

# Northland Reliability Project



## Packet overview

Thank you for your interest in the Northland Reliability Project. We appreciate you reviewing this packet to learn about the project and provide input to help us route this transmission line.

Please read the materials and send us the comment form to share your valuable input with us. You can:

- **Mail** the comment form and map back to our team using the prepaid return envelope
- **Scan** and email it to us at: [connect@northlandreliabilityproject.com](mailto:connect@northlandreliabilityproject.com)
- **Visit** the project website to visit our online comment map and complete the online comment form at [northlandreliabilityproject.com](http://northlandreliabilityproject.com)
- **Call** the project team if you have any questions at [218-864-6059](tel:218-864-6059)

Comments will be accepted through **Feb. 17, 2023.**

## Packet materials

This packet of information includes the information on the following:

- About the project
- Frequently asked questions
- Routing process and criteria
- Additional engagement
- Feedback opportunities
- Prepaid return envelope

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# Northland Reliability Project



## Supporting a reliable, resilient and flexible energy grid

To maintain a continuous supply of safe and reliable electricity, Minnesota Power and Great River Energy are investing in transmission infrastructure to enhance the stability of the regional electric system and support a reliable, resilient and flexible electric grid as energy resources continue to evolve. The energy resources we use to serve our customers and members are changing, and the regional power grid we use to deliver that energy needs to change, too.

### Project needs

The Northland Reliability Project will ensure the power grid in northern and central Minnesota continues to operate safely and reliably as energy resources in Minnesota and the regional power system continue to evolve. This project is also part of a large “Long Range Transmission Plan” portfolio approved by MISO, the region’s grid operator, to support grid reliability across the Midwest region. As generation resources shift from fossil fuels to more renewables, the Northland Reliability Project is one part of the solution to:



Provide support to the energy grid as more renewable energy is brought online and coal operations cease at existing power plants



Improve ability to withstand more frequent extreme weather events



Increase capacity to safely and reliably deliver more clean energy from where it’s produced to where it’s consumed by utility customers and power cooperative members



Meet future energy needs by enabling transfer of many types of power generation to many locations to meet the long-term needs of our customers and members

### About

The project consists of two major segments and some additional improvements:

- **Segment one:** Install approximately 130 miles of a new double-circuit 345-kilovolt (kV) transmission line, generally located near existing transmission line corridors
- **Segment two:** Replace approximately 20 miles of an existing 230-kV transmission line with a double-circuit 345-kV transmission line from the Benton County Substation to the Big Oaks Substation (substation to be built as part of a separate project)
- **Additional project improvements:**
  - Expand the existing Iron Range Substation, located near Grand Rapids, and the Benton County Substation, located near St. Cloud
  - Install a new substation at or near the existing Riverton Substation and reconfigure existing transmission lines in the Riverton area
  - Rebuild approximately 20 miles of existing single-circuit 345-kV line from the Benton County Substation to the Sherco Substation in Sherburne County

