

## Appendix C – Scoping Comment Summary Tables

**Table C-1: Federal and State Agency and Other Official Comments from Scoping for the Proposals**

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Purpose and Need</b>			
Senate – State of Minnesota	The USDA should perform an independent review of Project proponents' claims and stated need of Project.	Independent review of Project	The justification document which has been accepted by the RUS is the Alternative Evaluation study which is available at: <a href="http://www.rurdev.usda.gov/UWP-CapX2020-Hampton-Rochester-LaCrosse.html">http://www.rurdev.usda.gov/UWP-CapX2020-Hampton-Rochester-LaCrosse.html</a>
	The current peak needs of the region need to be further examined.	Electric needs	The basis of Dairyland's need for the Proposal is discussed in detail in Section 1.1.2.3. As noted in that discussion, since the need for the Proposal was originally identified, Dairyland experienced a record peak demand in 2010 of 916 MW and a new record peak in the summer of 2011 of 979 MW.
<b>Process</b>			
Federal Aviation Administration	Has FAA been in on the process and study completed on possible RFI?	Agency Involvement	Yes.
State of Minnesota Public Utilities Commission	Minnesota's PUC record and docket should be included in RUS' review of the Project.		RUS reviewed the docket and has referenced relevant documents from the docket throughout this Draft EIS.
Minnesota Department of Natural Resources	MDNR EIS Scoping comments should be used in determining final scope of Project.		The scope of this Draft EIS includes issues identified and addressed in the MN Draft EIS, as well as issues raised in comments on the MN Draft EIS. While RUS reviewed MNDR EIS scoping comments, RUS assumes that the MN Draft EIS incorporated these comments.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Project Alternatives</b>			
Mississippi River Parkway Commission of Minnesota	The Commission requests that routing and river crossing decision-making processes in Minnesota are aligned with those in Wisconsin.	Inter-Agency Cooperation	Except where there are differences in state laws and regulations, RUS has endeavored to apply the same standards in evaluating impacts in Minnesota and Wisconsin. As discussed in Section 2.3.1.1, the elimination from detailed consideration of all potential Mississippi River crossing locations except the Alma location was based on considering impacts on both sides of the Mississippi River.
USFWS	Any new crossing should consider use of existing ROWs or easement.	Mississippi River crossing	Use of existing ROWs is discussed in Section 2.3.1.1.
USFWS	Any new crossing should consider use of existing ROWs or easement.	Mississippi River crossing	Use of existing ROWs is discussed in Section 2.3.1.1.
Senate – State of Minnesota	Alternative energy should be considered to reduce environmental impact. Existing, planned, and potential local generation should be considered in meeting reliability needs in the Rochester and La Crosse area. Conservation and distributed generation should be considered.	Alternative energy	Energy-based alternatives, including demand side management, use of existing generation, new generation, and decentralized systems are addressed in Section 2.2.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Senate – State of Minnesota	Smart Grid technology that can address peak energy needs should be considered.	Use of Smart Grid technology	<p>Smart grid technology is characterized in Energy Independence and Security Act of 2007 (EISA 2007; Title XIII), which also includes smart grid appropriations. As described in EISA 2007, there are a number of components to smart grid. Some of these components are related to “deployment and integration of distributed resources and generation, including renewable resources” and demand-side management. These alternatives are discussed in Section 2.2. Some components are related to encouraging increased use of digital information and control technology, including real-time information, to improve the reliability and efficiency of the transmission system. In its draft 2011 MTEP the Midwest ISO has incorporated smart grid into its future scenario assessment (Midwest ISO 2011c, pp. 83-84). The inclusion of smart grid has the effect of lowering the growth of overall demand; however, it does not impact the need for the Proposal (Midwest ISO 2010c, Appendix A). See Section 1.1.2 for a discussion of the Midwest ISO role in determining the need for transmission improvements.</p>

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Route Alternatives</b>			
USFWS	<p>The USFWS believes that any new connecting lines should be kept away from the Mississippi River corridor. The USFWS believes that the Alma crossing may pose least environmental impact, La Crosse would be second, and Winona and Trempealeau crossings would likely not be acceptable to USFWS because of the need for new ROW across refuge land. The Alma ROW is the only ROW wide enough to accommodate the transmission line configuration that would have the least impact to birds and meet the conditions of 50 CFR 26.41 (c). USFWS recommends the use of the I-90 corridor. Underground options should be considered.</p>	Mississippi River crossing - Alma	<p>Alternative river crossings are addressed in the Section 2.3.1.1 discussion of the elimination from detailed consideration of all potential Mississippi River crossing locations except the Alma location. The elimination of the other locations also eliminated the I-90 corridor. Undergrounding is addressed in Section 2.4.2.1.</p>
USFWS	<p>Commenter suggests that the removal of any existing lines not used and doubling of lines should be considered.</p>	Routing - general	<p>Where practicable and where allowed under relevant NERC standards, alternatives consider placement of existing lines on the new structure.</p>

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	The proposed crossing of Shady Lake occurs at a location with no existing infrastructure. Flood damage to the dam at Shady Lake recently caused this waterbody to change from a reservoir to a river. Regional MDNR staff have reported possible plans for a restoration project in this area. Avoiding a greenfield crossing in this area is preferred and would likely correspond well with future restoration plans.	Shady Lake Crossing	Note that the Route 2P-002 crossing of the former Shady Lake follows the US 52 ROW. The concept restoration plans for the former Shady Lake are referenced in Section 2.5.1.2.
Federal Aviation Administration	The red line runs just east of Federal microwave repeater station. This microwave link is a primary communication path from Kansas City to Minneapolis.	Routing – potential conflict	The presence of microwave stations could impact pole placement, as the pole structures could potentially interfere with the beam path. Poles will be placed so that they do not interfere, and this will be addressed during design.
Minnesota Department of Natural Resources	A comparative analysis of various corridor alternatives should be included in the EIS to determine which corridor will minimize negative environmental impacts.	Routing – minimizing impacts	See Section 2.5 for a comparative analysis of alternatives.
	If the Alma alternative is chosen, the proposed alignment adjacent to the Woodbury WMA should be relocated one mile north to an existing alignment for a 69kV line.	Existing corridors	This comment was from the EIS scoping. The Woodbury WMA is not directly impacted by any alternatives. The closest route is 1B-003, which is approximately 1,300 feet north.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
	MDNR prefers the use of the existing disturbed corridors of Highway 52 and I-90.	Existing corridors	Alignments following US 52 are included in the Draft EIS. I-90 alternatives are not included in the Draft EIS. The elimination from detailed consideration of the Mississippi River crossings at Winona and La Crescent, discussed in Section 2.3.2.1, also eliminated the use of I-90 as an alternative.
Minnesota Department of Natural Resources	The line following the west side of Haverhill WMA would pose as a barrier to birds. Though there is an existing 69kV line west of this alignment, the proposed line would be significantly taller and increase avian impacts.	Avian impacts	This comment was from the EIS scoping. None of the alignments studied in the Draft EIS are in the vicinity of the Haverhill WMA. Corridors near the Haverhill WMA were associated with the Mississippi River crossings at Winona and La Crescent, which were eliminated from detailed consideration, as discussed in Section 2.3.2.1
Mississippi River Parkway Commission of Minnesota	The MRPC opposes the alternate route that parallels the Mississippi Great River Road for 1.3 miles because it would destroy scenic value. MRPC opposes any route that parallels the Great River Road for the sake of impacts to scenic value and travelers.	Scenic impacts	Potential impacts to the Great River Road and the MRPC concerns are addressed in Section 3.7. Potential impacts are also addressed and compared in Section 2.5.
Minnesota DOT	In the routing process, MnDOT information should be considered regarding proposed route area terrain, soil stability, potential rock fall, and water drainage.	Agency Involvement	Section 3.1.3.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	Discussion of shared ROW with highways, railroads, transmission lines and pipelines should be included.	Information availability - ROW	Sharing ROW with transmission lines, highways and railroads is discussed throughout the Draft EIS, and the results are summarized in Tables 2-4 and 2-5. Pipelines were not considered, as corridor sharing with pipelines, compared to sharing with highways, transmission lines and railroads, has little benefit and some disadvantages. Pipeline ROWs often run cross-country with little or no visual or agricultural effects. For safety reasons, gas pipelines often require a transmission line ROW to parallel the pipeline ROW with no or minimal overlap. Sharing a corridor with a gas pipeline may require the installation of cathodic protection to prevent pipeline corrosion caused by induced currents (PSC-WDNR 2011 p. 48).
	The MDNR recommends using variations of the Preferred Route during Project development to avoid public water crossings and associated natural resource impacts to the extent practicable.	Routing – minimizing impacts	Public water crossings are unavoidable, given the Proposal end points. Crossing locations were identified to minimize impact to the associated natural resources, and, throughout the Draft EIS, all alternatives are compared in terms of impacts to these natural resources.
	If final routing does cross a State forest, single pole construction is preferred to reduce the acreage of forest clearing.	Structures	Single pole construction is proposed, except in certain situations where H-frame structures may result in less impact. See discussion in Section 2.4.2.1.
	DNR encourages utilization of Highway 42 (Route 3B-003) near the McCarthy Lake Wildlife Management Area to avoid DNR State-managed forest and natural resource impacts.	Routing – minimizing impacts	This alternative is included in the Draft EIS as Route 3B-003.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	A proposed bypass to follow the west property line on the McCarthy Lake WMA for over a mile (3A-Kellogg or 3P-Kellogg) would cross a wetland mitigation bank currently being constructed.	Routing – potential conflict	Impacts to wetlands are included in the Draft EIS.
	Will the existing line near the Kellogg Crossing and the proposed line be co-located on the same poles?	Structures	Yes.
<b>Connected Action</b>			
Senate – State of Minnesota	The degree to which the La Crosse Project will permit transmission of coal from North and South Dakota and associated air emissions and global warming impacts should be discussed.	Air quality, coal transmission	The Proposal purpose and need is discussed in Section 1.2 and is not specifically related to electric generation in North and South Dakota. Because the Proposal will allow an outlet for bottled up generation (Section 1.1.2.3), it provides for more efficient use of electricity that is generated, and thus reduces the need for additional generation. Note that coal-generated electricity has the same access to transmission facilities as electricity generated by other means.
Senate – State of Minnesota	The connection of La Crosse Project with other CapX2020 projects extending into South Dakota and North Dakota should be discussed.	Potential for other transmission projects to be connected actions	The specific needs for the Proposal are discussed in Section 1.1.2 and its relationship to other actions is discussed in Section 1.6.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Geology and Soils</b>			
Minnesota Department of Natural Resources	There are undeveloped deposits of sand and gravel in the original alternative route – in the northwest corner of New Haven Township. Avoidance of this rare resource is recommended.	Avoid rare resources	Mines and future reserve areas are discussed in Section 3.1.1. This information has been added to Section 3.1.1.
Mississippi River Parkway Commission of Minnesota	There are negative impacts associated with the alternate alignment on TH 42 including highly erodible side slopes and bluffs that would be vulnerable due to the construction and long-term vegetation management practices.		Section 3.1.2.
<b>Biological Resources</b>			
Minnesota Department of Natural Resources	The following MDNR databases should be included in the EIS: Natural Heritage Information System (NHIS), including MCBS databases: Native Plant Communities, Sites of Biodiversity Significance, Railroad-Rights-of-Way prairies. The Rare Features Database, Rare Species Guide, Tomorrow's Habitat for the Wild and Rare, and An Action Plan for Minnesota Wildlife, January 2006 should be used to determine state-listed species, Species of Greatest Conservation Need, and locations.	MDNR databases	These databases were used to prepare the detailed route maps in the MN FEIS, which are included as Appendix E of this Draft EIS (Appendix A in the MN FEIS). These maps were used as the basis for comparison of alternatives and assessment of impacts in this Draft EIS. The MDNR website was used for state-listed species information.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	Rare species surveys should be conducted if native prairie remnants or other potential habitat of state-listed threatened or endangered species will be impacted, or if more information is needed to address areas with limited data.	Habitat impacts, endangered species, information availability	Section 3.5.3.5.
Minnesota Department of Natural Resources	A transmission line through the I-90 corridor would cause habitat fragmentation; the negative impacts of transmission line through bluff lands near the I-90 corridor should be discussed.	Habitat impacts – I-90 corridor	The I-90 corridor is not included as an alternative route in the Draft EIS.
Senate – State of Minnesota	Alternative routes will widen existing ROW through Upper Mississippi River National Wildlife Refuge.	Impacts to Upper Mississippi River National Wildlife Refuge	Section 2.4.2.1.
Senate – State of Minnesota	The potential impacts to migratory birds using the Mississippi Flyway should be considered.	Avian impacts	Section 3.5.1.4
Senate – State of Minnesota	The potential impacts to resources in the Mississippi River corridor should be considered.	Potential impacts	Sections 3.5 and 3.6.
Wisconsin Department of Natural Resources	The potential impacts to the La Crosse Marsh and the Van Loon State Wildlife Area should be considered.	Potential impacts	Section 3.6.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	The MDNR recommends avoiding construction work within the fence of the Elk Run Development, emphasizing use of construction BMPs, and removing soil from equipment to avoid movement of Chronic Wasting Disease prions and invasive species.	Construction processes	Section 3.5.3.4.
Minnesota Department of Natural Resources	Power line corridors are typically chemically treated to keep brush and trees down which may put many native plants at risk.	Potential impacts – chemical treatment, flora	Section 3.5.3.1.
Minnesota Department of Natural Resources	Impacts to McCarthy Lake Wildlife Management natural resources, such as the Blanding’s turtle, waterfowl, migratory birds, Henslow’s sparrows, and grassland songbirds should be discussed.	Potential impacts - wildlife	Section 2.5.1.3 and Section 3.5.
Minnesota Department of Natural Resources	An assessment of state-listed species of concern should be included in the FEIS.	Listed species	Section 3.5.1.5 and 3.5.2.5.
Minnesota Department of Natural Resources	The applicant should coordinate with the DNR regarding any required surveys for threatened or endangered species. Threatened and endangered species must be identified along the selected route. Surveys may be required during a specific time and may affect Project planning and scheduling.	Agency Involvement, listed species	Section 3.5.2.5.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	Possible preventive and management techniques for invasive species should be discussed. DNR invasive species standards will apply to state administered lands and water, including cleaning of equipment, use of clean weed-free straw for mulch, and use of Best Management Practices.	Invasive species	Sections 3.5.1.2, 3.5.2.2 and 3.5.3.2.
USFWS	USFWS recommends that the applicant apply for a permit under BGEPA.		

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>River Crossings</b>			
National Park Service	<p>Cannon River and Mississippi River crossings in Minnesota are located downstream from segments listed on the National Rivers Inventory.</p> <p>The Cannon River crossing is designated as part of Minnesota's Wild and Scenic Rivers Program. Two Cannon River crossings are State Recreation River segments and would substantially impact the river; Cannon River crossings should be limited to existing disturbed corridors.</p> <p>Adverse impacts caused by Cannon River and Mississippi River crossings should be avoided and mitigated.</p>	National Rivers Inventory, Wild and Scenic Rivers – Cannon River, Existing Corridors	Section 3.2.1.4.
National Park Service	The proposed line will cross a NRI-listed segment of the Black River in Wisconsin. This should be avoided and mitigated.	National Rivers Inventory -	Section 3.2.1.4.
Mississippi River Parkway Commission of Minnesota	Underground crossing should be used to minimize visual impacts and partner with other efforts related to river crossing, such as the installation of an invasive species barrier.	Visual impacts, river crossings, invasive species	Undergrounding: Section 2.4.2.1. Invasive species: Section 3.5.1.2, 3.5.2.2 and 3.5.3.2.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	The Alma Mississippi River crossing would significantly impact the McCarthy Lake Management Area and various state-listed endangered and threatened species and native plants.	Mississippi river crossings – Alma, McCarthy Lake, SGCN	Impacts to the McCarthy WMA and alternatives to avoid the impacts are discussed in various places throughout the Draft EIS.
Minnesota Department of Natural Resources	The Zumbro River should be crossed where existing infrastructure exists and there is least impact to resources from clearing or construction activities. The Zumbro River crossing at the White Bridge in Segment 3 appears to result in the least impact from clearing, and utilizes an existing river crossing.	Zumbro River concerns, existing corridors	Comment noted. The Zumbro River crossing alternatives are discussed in Section 2.5.1.3.
Minnesota Department of Natural Resources	The Mississippi River flyway is one of four primary flyways for all migratory species in North America. Consider that this situation warrants use of an underground crossing configuration. A thorough analysis of underground routing, including engineering alternatives should be conducted. Other locations than previously listed for aerial crossings may be considered if underground engineering is more practical at another location.	Avian impacts, underground crossing	The Mississippi Flyway is a broad area that covers much of the Upper Midwest. Potential impacts to migratory birds are discussed extensively in Section 3.5. Undergrounding is discussed in Section 2.4.2.1.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Minnesota Department of Natural Resources	<p>Analysis of an underground crossing at an existing transmission crossing, such as the Kellogg/ Alma location, should include collocation of existing transmission and new transmission so that the possible benefits of underground transmission are not lessened in the analysis.</p> <p>Whether underground or aerial crossing is planned for this Project, further coordination regarding details such as pole placement, pole type and underground line placement should be coordinated with the DNR to address vegetation and wildlife impacts, possible rare species impacts, and for preparation of a License to Cross Public Lands and Waters.</p>	Underground crossing, Mississippi river crossings	Section 2.4.2.1. Coordination with the MDNR and the USFWS is on-going.
Minnesota Department of Natural Resources	Coordinate with the DNR regarding the Mississippi River Crossing and other public land or water crossing and associated structures.	Mississippi river crossings, Agency Involvement	Section 1.3.1.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Wetlands and Other Waters of the United States</b>			
National Park Service	Disturbances to riparian areas should be minimized.	Avoid riparian areas	Sections 3.5.1.3, 3.5.2.3, and 3.5.3.3
National Park Service	A riparian management plan should be developed to ensure a 120-foot river buffer and upkeep of native plant species except those interfering with the ROW. Project activities should be kept within the ROW, and boundaries should be clearly delineated with barriers within 120 feet of river. Equipment should be kept away from riparian zone and off river banks, and removed upon completion.	Construction near rivers	Sections 3.5.1.3, 3.5.2.3, and 3.5.3.3
National Park Service	Appropriate erosion control should be maintained. If bank stabilization is necessary, bioengineering techniques and natural materials should be implemented.	Construction near rivers	Sections 3.5.1.3, 3.5.2.3, and 3.5.3.3

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
National Park Service	Trees along Project boundary in riparian areas should be protected from abrasion or root zone compaction, and the drip line of the trees should be clearly delineated. Trees should be cut within 120 feet of rivers flush to the ground. It is essential that rootwads continue to provide bank stability. Trees should only be removed when absolutely necessary. Excessive woody debris should be removed and placed at least 120 feet from the top of the river bank.		Sections 3.5.1.3, 3.5.2.3, and 3.5.3.3
USFWS	The Upper Mississippi River Floodplain Wetlands, including the national wildlife refuge and adjacent state-managed areas such as the McCarthy Lake Wildlife Management Area, were designated as "wetlands of international significance" under the Ramsar Convention. Although Ramsar designation does not in any way restrict existing management authority or decision-making ability on the designated wetlands, it helps justify accelerated efforts to understand ecological functions, balance sometimes competing demands, and demonstrate wise resource management.	Important wetland areas	Section 3.5.1.3.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Land Use</b>			
Minnesota Department of Natural Resources	Storm water management should be evaluated, including specific mitigation practices for runoff from construction, operation, and maintenance activities.	Storm water management	Sections 3.1.3, 3.2.2.2, and 3.2.2.4.
<b>Recreation</b>			
Minnesota Department of Natural Resources	MDNR will not permit construction of transmission lines within a State Park Statutory Boundary.	Lines in State Parks	No routes under consideration are in State Parks.
Minnesota Department of Natural Resources	The Douglas State Trail should be avoided to the greatest extent possible. The trail was purchased using LAWCON funding which includes stipulations that the land cannot be converted to uses other than for outdoor recreation unless replacement of land of at least fair market value and reasonable equivalent usefulness is provided (16 USC, 45.2509).	Avoid Douglas State Trail	Section 3.6.1.3.
Minnesota Department of Natural Resources	The Applicant should coordinate with the DNR if public land is crossed to determine if the lands have LAWCON funding. If LAWCON funding applies, further steps will be required and the EIS should explain this topic.	Public land	Section 3.6.1.3.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Visual Impacts</b>			
Wisconsin Mississippi River Parkway Commission	The Wisconsin Great River Road National Scenic Byway should be preserved and the impacts on the viewshed should be discussed.	Visual impacts	Section 3.7.
Mississippi River Parkway Commission of Minnesota	Construction mitigation plans to repair scenic value on the Great River Road should be discussed.	Mitigation on Great River Road	Section 3.7.
Minnesota Department of Natural Resources	Potential visual impacts to the Douglas Trail should be discussed.	Visual impacts - Douglas Trail	Section 3.7.2.
<b>Transportation and Access</b>			
Minnesota DOT	MnDOT requires a permit for any line affecting MnDOT ROW. General placement for aerial lines is within 5 feet of trunk highway right of way. Transmission lines should adhere to the MnDOT Utility Accommodation Policy.	MnDOT permitting and regulations	Sections 1.3.1 and 2.4.2.2.
Minnesota DOT	MnDOT's current and future projects should be considered in the HVTL site selection process.	MnDOT planning	Section 3.8.1 and Section 4.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Mississippi River Parkway Commission of Minnesota	There are negative impacts associated with the alternate alignment on TH 42 including visual impairment of the GRR and Mississippi River Valley due to substantial vegetation removal. The view from the river toward the west would reveal a new cut versus the current wooded bluff line.		Section 3.7.2.
<b>Agriculture</b>			
Minnesota Department of Natural Resources	Additional information on the effects to existing Farmland Natural Areas Program easements adjacent to the Applicant's Preferred Route should be provided.		Sections 3.6.2.3 and 3.8.1.
<b>Cumulative Impacts</b>			
Minnesota Department of Natural Resources	Wind farms site their facilities near HVTLs. Cumulative impacts of wind farms siting their facilities near the chosen corridor should be included.	Cumulative Impacts of wind farms siting near Project corridor	Section 4.4.
USFWS	Will development of wind energy create the need for more lines and river crossings?	Cumulative impacts of wind development	Section 4.4.

**Table C-2: Local Community and Agency Comments**

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Purpose and Need</b>			
(Representing) Farmington Township	Why is the Project needed?	Project need	Section 1.1.
<b>Process</b>			
General	<p>Commenter requests that in the routing decision, the Applicant considers the following: Land productivity, parcel size, proximity to transportation and job centers, proximity to agricultural markets, historic land uses, school districts, and other services, as well as factors that influence land economics.</p>	Routing criteria	<p>Items related to agricultural, socioeconomic and cultural resources are addressed in Section 3 of the Draft EIS, based on relevance to alternatives analysis and impacts, consistent with CEQ regulations stating that EISs should be . . . Items noted are addressed as appropriate in the Draft EIS, however, not all items listed appear to be “analytic rather than encyclopedic” and with impacts “discussed in proportion to their significance” (40 CFR 1502.2):</p>

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Project Alternatives</b>			
Holden Township	Commenter believes that alternative energy should be considered in energy conservation.	Alternative energy	Section 2.2.4.3.
Bridgewater Township Board of Supervisors	Commenter believes that local power generation should be used.	Local involvement	Section 2.2.2.
<b>Route Alternatives</b>			
Wabasha County Administrator	Commenter supports the southern route, as it is most consistent with Wabasha County's Comprehensive Land Use Plan.	Local involvement	Comment noted. See Sections 3.6.1.1 and 3.6.2.1.
Warren Township Chairman	Commenter suggests that the line should be routed through woodland or wetlands, with a strong suggestion against the northern option through Warren Township, believing that agricultural land should be avoided.	Routing - to avoid agricultural land	Comment noted.
Trempealeau County Board	Support the Q1 Route because it is least expensive, shortest, and has least impact on property owners.	Preferred route	Comment noted.
Goodhue County Board Commissioner	Commenter suggests that transmission lines should be routed along US-52 instead of MN-56 and -60 for the following reasons: to adhere to Goodhue County's land-use plan to maintain agricultural heritage; because these industrial and commercially zoned areas continue to grow and have greater energy demand; and because those homes near MN-56 and -60 are closer to highways and will be impacted more.	Routing - along US-52 instead of MN-56 and MN-60	Comment noted. See Tables 2-4 and 2-5.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Pine Island EDA Director, Holden Township, (Representing) Minnesota Township, (Representing) Roscoe Township	<p>Commenters suggest that the transmission lines should be routed along US-52 to avoid future residential and neighborhood commercial areas, family farm neighborhoods, and wildlife habitat in farmland fence lines. Commenter representing Minnesota Township stated that alternative routes IP004 and IP005 go through too many homes, would require clearing new ROW, and would impact wildlife. In addition, Commenter representing Roscoe Township believes that the line should be routed along US-52 or Highway 56 and 14 to avoid environmental impact.</p>	Routing - along US-52	Comment noted. See Tables 2-4 and 2-5.
City of Hampton, Pine Island EDA Director, Oronoco Township, La Crosse Director of Zoning, Planning & Land Information Department Administrative Center	<p>Commenters believe that the proposed line should be routed to avoid existing and future residential and commercial developments, and that any impacts on present and future developments should be discussed.</p> <p>There were specific concerns that in the case of the City of Hampton, the line should be routed to the eastern city limits, and additional suggestion that the northern route near Pine Island should be chosen.</p>	Routing - to avoid existing and future residential and commercial areas	Sections 3.6.1.1 and 3.6.2.1.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Oronoco Township	<p>Commenter believes that the structure designs should be highlighted according to each alternative; that the beginning and end of each alternative segment should be adequately defined, and differences between route alternatives should be clarified; that the location of transmission lines, pole placement, staging areas, and access roads within corridors or macro corridors should all be shown; and that locations where lines will be co-located with existing lines through wooded areas should be displayed on a map.</p> <p>Commenter from Oronoco Township also inquires: Is the location limited to only the 1000 ft. corridors or within 1.25 miles of the centerline as allowed in Minn. Stat. 116E.02 subd 1?</p>	Information availability, maps and structure designs	Regarding corridor width, see Section 2.3, third paragraph.
Zumbro Township Board	Commenter is concerned that the 3A route alternative has no existing corridor through the Zumbro Township and violates the MN Non-Proliferation Policy and Wabasha County Comprehensive Plan.	Existing corridors	The MN non-proliferation policy is considered in route selection and analysis. Local plans were also considered, as appropriate.
<b>Connected Action</b>			
Bridgewater Township Board of Supervisors	Commenter believes that this Project should be considered with the other CapX2020 power lines, which mostly bring power to Wisconsin and Illinois.	Potential for other transmission projects to be connected actions	Section 1.6.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Geology and Soils</b>			
Oronoco Township	Commenter asserted that geologic factors should be considered across all alternatives, including grounding in high pH soils, with respect to any changing geologic factors.	Geologic factors	Section 3.1.
<b>Noise</b>			
Warren Township Chairman	Commenter believes that noise impact should be limited.	Noise	Section 3.4.
<b>Biological Resources</b>			
Oronoco Township	Commenter is concerned that there is limited ecological data for private land, stating that most of the data came from MDNR Natural Heritage database, which is limited to areas where MDNR has conducted field surveys.	Inadequate information	Specific locations identified by private parties have been and will be considered. See also Section 3.5.3.5.
	<p>Commenter believes that new standards from IEEE Standards association relating to reducing bird deaths should be referenced and that detailed field assessments of the unique Oronoco/White Bridge migratory bird occurrences along the 3P route should be conducted, as well as bird counts and studies to qualify exactly what species will be impacted.</p> <p>Commenter is also concerned that the 3P route crosses Lake Zumbro, a habitat of large flocks of migrating waterfowl, including American White Pelicans (State Special Concern), ducks, and geese. Commenter is also concerned that the Lake Zumbro crossing is home to Bald Eagles and believes that the potential impact on their habitat should be considered.</p>	Avian standards and assessment	Sections 3.5.1.4 and 3.5.2.4.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Oronoco Township	<p>Commenter inquires how the applicant will mitigate impacts to birds within one mile of proposed transmission line, as well as what the likelihood is of avian collision with power lines and injury from electrocution.</p>	Avian impact mitigation	Sections 3.5.1.4 and 3.5.2.4.
	<p>Commenter believes that State Species of Greatest Concern and non-status species affected in Minnesota should be addressed, and that MDNR management plans for SGCN should be considered.</p>	SGCN	These were addressed in detail in the MN FEIS; relevant mapping from the MN FEIS has been adopted throughout the Draft EIS.
	<p>Commenter believes that areas should be identified along proposed routes that require the completion of biological surveys, and that route-specific wildlife data should be collected.</p> <p>Commenter suggests that quarterly schedule breakdown of construction activities should be provided and should list impacts to small birds and mammals.</p>	Biological surveys, wildlife impacts	Section 3.5.3.5; see also response above regarding conciseness of the EIS and related issues, for compliance with CEQ regulations.
	<p>Commenter inquires as to what the intended amount of clearing in forested areas will be, and requests that impacts to trees cleared should be quantified.</p>	Quantify forest clearing	Tables 2-4 and 2-5.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>River Crossings</b>			
Oronoco Township	Commenter believes that impacts to the three Zumbro River crossings should be addressed, and that underground and aerial crossings for the Zumbro River crossings should be compared.	Impact on Zumbro River Crossing	Undergrounding was considered for the Mississippi River crossing and considered to be cost-prohibitive (Section 2.4.2.1). The same rationale would apply to the Zumbro River crossing. Impacts are assessed under specific resource areas in Section 3. The three alternative crossings are compared in Section 2.5.1.3.
<b>Wetlands and Other Waters of the United States</b>			
La Crosse Director of Zoning, Planning & Land Information Department Administrative Center	Commenter believes that impacts on shoreland districts and wetlands should be considered.	Wetlands	Sections 3.2 and 3.5.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Land Use</b>			
Wanamingo City Administrator, Pine Island City Administrator	<p>Commenters are concerned that transmission lines may conflict with Comprehensive plans and potential current and future land use conflicts along the 161 kV preferred route in the Pine Island area.</p> <p>Commenter from Oronoco Township inquires why the Applicant would choose routing that disrupts a city's land use plan, referring specifically to the Olmsted County Land Use Plan.</p>	Interference with current and future development and city planning	Sections 3.6.1.1 and 3.6.2.1.
Oronoco Township Board	Commenter is concerned that the 3P Route crosses Oronoco Township without consideration for future land use and settlement patterns. Commenter suggests that Oronoco's Township and County Land Use Plans and Zoning Ordinances should be applied to avoid conflict, stating that recent land use and land value information for Oronoco Township is available in the Olmsted County General Land Use Plan (dated March 8, 2011).	Local involvement and interference with city planning	Sections 3.6.1.1 and 3.6.2.1.
Dakota County, Holden Township	Commenters request that potential impacts on Dakota County's FNAP easements and impacts of easements through small farmland parcels be discussed,	Easements	Section 3.6.2.3 and 3.8.1.
<b>Land Rights and Easement Acquisition</b>			
City of Pine Island	Commenter is concerned that setbacks may conflict with zoning requirements in Pine Island and create two conflicting standards concerning road ROW within the same Highway Commercial district – one at 30' (without the power lines) and another at 45' (with power lines).	Potential impact on zoning requirement	Sections 3.6.1.1 and 3.6.2.1.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Conservation Easements</b>			
Dakota County	Commenter noted that county-held conservation easement agreements preclude utility easements on several properties near route options and inquired whether or not other counties have similar conservation easements in place.	Utility Easements	Section 3.6.2.3 and 3.8.1.
<b>Recreation</b>			
Oronoco Township	Commenter believes that the recreational resources that will be spanned for all routes and alternatives should be specifically explained, and in regards to the 3P route, that the unique nature of Lake Zumbro should be considered and that the value of Lake Zumbro's recreational uses and any impacts to the economic value of Lake Zumbro recreation be discussed and included in the EIS.	Information availability, Lake Zumbro concerns	Sections 3.6.1.3 and 3.6.2.3 and 3.7.
Florence Township Planning Commissioner	Commenter believes that the proximity of the Kellogg crossing to the Eagle Center in Wabasha and impacts on tourist eagle watching should be discussed.	Scenic impacts	Sections 3.5.1.4, 3.5.2.4 and 3.5.3.4.
<b>Visual Impacts</b>			
Bridgewater Township Board of Supervisors, Oronoco Township	Commenters believe that transmission lines will cause environmental harm in scenic corridors, homes, and major roads. Commenter from Oronoco Township was specifically concerned with the visual impacts of the 3P Route transmission lines on traveled roads near the Zumbro River Valley in Oronoco Township and suggested that a viewshed analysis be conducted considering impacts within a 4-mile buffer surrounding the proposed routes, and should specifically address how homes are impacted.	Scenic impacts	Section 3.7

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
<b>Transportation and Access</b>			
Oronoco Township	<p>Commenter believes that there should be a specific focus on where future road expansions and/or realignments are likely to occur along the three route segments, especially areas where power line ROW will overlap with road ROW, requiring certain roadside structures to be displaced or relocated. Commenter suggests that this information is provided on the appropriate map(s) and that maps should be provided even if there is no conflict. Commenter believes that impacts on roadway management plans, including costs of relocating utility poles, should be discussed. Commenter requests that the applicant provide values for the following variables: traffic volume, design speed, roadside geometry, radius of horizontal curve, presence of a curb and presence of urban or rural roads, collectors, arterials, or freeways; stating that these influence the clear zone and road side obstruction requirements.</p>	Roadway planning.	Section 3.8.1 discusses roadway issues as appropriate. See also response above regarding conciseness of the EIS and related issues, for compliance with CEQ regulations.
	The Lake Zumbro Seaplane Base guide slope restrictions and how these restrictions will be mitigated should be identified and discussed.	Aviation concerns	Section 3.8.2.
<b>Historic and Cultural</b>			
Oronoco Township	<p>Commenter requests that the number of sites not evaluated for NHRP eligibility be quantified. Commenter also suggests that the completion date for the NHRP assessment should be indicated, inquiring why this assessment will not be conducted until after a route has been selected.</p>	NHRP	See Section 3.9. The cost and time required for detailed assessments of all potential routes would not be justified when impacts can be adequately avoided and mitigated by assessing the selected alternative.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
	<p>Commenter inquires what the protocol is for handling cultural resources or human remains that are inadvertently discovered during construction. Commenter suggests that an appendix discussing related training and construction processes should be included.</p>	Construction processes	Section 3.9.5.
	<p>Commenter inquires as to which route alternatives have the least impacts on cultural or archaeological resources.</p>	Cultural/ archeological impacts	Tables 2-4 and 2-5.
<b>Health and Safety</b>			
(Representing) Farmington Township	<p>Undetermined long-term health problems caused by transmission lines should be discussed.</p>		Section 3.10.
Warren Township Chairman, Holden Township	<p>Commenters inquire as to the effects of stray voltage on dairy cattle and request that more information regarding dairy cattle health near transmission lines should be included.</p>	Livestock health	Section 3.10.1.2, Section 3.11.2.2.
Pine Island City Administrator	<p>Commenter is concerned that the perception of potential health risks of the 161 KV line going through a healthy living campus dubbed the "<i>Healthiest Place on Earth</i>" will prevent such concept from realizing its full potential.</p>	Public health perceptions	Section 3.10.
Oronoco Township	<p>Commenter believes that all health risks should be adequately disclosed, and that more recent health studies relating to EMF should be provided considering human exposure, stray voltage, livestock, swimming pools, metallic pipelines, and energized conductive objects at ground level. Commenter also requests that mitigation for EMF exposure be explained.</p> <p>In addition, Commenter requested how EMF affects persons with implantable medical devices and mitigating measures?</p>	EMF – information availability and mitigation	Section 3.10.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
	<p>Commenter has concerns about health problems caused by EMF, and suggests minimizing any risks by avoiding as many individuals as possible. Commenter also suggests that the safe setback distance of structures from centerlines should be explained, with elaboration on the distance's adequacy.</p>	<p>Health concerns - routing</p>	<p>Section 3.10.</p>
<b>Electrical Characteristics</b>			
<p>Oronoco Township</p>	<p>Commenter requests that interference of electronic communications from corona, including electronic interference on homes, businesses, telecommunications, and GPS devices (including GPS-based farming equipment) should be discussed. Commenter specifically inquired as to why radio frequency, microwave path, and broadcast (TV and radio) studies will not be completed by the Applicant until a final route is selected.</p> <p>Commenter also specifically suggested that effects on properties within 1.25 miles of proposed 3P corridor should be modeled and reviewed.</p>	<p>Electronic interference</p>	<p>Section 3.11.2.2.</p>
	<p>Commenter suggests that the risk of transmission line-induced stray voltage when crossing service and distribution lines should be analyzed, and that the number of areas that are at risk for stray voltage should be listed. Commenter inquired who is responsible for detecting and mitigating stray voltage.</p>	<p>Stray voltage</p>	<p>Section 3.10.1.2</p>
	<p>Commenter suggests that magnetic fields at the edge of the ROW conform to state standards, with further inquiry into what standards determine that 300 feet is an acceptable outer limit distance for evaluating impacts of EMF.</p>	<p>EMF - Standards</p>	<p>Section 3.10.2.1, Tables 3-8 and 3-9.</p>
	<p>Commenter requests that maps with microwave communication towers, FCC licensed microwave beam paths that cross proposed routes, and location of MnDOT's existing emergency towers should be provided, with an explanation of how close transmission lines can be located to these towers.</p>	<p>Maps - towers</p>	<p>Selected route will comply with FAA and FCC requirements related to tower proximity.</p>

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Oronoco Township	Commenter requests that the "corona effect" emission values for ozone and oxides of nitrogen be provided in parts per million (ppm), and that impacts be modeled to air quality.	Air quality	Section 3.3.
<b>Social and Economic</b>			
(Representing) New Market Township	Impacts on property values should be discussed.	Property values	Section 3.11.2.1.
Wanamingo City Administrator, Oronoco Township	There were many Commenter concerns with sale of property. Commenters believed if these transmission lines are built, that development lots will be impossible to sell if Commenter from Oronoco Township stated that FHA or HUD loans cannot be acquired if a dwelling or related property improvements are located within the fall distance of any line structure, concluding that buyers would not be able to obtain loans for this property. Commenter was concerned that the market of purchasers would be caused to shrink, essentially reducing the property owner's ability to sell.	Property sales	Section 3.11.2.1.
Oronoco Township	Commenter inquired as to what happens when a transmission line structure falls.	Fall hazard	Section 3.10.2.3.
	Commenter believes that MDNR forestry stands should be avoided.	State forest impacts	Comment noted. Impacts are addressed.
<b>Agriculture</b>			
Warren Township Chairman, Bridgewater Township Board of Supervisors	Commenters are concerned that transmission lines will cause the loss of prime agricultural land, and believe that impact on farmland should be avoided.	Agricultural impacts	Sections 3.6.1.2 and 3.6.2.2.

Agency	Comments	Issue	Response/Reference to Draft EIS Discussion
Oronoco Township	<p>Commenter requests that the amount of arable land eliminated for each route alternative be quantified and compared, and that all mitigation and BMPs are implemented in agricultural areas during construction, operation, and maintenance.</p> <p>Additionally, Commenter is concerned that the 345 kV line has no benefits to locals but significantly impacts the township.</p>		<p>Sections 3.6.1.2 and 3.6.2.2; and Sections 3.11.1.1 and 3.11.2.4..</p>
<b>Residential</b>			
Oronoco Township	<p>Commenter requests that the number of homes displaced by each route be quantified and that a table showing homes within 1000 feet of proposed routes should be included, inquiring as to which route will have the least impacts.</p>	<p>Information availability - property, route alternatives</p>	<p>Section 2.5</p>

**Table C-3: Public Scoping Comments**

Comments	Response/Reference to Draft EIS Discussion
<b>Purpose and Need</b>	
Rural communities will not benefit from the Project. The perception is that only larger urban areas such as Rochester, MN and Chicago, IL will benefit. One specific comment questioned whether the Project is appropriate for borrowing per the Rural Electrification Act due to the lack of rural benefit.	Section 1.1.2.
Commenters generally question the need for the Proposal, requested that the EIS independently verify the need for the Project and review the background data used to create the justification including load forecasts, assumptions, data, and projections.	Section 1.1.2.
The EIS should also explain the regulatory criteria for approval of load forecasts applicable to the Proposal and provide a thorough and independent review of all forecast data and assumptions.	See Section 1.1.2 for a discussion of the project need.
Some commenters suggested that the real need for the Project is to create profit for the private power suppliers that have ownership in CapX2020.	See Section 1.1.2 for a discussion of the project need.
<b>Process</b>	
Commenters believe decisions have already been made and the scoping and public comment process is not meaningful.	Section 1.4.
Is a new certificate of need and an EIS required if additional lines are proposed in the future?	Sections 1.1.2.1, 1.2.3.
Commenters are concerned about insufficient opportunity for public input and lack of public notification.	Section 1.4.
How is information disseminated for those who do not have internet access? Also, one commenter felt that property ownership records seemed to be the only ones used for public notification, rather than the established Project contact lists.	Section 1.4. The Draft EIS will be available for review in local repositories.
What factored into decisions made when deciding the route and various alternatives?	Section 2.3
Commenters are concerned that alternatives added during the Minnesota scoping process will not be adequately evaluated.	All alternatives included in the MN DEIS are included in the federal EIS.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
An inquiry was made regarding the purpose of the scoping process, and specifically why public comments were not gathered prior to public scoping on the AES and MCS documents.	Section 1.4.1
Consideration should be given for “no-build” options.	Section 2.4.1
Public notices in the paper should include more detailed information, possibly including maps.	The Draft EIS notice provides detailed information.
Commenter believes that RUS’ process is not consistent with 7 CFR 1794.13(a) requirements to involve the public through notices and hearings.	Section 1.4.; see also notice of availability for Draft EIS and RUS website. Also, notices will be placed in 15 local newspapers.
Commenter believes that RUS is not meeting the interagency involvement and coordination requirements of 7 CFR 1794.14, and that there is duplication of effort.	Due to differences in the environmental review processes between the two states, a joint EIS was not agreed upon among the three agencies. See also Sections 1.2.2 and 1.3.2.2.
Commenters also requested that other federal, state, and local regulations are met and agencies be provided the opportunity to be involved in the process. Specific agencies mentioned include the FAA, USFWS, MDNR, WDNR, and other state and local agencies, as well as the Ho-Chunk Nation Tribe, the Oneida Nation of Wisconsin, Mille Lacs Band of Ojibwe, and other tribes in Wisconsin.	Section 1.3.
<b>Project Alternatives</b>	
Commenters expressed support for locally produced wind and solar power.	Section 2.2.2, Section 2.2.4.3.

