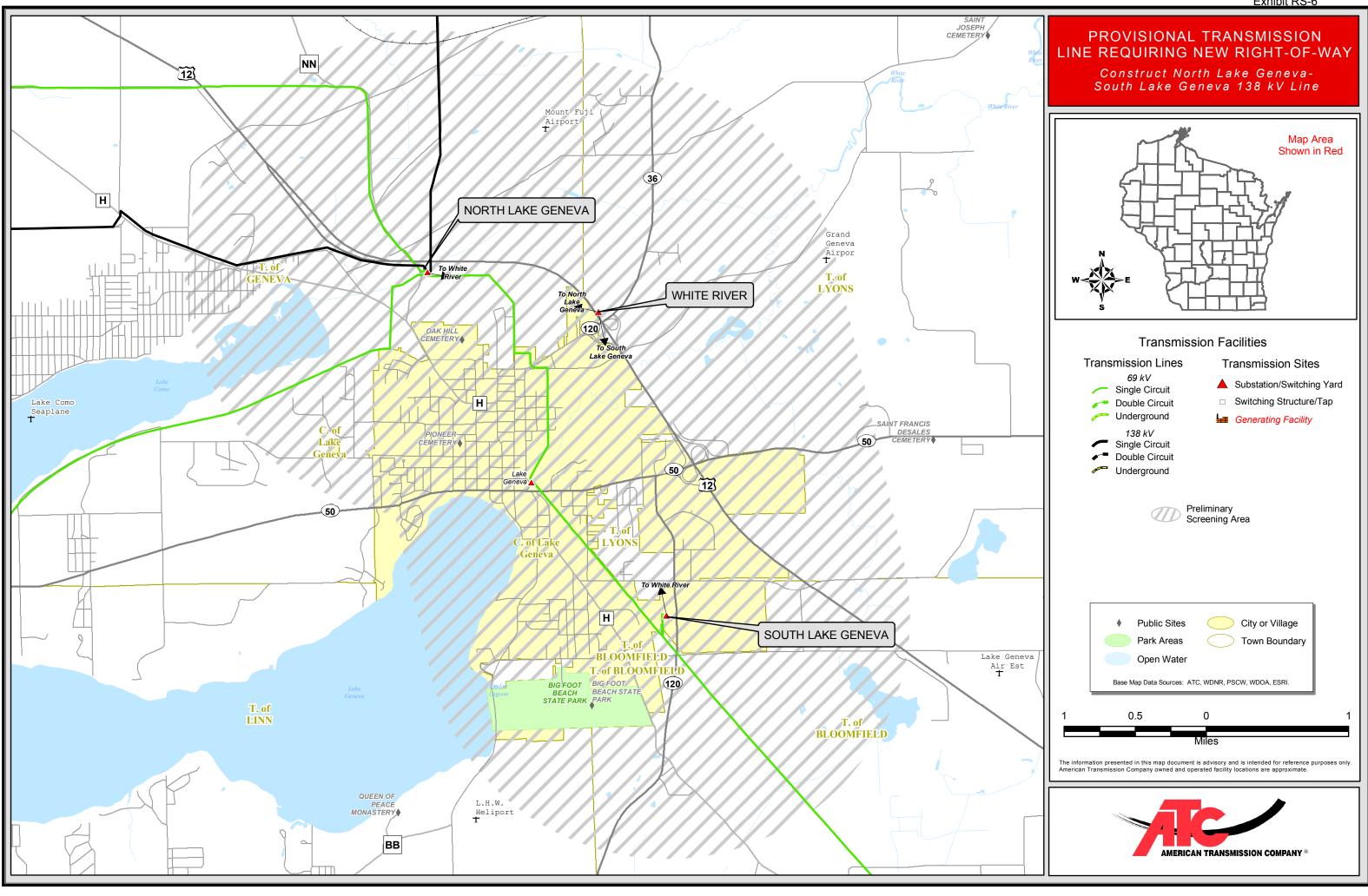


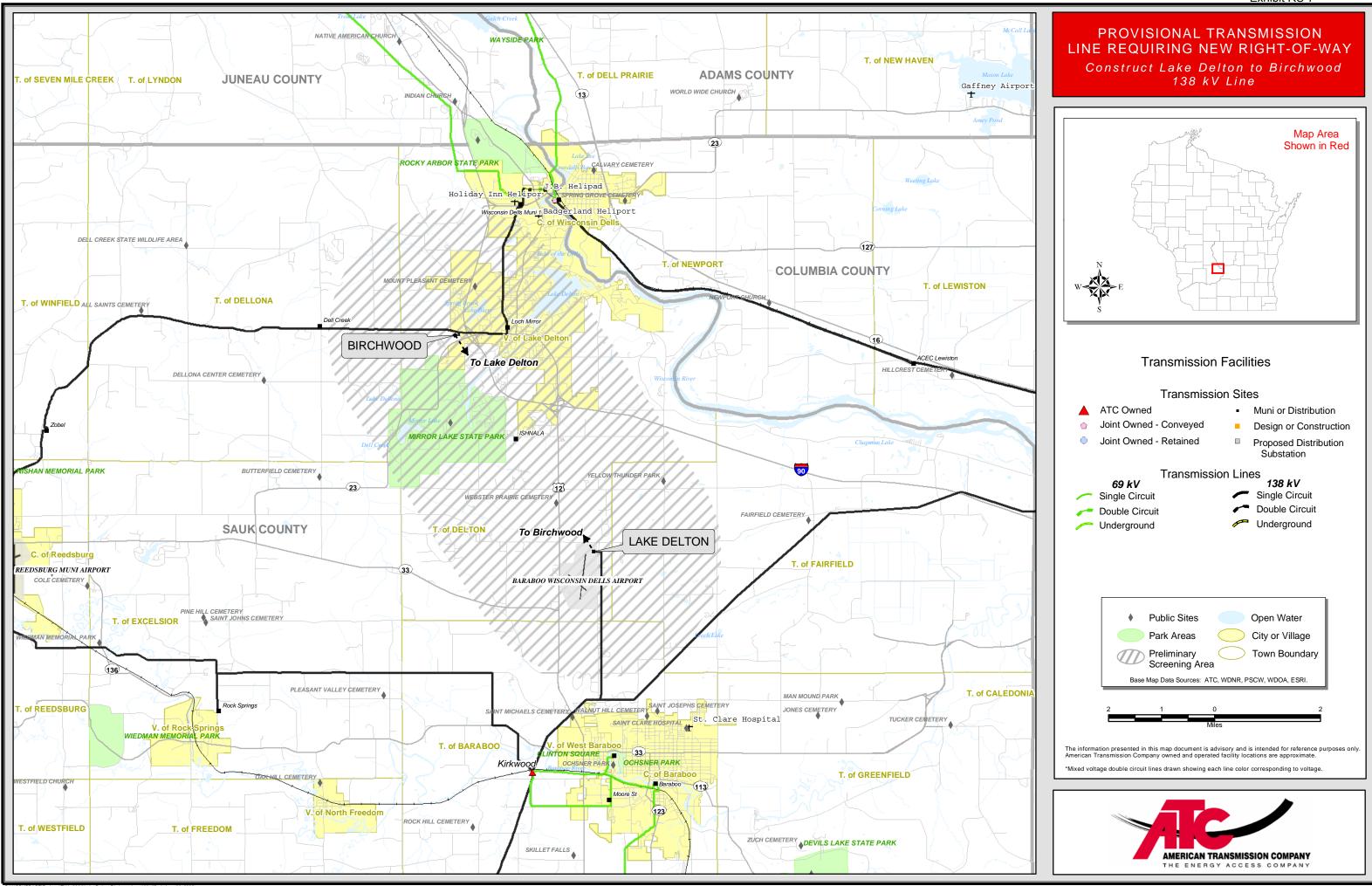






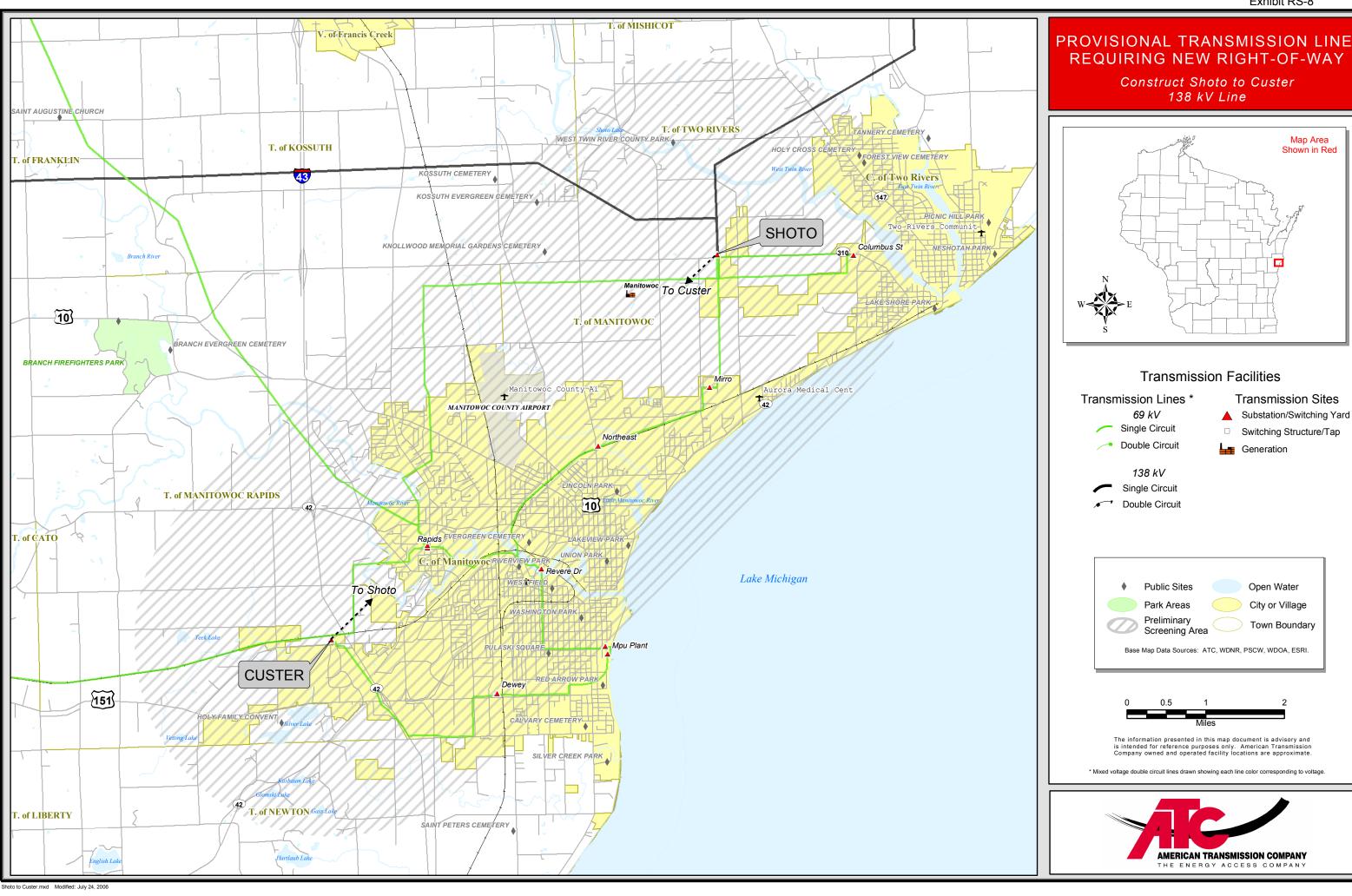