### Schedule

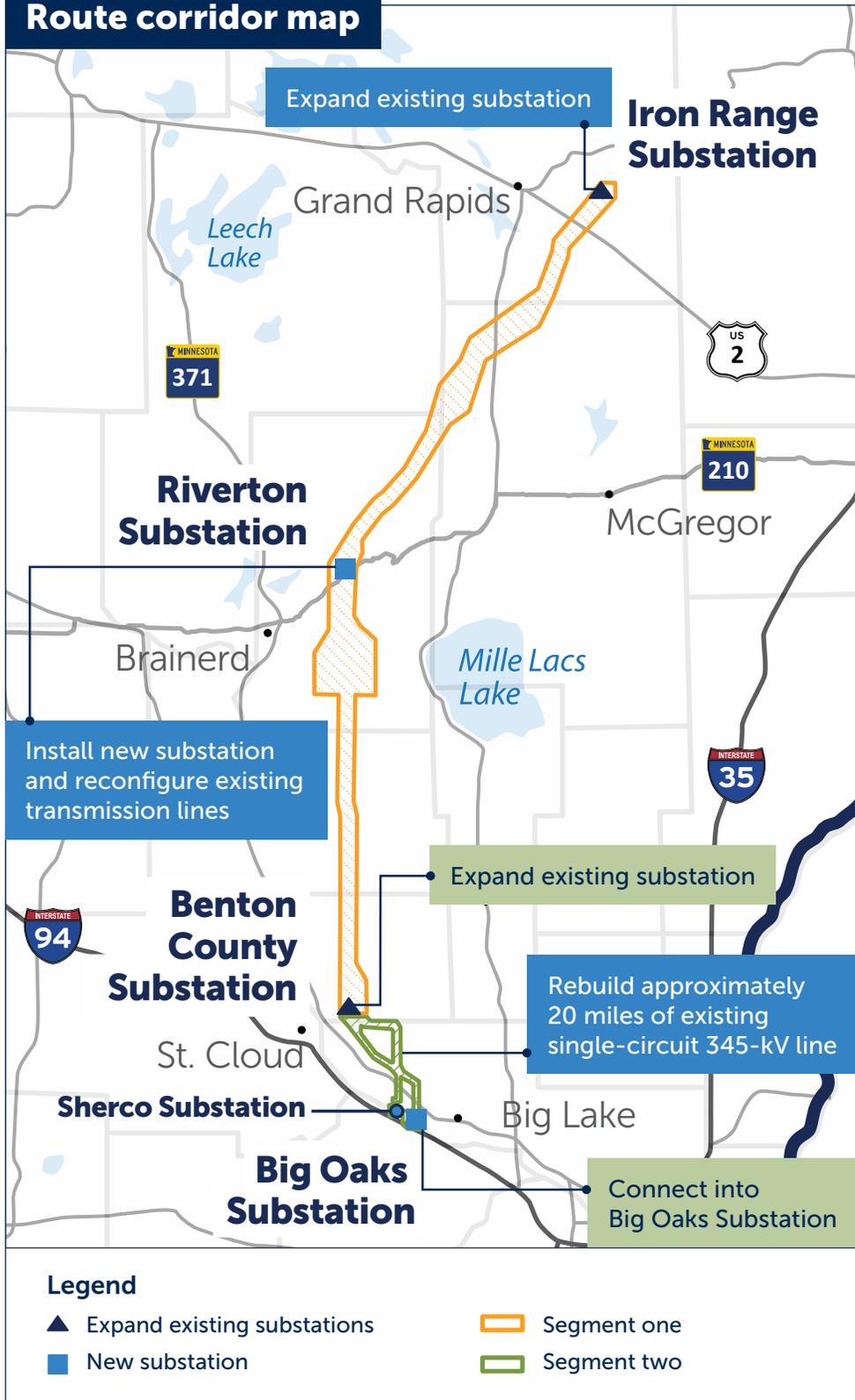
We’ll undertake a robust stakeholder process as we prepare to apply for a Certificate of Need and Route Permit from the Minnesota Public Utilities Commission.



*\*The schedule is subject to change.*

Minnesota Power and Great River Energy have a successful history of joint development and ownership of projects that support the reliability of our electric grid to meet the needs of our communities.

## Route corridor map



## Routing process

During the routing process, our team will identify route alternatives built on taking advantage of opportunities while understanding constraints. We'll be relying on feedback from the public, local leaders, agencies and our own expertise to develop alternatives within the route corridor.

### Segment one

Install approximately 130 miles of a new double-circuit 345-kV transmission line, generally located near existing transmission line corridors.

### Segment two

Replace approximately 20 miles of an existing 230-kV transmission line to a double-circuit 345-kV line from the Benton County Substation to the Big Oaks Substation (substation to be built as part of a separate project).

### Additional project improvements:

- Expand the existing Iron Range Substation, located near Grand Rapids, and the Benton County Substation, located near St. Cloud
- Install a new substation and reconfigure existing transmission lines in the Riverton area
- Rebuild approximately 20 miles of existing single-circuit 345-kV line from the Benton County Substation to the Sherco Substation in Sherburne County



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# Frequently asked questions

## ? Why is the Northland Reliability Project needed?

The Northland Reliability Project will ensure the power grid in northern and central Minnesota continues to operate safely and reliably as energy resources in Minnesota and the regional power system continue to evolve. As generation resources shift from fossil fuels to more renewable energy like wind and solar, the Northland Reliability Project is one part of the solution to:

- Provide system support as the use of fossil-fueled baseload generators continues to evolve.
- Facilitate increased capacity to safely and reliably deliver clean energy from where it is produced to where it is needed by our customers and members.
- Enhance system resiliency during extreme weather events.
- Plan proactively to meet changing customers' and members' power needs due to decarbonization and electrification.

