



Appendix E
Applicants' Scoping Comments



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November 21, 2023

Via E-Filing

Jim Sullivan
Minnesota Department of Commerce
85 7th Place East, Suite 280
St. Paul, MN 55101

Re: *In the Matter of the Application of Minnesota Power and Great River Energy
for a Certificate of Need and Route Permit for the Northland Reliability Project
345 kV Transmission Line*
Environmental Assessment Scoping Comments
MPUC Docket No. E015,ET2/CN-22-416
MPUC Docket No. E015,ET2/TL-22-415

Dear Mr. Sullivan:

Great River Energy and Minnesota Power (collectively, the “Applicants”) submit the following comments regarding the scope of the Environmental Assessment (“EA”) for the Northland Reliability Project (“Project”) that is being prepared by the Minnesota Department of Commerce, Environmental Review and Analysis (“DOC-EERA”).

During the Minnesota Public Utilities Commission’s (“Commission”) October 5, 2023 hearing, the Commission asked the Applicants to further examine route alternatives that would consolidate the proposed new double-circuit 345 kV transmission line with existing transmission lines. In analyzing potential route alternatives for inclusion in the EA, the Applicants examined opportunities for consolidation and are proposing for evaluation in the EA several route alternatives that address the Commission’s request. These route alternatives are described below, along with other route alternatives, route width expansions, alignment changes, and alignment alternatives that should be evaluated in the EA. Applicants’ continued coordination with the Minnesota Department of Natural Resources (“MnDNR”) regarding route and alignment alternatives is also discussed.

Also during the October 5th hearing, the Commission asked the Applicants to work with Commission Staff and the DOC-EERA to prepare a proposed procedural schedule for the Project and to submit this schedule during scoping for the Commission’s consideration. A discussion of these efforts and a proposed procedural schedule is provided.

Finally, the Applicants also include additional information below regarding the Project's use of specialty structures in response to questions received during the EA scoping meetings.

A. Applicants' Proposed Alternatives for Inclusion in EA

Below are route alternatives, route width expansions, and associated alignment alternatives that the Applicants request that the DOC-EERA include for evaluation in the EA.

a. Riverton Area Alternative Corridor

Applicants initially rejected a route alternative in the Riverton area that follows the existing Minnesota Power 92 Line and 11 Line from the Cuyuna Series Compensation Station (Section 7 of Irondale Township in Crow Wing County) to the southeast before turning south at Section 25 of Oak Lawn Township in Crow Wing County and following Great River Energy's MR Line for 6.5 miles. This alternative and the reasons for Applicants' rejection are provided in Section 5.3.5 of the Application.

During the hearing on October 5th, the Commission asked the Applicants to look for additional opportunities to consolidate the new double-circuit 345 kV transmission line with existing transmission lines. The Applicants have reviewed this area again, and while the Applicants continue to support the Proposed Route¹ included in the Application, they have developed an alternative in this area for further evaluation ("the "Riverton Area Alternative Corridor"). The Riverton Area Alternative Corridor is described in detail in **Attachment 1a**. An overview and mapbook of the Riverton Area Alternative Corridor are provided as **Attachment 1b** and **Attachment 1c**, respectively. A table comparing the impacts of the Riverton Area Alternative Corridor to the equivalent segment of the Proposed Route is provided as **Attachment 1d**. Due to the extensive overlap of existing rights-of-way, only a comparison between the Applicants' proposed alignment and the Riverton Area Alternative Corridor alignment is included in **Attachment 1d**. Impacts from reconfigurations within existing right-of-way are included in impacts associated with the Riverton Area Alternative Corridor.

b. Swatara Area Expanded Route Width

The Applicants are proposing an expanded route width north and west of Swatara, where Minnesota Power's existing 92 Line turns from a northeast-southwest diagonal orientation to a north-south orientation, to provide additional flexibility to minimize impacts to residences. The expanded route width would increase the route width in this area by approximately 4,000 feet east-west (at its widest portion) and by approximately 4,000 feet north-south. A map of this route width expansion is provided as **Attachment 2**.

¹ Terms not otherwise identified in this letter have the same meaning as those provided in the Application.

c. Cole Lake Way Alignment Alternative and Expanded Route Width

During the EA scoping meetings, several landowners with properties on or near Cole Lake Way recommended that the Proposed Route not deviate from Minnesota Power's existing 115 kV (13 Line and 11 Line) and 230 kV (92 Line) transmission lines (Sections 16, 20, and 21 of Wolford Township in Crow Wing County). The Proposed Route deviates from these existing lines in this area to avoid displacing homes located adjacent to the existing right-of-way. After further analysis, Applicants developed an alternative that would consolidate the 11 Line and 92 Line on the same structures and enable placement of the Project on the right-of-way currently used by the 92 Line in this area ("Cole Lake Way Alignment Alternative"). While this co-location of the 11 Line and the 92 Line is not preferred, Applicants believe it is a feasible, but more costly, alternative to address comments made during the EA scoping meetings by individuals concerned about routing in this area. Further, the Cole Lake Way Alignment Alternative would locate the Project in closer proximity to existing residences than the proposed alignment. A map showing the Cole Lake Way Alignment Alternative is provided as **Attachment 3a**. A table comparing the Cole Lake Way Alignment Alternative to the equivalent segment of the Proposed Route is provided at **Attachment 3b**.

d. Iron Range Substation Expansion Areas

The Project includes expansion of Minnesota Power's existing Iron Range Substation to accommodate the new double-circuit 345 kV transmission line. After the Application was submitted, Minnesota Power continued to work on the design and layout for the Iron Range Substation. During this process, the Applicants determined that, due to the topography in and around the Iron Range Substation, the existing substation fencing could not be expanded to accommodate the new double-circuit 345 kV transmission line. Instead, a smaller expansion of the existing Iron Range Substation fenced area and the construction of a second fenced area to the east of the existing Iron Range Substation would be necessary to accommodate the interconnections and equipment required for the Project. Electrically, this will perform the same as the single expanded fenced area contemplated at the time of the Application.² However, the environmental impacts associated with the Project will be reduced with this two-fenced-area approach because impacts to wetlands to the south and east of the existing Iron Range Substation are able to be minimized. A map illustrating this new Iron Range Substation design for inclusion of this modification in the EA is provided as **Attachment 4**.

² The two fenced areas will be connected using two 500 kV transmission lines constructed in parallel over the approximately 1,500-foot separation between the two fenced areas. This construction does not impact the Project's compliance with Minn. Stat. § 216E.03, subd. 2(5) to use the alternative route permitting review process.

e. Benton County Substation Expanded Route Width

The Applicants are currently analyzing modifications to the Project's alignment in the vicinity of the Benton County Substation as a result of ongoing coordination related to cultural resources. The Applicants will provide a revised proposed alignment when it is available. Based on current information, the Applicants are proposing to expand the route width by approximately 300 feet east-west and 300 feet north-south to the southwest of the existing Benton County Substation. A map showing this route width expansion is provided as **Attachment 5**.

f. Proposed Alignment Changes or Alternatives within the Proposed Route

The route width is the area in which the Commission authorizes a permittee to place the proposed transmission line facilities. In the Application for this Project, the Applicants requested a route width that ranges from 1,000 to 3,000 feet wide to allow the Applicants flexibility to make alignment adjustments during final design to work with landowners or to avoid sensitive resources. That said, the Applicants did provide, as part of the Application, an anticipated alignment for the Project for purposes of calculating the impacts of the Project. Following the submission of the Application, the Applicants have identified four route alignment changes or alternatives. Each of these alignment changes or alternatives is described below. Applicants anticipate that further alignment refinement will continue as permitting proceeds and prior to construction.

i. Moose River Alignment Alternative

The MnDNR's June 30, 2023, comment letter noted that the Project's proposed right-of-way would have a new crossing of the Moose River and adjoining unnamed stream. In this area, the Applicants propose an alignment change where the Project would parallel the existing 92 Line to span the Moose River and adjoining unnamed stream, then deviate around the Enbridge Swatara Station on the south side of the Moose River ("Moose River Alignment Alternative"). A map of the Moose River Alignment Alternative is provided as **Attachment 6**. The Applicants request that the EA substitute analysis of this alignment in place of the alignment included in the Application.

ii. County Road 59 Alignment Alternative

Based upon public comments and the MnDNR's June 30, 2023 comment letter regarding the Project's proximity to Hay Lake, Applicants reviewed an alignment alternative that follows County Road 59 and would not cross Hay Lake. The Applicants note that this alignment would require right-of-way within the MnDNR's Cuyuna Country State Recreation Area. A map of this alignment alternative is provided as **Attachment 7**. Applicants request that the EA analyze both the Applicants' proposed alignment and this alignment alternative.

iii. Sherco Solar Substation Alignment Area – Routing to Big Oaks Substation

The Applicants are working with Xcel Energy on routing the Project to interconnect at the Big Oaks Substation. The Applicants propose an alignment change to route east and south of Xcel Energy’s Sherco Solar Substation, near the Big Oaks Substation. This alignment alleviates congestion near Xcel Energy’s Sherco Solar Substation by removing a tall span of Xcel Energy’s potential double-circuit 345 kV transmission line from Sherco Substation to Sherco Solar Substation. A map showing the area under consideration for this potential alignment change is provided as **Attachment 8**.

B. Coordination with MnDNR

The Applicants are continuing to coordinate with MnDNR regarding the Project, including meeting with the MnDNR on November 13, 2023. During this meeting, the MnDNR referenced its June 30, 2023, comment letter. Following that meeting, the Applicants attempted to identify potential route alternatives based on that comment letter. The table below reflects Applicants’ effort to identify those route alternative locations, and Applicants’ responses thereto. Applicants understand that MnDNR’s comment letter also included discussion of potential resource concerns, to which Applicants will further respond as the permitting process proceeds.

Reference	MnDNR Route Alternative Comment	Applicants’ Response
1 - Itasca County	<i>The proposed greenfield route at the northernmost extent of the project goes through more wetlands than existing lines and creates a new crossing over the Swan River; crossing in the same location as existing right of way would greatly reduce the number/acres of impacted wetlands and eliminate the need for a new river crossing.</i>	Applicants’ Proposed Route in this location was chosen to minimize impacts to existing homes near County Road 10 and the Swan River. Applicants expect to span the Swan River, with no work being done in or near the riverbank so that mussels will not be impacted.
2 - Crow Wing County	<i>Installing newly disturbed and maintained corridors, rather than following existing infrastructure will fragment the landscape and habitat; and be another corridor with subsequent habitat loss and degradation. Using more of the existing transmission line ROW would be preferable and reduce impacts in this area.</i>	See Section A(a) above for a description of the Riverton Area Alternative Corridor and Section A(f)(ii) for a description of the County Road 59 Alignment Alternative.

Reference	MnDNR Route Alternative Comment	Applicants' Response
3 - Benton County	<i>It is unclear why an existing route to the west could not be used instead. This selected route through Benton County has some of the largest natural resource impacts possible.</i>	As discussed in Section 5.3.8 of the Application, the Applicants considered several Rejected Route Alternatives north of the Benton County Substation. These Rejected Route Alternatives deviate from the existing MR Line to the west or the east. These Rejected Route Alternatives increase the overall Project length and impacts to residences without any significant mitigation of potential impacts to other sensitive resources when compared to the Proposed Route.
4 - Sherburne County	<i>In the image below, there is another ROW that continues to the north rather than turning west. By continuing along this route or a similar route through this area, much of the riparian impacts to Benton County could be avoided. We would like to know more about why an alternate route to the east through Benton County was not considered.</i>	<p>The Proposed Route within Sherburne County involves rebuilding an existing transmission line within the existing easement area.</p> <p>A new route to the east within Benton County was not proposed as this would create a new transmission line right-of-way for the Project in addition to the existing right-of-way for the EW 69 kV line. In total, there would be three transmission lines within this area.</p> <p>The referenced right-of-way that continues north is the EW 69 kV right-of-way that leads north towards the City of Foley, whereas the Project needs to head west to interconnect into the Benton County Substation.</p>

C. Procedural Schedule

The Commission requested that the Applicants provide, with their Scoping Comments, a proposed procedural schedule for the Project. The Applicants provide a proposed procedural schedule as **Attachment 9**. The Applicants previously provided this proposed procedural schedule to the Commission Staff and DOC-EERA. Applicants look forward to continuing to coordinate with Commission Staff and DOC-EERA to further refine this schedule.

D. Specialty Structures

During the scoping meetings that were held during the week of October 23, 2023, several landowners asked questions about the types of specialty structures that will be used for the Project. In certain locations, the Applicants will likely install a two-pole dead-end structure like the one shown on page 2 of Appendix K of the Application. The Applicants anticipate approximately 10 percent of the structures for the Project will be these two-pole dead-end structures. As compared to a typical tangent structure, these two-pole dead-end structures are designed for more robust loading conditions and subsequently will have larger foundations. This structure type will primarily be used where sharp angles are turned but may be used in other locations to meet engineering criteria.

