BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Hwikwon Ham	Commissioner
Audrey C. Partridge	Commissioner
Joseph K. Sullivan	Commissioner
John A. Tuma	Commissioner

In the Matter of the Applications of Xcel Energy for a Certificate of Need and Route Permit for the Minnesota Energy Connection Project in Sherburne, Stearns, Kandiyohi, Wright, Meeker, Chippewa, Yellow Medicine, Renville, Redwood, and Lyon counties in Minnesota.

ISSUE DATE: June 10, 2025

DOCKETS NO. E-002/CN-22-131;
E-002/TL-22-132

ORDER MODIFYING AND ADOPTING ADMINISTRATIVE LAW JUDGE REPORT, GRANTING CERTIFICATE OF NEED, AND ISSUING ROUTE PERMIT FOR THE MINNESOTA ENERGY CONNECTION PROJECT

PROCEDURAL HISTORY

On March 9, 2023, Xcel filed a certificate of need application for the Minnesota Energy Connection (MNEC) Project (the Project).

On May 2, 2023, the Commission issued an order that accepted Xcel Energy's certificate of need application as complete as supplemented by its April 12, 2023 reply comments, and authorized the use of informal proceedings for developing the record.

On May 18, 2023, Xcel Energy filed a revised certificate of need application that included the updated Chapter 8 and Appendix E that were part of its April 12, 2023 reply comments.

On August 10, 2023, the Commission, recognizing that separate and overlapping application review processes for the same project may create administrative inefficiencies and confusion for the public, issued an order suspending review of the certificate of need application pending receipt of a route permit application and directed joint proceedings to be held on the two applications.

On October 30, 2023, Xcel Energy filed a route permit application for the MNEC Project.

On January 16, 2024, the Commission issued its Order Accepting [the Route Permit] Application as Complete and Establishing Procedural Requirements. In addition to the application completeness determination, the order reaffirmed the approval of joint proceedings and combined environmental review with the certificate of need application and denied the request to establish an advisory task force.

On January 24, 2024, the Commission issued its Notice of and Order for Hearing, which referred the route permit application to the Office of Administrative Hearings (OAH) for contested case proceedings.

Between January 24 and January 31, 2024, public information and Environmental Impact Statement (EIS) scoping meetings occurred in each of the following cities: Granite Falls, Marshall, Olivia, Redwood Falls, Litchfield, Monticello, and Kimball. An online public information and EIS scoping meeting occurred on February 1, 2024. A written comment period was open through February 21, 2024, to receive comments on the scope of the EIS.

On May 9, 2024, the Commission issued an order that adopted the recommendations of the Minnesota Department of Commerce, Energy Environmental Review and Analysis (EERA) as outlined in its comments and recommendations on the EIS Scoping Decision dated April 17, 2024. In addition to the routes proposed by Xcel in its route permit application, the Commission authorized evaluation of 48 route segments, 11 route connectors, and 4 alignment alternatives received during the EIS scoping period. Further, as it applied to the certificate of need application, the Commission authorized the evaluation of the following system alternatives: no-build, continued coal generation at Sherco, modified generation (solar and wind) at Sherco, modified generation (nuclear and natural gas) at Sherco, generation alternatives closer to Sherco, distributed solar generation, and undergrounding of the transmission line.

On June 5, 2024, the Commission issued a Notice of Comment Period on the merits of the certificate of need application.

By September 6, 2024, initial comments on the certificate of need application were filed by Xcel Energy, the Minnesota Department of Commerce Division of Energy Resources (the Department), LIUNA Minnesota and North Dakota (LIUNA), the Joint Commenters,[1] Clean Energy Economy Minnesota (CEEM), NoCapX 2020 (NoCapX), Jordan Junkermeier, Kellie Rosenow, and the Pierskallas.

Also on September 6, 2024, Xcel filed the Direct Testimony in the route permit application docket (22-132).

By October 8, 2024, reply comments on the certificate of need application were filed by Xcel Energy, the Department, Operating Engineers Local 49 and North Central States Regional Council of Carpenters (Local 49-Carpenters), International Brotherhood of Electrical Workers (IBEW), Anna Donnay, Lisa Dallenbach, the Pilgrams, and the Donnays.

On October 8, 2024, EERA filed the Draft EIS.

On October 15, 2024, the Commission issued the Notice of Information Meetings, Public and Evidentiary Hearings, and Availability of Draft Environmental Impact Statement

[1] The Joint Commenters include Citizens Utility Board of Minnesota (CUB), Fresh Energy, Minnesota Center for Environmental Advocacy (MCEA), Center for Rural Affairs, and the Clean Grid Alliance.

On October 22, 2024, supplemental comments on the certificate of need application were filed by Xcel Energy and LIUNA.

From October 29 through November 12, 2024, Administrative Law Judge (ALJ) Suzanne Todnem presided over public and evidentiary hearings to receive public input on the certificate of need and route permit applications and the draft EIS. The hearings included one online public hearing via WebEx, seven in-person public hearings held in the following cities: Monticello, Litchfield, Kimball, Granite Falls, Olivia, Marshall, and Redwood Falls, and an evidentiary hearing in the Commission's large hearing room. The in-person public hearings each included an open house period to provide information on the project and the Draft EIS. In addition, a written comment period was open through November 25, 2024. During the public hearing phase of the review process, hundreds of comments were submitted by members of the public, state and local governments, and organizations.

On November 25, 2024, Xcel and LIUNA filed comments on the Draft EIS.

On December 13, 2024, Xcel filed its Response to Hearing Comments; Post-Hearing Brief; and Proposed Findings of Fact, Conclusions of Law, and Recommendations.

On January 22, 2025, EERA filed the Final EIS.

On January 29, 2025, Xcel filed its Updated Findings of Fact, Conclusions of Law, and Recommendations, and EERA filed its Comments and Recommendations, which included proposed edits to Xcel's proposed Findings of Fact, Conclusions of Law, and Recommendations.

On February 5, 2025, ALJ, Suzanne Todnem filed her Findings of Fact, Conclusions of Law, and Recommendations (ALJ Report).

On February 20, 2025, EERA and Xcel filed exceptions to the ALJ Report.

On March 14, 2025, the Commission issued a notice of comment period requesting information on the technical feasibility, reliability, and cost associated with possible route reconfigurations related to existing 69-kilovolt (kV) lines and the Minnesota River crossing along Xcel's Modified Blue Route in the Franklin, Minnesota area.

By March 24, 2025, Xcel Energy, Lower Sioux Indian Community, and Birch Coulee Solar filed comments in response to the Commission's March 14 notice.

On April 10, 2025, the Commission considered this matter, and the record closed under Minn. Stat. § 14.61, subd. 2.

FINDINGS AND CONCLUSIONS

I. The Project

Northern States Power Company d/b/a Xcel Energy (Xcel) applied for a route permit to construct the Minnesota Energy Connection Project (the Project), a new approximately 171- to 174-mile

345-kV double-circuit transmission line between Sherburne and Lyon counties. The Project includes the following components:

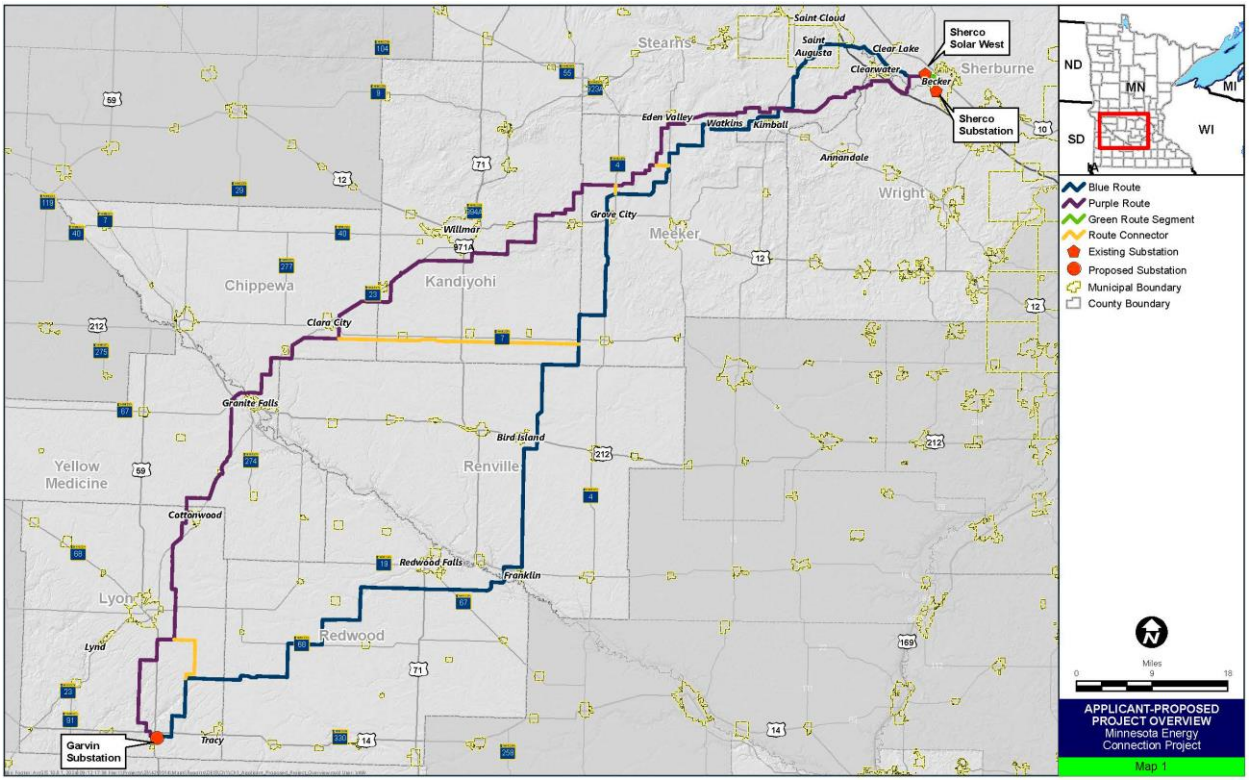
- A new 345-kV double-circuit transmission line between the existing Sherco substation in the city of Becker in Sherburne County and a new substation (Garvin substation) proposed near the city of Garvin in Lyon County. In its application, Xcel Energy proposed two route alternatives: a Purple Route, which is 171 miles in length, and a Blue Route, which is 174 miles in length. Xcel Energy also proposed four connector segments (yellow routes) to provide options to utilize different portions of each alternative route, as appropriate.

- A new 3.1-mile single-circuit 345-kV transmission line co-located on existing structures between the existing Sherco and Sherco Solar West substations in the city of Becker (Green Route).

- Modifications to the existing Sherco and Sherco Solar West substations, a new voltage-support substation, and a new intermediate substation.

Figure 1 below depicts the Purple and Blue Route alternatives Xcel proposed:

Figure 1



Xcel requested a route width of 1,000 feet and a final right-of-way width of 150 feet, with the exception of the areas around the substations and conservation easements where the route width would range from 0.3 mile to 1.25 miles to enable flexibility in routing.

II. Administrative Law Judge's Report

The ALJ Report is well reasoned, comprehensive, and thorough. It contains 683 findings of fact and 20 conclusions of law determining that all procedural requirements for approving the certificate of need and route permit applications were satisfied. The ALJ Report provided recommendations on the adequacy of the Final EIS and the justification for granting a certificate of need and route permit, including designating a specific route and additional permit conditions.

Having itself examined the record and having considered the ALJ Report, the Commission concurs in most of the ALJ's findings and conclusions. On a few issues, however, the Commission reaches different conclusions, as delineated and explained below. The Commission accepts, adopts, and incorporates the findings, conclusions, and recommendations in the ALJ Report to the extent they are consistent with the decisions below.

III. Environmental Impact Statement

Under Minn. R. 7850.2500, the commissioner of the Department of Commerce must prepare an environmental impact statement (EIS) for a high-voltage transmission line as defined under Minn. Stat. § 216E.01, subd. 4. The EIS must provide information on the human and environmental impacts of the proposed high-voltage transmission line and of alternative routes including methods to mitigate identified impacts.

The Commission approved and requested a combined environmental review authorizing preparation of an EIS in lieu of an environmental report pursuant to Minn. R. 7849.1900, subp. 2, so the EIS also includes the analysis of system alternatives required under Minn. R. 7849.1400.

The Commission may not make a final decision on a route permit until it has found the EIS to be adequate. The final EIS is adequate if it:

- addresses the issues and alternatives raised in scoping to a reasonable extent considering the availability of information and the time limitations for considering the permit application;
- provides responses to the timely substantive comments received during the draft environmental impact statement review process; and
- was prepared in compliance with the procedures in parts 7850.1000 to 7850.5600.

The ALJ Report stated that the Final EIS satisfied these conditions. The Commission agrees with the ALJ's findings on this issue and concludes that the Final EIS is adequate, in that it (1) addresses the issues and alternatives raised in scoping; (2) provides responses to substantive comments received on the Draft EIS; and (3) was prepared in compliance with Minn. R. 7850.

IV. Certificate of Need

Prior to siting or constructing a large energy facility in Minnesota, the Commission must issue a certificate of need.[2] The proposed MNEC Project requires a certificate of need because it is a

[2] Minn. Stat. § 216B.243, subd. 2.

transmission line with a capacity greater than 200 kV and a length greater than 1,500 feet, which meets the definition of a large energy facility.[3]

In assessing the need for a proposed large energy facility, the Commission must evaluate the criteria set forth in Minn. Stat. § 216B.243, subd. 3, and Minn. R. 7849.0120.

A. Positions of the Commenters

1. Supportive of Granting Certificate of Need

Xcel, the Department, CEEM, Joint Commenters, LIUNA, IBEW, and Local 49-Carpenters recommended that the Commission grant a certificate of need for the Project.

a. Xcel

According to Xcel's certificate of need application, the proposed Project would enable it to retain and reuse the approximately 2,000 megawatts (MW) of transmission interconnection rights at the Sherco substation under its Midcontinent Independent System Operator, Inc. (MISO) Electric Tariff approved by the Federal Energy Regulatory Commission (FERC) as part of Xcel's energy transition from carbon-based fuels to renewable energy.

Xcel explained that its request for a certificate of need for the Project resulted from its recent integrated resource plan (IRP) proceedings where the Commission found that:

- Xcel should retire the coal-powered Sherco Unit 3 by 2030;
- Xcel has demonstrated that, between 2027 and 2032, it will need approximately 600 MW more solar-powered generation and 2,150 MW more wind-powered generation, or an equivalent amount of energy and capacity from a combination of wind, solar and/or storage; and
- Xcel shall begin Certificate of Need and route permit proceedings for transmission lines with a capacity of 345 kilovolts extending from the locations of the retiring King and Sherco generators designed to permit new energy resources to connect to the transmission grid of the Midcontinent Independent System Operator, Inc.[4]

According to Xcel, the Project will complement MISO's Long Range Transmission Planning (LRTP) projects portfolio approved in July 2022. While Xcel recognized some similarities between the Project and planned LRTP projects, Xcel contended that the need for the Project remains:

> Although the LRTP projects are designed to provide substantial interconnection capacity, alleviate existing congestion, and enable additional renewable resource interconnections, they do not obviate the need for the Project. The LRTP projects are not located in the

[3] *See* Minn. Stat. § 216B.2421, subd. 2(2) (2023).

[4] *See In the Matter of the 2020–2034 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy*, Order Approving Plan with Modifications and Establishing Requirements for Future Filings, Docket No. E-002/RP-19-368 (April 15, 2022).

> prime wind resource areas in southwestern Minnesota. The LRTP projects will also be networked lines, and any generator will be able to seek to interconnect using MISO's generator interconnection queue. The only way that Xcel Energy can retain its interconnection rights at Sherco is to directly connect Xcel Energy-owned generation to the Sherco Substation via a single-user generation tie line, like those proposed with this Project. The Project also helps ensure that Xcel Energy is able to acquire needed capacity and energy resources in a timely fashion without having to go through the interconnection queue and potentially face delays and relatively higher interconnection costs.[5]

The Project would enable Xcel Energy to interconnect new renewable energy generation without needing to go through the generation interconnection process (GIP) at MISO, which Xcel stated typically takes years to complete and identifies substantial and costly needed upgrades for interconnections that often result in projects' withdrawal from the process.

Xcel explained that it evaluated various alternatives, including non-transmission and no-build options, before determining that the Project was its preferred option to enable delivery of at least 1,996 MW to Sherco.

Xcel provided updates to the Project's expected timeline and costs. The timeline for the in-service date moved back approximately eleven to twelve months into the third quarter of 2028. Xcel explained that the delay exists due to the U.S. Army Corps of Engineers requiring field surveys rather than desktop data as part of its permitting process. Xcel stated that the delay would not impact retirement schedules, interconnection of projects, or its ability to meet near-term energy demands. Xcel revised its total-cost estimates for the Project from $1.139 billion to between $1.274 and $1.302 billion due to the delayed in-service date and the need for additional synchronous condensers.

b. The Department

The Department evaluated the Project under the applicable certificate of need criteria in Minn. Stat. § 216B.243 and Minn. R. 7849.0120.

Based on its evaluation, the Department expressed support for a determination on Minn. R. 7849.0120 A. and its subparts as summarized below:

- Xcel Energy's resource needs likely surpass the proposed Project's capability, even under lower demand forecasts.
- Existing and expected energy efficiency and demand response programs would not significantly impact the overall need for reusing the Sherco interconnection rights.
- Promotional practices did not influence the claimed need for the proposed Project.
- Current and planned facilities without a certificate of need cannot adequately meet the identified need.

[5] Xcel's Certificate of Need Application, at 17.

- The proposed Project allows efficient use of existing interconnection rights and Minnesota's renewable energy resources.

The Department's evaluation of the Project found support for a determination on Minn. R. 7849.0120 B. and its subparts as summarized below:

- The proposed double-circuit 345-kV transmission line is the most cost-effective and technically feasible solution compared to other alternatives (*e.g.*, different voltage transmission lines, high-voltage direct current lines, or underground lines).
- A comprehensive analysis of ten options and two sub-options determined that the proposed double circuit 345-kV transmission line with voltage support technology is the most realistic and cost-effective choice.
- The proposed Project significantly contributes to carbon dioxide reduction when combined with the approved Resource Plan.
- Compared to other alternatives, the proposed Project provides greater capacity at a lower cost.

The Department's evaluation of the Project found support for a determination on Minn. R. 7849.0120 C.1 as summarized below:

- The proposed Project facilitates interconnection of renewable energy sources replacing retiring coal units at the Sherco Substation, which aligns with Minnesota's statutory renewable energy goals.
- Without the proposed Project, Xcel Energy would face challenges in maintaining reliable and cost-effective service.

For C.2, C.3, or C.4, the Department recommended that the Commission rely on the information in the EIS when evaluating the effects of the Project on the natural and socioeconomic environments compared to the effects of not building the Project.

Based on the Department's analysis, the Project would comply with relevant state and federal regulations and policies as contemplated by Minn. R. 7849.0120 D.

The Department also evaluated Xcel's compliance with additional requirements in statutes and rules for evaluating certificates of need and determined that Xcel had satisfied the requirements, or the requirements were inapplicable here.[6]

The Department recommended that the Commission issue a certificate of need for the Project if, after consideration of the EIS, the Commission finds that the proposed facility will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

The Department also recommend conditioning approval of the Project on requiring Xcel to comply with several measures to protect ratepayers including providing an updated project cost

[6] Requirements the Department evaluated are in Minn. Stat. §§ 216B.243, subd. 3 (9); 216B.243, subd. 3a; 216B.2422, subd. 4; 216B.2426; 216B.169; 216B.1694, subd. 2 (a) (4); 216B.243, subd. 3 (10); 216B.243, subd. 3 (12); 216H.03, subd. 3; 216B.2422, subd. 4a; and 216B.2422, subd. 4b.

estimate within 90 days of the Commission's order determining the route, proving the reasonableness of any cost overruns, and not seeking recovery from ratepayers of any cost overruns until Xcel's first rate case after the Project is placed in service.

c. Joint Commenters

Joint Commenters evaluated the Project under Minn. R. 7849.0120, reaching the same result as the Department. Joint Commenters noted that the Energy Information Administration reported that Sherco produced approximately 9.9 million tons of carbon dioxide emissions in 2022. By providing the transmission capacity necessary for replacement renewable energy to come online, the Project can help Xcel finalize its exit from coal by 2030 and create a healthier environment for all Minnesotans. Joint Commenters also asserted that the Project bolsters the reliability and adequacy of energy supplies, provides societal benefits in a manner compatible with protecting natural and socioeconomic environments, conforms to applicable rules and regulations, and meets needs that cannot be adequately served by alternatives.

d. CEEM

CEEM identified transmission system upgrades as key to getting new renewables online as the energy sector transitions from fossil fuels to renewable sources. CEEM noted that the Project holds the potential to address system reliability, expand access to renewables, and reduce greenhouse gas emissions. According to CEEM, the Project is part of a much larger strategy to provide the necessary service reliability for Minnesotans as well as a pathway to decarbonization.

e. LIUNA, IBEW, and Local 49-Carpenters

These Commenters generally echoed the sentiments expressed in other comments supportive of granting a certificate of need for the Project, noting that the utilization of existing interconnection rights will encourage, promote, and enable development of solar, wind, and battery sources of energy. This development will enable a more rapid transition away from coal-powered generation while promoting additional economic growth. Each of these commenters emphasized that the Project and the resulting generation projects will provide high-quality jobs for local workers. In order to quantify some of these benefits, LIUNA recommended that the Commission require labor statistics reporting for the Project and any interconnected generation or battery projects.

2. Opposed to Granting Certificate of Need

a. NoCapX 2020

NoCapX argued that if the identified need for the project is to interconnect 1,996 MW, then Xcel should not receive approval of a project with a capacity rating of 3,583 MVA. Despite asserting that 3,583 MVA exceeds what is necessary to interconnect 1,996 MW, NoCapX failed to identify a more reasonable and prudent alternative to the Project.

NoCapX further asserted that a certificate of need is inappropriate here because Xcel overstated demand projections, other transmission lines exist or may be constructed in southwest Minnesota to meet the stated need, and Xcel's preservation of interconnection rights benefits Xcel not the public, which does not justify incurring the Project's estimated cost. Additionally, NoCapX argued that the Project's anticipated line loss (approximately 10%) demonstrates the

inefficiencies of long-distance transmission while also stating that radial lines are inherently unreliable and problematic.

b. Landowner Comments

Multiple landowners filed comments responding to the certificate of need application that expressed opposition to the Project and recommended that the Commission deny the certificate of need. These commenters asserted that wind and solar are unreliable and inefficient energy sources and that coal, natural gas, or nuclear generation are better sources of energy. The majority of landowner comments expressed concern about potential adverse impacts that they expected the Project to create including health concerns related to electric and magnetic fields, stray voltage impacting livestock, vegetation management concerns, impacts to wildlife including avian species, decreased property values, and disruption to agricultural operations. Several landowners stated that they believed the Project would provide long-term detrimental impacts to communities along the route location while Project benefits would be enjoyed by Xcel and its customers in the Twin Cities.

B. ALJ Report

The ALJ found that all procedural requirements for considering the certificate of need application had been satisfied. The ALJ Report included findings related to all criteria of Minn. Stat. § 216B.243 and Minn. R. 7849.0120 that the Commission must consider when evaluating the Project's certificate of need application. Informed by the findings addressing the need for the Project, the ALJ Report stated that the record evidence demonstrated that the Project meets the criteria for granting a certificate of need, and therefore, the ALJ recommended that the Commission grant a certificate of need for the Project.

C. Commission Action on Certificate of Need

The Commission has thoroughly reviewed the record in this matter and agrees with the findings and conclusions in the ALJ Report evaluating considerations relevant to granting the certificate of need. Accordingly, the Commission will adopt the recommendation of the ALJ to grant a certificate of need for the Project.[7] The Commission also agrees with LIUNA's recommendation

[7] Findings of Fact (Findings) 328 in the ALJ Report addresses cost-cap language supported by Xcel and the Department. Consistent with this finding, the Commission will condition its certificate of need determination on requirements that Xcel:

- File a final cost number or cap amount within 90 days of the Commission's Order determining the route.
- Wait until the first scheduled rate case after the Project is placed in-service to request to recover any cost overruns from Minnesota ratepayers.
- Fully justify the reasonableness of recovering any cost overruns of the Project from Minnesota ratepayers. Xcel Energy must justify any costs (including operations-and-management expense, ongoing capital expense—including revenue requirements related to capital included in rate base—insurance expense, land-lease expense, and property/production tax expense) that are higher than forecasted in this proceeding. Xcel Energy bears the burden of proof in any future regulatory proceeding related to the recovery of costs above those forecasted in this proceeding.

to require reporting of labor statistics for the Project, which will enhance transparency and better enable stakeholders to verify employment associated with the Project. The Commission will require inclusion of the special permit condition on labor statistics reporting as described in ordering paragraph 12.i.

For all of the reasons discussed below, the Commission's consideration of the criteria in Minn. R. 7849.0120 supports issuing a certificate of need for the Project.

First, based on a consideration of the factors set forth in Minn. R. 7849.0120 A, the Commission concludes that the probable result of denying the application would adversely affect the future adequacy, reliability, or efficiency of the energy supply to the applicant, the applicant's customers, or the people of Minnesota and neighboring states.

NoCapX disputed Xcel's energy-demand forecasts as overstating need, asserting that there is insufficient demand to justify the Project. But the evidence in the record supports the ALJ's findings that Xcel's forecasted demand for the type of energy is reasonable, accurate, and demonstrates need for the Project. The Commission finds that the Project will address multiple needs for Xcel. As found by the ALJ, the Project will enable the delivery of at least 1,996 MW to the Sherco substation to utilize Xcel's existing transmission interconnection rights once the coal-powered units retire, supporting Xcel's acquisition of sources of carbon-free generation. Finally, the Project will support regional energy needs and enhance the efficiency and reliability of the transmission system as the Project will enable more predictable and cost-effective interconnection of wind- and solar-generated energy produced in southwestern Minnesota.

Second, based on a consideration of the factors set forth in Minn. R. 7849.0120 B, the Commission finds that a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record. The Commission is unpersuaded by NoCapX's arguments that the request for a certificate of need should be denied because other alternatives may exist. Many of its claims appear speculative and contrary to the robust analyses and other evidence in the record relied on by the ALJ to support her findings. For example, NoCapX argued that Xcel could utilize other existing or planned transmission lines to accomplish the Project's purpose. But NoCapX provided no reasonable explanation or analysis of how any existing or planned transmission line would allow Xcel to interconnect new generation to the Sherco substation in compliance with applicable MISO tariff conditions, including operational timelines, ownership requirements, and project-configuration parameters that Xcel must satisfy to maintain eligibility to utilize its existing interconnection rights.

Similarly, NoCapX claimed the size of the Project is excessive because it would be capable of transmitting more than the 1,996 MW of new generation eligible to interconnect through Xcel's existing interconnection rights. But the ALJ found that a more reasonable and prudent alternative to the Project had not been demonstrated by a preponderance of the evidence in the record. To support this finding, the ALJ referenced thorough evaluations of alternative project configurations discussed in filings of both the Department and Xcel that explain why the Project's proposed double-circuit 345-kV line is reasonable. Furthermore, Chapter 4 of the Final EIS evaluates and

- File updates regarding the composition of voltage support equipment (*i.e.*, static synchronous compensators (STATCOMs) versus interconnected solar facilities) after resource determinations have been made.

discusses various system alternatives and compares their potential human and environmental impacts. None of the feasible alternatives would be able to better achieve the Project's purpose of interconnecting at least 1,996 MW of new generation to the Sherco substation.

Third, based on a consideration of the factors set forth in Minn. R. 7849.0120 C, the Commission concludes that the preponderance of the evidence in the record demonstrates that the Project, with appropriate permit conditions and requirements to mitigate impacts, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

Comments from landowners generally opposed routing a high-voltage transmission line in or near their communities. Some commenters disagreed that Xcel should be able to interconnect new sources of renewable energy to promote compliance with carbon-free energy generation policies—energy policies that many commenters viewed as fundamentally flawed. And landowners also expressed fears that approval of the Project could adversely affect landowners' property rights, impair their economic livelihoods, increase health risks for family and community members, and disrupt the wellbeing of domestic and wild animals.

The Commission understands and appreciates the perspectives shared by members of the public, including the landowners opposed to the Project. Public comments provide valuable insights and can enhance the record so that the Commission and other stakeholders have access to critical information that promotes better and more informed decisions and reduces potential adverse impacts as fully as possible. To further reduce impacts, the Commission will require modifications to route segments in response to input from affected persons, as discussed in the EIS, ALJ Report, and below.

In Chapter 5, the Final EIS examined the human and environmental resources that could be affected by the Project and identified ways to avoid, minimize, and mitigate those impacts. As it relates to the concerns of commenters opposed to the certificated of need, the Final EIS identifies the potential impacts on human health and safety, specifically discussing potential impacts of electric and magnetic fields, implantable medical devices, public and worker safety, stray voltage, induced voltage, and electronic interference. Chapter 5 also discusses the Project's potential impacts on the natural environment, human settlement, and land-based economies, including agriculture. The standard and special conditions included in the route permit and the specific route the Commission will designate avoid, minimize, and mitigate potential impacts to ensure that the Project will provide benefits to society in a manner compatible with protecting natural and socioeconomic environments, including human health.

To the extent that commenters argue that the Project is unnecessary because they believe that carbon-based energy is preferable to developing the types of wind and solar generation that will be enabled by the Project, the Commission is unpersuaded. Minnesota's energy policy favors development of renewable energy sources and seeks to promote generation of electricity without the emission of carbon dioxide—Minnesota's recent enactment of the carbon-free standard demonstrates that continued reliance on carbon-dioxide-emitting generation sources to meet the state's energy needs is inconsistent with Minnesota's energy goals and policies.

Informed by Minnesota's energy policies, Xcel's general proposal for this Project arose in recent IRP proceedings where the general parameters of Xcel's resource plan that the Commission ultimately approved were developed through an iterative process that incorporated diverse

perspectives from a wide range of stakeholders. The Commission specifically approved an element of Xcel's plan to commence certificate of need and route permit proceedings for a 345-kV transmission line extending from Sherco to enable new energy resources to connect to the MISO transmission grid. The Commission also found that Xcel demonstrated that, between 2027 and 2032, it will need approximately 600 MW more solar-powered generation and 2,150 MW of wind-powered generation on the Sherco gen-tie line—or an equivalent amount of energy and capacity from a combination of wind, solar, and/or storage.

Consistent with the Commission's findings in Xcel's IRP proceeding, the ALJ found that key benefits of the Project include:

- addressing current energy needs outside of the over-burdened MISO GIQ process;
- facilitating the prompt replacement of energy generation from coal with energy generation from renewable sources;
- additional progress towards the carbon-free energy goals in Minn. Stat. § 216B.1691, subd. 2g; and
- mitigating some of the projected 3.6 GW deficit in Xcel Energy's accredited capacity.

The Project is the best option for society to obtain these important benefits. The Commission therefore finds that the consequences to society of granting the certificate of need are more favorable than the consequences of denying the certificate of need.

Fourth, based on a consideration of the factors set forth in Minn. R. 7849.0120 D, the Commission concludes that the record does not demonstrate that the design, construction, or operation of the project, or a suitable modification of the project, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

Finally, based on its review of the record and the analysis and findings set forth in the ALJ Report and above, the Commission concludes that granting a certificate of need for the proposed project will serve the public interest.

V. Route Permit

Minn. Stat. § 216E requires the routing of high-voltage transmission lines consistent with the state's goals to locate electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources.[8] The Commission is required to choose locations that minimize adverse human and environmental impacts while ensuring continuous electric power system reliability and integrity and ensuring that electric energy needs are met and fulfilled in an orderly and timely fashion.[9]

In addition, route permit determinations are guided by the policy objective to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and

[8] Minn. Stat. § 216E.02, subd. 2 (2023).

[9] *Id.*

ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.[10]

Before a high-voltage transmission line may be constructed in Minnesota, the Commission must issue a route permit.[11] The proposed MNEC Project requires a route permit because it meets the definition of a high-voltage transmission line with a capacity greater than 100 kV and a length greater than 1,500 feet.[12]

Minn. R. 7850.4100 provides factors the Commission must consider when deciding to issue a route permit for a high-voltage transmission line. Minn. Stat. § 216E.03, subd. 7(b) contains a non-exclusive list of factors the Commission must consider when designating a high-voltage transmission line route. The Commission must also make specific findings that it has considered locating a route for a high-voltage transmission line on an existing high-voltage transmission route and the use of parallel existing highway right-of-way and, to the extent those are not used for the route, the Commission must state the reasons.[13]

A. Route Options Evaluated

Xcel proposed two routes: the Purple Route and the Blue Route. Both the Purple and Blue Routes utilize the Green Route Segment (Green Route) that connects the existing Sherco Solar West substation and the Sherco substation. Xcel also proposed four route connector segments (yellow routes) that could be used to transition between portions of both the Purple and Blue Routes.

In addition to Xcel's proposed route options and consistent with the EIS scoping decision, EERA evaluated 48 alternative route segments (numbered 201 to 248), eleven route connector segments (numbered 101 to 115), four alignment alternatives (numbered AA1 to AA4), and two additional complete routes (Route C and Route D). The EIS divided the Project into seven geographic regions A through G to better enable comparisons of alternative route options.

B. Commenters Preferred Route Alternatives

Xcel, EERA, and the DNR each commented on the various route segment options, expressing support or opposition to certain segments or alternatives.

Xcel and EERA agreed that the best route for the Project was a modified version of the Blue Route. Xcel and EERA disagreed on Region B route preferences, with Xcel preferring Alternative Routes 212 and 219, and EERA recommending Alternative Routes 211 and 220. Although Xcel continued to recommend that the Commission approve its Preferred Route, Xcel stated that it would not object if the Commission approved EERA's Recommended Route in conjunction with Xcel's Modified alternative 223.

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[10] Minn. Stat. § 216E.03, subd. 7(a); Minn. R. 7850.4000.

[11] Minn. Stat. § 216E.03, subd. 2.

[12] *See* Minn. Stat. § 216E.01, subd. 4.

[13] Minn. Stat. § 216E.03, subd. 7(e).

The DNR generally recommended or preferred specific route segments that it identified as reducing potential impacts to natural resources

The DNR preferred a route over the Mississippi River that utilizes existing crossings, recommending the Purple Route in Wright County or Route Segment 246 along the Blue Route. According to the DNR, these routes would reduce the impact to the WSR district and minimize impacts related to viewshed, vegetation removal, and Minnesota Biological Survey (MBS) Sites of Biodiversity Significance. To minimize vertical planes for potential bird impacts, the DNR expressed a general preference for side-by-side (rather than stacked) placement of pole structures at the Mississippi River crossing.

The DNR identified its route preferences by region and expressed support for multiple potential route segments in several regions but did not recommend a complete end-to-end route alternative. To enable a like-for-like comparison of route alternatives for which a permit could be feasibly issued, Xcel developed a DNR Proxy Route that incorporated the most reasonable route segments in regions where the DNR supported more than one route segment.

Figure 2 provides the route preferences of Xcel, EERA, and the DNR:

Figure 2

Region	Xcel's Preferred Route[14]	EERA's Recommended Route	DNR Proxy Route
A	A6 (Blue)	A6 (Blue)	A6 (Blue)
B	B4 (Blue) + 212 + 216 AA1+ 219	B4 (Blue) + 211+ AA1 + 220 + 216	B4 (Blue) + 211 + 214
C	C4 (Blue) + Modified 223	C4 (Blue) + 223	C4 (Blue) + 223 + 105 (Blue to Purple)
D	D5 (Blue)	D5 (Blue)	D1 (Purple)
E	E2 (Blue)	E2 (Blue)	E1 (Purple)
F	F4 (Blue)	F4 (Blue)	F1 (Purple) + 109 or 110
G	G1 (Blue) + 244	G1 (Blue) + 244	G1 (Blue) + 115 + 240 + 249 and G3 + 248

Notes: As analyzed in the Final EIS: A6 incorporates Alternative Route 202, and D5 incorporates Alternative Route 226.