## ? How will I benefit from this project? Why is this project important to the electric grid in Minnesota?

The Northland Reliability Project will allow Minnesota Power and Great River Energy to continue delivering reliable, cleaner energy to our customers and members. This project will enhance the stability of our regional electric system and support a reliable, resilient and flexible energy grid so any type of generation, and from more locations, could be connected to meet the long-term energy needs of our customers and members. The Northland Reliability Project is part of a large portfolio of regional transmission projects approved by MISO, the region's grid operator, in the summer of 2022. All of the projects in that portfolio work together to provide broad regional benefits in addition to local reliability benefits. While the Northland Reliability Project will directly support reliability in northern and central Minnesota, it supports reliability well beyond Minnesota, as well.

## ? What are transmission lines and substations and what do they do?

Electricity is generated at power plants, wind or solar facilities and other generation sites before it is delivered across a complex, interconnected system of power lines and substations to electric customers and cooperative members. Think of transmission lines as the interstates, or the super

highways of the electric system. Transmission lines carry large amounts of high-voltage electricity from generation sites to substations, where it is "stepped down" to lower voltages so it can be delivered across the electric distribution system, and can be safely used at homes, farms and businesses.

## ? What is the routing study area?

The study area is the geographic area in consideration for the route of the power line. We developed the study area based on where the new transmission line will need to connect into existing infrastructure. We'll narrow down potential routes based on the state of Minnesota's requirements, as well as public input, engineering, permitting and construction feasibility. We will look for opportunities to follow existing utility corridors and use land already being used for power lines whenever it makes sense.

## ? How much will this project cost and how will it be paid for?

The Northland Reliability Project is one of 18 regional transmission projects approved by MISO, the region's grid operator, in the summer of 2022. Because the entire region benefits from the Northland Reliability Project, the cost is spread across all of the utilities who are members of MISO in the region. The Northland Reliability Project's estimated overall cost is approximately \$970 million and ultimately, everyone who uses electricity in the MISO region will pay a share through their electric bills as costs flow through to electric utility customers and electric cooperative members. While there is cost associated with new transmission, transmission makes up a small portion of electric bills and the value of this project is high. The project is one of many that will ensure reliability in our region as our generation resources evolve. MISO estimates the benefit of bringing on more low-cost renewable energy, along with other benefits, outweighs the cost of these projects by two to four times.

## ? What is this schedule for this project?

This project is in the early planning stages and includes a robust stakeholder engagement process. We'll apply for a Certificate of Need and Route Permit from the Minnesota Public Utilities Commission and work with

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local jurisdictions, landowners, customers, members and agencies while following permitting requirements throughout project development and construction. The proposed schedule is as follows:

- **2022** – Project planning and initial stakeholder engagement
- **2023** – Routing, public engagement and permitting
- **2024-2026** – Permitting, engineering, environmental surveys, real estate and public engagement
- **2027-2030** – Construction
- **2030** – Anticipated in-service\*

\*The schedule is subject to change.

### ? Can I get involved? Will my input be taken into account during the routing process?

Yes and yes! We need your input during the routing process. You can get information and provide input by visiting us at workshops and public meetings, browsing this website and more. Property owners within the route corridor will receive information throughout project development and we are always available to discuss the project with each individual property owner. Finally, you can stay up to date on project happenings by visiting this website regularly and signing up for future email updates.

### ? How will the routing process work?

We start by identifying a study area and through the routing process, ultimately narrow down to a specific route. Our routing process includes robust community engagement. You're the experts in your communities and we need you to share your insights so we can have a more complete picture of opportunities and constraints in your area. We analyze and study cost, environmental impacts, engineering, constructability and more. After we receive your input and analyze everything we have heard and studied, we will select a proposed route to submit in our Route Permit to the Minnesota Public Utilities Commission. For this project, we will be submitting an application for a combined Certificate of Need and Route Permit.

### ? What if I have personal or commercial land located on the proposed route?

If you have property in the route corridor, you will receive communications about the project by mail and

you will be invited to public open house meetings. If you own property on the final route that is approved by the Minnesota Public Utilities Commission, a project team member will contact you and begin the process for obtaining an easement on your property for the project's right-of-way needs. A right-of-way is a strip of land used for a specific purpose such as the construction, operation and maintenance of a road or transmission line and it is typically secured in the form of an easement. The easement is the document allowing Minnesota Power and Great River Energy the right to use the portion of your property for the transmission line project's needs. More information on the easement process will be made available when we have a better idea of what our proposed route will be.

