BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matthew Schuerger	Commissioner
Katie J. Sieben	Commissioner
John A. Tuma	Commissioner

In the Matter of the Application of Minnkota Power Cooperative, Inc. for a Route Permit for the MPL - Laporte 115 kV Transmission Line Project in Clearwater and Hubbard Counties, Minnesota	ISSUE DATE: June 21, 2017 DOCKET NO. ET-6/TL-16-327 ORDER APPROVING ROUTE PERMIT

PROCEDURAL HISTORY

On June 2, 2016, Minnkota Power Cooperative, Inc. (Minnkota or the Applicant) filed an application for a route permit to construct and operate a 115 kilovolt (kV), 9.4-mile transmission line in Clearwater and Hubbard counties (the project). The project is planned to link an existing Minnesota Pipe Line (MPL) Company pumping station and a newly proposed substation to serve a new pumping station located west of the city of Laporte.

On August 11, the Commission issued its order finding the application complete and authorizing use of the alternative permitting process in Minn. Stat. § 216E.04 and Minn. R. 7850.2800–.3900.

On August 15, 2016, the Commission and the Department of Commerce Energy Environmental Review and Analysis (EERA) unit filed a Notice of Public Information and Environmental Assessment Scoping Meeting.

On October 28, 2016, the Deputy Commissioner of the Department of Commerce (the Department) issued an environmental assessment scoping decision. The scoping decision identified the issues to be addressed in the environmental assessment, including potential human and environmental impacts, alternative sites or routes, and a schedule for completion of the environmental assessment.

On January 20, 2017, the EERA issued the environmental assessment. The EERA caused the environmental assessment to be published in the Environmental Quality Board Monitor on January 30, 2017, as required under Minn. R. 7850, subd. 6.

On February 16, 2017, Administrative Law Judge (ALJ) LauraSue Schlatter held a public hearing in Park Rapids.

On March 14, 2017, Minnkota filed proposed findings of fact and conclusions of law for the project. On April 17, 2017, the Applicant filed recommendations for revisions to the generic route permit template.

On April 27, 2017, the Administrative Law Judge filed her Findings of Fact, Conclusions of Law, and Recommendations (the ALJ Report).

On June 1, 2017, the Commission met to consider the matter.

FINDINGS AND CONCLUSIONS

I. The Proposed Project

Applicant requested a route permit to construct and operate approximately 9.4 miles of new 115 kV transmission line between an existing Minnesota Pipeline Company pumping station and a proposed substation to serve a new pumping station located west of Laporte. The proposed project is about 25 miles north of Park Rapids in Clearwater and Hubbard counties.

II. The Legal Standard

The project is subject to Minn. Stat. Chapter 216E, which requires that high-voltage transmission lines be routed consistent with the state's goals to locate electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources.[1] In addition, the statute requires that route permit determinations be guided by the policy objective to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.[2]

The project is also subject to environmental review under Minn. Stat. § 216E.04, subd. 5, which directs the Commissioner of the Department of Commerce to prepare an environmental assessment on proposed high voltage transmission lines between 100 and 200 kV, and to study and evaluate the impacts of the proposed project and alternatives, including mitigation measures.

Furthermore, in designating a route, the Commission must consider the permitting criteria contained in Minn. Stat. § 216E.03, subd. 7 (b), and Minn. R. 7850.4100.

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

[1] Minn. Stat.§ 216E.02.

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

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites;

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.

III. The Environmental Assessment

Minn. R. 7850.3700, subp. 4, requires that the environmental assessment include:

A. a general description of the proposed facility;

B. a list of any alternative sites or routes that are addressed;

C. a discussion of the potential impacts;

D. a discussion of mitigative measures that could reasonably be implemented to eliminate or minimize any adverse impacts identified for the proposed project and each alternative site or route analyzed;

E. an analysis of the feasibility of each alternative site or route considered;

F. a list of permits required for the project; and

G. a discussion of other matters identified in the scoping process.

The Administrative Law Judge reviewed the environmental assessment and concluded that it is adequate.[3] The Commission has also reviewed the environmental assessment under Minn. R. 7850.3900, subp. 2, which requires the Commission to determine whether the environmental assessment and the record created at the public hearing address the issues identified in the scoping decision. Based on its review of the environmental assessment, the Commission finds that, under Minn. R. 7850.3900, subp. 2, the environmental assessment and the record as a whole address the issues identified in the scoping decision.

