

Appendix A

Route Alternatives Included for Study in the EIS Mankato – Mississippi River 345 kV Transmission Line Project

| Name | Maps | Type | Alternative Description | Source |
|------------------------|------------------------|-------|---|-----------|
| Segment 1 North | 1, 2, 2-1, 2-5 and 2-6 | Route | Segment 1 North is a proposed new 345 kV HVTL in the Joint CN and Route Permit Application. Segment 1 North would extend from the Wilmarth Substation in Mankato to a point near the West Faribault Substation, and has a total length of 48.1 miles, with subsegments identified by the applicant. | Applicant |
| Segment 1 South | 1, 2 to 2-4, and 2-6 | Route | Segment 1 South is a proposed new 345 kV HVTL in the Joint CN and Route Permit Application. Segment 1 South would extend from the Wilmarth Substation in Mankato to a point near the West Faribault Substation, and has a total length of 53.6 miles, with subsegments identified by the applicant. | Applicant |
| Segment 2 North | 1 and 3 | Route | Segment 2 North is a proposed new 345 kV HVTL in the Joint CN and Route Permit Application. Route Option 2 North would extend from a point near the West Faribault Substation to the North Rochester Substation near Pine Island, and has a total length of 41.2 miles, with subsegments identified by the applicant. | Applicant |
| Segment 2 South | 1 and 3 | Route | Segment 2 South is a proposed new 345 kV HVTL in the Joint CN and Route Permit Application. Route Option 2 South would extend from a point near the West Faribault Substation to the North Rochester Substation near Pine Island, and has a total length of 33.6 miles, with subsegments identified by the applicant. | Applicant |
| Segment 3 | 1 and 5 | Route | Segment 3 is a proposed new 345 kV HVTL in the Joint CN and Route Permit Application. Segment 3 would extend from the North Rochester Substation near Pine Island to the Mississippi River near Kellogg, and has a total length of 43.4 miles. | Applicant |

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| Segment 4 East | 1 and 6 to 6-3, 6-5, 6-7, and 6-8 | Route | Segment 4 East is a proposed new 161 kV HVTL in the Joint CN and Route Permit Application. Segment 4 East would extend from the North Rochester Substation near Pine Island to the Chester 161 kV HVTL, and has a total length of 19.6 miles. | Applicant |
| Segment 4 West | 1 and 6, 6-1, 6-5 to 6-8 | Route | Segment 4 West is a proposed new 161 kV HVTL in the Joint CN and Route Permit Application. Route Option 4 West would extend from the North Rochester Substation near Pine Island to the Chester 161 kV HVTL, and has a total length of 23.7 miles. | Applicant |
| Route Segment 1 | 2 and 2-1 | Route Segment | Route Segment 1 starts south of the Eastwood Substation in Blue Earth County. It traverses east along Madison Avenue until 594th Avenue where it turns north until it joins Segment 1 South. This route segment would avoid potential impacts to commercial property. | Public |
| Alignment Alternative 2 | 2 and 2-1 | Alignment Alternative | Alignment Alternative 2 shifts the alignment of Segment 1 North to the east side of 589th Avenue. This alignment alternative would avoid a new development that has broken ground in the same location as the proposed alignment for Segment 1 North. | Applicant |
| Route Segment 5 | 2 and 2-2 | Route Segment | The applicant requested the EIS study a route segment located in the city of Madison Lake near Walnut Avenue and East Street. Route Segment 5 extends from Segment 1 South at the northeast side of the city along the south side of an existing railroad to the west side of 626th Avenue and then south to rejoin Segment 1 South. This route segment would avoid construction of a new commercial store planned along Walnut Avenue that will require extension of East Street and installation of turn lanes and sidewalks. | Applicant |