### ? What is the route corridor?

The route corridor is a narrowed area being considered for the power line. We developed the route corridor based on where the new power line will need to connect into substations, input gathered during our fall 2022 stakeholder workshops and the opportunity to route near existing utility corridors and land already being used for power lines. The route corridor is narrower than the original study area, and wider than the 150-foot right of way that will be needed for the construction, operation and maintenance of the line. The next step in route development will be to define route alternatives within the route corridor.

### ? What will the transmission line structure look like?

We are proposing 130–170 foot-high single-pole steel structures with arms on both sides of each structure to carry the lines. For this type of structure, we'd anticipate having about five to six for each mile of our line. Although this is our proposed typical design, this could change based on environmental needs, permitting requirements and engineering standards. We'll continue to share more details as they become available and we complete more engineering activities.

### ? Who can I talk to if I have other questions on this project?

If you have questions not answered here, you can fill out the comment form, email [connect@northlandreliabilityproject.com](mailto:connect@northlandreliabilityproject.com) or call **218-864-6059**. Each comment goes to our project team and one of our team members will get back to you.

## Connect with us

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## Our routing process

Routing a transmission line is no small task. The state of Minnesota has statutes and rules that guide the route development process and help minimize a project's impact to human settlement and the environment. Input from you, local leaders and agencies as well as our own expertise is critical as we develop and finalize a route.

Here's how our routing process works. We're currently in the define route corridor part of this process. Please note that at each point during this process, and even after we submit our Certificate of Need and Route Permit to the Minnesota Public Utilities Commission, there will be opportunities for public input.



# Northland Reliability Project



## Routing opportunities and constraints

The criteria for route selection, set forth in Minnesota Statutes section 216E.03, subdivision 7, and Minnesota Rule 7850.4100, will guide our team's route development process. Project partners will site transmission lines to minimize impacts to human settlement and the environment in accordance with Minnesota Statutes and Rules and will guide the Minnesota Public Utilities Commission's (PUC) selection of the final route for the project. During the routing process, our team will identify route alternatives built on taking advantage of opportunities while understanding constraints. The routing process will help us identify a proposed route that will be included in the Certificate of Need and Route Permit application which will be filed with the Minnesota PUC.

### Your input matters

We need your help to identify opportunities and constraints in the project area. Use the information on this handout to help us identify opportunities and sensitivities on survey, map and/or comment form included in your packet.

### Opportunities

*Typical existing corridor features that are oriented in the direction of the project.*

- Existing transmission line and utility corridors
- Highways and roads
- Property lines
- Field lines

### Constraints

*Typical area resources or conditions that may require additional review and consideration.*

- Agricultural uses, including organic farms
- Airports/air navigation facilities
- Cemeteries
- Communication towers\*
- Conservation areas/nature preserves
- Cultural/archaeological and historic resources\*
- Floodplains (more difficult construction and could have sensitive species)
- Lakes/ponds/rivers/streams/wetlands\*
- Levees/dams
- Mines/quarries
- Pipelines\*
- Potentially contaminated sites
- Railroads\*
- Religious facilities
- Residences (especially large clusters of homes)
- Scenic highways
- Schools
- Sensitive plant/animal species\*
- State/regional/local parks and trails
- Wells

*\*Constraints with additional precautions and studies required.*

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January 2023

## Right-of-way acquisition

### ? What is right-of-way?

The term right-of-way or ROW is typically a strip of land used for a specific purpose such as the construction, operation and maintenance of a road or transmission line. Right-of-way is typically secured as an easement on a property.

### ? What is an easement?

A document allowing Minnesota Power and Great River Energy the right to construct, operate and maintain a transmission line and other associated infrastructure on your property.

