

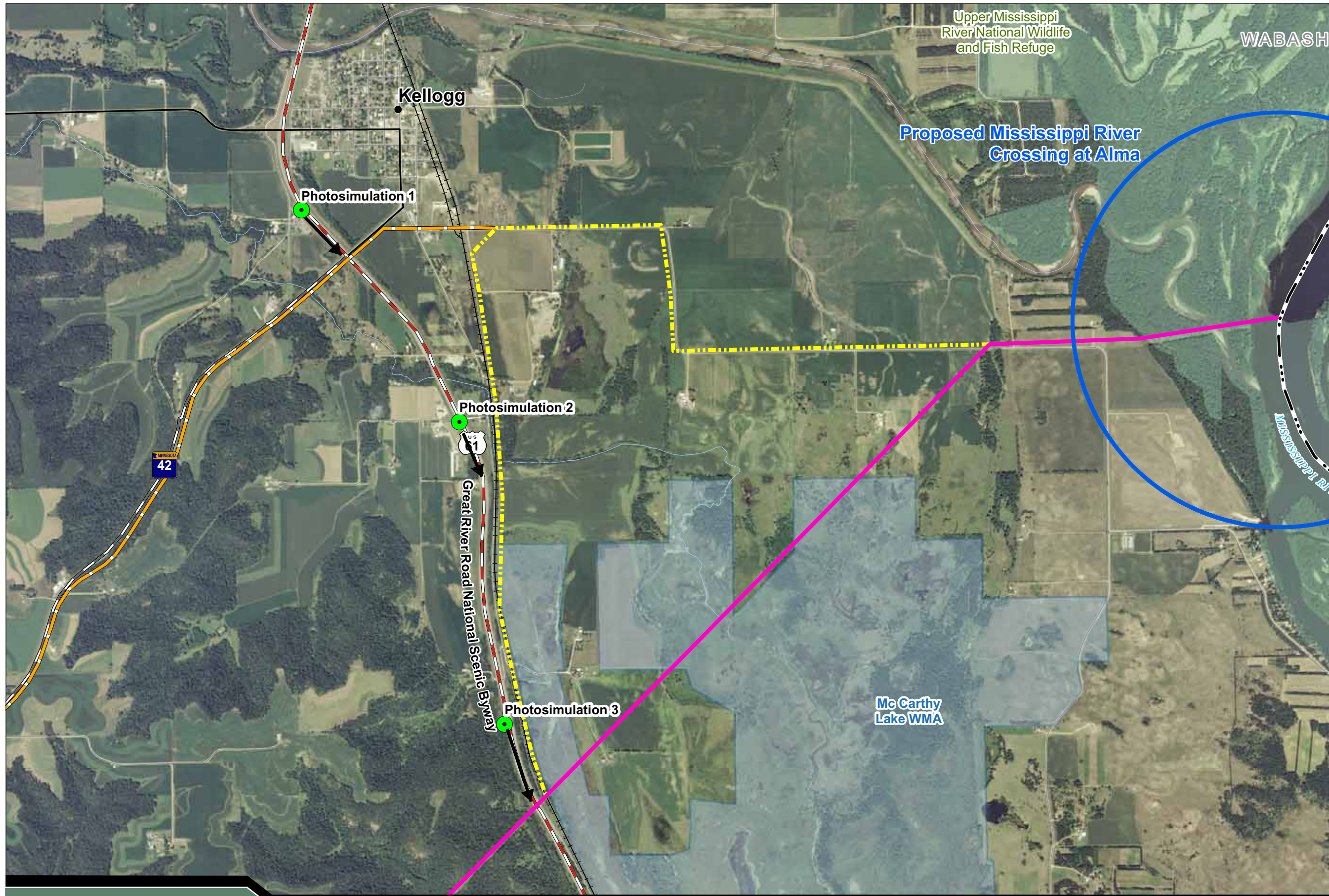
Summary Comparison of Impacts for Preferred and Alternative 161 kV Routes