Sincerely,

/s/ Jim Atkinson
Jim Atkinson
Minnesota Power
Manager - Environmental and Real
Estate

/s/ Dan Lesher
Dan Lesher
Great River Energy
Manager, Transmission Permitting and
Land Rights

cc: Service Lists

Riverton Alternative Corridor Reconfiguration

In Section 5.3.5 of the Application, the Applicants discuss a Rejected Route Alternative that follows the existing Minnesota Power 92 Line and 11 Line from the Cuyuna Series Compensation Station, starting at Section 7 of Irondale Township in Crow Wing County heading southeast past the existing Riverton Substation, and then turns south at Section 25 of Oak Lawn Township in Crow Wing County, following Great River Energy's MR Line for a total of 6.5 miles. This Route Alternative was originally rejected for several reasons, including impacts to Little Rabbit Lake (which is considered part of the Mississippi River) and residential lots north of Little Rabbit Lake, the Cuyuna Country State Recreation Area and the Applicants' existing electrical infrastructure south of Little Rabbit Lake, a cluster of homes built near the existing transmission line right-of-way at Highway 210, and gravel pits, the Loerch Wildlife Management Area ("WMA"), and residences along the existing right-of-way south of Highway 210.

Based on feedback from the Commission during the October 5 meeting, as well as comments received during the environmental scoping meetings, the Applicants have developed a revised version of the Riverton Area Alternative Corridor that maximizes the use of existing rights-of-way and consolidation of existing electrical infrastructure through the area to limit impacts for as many of the constraints listed above as possible. While the Applicants still prefer the proposed route through the Hay Lake area that avoids constraints in the Riverton area, and their associated impacts and costs, the Applicants submit the following route alternative for consideration in the environmental assessment as a technically feasible solution for routing through the Riverton Area.

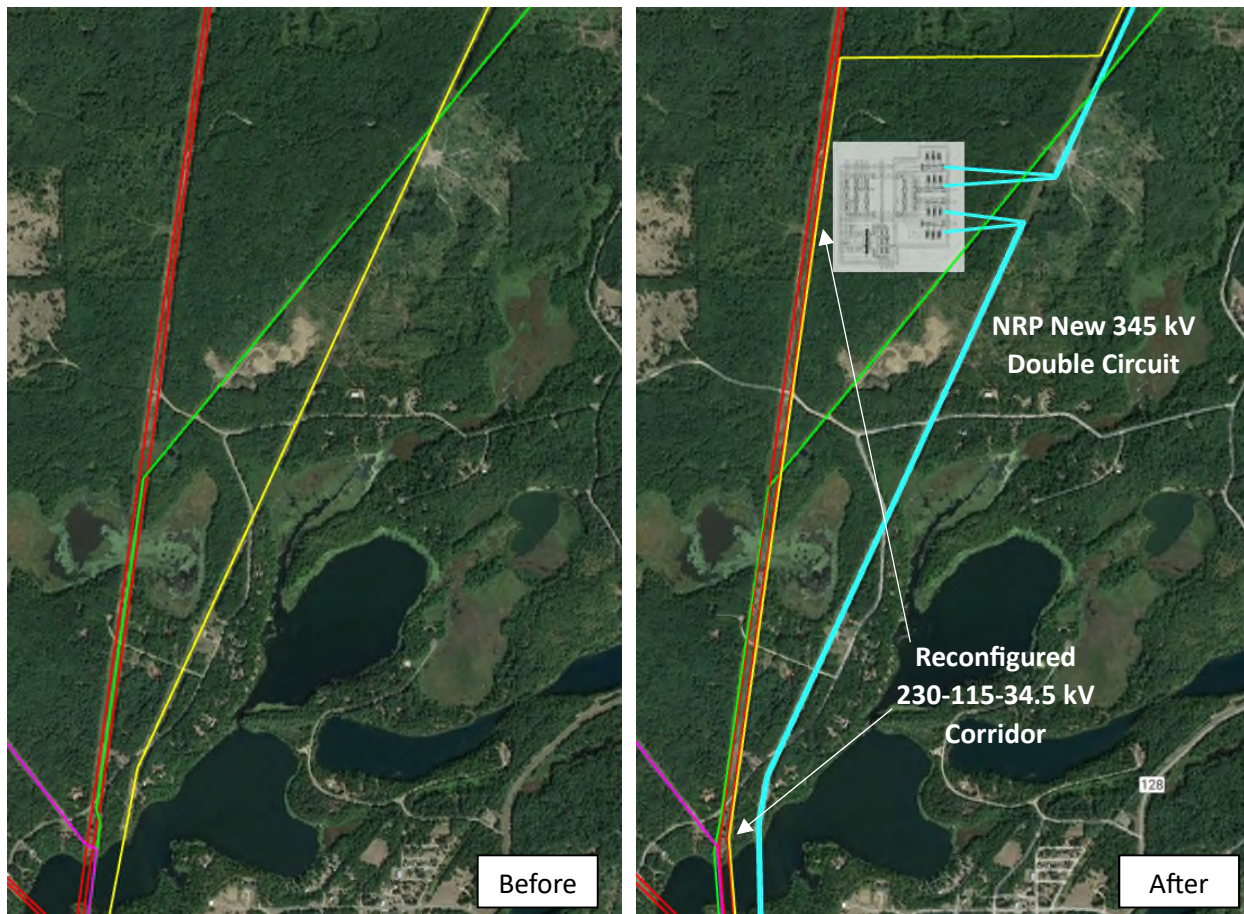
Starting at the Cuyuna Series Compensation Station, the Riverton Area Alternative Corridor would replace Minnesota Power's existing 230 kV 92 Line with the Project's new double circuit 345 kV line for approximately 1.5 miles until it crosses Little Rabbit Lake. The 92 Line would be relocated and consolidated with an existing 115 kV line in a nearby existing corridor. Following the Little Rabbit Lake crossing, the Project would shift to replacing the existing Great River Energy Riverton – Blind Lake 69 kV Line (RV Line) through the Cuyuna Country State Recreation Area for approximately 0.6 miles. The RV Line would be relocated and consolidated with an existing 115 kV line in a nearby corridor. South of Minnesota Power's existing Riverton 230/115 kV Substation, the Project would replace the Great River Energy Riverton - Wilson Lake 69 kV Line (RW Line) as it parallels the east side of the existing Great River Energy 230 kV line for approximately 1.2 miles. The RW Line would be relocated and consolidated with an existing 230 kV line in the same corridor. At the Highway 210 crossing, the entire corridor including the Project, the consolidated 230 kV and 69 kV lines, the 115 kV line, and an existing 34.5 kV distribution feeder, would be relocated to an alignment that balances impacts to homes on both sides of the highway. Approximately 1.4 miles south of Highway 210, the entire corridor would again be shifted to the west to limit impacts to homes along Nelson Road. In this part of the corridor, the Project would take over the centerline of the existing 230 kV line, with the consolidated 230 kV and 69 kV lines and the 115 kV line located to the west in the right-of-way. The Project would continue on this alignment for 1.4 miles until it rejoins the proposed alignment at Woodrow Road.

Extensive reconfigurations of existing electrical infrastructure are required to facilitate the Riverton Area Alternative Corridor as described above. The following sections provide more detail on the required reconfigurations in the different segments of the Riverton Area Alternative Corridor, including discussion of the associated impacts and costs.

Cuyuna Series Compensation Station to Little Rabbit Lake

From the Cuyuna Series Compensation Station to Little Rabbit Lake, the proposed Northland Reliability Project's ("Project" or "NRP") double-circuit 345 kV line would overtake the existing Minnesota Power Blackberry – Riverton 230 kV line (92 Line) right-of-way for approximately 1.5 miles to Little Rabbit Lake. The existing 130-foot right-of-way for 92 Line would need to expand to 150 feet for NRP. To accommodate NRP, the existing 92 Line would need to be relocated. After being re-routed around the Cuyuna Series Compensation Station, the 92 Line would be consolidated into a common corridor with the existing Minnesota Power Riverton – Grand Rapids 115 kV Line (11 Line), Minnesota Power Riverton – Portage Lake 115 kV Line (13 Line), and a Minnesota Power 34.5 kV Distribution Feeder. The following modifications would be made to this existing corridor:

- Minnesota Power 34.5 kV Distribution Feeder to be rebuilt overhead or undergrounded as needed to make room for reconfigured 115 kV and 230 kV transmission lines (2.1 miles).
- 13 Line rebuilt single circuit 115 kV on west side of the corridor from Cuyuna Series Compensation Station site to Rabbit Lake (1.8 miles).
- 92 Line & 11 Line constructed on double-circuit 230 kV/230 kV structures on east side of the corridor from Cuyuna Series Compensation Station site to Rabbit Lake (1.8 miles).
- The existing right-of-way varies from 140-180 feet. To relocate the 230 kV transmission line into the corridor, the total right-of-way would need to be increased to 215 feet, including approximately 65 feet from the centerline of the double-circuit 230 kV line to the eastern edge of right-of-way and approximately 50 feet from the centerline of the 115 kV line to the western edge of right-of-way.

