

OVERVIEW

The Mankato-Mississippi River Transmission Project will **improve reliability, deliver low-cost renewable energy and provide other regional benefits** by building new, more resilient 'backbone' infrastructure to serve customers.

We are proposing:

- **About 120 miles of new and upgraded 345 kilovolt (kV) transmission infrastructure** between the Wilmarth Substation located near Mankato and and at the Mississippi River near Kellogg.
- **About 20 miles of new 161 kV transmission infrastructure** between the North Rochester Substation near Pine Island and an existing transmission line northeast of Rochester.



2022

- Project identified by MISO



2023

- Preliminary route development process
- Public and stakeholder engagement
- Preliminary engineering
- Submit Certificate of Need and Route Permit Application



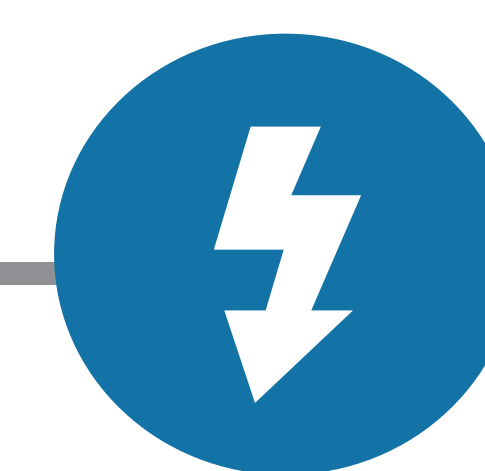
2024-2026

- Minnesota permitting review (including public engagement)
- Detailed engineering
- Negotiate with landowners to purchase easements
- Obtain other required permits
- Continued public and stakeholder engagement



2026-2028

- Construction



2028

- In-service
- Restoration



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IMPROVING TRANSMISSION INFRASTRUCTURE

IN MINNESOTA AND THE UPPER MIDWEST

The Mankato-Mississippi River Transmission Project is one of several long-range transmission projects identified by MISO, the regional grid operator, to support energy needs in Minnesota and throughout the region.

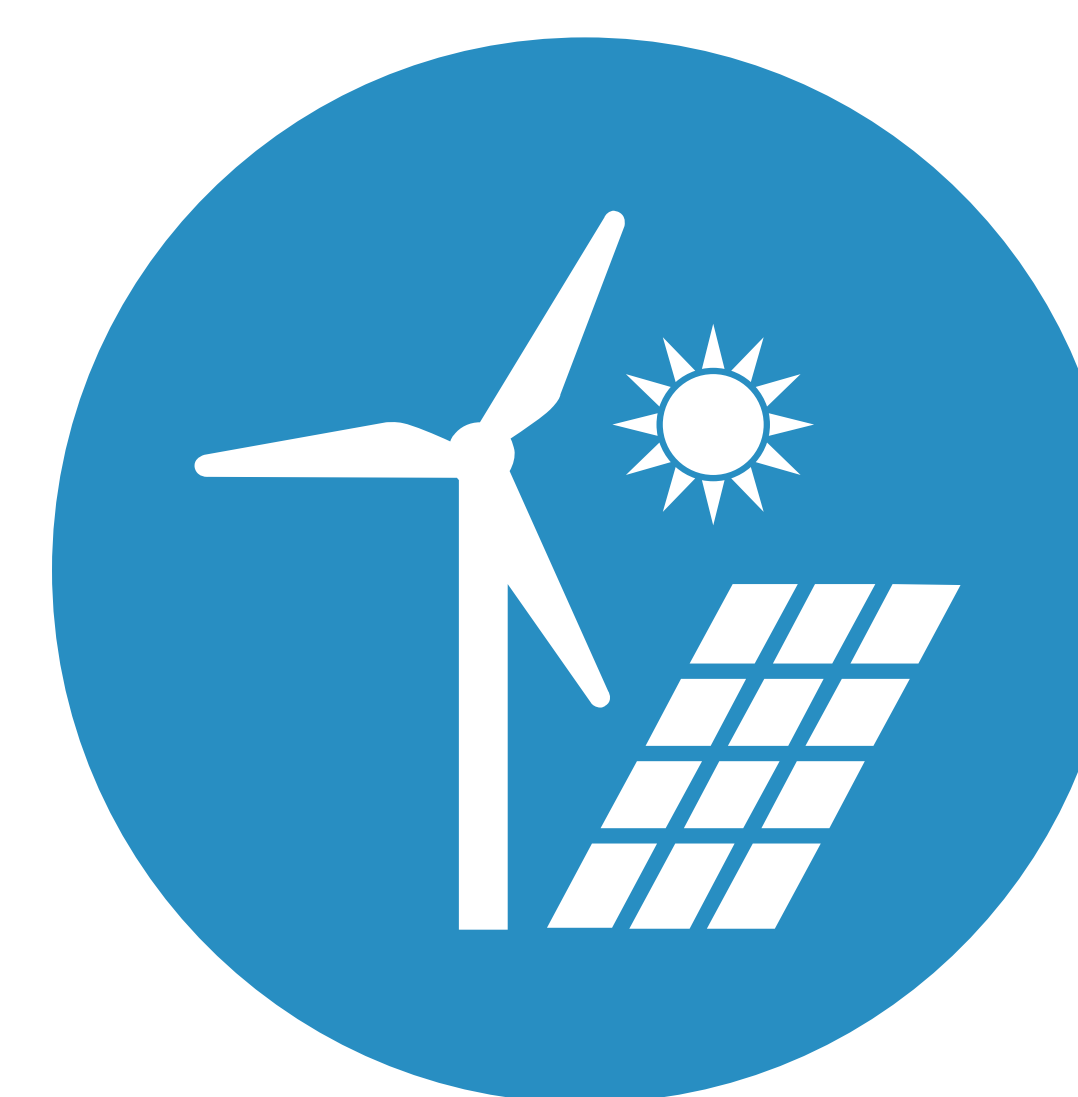
Transmission line projects, like this one, strengthen the grid by:



Improving reliability and system resilience in the Upper Midwest.



Creating greater access to low-cost renewable energy.



Adding transmission capacity to accommodate increasing amounts of renewable energy as aging traditional resources retire.



Supporting regional economic growth through new energy infrastructure.

