**In the Matter of the Route Permit Application for a 345 kV and a 161 kV Transmission Line from Hampton, Minnesota to La Crosse, Wisconsin.**

**ENVIRONMENTAL IMPACT STATEMENT SCOPING DECISION DOCUMENT**
**PUC Docket No. E002/TL-09-1448**

The above matter has come before the Director of the Office of Energy Security (OES) for a decision on the Scope of the Environmental Impact Statement (EIS) to be prepared on the Northern States Power Company route permit application before the Minnesota Public Utilities Commission (Commission) for the proposed transmission lines between Hampton, Minnesota and La Crosse, Wisconsin, under the full permitting process (Minnesota Rules 7850.1700 to7850.2700). Northern States Power Company (Xcel or Applicant) has submitted the route permit application on behalf of itself and other regional utilities participating in the CapX2020 initiative (Dairyland Power Cooperative, Southern Minnesota Municipal Power Agency, Rochester Public Utilities and WPPI Energy.)

## PROJECT DESCRIPTION

The Applicant proposes to construct and operate a 345-kilovolt (kV) High Voltage Transmission Line (HVTL) between Hampton, Minnesota, and La Crosse, Wisconsin, and a 161 kV HVTL between a proposed substation to be located between Zumbrota and Pine Island, Minnesota, and an existing substation near Rochester, Minn. The Minnesota portion of the project involves up to 91 miles of 345 kV High Voltage Transmission Line (HVTL) and 15 miles of 161 kV HVTL located in Dakota, Goodhue, Olmsted, and Wabasha counties, Minnesota (Figure 1.) The proposed project would cross the Mississippi River into the State of Wisconsin at a location near Kellogg, Minnesota, and Alma, Wisconsin. The Project also includes construction of a new North Rochester substation, to be located between Zumbrota and Pine Island, Minnesota, and improvements to the existing Northern Hills substation, near Rochester.

The proposed structures for the 345 kV HVTL are double circuit-capable, single-pole, self-weathering steel structures. The height of these poles will range from 130 to 170 feet, with the spans between poles ranging from 700 to 1,000 feet. The typical right-of-way width for the 345 kV transmission line is 150 feet. The proposed structures for the 161 kV HVTL are single-pole, steel structures 70 to 105 feet in height, with spans between the poles ranging from 400 to 700 feet. The typical right-of-way width for the 161 kV line is 80 feet. The Applicant has requested a route width of 1000 feet (the lateral area within which a transmission line right-of-way could be permitted) for both the 345 kV and 161 kV lines, and has identified a proposed centerline for right-of-way placement In some locations, the applicant has requested route widths greater than 1,000 feet near existing or anticipated future developments. The 345kV HVTL will be designed to have a minimum ground clearance of 34 feet. The 161 kV HVTL will have a minimum ground clearance of 26 feet.

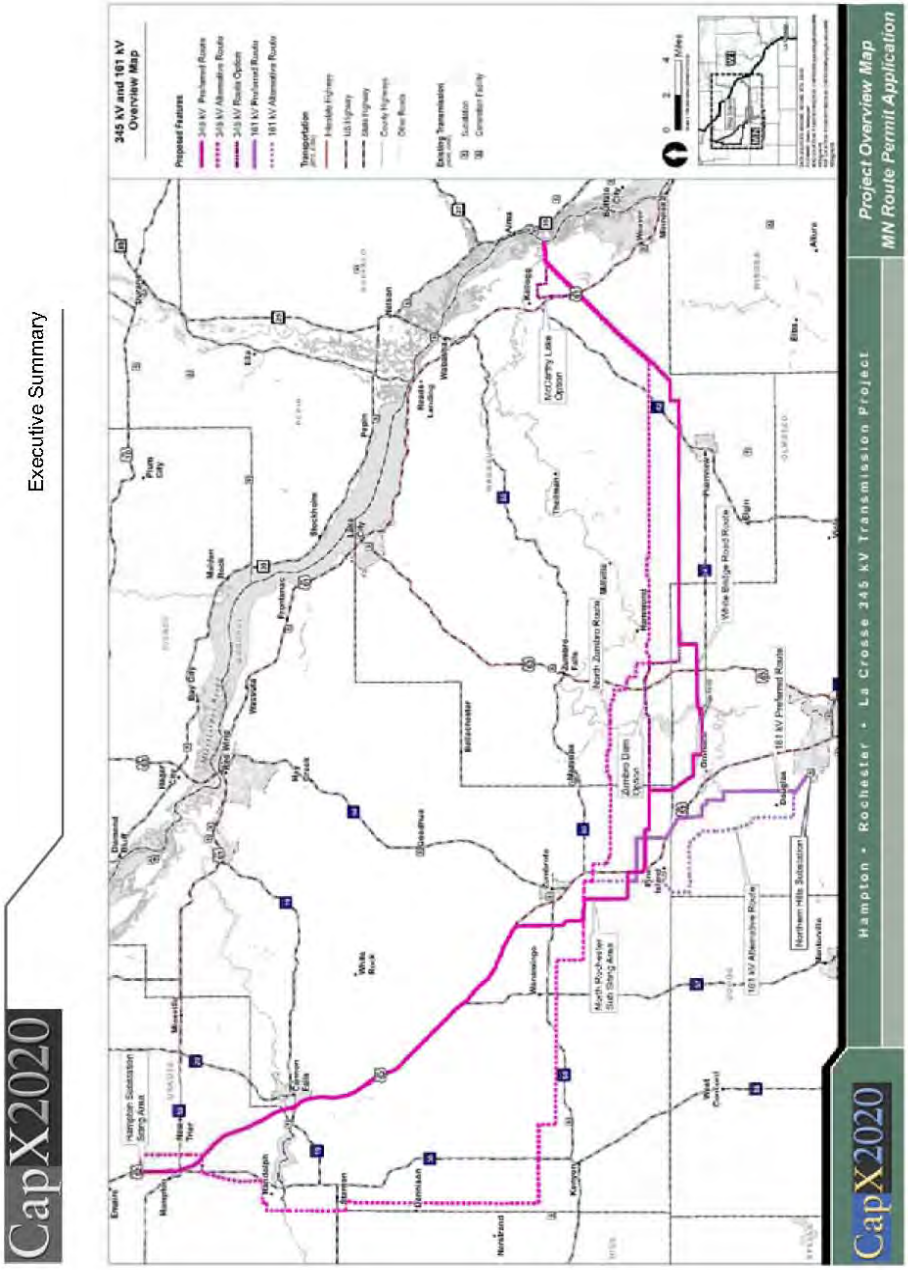



Figure ES-1: Project Overview Map

Hampton ▪ Rochester ▪ La Crosse 345 kV Transmission Project

The estimated cost of the Project for facilities to be located in Minnesota is between $229 and $253 million (2009 dollars), depending on the final route selected. Construction of the Project is expected to begin in the third quarter of 2011. The applicant anticipates the 345 kV HVTL will be completed and the line in-service by second quarter 2015, and the 161 kV HVTL in-service by fourth quarter 2012.

## PROJECT PURPOSE

As indicated by the Applicant in the route permit application, the project is designed to ensure continued reliable electric service to customers in the local Project area, to improve the reliability of the bulk electric system serving Minnesota and portions of neighboring states, and to facilitate generation development in southeastern Minnesota to meet each utility's Renewable Energy Standards.

Detailed information regarding the purpose and need for this transmission project is provided in the May 22, 2009, Order issued by the Commission granting Certificates of Need for the CapX 345 kV Transmission Projects, Docket No. ET-2, E-002, et al./CN-06-1115 (https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={54C51FAE-B774-4EED-A93C-CAF6ECC5EB52}&documentTitle=20095-37752-01)

## REGULATORY BACKGROUND

The Applicants filed a route permit application on January 19, 2010, under the full permitting process of the Power Plant Siting Act (Minnesota Statute 216E). The application was accepted as complete by the Commission on March 9, 2010. Under the full permitting process, the Commission has one year from the date the application was accepted as complete to make a decision on the route permit.

## SCOPING PROCESS

Route permit applications for high voltage transmission lines are subject to environmental review in accordance with Minnesota Rules 7850.1700 to 7850.2700. Scoping is the first step in the permitting process after application acceptance. The scoping process has two primary purposes: to ensure that the public has a chance to participate in determining what routes and issues to study in the EIS, and to help focus the EIS on the most important issues surrounding the route permit decision.

OES Energy Facility Permitting (EFP) staff collected and reviewed comments on the scope of the EIS by holding six Scoping Meetings and convening two advisory task forces. The EFP also accepted written comments from April 19, 2010, through May 20, 2010. This scope identifies potential human/environmental issues and project route and substation alternatives that will be addressed in the EIS. The scope also presents a tentative schedule of the environmental review process.

### *Advisory Task Forces*

In an Order dated March 16, 2010, the Commission authorized the establishment of two geographically-based advisory task forces that would each focus on approximately half the project area: the Hampton to Northern Hills Advisory Task Force (ATF) and the North Rochester to Mississippi River ATF. The ATFs were each charged with: (1) identifying local site or route specific impacts and issues of local concern, and (2) identifying alternative transmission line routes or substation locations in their respective area of concern that may maximize positive impacts and minimize or avoid negative impacts of the project. The task forces each met three times between April and June 2010. The recommendations of the ATFs have been considered during the preparation of this scope and can be found in their respective reports, dated June 30, 2010.

The ATF reports are available on the EFP website at http://energyfacilities.puc.state.mn.us/Docket.html?Id=25731.

Or, on the Commission's eDockets website at:

Hampton to Northern Hills ATF:
https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={02470B34-BB70-4B83-B653-1275D9A34E6E}&documentTitle=20108-53216-01

North Rochester to Mississippi River ATF:
https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={BC08107E-3960-4E50-B639-896297721919}&documentTitle=20108-53217-01

### *Public Scoping Meetings*

Six public information and scoping meetings were conducted by the EFP May 4 through May 6, 2010, at three different locations along the proposed project routes: Plainview, Pine Island and Cannon Falls, Minn. Approximately 350 people attended the six public meetings. The scoping meetings provided the public an opportunity to learn about the proposed project and the route permitting process, review the route permit application, and ask questions and submit comments. A court reporter was present at each of the public meetings and transcribed questions asked and comments made by the public as well as responses from the EFP and the Applicant.

### *Public Comments*

A public comment period beginning April 19, 2010, and ending on May 20, 2010, provided the public an additional opportunity to submit comments and alternative routes to be considered for the scope of the EIS. A total of 211 commenters provided comments by the close of the comment period, which includes written comments received via mail, email or facsimile and verbal comments submitted at the public scoping meetings.

All of the written and oral comments submitted at the scoping meetings along with comments received by mail, email, and facsimile were reviewed and entered into a database. Each comment was evaluated for issues or concerns that should be considered for detailed evaluation in the EIS and were classified based on the major topics of the comments. Table 1 below summarizes the major issues raised in these comments, as well as the relative frequency the issue was raised.