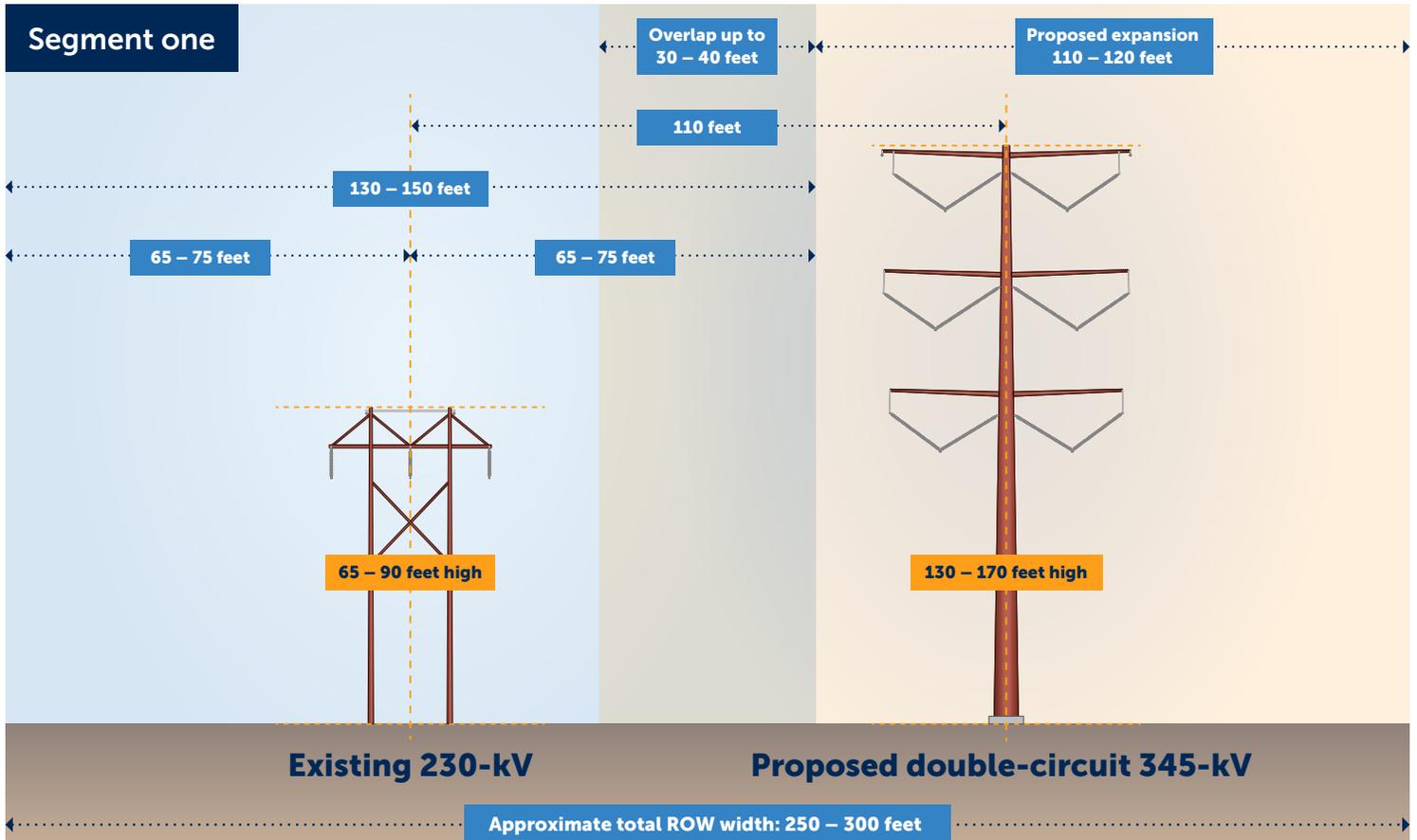
Project representatives will hold individual meetings with **affected landowners** to discuss right-of-way needs.



## Frequently asked questions

### ? Can this project share right-of-way in segment one with an existing line?

There may be opportunities to overlap right-of-way with an existing line. We estimate up to 30-40 feet of right-of-way may be shared between the existing structure and the new structure depending on factors like engineering, construction and topography.