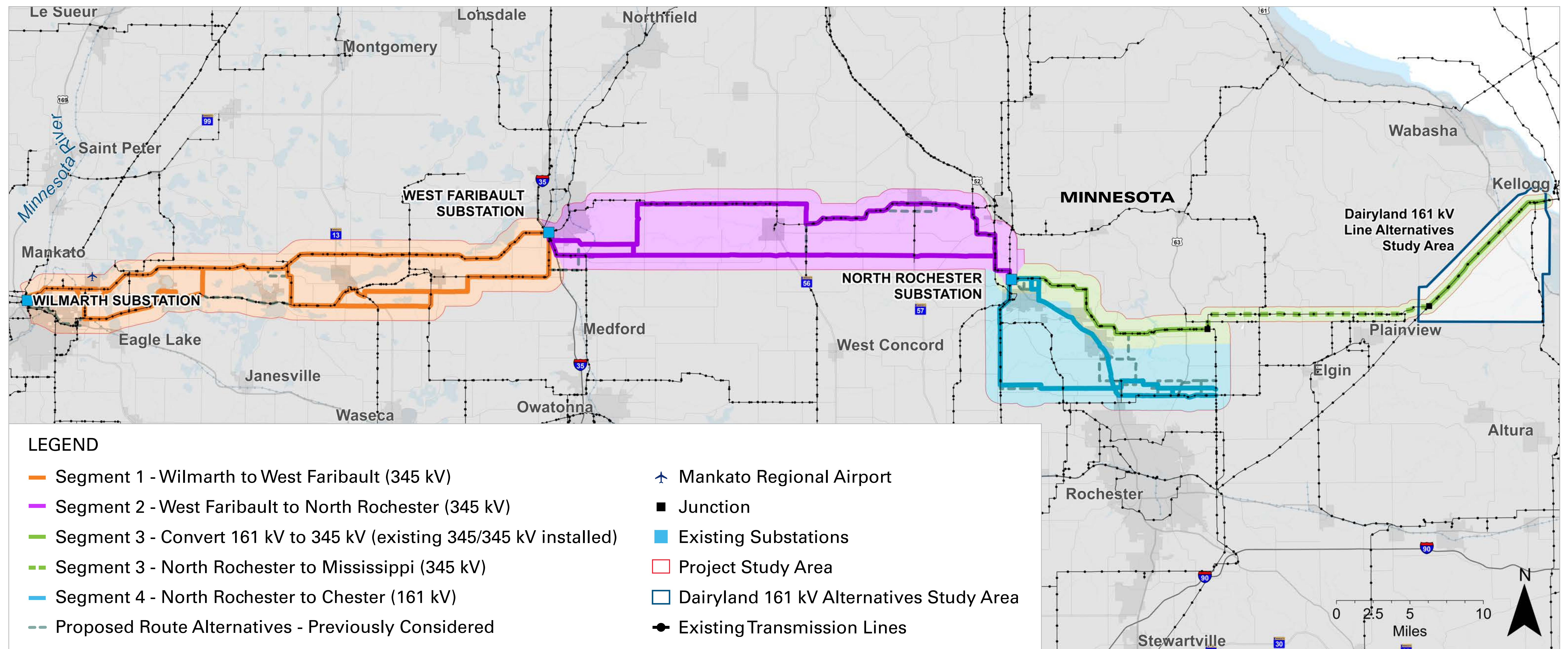


Upgrading and updating infrastructure facilitates more jobs and increases tax revenue for communities in southern Minnesota.



FOUR SEGMENTS, ONE PROJECT

This project has **four segments** that include a combination of new transmission lines and upgrades to existing infrastructure. Where feasible, we've worked to identify opportunities to locate lines in existing utility or transportation corridors.

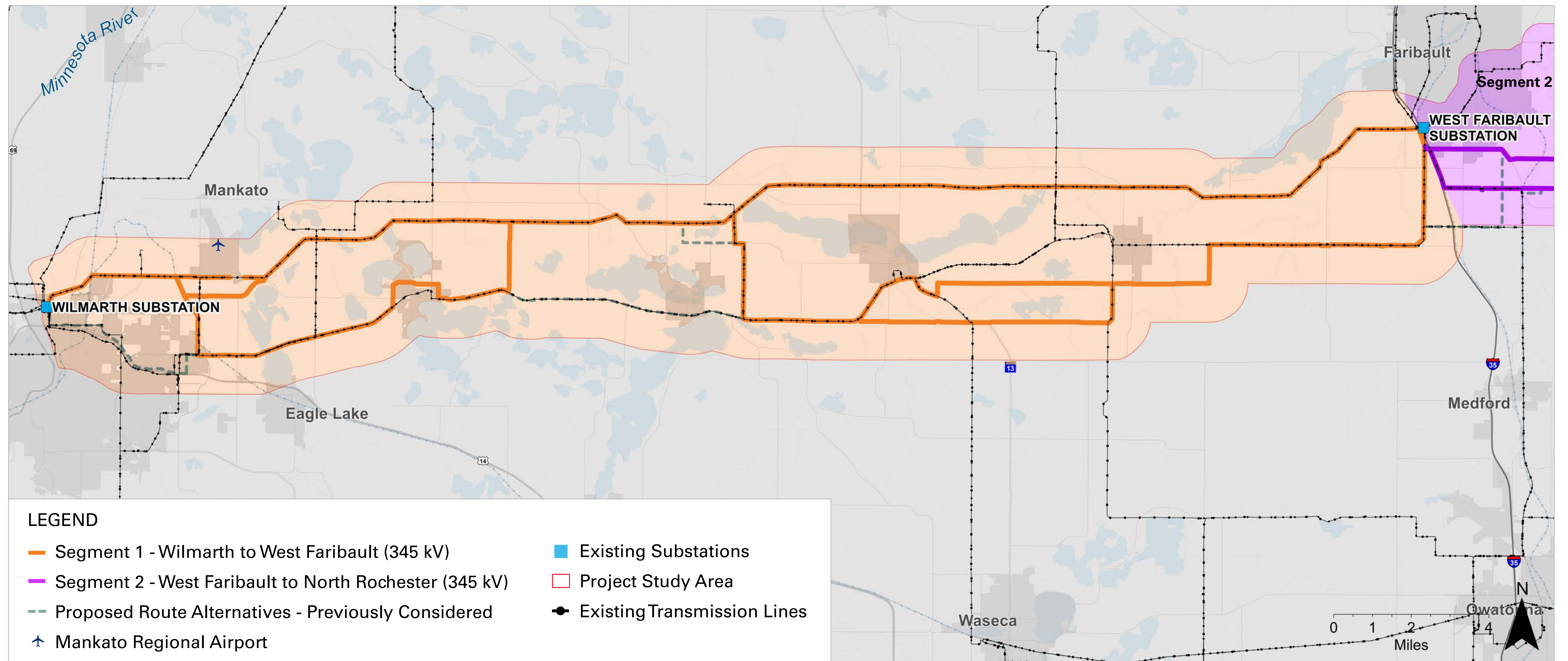


This map is a general graphic and may not show exact locations.