IV. Public Hearing

On February 16, 2017, the ALJ presided at the public hearing in this matter. Sixteen members of the public attended; eight members of the public spoke at the hearing. One person, Scott Seeger, who had suggested six alternative routes during the scoping process, recommended use of the Seeger 2 alternative route.[4]

Before the comments period closed on March 3, 2017, fourteen members of the public submitted written comments either to the ALJ or directly to the Commission through Speak Up!. The comments concerned property impacts, aesthetics, noise, electromagnetic fields, and impacts on possible additional cultural resources and plant resources.

V. Route Permit Template Revisions

Minnkota Power requested six revisions to the Commission's generic route permit template—Sections 5.2, 5.3.4, 5.3.9, 5.3.10, 9.4, and 9.5. Minnkota Power requested the following changes to avoid ambiguity, clarify facts, and provide the appropriate time frame needed to complete the project:

> Section 5.2
> The Permittee shall notify landowners or their designee at least 14 days in advance but not greater than 60 days in advance ~~of entering the property~~ of conducting construction or maintenance activities on the property related to the project.
>
> Section 5.3.4 (Second Paragraph
> Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats ~~should~~ shall be used to minimize impacts on access paths and construction areas where warranted by the presence of wetlands or other sensitive areas.

[3] Administrative Law Judge's Findings of Fact, Conclusions of Law, and Recommendations, Finding 331 (April 27, 2017).

[4] This route follows Minnkota's Proposed Route north to south, as far as the Proposed Route's intersection with the MPL pipeline corridor. At that point, the Seeger 2 Route follows the MPL pipeline corridor south to the Project ending. Route Permit Application at 10.

Section 5.3.9 (Second Paragraph

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent ~~possible~~ practicable, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the rights-of-way and adjacent areas, to the extent that the low growing vegetation ~~that~~ will not pose a threat to the transmission facility or impede construction, or future maintenance.

Section 5.3.10

The Permittee shall restrict pesticide use in the right-of-way to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property that lies within the right-of-way. The landowner may request that there be no application of pesticides on any part of the site right-of-way within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners, and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

Section 9.4

Within ~~90~~ 180 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specification s developed during the project.

Section 9.5

Within ~~90~~ 180 days after completion of construction, the Permittee shall submit to the Commission, in the format requeste4d by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

The Commission will accept Minnkota Power's proposed revisions into the final route permit. The revision to Sections 5.2, 5.3.4, 5.3.9, and 5.3.10 add clarification without changing the intent of the original language. The extended time allowed in Sections 9.4 and 9.5 does not materially affect any of the other permit conditions and has no environmental or human impacts. Accordingly, the Commission will revise the site permit to include these mitigation measures and conditions.

VI. The ALJ Report and Comments

On April 27, 2017, the ALJ filed her Report. The Report is well reasoned, comprehensive, and thorough. The ALJ made some 331 proposed findings of fact, 11 conclusions of law, and recommended that the Commission issue a route permit to Minnkota Power for either the Proposed Route or the Seeger 2 Route, because these two routes best satisfy the route permit factors.

On May 11, 2017, Minnkota Power filed exceptions to the ALJ Report, arguing that the Proposed Route is superior to the Seeger 2 Route Alternative.

The Minnesota Department of Natural Resources (DNR) also filed comments, indicating its preference for the Proposed Route because the route minimizes disturbances to a Minnesota Biological Survey site of high biodiversity significance – a trout stream. The DNR stated that the Preferred Route follows road right-of-way or current power lines, crosses the affected trout stream where it can be spanned without structures in the water, and avoids Itasca State park property.

