

section

Environmental Assessment

This section summarizes the environmental screening information for projects involving new transmission line construction requiring new right-of-way. Table VII-1 below lists the new transmission lines requiring new right-of-way and whether environmental screening information is provided in this report or can be found in application materials already filed with the PSC. It should also be noted that 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 VII-2 below provides environmental screening information for the lines listed in Table VII-1. Exhibits VII-1 through VII-33 are figures identifying the approximate end-points and study areas for each project for which high level environmental screening information is provided.

The projects below do not reflect the entire number of projects listed in this report 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 VII-1 Identified Needs and Proposed Transmission Lines Requiring New Right-of-Way (Environmental Assessment)

Planned Additions	Planning Zone	Need Category	Planned, Proposed or Conceptual	Environmental Screening Provided?	Comments
Construct an Endeavor-Wautoma/Portage Tap 69 kV line	1	T-D Interconnection	Planned	no	Environmental information included in Portage-Montello filing at PSC
Construct 138 kV double circuit line from Townline Road to Rock River	3	reliability, new generation	Planned	no	Environmental information included with Calpine filing at PSC - CPCN approved.
Construct an Omro Industrial-Berlin/Omro 69 kV line	1	T-D Interconnection	Planned	yes	
Construct Artesian-Zobel 138 kV line	3	reliability	Planned	yes	
Construct Fitchburg-Tokay-Westowne 69 kV underground line	3	T-D interconnection	Planned	no	Environmental information included with filing at PSC - CPCN approved.
Construct an Eagle River-Cranberry/Three Lakes 115 kV line	1	T-D interconnection	Proposed	yes	
Construct Weston-Stone Lake 345 kV line	1	service limitation, reliability, import capability and Weston stability	Planned	no	Environmental information included with filing at PSC - CPCN approved.
Rebuild Skanawan-Highway 8 115 kV line to double circuit 115 kV	1	reliability	Planned	no	Environmental information included in Rhinelander Loop filing at PSC
Construct 138 kV line from Venus to new Crandon Substation (operate at 115 kV)	1	T-D interconnections	Proposed	yes	,
Construct new 69 kV line from Columbia to Rio to feed the proposed Wyocena substation	3	T-D interconnection, reliability	Proposed	yes	
Construct new line from West Darien to Southwest Delavan to Delavan at 138 kV, operate at 69 kV	3	T-D interconnection	Planned	yes	
Construct a Waukesha-Duplainville-Sussex 138 kV line	5	T-D interconnection	Planned	yes	
Construct Clear Lake-Arnett Road 115 kV line	1	T-D interconnection	Proposed	yes	
Construct 138 kV line from Crandon to new Laona and operate at 115 kV	1	T-D interconnection	Proposed	yes	

Table VII-1 (continued) Identified Needs and Proposed Transmission Lines Requiring New Right-of-Way (Environmental Assessment)

Planned Additions	Planning Zone	Need Category	Planned, Proposed or Conceptual	Environmental Screening Provided?	Comments
Construct a Jefferson-Lake Mills-Stony Brook 138 kV line	3	reliability, T-D interconnection	Proposed	yes	
Construct 138 kV line from Erdman to Howard's Grove	4	T-D interconnection	Planned	yes	
Construct 2.5 miles of 138 kV line from Lodestar to Sheboygan Falls	4	reliability	Proposed	yes	
Construct Cranberry-Conover 138 kV line	1	transfer capability, reliability	Proposed	yes	
Loop the Femrite to Royster 69 kV line into AGA Gas	3	reliability	Proposed		
Construct South Beaver Dam-North Beaver Dam 138 kV line	3	reliability	Proposed	yes	
Construct Sprecher-Femrite 138 kV line	3	reliability, new generation	Proposed	yes	
Construct new 138 kV line from Verona to Southeast Fitchburg Substation	3	reliability	Conceptual	yes	
Construct 138 kV line from Canal to Dunn Rd	4	reliability	Proposed	yes	
Construct an Oak Creek-Brookdale 345 kV line installing 4 mi. new structures, converting 16.2 mi. of non-operative 230 kV and 5 mi. 138 kV	5	new generation	Proposed	yes	
Construct Oak Creek-St Martins 138 kV circuit #2 installing 4 mi. new structures and conductor, plus 12.6 mi. conductor on existing towers	5	new generation	Proposed	yes	
Construct Stone Lake-Arrowhead 345 kV line	1	service limitation, reliability, import capability and Weston stability	Planned	no	Environmental information included with filing at PSC - CPCN approved.
Construct St. Germain-Boulder Junction 115 kV line	1	T-D interconnection	Conceptual	yes	
Construct Fitzgerald-Omro Industrial 69 kV line	1	reliability	Conceptual	yes	

Table VII-1 (continued) Identified Needs and Proposed Transmission Lines Requiring New Right-of-Way (Environmental Assessment)

Planned Additions	Planning Zone	Need Category	Planned, Proposed or Conceptual	Environmental Screening Provided?	Comments
Construct new 138 kV line from Twin Lakes to Spring Valley	3	reliability	Conceptual	yes	
Construct new 138 kV line from South Lake Geneva to North Lake Geneva	3	reliability	Conceptual	yes	
Construct new 69 kV line from Brooklyn to Belleville Substation	3	reliability	Proposed	yes	
Construct 345 kV line from Rockdale through Kegonsa to West Middleton	3	reliability	Proposed	yes	
Construct Spring Green-Prairie du Sac 69 kV line	3	reliability, T-D interconnection	Proposed	yes	
Construct Morgan-Werner West 345 kV line	4	reliability, service limitation	Proposed	yes	
Construct a Concord-Bark River 345 kV line	3 and 5	reliability	Proposed	yes	
Construct Oak Creek-Racine 345 kV line with 4 mi new structures and conductor, plus convert 9.6 mi. 138 kV line KK812 to 345 kV	5	new generation	Proposed	yes	
Construct 345 kV line from Paddock to new Verona 345 kV switchyard; loop Kegonsa-West Middleton 345 kV line into Verona	3	reliability, transfer capability	Conceptual	yes	
Construct 69 kV line Eden through Muscoda to Richland Center	3	reliability	Conceptual	yes	



Endeavor-Wautoma/Portage 69 kV Line	Environmental information included in Portage-Montello filing at PSC.
Riverside - Rock River 138 kV line	Environmental information included with Calpine filing at PSC - CPCN Approved
Omro Industrial-Berlin/Omro 69 kV line	
General Description	New line
Length (miles)	approximately 1.9
Study Area (square miles-length times width)	approximately 9.7
Corridor Sharing Opportunities	State highways and existing transmission corridors offer corridor sharing opportunities.
Public Lands	Tower Park, Omro Ball Park, Stearn's Park, Fox and Hounds Parks, Riverside Park, and Scott Park are located in the study area.
Sensitive Resources	The Fox River is located in the study area.
Cultural Resources	Omro Historical Museum, Omro Cemetery
Miscellaneous	
Artesian - Zobel 138 kV line	
General Description	New line
Length (miles)	approximately 1.3
Study Area (square miles-length times width)	approximately 1.5
Corridor Sharing Opportunities	Existing town roads offer the best opportunity for corridor sharing.
Public Lands	None
Sensitive Resources	Nishan Memorial Park
Cultural Resources	None listed
Miscellaneous	
Fitchburg-Tokay-Westowne 69 kV underground line	Environmental Information included with filing at PSC - CPCN Approved

Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

Eagle River-Cranberry/Three Lakes 115kV line	
General Description Length (miles) Study Area (square miles-length times width) Corridor Sharing Opportunities Public Lands Sensitive Resources Cultural Resources Miscellaneous	New line - interconnection with proposed WPS substation approximately 0.7 approximately 1.0 Vilas County roads/ municipal streets. Possible sharing with local electrical distribution lines. None shown. Mud Creek is within the study area. Cultural Map of Wisconsin does not identify any sites within the project area.
Weston - Stone Lake 345kV line	Environmental Information included with filing at PSC - CPCN Approved
Skanawan to Highway 8 115kV line	Environmental Information included in Rhinelander Loop filing at PSC.
Venus-New Crandon 115/138kV line	
General Description Length (miles) Study Area (square miles-length times width) Corridor Sharing Opportunities	New line approximately 13 approximately 83 Wiscosin State Hwys. 45/8/32 within study zone. Existing 115 kV transmission right-of-way in western 1/4 of study zone. Several railroads present. Electric distribution line parallels much of Wisconsin Hwy. 8.
Public Lands	Chequamegan-Nicolet National Forest, Veterans Memorial Park, Little Rice Wildlife Area, Wolf River Tower Site, Statewide Natural Areas, Statewide Spring Ponds and scattered forestlands.
Sensitive Resources Cultural Resources	Numerous lakes, headwaters to the Wolf River, streams, wetlands and forest. Potawatomi Indian Reservation and high potential for other historical and cultural resources within study zone.
Miscellaneous	

Miscellaneous



Columbia - Rio 69 kV line	
General Description	New line
Length (miles)	approximately 9
Study Area (square miles-length times width)	approximately 65
Corridor Sharing Opportunities	State highways, railroads, and existing transmission line rights-of-way offer opportunity for corridor sharing.
Public Lands	Wyona County Park, Middle Branch Duck Creek, Duck Creek Campground, local parks associated with Duck Creek, Lake Columbia, Wyona Lake, Jennings Creek, and boat launches associated with area lakes are found in the study area.
Sensitive Resources	Rock Run Oak Savanna State Natural Area, Jennings Creek State Wildlife Area, Rocky Run Creek State Fishery Area, Duck Creek, Wyona Lake, and Lake Columbia are located in the study area.
Cultural Resources	The Cultural Map of Wisconsin does not identify any sites within the project area, however there are several cemeteries known in the study area.
Miscellaneous	Several airfields and landing strips are found in the study area.
West Darien-Southwest Delavan-Delavan 138/69 kV line	
General Description	New line
Length (miles)	approximately 5
Study Area (square miles-length times width)	approximately 45
Corridor Sharing Opportunities	Federal highway, state and county roads, railroad corridor, and existing electrical distribution lines routes located within the project corridor offer the best potential for corridor sharing.
Public Lands	Turtle Creek Hunting Grounds
Sensitive Resources	Turtle Creek Wildlife Area, streams, small lakes and wetlands.
Cultural Resources	Clown Hall of Fame, Circus Colony, Wisconsin's First School for the Deaf marker.

Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

New lines feeding a new Duplainville substation.
approximately 8
approximately 59
State and county roads, railroad corridor, and existing electrical distribution line routes located within the study area offer the best potential for corridor sharing.
Frame Park, Waukesha County Fairgrounds and Waukesha Airport are among the larger publicly owned lands in the project area.
Busse Woods, Fox River, and Pewaukee River are all located within the project area.
Cultural Map of Wisconsin does not identify any sites within the project area.
New line - interconnection with proposed WPS substation
approximately 6.0
approximately 50
State Hwy. 47, county highways and railroad corridors offer opportunities for sharing.
Northern Highland - American Legion State Forest, Brandy Lake Park.
Northern Flightana American Eeglon State Forest, Drandy Eake Fark.
None known.



Crando	on-Nev	v Laona	a 115/ <i>1</i>	138 kV	' line

General Description New line

Length (miles) approximately 12
Study Area (square miles-length times width) approximately 78

Corridor Sharing Opportunities Wisconsin State Hwys. 45/8/32 within study zone. Several railroads present. Electric

distribution line parallels much of Wisconsin Hwy. 8.

Public Lands Chequamegan-Nicolet National Forest, Veterans Memorial Park, Little Rice Wildlife

Area, Wolf River Tower Site, Statewide Natural Areas, scattered forestlands, Statewide

Spring Ponds, and state-owned islands on Lake Lucerne.

Sensitive Resources Laona Hemlock Hardwoods, numerous lakes, headwaters to the Wolf River, streams,

wetlands and forest.

Cultural Resources Potawatomi Indian Reservation and high potential for other historical and cultural

resources within study zone. Nicolet Scenic Rail, Laona School Forest, the Camp Five Museum and Ecology Complex are listed on the Cultural Map of Wisconsin in the study

area.

Miscellaneous

Jefferson - Lake Mills - Stony Brook 138 kV line

General Description New line

Length (miles) approximately 12
Study Area (square miles-length times width) approximately 78

Corridor Sharing Opportunities Several state and county highways and portions of existing transmission rights-of-way,

pipelines, and active and abandoned railroad corridors are within the study zone

Public Lands

Aztalan State Park, Lake Mills State Wildlife Area, Waterloo State Wildlife Area, Rock
Lake County Park, the Jefferson County Fairgrounds, and several local parks are

located in the study area.

Sensitive Resources Several lakes (Rock, Bean, Marsh, and Mud), The Crawfish and Rock Rivers and their

tributaries are located in the study area. Bean Lake and Waterloo Prairie State Natural Areas are located in the study area and the Snapper and Falville Prairie State Natural

Areas are located near the study area.

Cultural Resources

Aztalan Museum and Aztalan State Park are identified on the Cultural Map of Wisconsin

within the study area.

Miscellaneous The Muck Farms Airport, Tesmer Field and Ha-Rail Field are located in the study area.

Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

Howard's Grove-Erdman 138 kV line	
General Description	New line
Length (miles)	approximately 4.7
Study Area (square miles-length times width)	approximately 43
Corridor Sharing Opportunities	Interstate Hwy. 43, State Hwys. 23/32/42 are located within the study zone as well as County Hwys. J/JJ/Y.
Public Lands	None Shown.
Sensitive Resources	Scattered wetlands, streams, some forested lands, and extensive agricultural lands are present in the study area.
Cultural Resources	None Shown.
Miscellaneous	
Lodestar - Sheboygan Falls 138 kV line	
General Description	New line
Length (miles)	approximately 2
Study Area (square miles-length times width)	approximately 10
Corridor Sharing Opportunities	State highways, county roads, railroad corridor, and existing transmission corridors may offer opportunities for corridor sharing.
Public Lands	Local parks along the Sheboygan River.
Sensitive Resources	Sheboygan River
Cultural Resources	The Cole Historic District, Downtown Historic District, historical sites and museum near Kohler, and four cemeteries are located in the study area.
Miscellaneous	



Cranberry - Conover 138 kV line	
General Description	New line
Length (miles)	approximately 11
Study Area (square miles-length times width)	approximately 74
Corridor Sharing Opportunities	State Hwys. 32/45 and 17, county highways, local roads, existing electrical transmission and distribution lines and railroad corridors are present in the study area.
Public Lands	Chequamegon/Nicolet National Forest, Northern Highland - American Legion State Forest, Eagle Lake Park.
Sensitive Resources	Numerous lakes, streams, wetlands and forested lands are found in the study area.
Cultural Resources	There is a high potential for historic and cultural resources within the study area.
Miscellaneous	Eagle River Union Airport is located within the study area.
Femrite-Royster/AGA 69 kV line	
General Description	New line
Length (miles)	approximately 1.4
Study Area (square miles-length times width)	approximately 2.2
Corridor Sharing Opportunities	Existing transmission lines and town roads offer the best opportunity for corridor sharing.
Public Lands	None listed
Sensitive Resources	Legacy Places lists the upper Yahara River Streams and Lakes, other streams and wetlands within project area.
Cultural Resources	Cultural Map of Wisconsin does not identify any sites within the project area.
Miscellaneous	

Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

South Beaver Dam - North Beaver Dam 138 kV line	
General Description	138 kV system tie
Length (miles)	approximately 4
Study Area (square miles-length times width)	approximately 33
Corridor Sharing Opportunities	Extension of 138 kV feed from North Beaver Dam to South Beaver Dam to strengthen source. Additional right-of-way may be required. State and county roads, railroad corridor, and an existing 69 kV transmission line route also are located within the study area.
Public Lands	Crystal Lake, Waterworks, and Lakeview parks are located within the study area.
Sensitive Resources	Shaw Marsh Wildlife Area, and Beaver Dam Lake are found within the project area
Cultural Resources	
Miscellaneous	
Sprecher - Femrite 138 kV line	
General Description	New line
Length (miles)	approximately 2.6
Study Area (square miles-length times width)	approximately 8
Corridor Sharing Opportunities	Existing transmission lines, railroad corridors, federal highways and town roads offer the best opportunity for corridor sharing.
Public Lands	None listed.
Sensitive Resources	Legacy Places lists the upper Yahara River Streams and Lakes, other streams and wetlands within project area.
Cultural Resources	Cultural Map of Wisconsin does not identify any sites within the project area.
Miscellaneous	

Miscellaneous

Verona - Southeast Fitchburg 138 kV line	
General Description	New line
Length (miles)	approximately 9 total, 3.6 of new right-of-way
Study Area (square miles-length times width)	approximately 18
Corridor Sharing Opportunities	Existing transmission lines, railroad corridors and town roads offer the best opportunity for corridor sharing.
Public Lands	Badger Prairie, Capitol City State Trail
Sensitive Resources	Goose Lake, Badger Mill Creek and various other wetlands, lakes and streams are located within the study area.
Cultural Resources	Military Ridge State Trail and Capitol City State Trail are located within the study area.
Miscellaneous	
Canal - Dunn Road 138 kV line	
General Description	New line
Length (miles)	approximately 6.5
Study Area (square miles-length times width)	approximately 52
Corridor Sharing Opportunities	Existing transmission right-of-way, State Hwy. 42/57 and county highways offer sharing opportunities.
Public Lands	Several local parks (Big Hill Park, Garland Park, Amity Field)
Sensitive Resources	Sturgeon Bay Ship Canal. Some wetlands, streams and agricultural lands are found in the study area.
Cultural Resources	Several museums are located in the Village of Sturgeon Bay.

Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

Oak Creek - Brookdale 345 kV line	
General Description	New transmission line segments along with conversion of 16 mile 138 kV segment to 345 kV.
Length (miles)	approximately 24 total, 4 of new right-of-way
Study Area (square miles-length times width)	approximately 200
Corridor Sharing Opportunities	Several state and county roads and existing 138, 230 and 345 kV line routes exist in the project area.
Public Lands	Racine and Milwaukee County Parkland, Root River Parkway, Whitnall Park.
Sensitive Resources	Root River and Tributaries, Big Muskego Lake, State Natural Areas (Gravel Pit Woods, Caddy Vista Woods, Stone Woods, County Line Lowland Woods, and a few locally significant areas identified in a SEWRPC report).
Cultural Resources	The Ben Hunt Cabin is identified in the project area on the Cultural Map of Wisconsin.
Miscellaneous	Some additional right-of-way needed, Hales Corners Airport.
Oak Creek - St. Martins 138 kV line	
General Description	Addition of a second 138 kV circuit to an existing line
Length (miles)	approximately 16 total, 4 of new right-of-way
Study Area (square miles-length times width)	approximately 87
Corridor Sharing Opportunities	Existing transmission right-of-way can be followed for this project. Additional corridor sharing opportunities exist with state and county roads in the project area.
Public Lands	Racine and Milwaukee County Parkland, Root River Parkway, Whitnall Park.
Sensitive Resources	Root River and Tributaries, Big Muskego Lake, State Natural Areas (Gravel Pit Woods, Caddy Vista Woods, Stone Woods, County Line Lowland Woods, and a few locally significant areas identified in a SEWRPC report).
Cultural Resources	The Ben Hunt Cabin is identified in the project area on the Cultural Map of Wisconsin.
Miscellaneous	
	Environmental Information included with filing at PSC - CPCN Approved



St. Germain - Boulder Junction 115 kV line

General Description New line - interconnection with proposed WPS substation

Length (miles) approximately 15
Study Area (square miles-length times width) approximately 96

Corridor Sharing Opportunities Very limited. Vilas County Roads and State Hwys. 70 and 155 are located within the

study area.

Public Lands St. Germain substation located in Northern Highland American Legion State Forest.

State forest covers most of the study area. Escanaba hiking trail.

Sensitive Resources Numerous lakes, streams, wetlands and forested lands found within the study zone. The

Aurora Lake State Natural Area is located in the study area.

Cultural Resources

There is a high potential for historic and cultural resources within the study area.

Miscellaneous

Fitzgerald - Omro Industrial 69 kV line

General Description New line

Length (miles) approximately 6
Study Area (square miles-length times width) approximately 49

Corridor Sharing Opportunities State highways and existing transmission lines offer corridor sharing opportunities.

Public Lands

Lake Butte des Morts boat landings, Tower Park, Stearn's Park, Omro Ball Park, and

Waukau Creek Nature Preserve are located in the study area.

Sensitive Resources Fox River, Waukau Creek Nature Preserve, Spring Brook.

Cultural Resources

The Cultural Map of Wisconsin does not identify any sites within the project area,

however there are several cemeteries known in the study area.

Miscellaneous Skydive Adventure Airport

 Table VII-2 (continued)
 2003 Screening Information for Projects Requiring New Right-of-Way

Twin Lakes - Spring Valley 138 kV line	
Company Description	Navylina
General Description	New line
Length (miles)	approximately 9
Study Area (square miles-length times width)	approximately 64
Corridor Sharing Opportunities	Several Kenosha County highways and a railroad corridor are located within the study area.
Public Lands	Silver Lake and Fox River Parks. New Munster State Wildlife area.
Sensitive Resources	The Fox River and tributaries and several lakes are located within the study area. Peat Lake, Silver Lake Bog, and New Munster Bog Island State Natural Areas are located in the study area. The Elizabeth Lake Wetlands and Southeast Prairie Pothole areas are located in or near the study area.
Cultural Resources	No locations of cultural interest are identified on the Cultural Map of Wisconsin within the study area.
Miscellaneous	Westosha and Camp Lake Landing Strips
South Lake Geneva - North Lake Geneva 138 kV line	
General Description	New line
Length (miles)	approximately 3
Study Area (square miles-length times width)	approximately 16
Corridor Sharing Opportunities	Numerous city streets, United States Hwy. 12, State Hwys. 36, 50, and 120 and a railroad corridor are located within the study area.
Public Lands	Big Foot Beach State Park, Lyons and Bloomfield State Wildlife areas and several city parks are located in the study area.
Sensitive Resources	Lake Geneva, the White River and Bloomfield area, portions of Lake Como and Como Creek are located in the study area.
Cultural Resources	Big Foot Beach State Park and the Geneva Lakes area Museum of History are identified on the Cultural Map of Wisconsin within the study area.
Miscellaneous	Numerous resorts and recreation facilities are located in the study area.



Brooklyn - Belleville 138 kV line	
General Description	New line
Length (miles)	approximately 8
Study Area (square miles-length times width)	approximately 60
Corridor Sharing Opportunities	County and town roads offer the best opportunities for corridor sharing
Public Lands	Brooklyn State Wildlife Area
Sensitive Resources	Lake Bell View, Sugar River, West Branch Sugar River, Story Creek, Allen Creek Gill Creek, Story Creek, numerous other tributary streams, wetlands and lakes are within the study area.
Cultural Resources	No locations of cultural interest are identified on the Cultural Map of Wisconsin within the study area.
Miscellaneous	
Rockdale - West Middleton 345 kV line	
General Description	345 kV system tie
Length (miles)	approximately 28
Study Area (square miles-length times width)	approximately 290
Corridor Sharing Opportunities	New tie from the 345 kV system to relieve system overloads in the Madison area. Additional right-of-way will be required. State and county roads and existing transmission lines located within the study area offer the best possibility of corridor sharing.
Public Lands	Numerous city, county, and state parks including Indian Lake, LaFollette, and Festbe County Parks, Governor Nelson and Lake Kegonsa State Parks, portions of the Glacial Drumlin State Trail, and several state fishery and wildlife areas are located within the study area.
Sensitive Resources	Bean Lake, Red Cedar Lake, Hook Lake/Grass Lake State Natural Areas and much of the Yahara River drainage basin are found within the project area
Cultural Resources	The Koshkonong Norwegian Settlement, Bernard-Hoover Boar House, Robert M. LaFollyette House, Gilmore House, Olin House, the State Capital, several effigy mound sites, numerous museums, and the Langdon Street, Sherman Avenue, Third Lake Ridge, and University Heights Historic Districts are located within the project area.
Miscellaneous	

Spring Green - Prairie du Sac 69 kV line	
General Description	69 kV system support
Length (miles)	approximately 18
Study Area (square miles-length times width)	approximately 153
Corridor Sharing Opportunities	New 69 kV feed from Spring Green to relieve system overloads and provide system support in the Prairie du Sac area. Additional right-of-way will be required. State and county roads and existing transmission lines located within the study area offer the best possibilities for corridor sharing.
Public Lands	Numerous city, county, and state parks including Summer Oaks and Fish Lake County Parks, Tower Hill State Park, and lands along the Lower Wisconsin State Riverway are located within the study area.
Sensitive Resources	Spring Green Reserve, Ferry Bluff, Tower Hill Bottoms, Mazomanie Bottoms State Natural Areas and The Lower Wisconsin River State Wildlife Area are found within the project area
Cultural Resources	The Tower Hill Shot Tower, August Derleth HomWilliam Steuber Home, the Honey Creek Swiss Rural Historic District and Taliesin are located within the project area.
Miscellaneous	
Morgan-Werner West 345kV line	
General Description	New line
Length (miles)	approximately 47
Study Area (square miles-length times width)	approximately 555
Corridor Sharing Opportunities	Several state highways, county highways, existing transmission rights-of-way, pipelines, and railroads within the study zone
Public Lands	Several state wildlife areas (Mukwa, Outagamie, Maine, Navarino), and parks including Cedar County Park, Walter A. Olen, Shiocton Lake, Lindsay, Pfeifer, Hatten, Abrahams Park, as well as numerous fish, wildlife, habitat and natural areas along the Wolf River throughout study zone.
Sensitive Resources	The Wolf River, scattered lakes, streams and wetlands along with forested lands and agricultural land are in the study area.
Cultural Resources	High potential for historic and cultural resources within study zone. Numerous cemeteries.
Miscellaneous	Clintonville Municipal Airport.



Concord - Bark River 345 kV line	
General Description	New line
Length (miles)	approximately 17 total, 10 of new right-of-way
Study Area (square miles-length times width)	approximately 107
Corridor Sharing Opportunities	Several state and county highways, existing transmission rights-of-way, pipelines, and railroad corridors are within the study zone
Public Lands	State public hunting grounds, Monches County Park and other undeveloped county parklands as well as several community parks are located within the study area.
Sensitive Resources	Keesus Lake Marshland Preservation Area, Ashippun Lake Access and Wildlife Area, Keesus Lake, North Lake, Beaver Lake, Pine Lake, Cornell Lake, Moose Lake, Okauchee Tamarack Lake, Ashippun Lake, Lac la Belle, and several streams including Bark River, Oconomowoc River, Mason Creek, Ashippun River, Rock River and tributaries are all located in the study area.
Cultural Resources	The Maranatha Baptist Bible College, the Octagon House, Northwestern College and the Main Street Commercial District in Watertown and the East Capitol Drive Historic District in Hartland are identified on the Cultural Map of Wisconsin within the study area.
Miscellaneous	The Watertown Municipal Airport and the Oconomowoc Landing Strip are located in the study area.
Oak Creek - Racine 345 kV line	
General Description	New 345 kV line
Length (miles)	approximately 16 total, 4 of new right-of-way
Study Area (square miles-length times width)	approximately 82
Corridor Sharing Opportunities	New 345 kV line to accommodate new generation. Additional right-of-way will be required. State and county roads, railroad and existing transmission lines corridors located within the study area offer the best possibilities for corridor sharing.
Public Lands	Numerous city and county parks including Bender Park, Cliffside Park, Johnson Park, the Root River Parkway, Armstrong Park, and Caledonia-Mount Pleasant Park are located within the study area.
Sensitive Resources	Renak-Polak Maple Beech Woods and Sander Park Hardwoods State Natural Areas, Hunts Woods, Cliffside Park Woods, Tabor Woods, Caledonia Low Woods, Oak Creek Low Woods, and Root River riverine forest are found within the project area
Cultural Resources	The Wind Point Lighthouse and Herbert F. Johnson House are located within the project area.