SEGMENT 1: MANKATO TO FARIBAULT

Segment 1: Build about 40 miles of 345 kV transmission lines in existing transmission corridors between the Wilmarth Substation near Mankato and the West Faribault Substation in Faribault.



This map is a general graphic and may not show exact locations.

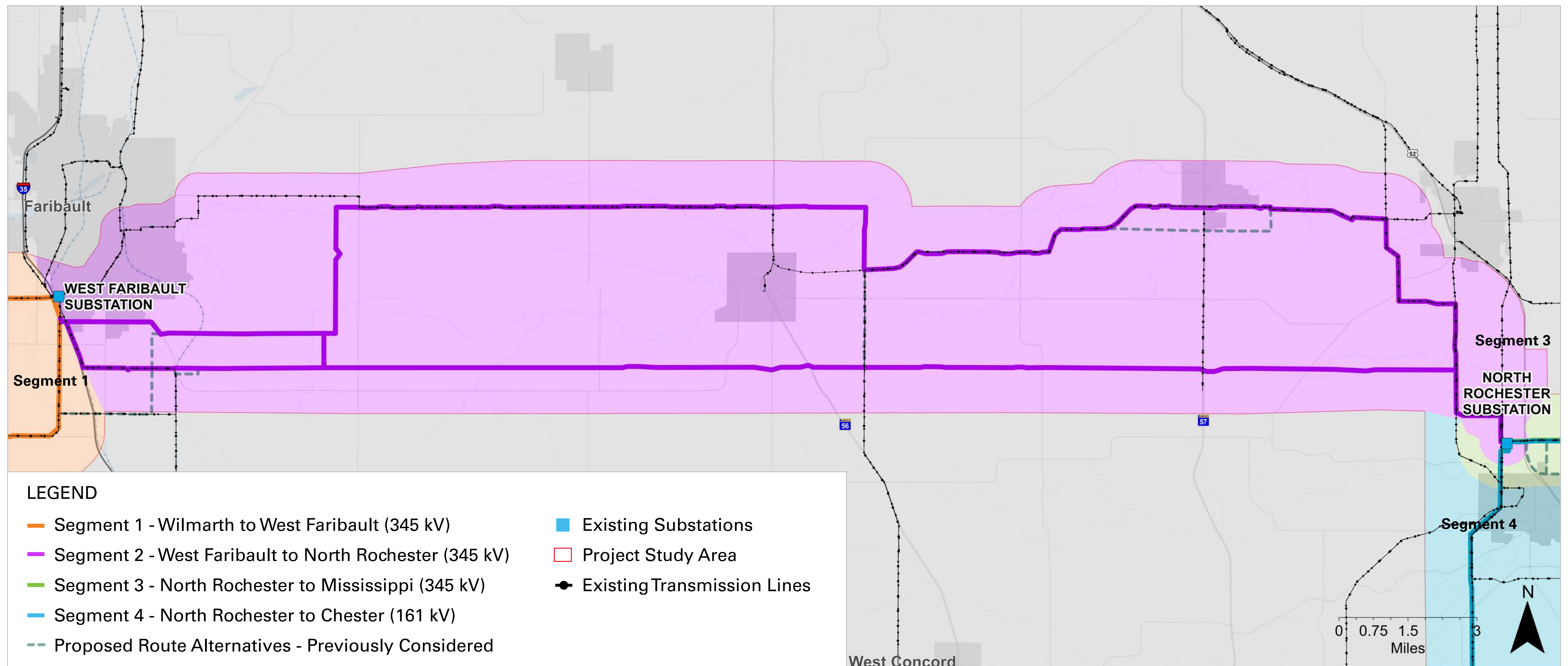


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SEGMENT 2: FARIBAULT TO PINE ISLAND

Segment 2: Build about 35-40 miles of 345 kV transmission lines in either a new corridor and/or in existing transmission corridors from near the West Faribault Substation to the North Rochester Substation near Pine Island.



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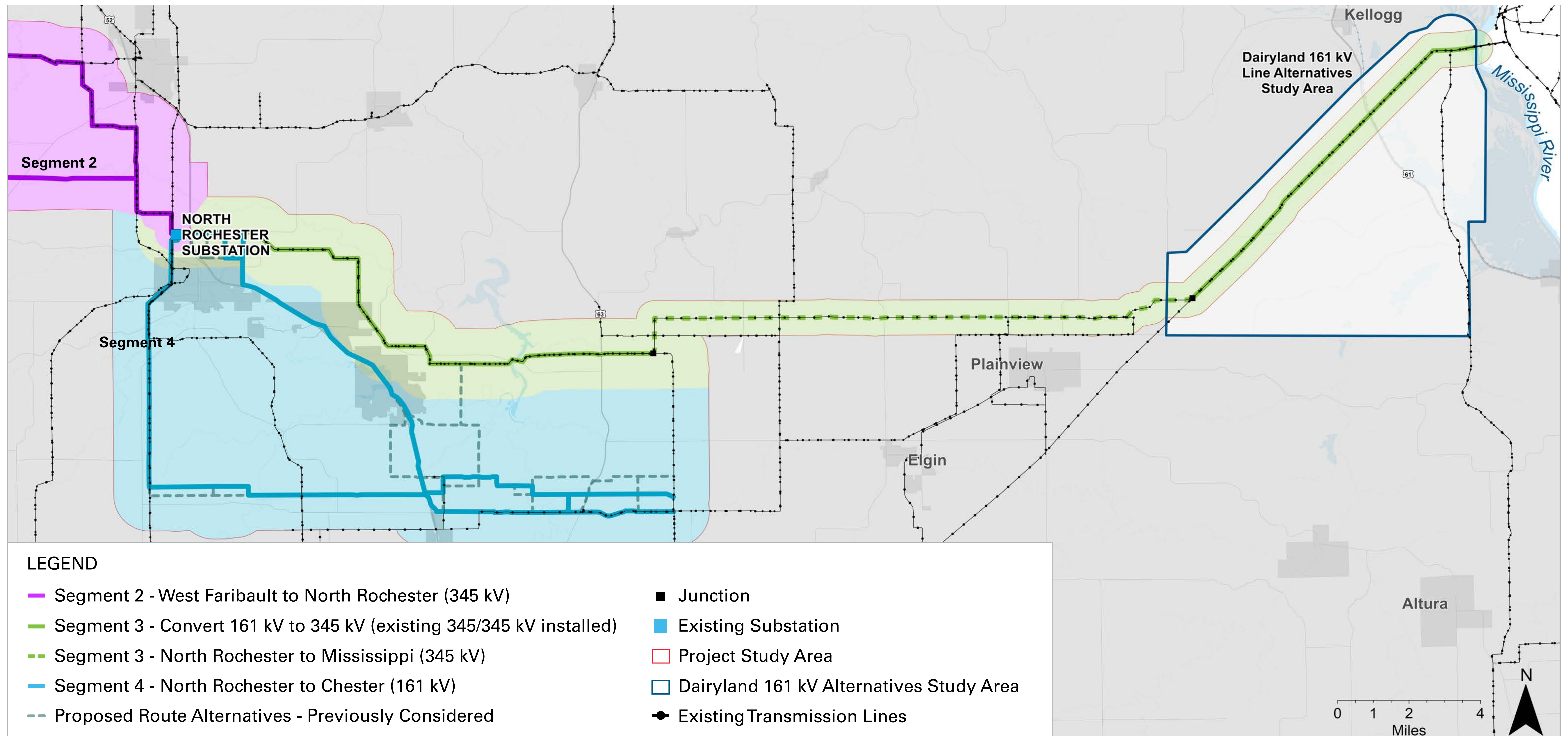