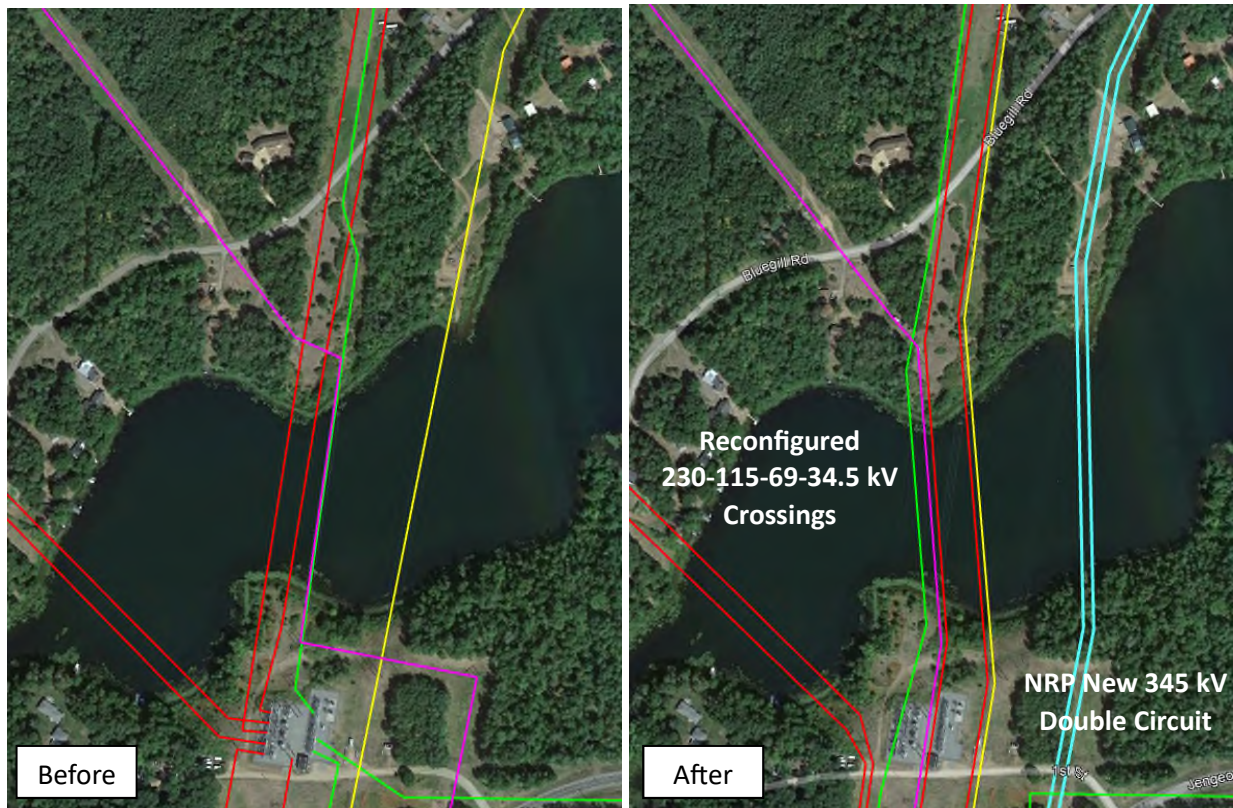


Little Rabbit Lake Crossing

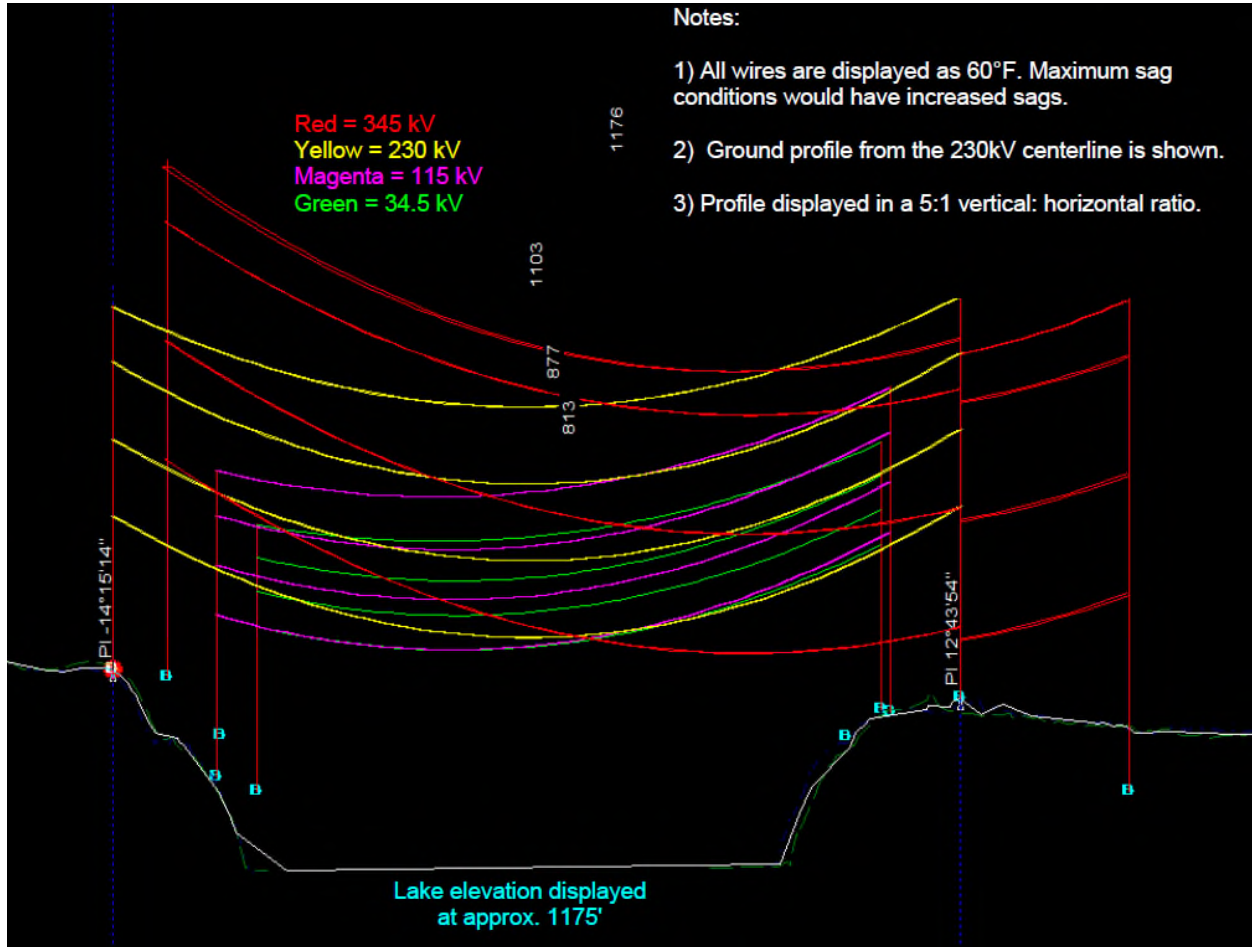
At Little Rabbit Lake, the proposed NRP double-circuit 345 kV line would overtake the existing 92 Line alignment as it crosses Little Rabbit Lake. The existing horizontally arranged 230 kV line would be replaced with a vertically oriented double-circuit 345 kV line. The estimated span length of the lake crossing is approximately 1,300 feet, which will require structures on the higher end of the range (140-180 feet) at the crossing. To accommodate NRP, the existing 92 Line would need to be relocated, continuing in the common corridor with the existing 115 kV lines as described above. The following modifications would be made to the existing transmission lines at the Little Rabbit Lake crossing:

- Minnesota Power 34.5 kV Distribution Feeder rebuilt on a single-circuit overhead crossing on west side of the Little Rabbit Lake crossing corridor. The lake crossing will change alignment slightly to shift from the new alignments south of Little Rabbit Lake to the existing alignments north of Little Rabbit Lake. The 34.5 kV alignment will use a portion of the existing 11 Line Lake crossing alignment.
- 13 Line & RV Line constructed on double-circuit 115 kV/115 kV structures parallel to the 34.5 kV circuit. North of Little Rabbit Lake, the Great River Energy 69 kV line branches northwest on its existing alignment while 13 Line continues north on single-circuit structures. South of Little Rabbit Lake, 13 Line & RV Line continue south on double-circuit structures.

- 92 Line and 11 Line constructed on double circuit 230 kV/230 kV structures across Little Rabbit Lake, paralleling the relocated 34.5 kV, 69 kV and 115 kV circuits as they cross the lake. North and south of Little Rabbit Lake, 92 Line and 11 Line continue on double-circuit structures.



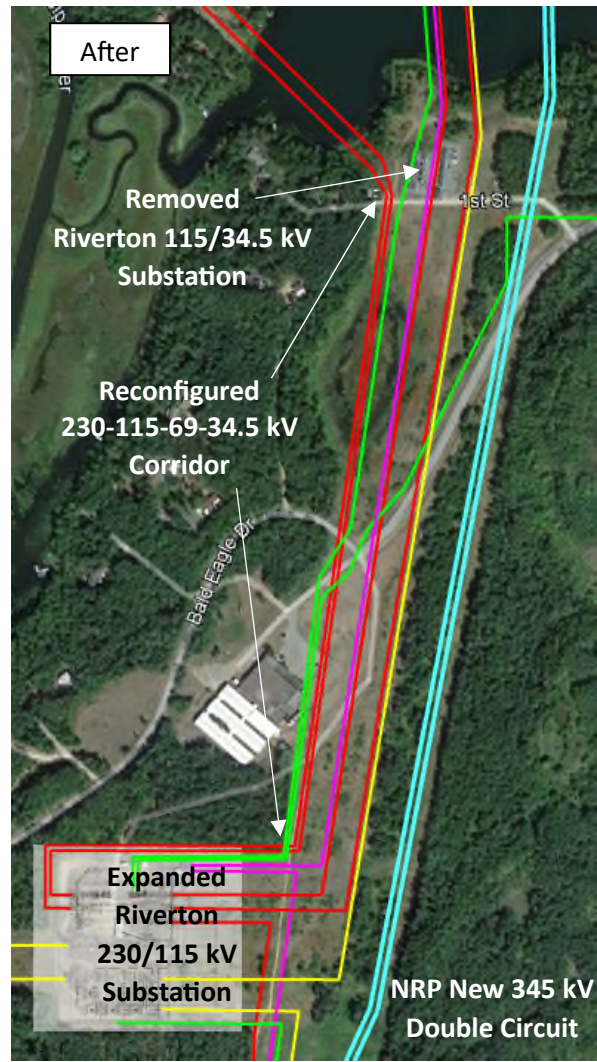
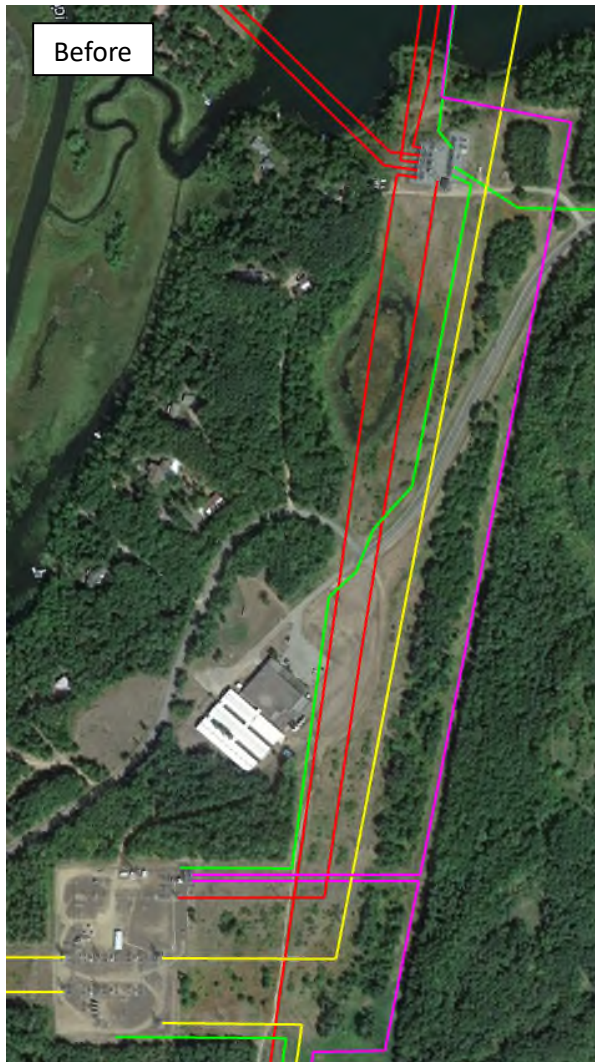
Due to the number of transmission lines crossing Little Rabbit Lake, their various operating voltages, and the expected vertical orientation of the double circuit structures at the crossing location, there will be conductors at several different heights as they cross over Little Rabbit Lake. A conceptual profile drawing of the different conductor heights crossing Little Rabbit Lake is shown below.



Little Rabbit Lake to Riverton 230/115 kV Substation

South of Little Rabbit Lake, the proposed NRP double-circuit 345 kV line would shift east onto the alignment of the existing RV Line. This alignment would place the NRP inside the Cuyuna Country State Recreation Area for a short distance. In general, the eastern edge of the existing RV Line right-of-way would be maintained, and the additional right-of-way required for NRP (approximately 80 feet) would extend to the west. To accommodate NRP and the consolidation of corridors described in the preceding sections, the RV Line and all existing transmission lines and substations west of the proposed NRP alignment in this area would need to be reconfigured. The following modifications would be made:

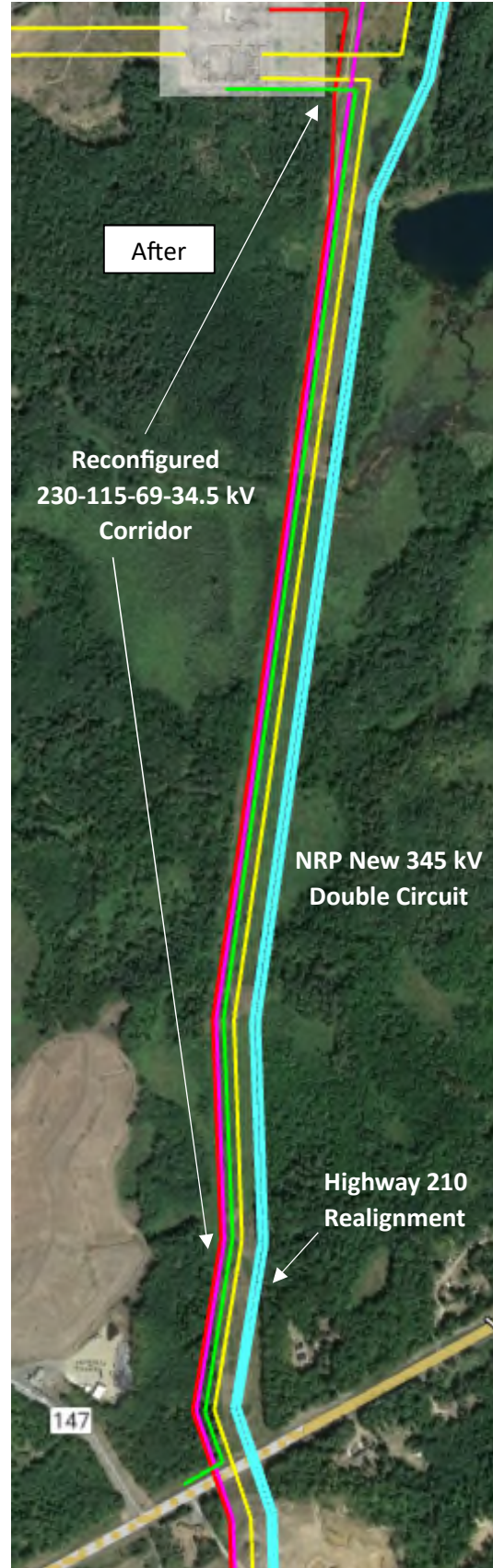
- The existing Minnesota Power Riverton 115 kV/34.5kV Substation would need to be removed to accommodate the previously described transmission line reconfigurations at the Little Rabbit Lake crossing and additional reconfigurations south of Rabbit Lake. The existing Minnesota Power Riverton 230 kV/115 kV Substation, located less than a mile to the south, would be expanded to incorporate the interconnections presently tied to the Riverton 115 kV/34.5 kV Substation, including 115 kV transmission lines, 115 kV/34.5 kV transformers and 34.5 kV feeders. A second 230 kV/115 kV transformer with a tertiary-connected shunt reactor would be added at the Riverton 230 kV/115 kV Substation to accommodate the expansion of the 115 kV bus. The majority of the expansion would be completed within the existing Riverton 230 kV/115 kV Substation fence line, but the fence may need to be expanded in some areas.
- Existing Minnesota Power 34.5 kV distribution feeders would be reconfigured and extended to the new 34.5 kV bus at the expanded Riverton 230 kV/115 kV Substation. Reconfigured feeders would be undergrounded as necessary to avoid conflicting with overhead transmission lines.
- The existing Minnesota Power Riverton – Brainerd 115 kV Line (12 Line) would be reconfigured to terminate at the expanded Riverton 230 kV/115 kV Substation, requiring a short span into a new line entrance.
- The existing Minnesota Power Riverton – Pequot Lakes 115 kV Line (51 Line) and Minnesota Power Riverton – Baxter 115 kV Line (130 Line) would be extended from structures outside the removed Riverton 115 kV/34.5 kV Substation to the expanded Riverton 230 kV/115 kV Substation on double-circuit 115 kV/115 kV structures following the existing 12 Line alignment and the north side of the Riverton 230 kV/115 kV Substation to new line entrances on the west side of the expanded substation (approximately 4,100 feet).
- 92 Line & 11 Line would continue south on double-circuit 230 kV/230 kV structures, shifting onto the existing 92 Line alignment as they pass by the former site of the Riverton 115 kV/34.5 kV Substation and continuing to their respective line entrance locations at the expanded Riverton 230 kV/115 kV Substation (approximately 4,100 feet).
- 13 Line & RV Line would continue south on double-circuit 115 kV/115 kV structures, crossing over the former site of the Riverton 115 kV/34.5 kV Substation and continuing to the expanded Riverton 230 kV/115 kV Substation along the alignment of the existing Riverton – Riverton 115 kV Line (“60 Line”), a total of approximately 3,850 feet. 60 Line would no longer be necessary following the removal of the Riverton 115 kV/34.5 kV Substation and relocation of its interconnections.
- Following construction of the double-circuit 13 Line & RV Line, the existing RV Line running through the Cuyuna Country State Recreation Area would be removed to make space for the construction of the NRP double-circuit 345 kV/345 kV line.