[14] Without AA1, Xcel's Preferred Route depicted in Figure 2 is the same route recommended by the ALJ Report.

C. ALJ Report

The ALJ recommended that the Commission issue a route permit for the Project using Xcel's Preferred Route, which primarily follows the Blue Route, but incorporates Route Segments 202, 212, 216, 219, 226, 244, and Xcel's modified 223. The ALJ Report's findings discuss and compare the various route alternatives for the Project in relation to the routing criteria established in Minn. R. 7850.4100. While the ALJ found that Xcel's Preferred Route best balanced and minimized potential impacts, considering each of those criteria (including, but not limited to, residential impacts, natural resources, reliability, and cost), the ALJ Report also found that other routes considered may offer benefits as to one routing factor or another, but each invite countervailing negative impacts related to other factors.[15]

1. Exceptions to the ALJ Report

EERA and Xcel both filed timely exceptions to the ALJ Report with each recommending several modifications or revisions of the ALJ Report. Neither Xcel's nor EERA's exceptions identified irregularities in the ALJ Report, rather, they clarified their current positions on various issues and recommended changes to the ALJ Report to better reflect the record evidence that supports their preferred outcomes.

EERA explained that its recommended exceptions to the ALJ Report would:

- Better reflect the route it recommended for Commission approval and include additional findings that reflect EERA's Recommended Route is most consistent with applicable guidance in statutes and rules;[16]
- Provide additional information on the public information meetings that occurred; and
- Identify special permit conditions from the record that were inadvertently omitted from the ALJ Report.

Xcel's exceptions clarified its position in support of EERA's recommendation to incorporate AA1 into the Project's route—Xcel noted that AA1 would avoid conservation easements crossed by Xcel's Preferred Route. Xcel proposed modifying paragraph 215 to better reflect the record support for its modified Route Segment 223. Xcel also recommended adding additional language to address the Project's use of existing rights-of-way.

Xcel argued that the evidence in the record did not support requiring Xcel to (1) coordinate with the DNR on potential calcareous fen impacts or (2) develop a decommissioning plan for the Project. Accordingly, Xcel proposed modifying related ALJ Report findings to better support eliminating these requirements.

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[15] ALJ Report at FOF 673.

[16] EERA recommended that the ALJ Report reflect EERA's revised Summary of Recommendations; Findings 195, 501, 619, 665, 672, 674, 683 (Table 10), 692, and 693; Conclusions 12 and 13; and Recommendation regarding the route for the Project. EERA's specific recommended changes to the ALJ Report can be found in Attachment A of EERA's January 29, 2025 comments.

D. Commission Action

The ALJ's conclusions and recommendations are supported by robust findings that compare the impacts of various route options within each of the Project's seven geographic regions and apply routing criteria to the route alternatives considered. Although the Commission will adopt the ALJ's findings and conclusions to the extent they are consistent with the decisions in this order, the Commission reaches a different conclusion as it relates to the best route segment option for Region B—the Commission concludes that EERA's Recommended Route better balances the relevant routing considerations than the routes recommended by the ALJ or currently preferred by Xcel. Accordingly, the Commission will adopt EERA's exceptions that modify the ALJ Report to include additional record support for the recommendation that the Commission issue a route permit for EERA's Recommended Route.

Additionally, the Commission finds that incorporating Xcel's modification to alternative 223 instead of the entirety of alternative 223 recommended by EERA will further improve EERA's Recommended Route. To provide additional record support for this outcome recommended by the ALJ, the Commission will modify finding 215 of the ALJ Report as proposed in Xcel's exceptions.

The Commission agrees with the ALJ's Conclusion 17 that Xcel's proposed route widths are reasonable for the Project and will authorize route widths as described in ordering paragraph 8.

To the extent that they are consistent with Commission's designated route for the Project, the Commission adopts the clarifications and modifications to the ALJ's Report as stated in ordering paragraphs 2 and 3. These clarifications and modifications provide additional record support for the Commission's decision to issue the Project's route permit for the designated route, including relevant procedural history and appropriate permit conditions.

1. Additional Route Modifications

While the Commission agrees with the recommendations of the ALJ Report, as modified by this order, to issue a route permit for EERA's Recommended Route that incorporates Xcel's Modified 223, the Commission finds that the adjustments described below into the designated route will further mitigate Project impacts and better effectuate the purposes of routing criteria considerations:

a. Route Segment 212

The Commission will modify Route Segment 212 so that the route alignment is on the south side of Highway 68 and incorporate the modified Route Segment 212 into its designated route. This modified 212 avoids more significant impacts on one residence (within 75 to 250 feet) and locates the route closer to several residences (3 residences within 250 to 500 feet and 6 residences within 500 to1500 feet). Modified 212 parallels existing infrastructure rights of way for its entire 4.5 mile length (compared to 33% of the equivalent route), and it also avoids a portion of the equivalent route that travels through agricultural fields along a property line, which, according to comments received, would cause disruptive impacts to coordinated agricultural activities conducted on both sides of the equivalent route. Modified 212 impacts one residence on the north side and one on the south side of Highway 68, and moving the alignment

to the south side of Highway 68 decreases the impact on the northern residence which is closer to the highway than the residence on the southern side.

b. Route Segment 213

Several of the residents impacted by the Route Segment 213's equivalent route participated in this docket and appeared at the Commission's hearing to express support for Segment 213 so that the Project would be located farther from their homes and mitigate impacts on agriculture. Comparing Segment 213 to its equivalent route shows that 213 avoids more human impacts, but the equivalent route avoids more potential environmental impacts.[17] Segment 213 provides a net reduction of four residences within 300 feet of the transmission line, but it is near a residence on Kenwood Avenue. To allow for a possible alignment that mitigates the impacts on this homestead, the Commission will expand the route width 2,700 feet east from Segment 213 where the route travels north–south along Kenwood Avenue. Xcel must consult with those affected as described in ordering paragraph 10. With the expanded route width, the Commission will incorporate Route Segment 213 into its designated route.

c. Route Segment 237

Route Segment 237 avoids multiple residences, avoids tree removal, and avoids locating the Project near an apiary. Initially, Route Segment 237 appeared likely to interfere with the operation of nearby center-pivot irrigation systems. The Commission examined maps of the irrigation systems included in the EIS and determined that Route Segment 237 would enable an alignment where the placement of necessary structures would not interfere with the existing irrigation systems. For these reasons, the Commission will incorporate Route Segment 237 into its designated route.

d. 135th Street in Stearns County

To further mitigate potential impacts on a property owner and improve the designated route, the Commission will place the east–west route alignment on the south side of 135th street in Stearns County as described in ordering paragraph 12.l.

e. County Road 7 in Stearns County

To further mitigate potential impacts on both homesteads and a daycare located along County Road 7, in Stearns County, the Commission will require the route alignment to cross over the road as described in ordering paragraph 12.l.

2. Permit Conditions

The ALJ Report stated that the general route permit conditions, as modified by Findings 675 and 676, are appropriate for the Project and would protect human life and environmental features in the Project area. Specifically, the ALJ recommended inclusion of Xcel's proposed revisions to the following sections of the Draft Route Permit: 4, 5, 5.3.1, 5.3.11, 9.1, and 9.2, while also recommending the inclusion of new special conditions in 6.1 (regarding vegetation removal prior to a plan and profile submission) and 6.2 (regarding substation construction).

[17] *See* Final EIS at 288, Table 7-20.

EERA maintained its support for adopting the modified Findings 696, 697, and 698 and incorporating resulting, related permit conditions to mitigate potential impacts identified and discussed in the FEIS.[18]

The DNR recommended that any route permit include conditions requiring:

- coordination with the U.S. Fish and Wildlife Service;
- wildlife-impact-mitigating design for any illuminated structures;
- no use of dust-control products containing calcium chloride or magnesium chloride;
- Xcel to consult with the DNR to determine if the Project will impact any calcareous fens;
- use of wildlife-friendly erosion control products; and
- ongoing coordination with DNR on appropriate use of avian flight diverters.

The DNR also expressed concerns related to vegetation removal, specifically identifying potential impacts to floodplains and designated trout streams. The DNR supported winter tree clearing to avoid direct impacts to nesting birds and roosting bats and stated that the route permit should require this best practice.

a. Commission Action on Permit Conditions

The Commission finds that most of the permit conditions recommended by the ALJ for inclusion in the Draft Route Permit are reasonable. However, the Commission will not adopt all of the permit conditions recommended by the ALJ.

The Commission will exclude from the Project's Route Permit the recommended conditions in the following Draft Route Permit sections: 5.1, because it is inconsistent with Minn. Stat. § 216E; and 5.3.1., because it appears to reduce reasonable notice requirements. However, due to the potential for miscommunication or misunderstanding between landowners and Xcel's individual land agents, the Commission will require Xcel to provide landowners with the contact information for its senior land agent as described in ordering paragraph 13.

The Commission will not adopt the language recommended to effectuate tacit Commission authorization related to approval of certain compliance filings. Although adopting the recommended language may create efficiencies, it also increases the risk of enabling impacts that could be avoided or mitigated.

Furthermore, the Commission will incorporate into the Route Permit the special permit conditions recommended by EERA in its January 29, 2025 comments. These permit conditions serve to mitigate impacts identified in the FEIS (including the DNR's recommended permit conditions) and it is reasonable to include them in the Route Permit with the modifications described in ordering paragraph 12.h. These modifications are appropriate because they will preserve flexibility to avoid unintended or unnecessary outcomes while still reasonably mitigating the potential impacts addressed by the permit conditions.

[18] *See* EERA's January 29, 2025 comments at Attachment A.

The Commission finds that two additional permit conditions are justified by the record. First, to further mitigate potential impacts to property along portions of the designated route, the Commission will amend the Route Permit as described in ordering paragraph 12.j. Second, to further mitigate potential impacts of relocating existing distribution lines on residences or irrigated fields, the Commission will require Xcel to explore possible co-location on Xcel's structures as described in ordering paragraph 12.k.

E. Supplemental Notice of Comment Period

On March 14, 2025, the Commission requested comments on four different route scenarios and line configurations along the proposed Blue Route near the City of Franklin and the Minnesota River, and asked that commenters provide a careful technical feasibility, reliability, and cost review of each of the four options.

1. Comments in Response

Xcel explained that each of the four options would introduce new issues for consideration. Although Xcel's preliminary evaluation of the options indicated that each may be feasible, that evaluation was not determinative. According to Xcel, each of the four options would add significant cost to the project, cause delay, and ultimately may not provide the anticipated benefits that would justify the increased costs. Xcel expressed further concern about the four options because the Project would operate as a radial line supporting interconnection of 2,000 MW or more, which creates a heightened concern about ensuring reliability. Due to this characteristic, Xcel attempted to limit crossings of existing lines and did not plan for the Project to co-circuit with existing lines, both of which would increase reliability risks and create additional challenges when conducting maintenance on the Project and existing lines, which Xcel noted could increase costs and worker safety concerns. Accordingly, Xcel did not recommend any of the four options.

The Lower Sioux Indian Community responded expressing its concern with a known historical site identified as 21RW0001 that it had identified during EIS scoping and that was discussed in the EIS. As provided in the Final EIS, Site 21RW0001 is a Native American burial mound site consisting of a single mound. The site is reported to have been destroyed by the development of a housing complex and gravel pit. In addition, the Project would parallel an existing transmission line that intersects the site.

To mitigate potential impacts, the Lower Sioux Indian Community recommended that the proposed east–west alignment along 320th Street be shifted south and the north–south alignment be shifted east in the 21RW0001 area. Additionally, the Lower Sioux Indian Community recommended that all construction activities in that area include a tribal monitoring component.

In response to the Lower Sioux Indian Community's comments, Xcel indicated that it intends to thoroughly assess the extent and condition of Site 21RW001 by conducting field surveys prior to construction with a commitment to tribal participation in these surveys and the employment of tribal monitors near the Minnesota River crossing and other key locations during the Project's construction. Additionally, Xcel Energy committed to implementing an Unanticipated Discoveries Plan during construction.

Birch Coulee Solar, LLC filed reply comments in this matter, asserting that one or more of the proposed options one through four would adversely impact the proposed Birch Coulee Solar Project, which has an active site permit application with the Commission. Accordingly, Birch Coulee Solar, LLC did not support incorporating any of the four configurations into the Project's route.

2. Commission Action

a. Special Permit Condition

Due to the potential impacts the Project may have on culturally sensitive areas including Site 21RW0001 and sites near the Minnesota River, the Commission will require the route permit to include a special permit condition as shown below:

> The Permittee is required to coordinate with the Lower Sioux Indian Community (Lower Sioux) and Bois Forte Band of Chippewa (Bois Forte)[[19]] during preconstruction and construction activities that are within a buffer of 250 yards of known historical and culturally sensitive areas including, but not limited to, Site 21RW0001, and sites near the Minnesota River. Coordination efforts must include, but are not limited to, Tribal construction monitors. The Permittee must file a preconstruction filing at least 14 days prior to the preconstruction meeting describing the coordination that occurred between the Xcel Energy and the Lower Sioux and Bois Forte. Xcel Energy must also describe the mitigation and routing strategies taken to avoid impacting the culturally sensitive areas.

b. Expanded Route Width

For the purpose of potentially identifying an alternative alignment that reduces environmental, cultural, historical, and human impacts, the Commission will expand the Project's route width near alternative alignment one (AA1) and the City of Franklin as described in ordering paragraph 11. Xcel must engage in the consultations and reporting described in ordering paragraph 11.

ORDER

1. The Commission adopts the administrative law judge's findings of fact, conclusions of law, and recommendations to the extent consistent with the decisions below.

2. The Commission adopts the following exceptions and clarifications[20] to the ALJ Report:

   a. E4;
   b. E5 ;
   c. E6;
   d. E7;

[19] The Boise Forte Band of Chippewa responded to Xcel's Project notification letter and recommended that Tribal monitors be present during ground disturbing activities within a buffer of 250 yards of known historical sites and near the Minnesota River. *See* ALJ Report at FOF 229.

[20] The specific exceptions and clarifications adopted by the Commission can be found in Attachment D, Table 2, of staff briefing papers filed on March 31, 2025.

e. E8;
f. E9;
g. E15;
h. E22; and
i. E24–E33.

3. The Commission adopts the following exceptions and clarifications to the ALJ Report:

a. E1;
b. E2;
c. E3;
d. E11;
e. E13;
f. E14;
g. E16;
h. E17;
i. E18;
j. E19;
k. E20;
l. E21; and
m. E23.

4. The Commission determines that the Final EIS is adequate, in that it: (i) addresses the issues and alternatives raised in scoping; (ii) provides responses to substantive comments received on the Draft EIS, and (iii) was prepared in compliance with Minn. R. chapter 7850.

5. The Commission grants a certificate of need for the Minnesota Energy Connection Project.

6. The Commission conditions its certificate of need determination on requirements that Xcel Energy:

- File a final cost number or cap amount within 90 days of the Commission's Order determining the route.
- Wait until the first scheduled rate case after the Project is placed in-service to request to recover any cost overruns from Minnesota ratepayers.
- Fully justify the reasonableness of recovering any cost overruns of the Project from Minnesota ratepayers. Xcel Energy must justify any costs (including operations-and-management expense, ongoing capital expense—including revenue requirements related to capital included in rate base—insurance expense, land-lease expense, and property/production tax expense) that are higher than forecasted in this proceeding. Xcel Energy bears the burden of proof in any future regulatory proceeding related to the recovery of costs above those forecasted in this proceeding.

- File updates regarding the composition of voltage support equipment (*i.e.*, static synchronous compensators (STATCOMs) versus interconnected solar facilities) after resource determinations have been made.

7. The Commission grants a route permit for the Minnesota Energy Connection Project and designates the following route:

   EERA Recommended Route with Xcel's Modified Alternative 223; Alternative 212 modified so that the alignment is on the south side of Minnesota Highway 68; Alternative 213; and Alternative 237.

8. The Commission authorizes a 150-foot route width for the Green Route and a 1,000-foot route width for the remainder of the route including the expanded route widths identified in the Expanded Route Width Areas Table under the Staff Discussion section of the briefing papers.

9. Given the congestion and potential for viable alternative routes south, the approved route width at the corner of the Modified Blue Route and Co. Rd. 7 shall be expanded 1000 feet.

10. For the purpose of identifying an alternative alignment within the expanded route width described below that reduces environmental and human impacts, the Permittee shall consult with the affected Townships, BWSR (particularly those responsible for managing conservation easements in this area), DNR, and the affected landowners. The Permittee shall file with the Commission the results of the consultations and any modifications to the transmission line alignment that have been mutually agreed to within the expanded route width.

    The route width is expanded a distance of 2,700 feet to the east of the Alternative 213 alignment to allow for a possible alignment along the field line for the purpose of mitigating impacts on the homestead at 31252 Kenwood Avenue.

11. For the purpose of identifying an alternative alignment within the expanded route width below that reduces environmental, cultural, historical and human impacts, the Permittee shall coordinate with the Lower Sioux Indian Community (particularly their leaders responsible for tribal historic preservation, land management, and natural resources), the affected Townships, BWSR (particularly those responsible for managing conservation easements in this area), DNR, and the affected landowners. The Permittee shall file with the Commission the results of the coordination and any modifications to the transmission line alignment that have been mutually agreed to within the expanded route width.

    The route width along the Modified Blue Route and Alternative AA1 between Franklin and where the Modified Blue Route crosses Porter Avenue is expanded as follows:

    - From State Highway 19 South across the river valley the route width is extended east from the Modified Blue Route alignment an additional 2500 feet (this is intended to encompass the alternatives recommended by Mark Hogan in his November 25, 2024 comments);
    - To the east of Ranch Avenue, the route width is extended south from the

Modified Blue Route alignment an additional 3500 feet; and to the east of Porter Avenue, the route width is expanded to include all of the property owned by Cletus Gewerth and the residence east of Porter Avenue.

In the coordination described above, the Permittee shall also address and consider possible triple circuiting with the existing 69-kV line or lower H-frame structures if there is consensus that doing so will mitigate impacts.

12. The Commission adopts the following special permit conditions:[21]

a. The Permittee is required to coordinate with the Lower Sioux Indian Community (Lower Sioux) and Bois Forte Band of Chippewa (Bois Forte) during preconstruction and construction activities that are within a buffer of 250 yards of known historical and culturally sensitive areas including, but not limited to, Site 21RW0001, and sites near the Minnesota River. Coordination efforts must include, but are not limited to, Tribal construction monitors. The Permittee must file a preconstruction filing at least 14 days prior to the preconstruction meeting describing the coordination that occurred between the Xcel Energy and the Lower Sioux and Bois Forte. Xcel Energy must also describe the mitigation and routing strategies taken to avoid impacting the culturally sensitive areas.
b. P2;
c. P5;
d. P6;
e. P7;
f. P8;
g. P9;
h. P11 through P17, including the following modifications: P17 modified to require filing of either a decommissioning plan or an explanation of why such a plan is not appropriate; P13 modified to require use of "appropriate structures" [replacing "wider, shallower structures"]: and P11 modified to strike "potential mitigation required for";
i. P18;
j. Irrigation. Amend permit section 5.4.1 regarding grounding to require the Permittee to provide educational materials on appropriate grounding of structures and operation of equipment near the powerline to all landowners with permanent metal structures and irrigation systems within 75 feet of the alignment. Content of the educational materials shall be developed in the Agricultural Impact Mitigation Plan and must include contact information for a representative of the Permittee who will work with landowners to address and rectify any induced current problems that arise because of transmission line operation at the Permittee's expense;

[21] For the text of permit conditions represented as "P[numeral]," consult Attachment D, Table 1, of staff briefing papers.

k. Co-locate. Xcel Energy shall coordinate with distribution owners to relocate existing distribution lines where those lines would be in conflict with the Project's alignment and where technically feasible and where doing so will mitigate impacts on residences or irrigated fields, the Permittee shall work with local power companies to co-locate the local power company distribution structures on the Permittee's structures; and

l. **135th St. in Stearns Co**. At the intersection of 108th Ave. and 135th St. in Stearns County, the designated route's alignment should cross over to the south side of 135th St. where it proceeds west. The purpose of the alignment is to mitigate the impact on the property owned by Tom Libbesmeier; and **Stearns County Road 7.** If a route is selected along Stearns County Road 7, the alignment shall be modified to cross over the road to the opposite sides of homesteads and the daycare along that section of the route.

13. The Commission amends permit paragraph 5.1 regarding the route permit distribution to landowners to require the Permittee to also provide to landowners contact information for:

    a. the specific land agents of the Permittee who will be working with the specific landowners; and
    b. the senior land agent of the Permittee.

14. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Will Seuffert
Executive Secretary

This document can be made available in alternative formats (e.g., large print or audio) by calling 651.296.0406 (voice). Persons with hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR THE
MINNESOTA ENERGY CONNECTION PROJECT

A HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
SHERBURNE, STEARNS, KANDIYOHI, MEEKER, RENVILLE, REDWOOD, AND LYON COUNTIES

ISSUED TO
NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY

PUC DOCKET NO. E-002/TL-22-132

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

Northern States Power Company d/b/a Xcel Energy

Northern States Power Company d/b/a Xcel Energy (Permittee) is authorized by this route permit to construct and operate approximately 176 miles of 345-kilovolt double-circuit high-voltage transmission line and associated facilities.

The high-voltage transmission line and associated facilities shall be built within the route identified in this route permit and as portrayed on the route maps and in compliance with the conditions specified in this route permit.

Approved and adopted this 10th day of June, 2025

BY ORDER OF THE COMMISSION

Will Seuffert,
Executive Secretary

CONTENTS

ATTACHMENTS

1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Northern States Power Company d/b/a Xcel Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This route permit authorizes the Permittee to construct and operate a 345-kilovolt double-circuit high-voltage transmission line and associated facilities as identified in the attached route maps, hereby incorporated into this document (Minnesota Energy Connection Project, henceforth known as Transmission Facility).

1.1 Pre-emption

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole route approval required for construction of the transmission facilities and this route permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose governments.

2 TRANSMISSION FACILITY DESCRIPTION

The transmission facility includes the construction and operation of approximately 176 miles of new 345-kilovolt double-circuit high-voltage transmission line and associated facilities, including modifications to existing substations and construction of a terminal substation (Garvin Substation), an intermediate substation, and a voltage support substation, as identified in the attached route maps.

2.1 Structures

The structure types as described in the Permittee's route permit application are detailed in the table below.

Line Type	Structure		Foundation Diameter (feet)	Structure Height (feet)	Average Span Between Structures (feet)
	Type	Material			
345-kilovolt Double-Circuit, Tangent, Small and Medium Angles	Monopole with Davit Arms	Weathering Steel	7-10	90-160	1,000

Line Type	Structure		Foundation Diameter (feet)	Structure Height (feet)	Average Span Between Structures (feet)
	Type	Material			
345-kilovolt Double-Circuit, Large Angle and Dead-End	Two Poles with Davit Arms	Weathering Steel	Up to 12	90-160	1,000

2.2 Conductors

Conductor types may include:

- a double-bundled (twisted-pair) 2x636 kcmil aluminum conductor steel reinforced or similar performance with a capacity of 3,000 amps or greater.

2.1 Substations and Associated Facilities

The associated facilities authorized by this Route Permit include:

- Expansion of the existing Sherco Solar West Substation and modifications to both the Sherco Solar West Substation and the existing Sherco Substation, including the installation of new substation equipment such as: breakers, switches, continuously variable transmissions (CVTs), arresters, and bus work.

- Construction of an approximately 30-acre voltage support substation, including the installation of a Series Capacitor, one 150-megavolt amp reactive power (MVAR) static synchronous compensator (STATCOM) system per line, appropriate voltage support equipment, and construction of a control building and an access road.

- Construction of an approximately 20-acre intermediate substation with a control building and an access road.

- Construction of an approximately 40-acre terminal substation (Garvin Substation), including the installation of two 116/-58 MVAR STATCOMS, shunt reactors, breakers, switches, CVTs, arresters, bus work, and construction of a control building and an access road.

3 DESIGNATED ROUTE

The route and route widths designated by the Commission are summarized below and shown on the detailed route maps attached to this route permit (Designated Route). The Designated Route can be summarized as follows:

> The northernmost endpoint of the route begins at the existing Sherco Solar West Substation near the city of Becker, Minnesota, and proceeds southwest for approximately 176 miles through Sherburne, Stearns, Kandiyohi, Meeker, Renville, Redwood, and Lyon counties ending at the southernmost endpoint, a new Garvin Substation near the town of Garvin, Minnesota.

The Designated Route generally has an authorized route width of 1,000 feet with areas of reduced or expanded route width as identified in the table below.

Area	Route Width	Approximate Length of Route (mile)	Route Map Number(s) in Attachment 3
Sherco to Sherco Solar West Substations	150 feet	3.14	Map 1
Voltage Support Substation	1.25 mile	15.70	Maps 25 to 31
Intermediate Substation 1	1.25 mile	5.30	Maps 59 to 61
Intermediate Substation 2	1.01 mile	2.86	Maps 56 to 58
Garvin Substation	0.48 mile	---	Map 68
Conservation Easement	0.80 mile	1.92	Map 45
Special Expanded Route Width A	2,000 feet	1.05	Map 7
Special Expanded Route Width B	3,200 feet	1.00	Map 50
Special Expanded Route Width C	Variable 3,000-4,000 feet	2.46	Maps 44 and 45

The Designed Route includes an anticipated alignment and a right-of-way. The right-of-way is the physical land needed for the safe operation of the transmission line. The Permittee shall locate the alignment and associated right-of-way within the Designated Route unless otherwise authorized by this route permit or the Commission. The Designated Route provides the Permittee with flexibility for minor adjustments of the alignment and right-of-way to accommodate landowner requests and unforeseen conditions.

Any modifications to the Designated Route or modifications that would result in right-of-way placement outside the Designated Route shall be specifically reviewed by the Commission in accordance with Minn. R. 7850.4900 and Section 10 of this route permit.

3.1 Special Expanded Route Width A (Saint Augusta Area)

The route width shall be expanded an additional 1,000 feet southeast from the corner of the route at the intersection of 228th Street and County Road 7 where the route turns south along Country Road 7 to allow greater flexibility in determining an appropriate transmission alignment (Attachment 3, Map 7).

3.2 Special Expanded Route Width B (Kenwood Avenue Area)

The route width shall be expanded an additional 2,200 feet east from Kenwood Avenue where the route follows Kenwood Avenue north from 310th Street, for the purpose of identifying an alternative alignment along the field line to mitigate impacts on the homestead at 31252 Kenwood Avenue and that reduces environmental and human impacts (Attachment 3, Map 50).

The Permittee shall consult with the affected townships, BWSR, DNR and the affected landowners, and shall file with the Commission the results of the consultations and any modifications to the transmission line alignment that have been mutually agreed to within the expanded route width.

3.3 Special Expanded Route Width C (Minnesota River Crossing Area)

The approved route width shall be expanded (1) an additional 2,500 feet east starting at County Road 19 and south across the Minnesota River Valley; (2) an additional 3,500 feet south along the approved route between the Minnesota River Valley and Porter Avenue; and (3) east from Porter Avenue to include all of the property owned by Cletus Gewerth and the residence east of Porter Avenue, for the purpose of identifying an alternative alignment that reduces environmental, cultural, historical and human impacts (Attachment 3, Maps 44 and 45).

The Permittee shall consult with the Lower Sioux Indian Community (specifically their leaders responsible for tribal historic preservation, land management, and natural resources), affected townships, BWSR (specifically those responsible for managing conservation easements in the area), DNR, and the affected landowners concerning the transmission line alignment in this area. This includes assessing whether triple-circuiting with the existing 69-kilovolt transmission line or employing H-frame structures would increase or decrease impacts in the area. The Permittee shall file with the Commission the results of the consultations and any mutually agreed modifications to the transmission line alignment within the expanded route width.

4 RIGHT-OF-WAY

This route permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line up to 150 feet in width. In certain locations, a wider right-of-way may be required due to site-specific conditions, specialty structures, or both. The permanent right-of-way is typically 75 feet on both sides of the transmission line measured from its centerline or alignment.

The anticipated alignment is intended to minimize potential impacts relative to the criteria identified in Minn. R. 7850.4100. The final alignment must generally conform to the anticipated alignment identified on the route maps unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this route permit.

Any right-of-way or alignment modifications within the Designated Route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.2 of this route permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100, and the other requirements of this route permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

4.1 Special Alignment A

The east-west alignment of the transmission line in Redwood County shall be placed on the south side of Highway 68 starting at the intersection of County Highway 7 and State Highway 68 and extending west for approximately 1.5 miles (Attachment 3, Map 56).

4.2 Special Alignment B

The east-west alignment of the transmission line in Stearns County shall be placed on the south side of 135th Street between 108th Avenue and 113th Avenue (Attachment 3, Map 13).

4.3 Special Alignment C

The transmission alignment along County Road 7 in Stearns County shall be modified to cross over the road to the opposite sides of homesteads and the daycare along that section of the route (Attachment 3, Maps 7 and 8).

5 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the Transmission Facility over the life of this route permit.

5.1 Route Permit Distribution

Within 30 days of issuance of this route permit, the Permittee shall provide all affected landowners with a copy of this route permit, the complaint procedures, the contact information of the designated land agents of the Permittee assigned to the respective landowners, and the contact information of the senior land agent of the Permittee. An affected landowner is any landowner or designee that is within or adjacent to the Designated Route. In no case shall a landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. The Permittee shall also provide a copy of this route permit and the complaint procedures to the applicable regional development commissions, county environmental offices, and city and township clerks. The Permittee shall file with the Commission an affidavit of its route permit and complaint procedures distribution within 30 days of issuance of this route permit.

5.2 Access to Property

The Permittee shall notify landowners prior to entering or conducting maintenance within their property, unless otherwise negotiated with the landowner. The Permittee shall keep records of compliance with this section and provide them upon the request of the Minnesota Department of Commerce (Commerce) or Commission staff.

5.3 Construction and Operation Practices

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the permitting record for this Transmission Facility unless this route permit establishes a different requirement in which case this route permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this route permit during construction of the Transmission Facility. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative at least 14 days prior to the pre-construction meeting. The Permittee shall provide the field representative's contact information to affected landowners, local government units and other interested persons at least 14 days prior to the pre-construction meeting. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, local government units and other interested persons. The Permittee shall file with the Commission an affidavit of distribution of its field representative's contact information at least 14 days prior to the pre-construction meeting and upon changes to the field representative.

5.3.2 Employee Training - Route Permit Terms and Conditions

The Permittee shall train all employees, contractors, and other persons involved in the Transmission Facility construction regarding the terms and conditions of this route permit. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.3 Independent Third-Party Monitoring

Prior to any construction, the Permittee shall propose a scope of work and identify an independent third-party monitor to conduct Project construction monitoring on behalf of the Department of Commerce. The scope of work shall be developed in consultation with and approved by the Department of Commerce. This third-party monitor will report directly to and will be under the control of the Department of Commerce with costs borne by the Permittee. Commerce staff shall keep records of compliance with this section and will ensure that status reports detailing the construction monitoring are filed with the Commission in accordance with scope of work approved by the Department of Commerce.

5.3.4 Public Services, Public Utilities, and Existing Easements

During Transmission Facility construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these shall be temporary, and the Permittee shall restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local

entities to determine the most appropriate mitigation measures if not already considered as part of this route permit.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.5 Temporary Workspace

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. The Permittee shall obtain temporary easements outside of the authorized transmission line right-of-way from affected landowners through rental agreements. Temporary easements are not provided for in this route permit.

The Permittee may construct temporary driveways between the roadway and the structures to minimize impact using the shortest route feasible. The Permittee shall use construction mats to minimize impacts on access paths and construction areas. The Permittee shall submit the location of temporary workspaces and driveways with the plan and profile pursuant to Section 9.2.

5.3.6 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. The Permittee shall limit construction and maintenance activities to daytime working hours to the extent practicable.

5.3.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Transmission Facility during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. The Permittee shall place structures at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.8 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program. If construction of the Transmission Facility disturbs more than one acre of land or is sited in an area designated by the Minnesota Pollution Control Agency as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System Construction Stormwater Permit from the Minnesota Pollution Control Agency that provides for the development of a Stormwater Pollution Prevention Plan that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the Transmission Facility shall be returned to pre-construction conditions.

5.3.9 Wetlands and Water Resources

The Permittee shall develop wetland impact avoidance measures and implement them during construction of the Transmission Facility. Measures shall include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, the Permittee shall construct in wetland areas during frozen ground conditions where practicable and according to permit requirements by the applicable permitting authority. When construction during winter is not possible, the Permittee shall use wooden or composite mats to protect wetland vegetation.

The Permittee shall contain soil excavated from the wetlands and riparian areas and not place it back into the wetland or riparian area. The Permittee shall access wetlands and riparian areas using the shortest route feasible in order to minimize travel through wetland areas and prevent unnecessary impacts. The Permittee shall not place staging or stringing set up areas within or adjacent to wetlands or water resources, as practicable. The Permittee shall assemble power pole structures on upland areas before they are brought to the site for installation.

The Permittee shall restore wetland and water resource areas disturbed by construction activities to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

The Permittee shall meet all requirements of the U.S. Army Corps of Engineers, Minnesota Department of Natural Resources, and local units of government.

5.3.10 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

The Permittee shall remove tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission line. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission line or impede construction.

5.3.11 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner at least 14 days prior to pesticide application on their property. The Permittee may not apply any pesticide if the landowner requests that there be no application of pesticides within the landowner's property. The Permittee shall provide notice of pesticide application to landowners and beekeepers operating Minnesota Department of Agriculture-registered apiaries within three miles of the pesticide application area at least 14 days prior to such application. The Permittee shall use the Minnesota Department of Agriculture's Apiary Registry (https://mn.beecheck.org/map) to identify apiaries for purposes of compliance with this condition. The Permittee shall keep pesticide communication and application records and provide them upon the request of Commerce or Commission staff.

5.3.12 Invasive Species

The Permittee shall employ best management practices to avoid the potential introduction and spread of invasive species on lands disturbed by Transmission Facility construction activities. The Permittee shall develop an Invasive Species Prevention Plan and file it with the Commission

at least 14 days prior to the pre-construction meeting. The Permittee shall comply with the most recently filed Invasive Species Prevention Plan.

5.3.13 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.14 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city, or township roads that will be used during the construction phase of the Transmission Facility. Where practical, existing roadways shall be used for all activities associated with construction of the Transmission Facility. Oversize or overweight loads associated with the Transmission Facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the fewest number of site access roads required. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.15 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Transmission Facility. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize Transmission Facility impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, the Permittee shall train workers about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented

cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.3.16 Avian Protection

The Permittee in cooperation with the Minnesota Department of Natural Resources shall identify areas of the transmission line where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices. The Permittee shall submit documentation of its avian protection coordination with the plan and profile pursuant to Section 9.2.

5.3.17 Restoration

The Permittee shall restore the right-of-way, temporary workspaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the Transmission Facility. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall file with the Commission a Notification of Restoration Completion.

5.3.18 Cleanup

The Permittee shall remove and properly dispose of all waste and scrap from the right-of-way and all premises on which construction activities were conducted upon completion of each task. The Permittee shall remove and properly dispose of all personal litter, including bottles, cans, and paper from construction activities on a daily basis.

5.3.19 Pollution and Hazardous Wastes

The Permittee shall take all appropriate precautions to protect against pollution of the environment. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.20 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.4 Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliampere rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code. The Permittee shall address and rectify any induced current problems that arise during transmission line operation at its expense.