Comments	Response/Reference to Draft EIS Discussion
Commenters suggested that reasonable system alternatives be included in the EIS, such as local generation and transmission, conservation, alternative sources of energy, renewable energy, nuclear energy, incentivized conservation, postponement, undergrounding, decentralized energy, load management, upgrading existing transmission lines, and smart grid technology.	Section 2.2.
Other alternatives should be considered, such as expanding the size of Rochester's power plant, expanding other coal plants, and nuclear power.	Section 2.2.
<b>Route Alternatives</b>	
Commenter believes RUS is not complying with the 7 CFR 1794.15 (and 40 CFR 1506.1) requirement that the applicant "shall take no action concerning the proposed action which would have an adverse environmental impact or limit the choice of reasonable alternatives being considered in the environmental review process" because the MN and WI permit applications include only one river crossing.	The EIS is not limited to considering those alternatives included in the permit applications. In addition, the EIS evaluates in detail only one MS river crossing. See Sections 2.1.1, 2.3.1 and 2.3.2.
The commenter believes that residential density and plans for future residential development should be considered.	Tables 2-4 and 2-5; Sections 3.6.1.1 and 3.6.2.1.
Commenters believe underground routes should be considered for certain areas such as river and stream crossings (in particular the Mississippi River crossing), and in scenic or populated areas.	Section 2.4.2.1.
Commenters believe Route 3A is a violation of the Minnesota Non-proliferation policy.	Comment noted; see also Table 2-4.
The proposed North route uses the highest amount of established ROW at ~51%, in accordance with Minn. Stat. 216E.03, Subd. 7(b)(8).	Comment noted; see also Table 2-4.
Commenters believe that existing corridors, ROWs, roads, property lines and transmission lines should be paralleled and used when choosing the final route.	Section 2.5.
General comments included recommendations that existing residences and farms, rural river valleys, farmland, bluff country, dairy farms, the Richard Dorer Memorial Forest, the Hammond Creek Trout Stream and the Zumbro River Valley be avoided when choosing the final route.	These items are addressed throughout Sections 2 and 3.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
Commenters requested that the shortest and least expensive route be chosen.	Comment noted; see also Tables 2-4 and 2-5.
The preferred routing utilizes existing utility right-of-ways, whereas the alternative routing would impede private field lines and it would impact trails as well.	Comment noted; see also Tables 2-4 and 2-5.
Commenters (North Group) expressed opposition to the northernmost alternative for crossing the Zumbro River, based on lack of compliance with MN Non-Proliferation Policy, biological impacts, impacts to the Zumbro River Water Trail, forest impacts, impacts to the Richard J. Dorer Memorial Forest, cost, and other issues.	This alternative is evaluated in detail in the Draft EIS as Route 3P Zumbro.
A common request was to underground the entire project.	Section 2.4.2.1.
<b>Connected Action</b>	
Commenters suggested that the EIS include all four CapX2020 transmission projects because they were studied and developed as a whole.	Section 1.6.
Commenter suggested that, at a minimum, the Brookings County to Hampton project be analyzed in the EIS for Hampton-Rochester-La Crosse because the projects are electrically connected at the proposed Hampton Substation.	Section 1.6.
Commenter concerned about impacts of Badger-Coulee transmission line and/or believes it is a connected action.	Badger-Coulee is not part of the proposal. See also Section 1.6.
<b>Geology and Soils</b>	
The Nature Conservancy has identified the confluence of the Zumbro and Mississippi Rivers and the sand delta that formed behind it as a high priority conservation area for its characteristic sand dunes, dry sand prairie and many rare species that occur there. The Conservancy refers to this area as the Weaver Dunes-Zumbro Delta conservation area.	Section 3.5.1.3. The area will not be impacted by the Proposal.
Commenters expressed concern about potential erosion, especially in bluff areas along the Mississippi, Cannon and Black Rivers.	Section 3.1
Slope and grade need to be considered when finalizing the route.	Section 3.1.2.2.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
Have gravel pits been identified on the maps?	See Sections 3.1.1.2, 3.1.1.3, 3.1.2 and 3.1.3.
Have sinkholes been identified on the maps?	
Commenter expressed concerns about karst and referenced a siting for nuclear waste that found Goodhue County almost entirely lacking suitable sites because of karst features.	See Sections 3.1.1.2, 3.1.2 and 3.1.3. Potential karst impacts associated with nuclear waste are very different from those associated with transmission lines.
The commenter believed an in-depth analysis of the potential impacts on karst features needed to be included.	Section 3.1.1.2.
It was also requested that mitigation of soil compaction and damage caused during construction and operation of the Project be considered in the EIS.	Section 3.1.
Commenter was concerned about siltation impacts to ponds within drainageways of proposed construction access roads.	Section 3.2.
<b>Noise</b>	
Commenters expressed concerns about noise from transmission lines, focusing on the audible hum of transmission lines or the whistling that occurs in windy conditions.	Section 3.4.
Commenters requested that noise impacts to quiet rural areas, noise, residential, recreational, and wildlife preservation areas where background noise is generally quiet be analyzed in the EIS.	Section 3.4.
<b>Biological Resources</b>	
Commenter expressed concerns about impacts to habitat from tree removal.	Section 3.5.2
The flight path of migratory waterfowl would be negatively impacted.	Sections 3.5.1.4, 3.5.2.4, and 3.5.3.4
Commenters are concerned about impacts to various MDNR trout streams.	Section 3.2.1.4
Commenters were concerned that tree removal would increase the risk of Buckthorn infestation.	Sections 3.5.1.2, 3.5.2.2 and 3.5.3.2

Comments	Response/Reference to Draft EIS Discussion
Commenter suggests coordinating with USFWS regarding golden and bald eagles.	USFWS is a cooperating agency for the EIS (Section 1.2.2.2).
Commenter is concerned that the Proposal would adversely impact the land he is managing for the endangered Karner blue butterfly. ( <i>Lycaeides melissa</i> ).	Section 3.5.3.5
Commenters expressed concerns about impacts to fauna including, but not limited to: Bald Eagle, turkey, white-tailed deer, pheasant, grouse, Pileated Woodpecker, White Egret, Blue Heron, owls, wood turtles, short-tailed weasels, Henslow's sparrows, loggerhead shrikes, prairie voles, trout lily, wild ginger, prairie bush clover, and kitten tails and Monarch butterflies.	Section 3.5
Commenters expressed concerns about impacts to flora including, but not limited to: Dwarf Trout Lilies, Yellow Lady's Slipper Orchid, Nodding Trillium, Grandiflora Trillium, Prairie Bush Clover, red/white oaks, black walnut, black cherry, white ash, silver maple, and red/white/scotch pine.	Section 3.5
<b>River Crossings</b>	
The Nature Conservancy expressed concern that an additional high voltage transmission line crossing the Mississippi River will lead to an increase in avian mortality as this is a major migratory bird flyway and commended the applicants for working with the U.S. Fish and Wildlife Service.	Sections 3.5.1.4, 3.5.2.4, and 3.5.3.4.
We understand an alternative route across the Mississippi River is required by Minnesota rules. We do not see anywhere, in any of the maps available to us, where a second river crossing would be operated.	Section 3.2.1.1.
Commenters expressed concerns about impacts on wetlands at river crossings.	Section 3.5.
Commenter stated that the Cannon River be avoided because it is designated as part of the Minnesota Wild, Scenic, and Recreational Rivers Program.	Crossing the Cannon River is unavoidable. Section 3.2.2.3.
<b>Land Use</b>	
Commenters believe the Proposal is inconsistent with land-use plans of the local government agencies, including the City of Pine Island, City of Oronoco, Oronoco township, or Olmsted County.	Section 3.6.1.1, 3.6.2.1.
Commenter believes that route should not cross land identified by a municipality or township as future residential.	Section 3.6.1.1, 3.6.2.1.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
Commenter believes the transmission line should be placed on lower value property and not on land "slated for residential development within a high powered school district."	Section 3.11.2.5.
Residents are concerned that their land will become unusable for home construction.	Sections 3.6.1.1, 3.6.2.1 and 3.11.2.1.
Residents are concerned that future land use (in general, no specifics given) will be affected.	Sections 3.6.1.1, 3.6.2.1 and 3.11.2.1.
Commenter expressed concern about impacts on their property which they are planning to develop for commercial/industrial use.	Sections 3.6.1.1, 3.6.2.1 and 3.11.2.1.
Commenters requested that the direct and indirect impacts to current and future land be examined in the EIS, including agriculture, forests, river valleys, MDNR forest management areas, sensitive land uses, businesses, recreational land, residential areas, and commercial land use.	Sections 3.6 and 3.11.2.1.
<b>Land Rights and Easement Acquisition</b>	
ROW requirements along the route should be clarified, and all Project activities must remain within the ROW.	Section 2.4.2.1
What impact will the right-of-way (ROW) have on residences and businesses along the various routes?	Impacts are discussed by resource throughout the Draft EIS. Sections 3.10 and 3.11 are most applicable.
Commenters questioned the safe and allowable distance between a home and a transmission line.	Section 3.10.
Routes should follow existing ROW corridors to eliminate need for new ROW agreements.	Criteria for identifying routes is described in the Draft EIS and includes consideration of existing corridors.

Comments	Response/Reference to Draft EIS Discussion
<p>Comment on Minnesota DEIS: Section 8.1.4.11 states that most portions of rural US-52 are constructed on approximately 280 feet of right-of-way, and also that the Applicant has proposed that 70 feet of the transmission line right-of-way overlap the highway right-of-way. It is important to note that the width of the highway right-of-way is not uniform and may vary in width along any highway. Also, 70 feet of occupation of the highway right-of-way implies a pole placement approximately 5 feet outside the right-of-way boundary line. As MnDOT noted in its letter on the scoping of the DEIS, US-52 is a four-lane divided highway that carries a high volume of vehicle traffic daily. US-52 has been designated as a high priority Interregional Corridor and the vision for US-52 is to develop it as a fully access controlled freeway facility. Therefore, MnDOT's intent is to apply freeway standards to any permit applications by the Applicant, including the restriction on static occupation of the highway right of way. This would imply a pole position approximately 25 feet outside the right-of-way boundary line.</p>	<p>Section 2.4.2.2.</p>
<p><b>Conservation and Scenic Easements</b></p>	
<p>Does the Reinvest in Minnesota (RIM) program allow for electric transmission lines to cross affected property? Are permits required for land in the RIM program?</p>	<p>Section 3.6.2.3.</p>
<p>Commenter requested full disclosure of conservation and scenic easements.</p>	<p>These are addressed as appropriate. See Sections 3.6.2.3, Table 2-5, 3.7.1.1, and 3.7.3.</p>
<p>Commenters requested that land in conservation easements be avoided and the potential impacts assessed if the Project passed through a conservation easement. Specific concerns include easements in Oakwood Township, Minnesota and land enrolled in the Minnesota Land Stewardship Program.</p>	<p>Section 3.6.2.3.</p>

Comments	Response/Reference to Draft EIS Discussion
<b>Recreation</b>	
<p>Commenters requested that recreational areas be preserved and avoided, specifically citing Lake Zumbro, the Zumbro River Valley, Lake Byllesby, the Cannon River, the Woodland Camp, Camp Victory, useable lakes and rivers in southeastern Minnesota, Steeplechase Ski and Snowboard Area, the bluffs near the Mississippi River, hunting grounds on private and public property, fishing areas, hiking areas, campgrounds, trails and parks.</p>	<p>Impacts on land resources, including parks and recreation area, are discussed in Section 3.6. Ski areas will not be directly affected. River crossings are unavoidable. Surface water impacts are discussed in Section 3.2. Impacts to recreation will generally be limited to visual impacts (Section 3.7).</p>
<p>Proposed highway layout changes and interchange additions outlined in MnDOT plans need to be taken into account when the final route is decided.</p>	<p>Section 3.8.1.</p>
<p>Citizens are concerned about Project interference with recreational activities including: biking, snowmobiling, flight, water skiing, fishing, kayaking, hunting, canoeing, walking/hiking, golf, horse riding, bird watching, and ice fishing.</p>	<p>Recreational impacts will be generally be limited to visual impacts (Section 3.7). Airports are discussed in Section 3.8.2.</p>
<b>Visual Impacts</b>	
<p>Part of any environmental discussion should also include the visual effect to the land. The preferred route will see little additional impact, whereas the alternative routes will be greatly visually scarred.</p>	<p>Section 3.7.</p>
<p>Commenter believes that keeping the alignment on U.S. 52 would reduce visual impacts.</p>	<p>Section 3.7.</p>

Comments	Response/Reference to Draft EIS Discussion
Commenter expressed concern about visual impacts on Lake Zumbro, Lake Byllesby, and/or the Zumbro River Valley. One commenter was especially concerned about impacts on weekends when more recreational users are present.	Section 3.7.
The commenter expressed concerns about visual impacts on the Nansen Agricultural historic district.	Section 3.7.
The commenter expressed concerns about visual impacts on the bluffland areas of Winona and Wabasha counties.	Section 3.7.
Commenters requested that the EIS address direct and indirect visual impacts to specific resources ranging from the National Scenic Byway located in Minnesota and Wisconsin, the Mississippi River channel, Van Loon Wildlife Area, scenic byways, neighborhoods and homes, Lake Zumbro, rural agricultural communities, waterways, wetlands, and recreational areas.	Section 3.7.
Commenters expressed concerns about visual impacts on residences and/or the area in general.	Section 3.7.
<b>Transportation and Access</b>	
Construction will affect 65 <sup>th</sup> Street –it’s already in need of major repairs and has poor visibility. Has this been taken into consideration?	Section 3.8.1.
The effect of transmission lines and pole structures on Stanton's Automated Weather Observation Station (AWOS).	Section 3.8.2.
Stanton caters to gliders and small general aviation aircraft. Gliders, with only a few exceptions, are not powered by an engine and therefore are severely limited in their ability to alter altitude on final approach. FAA guidelines do not address the special limitations of gliders.	Section 3.8.2.
Commenter expressed concern about one of the advisory committees placing a line too close to the Stanton Airport, especially after the applicant had been coordinating with airport personnel.	Section 3.8.2.
Takeoff and landing areas for aerial crop spraying and dusting should be addressed.	Section 3.8.2
Impacts on both public and private airports should be considered, even if FAA rules are not applicable.	Section 3.8.2.
The Project will interfere with recreational airplane flight.	Section 3.8.2.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
The transmission line route will interfere with road access that would allow future property development.	The line will cross major highways and will not interfere with road access.
Commenter is concerned that wooded buffers along U.S. 52 will be eliminated to satisfy ROW requirements for the transmission line.	Section 3.7.2.
Commenter requested that private airports be considered during the routing process.	Section 3.8.2.
Commenter requests that impacts to private drives be avoided.	The Draft EIS details the criteria used to locate routes and avoid and minimize impacts. Private drives were not included in the criteria. The line will cross major highways and will not affect access for private driveways.
<b>Historic and Cultural</b>	
Impacts to the Nansen Agricultural Historic District, which was established as the nation's first rural historic landscape district, should be considered.	Section 3.9
Agricultural heritage in general, and specifically farms designated as "Century Farms", will be negatively impacted.	Section 3.7.2 and 3.9.
Route 1P-009 will encroach upon Urland Lutheran Church, a 130 year old congregation.	Section 3.9.
Proposed route 2C3 will affect the Old Stagecoach Trail along the Goodhue-Wabasha county line.	Section 3.9.
Commenters requested avoidance of the Laura Ingalls Wilder historic trail and homestead.	Section 3.9
The route that follows Hwy 52 through Pine Island appears to affect the Pine Island Cemetery.	Section 3.9

Comments	Response/Reference to Draft EIS Discussion
Our property [Mary Lazaretti] has 3 building sites with nearly 25 farm buildings on them. After we purchased we decided that since we had the means, we wanted to restore all the buildings on the property in order to preserve the story they tell. Our farm buildings are representative of farm life from the late 1800's through the 1950's and the story they tell of our history is worth preserving.	Section 3.9
Indian mounds have been noted in Warsaw Twp, Section 8.	Section 3.9
Investigation has been requested on the identification and registration of Native Indian burial sites on the east bluff above the Zumbro River on route 3A (Section 15, T109N R14SW of Wabasha County).	Section 3.9
The Hampton to Randolph route will affect St. Mark Lutheran Church.	Section 3.9
Commenter requested that impacts on Century Farms and stagecoach routes and associated facilities be addressed.	Section 3.9
Our family farm [John Peterson] is not noted as a historic farm, as we were named by MnDOT within the past few years. A MnDOT representative cataloged information about our farm, and subsequently we were named as a historic farm. This historic designation should be noted (it doesn't appear currently) on the EIS, given that two of the proposed routes would travel through our property and alter our farm forever. In particular, the route IP-001 would cut right through the heart of our farm.	Section 3.9.
Commenters noted a "historic Sears home" in Oronoco Township.	Section 3.9.
Within 100 yards of my house [Ann Troost] multiple Native American Ojibwe Indian arrowheads have been found in the garden. Dr. Alan and Karen Bard unearthed many artifacts on this property in the 1980's and surrounding decades. The original owner Mr. Rusch stated that the Indians used to camp here, prior to the Homestead Act of 1862.	Section 3.9.
Commenters requested that resources be avoided, such as century farms, places currently or nominated to be on the National Registry of Historic Places, historic farms, historic school houses, cemeteries, archeological sites, historic trails, and homesteads, citing specifically Mount Trempealeau and Laura Ingalls Wilder Historic trails and homestead.	Section 3.9.

Comments	Response/Reference to Draft EIS Discussion
<p>Tribal representatives explicitly asked that specific areas of tribal importance be avoided including active tribal ceremonial sites, grave sites along the Mississippi River protected under Native American Graves Protection and Repatriation Act (NAGRPA), Native American cave and mound burial sites, vision quest sites, and architectural property, archeological sites, culturally sensitive sites, or traditional cultural properties significant to the Ho Chunk Nation. In addition, tribes requested to be included in the formal Section 106 process by being provided with cultural resource studies and archeological reports and offered to host site visits with the RUS.</p>	<p>Section 3.9.</p>
<p><b>Health and Safety</b></p>	
<p>Commenters have concerns about the human and animal health effects of EMF, stray voltage, the lack of U.S. exposure standards for EMF, use of estimates rather than design capacities to calculate magnetic fields. Specific concerns are related to impacts on implanted medical devices (e.g., pacemakers) and hearing aids, fertility and milk production in cattle, potential to cause cancer or other diseases, and catastrophic failure due to adverse weather, requesting that the EIS include assessment of the detrimental direct and indirect impacts.</p>	<p>Section 3.10, Section 3.11.2.2</p>
<p>In the event of a fault with a high voltage line, fiber optic lines have transferred current into homes causing fires and electrocution, with no solution, as of an EPRI report released in 1997. The FEIS should take into consideration risks of fiber-optic.</p>	<p>Section 3.10.2.3.</p>
<p>Commenter is concerned about spread of chronic wasting disease (CWD) through movement of contaminated soil.</p>	<p>Section 3.5.4.1, 3.5.2.4, 3.5.3.4</p>
<p>Commenter is concerned about potential impacts to emergency medical helicopters.</p>	<p>Section 3.8.3.</p>
<p>Commenter is concerned about stray voltage and/or storm damage.</p>	<p>Section 3.10.1.2</p>
<p>Do transmission lines affect 911 emergency service systems?</p>	<p>No.</p>
<p>Commenter detailed information on EMF.</p>	<p>Information needed for analysis of potential health impacts is presented in Section 3.10.1.1 and Appendix H.</p>

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
<p>Commenter is concerned that a failure of a dam upstream of the transmission line would destroy the line.</p>	<p>A dam failure is a low-probability event that could result in widespread damage to structures, including transmission lines. See Section 3.10.2.3 for discussion of electrical safety issues.</p>

Comments	Response/Reference to Draft EIS Discussion
<p>Commenter is concerned about ice falling from transmission lines onto nearby residences during high winds.</p>	<p>Excessive ice buildup can cause lines to fail. Ice storms are dangerous and can cause damage, and the combination of an ice storm and high winds is especially dangerous. However, power lines do not pose any particular hazard relative to other structures or natural features (e.g., trees) that may accumulate ice. Because no residences are within the ROW, power lines would seem to be of relatively low concern for impacts to residences in the event of combined ice and wind storm.</p>
<p>Commenter is concerned about the impact of the transmission line on windbreaks.</p>	<p>Section 3.11.2.3.</p>
<p><b>Electrical Characteristics</b></p>	
<p>Commenters are concerned about impacts of stray voltage on distribution lines.</p>	<p>Section 3.10.1.2.</p>
<p>Commenters are concerned about potential impacts of transmission lines on cell phones and internet.</p>	<p>Section 3.11.2.2.</p>

Comments	Response/Reference to Draft EIS Discussion
A table such as Exhibit C underestimates the Magnetic Field that would be created if the transmission line was utilized to its full potential capacity, or to 80% of its full potential capacity.	Section 3.10.1.1.
Commenters are concerned about potential impacts of transmission lines on GPS, specifically for usage on agricultural equipment, including questions about compensation or mitigation if interference does occur.	Section 3.11.2.2.
How big is the magnetic field created by the transmission lines?	Section 3.10.2.1, Table 3-8.
Commenters questioned the potential effects of EMF on humans and livestock, as well as static electricity and stray voltage issues, and how they would be mitigated.	Section 3.10, Section 3.11.2.2
<b>Social and Economic</b>	
Commenters are concerned about impacts on Veteran's Administration (VA) financing for home loans.	Section 3.11.2.1.
Commenter believes impacts on FHA mortgages should be further addressed and states that FHA insured over 37% of all mortgages.	Section 3.11.2.1
Commenters are concerned about impacts to property/home values.	Section 3.11.2.1.
What is the financial compensation for potential decreases in property values?	Section 3.11.3.1
Commenters are concerned about a potential increase in taxes resulting from the transmission line.	If property values increase, taxes would increase.
Commenters are concerned about impacts to land- and property- based income.	Section 3.11.2.1.
The transmission line may affect visual resources that provide value.	Section 3.7 and 3.11.2.1.
Commenter is concerned about potential impacts on tourism.	Section 3.11.2.1.
Commenter is concerned about potential increases in electricity rates to pay for the transmission lines	Funding and evaluation of rates are outside the scope of the EIS.
Commenters are concerned about general impacts on businesses, including those that are agriculture-based, or recreational.	Section 3.11.2.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
Commenters questioned the continued viability of small farms that might be part of a final alignment and therefore host an easement.	Sections 3.11.2.2 and 3.11.3.2.
How will this Project affect the new water tower for the City of Wanamingo?	The Proposal will not impact the new water tower.
Commenters are concerned about impact on future development of property.	Section 3.11.2.1.
Commenters questioned the source of Project funds and wondered about other potential use for the money.	The purpose and need for the Proposal is discussed in Section 1.2. Funding is outside the scope of the EIS.
Why would the Project be routed in rural land and affect rural landowners when users in urban centers would be the principal beneficiaries of this Project?	Nearly all landowners, urban and rural, benefit from electricity. Routes are identified based on the criteria described in detail in the Draft EIS.
<b>Agriculture</b>	
Is the Proposal consistent with Minnesota's policy of agricultural preservation (Minn. Stat. 17.80)?	Section 3.11.3.2.
Commenters are concerned about the impacts of transmission lines on crop production (corn, soybeans, wine grapes, pumpkins), grazing land (dairy cattle, hogs, goats, turkeys), tree farms, vineyards, livestock and dairy farms.	Sections 3.11.2.4 and 3.11.3.2.
Commenter believes that forestry impacts should be included as agricultural, noting that impacts are permanent.	Compensation for permanent loss of use is covered by the easement payment (Section 3.11.3.1).
Commenter is concerned about impact of poles on contoured terraces in farm fields.	Sections 3.11.2.4 and 3.11.3.2.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
Commenter is concerned about potential impacts on certified organic farms, including the loss of productive farmland and revenue associated with production, interference with farming equipment and operations, compaction of soil, and the health and safety of livestock (especially dairy cattle).	Section 3.11.3.2.
Commenters are concerned about the impact to operations including tile drainage and possible destruction, center pivot irrigation systems, and the aerial application of chemicals.	Section 3.11.3.2.
Commenters also questioned the ability of farms to navigate farm equipment around transmission line structures and if compensation for damages and losses would be provided by the utilities.	Section 3.11.3.2.
<b>Residential</b>	
Commenters request avoidance of residences, family farms, and/or future home sites.	Impacts to residences, including farm residences, have been avoided to the extent practicable. Future home sites were not accounted for.
Commenters request more specific information on locations of residences.	Locations of residences can be found on the detailed maps in Appendices E (MN) and G (WI).
<b>Environmental Justice</b>	
Commenter expressed concerns about environmental justice.	Section 3.11.2.3.
Commenter questioned proper and timely notification of the Project for the Trempealeau County area, noting that the population is small and displays low income characteristics, indicating that the residents would be uniquely disadvantaged.	Section 3.11.2.3.

Comments	Response/Reference to Draft EIS Discussion
<b>Cumulative Impacts</b>	
Residences already impacted by a utility easement should not be affected by another, specifically citing the Williams pipeline.	Minnesota and Wisconsin regulations require consideration of co-location in existing utility corridors (Section 2.3).
Commenter questioned the cumulative impact to migratory birds and waterfowl within the Mississippi Flyway.	Section 4.4.

<b>Comments</b>	<b>Response/Reference to Draft EIS Discussion</b>
<p>Commenter questioned the cumulative impacts if this Project were enabling a new coal generation in the Dakotas, and its impact on global warming.</p>	<p>The Proposal purpose and need is discussed in Section 1.2 and is not specifically related to electric generation in North and South Dakota. Because the Proposal will allow an outlet for bottled up generation (Section 1.1.2.3), it provides for more efficient use of electricity that is generated, and thus reduces the need for additional generation. Note that by law coal-generated electricity has the same access to transmission facilities as electricity generated by other means.</p>
<p>Commenter requested that the cumulative impacts of new wind farm development correlated to the final route alignment for the proposed Project be analyzed in the EIS.</p>	<p>Cumulative impacts from the Proposal, including those resulting from wind farm development, are discussed in Section 4.4.</p>

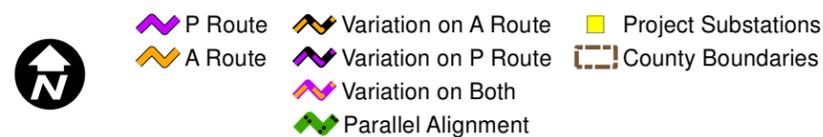
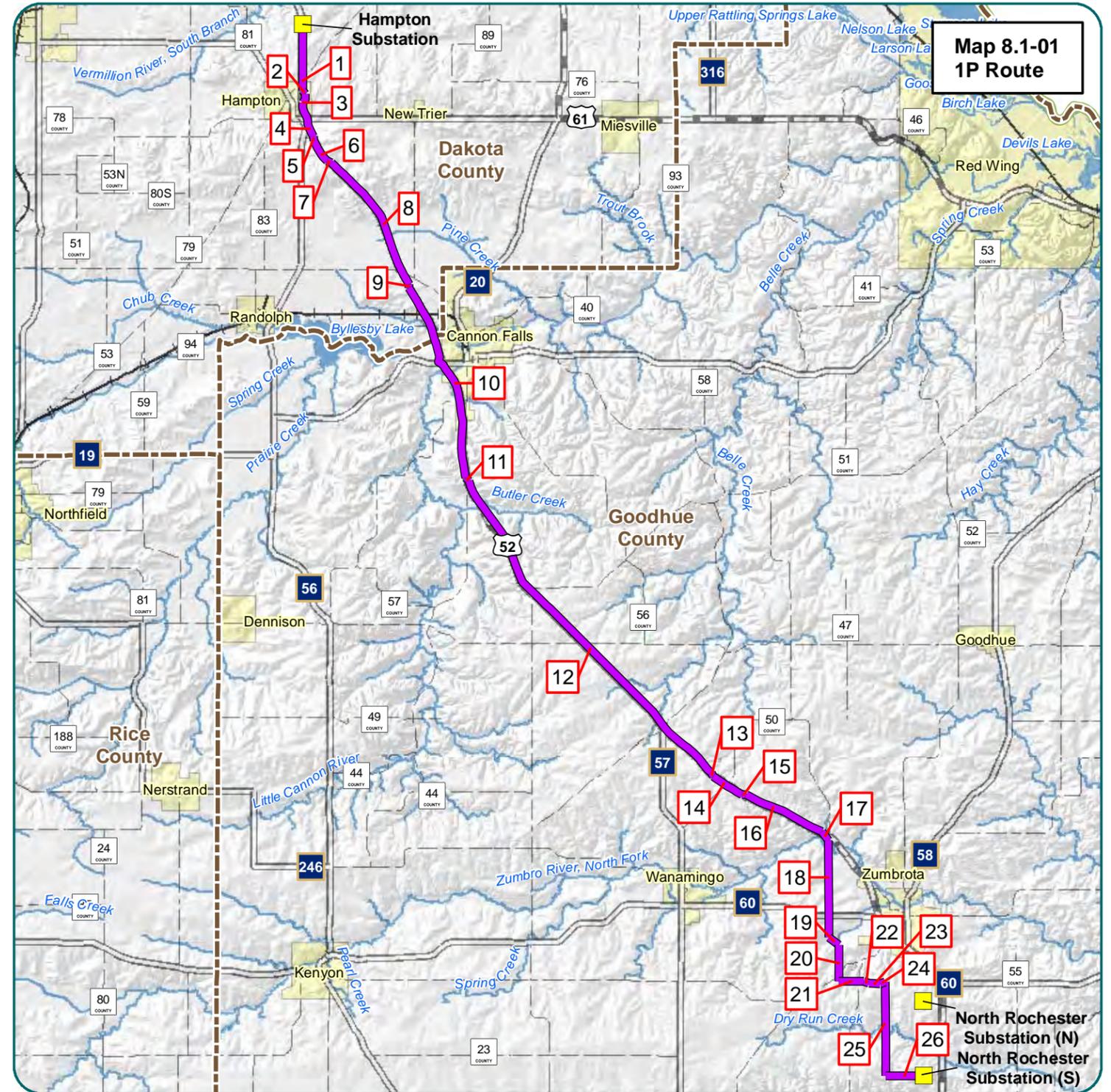
Appendix D – Detailed Descriptions of Route Alternatives - Minnesota Final EIS

8.1.1 Description of Route Alternatives – Hampton to North Rochester Substation

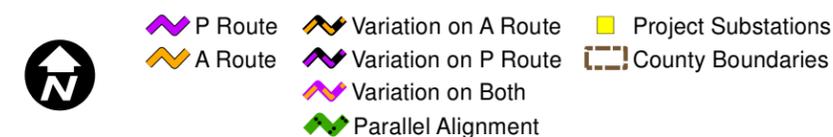
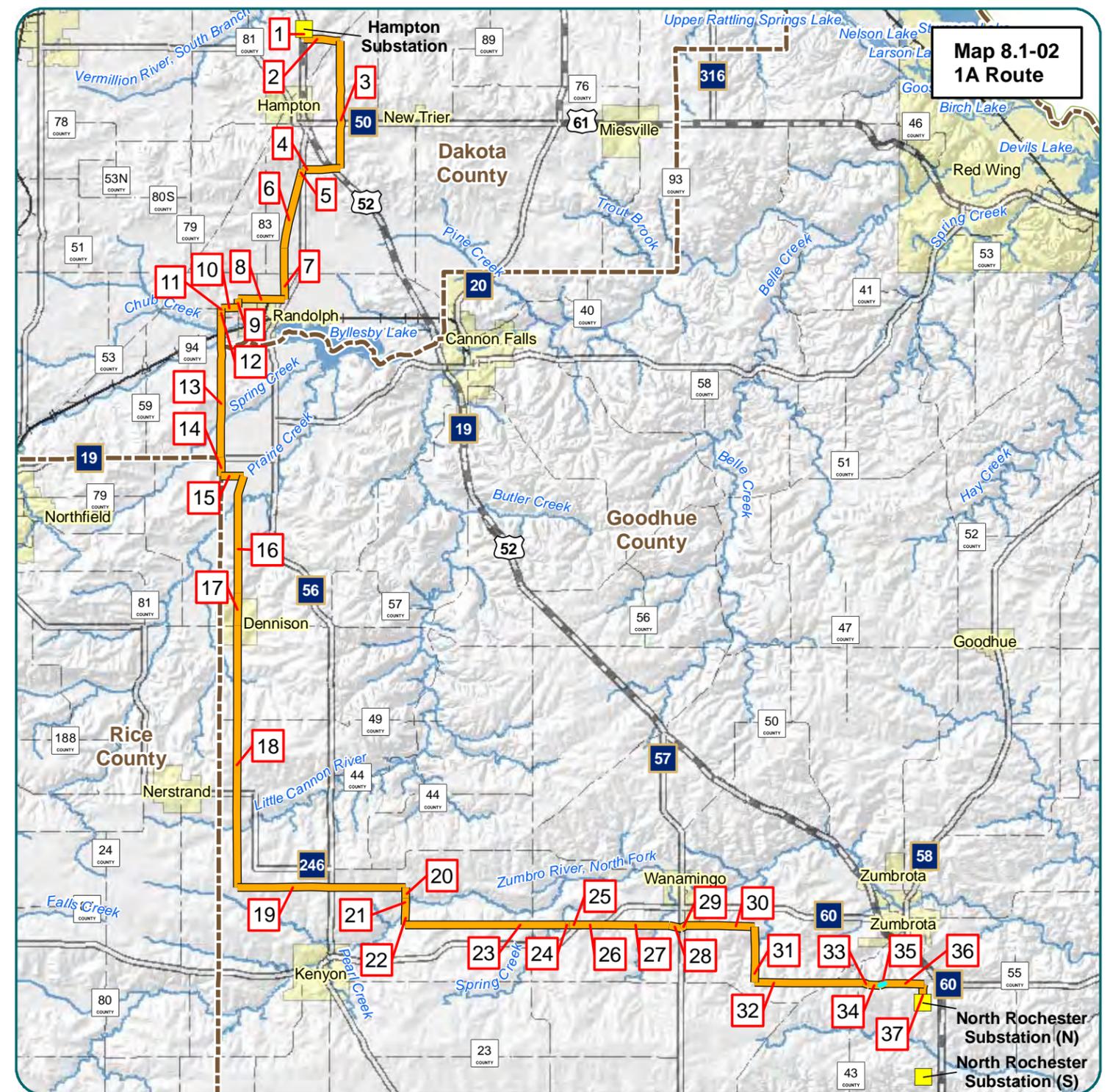
Hampton to North Rochester (1P)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the Hampton Substation go south following US Hwy 52	1.77	Major Hwy
2 Turn southeast cross-country	0.11	Cross-country
3 Turn south then southwest following field line/cross country to US Hwy 52	0.26	Field Line/Cross-country
4 Turn south/southeast following US Hwy 52	0.96	Major Hwy
5 Turn south crossing US Hwy 52	0.12	Major Hwy
6 Turn southeast following US Hwy 52	0.63	Major Hwy
7 Turn east/southeast crossing US Hwy 52	0.13	Major Hwy
8 Turn southeast following US Hwy 52	3.91	Major Hwy
9 Turn south crossing US Hwy 52	0.11	Major Hwy
10 Turn southeast following US Hwy 52	5.44	Major Hwy
11 Continue southeast crossing US Hwy 52	0.12	Major Hwy
12 Turn south/southeast following US Hwy 52/transmission line	10.23	Major Hwy/Transmission Line
13 Continue south/southeast crossing US Hwy 52	0.12	Major Hwy
14 Turn southeast following US Hwy 52	0.90	Major Hwy
15 Turn east crossing US Hwy 52	0.13	Major Hwy
16 Turn southeast following US Hwy 52/transmission line	2.25	Major Hwy/Transmission Line
17 Turn south/southeast crossing US Hwy 52 then cross-country	0.28	Major Hwy/Cross-country
18 Turn south following field line/cross country	2.58	Field Line/Cross-country
19 Turn south/southeast cross-country	0.32	Cross-country
20 Turn south following field line	0.98	Field Line
21 Turn east following field line	0.66	Field Line
22 Turn east/southeast cross-country	0.15	Cross-country
23 Turn east following field line	0.29	Field Line
24 Turn east/northeast cross-country	0.15	Cross-country
25 Turn south following transmission line	2.51	Transmission Line
26 Turn east following field line/cross-country and enters the proposed North Rochester Substation (S) area	1.01	Field Line/Cross-country
<b>Total Length</b>	<b>36.11</b>	

Hampton Substation to North Rochester Substation

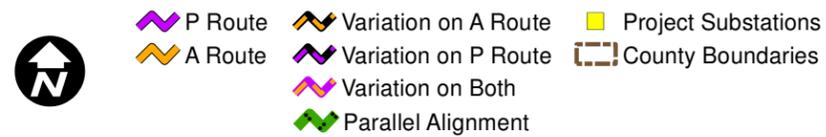
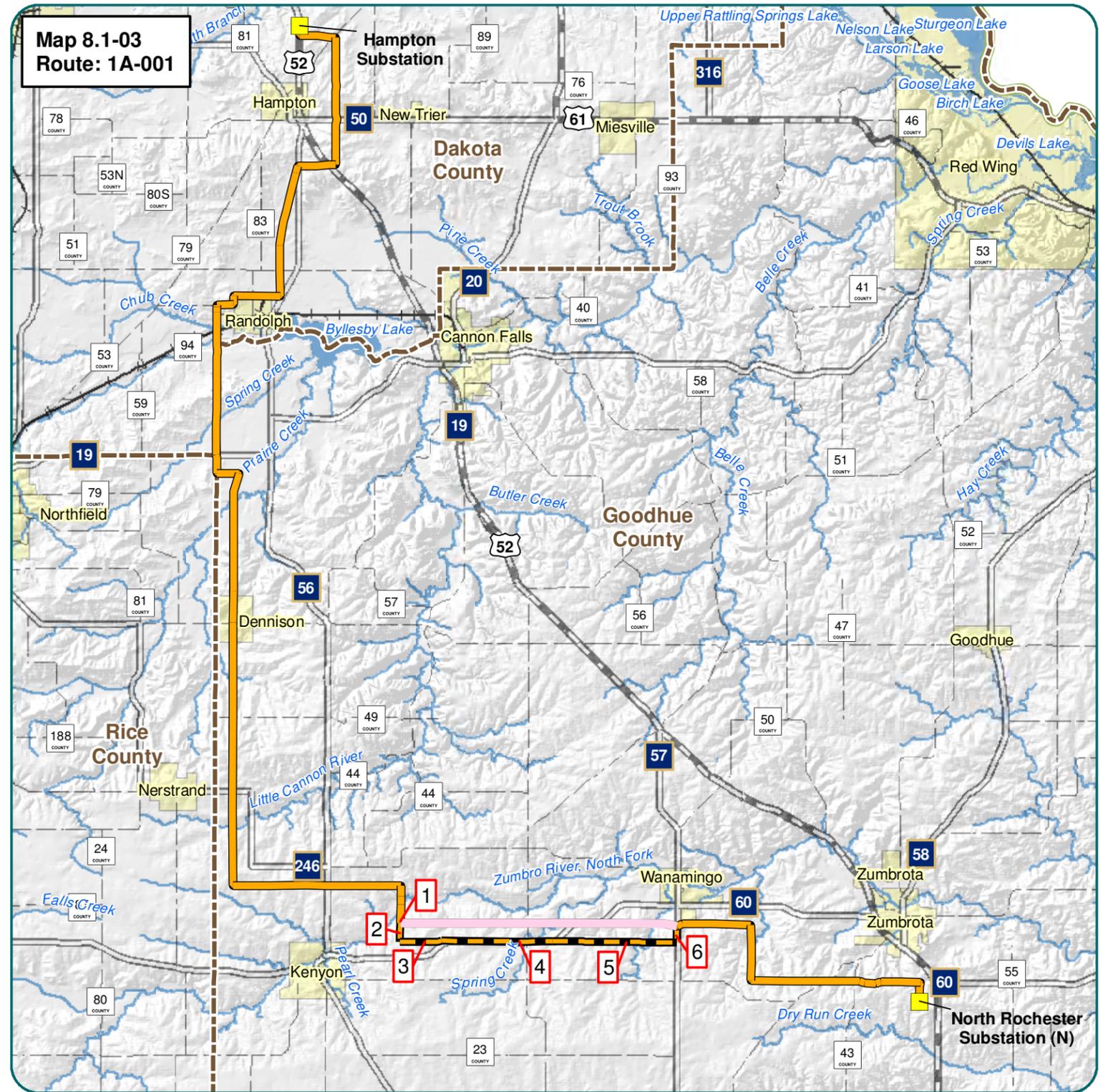
Section 8.1