Resource Category	Preferred 161 kV Route	Alternative 161 kV Route
Residences¹		
Revised Number of Residences 0-40 feet (within ROW) from route centerline	0	0
Revised Number of Residences 0-75 feet from route centerline	4	1
Revised Number of Residences 75-150 feet from route centerline	15	5
Revised Number of Residences 150-300 feet from route centerline	40	28
Revised Density (residences/linear mile within 300 feet of route centerline)	3.8	1.8
Recreation and Tourism		
No impacts to recreation and tourism are anticipated		
Effects on Land-Based Economics		
Agriculture		
Permanent Impact	2.4 acres	2.6 acres
Temporary Impact	139 acres	161 acres
Forestry	No impacts to economically important forestry areas are anticipated.	
Mining	No impacts to aggregate mines are anticipated.	
Archaeological and Historic Resources Sites Within 1 mile of Route Centerline		
Archaeological	14	0
Architectural		
National Register of Historic Places (NRHP)	0	3
Architectural	13	11
Natural Environment		
Water Resources		
Permanent Wetlands Impacts	<1 acre	<1 acre
Temporary Wetlands Impacts	2 acres	3 acres
Potential Tree Clearing in Wetlands	1.3 acres	1.9 acres
Stream Crossings	5	18
Permanent Impacts to Floodplains	<1 acre	<1 acre
Flora		
Percent Cropland	77	72
Percent Grassland	17	22
Percent Shrubland	0	<1
Percent Forested Land	3	5

¹ The house count numbers contained in this chart were revised from the Application. See Schedule 8 to Tom Hillstrom's Direct Testimony for additional information.

Summary Comparison of Impacts for Preferred and Alternative 161 kV Routes

Resource Category	Preferred 161 kV Route	Alternative 161 kV Route
Percent Aquatic	<1	0
Fauna		
Conservation Reserve Program Lands Crossed	4	2
Conservation Reserve Enhancement Program Lands Crossed	0	0
Length of Important Bird Areas Crossed	0 mile	0 mile
Length of Grassland Bird Conservation Areas Crossed	0 mile	2.6 miles
Number of Federal Rare and Unique Species Known to Occur Within 1 mile of Route Centerline		
Threatened	0	0
Endangered	0	0
Candidate	0	0
Number of State Rare and Unique Species Known to Occur Within 1 mile of Route Centerline		
Threatened	6	6
Endangered	0	0
Species of Concern	4	2
DNR Rare Native Communities	35	70
Length of Outstanding Biodiversity Sites Crossed	0	0
Length of High Biodiversity Sites Crossed	0	0.7 mile
Length of Moderate Biodiversity Sites Crossed	0	0
Use or Paralleling of existing ROW (transportation, pipeline, and electrical transmission systems) and property lines		
Total length of route (miles)	15.4	18.0
Length following Transmission Line (miles)	0.5	5.8
Percentage of route following Transmission Line	3%	32%
Length following road but not Transmission Line (miles)	13.3	8.1
Percentage of route following road but not Transmission Line	86%	45%
Length following property line but not transmission line or roads (miles)	1.6	2.2
Percentage of route following property line but not transmission line or roads	10%	12%
Total length following transmission line, roads, or property lines (miles)	15.3	16.1
Percentage of route following transmission line, roads, or property lines	100%	89%
Length not following transmission line, roads, or property lines (miles)	0.1	1.9
Percentage of route not following transmission line, roads, or property lines	1%	11%
Estimated Costs (millions)		
Cost	\$16	\$17



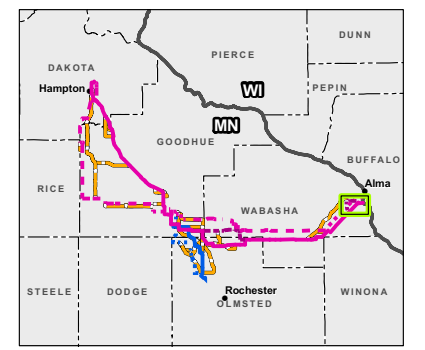
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Proposed Features

