

## 8.5 Substations

In addition to the new high voltage transmission lines (HVTLs), the proposed project would require one new substation (North Rochester Substation) and expansions/modifications to one existing substation (Northern Hills Substation). Modifications to the Hampton Substation (see Map 8.5-01) are being permitted as part of the CapX 2020 Brookings County-Hampton project (Docket ET/TL-018-1474); because of this, the Hampton Substation will not be discussed here. In addition, the Wisconsin portion of the proposed project will be permitted in a separate proceeding before the Public Service Commission of Wisconsin (PSCW) and is not discussed here.

### 8.5.1 North Rochester Substation

The proposed project would include construction of a new North Rochester Substation, which would be located between Zumbrota and Pine Island (Map 8.5-02). The applicant has proposed two siting areas for the North Rochester Substation: North Rochester Substation-South, which is the applicant's preferred site, and North Rochester Substation-North, which is the applicant's alternate site (Map 8.5-02).

#### **The new "North Rochester Substation" could require the acquisition of up to 40 acres for substation infrastructure and operation.**

Approximately 8 of these 40 acres would be fenced for the actual substation site location. The North Rochester Substation would include six 345 kilovolt (kV) circuit breakers, a 345 kV/161 kV transformer, three 161 kV circuit breakers, a control house and associated line termination structures, switches, buswork, controls, and associated equipment.

#### **8.5.1.1 Resources within Vicinity of Proposed Substation Siting Locations**

The following discussion focuses on the resources that are present within the boundary of either the North Rochester Substation-South siting area or the North Rochester-North siting area or within 0.5 miles of either siting area. Resources that are not discussed here are not located within 0.5 miles of either siting area.

### *Human Settlement*

No houses are located within the siting areas for either of the proposed North Rochester Substations. However, there are 12 houses located within 0.5 miles of the North Rochester Substation-North siting area and 9 houses located within 0.5 miles of the North Rochester Substation-South siting area (Map 8.5-02). Because no houses are located within either substation siting area, no displacements are anticipated.

### *Rare and Unique Resources*

No federally or state-listed threatened or endangered species have been documented within 0.5 miles of either siting area. Minnesota Department of Natural Resources (DNR) Minnesota County Biological Survey (MCBS) Sites of Biodiversity Significance (SBS) are present just under 0.5 miles from both substation siting areas; approximately 3.3 acres are located within 0.5 miles of North Rochester Substation-South and approximately 4.5 acres are located within 0.5 miles of North Rochester Substation-North (Map 8.5-02). The SBS sites are located over 0.4 miles from the siting areas; because of this, impacts to these resources are not anticipated from the proposed project. The applicant will address avian issues by working with the DNR and United States Fish and Wildlife Service (USFWS) to reduce the likelihood of collisions.

### *Flora and Fauna*

There is one shallow lake located approximately 0.15 miles from the North Rochester Substation-South siting area; no shallow lakes are located within 0.5 miles of the North Rochester Substation-North siting area (Map 8.5-02). There is one state conservation easement land located approximately 0.3 miles from the North Rochester Substation-South siting area; no state conservation easement lands are located within 0.5 miles of the North Rochester Substation-North siting area (Map 8.5-02). Because neither the shallow lake nor the state conservation easement land is located within the North Rochester Substation-South siting area, no direct impacts to these resources are anticipated from the

proposed project. As stated above, the applicant will address avian issues by working with the DNR and United States Fish and Wildlife Service (USFWS) to reduce the likelihood of collisions.

### *Water Resources*

There are 11 and 6 stream crossings within 0.5 miles of the North Rochester Substation-South and North Rochester Substation-North siting areas, respectively (Map 8.5-02). None of the stream crossings located within 0.5 miles of the North Rochester Substation-North siting area are within the actual siting area, while 2 of the stream crossings within 0.5 miles of the North Rochester Substation-South siting area are within the siting area (Map 8.5-02). One of the streams, the North Branch of the Middle Fork Zumbro River, which is located approximately 0.5 miles from the North Rochester Substation-South siting area is designated on the DNR Public Water Inventory (PWI) (Map 8.5-02).