The Minnesota Pollution Control Agency filed comments regarding the necessity of a Clean Water Act Section 401 Water Quality Certification for the MPL - Laporte line. Such certification might be required, depending on the final route selection, and the final design. A special permit condition (Section 6.5) has been added to the route permit to capture this potential permit requirement.

The EERA filed comments on May 12, 2017. The EERA responded to public comments received on the environmental assessment prepared for the project, the Applicant's proposed findings of fact and conclusions of law, the generic site permit template, and the Report.

The EERA proposed that several changes be made to the ALJ Report to clarify certain of the findings. The EERA also proposed three new findings in the Noise section of the ALJ Report to clarify the expected noise levels caused by the new substation, and four new findings in the Cumulative Potential Effects section to describe the MPL - Line 4 project, which is a related project.

VII. Route Permit

Having closely reviewed the ALJ Report and the comments of the parties, the Commission agrees with the EERA that the Proposed Route (yellow route) of the Applicant is the most feasible route for this project among the eight routes evaluated in the environmental assessment.

While the Seeger 2 Route alternative was also recommended by the ALJ, the Commission is persuaded by the conclusions reached in Section 7 of the environmental assessment (Comparative Analysis of Route Alternatives), which analyzed the relative merits of all the route alternatives with respect to the routing factors found in Minnesota Rules, part 7850.4100. As shown in Table 19 of the environmental assessment, the Commission agrees that the Proposed Route has the least impact on the natural and human environments and can be constructed with a minimum amount of mitigation.

The Commission therefore agrees with the Administrative Law Judge that the Preferred Route for the Minnkota MPL - Laporte Route Permit satisfies the conditions under Minn. R. 7850.2800 – 7850.3900, and finds that the project is consistent, under Minn. Stat. § 216.03, subd. 7, and Minn. R. 7850.400, with state goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and best ensures the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure. The Commission will therefore adopt the Administrative Law Judge's Findings of Fact and Conclusions for the MPL - Laporte 114 kV Transmission Line project and issue the Route Permit to Minnkota for the Preferred Route in the form attached.

The Commission also makes further findings of fact and route permit modifications necessary to ensure consistency with the record in this matter and recently issued permits. These modifications are reflected in the attached documents.

ORDER

1. The Commission finds that the environmental assessment and the record created at the public hearing address the issues identified in the scoping decision.

2. The Commission approves and adopts the ALJ's Findings of Fact, Conclusions of Law, and Recommendations for the MPL - Laporte 115 kV Transmission Line project as attached hereto.

3. The Commission issues the attached proposed high-voltage transmission line route permit, identifying a specific route and permit conditions, to Minnkota for the MPL -Laporte 115 kV Transmission Line project.

4. This order shall become effective immediately.

BY ORDER OF THE COMMISSION

Janet D. Gonzalez for

Daniel P. Wolf
Executive Secretary

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Attachment 1

STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF MINNKOTA POWER COOPERATIVE, INC. FOR A ROUTE PERMIT FOR THE MPL-LAPORTE 115 KV TRANSMISSION LINE IN CLEARWATER AND HUBBARD COUNTIES, MINNESOTA	PUC Docket No. ET6/TL-16-327 OAH Docket No. 80-2500-34009 PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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IN THE MATTER OF THE APPLICATION OF MINNKOTA POWER COOPERATIVE, INC. FOR A ROUTE PERMIT FOR THE MPL-LAPORTE 115 kV TRANSMISSION LINE IN CLEARWATER AND HUBBARD COUNTIES	PUC DOCKET No. ET6/TL-16-327 OAH Docket No. 80-2500-34009 PROPOSED FINDINDS OF FACT AND CONCLUSIONS OF LAW

A public hearing on Minnkota's proposed Project was held before the Administrative Law Judge on February 16, 2017, at the Frank White Education Center, 301 Huntsinger Avenue, Park Rapids, MN.