South of Riverton 230 kV/115 kV Substation to Highway 210 Crossing

South of the Riverton 230 kV/115kV Substation, the proposed NRP double-circuit 345 kV/345 kV line would shift slightly west onto the alignment of the existing Great River Energy Riverton – Wilson Lake 69kV Line (RW Line), paralleling the existing Great River Energy Riverton – Mud Lake 230kV Line (MR Line) with a minimum 110-foot centerline to centerline offset as proposed in other parts of the route. The Riverton Area Alternative Corridor would follow this alignment past the Crow Wing County landfill until just north of Highway 210. At the Highway 210 crossing, the alignment of the NRP and existing 230 kV, 115 kV, 69 kV, and 34.5 kV lines will be reconfigured to limit impacts to homes on the north and south sides of the highway. To accommodate NRP, existing transmission and distribution lines in this corridor will need to be rebuilt. The following modifications would be made to this existing corridor:

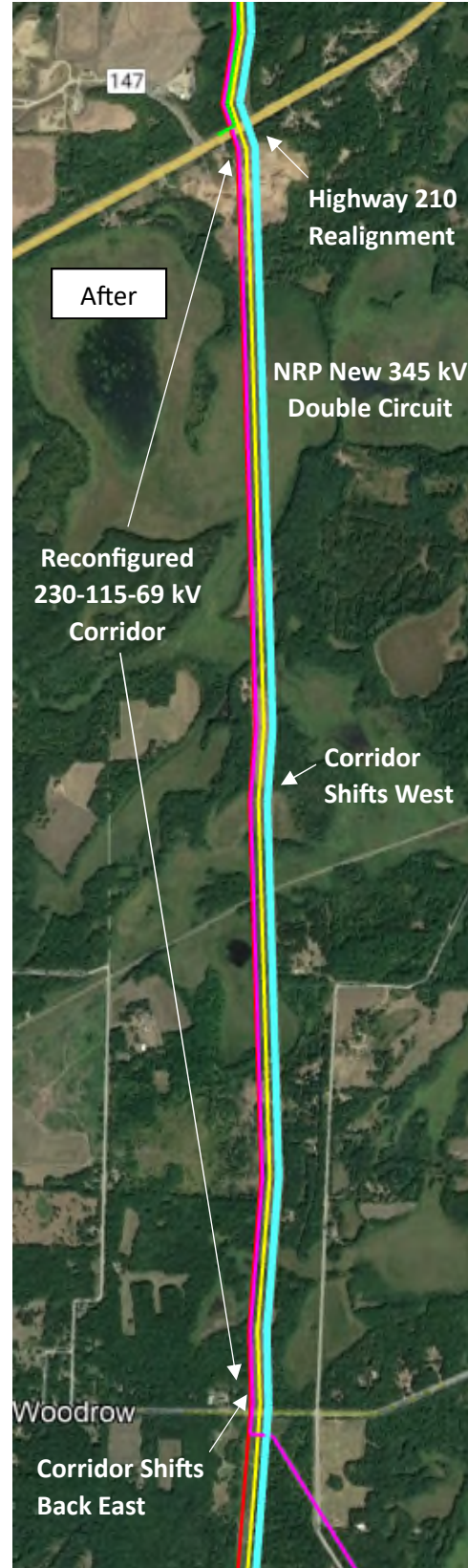
- The existing Great River Energy 69 kV RW Line will be relocated onto double-circuit 230 kV/115 kV structures with the Great River Energy 230 kV MR Line for the entire segment, generally following the existing MR Line alignment until the Highway 210 crossing (approximately 1.5 miles).
- The existing Minnesota Power Riverton – Brainerd 115 kV Line (12 Line) will be rebuilt on single circuit 115 kV structures for the entire length of this segment, generally on or near its existing alignment to optimize corridor width (approximately 1.5 miles).
- The existing Minnesota Power 34.5 kV Distribution Feeder will be relocated or undergrounded as needed from Riverton 230 kV/115 kV Substation to Highway 210 (approximately 1.4 miles) to further reduce right-of-way requirements for the common corridor.
- The existing right-of-way in this corridor is generally 235 feet. After relocating the RW Line, approximately 100 feet of additional right-of-way would be required to accommodate the NRP double-circuit 345 kV/345 kV line. The additional right-of-way is required on the east side of the corridor, with the exception of the Highway 210 crossing realignment shown below.



Highway 210 Crossing to Proposed Route

South of Highway 210, the proposed NRP double-circuit 345 kV line would shift slightly west back onto the alignment of the existing Great River Energy Riverton – Wilson Lake 69kV Line (RW Line), paralleling the existing Great River Energy’s Riverton – Mud Lake 230 kV Line (MR Line) with a minimum 110-foot centerline to centerline offset as proposed in other parts of the route. The NRP would follow this alignment for approximately 1.4 miles south of Highway 210. At that point, the NRP would shift west to overtake the MR Line alignment, maintaining the eastern edge of the right-of-way for another 1.4 miles until shifting back to the east where it meets up again with the Applicants’ proposed route near Woodrow Road. To accommodate NRP, existing transmission and distribution lines in this corridor would need to be rebuilt on a combination of new and existing alignments to reduce impacts to residences. The following modifications would be made to this existing corridor:

- The existing Great River Energy 69 kV RW Line will be relocated onto double circuit 230kV-115kV structures with the Great River Energy 230 kV MR Line for the entire segment, following the existing MR Line alignment for 1.4 miles and then shifting west within the corridor for the remaining approximately 1.4 miles.
- The existing Minnesota Power Riverton – Brainerd 115 kV Line (12 Line) will be rebuilt on single-circuit 115 kV structures for the entire length of this segment, following its existing alignment for the first 1.4 miles and then shifting west for the remaining approximately 1.4 miles.
- The existing right-of-way in this corridor is generally 235 feet. After relocating the RW Line, an additional 100 feet of right-of-way would be required to accommodate the NRP double-circuit 345 kV line. The additional right-of-way is required on the east side of the corridor for approximately the first 1.4 miles. At that point, the entire corridor shifts west to limit impacts to homes, and the additional 100 feet of right-of-way is required on the west side of the corridor for the remaining approximately 1.4 miles until it shifts back east where it meets up with the Proposed Route near Woodrow Road.



 Proposed Route


 Riverton Route Alternative


 NRP Proposed Centerline


 NRP Alternative Centerline


Reconfigured Transmission


 MP 34kV Distribution


 MP 230kV 92 Line


 MP 115kV 13 Line


 MP 115kV 12 Line


 MP 115kV 11 Line

 MP 115/230kV Double Circuit
11/92 Line

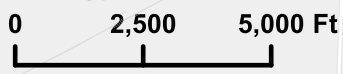
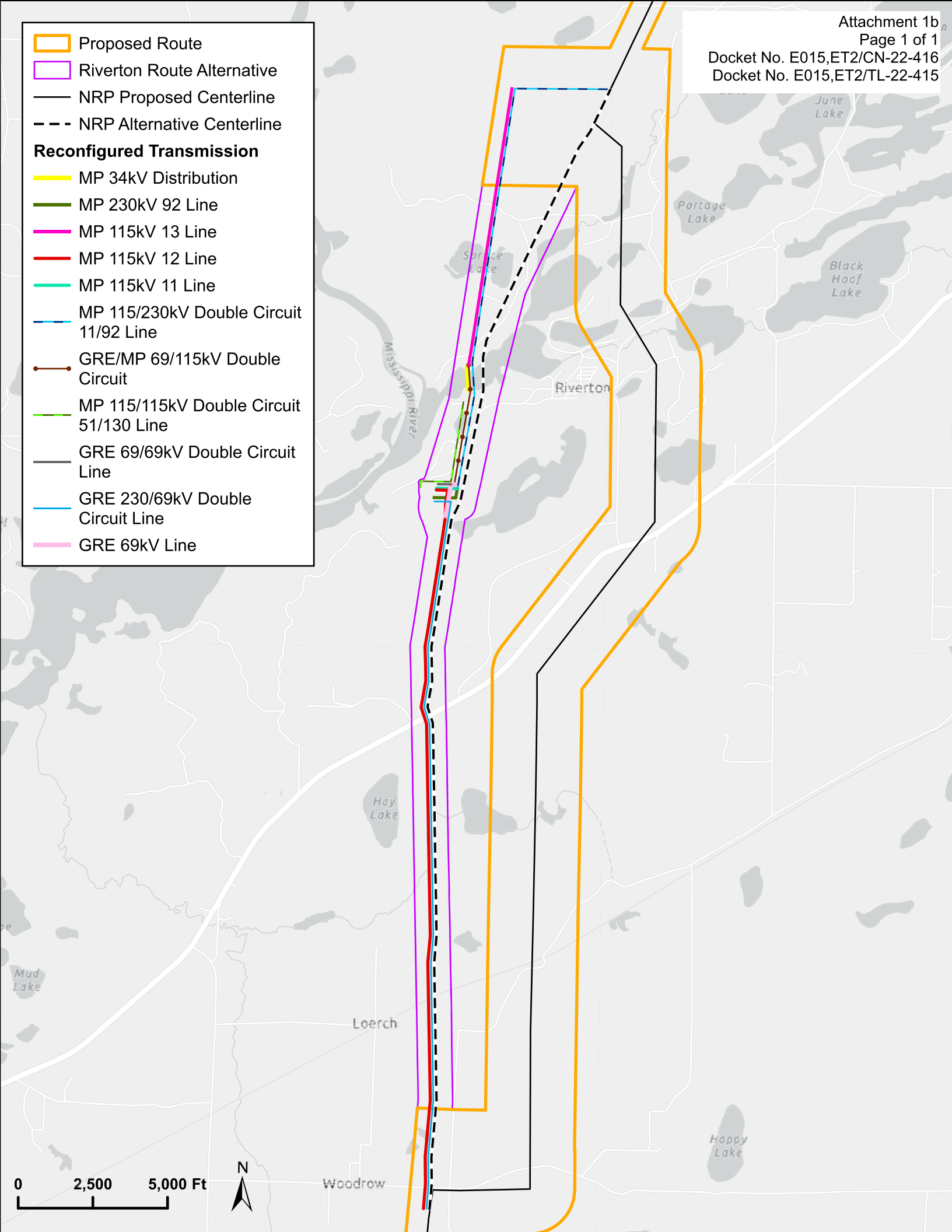
 GRE/MP 69/115kV Double
Circuit