Table 1. Major Issues Raised During Public Scoping Period

| Issue | Number of Times Issue Mentioned | Percentage of All Commenters who Raised the Issue |
|---|---|---|
| Airport | 10 | 5% |
| Archaeological | 6 | 3% |
| Effects on Local Development | 9 | 4% |
| EMF | 40 | 19% |
| GPS (including Aircraft and Agricultural Navigation) | 7 | 3% |
| Implantable Medical Devices | 8 | 4% |
| Land Based Economics | 50 | 24% |
| Noise | 12 | 6% |
| Process | 40 | 19% |
| Property Value | 67 | 32% |
| Proximity to Homes/Structures | 66 | 31% |
| Rare or Unique Natural Resources | 28 | 13% |
| Recreation | 33 | 16% |
| Soils (erosion, sinkholes, karst, gravel) | 29 | 14% |
| Stray Voltage | 12 | 6% |
| Tree Groves/Wind Breaks | 36 | 17% |
| TV, Radio, Cell Phone, Internet | 11 | 5% |
| Visual and Aesthetic Impacts | 42 | 20% |
| Water Resources (Including Wetlands) | 25 | 12% |
| Water Well Installation | 3 | 1% |
| Wildlife (Including Birds) | 41 | 19% |
| Other* | 39 | 18% |

*Other included issues related to data in route permit application, general opposition to the project, project need, and easement negotiation process, among others.

The public suggested 66 alternatives to the applicants' proposed routes through comment. The 66 alternatives were divided into those that fell within the applicants' requested route width and those that fell outside the requested route width. Twelve of these alternatives fell within the requested route width and were categorized as alignment alternatives (an "alignment alternative" in this case means a suggested change in the applicants' proposed transmission centerline, such as a shift from one side of a roadway to the other, but where the line would still be located within

the original route width) and 54 alternatives fell outside the requested route width and were categorized as route alternatives. Alternative routes recommended by the ATFs are included in the 66 alternatives.

The task force meeting reports and scoping meeting comment reports, as well as each individual comment (letter or email), are available on the project website maintained by the Commission at: http://energyfacilities.puc.state.mn.us/Docket.html?Id=25731.

Or, on the Commission's eDockets website at:
https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={02470B34-BB70-4B83-B653-1275D9A34E6E}&documentTitle=20108-53276-01

## MATTERS TO BE ADDRESSED

Having reviewed the matter, consulted with OES Energy Facility Permitting staff, and in accordance with Minnesota Rule 7850.2500, I hereby make the following Scoping Decision.

The Applicant's route permit application describes their route analysis and contains the information required by Minnesota Rule 7850.1900, subp. 2, as determined by the Commission. The EIS will summarize the process the Applicants used to identify, evaluate, and select the routes. The EIS will also verify and supplement information provided in the route permit application and will incorporate the information by reference as appropriate.

The EIS on the proposed Hampton to Rochester to La Crosse 345 kV and 161 kV transmission line project will address and provide information on the following matters:

**I. INTRODUCTION**

A. Project Description
B. Purpose of the Transmission Line
C. Project Location
D. Route Description
E. Route Width
F. Rights-of-Way
G. Project Cost

**II. REGULATORY FRAMEWORK**

A. Certificate of Need
B. Route Permit
C. Environmental Review Process

**III. ENGINEERING AND OPERATION DESIGN**

A. Transmission Line Conductors
B. Transmission Line Structures
C. Substations

## IV. CONSTRUCTION

A. Transmission Line and Structures
B. Substations
C. Property/Right-of-Way Acquisition
D. Cleanup and Restoration
E. Damage Compensation
F. Maintenance
G. Underground Options

## V. AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATIVE MEASURES

The EIS will include a discussion of the human and environmental resources potentially impacted by the project and its alternatives. Potential impacts, both positive and negative, of the proposed project and each alternative considered will be described. Based on the impacts identified, the EIS will describe mitigative measures that could reasonably be implemented to reduce or eliminate the identified impacts.

A. Environmental Setting
B. Socioeconomic Setting
C. Human Settlement
    1. Noise
    2. Aesthetics
    3. Proximity to Structures
        a. Homes and Farmsteads (including farming related structures)
        b. Businesses
        c. Schools/Daycares
        d. Hospitals
        e. Cemeteries
    4. Displacement
    5. Tree Groves/Windbreaks
    6. Existing Utilities (pipelines, propane tanks, septic systems)
    7. Domestic Water Well Installation/Maintenance
D. Public Health and Safety
    1. Electric and Magnetic Fields
    2. Implantable Medical Devices
    3. Stray Voltage
E. Recreation
    1. Parks (city, county, state, and federal)
    2. Golf Courses
    3. Downhill Ski Areas
    4. Trails

F. Transportation and Public Services
    1. Emergency Services
    2. Airports
    3. Highways and Roads (including scenic highways/byways and rest stops)
G. Interference
    1. Radio and Television (digital and satellite)
    2. Internet
    3. Cellular Phone
    4. GPS-Based Agriculture Navigation Systems
H. Archaeological and Historic Resources
I. Zoning and Compatibility/Federal, State and Local Government Planning
J. Land-Based Economies
    1. Agriculture
        a. Prime Farmland
        b. Organic Farms
        c. Livestock
        d. Aerial Crop Spraying/Dusting
    2. Forestry
    3. Mining
K. Property Values
    1. Residential
    2. Industrial
    3. Agriculture
L. Air Quality (As it pertains specifically to this transmission line)
M. Natural Resources
    1. Surface Water
        a. Lakes
        b. Surface Flows
    2. Groundwater
    3. Wetlands
    4. Floodplains
    5. Geology and Soils
        a. Karst Topography
        b. Sinkholes
    6. State Wildlife Management Areas
    7. Scientific and Natural Areas
    8. National Wildlife Refuge
    9. Waterfowl Production Areas
    10. Forests
N. Flora
O. Fauna
P. Rare and Unique Natural Resources/Critical Habitat

## VI. ALTERNATIVE ROUTES TO BE EVALUATED IN EIS

The EIS will identify and evaluate alternative routes and route segments to the proposed project. Forty-six of the 54 alternative routes suggested through public comment, including routes developed by the ATFs, will be evaluated in the EIS and are presented below and illustrated in Figures 2 through 11. Just as the applicant has provided a proposed alignment and 1000-foot route width in their permit application, these route alternatives are depicted on the maps as the proposed alignment, and would carry a 1000-foot route width. The first number in the name of each route identifies which geographic region the alternative was proposed in [(1) 345 kV line from Hampton to the North Rochester Substation, (2) 161 kV from North Rochester Substation, and the (3) 345 kV line from the North Rochester Substation to the Minnesota terminus of the project.] The subsequent letter in the name refers to whether the route is an alternative to the applicant's preferred (P), alternative (A), or both (B) routes. Some alternatives combine the 345 kV and 161 kV routes. These are identified with a letter "C."

***Route Alternatives on Figure 2***

**1A-001** – From the applicant's 345 kV alternate route in southwest Holden township in Goodhue County, Go South on 50th Ave for 0.5 mile, turn east and go cross-country 1 mile, then meet up with existing transmission line and continue east on MNTH 60 for 3 miles, where transmission line turns north. Continue going east on MNTH 60 for 3.3 miles, then turn north and follow MNTH 57 for about .5 miles returning to the applicant's 345 kV alternate route.

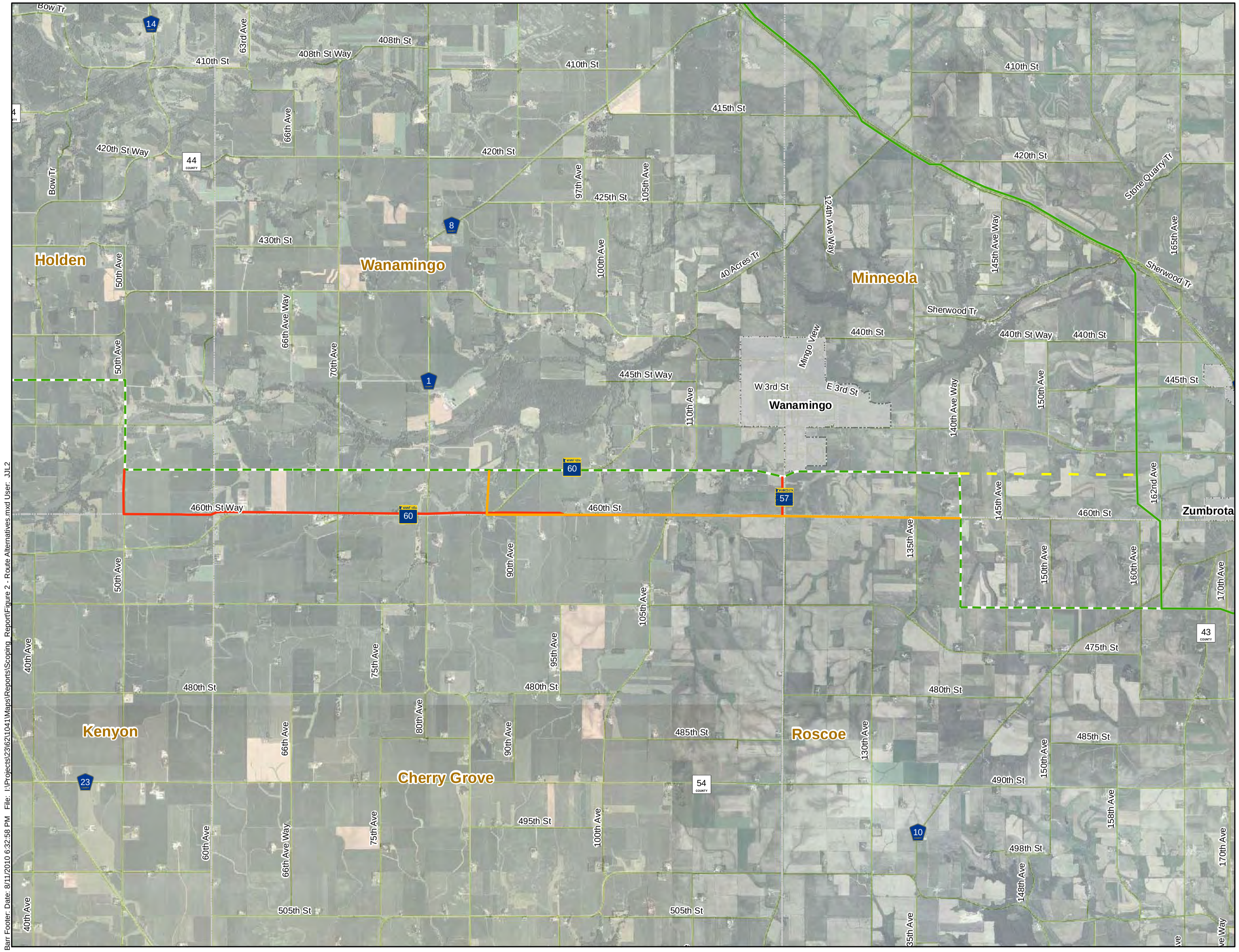
**1A-004** – From the applicant's 345 kV alternate route, 0.5 miles north of the intersection of MN 60 and 460th sty in Goodhue County. Go south cross-country for 0.5 miles following existing line. At intersection of MN 60 and 460th street, turn east away from existing line, and follow 460th street for 3.3 miles. Cross MN 57, and go east on 460th street for 2 miles returning to applicant's 345 kV alternate route.

**1B-003** – From the applicant's 345 kV alternate route, 0.5 miles north of the intersection of 160th Ave and 460th sty in Wabasha County. Go east cross-country for 1.5 miles, crossing 145th Ave and continue east cross-country for 0.5 miles connecting to the applicant's 345 kV preferred route.

***Route Alternatives on Figure 3***

**1B-001** – From the applicant's 345 kV alternate route, 0.5 miles west of the intersection of US 52 and US 60. Go east cross-country for 0.5 miles to meet up with US 52. Follow US 52 south for 2.3 miles connecting to the applicant's 345 kV preferred route.