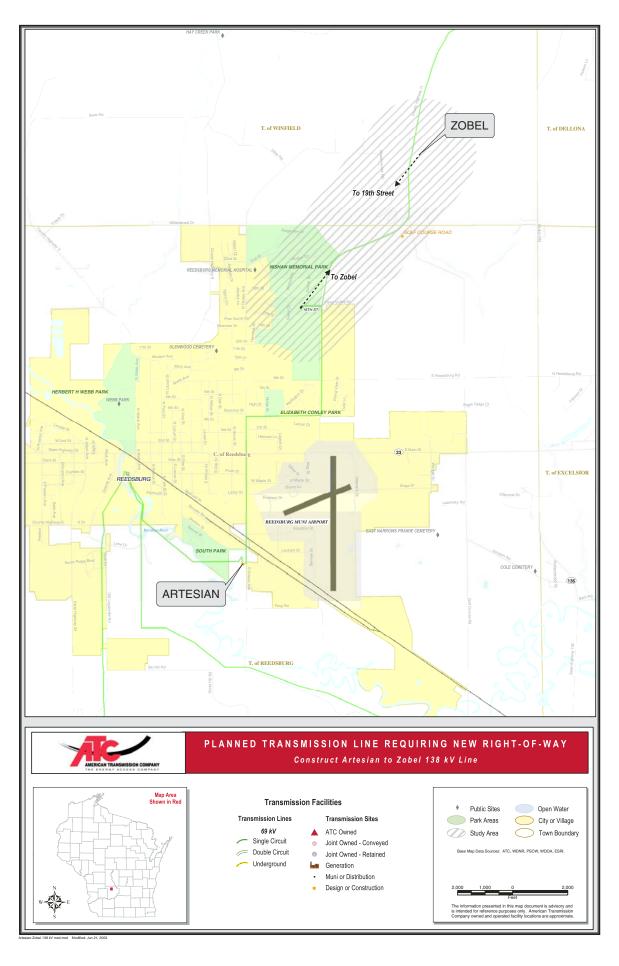
Table VII-2 (continued) 2003 Screening Information for Projects Requiring New Right-of-Way

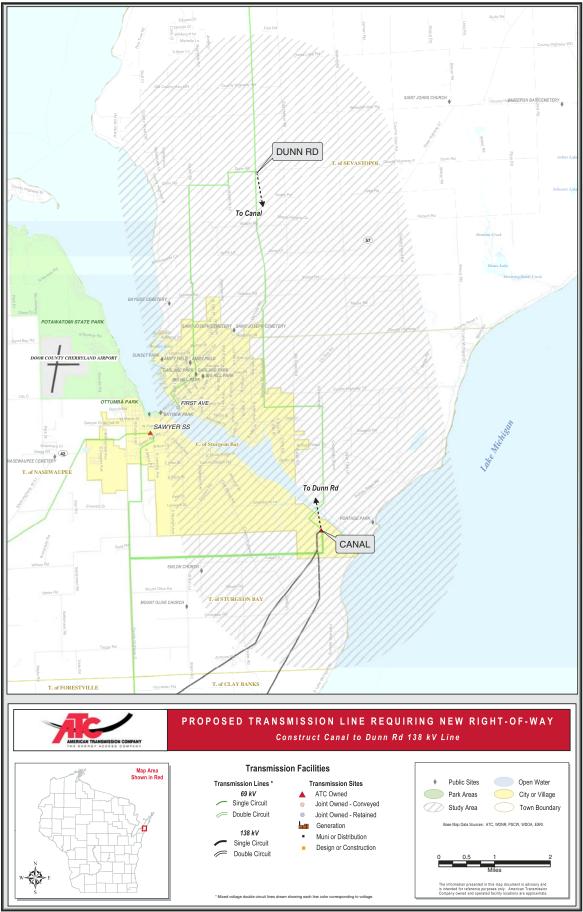
Paddock - Verona 345 kV line and Kegonsa-West Middleton Loop into Verona	
General Description	New line
Length (miles)	approximately 40 total, 10 of new right-of-way
Study Area (square miles-length times width)	approximately 585
Corridor Sharing Opportunities	New right-of-way will be required. State and county roads, railroad and existing transmission line corridors located within the study area offer the best possibilities for corridor sharing.
Public Lands	City and county parks, Footville Leased Public Hunting Ground, Badfish Creek Public Hunting Grounds, Avon Bottoms Hunting Ground, Liberty Creek Hunting Ground, Albany Hunting Ground.
Sensitive Resources	Albany Wildlife Area, Liberty Creek Wildlife Area, Footville Leased Public Hunting Ground, Evansville Wildlife Area, Badfish Creek Wildlife Area, Bellville Wildlife Area, Hook Lake Wildlife and Natural Area, Lower Waubesa Wetland and Natural Area. Rock River, Bass Creek, Raccoon Creek, Stevens Creek, Lake Leota, Grass Lake, Allen Creek, Liberty Creek, Cold Spring Creek, Spring Creek, Gibbs Lake, Bass Lake, Grass Lake, Lake Blarney, Lake Harriet, Sugar River, Badger Mill Creek, Hook Lake, Island Lake, other streams, lakes and wetlands within the Yahara and Rock River Drainage basins.
Cultural Resources	Exchange Square Historic District, Broadhead, Route of Abraham Lincoln Marker, Footville Condensery, Frances Wiggins Ford Farm, Cooksville Cheese Factory, Cooksville Historic District, Evansville Historic District, Wisconsin Industrial School for Girls, University of Wisconsin Arboretum.
Miscellaneous	



Eden-Muscoda-Richland Center 69kV line	
General Description	New line
Length (miles)	approximately 25
Study Area (square miles-length times width)	approximately 234
Corridor Sharing Opportunities	Railroads, existing transmission lines and state and United States highways offer corridor sharing potential.
Public Lands	Blackhawk Lake Recreation area, Pine River public hunting grounds, Big Spring Fishery area and other public lands along the Wisconsin River are located in the study area.
Sensitive Resources	Wisconsin River, Lower Wisconsin State Riverway, Southwest Wisconsin Driftless area topography, Big Spring Fishery area, Pine River Public Hunting Grounds, Blackhawk Lake Recreation area, Lower Wisconsin State Wildlife Area, Blue River Sand Barrens State Natural Area, Avoca Prairie Savanna State Natural Area and Orion Mussel Bed State Natural Area are located in the study area.
Cultural Resources	Court Street Commercial Historic District, Birthplace of GTE, Krouskop Park, AD German Warehouse, Eagle Effigy Mounds, proposed Ho-Chunk Cultural Park, Dr. Bertha E. Reynolds Memorial, Rural Electrification Marker are shown on the Cultural Map of Wisconsin.
Miscellaneous	Pierick Landing Strip
Notes:	
Study Area Width:	For lines 0-5 miles long, study area width equals length of segment: for lines 5-15 miles long, study area width equals 5 miles; for lines > 15 miles long, study area width equals

Study Area Width:	For lines 0-5 miles long, study area width equals length of segment: for lines 5-15 miles long, study area width equals 5 miles; for lines > 15 miles long, study area width equals 30% of line length.
Corridor Sharing Opportunities:	Identify dominant corridor types.
Public Lands:	Identify properties by name.
Sensitive Resources:	List major stream crossings, significant topographic features, designated natural areas, etc.