- Photosimulation Location
- Preferred 345 kV Route
- - - Alternative 345 kV Route
- Highway 42 Route Segment

Jurisdiction (MNDNR, USGS, NPS, TNC)

- ▭ Municipality
- ▭ MNDNR Wildlife Management Area
- ▭ USFWS National Wildlife Refuge
- - - Minnesota State Trail



DATA SOURCES: MN DNR, WI DNR, BTS, USGS
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CapX2020

Hampton • Rochester • La Crosse 345 kV Transmission Project

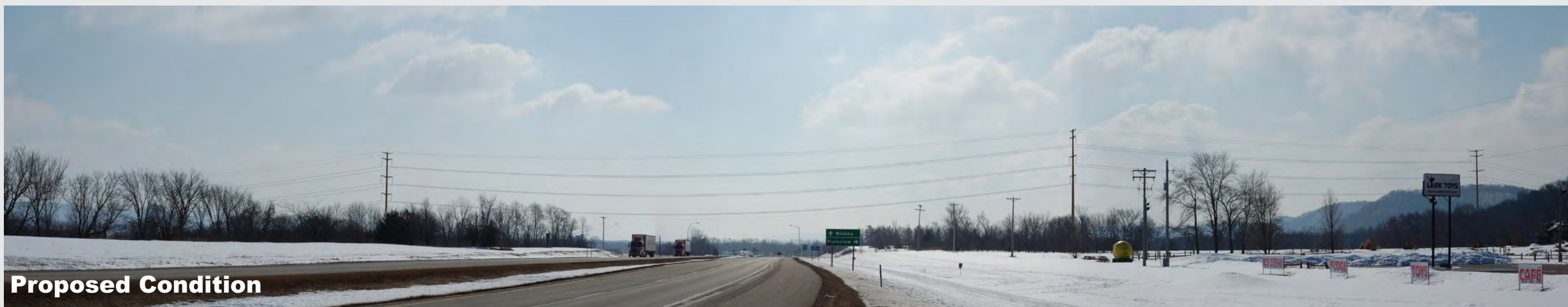
Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI Energy • Southern Minnesota Municipal Power Agency

**MN Great River Road
 Photosimulation Location Map**



Existing Condition

Photopoint 1 - Southbound Great River Road looking southeast. Looking southeast at the Highway 42 Route Segment.



Proposed Condition

Photopoint 1 - Southbound Great River Road looking southeast. Looking southeast at the Highway 42 Route Segment.



Existing Condition

Photopoint 2 - Southbound Great River Road. Looking southeast at the Alternative 345 kV Route.



Proposed Condition

Photopoint 2 - Southbound Great River Road. Looking southeast at the Alternative 345 kV Route.



Existing Condition

Photopoint 3 - Southbound Great River Road. Looking southeast at the Alternative 345 kV Route.



Proposed Condition

Photopoint 3 - Southbound Great River Road. Looking southeast at the Alternative 345 kV Route.



Existing Condition

Photopoint 3 - Southbound Great River Road. Looking southeast at the Preferred 345 kV Route.



Proposed Condition

Photopoint 3 - Southbound Great River Road. Looking southeast at the Preferred 345 kV Route.

SUMMARY OF HOUSE COUNTS WITHIN 300 FEET OF REFERENCE CENTERLINE

The following provides a summary of the Applicant’s analysis of house counts within 300 feet of the reference route centerlines that were presented in the Draft Environmental Impact Statement (“DEIS”) and in the Applicant’s Route Permit Application (“RPA”). Based on review of the DEIS and Applicant’s GIS information, aerial oblique and street view photography and some field checks, the Applicant has revised the house counts for each segment as described in this summary. At the end of each segment discussion there is a chart showing the distance to the houses from the reference centerline. Revised house counts by route are shown in Tables 1-6 at the end of the document.

The point of measurement on each house is an important consideration when determining distance to a route centerline. The DEIS house measuring point was used unless the house was identified only by the Applicant, in which case the Applicant’s measuring location was used.