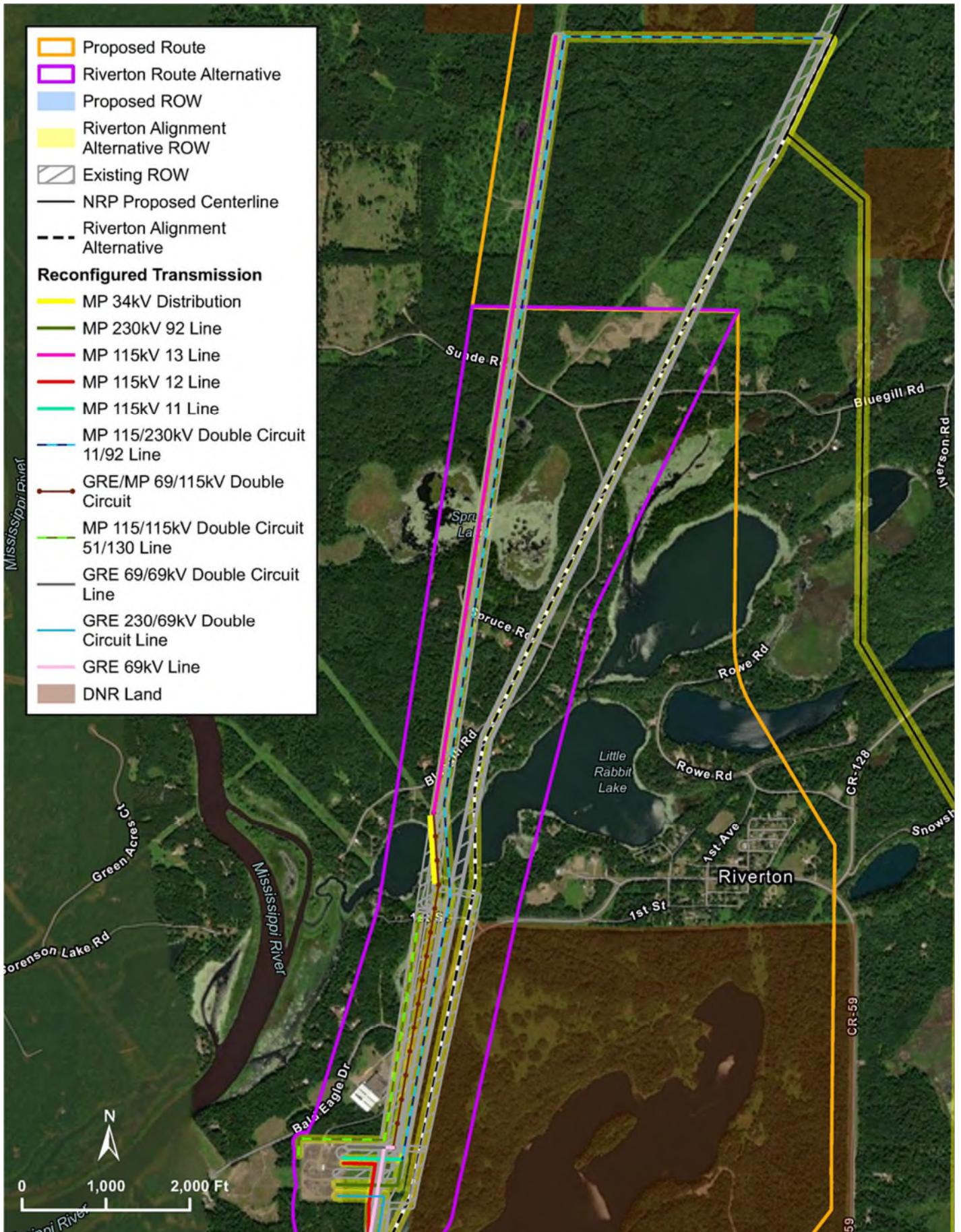
 MP 115/115kV Double Circuit
51/130 Line