**1P-004** – From the applicant's 345 kV preferred route, at US 52 in Minneola township in Goodhue County, 0.5 miles east of where US 52 and 145th Ave Way intersect. Travel south cross-country for 0.7 miles. Turn east and go cross-country for 1 mile returning to the applicant's 345 kV preferred route.




## Applicant's 345 kV

- Preferred/Both
- Alternative
- Dam Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Route Alternatives

- 1A-001
- 1A-004
- 1B-003
- Townships
- Municipality

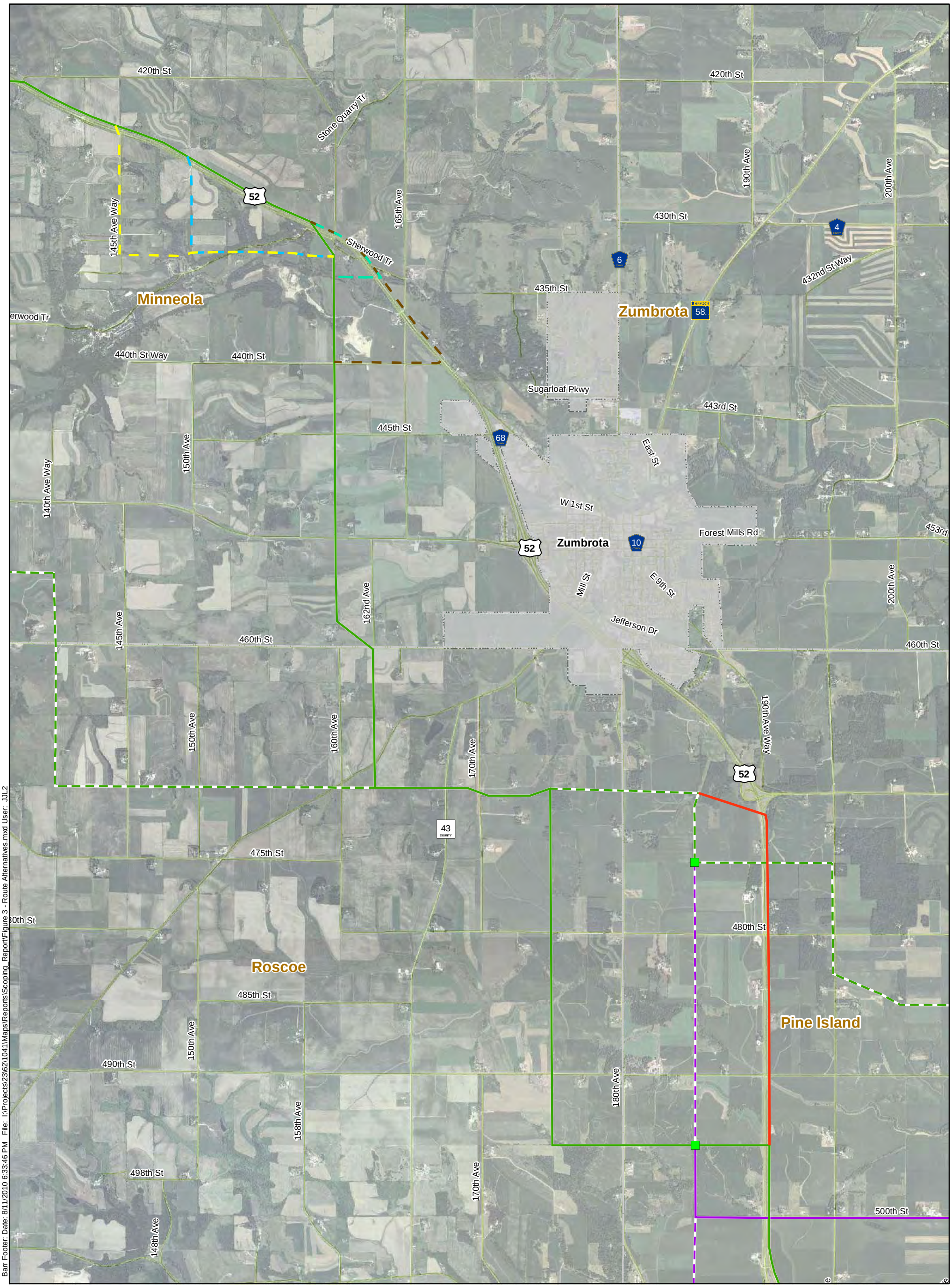
N

0 0.5 1 2 Miles

Figure 2

Route Alternatives Map 1 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:32:58 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 2 - Route Alternatives.mxd User: JJL2




Barr Footer: Date: 8/11/2010 6:33:46 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 3 - Route Alternatives.mxd User: JJL2

**Applicant's 345 kV**

- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**

- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**Route Alternatives**

- 1B-001
- 1P-004
- 1P-005
- 1P-006
- 1P-007

N

0 0.25 0.5 1 Miles

Figure 3

Route Alternatives Map 2 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

***Route Alternatives on Figure 3 (cont.)***

**1P-005** – From the applicant's 345 kV preferred route, at the intersection of US 52 and 145th Ave Way. Go south 0.9 miles along 145th Ave Way. Turn east and go cross-country for 1.5 miles returning to the applicant's 345 kV preferred route.

**1P-006** – From the applicant's 345 kV preferred route at US 52 0.2 miles west of the intersection of US 52 and CSAH 7. Follow US 52 going southeast for 0.6 miles. Turn west and go cross-country for 0.35 miles returning to the applicant's 345 kV preferred route.

**1P-007** – From the applicant's 345 kV preferred route at US 52 0.2 miles west of the intersection of US 52 and CSAH 7. Follow US 52 going southeast for 1.4 miles. Turn west and follow 440th street for .75 miles returning to the applicant's 345 kV preferred route.

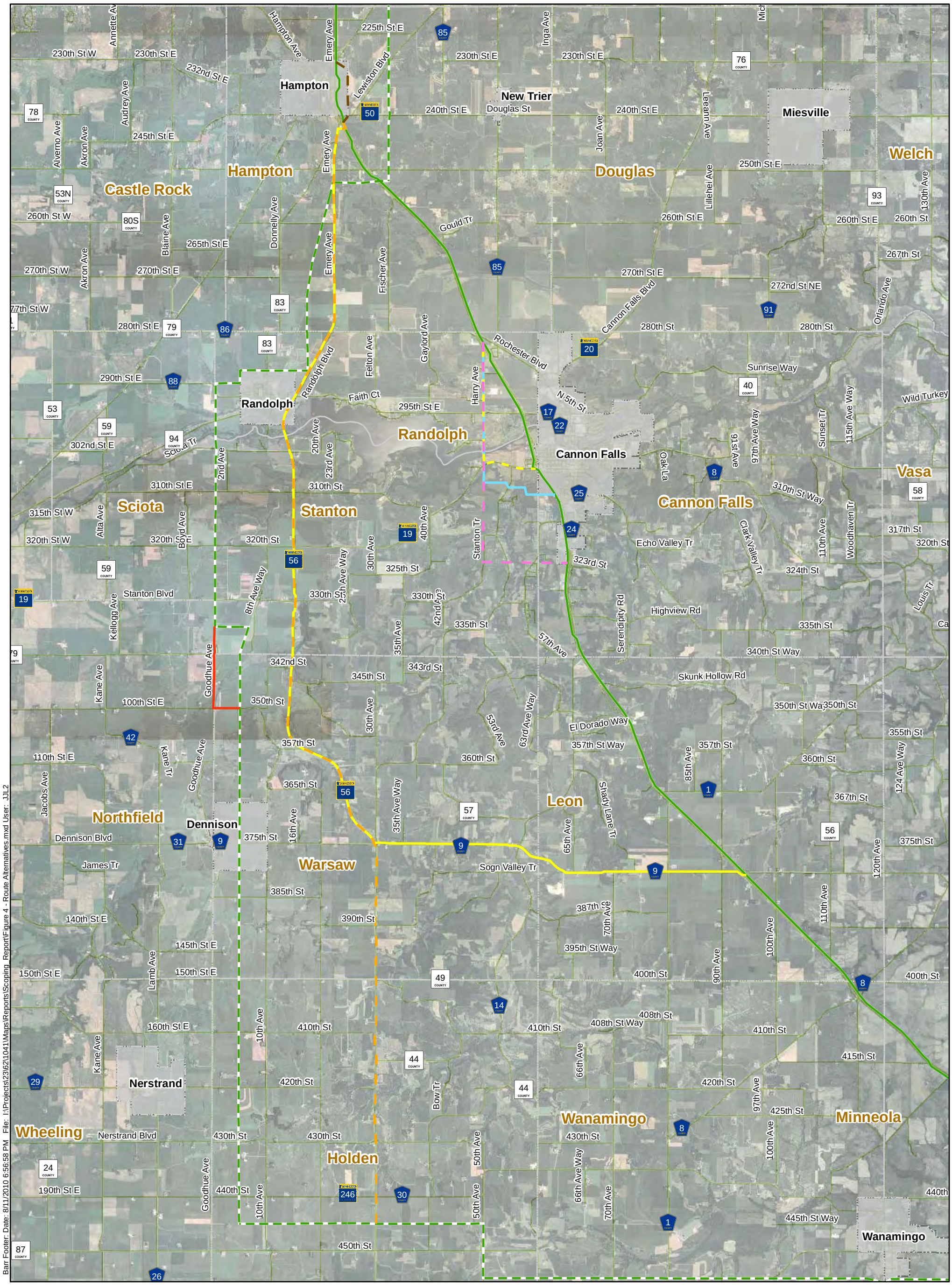
***Route Alternatives on Figure 4***

**1A-003** – From the applicant's 345 kV alternate route at the Goodhue and Rice County boundary, go south along Goodhue Ave for 1 mile, go east on 350th sty. 0.5 miles returning to the applicant's 345 kV alternate route.

**1B-005** - From the applicant's 345 kV preferred route at the intersection of Emery Ave and Rochester Blvd, just south of the town of Hampton, go south along Rochester Blvd for 0.1 miles then turn west and go cross-country for 0.1 miles and hit Emery Ave. At Emery Ave, turn south and follow along Emery for 3.6 miles. The road curves SW and name changes to Randolph Blvd. Follow Randolph Blvd for 2.1 miles. Keep following along the road and cross into Goodhue County, where Randolph Blvd changes into MN 56. Keep following MN 56 south, then SE, then south again for 15.4 miles connecting to the applicant's 345 kV alternate route.

**1P-001** - From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave, go south along Harry Ave for 1.9 miles until Harry Ave ends. Continue going south cross-country for 0.75 miles into Goodhue County. Turn east and go cross-country for 0.4 miles, then turn SSE and go cross-country for 0.1 miles, then east and go cross-country for 0.3 miles. Turn SSE and go cross-country for 0.1 miles, then turn east and go cross-country for 0.55 miles returning to the applicant's 345 kV preferred route.

**1P-002** – From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave. Go south on Harry Ave for 1.9 miles parallel with existing line until Harry Ave ends. Cross the Cannon River, still following existing line, and continue south cross-country about 0.3 miles until MN 19. Turn east and follow MN 19 for 1 mile, parallel to existing line returning to the applicant's 345 kV preferred route.