1.0 Hampton to North Rochester 345 kV Preferred Route

The DEIS lists 46 houses; the RPA lists 29. The Applicant’s revised house count is 37 based on the following:

- The DEIS includes 10 businesses and one church, which were removed from the revised count.
- The DEIS adds 5 houses not included in the Applicant’s count. These houses are located in densely wooded areas and were not visible from aerial photos or from public property. These were included in the revised count.
- The DEIS measuring point moved 3 houses closer to the reference centerline than the Applicant had placed them originally. These were included in the revised count.
- Two houses identified by the Applicant were not included in the DEIS house count. These houses were reconfirmed by the Applicant and included in the revised count. Each is a second house located at a single farmstead.

0'-75'	76'-150'	151'-300'	Revised Total
1	12	24	37

2.0 Hampton to North Rochester 345 kV Alternative Route

The DEIS lists 13 houses; the RPA lists 12. The Applicant’s revised count is 13. The additional house in the DEIS is due to measurement margin of error. The Applicant reviewed the measurement and included the additional house in the revised count.

0'-75'	76'-150'	151'-300'	Revised Total
1	3	9	13

3.0 North Rochester to Mississippi River 345 kV Preferred Route

The DEIS lists 5 houses; the RPA list 8. The Applicant’s revised house count is 7. The Applicant reviewed these locations and maintained them in the revised house count except for one, which was removed from the count as it was classified as a storage building.

0'-75'	76'-150'	151'-300'	Revised Total
0	1	6	7

4.0 North Rochester to Mississippi 345 kV Alternative Route

The DEIS lists 3 houses; the RPA lists 5. The Applicant’s revised count is 4. The Applicant reviewed these locations and maintained them in the revised house count except for one house where the location of the house on the property is clearly not within the 300-foot buffer.

0'-75'	76'-150'	151'-300'	Revised Total
0	0	4	4

5.0 North Rochester to Northern Hills 161 kV Preferred Route

The DEIS lists 59 houses; the RPA lists 54. The Applicant’s revised house count is 59. The difference is due to:

- The DEIS includes one business which was removed from the revised count.
- The DEIS measuring point is closer to the reference centerline than where the Applicant had placed it originally and adds a second house to a property where Applicant showed one. This house was included in the revised count.
- The DEIS adds 3 additional houses not included in the Applicant’s count which were included in the revised count.
- Two structures identified as houses by the Applicant were not included in the DEIS house count. Upon further review, one was included in the revised count and one was not because it was classified as a garage.

01-40'	41'-75'	76'-150'	151'-300'	Revised Total
0	4	15	40	59

6.0 North Rochester to Northern Hills 161 kV Alternative Route

The DEIS lists 28 houses; the RPA lists 33. The Applicant’s revised house count is 34. The difference is due to 6 houses identified by the Applicant that were not included in the DEIS and 1 house location that was moved closer to the reference centerline in the DEIS being included in the revised count.

01-40'	41'-75"	76'-150'	151'-300'	Revised Total
0	1	5	28	34

TABLE 1: Hampton to North Rochester 345 kV Modified Preferred Route

Source	Residences 0-75 feet from Route Centerline	Residences 76-150 feet from Route Centerline	Residences 151-300 feet from Route Centerline	Total Residences 0-300 feet from proposed Route Centerline
Route Permit Application	0	8	21	29
DEIS	1	13	32	46
Revised House Count	1	12	24	37

TABLE 2: Hampton to North Rochester 345 kV Alternate Route

Source	Residences 0-75 feet from Route Centerline	Residences 76-150 feet from Route Centerline	Residences 151-300 feet from Route Centerline	Total Residences 0-300 feet from proposed Route Centerline
Route Permit Application	0	2	10	12
DEIS	1	3	9	13
Revised House Count	1	3	9	13

