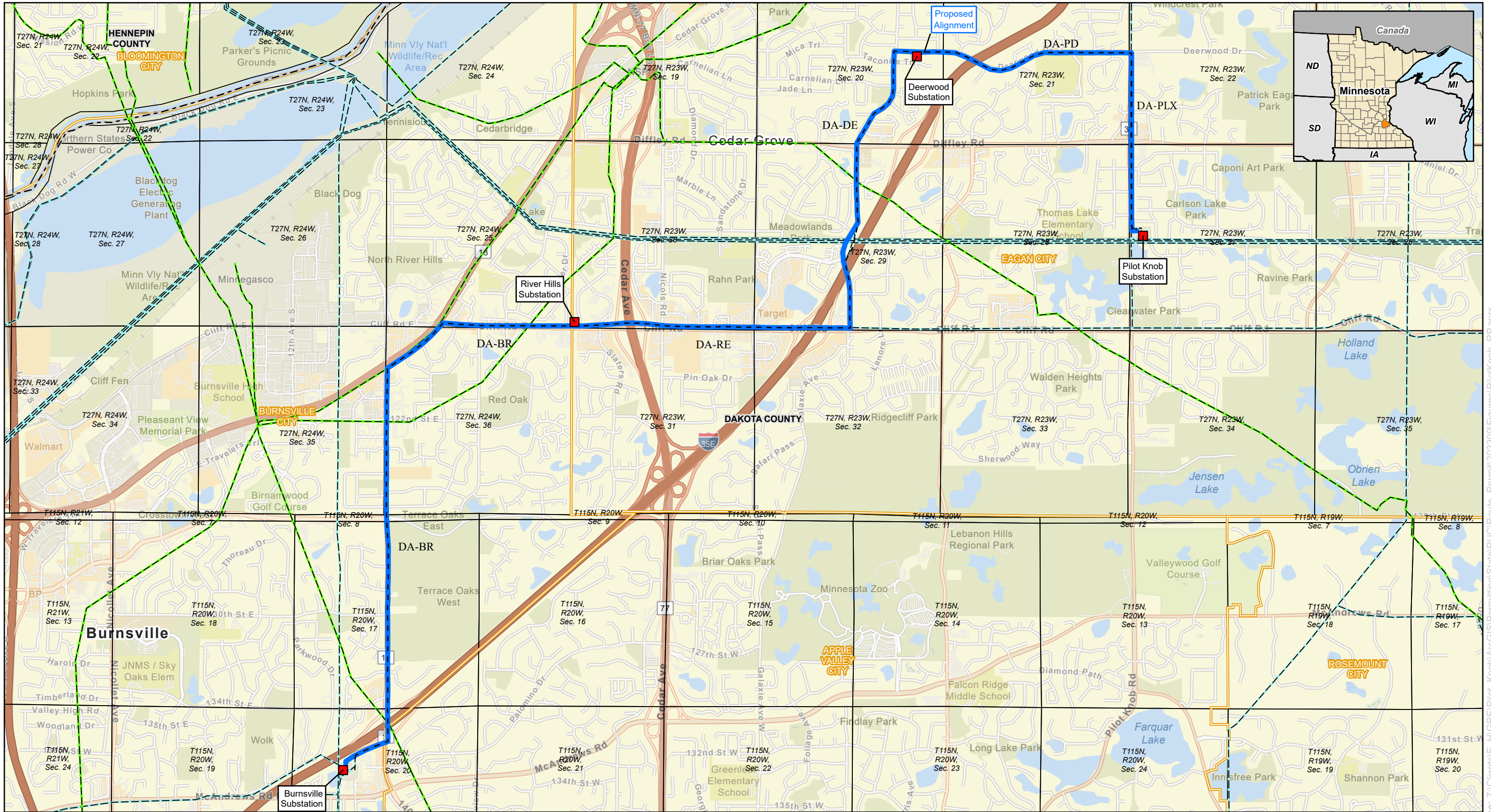
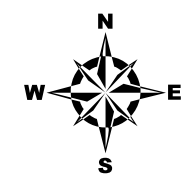