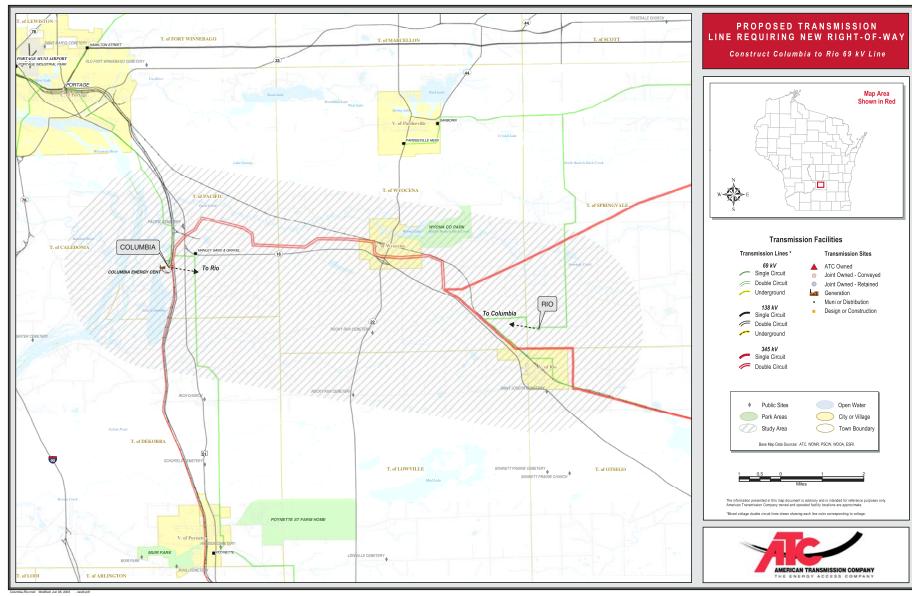


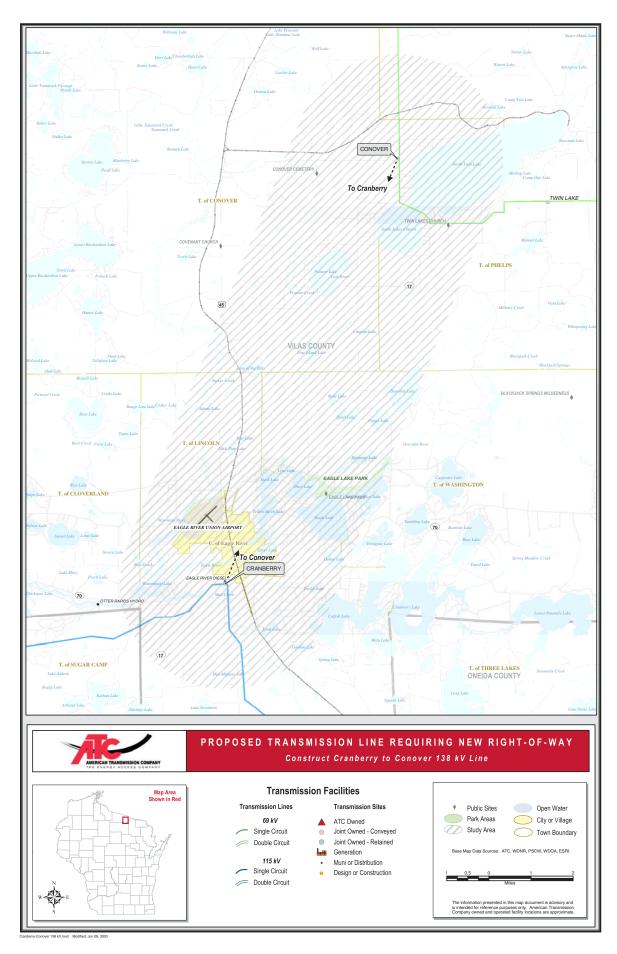


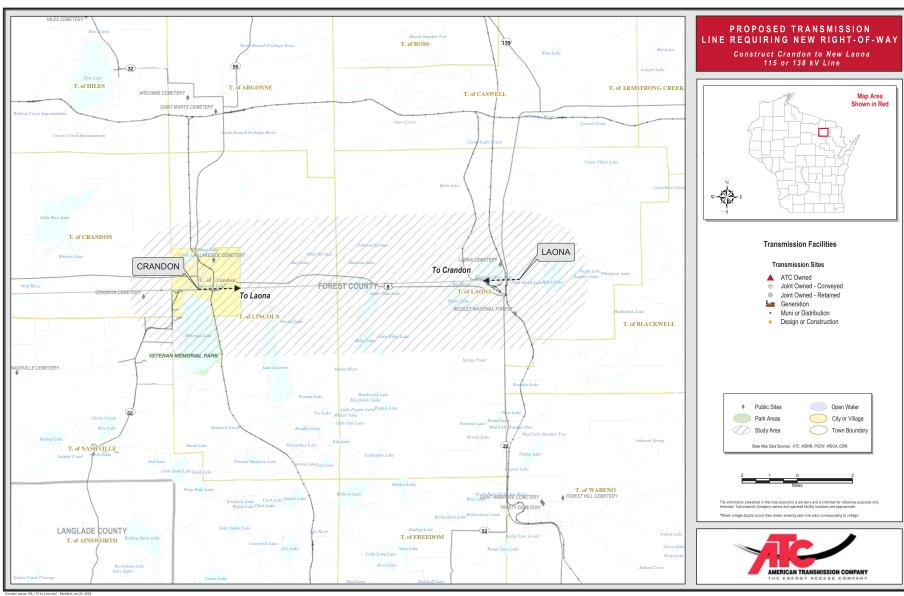
Canal-Dunn Rd 138 kV.mxd Modified: Jun 09, 2003

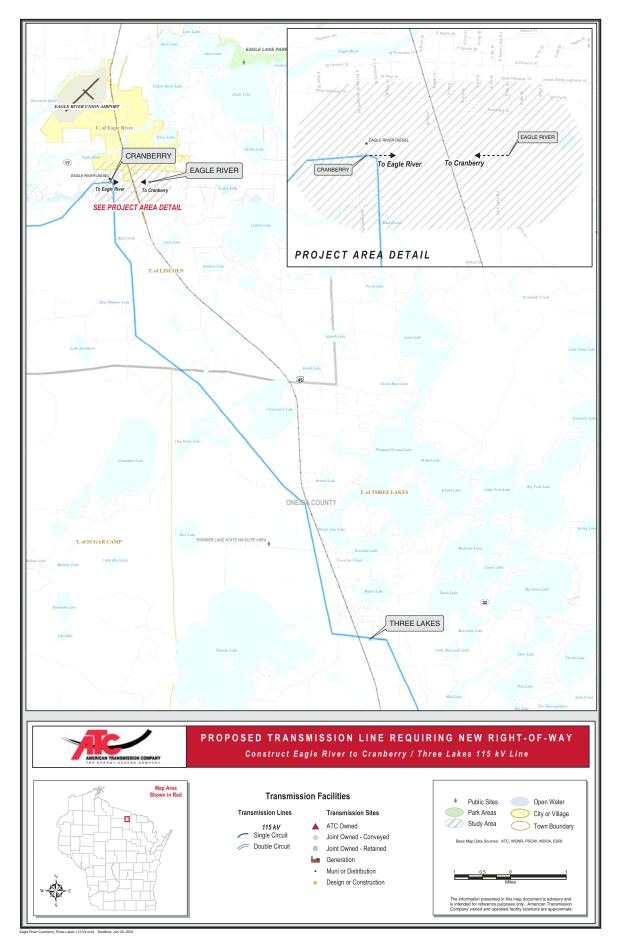
PROPOSED TRANSMISSION LINE REQUIRING NEW RIGHT-OF-WAY