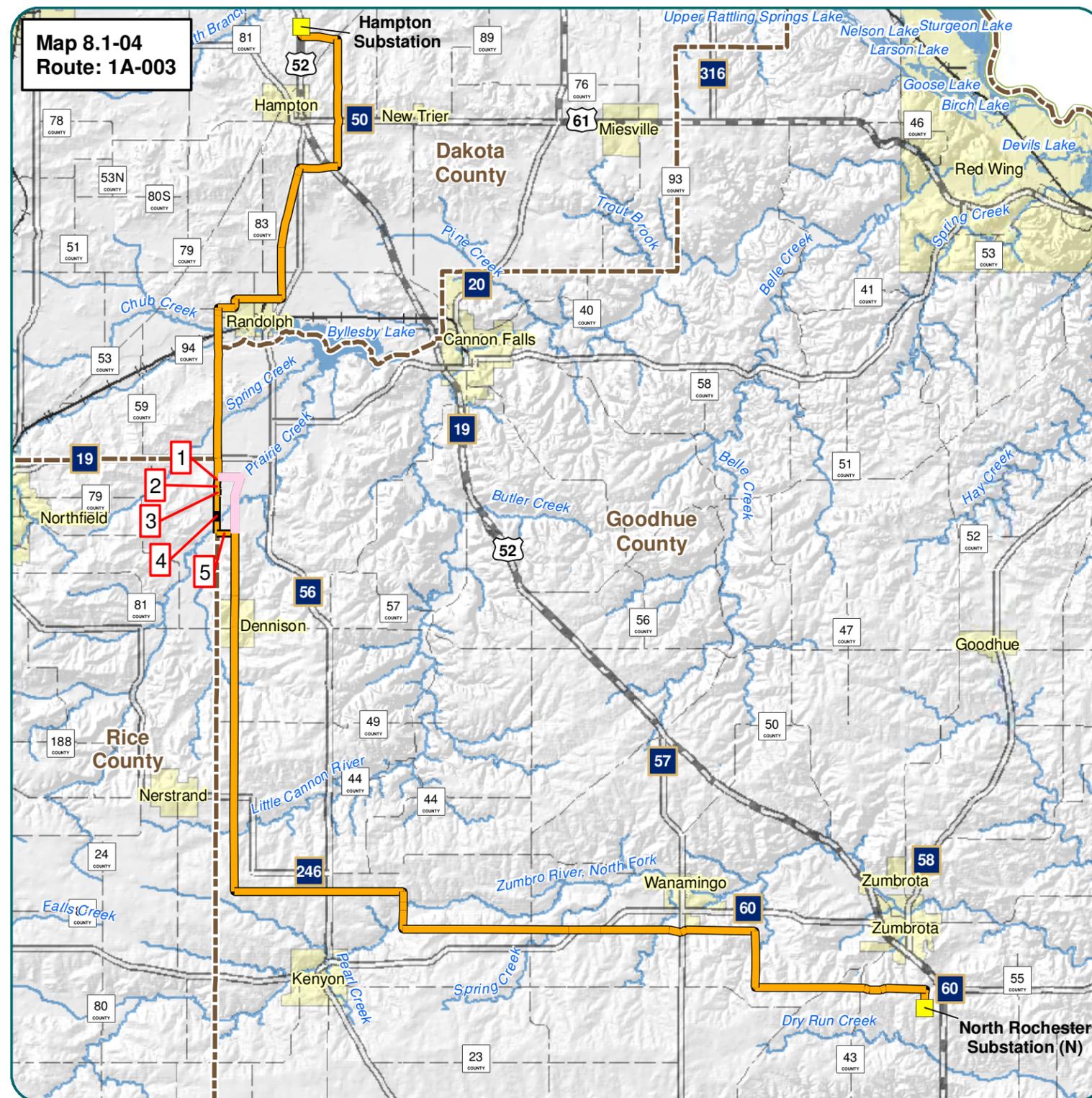
Hampton to North Rochester (1A)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the Hampton Substation go south following US Hwy 52	0.27	Major Hwy
2 Turn east following field line/cross-country	0.97	Field Line/Cross-country
3 Turn south following field line/cross-country	3.40	Field Line/Cross-country
4 Turn west following field line/cross-country	1.03	Field Line/Cross-country
5 Turn southwest cross-country to Douglas State Trail	0.18	Cross-country
6 Continue southwest then south following Douglas State Trail	1.98	Trail
7 Continue south following field line	1.36	Field Line
8 Turn west following field line	1.24	Field Line
9 Turn south following field line	0.23	Field Line
10 Turn west following field line	0.45	Field Line
11 Turn south following field line	0.06	Field Line
12 Continue south following 290th St. SE	0.14	Cty or Twp Road
13 Continue south following field line/cross-country to Goodhue Ave.	3.79	Field Line/Cross-country
14 Continue south following Goodhue Ave.	0.50	Cty or Twp Road
15 Turn east following field line	0.61	Field Line
16 Turn southwest then south following field line/cross-country to 5th Ave. Way	3.17	Field Line/Cross-country
17 Continue south following 5th Ave. Way	0.84	Cty or Twp Road
18 Continue south following field line/cross-country	7.00	Field Line/Cross-country
19 Turn east following field line/cross-country to 50th Ave.	4.49	Field Line/Cross-country
20 Turn south following 50th Ave.	0.28	Cty or Twp Road
21 Continue south cross-country	0.22	Cross-country
22 Continue south following 50th Ave.	0.51	Cty or Twp Road
23 Turn east following field line/cross-country to local road	4.27	Field Line/Cross-country
24 Continue east following local road	0.12	Local Road
25 Continue east following transmission line	0.25	Transmission Line
26 Continue east following MNTH 60/transmission line	0.62	Major Hwy/transmission line
27 Continue east following field line/cross-country	1.80	Field Line/Cross-country
28 Turn east/southeast cross-country	0.32	Cross-country
29 Turn northeast cross-country	0.16	Cross-country
30 Turn east following field line/cross-country	1.83	Field Line/Cross-country
31 Turn south following field line/cross-country	1.50	Field Line/Cross-country
32 Turn east following field line/cross-country	2.91	Field Line/Cross-country
33 Turn east/southeast cross-country	0.15	Cross-country
34 Turn east following field line	0.29	Field Line
35 Turn east/northeast cross-country	0.15	Cross-country
36 Turn east following field line	1.05	Field Line
37 Turn southwest then south following transmission line and enters the Proposed North Rochester Substation (N)	0.49	Transmission Line
<b>Total Length</b>	<b>48.62</b>	

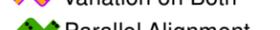


Hampton to North Rochester (1A-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route until 50th Ave.		
2 Continue south following 50th Ave.	0.50	Cty or Twp Road
3 Turn east following field lines to MN Hwy 60	1.10	Field Line
4 Continue east following MN Hwy 60 along existing transmission line	2.97	Major Hwy/Transmission Line
5 Continue east following 460th Street	3.31	Cty or Twp Road
6 Turn north following TH 57	0.44	Returns to applicant's alternate route - Major Hwy/Transmission Line
Total Length		49.58



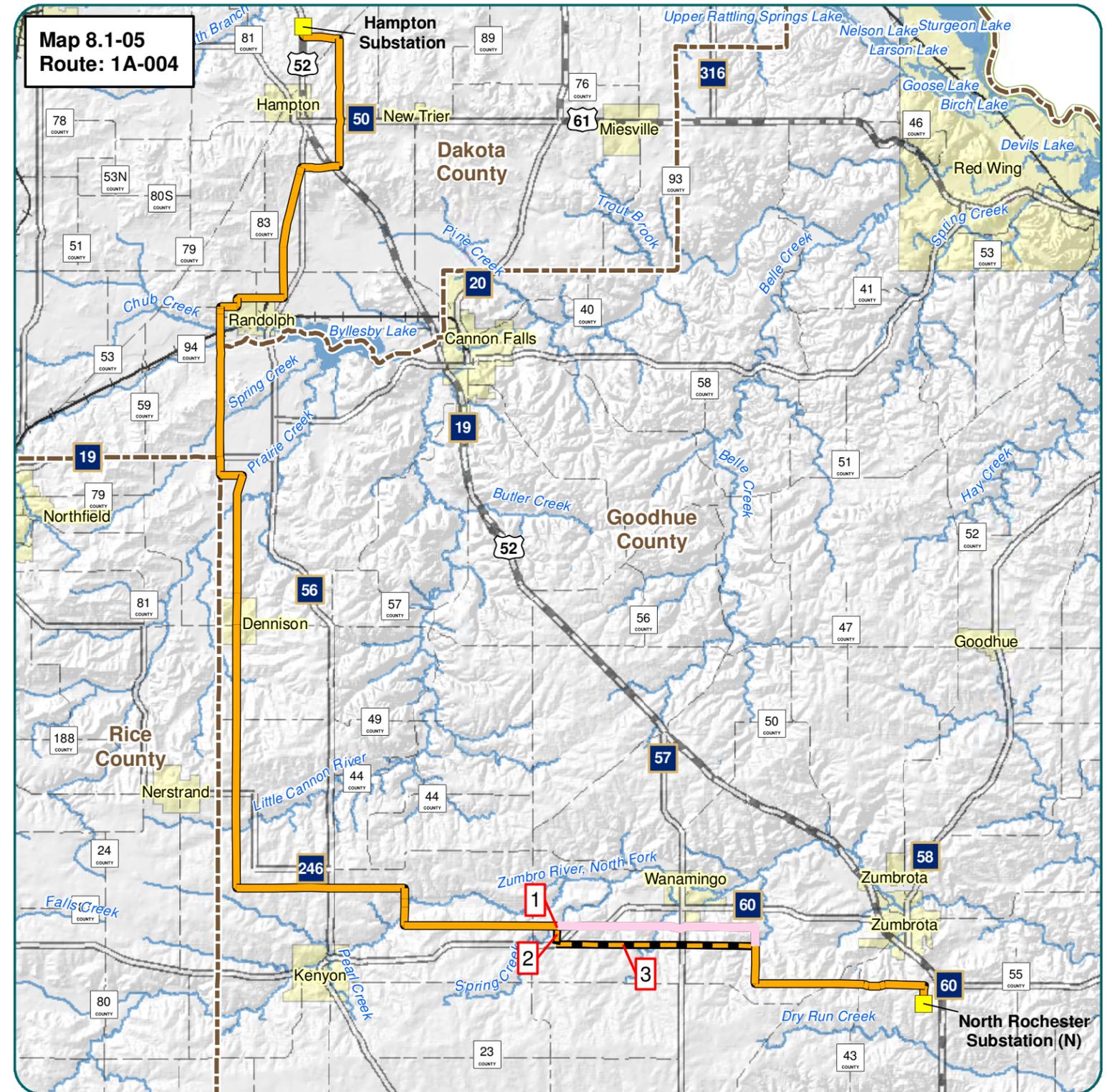
Hampton to North Rochester (1A-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's alternate route until Goodhue Ave.
2	0.33	Cty or Twp Road
3	0.17	X-Country
4	1.01	Cty or Twp Road
5	0.49	Returns to applicant's alternate route - Cty or Twp Road
Total Length		48.48



-  North Arrow
-  P Route
-  A Route
-  Project Substations
-  County Boundaries
-  Variation on A Route
-  Variation on P Route
-  Variation on Both
-  Parallel Alignment

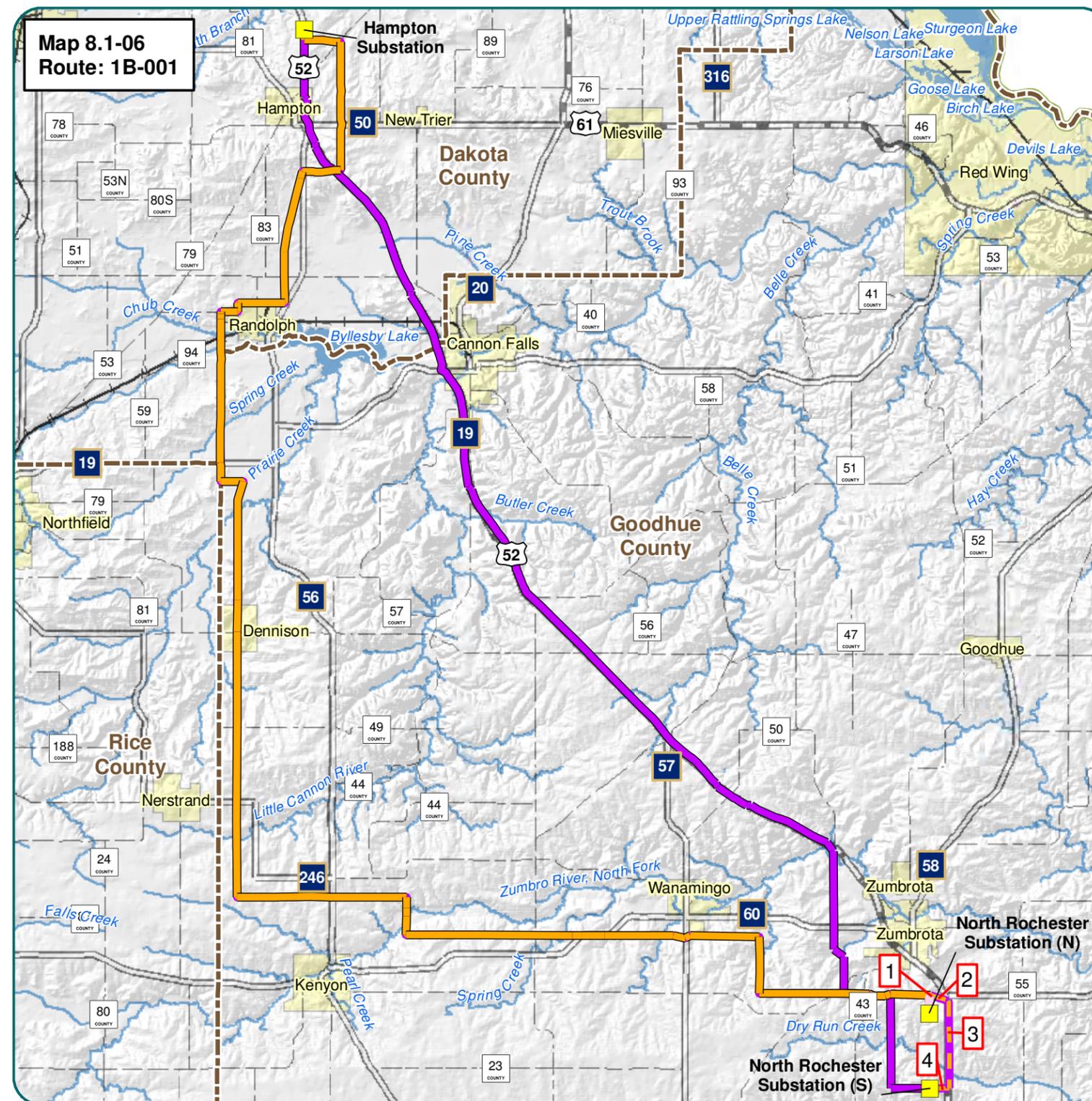
Section 8.1  
Hampton Substation to North Rochester Substation

Hampton to North Rochester (1A-004)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's alternate route until 0.5 miles north of intersection MN Hwy 60 and 460th St.	
2	Turn south following existing transmission line	0.50 Transmission Line
3	Turn east following 460th St.	5.30 Returns to applicant's alternate route - Cty or Twp Road
Total Length		48.63



- P Route
- A Route
- Project Substations
- County Boundaries
- North Arrow
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment

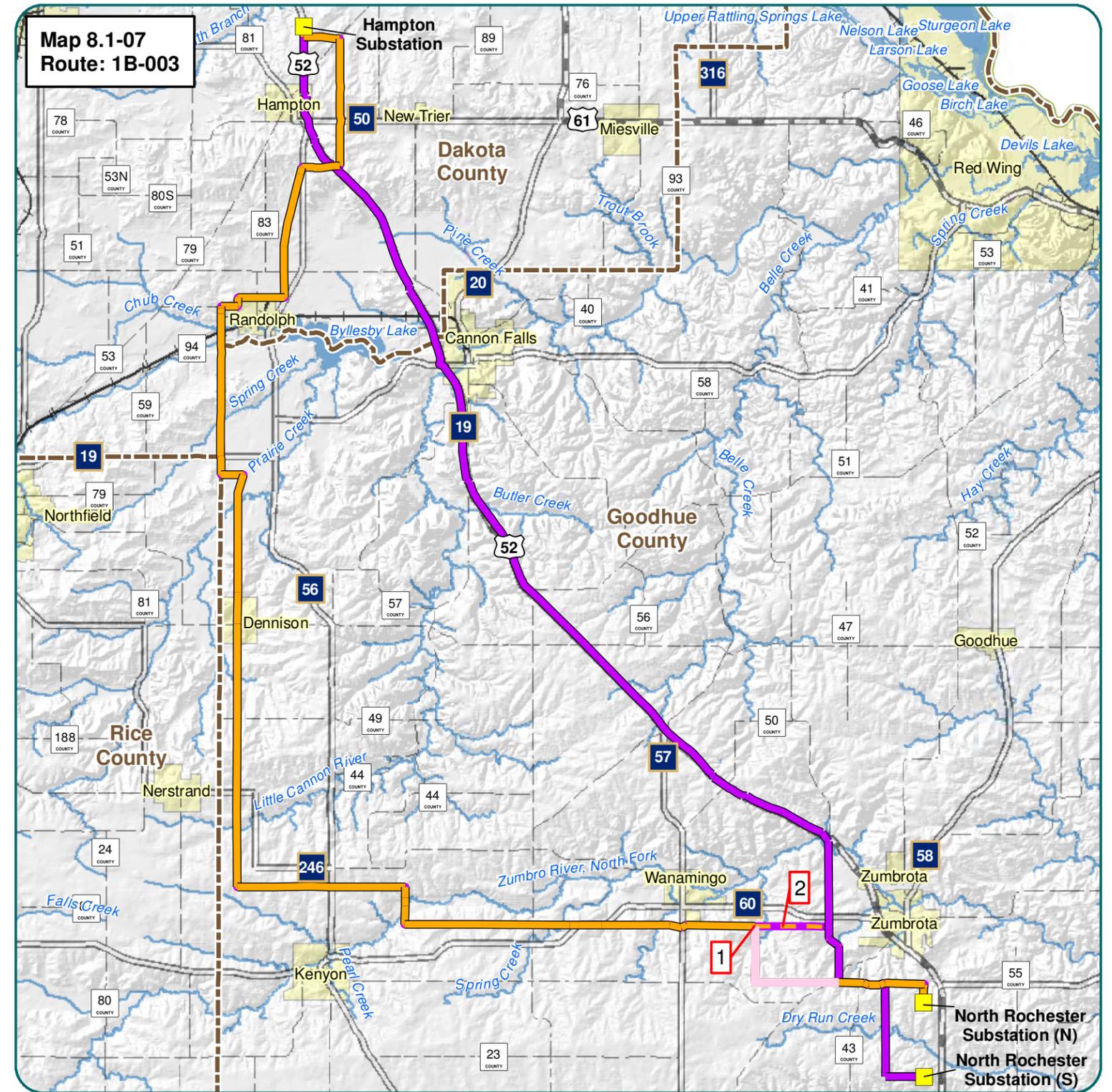
Hampton to North Rochester (1B-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's alternate route until 0.5 miles west of intersection MN Hwy 60 and US Hwy 52	
2	Continue east cross-country to US Hwy 52	0.50 Cross-country
3	Turn south following US Hwy 52	2.32 Major Hwy
4	Turn west following field line	0.52 Connects to North Rochester Substation (S) - Field Line
Total Length		51.46



- P Route
- A Route
- Project Substations
- County Boundaries
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment

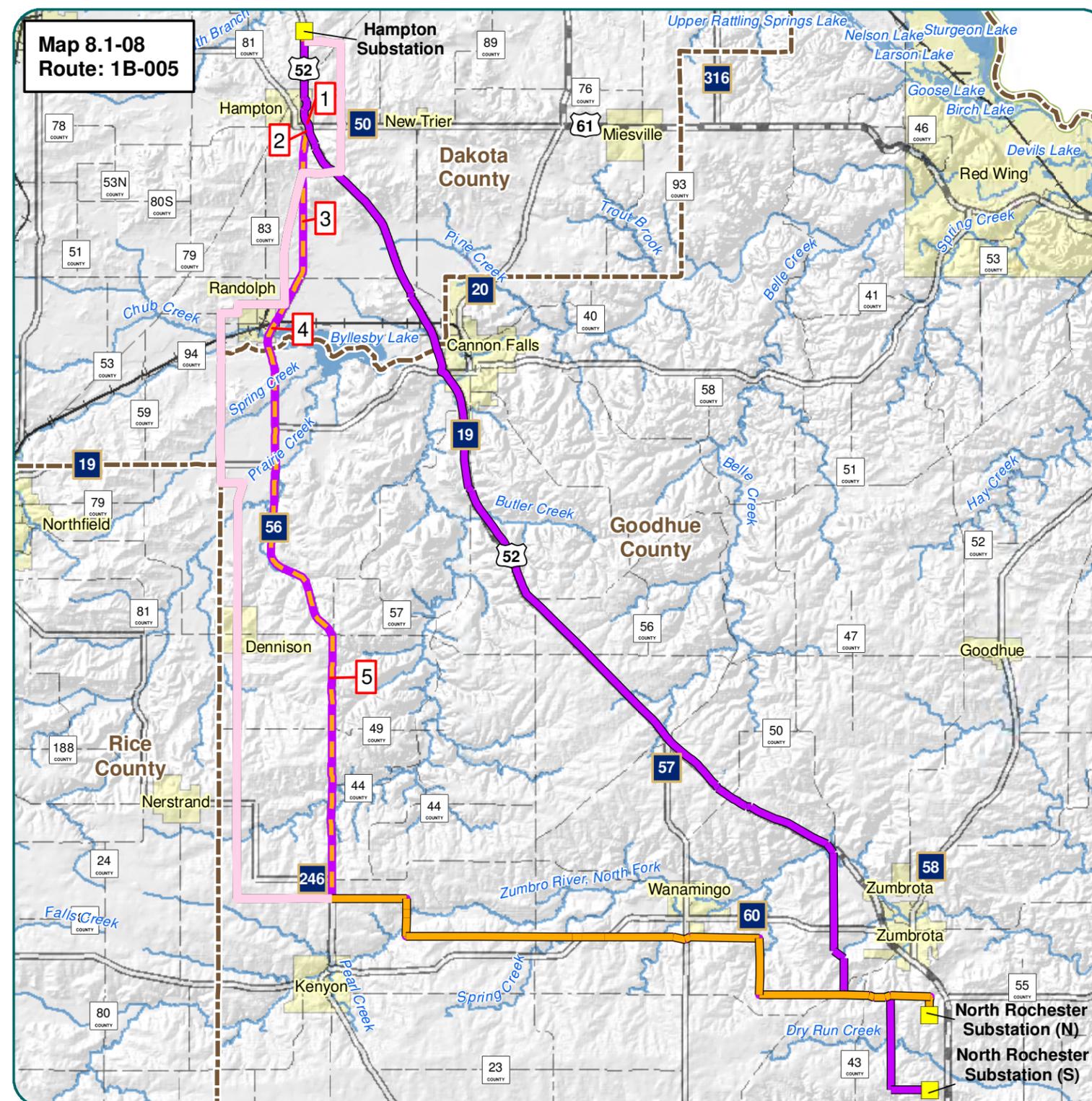
Section 8.1  
Hampton Substation to North Rochester Substation

Hampton to North Rochester (1B-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's alternate route until 0.5 miles south of intersection 140th Ave Way and MNTH 60
2	1.99	Returns to applicant's preferred route - Cross-country/field lines
Total Length		48.53



- North Arrow
- P Route
- A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment
- Project Substations
- County Boundaries

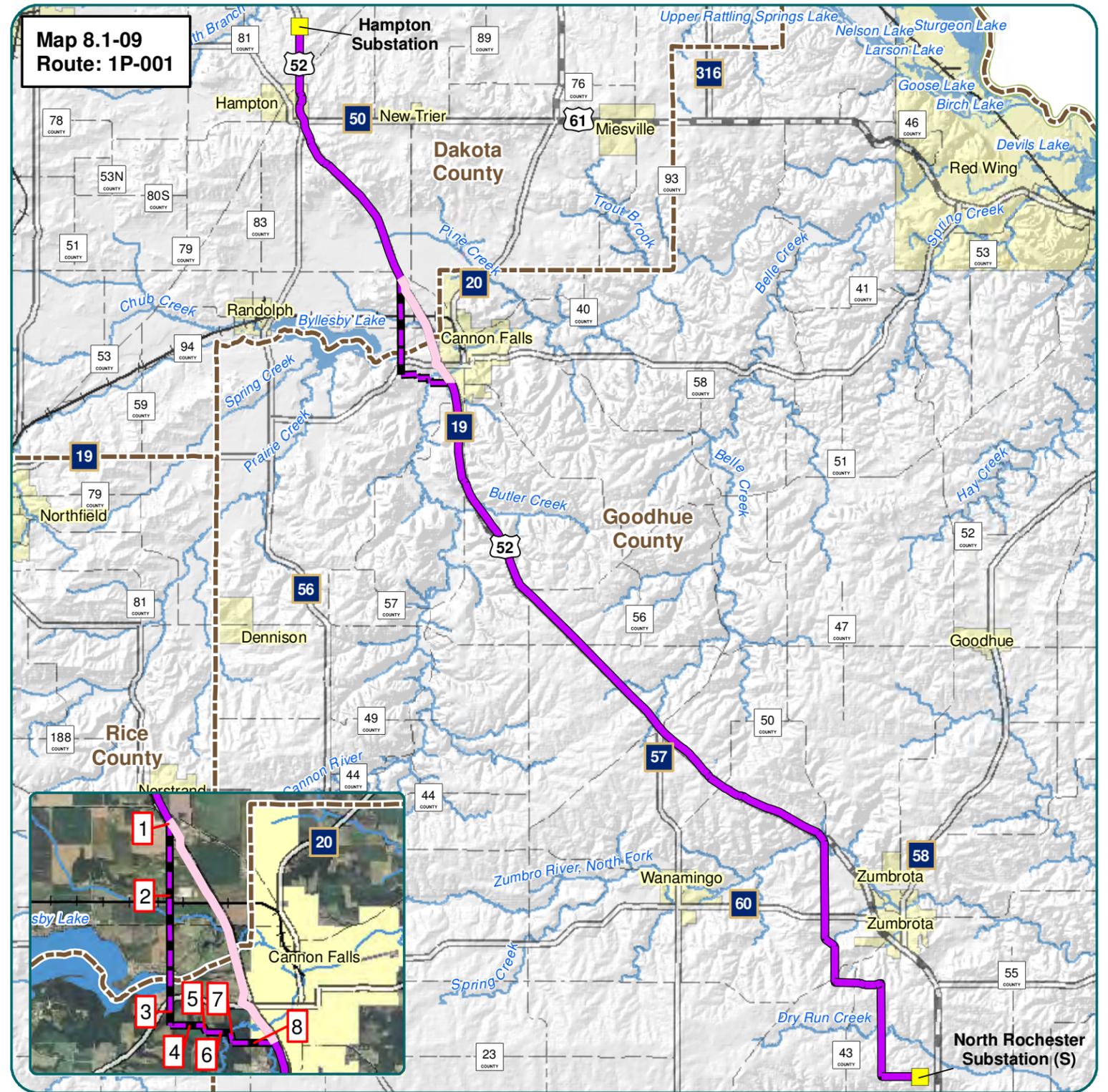
Hampton to North Rochester (1B-005)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until the intersection of Emery Ave. and Rochester Blvd.
2	0.14	Cross-country
3	3.75	Major Hwy
4	2.14	Major Hwy
5	15.29	Returns to applicant's alternate route - Major Hwy
Total Length		43.04



- P Route
- A Route
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment
- Project Substations
- County Boundaries

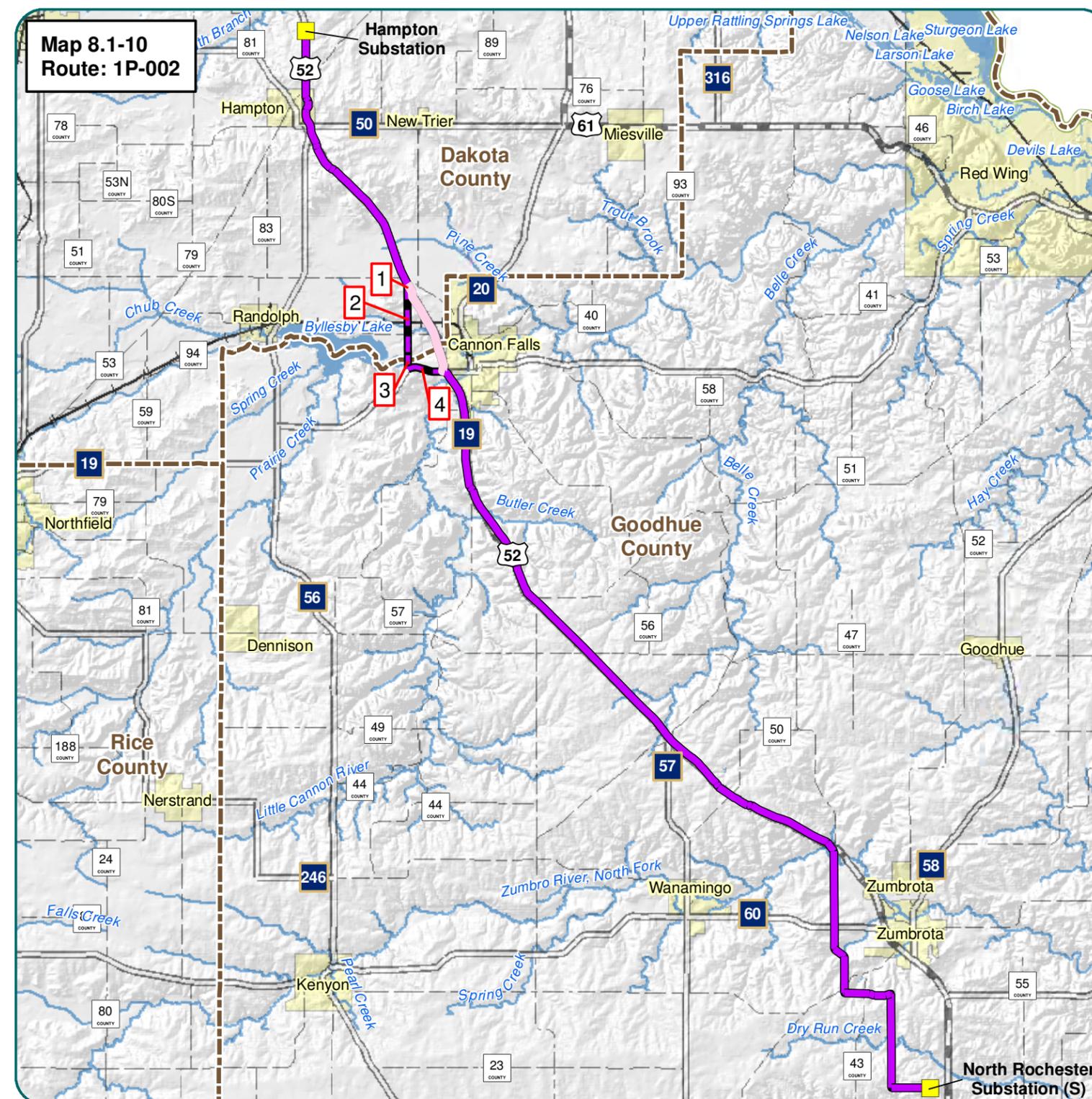
Section 8.1  
Hampton Substation to North Rochester Substation

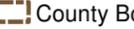
Hampton to North Rochester (1P-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until the intersection of US Hwy 52 and Harry Ave.
2	1.90	Cnty or Twp Road
3	0.69	Cross-country
4	0.41	Field Line
5	0.10	Cross-country
6	0.31	Cross-country
7	0.13	Cross-country
8	0.53	Returns to applicant's preferred route - Cross-country/field lines
Total Length		36.97



- P Route
- Variation on A Route
- Project Substations
- Variation on P Route
- Variation on Both
- Parallel Alignment
- 
- County Boundaries

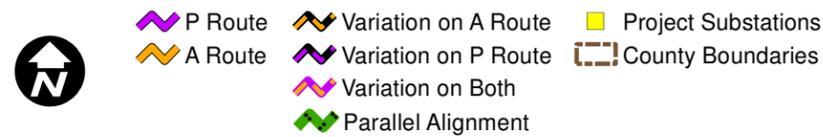
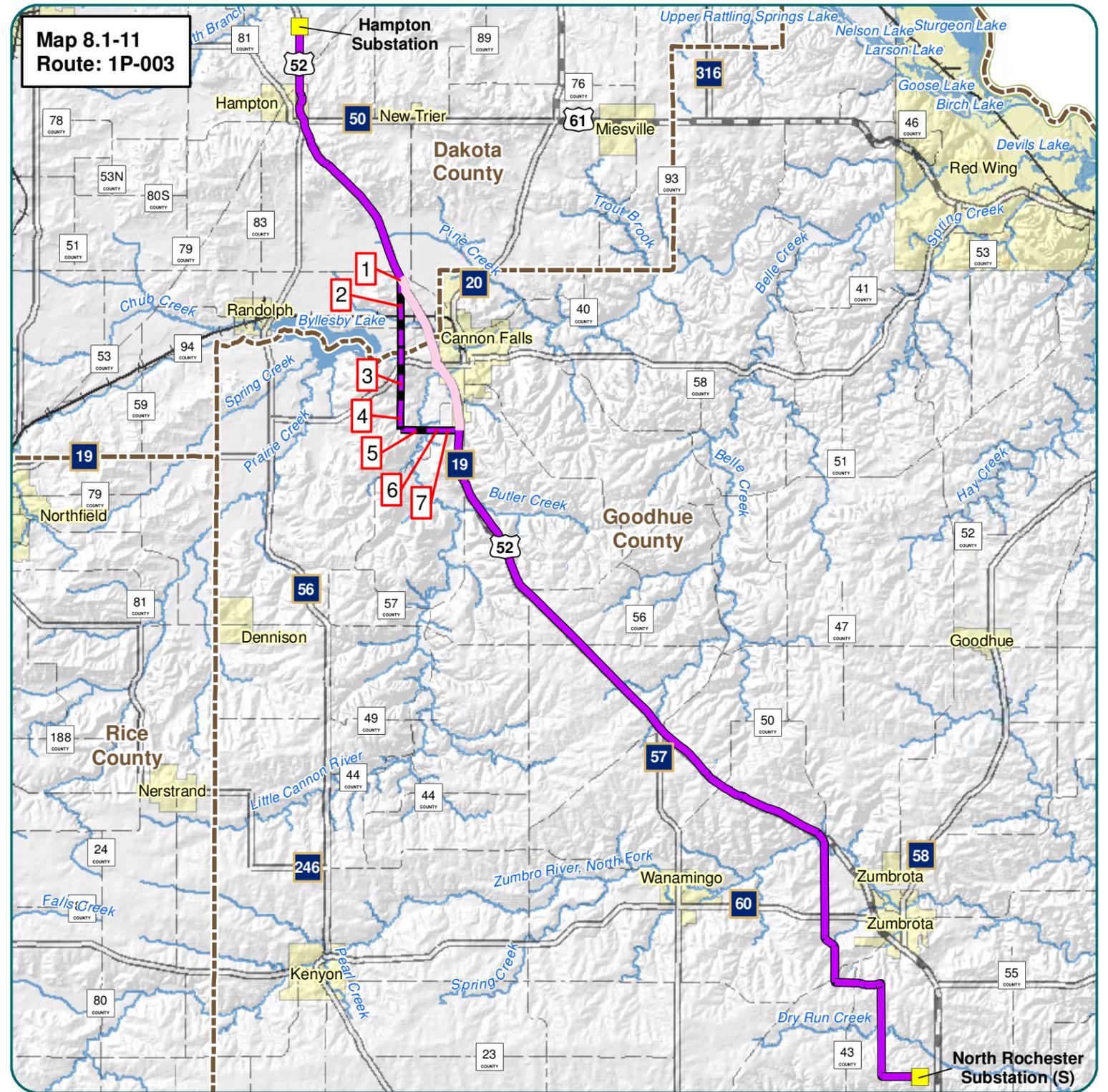
Hampton to North Rochester (1P-002)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until the intersection of US Hwy 52 and Harry Ave.		
2 Turn south following Harry Ave.	1.90	Cnty or Twp Road
3 Continue south following existing transmission line/cross-country to MN Hwy 19	0.37	Transmission Line
4 Turn east following MN Hwy 19	0.98	Returns to preferred route - Major Hwy
Total Length		36.77



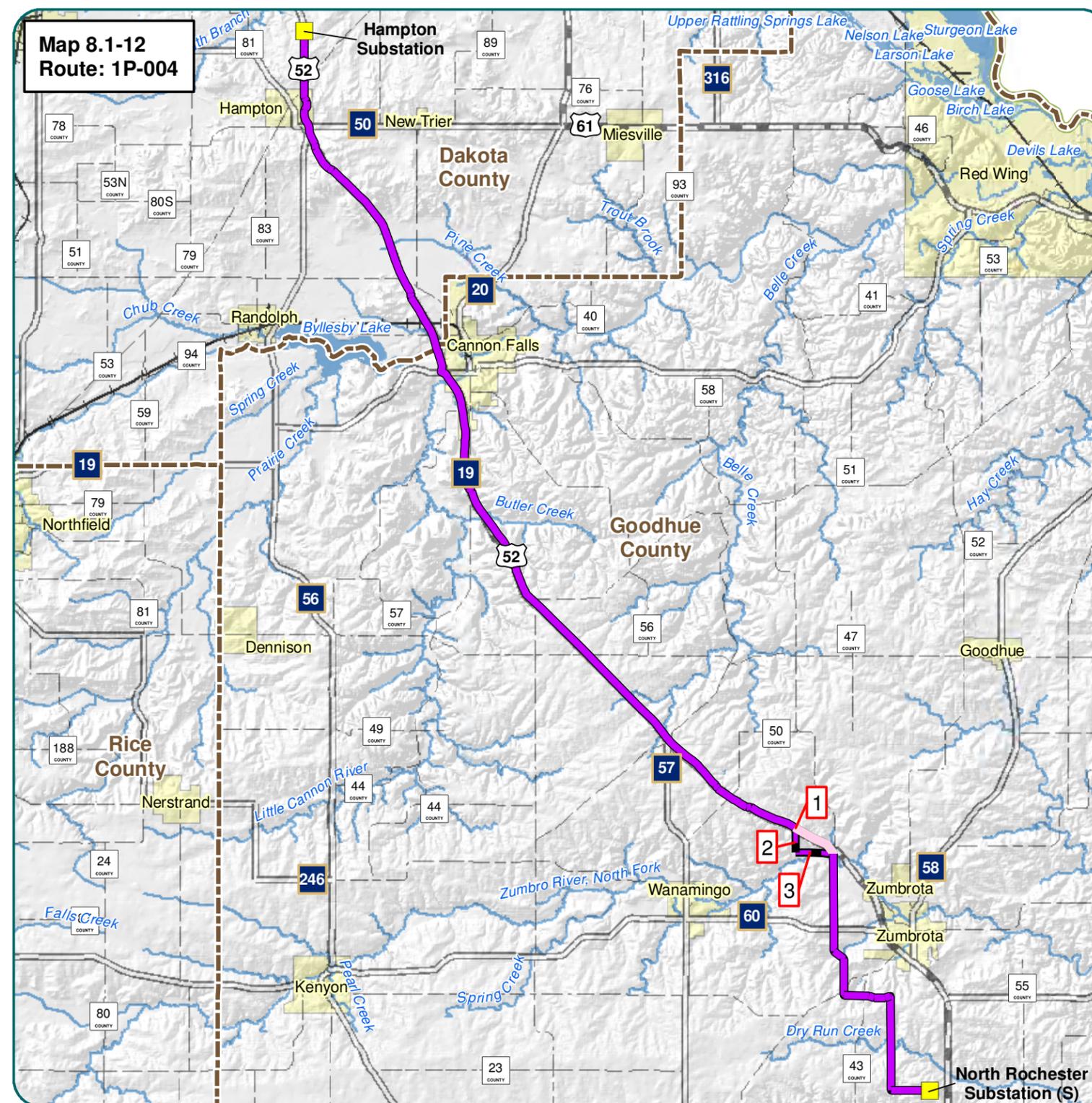
-  P Route
-  A Route
-  Project Substations
-  County Boundaries
-  Variation on A Route
-  Variation on P Route
-  Variation on Both
-  Parallel Alignment