## Figures

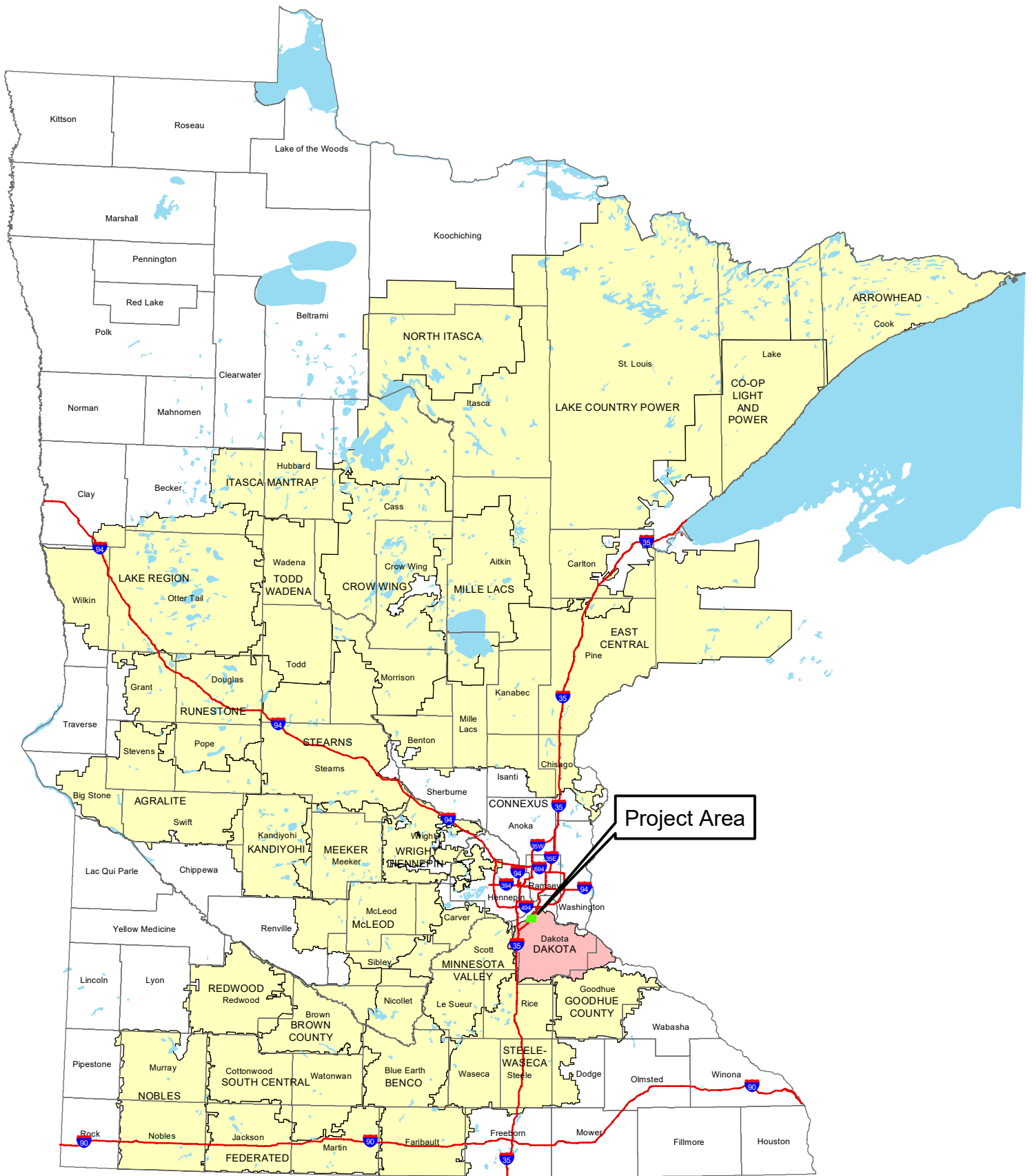


0 1,300 2,600  
Feet  
1 inch = 2,600 feet



**Figure 1-1**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Proposed Alignment**  
**Dakota County, Minnesota**

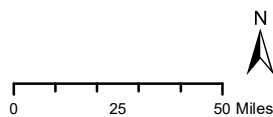
- |                                  |                               |                  |
|----------------------------------|-------------------------------|------------------|
| <b>Great River Energy</b>        | <b>Non-GRE Transmission</b>   | County Highway   |
| Proposed Alignment               | Existing Natural Gas Pipeline | State Highway    |
| Existing Substation              | Existing Transmission Line    | Section Boundary |
| Existing Transmission Line (GRE) |                               | City Boundary    |
|                                  |                               | County Boundary  |

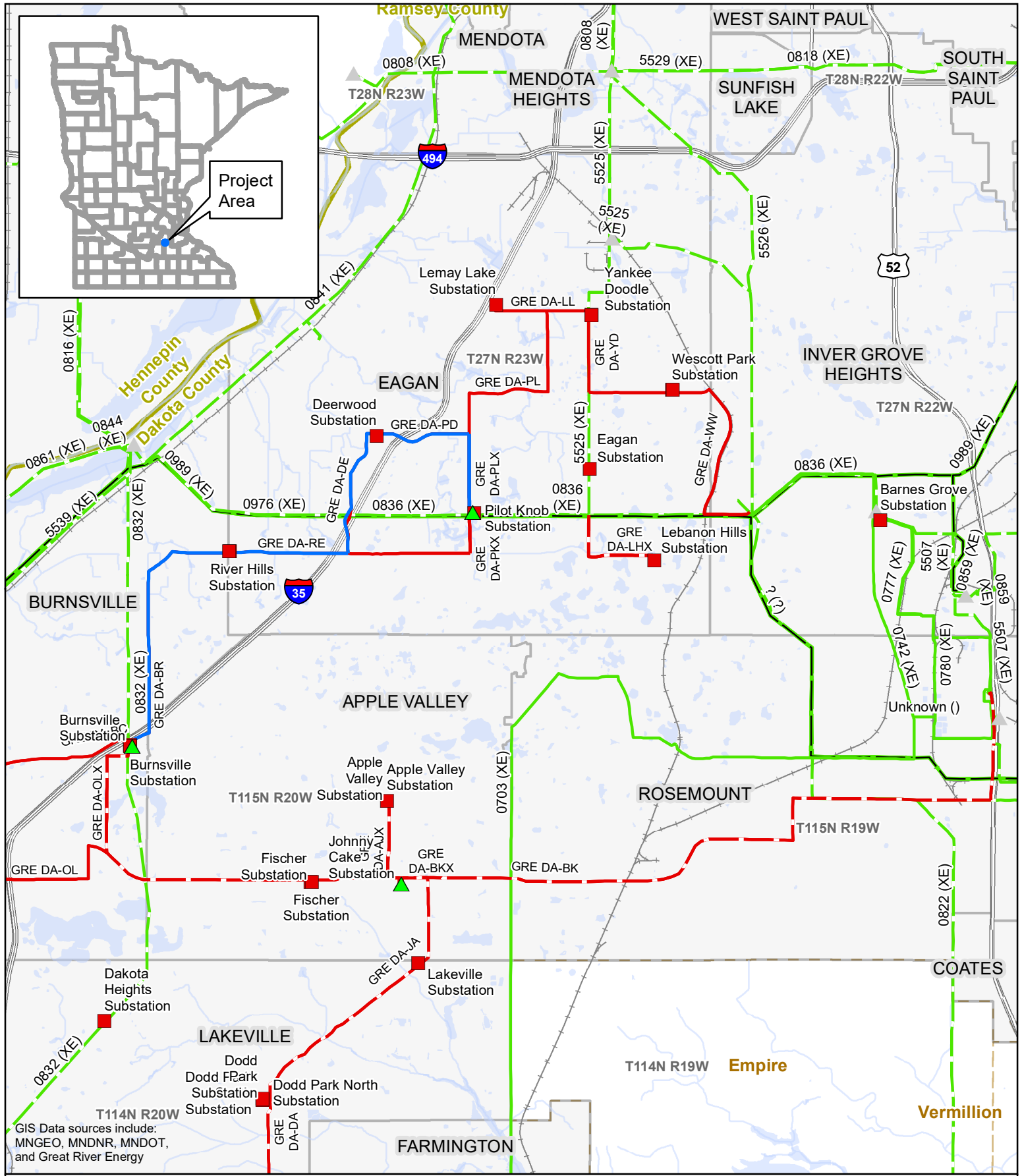


- Name**
- Cooperatives
  - Dakota Electric Association
  - ProjectArea

**Pilot Knob to Burnsville  
 Rebuild and Upgrade Project  
 Great River Energy Service Area &  
 Project Location  
 Figure 1-2**