**Applicant's 345 kV**

- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**

- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**Route Alternatives**

- 1A-003
- 1B-005
- 1P-001
- 1P-002
- 1P-003
- 1P-008
- 1P-009

N

0 1 2 4 Miles

Figure 4

Route Alternatives Map 3 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

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***Route Alternatives on Figure 4 (cont.)***

**1P-003** – From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave. Go south on Harry Ave for 1.9 miles parallel with existing line until Harry Ave ends. Cross the Cannon River, still following existing line, and continue south cross-country about 0.3 miles until MN 19. Cross MN 19, and continue south cross-country for 1.3 miles, joining up with Stanton Trail. Continue south along Stanton Trail for 0.5 miles. Turn east and go cross-country for 1.55 miles returning to the applicant's 345 kV preferred route.

**1P-008** – From the applicant's 345 kV preferred route at the intersection of Emery Ave and Rochester Blvd just south of the town of Hampton, go NE cross-country for .17 miles, until you hit 240th sty E. Then, turn north and go cross-country for .85 miles, running along the eastern municipal boundary of the town of Hampton. Turn NW and go cross-country for .25 miles returning to the applicant's 345 kV preferred route.

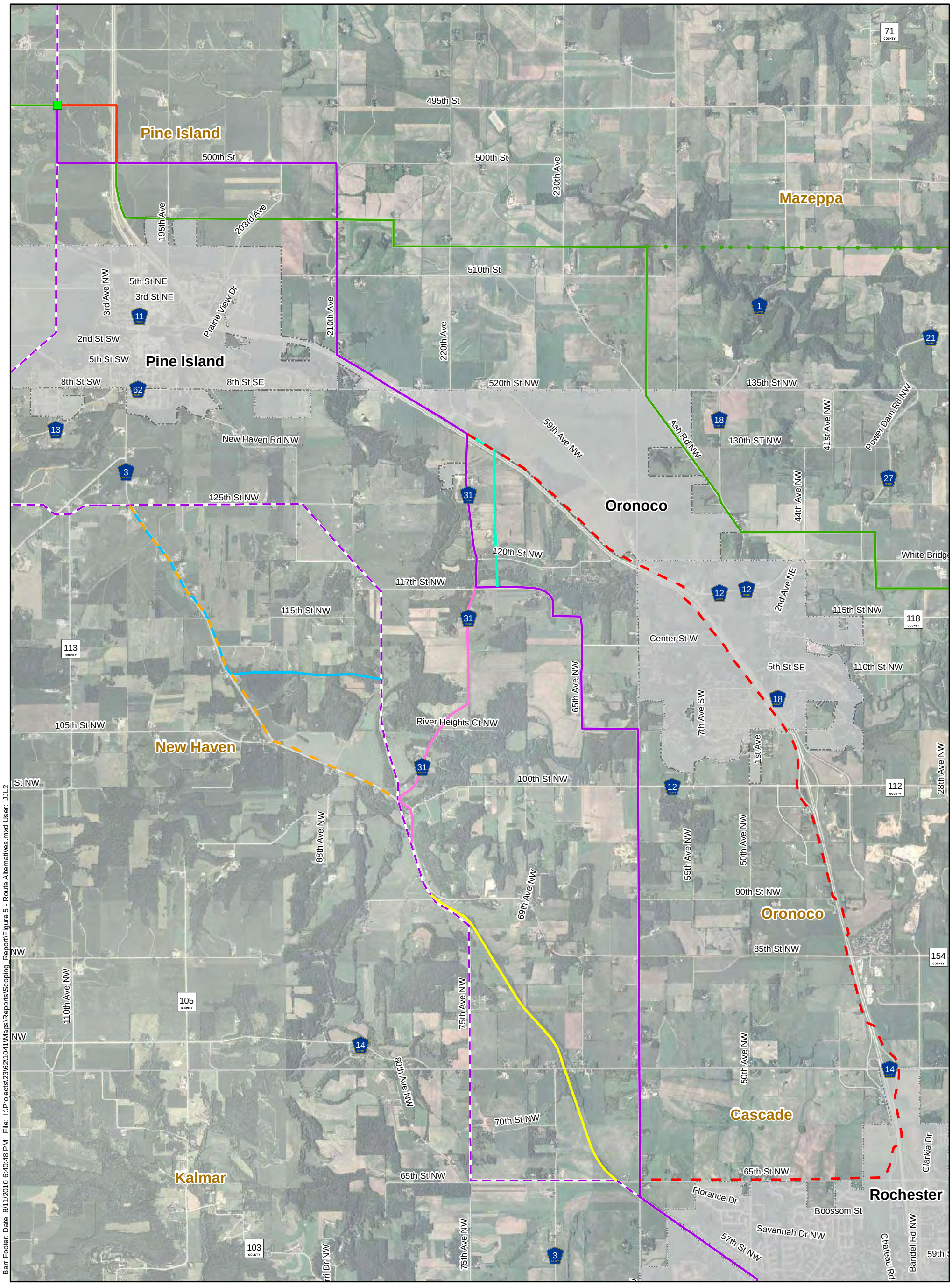
**1P-009** – From the applicant's 345 kV preferred route at the intersection Emery Ave and Rochester Blvd, just south of the town of Hampton, go south along Rochester Blvd for 0.1 miles, then turn west and go cross-country for 0.1 miles and hit Emery Ave. At Emery Ave, turn south and follow along Emery for 3.6 miles. The road curves SW and name changes to Randolph Blvd. Follow Randolph Blvd. for 2.1 miles. Keep following along the road and cross into Goodhue County, where Randolph Blvd. changes into MN 56. Keep following MN 56 south and then SE for 8.4 miles to meet up with CSAH 9. Follow CSAH 9 east for about 7 miles returning to the applicant's 345 kV preferred route.

***Route Alternatives on Figure 5***

**2A-001** – From the applicant's 161 kV alternate route, just north of the intersection of 90th sty NW and 75th Ave NW in Olmsted County. Go SE and follow along 75th Ave NW for about .37 miles. When road turns south, Continue going SE along the Douglas Trail for 2.7 miles returning to the applicant's 161 kV alternate route at 65th sty NW.

**2A-002** – From the applicant's 161 kV alternate route at the intersection of 125th sty NW and CSAH 3 in Olmsted County, follow CSAH 3 SE for 1.75 miles. Turn east and go cross-country for 1.3 miles returning to the applicant's 161 kV alternate route.

**2A-003** – From the applicant's 161 kV alternate route at the intersection of 125th sty NW and CSAH 3 in Olmsted County, follow along CSAH 3 SE for 3.7 miles returning to the applicant's 161 kV alternate route.




**Applicant's 345 kV**

- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**

- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**Route Alternatives**

- 2A-001
- 2A-002
- 2A-003
- 2B-001
- 2P-001
- 2P-002
- 2C3-008

N

0 0.5 1 2 Miles

Figure 5

Route Alternatives Map 4 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:40:48 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 5 - Route Alternatives.mxd User: JJL2

***Route Alternatives on Figure 5 (cont.)***

**2B-001** – From the applicant's 161 kV preferred route at the intersection of 117th sty NW and CSAH 31, follow CSAH 31 SSW for 0.2 miles, continue following CSAH 31 as it curves and goes south for 0.8 miles, then SW for 1.1 miles until it meets up with CSAH 3. Turn southeast and follow CSAH 3 for 0.15 miles. Then turn south on CSAH 3 and go about 0.3 miles connecting to the applicant's 161 kV alternate route.

**2C3-008** – From the southern proposed north Rochester substation combine the preferred 345 and 161 kV lines so that the 161 kV line follows the applicant's proposed 345 kV preferred route.

**2P-001** - From the applicant's 161 kV preferred route at the intersection of US 52 and CSAH 31, follow US 52 southeast for 0.3 miles. Turn south and go cross-country for 1.2 miles returning to the applicant's 161 kV preferred route at 117th St NW.

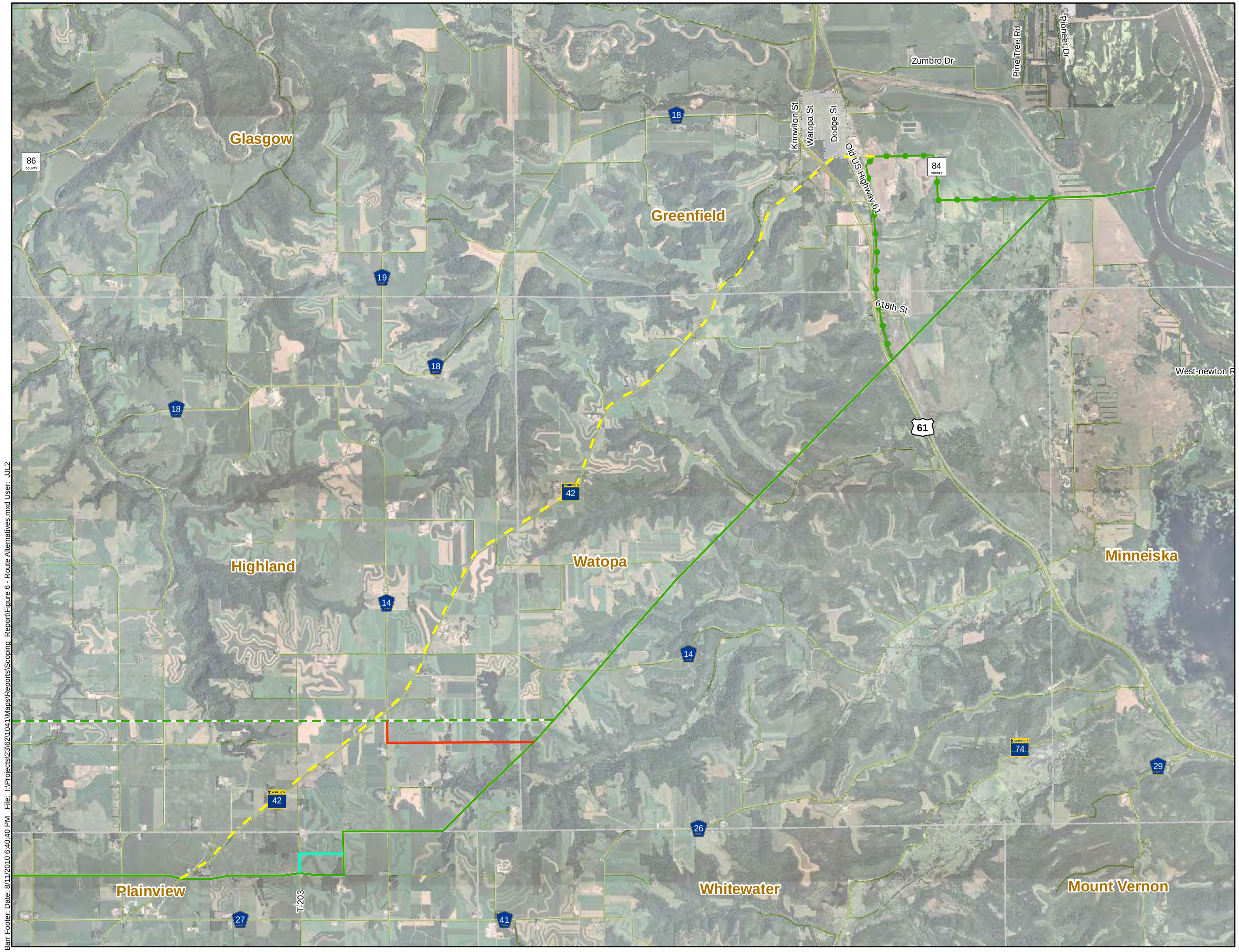
**2P-002** – From the applicant's 161 kV preferred route at the intersection of US 52 and CSAH 31 in Goodhue County. Follow US 52 southwest along the highway for 9 miles. Turn west at 65th sty NW, and go west on 65th for 1.5 miles returning to the applicant's 161 kV preferred route.