Exhibit VII-5

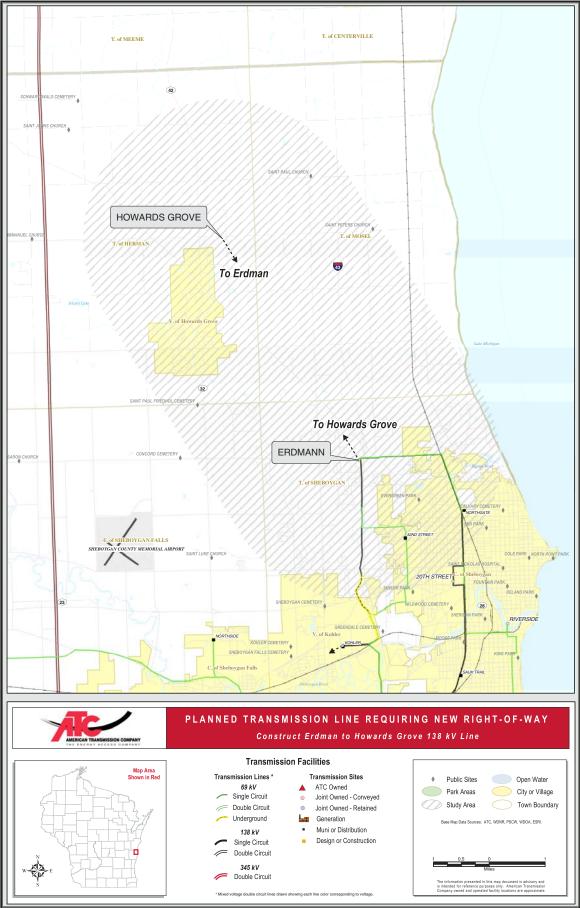




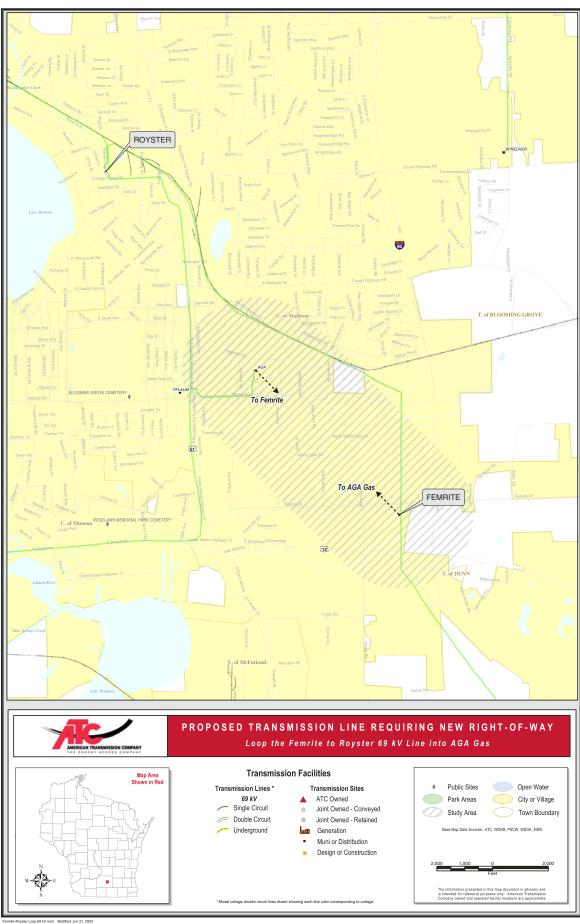




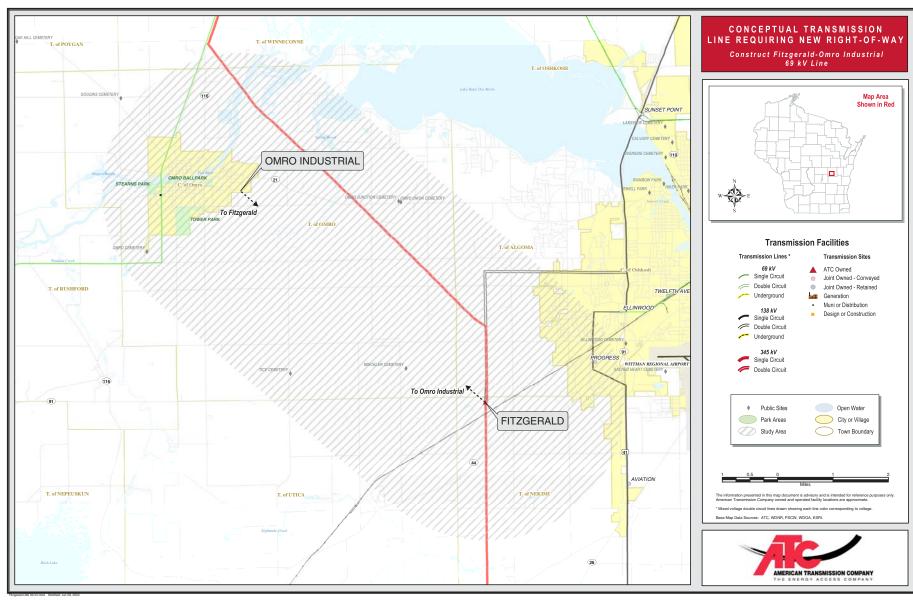


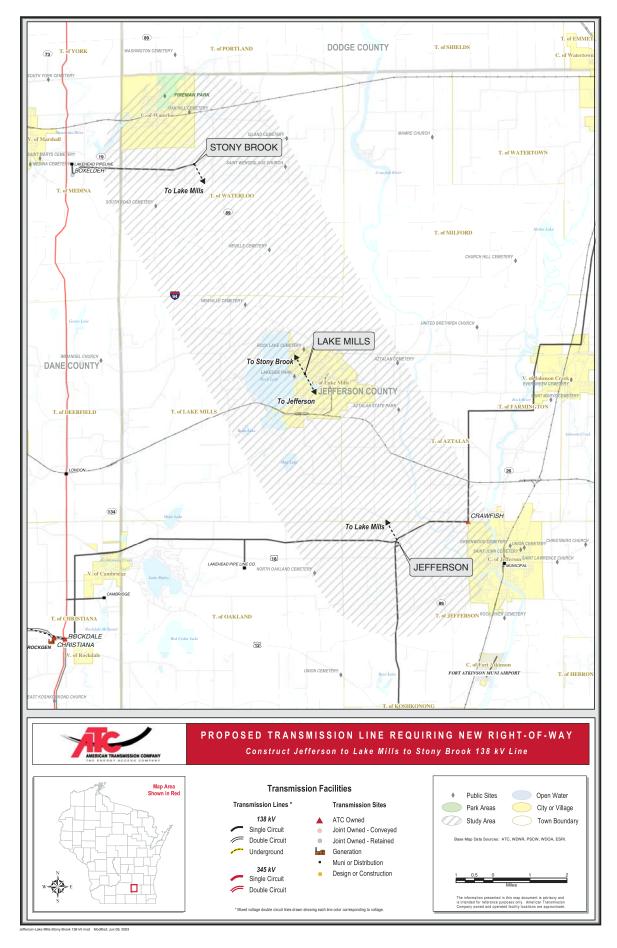


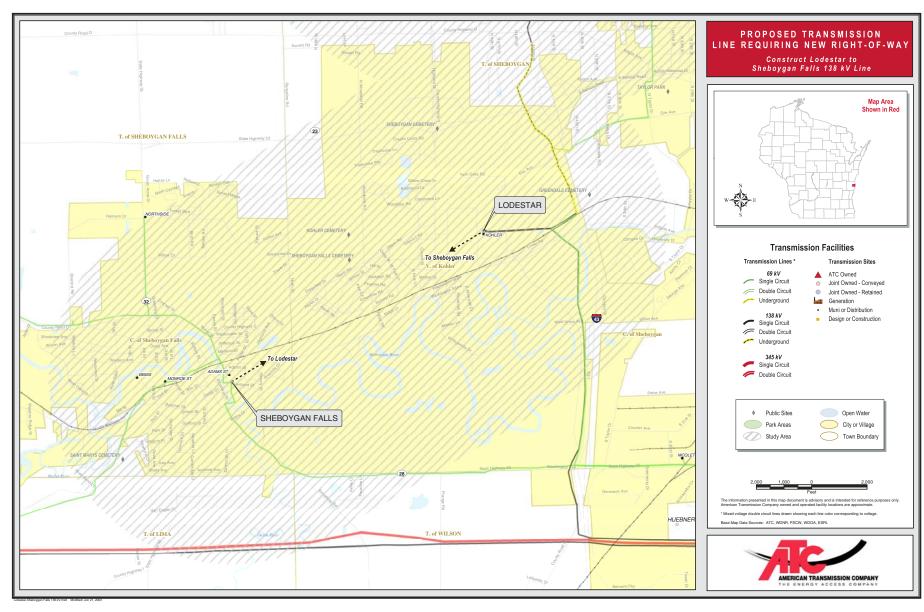
Erdman - Howards Grove 138 kV.mxd Modified: Jun 20, 2003