Section 8.1  
Hampton Substation to North Rochester Substation

Hampton to North Rochester (1P-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until the intersection of US Hwy 52 and Harry Ave.
2	1.90	Cnty or Twp Road
3	1.66	Cross-country
4	0.50	Cnty or Twp Road
5	0.92	Cross-country/field lines
6	0.11	Cnty or Twp Road
7	0.53	Returns to applicant's preferred route - Cross-country/field lines
Total Length		37.23



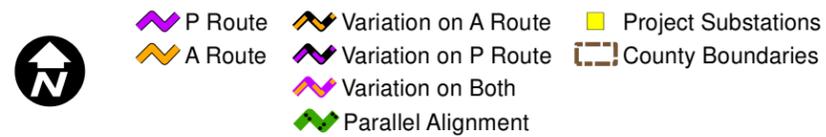
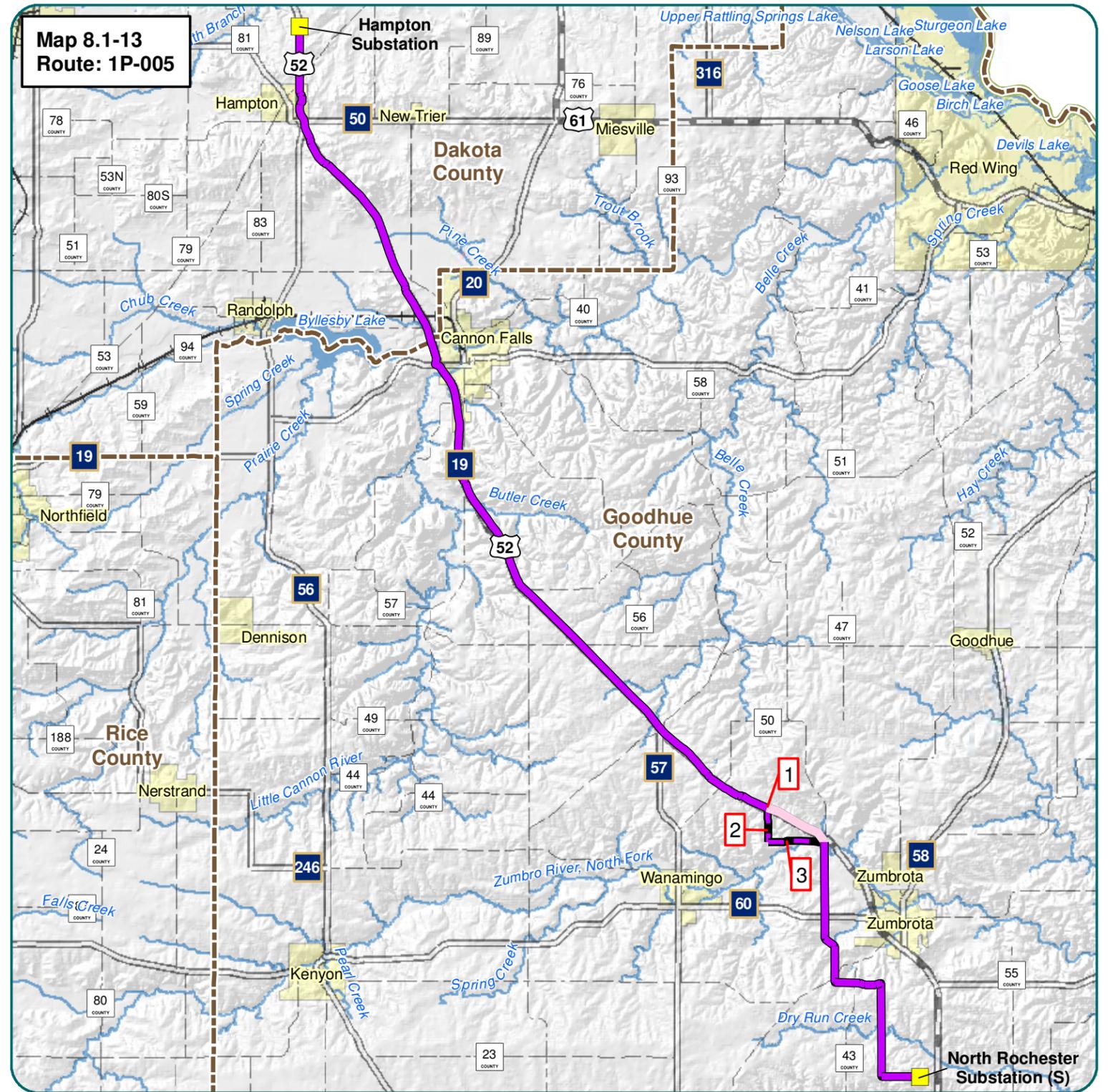
Hampton to North Rochester (1P-004)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.5 miles east of intersection US Hwy 52 and 145th Ave. Way		
2 Turn south following field line	0.68	Field Line
3 Turn east cross-country	1.00	Returns to applicant's preferred route - Cross-country
Total Length		36.52



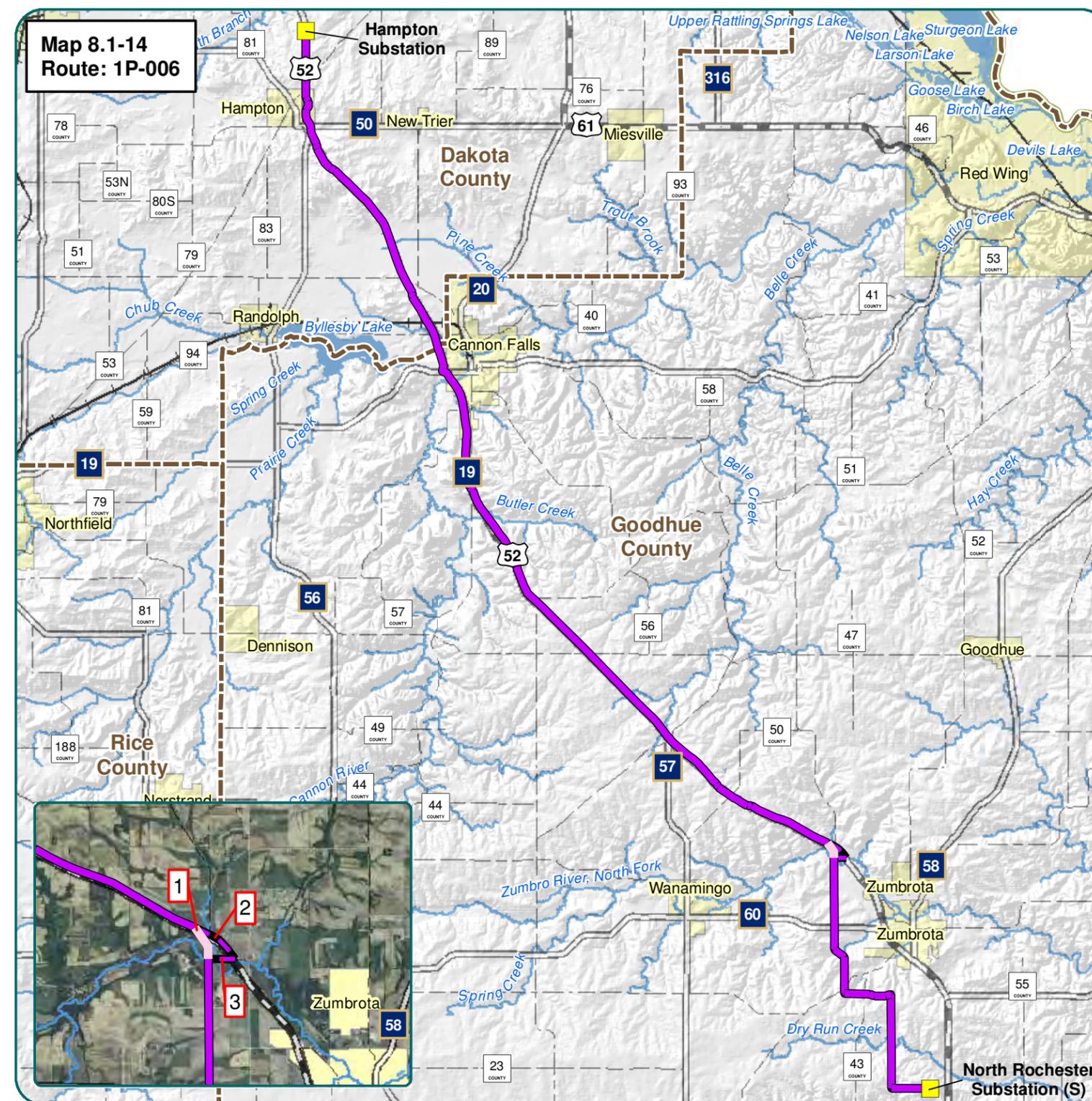
-   P Route
-  A Route
-  Variation on A Route
-  Variation on P Route
-  Variation on Both
-  Parallel Alignment
-  Project Substations
-  County Boundaries

Section 8.1  
Hampton Substation to North Rochester Substation

Hampton to North Rochester (1P-005)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until the intersection of US Hwy 52 and 145th Ave. Way
2	0.92	Cnty or Twp Road
3	1.51	Returns to applicant's preferred route - Cross-country/field lines
Total Length		36.71



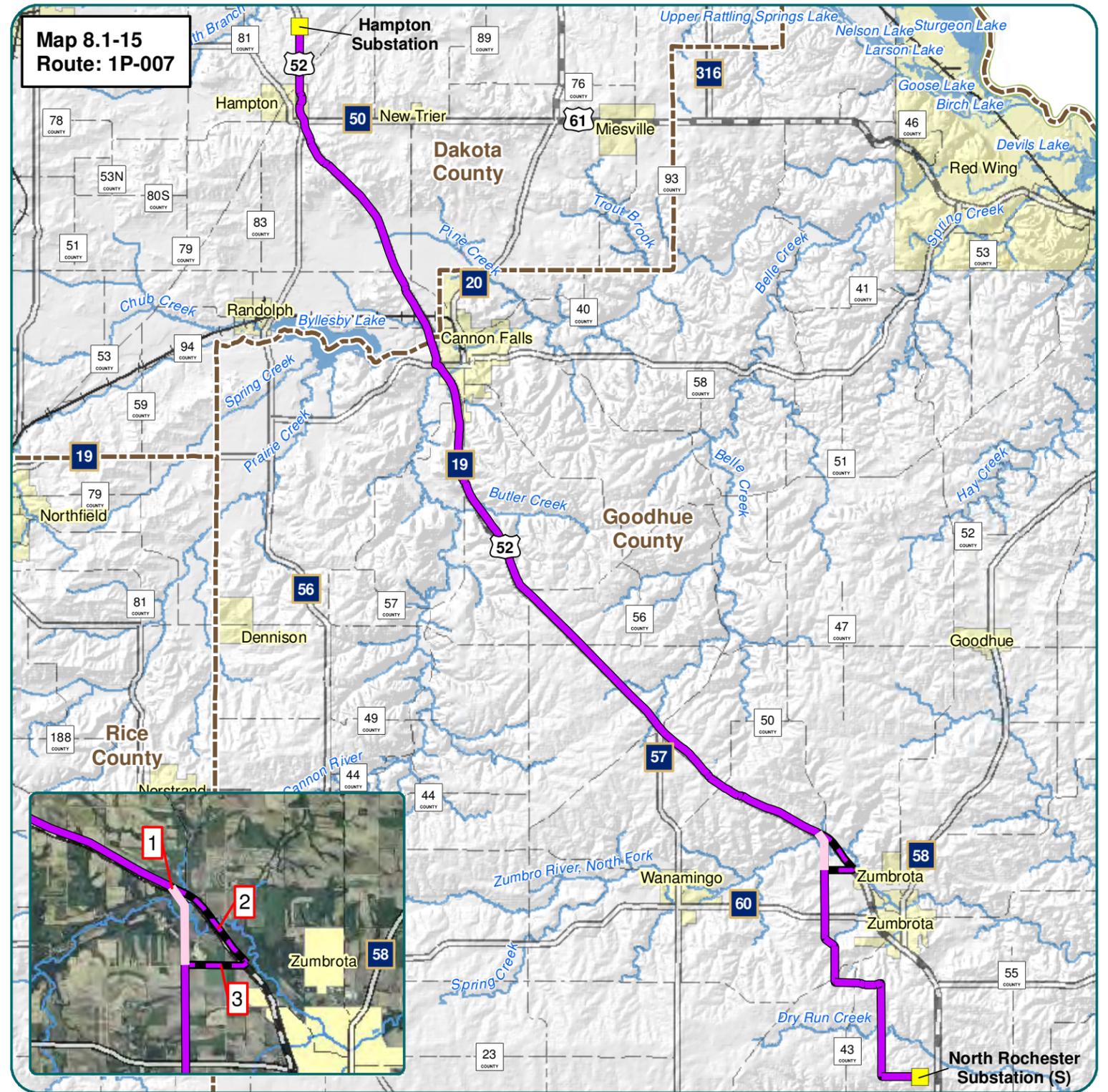
Hampton to North Rochester (1P-006)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.2 miles west of intersection US Hwy 52 and Cty Hwy 7		
2 Continue southeast following US Hwy 52	0.65	Major Hwy/Transmission Line
3 Turn west cross-country	0.33	Returns to applicant's preferred route - Cross-country
Total Length		36.65



- P Route
- A Route
- Project Substations
- County Boundaries
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment

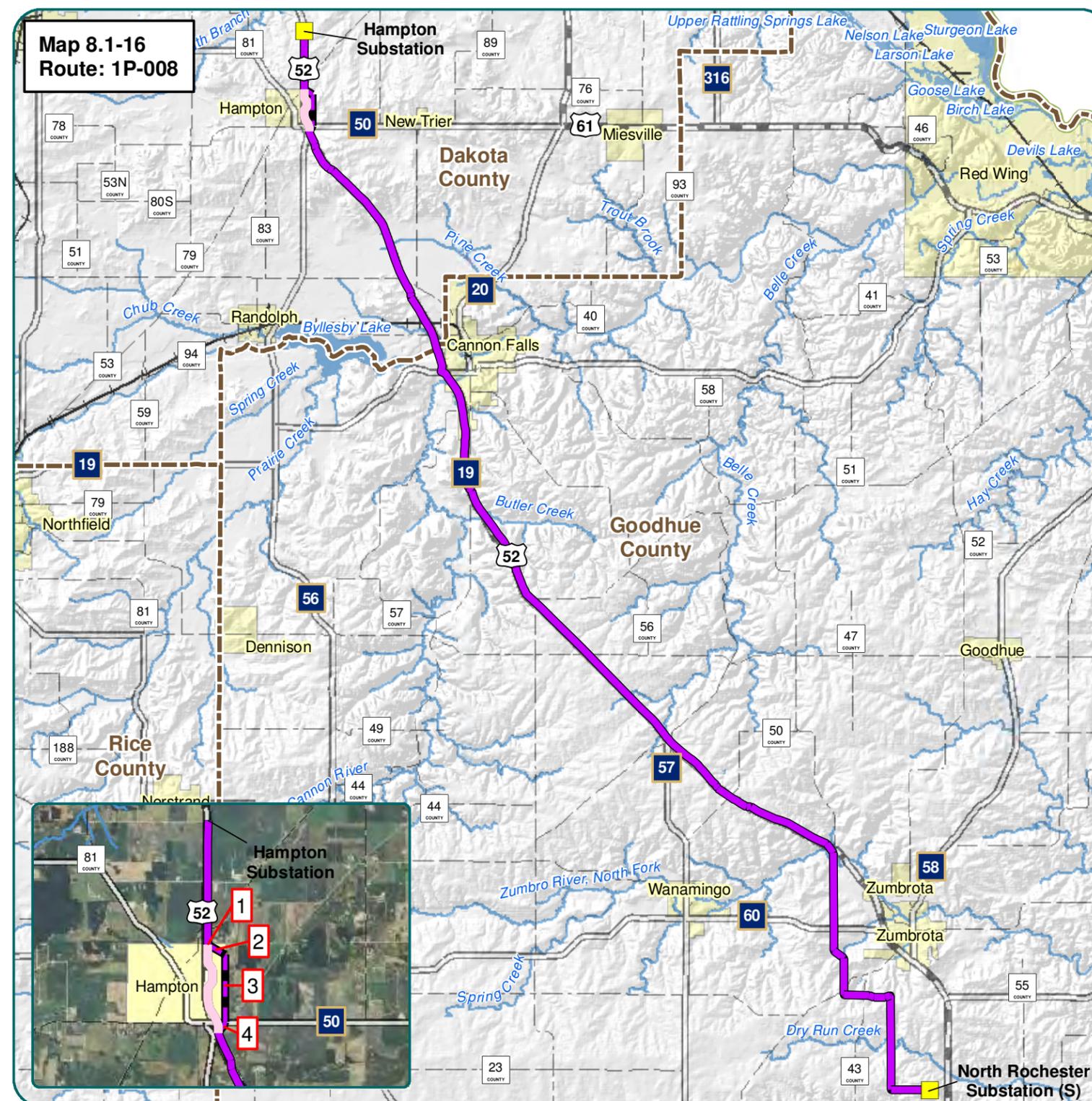
Section 8.1  
Hampton Substation to North Rochester Substation

Hampton to North Rochester (1P-007)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.2 miles west of intersection US Hwy 52 and Cty Hwy 7		
2 Continue southeast following US Hwy 52	1.37	Major Hwy/Transmission Line
3 Turn west following 440th St.	0.79	Returns to applicant's preferred route - Cty or Twp Road
<b>Total Length</b>	<b>37.23</b>	



- P Route
- A Route
- Project Substations
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment
- 
- County Boundaries

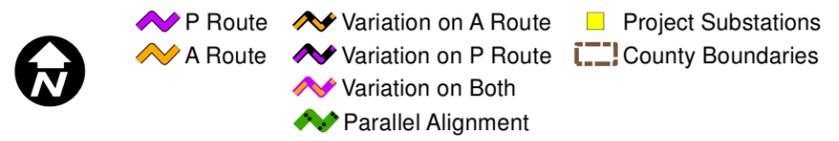
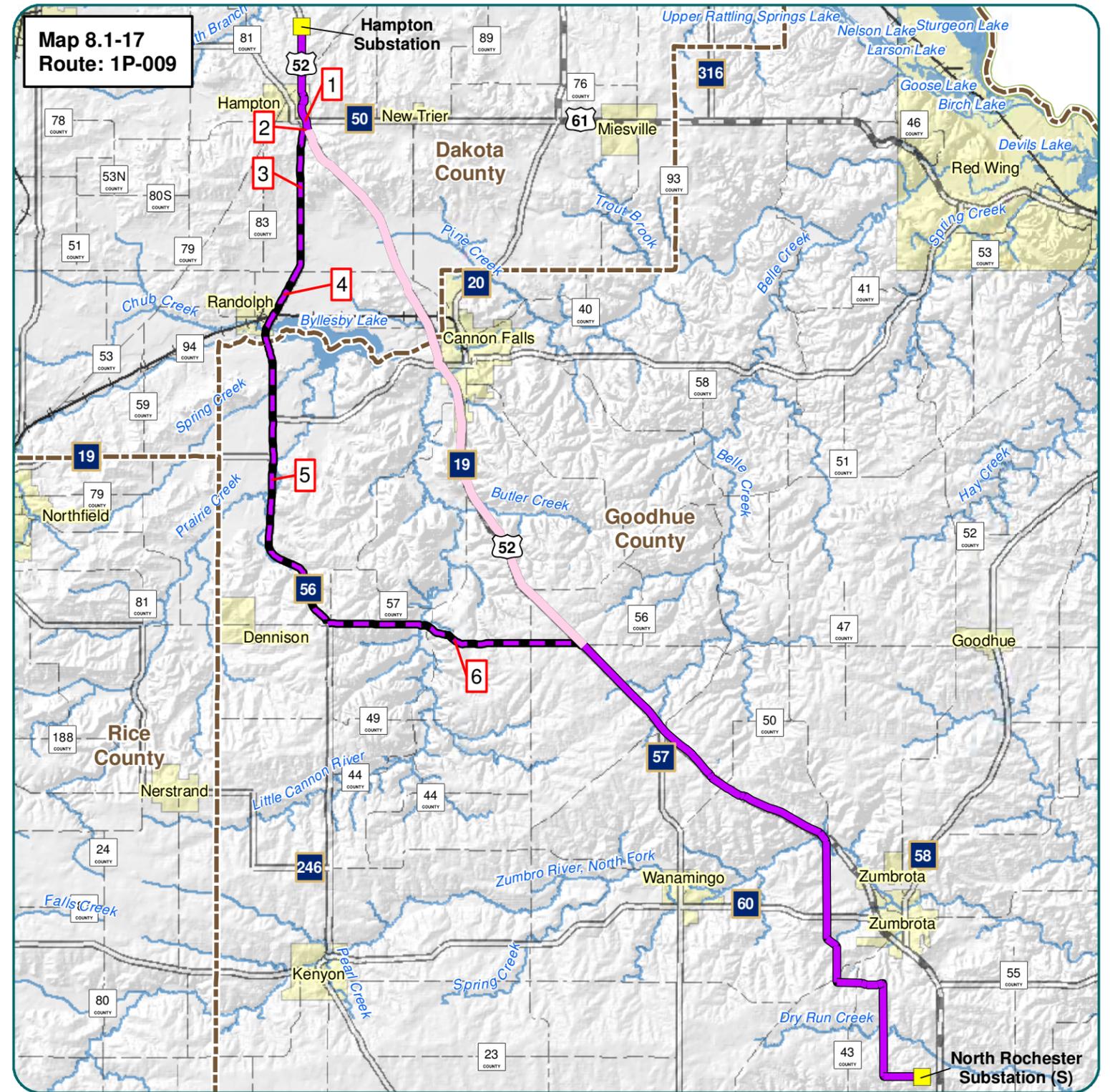
Hampton to North Rochester (1P-008)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.2 miles south of the intersection US Hwy 52 and CSAH 47		
2 Turn southeast cross-country	0.25	Cross-country
3 Turn south field lines/cross-country	0.84	Cross-country
4 Turn southwest cross-country	0.17	Returns to applicant's preferred route - Cross-country
<b>Total Length</b>	<b>36.19</b>	

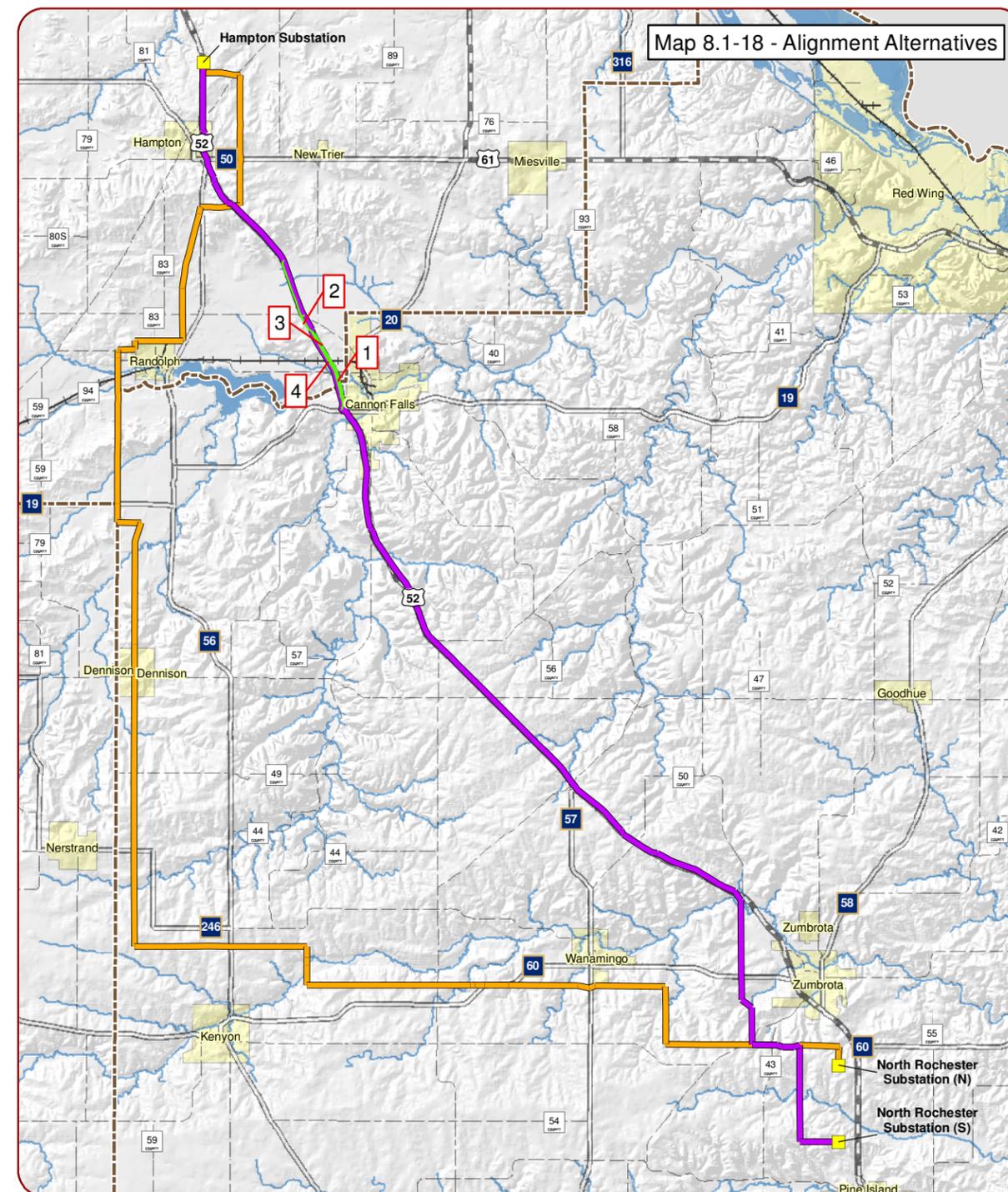
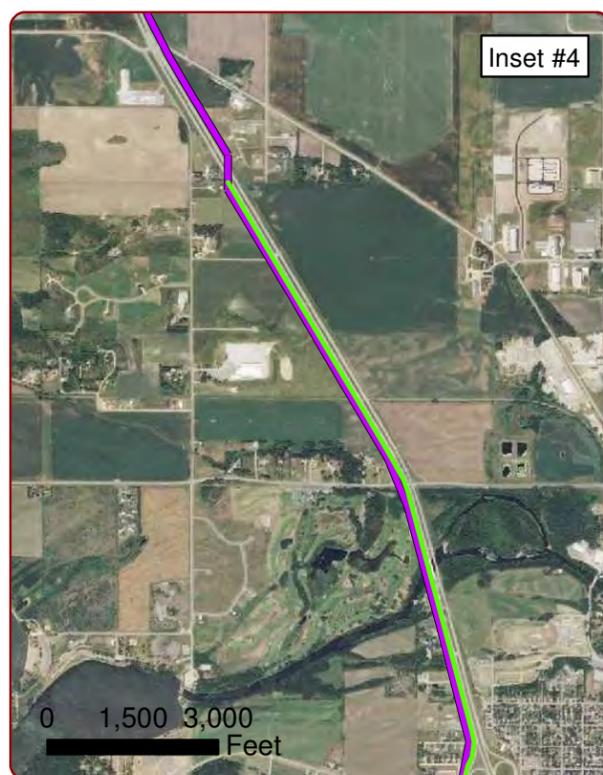
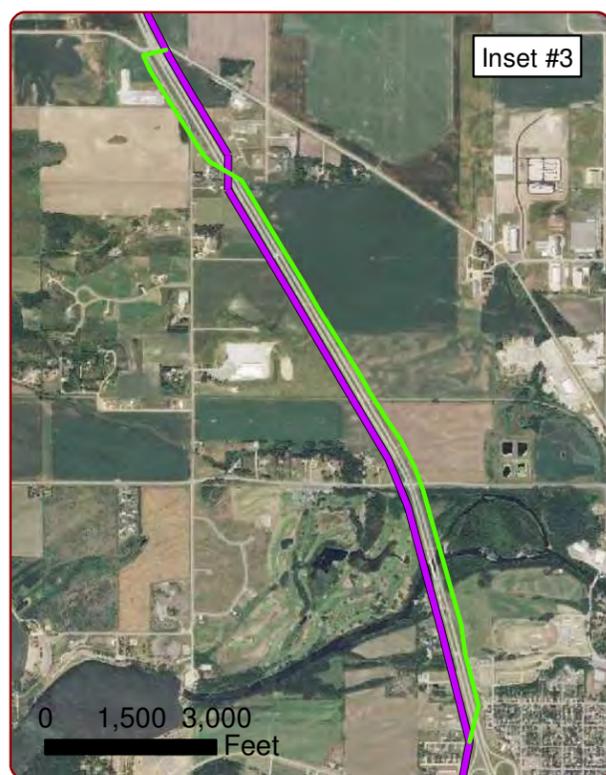
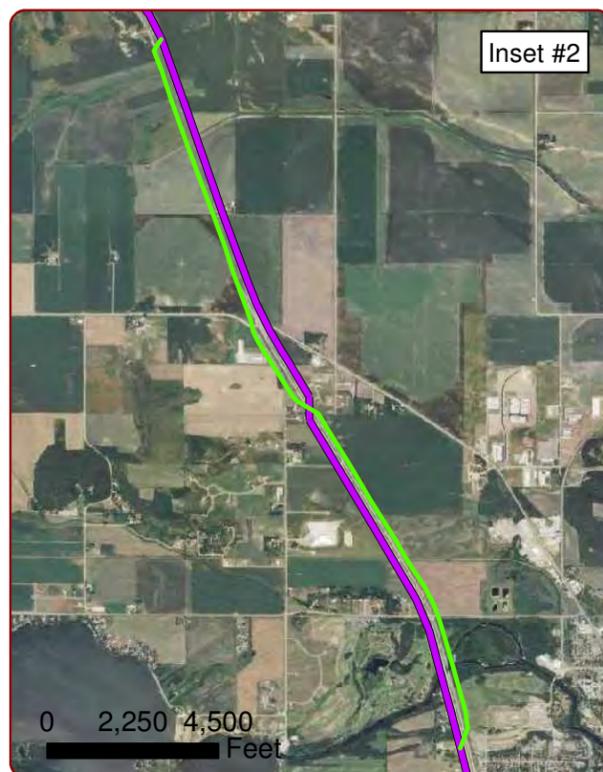
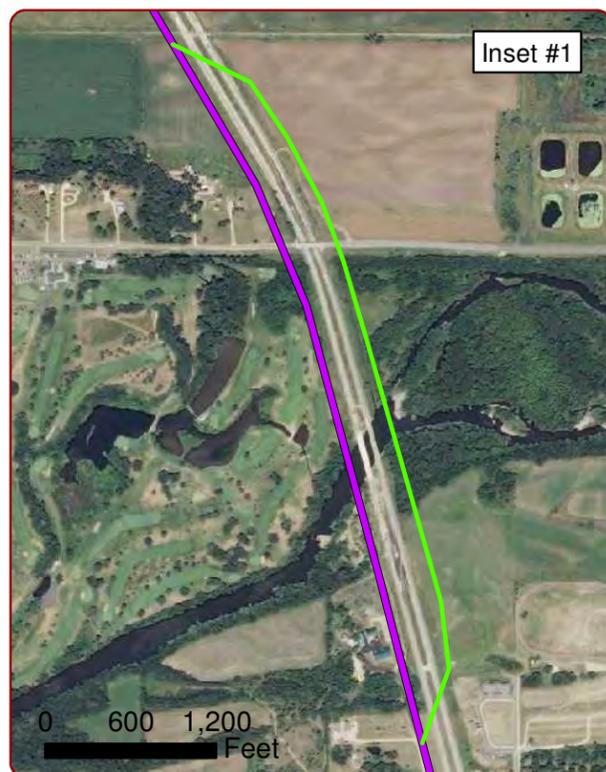


- P Route
- A Route
- Project Substations
- County Boundaries
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment

Section 8.1  
Hampton Substation to North Rochester Substation

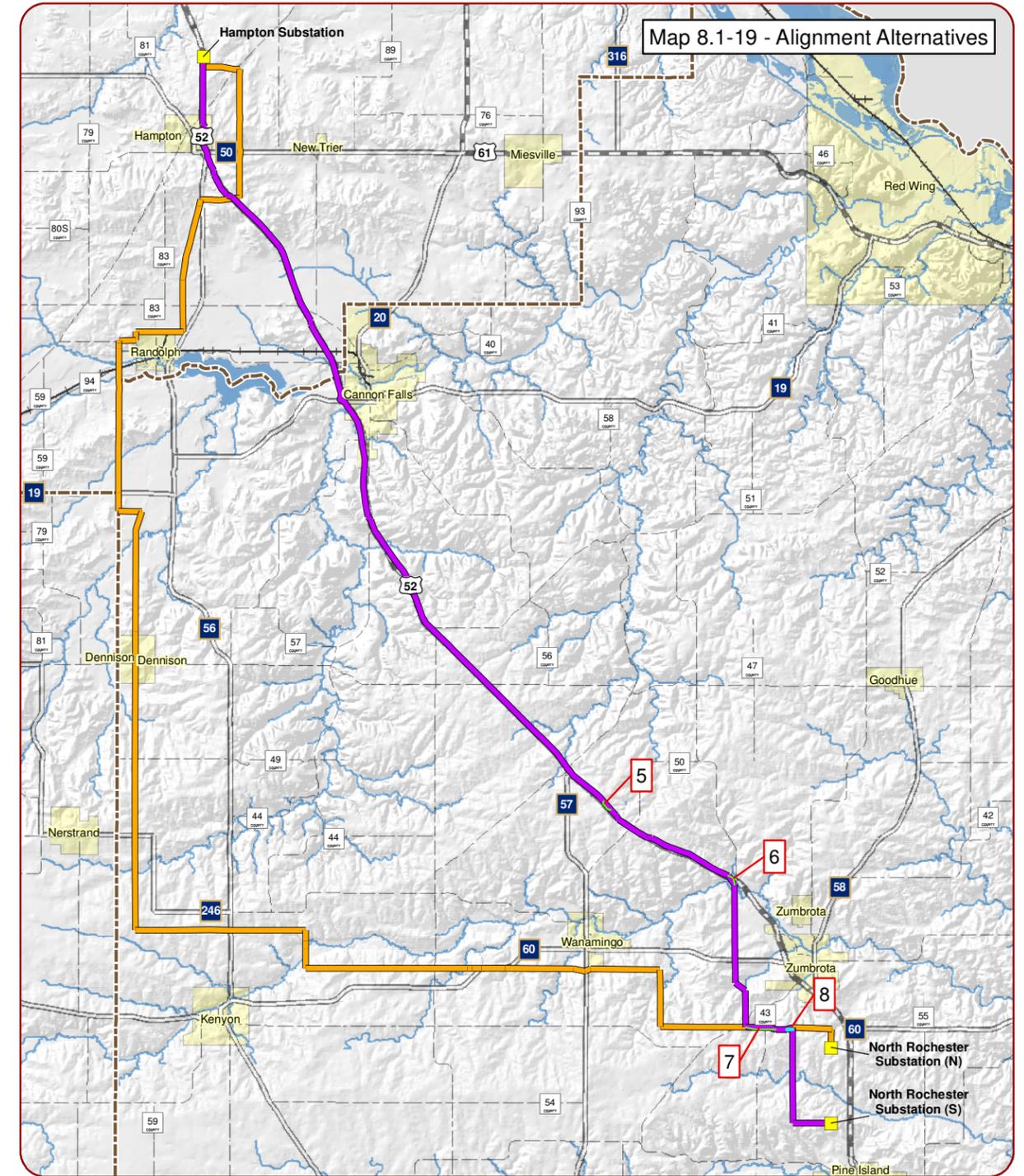
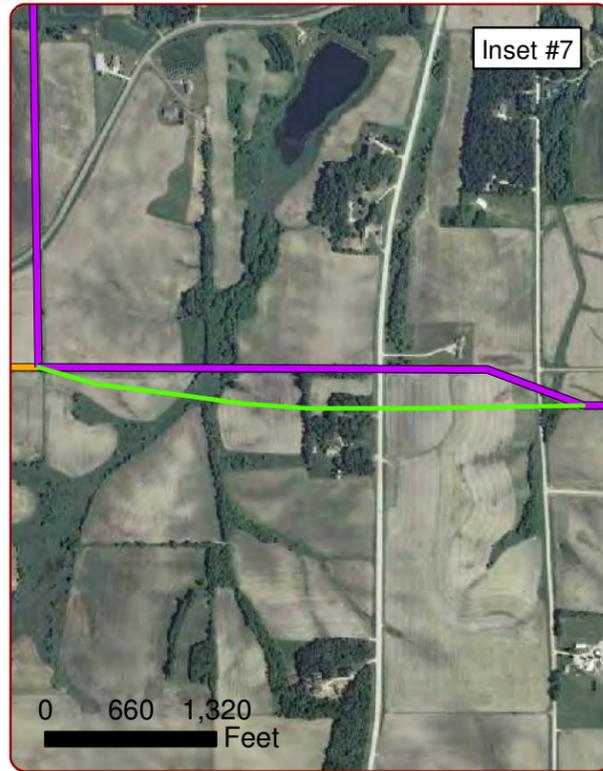
Hampton to North Rochester (1P-009)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until 0.1 miles south of the intersection of Emery Ave. and Rochester Blvd.
2	0.14	Cross-country
3	3.66	Major Hwy
4	2.29	Major Hwy
5	8.20	Major Hwy
6	7.04	Returns to applicant's preferred route - Cty or Twp Road
Total Length		41.27





- Original P Route
- Original A Route
- Alignment Alternatives
- Variation on P Route
- Variation on A Route
- Variation on Both
- Project Substations
- County Boundaries

Section 8.1  
Hampton Substation to North Rochester Substation

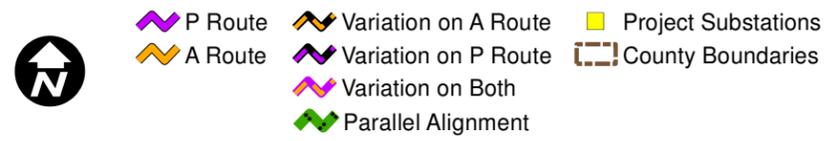
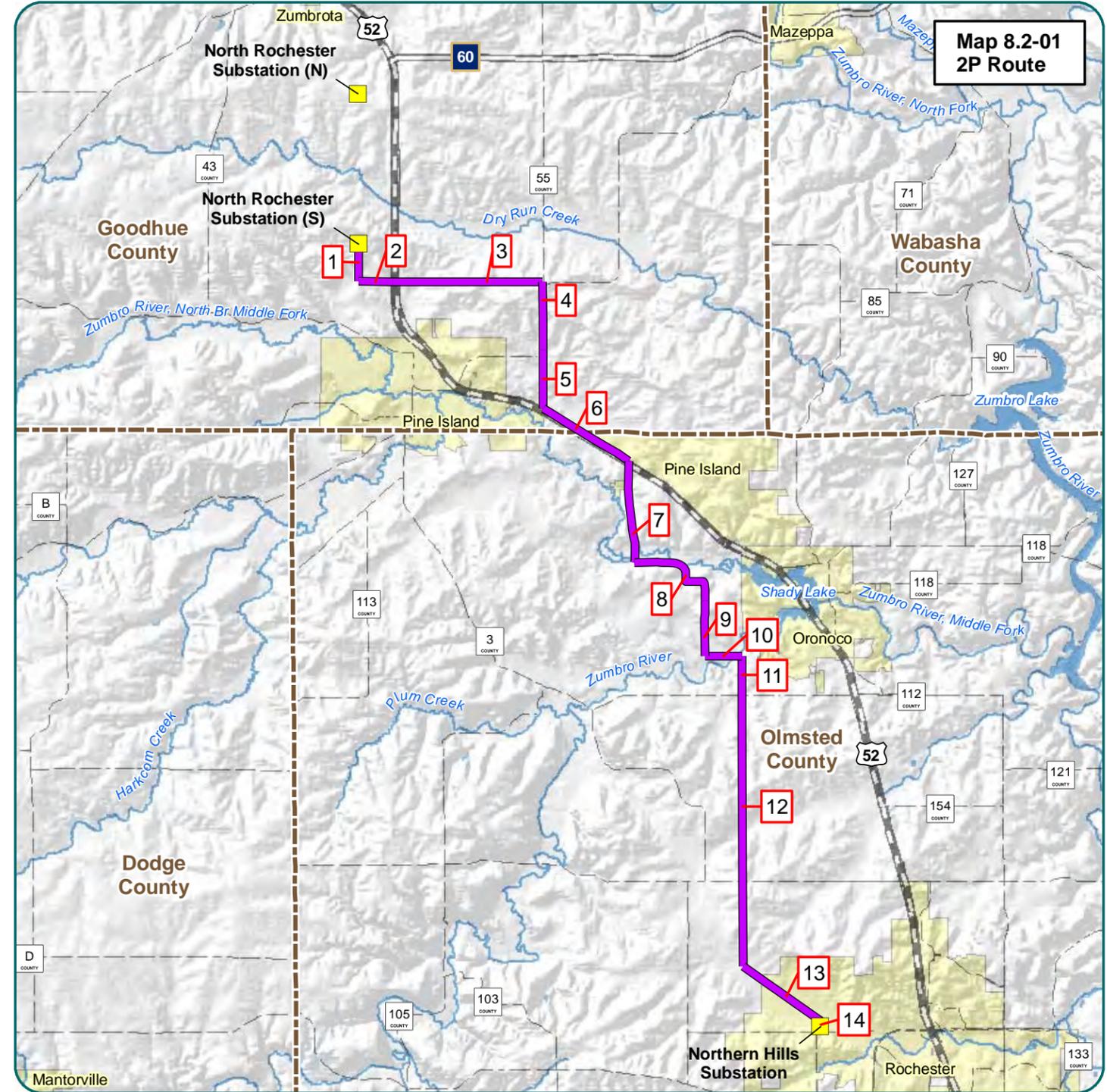