**? How large of an easement do you need?**

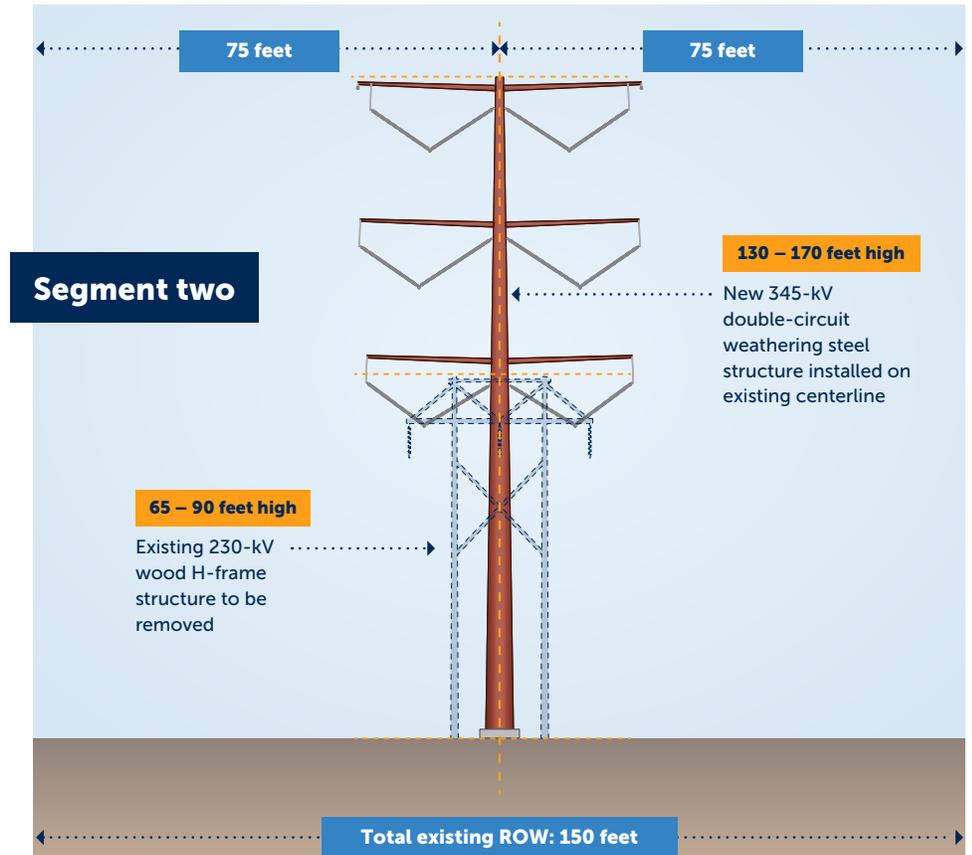
The typical right-of-way width will be at a minimum 150 feet for each transmission line (75 feet on each side of a transmission line). It is sometimes necessary to secure additional permanent right-of-way at angles or areas where we use specialty structures. It could also be necessary to secure temporary areas next to the permanent right-of-way for stringing and construction access.

**? Does segment two require a wider easement?**

At this time, we do not anticipate requiring additional easement width for the line replacement along segment two (Benton County Substation to Big Oaks Substation). The replaced line is expected to be in the same ROW as the existing line.

**? How far will the transmission line be from by homes and businesses?**

To the extent practicable, the project team will design the route to maximize separation from homes and businesses. Proximity to homes and businesses is one of the routing criteria for Minnesota Power and Great River Energy. We do not anticipate having structures within our 150-foot-wide right-of-way.



**? How does an easement affect my property?**

The easement restricts the placement of buildings and structures within the easement area for safety and reliability and provides rights for access as well as clearing and removal of vegetation. Our project team will coordinate with landowners prior to construction. Additionally, easements stay with a property even if the ownership of a property changes.

**? What activities are allowed within the easement area?**

In general, the land can continue to be used as before, provided that the use does not interfere with the construction, operation and maintenance of the transmission line. Minnesota Power and Great River Energy encourage landowners on the final approved route to discuss the activities they plan to conduct in the easement area with a land agent.

**? Will eminent domain be used for this project?**

Great River Energy and Minnesota Power intend to work with all landowners to reach voluntary agreements. In the event those agreements cannot be reached, then eminent domain proceedings may be necessary. In those instances, the Northland Reliability Project team encourages landowners to consult with their own counsel. The Northland Reliability Project team will continue to negotiate with landowners during an eminent domain proceedings and will dismiss the proceedings if an easement agreement is reached.



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# Northland Reliability Project



## Construction, restoration and maintenance

### Typical preconstruction survey types

- Field surveys
- Wildlife surveys
- Archaeological surveys
- Wetland and stream surveys
- Soil surveys

### Construction and restoration



▲ Initial surveying, right-of-way clearing and access routes



▲ Structure staking, surveying and soils investigations as needed



▲ Foundation installation  
*Foundation type may vary depending on structure*



▲ Assemble and set structures



▲ Wire installation



▲ Cleanup and restoration



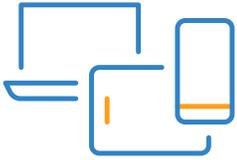
Energize line

A project representative will assess damages incurred during construction and contact each property owner to settle claims for any such damages. After construction is complete, damaged property will be restored as close as possible to its original condition. Landowners will be fairly reimbursed if damage occurred to crops, fences or other property during construction.

