

Direct Testimony and Schedules
Matthew Langan

Before the Minnesota Public Utilities Commission
State of Minnesota

In the Matter of the Application of Xcel Energy for a Route Permit for the Minnesota
Energy Connection Project in Sherburne, Stearns, Kandiyohi, Wright, Meeker,
Chippewa, Yellow Medicine, Renville, Redwood, and Lyon Counties in Minnesota

Docket No. E002/TL-22-132
OAH Docket No. 23-2500-39782

Xcel

**Direct Testimony of Matthew Langan
on behalf of
Xcel Energy**

September 6, 2024

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2
3 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

4 A. My name is Matthew Langan. My business address is 401 Nicollet Mall,
5 Minneapolis, MN 55401.

6
7 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

8 A. I am employed as a Principal Agent, Siting and Land Rights by Northern States
9 Power Company, doing business as Xcel Energy (Xcel Energy).

10
11 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

12 A. I graduated from the University of Minnesota where I majored in Natural
13 Resources and Environmental Studies and minored in Forestry. From 1999 to
14 2009, I was employed by the Minnesota Department of Natural Resources
15 (MDNR) in various capacities. From 2009 to 2012, I was employed by the
16 Minnesota Department of Commerce where my role related to environmental
17 review and permitting. I have been employed by Xcel Energy in its Siting and
18 Land Rights Department since 2012, and I am currently a Principal Agent. My
19 Statement of Qualifications is attached to this testimony as **Schedule 1**.

20
21 Q. FOR WHOM ARE YOU TESTIFYING?

22 A. I am testifying on behalf of the applicant in this proceeding, Xcel Energy.

23
24 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

25 A. The purpose of my testimony is generally to describe the Minnesota Energy
26 Connection Project (Project), Xcel Energy’s routing process and preferred
27 route for the Project, and Xcel Energy’s stakeholder coordination. More

1 specifically, the remainder of my testimony is organized into the following
2 sections:

- 3 • Project Overview
- 4 • Stakeholder Coordination
- 5 • Development of Project Routes
- 6 • Route Alternatives
- 7 • Applicant's Preferred Route
- 8 • Other Permits and Approvals
- 9 • Coordination with Tribes and State Historic Preservation Office
- 10 • Survey and Land Acquisition

11 Q. ARE YOU SPONSORING ANY PORTIONS OF THE ROUTE PERMIT APPLICATION
12 (APPLICATION) SUBMITTED BY XCEL ENERGY FOR THE PROJECT?

13 A. Yes. I am sponsoring the following sections of the Application:

- 14 • 1.0 Introduction
- 15 • 2.1 Project Proposal
- 16 • 2.2 Proposed Routes
- 17 • 2.3 Route Width
- 18 • 2.5 Transmission Line Right-of-Way
- 19 • 3.0 Route Selection Process
- 20 • 4.0 Description of Proposed Routes
- 21 • 5.1 Right-of-Way Acquisition
- 22 • 5.3 Restoration and Clean-Up Procedures
- 23 • 6.0 Environmental Information
- 24 • 7.0 Federal and State Agency, Tribal Nations, Local Government, and
25 Public Outreach

- 1 • 8.0 Required Permits, Approvals, and Consultations
- 2 • 9.0 Summary

3

4 Q. ARE YOU SPONSORING ANY SCHEDULES?

5 A. Yes. The following schedules are attached to my testimony:

- 6 • Schedule 1: Statement of Qualifications
- 7 • Schedule 2: Route Alternatives Analysis
- 8 • Schedule 3: Preferred Route Maps
- 9 • Schedule 4: Preferred Route Impact Table

10

11

II. PROJECT OVERVIEW

12 Q. PLEASE GENERALLY DESCRIBE THE PROJECT.

13 A. As described in Section 1.0 of the Application, the Project is proposed as an
14 approximately 160- to 180-mile double circuit 345 kilovolt (kV) transmission
15 line connecting the existing Sherburne County Generation Station Substation
16 (Sherco Substation) in Becker, Minnesota, and a new substation in Lyon
17 County, Minnesota, and other associated facilities, including intermediate and
18 voltage support substations.

19

20 Q. THE APPLICATION DISCUSSES BOTH A ROUTE WIDTH AND RIGHT-OF-WAY.
21 WHAT IS THE DIFFERENCE?

22 A. The “route width” refers to the area within which the transmission facilities
23 may be located pursuant to a route permit issued by the Minnesota Public
24 Utilities Commission (Commission). A route width may be up to 1.25 miles

1 wide.¹ In contrast, a “right-of-way” is the physical land area within a route that
2 is needed to construct and operate the transmission line.

3
4 Q. WHAT ROUTE WIDTH AND RIGHT-OF-WAY IS XCEL ENERGY SEEKING FOR THE
5 PROJECT?

6 A. For most of the Project, Xcel Energy is requesting a 1,000-foot route width
7 for the Project. In some areas (such potential substation siting areas), Xcel
8 Energy is requesting a wider route width to allow additional flexibility in siting
9 Project facilities in certain areas. For the right-of-way, Xcel Energy is generally
10 seeking a 150-foot-wide right-of-way, which will be located within the
11 requested route width.²

12
13 Q. WILL THE ENTIRE ROUTE WIDTH BE USED FOR PROJECT FACILITIES?

14 A. No. Transmission line facilities will generally be limited to the right-of-way.³

15
16 Q. WHAT ROUTES HAS XCEL ENERGY PROPOSED FOR THE PROJECT?

17 A. After an extensive route development process that studied and analyzed
18 numerous potential routes and route segments, Xcel Energy identified two
19 potential routes for the Project: the “Purple Route” and the “Blue Route.”
20 Both routes would utilize what Xcel Energy has named the “Green Segment”
21 for a portion of their route near the Sherco Substation.

22

¹ Minn. Stat. § 216E.01, subd. 8; Minn. R. 7850.1000, subp. 16.

² For additional detail, see Section 2.3 of the Application.

³ Staging/laydown yards, other temporary facilities, and road accesses may be located outside of the final right-of-way. Likewise, as described in Section 2.6 of the Application, the Applicant intends to seek agreement with willing landowners for the location of new substations, and that acquisition process is ongoing.

1 Q. PLEASE DESCRIBE THE PURPLE ROUTE.

2 A. The Purple Route is the westernmost route proposed by Xcel Energy and is
3 approximately 171 miles long, crossing Sherburne, Wright, Stearns, Meeker,
4 Kandiyohi, Chippewa, Renville, Yellow Medicine, and Lyon counties. The
5 Purple Route predominantly follows property lines, agricultural field lines, and
6 roads where practicable. The Purple Route also follows existing transmission
7 lines where it crosses the Mississippi and Minnesota Rivers.

8

9 Q. PLEASE DESCRIBE THE BLUE ROUTE.

10 A. The Blue Route is the easternmost route proposed by Xcel Energy and is
11 approximately 174 miles in length, traversing Sherburne, Stearns, Meeker,
12 Kandiyohi, Renville, Redwood, and Lyon counties. Similar to the Purple
13 Route, the Blue Route predominantly follows property lines, agricultural field
14 lines, and roads where practicable. The Blue Route also follows an existing
15 transmission line where it crosses the Minnesota River.

16

17 Q. PLEASE DESCRIBE THE GREEN SEGMENT.

18 A. The Green Segment will serve as an interconnection between the Sherco
19 Substation and the Sherco Solar West Substation; as such, it is common to
20 both the Purple and Blue Routes. The transmission line in this segment will
21 be co-located on existing transmission structures that were built to be double-
22 circuit capable.

23

1 Q. WHY HAS XCEL ENERGY IDENTIFIED TWO POTENTIAL ROUTES FOR THE
2 PROJECT?

3 A. Xcel Energy identifies two potential routes for the Project in the Application
4 because Minnesota law requires it to do so.⁴

5

6 III. STAKEHOLDER COORDINATION

7 Q. PLEASE DESCRIBE XCEL ENERGY'S STAKEHOLDER OUTREACH PROCESS PRIOR
8 TO FILING THE APPLICATION.

9 A. Xcel Energy engaged with landowners and residents, as well as Tribal Nations,
10 and federal, state, and local agencies and governments prior to filing the
11 Application. As described in more detail in Section 7.2 of the Application,
12 Xcel Energy sent a public outreach mailing to approximately 150,000
13 landowners and other stakeholders and conducted virtual open house sessions
14 in November 2022. Next, Xcel Energy conducted two rounds of public open
15 houses, including in-person and online sessions. The goal of each open house
16 was to provide Project information and gather input from the public on
17 several different transmission line routing options. To this end, stakeholders
18 were encouraged to submit comments regarding the Project. As part of this
19 process, Xcel Energy also conducted outreach to local governments, state and
20 federal agencies, and Tribal Nations.⁵

21

22 Q. WILL XCEL ENERGY CONTINUE TO ENGAGE WITH PROJECT STAKEHOLDERS?

23 A. Yes. Xcel Energy will continue to engage with stakeholders as Project
24 permitting, design, and construction proceeds. Xcel Energy is maintaining an

⁴ Minn. Stat. § 216E.03, subd. 3.

⁵ Additional detail regarding Xcel Energy's coordination with Tribal Nations is provided in Section VIII of this testimony.

1 updated Project website that reflects the routes being studied in the
2 environmental impact statement (EIS), and in July 2024, Xcel Energy sent a
3 landowner mailing providing an update on the current status of the regulatory
4 process. In addition, for example, Xcel Energy will send landowner and local
5 government notifications if/when the Commission issues a decision on the
6 Project's route, and additional mailings and notifications will be provided, as
7 applicable, prior to and during Project construction.

8 9 **IV. DEVELOPMENT OF PROJECT ROUTES**

10 Q. HOW DID XCEL ENERGY IDENTIFY THE ROUTES PRESENTED IN THE
11 APPLICATION (APPLICATION ROUTES)?

12 A. As described in Section 3.0 of the Application, Xcel Energy conducted a
13 thorough and systematic route selection process beginning in 2022 and
14 extending through mid-2023. This process included identifying, refining, and
15 comparing route options to arrive at the proposed route options and
16 connector segments identified in the Application. Xcel Energy's route
17 development process included consideration of statutory and rule
18 requirements, information gathering, public outreach and input (including
19 multiple rounds of public meetings), and comparison of route segments and
20 alignments. Xcel Energy developed a geographic information system (GIS)
21 database of information gathered from publicly available data resources and
22 from on-site field review efforts that was used to compare the merits of
23 various routing options with a goal of developing Application Routes that
24 minimize impacts to sensitive resources to the extent practicable.

25

1 Q. WHAT STEPS DID XCEL ENERGY TAKE TO IDENTIFY, REFINE, AND COMPARE
2 ROUTE OPTIONS?

3 A. The following steps were taken by Xcel Energy as part of the route
4 development process:

- 5 • Establish boundaries for Routing Study Area;
- 6 • Identify opportunities and constraints;
- 7 • Conduct local government and agency outreach;
- 8 • Conduct initial outreach in the routing study area;
- 9 • Review initial route network in the field;
- 10 • Hold public open house meetings;
- 11 • Review and refine routes, run comparative analysis to remove most
12 impactful routes;
- 13 • Hold second round of open house meetings;
- 14 • Review, refine routes, run comparative analysis to remove most
15 impactful routes;
- 16 • Optimize route segments and connect for end-to-end routes for the
17 Application; and
- 18 • Conduct constructability review of end-to-end routes.

19 Each step of the route development process is described in Sections 3.2 and
20 3.3 of the Application.

21

22 Q. WHAT ROUTING CONSTRAINTS DID XCEL ENERGY CONSIDER?

23 A. To minimize impacts on the environment and landowners, Xcel Energy
24 identified areas to avoid within the Routing Study Area:

- 25 • Residences: No occupied residences within the transmission line's 150-
26 foot-wide right-of-way.

- 1 • Municipal boundaries: No 150-foot-wide right-of-way for the
2 transmission lines proposed through cities.
- 3 • Tribally-owned properties: No routes through land owned by Tribal
4 governments.
- 5 • Federally-owned properties: No routes through U.S. Fish and Wildlife
6 Service Waterfowl Production Areas, historic landmarks, or publicly
7 owned properties that were acquired with federal Land and Water
8 Conservation Act funding.
- 9 • State-owned properties: No routes through State Parks, Wildlife
10 Management Areas, Scientific and Natural Areas, or Aquatic
11 Management Areas.
- 12 • Lakes, Rivers, and Calcareous Fens: No routes are proposed that would
13 require placement of a transmission structure foundation in a lake,
14 river, or calcareous fen.
- 15 • Public Airports: No routes are proposed that would create an aviation
16 hazard at a public airport per Federal Aviation Administration and
17 Minnesota Department of Transportation regulations.
- 18 • Regional, County, and Municipal Parks: No routes are proposed that
19 cross within the boundaries of these recreation lands.
- 20 Cemeteries, Schools, Hospitals, Public Buildings: No routes are
21 proposed that would include these facilities within the transmission
22 line's 150-foot-wide right-of-way.

23 Additional discussion of Xcel Energy's consideration of routing constraints
24 and opportunities is included in Section 3.2.2 of the Application.

25

1 Q. HAS XCEL ENERGY IDENTIFIED POTENTIAL SUBSTATION SITING AREAS FOR
2 NEW PROJECT SUBSTATIONS?

3 A. Yes. The Application identifies potential substation siting areas for the Garvin,
4 Intermediate, and Voltage Support substations. The precise location of these
5 substations is not known and cannot be determined until a route is chosen by
6 the Commission, but the substation siting areas correspond to the
7 approximate locations where Xcel Energy will seek to site the new substations.
8 The same constraints discussed above with respect to the Project's routing
9 were also used in identifying the substation siting areas and will be used in
10 selecting the final footprint for each.

11

12 Q. HOW WERE THE POTENTIAL SUBSTATION SITING AREAS IDENTIFIED?

13 A. The specific location of the new Project substations will be determined
14 through this routing proceeding. In general, Xcel Energy is working to identify
15 a location for each substation that avoids environmentally sensitive areas
16 including but not limited to, wetlands, public lands, native plant communities,
17 and historic sites. Xcel Energy applied the same opportunities and constraints
18 framework used in the route development process to identify potential
19 substation siting areas and intends to utilize the same framework in selecting
20 the final footprint for each substation. Xcel Energy intends to seek voluntary
21 agreements with landowners for the locations of the new substations.

22

23 Q. WHY IS XCEL ENERGY REQUESTING WIDER ROUTE WIDTHS IN POTENTIAL
24 SUBSTATION SITING AREAS?

25 A. Xcel Energy requests an additional route width between 0.5 mile and up to
26 1.25 miles surrounding the Garvin, Intermediate, and Voltage Support
27 substations to provide flexibility in substation location and routing the lines in

1 and out of the substations. The wider route widths requested correspond to
2 the approximate locations where Xcel Energy will site the new substations and
3 will accommodate Xcel Energy's plan to avoid siting the new substations in
4 areas where resources such as wetlands, waterbodies, public lands, native plant
5 communities, residences, and historic sites exist.

7 V. ROUTE ALTERNATIVES

8 Q. ARE ROUTES OTHER THAN THE APPLICATION ROUTES BEING ANALYZED IN
9 THIS PROCESS?

10 A. Yes. The Department of Commerce, Energy Environmental Review and
11 Analysis unit is preparing an EIS that will evaluate route alternatives and
12 alignment alternatives for the Project. Ultimately, the Commission will select
13 the final route for the Project.

14
15 Q. HAS XCEL ENERGY CONDUCTED ITS OWN REVIEW OF THE ROUTE
16 ALTERNATIVES THAT ARE BEING STUDIED IN THE EIS?

17 A. Yes. Xcel Energy has analyzed the route alternatives that are being studied in
18 the EIS. **Schedule 2** to my Direct Testimony identifies the route alternatives
19 being studied in the EIS and indicates Xcel Energy's position on each
20 alternative at this time. I note that our analysis is continuing and that the
21 record in this proceeding will continue to develop through the preparation of
22 the EIS and upcoming public hearings.

23
24 Q. ARE THERE ANY ROUTE ALTERNATIVES YOU WOULD LIKE TO DISCUSS
25 FURTHER, BEYOND THE ANALYSIS PRESENTED IN SCHEDULE 2?

26 A. Yes. I would like to discuss Xcel Energy's position on Routes 223 and 246.
27

1 Q. WHAT IS XCEL ENERGY'S POSITION ON ROUTE 223, AND WHY?

2 A. Xcel Energy does not support incorporating the entirety of Route 223 into
3 the Preferred Route (as defined in Section VI below) because of increased
4 impacts to residents on the southern portion of the route alternative, and
5 because of constructability issues related to multiple potential crossings of the
6 existing 69 kV line in this area. However, Xcel Energy does not oppose the
7 northern approximately one mile of Route 223; to avoid the impacts I just
8 described, this route would need to be modified to go west along 150th Street
9 to rejoin the Preferred Route at the intersection of 150th Street and 210 Street
10 SE, as depicted in the figure below. The blue line represents the Preferred
11 Route; the orange/yellow line represents the modified Route 223; and the pink
12 line represents Route 223 as originally proposed.

13



1
2
3
4
5

As depicted in the figure above, a short length of this route (1,545 feet) is not within a route width being studied in the EIS. As such, Xcel Energy also provides a table summarizing the potential human and environmental impacts of this route below.

Resource	Preferred Route	Preferred Route with Modified 223
Length (feet)	10,518.11	10,424.69
Residences within 75 feet	0	0
Residences within 150 feet	0	0
Residences within 300 feet	0	0
Residences within 500 feet	1	0
Following road (feet)	10,518.11	5,339,72
Following existing 69kV within agricultural field	0	5,078.70
Drainage ditch crossings	2	0
NWI wetlands within route corridor (acres)	0	0

2

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8

Q. WHAT IS XCEL ENERGY'S POSITION ON ROUTE 246, AND WHY?

9

10

11

12

13

14

A. Route 246 was proposed by a member of the public and would be an alternative crossing of the Mississippi River. Xcel Energy does not support Route 246 for multiple reasons. First, this route would increase impacts on residences because there is not sufficient right-of-way along River Road in this area. Specifically, there would be 42 residences within 500 feet of this route, as compared to 2 residences within the corresponding section of the Preferred

1 Route. Second, Route 246 is approximately 3.4 miles longer than the Preferred
2 Route, with a corresponding increase in costs and impacts. Although Route
3 246 would cross the Mississippi River with existing infrastructure, this
4 crossing increases human and environmental impacts, and Xcel Energy does
5 not support its inclusion in the Project's route.

7 **VI. APPLICANT'S PREFERRED ROUTE**

8 Q. HAS XCEL ENERGY IDENTIFIED ITS PREFERRED ROUTE BASED ON THE
9 ANALYSIS CONDUCTED THUS FAR?

10 A. Yes. As I described above, Xcel Energy engaged in a rigorous route
11 development process prior to filing the Application. At that time, consistent
12 with state law,⁶ Xcel Energy did not identify a route preference, as between
13 the Blue and Purple Routes. Now, we have been independently analyzing the
14 additional route and alignment alternatives that will be studied in the EIS. As
15 a result of that analysis, Xcel Energy has identified its Preferred Route for the
16 Project. I note that the analysis here is based on the information currently
17 available to Xcel Energy, and that the record in this proceeding will continue
18 to develop through the EIS and public hearing processes.

19
20 Q. PLEASE DESCRIBE XCEL ENERGY'S PREFERRED ROUTE (PREFERRED ROUTE).

21 A. At this time, Xcel Energy's Preferred Route includes the Green Segment and
22 the Blue Route, modified by the following route segment alternatives
23 members of the public proposed during scoping: 202; 212; 216; 219; 226; and
24 244. The Preferred Route is approximately 178 miles long and within
25 Sherburne, Stearns, Kandiyohi, Meeker, Renville, Redwood, and Lyon

⁶ Minn. Stat. 216E.03, subd. 3 ("Neither of the two proposed routes may be designated as a preferred route . . .").

1 counties. The maps included in **Schedule 3** depict the Preferred Route, and
2 **Schedule 4** includes tables that compare the human and environmental
3 impacts of the Preferred Route with the routes proposed in the Application
4 (the Purple and Blue Routes).

5
6 Q. WHY DOES XCEL ENERGY SUPPORT THE PREFERRED ROUTE?

7 A. Xcel Energy supports the Preferred Route because it minimizes human and
8 environmental impacts, is feasible to construct, operate, and maintain, and
9 presents engineering benefits.

10
11 Q. HOW DOES THE PREFERRED ROUTE MINIMIZE HUMAN AND ENVIRONMENTAL
12 IMPACTS?

13 A. The Blue Route was already the least impactful route across many resource
14 categories, including the fewest residences within 300 and 500 feet of the
15 Project centerline – residential proximity was the number one priority we
16 heard from landowners during outreach. The inclusion of the six route
17 segment alternatives results in further reducing impacts to the following
18 resources:

- 19 • Native Plant Communities
- 20 • Sites of Biodiversity
- 21 • Forested upland
- 22 • Forested wetland
- 23 • MDNR Public Waters
- 24 • Improved crossing of Cottonwood River
- 25 • Agriculture

1 Likewise, the Preferred Route includes Xcel Energy's preferred crossing
2 locations for the State-designated Wild and Scenic Minnesota and North Fork
3 of the Crow Rivers.

4
5 Q. WHY DOES XCEL ENERGY PREFER THE PREFERRED ROUTE'S CROSSING OF
6 THE MISSISSIPPI RIVER?

7 A. The Preferred Route's crossing of the Mississippi River is adjacent to
8 undeveloped land and crosses a narrow channel of the river. More specifically,
9 when developing the Blue and Purple Routes, Xcel Energy considered six
10 potential crossings of the Mississippi River (*see* Application § 3.3.1). Crossings
11 1 through 4 considered by Xcel Energy were favorable due to Xcel Energy
12 ownership of land on both sides of the Mississippi River; however, the land
13 south and west of the river crossing is a residential area with limited availability
14 for a 150-foot right-of-way. Crossing 5 considered by Xcel Energy would
15 follow existing infrastructure at the river crossing but would result in
16 residential impacts south and west of Sherco. Ultimately, Xcel Energy prefers
17 Crossing 6, which is part of the Preferred Route (and the Blue Route).
18 Although Crossing 6 does not have existing infrastructure at the crossing, it is
19 located adjacent to undeveloped land and would cross at a narrow river
20 channel. As compared to other potential crossings, this crossing of the
21 Mississippi River minimizes impacts to residences.

22
23 Q. WHAT ENGINEERING BENEFITS ARE PRESENTED BY THE PREFERRED ROUTE?

24 A. Xcel Energy anticipates that the Preferred Route will have fewer structures
25 and foundations, as well as approximately half the number of crossings of
26 existing transmission lines of 115 kV or greater. This improves constructability
27 and ongoing maintenance and reduces the potential for future outages due to

1 maintenance of other lines. Likewise, the Preferred Route does not follow
2 railroad corridors, which negates the need for induction studies and
3 mitigation, which can be time-consuming and costly.

4 **VII. OTHER PERMITS & APPROVALS**

6 Q. WILL THE PROJECT REQUIRE PERMITS AND APPROVALS BEYOND THOSE
7 REQUIRED FROM THE COMMISSION?

8 A. Yes. The Project will require multiple regulatory permits, reviews, and
9 approvals. Table 8.0-1 of the Application provides a summary of the major
10 permits, approvals, and consultations that may be required for the Project.
11 Xcel Energy initiated agency consultations in December 2022, and agency
12 coordination and outreach will continue throughout the Project's permitting
13 and construction.