***Route Alternatives on Figure 6***

**3A-001** – From the applicant's 345 kV alternate route, 0.1 miles south of the intersection of MN 42 and CSAH 14 in Highland township in Wabasha county. Go south along CSAH 14 for 0.25 miles. Turn east and go cross-country for 1.6 miles connecting to the applicant's 345 kV preferred route.

**3B-003** – From the applicant's 345 kV preferred route, 0.45 miles north of CSAH 27, and 0.65 miles east of CSAH 4. Run NE along MN 42 for 11.1 miles. Cross US 61, and continue going NE along CSAH 18 for 0.15 miles. Then turn east and go cross-country for 0.2 miles, and continue going east along CR 84 for .35 miles connecting to the applicant's 345 kV "Option."

**3P-004** – From the applicant's 345 kV preferred route on road T-203 in Plainview township in Wabasha County. Go north along road T-203 for .25 miles. Turn east and go cross-country for 0.5 miles returning to the applicant's 345 kV preferred route.




## Applicant's 345 kV

- Preferred/Both
- Alternative
- Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Route Alternative

- 3A-001
- 3B-003
- 3P-004
- Townships
- Municipality

N

0 0.5 1 2 Miles

Figure 6

Route Alternatives Map 5 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:40:40 PM File: I:\Projects\23\62\10\41\Maps\Reports\Scoping_Report\Figure 6 - Route Alternatives.mxd User: JJL2

***Route Alternatives on Figure 7***

**3A-003** – From the applicant's 345 kV alternate route 1 mile east of the intersection of CSAH 7 and US 63 in Wabasha County. Go south cross-country for 0.7 miles connecting to the applicant's 345 kV "Dam Option."

**3A-004** – From the applicant's 345 kV alternate route 0.75 miles east of the intersection of CSAH 7 and US 63 in Wabasha County. Go south cross-country for 0.6 miles connecting to the applicant's 345 kV "Dam Option."

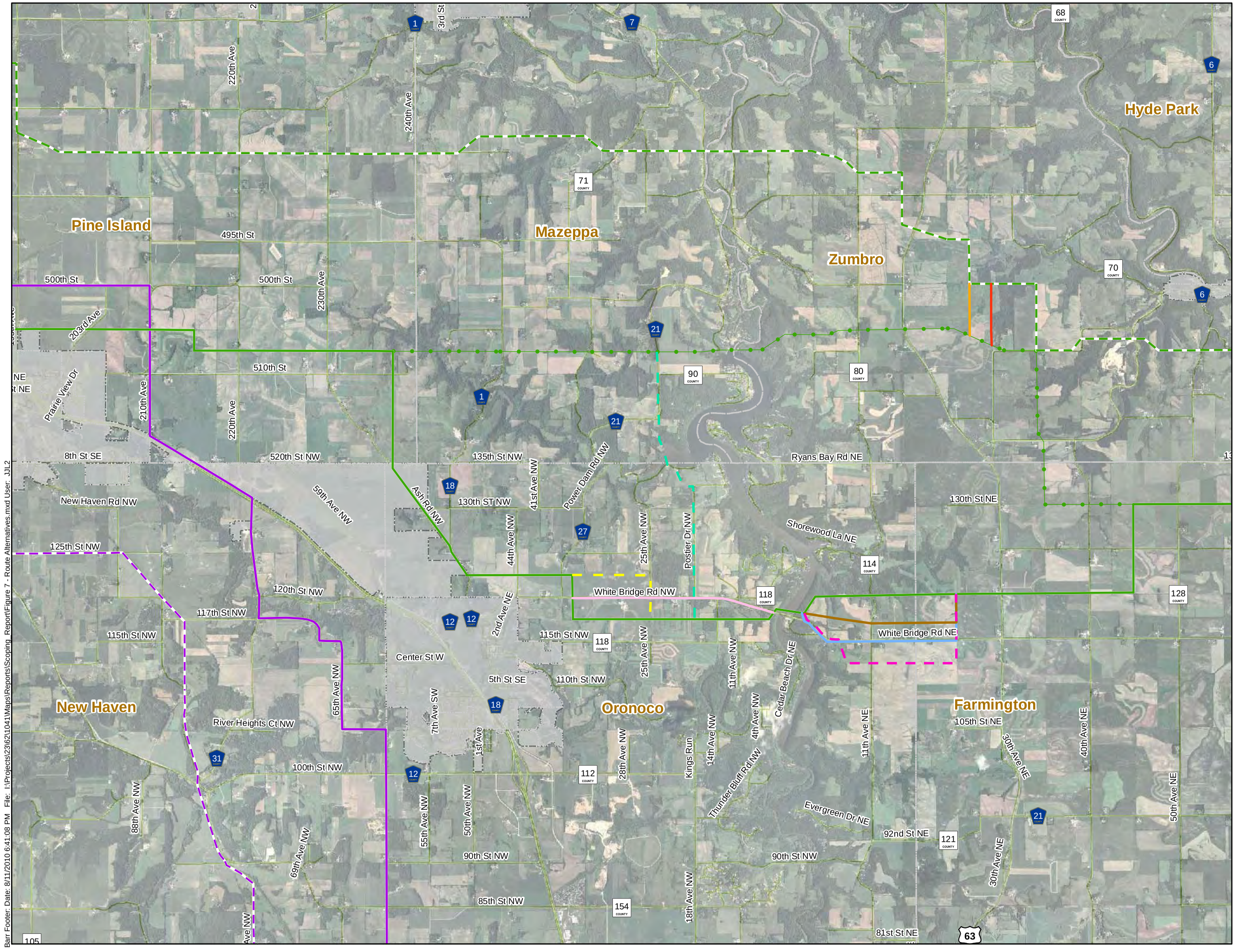
**3P-005** – From the applicant's 345 kV preferred route, 0.1 miles east of Power Dam Rd and 0.25 miles north of White Bridge Rd NW. Go east cross-country for 0.9 miles. Turn south on 25th aver NW, and follow 25th for 0.25 miles. Cross White Bridge Rd NW, and continue going south cross-country for 0.25 miles returning to the applicant's 345 kV preferred route.

**3P-006** – From the applicant's 345 kV preferred route, 0.1 miles north of White Bridge Rd NE and 0.1 miles east of the Zumbro River. Go SSE for 0.1 miles, to meet up with White Bridge Rd NE. Follow White Bridge Rd east for 1.8 miles, then turn north and go cross-country for 0.5 miles returning to the applicant's 345 kV preferred route.

**3P-007** – From the applicant's 345 kV preferred route, 0.11 miles east of the Zumbro River and 0.08 miles north of White Bridge Rd NE, just at the edge of the woods in Cronoco Township in Olmsted County. Go SSE for 0.1 miles until you reach White Bridge Rd NE. Follow SE along White Bridge Road NE for 0.45 miles. Turn SSE and go cross-country for .25 miles, then turn east and go cross-country for .25 miles. Cross 11th aver NE and continue going east cross-country for 1 mile. Turn north and go cross country for 0.25 miles, cross White Bridge Rd, and continue going north cross-country for 0.5 miles returning to the applicant's 345 kV preferred route.

**3P-009** – From the applicant's 345 kV "Dam Option" at CSAH 21 in Wabasha County, 0.25 miles north of the intersection of CSAH 21 and CR 90. Go south on CSAH 21 for .75 miles, then south cross-country for 0.25 miles. Turn SSE and go cross-country 0.3 miles until you meet up with 25th aver NW. Turn east and follow 25th aver for 0.15 miles. Then turn SSE and go cross-country for 0.2 miles. Then, turn east and go cross-country 0.15 miles. Turn south on Postier Dr NW, and go south along Postier for 1.25 miles. Cross White Bridge Rd NW, and continue going south cross-country for 0.25 miles connecting to the applicant's 345 kV preferred route.

**3P-010** – From the applicant's 345 kV preferred route at White Bridge Rd. Go east and then east-southeast along White Bridge for 2.3 miles returning to the applicant's 345 kV preferred route.




## Applicant's 345 kV

- Preferred/Both
- Alternative
- Dam Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Route Alternatives

- 3A-003
- 3A-004
- 3P-005
- 3P-006
- 3P-007
- 3P-009
- 3P-010
- 3P-011
- Townships
- Municipality

N

0 0.5 1 2 Miles

Figure 7

Route Alternatives Map 6 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:41:08 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 7 - Route Alternatives.mxd User: JJL2

***Route Alternatives on Figure 7 (cont.)***

**3P-011** – From the applicant's 345 kV preferred route, 0.11 miles east of the Zumbro River and 0.08 miles north of White Bridge Rd NE, just at the edge of the woods in Cronoco township in Olmsted County. Go east-southeast cross-country for 1.7 miles. Turn north and go cross-country 0.3 miles returning to the applicant's 345 kV preferred route.

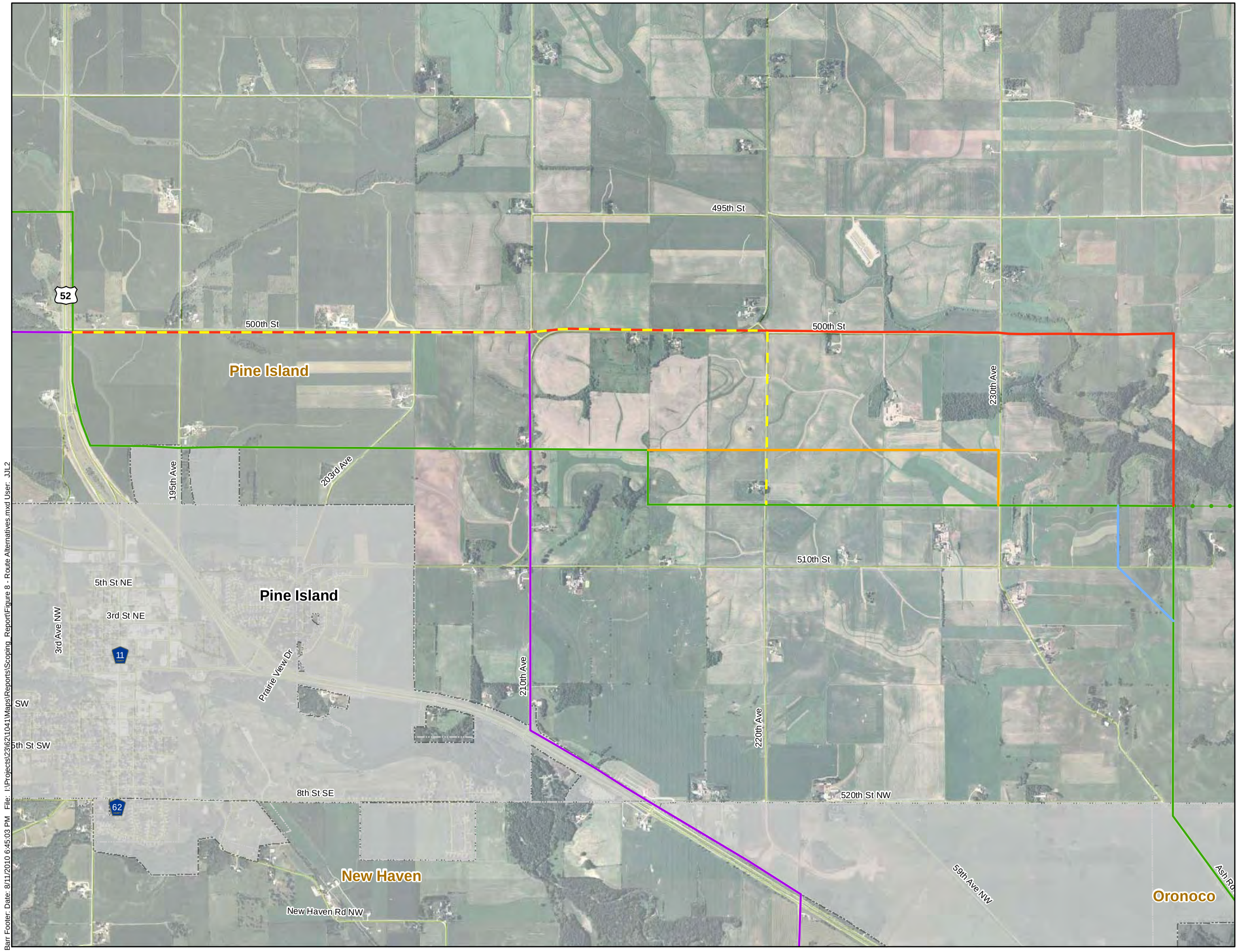
***Route Alternatives on Figure 8***

**3P-001** – From the applicant's 345 kV preferred route at the intersection of US 52 and 500th sty in Pine Island Township in Goodhue County. Go east along 500th sty for 2 miles. 500th street turns into CSAH 11. Go east along CSAH 11 for 1 mile, until CSAH 11 turns back into 500th sty. Continue east along 500th sty for 1 mile, then east cross-country for 0.75 miles. Turn south and go cross-country for 0.75 miles returning to the applicant's 345 kV preferred route.