According to the USFWS National Wetland Inventory (NWI), there are no wetlands located within the siting area of either substation location. However, approximately 5.4 and 3.1 acres of wetland are located within 0.5 miles of the North Rochester Substation-South and North Rochester Substation-North siting areas, respectively (Map 8.5-02).

The applicant anticipates avoiding streams when selecting the final site for the North Rochester Substation. Potential temporary impacts to streams and mitigation strategies are identified in Section 7.8.

### *Cultural Resources*

There are 3 Minnesota State Historic Preservation Office (SHPO) historical structures located within 0.5 miles of the North Rochester Substation-South siting area (Map 8.5-02) and one SHPO historical structure located within 0.5 miles of the North Rochester Substation-North siting area (Map 8.5-02); none of these sites are listed on the National Register of Historic Places (NRHP). None of these historical sites have been documented within either substation siting area boundary (Map 8.5-02). In addition, no SHPO archaeological sites

have been documented within 0.5 miles of either substation siting area. Because the historical resources are not located in the immediate vicinity of the siting area, impacts to these resources are not anticipated.

### *Recreation Resources*

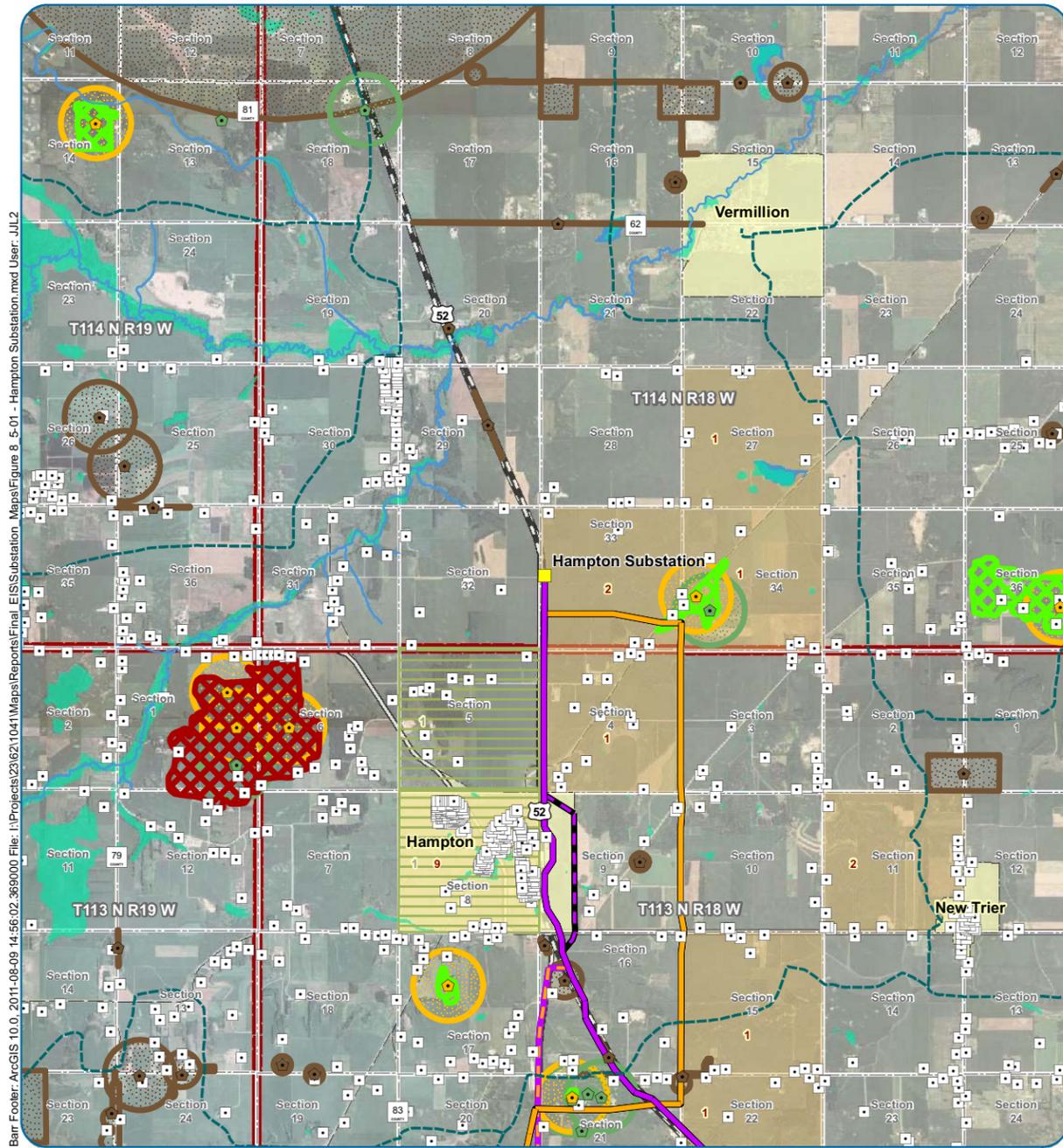
An approximately 8,300-foot long snow mobile trail is present within 0.5 miles of the North Rochester Substation-South siting area; approximately 2,100 feet of this snowmobile trail run through the siting area (Map 8.5-02). No snowmobile trails area present within 0.5 miles of the North Rochester Substation-North siting area. The applicant does not anticipate closure of, or direct impacts to, the snowmobile trail if the North Rochester Substation-South site is chosen. However, the proposed substation would likely be visible from portions of the snowmobile trail.