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SEGMENT 3: PINE ISLAND TO KELLOGG

Segment 3: Convert about 26 miles of 161 kV line to 345 kV line and install about 16 miles of new 345 kV line on existing structures between the North Rochester Substation and the Mississippi River.

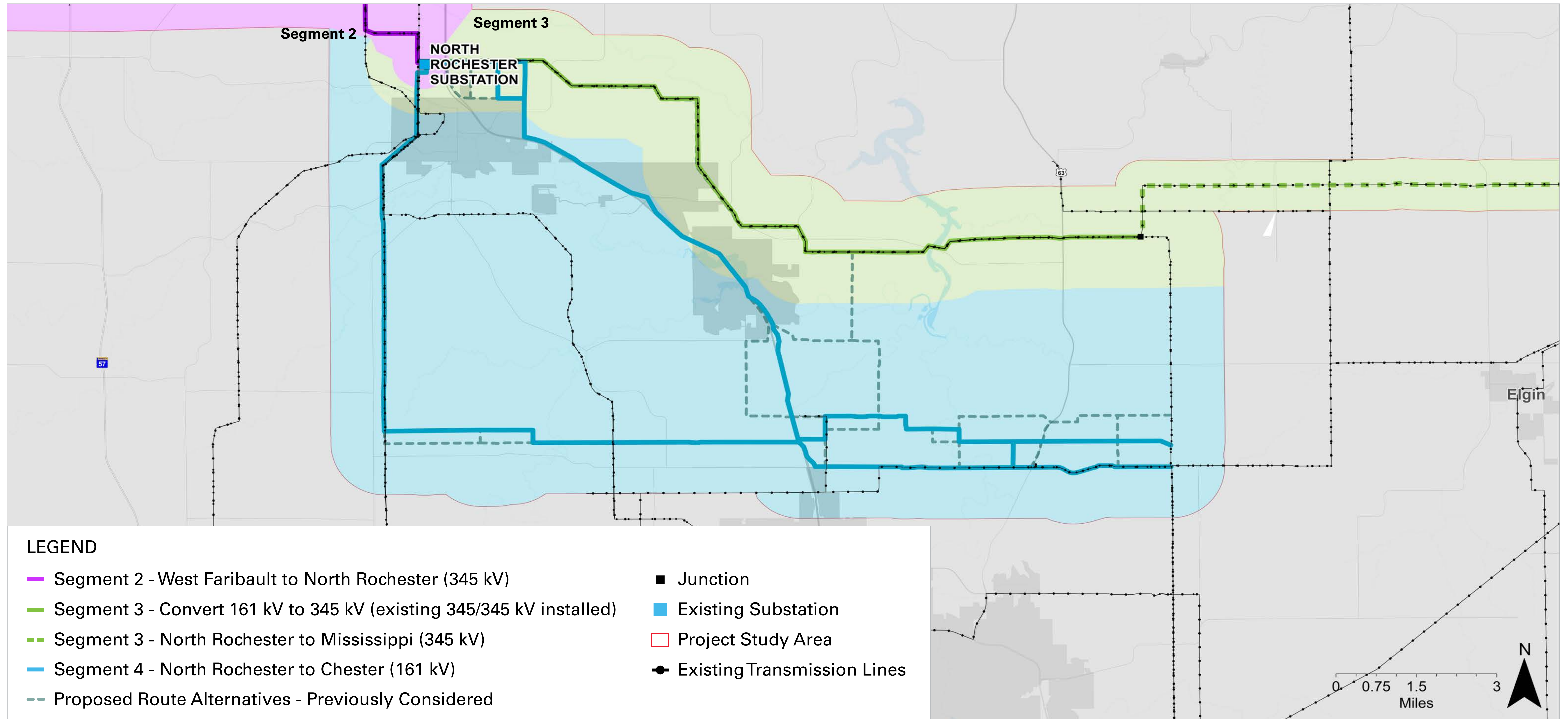


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SEGMENT 4: ROCHESTER CONNECTOR

Segment 4: Build about 20 miles of a new single-circuit 161 kV line from the North Rochester Substation to an existing transmission line northeast of Rochester.



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REGULATORY PROCESS

We expect to apply for a combined Certificate of Need and Route Permit with the Minnesota Public Utilities Commission (PUC) in late 2023.



Certificate of Need application:

Describes the project need and the issues it will solve.



Route Permit application:

Includes at least two feasible proposed routes and the factors evaluated in developing those routes. The Minnesota PUC determines the final route following a full review process.



After submitting these applications, the Minnesota review process will begin:

- Public meetings and hearings will be held with public engagement opportunities.
- Written comments can also be submitted to the PUC.