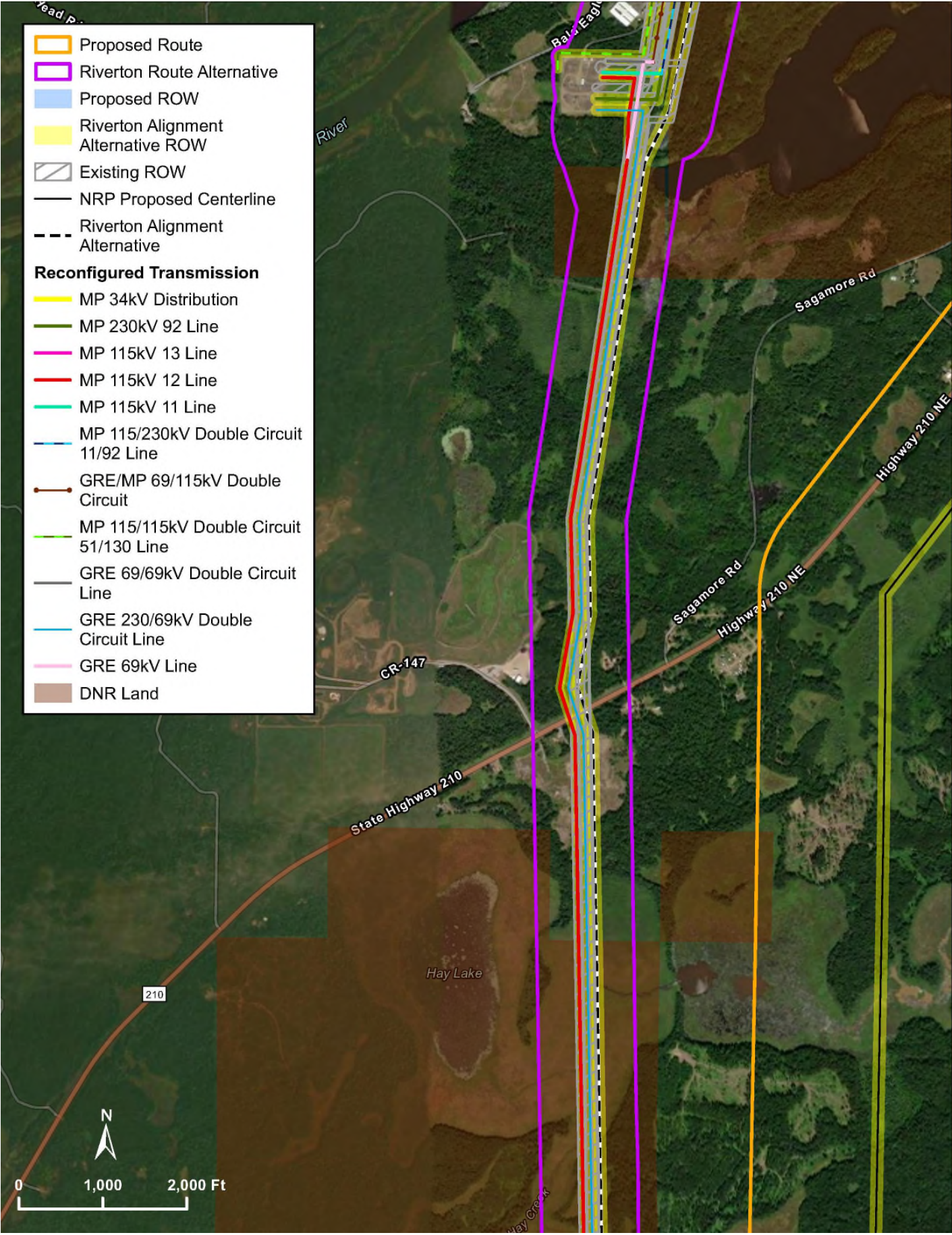
 GRE 69/69kV Double Circuit
Line

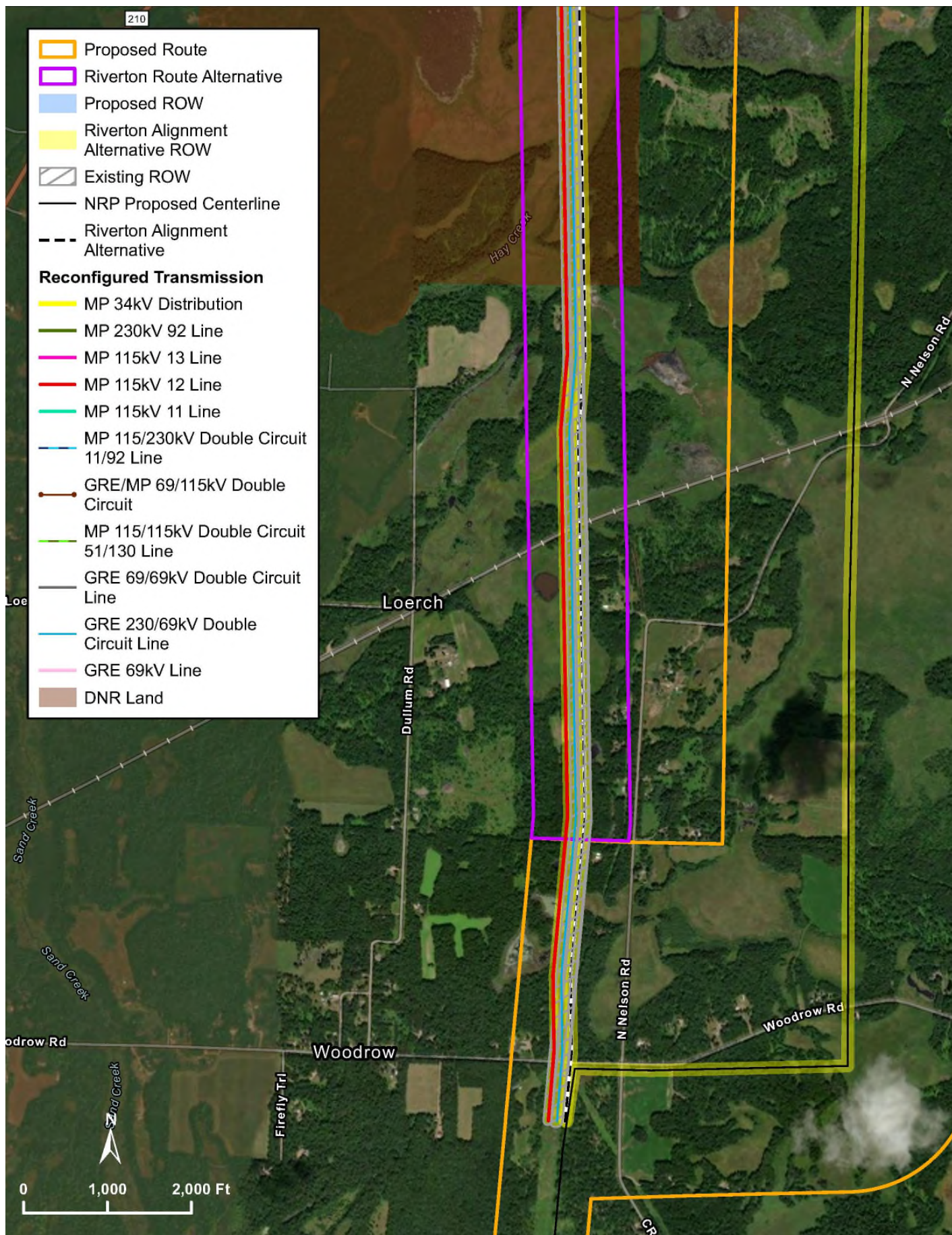
 GRE 230/69kV Double
Circuit Line

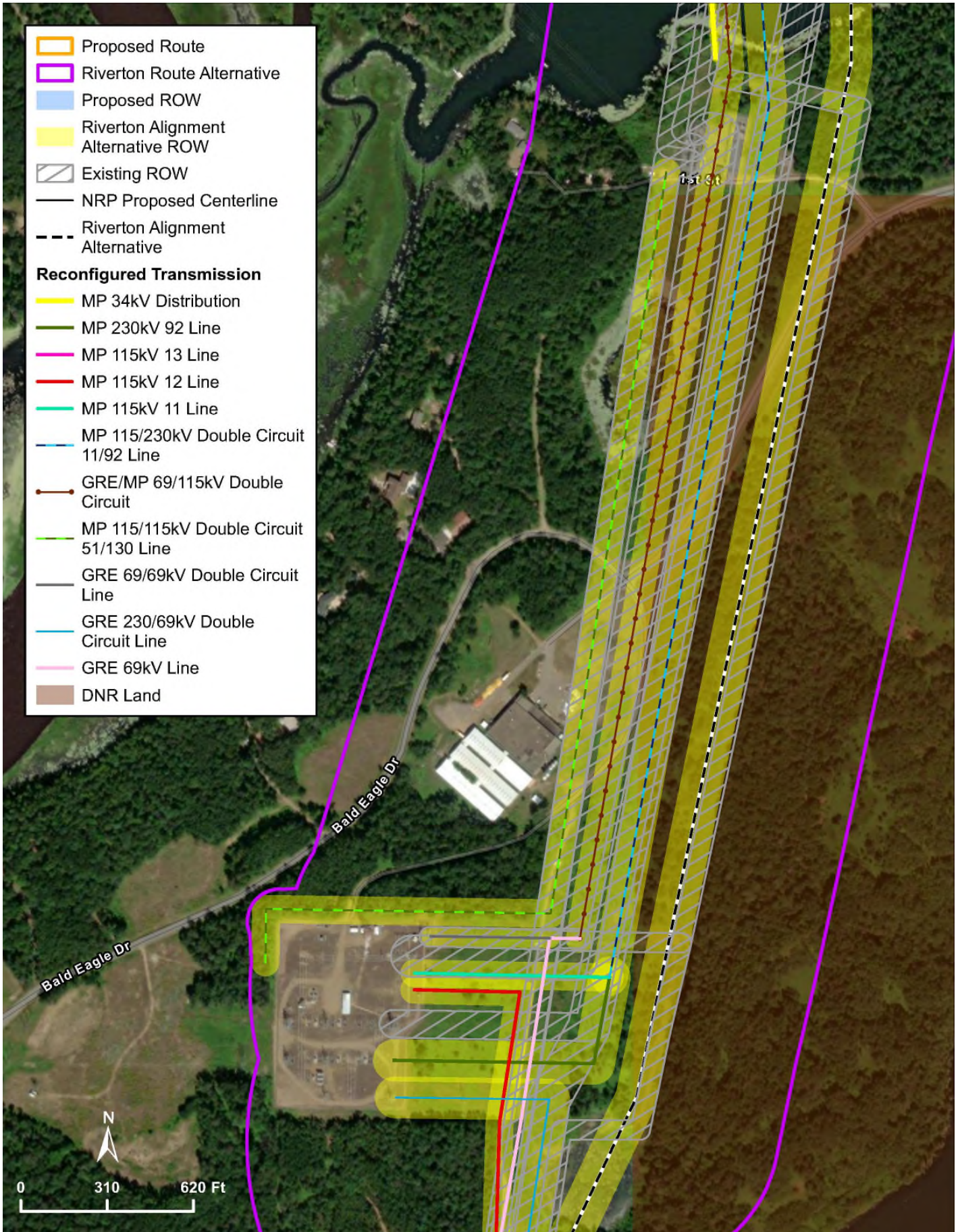
 GRE 69kV Line









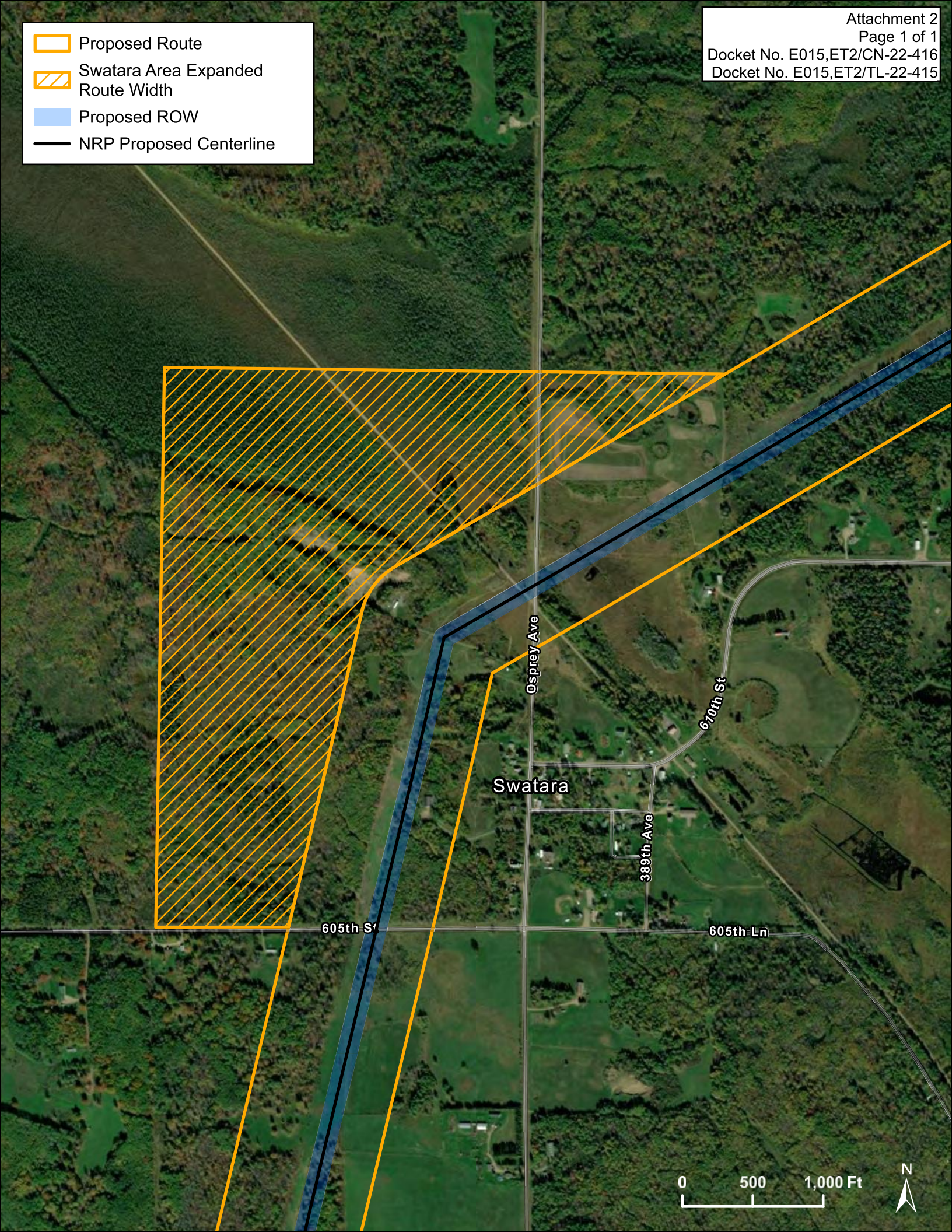


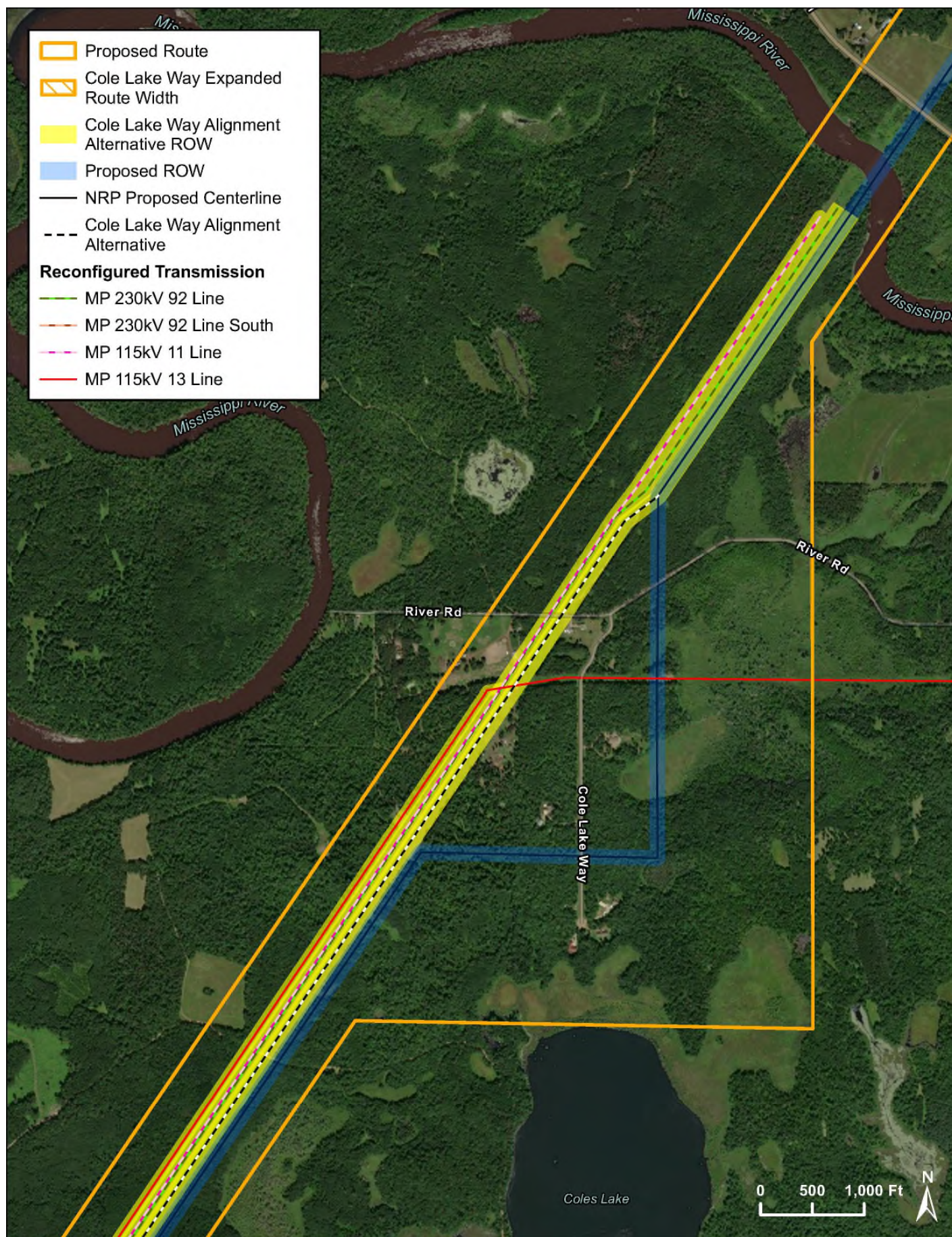


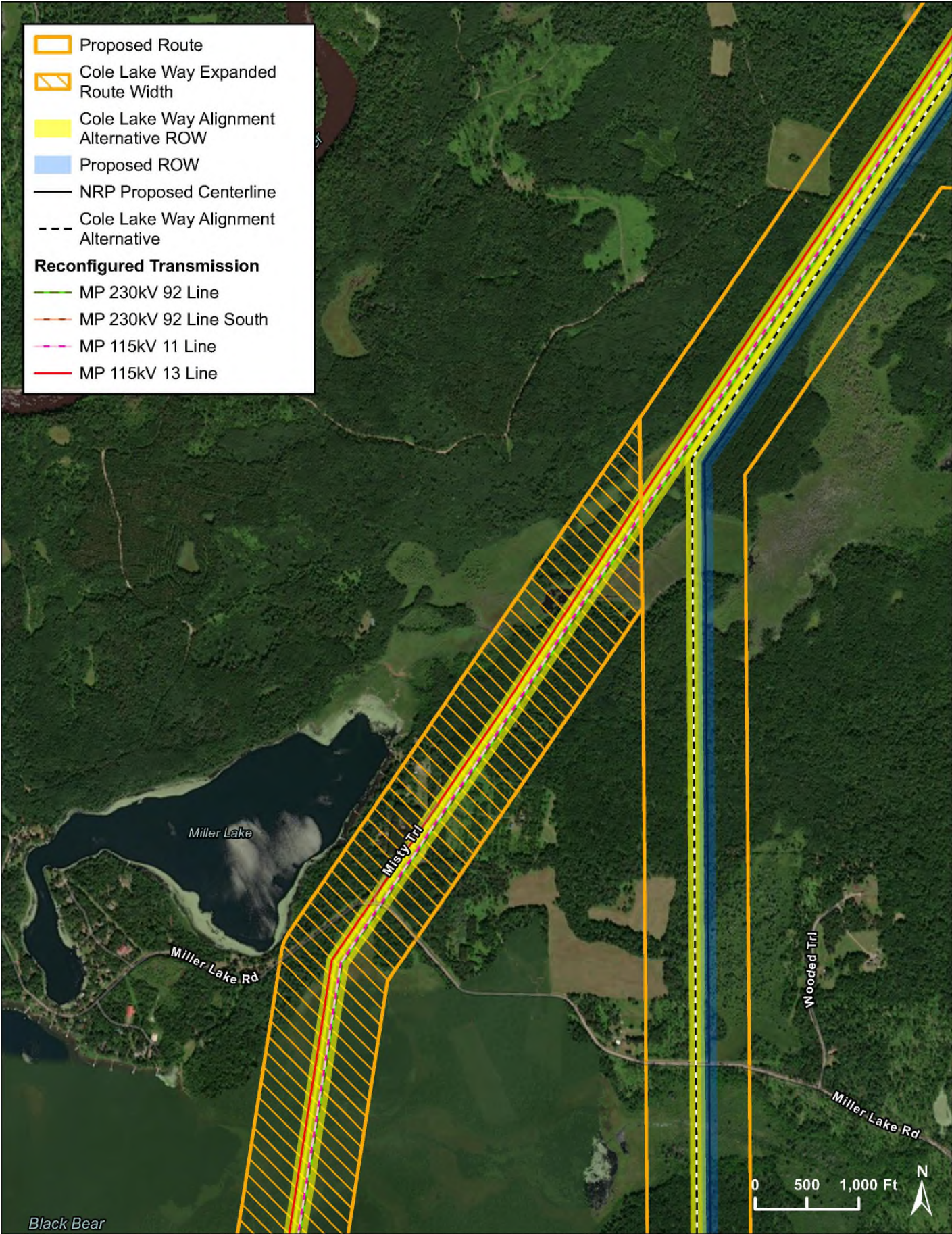


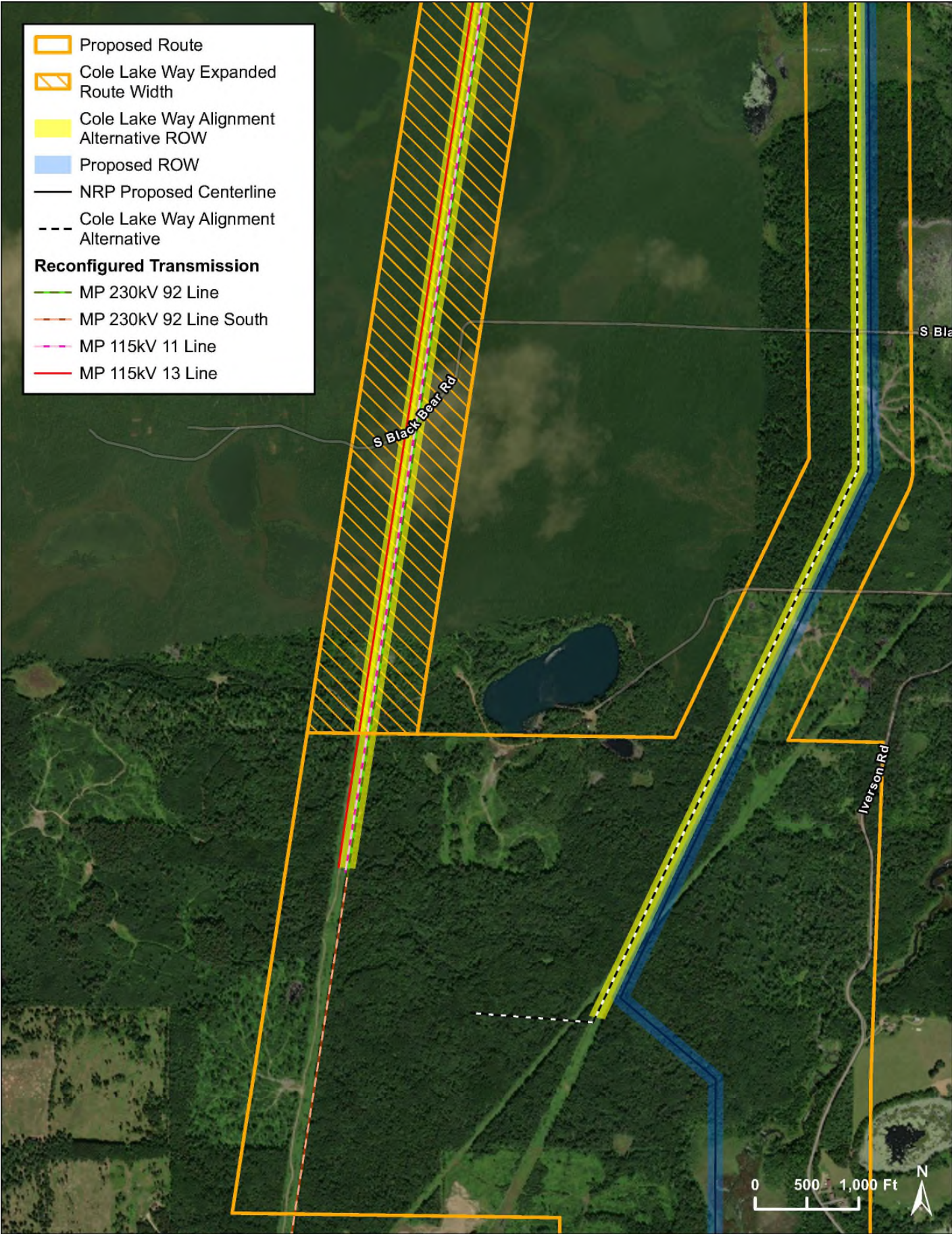
ROUTE NAME	Route		Centerline/Right-of-Way	
	NRP Proposed Route (Route Permit Application)	Riverton Route Alternative Route	NRP Proposed Centerline (Route Permit Application)	Riverton Route Alternative Centerline
MILES	NA	NA	8.1	7.3
ROW WIDTH	NA	NA	150.0	150.0
ROUTE/ROW ACRES	3383.1	1592.6	148.1	133.6
NEW ROW ACRES (does not overlap with existing)	NA	NA	146.8	49.4
Streams or PWI streams crossed				
DNR Streams crossed (count)	NA	NA	6	5
PWI streams crossed (count)	NA	NA	5	2
DNR Lakes Biological (acres)				
DNR Priority Shallow Lakes (acres)	32.4	47.1	0.0	0.0
DNR Biosignificant Lake (acres)	15.7	45.3	0.0	2.7
PWI Basins				
PWI Length Crossed (feet)	NA	NA	3810.6	818.1
Potential structure within PWI basin (crossing over 800ft count)	NA	NA	3.0	1.0
PWI Basins Crossed				
Hay Lake	105.0	15.2	10.4	0.0
Little Rabbit	20.6	46.6	0.0	2.9
Spruce	0.0	31.9	0.0	0.0
Unnamed	21.5	0.2	2.1	0.0
TOTAL PWI Basins Crossed (acres)	147.1	94.0	12.6	2.9
Wetlands				
Wetland crossed by centerline (feet)	NA	NA	19857.2	12906.7
Potential structure within wetlands (crossing over 800ft count)	NA	NA	14.0	10.0
Wetlands Crossed				
Freshwater Emergent Wetland	284.3	148.9	13.7	23.4
Freshwater Forested Wetland	96.4	17.0	4.9	1.3
Freshwater Forested/Emergent Wetland	0.0	0.0	0.0	0.0
Freshwater Forested/Shrub Wetland	46.9	0.0	6.3	0.0
Freshwater Pond	46.3	13.7	2.9	1.2
Freshwater Shrub Wetland	254.3	103.2	20.7	13.3
Freshwater Shrub/Emergent Wetland	232.5	10.9	13.0	1.6
Lake	79.3	71.3	2.3	2.7
Riverine	29.9	6.5	3.2	0.5
Total Wetlands (acres)	1069.9	371.5	67.1	44.0
Lands				