### 8.5.2 Northern Hills Substation

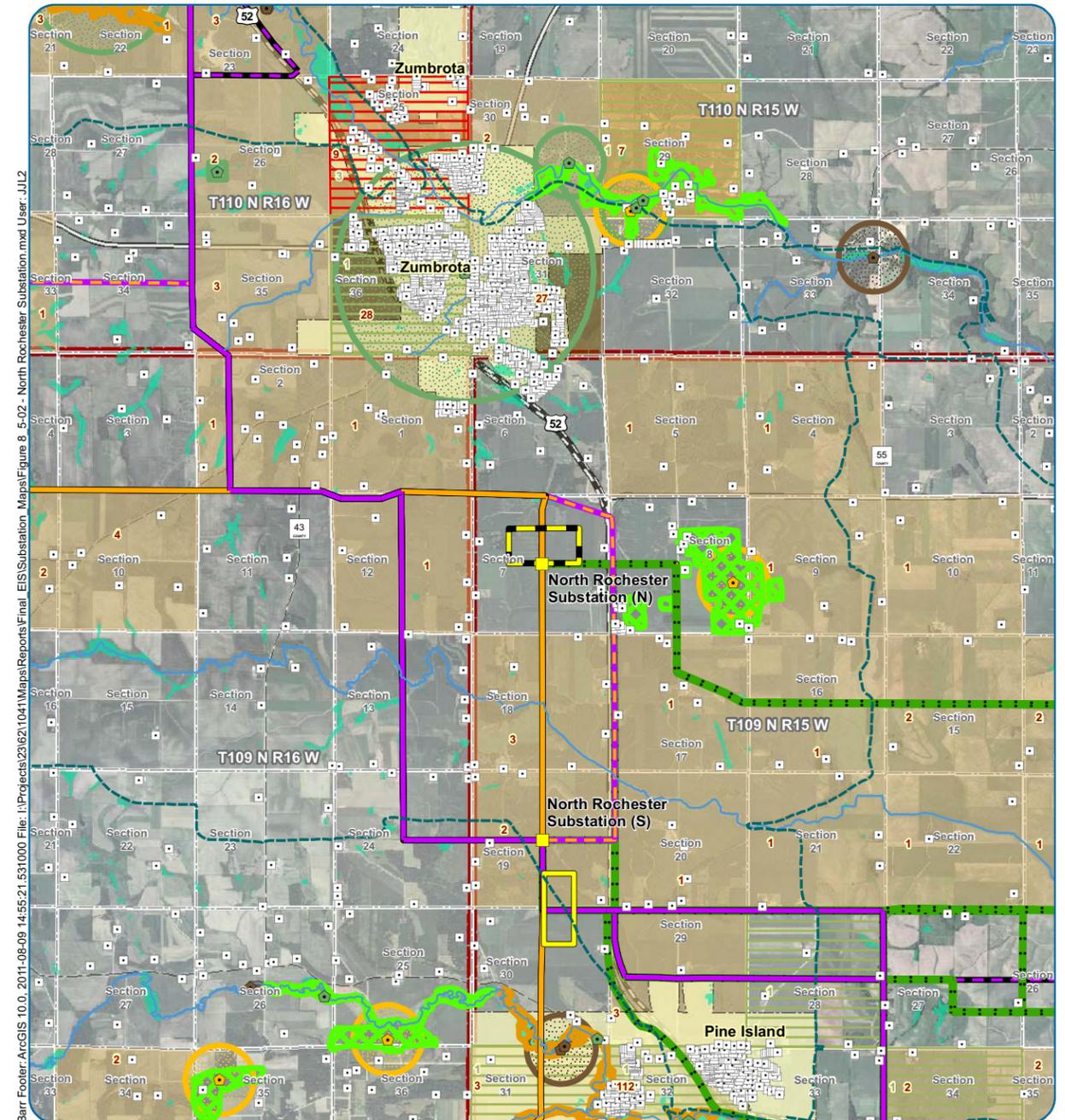
The proposed project would include an expansion to and modifications of the existing Northern Hills Substation (Map 8.5-03); this substation is the endpoint for Segment 2. The proposed project would require an approximate 0.5 acre expansion of the existing Northern Hills Substation to accommodate the new 161 kV transmission line and related equipment. No additional property would be required to construct the expansion. Improvements would include an expansion of the existing graded area by approximately 30 feet and the addition of 161 kV equipment, including one circuit breaker and associated line termination switches and controls. Construction would include the associated line switches, foundations, steel structures, and control panels.

Because the Northern Hills Substation would only involve a 0.5-acre expansion on the existing property, impacts to resources in the vicinity are not anticipated.