TABLE 3: North Rochester to Mississippi River 345 kV Modified Preferred Route

Source	Residences 0-75 feet from Route Centerline	Residences 76-150 feet from Route Centerline	Residences 151-300 feet from Route Centerline	Total Residences 0-300 feet from proposed Route Centerline
Route Permit Application	0	2	6	8
DEIS	0	1	4	5
Revised House Count	0	1	6	7

TABLE 4: North Rochester to Mississippi River 345 kV Alternate Route

Source	Residences 0-75 feet from Route Centerline	Residences 76-150 feet from Route Centerline	Residences 151-300 feet from Route Centerline	Total Residences 0-300 feet from Proposed Route Centerline
Route Permit Application	0	0	5	5
DEIS	0	0	3	3
Revised House Count	0	0	4	4

TABLE 5: North Rochester to Northern Hills 161 kV Preferred Route

Source	Residences 0-40 feet	Residences 41-75 feet	Residences 41-100 feet	Residences 76-150 feet	Residences 151-300	Residences 101-300	Total Residences 0-300 feet
Route Permit Application	0	0	_____ ¹	14	40	_____	54
DEIS	0	_____	7	_____	_____	52	59
Revised House Count	0	4	_____	15	40	_____	59

¹ The Route Permit Application and the DEIS did not use the same distances for measuring house impacts. A dash is used to signify where there is no count for a particular category.

TABLE 6: North Rochester to Northern Hills 161 kV Alternate Route

Source	Residences 0-40 feet	Residences 41-75 feet	Residences 41-100 feet	Residences 76-150 feet	Residences 151-300	Residences 101-300	Total Residences 0-300 feet
Route Permit Application	0	0	_____	5	28	_____	33
DEIS	0	_____	1	_____	_____	27	28
Revised House Count	0	1	_____	5	29	_____	34

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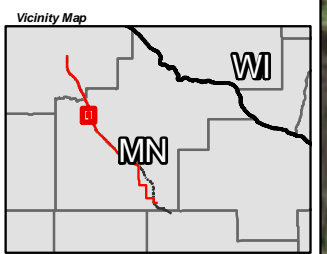
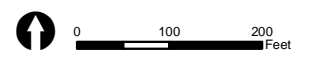
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Project Feature