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy

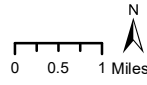


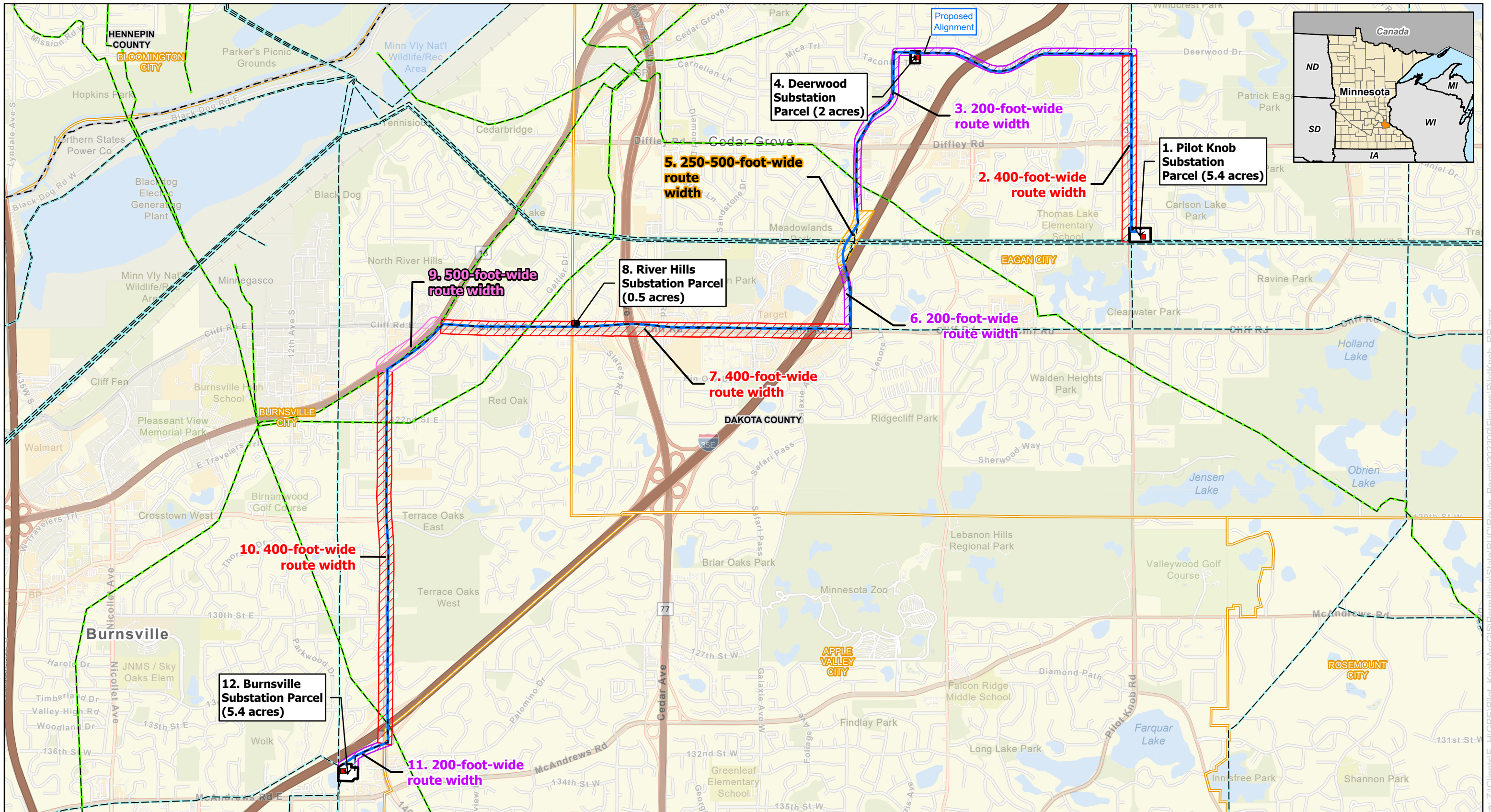


GIS Data sources include:  
MNGEO, MNDNR, MNDOT,  
and Great River Energy

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| <b>Great River Energy</b>         | <b>Non-GRE Transmission</b>       |
| Proposed 115-kV transmission line | Existing 69-kV transmission line  |
| Existing 69-kV transmission line  | Existing 115-kV transmission line |
| Existing 115-kV transmission line | Existing 345-kV transmission line |
| Existing transmission substation  | Existing transmission substation  |

**Pilot Knob to Burnsville  
Rebuild and Upgrade Project  
Regional Transmission System  
Figure 1-3**





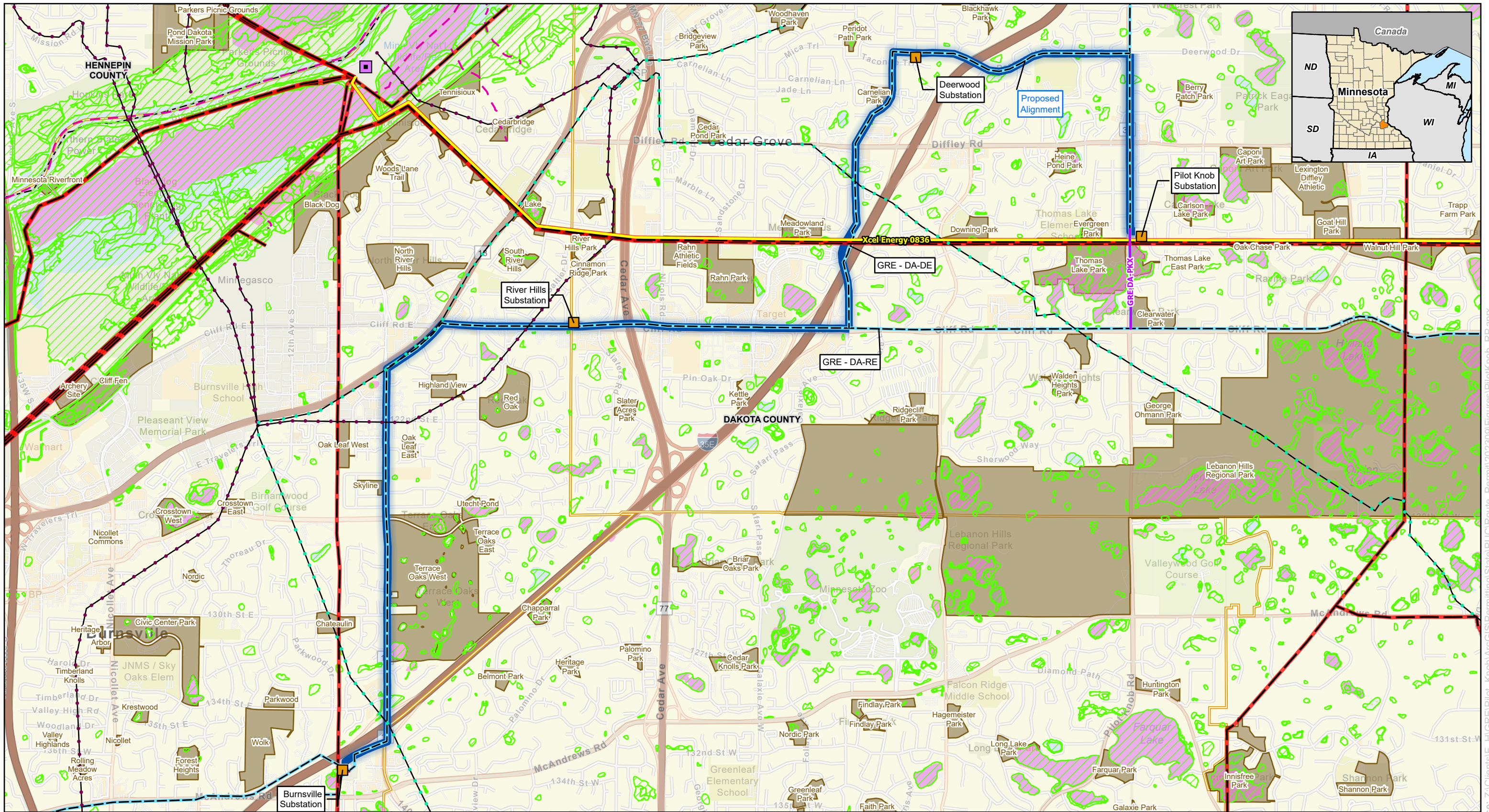
0 1,300 2,600 Feet  
1 inch = 2,600 feet

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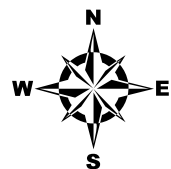
**Figure 3-1**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Route Widths**  
**Dakota County, Minnesota**

<p><b>Great River Energy</b></p> <ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Proposed Alignment</li> <li><span style="color: red;">■</span> Existing Substation</li> <li><span style="color: black;">- - -</span> Existing Transmission Line (GRE)</li> </ul>	<p><b>Route Widths (Feet)</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid purple; width: 10px; height: 10px; display: inline-block;"></span> 200</li> <li><span style="border: 1px solid orange; width: 10px; height: 10px; display: inline-block;"></span> 250-500</li> <li><span style="border: 1px solid red; width: 10px; height: 10px; display: inline-block;"></span> 400</li> <li><span style="border: 1px solid pink; width: 10px; height: 10px; display: inline-block;"></span> 500</li> </ul>	<p><b>Non-GRE Transmission</b></p> <ul style="list-style-type: none"> <li><span style="color: green;">—</span> Existing Natural Gas Pipeline</li> <li><span style="color: blue;">—</span> Existing Transmission Line</li> </ul>	<p><span style="border: 1px solid orange; width: 10px; height: 10px; display: inline-block;"></span> City Boundary</p> <p><span style="border: 1px dashed black; width: 10px; height: 10px; display: inline-block;"></span> County Boundary</p>
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Source: Z:\Clients\E\_HGRE\Pilot\_Knob\GIS\Permitting\State\PUC\Route\_Permits\202309\Figures\PilotKnob\_RP.aprx Date: (10/19/2023)