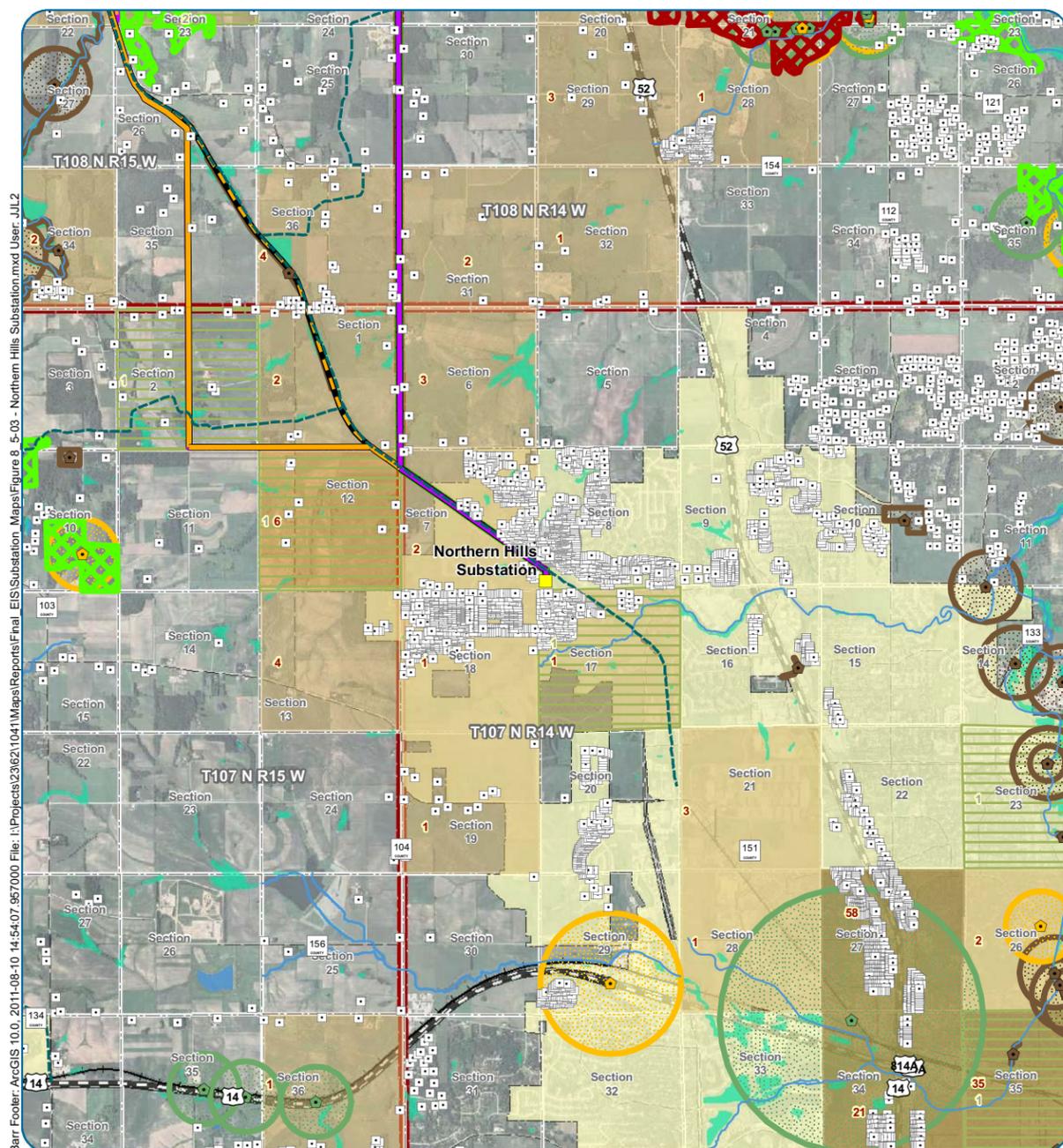
Section 8.5 Substations



Map 8.5-01  
Hampton Substation Area



Map 8.5-02  
North Rochester Substation Area



Barr, Fowler, ArcGIS 10.0, 2011-08-10 14:54:07 967000 File: I:\Projects\2362\1041\Maps\Reports\Final EIS\Substation Maps\Figure 8.5-03 - Northern Hills Substation.mxd User: JLL2

County Boundaries	Original Alignments	Snowmobile Trail	MCBS Biodiversity Significance	Archaeological Sites
Municipalities	P Route	Public Water Inventory Basins (includes lakes and wetlands)	Moderate Significance	1 - 2
	A Route	Public Water Inventory Watercourse	High Significance	3 - 4
	Additional Alternative Routes	NWI Wetlands	Outstanding Significance	5 - 6
	Variation on P Route	Public Land Survey Section	MN DNR Natural Heritage	1 - 5
	Variation on A Route	Public Land Survey Township	Botanical	6 - 20
	Variation on Both	Fish Technology Center	Ecological	21 - 164
	Parallel Alignment	Fisheries Research Station	Zoological	
	Airport	National Fish Hatchery	Botanical	
	Residences	National Wildlife Refuge	Ecological	
		Waterfowl Production Area	Zoological	



Refer to Appendix B for information on data sources.

Map 8.5-03  
Northern Hills Substation Area

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Substations

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