14
15 Q. DO YOU HAVE ANY UPDATES REGARDING OTHER PERMITS AND APPROVALS
16 THAT WILL BE REQUIRED FOR THE PROJECT?

17 A. Yes. Xcel Energy is continuing to coordinate with the U.S. Army Corps of
18 Engineers (USACE) regarding the Project because the Project will require
19 approvals under Section 404 of the Clean Water Act and Section 10 of the
20 Rivers and Harbors Act. USACE approvals will be based upon the Project's
21 specific route. Accordingly, the USACE permitting process will not formally
22 begin until after a Commission decision on the Project's final route. The prior
23 Project schedule presumed that desktop data could be used to support the
24 USACE process and that independent portions of the Project could be
25 separately permitted with the USACE. However, during ongoing consultation,
26 USACE indicated that field surveys will be required and that the pre-
27 construction notification submission to USACE must include the entirety of

1 the Project's route. To gather the necessary data, then, for a USACE pre-
2 construction notification submission, Xcel Energy will need to secure survey
3 access for a large percentage of any route that is ultimately approved by the
4 Commission. Because of the length of the Project and surveys that will be
5 required as part of the USACE permitting process, there is uncertainty
6 regarding when that process will conclude.

7
8 Q. PRIOR TO COMMENCING CONSTRUCTION ON ANY SEGMENT OF THE PROJECT,
9 WILL XCEL ENERGY OBTAIN ANY PERMITS AND APPROVALS REQUIRED FOR
10 THAT SEGMENT OF THE PROJECT?

11 A. Yes. Construction will begin after necessary federal, state, and local approvals
12 are obtained and property and rights-of-way are acquired for that segment.
13 Xcel Energy may construct in areas where approvals are not needed or have
14 already been obtained while approvals for other areas are in process. The
15 precise timing of construction will take into account various requirements of
16 permit conditions, environmental restrictions, availability of outages for
17 existing transmission lines (if required), available workforce, and materials.

18
19 **VIII. COORDINATION WITH TRIBES & SHPO**

20 Q. THE COMMISSION AUTHORIZED XCEL ENERGY TO INITIATE CONSULTATION
21 WITH THE MINNESOTA STATE HISTORIC PRESERVATION OFFICE (SHPO)
22 RELATED TO THE PROJECT AND DIRECTED XCEL ENERGY TO INFORM THE
23 COMMISSION OF THE STATUS OF THAT CONSULTATION WITH PRE-FILED
24 TESTIMONY. ARE YOU AWARE OF THAT AUTHORIZATION?

25 A. Yes. In this section of my Direct Testimony, I will provide an update regarding
26 Xcel Energy's coordination with SHPO regarding the Project. I will also

1 describe Xcel Energy's coordination with Tribal Nations related to the
2 Project.

3
4 Q. PLEASE DESCRIBE XCEL ENERGY'S COORDINATION WITH SHPO AND
5 ANALYSIS OF CULTURAL RESOURCES PRIOR TO FILING THE APPLICATION.

6 A. As discussed in Section 6.4 of the Application, background research on known
7 cultural resources within the Purple and Blue Routes was conducted in July
8 2023. Information regarding known archaeological sites and architectural
9 inventory resources recorded within the Purple and Blue Routes during
10 previous professional cultural resources surveys were collected and reviewed.
11 The data were further analyzed based on specific routes retained for the
12 analysis and additional research was conducted in public online records. This
13 information was used to identify types of archaeological sites that may be
14 encountered and landforms or geographic features that have a higher potential
15 for containing significant cultural resources. The results of the background
16 research to identify known cultural resources within the Purple and Blue
17 Routes is reflected in Section 6.4 and Appendix I of the Application. Xcel
18 Energy also provided correspondence to SHPO prior to filing the Application.
19 *See Application Appendix E.*

20
21 Q. HAS XCEL ENERGY CONSULTED WITH SHPO SINCE THE FILING OF THE
22 APPLICATION?

23 A. Yes. On November 13, 2023, SHPO responded to Xcel Energy's September
24 2023 correspondence with a letter that provided an overview of SHPO's
25 process for reviewing the Project. Among other things, SHPO recommended
26 that a Phase 1a archaeological assessment be completed for the Project. Xcel

1 Energy has since completed a Phase 1a archaeological assessment and, on July
2 26, 2024, submitted the assessment and Survey Plan to SHPO for review.

3
4 Q. WILL XCEL ENERGY'S COORDINATION AND CONSULTATION WITH SHPO
5 CONTINUE?

6 A. Yes. Xcel Energy will work cooperatively with SHPO and interested Tribal
7 Nations to design a survey strategy for the Project and conduct both a Phase
8 I Cultural Resource Reconnaissance survey and an Architectural History
9 Inventory. A proposed survey protocol / strategy was submitted to SHPO in
10 July 2024. The Phase I Survey will focus on areas proposed for Project
11 construction, including transmission structure locations, substation sites,
12 associated construction access roads, and temporary workspace areas. These
13 investigations will be conducted by a professional archaeologist meeting the
14 Secretary of the Interior's Standards for Archaeology as published in Title 36
15 Code of Federal Regulations Part 800. Survey strategies (pedestrian and/or
16 shovel probing and/or deep testing) for the Phase I Survey will depend on
17 surface exposure and the characteristics of the landforms proposed for
18 development.

19
20 Xcel Energy will implement the survey strategy and prepare reports
21 documenting the results of those surveys for submittal to SHPO and
22 interested Tribal Nations, among others, including USACE. If cultural
23 resources or mortuary sites/cemeteries are identified during the Phase I
24 Survey, avoidance will be the primary mitigation measure to avoid affecting
25 these resources during construction of the Project. Avoidance of resources
26 may include minor adjustments to the Project design and designation of
27 sensitive areas to be left undisturbed or spanned by the Project. Xcel Energy

1 will develop and Unanticipated Discoveries Plan for use during construction
2 of the Project that outlines the procedures to be followed in the event
3 unanticipated archaeological materials are found.
4

5 Q. HAS XCEL ENERGY ENGAGED WITH TRIBAL NATIONS REGARDING THE
6 PROJECT?

7 A. Yes. Xcel Energy has engaged with all Tribal Nations sharing geography with
8 Minnesota, including those Tribal Nations in nearest proximity to the Project.
9 Section 7.1.3 and Appendix E describe and include coordination prior to
10 submittal of the Application. Since filing the Application, Xcel Energy has
11 continued coordination with interested Tribal Nations, including by meeting
12 with Lower Sioux Indian Community regarding the Project. Xcel Energy also
13 reviewed the comments filed by Lower Sioux Indian Community on March
14 20, 2024, to ensure that the resources identified in those comments had been
15 documented in the Phase 1a prepared for the Project.
16

17 Q. WILL XCEL ENERGY CONTINUE TO ENGAGE WITH TRIBAL NATIONS
18 REGARDING THE PROJECT?

19 A. Yes. Among other things, the proposed survey strategy for the Project will be
20 shared with interested Tribal Nations to gather their input on the
21 methodology prior to completing the study. Xcel Energy is currently in the
22 process of seeking voluntary access for cultural resource surveys in certain
23 portions of the Project. To the extent Xcel Energy successfully obtains
24 voluntary survey access, Xcel Energy would invite representatives from
25 applicable interested Tribal Nations to participate in survey areas of interest.
26 Xcel Energy will also prepare reports documenting the results of those surveys

1 for submittal to SHPO and interested Tribal Nations, among others, including
2 USACE.

3
4 **IX. SURVEY & LAND ACQUISITION**

5 Q. THE APPLICATION STATES THAT XCEL ENERGY WOULD BEGIN LANDOWNER
6 ENGAGEMENT REGARDING EASEMENT ACQUISITION IN 2024. IS THAT STILL
7 THE CASE?

8 A. Yes. Xcel Energy is actively engaging with landowners in several areas along
9 the potential routes for the Project. To date, that engagement has been
10 focused on sharing information about the Project, establishing relationships
11 with landowners, and obtaining voluntary rights of entry agreements to allow
12 Xcel Energy to perform survey activities as it continues to develop and design
13 the Project.

14
15 Q. WHY DID XCEL ENERGY BEGIN THAT PROCESS PRIOR TO RECEIVING A ROUTE
16 PERMIT?

17 A. Xcel Energy is conducting outreach efforts now for several reasons, including
18 those noted above. Early engagement provides more opportunities for Xcel
19 Energy to build positive relationships with landowners, which will aid Xcel
20 Energy's efforts to obtain voluntary agreements when Xcel Energy seeks to
21 obtain easement rights. Information obtained from survey activities will help
22 to complete the design work in a timely fashion, which will also contribute to
23 Xcel Energy's readiness to engage with landowners after the Project route is
24 determined. This relatively advanced level of preparedness compared to some
25 past projects is critical in being able to begin construction in a timely manner.

26

1 Q. WHAT IF THE COMMISSION ULTIMATELY SELECTS A DIFFERENT ROUTE?

2 A. Xcel Energy understands that the Commission may ultimately select a
3 different route. Xcel Energy has communicated to landowners that the
4 Project's final route will be selected by the Commission and that the activities
5 that Xcel Energy is pursuing now may end up including efforts on lands that
6 are not within a Commission-approved route. In those circumstances,
7 landowners will retain compensation paid in connection with survey access
8 agreements.

9

10

X. CONCLUSION

11

12 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

13 A. Yes.

M A T T H E W A . L A N G A N

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Professional Summary

For the last twenty years, I have been in the regulated energy industry, directly involved with State and Federal environmental review and permitting of transmission line, wind farm, solar farm and pipeline projects through my employment with Xcel Energy, the Minnesota Department of Commerce and the Minnesota Department of Natural Resources. These positions have required high-end skills in technical writing, verbal communications, negotiations and project management, and a valid driver's license. My educational background comes from the University of Minnesota where I majored in Natural Resource Management, with an emphasis in Planning, Policy, and Law.

PROFESSIONAL EXPERIENCE**Xcel Energy • Minneapolis, MN 55401 • October 2012 - Present**

Xcel Energy provides our customers the safe, clean, reliable energy services they want and value at a competitive price, while protecting the environment as a core value of the Company.

Principal Land Agent (March 2018-present,) Senior Land Agent (October 2012-March 2018)

This position has required I lead planning, route alternatives analysis, site selection, and management of sites and corridors for major energy facilities, including transmission lines. It has also frequently required I interact with, and represent S&LR's interests, on multi-disciplinary internal project teams, involving engineering, legal, regulatory, and project management staff. I have lead preparation of applications and negotiated for and obtained applicable permits from federal, state and local government agencies for approvals to construct major energy facilities. These include necessary land use and environmental permits from local, state and federal government jurisdictions. This position has required I represent the company before federal, state and local regulatory and land management agencies, boards, planning commissions, councils, and legislative committees. I have prepared project descriptions and summaries, respond to data requests and make presentations to the governing jurisdictions in public hearings to obtain approval for projects, and have acted as primary spokesperson on all permitting-related activities for a variety of projects. The projects I have worked on have required I act as an expert witness in preparing and presenting written and oral testimony in state certification proceedings (CON, CPCN, CCN) and other regulatory proceedings. This requires a high level of technical knowledge and understanding of applicable federal, state and local land rights laws, codes, ordinances and regulations. This position has allowed me to serve as technical resource and advisor to other Siting & Land Rights, and Company, staff. And the project work has allowed me to administer and consult with other agents and team members on complex project issues regarding land rights and siting issues. I have contributed to process teams concerning budget and regulatory compliance and have provided assistance to other internal Xcel Energy departments and subsidiaries involving permitting activities while developing, refining and implementing the strategic goals and objectives of Xcel Energy. I have helped prepare requests for proposals, contract agreements, and project estimates for projects, and have led the selection of consultants and contractors, as well as managed consultants on major projects. These essential responsibilities have been required in the project work listed below. I also represented Xcel Energy on the Mn Public Utilities Commission's Permit Reform Taks Force and testified at legislative committees in support of the 2024 Permit Reform Bill, known as the Energy Infrastructure Permitting Act.

Project and Permit Accomplishments

- Xcel Energy Permit Leader for the Mn Energy Connection 345kV transmission line and MISO's LRTP-2 345kV transmission line.
- Secured all permits for the Nobles, Grand Meadow, and Pleasant Valley Wind Farm Re-power projects
- Secured all permits for the Rosemount, Cottage Grove and Vonco transmission line re-location projects.
- Siting and Land Rights Project Team Lead on all FERC 1000, MISO competitive bid projects (Dry Run, Duff-Coleman, Hartburg-New Sabine.)
- Siting and Land Rights Permitting Lead on NSP's Renewable Portfolio Wind Expansion.

- Secured a CPCN approval from the North Dakota Public Service Commission and Route Permit approval from the City of Fargo for the Maple River to Red River 115kV Transmission Line Project in Fargo, North Dakota.
- Secured a High Voltage Transmission Line Permit for the Scott County 345kV Tap Line and Substation Expansion project in Scott County, Minnesota.
- Secured a CPCN approval from the North Dakota Public Service Commission for the Prairie Substation Expansion project in Grand Forks, North Dakota.
- Xcel Energy permitting lead on the Badger Coulee CPCN application (PSC-W Order April 2015.)

Minnesota Department of Commerce • St. Paul, MN 55101 • May 2009 - October 2012

Minnesota Department of Commerce reviews transmission line, pipeline, wind farm, and power plant permit applications submitted by utility companies, prepares state environmental review documents, participates in public and contested case hearings, and guides the public and other governmental units through the state permitting process.

Planning Director

The purpose of this position is to lead utility companies, local government units, state and federal agencies, various interest groups, landowners and the public through the State of Minnesota environmental review and permitting process per the Power Plant Siting Act and Minnesota Rules Chapter 7850. The skills required for this position include technical writing aptitude, effective public speaking, customer service, technical knowledge of construction and operational design, technical knowledge of potential resource impacts and mitigation strategies associated with different kinds of energy projects, ability to lead a team of specialized experts, knowledge of the state environmental review process, and knowledge of various federal, state, and local permitting processes and requirements.

Accomplishments

- Permitted six high voltage transmission line and large wind energy conversion system projects, including the CapX Hampton-LaCrosse 345kV transmission line project.
- Department of Commerce Technical Representative to the Minnesota Environmental Quality Board.
- Named 2012 State of Minnesota Emerging Leader by Minnesota Management and Budget

Minnesota Department of Natural Resources • St. Paul, MN 55155 • July 1999 - May 2009

The Minnesota Department of Natural Resources' (MDNR) mission is "to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life." I held positions with increasing responsibility in environmental planning and regulation during my ten years with the Department.

Principal Planner (May 2004 - May 2009)

The primary responsibilities of this position were to: 1) prepare environmental review documents in compliance with the Minnesota Environmental Protection Act (MEPA, Minn. Stat 116D) and; 2) coordinate Department-wide review of transmission line, pipeline, power plant, and wind energy projects in all areas of the state.

Accomplishments

- Department of Natural Resources Technical Representative to the MN Environmental Quality Board.
- 2008 MDNR Supervisor School Graduate
- Context Sensitive (Planning) Design Certification

Senior Planner (June 2002 - May 2004)

The primary responsibility of this position was to prepare environmental review documents in compliance with MEPA, with an emphasis on All-Terrain Vehicle Recreational Trails.

Senior Planner (June 2000 - June 2002)

The primary responsibility of this position was to develop, in coordination with the public and governmental units, State Park Management Plans for two newly created State Parks - Big Bog and Red River - in compliance with the MN Outdoor Recreation Act (Minn. State 86A).

Accomplishments

- Published the Big Bog, Red River, and Cascade River State Park Management Plans
- 2001 DNR Teamwork and Partnership Award

Planner (July 1999 - June 2000)

Student Worker position included assisting Senior Planners develop maps and research sections of State Park Management Plans. Assisted with the development of the 2000 MDNR State Park Systemwide Management Plan.

EDUCATION

University of Minnesota (1995-1999)

Natural Resources and Environmental Studies

Forestry Minor

Area of Emphasis in Planning, Policy and Law.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
Blue Route	Route	NA	The Blue Route is 174 miles long and was proposed by the applicant. It crosses Sherburne, Stearns, Meeker, Kandiyohi, Renville, Redwood, and Lyon counties.	Applicant	N/A	
Purple Route	Route	NA	The Purple Route is 171 miles long and was proposed by the applicant. It crosses Sherburne, Wright, Stearns, Meeker, Kandiyohi, Chippewa, Renville, Yellow Medicine, and Lyon counties.	Applicant	N/A	
201	Route Segment	Blue	EERA received a scoping comment from Ronald McDaniel (#111) proposing Route Segment 201. This route segment initiates at the proposed Garvin Substation in Lyon County. It traverses north along U.S. Highway 59 until Country Road 2 where it turns east until it joins the Blue Route. The commenter noted potential impacts on habitat/wildlife/rare species, water resources, and land use.	Public	Oppose	Outstanding Site of Biological Significance (SOBS) would be impacted by this alternative, but not Applicant's Preferred Route. To avoid Outstanding SOBS, right-of-way would impact Garvin County Park (which implicates LAWCON and thus potential additional federal environmental review and permitting).
202	Route Segment	Blue	EERA received scoping comments from Stephen Miller (#59) and Ronald McDaniel (#111) proposing Route Segment 202. This route segment departs the Blue Route at County Road 9 and traverses north. It turns east along the northern border of T110N, R40W, S29 until it rejoins the Blue Route. The commenters noted potential impacts on farming operations, habitat/wildlife/ rare species, water resources, and land use.	Public	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony.

*The text in the columns titled Name, Type, Route Connection, Description, and Proposer is taken verbatim from the corresponding columns in Appendix A of the Environmental Impact Statement Scoping Decision prepared by the Department of Commerce. Xcel Energy has directly reproduced that text for convenience in this table; the text's inclusion in this table does not reflect Xcel Energy's adoption or endorsement.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
203	Route Segment	Blue	EERA received a scoping comment from the Lyon County Commissioner (#443) proposing Route Segment 203. This route segment departs the Blue Route at County Road 9 and traverses north. It turns east at 185th Street, traverses north on 310th Avenue, continues east on 190th Street, then traverses north on 320th Avenue until it rejoins the Blue Route. The Commissioner noted potential impacts on farming operation, land use, and tree removal.	Lyon County Commissioner	Support 3.5-mile portion that follows County Road 9 (additional 3 miles do not follow this road).	Four fewer deadend structures. This alternative overlaps with Route 202, which Xcel Energy supports and has incorporated into the Preferred Route. Because Xcel Energy supports only a portion of this alternative, Xcel Energy has not incorporated it into the current Preferred Route.
204	Route Segment	Purple	EERA received a scoping comment from Eldan Mitzer (#257) proposing Route Segment 204. This route segment departs the Purple Route by traversing further west on U.S. Highway 14. Halfway into T109N, R41W, S16, it turns north until it rejoins the Purple Route. The commenter noted potential impacts on stray voltage, land use, and green/clean energy.	Public	Oppose	Right angle at US Highway 14 presents challenges with pipeline and 69 kilovolt (kV) line crossing. In contrast, Applicant's Purple Route follows a road. Also, not applicable to Applicant's Preferred Route. ¹
205	Route Segment	Purple	EERA received a scoping comment from Ken Marcotte (#32) proposing Route Segment 205. This route segment departs the Purple Route at 190th Street where it traverses east to U.S. Highway 59. From here it turns north until it rejoins the Purple Route. The commenter noted potential impacts on	Public	Oppose	Additional residential impacts along CR 59 - pinch points between houses. Two additional 115 kV line crossings.

¹ Xcel Energy's Preferred Route consists of the Blue Route identified in the Route Permit Application, together with several route alternatives proposed during the scoping period. As such, route alternatives which modify the Purple Route are not applicable to the Company's current Preferred Route. Nonetheless, Xcel Energy provides analysis of those alternatives here, as applicable.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			habitat/wildlife/rare species and water resources.			
206	Route Segment	Purple	EERA received a scoping comment from Ken Marcotte (#32) proposing Route Segment 206. This route segment departs the Purple Route at County Road 67 and traverses north to 220th Street. From here, it turns east until it rejoins the Purple Route. The commenter noted potential impacts on habitat/wildlife/rare species and water resources.	Public	Oppose	Additional residential impacts along County Road 67 and 220 th Street-pinch points between houses.
101	Route Connector	Connects Blue and Purple Routes	Route Connector 101 was proposed by the applicant as "Connector D." It is approximately 8 miles long and located in Lyon County.	Applicant	N/A	
207	Route Segment	(route segment starting and ending on Connector 101)	EERA received a scoping comment from Mike Truwe (#61) proposing Route Segment 207. This route segment departs the Blue Route and traverses north on the eastern border of T110N, R40W, S17 until it joins Route Connector 101. The commenter noted potential impacts on stray voltage, aesthetic impacts/property values, tree removal, and noise.	Public	No position	Would not be applicable unless Route Connector 101 was incorporated into the approved route.
208	Route Segment	(route segment starting and ending on Connector 101)	EERA received a scoping comment from Leslie Bergquist (#101) proposing Route Segment 208. This route segment departs Route Connector 101 at 230th Street and traverses west. It turns north at 310th Avenue until it rejoins Route Connector 101. The commenter noted potential impacts on farming operation, aesthetic impacts/property values, and use of existing ROW.	Public	Oppose	Due to offset from existing 115 kV line and ditch, following 310th does not mitigate agricultural impacts. Also, two additional angle structures and one additional residence as compared to Applicant's Route Connector 101.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
209	Route Segment	Purple	EERA received a scoping comment from David Kietzmann and Saralee Kietzmann (#266) proposing Route Segment 209. This route segment departs the Purple Route at 490th Steet and traverses north. It turns east at 290th Avenue until it rejoins the Purple Route. The commenters noted potential impacts on farming operation and water resources.	Public	Oppose	Longer route and has additional residential impacts as compared to Purple Route. Also, not applicable to Applicant's Preferred Route.
210	Route Segment	Purple	EERA received a scoping comment from Leslie Bergquist (#101) proposing Route Segment 210. This route segment departs the Purple Route continuing north on State Highway 23 following the curve of the highway until it rejoins the Purple Route. The commenter noted potential impacts on farming operation, aesthetic impacts/property values, and use of existing ROW.	Public	Oppose	Crosses cemetery; within Minnesota Department of Transportation (MnDOT) right-of-way. Also, not applicable to Applicant's Preferred Route.
102	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from Daniel Wambeke and 43 others (#320) proposing Route Connector 102. This route connector departs the Blue Route at Lyon Redwood Road and traverses north. It turns east at 230th Street, continues north on Aspen Avenue, then continues east on 260th Street. From there, the route connector traverses north at County Highway 8, turns east halfway into T114N, R39W, S33, then continues north at County Road 6. It traverses west across the lower portion if T114N, R39W, S28, turns north halfway into the section, then continues east halfway into T114, R39W, S21. The route connector traverses north at State Highway 274 following the curve of the highway, turns west halfway into T114N, R39W, S4, and continues north a	Public	No position	Route alternative does not connect to Applicant's preferred route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			third of the way into the section. It traverses west on 220th Ave, turns north at the western border of T115, R39W, S32, and continues west at 230th Avenue until it joins the Purple Route. The commenters noted potential impacts on public health/EMF/pacemaker, farming operation, stray voltage, aesthetic impacts/property values, habitat/wildlife/rare species, water resources, proximity to home/being boxed in, land use, and noise.			
211	Route Segment	Blue	EERA received a scoping comment from Ben Hicks (#289) proposing Route Segment 211. This route segment departs the Blue Route at County Road 8 and traverses south. It turns east at County Road 4 and continues north at Duncan Avenue until it rejoins the Blue Route. The commenter noted potential impacts on farming operation, habitat/wildlife/rare species, land use, and tree removal.	Public	Support – with the exception of the north/south portion along Duncan Road	Applicant prefers connection to Route 219 to rejoin Blue Route / Preferred Route rather than proceeding north along Duncan Road to minimize angle structures (2 fewer angle structures). This alternative overlaps with Route 219, which Xcel Energy supports and has incorporated into the Preferred Route. Because Xcel Energy supports only a portion of this alternative, Xcel Energy has not incorporated it into the current Preferred Route.
212	Route Segment	Blue	EERA received a scoping comment from Jeff Turbes (#102) proposing Route Segment 212. This route segment departs the Blue Route by continuing east on 240th Street. It turns north at County Highway 7 until it rejoins the Blue Route. The commenter noted potential	Public	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			impacts on farming operation, stray voltage, aesthetic impacts/property values, and use of existing ROW.			
213	Route Segment	Blue	EERA received a scoping comment from Jeff Potter (#22) proposing Route Segment 213. This route segment departs the Blue Route by continuing north on Ideal Avenue. It turns east halfway into T112N, R37W, S14, and continues south at Kenwood Avenue until it rejoins the Blue Route. The commenter noted potential impacts on electronic interference, farming operation, stray voltage, aesthetic impacts/property values, and noise.	Public	Oppose	Route alternative is adjacent to Minnesota Department of Natural Resources (MDNR) Wildlife Management Area (WMA) and would require greenfield crossing of Redwood River, whereas Preferred Route crosses along a road.
214	Route Segment	Blue	EERA received a scoping comment from Cletus Gewerth (#30) proposing Route Segment 214. This route segment departs the Blue Route at Porter Avenue and traverses north. It turns east at 320th Street until it rejoins the Blue Route. The commenter noted potential impacts on water resources and wildlife.	Public	Oppose	Route alternative would require installation of transmission structures and foundations within a Board of Water and Soil Resources (BWSR) easement that restricts construction of structures. Thus, the affected portion of this alternative would likely require partial termination/alteration of the BWSR easement through a process involving BWSR, the landowner, Applicant, and consultation with the Commissioners of the Departments of Agriculture and Natural Resources. Other route alternatives exist in this