8.2.1 Description of Route Alternatives – North Rochester Substation to Northern Hills Substation

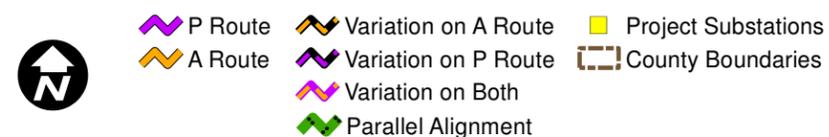
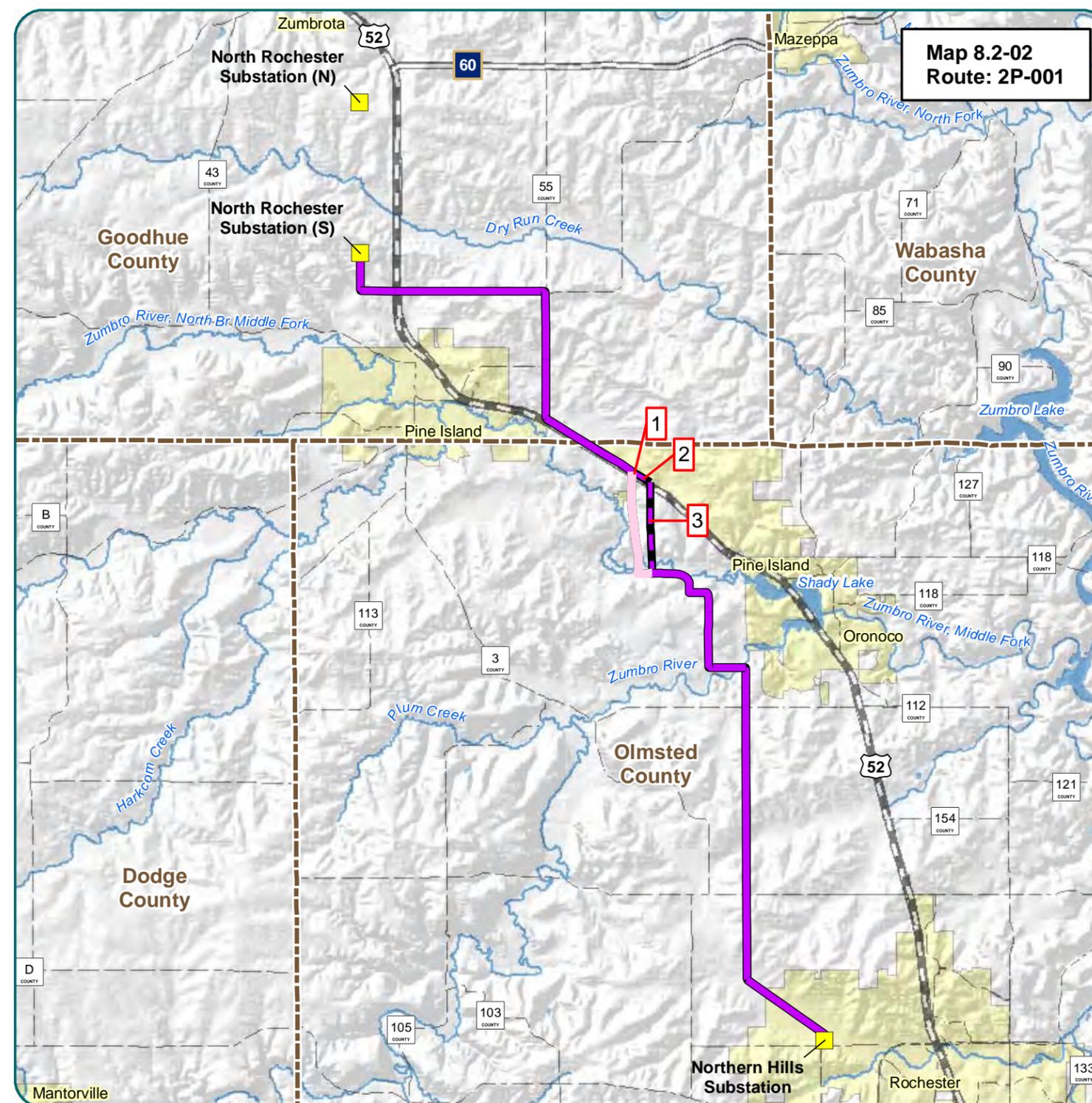
North Rochester Substation to Northern Hills Substation

Section 8.2

North Rochester to Northern Hills (2P)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the proposed North Rochester Substation (S) go south following transmission line	0.51	Transmission Line
2 Turn east following field line	0.46	Field Line
3 Continue east following 500th St.	2.00	Cty or Twp Road
4 Turn south following CSAH 11	0.90	Cty or Twp Road
5 Continue south following 210th Ave	0.78	Cty or Twp Road
6 Turn southeast following MN Hwy 52	1.34	Major Hwy
7 Turn south following CSAH 31	1.36	Cty or Twp Road
8 Turn east then south following 117th St. NW	1.35	Cty or Twp Road
9 Continue south following 65th Ave NW	0.74	Cty or Twp Road
10 Turn east following field line/cross-country	0.49	Field Line/Cross-country
11 Turn south cross-country to 60th Ave NW	0.50	Cross-country
12 Continue south following 60th Ave NW	3.62	Cty or Twp Road
13 Turn southeast following Douglas State Trail/Transmission line	1.26	Trail/Transmission Line
14 Turn south following transmission line and enters the Northern Hills Substation Area	0.08	Transmission Line
<b>Total Length</b>	<b>15.39</b>	

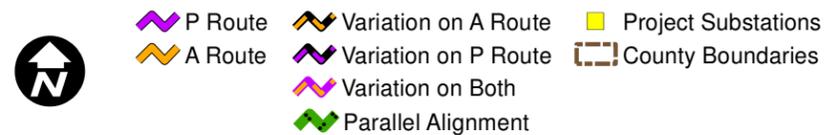
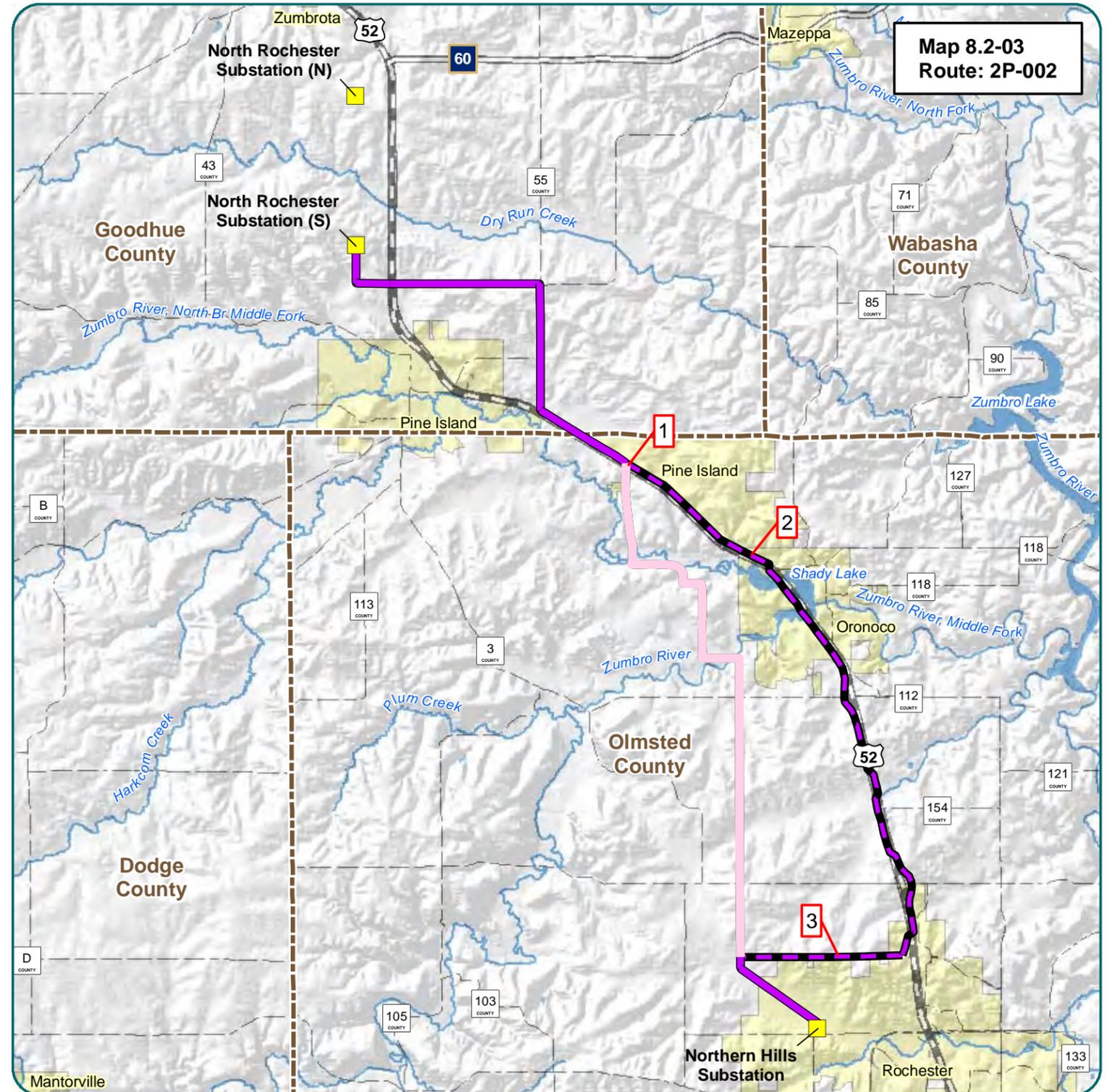


North Rochester to Northern Hills (2P-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until the intersection of US Hwy 52 and CSAH 31
2	0.28	Major Hwy
3	1.21	Returns to preferred route - Cross-country
Total Length		15.32

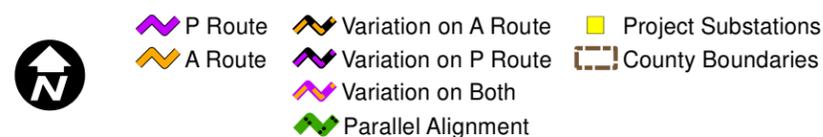
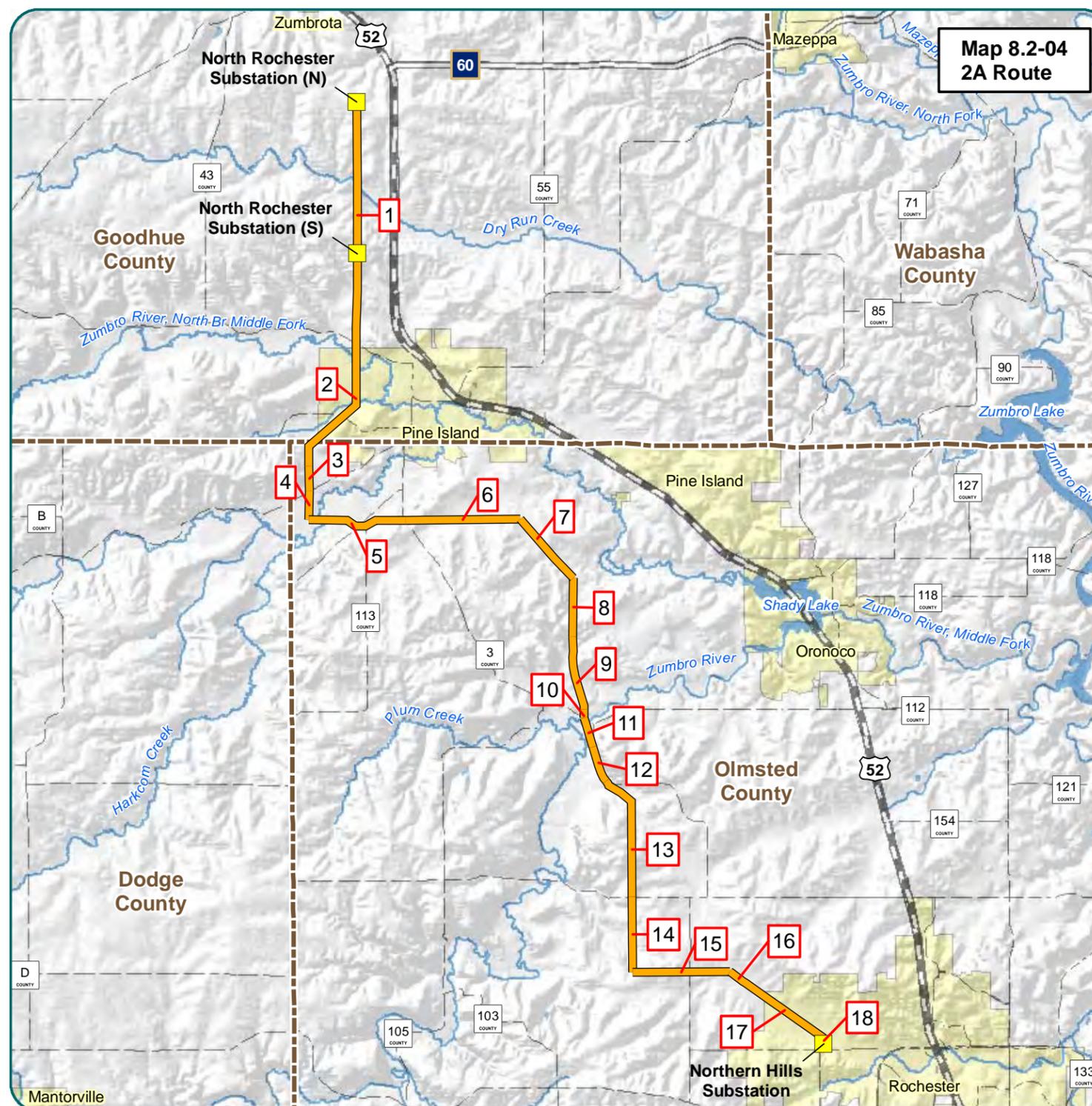


Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2P-002)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until the intersection of US Hwy 52 and CSAH 31		
2 Continue southwest following US Hwy 52 to 65th St. NW	8.20	Major Hwy
3 Turn west following 65th St. NW	2.15	Returns to preferred route - Cnty or Twp Road
Total Length		17.84

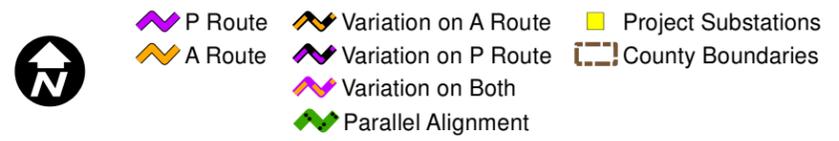
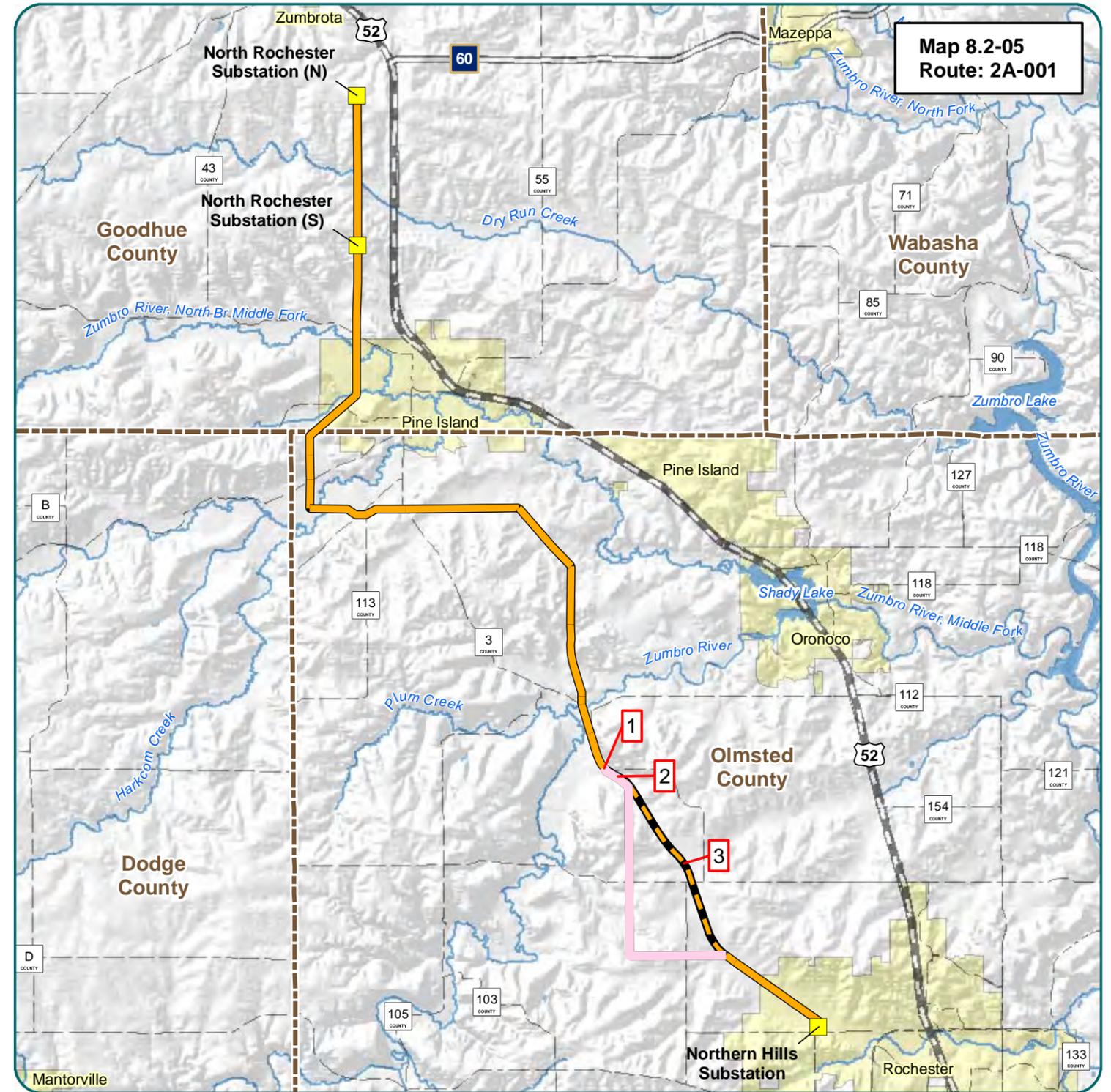


North Rochester to Northern Hills (2A)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N) go south following transmission line to North Rochester Substation (S)	1.99	Transmission Line
2 From the North Rochester Substation (S) go south/southwest following transmission line	3.09	Transmission Line
3 Continue south following T-1382 and transmission line	0.32	Cty or Twp Road/Transmission Line
4 Continue south following transmission line	0.38	Cty or Twp Road/Transmission Line
5 Turn east following field line/cross-country to 125th St. NW	1.32	Field Line/Cross-country
6 Continue east following 125th St. NW	1.52	Cty or Twp Road
7 Turn southeast following Douglas State Trail	1.04	Trail
8 Turn south following field line/cross-country to New Haven Road NW	0.77	Field Line/Cross-country
9 Continue south following New Haven Road NW	0.98	Cty or Twp Road
10 Continue south cross-country to Douglas State Trail	0.11	Cross-country
11 Turn southeast following Douglas State Trail	0.40	Trail
12 Continue southeast following CSAH 3	0.49	Cty or Twp Road
13 Continue southeast then south following 75th Ave. NW	1.69	Cty or Twp Road
14 Continue south following field line	0.99	Field Line
15 Turn east following 65th St. NW	1.29	Cty or Twp Road
16 Turn southeast following Douglas State Trail	0.15	Trail
17 Continue southeast following Douglas State Trail/Transmission line	1.36	Trail/Transmission Line
18 Turn south following transmission line and enters the Northern Hills Substation Area	0.08	Transmission Line
<b>Total Length</b>	<b>17.97</b>	

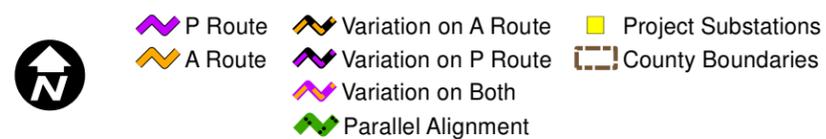
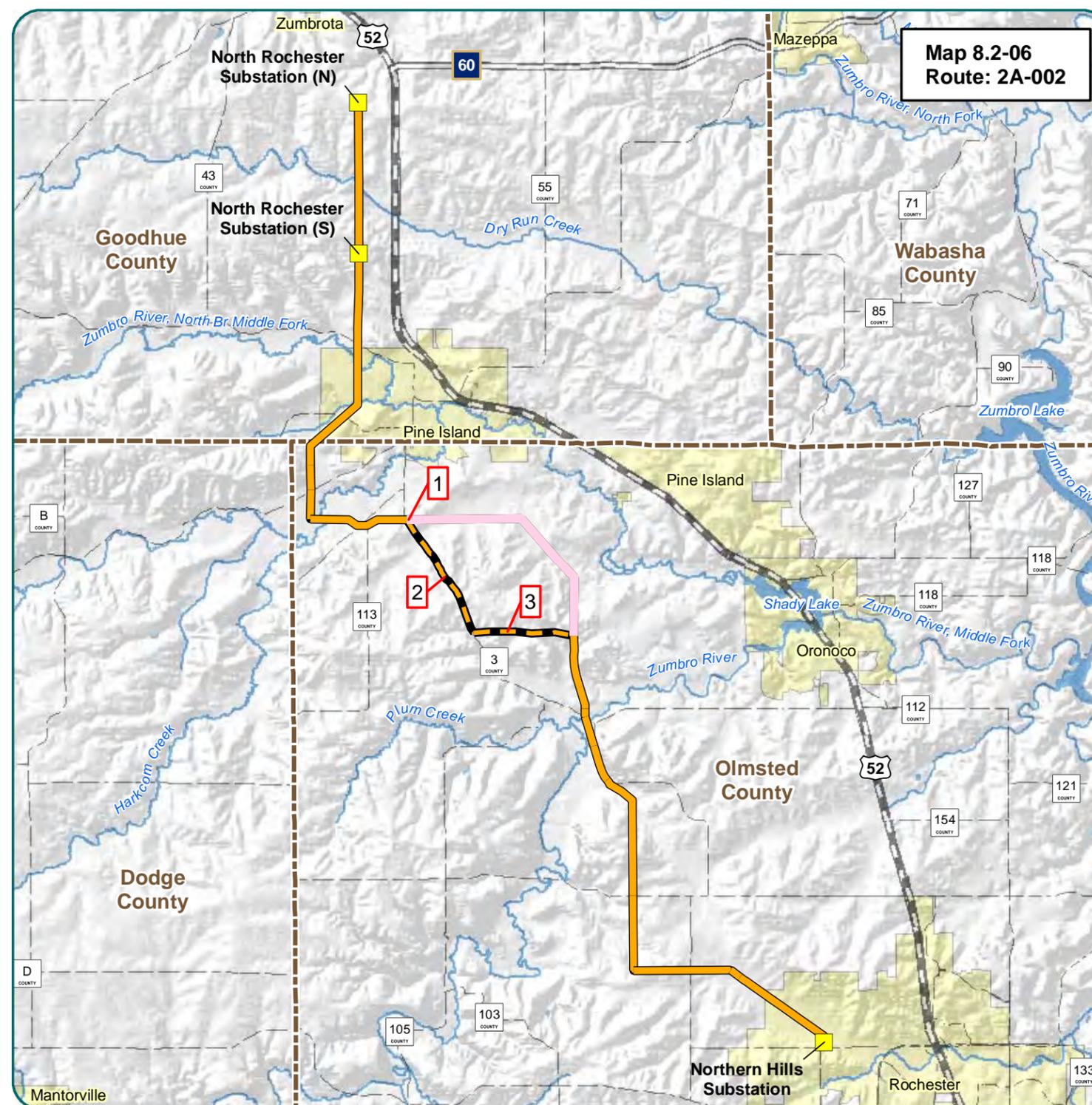


Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2A-001)			
Turn by Turn		Distance (miles)	Comments/ROW Type
1	Follow the applicant's alternate route just north of intersection 90th Street and 75th Ave. NW		
2	Turn southeast following 75th Ave. NW	0.41	Cty or Twp Road
3	Continue southeast following Douglas Trail	2.66	Returns to applicant's alternate route - Trail
Total Length		17.07	

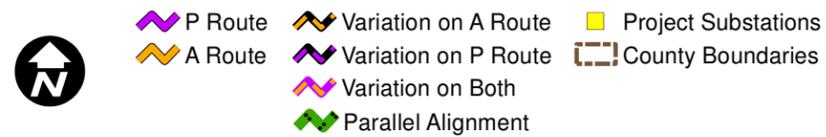
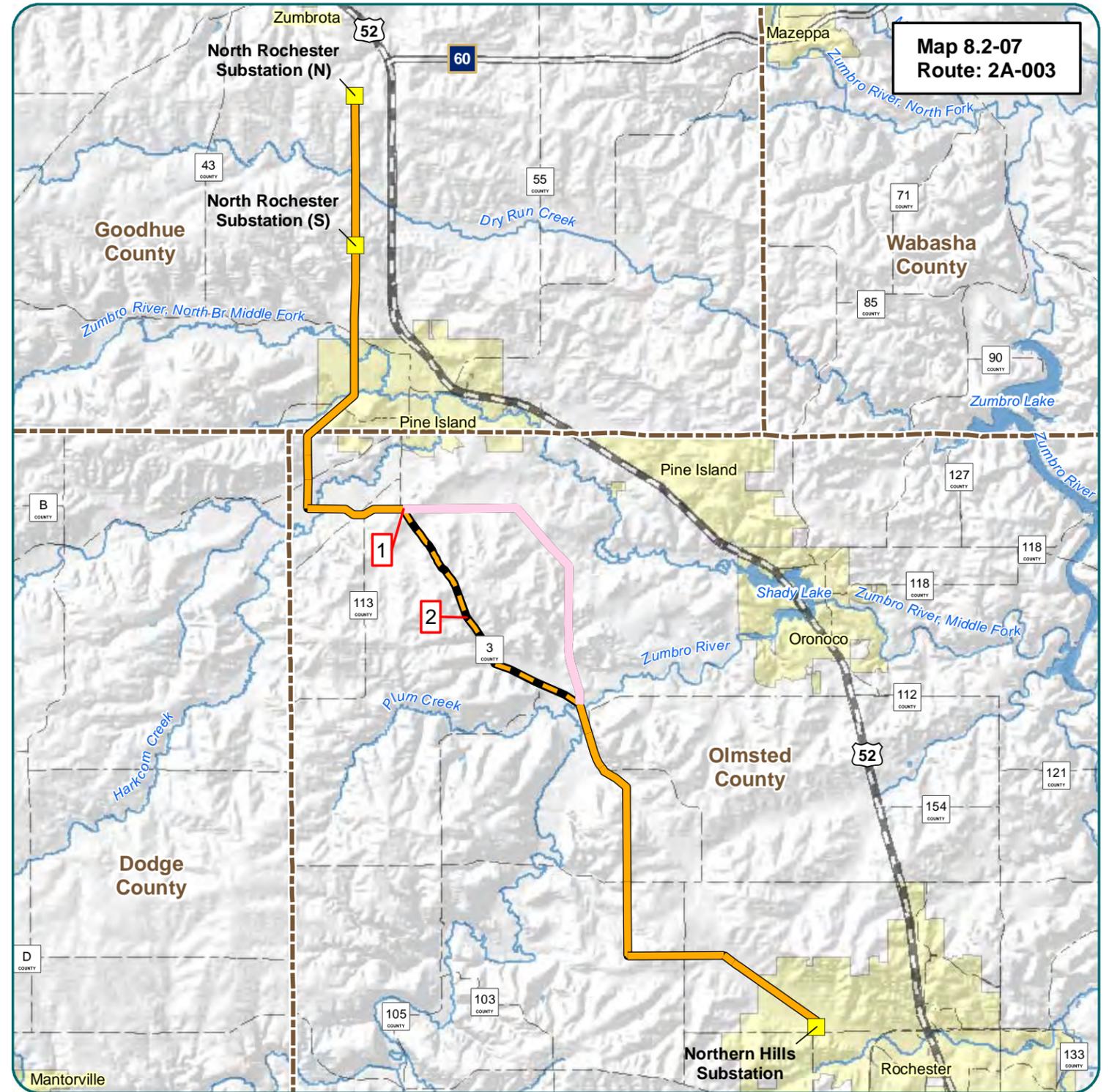


North Rochester to Northern Hills (2A-002)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route until the intersection of 125th St. and CSAH 3		
2 Turn southeast following CSAH 3	1.76	Cty or Twp Road
3 Turn east cross-country/field lines	1.33	Returns to applicant's alternate route - Cross-country/field lines
Total Length		17.72

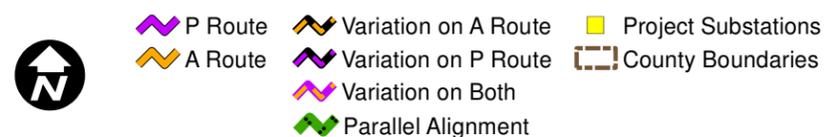
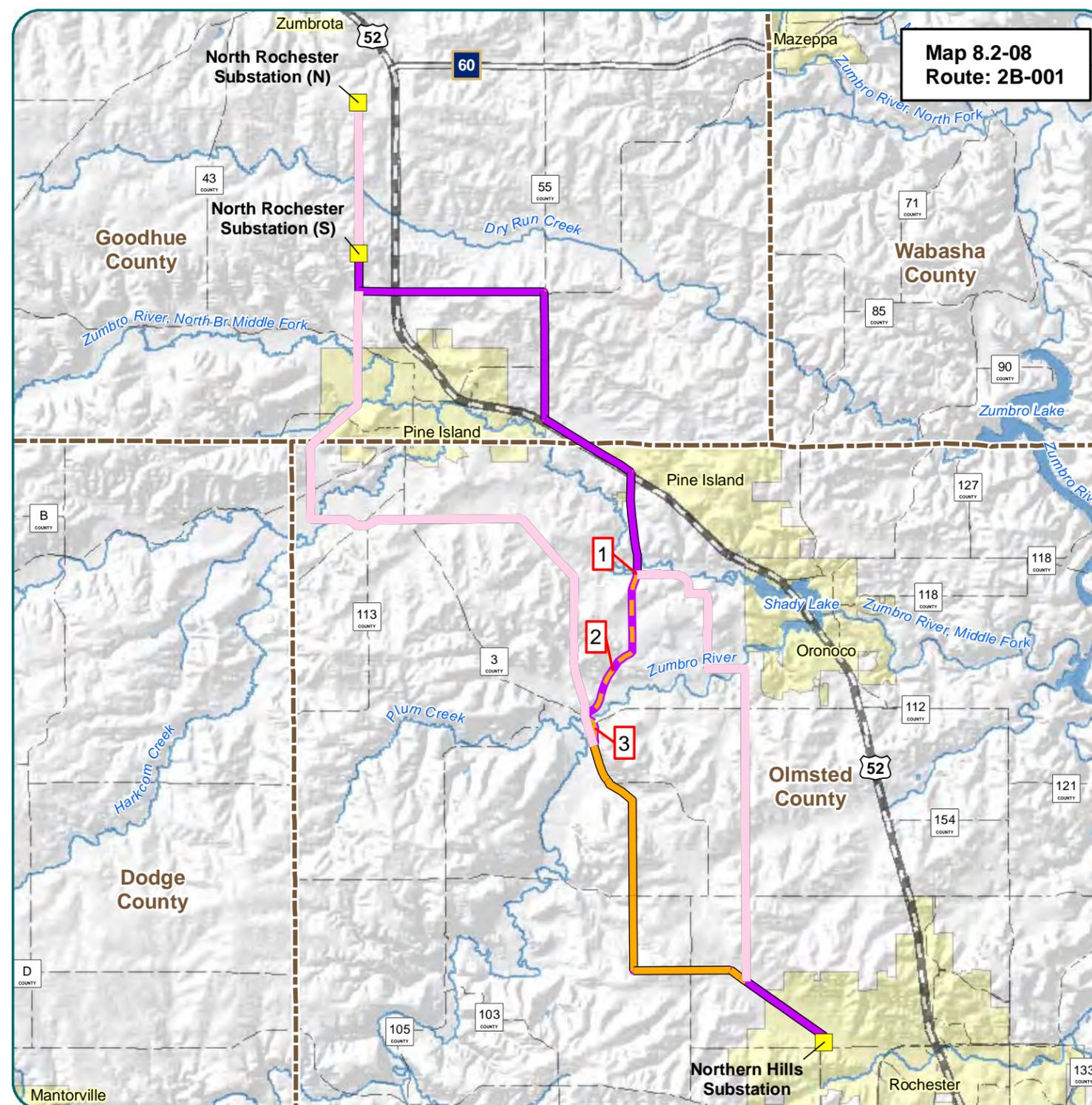


Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2A-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route until the intersection of 125th St. and CSAH 3		
2 Turn southeast following CSAH 3	3.68	Returns to applicant's alternate route - Cty or Twp Road
Total Length		17.23

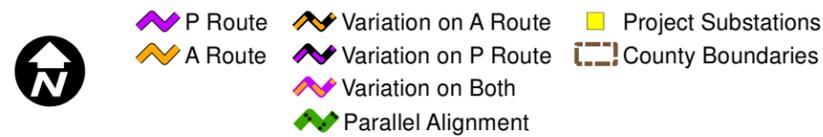
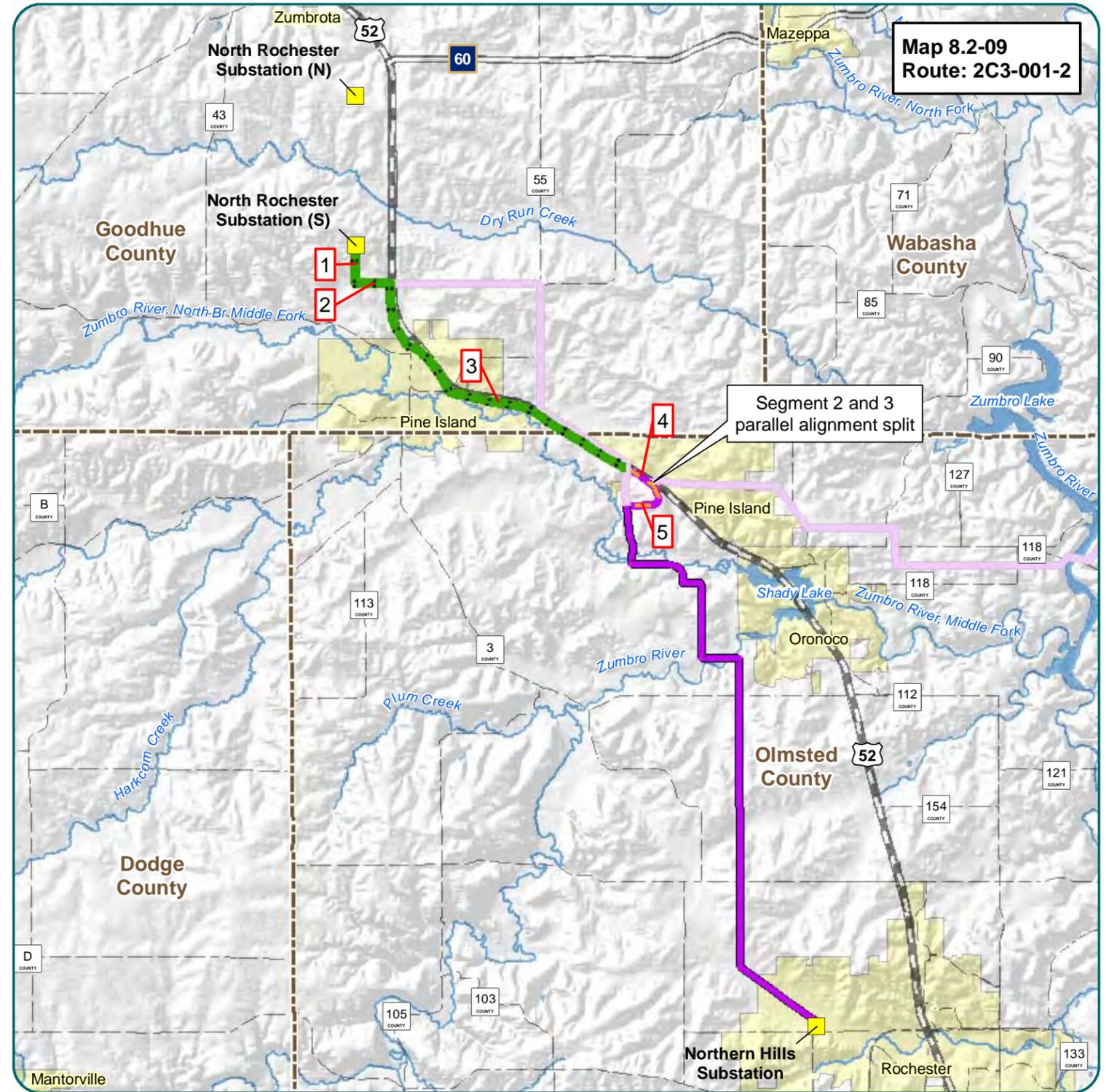


North Rochester to Northern Hills (2B-001)			
	Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's preferred route until the intersection of 117th St. NW and CSAH 31		
2	Continue south following CSAH 31	2.25	Returns to applicant's alternate route - Cty or Twp Road
3	Turn southeast following CSAH 3	0.31	Returns to applicant's alternate route - Cty or Twp Road
Total Length		15.96	

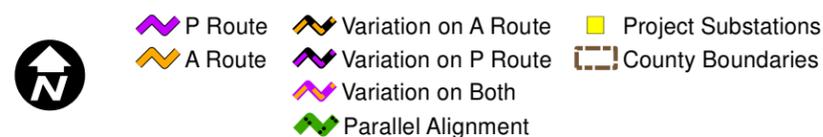
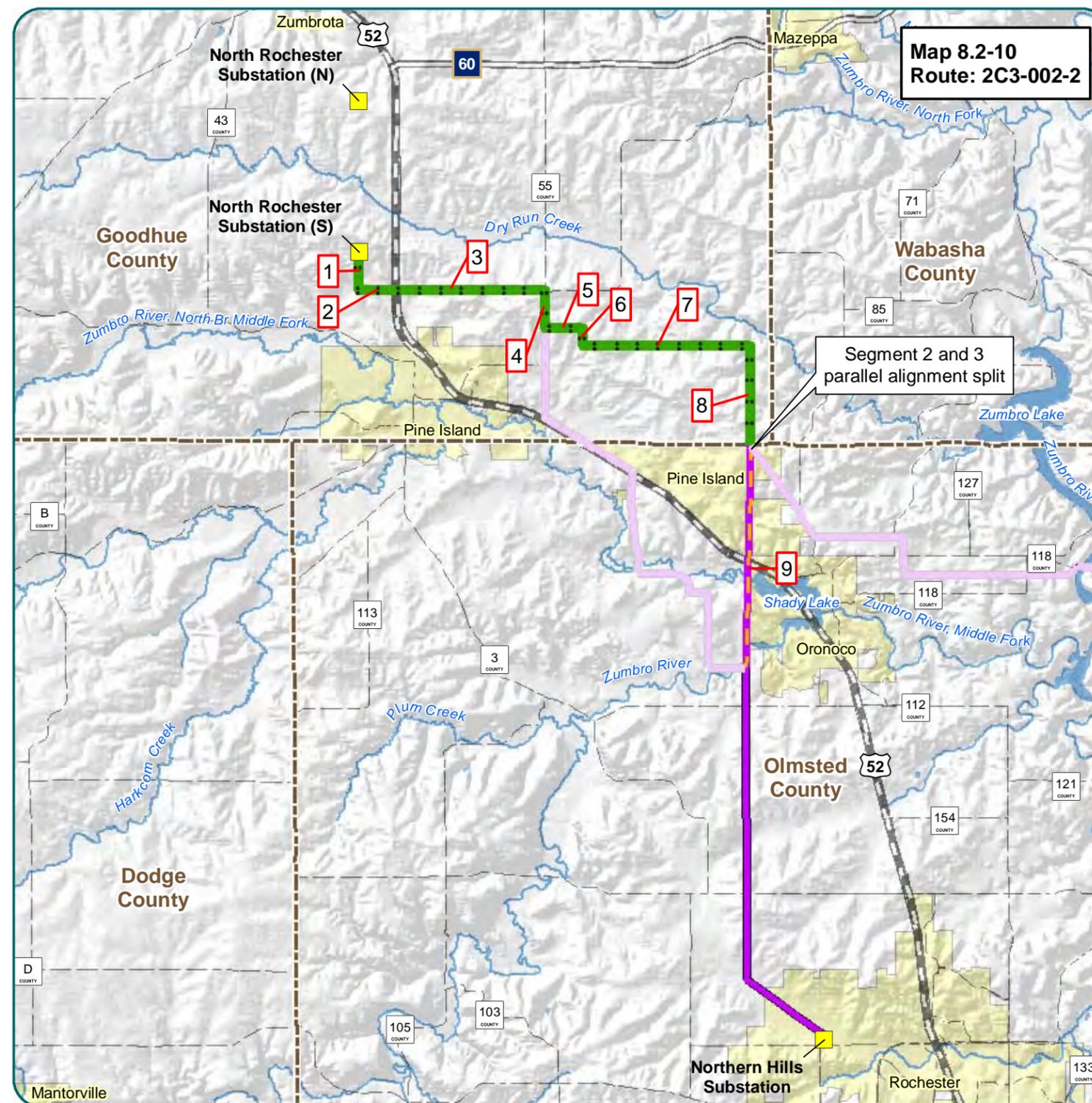


Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2C3-001-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field Line (Parallel alignment)
3 Turn south/southeast following US Hwy 52	4.33	Major Hwy (Parallel alignment)
4 Continue southeast cross-country	0.42	Cross-country
5 Turn west cross-country	0.69	Returns to applicant's preferred route - Cross-country
Total Length		15.23

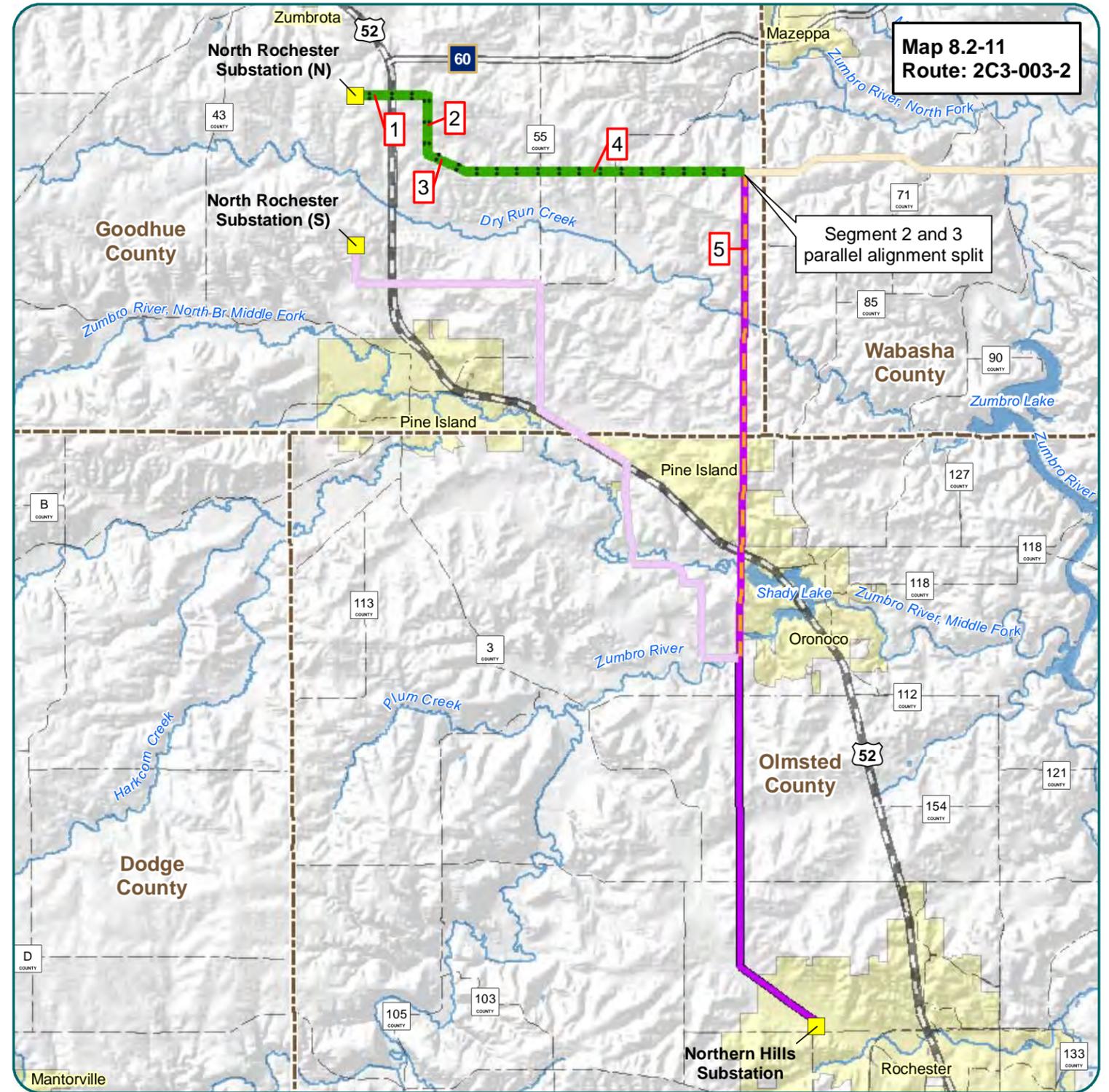


North Rochester to Northern Hills (2C3-002-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.50	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field line (Parallel alignment)
3 Continue east following 500th St.	2.00	Cty or Twp Road (Parallel alignment)
4 Turn south following CSAH 11	0.50	Cty or Twp Road (Parallel alignment)
5 Turn east following field line	0.50	Field line (Parallel alignment)
6 Turn south following field line	0.23	Field line (Parallel alignment)
7 Turn east cross-country	2.23	Cross-country (Parallel alignment)
8 Turn south cross-country/field lines	1.31	Cross-country (Parallel alignment)
9 Continue south cross-country/field lines	2.93	Returns to applicant's preferred route - cross-country
Total Length		16.12



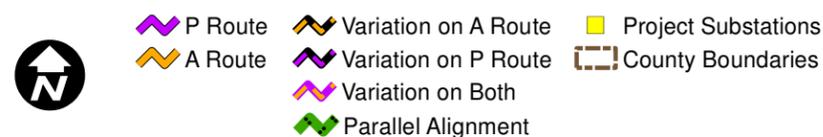
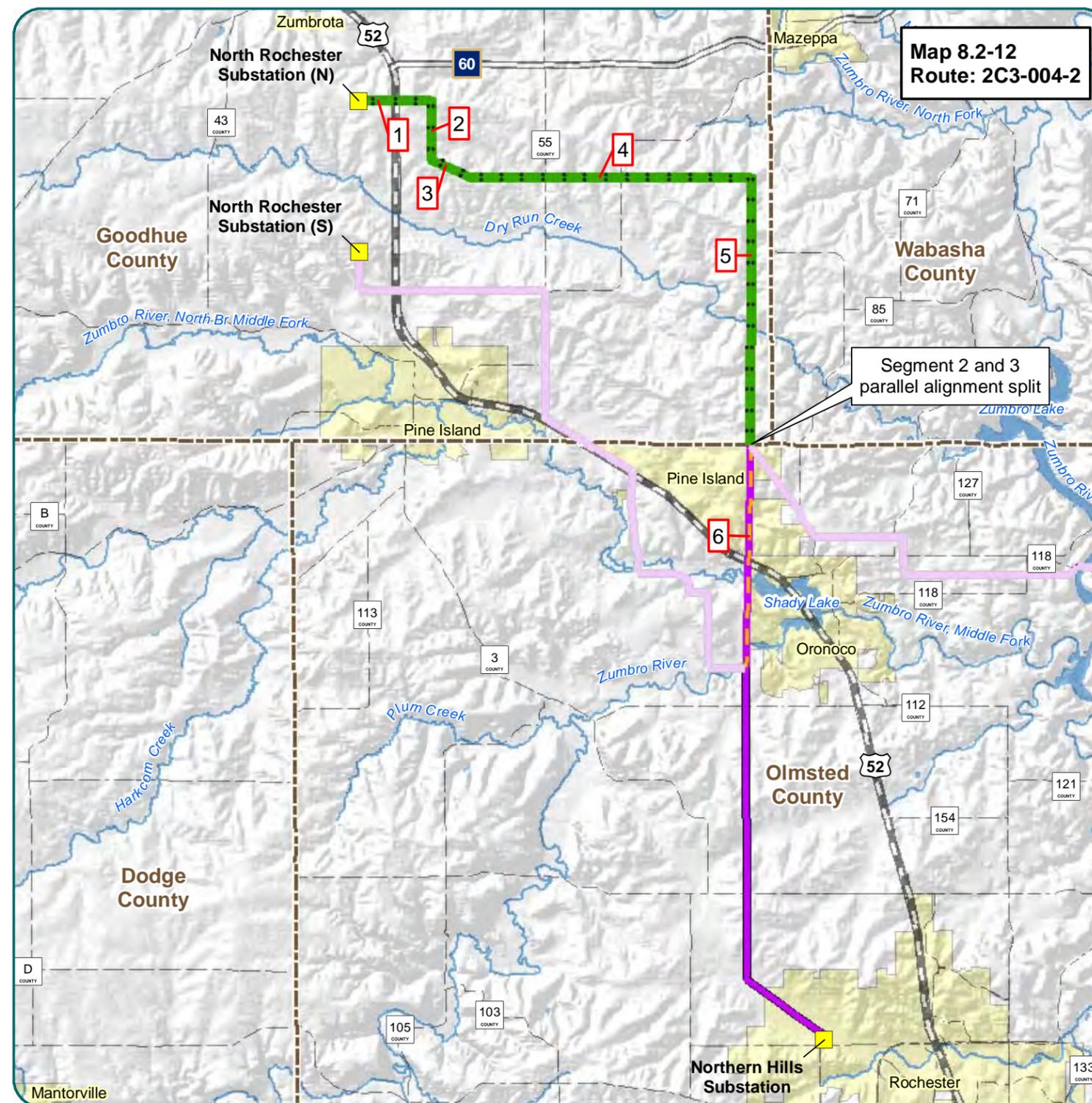
Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2C3-003-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N), go east following field line to 195th Ave.	0.97	Field Line (Parallel alignment)
2 Turn south following 195th Ave.	0.78	City or Twp Road (Parallel alignment)
3 Turn southeast cross-country	0.52	Cross-country (Parallel alignment)
4 Turn east following field line	3.75	Field Line (Parallel alignment)
5 Turn south cross-country/field line	6.46	Returns to applicant's preferred route - Cross-country
Total Length		17.93



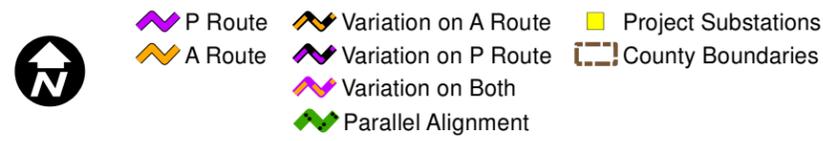
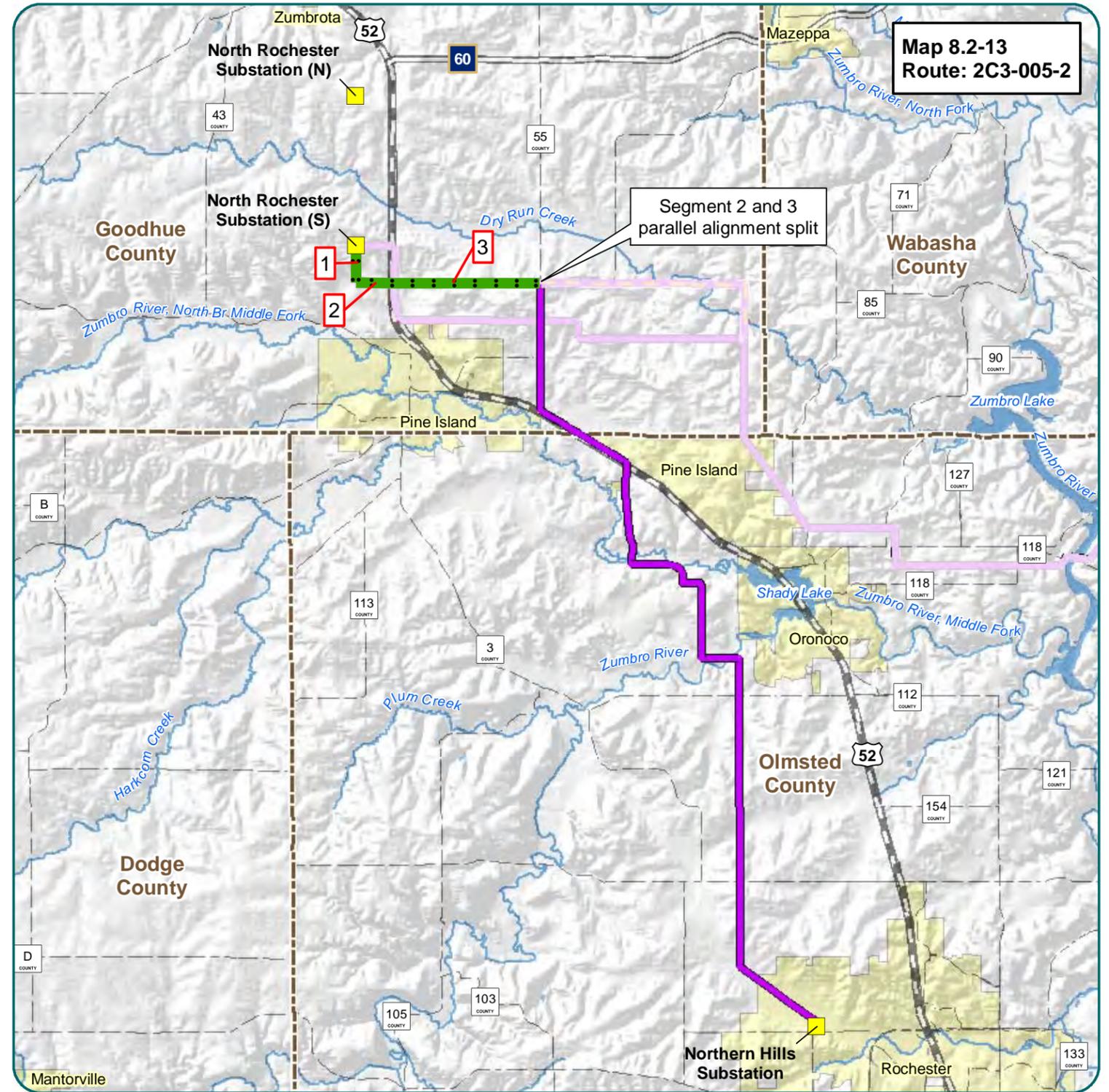
- P Route
- A Route
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment
- Project Substations
- County Boundaries

North Rochester to Northern Hills (2C3-004-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N), go east following field line to 195th Ave.	0.97	Field Line (Parallel alignment)
2 Turn south following 195th Ave.	0.78	Cty or Twp Road (Parallel alignment)
3 Turn southeast cross-country	0.52	Cross-country (Parallel alignment)
4 Turn east following field line/cross-country	3.75	Field Line (Parallel alignment)
5 Turn south cross-country	3.53	Cross-country (Parallel alignment)
6 Continue south cross-country	2.93	Returns to applicant's preferred route - Cross-country
Total Length		17.93

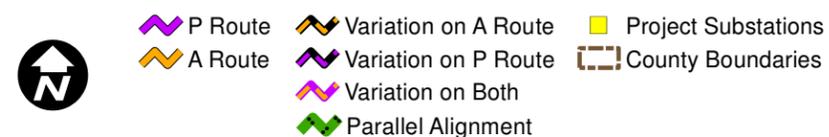
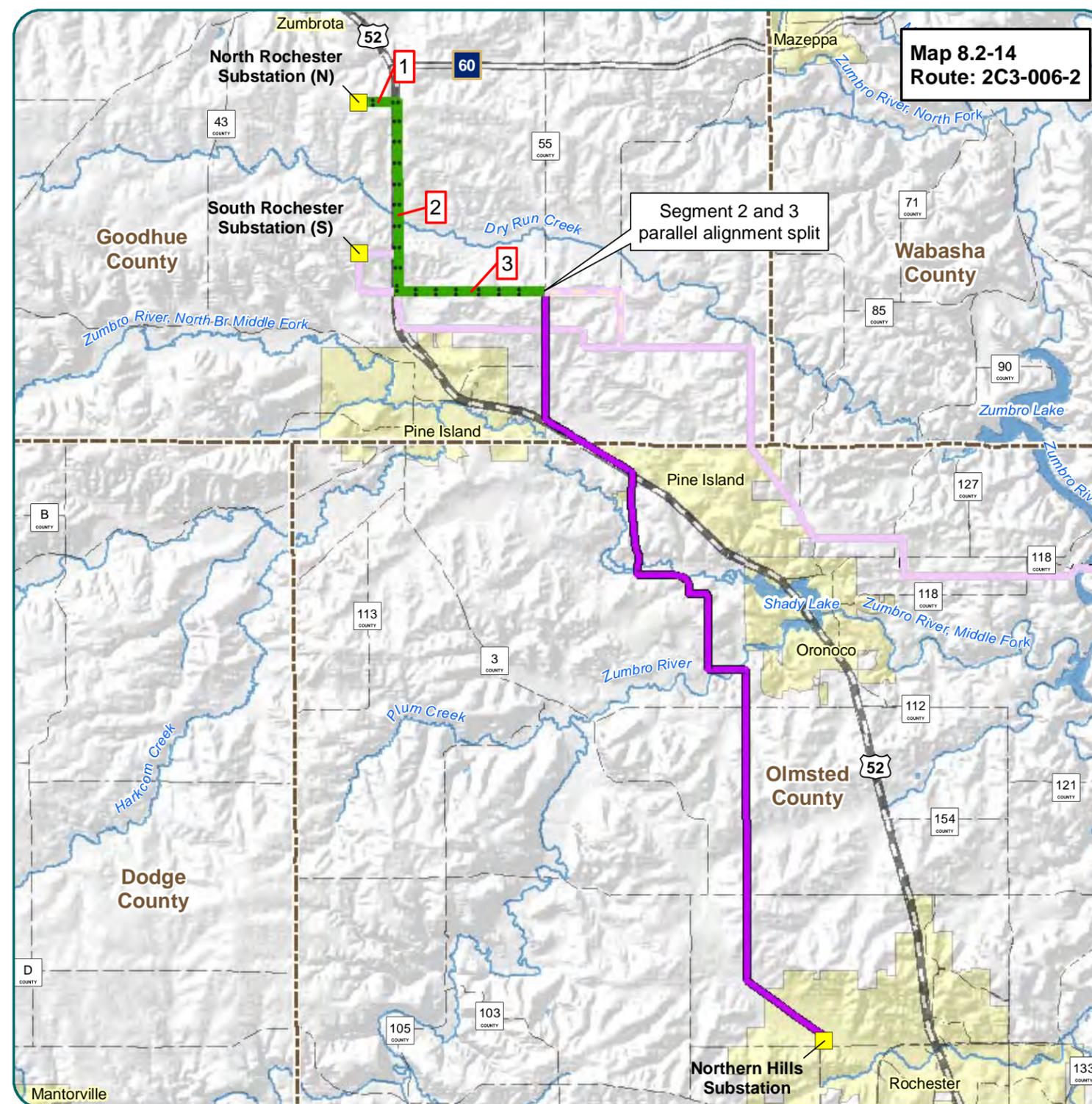


Section 8.2 North Rochester Substation to Northern Hills Substation

North Rochester to Northern Hills (2C3-005-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field Line (Double-circuit)
3 Continue east following 500th St.	2.00	Returns to applicant's preferred route - Cty or Twp Road (Parallel alignment)
Total Length		15.39

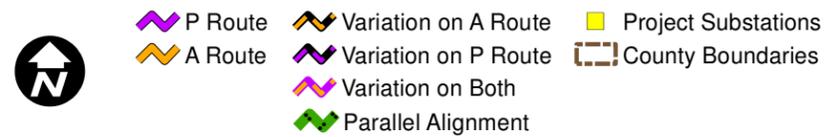
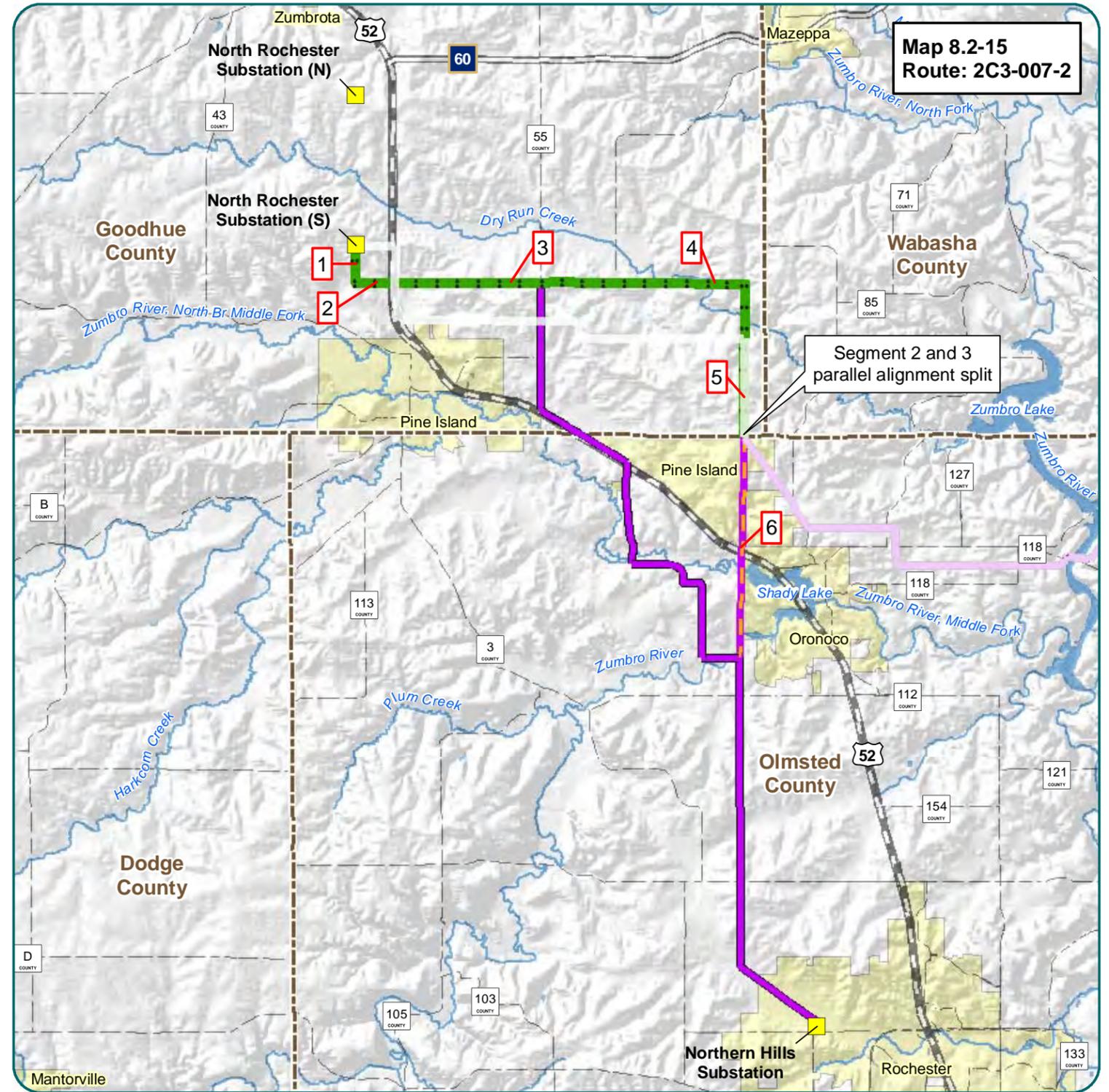


North Rochester to Northern Hills (2C3-006-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N), go east following field line to US Hwy 52	0.51	Field line (Parallel alignment)
2 Turn south following US Hwy 52	2.50	Major Hwy (Parallel alignment)
3 Turn east following 500th St.	1.94	Returns to applicant's preferred route - Cty or Twp Road (Parallel alignment)
Total Length		17.37

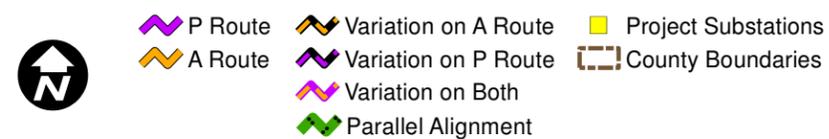
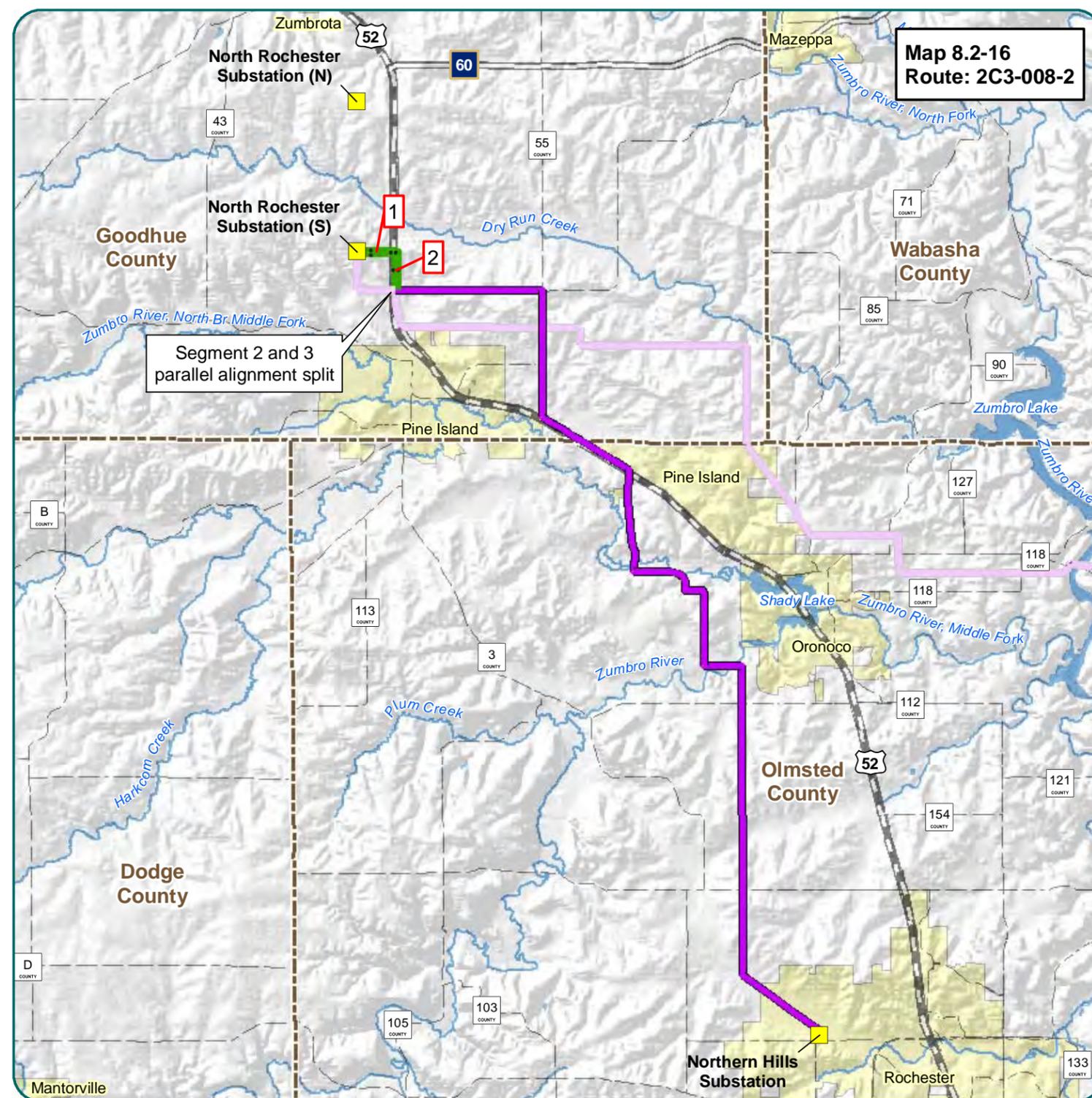


Section 8.2 North Rochester Substation to Northern Hills Substation

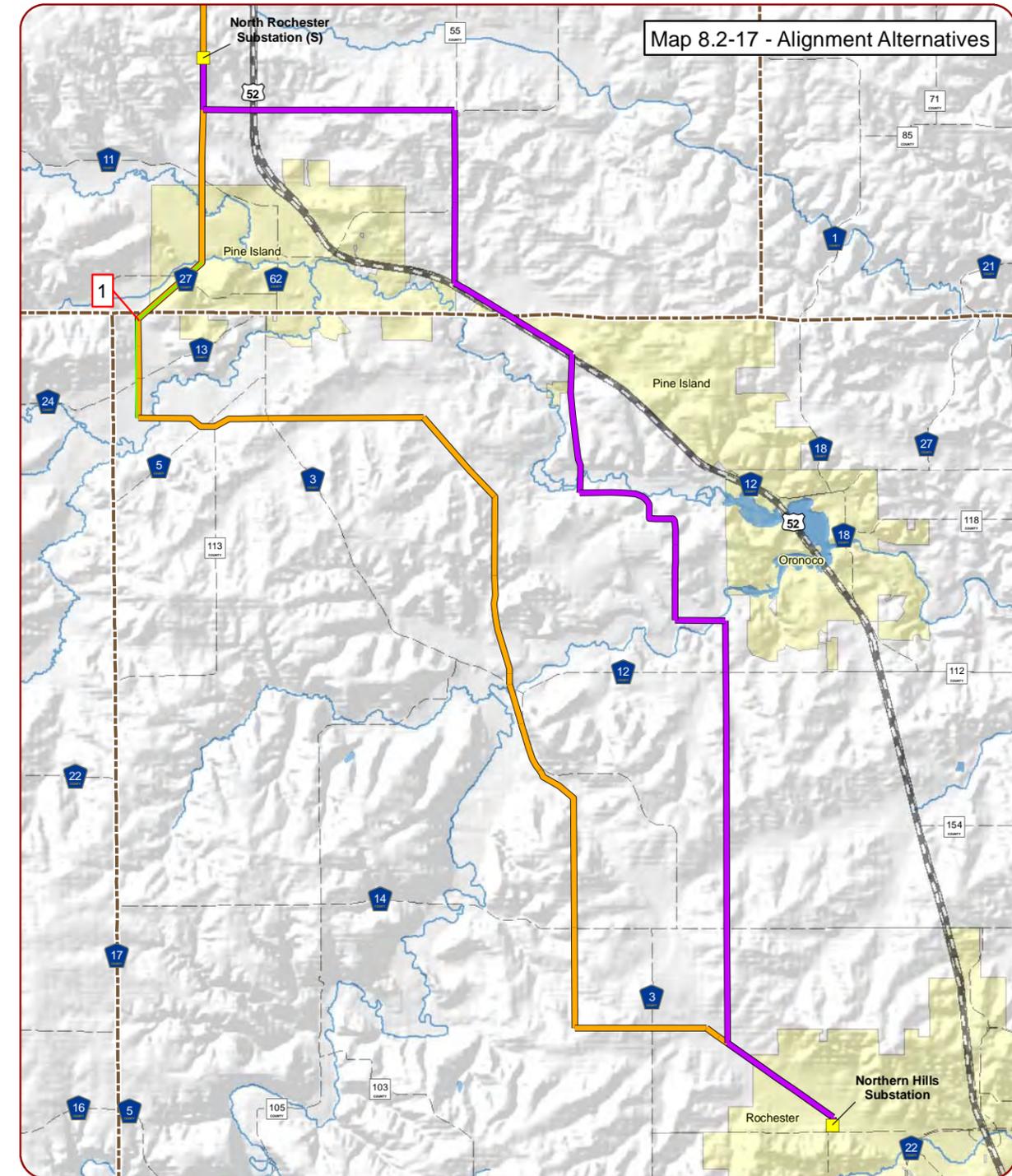
North Rochester to Northern Hills (2C3-007-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission line (Parallel alignment)
2 Turn east following field line	0.52	Field Line (Parallel alignment)
3 Continue east on 500th St.	3.95	Cty or Twp Road (Parallel alignment)
4 Continue east cross-country	0.71	Cross-country (Parallel alignment)
5 Continue south cross-country	2.04	Cross-country (Parallel alignment)
6 Continue south cross-country/field line	2.93	Returns to applicant's preferred route - Cross-country/field line
Total Length	16.13	



North Rochester to Northern Hills (2C3-008-2)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	0.52	From the North Rochester Substation (S), go east following applicant's preferred route to US Hwy 52
2	0.51	Turn south following US Hwy 52 and applicant's preferred route
Total Length		15.39



Section 8.2 North Rochester Substation to Northern Hills Substation

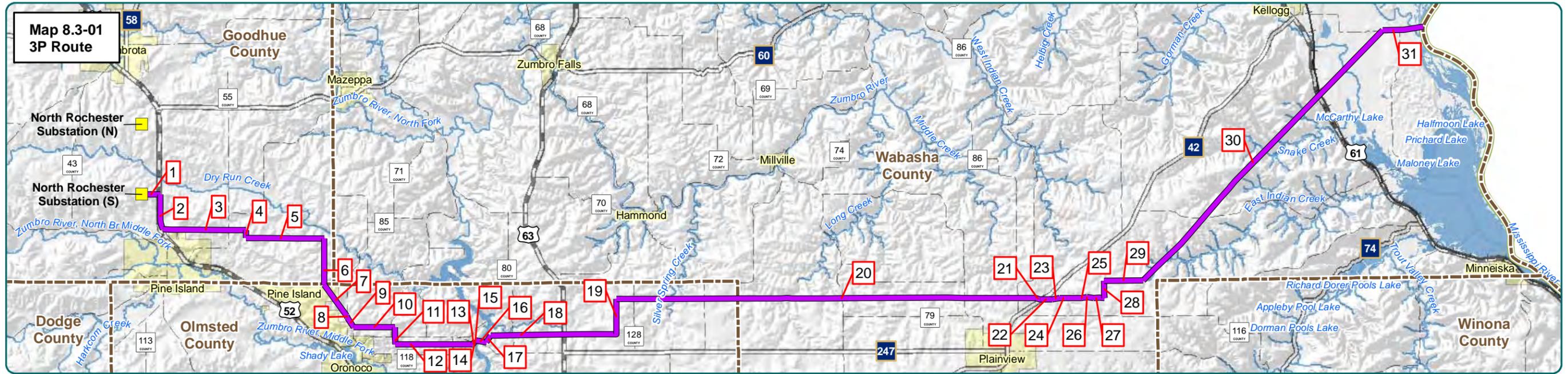


-  Original P Route
-  Original A Route
-  Alignment Alternatives
-  Variation on P Route
-  Variation on A Route
-  Variation on Both
-  Parallel Alignment
-  Project Substations
-  County Boundaries

8.3.1 Description of Route Alternatives – North Rochester Substation to Mississippi River

Segment 3 – North Rochester Substation to Mississippi River

Section 8.3

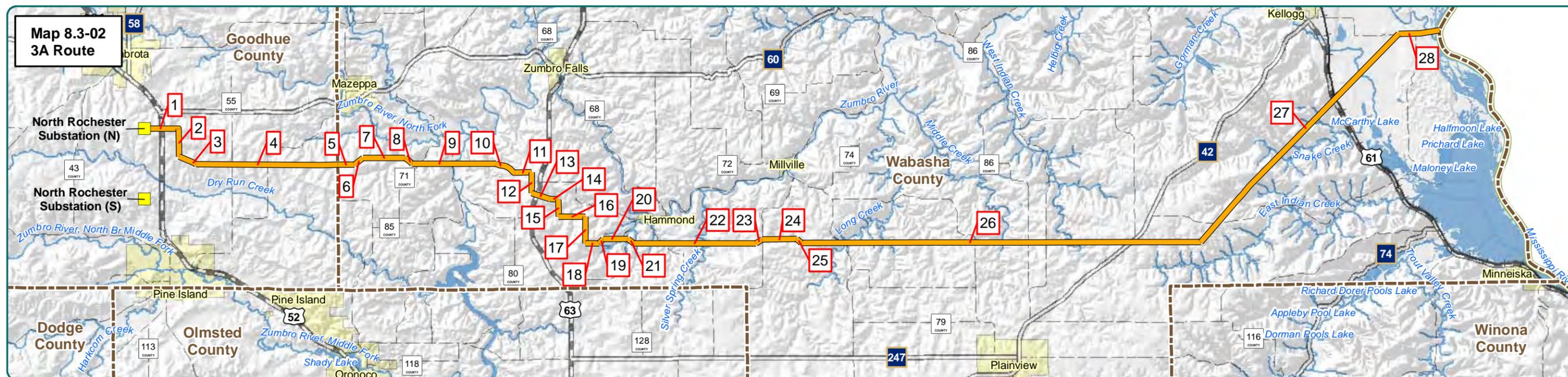


North Rochester to Mississippi River (3P)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	0.52	From the Proposed North Rochester Substation (S) go east following field line
2	1.00	Turn south following US Hwy 52
3	2.36	Turn east following field line/cross-country
4	0.23	Turn south following field line
5	2.23	Turn east following field line/cross-country
6	1.31	Turn south following field line/cross-country to Ash Road NW
7	1.08	Turn southeast following Ash Road NW
8	0.07	Turn south/southeast crossing Ash Road NW
9	0.31	Turn southeast following CSAH 18
10	1.17	Turn east cross-country
11	0.50	Turn south cross-country
12	2.20	Turn east following field line/cross-country
13	0.09	Turn northeast cross-country to White Bridge Road NE
14	0.03	Continue northeast crossing White Bridge Road NE
15	0.02	Continue northeast cross-country
16	0.32	Turn east/southeast cross-country (cross the Zumbro River)

17	0.22	Turn northeast cross-country
18	3.57	Turn east following field line/cross-country
19	0.99	Turn north following field line
20	11.94	Turn east following field line/cross-country
21	0.14	Turn east/southeast cross-country
22	0.34	Turn east cross-country
23	0.21	Turn east/northeast following cross-country
24	0.62	Turn east following field line
25	0.17	Turn east/northeast cross-country
26	0.19	Turn east/southeast cross-country
27	0.31	Turn east cross-country
28	0.49	Turn north following field line
29	1.12	Turn east following field line
30	9.83	Turn northeast following transmission line
31	1.16	Turn east/northeast following transmission line to Mississippi River

Total Length 44.74

P Route
 A Route
 Variation on A Route
 Variation on P Route
 Variation on Both
 Parallel Alignment
 Project Substations
 County Boundaries



North Rochester to Mississippi River (3A)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	0.97	Field Line
2	0.78	Cty or Twp Road
3	0.52	Cross-country
4	4.00	Field Line/Cross-country
5	0.47	Cty or Twp Road
6	0.30	Cross-country
7	1.19	Cross-country
8	0.26	Cross-country
9	2.35	Field Line/Cross-country
10	0.58	Cross-country
11	0.49	Field Line
12	0.59	Field Line/Cross-country
13	0.53	Cross-country
14	0.25	Field Line
15	0.50	Field Line
16	0.75	Cross-country

17	0.75	Field Line/Cross-country
18	0.40	Cty or Twp Road
19	0.17	Cross-country
20	0.71	Cross-country
21	0.20	Cross-country
22	3.43	Field Line/Cross-country
23	0.21	Cross-country
24	0.98	Cross-country
25	0.16	Cross-country
26	11.25	Field Line/Cross-country
27	8.07	Transmission Line
28	1.16	Transmission Line

Total Length 42.02



- P Route
- A Route
- Project Substations
- County Boundaries
- Variation on A Route
- Variation on P Route
- Variation on Both
- Parallel Alignment

Section 8.3

Segment 3 - North Rochester Substation to Mississippi River

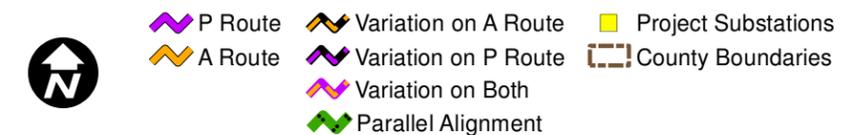
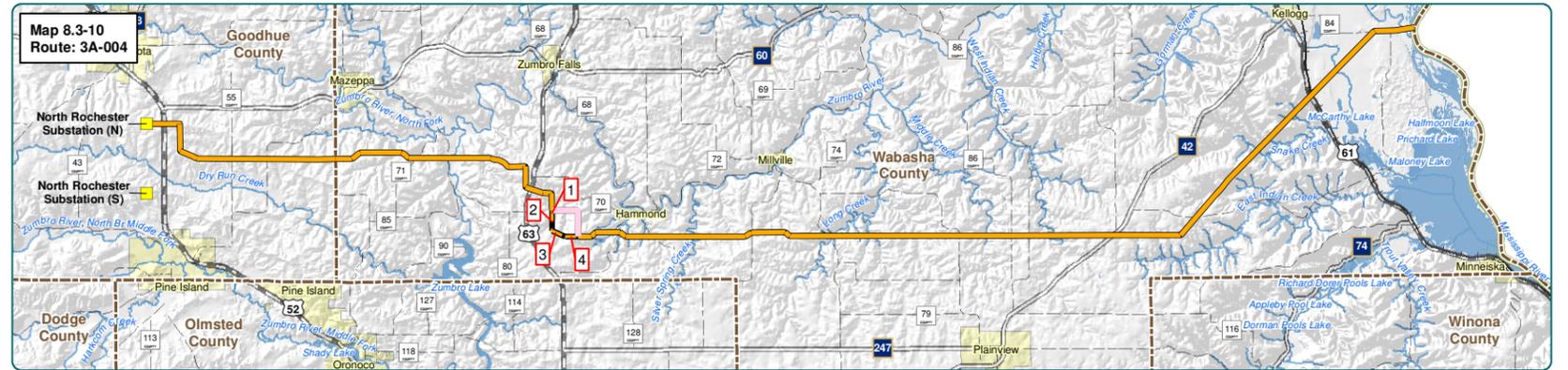
North Rochester to Mississippi River (3A-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route until 0.1 miles south of intersection MN Hwy 42 and CSAH 14		
2 Turn south following CSAH 14	0.25	Cty or Twp Road
3 Turn east cross-country/field lines	1.64	Cross-country/field lines
4 Turn northeast following transmission line	0.33	Returns to the applicant's alternate route - Transmission Line
<b>Total Length</b>	<b>42.37</b>	