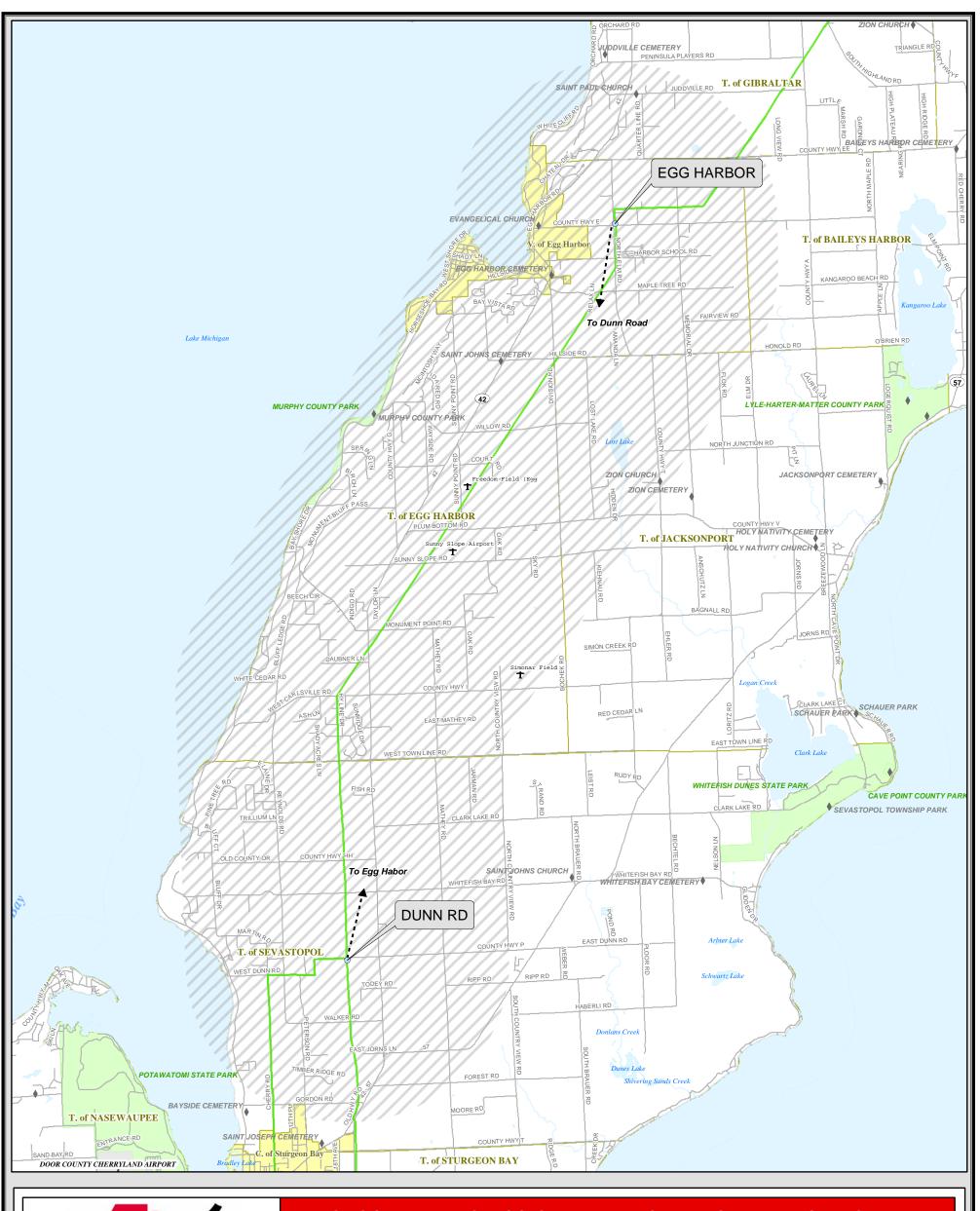


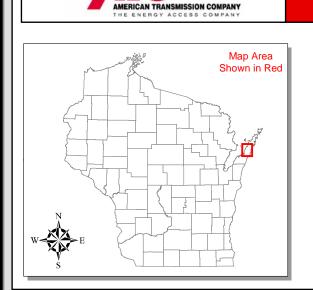


Map Area

Shown in Red







PROPOSED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY

Construct a Second Dunn Rd-Egg Harbor 69 kV Line

Transmission Facilities

Transmission Lines *

69 kV

Single Circuit

Double Circuit

138 kV
Single Circuit

Double Circuit

Transmission Sites

ATC Owned

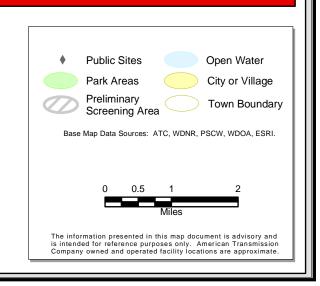
Joint Owned - Conveyed

Joint Owned - Retained

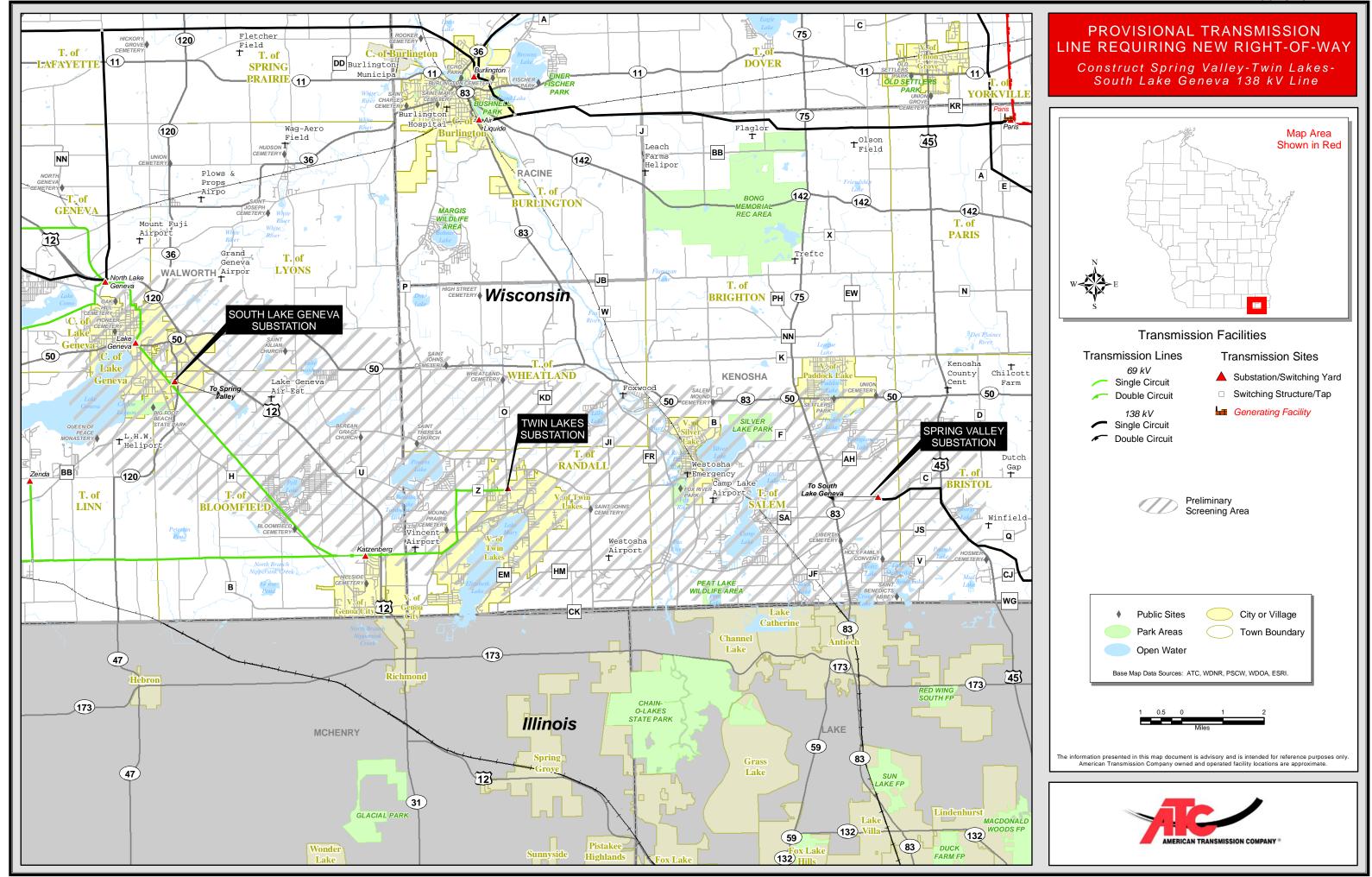
Generation

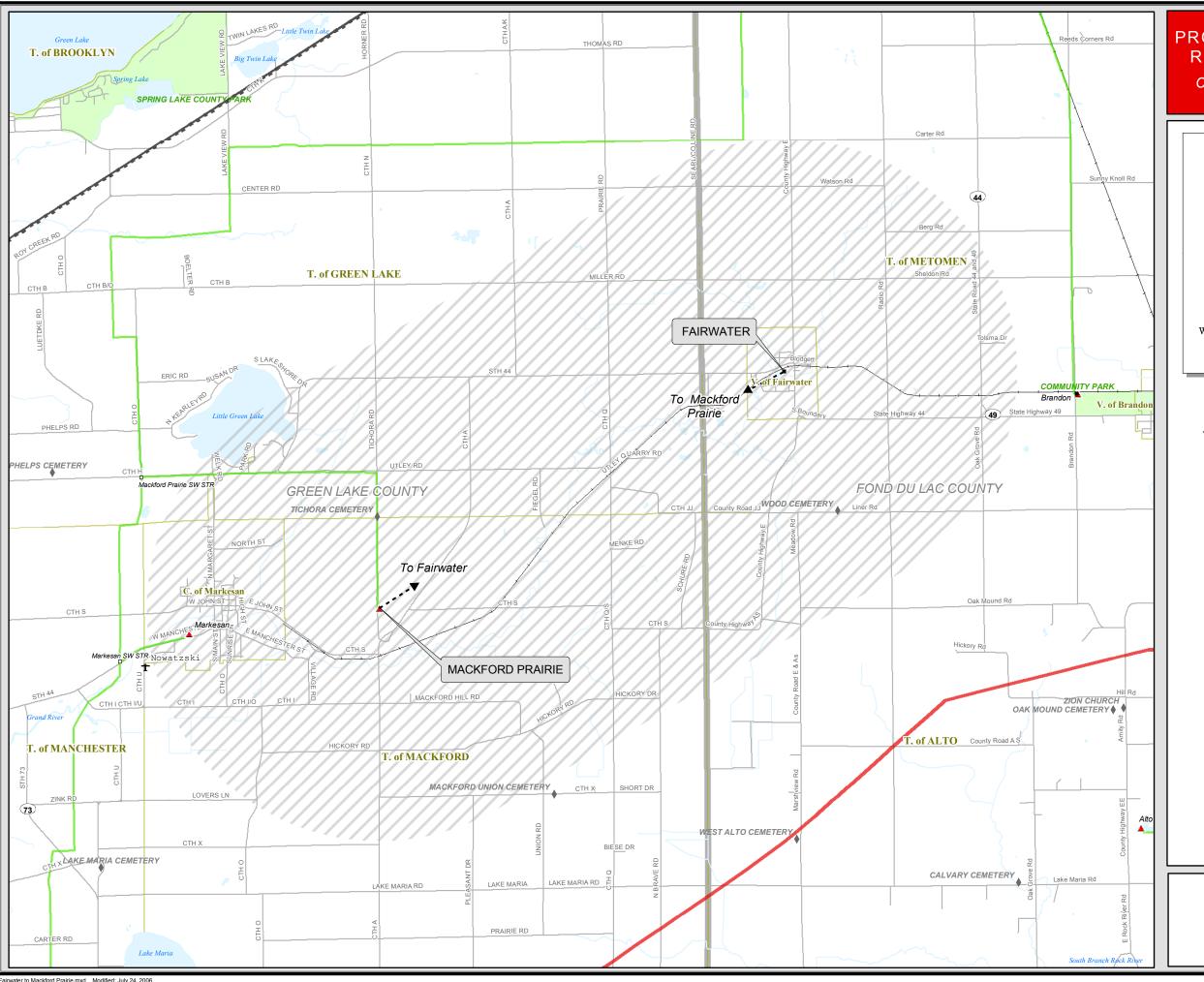
Muni or Distribution

Design or Construction



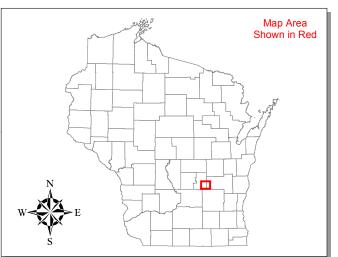
* Mixed voltage double circuit lines drawn showing each line color corresponding to voltage.