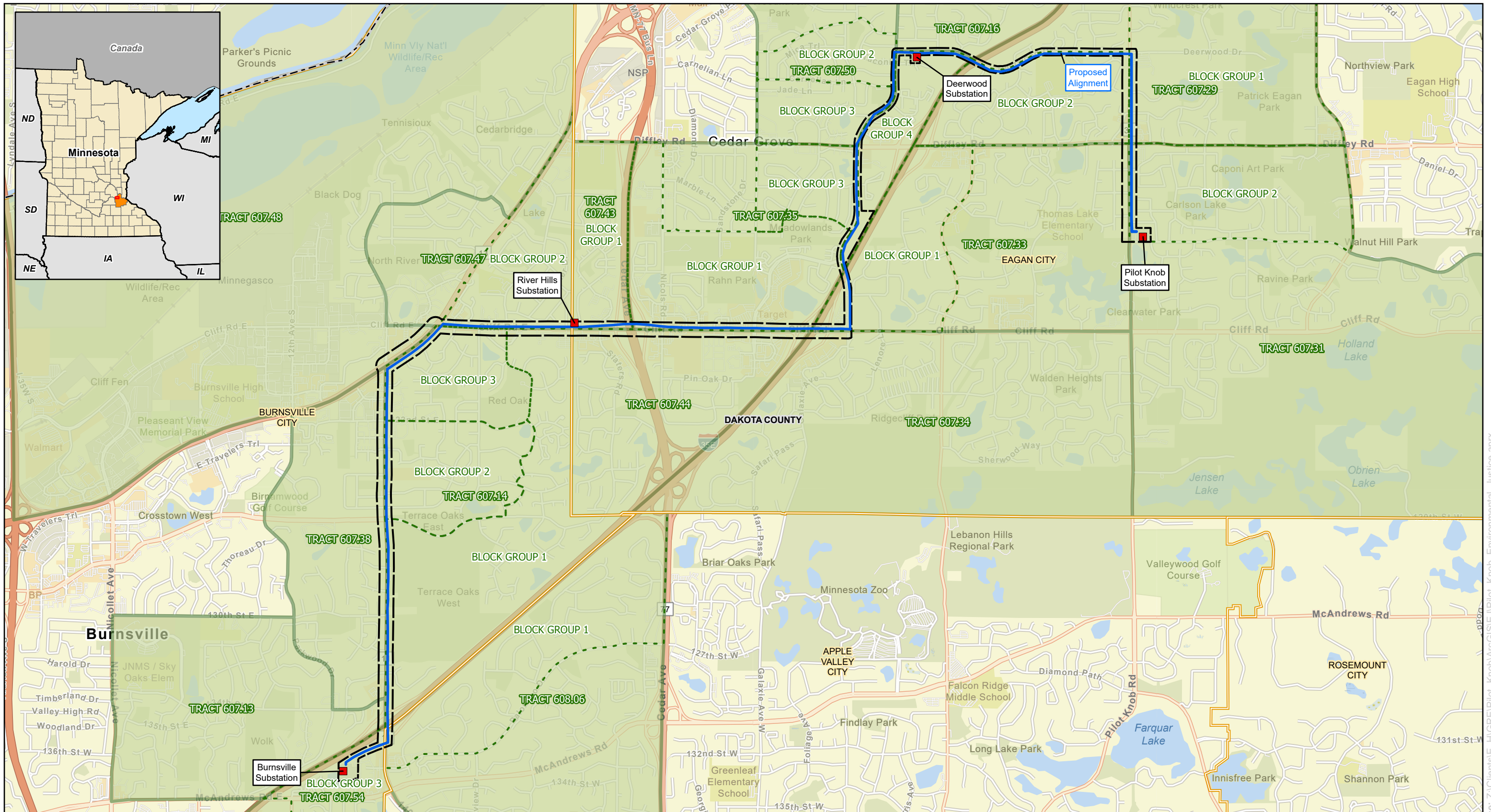


0 1,300 2,600  
 Feet  
 1 inch = 2,600 feet

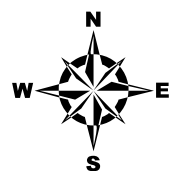


**Figure 5-1**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Route Alternatives Considered and Rejected**  
**Dakota County, Minnesota**

- |                                    |                               |                            |
|------------------------------------|-------------------------------|----------------------------|
| Proposed Alignment                 | Xcel Energy 0836              | PWI Watercourse            |
| Existing Substation                | GRE DA-PKX                    | NWI Wetland                |
| Blackdog Electric Generating Plant | Existing Natural Gas Pipeline | PWI Basin                  |
| Great River Energy                 | CenterPoint Energy            | Local Park/Recreation Area |
| Xcel Energy, Inc.                  | NNG                           | County Boundary            |
|                                    |                               | City Boundary              |