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
						area which instead span over narrower sections of BWSR easement areas.
215	Route Segment	Blue	EERA received a scoping comment from Andrew Rieke and Linda Rieke (#270) proposing Route Segment 215. This route segment departs the Blue Route at Highway 19 and traverses east. It turns north halfway into T112, R34W, S2 until it rejoins the Blue Route. The commenters noted potential impacts on farming operation.	Public	Oppose	Additional crossings of 69 kV line with BWSR easements on either side of the road. Also encroaches on the incorporated areas of the City of Franklin.
216	Route Segment	Blue	EERA received a scoping comment from Connie Kieper (#84) proposing Route Segment 216. This route segment departs the Blue Route halfway into T115N, R34W, S25 traverses east. It turns north at the eastern border of T115, R33W, S30 until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, electronic interference, farming operation, noise, and use of existing ROW.	Public	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony.
217	Route Segment	Blue	EERA received a scoping comment from Larry Posl (#209) proposing Route Segment 217. This route segment departs the Blue Route near the top of the eastern border of T115N, R33W, S6 and traverses northwest. It turns west at County Road 70, continues north at County Road 57, then continues east at the northern border of T116N, R33W, S31 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation and proximity to home/being boxed in.	Public	Oppose	Two additional angle structures and length of route (1.8 miles longer).
218	Route Segment	Blue	EERA received a scoping comment from Larry Posl (#209) proposing Route Segment 218. This route segment departs the Blue	Public	Oppose	Two additional angle structures and length of route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			Route near the top of the eastern border of T115N, R33W, S6 and traverses northwest. It turns west at County Road 70, continues north at County Road 57, then continues east at the northern border of T116N, R33W, S30 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation and proximity to home/being boxed in.			
219	Route Segment	Blue	EERA received a scoping comment from Ben Hicks (#289) proposing Route Segment 219. This route segment departs the Blue Route at County Road 8 and traverses south. It turns east at County Road 4, and continues north halfway into T110N, R38W, S17 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation, habitat/wildlife/rare species, land use, and tree removal.	Public	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony.
220	Route Segment	Blue	EERA received a scoping comment from Brian Greenslit and Gloria Greenslit (#3) proposing Route Segment 220. This route segment departs the Blue Route at State Highway 19 and traverses east. It turns north halfway into T112, R34W, S3 until it rejoins the Blue Route. The commenters noted potential impacts on aesthetic impacts/property values, proximity to home/being boxed in, and noise.	Public	No position	Requires two additional angle structures, with no appreciable corresponding reduction in human and environmental impacts.
221	Route Segment	Purple	EERA received a scoping comment from David Kietzmann and Saralee Kietzmann (#266) proposing Route Segment 221. This route segment departs the Purple Route at 260th Avenue and traverses west. It turns north at 520th Street, continues east at State Highway 67, and continues north a quarter of	Public	Oppose	Six additional angle structures and increased impact to residences. Also, not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			the way into T116N, R39W, S31. It turns east a quarter of the way into the section until it rejoins the Purple Route. The commenters noted potential impacts on farming operation and water resources.			
103	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from Melvin Zuidem (#35) proposing Route Connector 103. This route connector departs the Purple Route continuing east on County Highway 18 until it joins the Blue Route. The commenter noted potential impacts on farming operation and development/community.	Public	No position	Route alternative does not connect to Applicant's Preferred Route.
222	Route Segment	Blue	EERA received a scoping comment from Luke Johnson (#306) proposing Route Segment 222. This route segment departs the Blue Route at 195th Avenue SE and traverses north. It turns east at County Road 77 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation.	Public	Oppose	Increased impacts to residences and two additional angle structures.
223	Route Segment	Blue	EERA received a scoping comment from Duane Anderson (#200) proposing Route Segment 223. This route segment departs the Blue Route continuing east on 100th Street. It turns north at 515th Avenue until it rejoins the Blue Route. The commenter noted potential impacts on land use.	Public	See Section V of Direct Testimony.	See Section V of Direct Testimony.
104	Route Connector	Connects Blue and Purple Routes	Route Connector 104 was proposed by the applicant as "Connector C." It is approximately 29 miles long and located in Kandiyohi and Chippewa counties.	Applicant	N/A	
224	Route Segment	Purple	EERA received a scoping comment from Marilyn Worke and Helga Miller (#256) proposing Route Segment 224. This route segment departs the Purple Route at 30th	Public	No position	Not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			Avenue SE and traverses east. It turns north halfway into T119N, R33W, S19 until it rejoins the Purple Route. The commenters noted potential impacts on farming operation.			
225	Route Segment	Purple	EERA received a scoping comment from Jordan Junkermeier and Rachel Junkermeier (#130) proposing Route Segment 225. This route segment departs the Purple Route continuing north halfway into T119N, R33W, S6. It turns east at 30th Avenue NE until it rejoins the Purple Route. The commenters noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, water resources, proximity to home/being boxed in, tree removal, and green/clean energy.	Public	Oppose	Increased impacts to residences. Also, not applicable to Applicant's Preferred Route.
105	Route Connector	Connects Blue and Purple Routes	Route Connector 105 was proposed by the applicant as "Connector B." It is approximately 1 mile long and located in Meeker County.	Applicant	N/A	
106	Route Connector	Connects Blue and Purple Routes	Route Connector 106 was proposed by the applicant as "Connector A." It is approximately 1.5 miles long and located in Meeker County.	Applicant	N/A	
107	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from Maureen Murray (#45) proposing Route Connector 107. This route connector departs the Purple Route continuing east halfway through T121N, R31W, S27 until it connects to the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, electronic interference, aesthetic impacts/property values, habitat/wildlife/rare species, water	Public	No position	Not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			resources, land use, conservation easement, and bees/pollinator habitat.			
226	Route Segment	Blue	EERA received a scoping comment from Von Grotto (#246) proposing Route Segment 226. This route segment departs the Blue Route at the southwestern corner of T120N, R31W, S9 and traverses northeast. It turns east a quarter of the way through the section, continues north at 600th Avenue, and continues east at the northern border of T120N, R31W, S3 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation and proximity to home/being boxed in.	Public	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony. Specifically, this alternative presents a better crossing of the existing 400kV transmission line in this area. This option also parallels more road right-of-way than the Applicant's Blue Route, reduces the impact on agricultural lands and reduces the number of residences within 500 feet of the transmission line.
227	Route Segment	Blue	EERA received a scoping comment from Gordon Neuman and Ramona Neuman (#46) proposing Route Segment 227. This route segment departs the Blue Route continuing east on County Road 7. It turns north at State Highway 22 and follows the curve of the highway until it rejoins the Blue Route. The commenters noted potential impacts on farming operation, habitat/wildlife/rare species, and conservation easement.	Public	No position	
228	Route Segment	Purple	EERA received a scoping comment from Gordon Neuman and Ramona Neuman (#46) proposing Route Segment 228. This route segment departs the Purple Route at State Highway 4 and traverses north. It turns east at	Public	No position	Not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			County Road 16 until it rejoins the Purple Route. The commenters noted potential impacts on farming operation, habitat/wildlife/rare species, and conservation easement.			
229	Route Segment	Purple	EERA received a scoping comment from Dawn Jansen (#62) proposing Route Segment 229. This route segment departs the Purple Route at 590th Avenue and traverses north. It turns east at 349th Street until it rejoins the Purple Route. The commenter noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, proximity to home/being boxed in, and tree removal.	Public	No position	Not applicable to Applicant's Preferred Route.
230	Route Segment	Purple	EERA received a scoping comment from LuVern Becker (#132) proposing Route Segment 230. This route segment departs the Purple Route halfway into T121N, R31W, S10 and traverses north. It turns east at County Road 36 until it rejoins the Purple Route. The commenter noted potential impacts on farming operation, aesthetic impacts/property values, and habitat/wildlife/rare species.	Public	Oppose	This route alternative parallels a pipeline, which could require additional studies and mitigation. Also, not applicable to Applicant's Preferred Route.
231	Route Segment	Purple	EERA received a scoping comment from Brad Libbesmeier and Ellen Libbesmeier (#79) proposing Route Segment 231. This route segment departs the Purple Route at 140th Street and traverses east. It turns north at County Highway 149 until it rejoins the Purple Route. The commenters noted potential impacts on public health/EMF/pacemaker, farming operation, aesthetic impacts/property values, use of existing ROW, and green/clean energy.	Public	Oppose	Increased impact to residences. Also, not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
232	Route Segment	Purple	EERA received a scoping comment from Ben Stockinger (#143) proposing Route Segment 232. This route segment departs the Purple Route three quarters through T122N, R29W, S32 and traverses east. It continues east at Balsam Road and follows the curve of the road until it rejoins the Purple Route. The commenter noted potential impacts on farming operation and aesthetic impacts/property values.	Public	No position	Not applicable to Applicant's Preferred Route.
108	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from John Stein (#27) proposing Route Connector 108. This route connector departs the Purple Route a quarter through T122N, R29W, S34 and traverse south until it connects to the Blue Route. The commenter noted potential impacts on habitat/wildlife/rare species, water resources, and farming operations.	Public	No position	Not applicable to Applicant's Preferred Route.
109	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from the MN DNR (#285) proposing Route Connector 109. This route connector departs the Purple Route at the western border of T122N, R29W, S35 and traverses south. It turns east a quarter of the way through the section, continues north a little over halfway through the section, then continues east two thirds through the section to connect to the Blue Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	Oppose	Route alternative crosses an active gravel pit, and has potentially six additional angle structures as compared to the Applicant's Preferred Route. Also, not applicable to Applicant's Preferred Route.
110	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from John Adolph and Tamile Adolph (#81) proposing Route Connector 110. This route connector departs the Purple Route at Power Rodge Road and traverses east until it	Public	Oppose	Increased impacts to residences and clearing of forested wetlands. Also, not applicable to

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			connects to the Blue Route. The commenters noted potential impacts on farming operation.			Applicant's Preferred Route.
233	Route Segment	Blue	EERA received a scoping comment from the MN DNR (#285) proposing Route Segment 233. This route segment departs the Blue Route at State Highway 15 traversing north following the curve of the highway. It turns east a quarter of the way into T122N, R29W, S35, continues north halfway into the section, then continues east two thirds of the way through the section until it rejoins the Blue Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	Oppose	Route alternative crosses an active gravel pit, has four additional angle structures, increased agricultural impacts, and does not follow property lines.
234	Route Segment	Blue	EERA received a scoping comment from Joel Lauer (#222) proposing Route Segment 234. This route segment departs the Blue Route at State Highway 15 following the curve of the road. It turns east at County Road 146 until it rejoins the Blue Route. The commenter noted potential impacts on farming operation.	Public	Oppose	Increased impact to residences and general lack of available right-of-way. MDNR early coordination review indicated concern for routing along State Highway 15.
235	Route Segment	Blue	EERA received a scoping comment from Dan Stein (#214) proposing Route Segment 235. This route segment departs the Blue Route continuing north at the western border of T122N, R29W, S25. It turns east three quarters through the section, then continues north a quarter through the section. From there, it turns east a quarter through T122N, R29W, S24 until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, water resources, and use of existing ROW.	Public	Oppose	Concern regarding increased impact to center pivot irrigation and proximity to Stearns County Waterfowl Production Area.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
236	Route Segment	Blue	EERA received a scoping comment from Jason Pierskalla (#56) proposing Route Segment 236. This route segment departs the Blue Route at 73rd Avenue and traverses north. It turns east at 163rd Street until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, habitat/wildlife/rare species, general environmental impact, and conservation easement.	Public	Oppose	Concern regarding increased impact to center pivot irrigation.
237	Route Segment	Blue	EERA received a scoping comment from Jason Pierskalla (#56) proposing Route Segment 237. This route segment departs the Blue Route at 73rd Avenue and traverses north. It turns east halfway into T122N, R28W, S19 until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, habitat/wildlife/rare species, general environmental impact, and conservation easement.	Public	Oppose	Concern regarding increased impact to center pivot irrigation
238	Route Segment	Blue	EERA received a scoping comment from Jason Pierskalla (#49) proposing Route Segment 238. This route segment departs the Blue Route at 73rd Avenue and traverses north. It turns east at 152nd Street until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, farming operation, aesthetic impacts/property values, habitat/wildlife/rare species, general environmental impact, conservation easement, tree removal, and bees/pollinator habitat.	Public	Oppose	Increased impact to residences and lack of available right-of-way due to residences on both sides of the road.
239	Route Segment	Blue	EERA received a scoping comment from Jason Pierskalla (#162) proposing Route Segment 239. This route segment departs the	Public	No position	

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			Blue Route a quarter of the way through T122N, R28W, S30 and traverses north. It turns east at 152nd Street until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, general environmental impact, and conservation easement.			
240	Route Segment	Blue	EERA received a scoping comment from Jason Pierskalla (#162) proposing Route Segment 240. This route segment departs the Blue Route a quarter of the way into T122N, R28W, S30 and traverses north. It turns east three quarters through the section until it rejoins the Blue Route. The commenter noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, general environmental impact, and conservation easement.	Public	Oppose	Concern regarding increased impact to center pivot irrigation
241	Route Segment	Purple	EERA received a scoping comment from the MN DNR (#285) proposing Route Segment 241. This route segment departs the Purple Route at 73rd Avenue and traverses south. It turns east at 140th Street and follows the curve of the street. From there, it turns north at 53rd Avenue until it rejoins the Purple Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	Oppose	Increase route length and eight additional angle structures. Also, not applicable to Applicant's Preferred Route.
242	Route Segment	Purple	EERA received a scoping comment from Joe Lauer (#197) proposing Route Segment 242. This route segment departs the Purple Route at County Highway 7 and traverses south. It	Public	Oppose	Increased residential impact and route length. Also, not applicable to

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			turns northeast at County Highway 45 until it rejoins the Purple Route. The commenter noted potential impacts on electronic interference, farming operation, habitat/wildlife/rare species, and land use.			Applicant's Preferred Route.
243	Route Segment	Purple	EERA received a scoping comment from Raechell Nelson (#302) proposing Route Segment 243. This route segment departs the Purple Route three quarters of the way through T122N, R28W, S26 and traverses east. It turns north at 13th Avenue until it rejoins the Purple Route. The commenter noted potential impacts on proximity to home/being boxed in.	Public	No position	Not applicable to Applicant's Preferred Route.
111	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from Jack Miller (#178) proposing Route Connector 111. This route connector departs the Blue Route continuing east at the southern border of T122N, R28W, S30. It turns south at County Highway 7 until it connects to the Purple Route. The commenter noted potential impacts on public health/EMF/pacemaker, farming operations, stray voltage, noise, and use of existing ROW.	Public	No position	Not applicable to Applicant's Preferred Route.
112	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from the MN DNR (#285) proposing Route Connector 112. This route connector departs the Blue Route at Dellwood Road and traverses east following the curve of the road. It turns south at County Road 7, continues east at 170th Street, and continues south at 33rd Avenue. From there, it turns east at 165th Street, then continues south at 23rd Avenue until it connects to the Purple Route. The DNR noted potential impacts on	DNR	Oppose	Increase impacts to residences and lack of available right-of-way due to residences on both sides of the road. Also, not applicable to Applicant's Preferred Route.

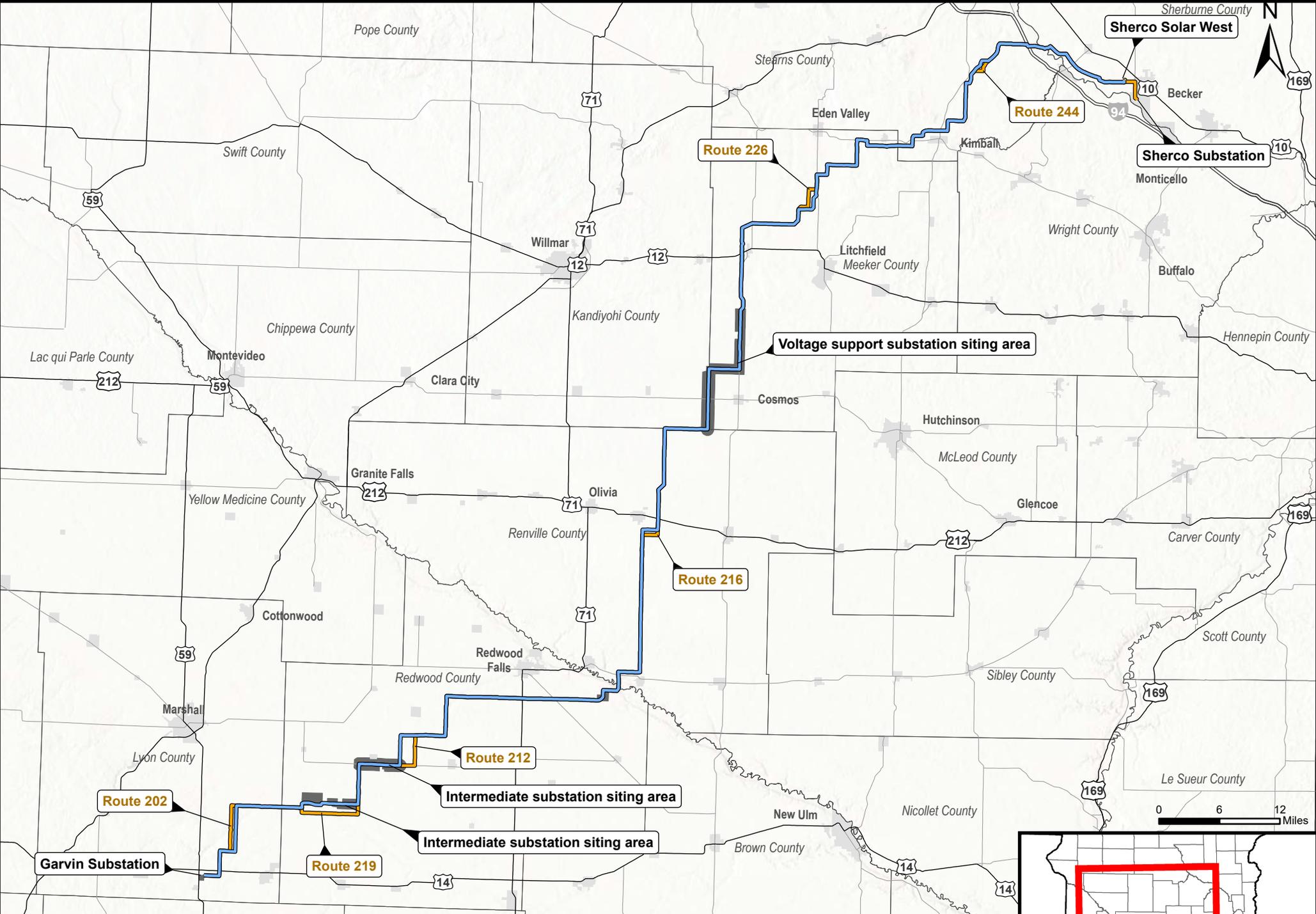
ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			habitat/wildlife/rare species, water resources, and tree removal.			
113	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from the MN DNR (#285) proposing Route Connector 113. This route connector departs the Blue Route at Dellwood Road and traverses east following the curve of the road. It turns south at County Road 7, continues east at 170th Street, and continues south at 33rd Avenue. From there, it turns east three quarters through T122N, R28W, S23. It turns southeast three quarters of the way through the section until it connects to the Purple Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	Oppose	Concern regarding increased impact to agricultural lands that use center pivot irrigation. Increase impacts to residences and lack of available right-of-way due to residences on both sides of the road. Also, not applicable to Applicant's Preferred Route.
114	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from the MN DNR (#285) proposing Route Connector 114. This route connector departs the Blue Route a quarter of the way through T122N, R28W, S20 and traverses east. It turns northeast a quarter of the way through the section, continues north a third of the way through the section, turns east three quarters of the way through the section, and continues northeast two thirds of the way through the section. From there, the route connector traverses north just above the southern border of T122N, R28W, S16, turns east at Dellwood Road following the curve of the road, and continues south at County Road 7. It turns east at 170th Street, continues south at 33rd Avenue, continues east at 165th Street, then turns south at 23rd Avenue until it connects to the Purple Route. The DNR noted potential	DNR	Oppose	Concern regarding increased impact to agricultural lands that use center pivot irrigation. Also, not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			impacts on habitat/wildlife/rare species, water resources, and tree removal.			
115	Route Connector	Connects Blue and Purple Routes	EERA received a scoping comment from the MN DNR (#285) proposing Route Connector 115. This route connector departs the Blue Route a quarter of the way through T122N, R28W, S20 and traverses east. It turns northeast a quarter of the way through the section, continues north a third of the way through the section, turns east three quarters of the way through the section, and continues northeast two thirds of the way through the section. From there, the route connector traverses north just above the southern border of T122N, R28W, S16, turns east at Dellwood Road following the curve of the road, and continues south at County Road 7. It turns east at 170th Street, continues south at 33rd Avenue, and continues east three quarters through T122N, R28W, S23. It turns southeast three quarters of the way through the section until it connects to the Purple Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	Oppose	Concern regarding increased impact to agricultural lands that use center pivot irrigation. Also, not applicable to Applicant's Preferred Route.
244	Route Segment	Blue	EERA received a scoping comment from the MN DNR (#285) proposing Route Segment 244. This route segment departs the Blue Route at the southern border of T123N, R28W, S32 and traverses east. It turns north at almost halfway through T123N, R28W, S33, continues northeast three quarters through the section, continues north at two thirds through the section, and turns northeast at County Road 142 until it rejoins the Blue Route. The	DNR	Support	Applicant incorporated this route alternative into its Preferred Route for the reasons generally discussed in Section VI of this Direct Testimony.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.			
245	Route Segment	Blue	EERA received a scoping comment from Miguel Cabrera and Shannon Cabrera (#167) proposing Route Segment 245. This route segment departs the Blue Route at Franklin Road and traverses north. It turns east at the southern border of T34N, R30W, S5, continues northeast at the southwest corner of T34N, R30W, S4, and continues southeast at County Road 8 SE until it rejoins the Blue Route. The commenters noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, and water resources.	Public	Oppose	Increased route length and residential impact along River Road. Also, in close proximity to Island View Regional Park.
246	Route Segment	Blue	EERA received a scoping comment from Miguel Cabrera and Shannon Cabrera (#167) proposing Route Segment 246. This route segment departs the Blue Route at Franklin Road and traverses north following the curve of the road. It continues north about 1,200 feet at the western border of T123N, R27W, S8 then continues northeast. It turns east at the halfway parallel of T35N, R30W, S32, then continues southeast at River Road SE following the curve of the road until it rejoins the Blue Line. The commenters noted potential impacts on public health/EMF/pacemaker, aesthetic impacts/property values, habitat/wildlife/rare species, and water resources.	Public	Oppose	Increased route length and residential impact with lack of available right-of-way along River Road. <i>See</i> Section V of Direct Testimony for additional discussion.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
247	Route Segment	Purple	EERA received a scoping comment from the MN DNR (#285) proposing Route Segment 247. This route segment departs the Purple Route halfway up the eastern border of T122N, R27W, S17 and traverses east about 1,000 feet. From there, it turns north until it reaches County Road 46, and continues east on County Road 46 until it rejoins the Purple Route. The DNR noted potential impacts on habitat/wildlife/rare species, water resources, and tree removal.	DNR	No position	Not applicable to Applicant's Preferred Route.
AA1	Alternative Alignment	Blue	EERA received a scoping comment from Tom Haak (#6) proposing Alternative Alignment 1. He recommended the alternative alignment to avoid RIM easements on his property.	Public	No position	
AA2	Alternative Alignment	(Neither) Route Connector 104	EERA received a scoping comment from Dennis Neimeyer (#258) proposing Alternative Alignment 2. He recommended the alternative alignment because it is more direct (less distance) and better avoids tree cover on his property which he notes is used for shelterbelt and CRP.	Public	No position	Not applicable to Applicant's Preferred Route.
AA3	Alternative Alignment	Purple	EERA received a scoping comment from Greg Potthoff (#82) proposing Alternative Alignment 3. He recommended the alternative alignment to minimize disruption to farming activities.	Public	No position	Not applicable to Applicant's Preferred Route.
AA4	Alternative Alignment	Purple	EERA received a scoping comment from John Welckle (#34) proposing Alternative Alignment 4. He recommended the alternative alignment to minimize farming activities. He specifically noted the alternative alignment would minimize impediment to large	Public	Oppose	Not a constructible crossing of the existing 345 kV line. Not applicable to Applicant's Preferred Route.