Total DNR Lands (acres)	120.5	258.9	1.3	29.1
MBS Sites Crossed (acres)				
Irondale 36	477.2	0.0	21.6	0.0
Rabbit Lake Uplands	530.0	356.2	11.3	9.8
Total MCBS Sites Crossed (acres)	1007.3	356.2	32.9	9.8
NCLD Crossed (acres)				
Barren Land	0.9	21.6	0.0	3.4
Cultivated Crops	25.1	0	4.3	0.0
Deciduous Forest	1609.7	856.0	58.9	37.6
Developed, High Intensity	0.5	7.3	0.0	0.0
Developed, Low Intensity	47.7	17.2	1.5	1.8
Developed, Medium Intensity	16.9	10.4	0.2	0.4
Developed, Open Space	114.9	41.7	3.9	4.2
Emergent Herbaceous Wetlands	635.3	231.5	34.6	33.6
Evergreen Forest	71.3	5.2	3.6	0.0
Hay/Pasture	90.6	136.4	2.9	6.5
Herbaceous	27.1	51.1	4.1	0.9
Mixed Forest	161.8	30.6	2.6	2.7
Open Water	94.9	51.1	3.9	33.8
Shrub/Scrub	22.8	36.1	0.0	4.0
Woody Wetlands	463.6	96.5	27.5	4.7
Total NCLD (acres)	3383.1	1592.6	148.1	133.6
SSURGO Prime Farmland Soil Crossed (acres)				
All Prime farmland Soil	0.0	3.6	0.0	0.0
Farmland State Importance Soil	375.5	337.2	5.4	18.8
Not Prime Farmland Soil	3007.6	1251.8	142.7	114.9
Prime farmland if drained Soil	0.0	0.0	0.0	0.0
Prime farmland if drained or protected Soil	0.0	0.0	0.0	0.0
Prime farmland if drained, Flooded or protected Soil	0.0	0.0	0.0	0.0
TOTAL SSURGO Prime Farmland Soil (acres)	3383.1	1592.6	148.1	133.6
Residential Structures (distance from centerline)				
0 - 75 ft	NA	NA	0	0
75 - 150 ft	NA	NA	4	4
150 - 300 ft	NA	NA	2	9
300 - 500 ft	NA	NA	7	14
500 - 1000ft	NA	NA	26	20
Total 0 - 1000ft	NA	NA	39	47
Non-residential Structures (distance from centerline)				
0 - 75 ft	NA	NA	0	1
75 - 150 ft	NA	NA	0	5
150 - 300 ft	NA	NA	3	9
300 - 500 ft	NA	NA	9	18
500 - 1000ft	NA	NA	25	20
Total 0 - 1000ft	NA	NA	37	53
Total Structures (within 0 - 1000ft of centerline)	NA	NA	76	100
Residential Structures (within Route)	58	39	NA	NA
Non-residential Structures (within Route)	62	53	NA	NA
Total Structures (within Route)	120	92	NA	NA

-  Proposed Route
-  Swatara Area Expanded Route Width
-  Proposed ROW
-  NRP Proposed Centerline