The Permittee shall provide education materials on appropriate grounding of structures and operation of equipment near the transmission line to all landowners with permanent metal structures and irrigation systems within 75 feet of the alignment. Content of the educational materials shall be developed in the Agricultural Impact Mitigation Plan and must include contact information for a representative of the Permittee who will work with landowners to address and rectify any induced current problems that arise because of transmission line operation.

5.4.2 Electric Field

The Permittee shall design, construct, and operate the transmission line in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of

the Transmission Facility, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the Transmission Facility. The Permittee shall keep records of compliance with this section and provide them upon the request of Commerce or Commission staff.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The Permittee shall design the transmission line and associated facilities to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Transmission Facility and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. The Permittee shall submit a copy of such permits upon the request of Commerce or Commission staff.

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission an Other Permits and Regulations Submittal that contains a detailed status of all permits, authorizations, and approvals that have been applied for specific to the Transmission Facility. The Other Permits and Regulations Submittal shall also include the permitting agency or authority, the name of the permit, authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

6 SPECIAL CONDITIONS

The special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1 Tribal Monitoring

The Permittee is required to coordinate with the Lower Sioux Indian Community (Lower Sioux) and Bois Forte Band of Chippewa (Bois Forte) during preconstruction and construction activities that are within a buffer of 250 yards of known historical and culturally sensitive areas including, but not limited to, Site 21RW0001, and sites near the Minnesota River. Coordination efforts must include, but are not limited to, Tribal construction monitors. The Permittee must submit a filing at least 14 days before the preconstruction meeting detailing the coordination that took place between the Lower Sioux and Bois Forte. The Permittee must also describe the mitigation and routing strategies taken to avoid impacting culturally sensitive areas.

6.2 Calcareous Fens

The Permittee shall work with the DNR to determine if any impacts to calcareous fen will occur during any phase of the Project.

6.3 Vegetation Clearing Before Construction

If the Permittee will clear vegetation for any portion of the Transmission Facility prior to completion of the design necessary to provide a plan and profile contemplated under Section 9.2, the Permittee shall file with the Commission at least 14 days prior to such vegetation clearing activities:

- If applicable, any vegetation management plan that is applicable to any portion of the Transmission Facility being proposed for vegetation clearing;

- A map showing the area proposed for vegetation removal and its location within the Designated Route and compared to the right-of-way identified in this route permit;

- A statement of confirmation that the Permittee has obtained, or will obtain before commencing, necessary land rights and agency permits for the proposed vegetation removal. The required permits must be provided prior to vegetation clearing.

- The Permittee's plan for notifying landowners in the identified area(s) and for providing contact information for the Permittee's field representative; and

- If the Permittee has made any modifications to the right-of-way or alignment within the Designated Route from that identified in this route permit, the Permittee shall demonstrate that the right-of-way to be cleared of vegetation will be located so as to

have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way and alignment identified in this route permit.

6.4 City of Saint Augusta

The Permittee shall coordinate with the city of Saint Augusta to further understand the Project's potential impacts to the city's ongoing residential developments. Proof of this coordination shall be filed 14 days prior to the plan and profile submittal for this location.

6.5 Substation Construction

Notwithstanding any other requirements in this Route Permit, the Permittee may commence construction of the substations identified in Section 2.1 of this Route Permit, provided that Permittee complies, as applicable, with Sections 9.1 and 9.2 of this Route Permit with respect to the specific scope of the construction activities sought to be conducted by Permittee.

6.6 Public Safety Emergency Response Plan

The Permittee shall file a public version of its public safety emergency response plan 14 days prior to its last plan and profile submittal.

6.7 Groundwater

The Permittee shall conduct geotechnical evaluations prior to Project construction to identify locations where potential groundwater impacts could occur. If shallow depths to groundwater resources are identified during geotechnical design of the Project, the Permittee shall employ appropriate structures with wider, shallower foundations. These locations must be shown on the plan and profile submitted for the Project, and appropriate mitigation measures must be identified as part of the filing.

6.8 Protected Species

The Permittee shall coordinate with the DNR to avoid adverse impacts to protected species and implement appropriate, species-specific BMPs if project activities take place during any of the species' active seasons. Proof of this coordination shall be filed with the respective plan and profile submittal(s) for the Project.

6.9 Lighting

The Permittee shall utilize downward facing lighting on associated facilities. If LED lights are used, the Permittee shall follow MnDOT Approved Products for luminaries and a nominal color temperature below 2700K. If available, the Permittee shall choose products that have the lowest number for backlight and glare.

6.10 Dust Control

The Permittee shall not use dust control products that contain chlorides, to avoid the potential for chloride products accumulating to levels that are toxic to plants and wildlife.

6.11 Decommissioning Plan

The Permittee shall file a decommissioning plan or an explanation of why one is not appropriate 14 days prior to the last preconstruction meeting for the Project.

6.12 Distribution Line Co-location

The Permittee shall coordinate with distribution line owners to relocate existing distribution lines that would be in conflict with the Transmission Facility alignment and where relocation is technically feasible. In cases where it is technically feasible and will mitigate impacts on residences or irrigated fields, the Permittee shall work with distribution line owners to co-locate the distribution lines on the Permittee's structures.

6.13 Labor Statistic Reporting

The Permittee shall file quarterly Labor Statistic Reports with the Commission within 45 days of the end of the quarter regarding construction workers that participated in the construction of the Project. The Labor Statistic Reports shall:

A. detail the Permittee's efforts and the site contractor's efforts to hire Minnesota workers; and

B. provide an account of:

    1. the gross number of hours worked by or full-time equivalent workers who are Minnesota residents, as defined in Minn. Stat. § 290.01, subd. 7;

2. the gross number of hours worked by or full-time equivalent workers who are residents of other states, but maintain a permanent residence within 150 miles of the Project; and

3. the total gross hours worked or total full-time equivalent workers.

The Permittee shall work with its contractor to determine the suitable reporting metric. The report may not include personally identifiable data.

6.14 Prevailing Wage

The Permittee, its contractors, and subcontractors shall pay no less than the prevailing wage rate as defined in Minn. Stat. § 177.42 and shall be subject to the requirements and enforcement provisions under Minn. Stat. §§ 177.27, 177.30, 177.32, 177.41 to 177.435, and 177.45. The Permittee shall keep records of contractor and subcontractor pay and provide them at the request of Commerce or Commission staff.

7 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this route permit the Permittee shall file a Failure to Construct Report and the Commission shall consider suspension of this route permit in accordance with Minn. R. 7850.4700.

8 COMPLAINT PROCEDURES

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission the complaint procedures that will be used to receive and respond to complaints. The complaint procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this route permit.

Upon request, the Permittee shall assist Commerce or Commission staff with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this route permit is a failure to comply with the conditions of this route permit. Compliance filings must be electronically filed with the Commission.

9.1 Pre-Construction Meeting

Prior to the start of construction, the Permittee shall participate in a pre-construction meeting with Commerce and Commission staff to review pre-construction filing requirements, scheduling, and to coordinate monitoring of construction and site restoration activities. Multiple pre-construction meetings and submissions under Section 9.2 are allowed. Within 14 days following the pre-construction meeting, the Permittee shall file with the Commission a summary of the topics reviewed and discussed and a list of attendees. The Permittee shall indicate in the filing the anticipated construction start date.

9.2 Plan and Profile

At least 14 days prior to the pre-construction meeting, the Permittee shall file with the Commission, and provide the Department of Commerce, and the counties where the Transmission Facility, or portion of the Transmission Facility, will be constructed with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the Transmission Facility. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this route permit.

The Permittee may not commence construction until the earlier of (i) 30 days after the pre-construction meeting or (ii) or until the Commission staff has notified the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this route permit.

If the Commission notifies the Permittee in writing within 30 days after the pre-construction meeting that it has completed its review of the documents and planned construction, and finds that the planned construction is not consistent with this route permit, the Permittee may submit additional and/or revised documentation and may not commence construction until the Commission has notified the Permittee in writing that it has determined that the planned construction is consistent with this route permit.

If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission, the Department of Commerce, and county staff at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this route permit.

9.3 Status Reports

The Permittee shall file with the Commission monthly Construction Status Reports beginning with the pre-construction meeting and until completion of restoration. Construction Status Reports shall describe construction activities and progress, activities undertaken in compliance with this route permit, and shall include text and photographs.

If the Permittee does not commence construction of the Transmission Facility within six months of this route permit issuance, the Permittee shall file with the Commission Pre-Construction Status Reports on the anticipated timing of construction every six months beginning with the issuance of this route permit until the pre-construction meeting.

9.4 In-Service Date

At least three days before the Transmission Facility is to be placed into service, the Permittee shall notify the Commission of the date on which the Transmission Facility will be placed into service and the date on which construction was completed.

9.5 As-Builts

Within 90 days after completion of construction, the Permittee shall submit to the Commission copies of all final as-built plans and specifications developed during the Transmission Facility construction.

9.6 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the Transmission Facility and each substation connected.

9.7 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following,

upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

(a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.

(b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.

(c) To sample and monitor upon the facilities easement of the property.
To examine and copy any documents pertaining to compliance with the conditions of this route permit.

10 ROUTE PERMIT AMENDMENT

This route permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this route permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required under Minn. R. 7850.4900.

11 TRANSFER OF ROUTE PERMIT

The Permittee may request at any time that the Commission transfer this route permit to another person or entity (transferee). In its request, the Permittee must provide the Commission with:

(a) the name and description of the transferee;
(b) the reasons for the transfer;
(c) a description of the facilities affected; and
(d) the proposed effective date of the transfer.

The transferee must provide the Commission with a certification that it has read, understands and is able to comply with the plans and procedures filed for the Transmission Facility and all conditions of this route permit. The Commission may authorize transfer of the route permit after affording the Permittee, the transferee, and interested persons such process as is required under Minn. R. 7850.5000.

12 REVOCATION OR SUSPENSION OF ROUTE PERMIT

The Commission may initiate action to revoke or suspend this route permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend this route permit.

ATTACHMENT 1
Complaint Handling Procedures for Permitted Energy Facilities

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT HANDLING PROCEDURES FOR
PERMITTED ENERGY FACILITIES

A. Purpose

To establish a uniform and timely method of reporting and resolving complaints received by the permittee concerning permit conditions for site or route preparation, construction, cleanup, restoration, operation, and maintenance.

B. Scope

This document describes complaint reporting procedures and frequency.

C. Applicability

The procedures shall be used for all complaints received by the permittee and all complaints received by the Minnesota Public Utilities Commission (Commission) under Minn. R. 7829.1500 or Minn. R. 7829.1700 relevant to this permit.

D. Definitions

Complaint: A verbal or written statement presented to the permittee by a person expressing dissatisfaction or concern regarding site or route preparation, cleanup or restoration, or other permit conditions. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint: A written complaint alleging a violation of a specific permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

Unresolved Complaint: A complaint which, despite the good faith efforts of the permittee and a person, remains unresolved or unsatisfactorily resolved to one or both of the parties.

Person: An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private; however organized.

E. Complaint Documentation and Processing

1. The permittee shall designate a representative responsible for filing complaints to the Commission's eDocket system. This person's name, phone number and email address shall accompany all complaint submittals. The name and contact information for the representative shall be kept current in eDockets.

2. A person presenting the complaint should, to the extent possible, include the following information in their communications:

    a. name, address, phone number, and email address;
    b. initial date of the complaint;
    c. tract, parcel number, or address of the complaint;
    d. a summary of the complaint; and
    e. whether the complaint relates to a permit violation, a construction practice issue, or other type of complaint.

3. The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:

    a. docket number and project name;
    b. name of complainant, address, phone number and email address;
    c. precise description of property or parcel number;
    d. name of permittee representative receiving complaint and date of receipt;
    e. nature of complaint and the applicable permit condition(s);
    f. summary of activities undertaken to resolve the complaint; and
    g. a statement on the final disposition of the complaint.

F. Reporting Requirements

The permittee shall commence complaint reporting at the beginning of project construction and continue through the term of the permit, unless otherwise required below. The permittee shall report all complaints to the Commission according to the following schedule:

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Public Advisor at 1-800-657-3782 (voice messages are acceptable) or publicadvisor.puc@state.mn.us. For e-mail reporting, the email

subject line should read “PUC EFP Complaint” and include the appropriate project docket number.

Monthly Reports: During project construction, restoration, and operation, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be filed by the 15th of each month to Will Seuffert, Executive Secretary, Public Utilities Commission, using the eDockets system. The eDockets system is located at: https://www.edockets.state.mn.us/EFiling/home.jsp. If no complaints were received during the preceding month, the permittee shall file a summary indicating that no complaints were received.

If a project has submitted twelve consecutive months of complaint reports with no complaints, monthly reports can terminate by a letter to eDockets notifying the Commission of such action. If a substantial complaint is received (by the company or the Commission) following termination of the monthly complaint report, as noted above, the monthly reporting should commence for a period of six months following the most recent complaint or upon resolution of all pending complaints.

If a permittee is found to be in violation of this section, the Commission may reinstate monthly complaint reporting for the remaining permit term or enact some other commensurate requirement via notification by the Executive Secretary or some other action as decided by the Commission.

G. Complaints Received by the Commission

Complaints received directly by the Commission from aggrieved persons regarding the permit or issues related to site or route preparation, construction, cleanup, restoration, or operation and maintenance will be promptly sent to the permittee.

The permittee shall notify the Commission when the issue has been resolved. The permittee will add the complaint to the monthly reports of all complaints. If the permittee is unable to find resolution, the Commission will use the process outlined in the Unresolved Complaints Section to process the issue.

H. Commission Process for Unresolved Complaints

Complaints raising substantial and unresolved permit issues will be investigated by the Commission. Staff will notify the permittee and appropriate people if it determines that the

complaint is a substantial complaint. With respect to such complaints, the permittee and complainant shall be required to submit a written summary of the complaint and its current position on the issues to the Commission. Staff will set a deadline for comments. As necessary, the complaint will be presented to the Commission for consideration.

I. Permittee Contacts for Complaints and Complaint Reporting

Complaints may be filed by mail or email to the permittee's designated complaint representative, or to the Commission's Public Advisor at 1-800-657-3782 or publicadvisor.puc@state.mn.us. The name and contact information for the permittee's designated complaint representative shall be kept current in the Commission's eDocket system.

ATTACHMENT 2
Compliance Filing Procedures for Permitted Energy Facilities

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLIANCE FILING PROCEDURE FOR
PERMITTED ENERGY FACILITIES

A. Purpose

To establish a uniform and timely method of submitting information required by Commission energy facility permits.

B. Scope and Applicability

This procedure encompasses all known compliance filings required by permit.

C. Definitions

Compliance Filing: A filing of information to the Commission, where the information is required by a Commission site or route permit.

D. Responsibilities

1. The permittee shall file all compliance filings with Will Seuffert, Executive Secretary, Public Utilities Commission, through the eDockets system. The eDockets system is located at: https://www.edockets.state.mn.us/EFiling/home.jsp

General instructions are provided on the eDockets website. Permittees must register on the website to file documents.

2. All filings must have a cover sheet that includes:

    a. Date
    b. Name of submitter/permittee
    c. Type of permit (site or route)
    d. Project location
    e. Project docket number
    f. Permit section under which the filing is made
    g. Short description of the filing

3. Filings that are graphic intensive (e.g., maps, engineered drawings) must, in addition to being electronically filed, be submitted as paper copies and on CD. Paper copies and CDs should be sent to: 1) Will Seuffert, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN 55101-2147, and 2) Department of Commerce, Energy Environmental Review and Analysis, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

The Commission may request a paper copy of any electronically filed document.

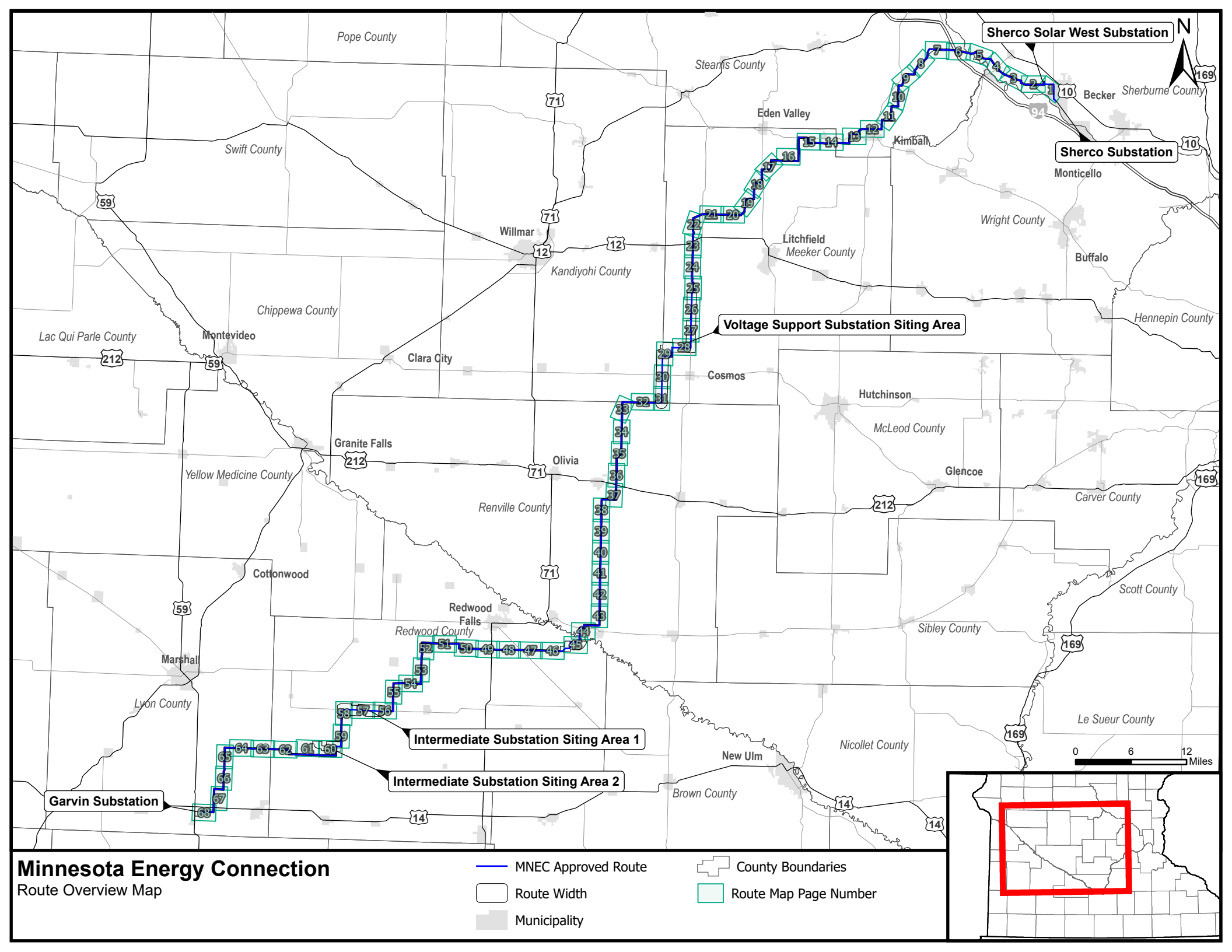
PERMIT COMPLIANCE FILINGS[1]

PERMITTEE:
PERMIT TYPE:
PROJECT LOCATION:
PUC DOCKET NUMBER:

Filing Number	Permit Section	Description of Compliance Filing	Due Date

[1] This compilation of permit compliance filings is provided for the convenience of the permittee and the Commission. It is not a substitute for the permit; the language of the permit controls.

ATTACHMENT 3
Route Permit Maps


Sherco Solar West Substation
Sherco Substation
Voltage Support Substation Siting Area
Intermediate Substation Siting Area 1
Intermediate Substation Siting Area 2
Garvin Substation
Pope County
Stearns County
Sherburne County
Swift County
Kandiyohi County
Meeker County
Wright County
Hennepin County
Chippewa County
Lac Qui Parle County
Yellow Medicine County
Renville County
McLeod County
Carver County
Redwood County
Scott County
Sibley County
Lyon County
Nicollet County
Le Sueur County
Brown County
Eden Valley
Becker
Monticello
Kimball
Litchfield
Buffalo
Willmar
Montevideo
Clara City
Cosmos
Hutchinson
Granite Falls
Olivia
Glencoe
Cottonwood
Redwood Falls
Marshall
New Ulm
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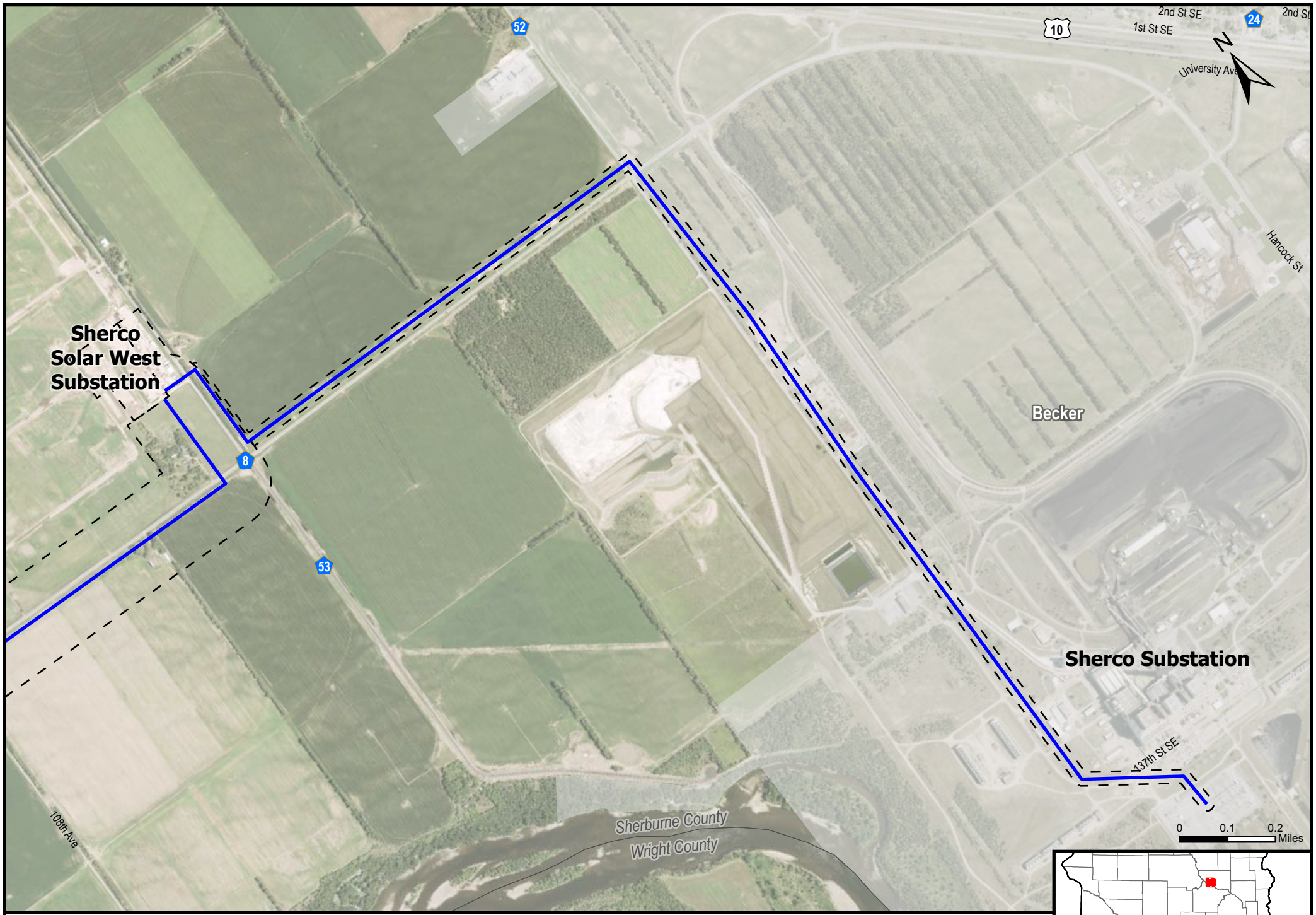
0 6 12 Miles
Minnesota Energy Connection
Route Overview Map
MNEC Approved Route
Route Width
Municipality
County Boundaries
Route Map Page Number



Minnesota Energy Connection

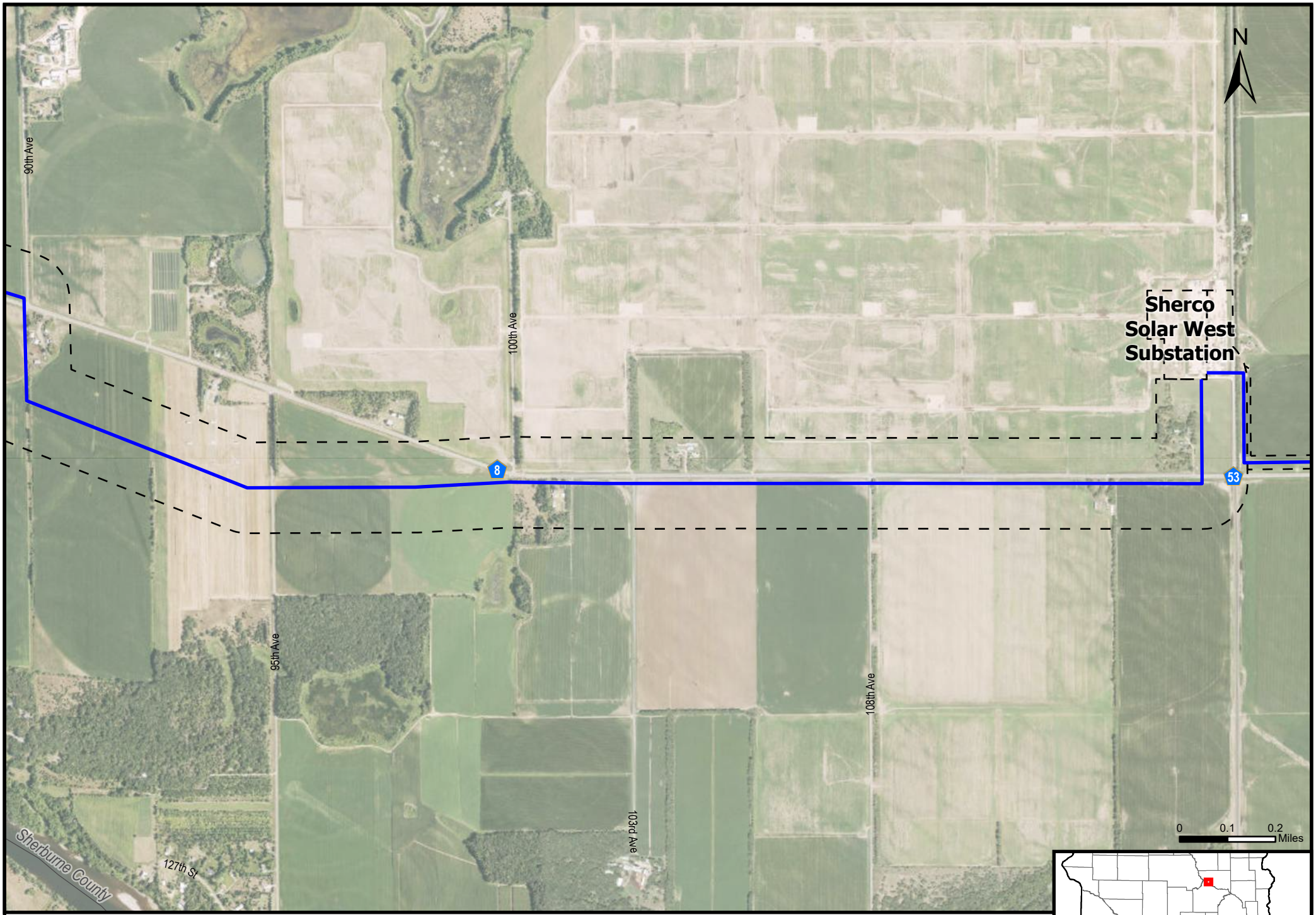
Route Maps | Sherburne County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

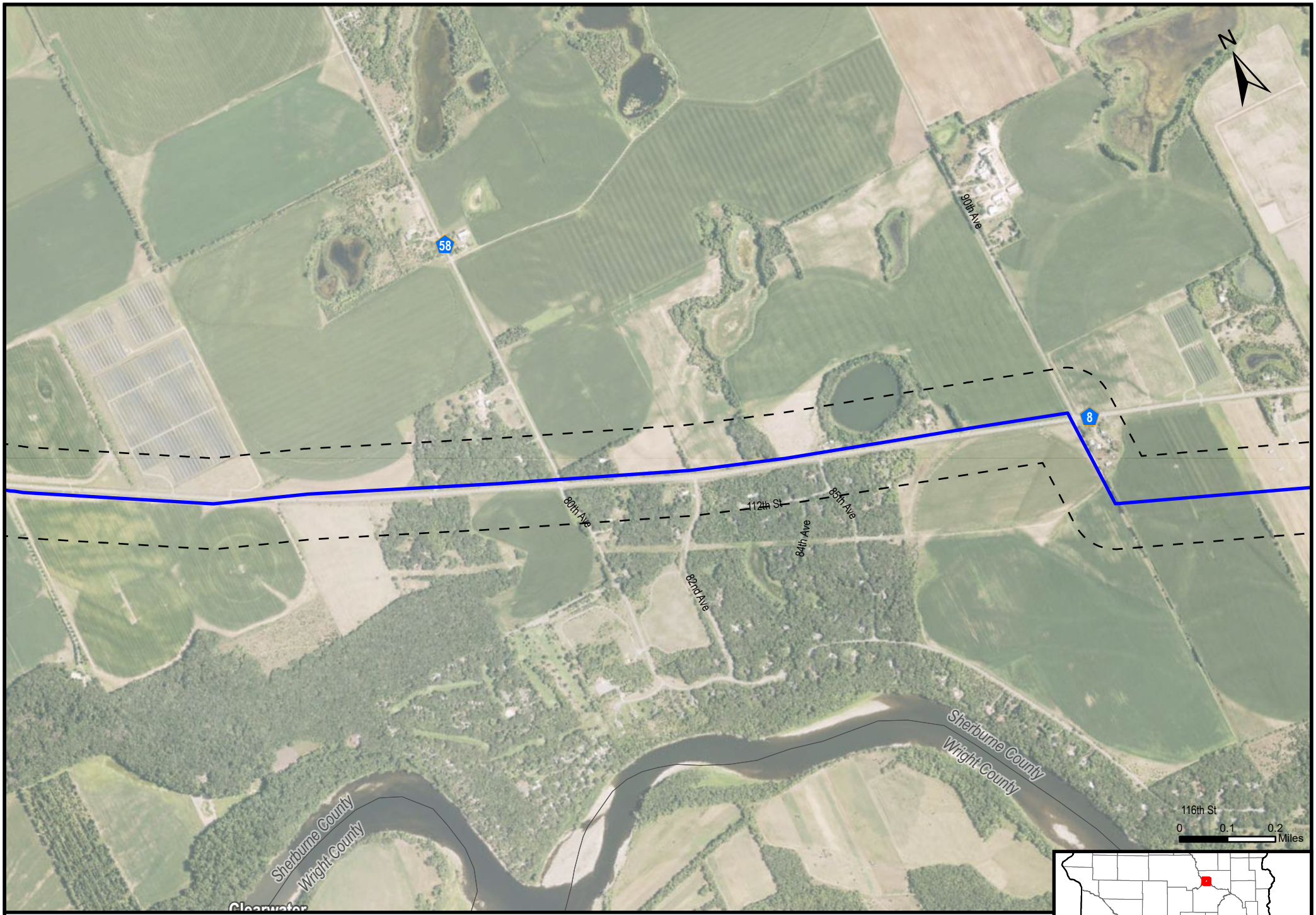
Route Maps | Sherburne County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

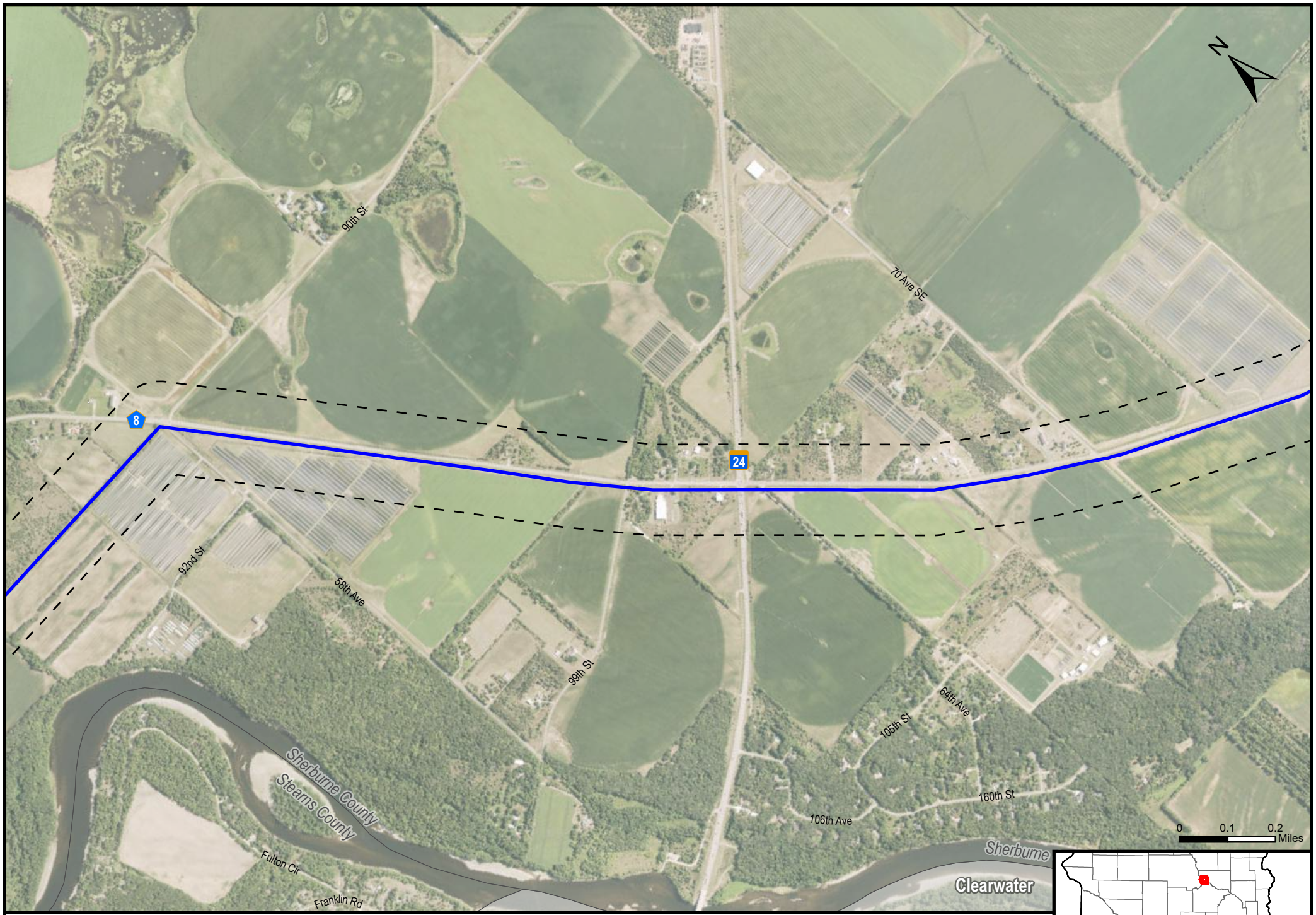
Route Maps | Sherburne County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Sherburne County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