ID	Type	Route Connection	Description	Proposer	Applicant Position	Applicant Summary Comments
			machinery maneuvering to accomplish modern farming.			



Preferred Route Overview Map

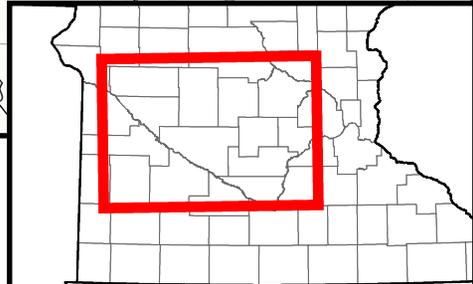
Minnesota Energy Connection



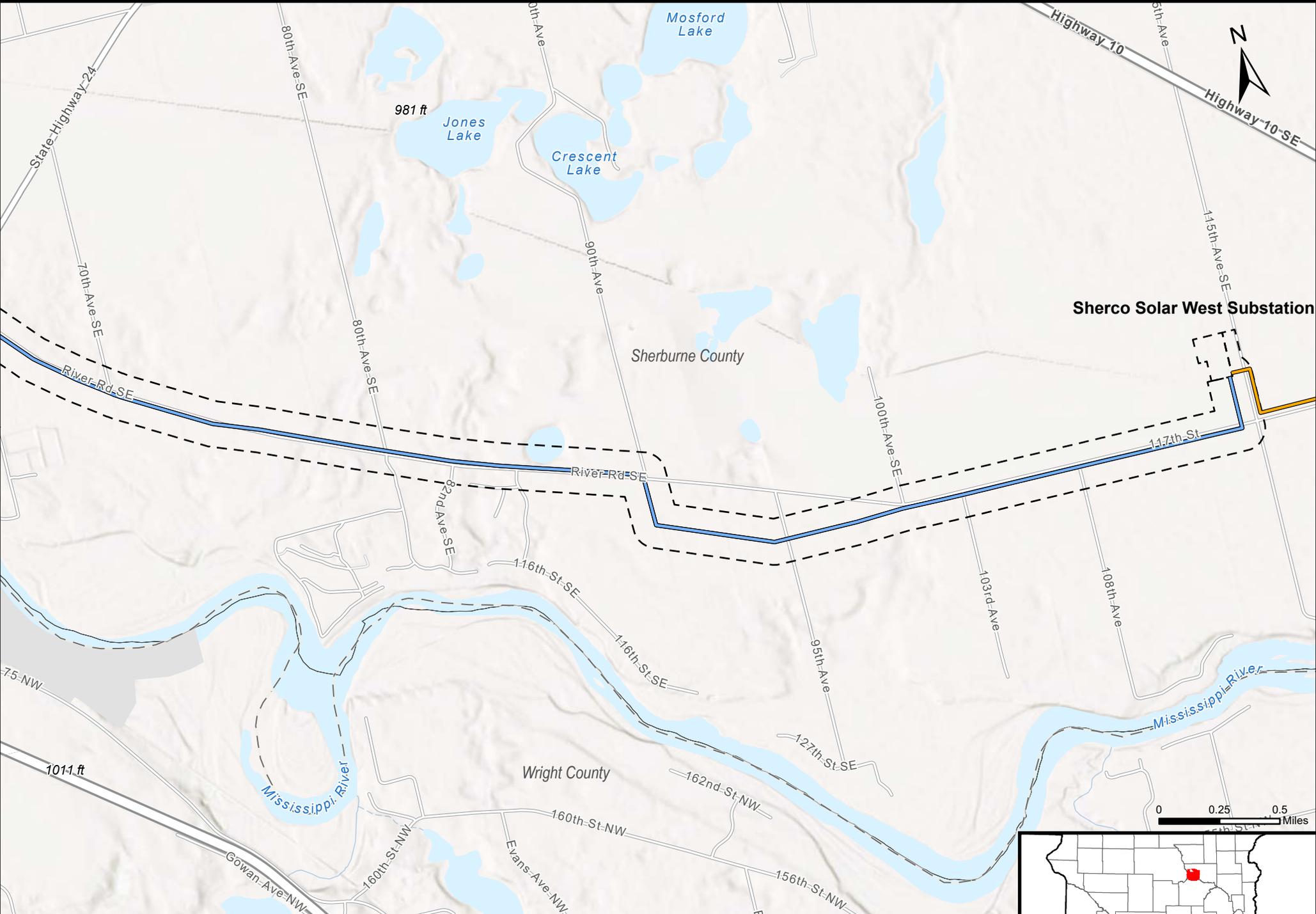
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- Blue Route
- Preferred Route
- Municipality
- County Boundaries
- Route Width

Date: 8/30/2024

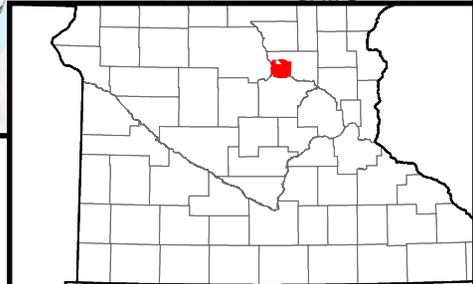


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Preferred Route - Alternates Included
Minnesota Energy Connection

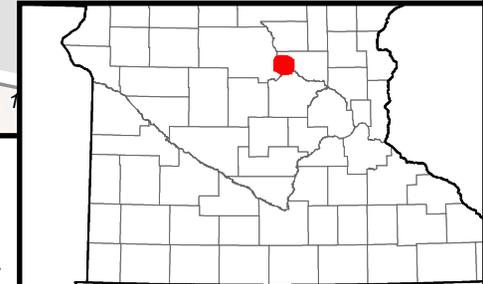
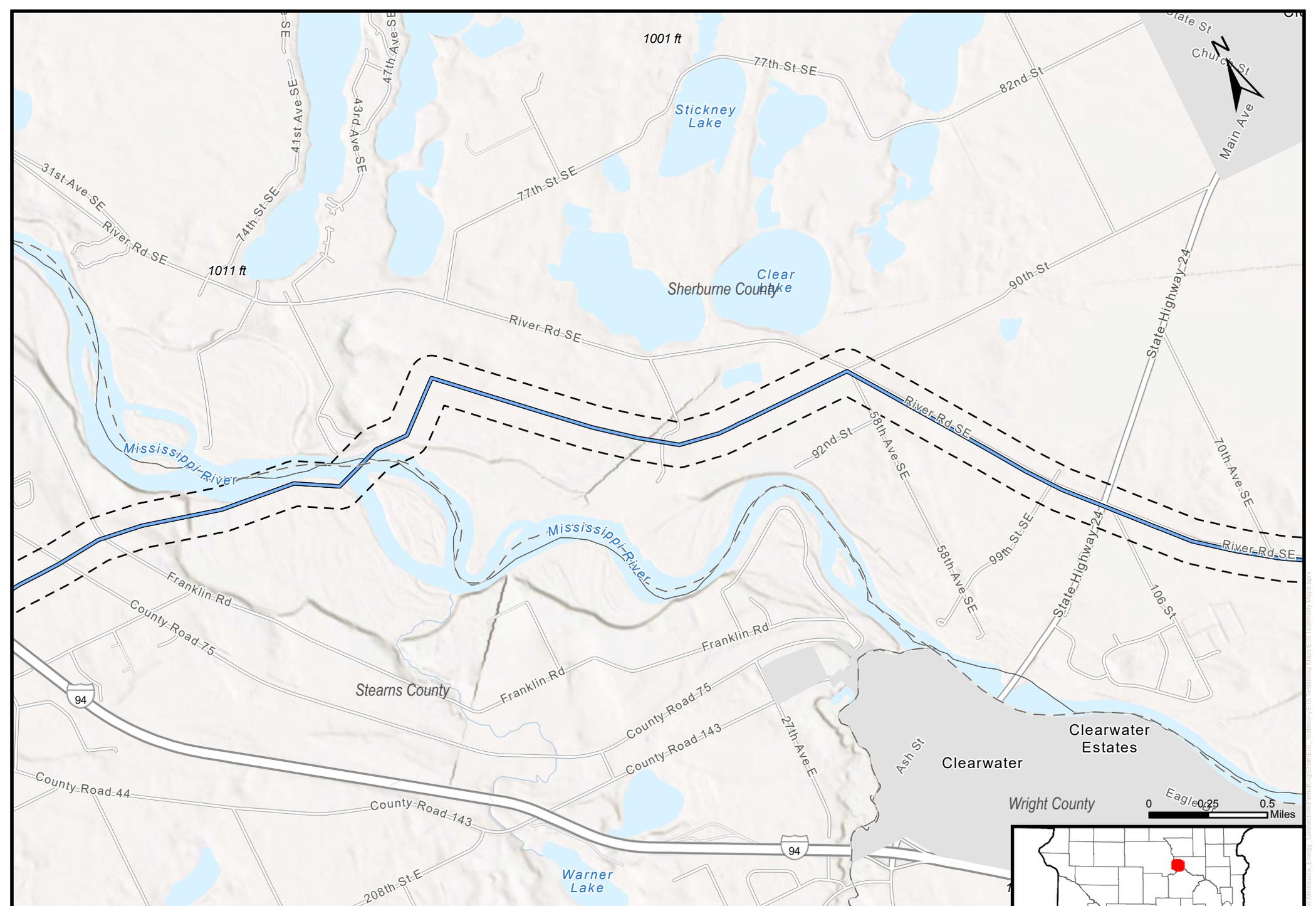
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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Preferred Route - Alternates Included
Minnesota Energy Connection

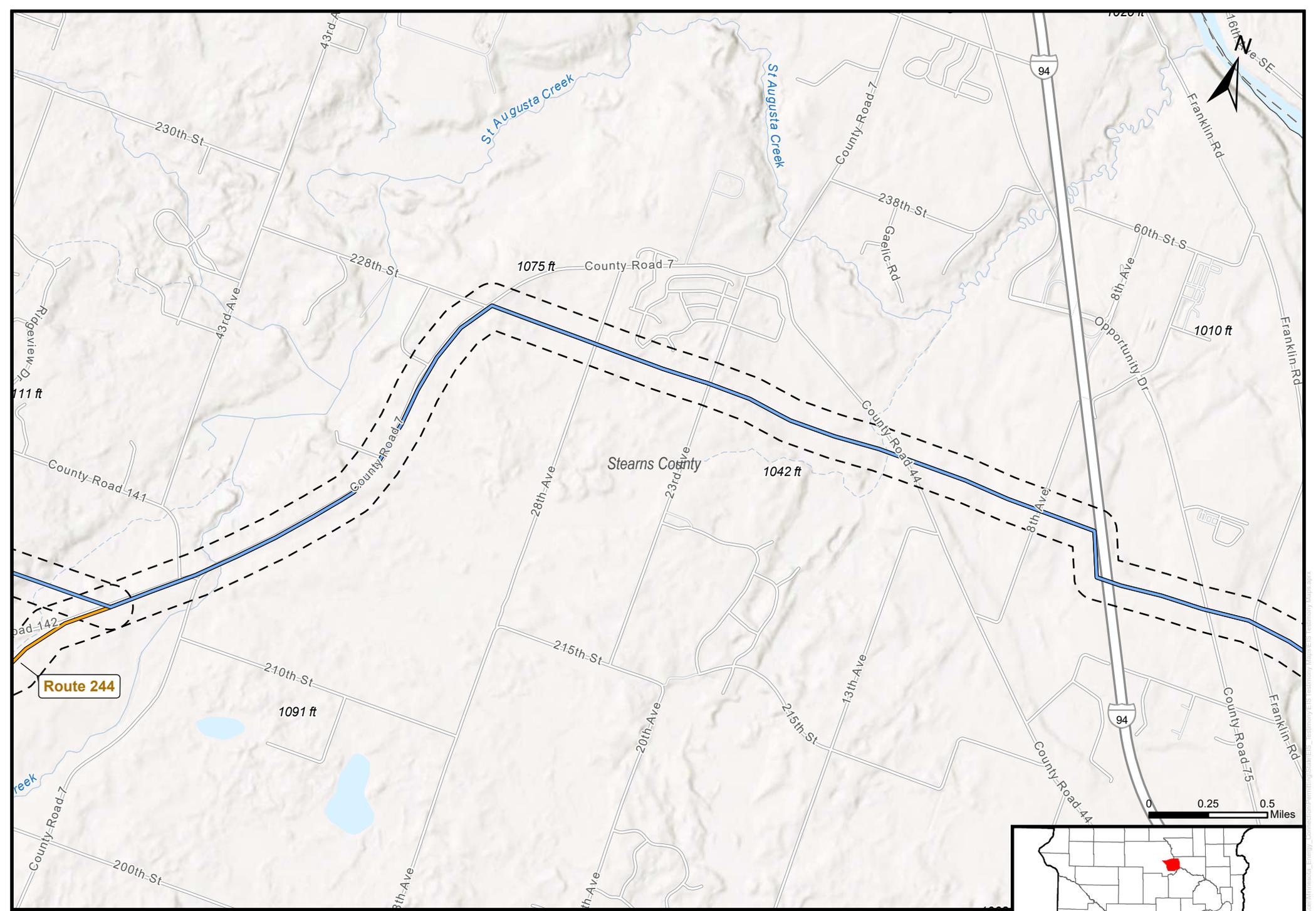
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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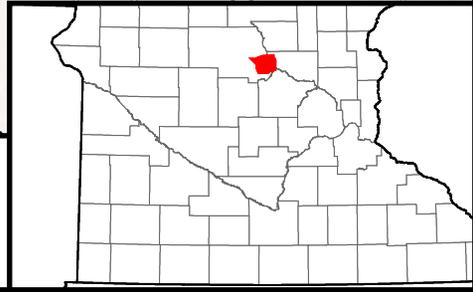
Preferred Route - Alternates Included
Minnesota Energy Connection

-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries

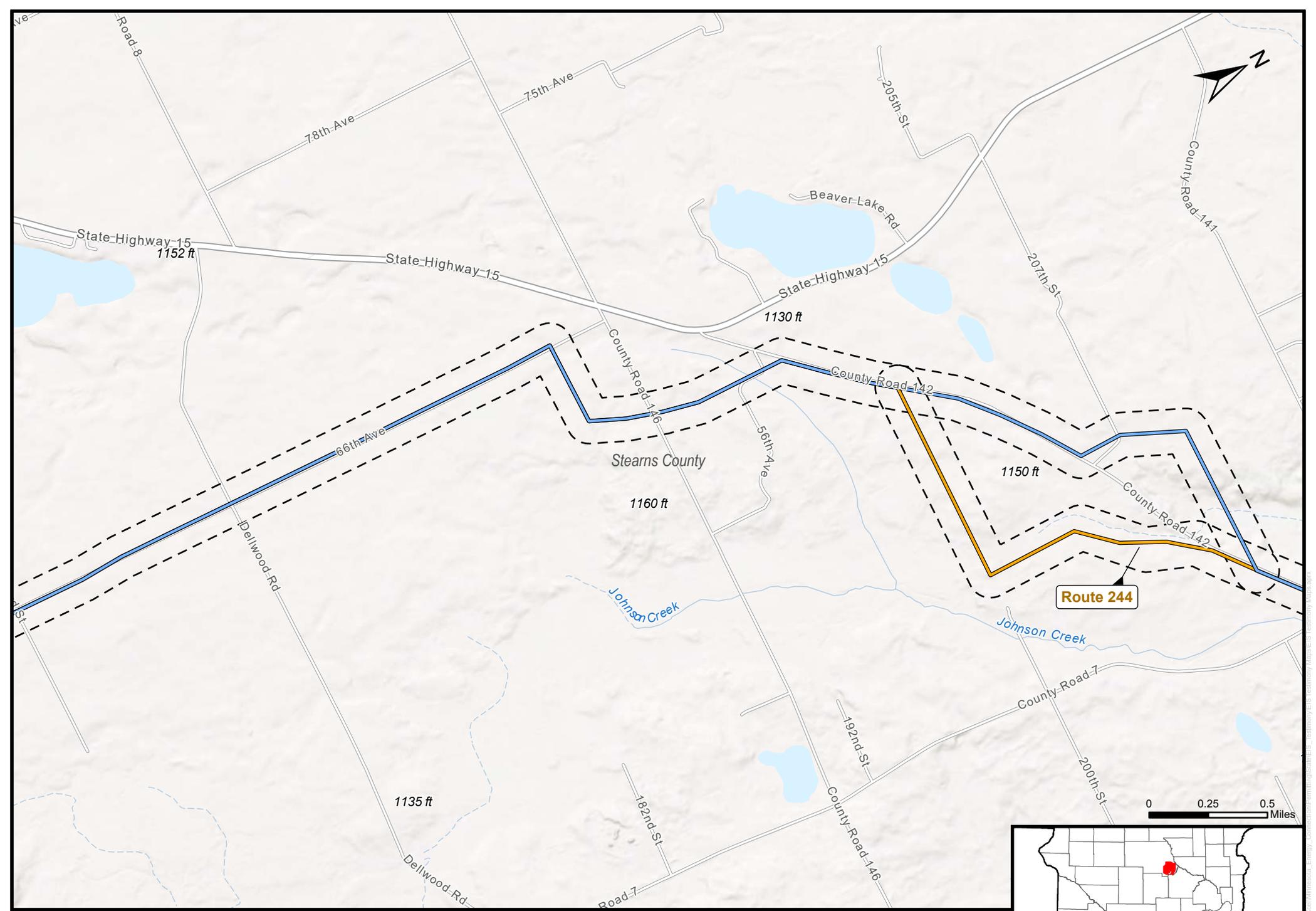


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Preferred Route - Alternates Included

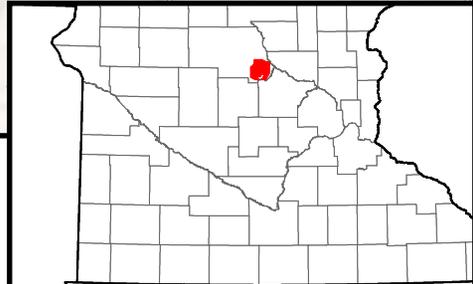
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