Joel Larson, Staff Attorney for Minnkota, appeared on behalf of Minnkota ("Applicant") along with Jay Bushy, Project Manager; Craig Bleth, Environmental Engineer; Brian Hoffart, Right-of-Way Manager; and Wayne Lembke, Civil Engineering Manager.

Bill Storm, Environmental Review Manager, appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis ("EERA").

Cezar Panait, Staff Engineer, and Kevin George, Public Advisor, appeared on behalf of the Minnesota Public Utilities Commission ("Commission") staff.

STATEMENT OF ISSUE

Has the Applicant satisfied the factors set forth in Minn. Stat. § 216E.03 (2016) and Minn. R. ch. 7850 (2015) for a route permit for the MPL-Laporte 115 kV Transmission Line in Clearwater and Hubbard Counties, west of the City of Laporte, Minnesota (the "Project")?

Does the Environmental Assessment ("EA") prepared under Minnesota Rules 7850.3700 and the record address the issues identified in the scoping decision? If so, which route under consideration best complies with the applicable statutes and rules?

SUMMARY

The Commission concludes that the Applicant has satisfied the criteria set forth in Minnesota law for a Route Permit and the Commission GRANTS the Applicant a Route Permit.

Based on information in the Application, the EA, the testimony at the public hearing, written comments, and exhibits received in this proceeding, the Commission makes the following:

FINDINGS OF FACT[1]

I. APPLICANT

1. Minnkota is a not-for-profit generation and transmission cooperative based in Grand Forks, North Dakota. Minnkota provides electrical energy and related services to 11 member cooperatives in eastern North Dakota and northwestern Minnesota, including Clearwater-Polk Electric Cooperative, the distribution cooperative to serve the proposed Project. Minnkota is also the operating agent for the Northern Municipal Power Agency (NMPA), which includes 12 municipalities in both Minnesota and North Dakota. NMPA serves over 15,000 residential and non-residential customers. Minnkota's distribution cooperatives supply electricity and related services to more than 100,000 residential customers, and just under 30,000 commercial and other customers.[2]

2. Minnkota has applied for a route permit for an approximately 9.4-mile long, 115 kilovolt (kV) high voltage transmission line (HVTL or line) in Clearwater and Hubbard Counties, Minnesota to serve the Minnesota Pipeline (MPL) Laporte Pump Station.[3]

3. The Project is intended to serve an industrial load for a new pumping station to be constructed and operated by Minnesota Pipeline Company, LLC.[4] The pumping station is part of the Minnesota Pipeline Company's Reliability Project.[5]

4. The proposed Project is located near the City of Laporte, in Clearwater and Hubbard Counties.[6]

II. PROCEDURAL SUMMARY

5. On April 15, 2016, Minnkota filed with the Commission its Notice of Intent to Submit Route Permit Application.[7]

6. On June 2, 2016, Minnkota submitted its Application for the Project.[8]

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[1] A master exhibit list was filed by the court reporter on February 21, 2017. *See* eDocket No. 20172-129199-01.
[2] Minnkota's Proposed Findings of Fact at 2 (Mar. 14, 2017) (eDocket No. 20173-129853-01).
[3] Exhibit (Ex.) 110 at 2 (Environmental Assessment).
[4] Ex. 2 at 1 (Application).
[5] *See* MPUC Docket No. PL-5/CN-14-210; Ex. 110 at 2 (Environmental Assessment); Ex. 2 at 5 (Application).
[6] Ex. 2 at 5 (Application).
[7] Ex. 1 (Notice of Intent to Submit Route Permit Application).
[8] Ex. 2 (Application).