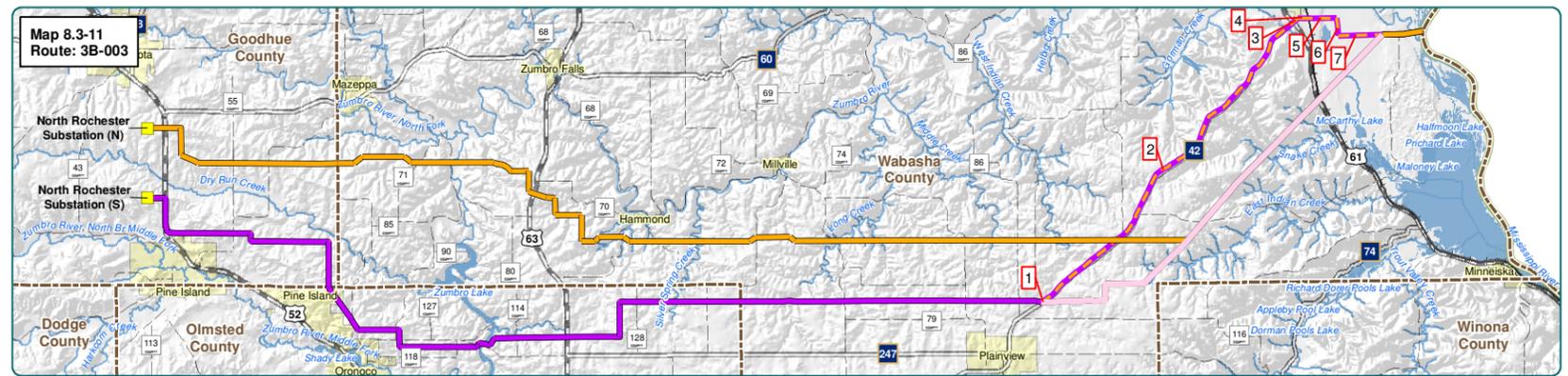
North Rochester to Mississippi River (3A-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route until 1 mile east of intersection CSAH 7 and US Hwy 63		
2 Turn south following field line	0.69	Field Line
3 Turn southeast cross-country	0.14	Cross-contry
4 Turn east following T-196	0.37	Returns to applicant's alternate route - Cnty or Twp Road
<b>Total Length</b>	<b>41.96</b>	



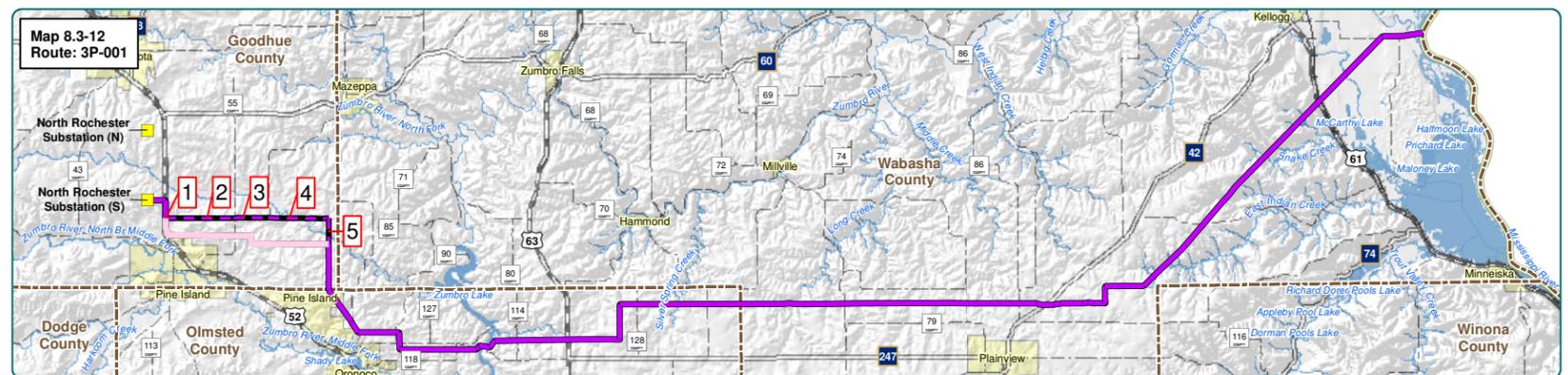
North Rochester to Mississippi River (3A-004)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.75 miles east of intersection CSAH 7 and US Hwy 63		
2 Turn south cross-country	0.58	Cross-country
3 Turn southeast cross-country	0.42	Cross-country
4 Turn east following T-196	0.37	Returns to applicant's alternate route - Cnty or Twp Road
<b>Total Length</b>	<b>41.88</b>	



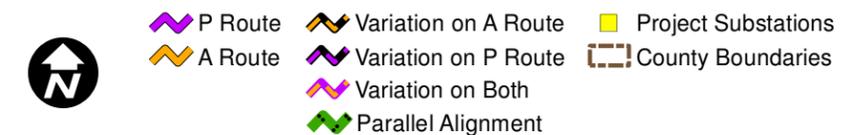
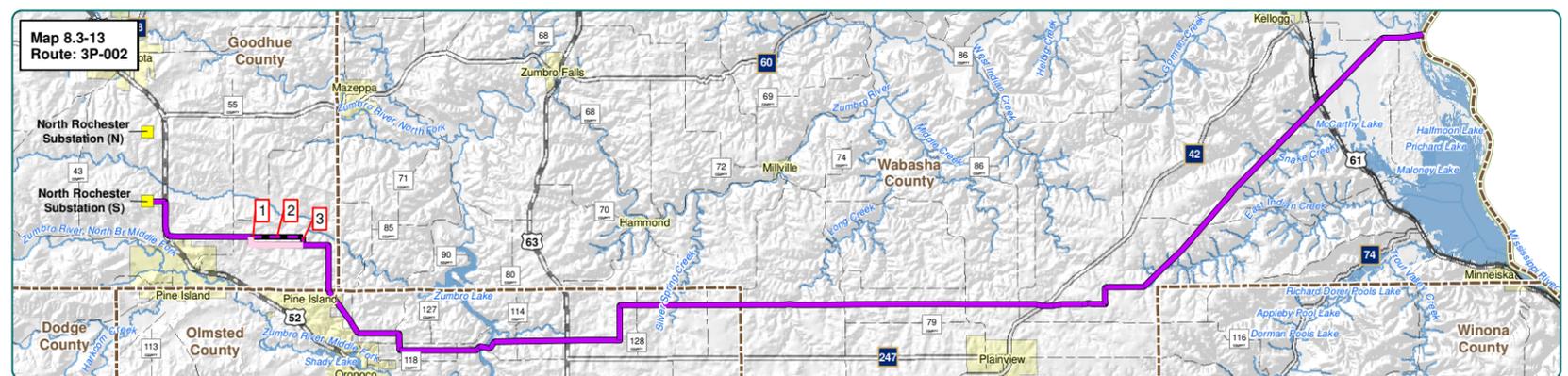
North Rochester to Mississippi River (3B-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's preferred route until 0.45 miles north of CSAH 27 and 0.65 miles east of CSAH 4	
2	Turn northeast following MN Hwy 42	11.06 Major Hwy
3	Continue northeast following CSAH 18	0.16 Cty or Twp Road
4	Turn east cross-country to Cty Road 84	0.11 Cross-country
5	Continue east following Cty Road 84	1.00 Cty or Twp Road
6	Turn south following Cty Road 84	0.50 Cty or Twp Road
7	Turn east following Cty Road 84	1.26 Returns to applicant's alternate route - Cty or Twp Road
Total Length		45.57



North Rochester to Mississippi River (3P-001)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's preferred route until the intersection of US Hwy 52 and 500th St.	
2	Turn east following 500th St.	1.96 Cty or Twp Road
3	Continue east following CSAH 11	1.00 Cty or Twp Road
4	Continue east following 500th St.	1.72 Cty or Twp Road
5	Continue south cross-country	0.73 Returns to applicant's preferred route - Cross-country
Total Length		44.83



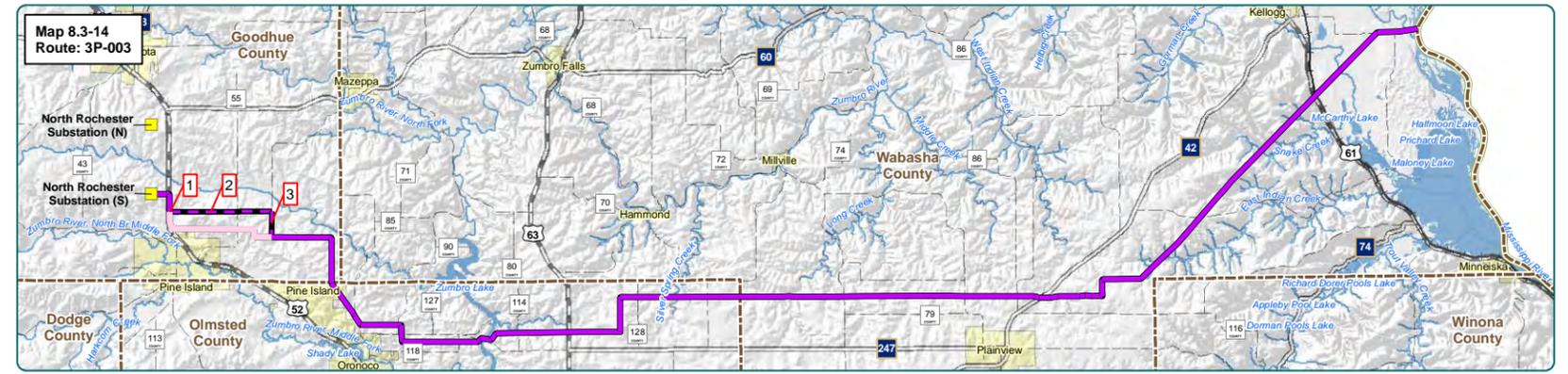
North Rochester to Mississippi River (3P-002)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1	Follow the applicant's preferred route until 0.5 miles west of 220th Ave. and 0.5 miles north of 510	
2	Turn east cross-country to 230th Ave.	1.49 Cty or Twp Road
3	Turn south following 230th Ave.	0.24 Returns to applicant's preferred route - Cty or Twp Road
Total Length		44.75



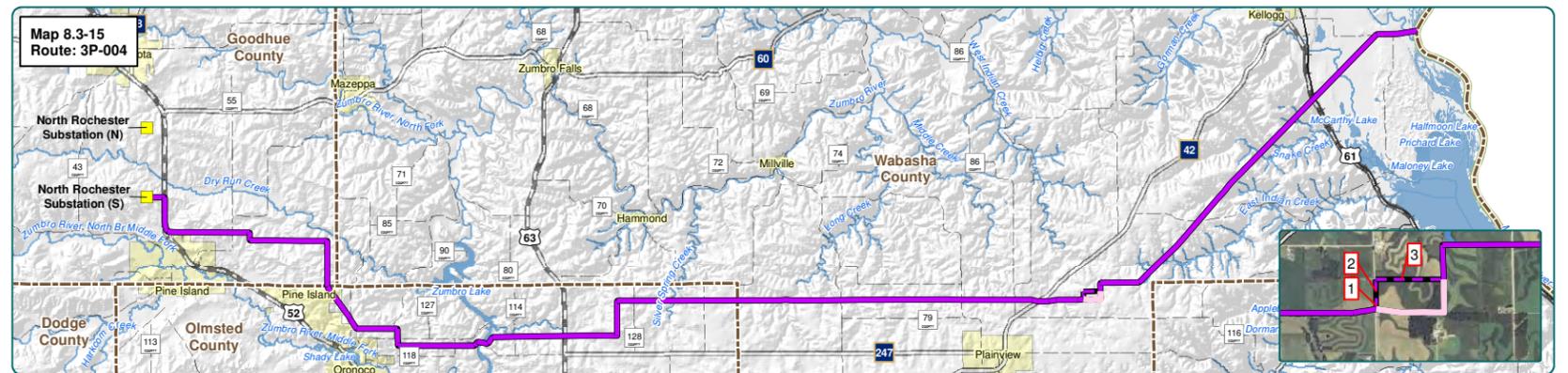
Section 8.3

Segment 3 - North Rochester Substation to Mississippi River

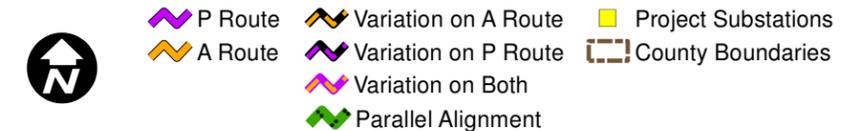
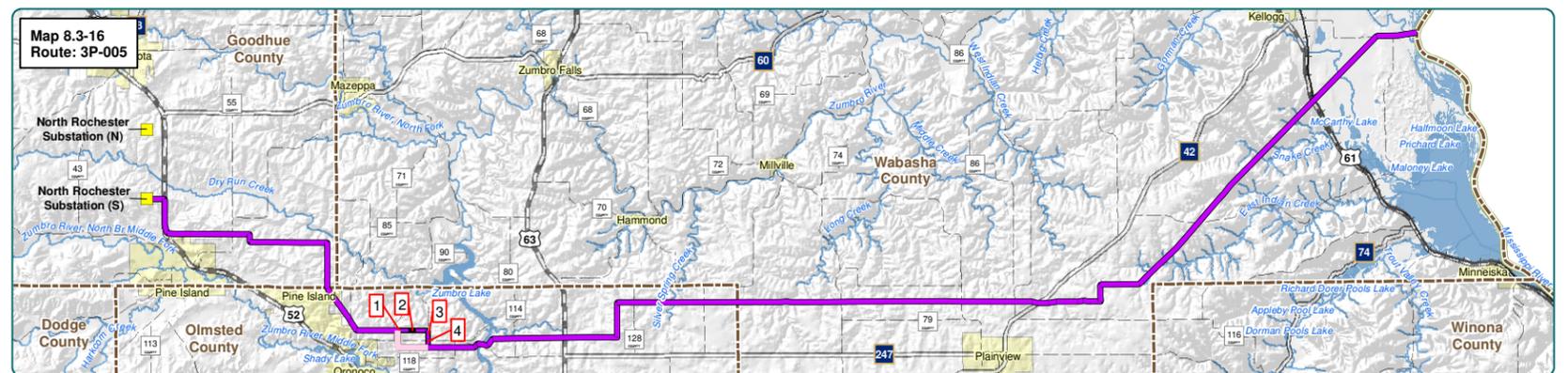
North Rochester to Mississippi River (3P-003)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until the intersection of US Hwy 52 and 500th St.		
2 Turn east following 500th St.	2.95	Cty or Twp Road
3 Turn south following 200th Ave.	0.74	Returns to applicant's preferred route - Cty or Twp Road
Total Length		44.84



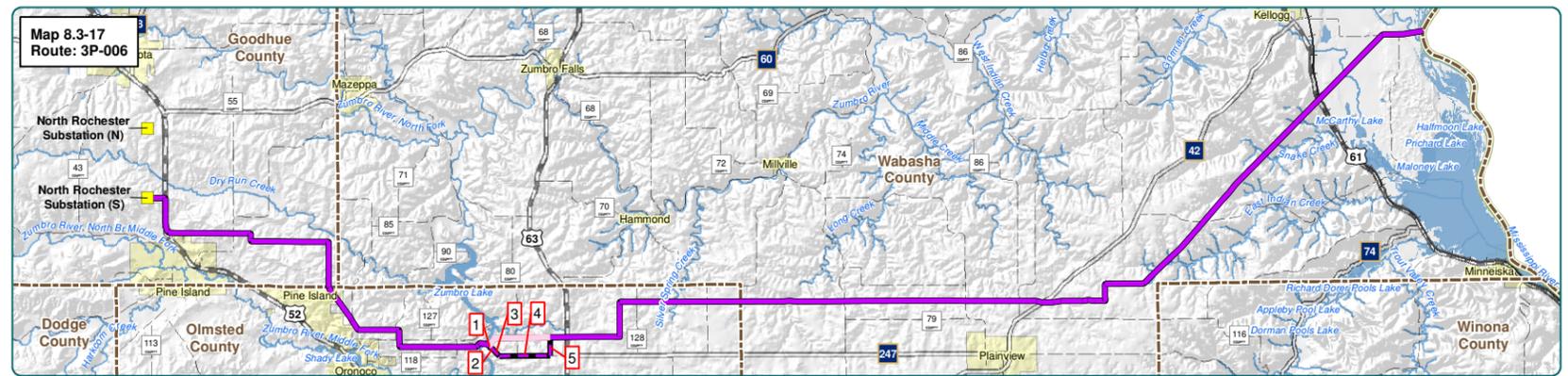
North Rochester to Mississippi River (3P-004)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.45 miles south of T-307 and T-203		
2 Turn north following T-203	0.21	Cty or Twp Road
3 Turn east following field line	0.49	Returns to applicant's preferred route - Field Line
Total Length		44.72



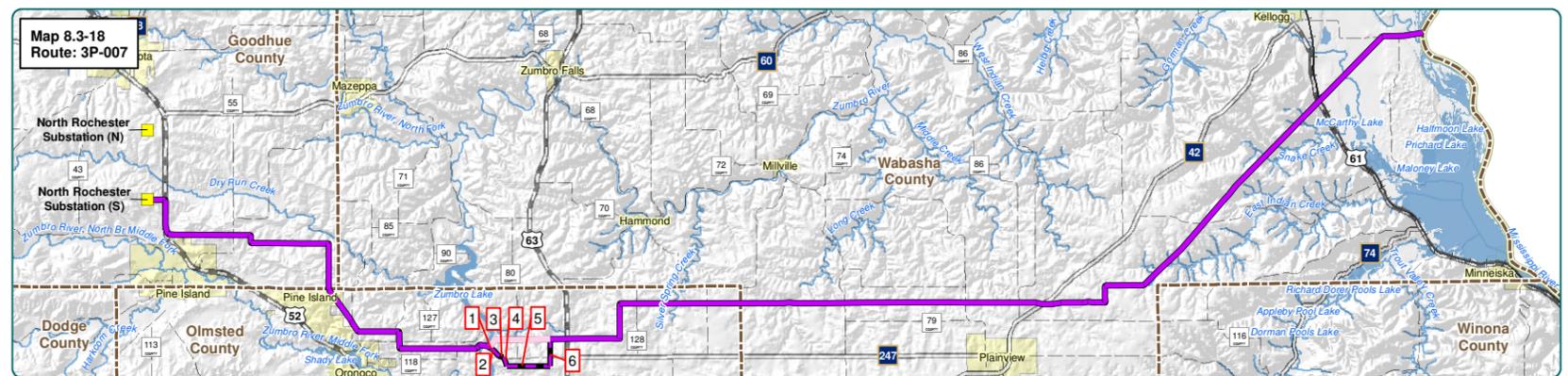
North Rochester to Mississippi River (3P-005)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.1 miles east of Power Dam Road and 0.25 miles north of White Bridge Road NW		
2 Continue east cross-country to 25th Ave NW	0.88	Cross-country
3 Turn south following 25th Ave.	0.25	Cty or Twp Road
4 Continue south following field line	0.24	Returns to applicant's preferred route - Field Line
Total Length		44.75



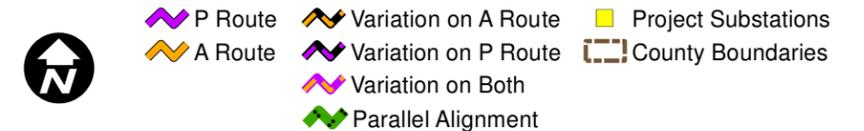
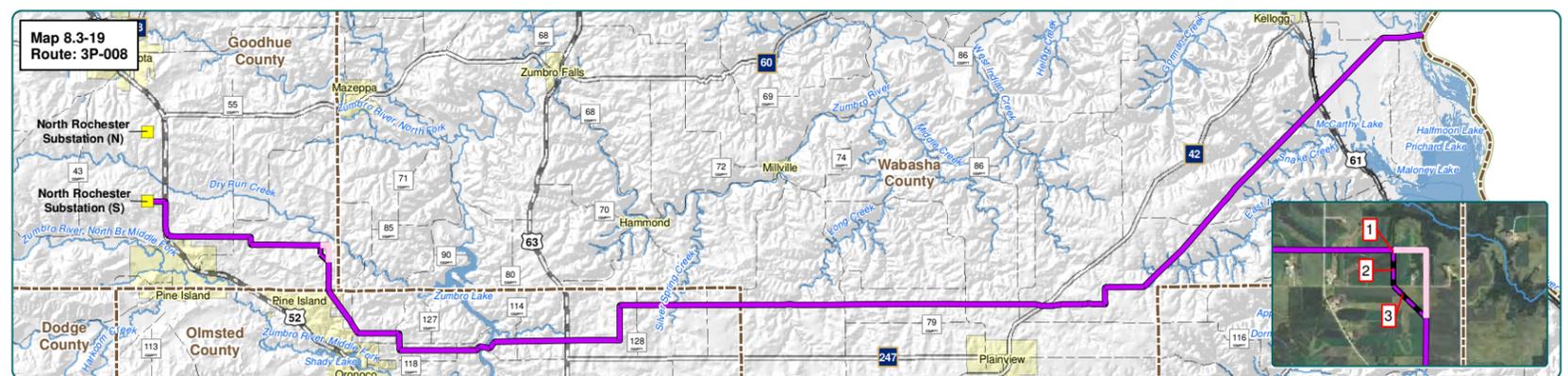
North Rochester to Mississippi River (3P-006)			
Turn by Turn	Distance (miles)	Comments/ROW Type	
1	Follow the applicant's preferred route until 0.1 miles north of White Bridge Road NE and 0.1 miles east of Zumbro River		
2	Turn southeast cross country to White Bridge Road NE	0.08	Cross-country
3	Continue southeast following White Bridge Road NE	0.37	Cty or Twp Road
4	Turn east following White Bridge Road NE	1.45	Cty or Twp Road
5	Turn north following field line	0.52	Returns to applicant's preferred route - Field Line
Total Length		45.32	



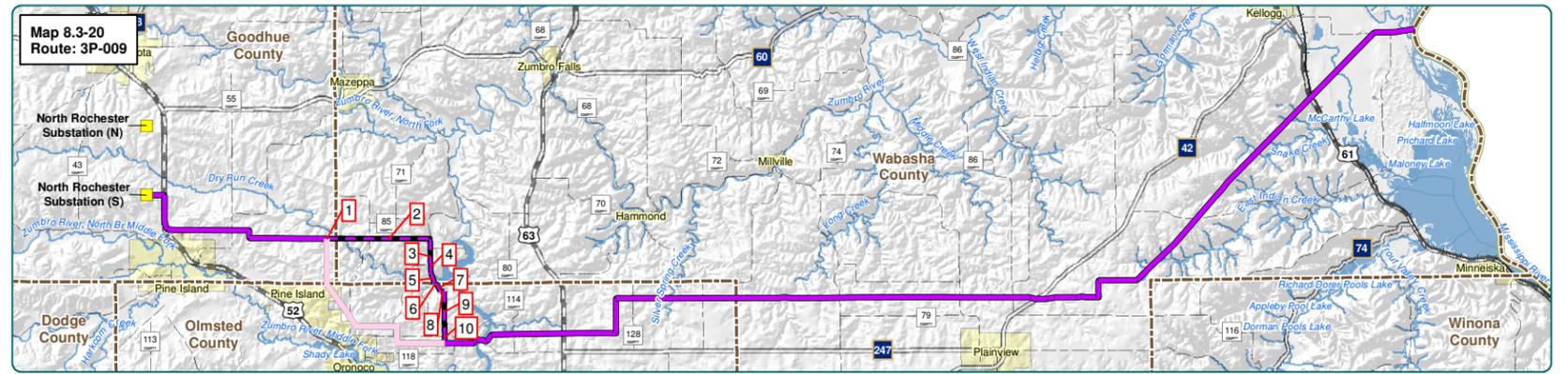
North Rochester to Mississippi River (3P-007)			
Turn by Turn	Distance (miles)	Comments/ROW Type	
1	Follow the applicant's preferred route until 0.08 miles north of White Bridge Road NE and 0.11 miles east of Zumbro River		
2	Turn southeast cross country to White Bridge Road NE	0.08	Cross-country
3	Continue southeast following White Bridge Road NE	0.44	Cty or Twp Road
4	Turn southeast cross country	0.28	Cross-country
5	Turn east cross country	1.23	Cross-country
6	Turn north following field line	0.78	Returns to applicant's preferred route - Field Line
Total Length		45.74	



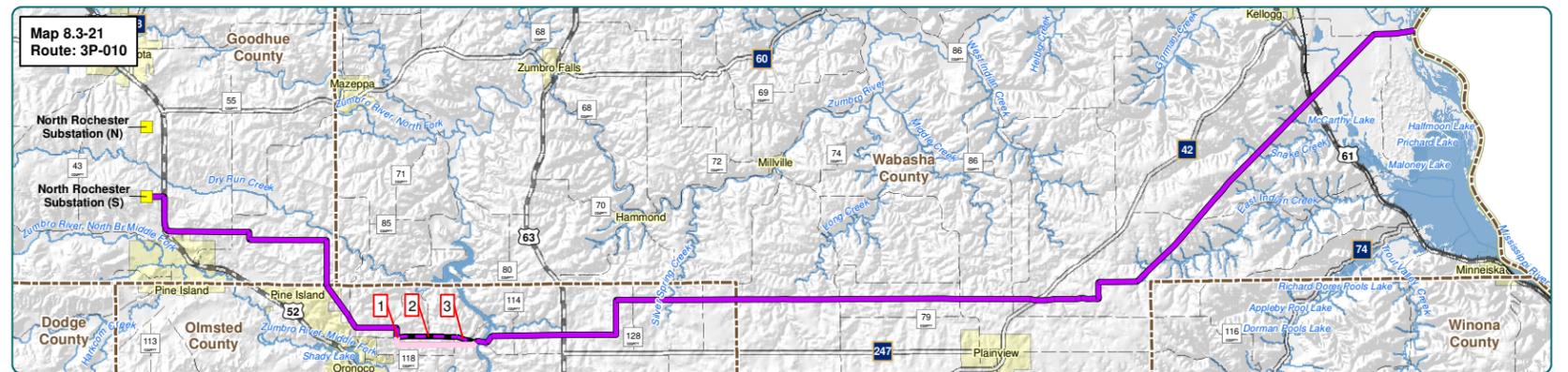
North Rochester to Mississippi River (3P-008)			
Turn by Turn	Distance (miles)	Comments/ROW Type	
1	Follow the applicant's preferred route until 0.5 miles east of 230th Ave. and 0.25 miles north of 510 St.		
2	Turn south following field line	0.26	Field Line
3	Turn southeast cross country	0.33	Returns to applicant's preferred route - Cross-country
Total Length		44.61	



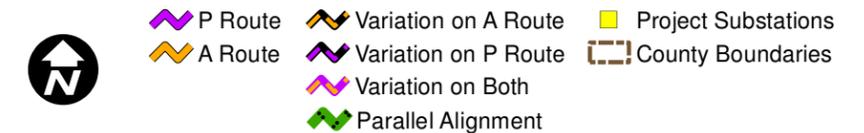
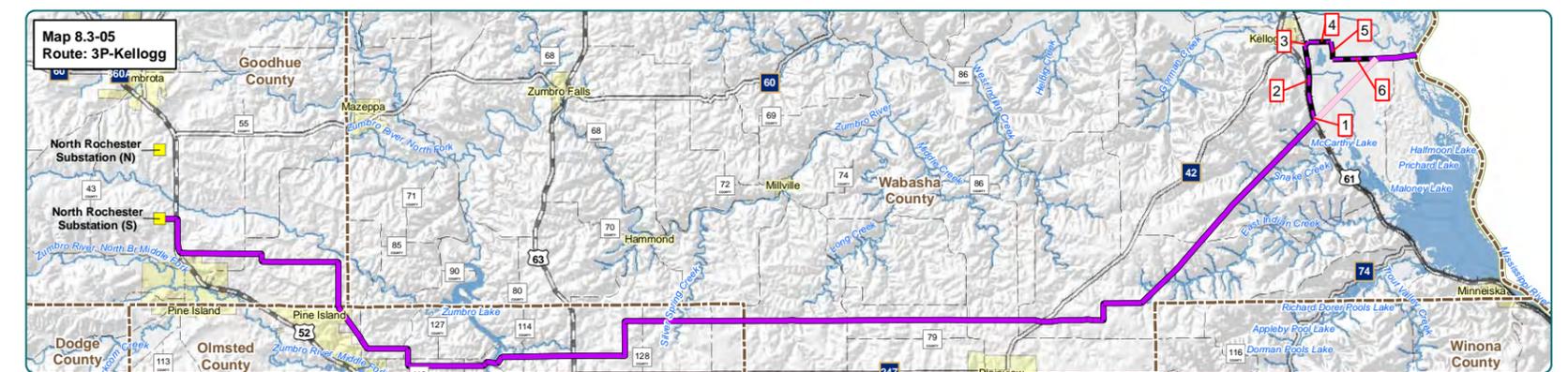
North Rochester to Mississippi River (3P-009)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.7 miles east of 230th Ave.		
2 Continue east cross-country/field lines	2.96	Cross-country/field lines
3 Turn south following CSAH 21	0.75	Cty or Twp Road/Transmission Line
4 Continue south cross-country	0.24	Cross-country/Transmission Line
5 Turn southeast cross-country to 25th Ave NW	0.30	Cross-country/Transmission Line
6 Turn east following 25th Ave	0.12	Cty or Twp Road/Transmission Line
7 Turn southeast cross-country	0.20	Cross-country/Transmission Line
8 Turn east cross-country to Postier Dr. NW	0.11	Cross-country/Transmission Line
9 Turn south following Postier Dr. NW	1.24	Cty or Twp Road/Transmission Line
10 Continue south following transmission line	0.25	Returns to applicant's preferred route - Transmission Line
<b>Total Length</b>	<b>45.08</b>	



North Rochester to Mississippi River (3P-010)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until White Bridge Road		
2 Turn east following White Bridge Road	1.72	Cty or Twp Road
3 Turn southeast following White Bridge Road	0.56	Returns to applicant's preferred route - Cty or Twp Road
<b>Total Length</b>	<b>44.50</b>	



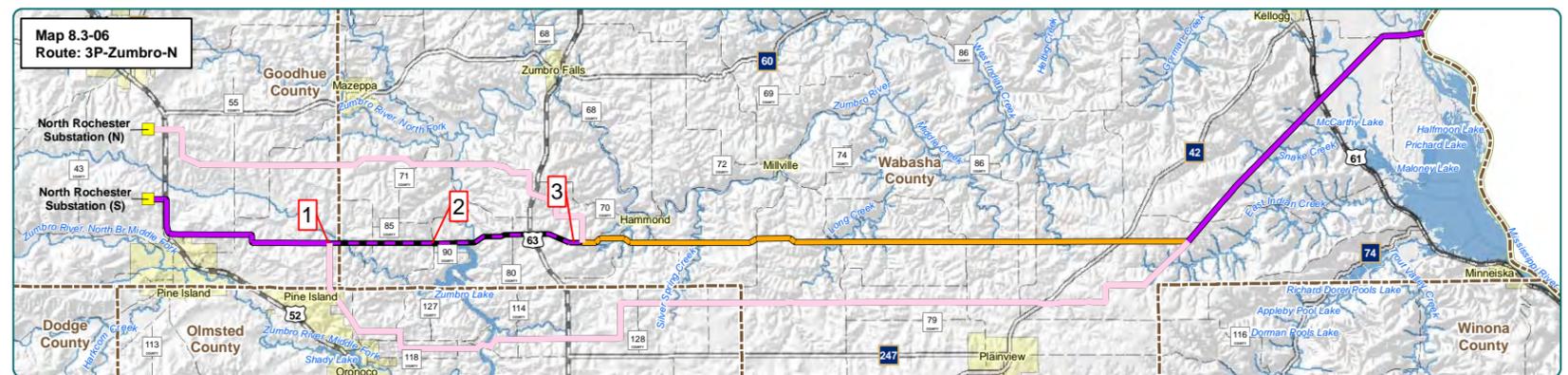
North Rochester to Mississippi River (3P-Kellogg)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until the RR tracks just east of US Hwy 61		
2 Turn north following RR line	2.20	RR Line
3 Turn northeast cross-country	0.14	Cross-country
4 Turn east along CR-84	0.66	Cty or Twp Road
5 Turn south following CR-84	0.51	Cty or Twp Road
6 Turn east following CR-84	1.26	Returns to applicant's preferred route - Cty or Twp Road
<b>Total Length</b>	<b>46.98</b>	



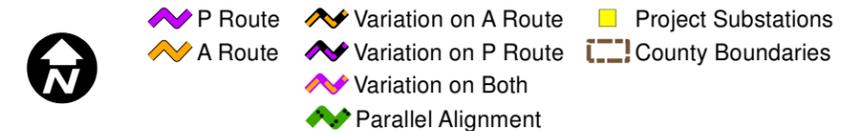
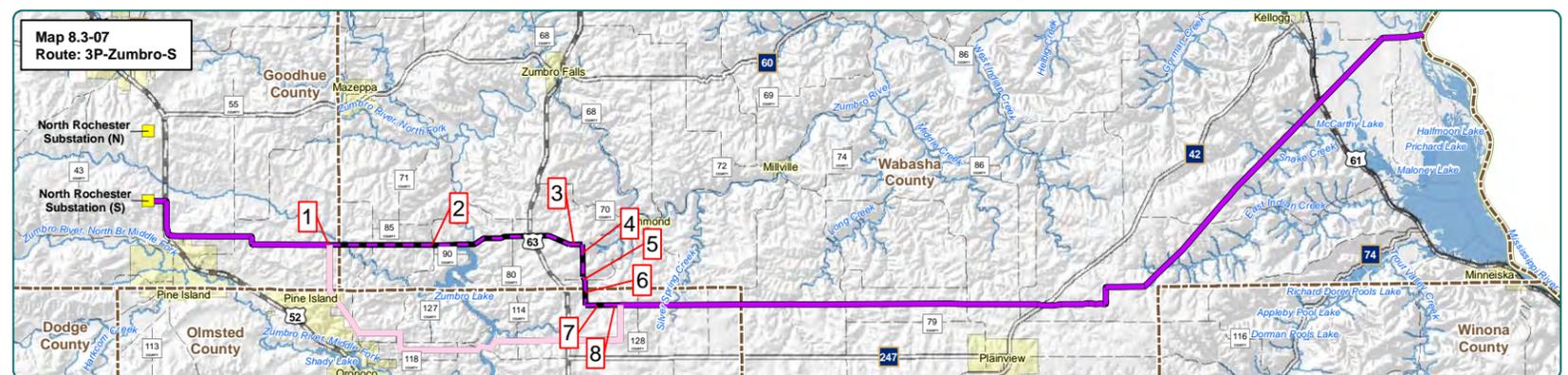
North Rochester to Mississippi River (3A-Kellogg)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's alterante route until the RR tracks rust east of US Hwy 61
2	2.20	Turn north following RR line
3	0.14	Turn northeast cross-country
4	0.66	Turn east along CR-84
5	0.51	Turn south following CR-84
6	1.26	Turn east following CR-84
Total Length		44.26



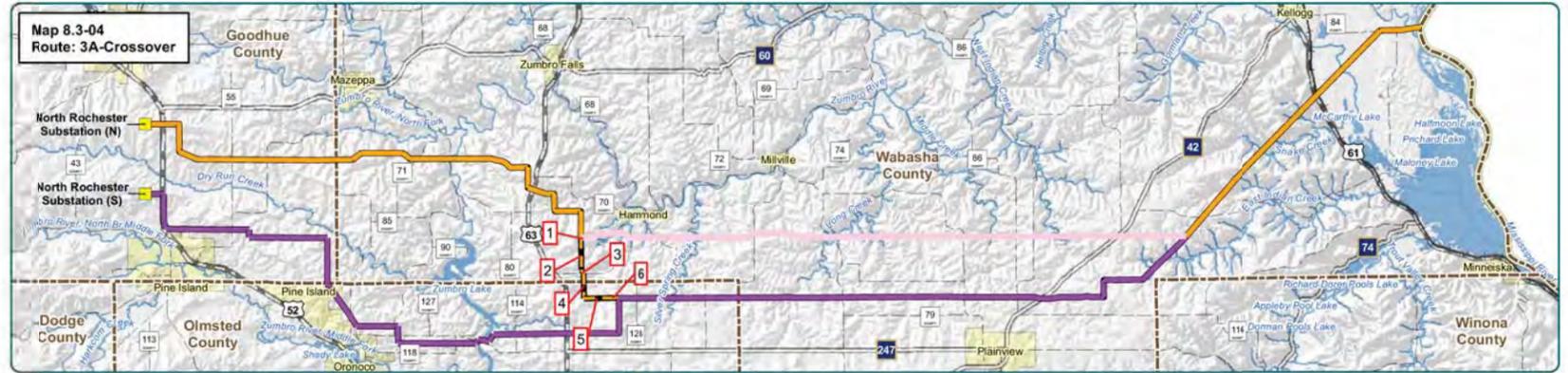
North Rochester to Mississippi River (3P-Zumbro-N)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until 0.7 miles east of 230th Ave
2	6.97	Continue east cross-country/field line
3	0.37	Continue east on T-196
Total Length		40.42



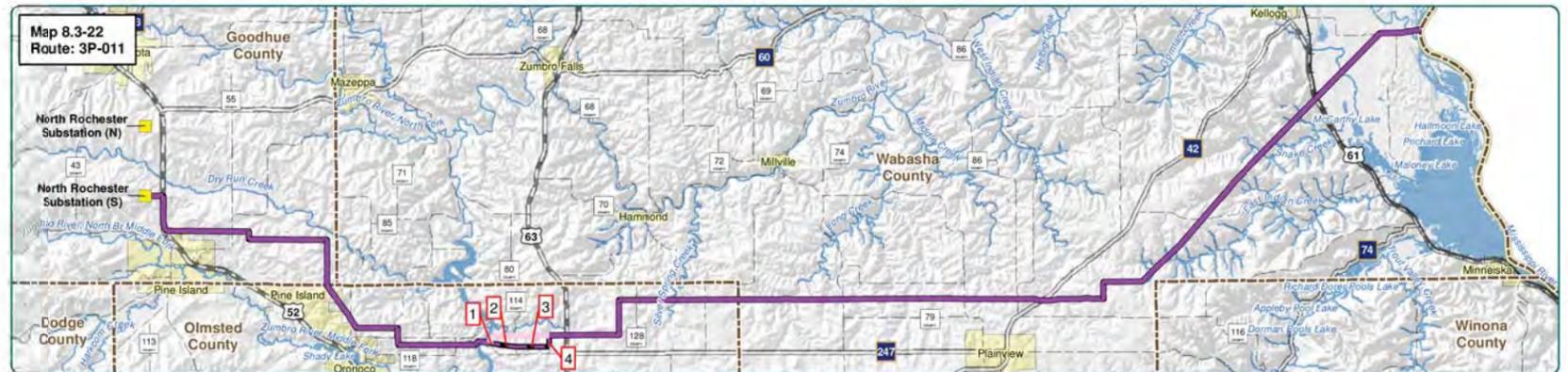
North Rochester to Mississippi River (3P-Zumbro-S)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1		Follow the applicant's preferred route until 0.7 miles east of 230th Ave
2	6.97	Continue east cross-country/field line
3	0.37	Continue east on T-196
4	0.92	Turn south cross-country/field line
5	0.13	Turn southeast cross-country
6	0.70	Turn south cross-country/field line
7	0.74	Turn east along field line
8	0.25	Continue east cross-country
Total Length		42.92