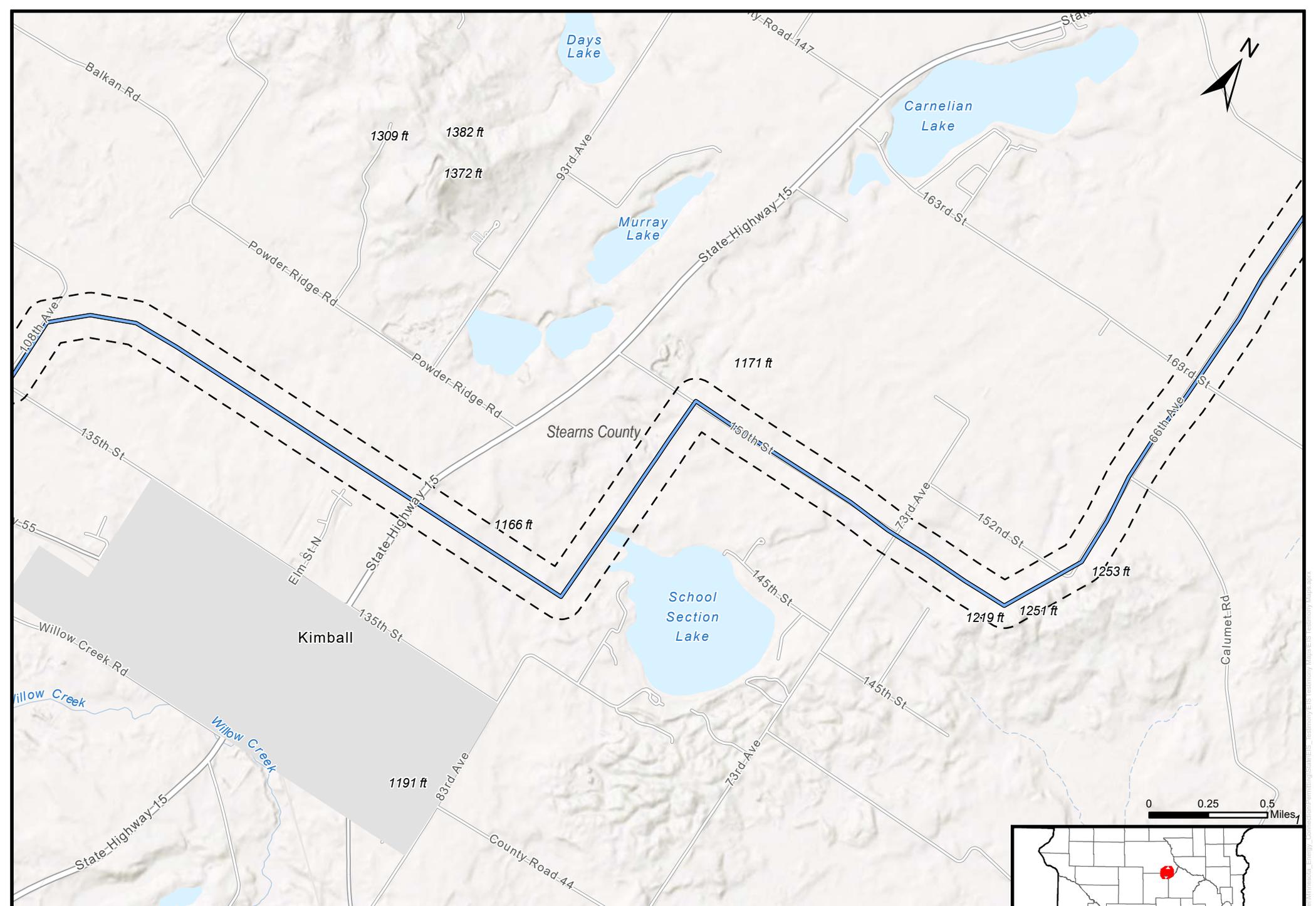


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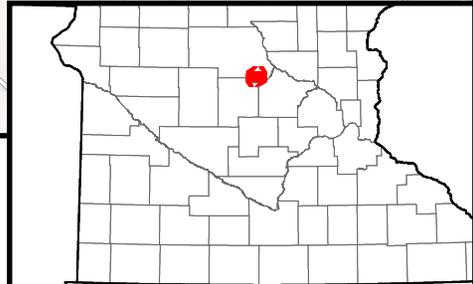
Preferred Route - Alternates Included
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

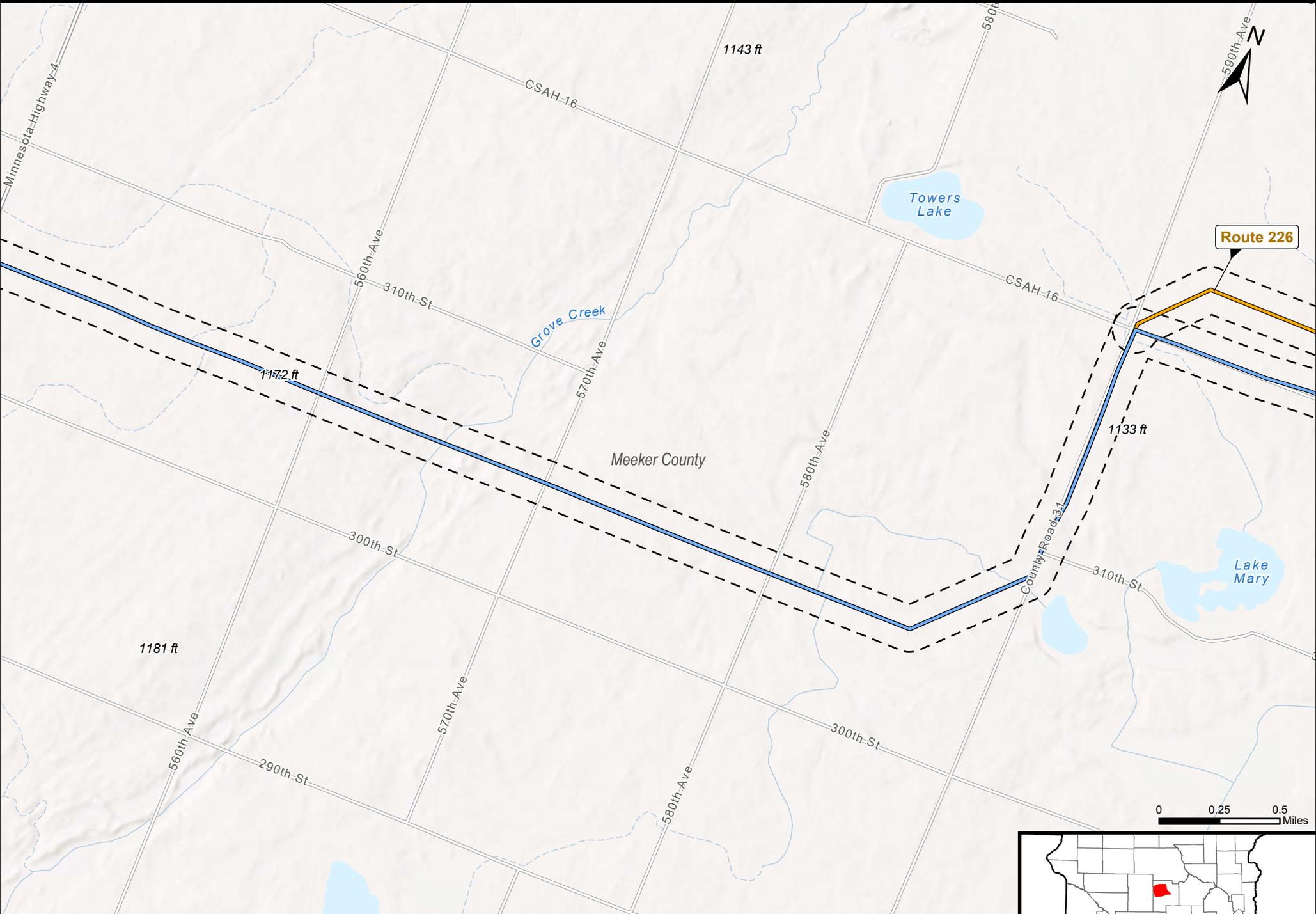


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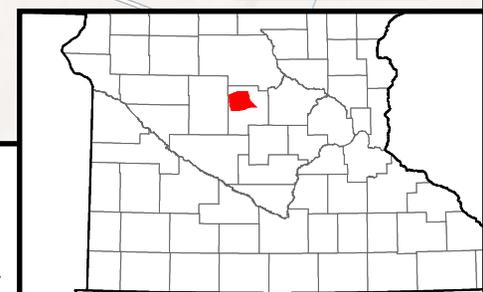


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Preferred Route - Alternates Included
Minnesota Energy Connection

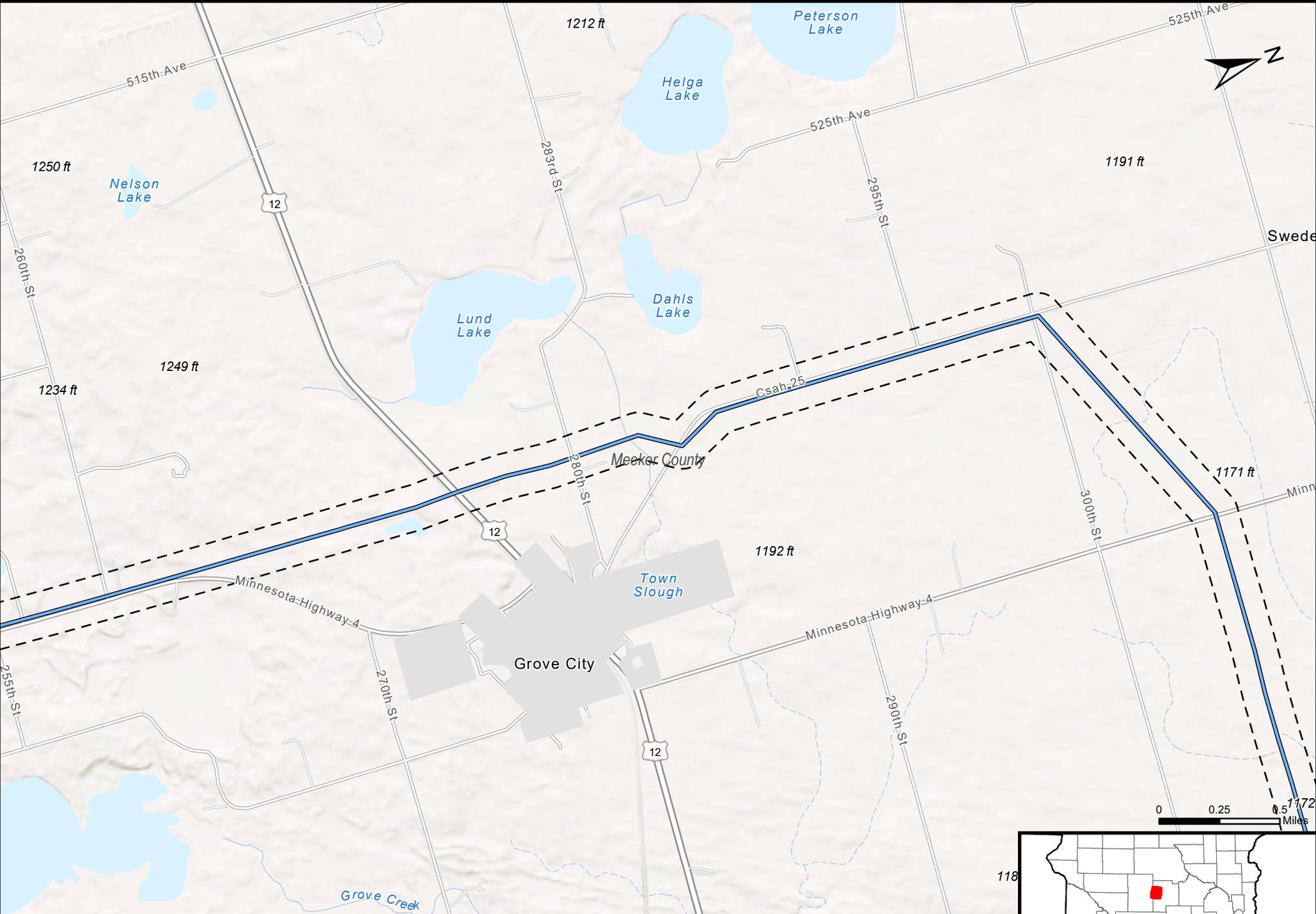
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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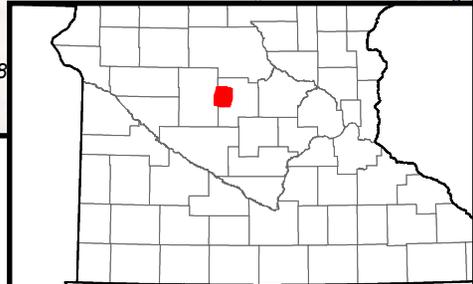
Preferred Route - Alternates Included
 Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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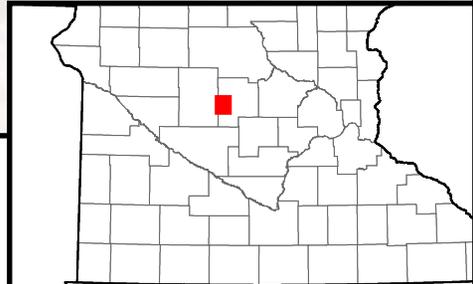
Preferred Route - Alternates Included
 Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

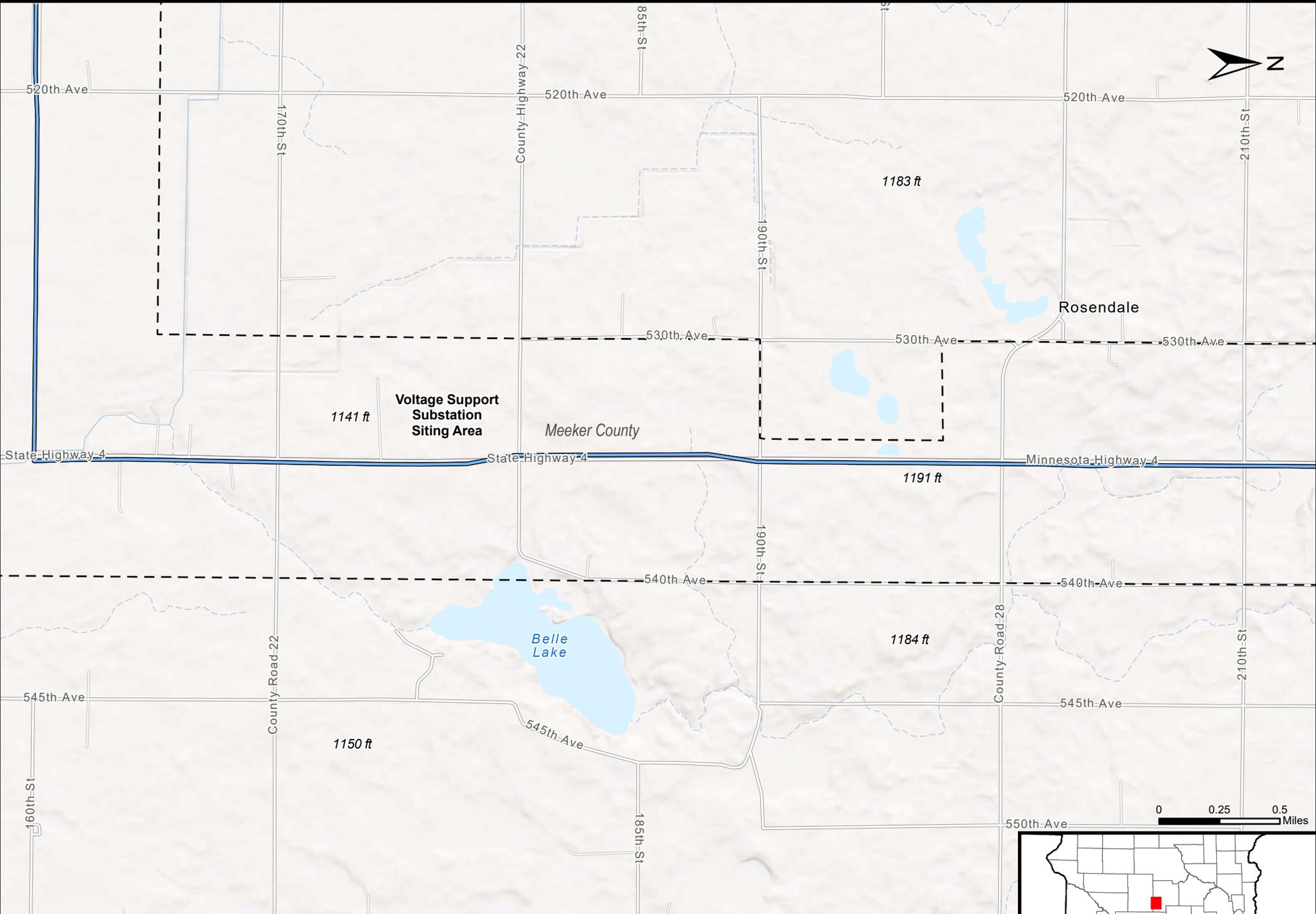


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Preferred Route - Alternates Included

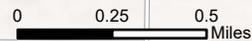
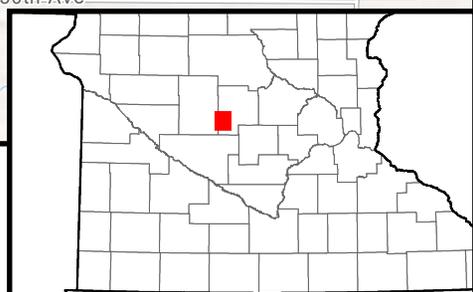
Minnesota Energy Connection

-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries

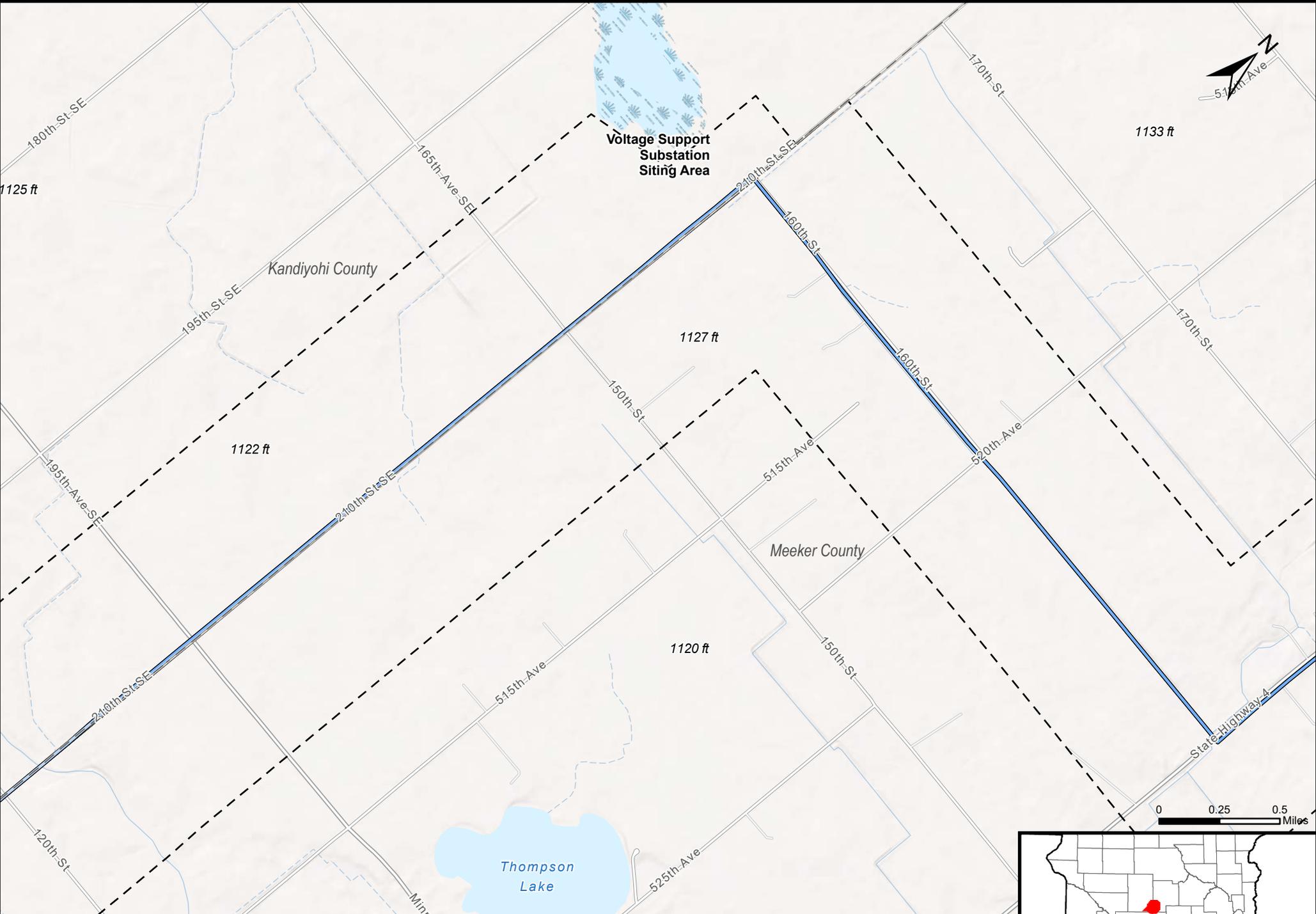


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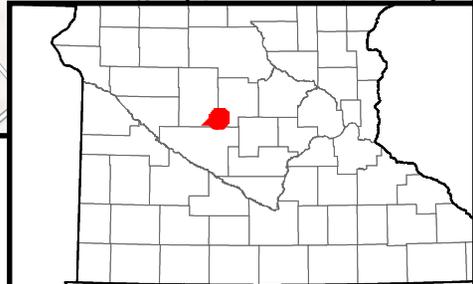
Preferred Route - Alternates Included
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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South Fork Clow River

Kandiyohi County

Meeker County

Renville County

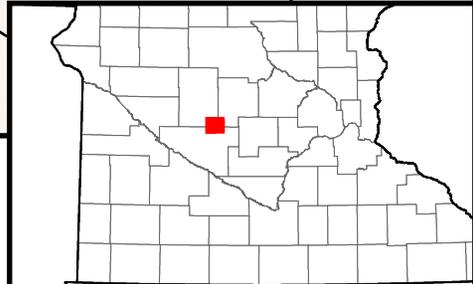
Voltage Support Substation Siting Area

0 0.25 0.5 Miles

Preferred Route - Alternates Included

Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

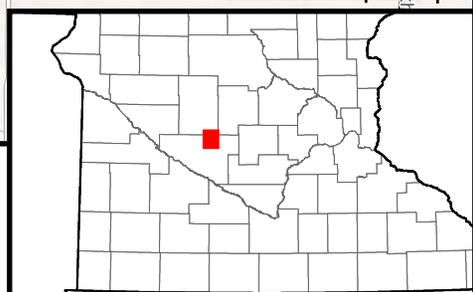
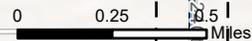
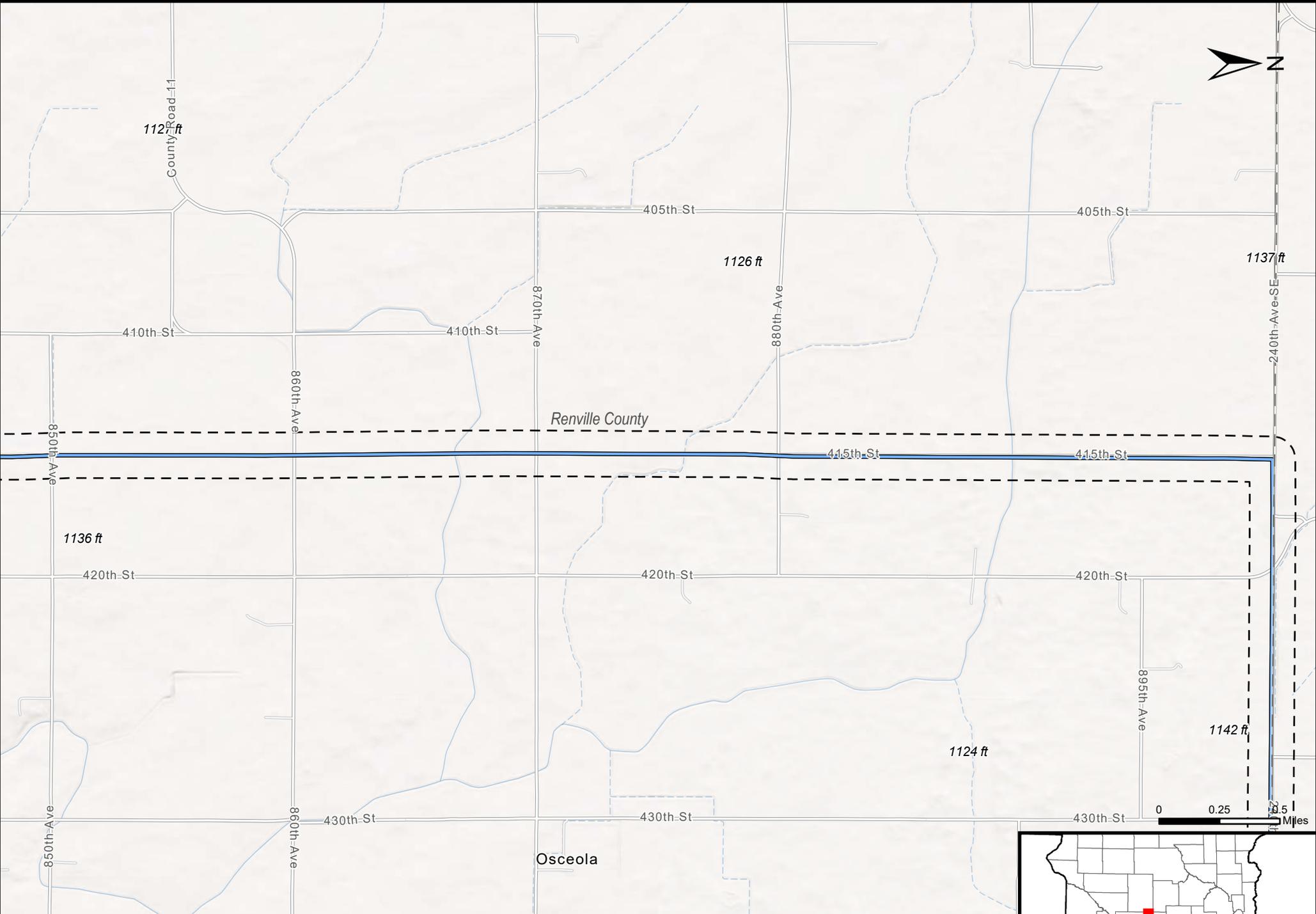