- 5 Feet Offset Alignment
- 25 Feet Offset Alignment

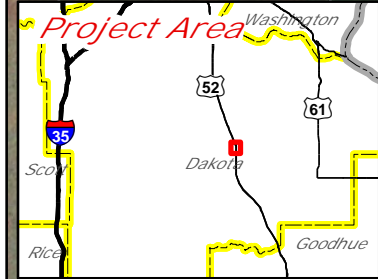
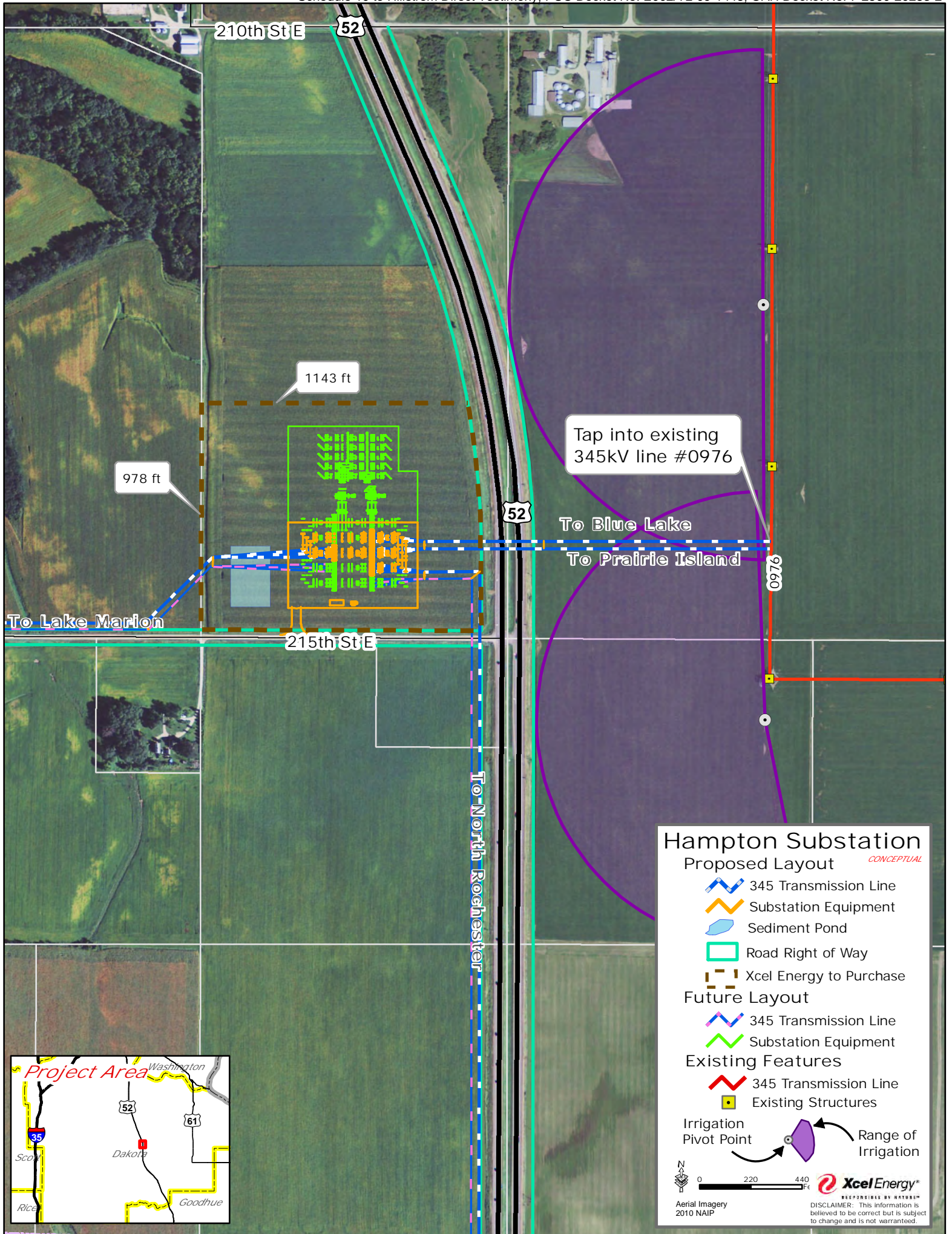
Transportation

- - - - MnDOT Hwy 52 ROW



Data Sources: MNDNR, BTS, LMC
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Aerial Photography Published by National Agriculture Imagery Program (NAIP), 2010



Hampton Substation

Proposed Layout *CONCEPTUAL*

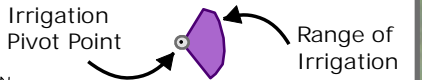
- 345 Transmission Line
- Substation Equipment
- Sediment Pond
- Road Right of Way
- Xcel Energy to Purchase