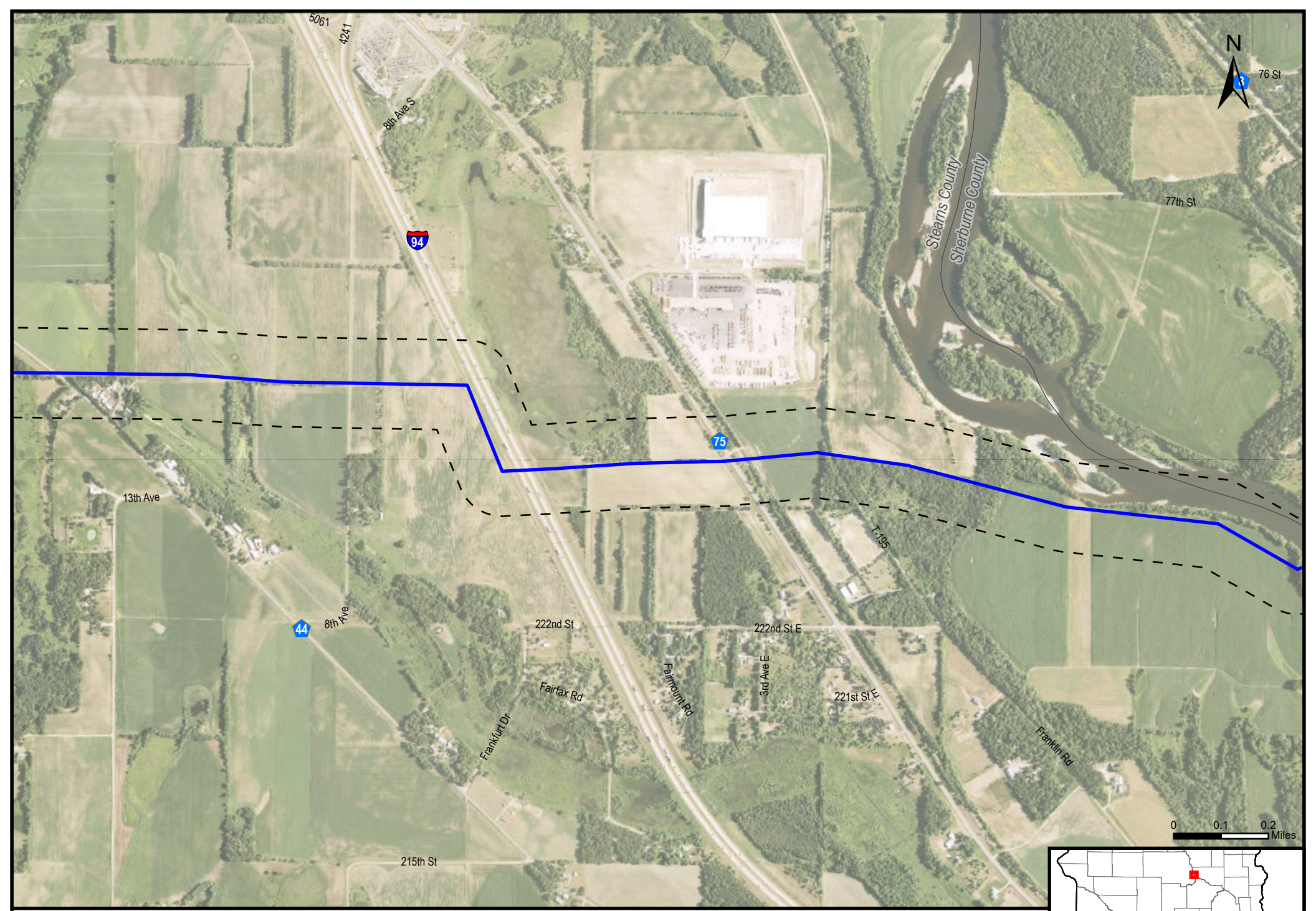
Route Maps | Stearns and Sherburne County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

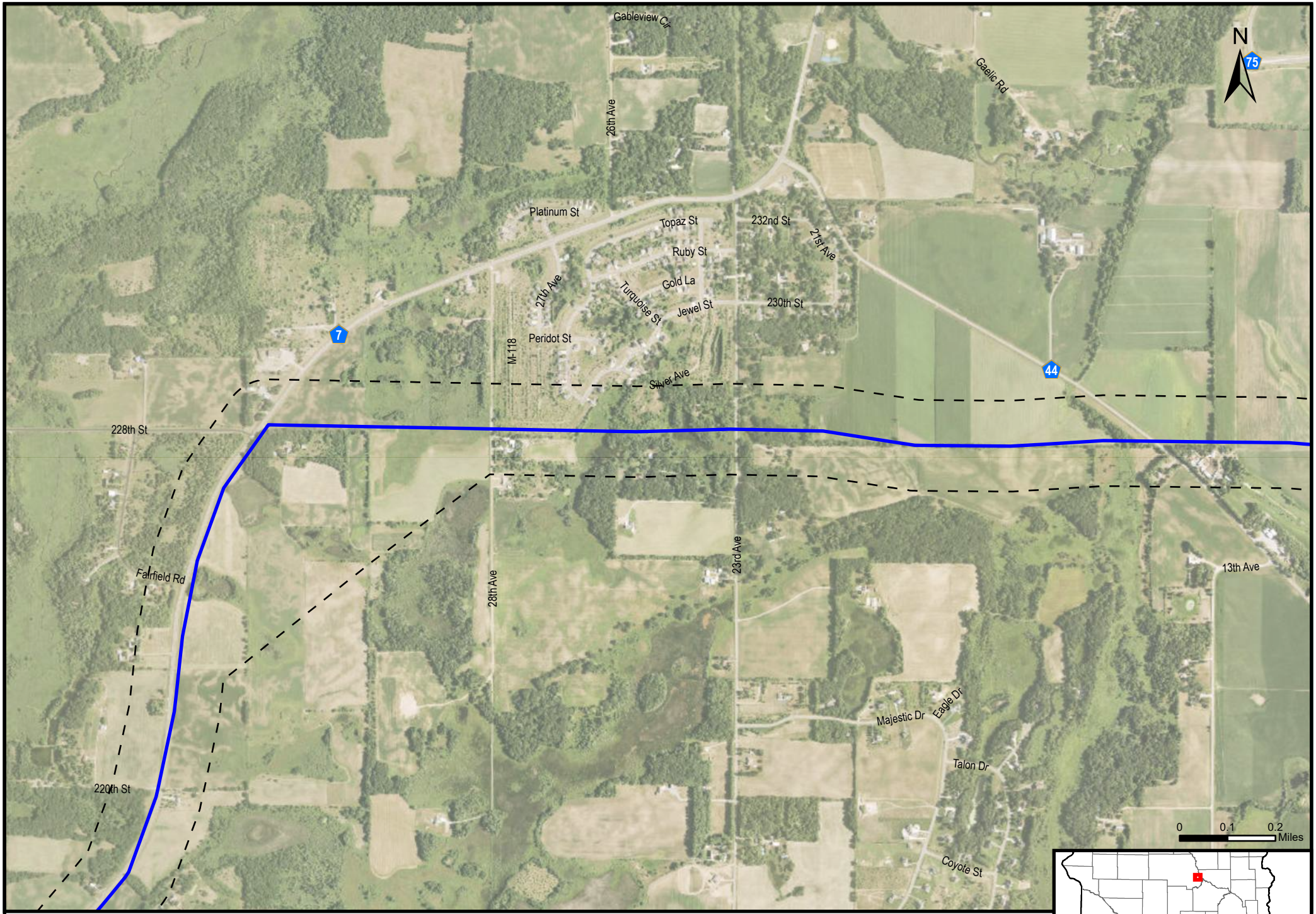
Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

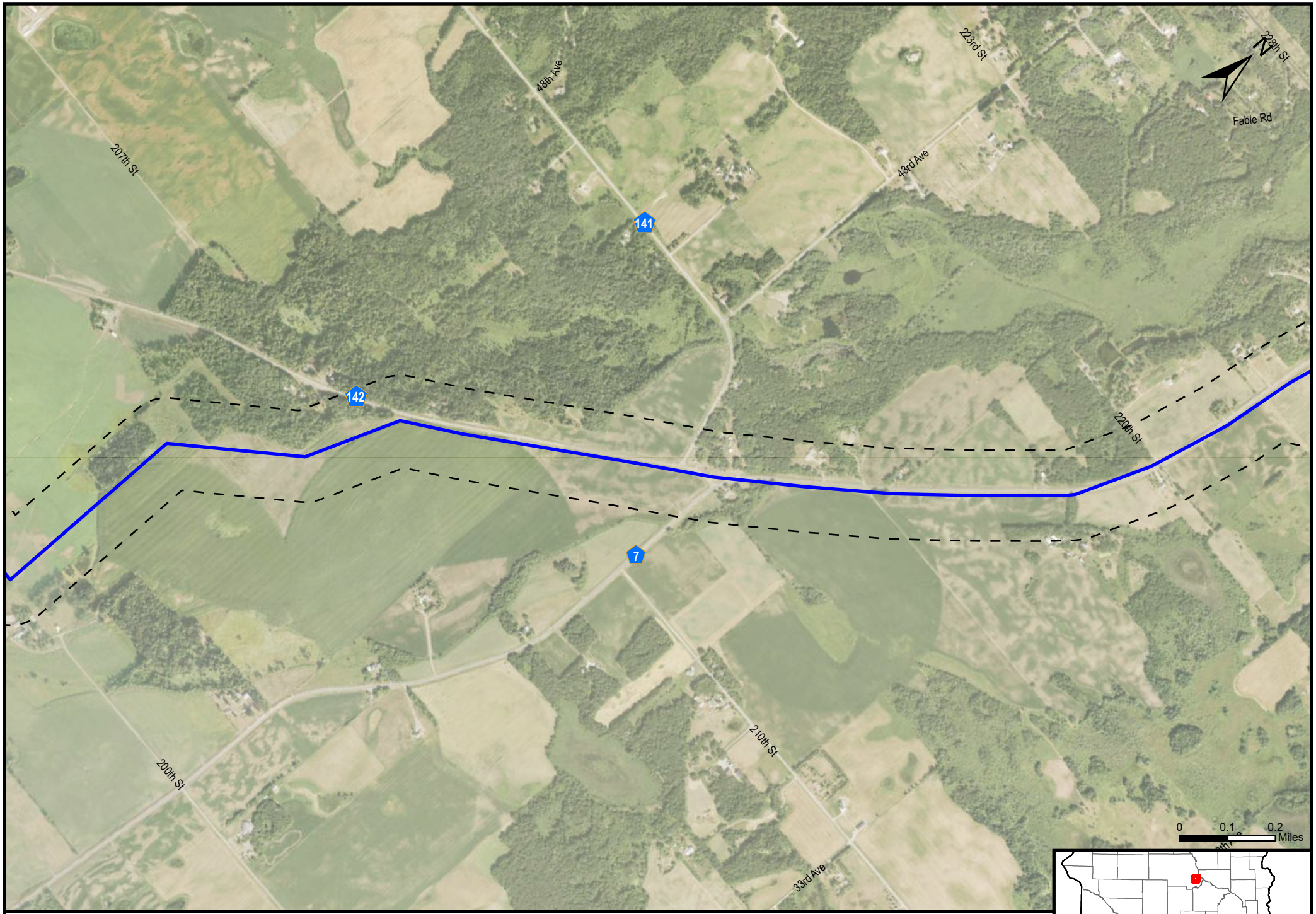
Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

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Route Maps | Stearns County

MNEC Approved Route

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Minnesota Energy Connection

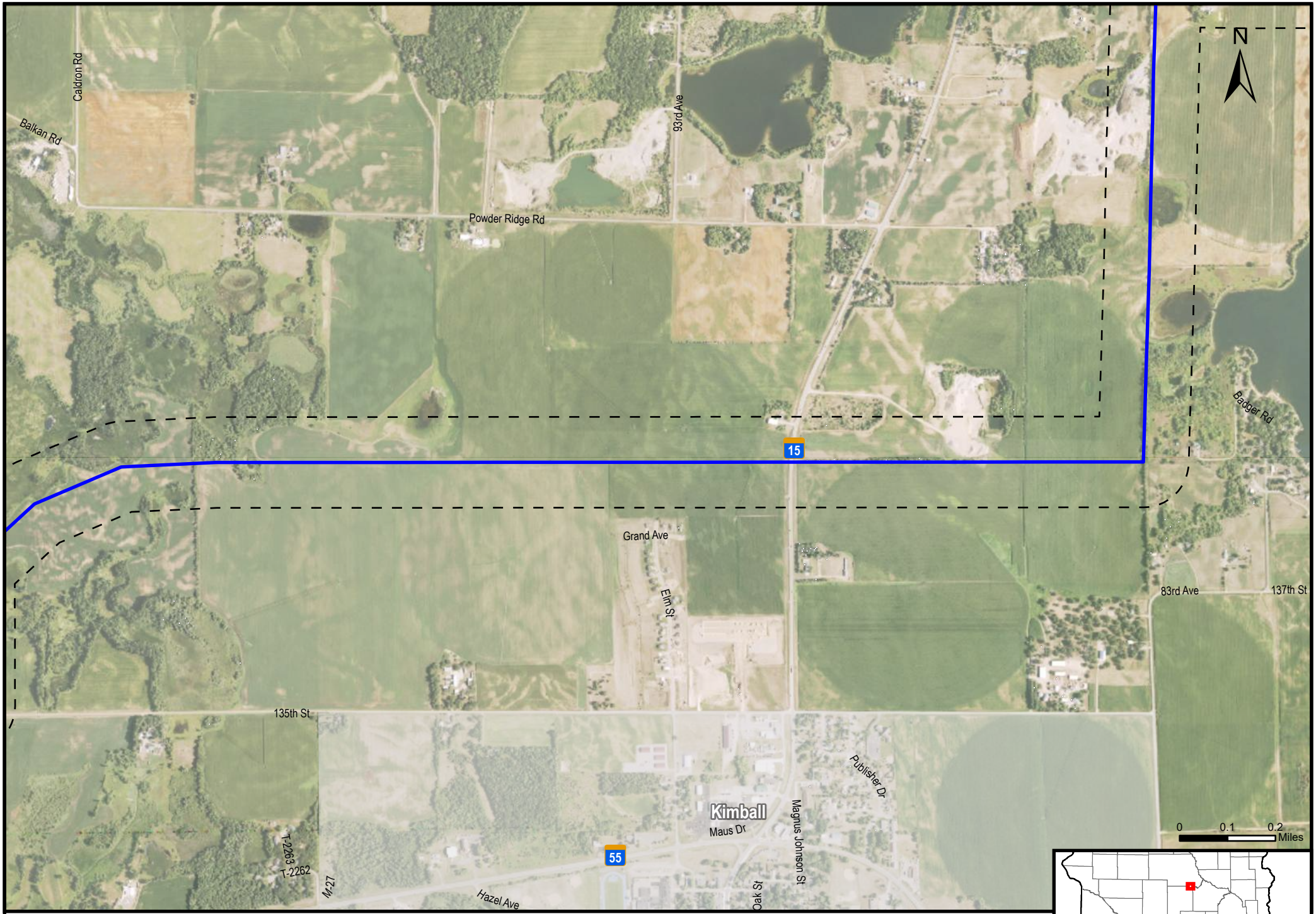
Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

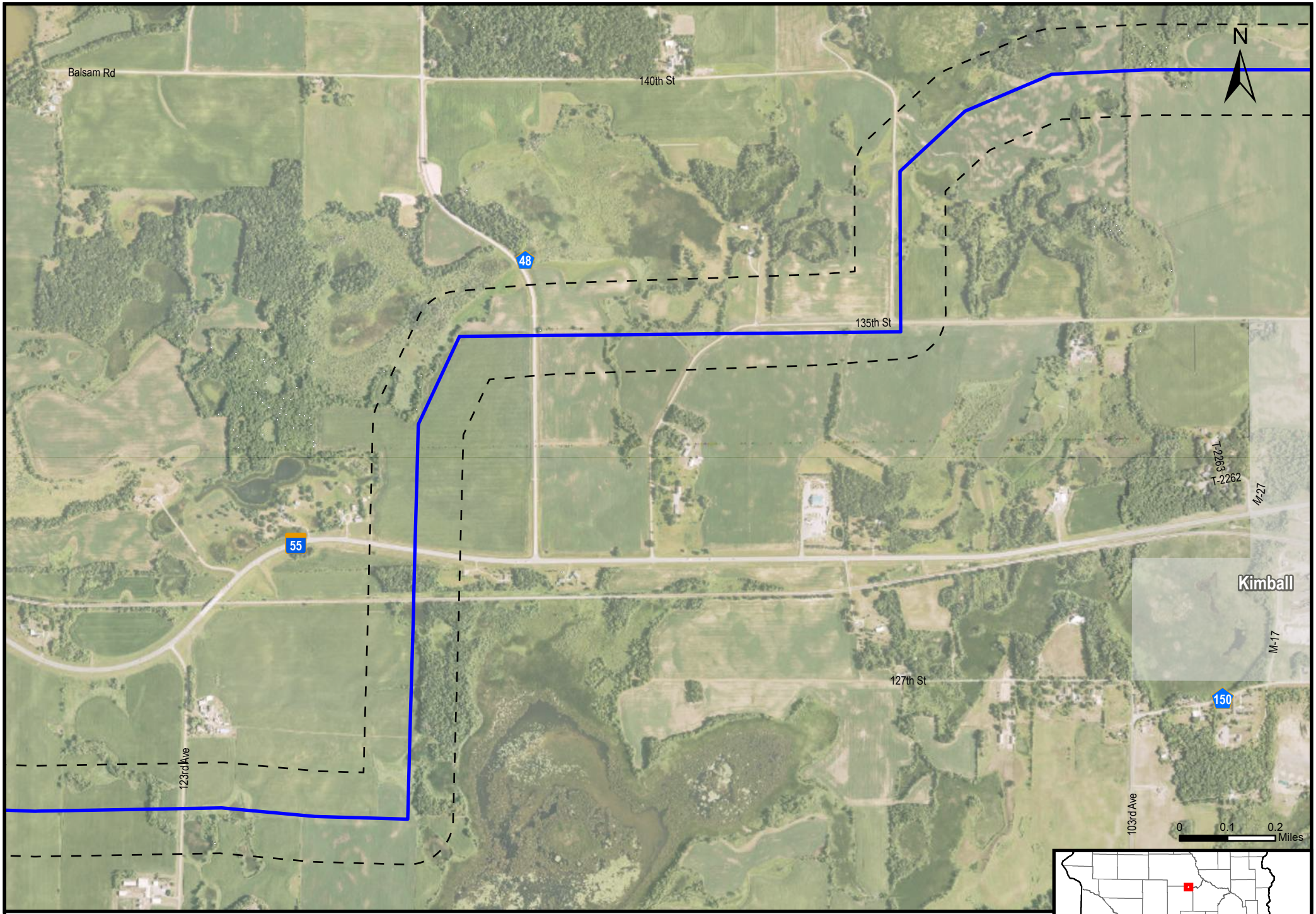
Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

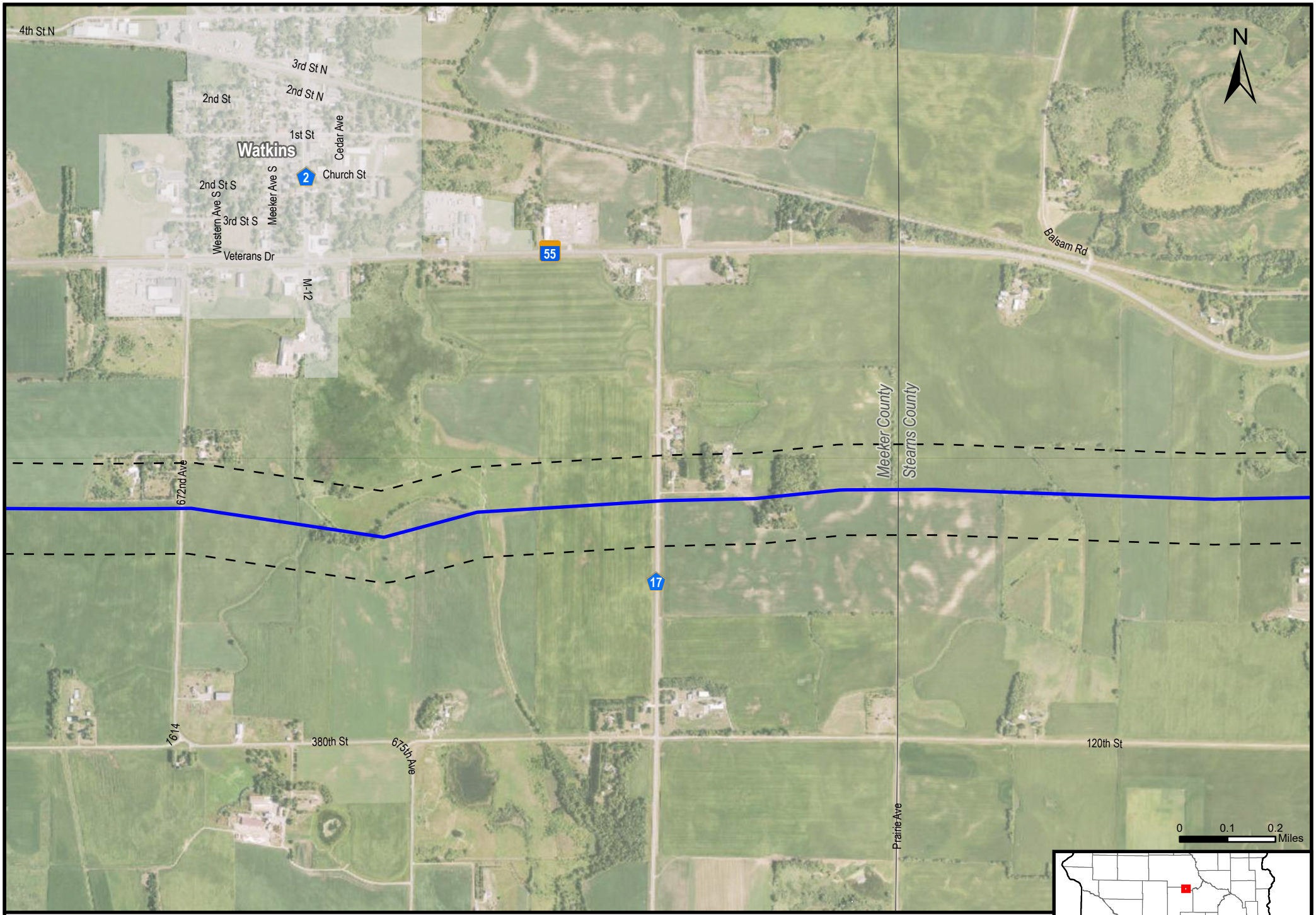
Route Maps | Stearns County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

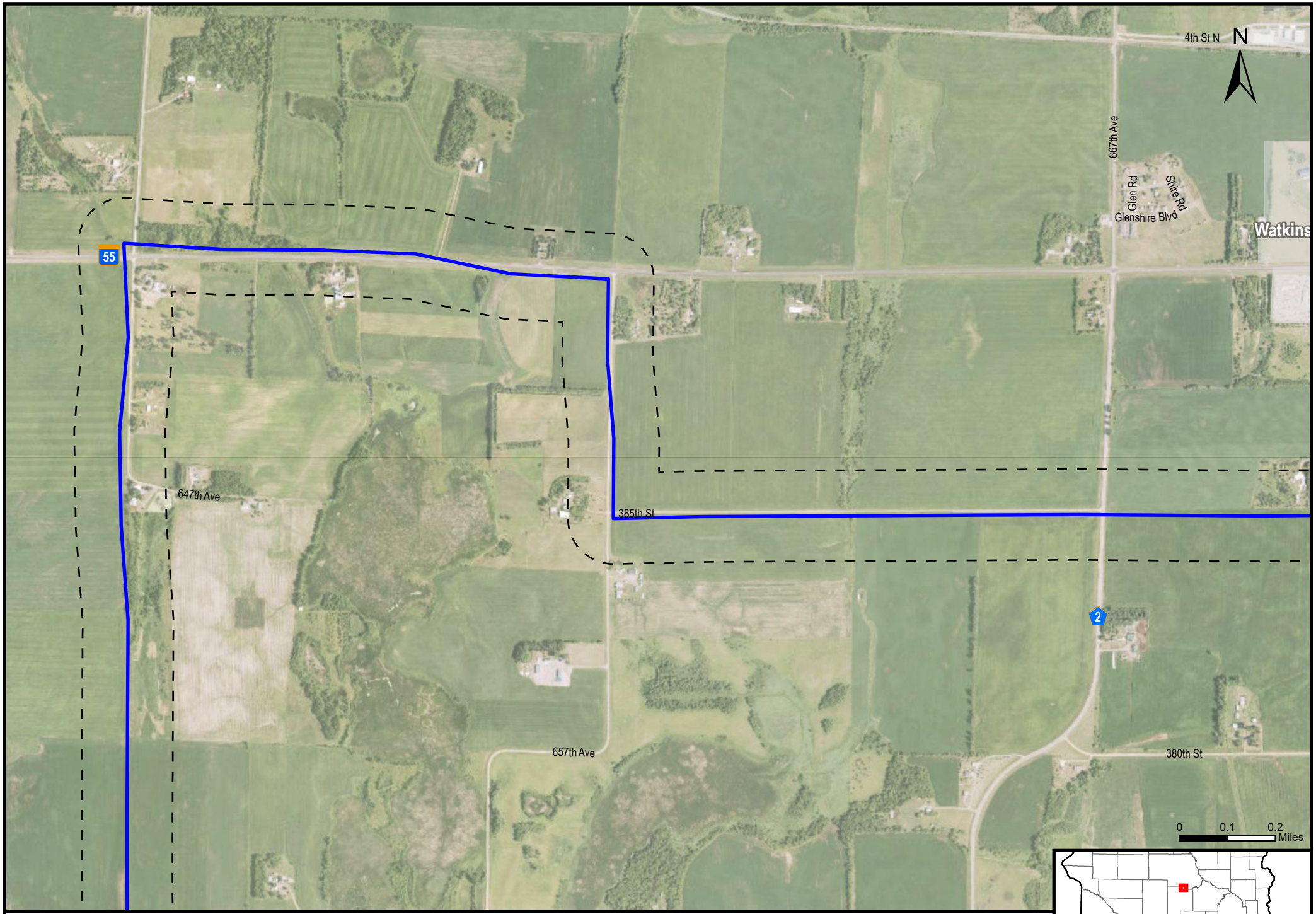
Route Maps | Stearns and Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

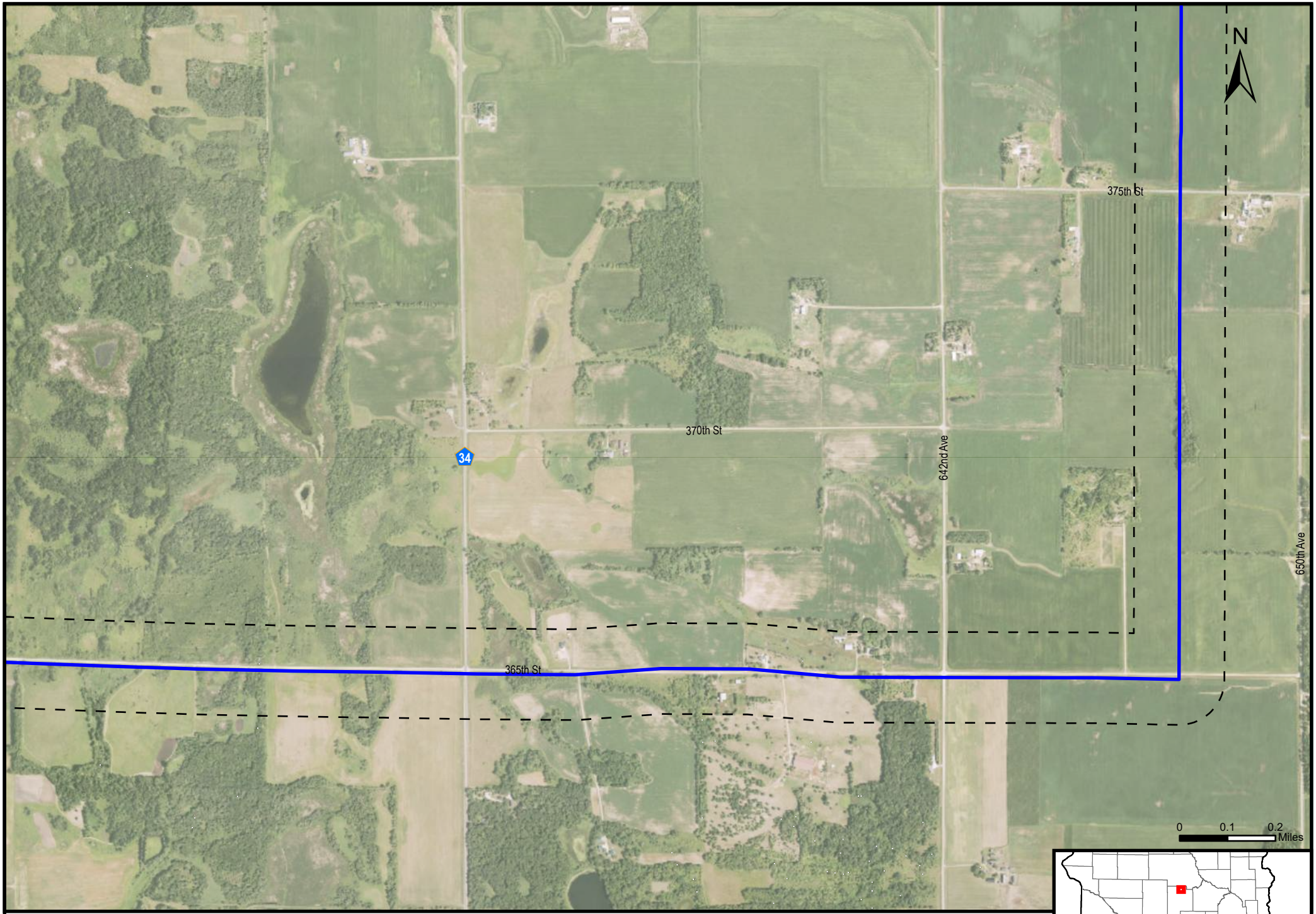
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

Route Maps | Meeker County

MNEC Approved Route

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Route Maps | Meeker County

MNEC Approved Route

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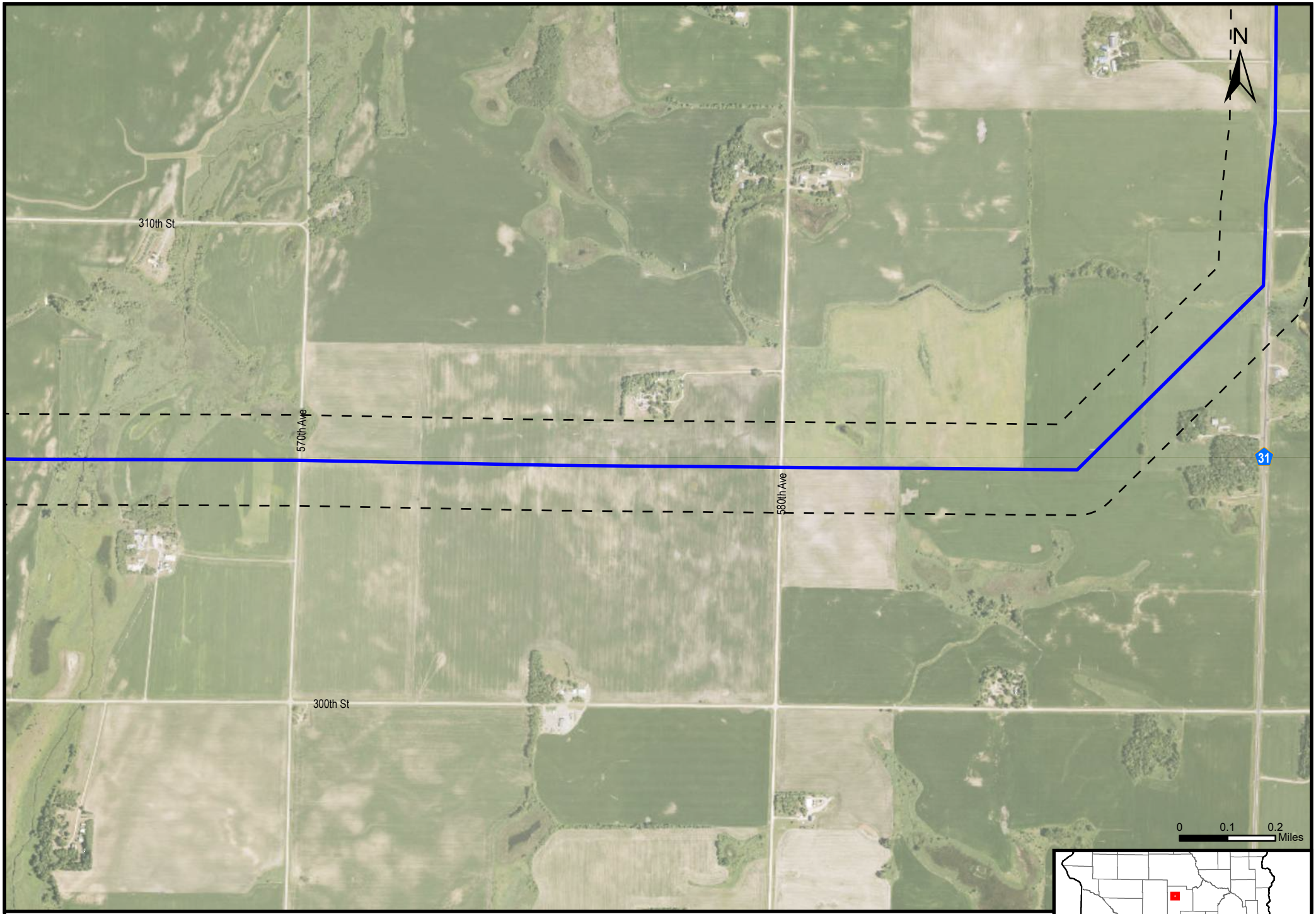