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

Construct Fairwater to Mackford Prairie 69 kV Line



Transmission Facilities

Transmission Lines *

69 kV

Single Circuit

Double Circuit

138 kV

Single Circuit

Double Circuit

345 kV

Single Circuit

Transmission Sites ▲ Substation/Switching Yard

□ Switching Structure/Tap

Generation

Public Sites

Open Water

Park Areas Preliminary Screening Area

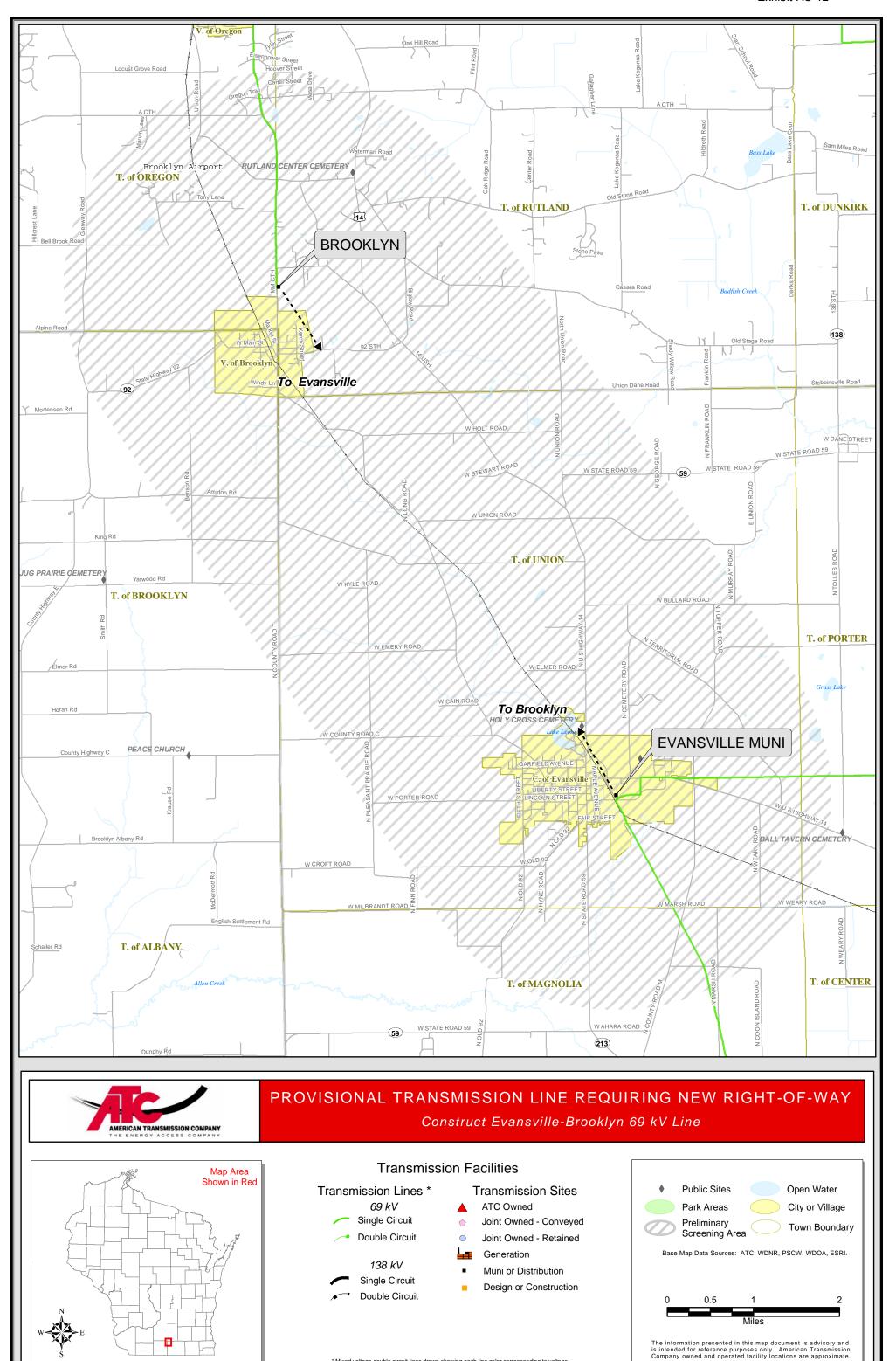
City or Village **Town Boundary**

Base Map Data Sources: ATC, WDNR, 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.





Evansville to Brooklyn.mxd Modified: June 30, 2005