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Preferred Route - Alternates Included

Minnesota Energy Connection

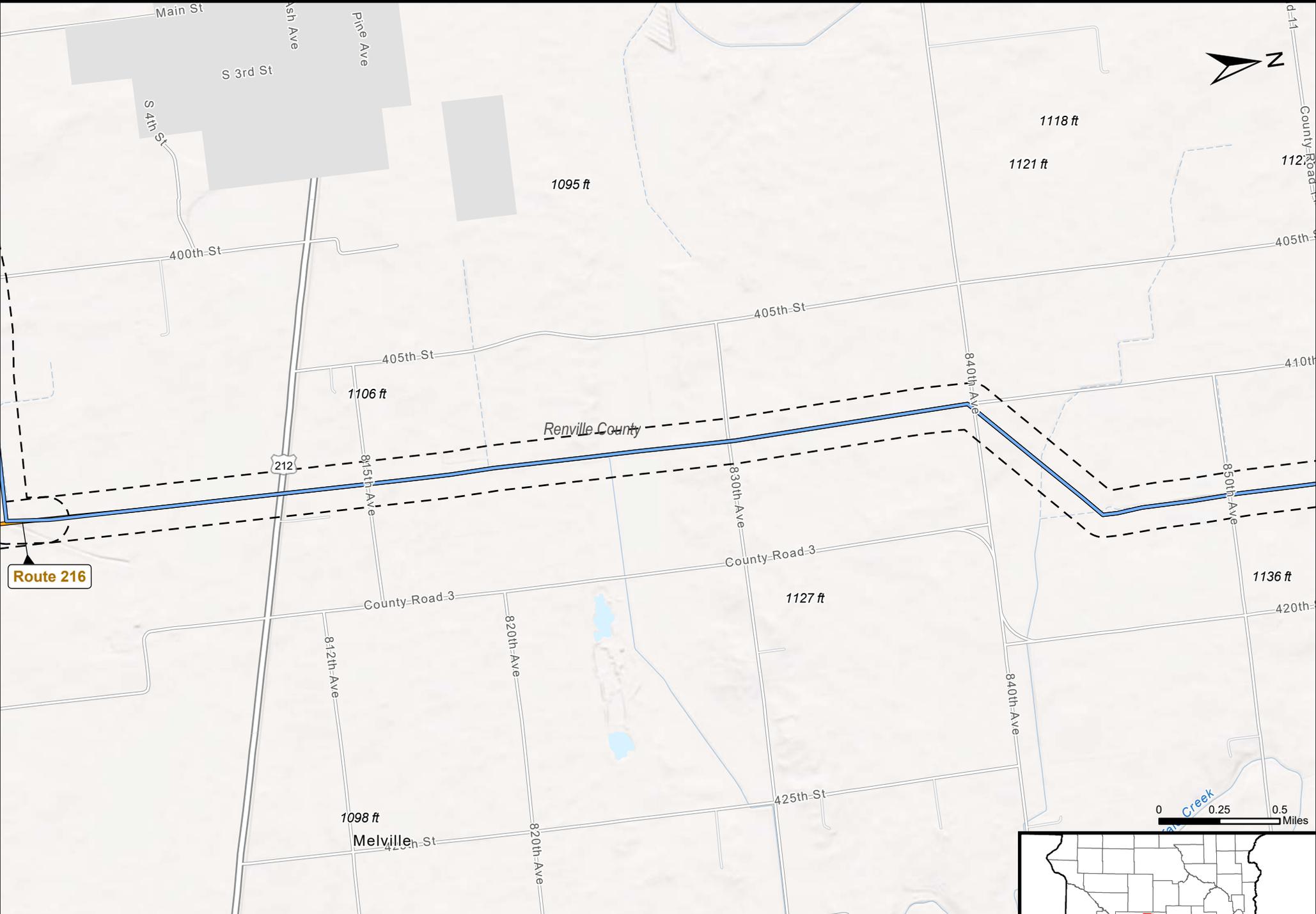
-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries



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

Date: 8/30/2024

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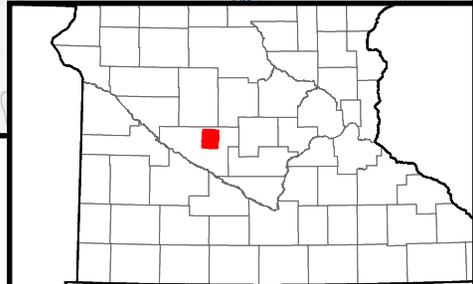
Preferred Route - Alternates Included
Minnesota Energy Connection

-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries

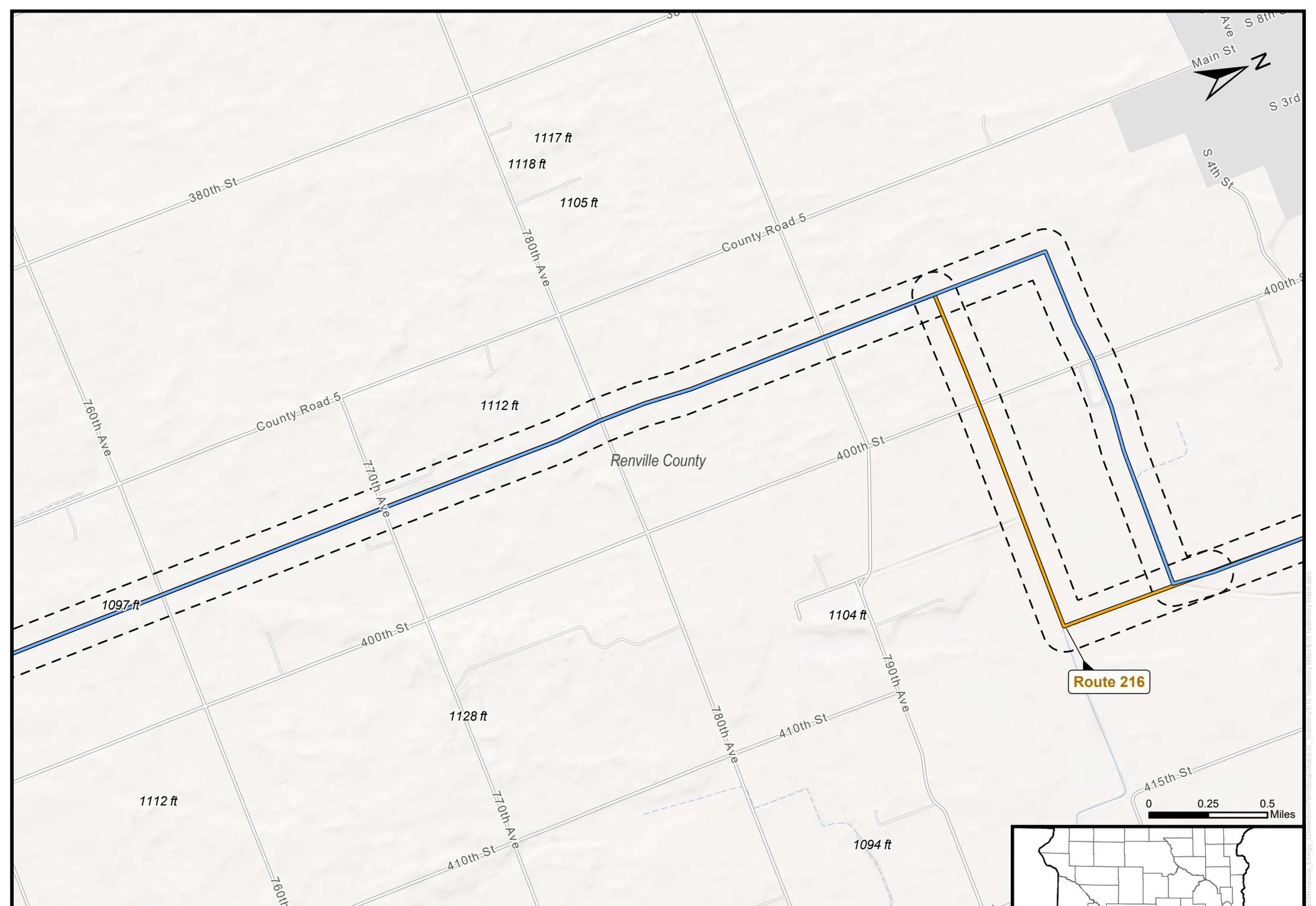


DISCLAIMER: This information is believed to be correct but is subject to change and is not warranted.

Date: 8/30/2024

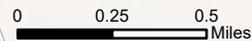
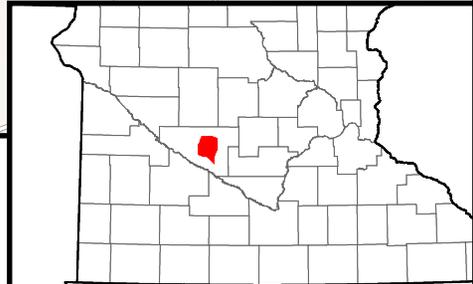


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Preferred Route - Alternates Included
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries



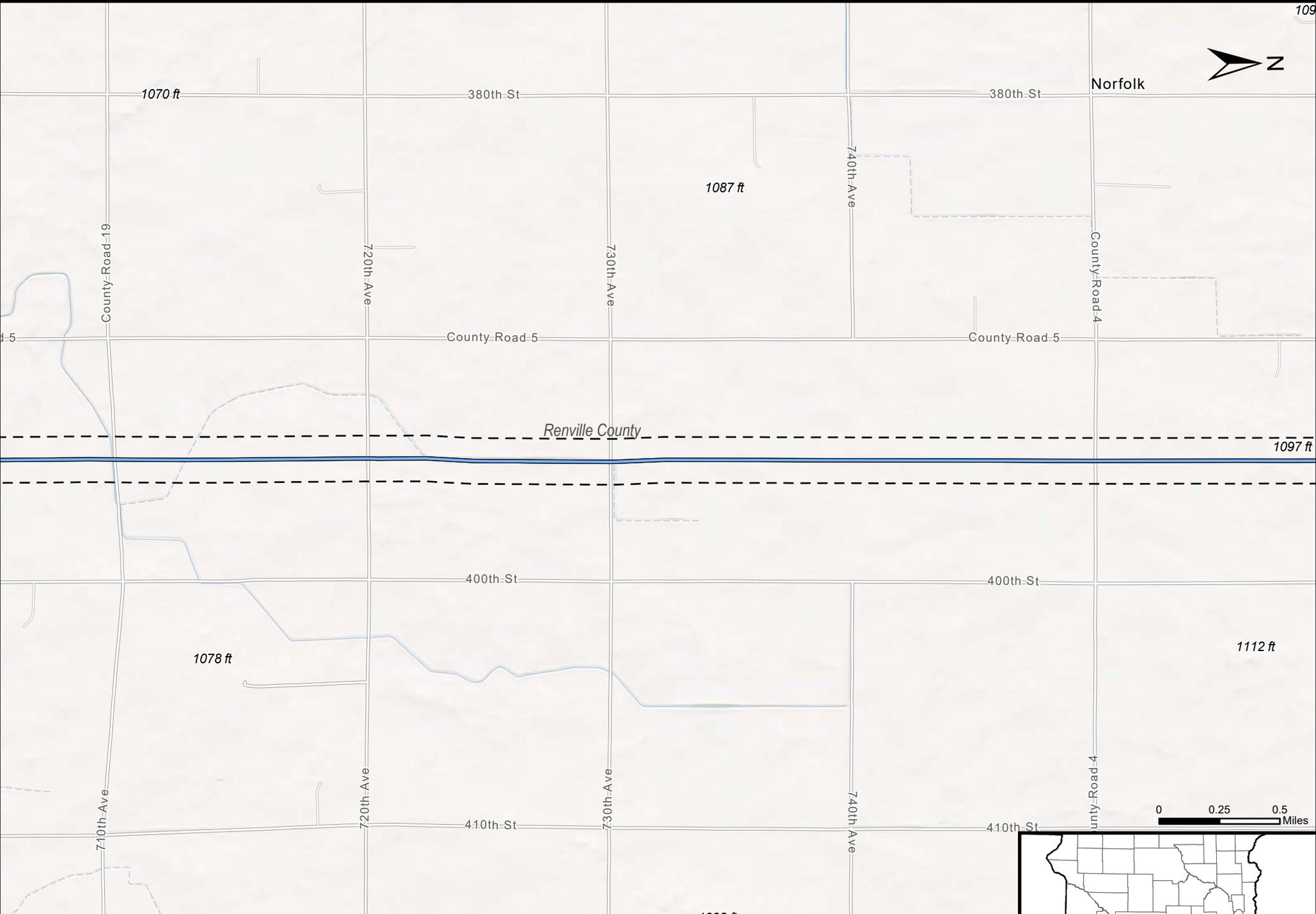
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Date: 8/30/2024

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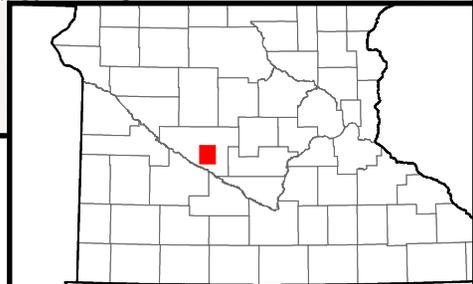


Norfolk



Preferred Route - Alternates Included
 Minnesota Energy Connection

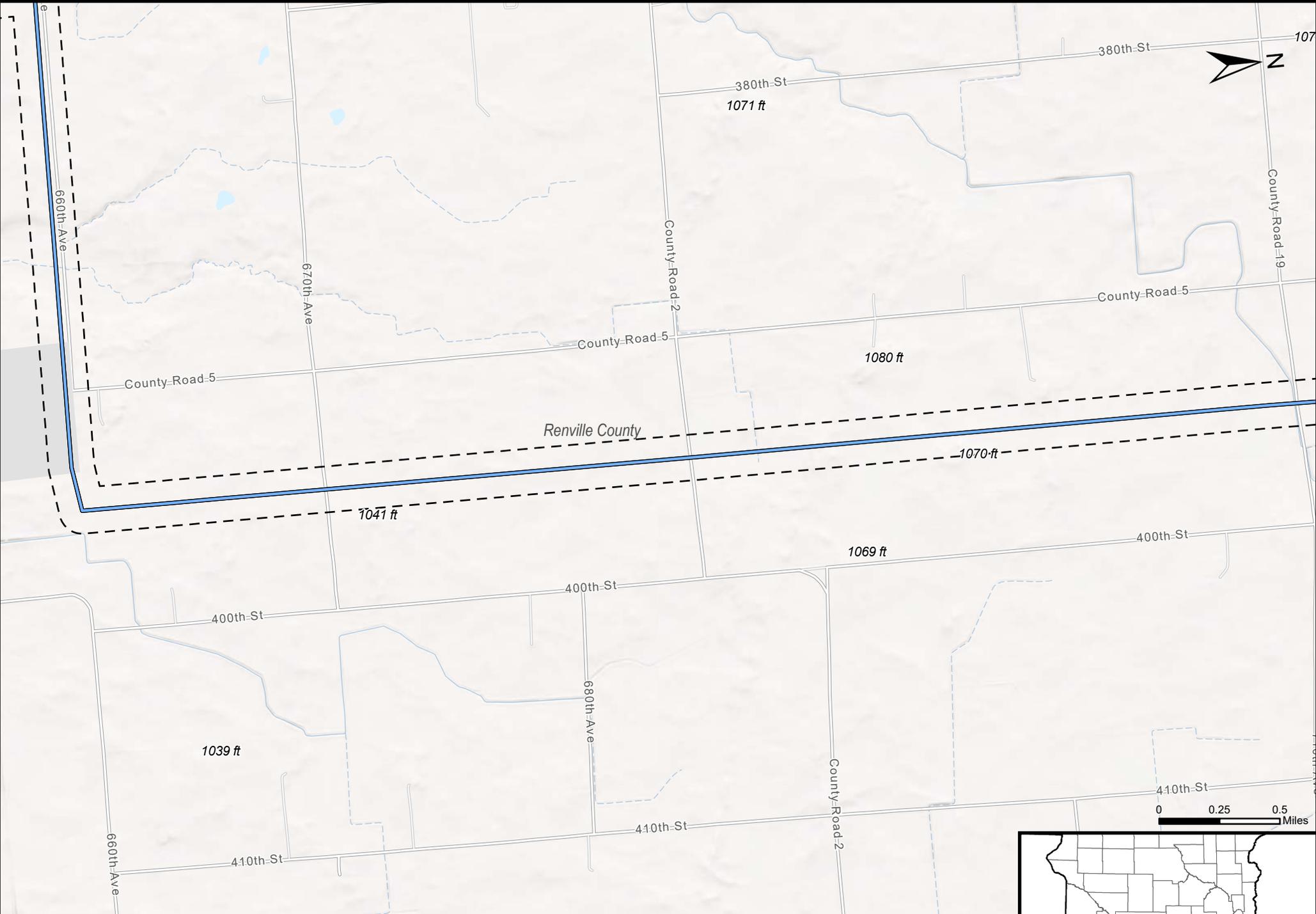
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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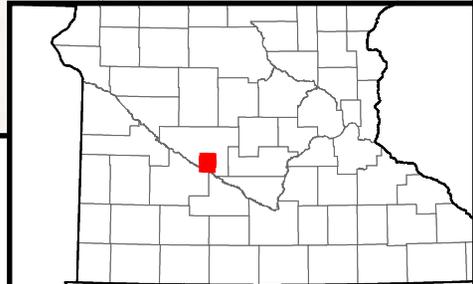
Date: 8/30/2024

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Preferred Route - Alternates Included
Minnesota Energy Connection

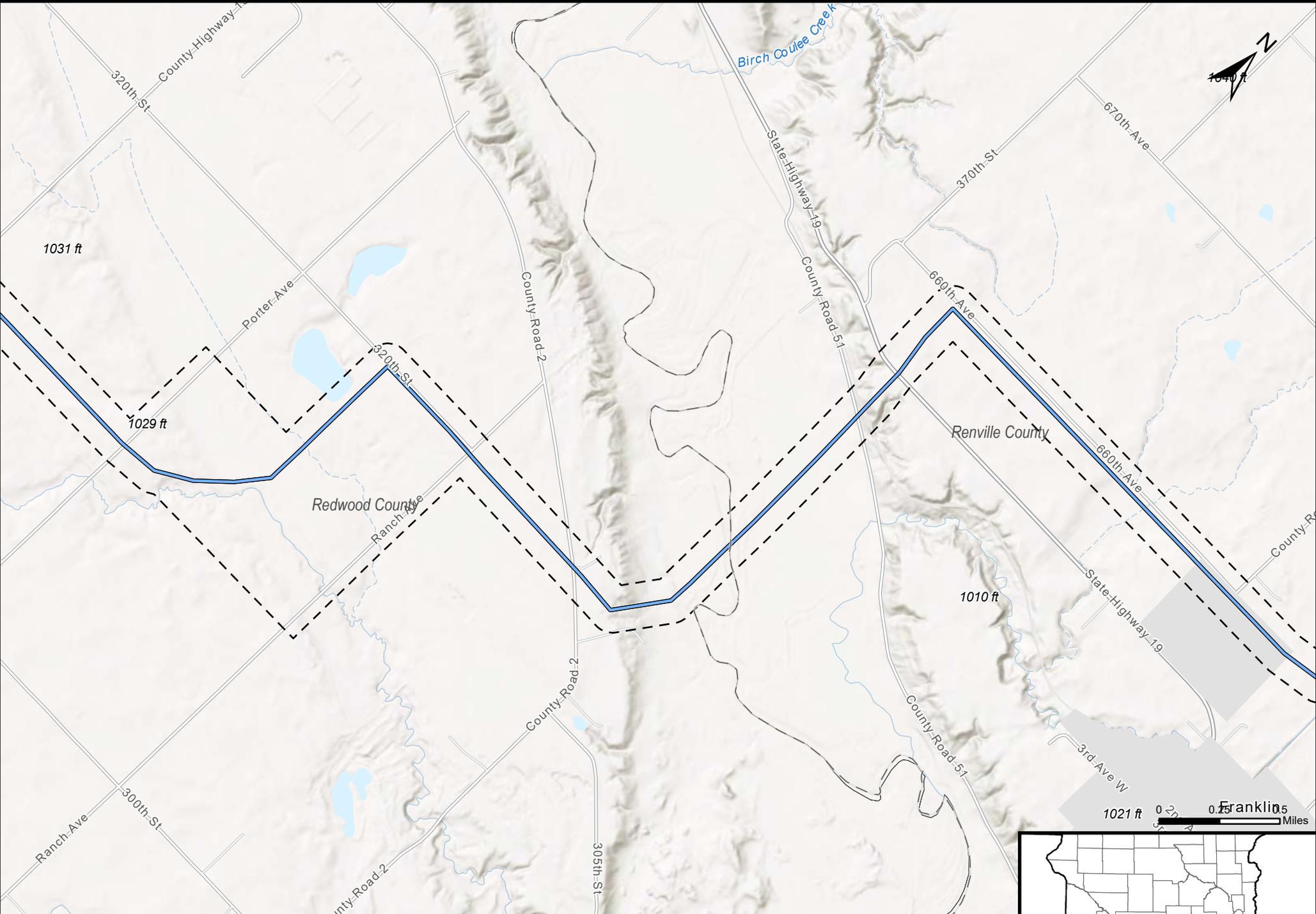
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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Date: 8/30/2024