Minnesota Energy Connection

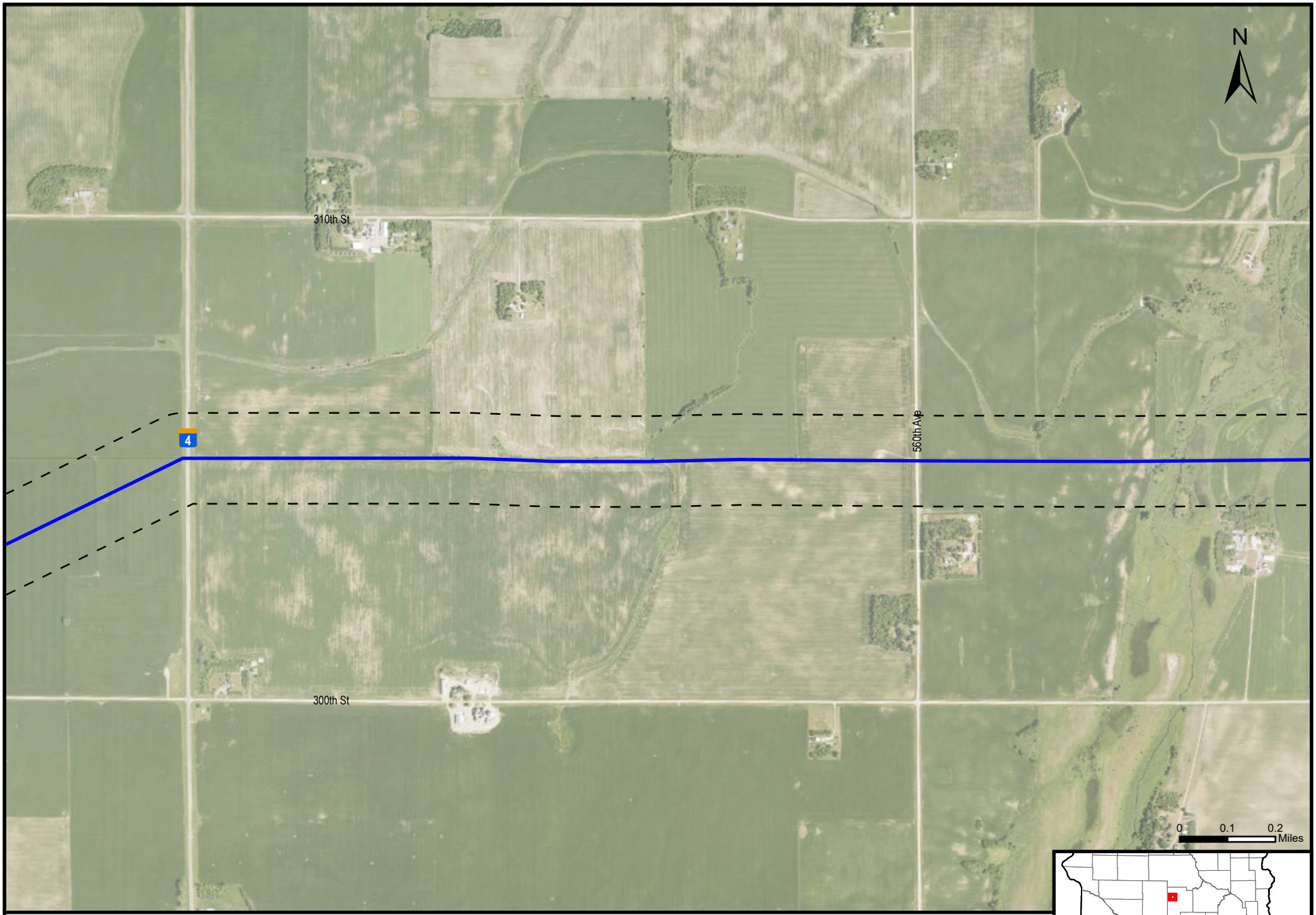
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

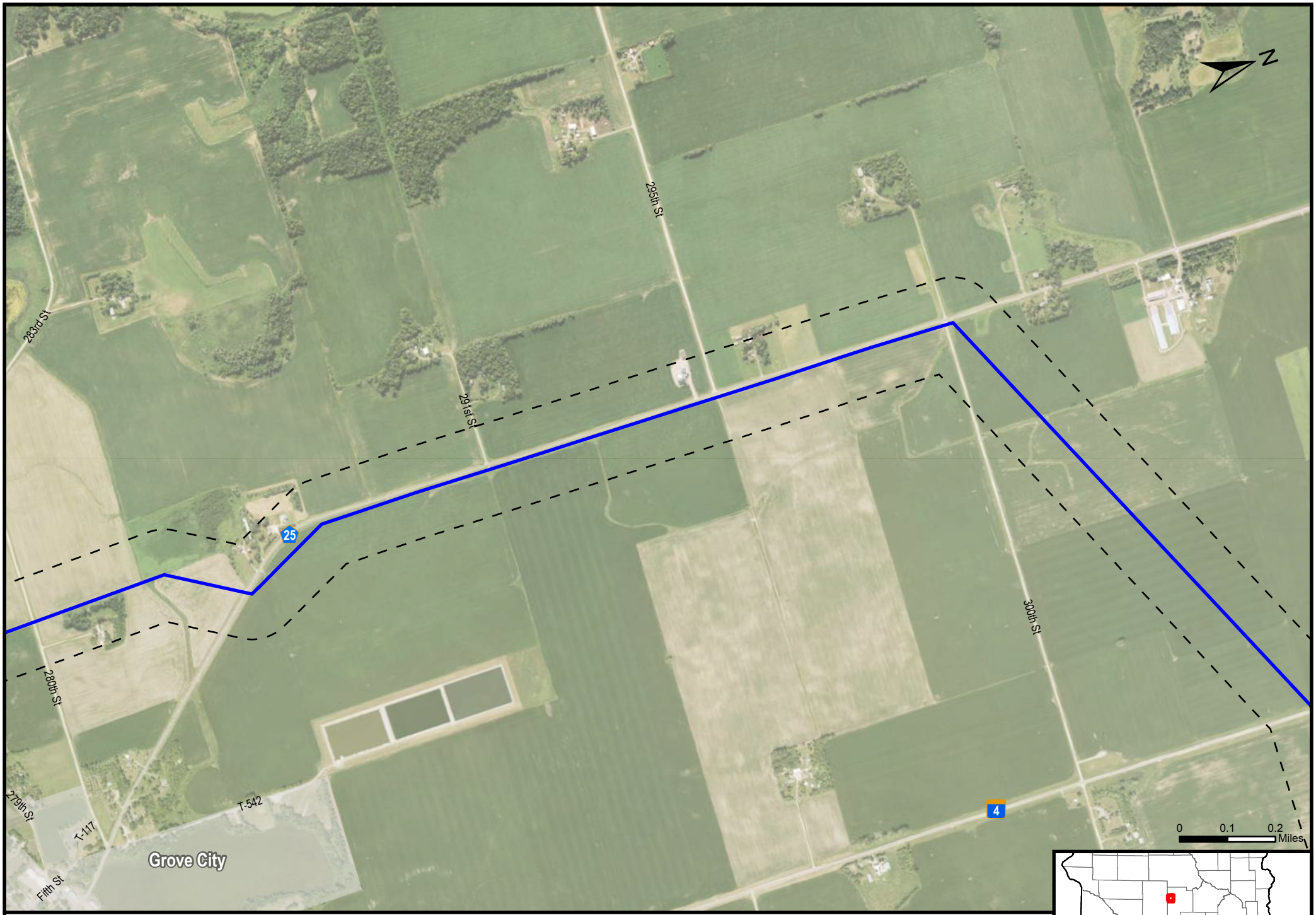
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

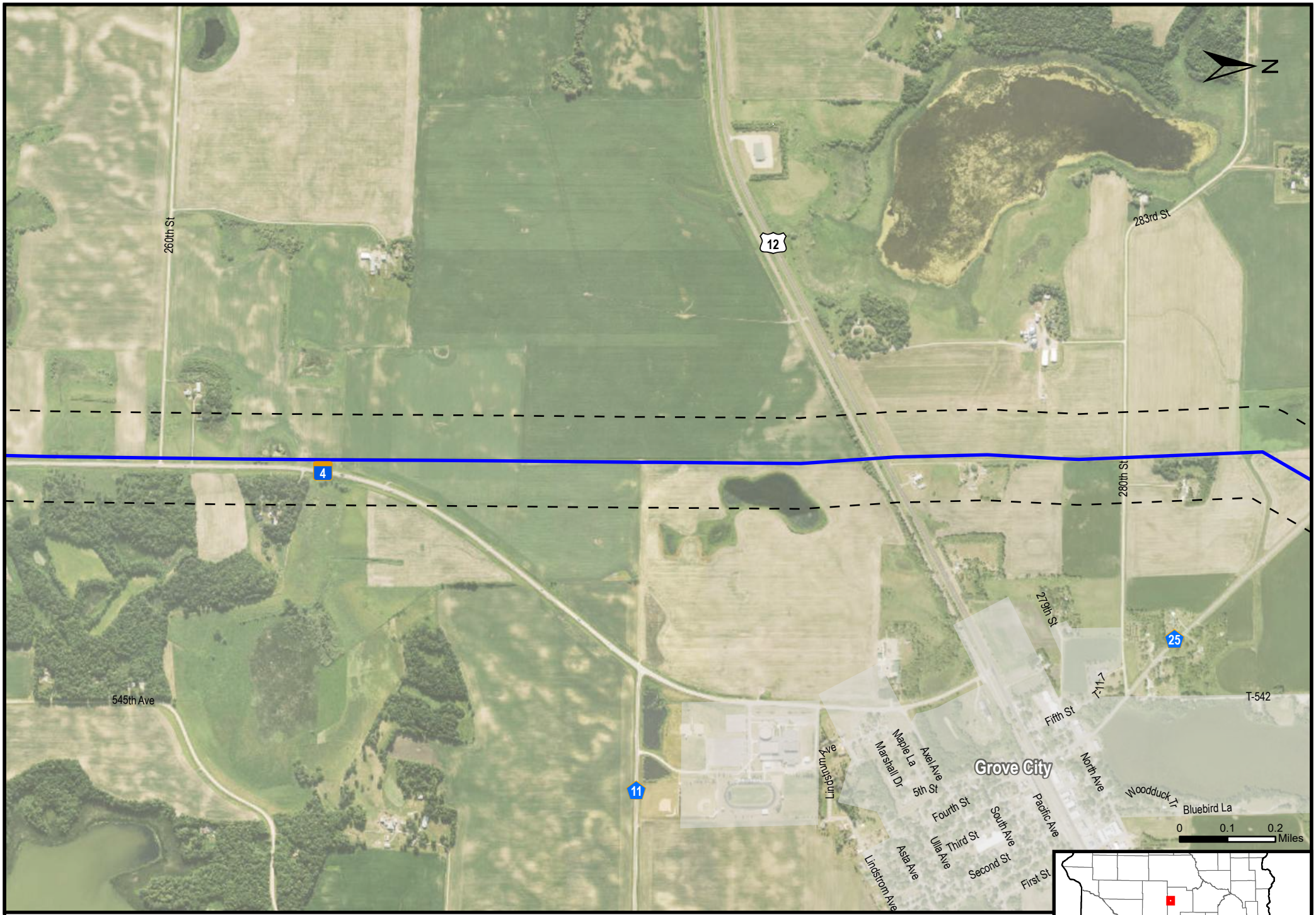
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

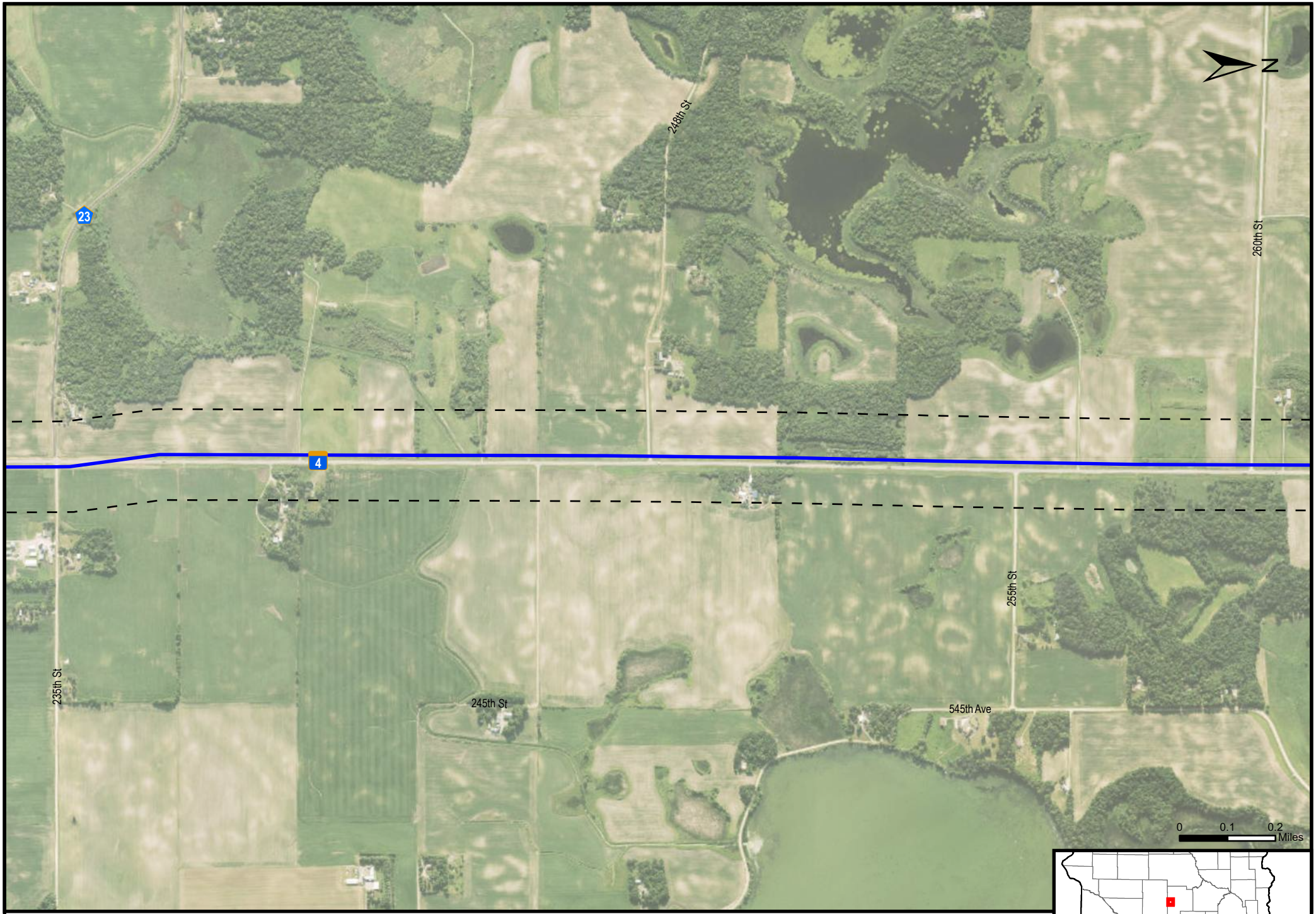
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

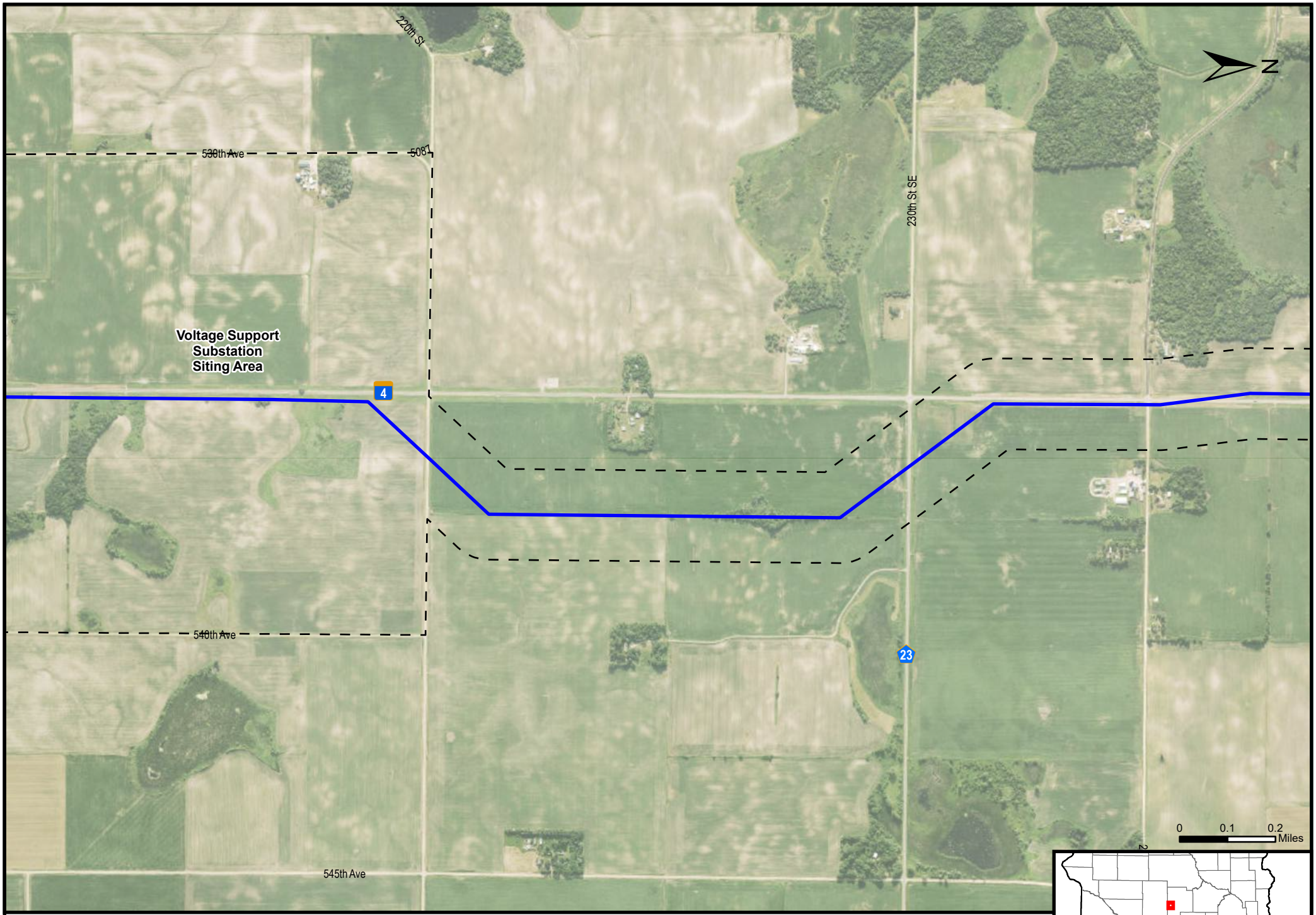
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

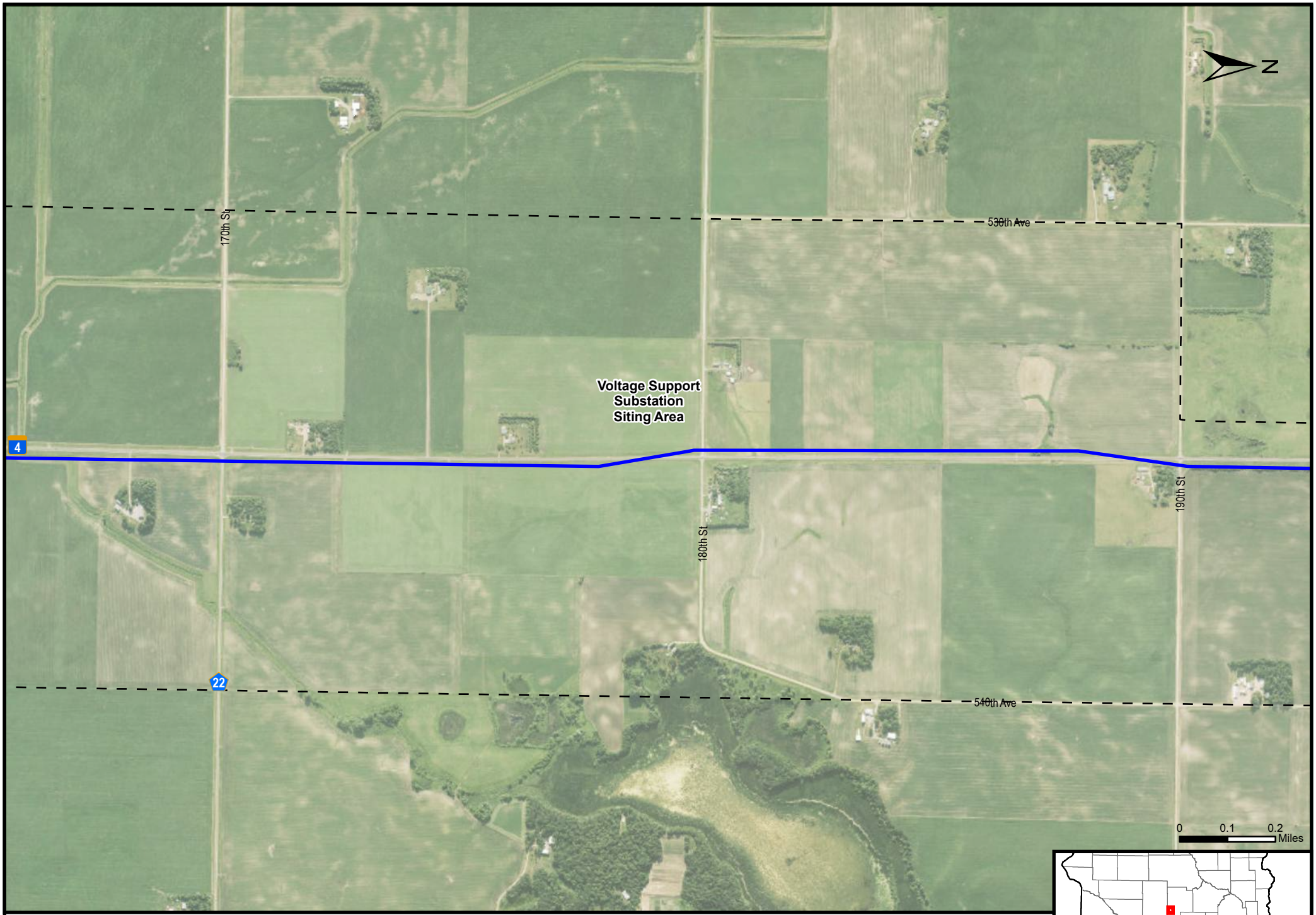
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

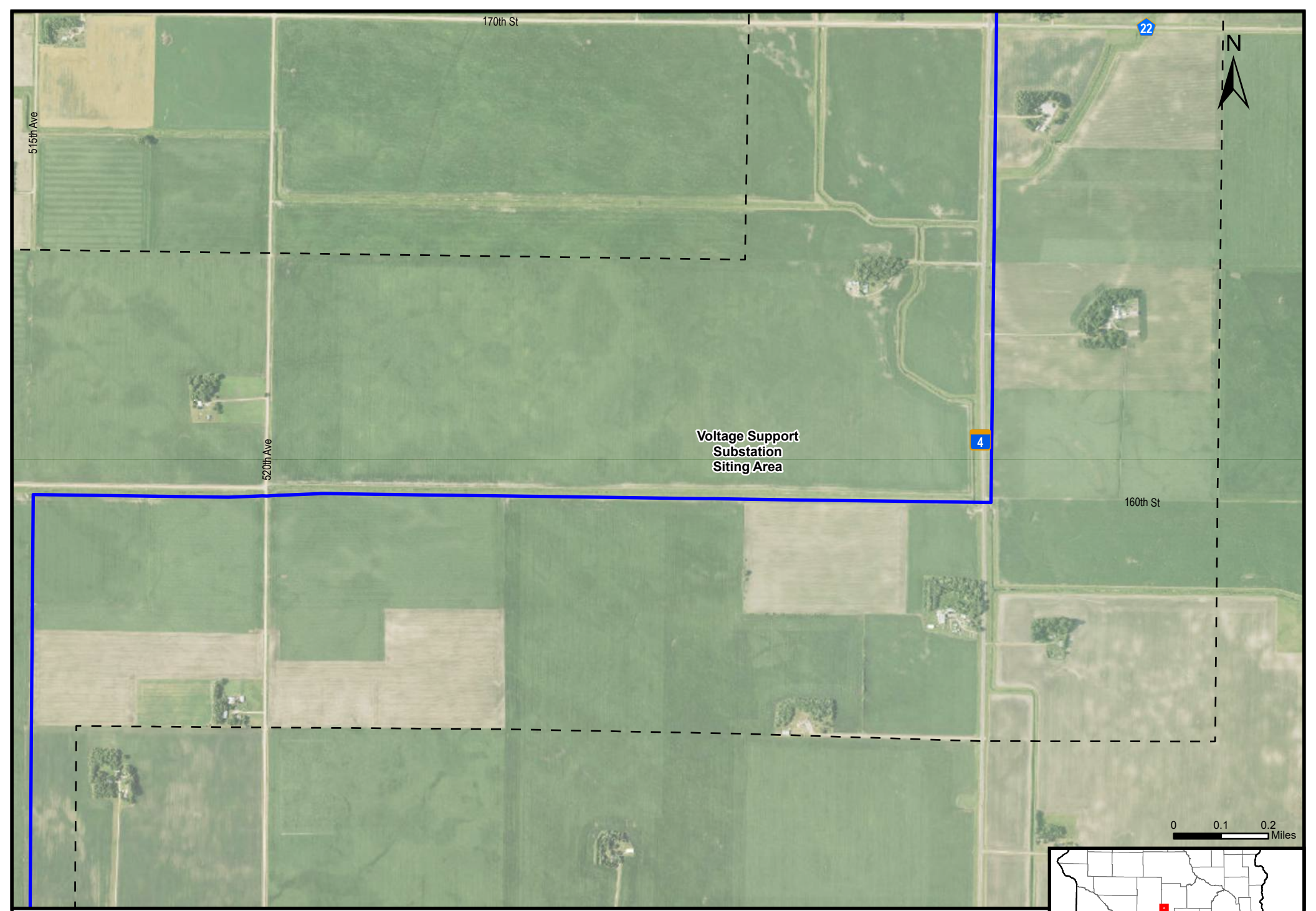
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

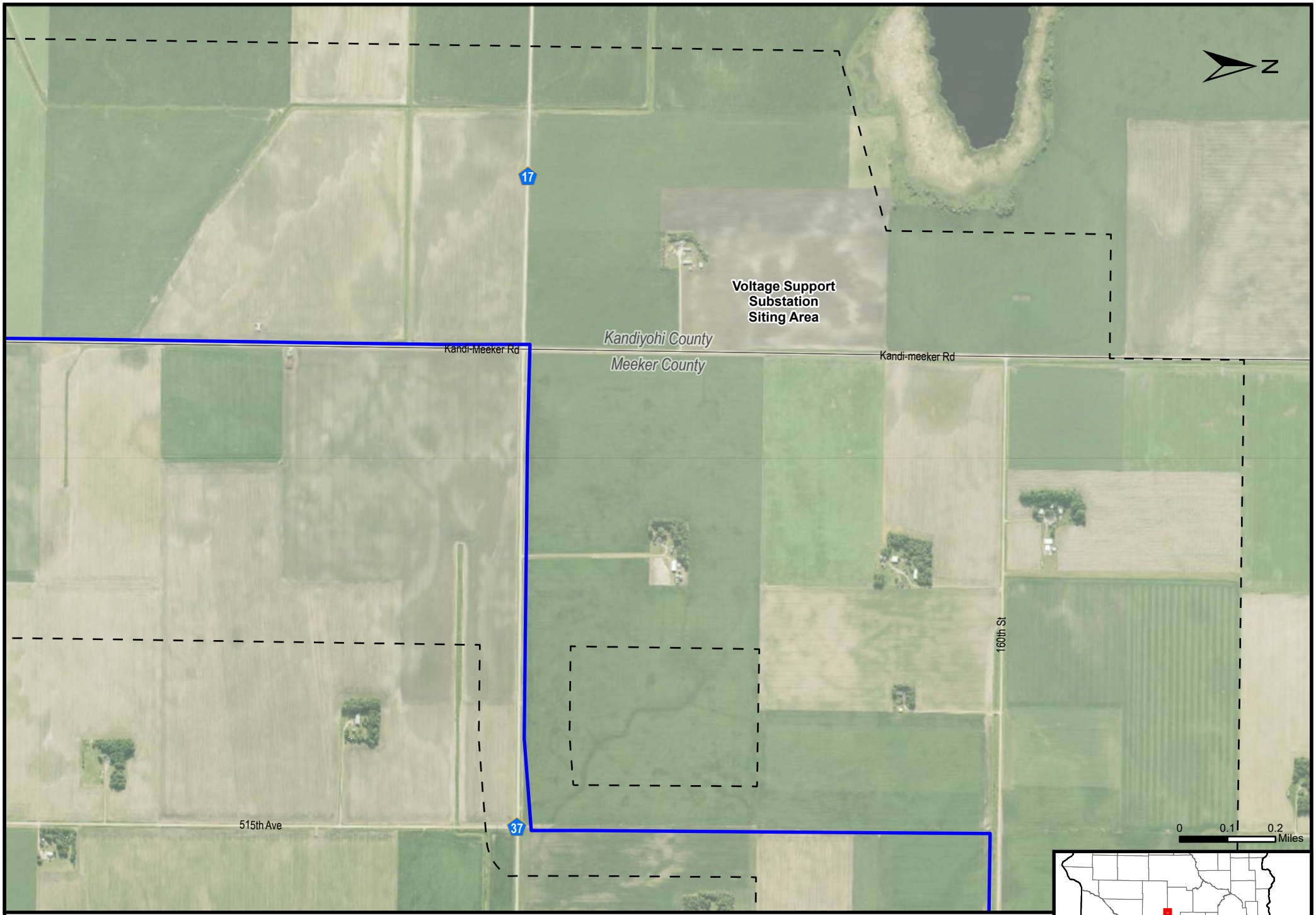
Route Maps | Meeker County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

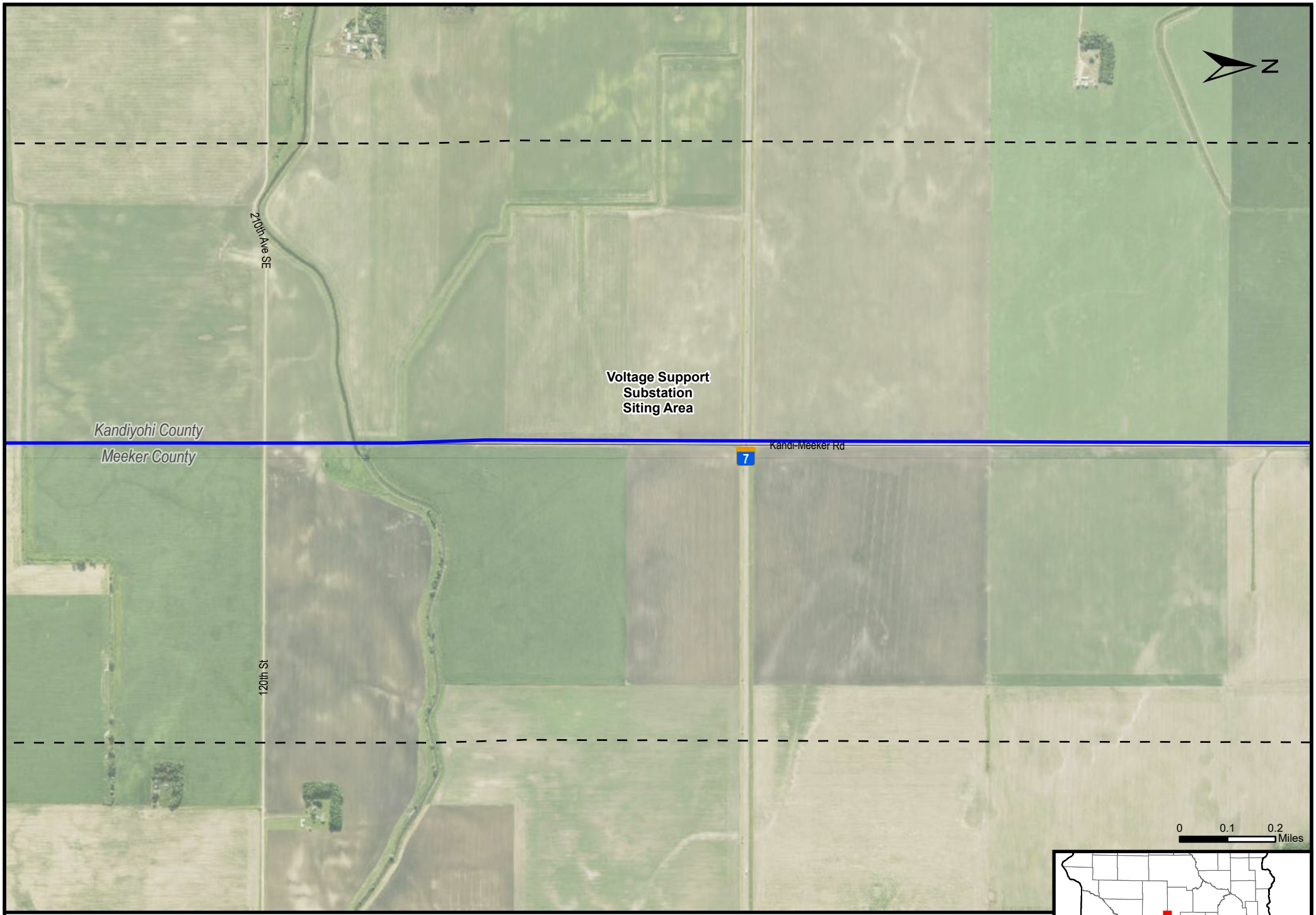
Route Maps | Meeker and Kandiyohi County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

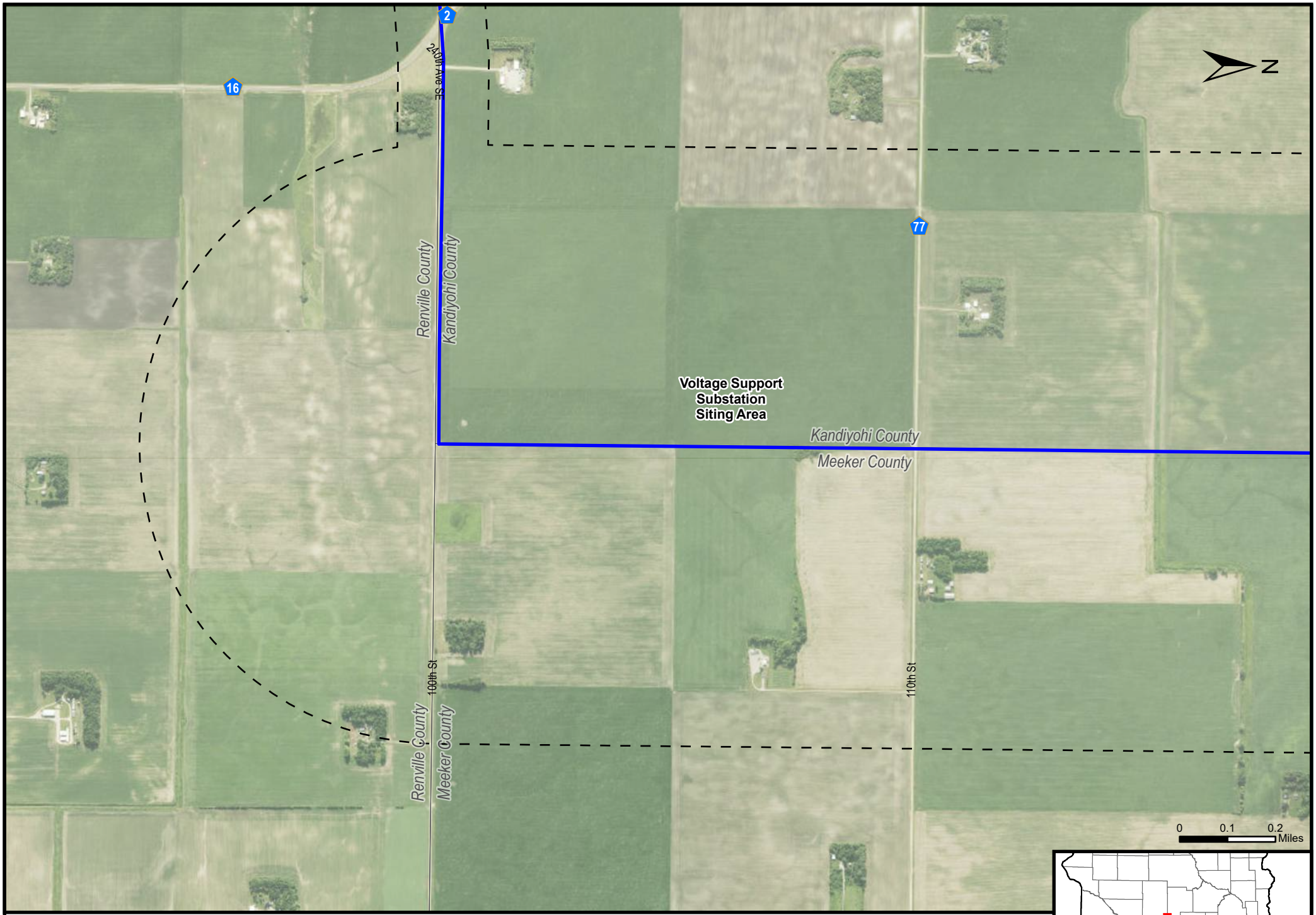
Route Maps | Meeker and Kandiyohi County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Meeker, Renville and Kandiyohi County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