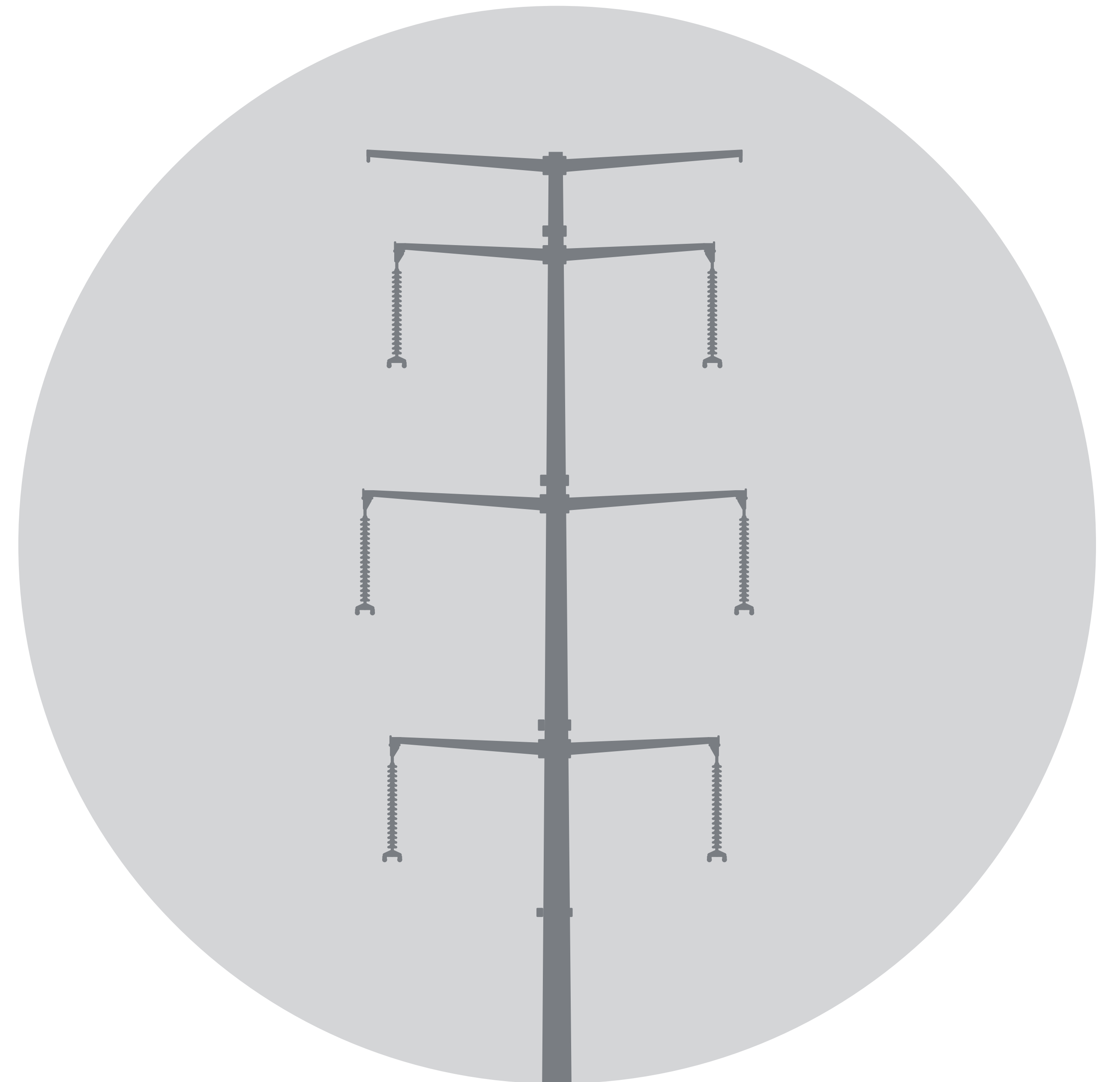
Following this process, **the PUC will decide on the Certificate of Need and Route Permit expected in 2024 or 2025.** The PUC may select one option or a combination of the route options identified.



TRANSMISSION LINE INFRASTRUCTURE

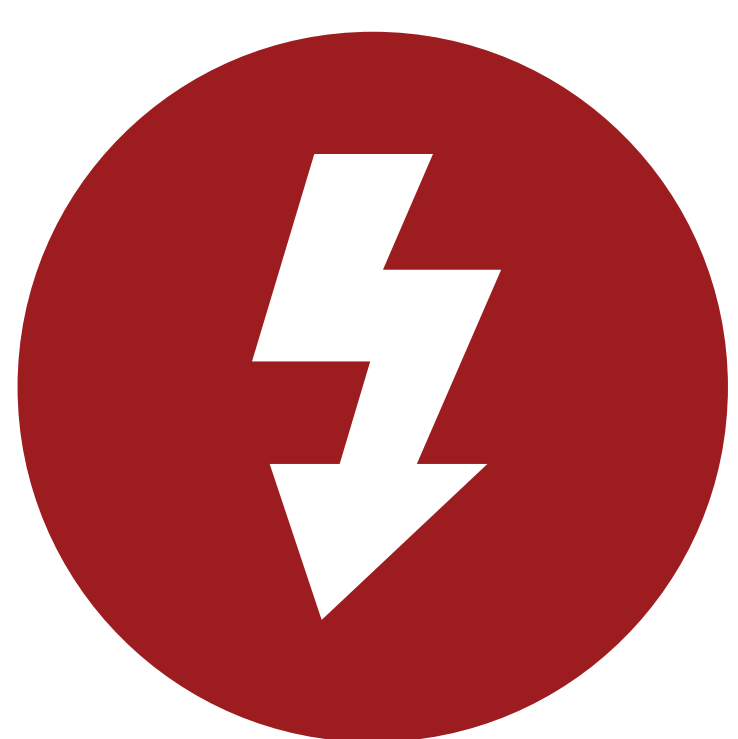
ANTICIPATED DESIGN*:

- Steel transmission structures
- Single pole style for most structures
- Typical pole height is 100-150 feet (depending on the terrain)
- Typical Right-of-Way is 150-foot-wide for a 345 kV line
- Typical Right-of-Way is 80-100-foot-wide for a 161 kV line
- 800-1,200 feet between structures for 345 kV segments
- 300-500 feet between structures for the 161 kV segments



*Design is subject to change based on final detailed engineering and other factors.

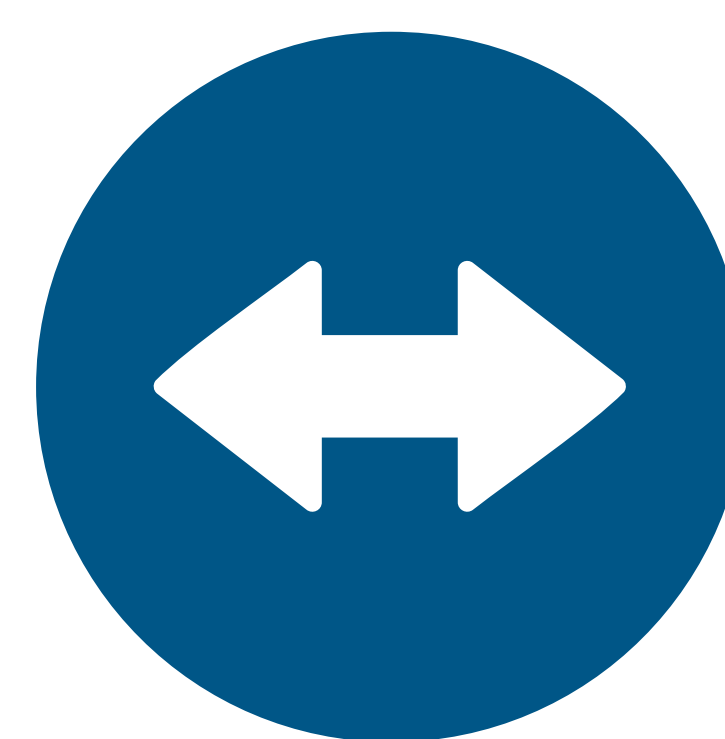
TRANSMISSION LINE STRUCTURES VARY IN HEIGHT BASED ON FACTORS LIKE:



Voltage



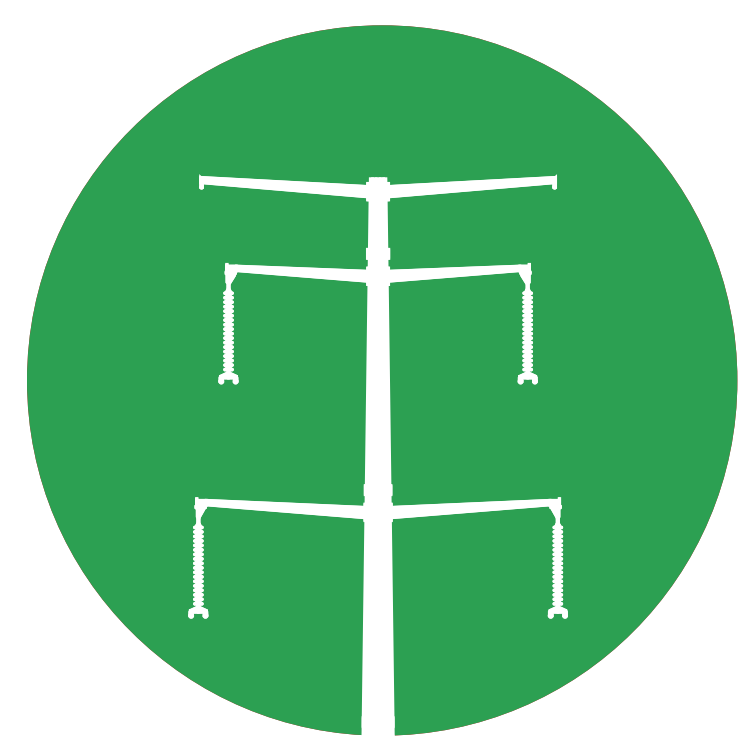
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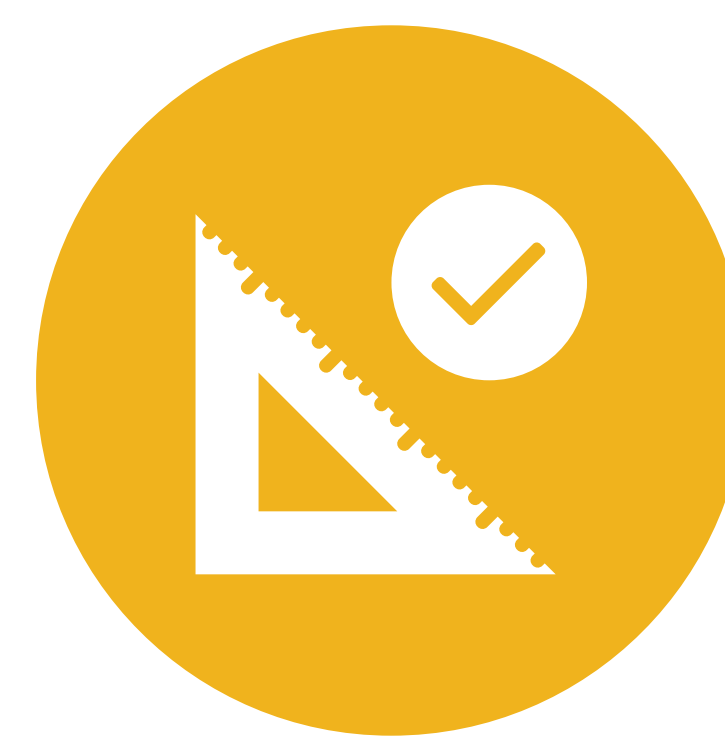
Distance between structures



Terrain



Structure types



Minimum clearance prescribed by National Electric Safety Code and Company standards



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WORKING WITH LANDOWNERS

EASEMENTS are a permanent right authorizing a utility to use the Right-of-Way (ROW) to build and maintain a transmission line. Landowners are paid a fair market value for the easement and can continue to use the land if the use doesn't interfere with the operation and maintenance of the transmission line.

RIGHTS-OF-WAY are the actual land areas acquired for a specific purpose such as a transmission line, roadway or other infrastructure.

LAND USES IN THE EASEMENT AREA

Agriculture

After initial construction, agricultural activities can continue outside the small area with the transmission structures.

Vegetation Management

Trees growing near power lines can be a safety hazard and can contribute to electric service interruptions nationwide. Some areas will require tree removal and pruning.

Our goal is to provide safe, reliable electric service while also taking care of one of your community's valuable natural resources.

Buildings and Structures

Generally, buildings or other structures are not allowed in the ROW/easement for transmission lines due to clearance and safety concerns. Landowners can only build structures in the easement area after receiving written approval from the utility.



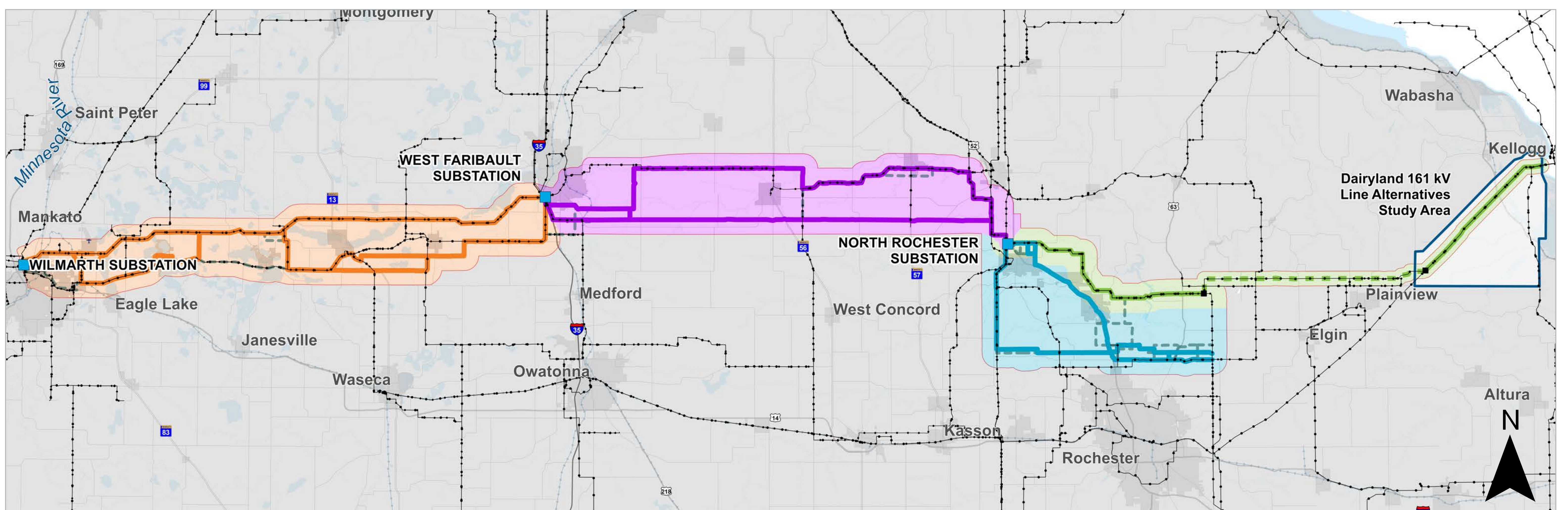
This picture includes an existing 161 kV transmission line.