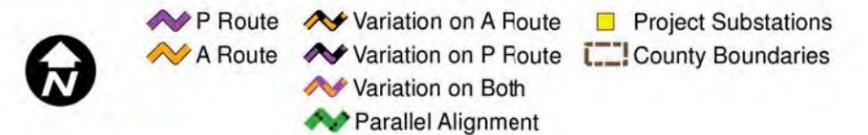
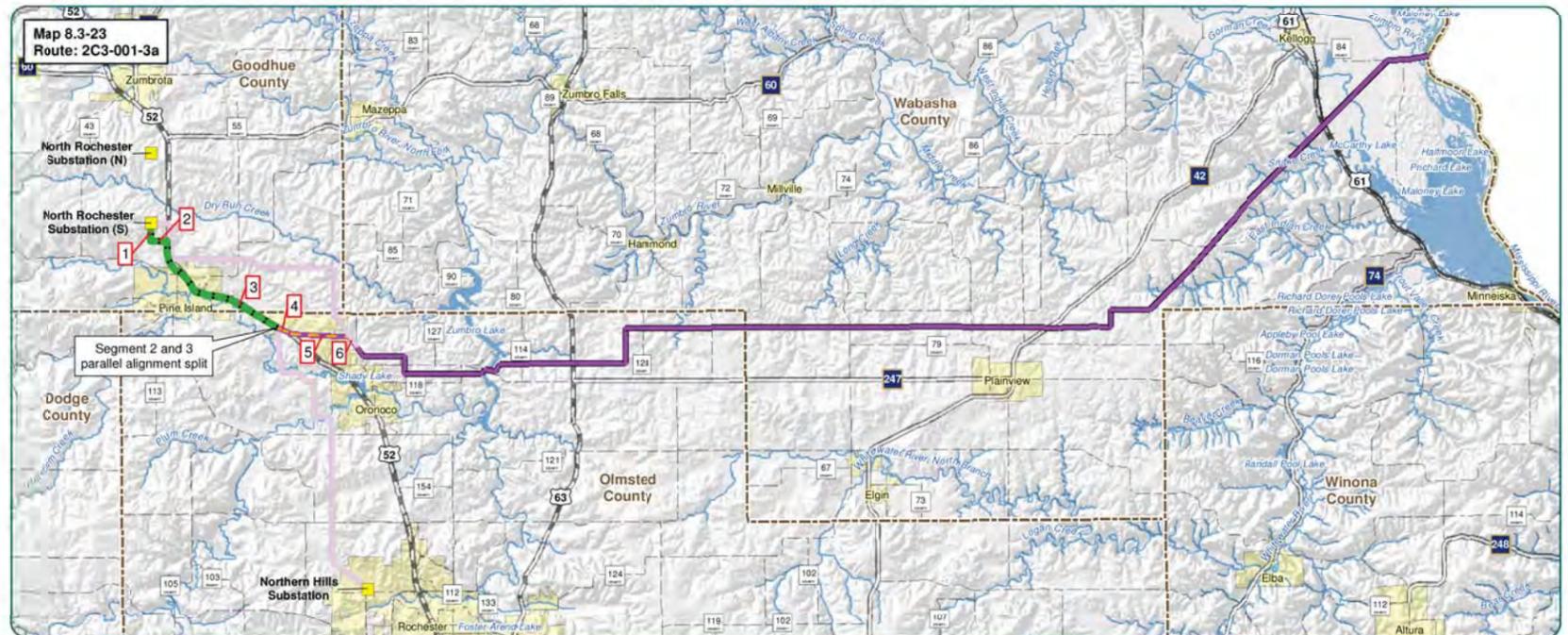
North Rochester to Mississippi River (3A-Crossover)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's alternate route to T-196		
2 Continue south cross-country/field line	0.92	Cross-country/field line
3 Turn southeast cross-country	0.13	Cross-country
4 Turn south cross-country/field line	0.70	Cross-country/field line
5 Turn east along field line	0.74	Field line
6 Continue east cross-country	0.25	Returns to applicant's preferred route - Cross-country
Total Length		44.52



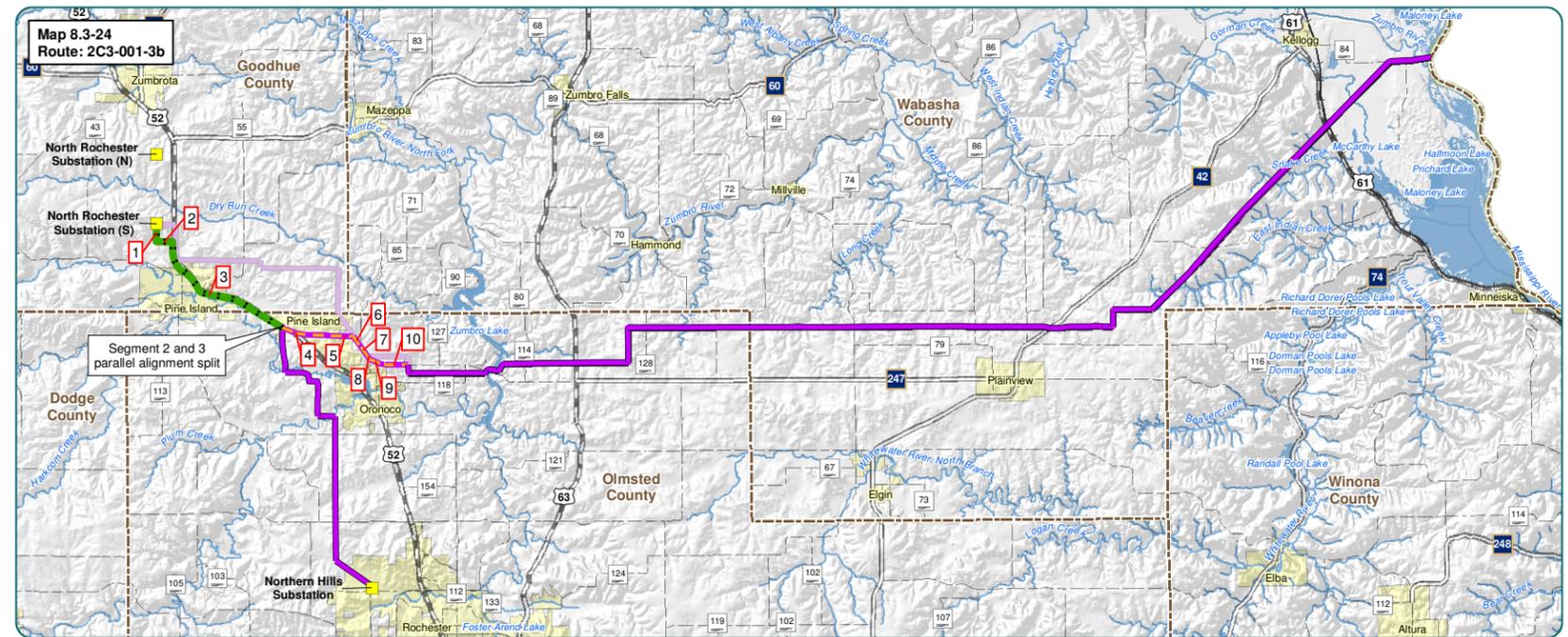
North Rochester to Mississippi River (3P-011)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 Follow the applicant's preferred route until 0.11 miles east of Zumbro River and 0.08 miles north of White Bridge Road NE		
2 Continue southeast cross-country	0.76	Cross-country
3 Turn east cross-country	0.95	Cross-country
4 Turn north cross-country	0.32	Returns to applicant's preferred route - Cross-country
Total Length		44.97



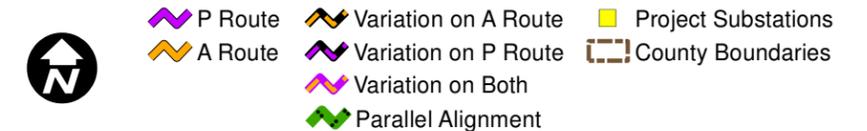
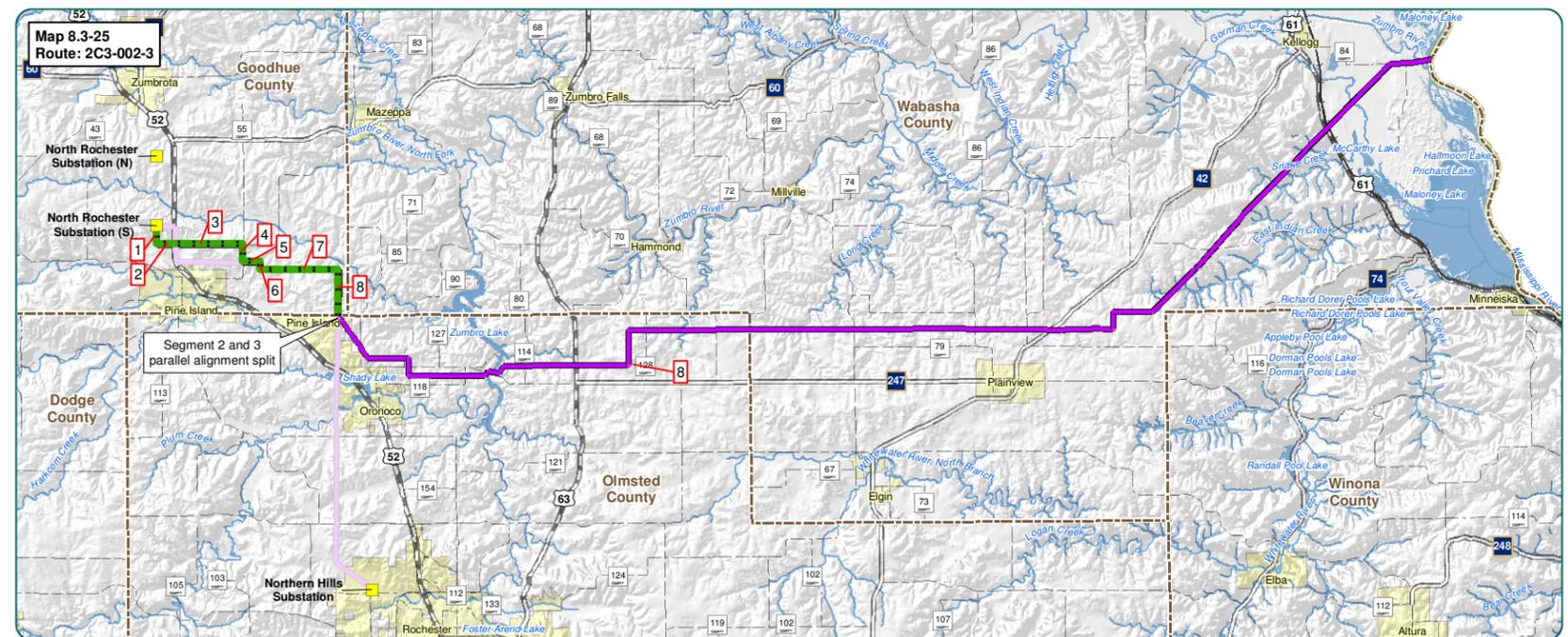
North Rochester to Mississippi River (2C3-001-3a)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field Line (Parallel alignment)
3 Turn south following US Hwy 52	4.33	Major Hwy (Parallel alignment)
4 Continue southeast following US Hwy 52	0.38	Major Hwy
5 Turn east cross-country to Ash Road NW	1.67	Cross-country
6 Turn southeast following Ash Road NW	0.37	Returns to applicant's preferred route - Cty or Twp Road



North Rochester to Mississippi River (2C3-001-3b)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field Line (Parallel alignment)
3 Turn south following US Hwy 52	4.33	Major Hwy (Parallel alignment)
4 Continue southeast following US Hwy 52	0.38	Major Hwy
5 Turn east cross-country to Ash Road NW	1.67	Cross-country
6 Turn southeast following Ash Road NW	0.37	Cty or Twp Road
7 Continue southeast following CSAH 18	0.31	Cty or Twp Road
8 Continue southeast cross-country	0.14	Cross-country
9 Continue east/southeast cross-country	0.41	Cross-country
10 Turn east following White Bridge Road NW	0.70	Returns to applicant's preferred route - Cty or Twp Road
Total Length		43.47



North Rochester to Mississippi River (2C3-002-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.50	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field line (Parallel alignment)
3 Continue east following 500th St.	2.00	Cty or Twp Road (Parallel alignment)
4 Turn south following CSAH 11	0.50	Cty or Twp Road (Parallel alignment)
5 Turn east following field line	0.50	Field line (Parallel alignment)
6 Turn south following field line	0.23	Field line (Parallel alignment)
7 Turn east cross-country/field lines	2.23	Cross-country (Parallel alignment)
8 Turn south cross-country	1.31	Returns to applicant's preferred route - Cross-country (Parallel alignment)
Total Length		44.81



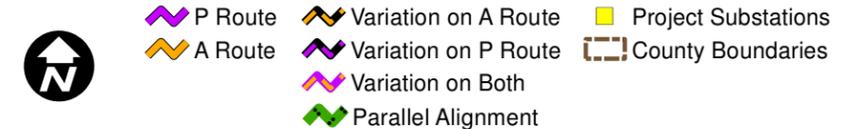
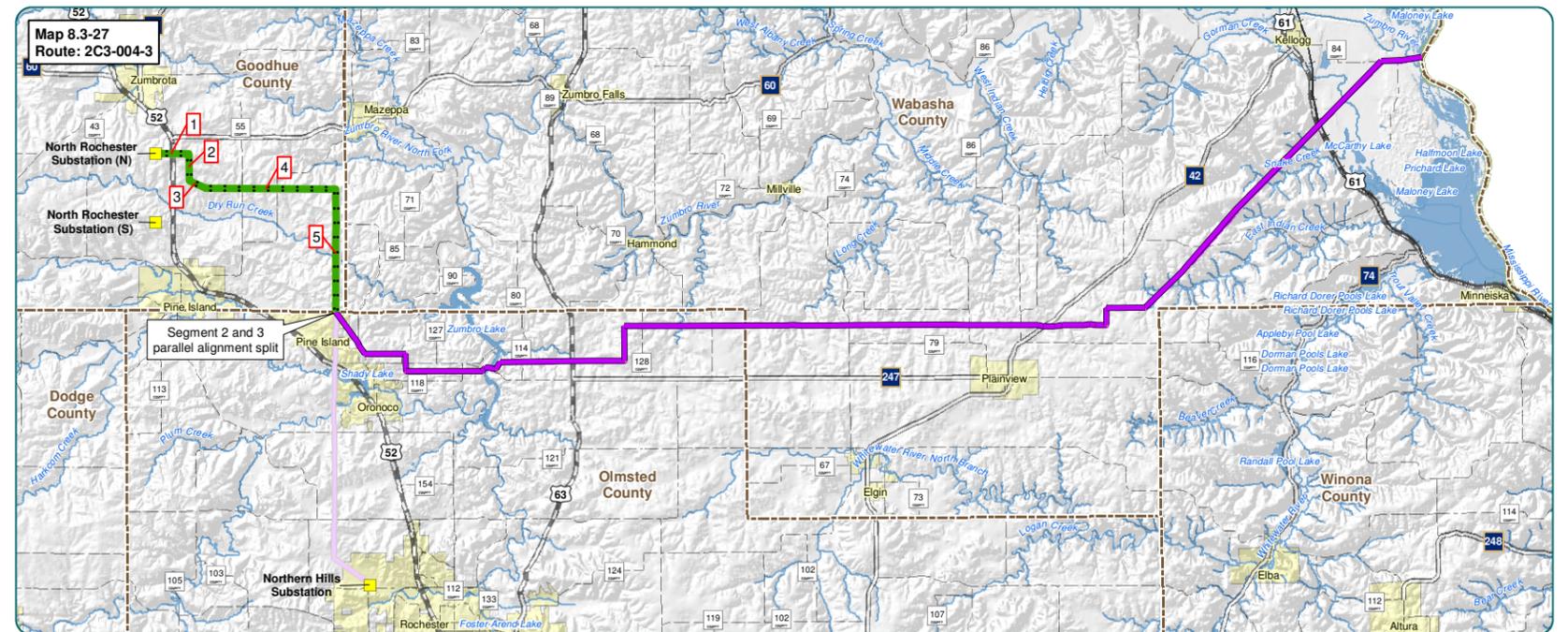
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Segment 3 - North Rochester Substation to Mississippi River

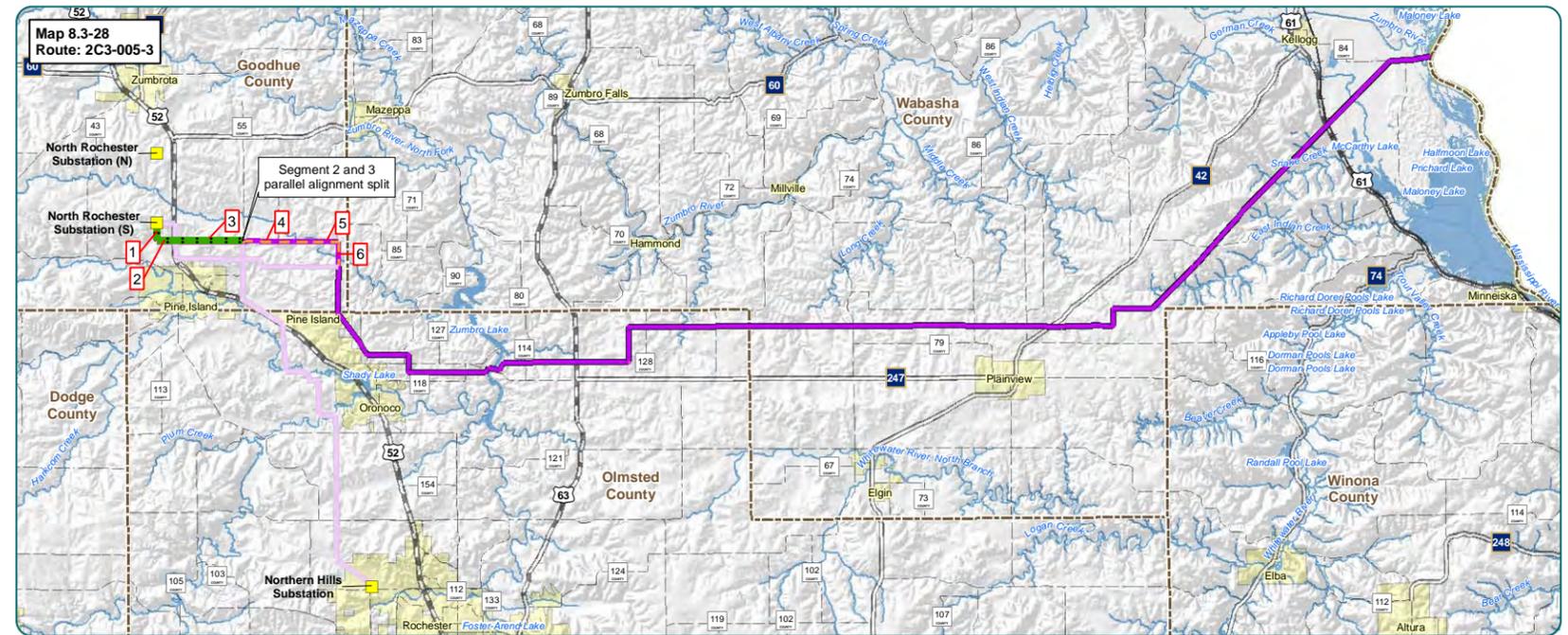
North Rochester to Mississippi River (2C3-002-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.50	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field line (Parallel alignment)
3 Continue east following 500th St.	2.00	Cty or Twp Road (Parallel alignment)
4 Turn south following CSAH 11	0.50	Cty or Twp Road (Parallel alignment)
5 Turn east following field line	0.50	Field line (Parallel alignment)
6 Turn south following field line	0.23	Field line (Parallel alignment)
7 Turn east cross-country/field lines	2.23	Cross-country (Parallel alignment)
8 Turn south cross-country	1.31	Returns to applicant's preferred route - Cross-country (Parallel alignment)
<b>Total Length</b>		<b>44.81</b>



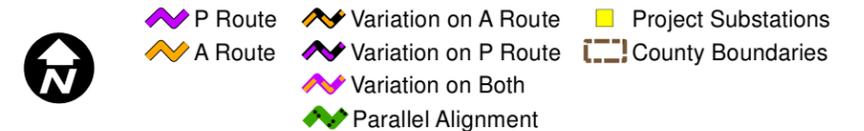
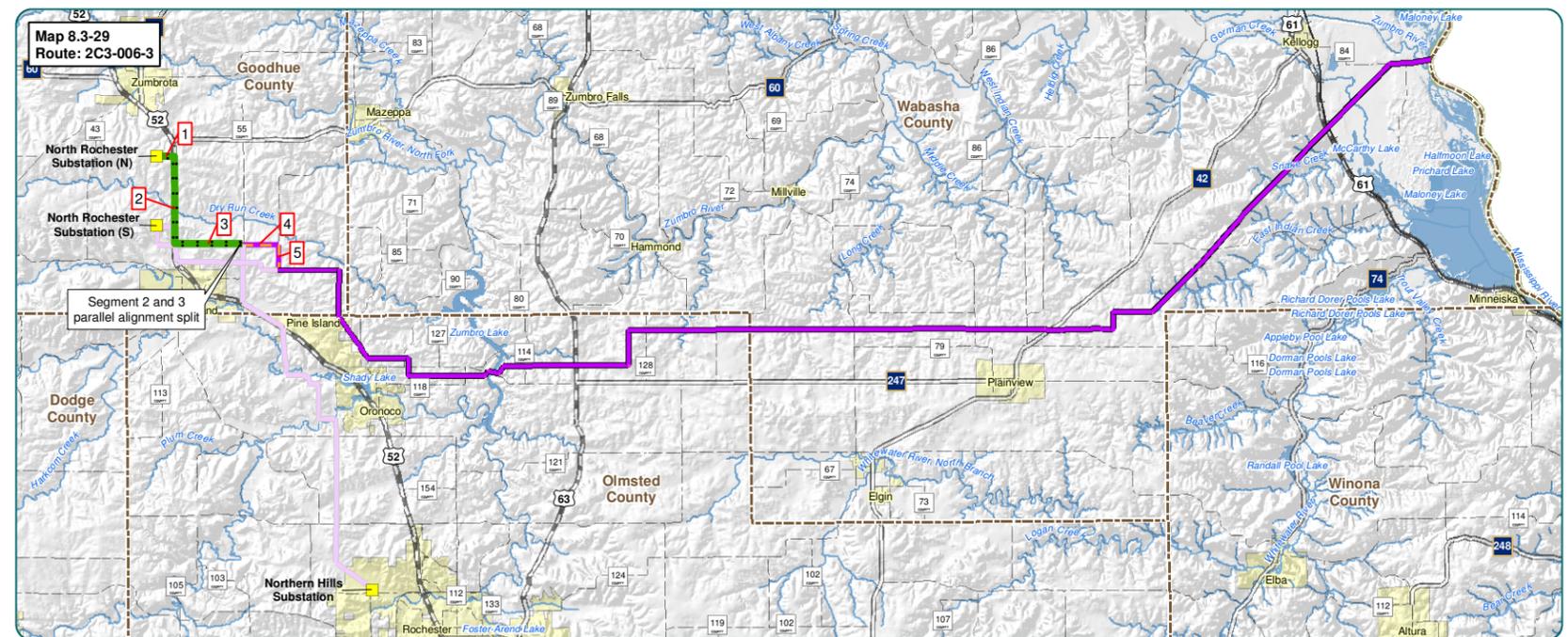
North Rochester to Mississippi River (2C3-004-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N), go east following field line to 195th Ave.	0.97	Field Line (Parallel alignment)
2 Turn south following 195th Ave.	0.78	Cty or Twp Road (Parallel alignment)
3 Turn southeast cross-country	0.52	Cross-country (Parallel alignment)
4 Turn east following field line/cross-country	3.75	Field Line (Parallel alignment)
5 Turn south cross-country	3.53	Returns to applicant's preferred route - Cross-country (Parallel alignment)
<b>Total Length</b>		<b>46.63</b>



North Rochester to Mississippi River (2C3-005-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission Line (Parallel alignment)
2 Turn east following field line	0.46	Field Line (Parallel alignment)
3 Continue east following 500th St.	2.00	Cty or Twp Road (Parallel alignment)
4 Continue east following 500th St.	2.01	Cty or Twp Road
5 Continue east cross-country/field lines	0.72	Cross-country/field lines
6 Turn south cross-country	0.73	Returns to applicant's preferred route - Cross-country
Total Length		44.82

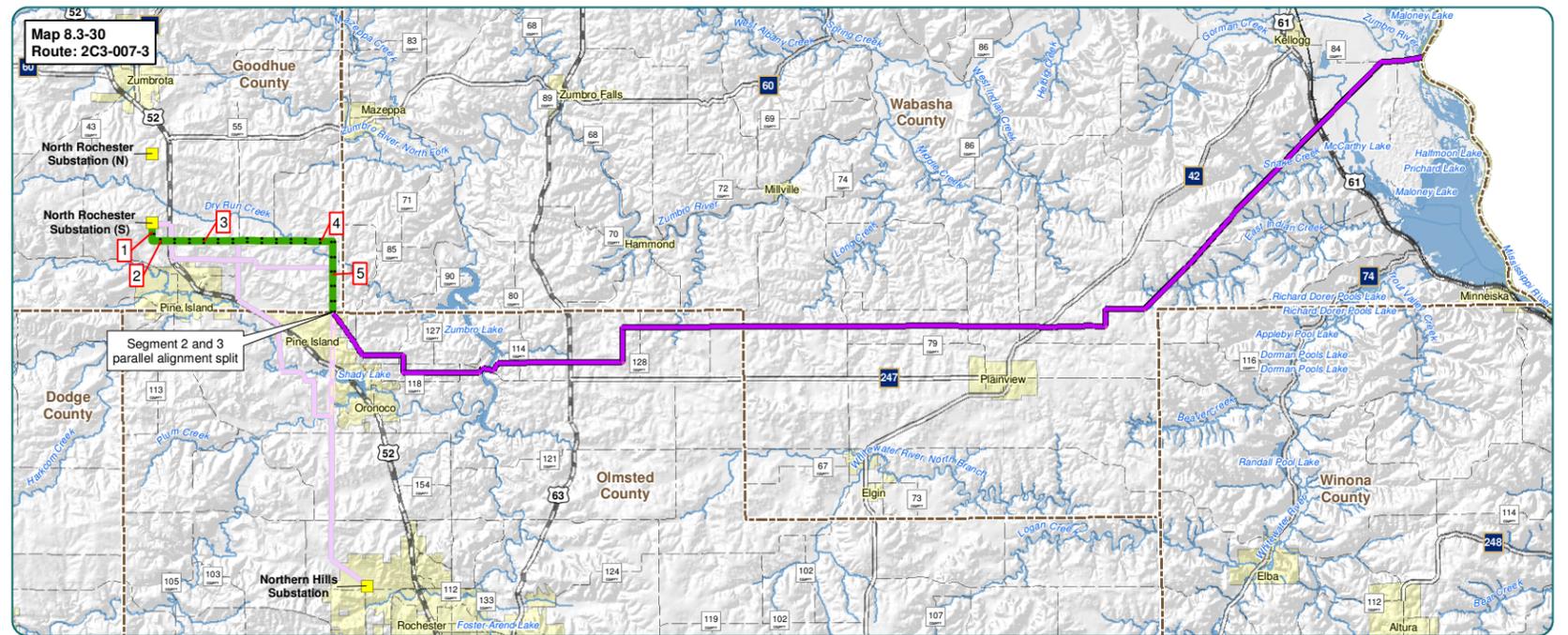


North Rochester to Mississippi River (2C3-006-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (N), go east following field line to US Hwy 52	0.51	Field line (Parallel alignment)
2 Turn south following US Hwy 52	2.50	Major Hwy (Parallel alignment)
3 Turn east following 500th St.	1.94	Cty or Twp Road (Parallel alignment)
4 Continue east following 500th St.	1.01	Cty or Twp Road
5 Turn south following 220th Ave.	0.73	Returns to applicant's preferred route - Cty or Twp Road
Total Length		46.80

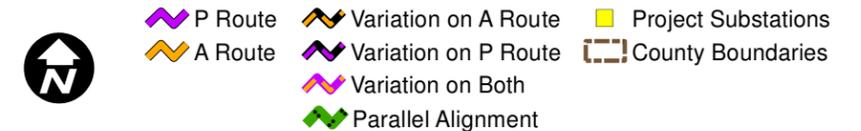
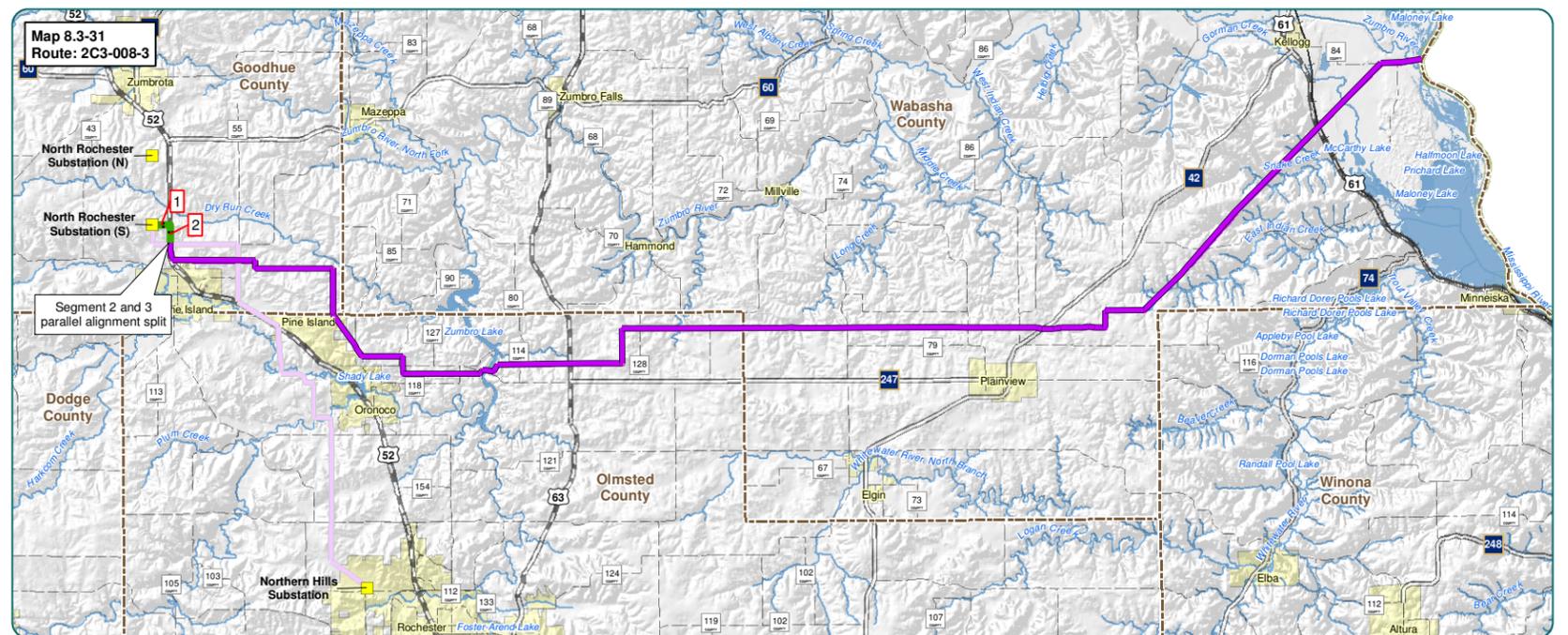


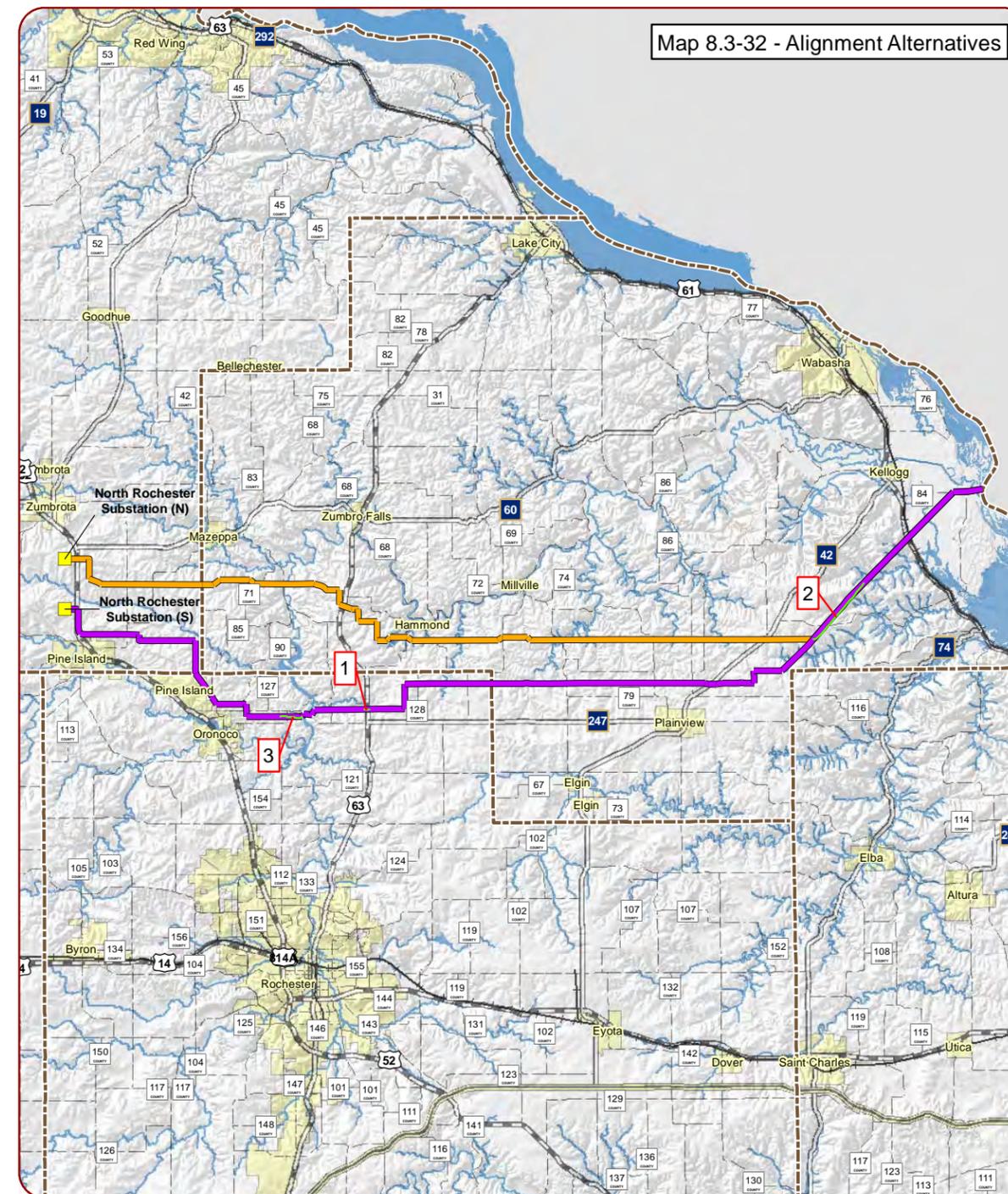
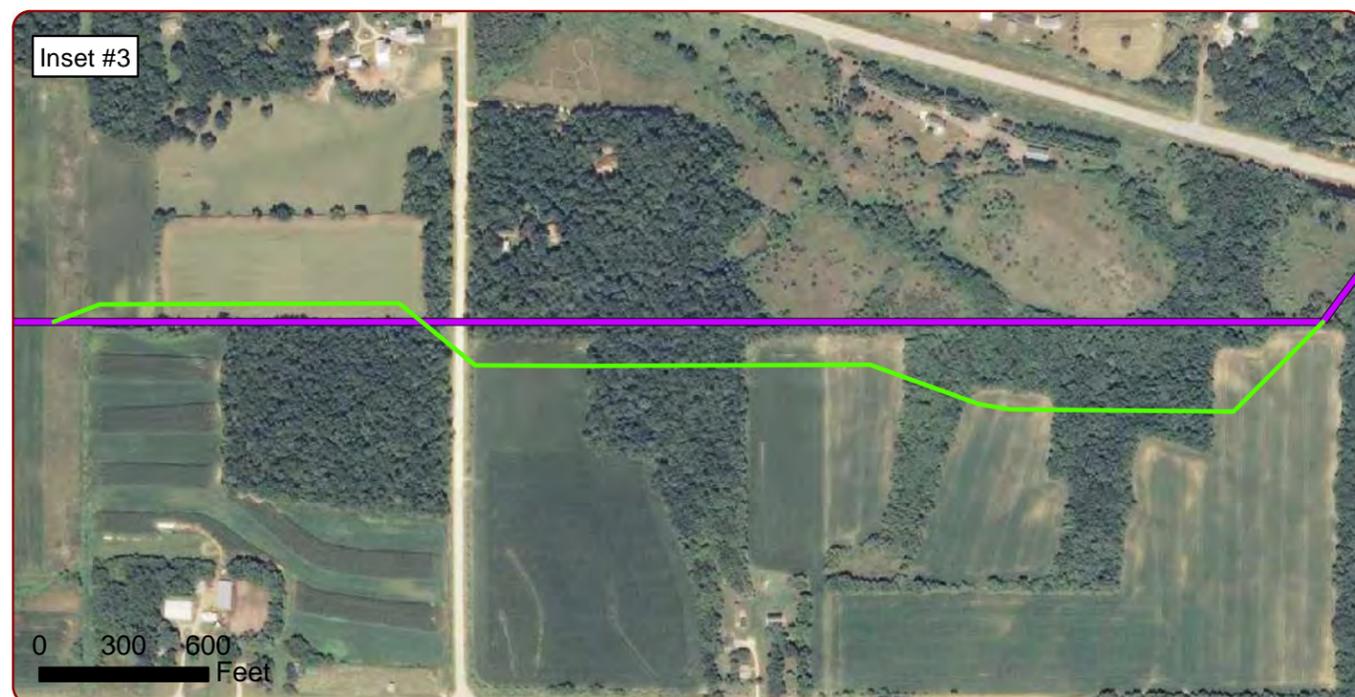
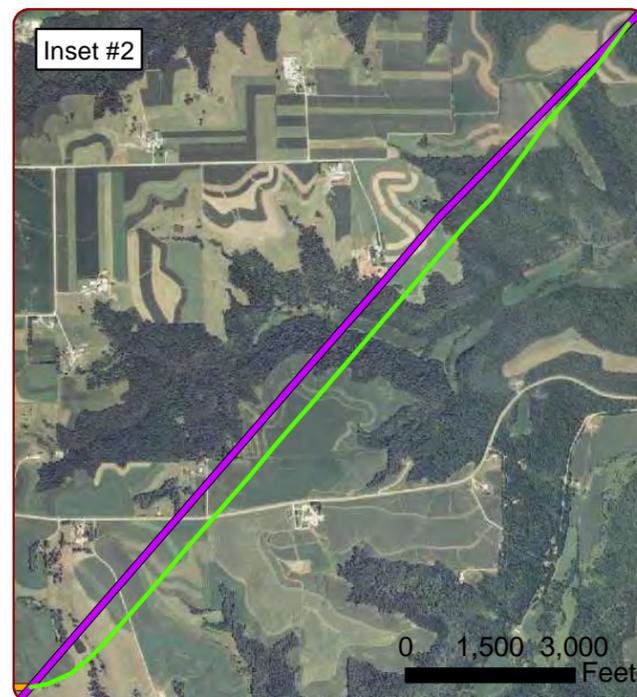
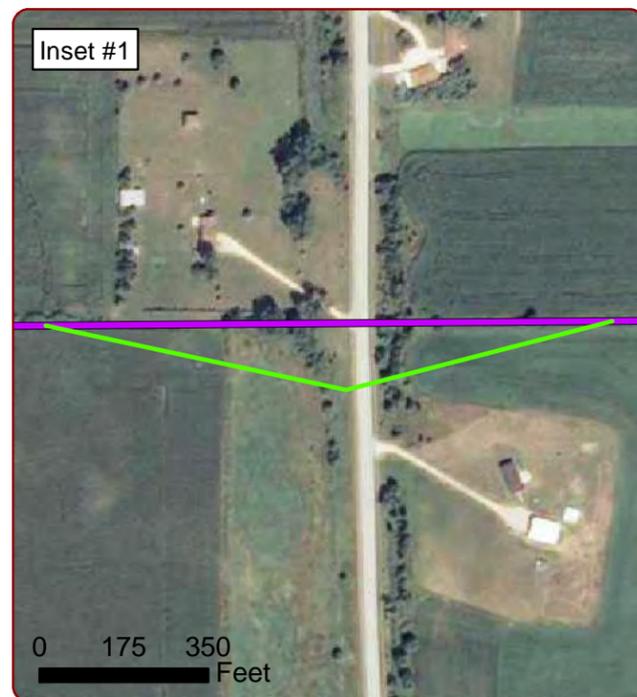
Section 8.3  
Segment 3 - North Rochester Substation to Mississippi River

North Rochester to Mississippi River (2C3-007-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go south following transmission line	0.51	Transmission line (Parallel alignment)
2 Turn east following field line	0.52	Field Line (Parallel alignment)
3 Continue east following 500th St.	3.95	Cty or Twp Road (Parallel alignment)
4 Continue east cross-country	0.71	Cross-country (Parallel alignment)
5 Turn south cross-country	2.04	Returns to the applicant's preferred route - Cross-country (Parallel alignment)
Total Length		44.82



North Rochester to Mississippi River (2C3-008-3)		
Turn by Turn	Distance (miles)	Comments/ROW Type
1 From the North Rochester Substation (S), go east following applicant's preferred route to US Hwy 52	0.52	Field Line (Parallel alignment)
2 Turn south following US Hwy 52 and the applicant's preferred route	0.51	Returns to applicant's preferred route - Major Hwy (Parallel alignment)
Total Length		44.74





-  Original P Route
-  Original A Route
-  Alignment Alternatives
-  Variation on P Route
-  Variation on A Route
-  Variation on Both
-  Parallel Alignment
-  Project Substations
-  County Boundaries