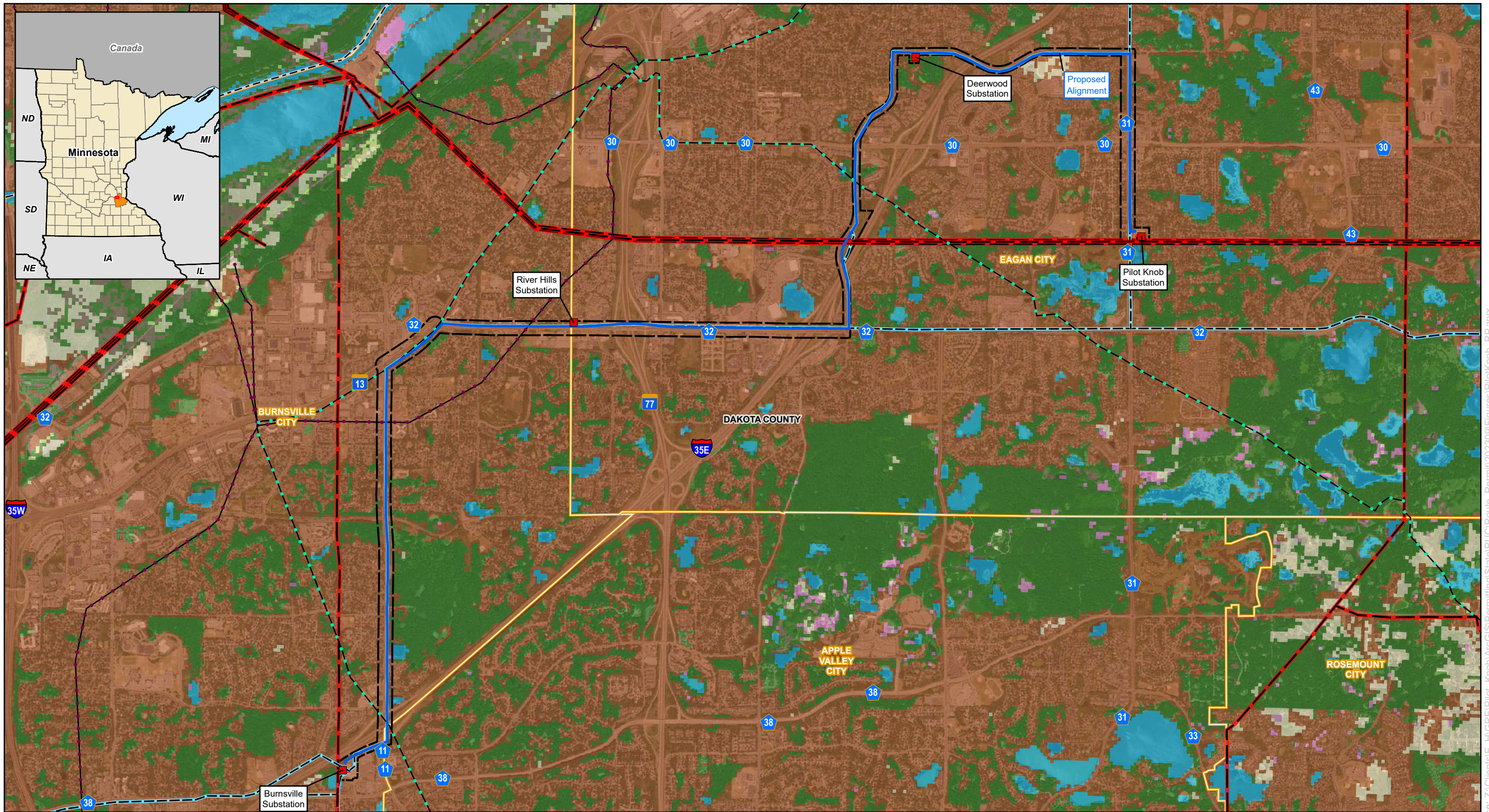


0 2,600 Feet  
1 inch = 2,600 feet



**Figure 7-1**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Census Tracts**  
**Dakota County, Minnesota**

- |                        |                          |
|------------------------|--------------------------|
| Great River Energy     | ■ Census Tract           |
| — Proposed Alignment   | - - - Census Block Group |
| ■ Existing Substation  | ▭ City Boundary          |
| ▭ Proposed Route Width | ▭ County Boundary        |



0 2,600 Feet  
1 inch = 2,600 feet

**GREAT RIVER ENERGY**

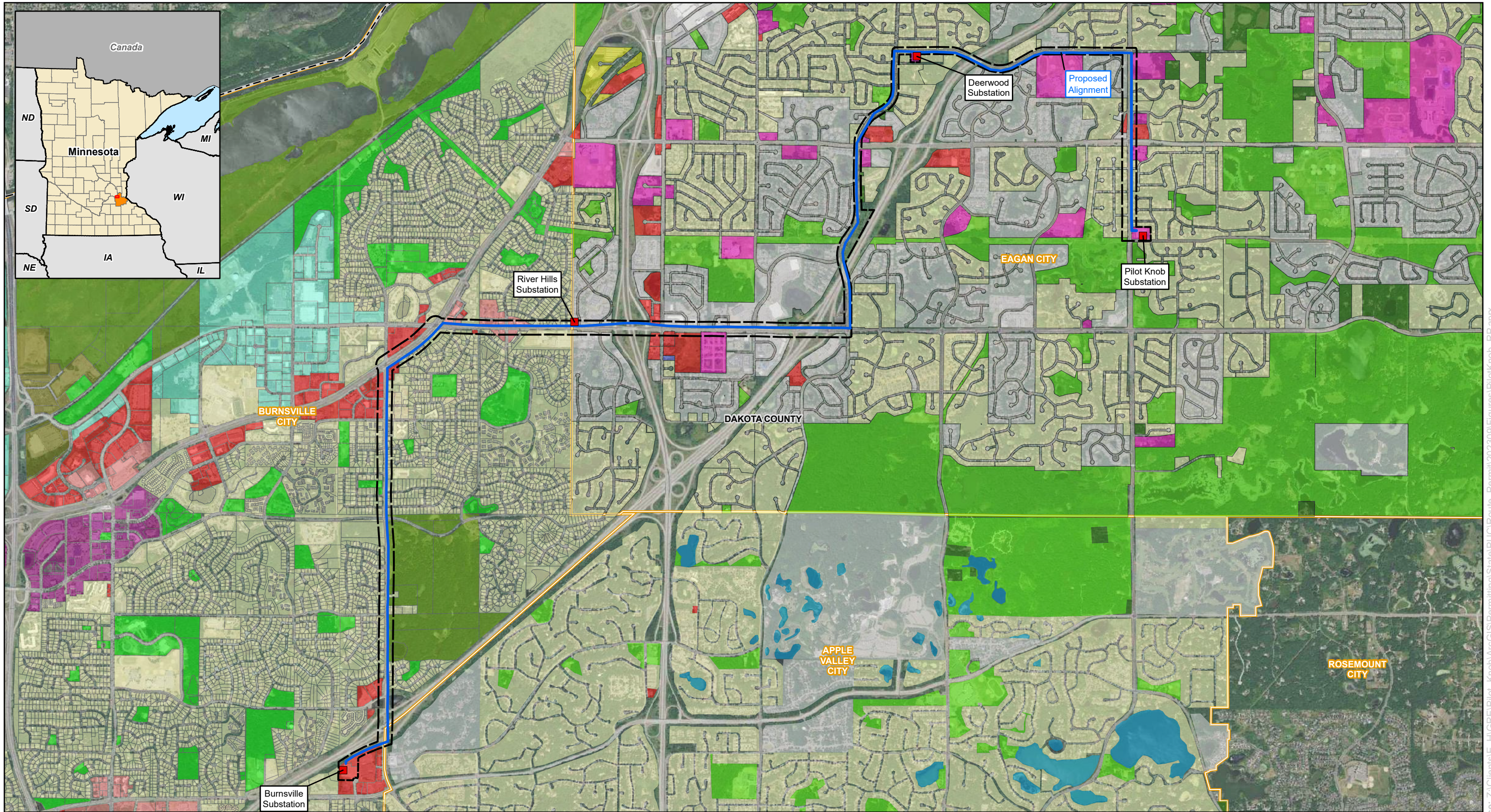
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**Figure 7-2**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Land Use**  
**Dakota County, Minnesota**