MANKATO- MISSISSIPPI RIVER PROJECT PARTNERS

Multiple utility partners will develop this new infrastructure to serve southern Minnesota and western Wisconsin, including several companies who helped build the CapX2020 transmission projects.

DEVELOPMENT DETAILS

- Xcel Energy will develop and own the infrastructure between the Wilmarth Substation near Mankato and the North Rochester Substation near Pine Island (Segments **1** and **2**).
- All project partners will participate in the additional 345 kV infrastructure from the North Rochester Substation to the Mississippi River (Segment **3**) and the 161 kV line from Pine Island to the Rochester area (Segment **4**).
- Segments **1** **2** **3** and **4** will be submitted in one combined Certificate of Need and Route Permit.
- Dairyland Power will develop the relocation of the 161 kV portion east of Plainview, which will be permitted separately from this project.



This map is a general graphic and may not show exact locations.



CONSTRUCTION AND RESTORATION ACTIVITIES

Our typical transmission line construction process includes the following steps:



1. Soil surveys and property staking



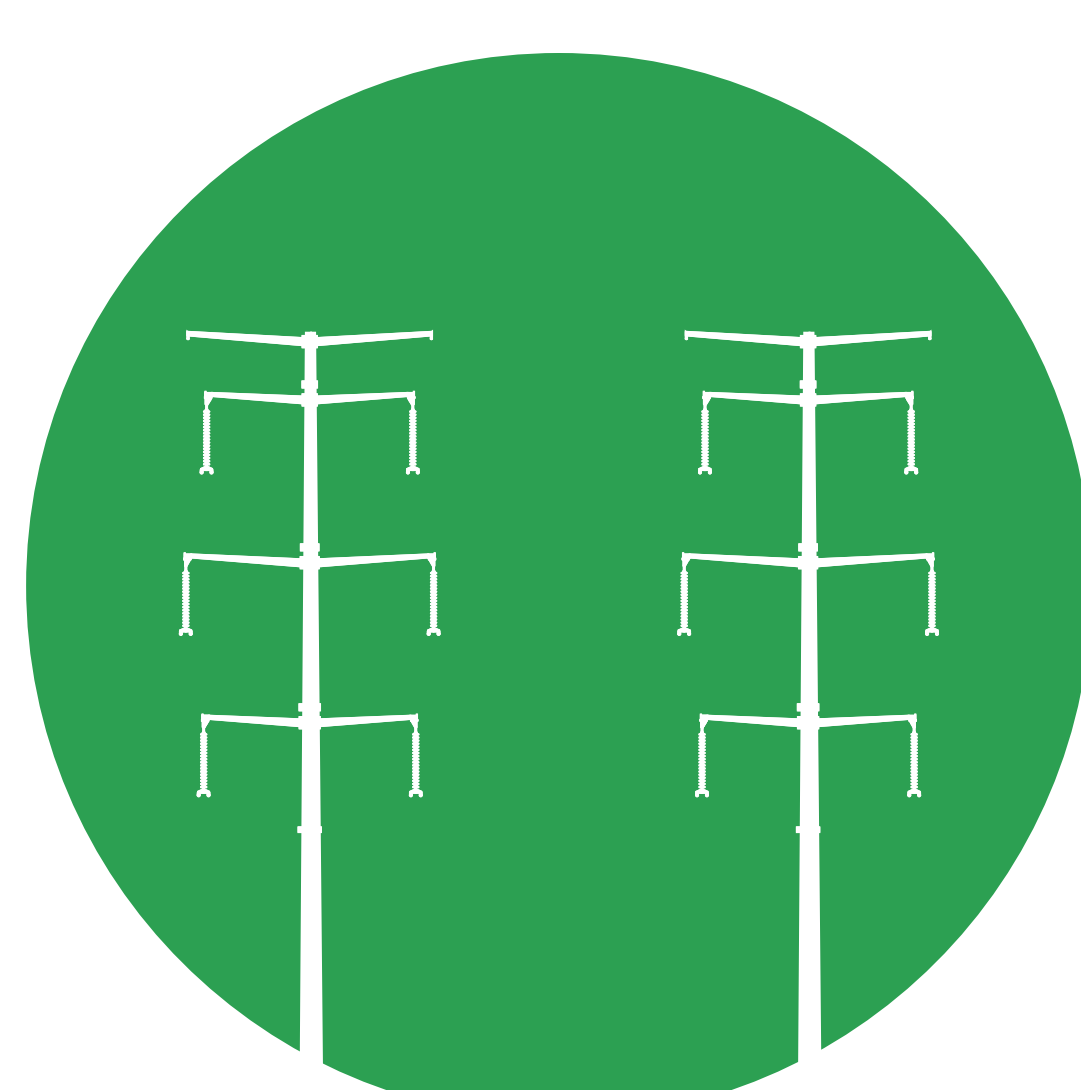
2. Construction access and vegetation clearing



3. Mobilizing equipment and delivering material



4. Foundation construction



5. Installing structures and stringing conductor



6. Land restoration

We currently expect construction to start in 2026 with the project in-service in 2028.



WHAT WE HEARD






In spring 2023, we launched a public engagement campaign to collect feedback on the project routing process.