## Additional engagement opportunities

In addition to this packet, there are many ways to stay connected and share your input.

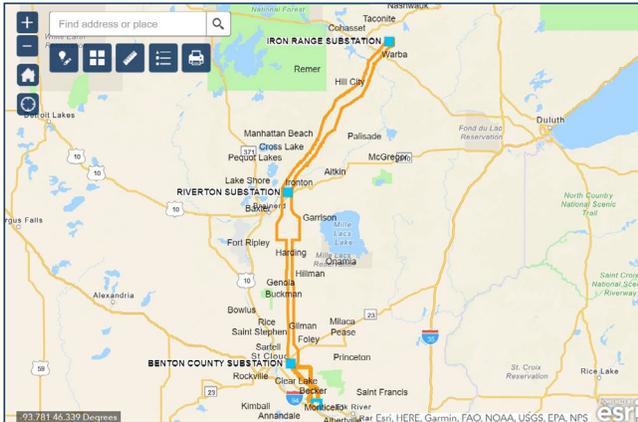
### Virtual open house



Explore our virtual, self-guided open house available from Jan. 23 – Feb. 17 at [northlandreliabilityproject.com](http://northlandreliabilityproject.com).

### Interactive comment map

Visit our interactive comment map at [northlandreliabilityproject.com](http://northlandreliabilityproject.com). Drop a pin on the map below to share geographically specific routing opportunities or constraints in your community.



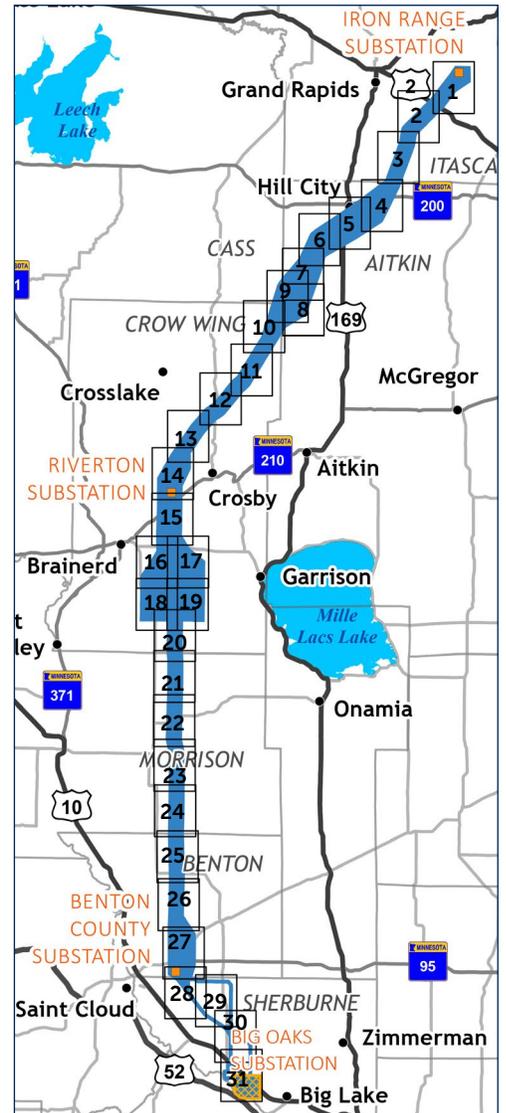
### Meeting with the project team



Schedule a meeting with the project team by emailing us or leaving a message on our hotline.

### Printable detailed maps

Visit the project website to view and print detailed sections of the study area map.



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# Northland Reliability Project



## Constraints survey

We need your input to learn as much as we can about the project area to take advantage of opportunities and have a better understanding of constraints. **We need your input to help define route alternatives in the route corridor.**

### What are the top three constraints we should be aware of?

- Agricultural uses, including organic farms
- Airports/air navigation facilities
- Cemeteries
- Communication towers
- Conservation areas/nature preserves
- Cultural/archaeological and historic resources
- Floodplains
- Lakes/ponds/rivers/streams/wetlands
- Levees/dams
- Mines/quarries
- Pipelines
- Potentially contaminated sites
- Railroads
- Religious facilities
- Residences (especially large clusters of homes)
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