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| Route Segment 6 | 2 and 2-3 | Route Segment | EERA received a public scoping comment and a proposed alternative route segment for the 345 kV transmission line that would follow the Sakatah Singing Hills State Trail. Route Segment 6 would start at the intersection of 516th St. and the Sakatah Singing Hills State Trail and continue 3.6 miles east and rejoin Segment 1 South near Highway 60. This route segment is intended to utilize the existing Sakatah Singing Hills State Trail corridor to reduce additional land use conversion, and to move the line away from multiple residences along Highway 60. | Public |
| Route Segment 7 | 2 and 2-4 | Route Segment | The applicant requested the EIS study a route segment located south of the city of Morristown along 260th Street West. Route Segment 7 would avoid construction of a new residence along 260th Street West. | Applicant |
| Alignment Alternative 8 | 2 and 2-5 | Alignment Alternative | EERA received a public scoping comment requesting the EIS study Alignment Alternative 8. This alignment alternative starts east of Echo Avenue and would traverse 0.2 miles northeast where it would reconnect with Segment 1 North as shown on Map 2-6. The alignment alternative would avoid tree removal near a steep hill along Segment 1 North. | Public |
| Route Segment 9 | 2 and 2-5 | Route Segment | EERA received a public scoping comment suggesting the EIS evaluate Route Segment 9. This route segment is located southwest of the city of Faribault and east of Cannon Lake. The route segment would shift the route approximately 600 feet to the east of where it is proposed and span 0.9 miles northeast where it would reconnect with Segment 1 North. Route Segment 9 would minimize tree clearing. | Public |

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| Route Segment 10 | 2 and 2-6 | Route Segment | EERA received a public scoping comment proposing Route Segment 10. Route Segment 10 starts at 250th St. West and traverses north along Interstate 35 where it would connect with Segment 1 South. The commenters noted potential impacts on existing residences and structures. | Public |
| Route Segment 11 | 2 and 2-6 | Route Segment | EERA received a public scoping comment proposing Route Segment 11. Route Segment 11 starts at 245th St. E where it traverses north along Interstate 35 until it joins Segment 1 South. The commenters noted potential impacts on existing residences and structures. | Public |
| Route Segment 12 | 6 to 6-4 | Route Segment | EERA received a public scoping comment requesting the EIS study an option to construct the 161 kV line parallel to the existing CapX line along Route Option 3. This route segment starts at the North Rochester Substation and would Parallel Segment 3 to 40th Avenue NE. This route segment would reduce project related impacts on the natural environment and human settlements by paralleling the existing CapX alignment. | Public |
| Route Segment 13 | 6, 6-1, and 6-5 to 6-8 | Route Segment | The applicant requested the EIS study a route segment that would double circuit with the existing North Rochester to Northern Hills 161 kV line. Alternative 13 starts at the North Rochester Substation and would double circuit the existing transmission line for 11.3 miles south where it would connect to Segment 4 West. This route segment would reduce project related impacts on the natural environment and human settlement by paralleling the existing CapX alignment. | Applicant |

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| Alignment Alternative 15 | 6 and 6-3 | Alignment Alternative | EERA received a public scoping comment requesting the EIS study an alternative alignment that would cross the Zumbro River near the existing 345 kV transmission line on the south side of the County Road 12. Alternative 15 is intended to reduce the project impacts to the Zumbro River by collocating the crossing with the existing County Road 12 bridge. | Public |
| Alignment Alternative 16 | 6 and 6-7 | Alignment Alternative | EERA received a public scoping comment requesting that the EIS study an alignment alternative on the south side of 75th Street NW. Alignment Alternative 16 would avoid clearing trees along the north side of 75th Street, which provide a visual and noise barrier from vehicle traffic for some of the residences along the north side of 75th street. | Public |
| Route Segment 17 (Highway 14 Option) | 4 to 4-16 | Route Segment | Commentors suggested that the EIS evaluate a route option for the 345 kV transmission line from the Wilmarth Substation along State Highway 14 to the North Rochester Substation. The Route Segment 17 (Highway 14 Option) is primarily located within or adjacent to the U.S. Highway 14 ROW. The typical route width is 1,000 feet, centered on the anticipated alignment extending 500 feet on each side. The route width is wider in some locations. | Public |
| Route Segment 18 | 2 and 2-5 | Route Segment | The Commission requested that the EIS study a route segment that departs Segment 1 North, and travels east along an existing property line before intersecting 230 th Street West, just south of Highway 60 in Rice County. From its intersection with 230 th Street West, the route segment would extend northeast until it reconnects with Segment 1 North after it has turned east. This route segment would move the line further from Cannon Lake. | Commission |