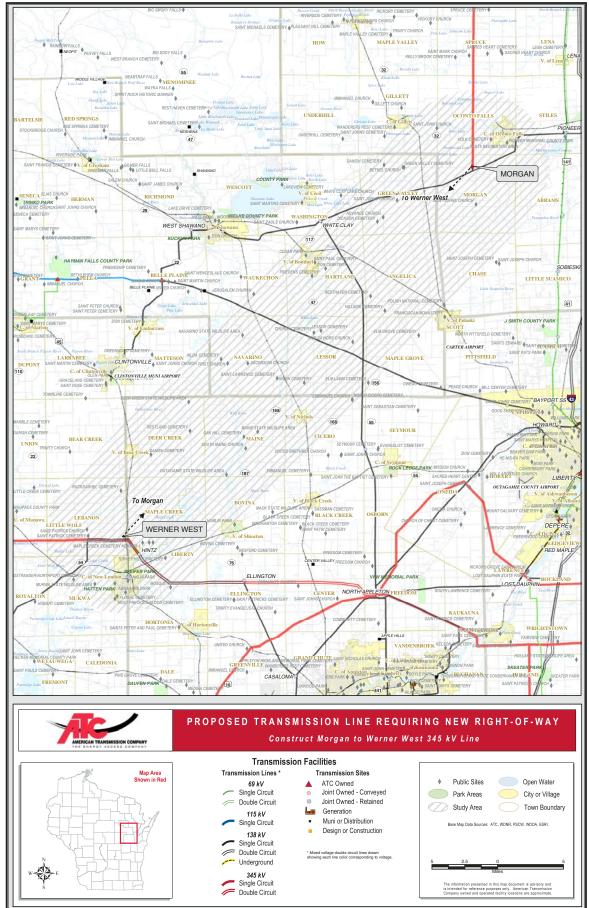


212

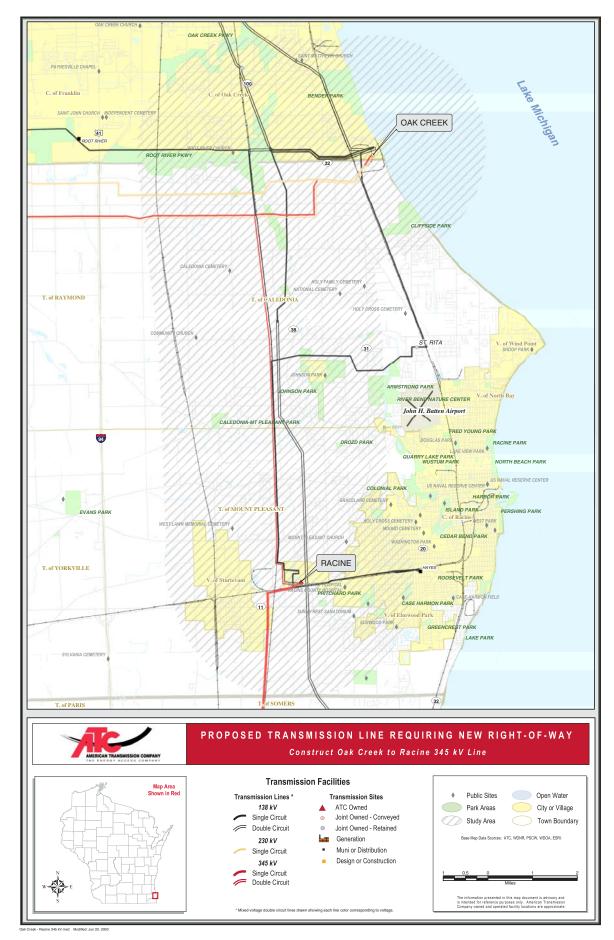




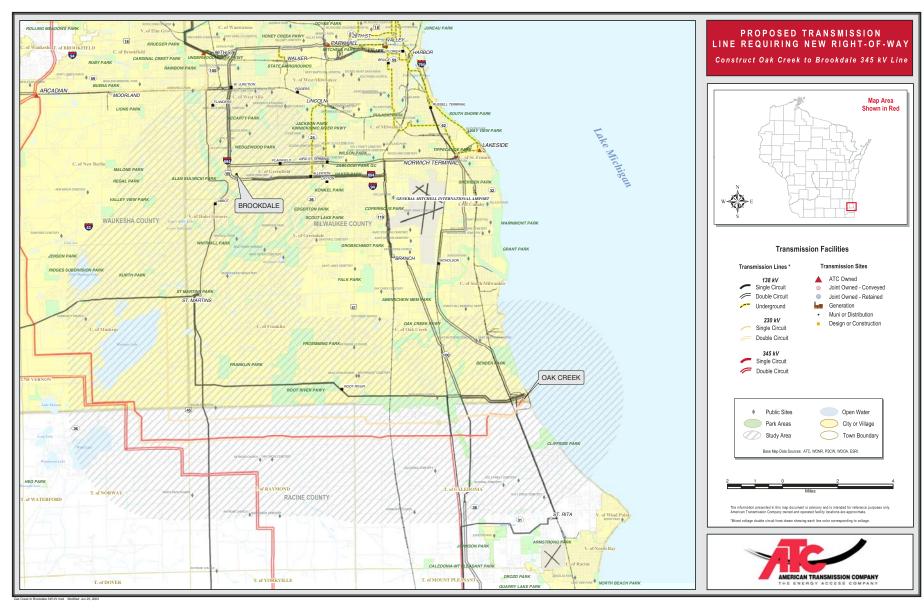


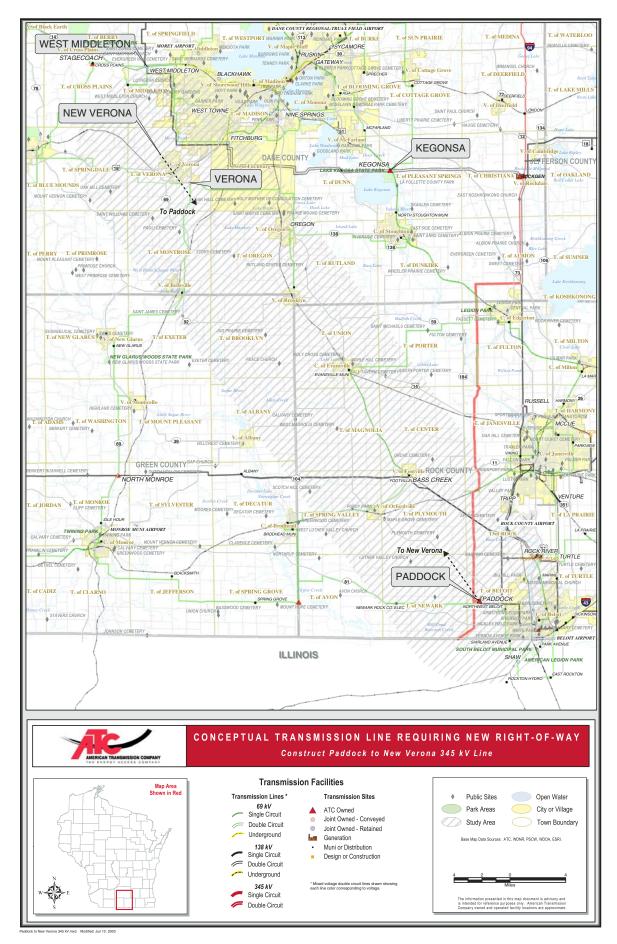


Morgan - Werner West 345 kV.mxd Modified: Jun 20, 2003



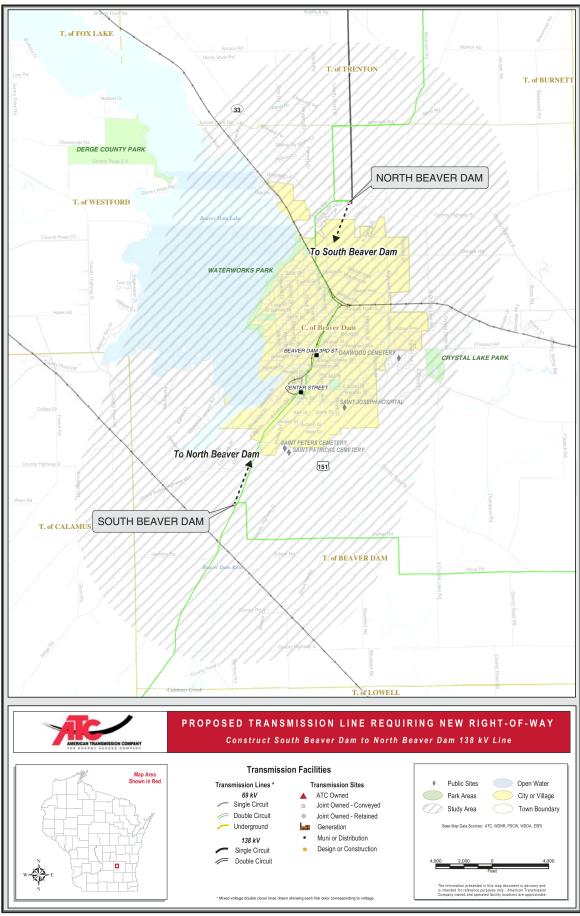
Full Report - September 2003



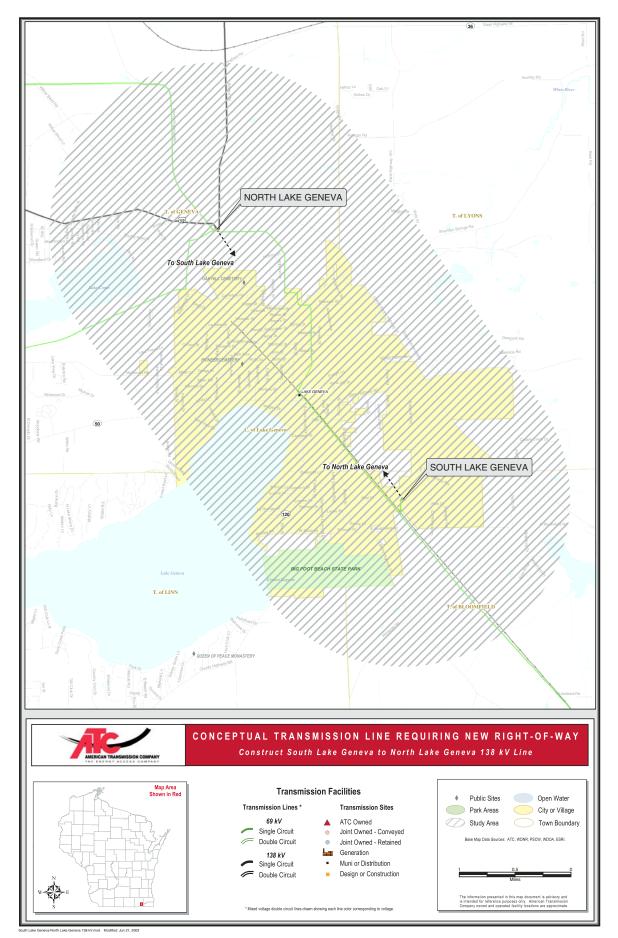


Full Report — September 20

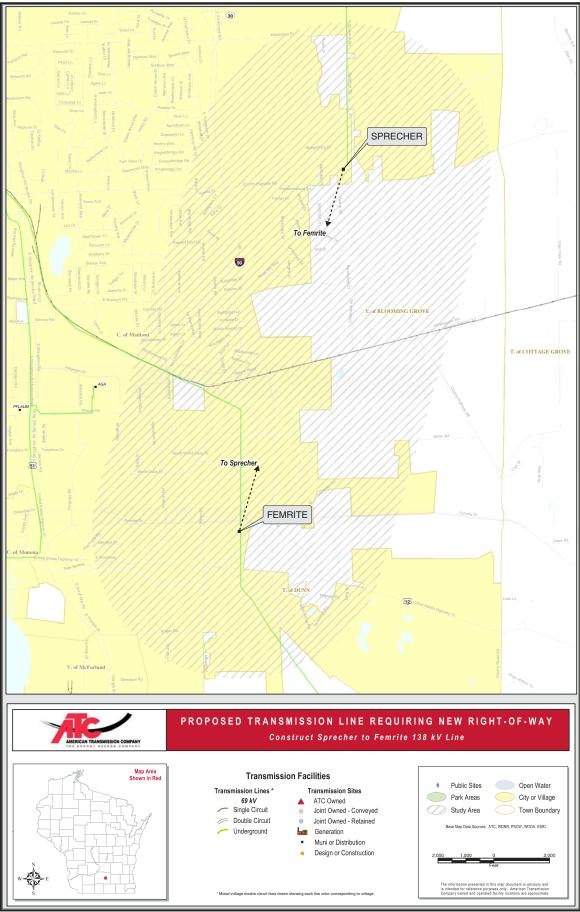
PROPOSED TRANSMISSION



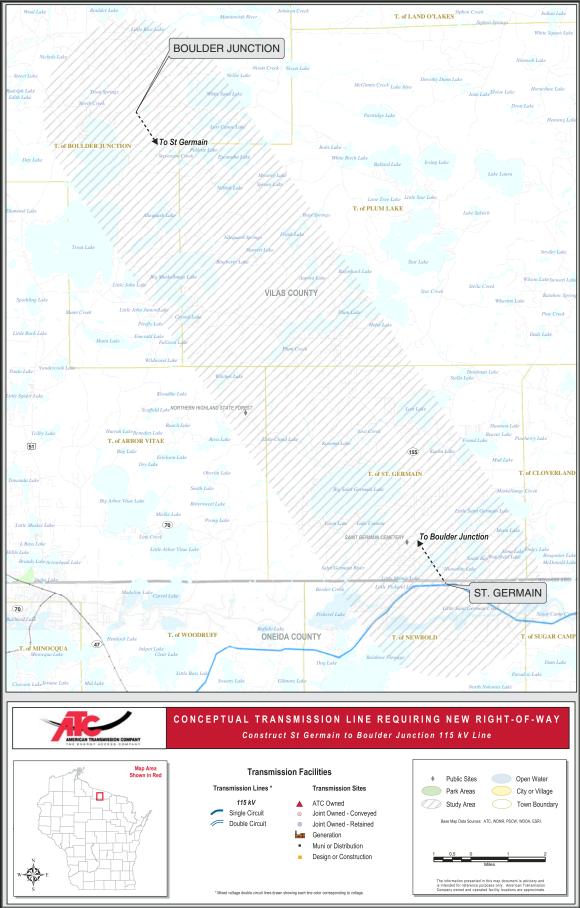