<p><b>Great River Energy</b></p> <ul style="list-style-type: none"> <li> Proposed Alignment</li> <li> Proposed Route Width</li> <li> Existing Substation</li> </ul>	<p><b>Existing Natural Gas Pipeline</b></p> <ul style="list-style-type: none"> <li> CenterPoint Energy</li> <li> NNG</li> </ul> <p><b>Existing Transmission Line</b></p> <ul style="list-style-type: none"> <li> Great River Energy</li> <li> Xcel Energy, Inc.</li> </ul>	<ul style="list-style-type: none"> <li> City Boundary</li> <li> County Boundary</li> </ul> <p><b>GAP Land Use</b></p> <ul style="list-style-type: none"> <li> Agricultural &amp; Developed Vegetation</li> <li> Developed &amp; Other Human Use</li> </ul>	<ul style="list-style-type: none"> <li> Forest &amp; Woodland</li> <li> Introduced &amp; Semi Natural Vegetation</li> <li> Open Water</li> <li> Recently Disturbed or Modified</li> <li> Shrub &amp; Herb Vegetation</li> </ul>
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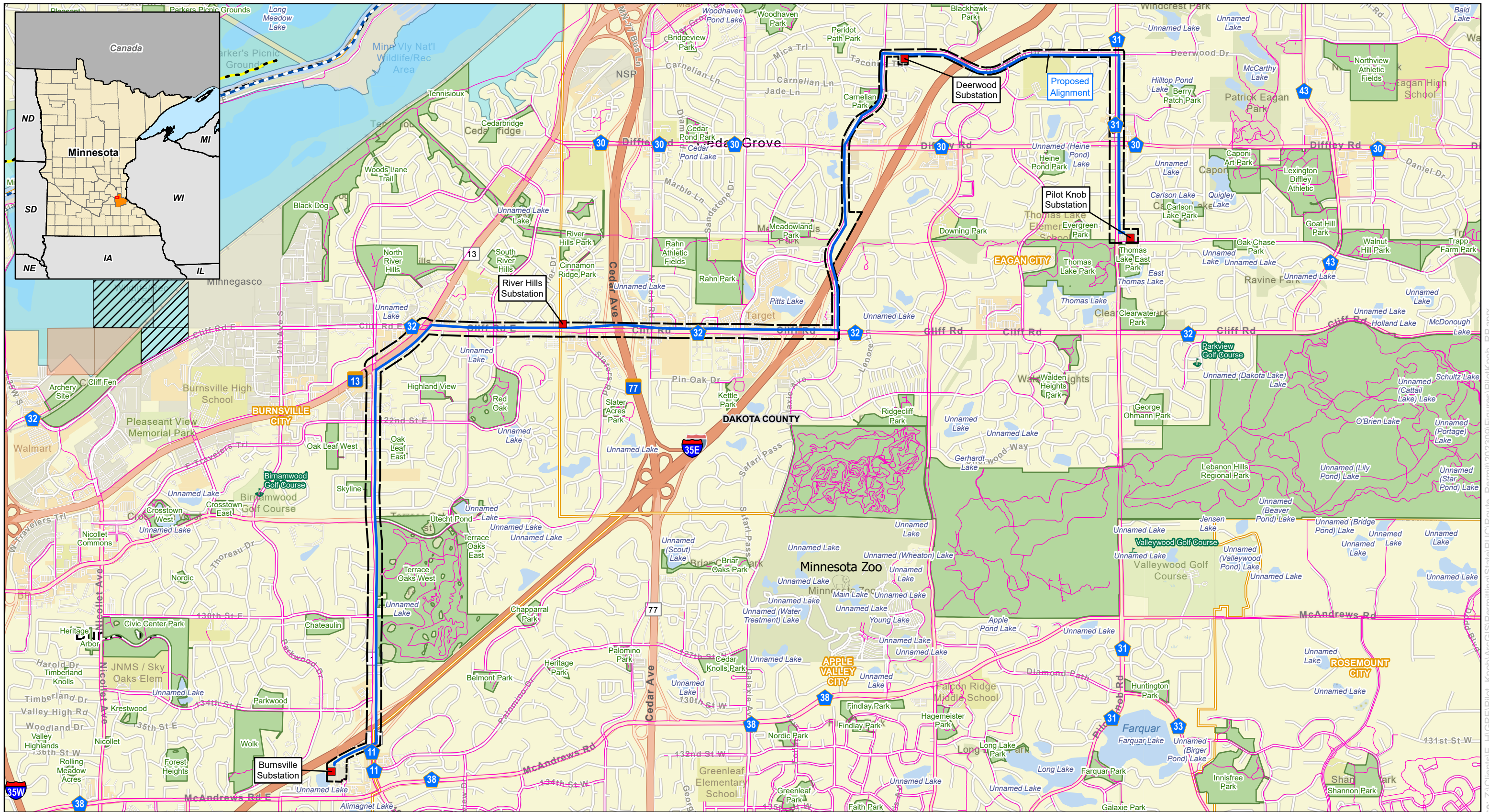
0 2,600 Feet  
1 inch = 2,600 feet

**GREAT RIVER ENERGY**

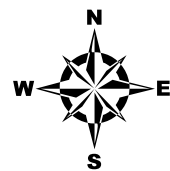
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**Figure 7-3**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Zoning**  
**Dakota County, Minnesota**

<b>Great River Energy</b>	<b>Apple Valley Zoning</b>	Residential	Park	<b>Burnsville Zoning</b>	Residential
Proposed Alignment	Agricultural	Water	Public Facility	Business	Right-of-Way
Proposed Route Width	Business	<b>Eagan Zoning</b>	Planned Development	GW	Transit Oriented Development
Existing Substation	Park	Agriculture	Transitional	Conservancy	City Boundary
	Planned Development	Residential	Cedar Grove District	Industrial	County Boundary
		Business		MIX	
		Limited Industrial		Park	