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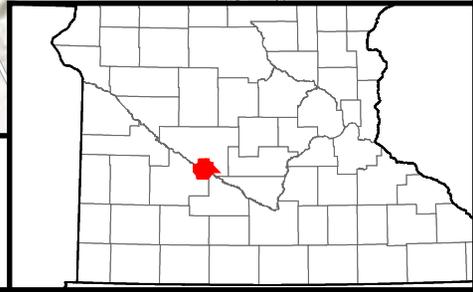
Preferred Route - Alternates Included
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

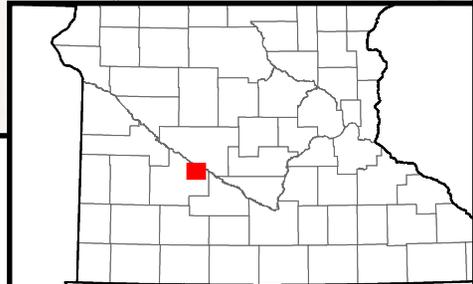
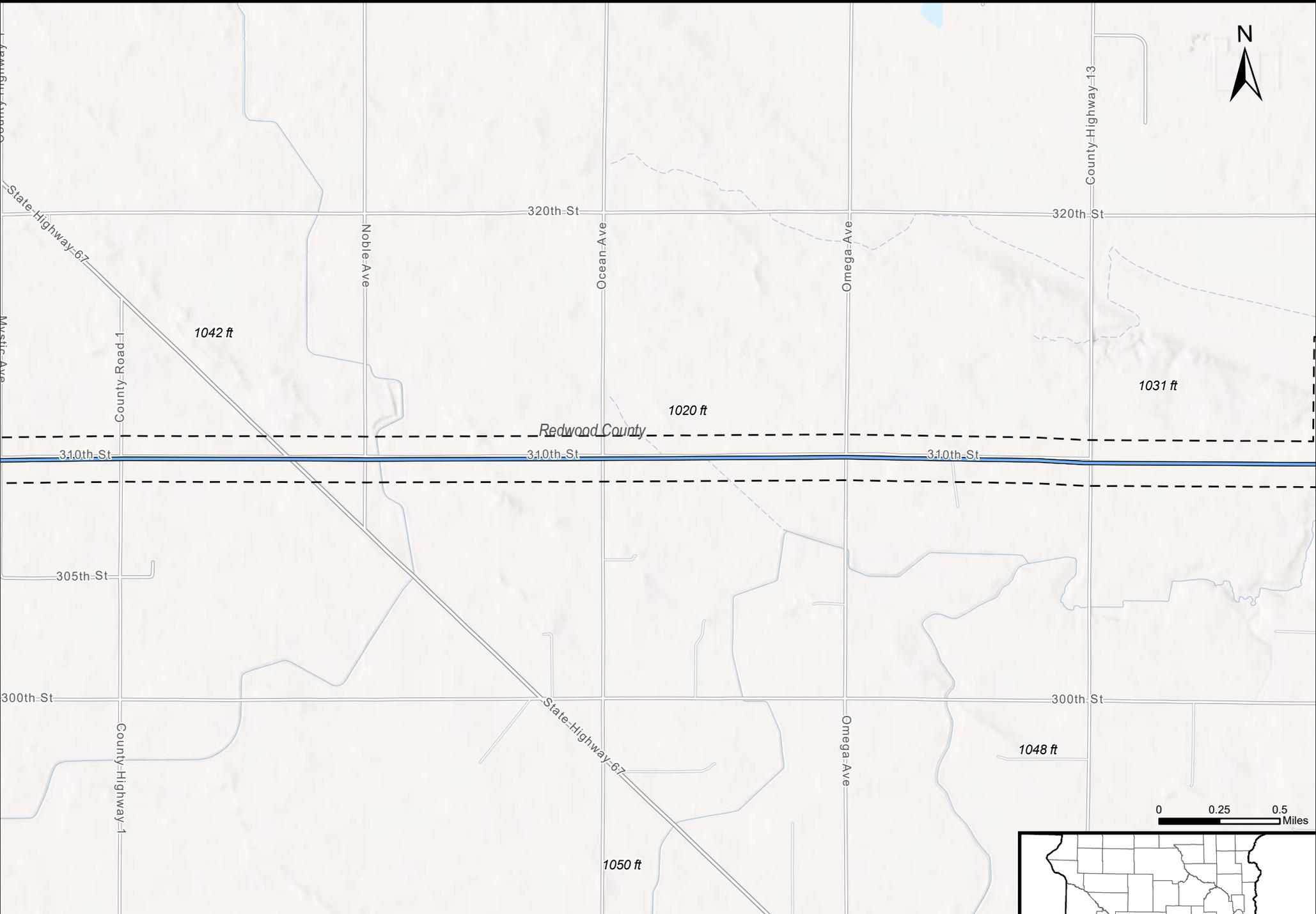


DISCLAIMER: This information is believed to be correct but is subject to change and is not warranted.

Date: 8/30/2024



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Preferred Route - Alternates Included

Minnesota Energy Connection

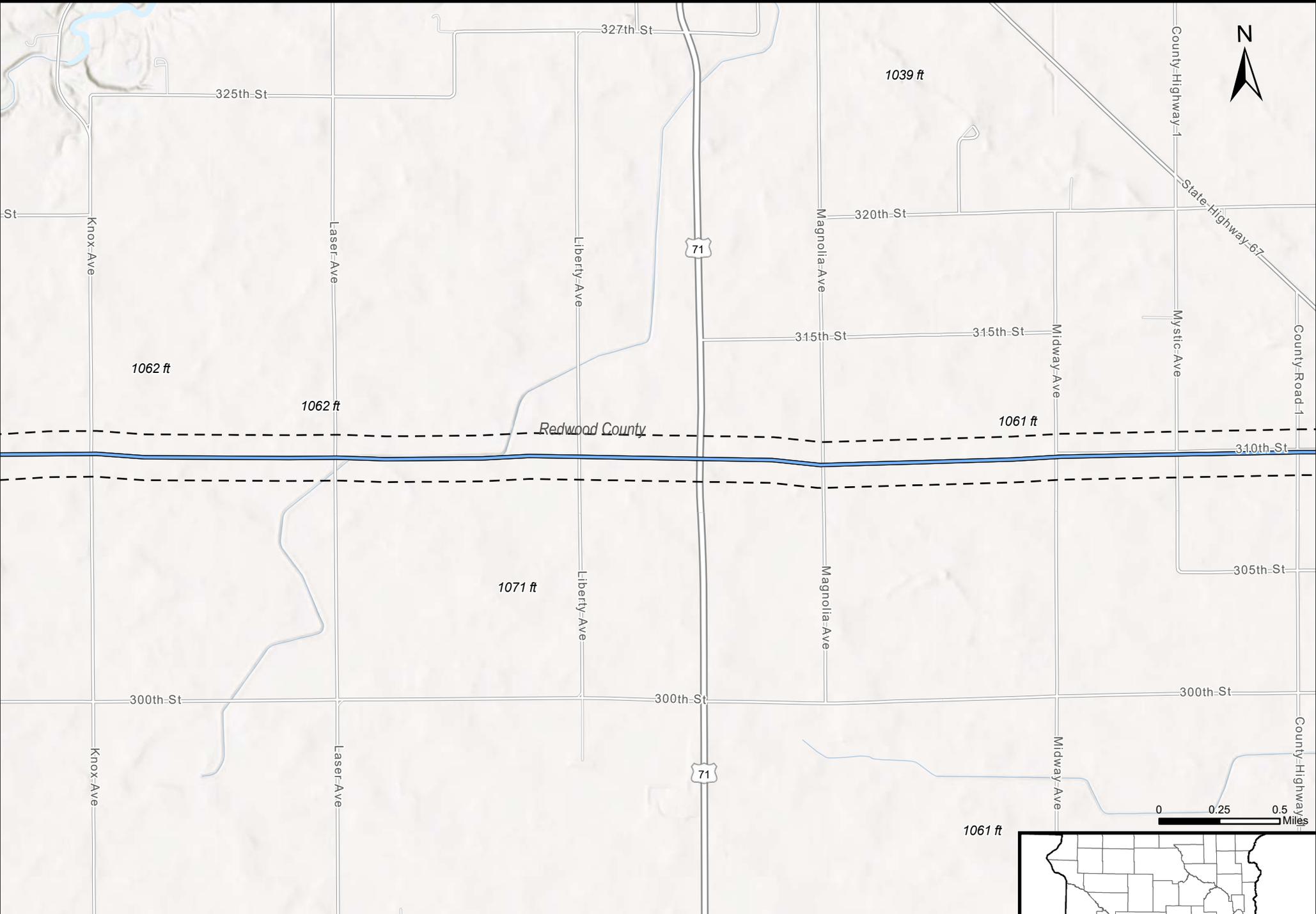
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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Date: 8/30/2024

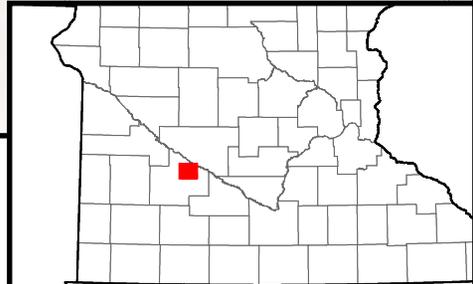
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Preferred Route - Alternates Included

Minnesota Energy Connection

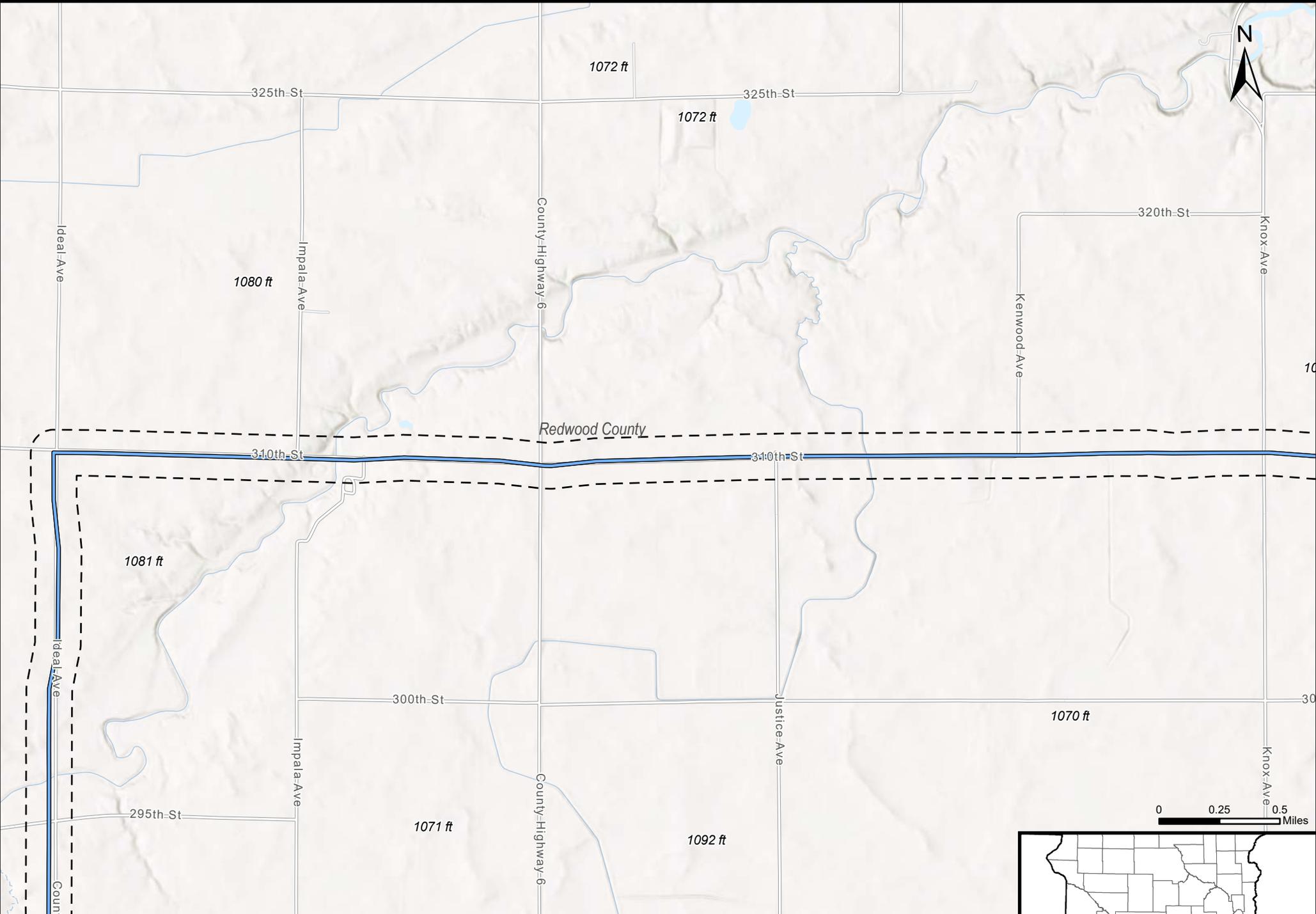
-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries



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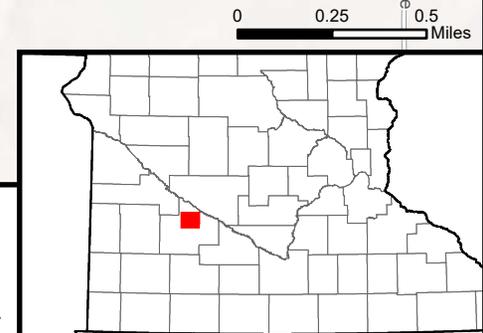
Date: 8/30/2024

Document Path: Z:\GIS\Output\Minnesota_Energy_Connection\Permitting\State\IB_Study\Map7_Maps\IB_Study\Map7_Maps.aprx



Preferred Route - Alternates Included
Minnesota Energy Connection

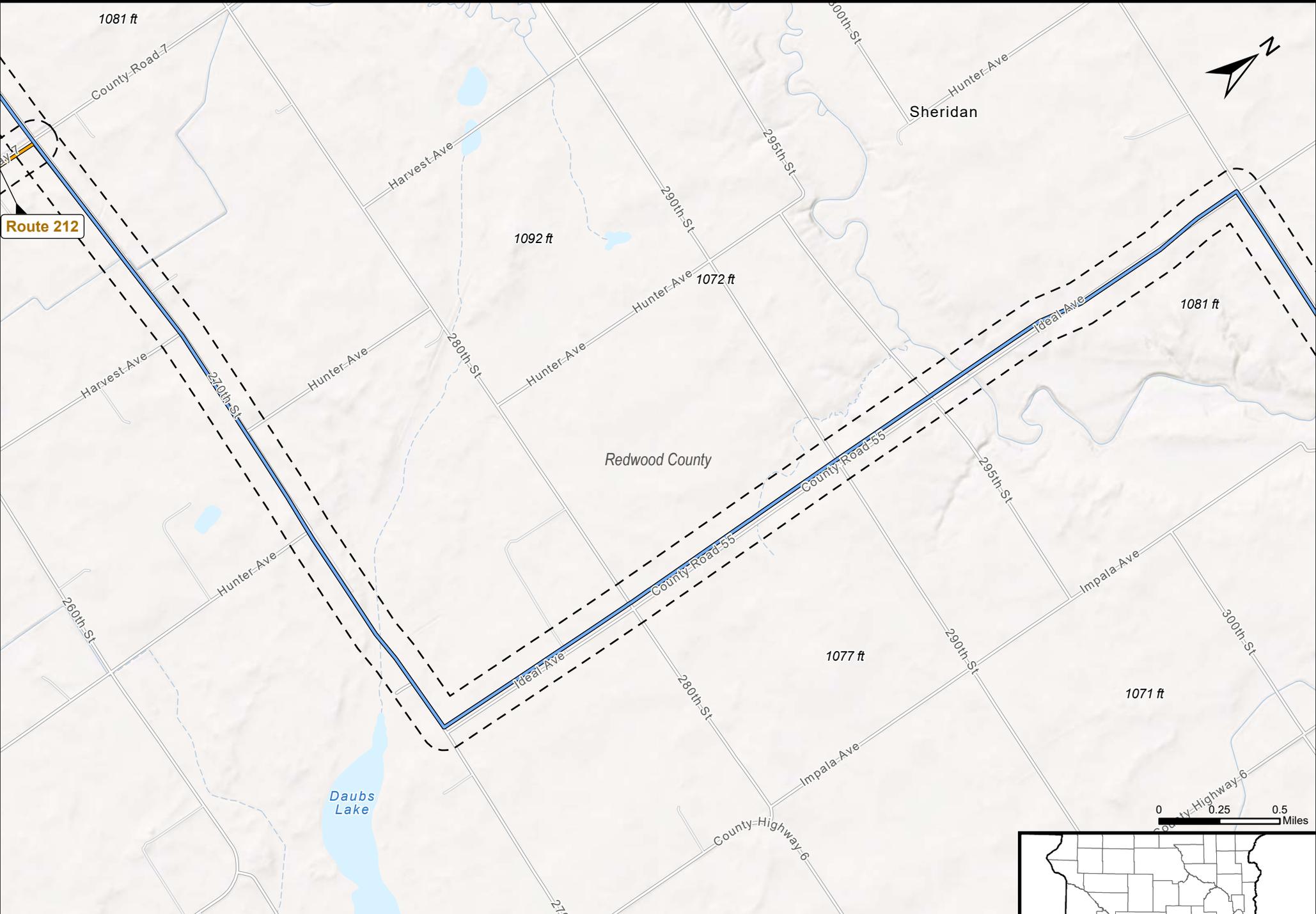
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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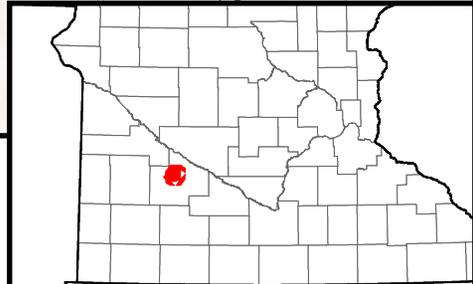
Date: 8/30/2024

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Preferred Route - Alternates Included
Minnesota Energy Connection

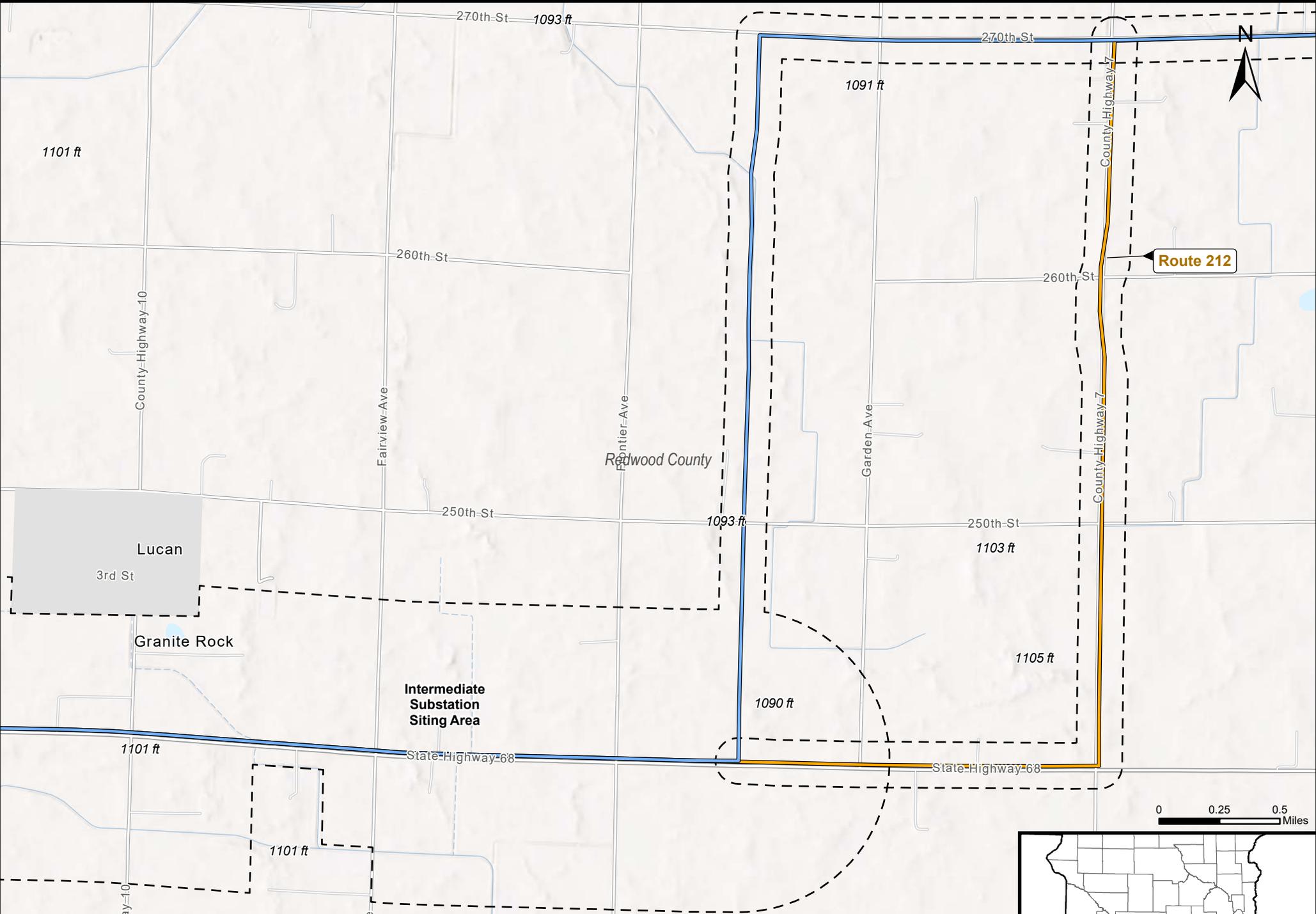
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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

Date: 8/30/2024

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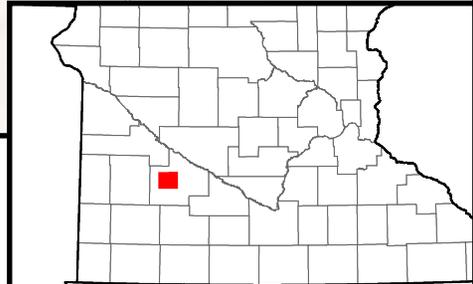
Preferred Route - Alternates Included
 Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