Future Layout

- 345 Transmission Line
- Substation Equipment

Existing Features

- 345 Transmission Line
- Existing Structures

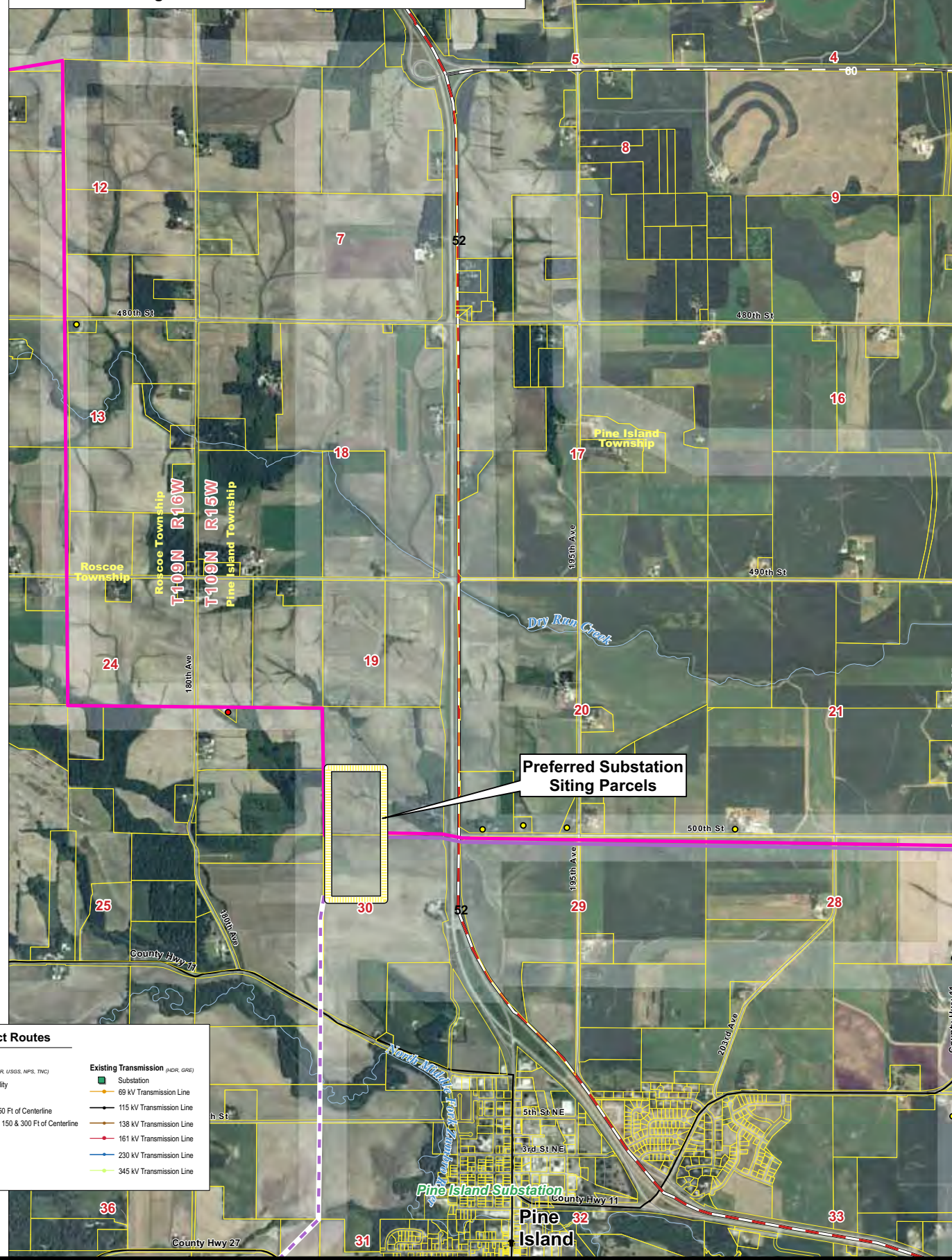
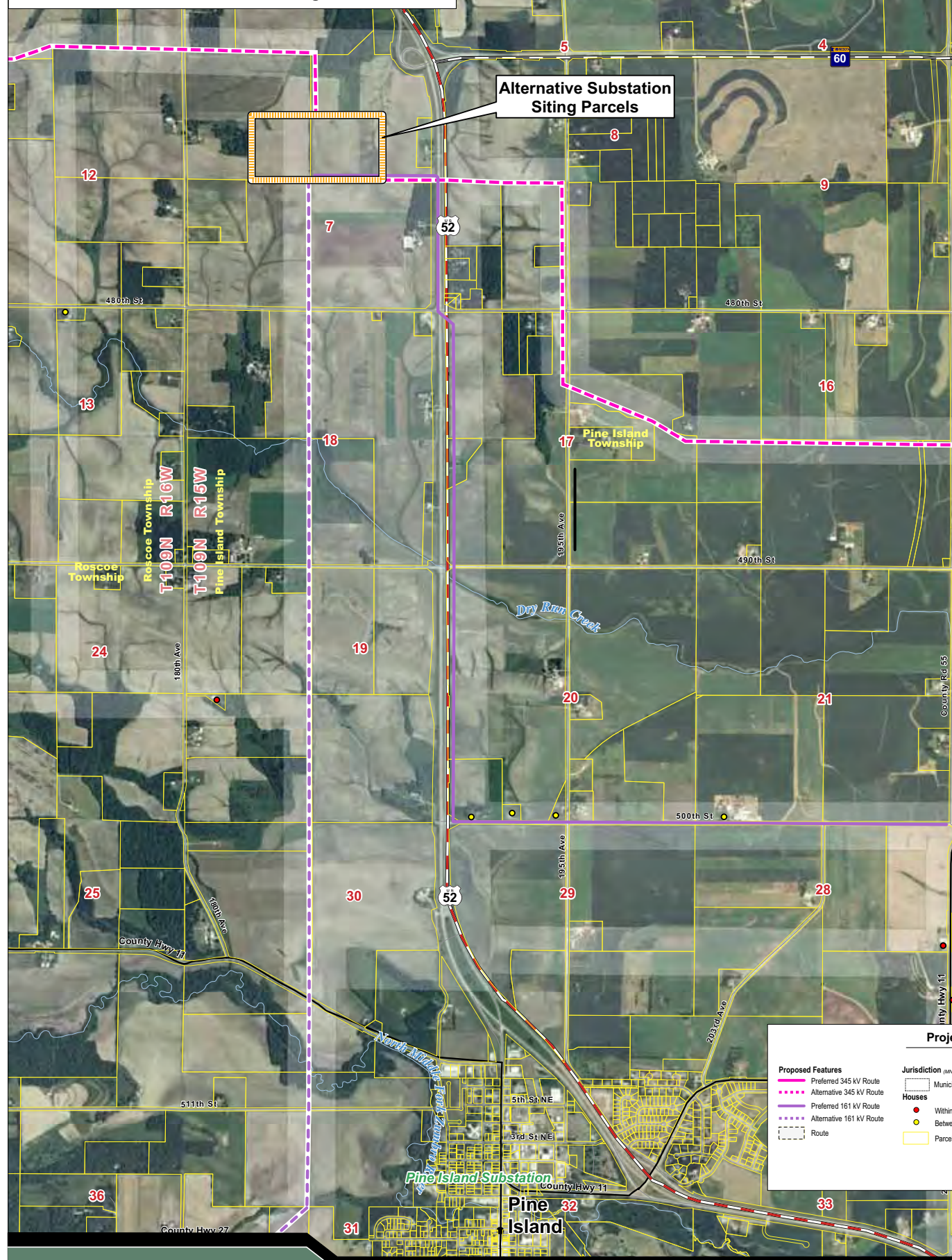


Aerial Imagery
2010 NAIP

DISCLAIMER: This information is believed to be correct but is subject to change and is not warranted.

ALTERNATIVE 345 kV ROUTE
Substation Location and Line Routes
For North Zumbro River Crossing 345 kV Route

MODIFIED PREFERRED 345 kV ROUTE
Substation Location and Line Routes
For White Bridge Road and Zumbro Dam 345 kV Routes



Project Routes		Existing Transmission	
	Preferred 345 kV Route		Substation
	Alternative 345 kV Route		69 kV Transmission Line
	Preferred 161 kV Route		115 kV Transmission Line
	Alternative 161 kV Route		138 kV Transmission Line
	Route		161 kV Transmission Line
	Route		230 kV Transmission Line
	Route		345 kV Transmission Line
	Municipality		Substation
	Houses		69 kV Transmission Line
	Within 150 Ft of Centerline		115 kV Transmission Line
	Between 150 & 300 Ft of Centerline		138 kV Transmission Line
	Parcel		161 kV Transmission Line
			230 kV Transmission Line
			345 kV Transmission Line