7. On June 7, 2016, the Commission issued a Notice of Comment Period on Completeness of Route Permit Application.[9]

8. On June 16, 2016, Minnkota filed proof of its compliance with the mailing and publication notice requirements of Minn. Stat. § 216E.03, subd. 4, .04, subd. 4 (2016); and Minn. R. 7850.2100, subp. 4.[10]

9. On June 17, 2016, the DOC-EERA filed comments and recommendations regarding the completeness of the Application and recommended the Application be found complete.[11]

10. On July 15, 2016, the Commission gave notice that it would consider whether the Application was complete at its meeting on July 29, 2016.[12]

11. On July 22, 2016, Commission staff filed briefing papers regarding the July 29, 2016 meeting. Commission staff recommended that the Commission find the Application complete. In addition, the staff recommended that the Commission: (1) appoint a staff person as the Project's public advisor; (2) take no action on an advisory task force at that time; (3) grant a variance of the ten-day timeline set forth in Minn. R. 7850.3700, subp. 3, to allow adequate time for Commission review; and (4) request that the DOC-EERA begin the environmental review process and perform related administrative tasks.[13]

12. On July 27, 2017, Minnkota filed Revision 1 of Section 4 of the Application pertaining to fault protection.[14]

13. On July 29, 2016, Commission staff proposed a revision to the Commission's decision options as a supplement to the July 22, 2016 staff briefing papers.[15]

14. On August 11, 2016, the Commission issued its Order Finding Application Complete and Varying Rule (Completeness Order). [16] In the Completeness Order, the Commission: (1) deferred a decision on the regulatory process until it could review the alternative routes to be considered in the EA; (2) found the application complete; (3) appointed a Commission staff person as the public advisor; (4) took no action on an advisory task force; (5) granted a variance to extend the ten-day timeline in Minn. R. 7850.3700, subp. 3, to allow for analysis of route alternatives to include in the EA; and (6) requested the DOC-EERA continue to study issues and indicate during the hearing process its position on the reasonableness of granting a route permit.[17]

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[9] Ex. 7 (Notice of Comment Period on Application Completeness).
[10] Ex. 4 (Confirmation of Notice).
[11] Ex. 100 (DOC-EERA Comments & Recommendations on Application Completeness).
[12] Ex. 9 (Notice of Commission Meeting).
[13] Ex. 22 at 6-7 (Staff Briefing Papers on Completeness).
[14] Ex. 12 at 1 (Order Finding Application Complete and Varying Rule); Revision 1 (July 27, 2016) (eDocket No. 20167-123650-01).
[15] Ex. 11 (Briefing Papers – Revised Decision Options).
[16] Ex. 12 (Order Finding Application Complete and Varying Rule).
[17] *Id.* at 3-4.

15. On August 15, 2016, the Commission mailed its Notice of Public Information and Environmental Assessment Scoping Meeting to persons on the Commission's General List and to potentially affected landowners informing them of a public meeting to be held on August 30, 2016.[18]

16. On August 17, 2016, the Notice of Public Information and Environmental Assessment Scoping Meeting was published in the *Park Rapids Enterprise* and *Farmers Independent*.[19]

17. Also on August 17, 2016, the DOC-EERA issued its Draft Scoping Document.[20]

18. On August 30, 2016, the Commission staff and the DOC-EERA held the Public Information and Environmental Assessment Scoping Meeting at the Park Rapids Public Library in Park Rapids, Minnesota.[21]

19. On September 13, 2016, the scoping comment period ended.[22] The Minnesota Department of Natural Resources (DNR) and the Minnesota Department of Transportation (DOT) both submitted comments.[23] Brandon and Amanda Bergin, Mary Thompson, and Scott Seeger also submitted written comments.[24]

20. On September 23, 2016, Minnkota filed comments with the DOC-EERA to respond to public comments on the Project.[25] In response to public comments expressing concern over potential harmful effects from electric and magnetic fields, Minnkota stated that the calculated electric magnetic field strengths emanating from its proposed facility would be below any amounts that could pose a health concern.[26] Minnkota also noted environmental, aesthetic, cost, and other concerns posed by the alternative routes suggested by commenters.[27] In response to the DNR's comment concerning the timing of tree clearing for the Project because of its impact on the habitat of the Northern Long-Eared bat, Minnkota noted that the United States Fish and Wildlife Service (USFWS) had found it unnecessary to designate critical summer habitat for the species because of the wide availability of suitable habitat.[28]