Route Maps | Renville and Kandiyohi County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

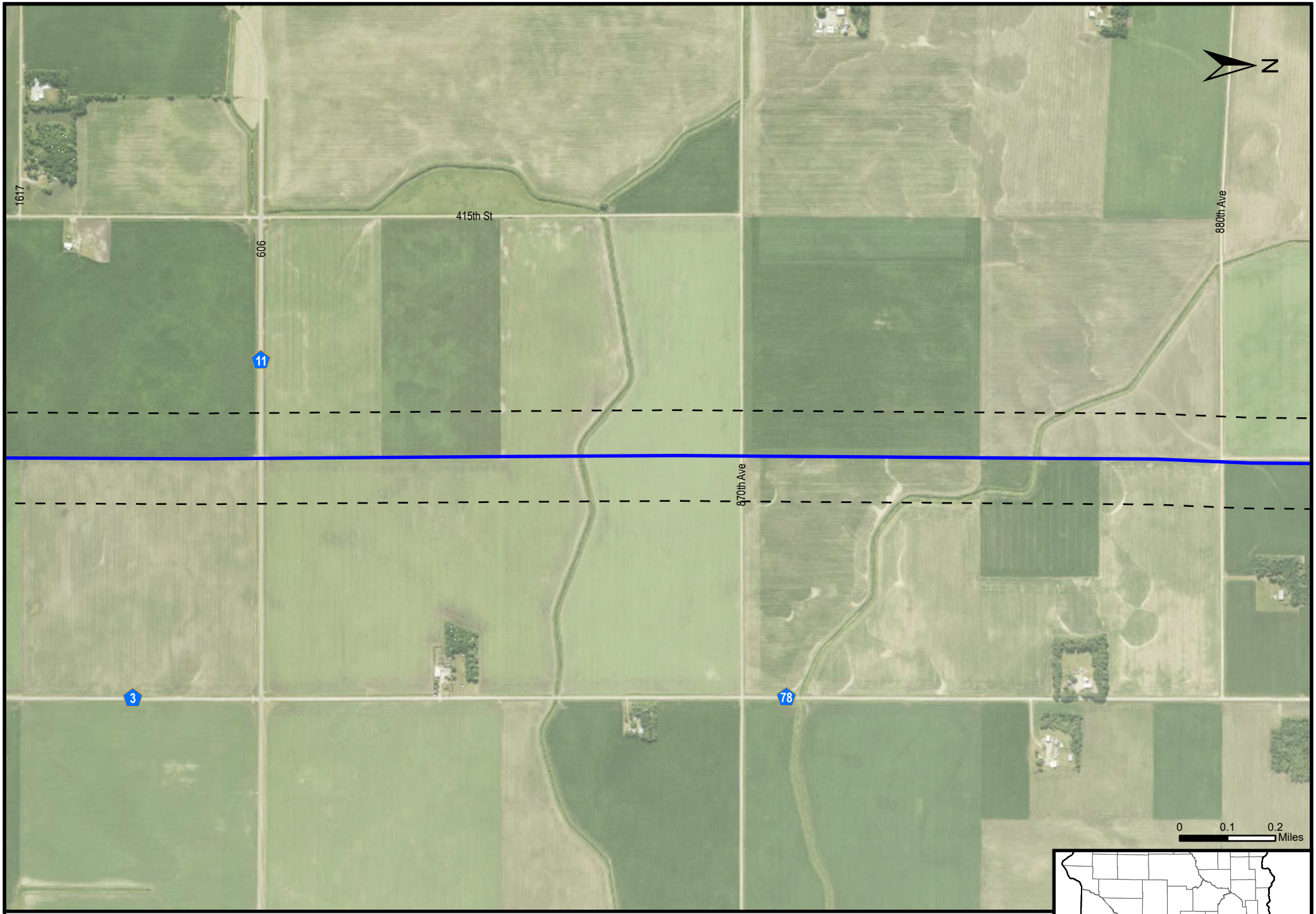
Route Maps | Renville and Kandiyohi County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

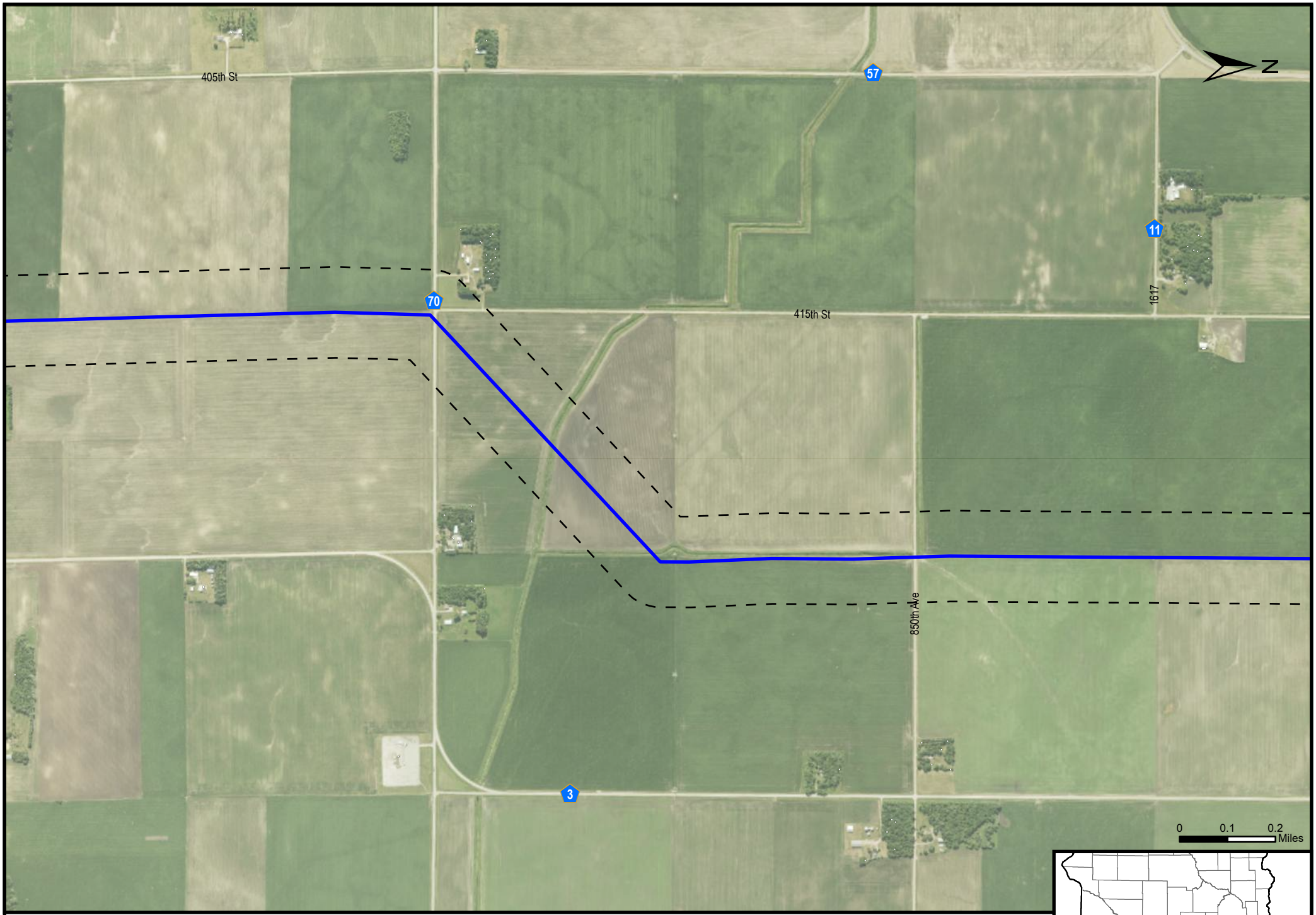
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

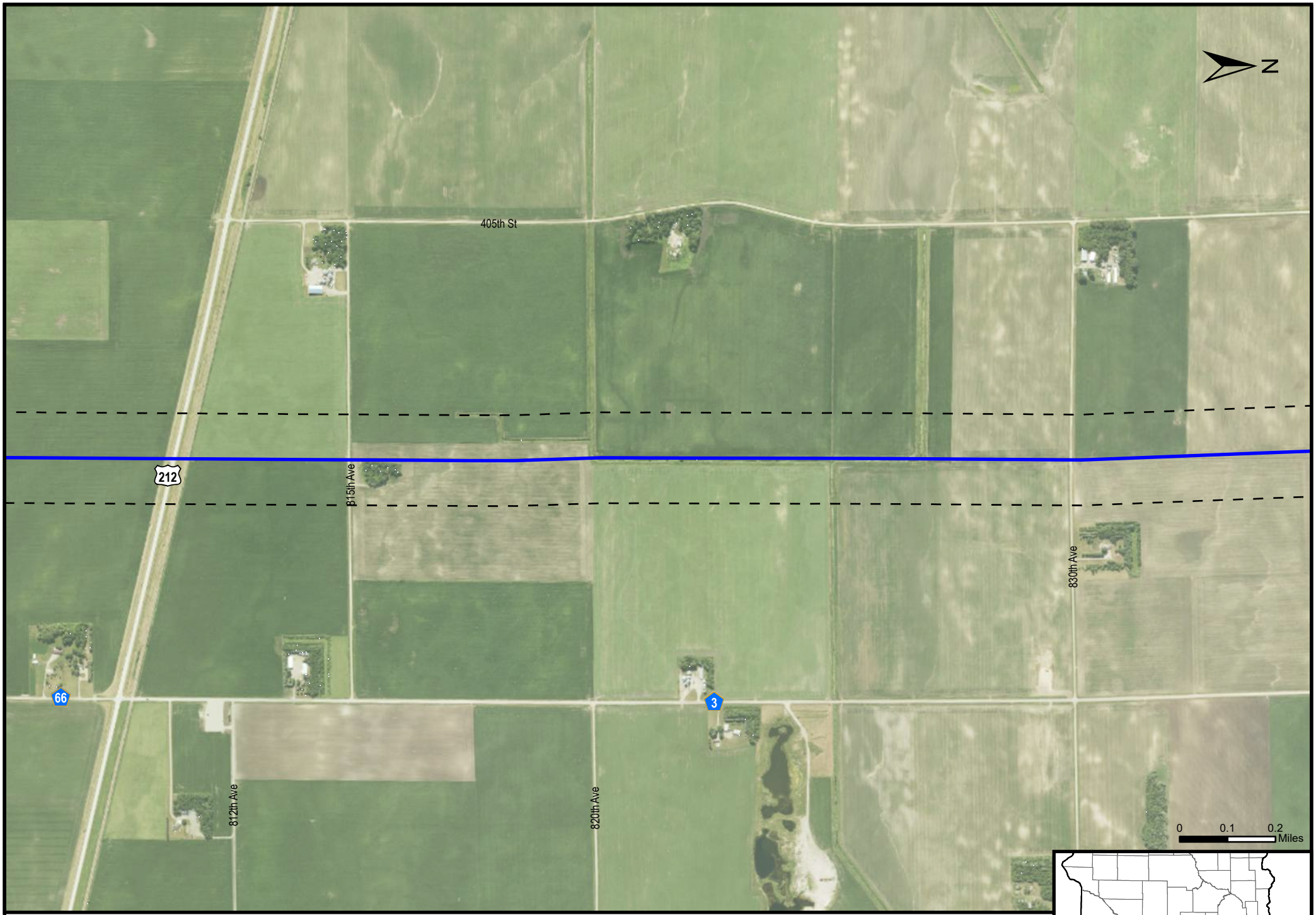
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

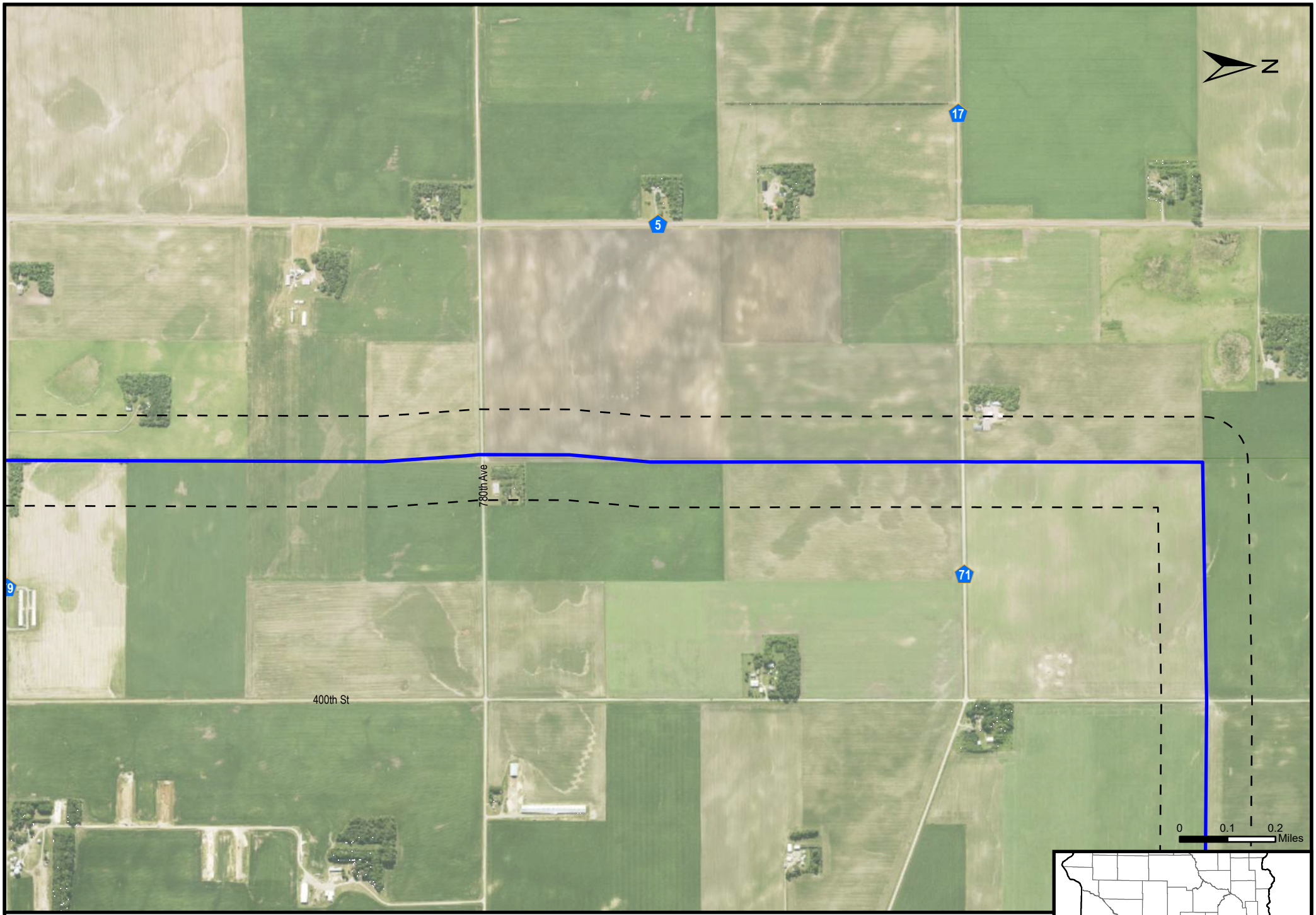
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

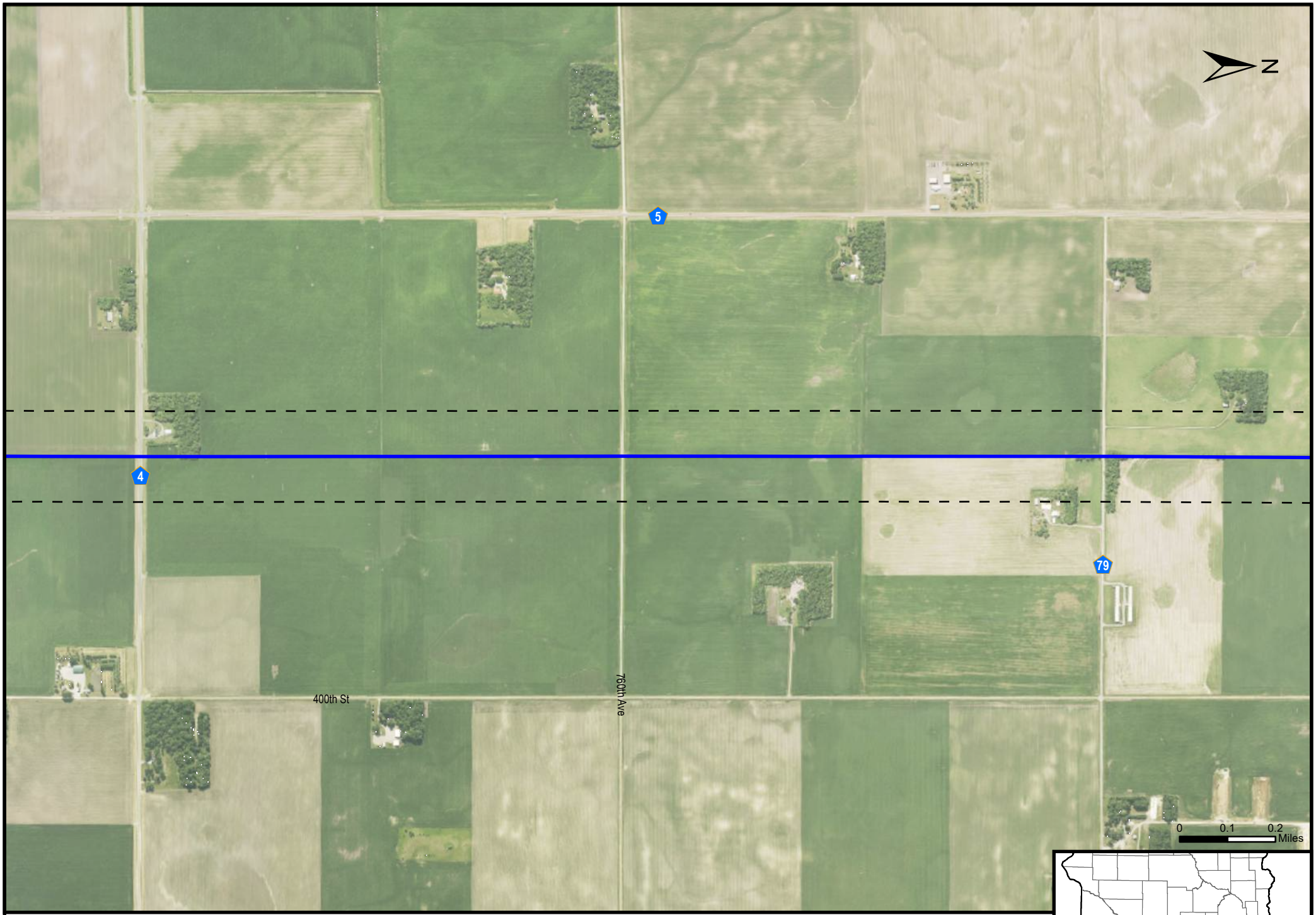
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

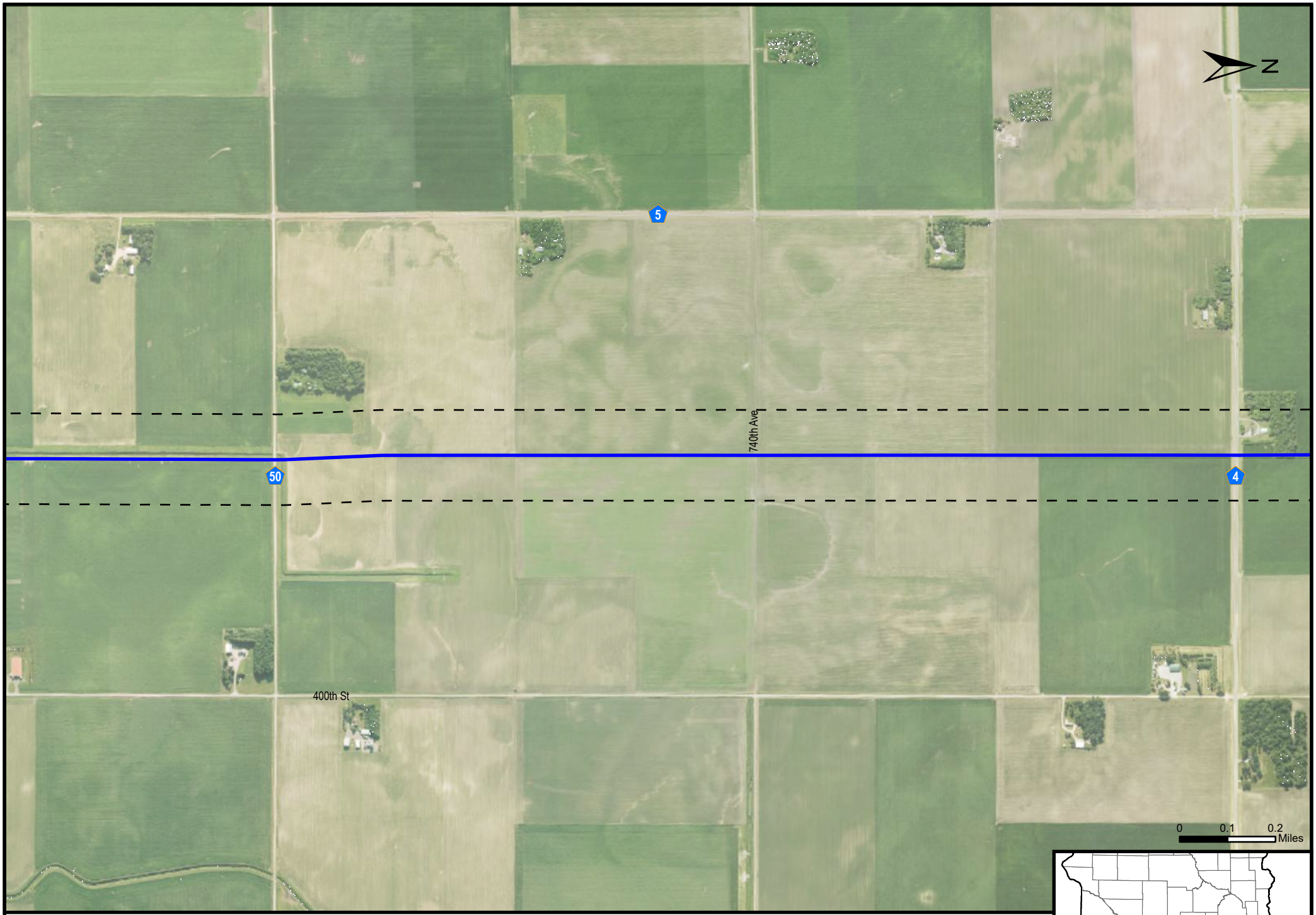
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

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Minnesota Energy Connection

Route Maps | Renville County

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Minnesota Energy Connection

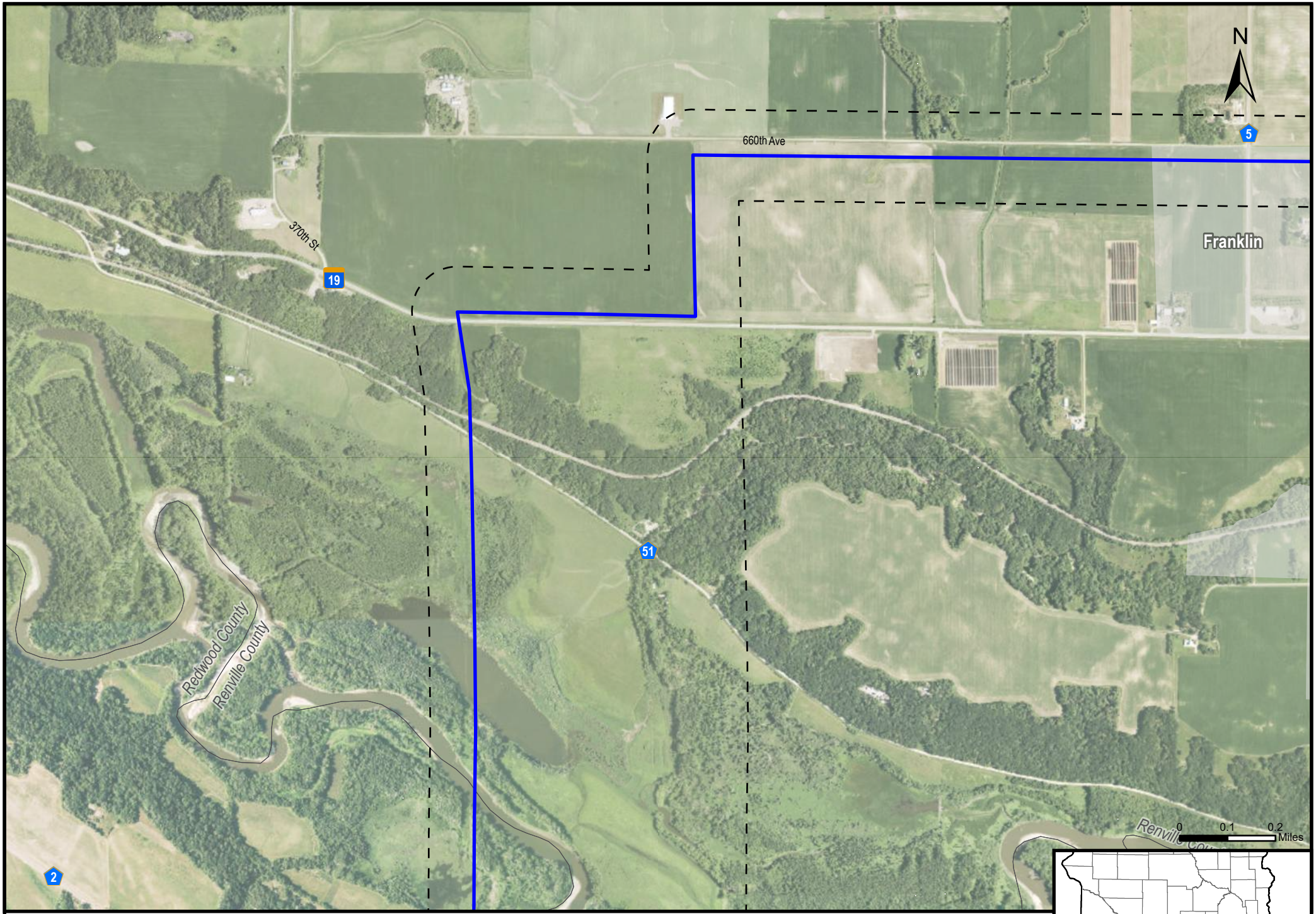
Route Maps | Renville County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

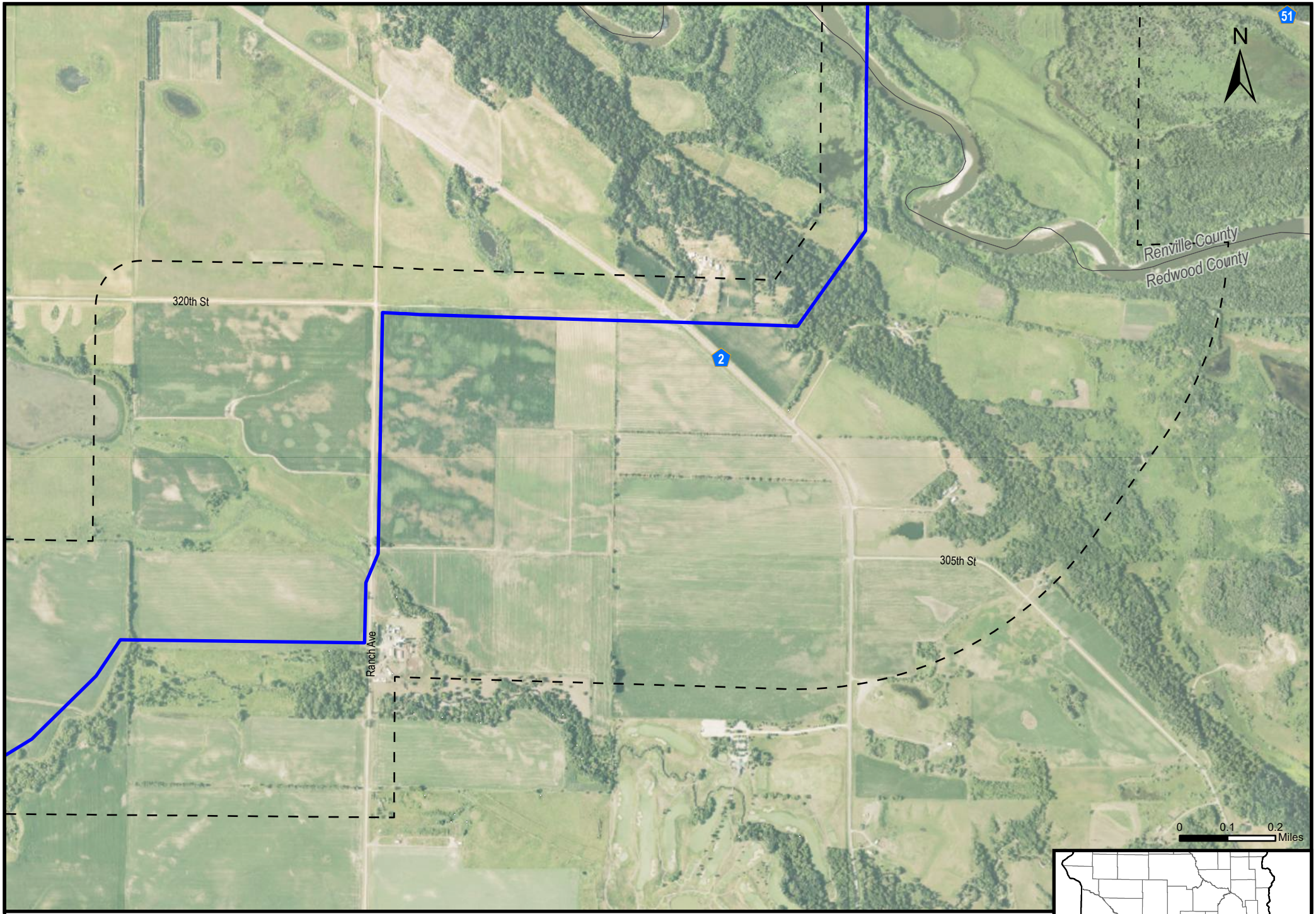
Route Maps | Renville and Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

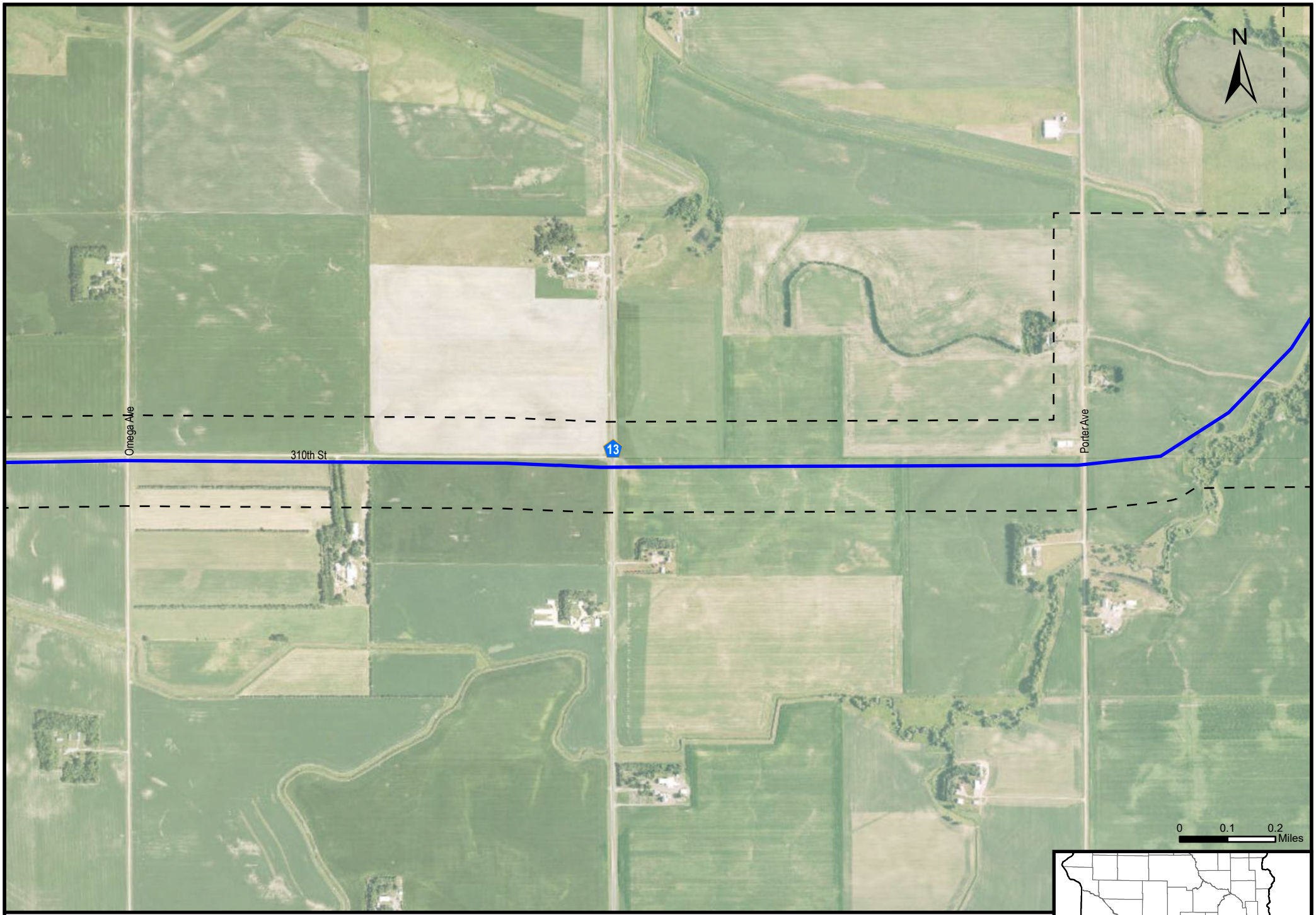
Route Maps | Renville and Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