**3P-002** – From the applicant's 345 kV preferred route in Pine Island township in Goodhue County, 0.5 miles west of 220th aver and 0.5 miles north 510th sty. Go east cross-country for 1.5 miles. Turn south on 230th aver and go 0.25 miles returning to the applicant's 345 kV preferred route.

**3P-003** – From the applicant's 345 kV preferred route at the intersection of US 52 and 500th sty in Pine Island township in Goodhue Count. Go east on 500th sty for 3 miles. Turn south on 220th aver and go for 0.75 miles returning to the applicant's 345 kV preferred route.

**3P-008** – From the applicant's 345 kV preferred route, 0.5 miles east of 230th aver and 0.25 miles north of 510th sty in Pine Island township in Goodhue County. Go straight south cross-country for 0.25 miles, cross 510th street, and go SE cross-country for 0.33 miles returning to the applicant's 345 kV preferred route.




## Applicant's 345 kV

- Preferred/Both
- Alternative
- Dam Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Route Alternatives

- 3P-001
- 3P-002
- 3P-003
- 3P-008
- Townships
- Municipality

N

0 0.25 0.5 Miles

Figure 8

Route Alternatives Map 7 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:45:03 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 8 - Route Alternatives.mxd User: JJL2

***Route Alternatives on Figure 9***

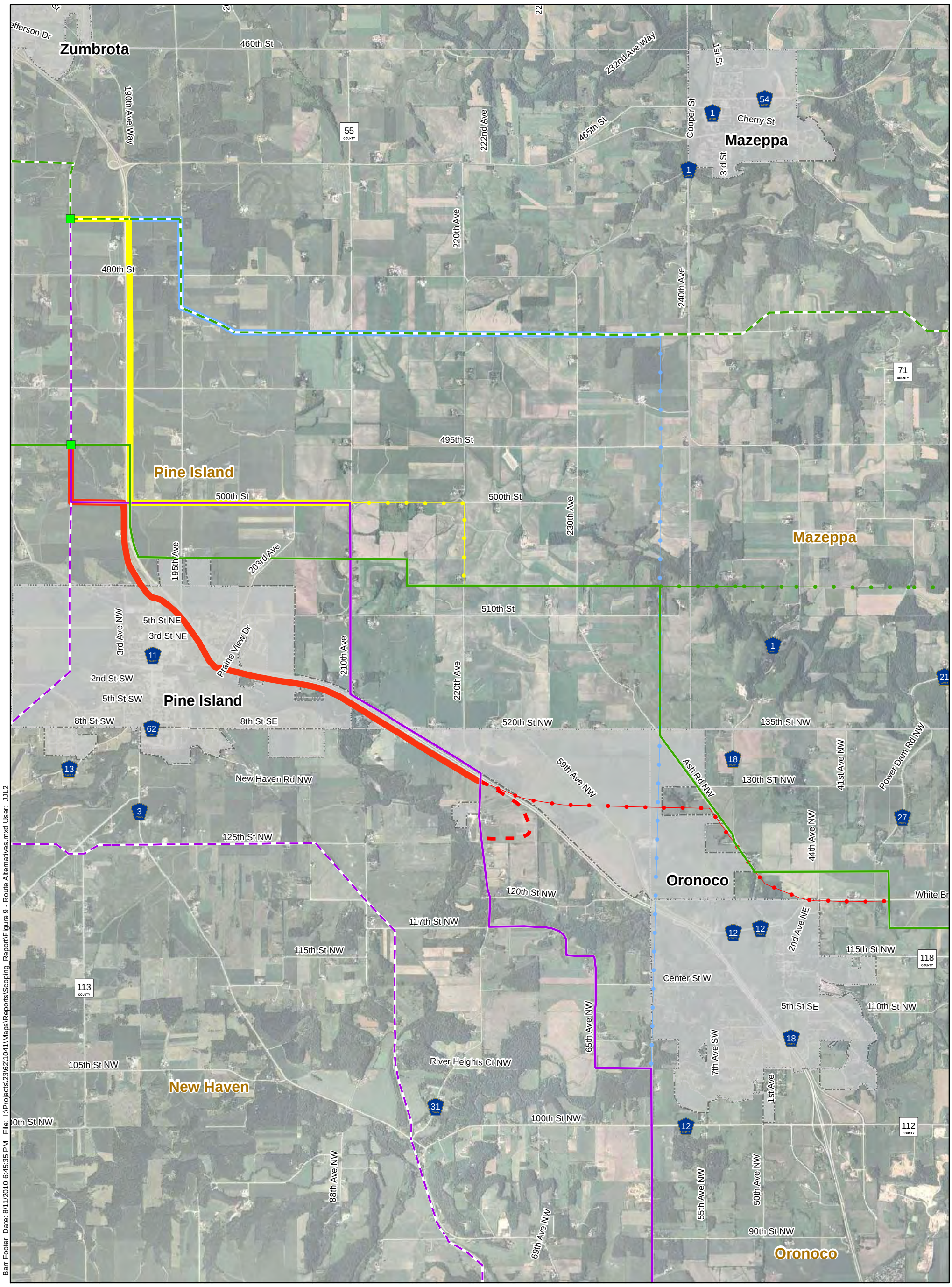
**2C3-001** – Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 0.5 miles to meet up with US 52. Turn south and follow along US 52 for about 4.3 miles. At this point the 161 and 345 kV lines would splint. The 161 kV line would run parallel along US 52 for about .43 miles. Turn SE and run cross-country for .2 miles, then curve southwest and run cross-country for .15 miles, then curve west and run cross-country for .35 miles to meet up with the applicant's 161 kV preferred route at CSAH 31. The 345 kV line would go SE along US 52 for 0.4 miles. Turn east and go cross-country for 1.7 miles. Turn SE at Ash Rd NW, and go SE for 0.4 miles. Ash Rd merges into CSAH 18, and continue following CSAH 18 for 0.35 miles. Then continue SE cross-country for 0.15 miles, and turn east-southeast and go cross-country for 0.4 miles until you hit White Bridge Rd NW. At White Bridge Rd NW, go east along White Bridge for 0.7 miles connecting with the applicant's 345 kV preferred route.

**2C3-003** – Begin at the northern option for the proposed North Rochester substation, go east cross-country for 1 mile. Turn south on 195th Ave and go south for 0.75 miles. Turn SE and go cross-country for .56 miles, then turn east and go cross-country for 3.75 miles At this point the 345 kV line continues east along the applicant's 345 kV alternate route. The 161 kV line goes south cross-country for 6.5 miles connecting to the applicant's 161 kV preferred route.

**2C3-006** – Begin at the northern option for the proposed North Rochester substation, go east cross-country for 0.5 miles. Go south on US 52 for 2.5 miles, turn east and go along 500th sty for 2 miles. At this point the 161 kV line goes south following the applicant's 161 kV preferred route. The 345 kV line continue east on 500th St (CSAH 11) for 1 mile, then turn south and follow 220th aver for .75 miles connecting to the applicant's 345 kV preferred route.

***Route Alternatives on Figure 10***

**2C3-002** – Begin at the northern option for the proposed North Rochester substation, go east cross-country for 1 mile. Turn south on 195th Ave and go south for 0.75 miles. Turn SE and go cross-country for .56 miles, then turn east and go cross-country for 3.75 miles. Turn south and go cross-country for 3.5 miles to Ash Rd. NW. At this point the 161 and 345 kV lines split. The 345 kV line goes SE following the applicant's 345 kV preferred route. The 161 kV line goes south cross-country for 3 miles connecting to the applicant's 161 kV preferred route.




Barr Footer: Date: 8/11/2010 6:45:35 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 9 - Route Alternatives.mxd User: JJL2

**Applicant's 345 kV**
- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**
- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**2C3-001**
- Segments 2 and 3 Combined
- Segment 2 Only
- Segment 3 Only

**2C3-003**
- Segments 2 and 3 Combined
- Segment 2 Only

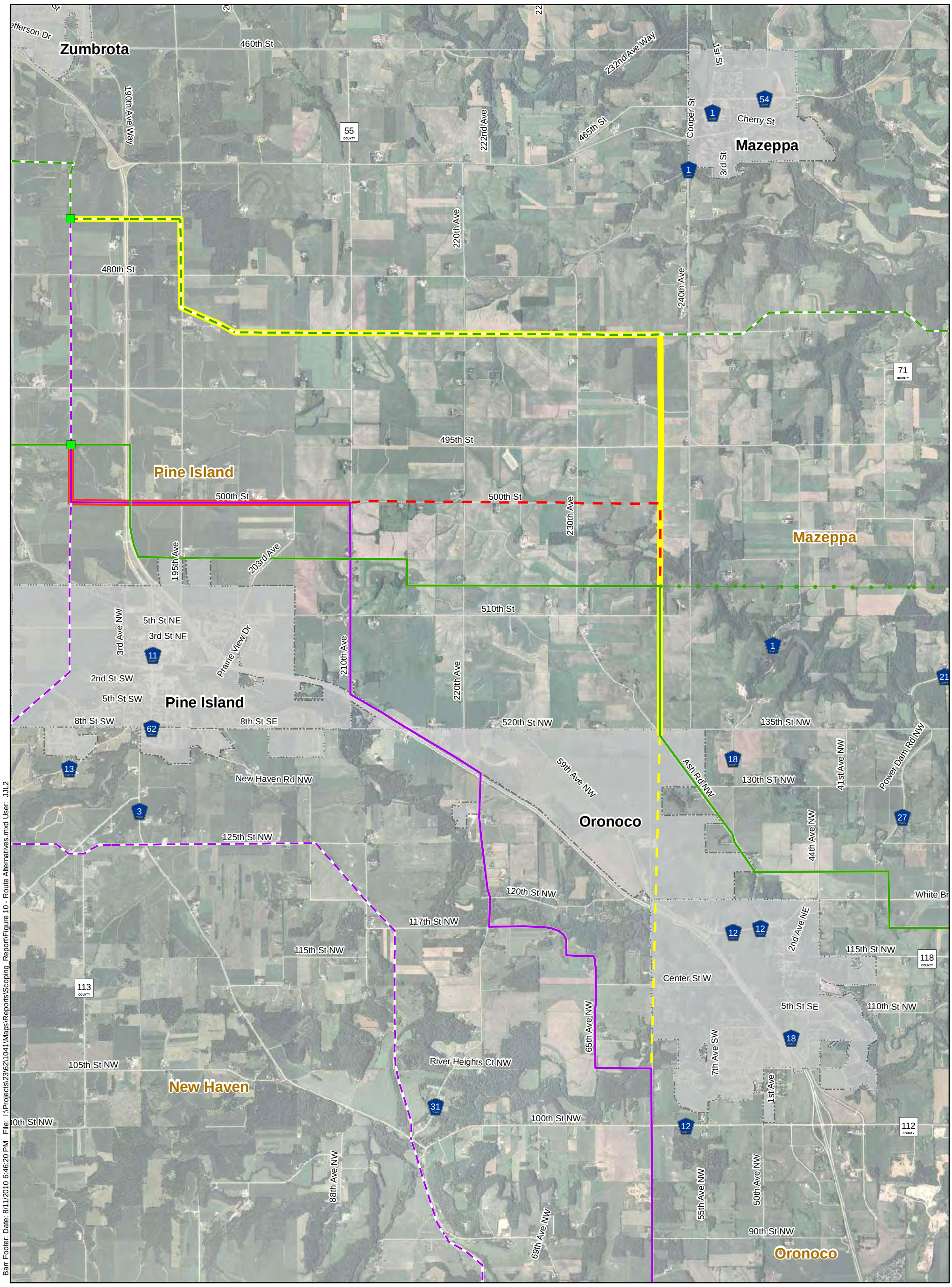
**2C3-006**
- Segments 2 and 3 Combined
- Segment 3 Only