SPRING 2023 ENGAGEMENT EFFORTS

- **6** in-person open houses
- **2** virtual open houses
- **1** self-guided virtual open house
- **1,070** website visits
- **17,000+** postcards mailed
- **43,000** people reached with **11** newspaper ads
- **67,000** people reached with Facebook posts
- **145** total comments received

COMMENTS RECEIVED BY CATEGORY

Top Comment Topics

-  **Routing**
40 Comments
-  **Information Request**
25 Comments
-  **Distance from Homes/Structures**
23 Comments
-  **Mapping Request**
21 Comments
-  **Property Development**
20 Comments

All Comment Topics

Aviation	3	Noise	1	Trails	1
Community Impacts	1	Property Access	2	Trees	4
Cost	1	Property Damage	5	Utilities	2
Cultural Resources	2	Property Development	20	Vegetation Management	5
Endangered Species	1	Property Values	5	Visual/Aesthetic	4
Farming	7	Dist. from Homes/Structures	23	Water	3
General	12	Recreation	2	Wetlands	8
Geography	6	Reliability	1	Wildlife	8
Information Request	25	Renewable Energy	3		
Livestock	3	Routing	40		
Mailing List Request	3	ROW	2		
Mapping Request	21	Safety	2		
Materials	3	System Planning	1		

Every comment we receive is considered during the routing process. Your feedback helped us make adjustments and refinements to the preliminary route options. Thank you for your feedback and participation in the route development process.



WHAT ARE ELECTRIC AND MAGNETIC FIELDS?

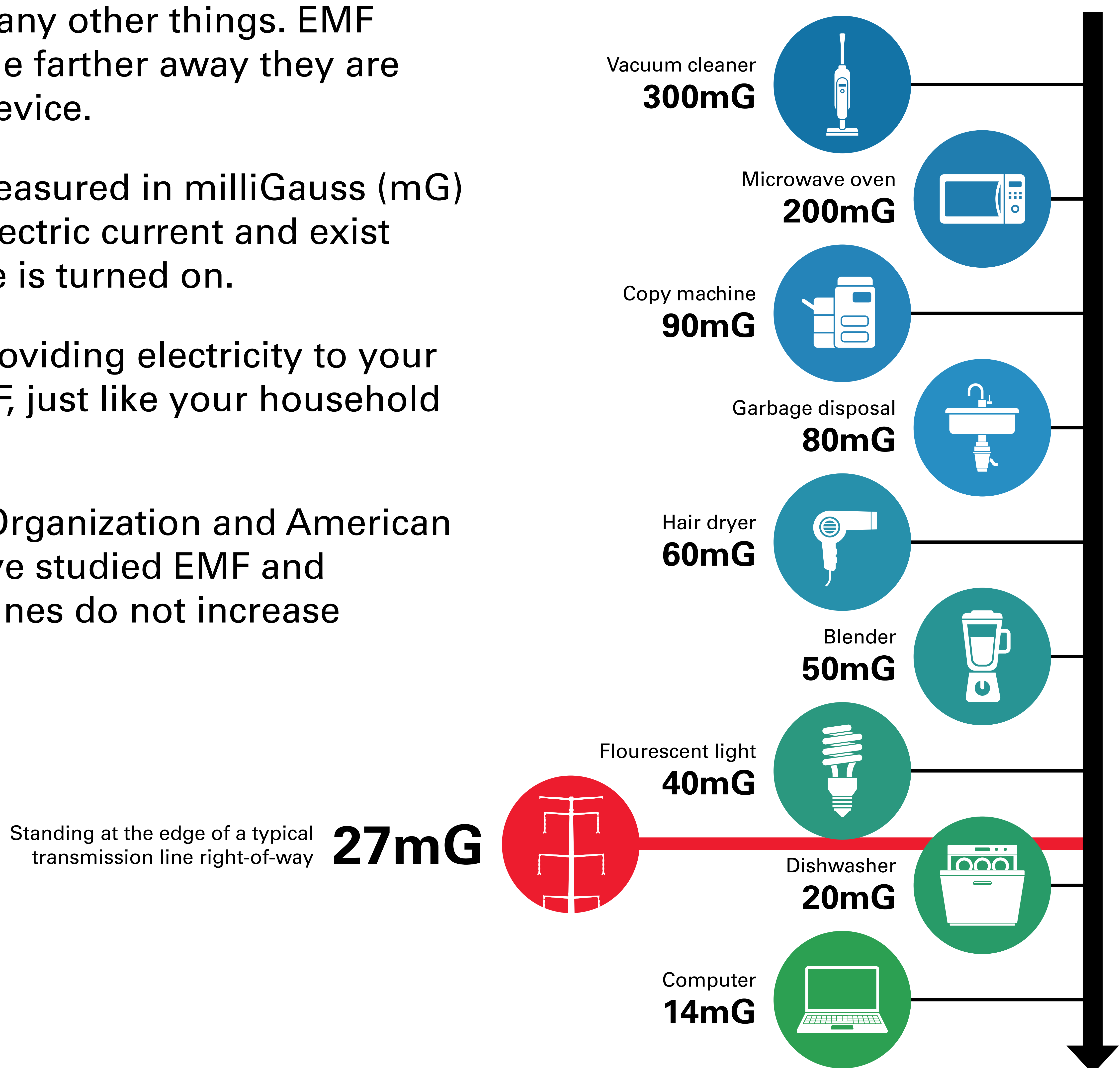
ELECTRIC AND MAGNETIC FIELDS, OR EMF, exist where electricity is produced or used. This includes appliances, lamps, computers, power lines and many other things. EMF dissipate rapidly the farther away they are from a source or device.

Magnetic fields, measured in milliGauss (mG) are produced by electric current and exist only when a device is turned on.

The power lines providing electricity to your home produce EMF, just like your household appliances.

The World Health Organization and American Cancer Society have studied EMF and concluded power lines do not increase risks to cancer.

Typical magnetic fields six inches from common home appliances measured in milliGauss (mG) are depicted in the chart.



ROUTE DEVELOPMENT PROCESS

Developing route alternatives involves multiple steps. The routes we plan to submit in the Route Permit Application are designed to minimize impacts to the area, including humans, environment and existing land use such as agriculture.

DEVELOPING PRELIMINARY ROUTE OPTIONS

**REFINING AND FIELD VERIFYING
PRELIMINARY ROUTE OPTIONS**

WE ARE HERE

**SUBMITTING PROPOSED ROUTES TO THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

Note: This process is flexible and steps may be revisited based on additional data and feedback we receive.

WHAT WE EVALUATE IN DEVELOPING ROUTES

Opportunities:

- Existing transmission line corridors
- Existing utility corridors (like pipelines)
- Roads and highways
- Property, field and section lines

Constraints or issues that may affect route development:

- Existing homes and businesses
- Farmland impacts
- Airports
- Cemeteries and religious facilities
- Rivers, lakes, streams and wetlands
- Conservation areas, nature preserves, and state and local parks
- Cultural and historic resources
- Sensitive animal and plant species



WE WANT TO HEAR FROM YOU!



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If you have questions or want to share your feedback, contact us. We will respond to you as soon as possible.