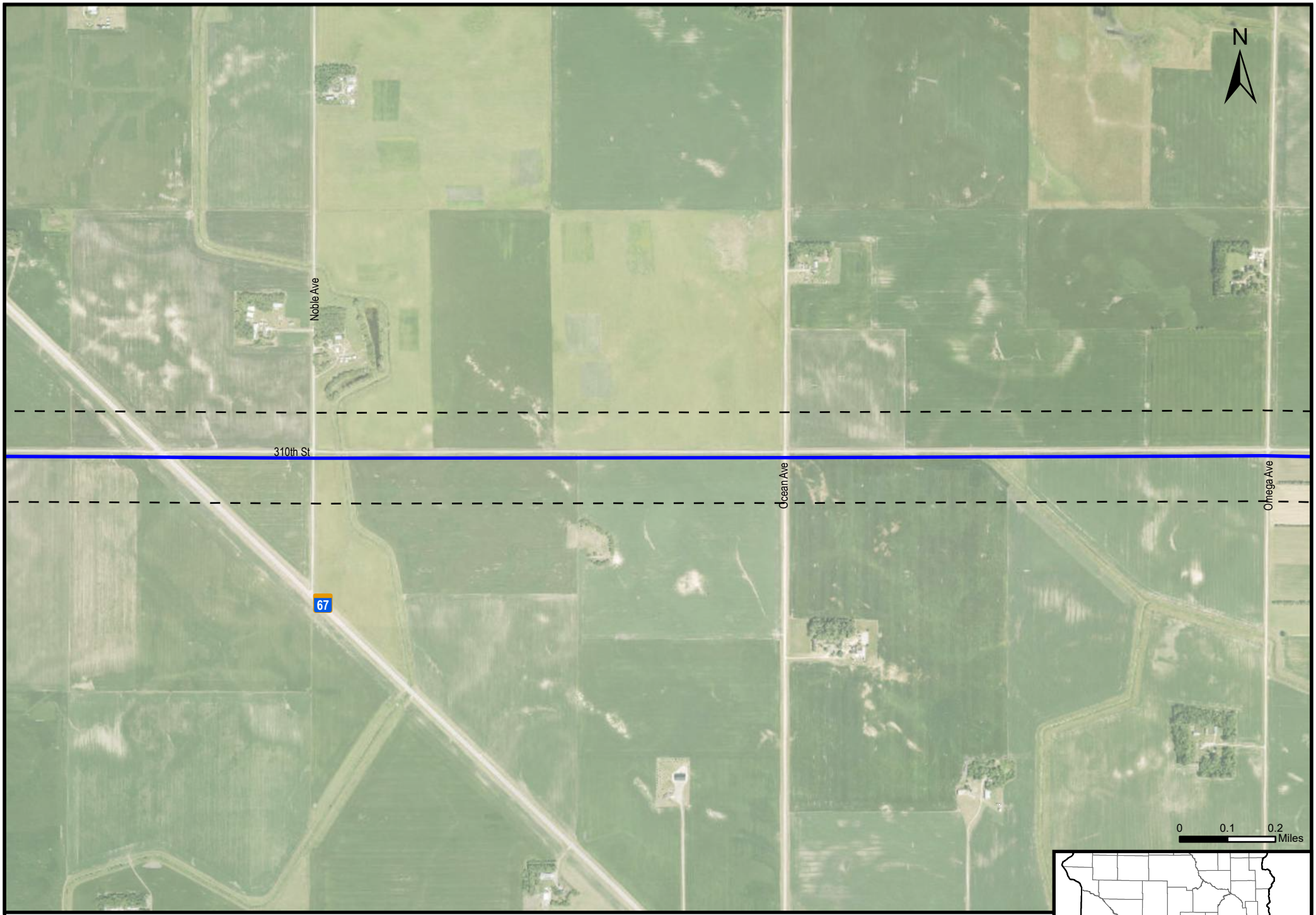
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

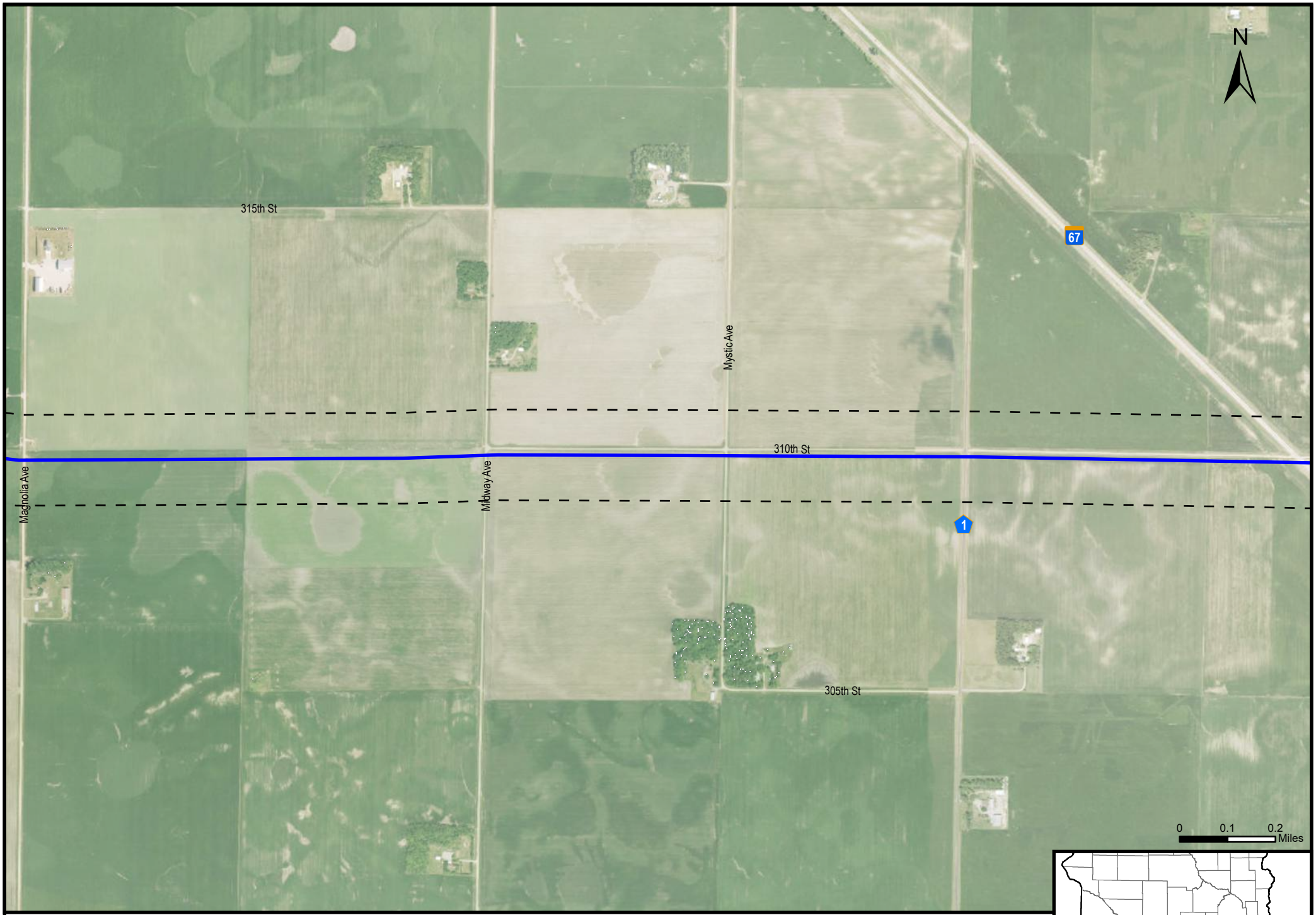
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

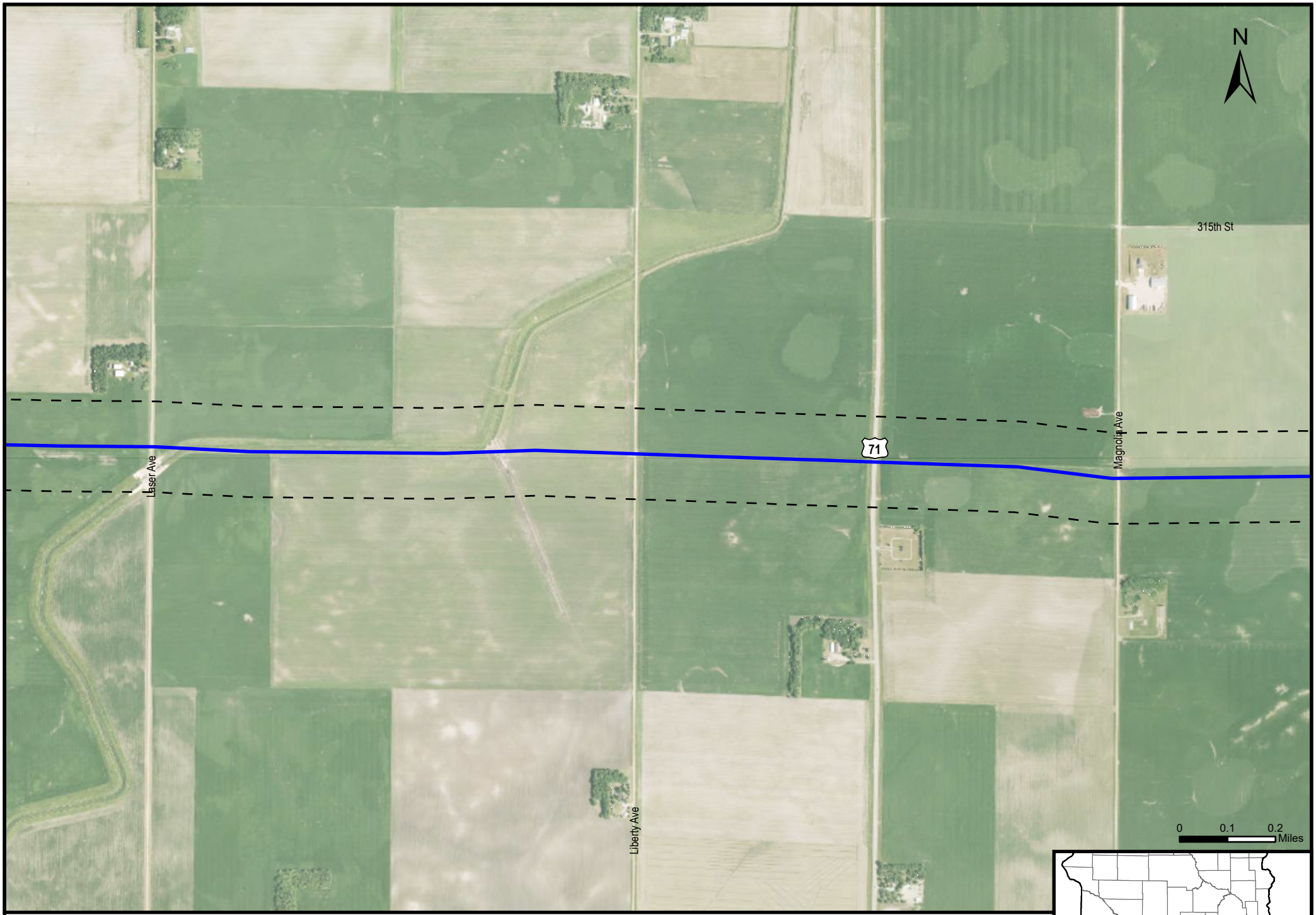
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

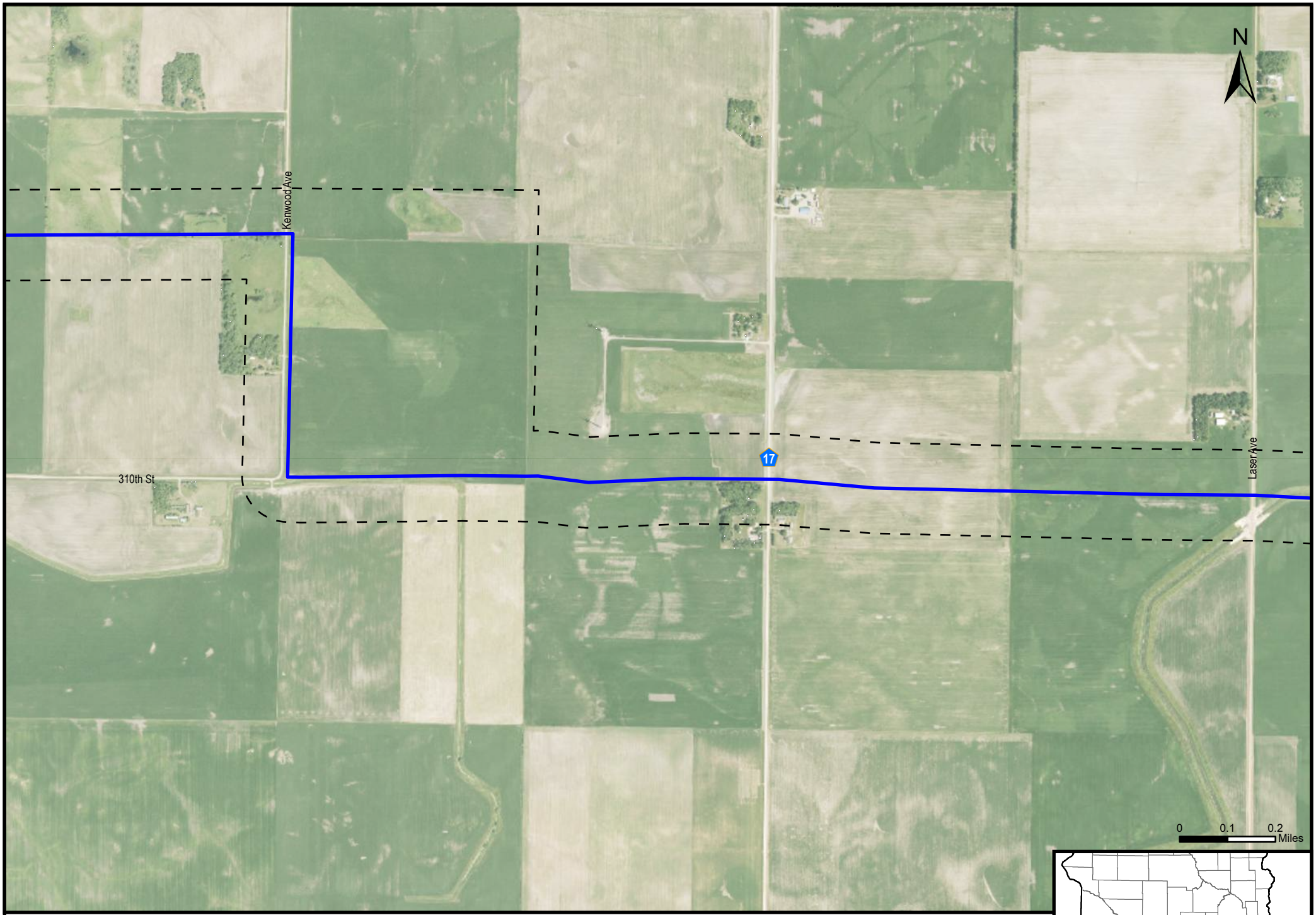
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

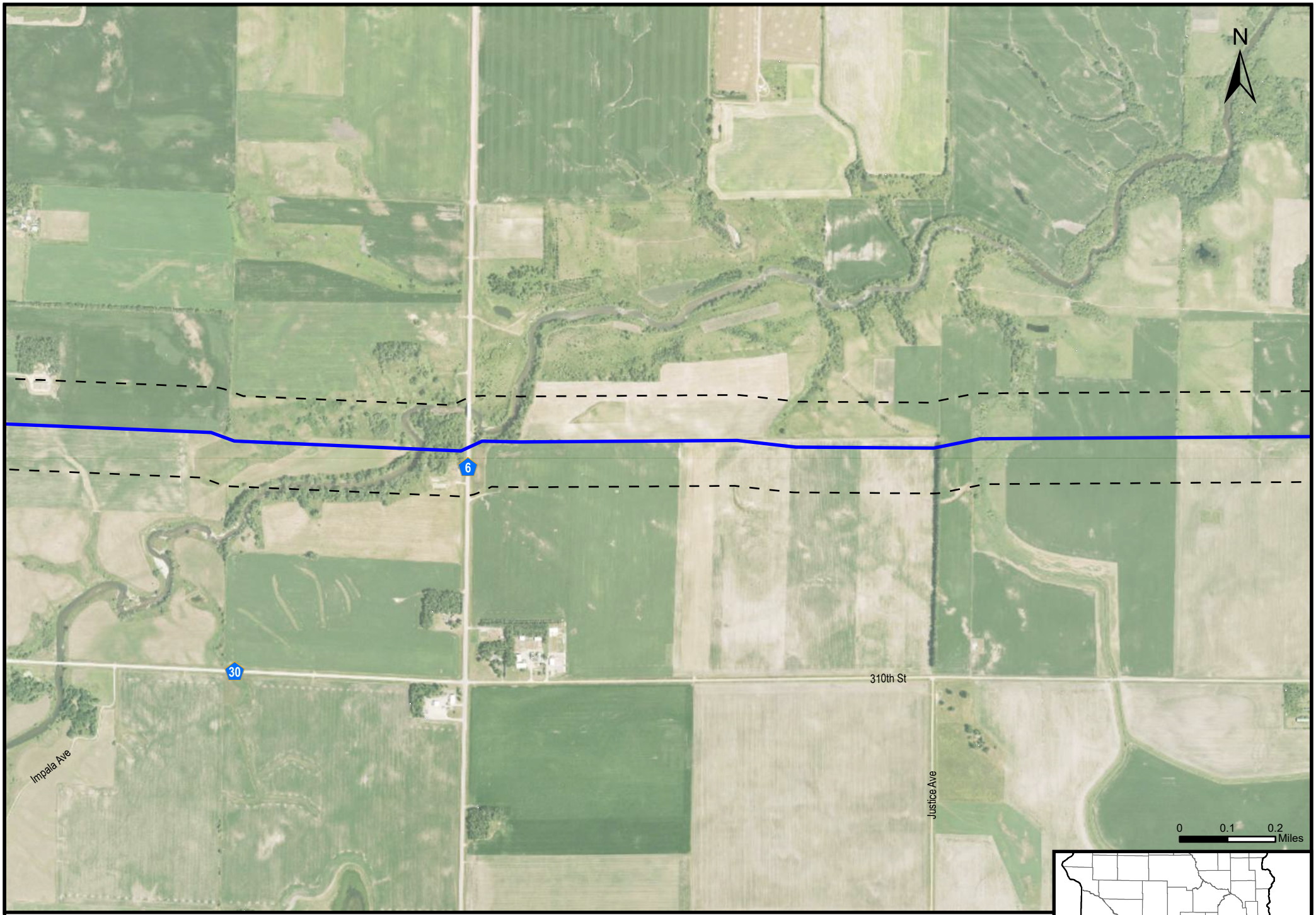
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

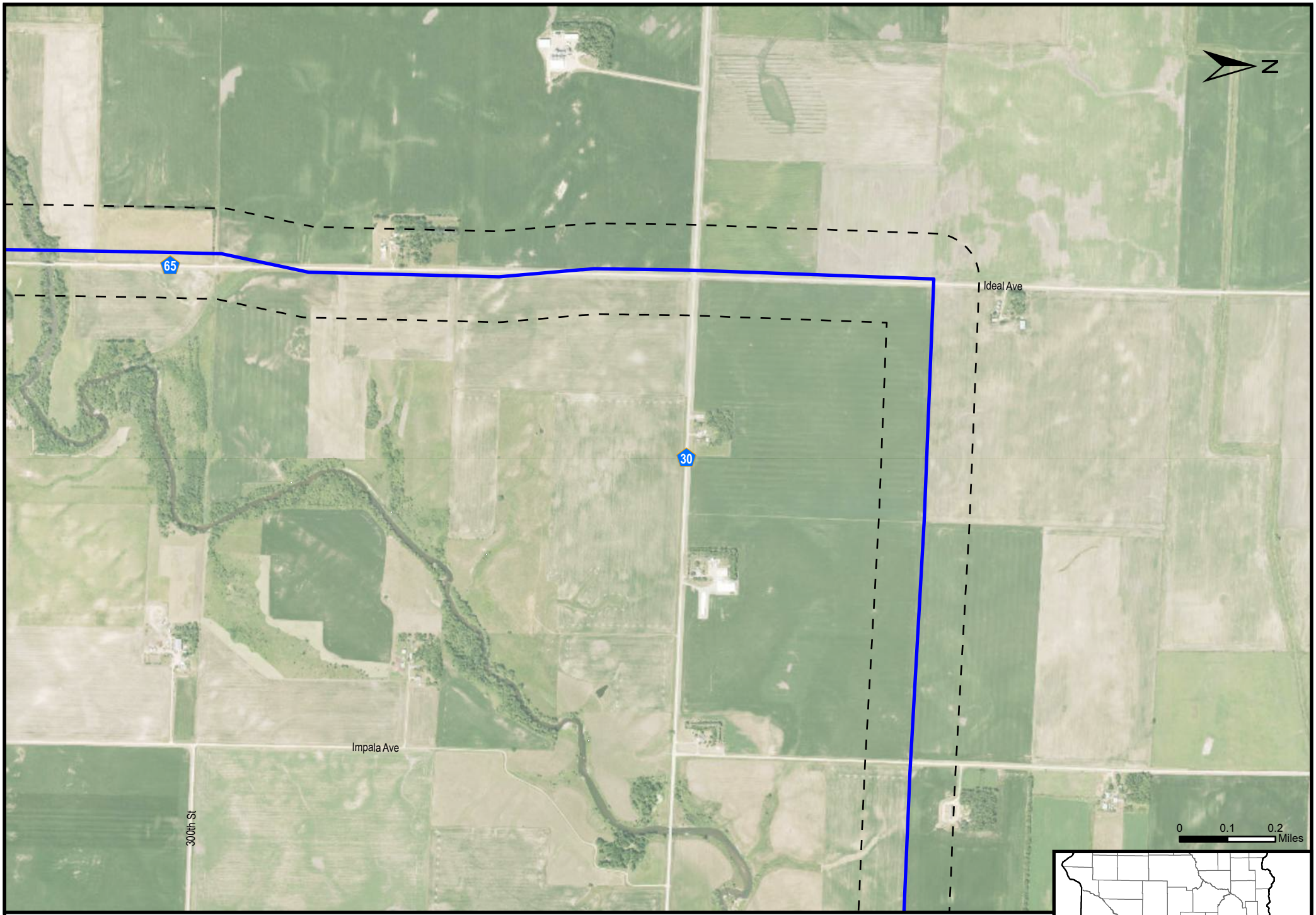
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

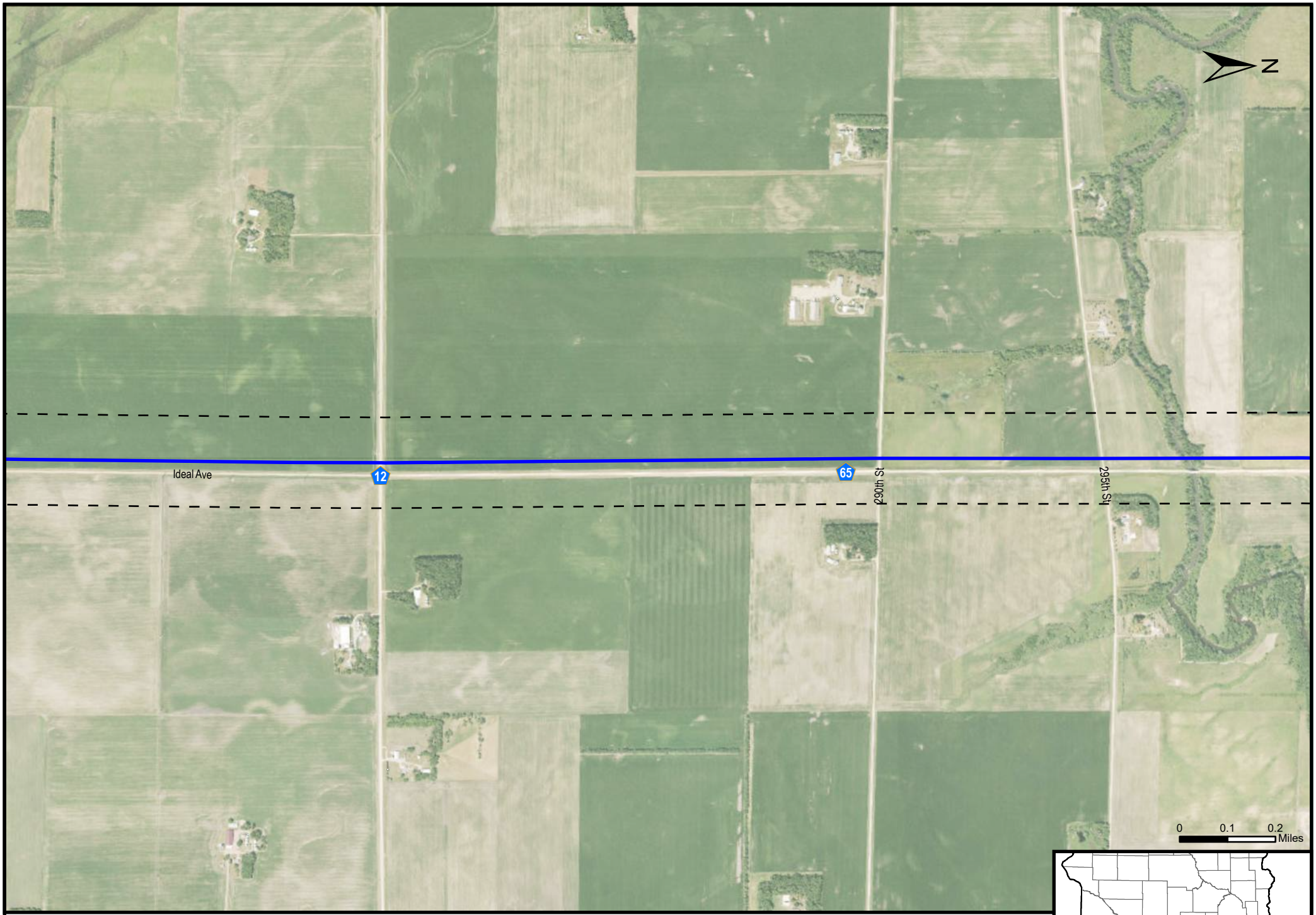
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Redwood County

MNEC Approved Route

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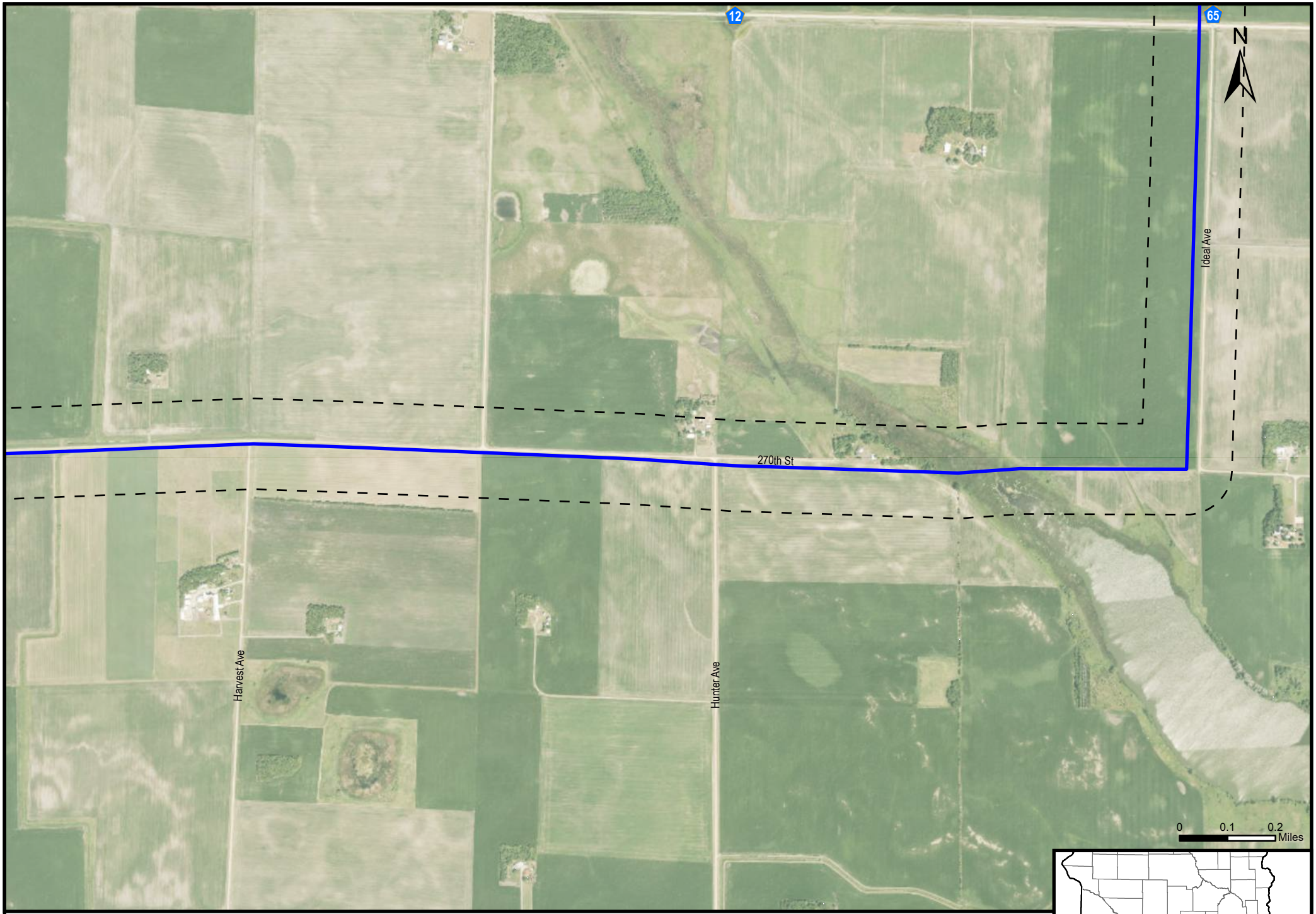
County Boundary



Minnesota Energy Connection

Route Maps | Redwood County

MNEC Approved Route

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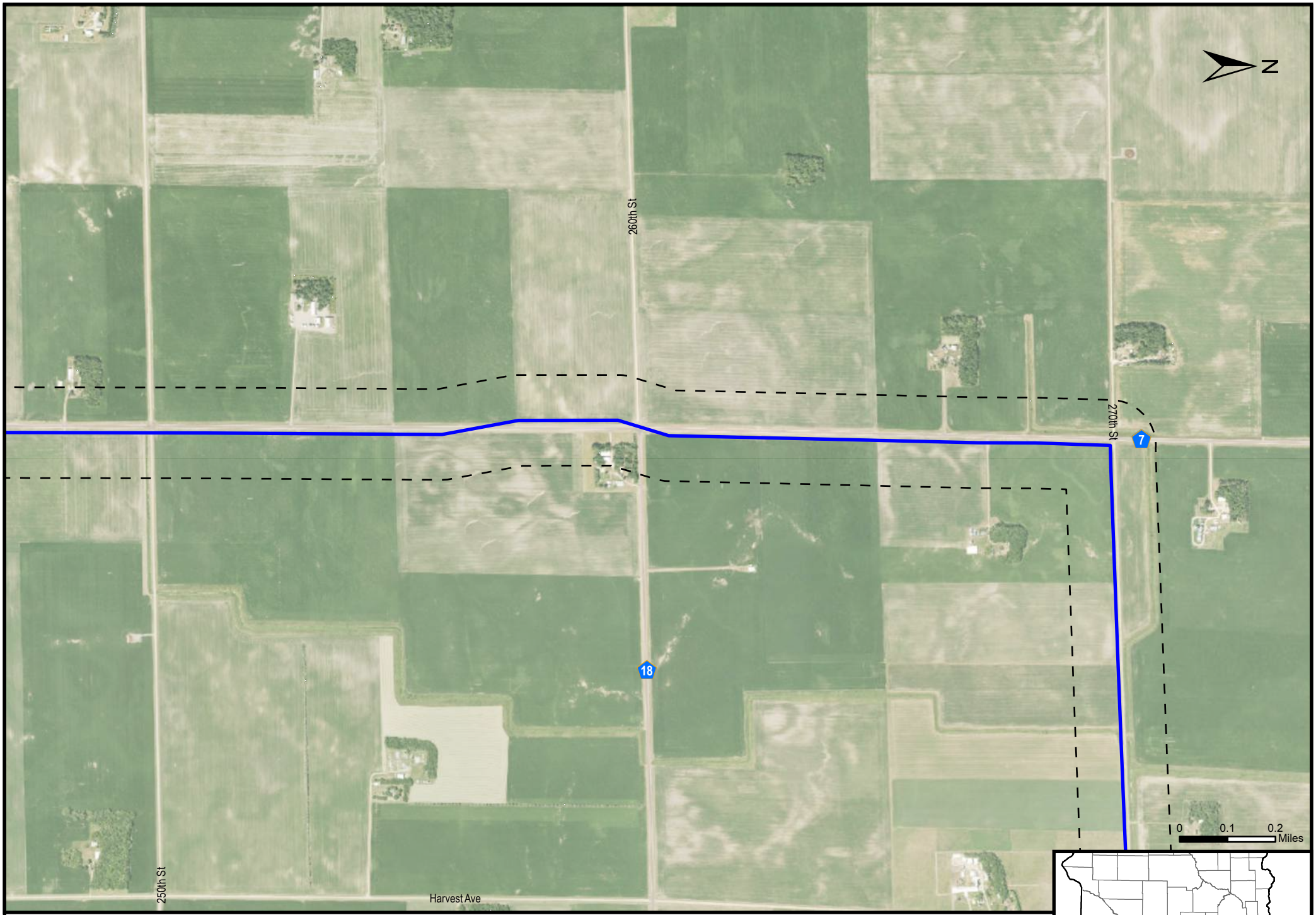
County Boundary



Minnesota Energy Connection

Route Maps | Redwood County

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Minnesota Energy Connection

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MNEC Approved Route

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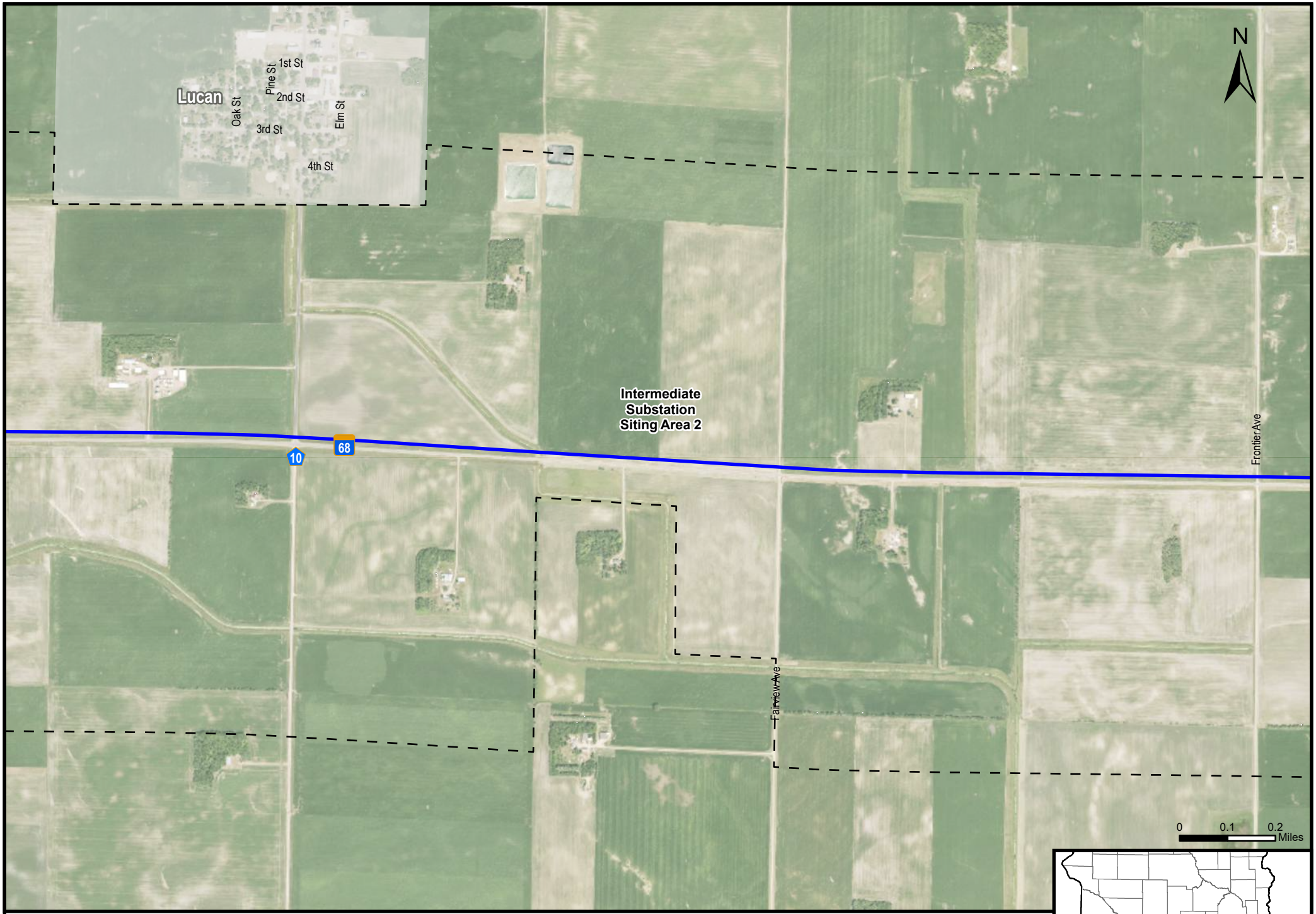