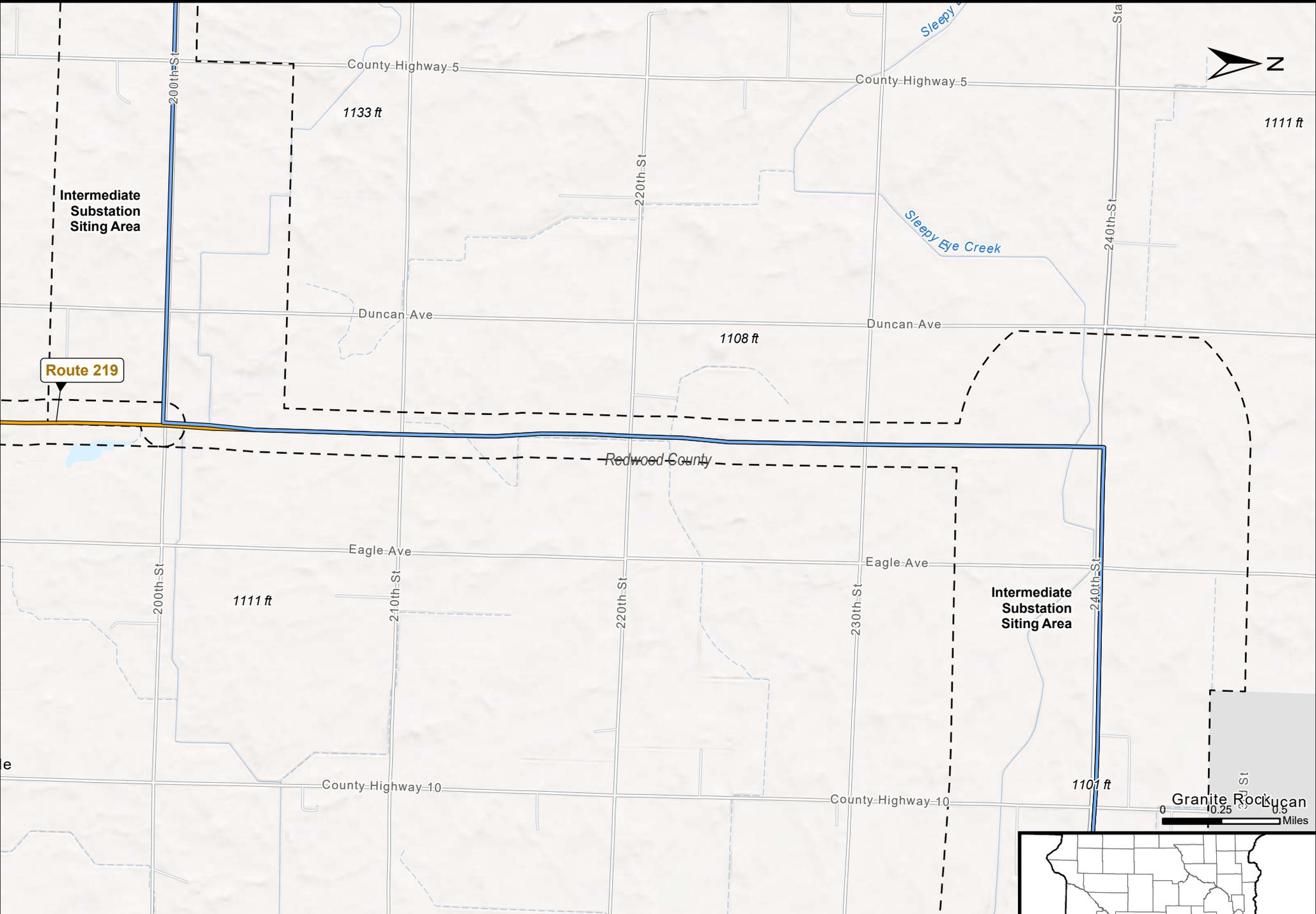


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Date: 8/30/2024



Document Path: Z:\GIS\04_ArcGIS\Minnesota_Energy_Connection\Permitting\State\ISIS_Testimony\Map\Map15_Testimony Maps.aprx



Route 219

Intermediate Substation Siting Area

Intermediate Substation Siting Area

Redwood County

Granite Rock Canyon
0 0.25 0.5 Miles

Preferred Route - Alternates Included

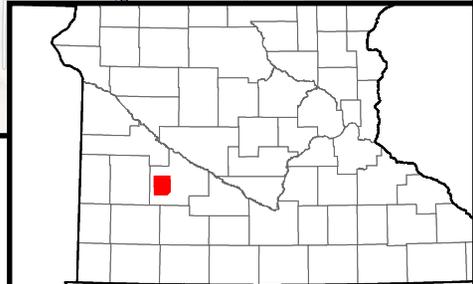
Minnesota Energy Connection

-  Blue Route
-  Preferred Route
-  Route Width
-  County Boundaries

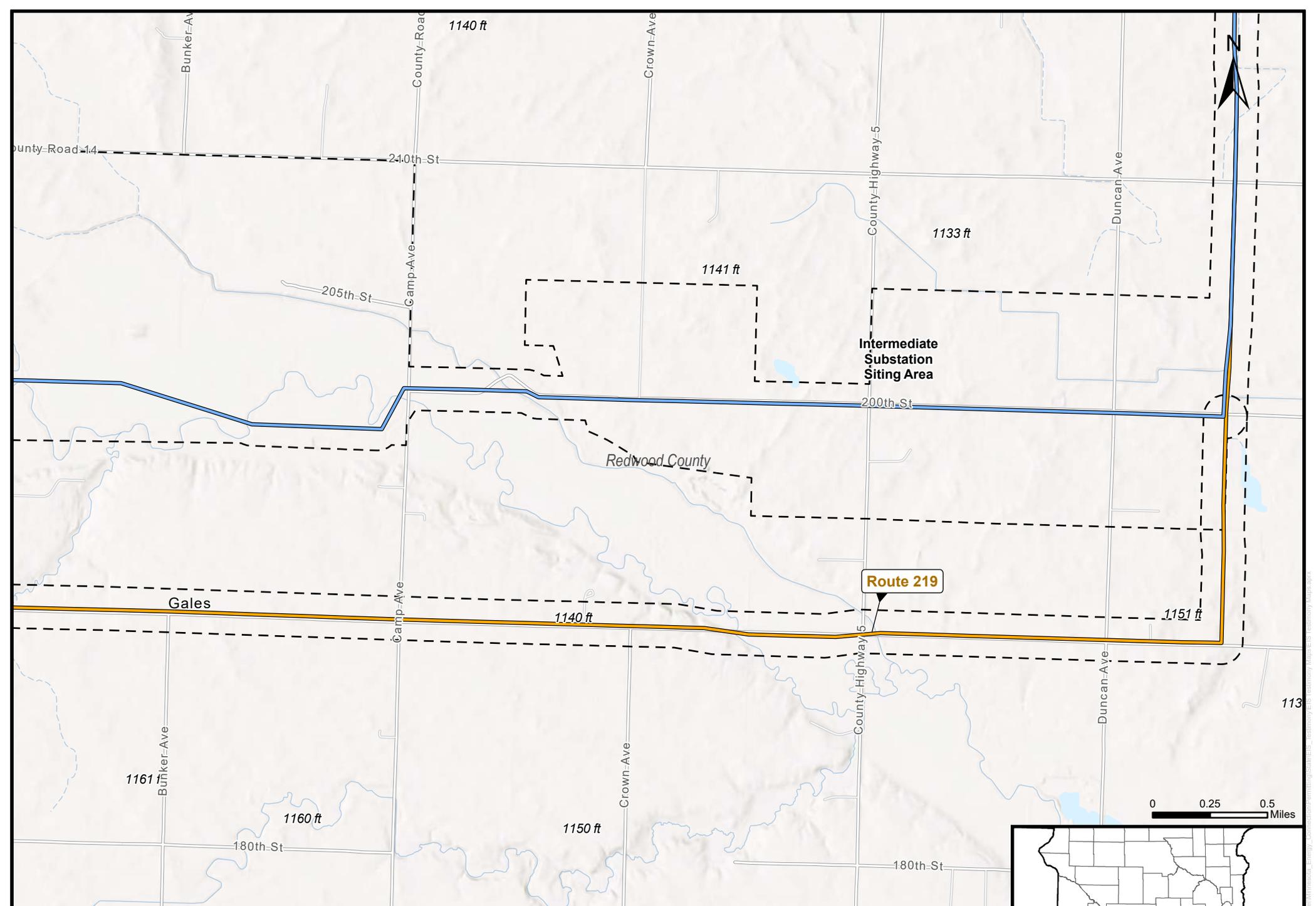


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Date: 8/30/2024

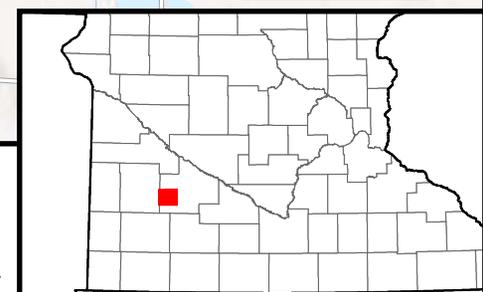


Document Path: Z:\GIS\MapDocs\Minnesota_Energy_Connection\Permitting\State\GIS_Testimony\GIS Testimony Maps\IB Testimony Maps.aprx



Preferred Route - Alternates Included
Minnesota Energy Connection

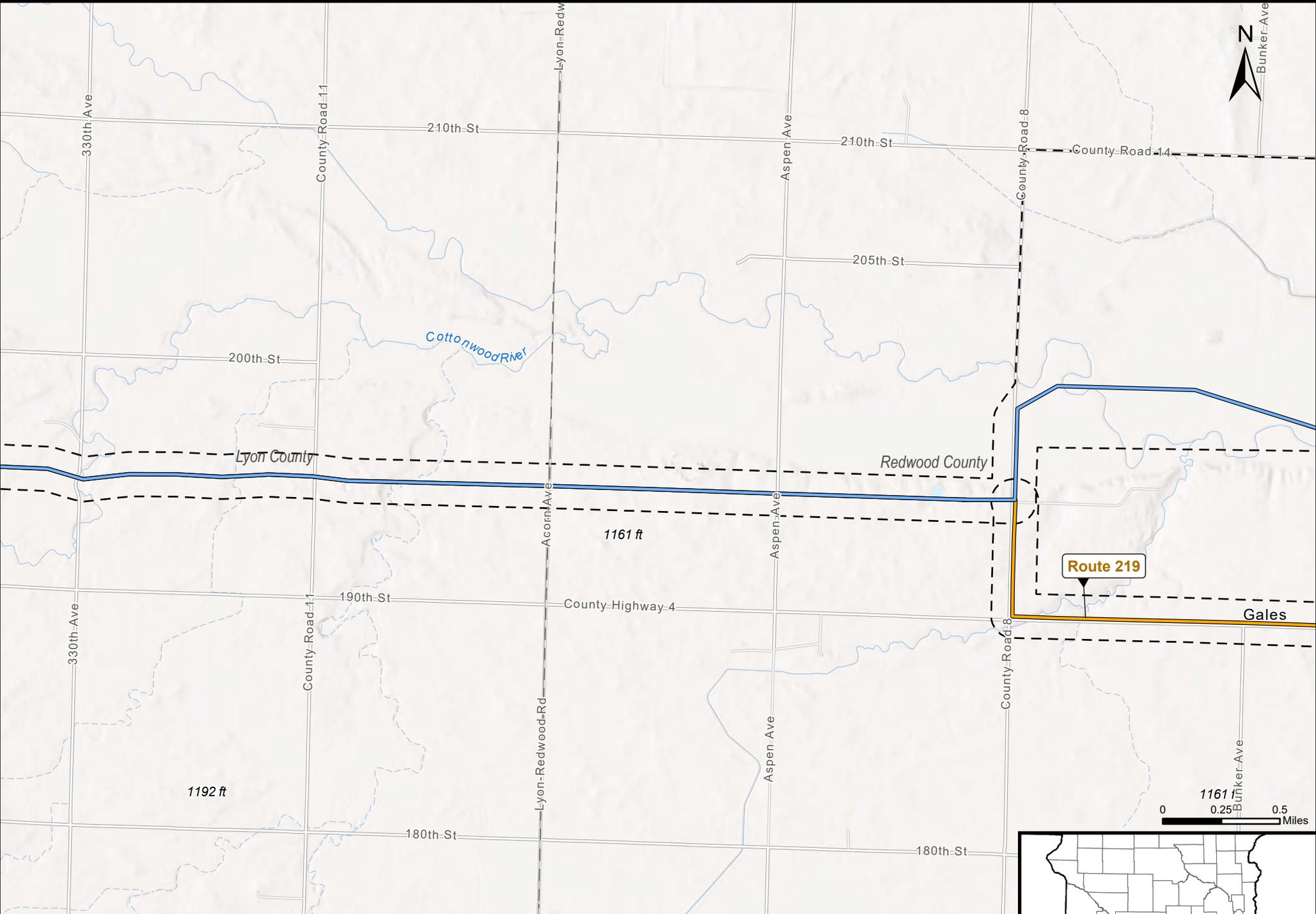
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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

Date: 8/30/2024

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Preferred Route - Alternates Included

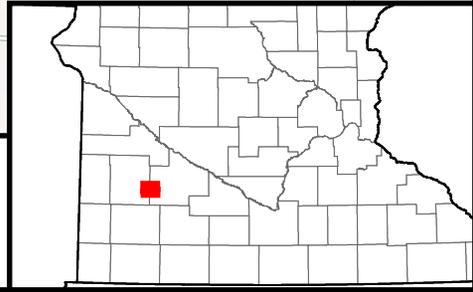
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries

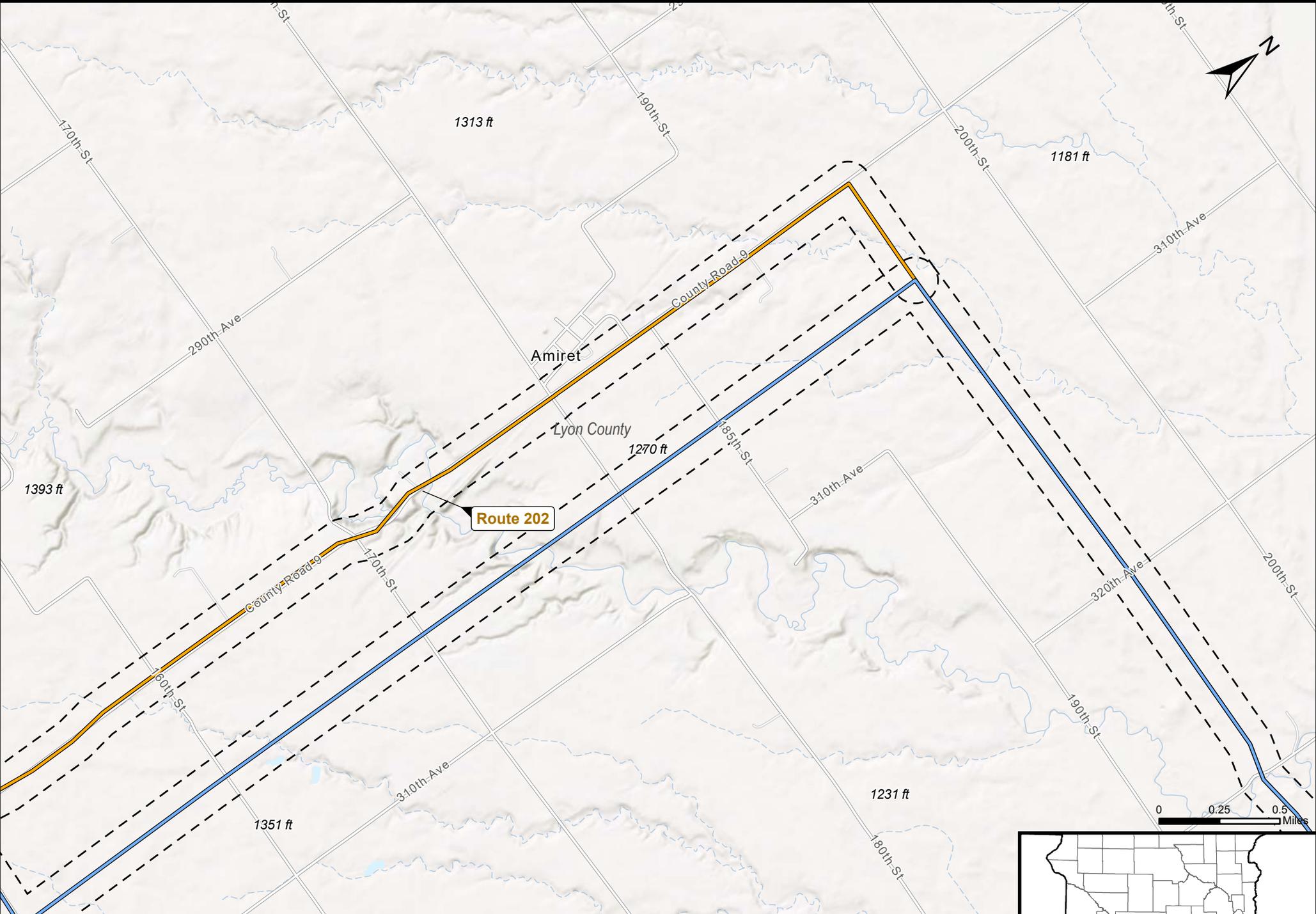


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Date: 8/30/2024



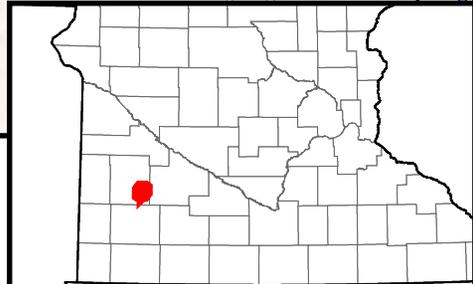
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Preferred Route - Alternates Included

Minnesota Energy Connection

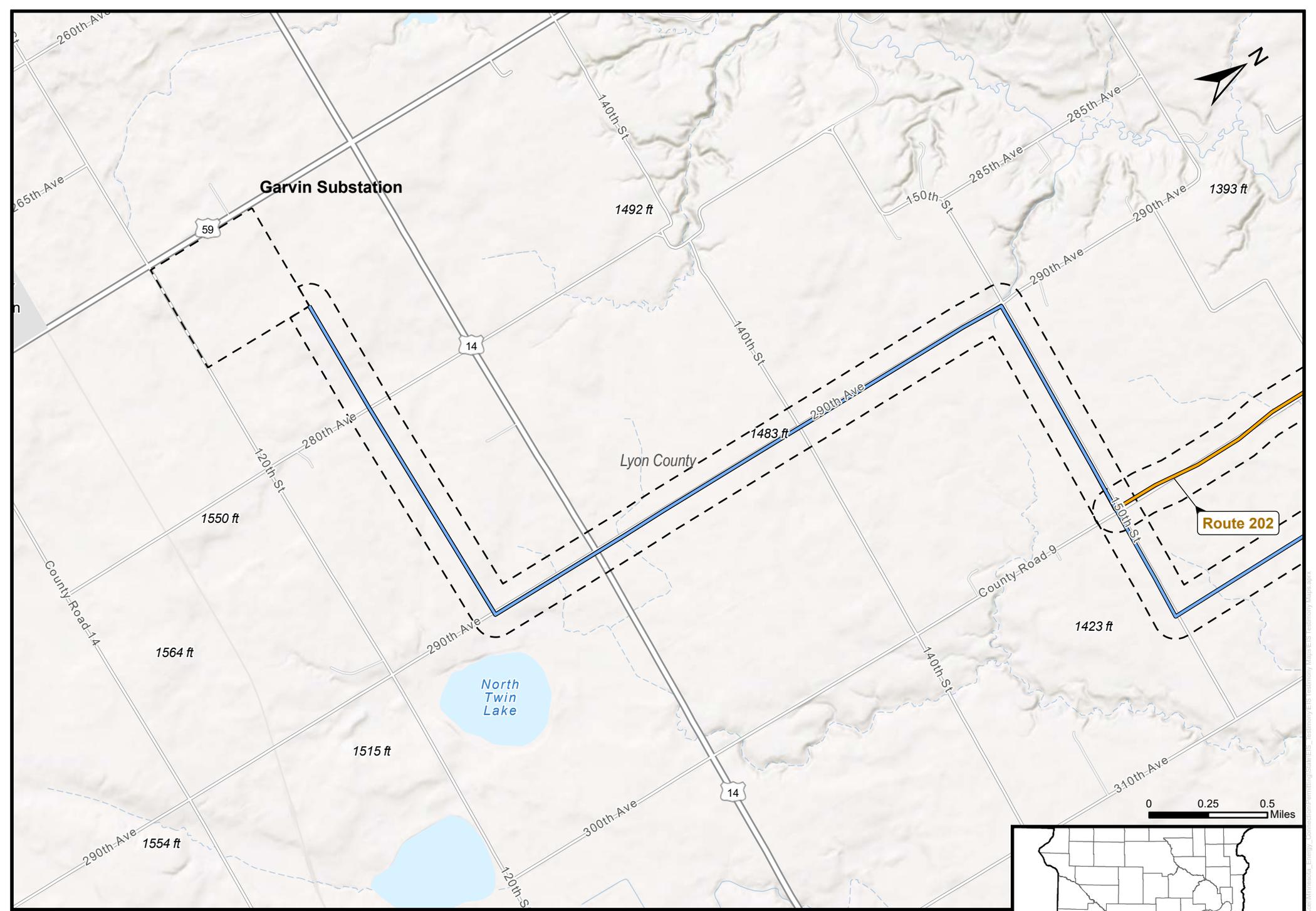
- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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Date: 8/30/2024

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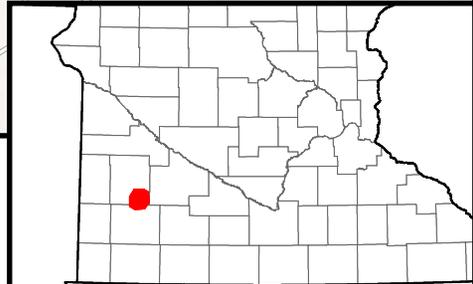
Preferred Route - Alternates Included
Minnesota Energy Connection

- Blue Route
- Preferred Route
- Route Width
- County Boundaries



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

Date: 8/30/2024



Document Path: Z:\Comms\04\Xcel\Minnesota_Energy_Connection\Permitting\Scenic\IS..._testimony\Map\Map14-15 Testimony Maps.aprx

	Purple Route + Green Route	Blue Route + Green Route	Preferred Route
Mileage	173.7	177.1	178.3
Homes within 75'	0	0	0
Homes within 150'	8	7	8
Homes within 300'	75	67	68
Homes within 500'	157	138	141
BWSR Crossings (Miles)	1.1	0.7	0.7
BWSR Crossings (Number)	6	10	10
Native Plant Communities S1-S3 (Acreage)	8.2	8.2	4.3
Sites of Biodiversity Significance (SOBS) - Below (Acreage)	33.3	43.0	49.9
SOBS - Moderate (Acreage)	26.9	49.0	12.4
Upland Forest (Acreage)	34.9	34.8	30.8
PWI Crossing (Count)	40	38	35
PWI Basin / Wetland Crossing (Count)	10	7	8
Trout Stream Crossing (Count)	1	1	1
Forested Wetland (Acreage)	17.5	17.8	16.3
Non-Forested Wetland (Acreage)	116.5	136.6	121.3
Wetlands > 1000' (Count)	2	5	2
Pipeline Crossing (Count)	6	10	10
Electric Transmission > 115 kV Crossing (Count)	23	12	12
Miles of Cross-Country Agricultural Land Crossed	37.4	35.9	33.1
Miles Following Pipeline	3.0	2.5	2.5
Miles Following Rail	16.1	0.0	0.0
Miles Following Road	77.5	81.1	89.4
Miles Following Electric Transmission	21.9	18.5	18.5
Miles Following Property Line	66.4	70.7	65.0
Number of Structures	1112	1056	1060
Number of Dead-End Structures	270	196	194

*Note: The above values will not sum to a project total in any category because they are meant to provide an equal comparison of features which may overlap along the Project routes.