N

0 0.5 1 2 Miles

Figure 9

Route Alternatives Map 8 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project




Barr Footer: Date: 8/11/2010 6:46:20 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 10 - Route Alternatives.mxd User: JJL2

**Applicant's 345 kV**
- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**
- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**2C3-004**
- Segments 2 and 3 Combined
- Segment 2 Only

**2C3-005**
- Segments 2 and 3 Combined
- Segment 3 Only

N

0 0.5 1 2 Miles

Figure 10

Route Alternatives Map 9 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

***Route Alternatives on Figure 10 (cont.)***

**2C3-005** – Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles. At this point the 161 and 345 kV lines split. The 161 kV line turns south following the applicant's 161 kV preferred route. The 345 kV line continues east along 500th sty for 1 mile, and then continues east cross-country for 0.75 miles. Then, turn south and go cross-country for 0.75 miles connecting to the applicant's 345 kV preferred route.

***Route Alternatives on Figure 11***

**2C3-002** - Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles, then turn south on CSAH 11 and go for 0.5 miles. Then, turn east and go cross-country for 0.5 miles, turn south and go cross-country for 0.25 miles. Turn East and go cross-country for 2.25 miles. Turn south and go cross-country for 1.25 miles to Ash Rd. NW. At this point the 161 and 345 kV lines split. The 345 kV line turns SE following the applicant's 345 kV preferred route. The 161 kV line continues south cross-country for 3 miles connecting to the applicant's 161 kV preferred route.

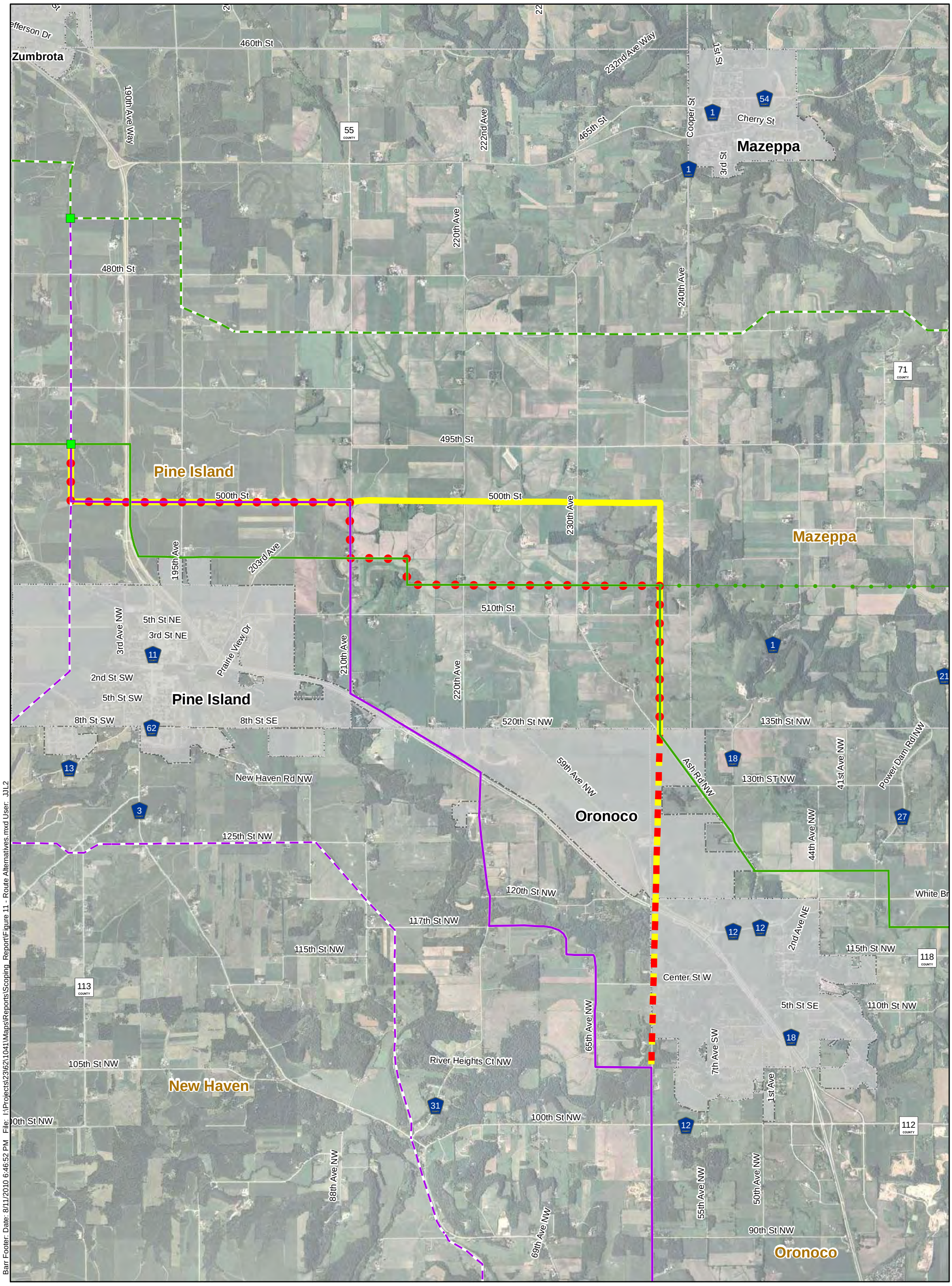
**2C3-007** – Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 5.2 miles, then turn south and go cross-country for 2 miles to Ash Rd NW. At this point the 161 and 345 kV lines split. The 161 kV line goes south cross-country for 3 miles connecting to the applicant's 161 kV preferred route. The 345 kV line continues east along the applicant's 345 kV alternate route.

## VII. ALIGNMENT ALTERNATIVES

The EIS will evaluate a total of 12 alignment alternatives suggested in comments. These are alternatives that fell within the applicants' requested route widths and generally involve site specific concerns such as building on one side of the road or the other, avoiding tree groves, and avoiding recreational areas or environmentally sensitive areas. These alignment alternatives are presented below and illustrated in Figures 12 to 14.

## VIII. REQUIRED PERMITS AND APPROVALS

The EIS will include a list of permits that will be required for the project.




**Applicant's 345 kV**
- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**
- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**2C3-002**
- Segments 2 and 3 Combined
- Segment 2 Only

**2C3-007**
- Segments 2 and 3 Combined
- Segment 2 Only

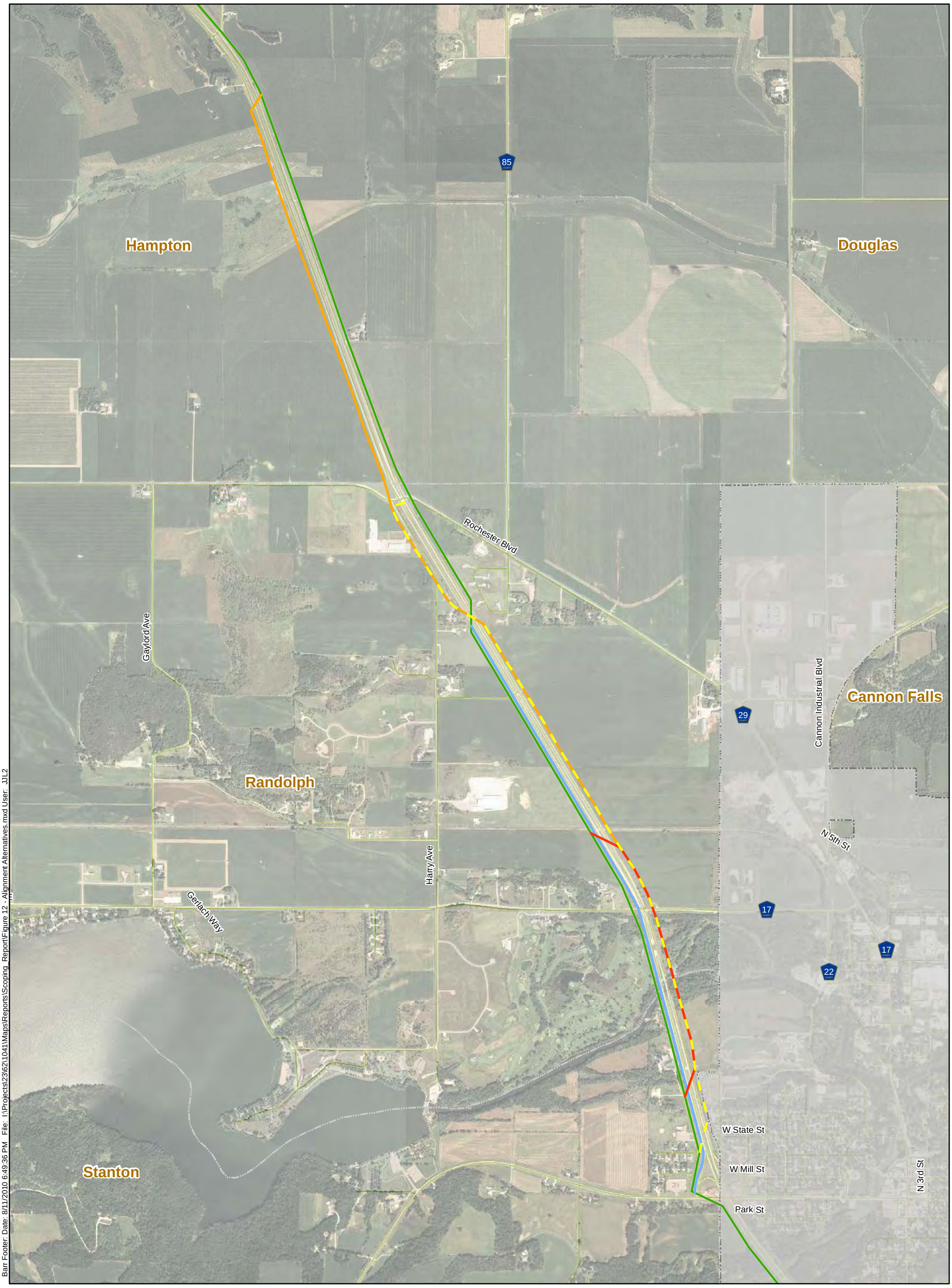
N

0 0.5 1 2 Miles

Figure 11

Route Alternatives Map 10 of 10
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:46:52 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 11 - Route Alternatives.mxd User: JJL2