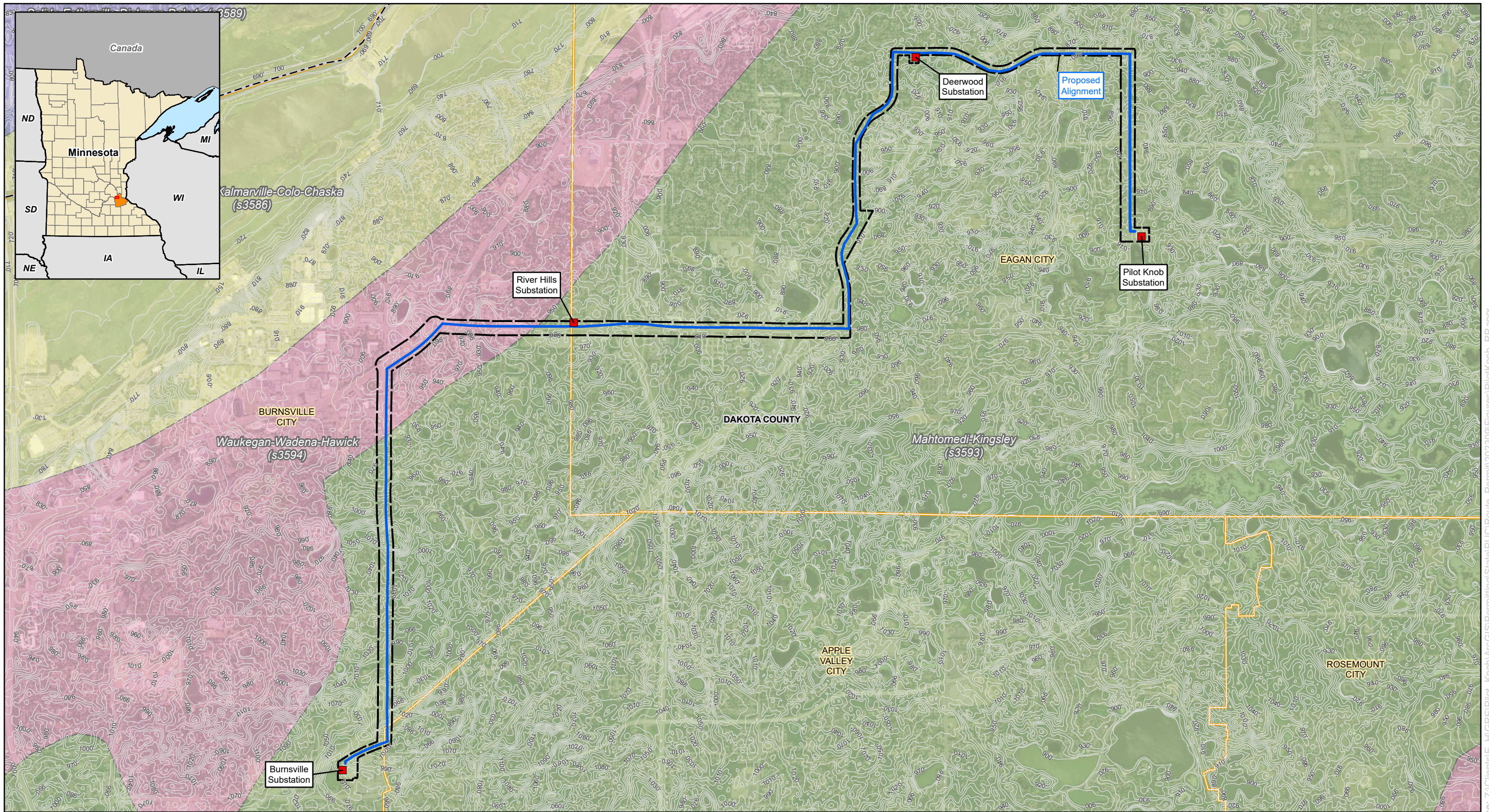


0 2,600 Feet  
1 inch = 2,600 feet

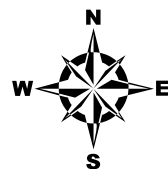


**Figure 7-4**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Recreation**  
**Dakota County, Minnesota**

- |                      |                            |                                                             |
|----------------------|----------------------------|-------------------------------------------------------------|
| Great River Energy   | State Water Trail          | Minnesota Valley National Wildlife Refuge / Recreation Area |
| Proposed Alignment   | Bike Trails                | Golf Course                                                 |
| Proposed Route Width | Transferred TNC Lands      | City Boundary                                               |
| Existing Substation  | Local Park/Recreation Area | County Boundary                                             |
| State Trail          | MDNR Public Lands          |                                                             |



0 2,600 Feet  
1 inch = 2,600 feet

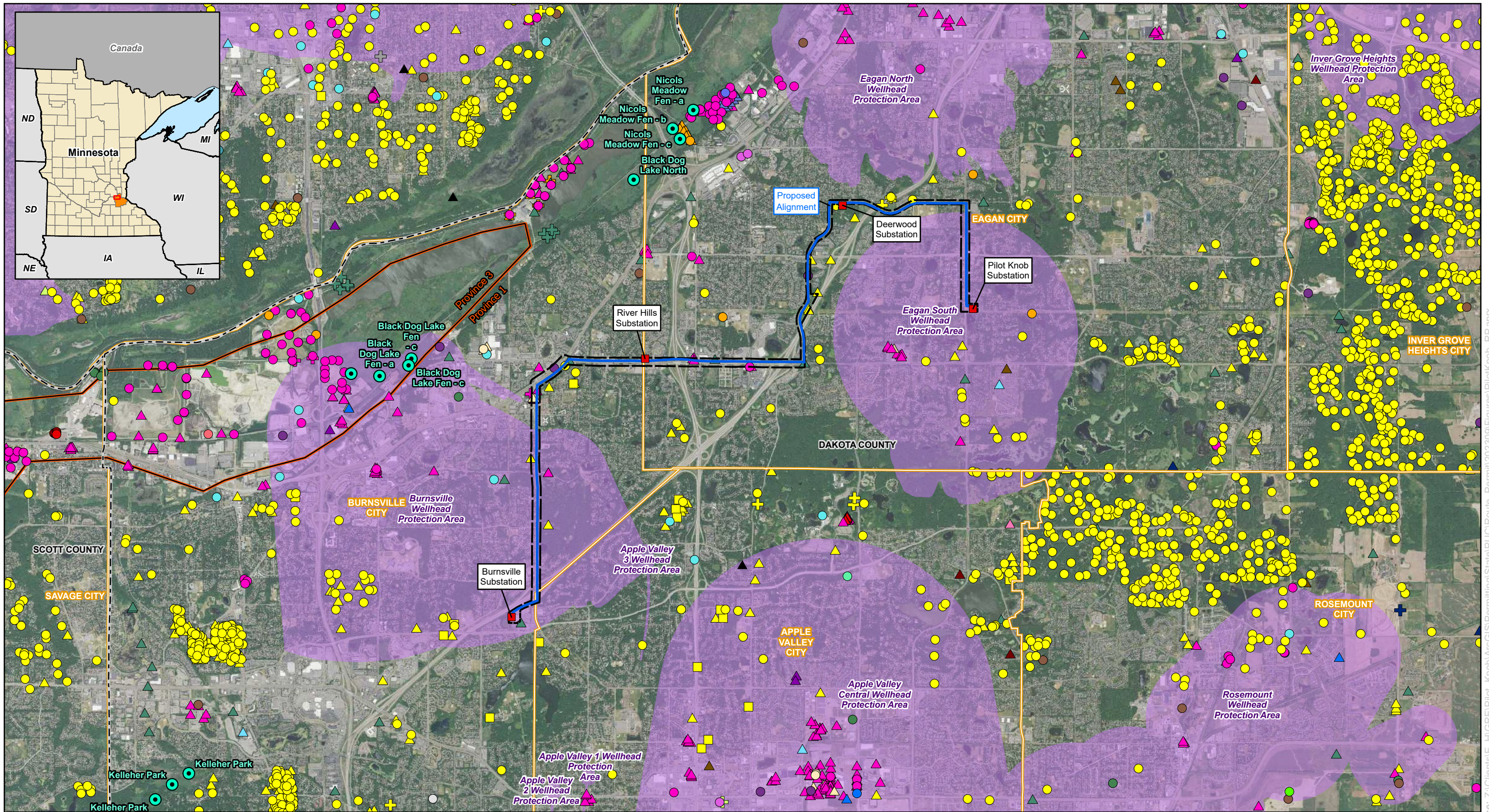


**Figure 7-5**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Soils and Topography**  
**Dakota County, Minnesota**

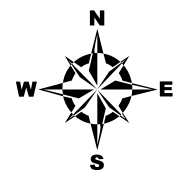
- |                      |                                           |
|----------------------|-------------------------------------------|
| Great River Energy   | 10' Contour                               |
| Proposed Alignment   | Soils (STATSGO)                           |
| Existing Substation  | Mahtomedi-Kingsley (s3593)                |
| Proposed Route Width | Minneiska-Kalmarville-Colo-Chaska (s3586) |
|                      | Salida-Estherville-Dickman-Dakota (s3589) |
|                      | Waukegan-Wadena-Hawick (s3594)            |
|                      | City Boundary                             |
|                      | County Boundary                           |

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0 4,500 Feet  
1 inch = 4,500 feet