South Beaver Dam to North Beaver Dam 138 kV.mxd Modified: Jun 20, 2003



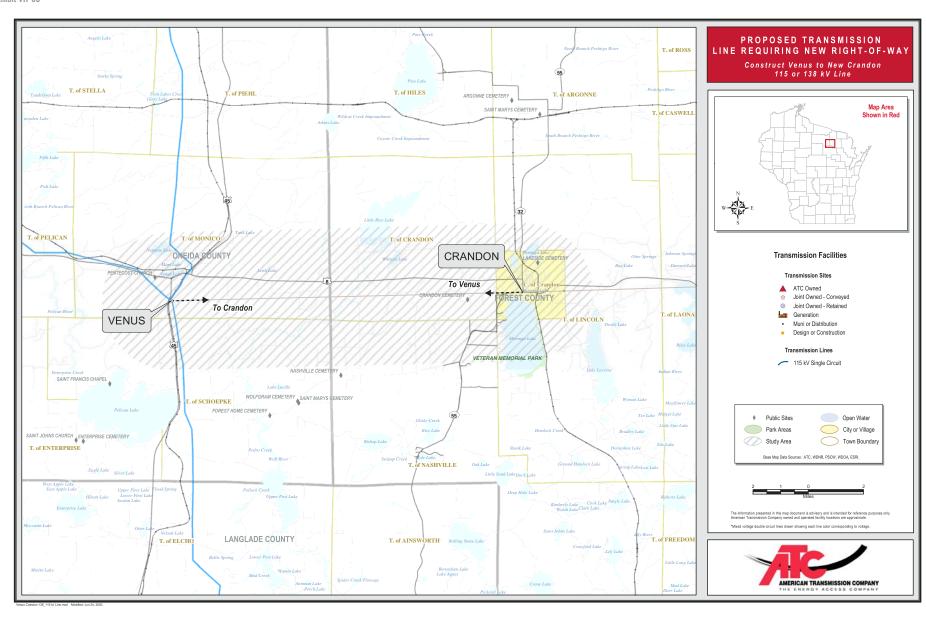
Full Report - September 200



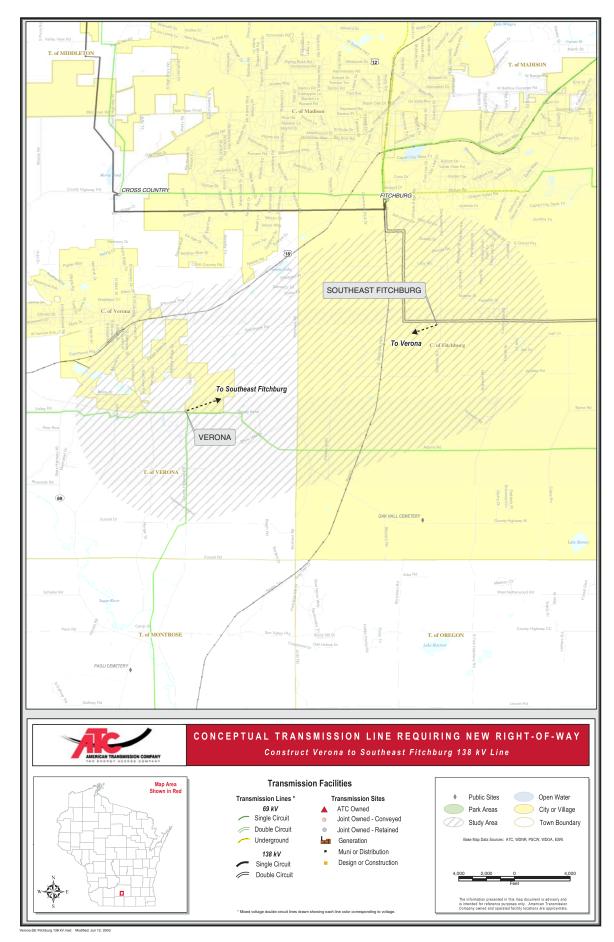
Sprecher-Fermite 138 kV.mxd Modified: Jun 21, 2003



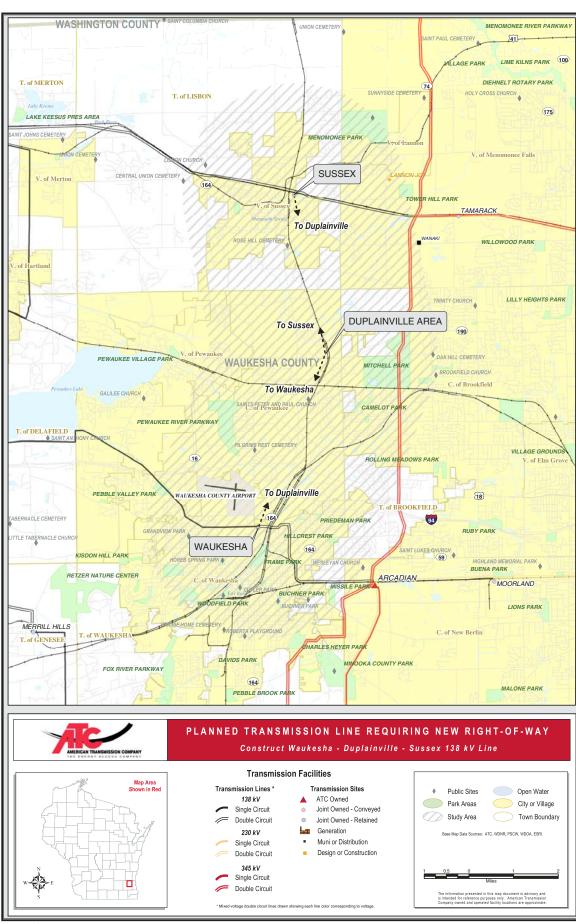
StGermain-Boulder Junction 115 kV.mxd Modified: Jun 21, 200



10-Year Transmission Assessment



Full Report — September 20



Waukesha-Duplainville-Sussex 138kV.mxd Modified: Jun 20, 2003