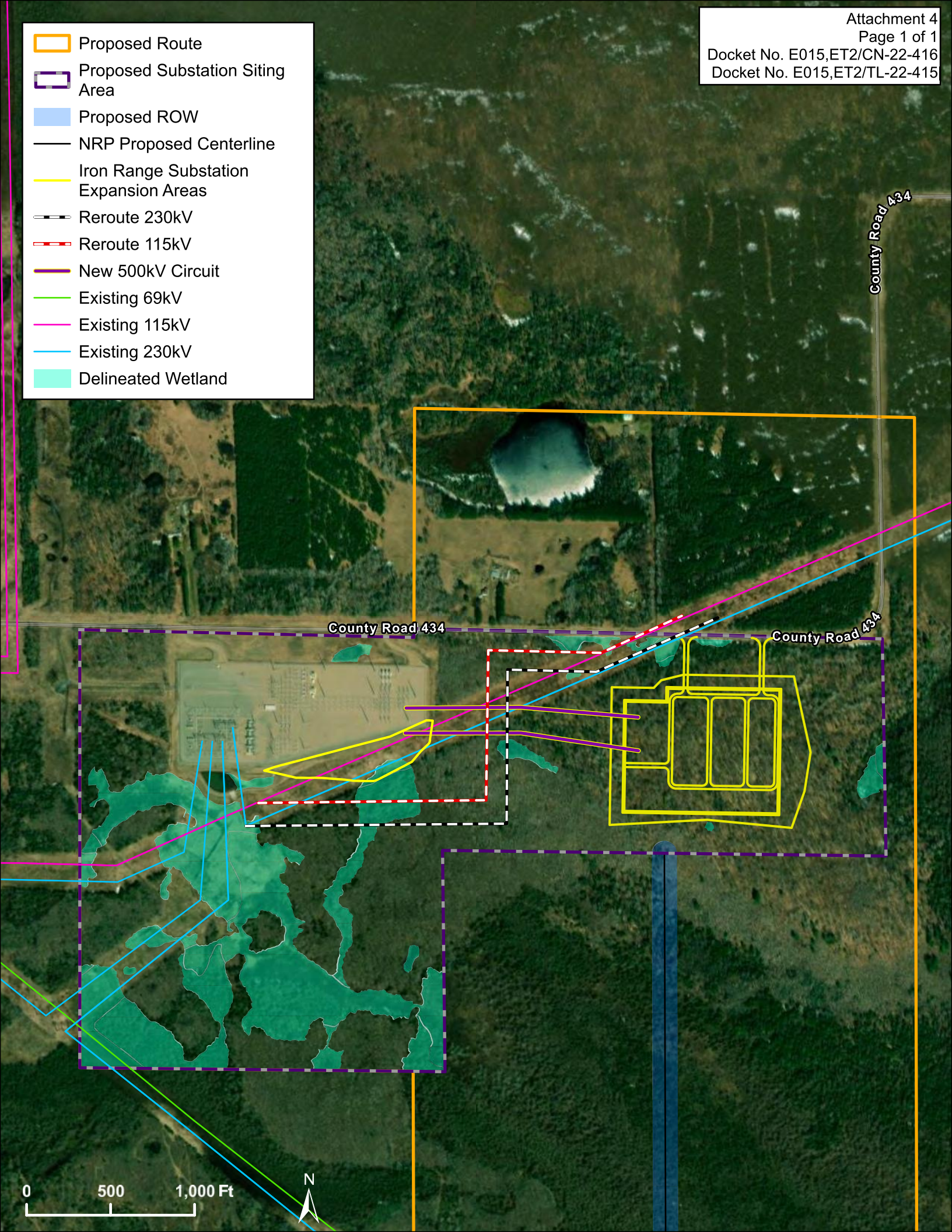










ROUTE NAME	Route		Centerline/Right-of-Way	
	NRP Proposed Route (Route Permit Application)	NRP Proposed Route (Route Permit Application) including Cole Lake Way Expanded Route Width	NRP Proposed Centerline (Route Permit Application)	Cole Lake Way Alignment Alternative Centerline including Reconfigured Lines
MILES	NA	NA	4.6	13.7
ROW WIDTH	NA	NA	150	150 + 130 + 100
ROUTE/ROW ACRES	856.7	1184.3	84.0	186.9
NEW ROW ACRES (does not overlap with existing)	NA	NA	71.1	42.2
Streams or PWI streams crossed				
DNR Streams crossed (count)	NA	NA	0	0
PWI streams crossed (count)	NA	NA	0	0
DNR Lakes Biological (acres)				
DNR Priority Shallow Lakes (acres)	0.0	0.0	0.0	0.0
DNR Biosignificant Lake (acres)	0.0	2.3	0.0	0.0
PWI Basins				
PWI Length Crossed (feet)	NA	NA	0.0	4705.0
Potential structure within PWI basin (crossing over 800ft count)	NA	NA	0.0	2.0
PWI Basins Crossed				
Black Bear	0.0	3.6	0.0	0.0
Unnamed	0.2	51.9	8.7	28.2
TOTAL PWI Basins Crossed (acres)	0.2	55.5	8.7	28.2
Wetlands				
Wetland crossed by centerline (feet)	NA	NA	0.0	0.0
Potential structure within wetlands (crossing over 800ft count)	NA	NA	0.0	0.0
Wetlands Crossed				
Freshwater Emergent Wetland	12.8	44.0	1.0	10.7
Freshwater Forested Wetland	29.1	36.4	0.2	1.2
Freshwater Forested/Emergent Wetland	0.0	0.0	0.0	0.0
Freshwater Forested/Shrub Wetland	27.8	45.5	2.1	3.9
Freshwater Pond	0.0	0.0	0.0	0.0
Freshwater Shrub Wetland	40.6	64.0	1.8	11.3
Freshwater Shrub/Emergent Wetland	68.2	69.5	7.5	3.6
Lake	0.0	30.2	0.0	5.7
Riverine	0.0	0.0	0.0	0.0
Total Wetlands (acres)	178.5	289.6	12.6	36.3
Lands				
Total DNR Lands (acres)	186.7	186.7	13.6	10.5
MBS Sites Crossed (acres)				
Rabbit Lake Uplands	635.3	962.8	64.9	121.5
Total MCBS Sites Crossed (acres)	635.3	962.8	64.9	121.5
NCLD Crossed (acres)				
Barren Land	0.0	0.0	0.0	0.0
Cultivated Crops	0.0	0.0	0.0	0.0
Deciduous Forest	516.6	697.1	51.6	74.6
Developed, High Intensity	0.0	0.0	0.0	0.0
Developed, Low Intensity	8.4	9.7	0.2	0.7
Developed, Medium Intensity	0.0	0.0	0.0	0.0
Developed, Open Space	14.6	27.2	1.6	4.8
Emergent Herbaceous Wetlands	65.9	109.3	5.0	22.1
Evergreen Forest	12.2	16.7	1.7	1.3
Hay/Pasture	58.7	63.6	6.8	36.5
Herbaceous	14.5	17.1	1.1	4.1
Mixed Forest	25.7	31.2	4.5	2.9
Open Water	0.0	23.5	0.0	3.5
Shrub/Scrub	20.5	20.5	3.9	16.5
Woody Wetlands	118.8	166.8	7.5	19.3
Total NCLD (acres)	855.8	1182.7	83.9	186.4
SSURGO Prime Farmland Soil Crossed (acres)				
All Prime farmland Soil	0.0	0.0	0.0	0.0
Farmland State Importance Soil	128.9	158.4	12.7	21.8
Not Prime Farmland Soil	727.8	1025.8	71.3	165.1
Prime farmland if drained Soil	0.0	0.0	0.0	0.0
Prime farmland if drained or protected Soil	0.0	0.0	0.0	0.0
Prime farmland if drained, Flooded or protected Soil	0.0	0.0	0.0	0.0
TOTAL SSURGO Prime Farmland Soil (acres)	856.7	1184.3	84.0	186.9
Residential Structures (distance from centerline)				
0 - 75 ft	NA	NA	0	0
75 - 150 ft	NA	NA	0	3
150 - 300 ft	NA	NA	0	3
300 - 500 ft	NA	NA	4	4
500 - 1000ft	NA	NA	4	9
Total 0 - 1000ft	NA	NA	8	19
Non-residential Structures (distance from centerline)				
0 - 75 ft	NA	NA	0	1
75 - 150 ft	NA	NA	0	1
150 - 300 ft	NA	NA	1	6
300 - 500 ft	NA	NA	3	3
500 - 1000ft	NA	NA	3	6
Total 0 - 1000ft	NA	NA	7	17
Total Structures (within 0 - 1000ft of centerline)	NA	NA	15	36
Residential Structures (within Route)	10	15	NA	NA
Non-residential Structures (within Route)	8	13	NA	NA
Total Structures (within Route)	18	28	NA	NA

- Proposed Route
- Proposed Substation Siting Area
- Proposed ROW
- NRP Proposed Centerline
- Iron Range Substation Expansion Areas
- Reroute 230kV
- Reroute 115kV
- New 500kV Circuit
- Existing 69kV
- Existing 115kV
- Existing 230kV
- Delineated Wetland



0 500 1,000 Ft



-  Proposed Route
-  Benton County Substation Expanded Route Width
-  Proposed ROW
-  NRP Proposed Centerline

55th Ave NE

55th Ave NE

55th Ave NE

Elk River

2nd St SE

2nd St SE






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1,000 Ft

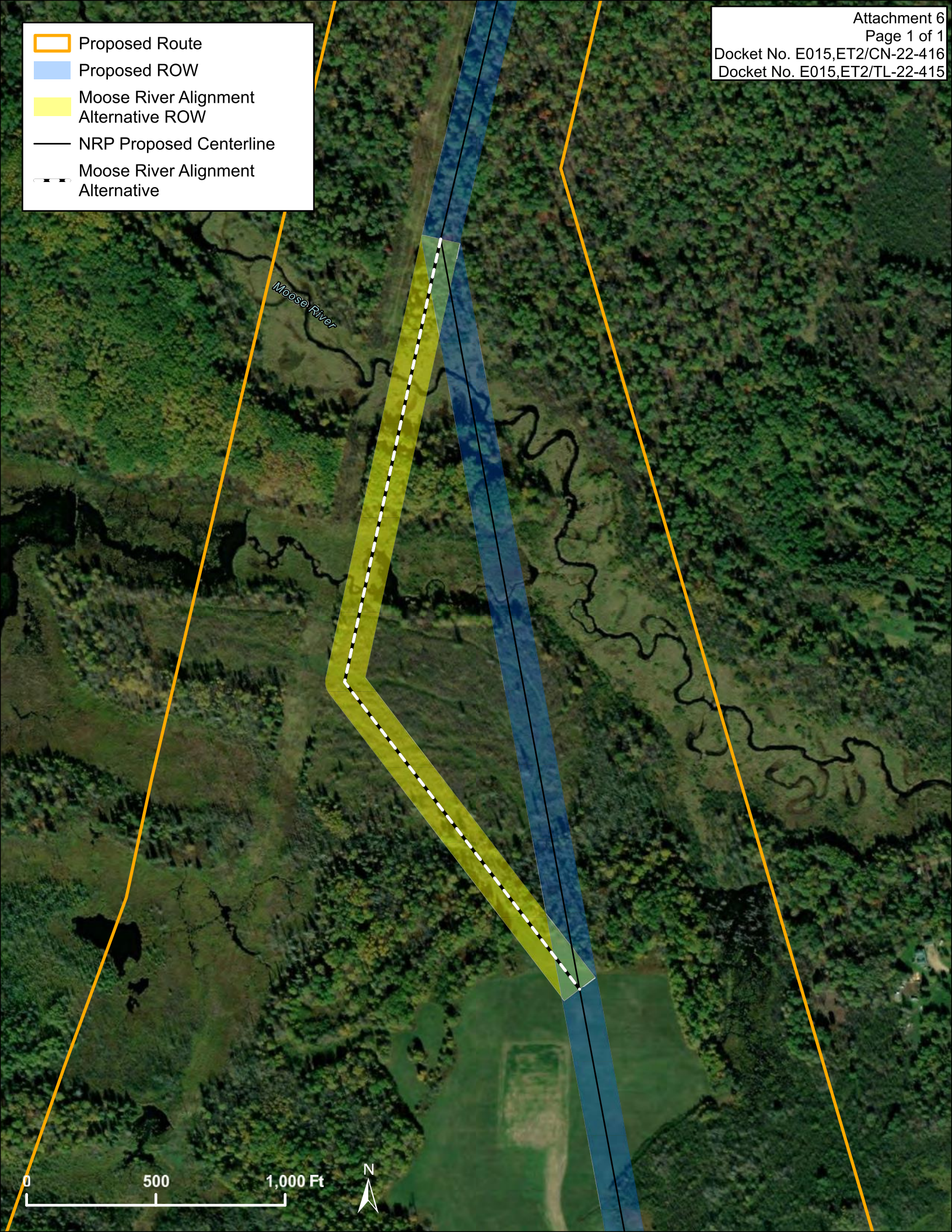


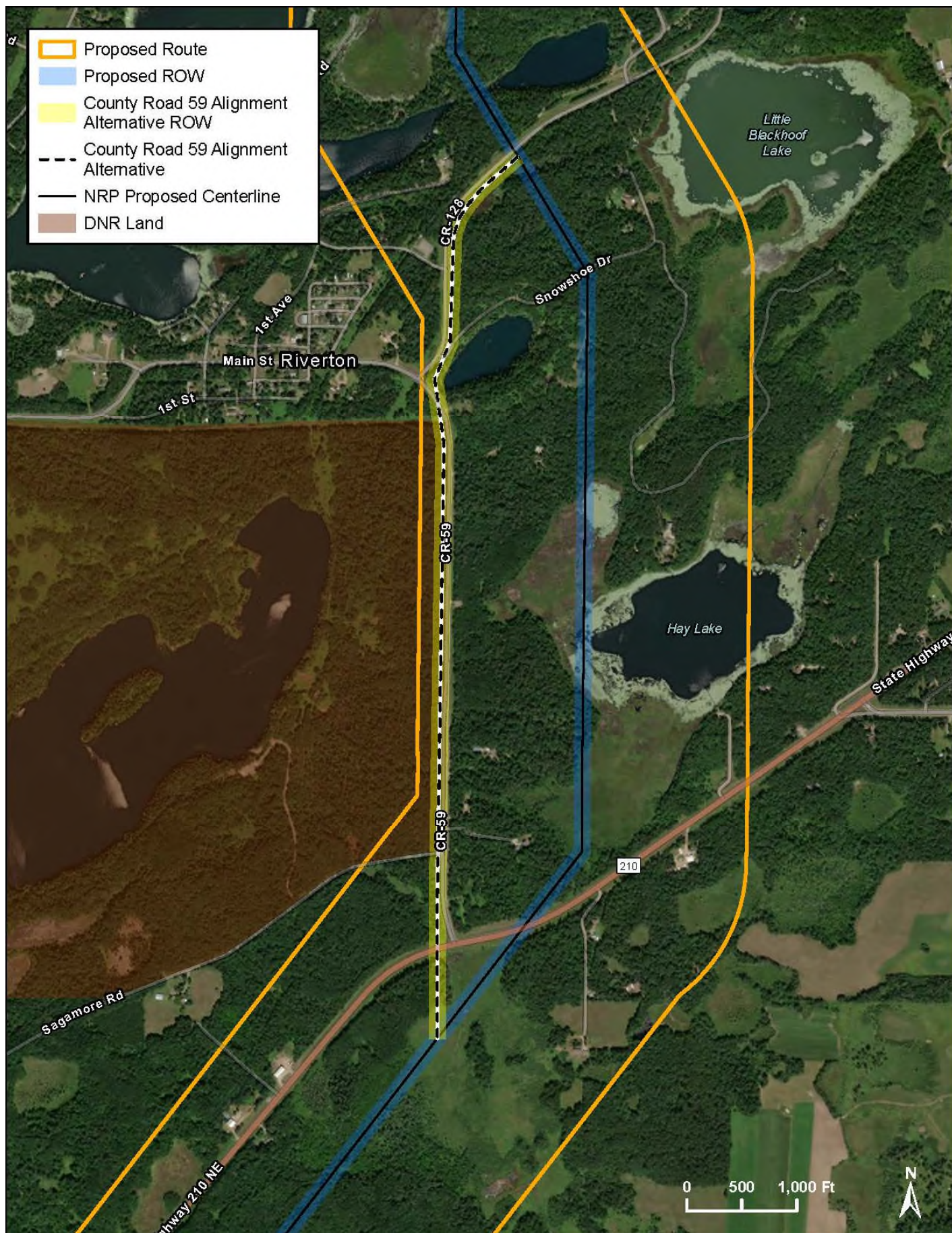
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



-  Proposed Route
-  Proposed ROW
-  Moose River Alignment Alternative ROW
-  NRP Proposed Centerline
-  Moose River Alignment Alternative

Moose River





-  Proposed Route
-  Sherco Solar Substation Alignment Area
-  Proposed ROW
-  NRP Proposed Centerline



137th St SE

137th

140th Ave SE

140th Ave SE

0 500 1,000 Ft



In the Matter of the Joint Application of Minnesota Power and Great River Energy for a Certificate of Need and Route Permit for an approximately 180-mile, double-circuit 345 kV transmission line from Itasca County to Benton County, Minnesota (Northland Reliability Project).

Docket Numbers: E015, ET2/CN-22-416; E015, ET2/TL-22-415

Applicants' Proposed Schedule

Procedural Milestone	Approximate Date
Public Information and Scoping Meetings	October 23-27, 2023
Commission Order on Application Acceptance	November 15, 2023
Close of Scoping Comment Period	November 21, 2023
Applicants' Response to Scoping Comments	December 1, 2023
EERA Recommendation on Scope of the EA	December 8, 2023
Commission Considers Scope of the EA	December 20, 2023
Department Issues Scoping Decision (and notices to new landowners)	December 27, 2023
EA Issued	April 26, 2024
Public Hearing	May 20-24, 2024
Close of Public Hearing Comment Period	June 14, 2024
Applicant Responds to Public Hearing Comments Applicants' Proposed Findings of Fact	June 28, 2024
EERA Responses to Comments on the EA Reply to Proposed Findings	July 12, 2024
ALJ Submits Full Report	August 12, 2024
Exceptions to ALJ Report	August 27, 2024
Commission Considers Certificate of Need and Route Permit Issuance	October 3, 2024