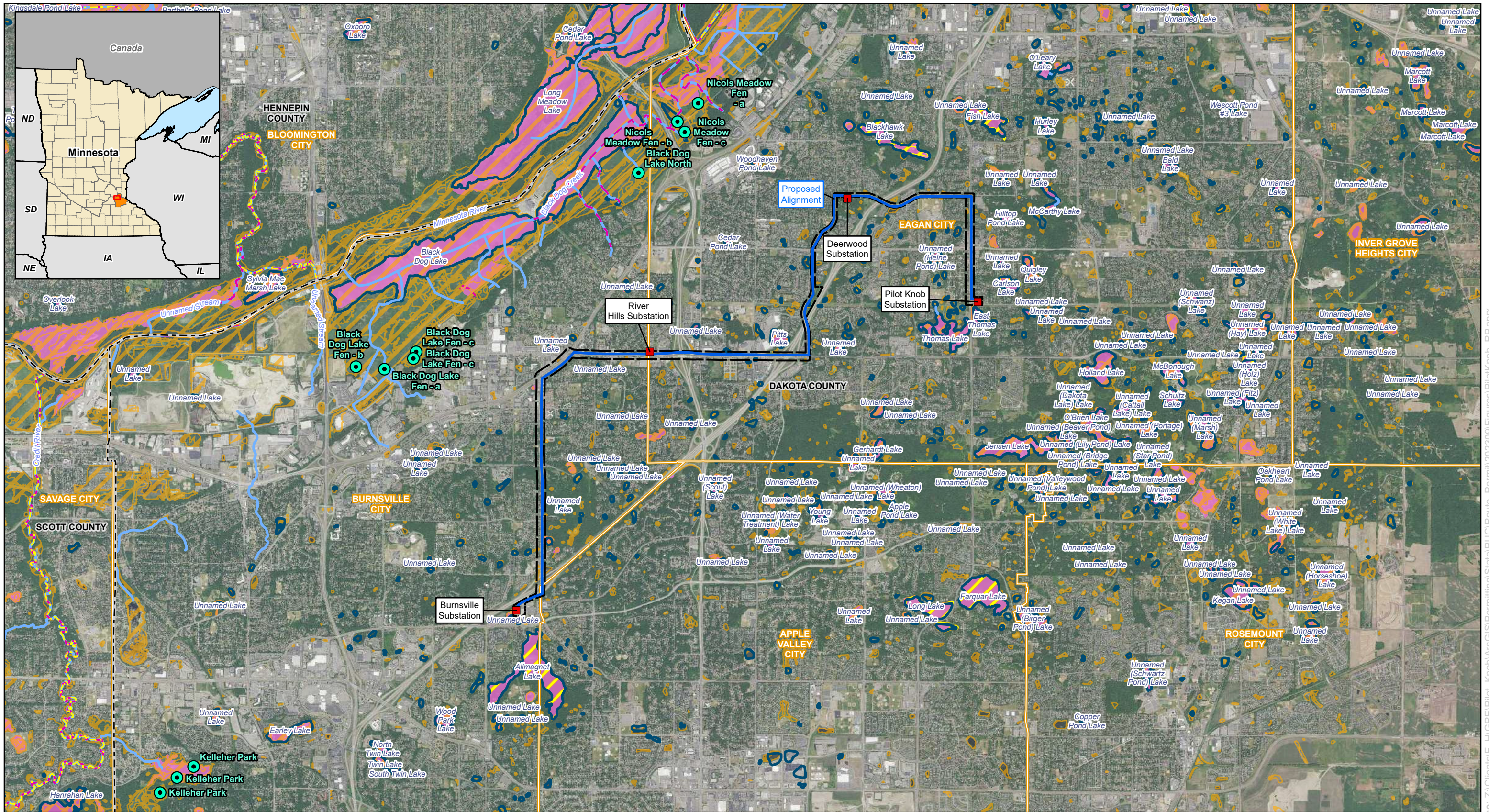
**Figure 7-6**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Groundwater Features**  
**Dakota County, Minnesota**

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li><span style="color: red;">■</span> Existing Substation</li> <li><span style="color: blue;">—</span> Proposed Alignment</li> <li><span style="color: blue;">—</span> Proposed Route Width</li> <li><span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> County Boundary</li> <li><span style="border: 1px dashed black; display: inline-block; width: 10px; height: 10px;"></span> City Boundary</li> <li><span style="border: 1px solid orange; display: inline-block; width: 10px; height: 10px;"></span> Groundwater Province</li> <li><span style="background-color: purple; border: 1px solid purple; display: inline-block; width: 10px; height: 10px;"></span> Wellhead Protection Area</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px;"></span> Calcareous Fen</li> </ul> | <p><b>County Well Index - Located Well</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px;"></span> Active</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: lightgray;"></span> Inactive</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: lightgray; opacity: 0.5;"></span> Sealed</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: lightgray; opacity: 0.2;"></span> Unknown</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: black;"></span> Abandoned</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: cyan;"></span> Commercial</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; background-color: blue;"></span> Dewatering</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: yellow; border-radius: 50%; width: 10px; height: 10px;"></span> Domestic</li> <li><span style="background-color: purple; border-radius: 50%; width: 10px; height: 10px;"></span> Elevator</li> <li><span style="background-color: green; border-radius: 50%; width: 10px; height: 10px;"></span> Environmental Bore Hole</li> <li><span style="background-color: brown; border-radius: 50%; width: 10px; height: 10px;"></span> Exploration</li> <li><span style="background-color: cyan; border-radius: 50%; width: 10px; height: 10px;"></span> Heat Pump</li> <li><span style="background-color: purple; border-radius: 50%; width: 10px; height: 10px;"></span> Industrial</li> <li><span style="background-color: red; border-radius: 50%; width: 10px; height: 10px;"></span> Industrial/Commercial</li> <li><span style="background-color: brown; border-radius: 50%; width: 10px; height: 10px;"></span> Irrigation</li> </ul> | <ul style="list-style-type: none"> <li><span style="background-color: pink; border-radius: 50%; width: 10px; height: 10px;"></span> Monitor Well</li> <li><span style="background-color: lightblue; border-radius: 50%; width: 10px; height: 10px;"></span> Multiple Dwelling</li> <li><span style="background-color: lightgreen; border-radius: 50%; width: 10px; height: 10px;"></span> Observation Well</li> <li><span style="background-color: gray; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Abandoned open hole artesian flow, USGS monitor well</li> <li><span style="background-color: gray; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Central well system</li> <li><span style="background-color: cyan; border-radius: 50%; width: 10px; height: 10px;"></span> Other - City Hall</li> <li><span style="background-color: yellow; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Dry hole</li> <li><span style="background-color: pink; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Hemphill Well Co.</li> <li><span style="background-color: lightgreen; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Hogs</li> <li><span style="background-color: lightgray; border-radius: 50%; width: 10px; height: 10px;"></span> Other - Soil vapor point</li> <li><span style="background-color: orange; border-radius: 50%; width: 10px; height: 10px;"></span> Piezometer</li> <li><span style="background-color: yellow; border-radius: 50%; width: 10px; height: 10px;"></span> Recovery Well</li> <li><span style="background-color: red; border-radius: 50%; width: 10px; height: 10px;"></span> Remedial</li> <li><span style="background-color: blue; border-radius: 50%; width: 10px; height: 10px;"></span> Scientific Investigation</li> <li><span style="background-color: cyan; border-radius: 50%; width: 10px; height: 10px;"></span> Test Well</li> <li><span style="background-color: lightgray; border-radius: 50%; width: 10px; height: 10px;"></span> Unknown</li> </ul> |
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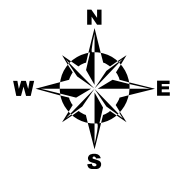


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0 4,500 Feet  
1 inch = 4,500 feet



**Figure 7-7**  
**Pilot Knob to Burnsville Rebuild and Upgrade Project**  
**Surface Water Features**  
**Dakota County, Minnesota**

**Great River Energy**

- Proposed Alignment
- Proposed Route Width
- Existing Substation

- Calcareous Fen
- MDNR Hydrography Dataset Watercourse
- MDNR Hydrography Dataset Lake/Pond
- PWI Watercourse
- PWI Basin

- Impaired Stream (2022)
- Impaired Lake (2022)
- NWI Wetland
- City Boundary
- County Boundary



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