Barr Footer: Date: 8/11/2010 6:49:36 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 12 - Alignment Alternatives.mxd User: JJL2

**Applicant's 345 kV**

- Preferred/Both
- Alternative
- Dam Option

**Applicant's 161kV**

- Preferred/Both
- Alternative

- Proposed Substation Locations
- Townships
- Municipality

**Alignment Alternatives**

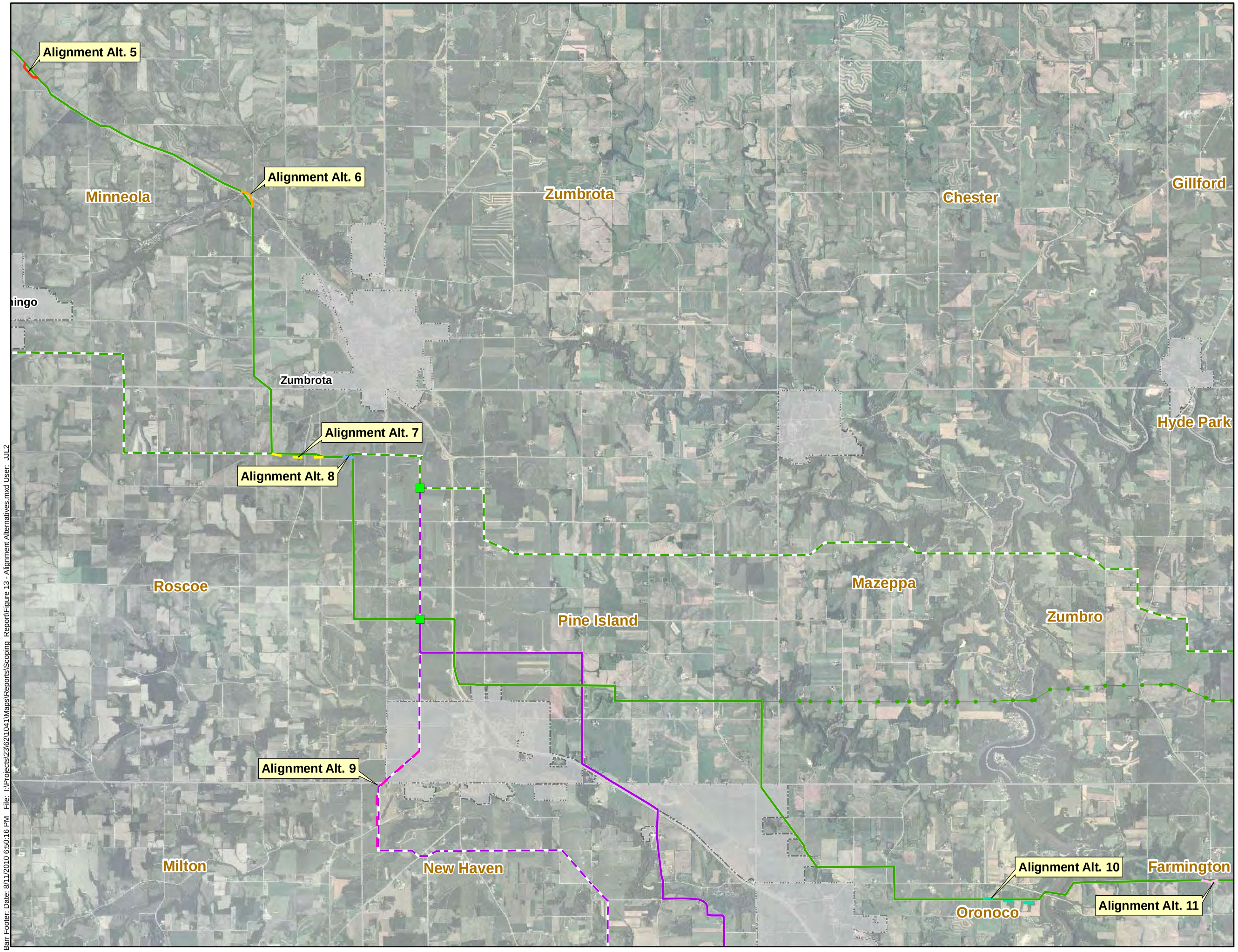
- Alignment Alt. 1
- Alignment Alt. 2
- Alignment Alt. 3
- Alignment Alt. 4

N

0 0.25 0.5 Miles

Figure 12

Alignment Alternatives Map 1 of 3
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project




## Applicant's 345 kV

- Preferred/Both
- Alternative
- Dam Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Alignment Alternatives

- Alignment Alt. 5
- Alignment Alt. 6
- Alignment Alt. 7
- Alignment Alt. 8
- Alignment Alt. 9
- Alignment Alt. 10
- Alignment Alt. 11
- Townships
- Municipality

N

0 1 2 Miles

Figure 13

Alignment Alternatives Map 2 of 3
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:50:16 PM File: I:\Projects\23621\041\Maps\Reports\Scoping_Report\Figure 13 - Alignment Alternatives.mxd User: JJL2

## Applicant's 345 kV

- Preferred/Both
- Alternative
- Dam Option

## Applicant's 161kV

- Preferred/Both
- Alternative
- Proposed Substation Locations

## Alignment Alternatives

- Alignment Alt. 12
- Townships
- Municipality

N

0 0.25 0.5 Miles

Figure 14

Alignment Alternatives Map 3 of 3
CapX2020
Hampton - Rochester - LaCrosse
345 kV Transmission Project

Barr Footer: Date: 8/11/2010 6:50:45 PM File: I:\Projects\23\62\1041\Maps\Reports\Scoping_Report\Figure 14 - Alignment Alternatives.mxd User: JJL2

## ISSUES OUTSIDE THE SCOPE OF THE EIS

The following issues will not be considered or evaluated in the EIS:

1. Any route or substation alternatives not specifically identified in this scoping decision

2. Questions of need, including size, type, and timing; questions of alternative system configurations; or questions of voltage.

3. The no-build option regarding the high voltage transmission line.

4. The impacts of specific energy sources, such as carbon outputs from coal-generated facilities.

5. The manner in which land owners are paid for transmission rights-of-way easements, as that is outside the jurisdiction of Public Utilities Commission.

6. The following alternative routes suggested through public comment will not be considered for further study or evaluation in the EIS. The route segments were rejected as they either did not meet the stated need of the project as defined in the Certificate of Need (CapX 345 kV Transmission Projects, Docket No. ET-2, E-002, et al./CN-06-1115), had more impacts relative to the criteria used by the Commission in route permit determinations as defined in Minnesota Statue 216E.03, subd. 7., or were incomplete in their description and/or depiction.

   A route alternative was suggested that would place the 345 kV transmission line along Highway 52 from Hampton, Minn. through Rochester to Interstate 90, where it would head east and cross the Mississippi River at La Crescent, Minn. This alternative would add significant length to the project, has significant constructability issues through the City of Rochester, and would impact more resources. The record provides information on the significant obstacles of approaching and crossing the Mississippi River at this location.

   A route alternative was suggested from the applicant's 345 kV preferred route in Watopa Township in Wabasha County, go east cross-country 0.2 miles. Turn northeast and go cross-country 2.2 miles. Turn north and go 0.15 miles cross-country returning to the applicant's 345 kV preferred route. This route would create a new transmission line corridor where none currently exists. This route is longer and impacts more resources.

A route alternative was suggested from the applicant's 345 kV alternate route, 0.1 miles south of the intersection of Mn 42 and CSAH 14 in Highland township in Wabasha County. Go north along CSAH 14 for 0.75 miles. Turn east on road T-530 and go for 0.4 miles. Merge with CSAH 14 again, and follow CSAH 14 east for 2 miles returning to the applicant's proposed 345 kV line. This route alternative is longer than the route is attempting to replace, affects more residences, and has more resource impacts.

A route alternative was suggested from the applicant's 345 kV alternate route in southern Wanamingo township in Goodhue County, follow existing transmission line along MNTH 60 going east for .65 miles, then curve northeast with MNTH 60 and follow for .65 miles, then curve east and follow MNTH 60 for 3.5 miles. Turn south from the highway and the existing line and go cross-country 0.5 miles returning to the applicant's 345 kV alternate route. This route alternative would bi-sect the municipal boundary of the City of Wanamingo, and would affect more residences than other alternative routes in the area.

A route alternative was suggested in Wabasha County that would follow, from the applicant’s preferred or alternate 345 kV route, County Roads 14 and 18, and joining the applicant’s Route Option south of the City of Kellogg. This route is substantially longer than other viable alternatives in the area, has constructability issues, and affects more resources.

A route alternative was suggested from the applicant's 345 kV preferred route, 0.15 miles west of the intersection of US 52 and CSAH 7. Go east cross-country for 2.2 miles. Then turn south on CSAH 6 and go south for 1.3 miles. Turn east and go cross-country for 0.3 miles, then continue going east along 443rd sty for 0.35 miles. Then turn south and go cross-country for 2.25 miles. Turn SSW, crossing US 52, and go SSW cross-country for 0.6 miles. Then turn south and go cross-country for 1.2 miles past the proposed north substation location to a new proposed substation location further south. A route exiting this substation was also suggested from the applicant's 345 kV alternate route, 0.5 miles west of the intersection of US 52 and US 60. Go east cross-country for 0.5 miles to meet up with US 52. Follow US 52 south for 2.3 miles connecting to the applicant's 345 kV preferred route. This route is longer than the route it is attempting to replace, affects more residences, and provides constructability issues along an existing 345 kV transmission line.

A route was suggested by commenters where the 345 kV transmission line would follow Highway 52 through the cities of Zumbrota and Oronoco, before turning east toward the Minnesota terminus of the project. This route would affect significantly more residences than the route segments it is attempting to replace. This alternative has more impacts relative to the criteria considered by the Commission in route permit decisions than the route segment it is attempting to replace.

A route alternative was suggested from the applicant's 345 kV route, in Watopa Township in Wabasha County on US 61 where the route and existing line cross US 61. Go southeast along US 61 for 0.25 miles. Turn northeast and go cross-country for 2.55 miles. Turn north and go cross-country for 0.25 miles to meet up with the applicant's 345 kV route at County Road 84. This route alternative would create a new corridor where one does not currently exist in a State Wildlife Management Area. This alternative has more impacts relative to the criteria considered by the Commission in route permit decisions than the route segment it is attempting to replace.

## SCHEDULE

Following is the anticipated schedule:

February 2011 – Draft EIS available.
March 2011 – Draft EIS public meetings.
June 2011 – Final EIS available.

Signed this 6th day of August, 2010

STATE OF MINNESOTA
DEPARTMENT OF COMMERCE
OFFICE OF ENERGY SECURITY

William Glahn, Director