Minnesota Energy Connection

Route Maps | Redwood County

MNEC Approved Route

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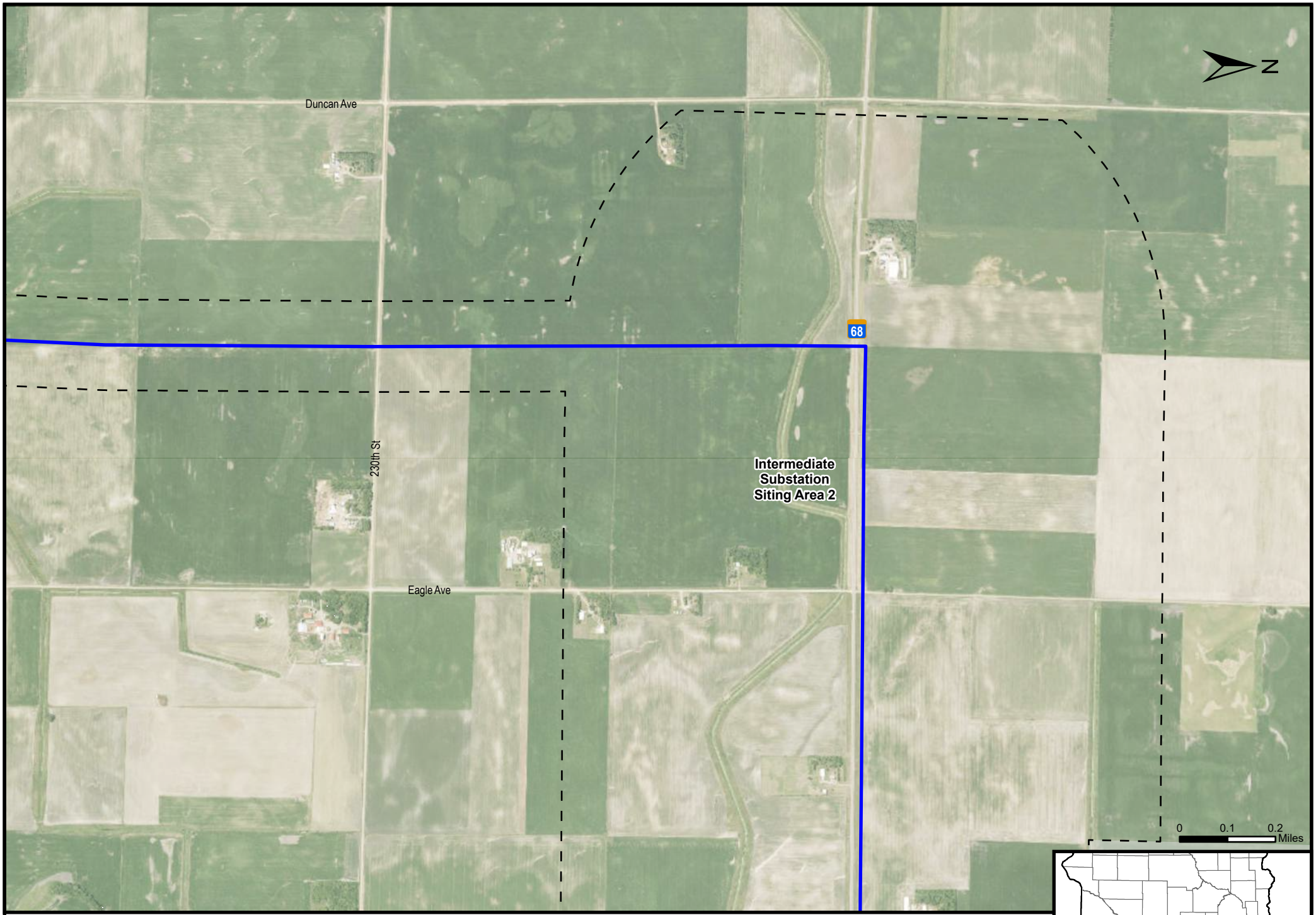

Minnesota Energy Connection

Route Maps | Redwood County

MNEC Approved Route

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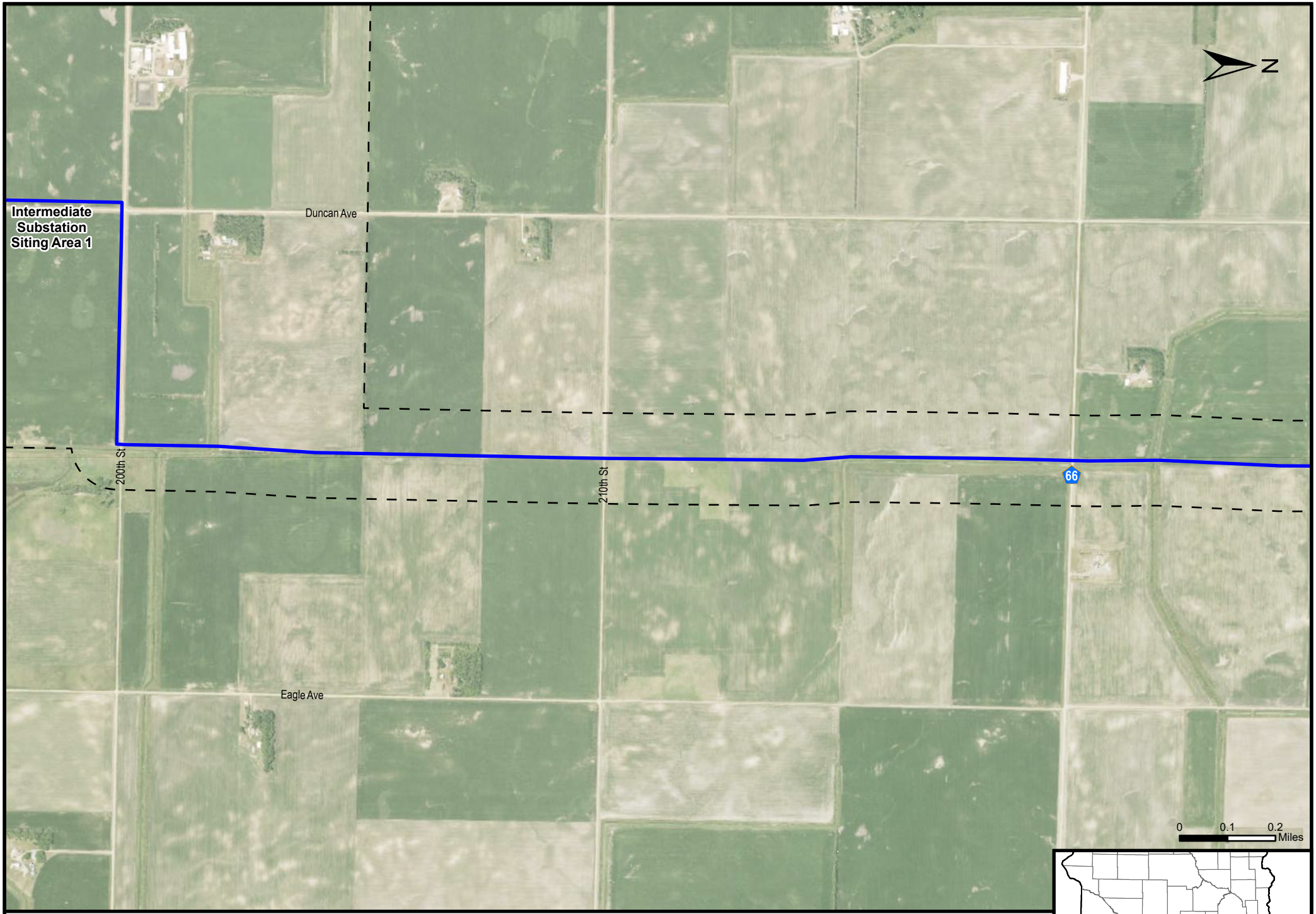
County Boundary



Minnesota Energy Connection

Route Maps | Redwood County

MNEC Approved Route

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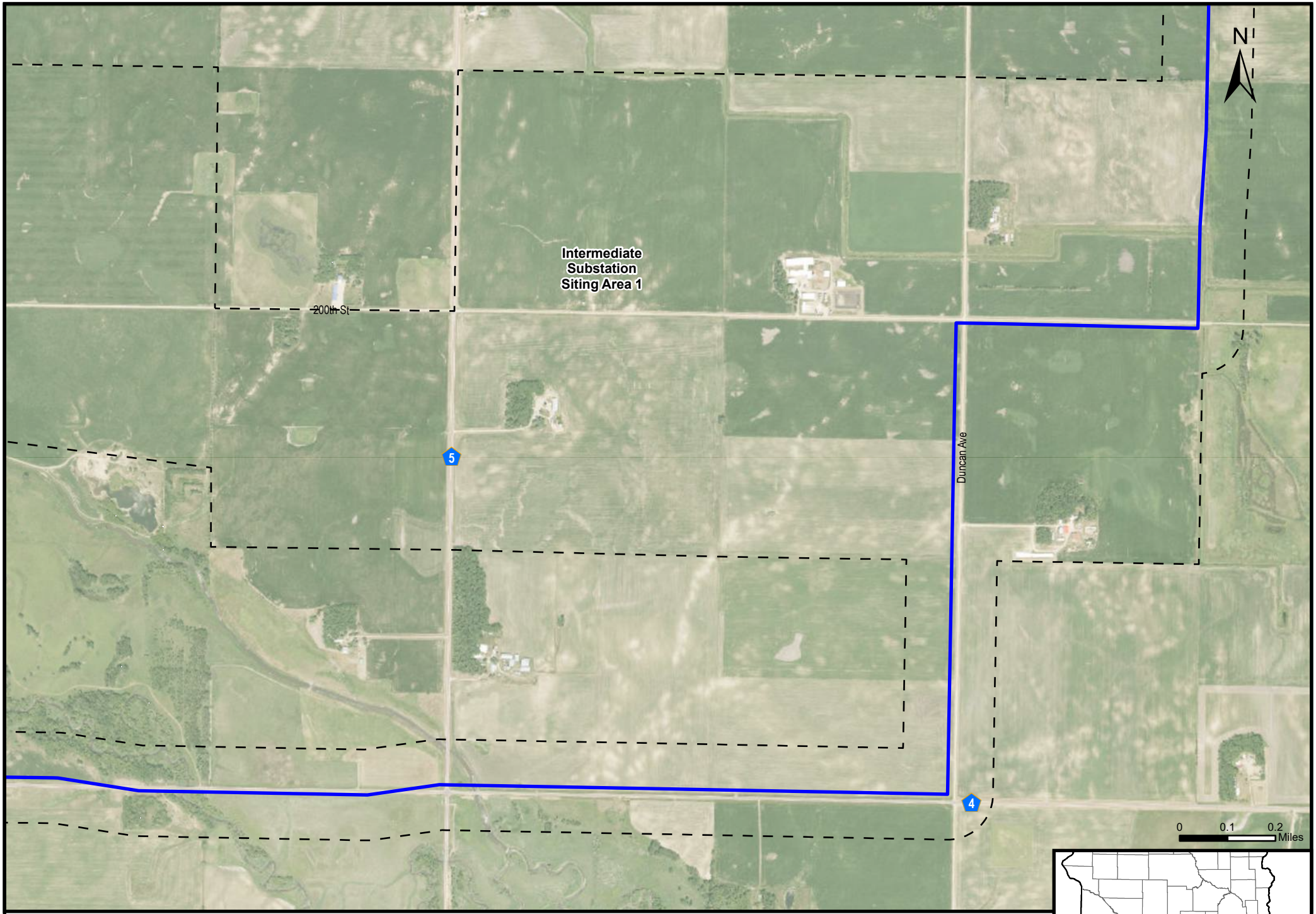


Minnesota Energy Connection

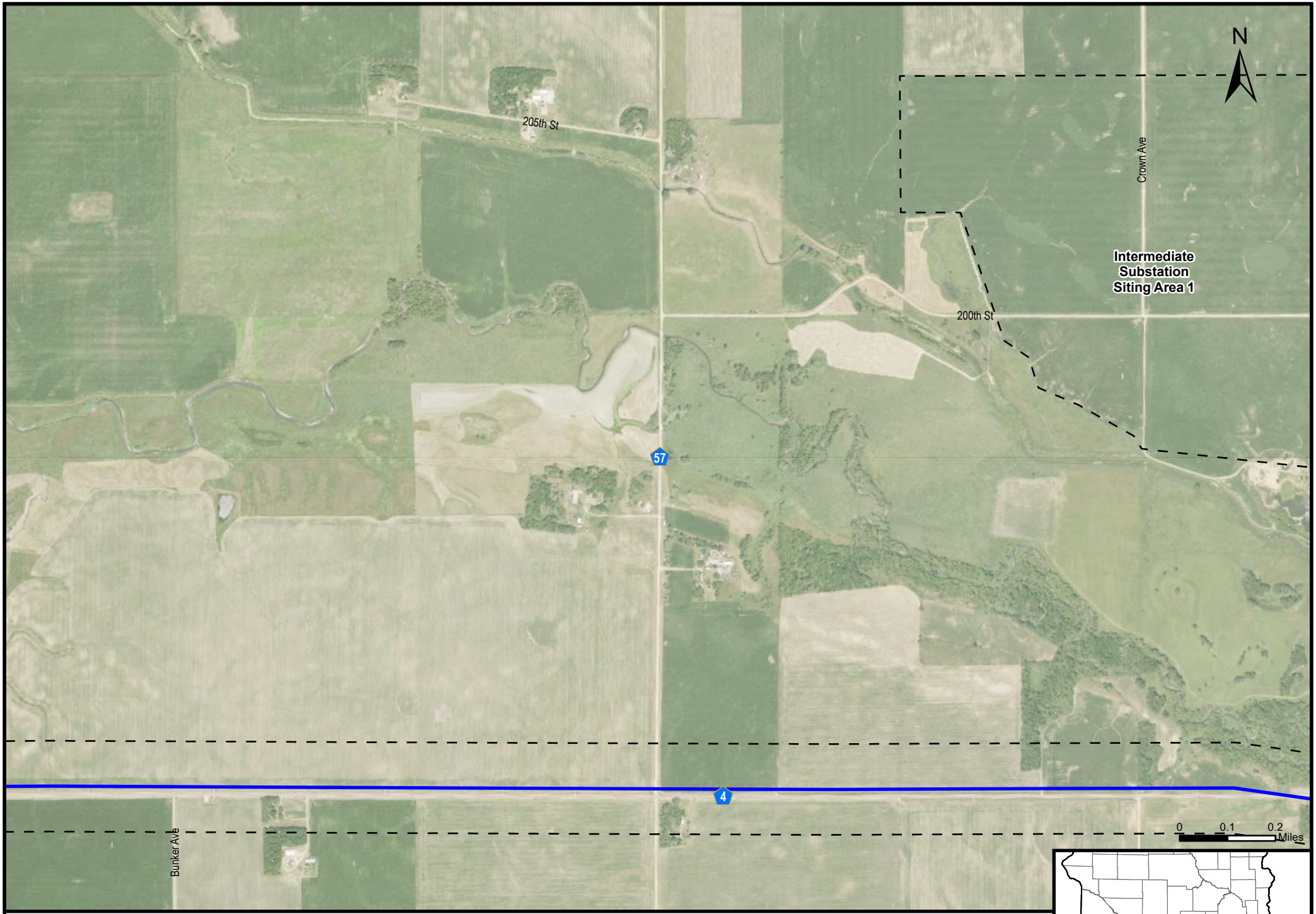
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

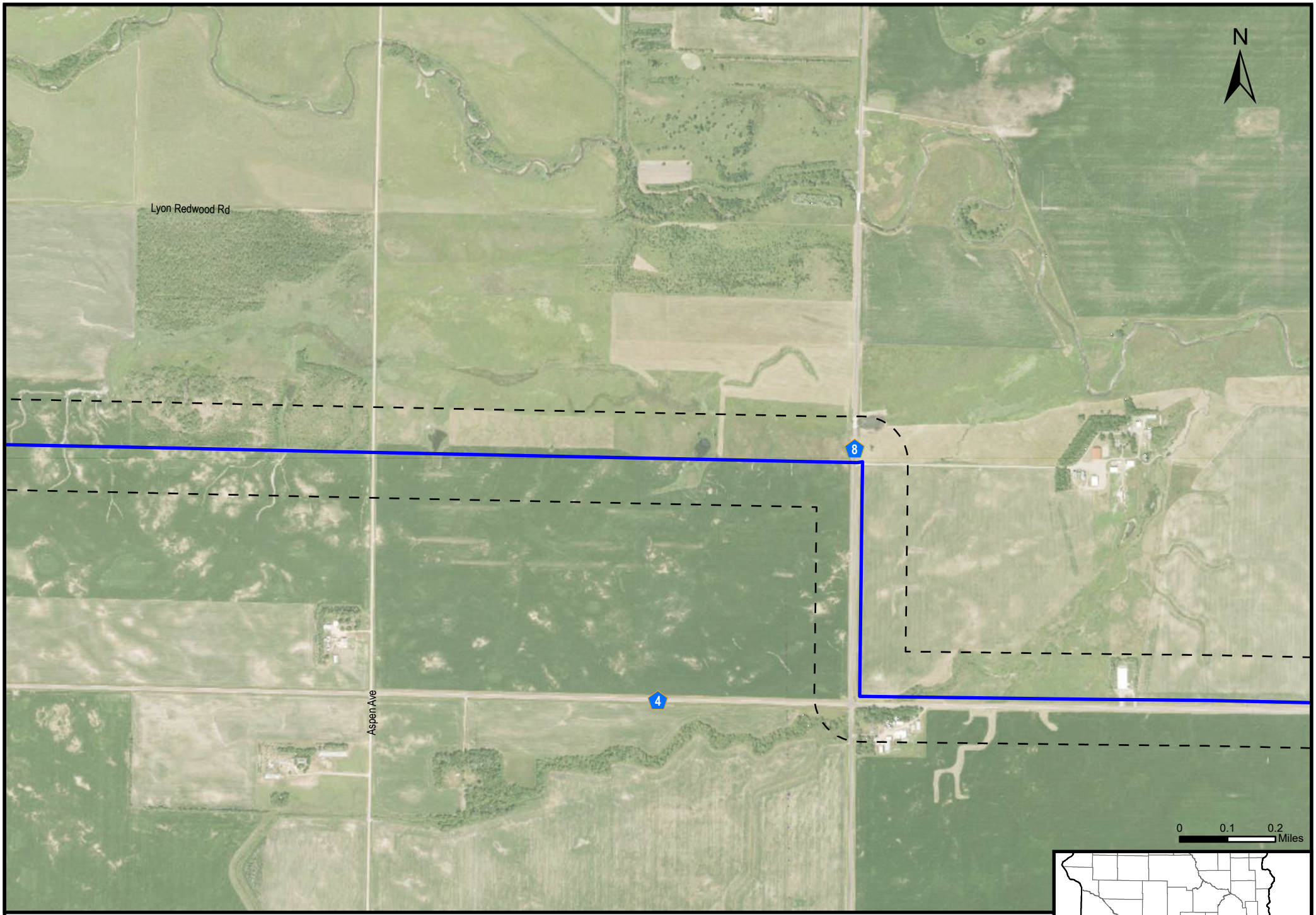
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

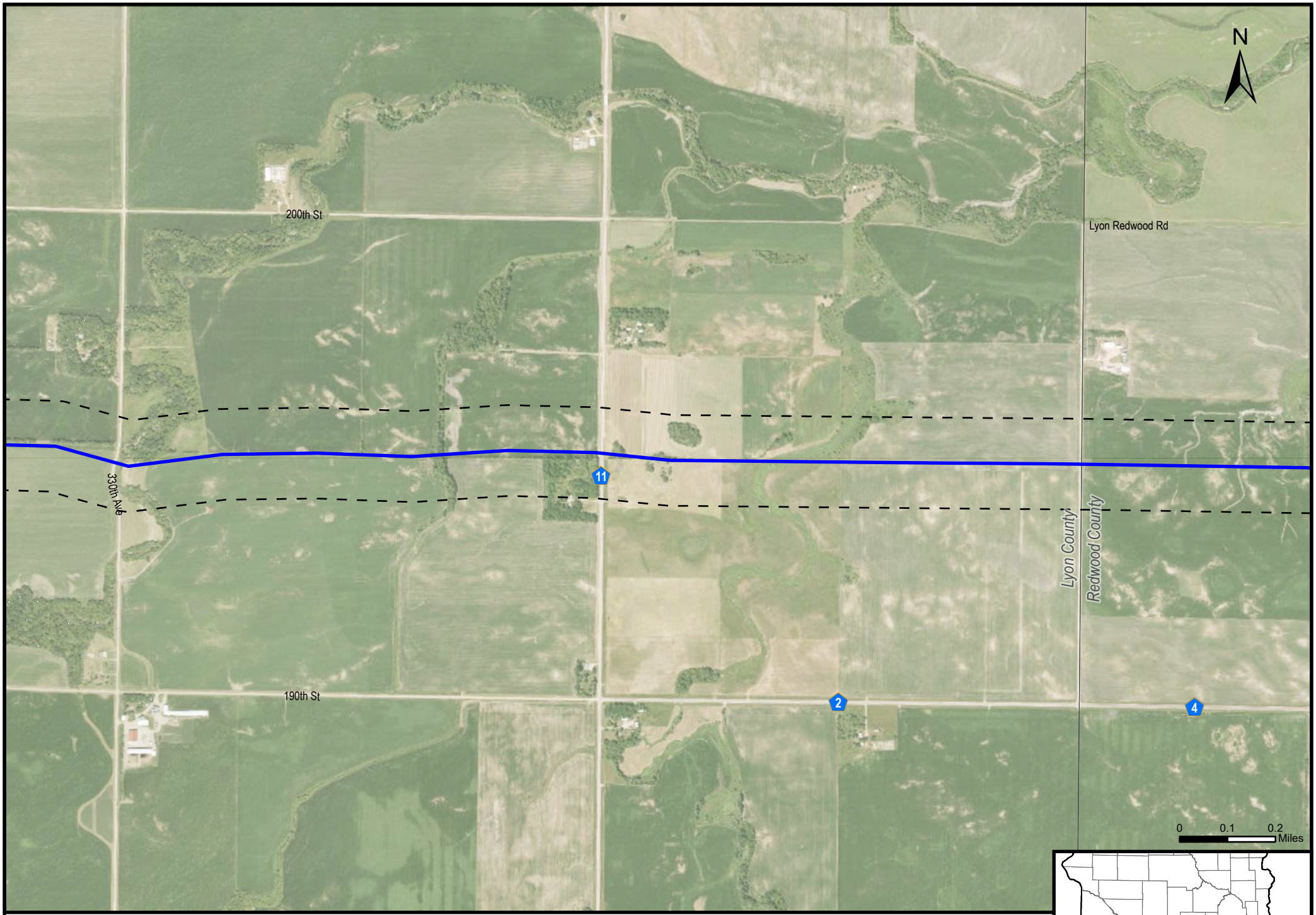
Route Maps | Redwood County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

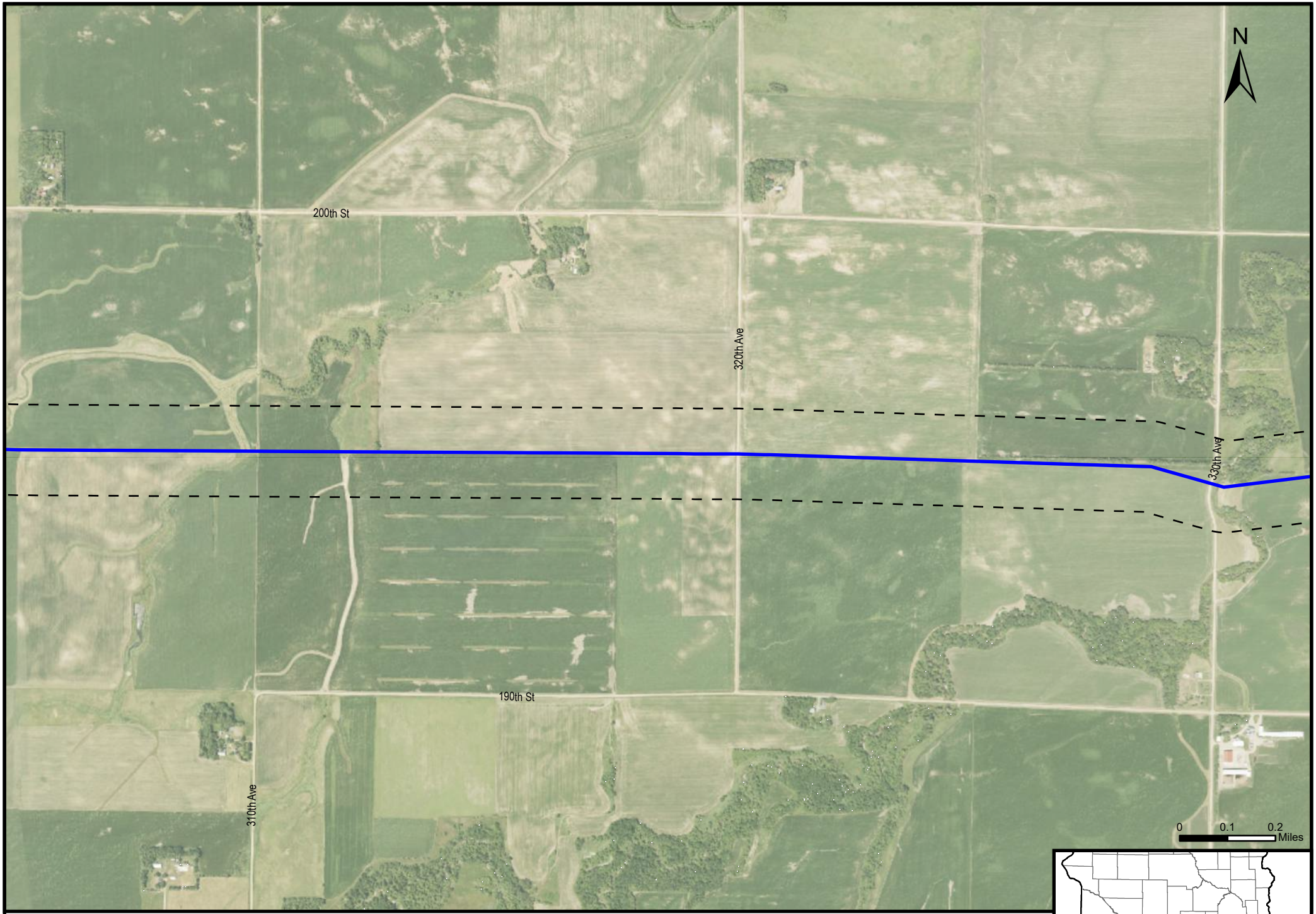
Route Maps | Redwood and Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

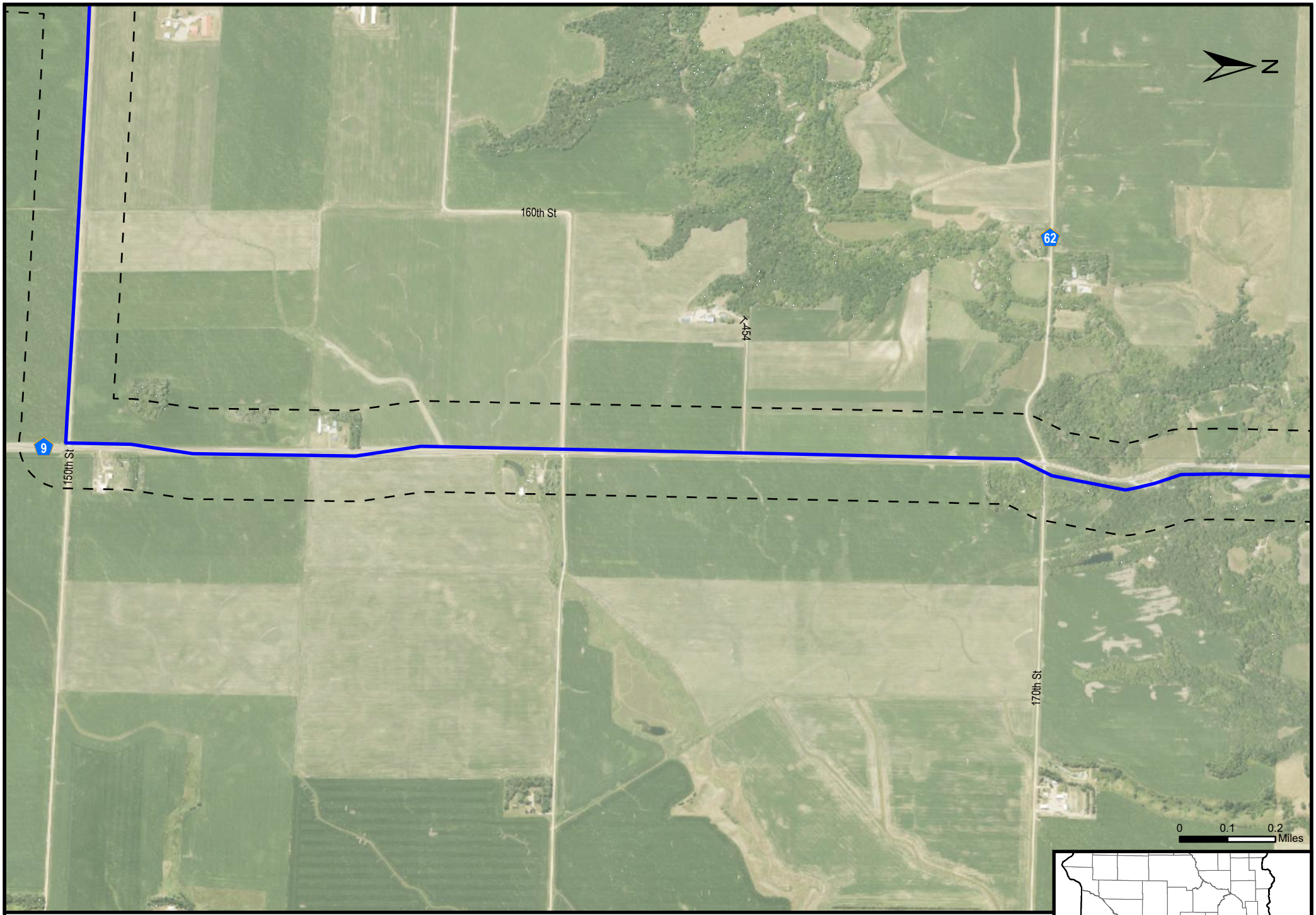
Route Maps | Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

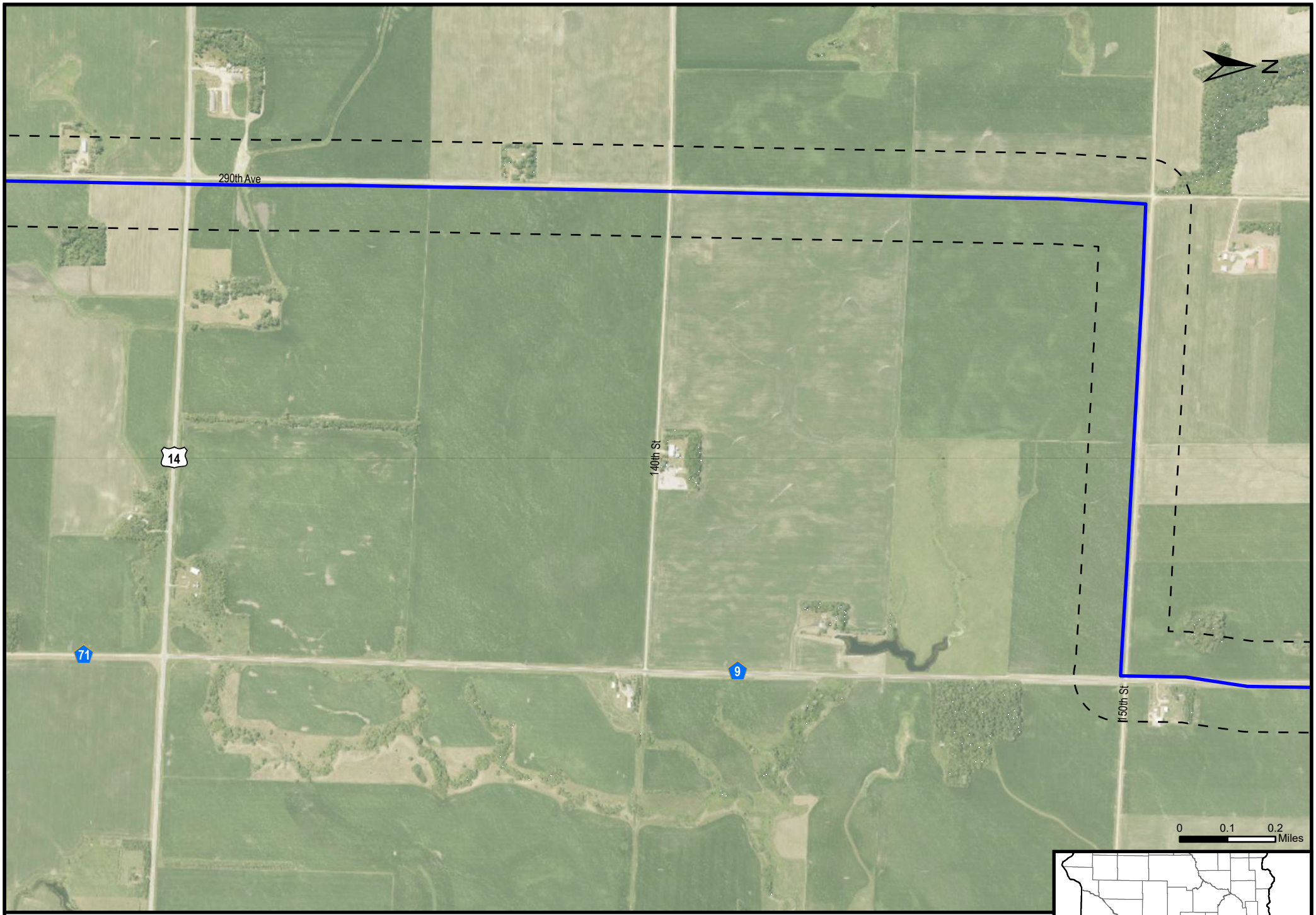
Route Maps | Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary



Minnesota Energy Connection

Route Maps | Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary

Minnesota Energy Connection

Route Maps | Lyon County

MNEC Approved Route

Route Width

Municipality

County Boundary