21. On September 29, 2016, the DOC-EERA issued comments and recommendations for the environmental review and analysis. The DOC-EERA recommended that, in addition to Minnkota's proposed route, the Commission should also consider the alternative route proposed by commenter Thompson (Thompson Route), alternative routes 2 through 6 proposed by

[18] Ex. 13 (Notice of Public Information and Environmental Assessment Scoping Meeting).
[19] Ex. 7 (Affidavit of Publication).
[20] Ex. 105 (Draft Scoping Document – Environmental Assessment).
[21] Ex. 106 at 4 (DOC-EERA Comment).
[22] Ex. 13 at 2 (Notice of Public Information and Environmental Assessment Scoping Meeting).
[23] Ex 22 (MnDNR Comment); Ex. 23 (MnDOT Comment).
[24] Ex. 103 (Public Comments Received on the Scope of the Environmental Assessment – Written Comments).
[25] Ex. 5 (Response to Scoping Comments).
[26] *Id.* at 1.
[27] *Id.* at 2-4.
[28] *Id.* at 5.

commenter Seeger (the Seeger 2 through 6 Routes), and a route co-located with the existing MPL pipeline corridor (Co-locate Route).[29]

22. On October 14, 2016, the Commission issued a Notice of Commission Meeting noting that it would consider what action it should take in regard to route alternatives to be evaluated in the EA at its regular meeting on October 28, 2016.[30]

23. On October 20, 2016, Commission staff issued briefing papers on the EA scoping process. Staff concurred with the DOC-EERA's recommendation that the EA consider eight routes: Minnkota's Proposed Route, plus seven of the alternative routes suggested in public comments.[31]

24. On October 28, 2016, the DOC Deputy Commissioner issued the EA Scoping Decision.[32]

25. On November 9, 2016, the Commission issued its Order Referring Route-Permit Application to the Office of Administrative Hearings Under Minn. R. 7850.3800.[33] The Commission took no action on the DOC-EERA's EA Scoping Decision recommending that a total of eight routes for the proposed transmission line be considered in the EA. The Commission requested that an administrative law judge assigned to the proceeding provide findings, conclusions, and recommendations on the proposed Project and Project alternatives in a report, provide comments and recommendations on the conditions and provisions of the proposed permit, and remain mindful of the statutory time frame for the Commission's decision. The Commission also requested the Administrative Law Judge ask the parties, participants, and the public to address whether the proposed Project and the alternative routes meet the selection criteria established in Minn. Stat. § 216E.03, subd. 7, and Minn. R. 7850.4100.[34]

26. On January 4, 2017, the Office of Administrative Hearings issued a Notice of Prehearing Conference. The Administrative Law Judge convened a telephone prehearing conference on January 20, 2017.

27. The schedule proposed by the parties at the first prehearing conference was inconsistent with the statutory deadline pursuant to Minn. Stat. § 216E.04, subd. 7 (2016). Minnkota agreed to a four-to-six-week waiver of the deadline which would have otherwise required a final decision by the Commission by May 11, 2017.[35] Following the first prehearing conference, the Administrative Law Judge issued her First Prehearing Order on January 23, 2017, setting the date for the public hearing as well as other procedural deadlines.[36]

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[29] Ex. 106 at 10 (DOC-EERA Comment).
[30] Ex. 16 (Notice of Commission Meeting).
[31] Ex. 17 at 6 (Briefing Papers – Decision on Route Alternatives to be Included in the Environmental Assessment).
[32] Ex. 107 (Scoping Decision for Environmental Assessment and Affidavit of Service).
[33] Ex. 18 (Order Referring Application to the Office of Administrative Hearing).
[34] *Id.* at 2.
[35] Prehearing Conference Transcript (Tr.) at 5 (Jan. 20, 2017).
[36] First Prehearing Order at 2 (Jan. 23, 2017) (eDocket No. 20171-128358-01).

28. On January 20, 2017, the DOC-EERA issued notice that its EA was available.[37]

29. On January 23, 2017, the Commission issued a Notice of Public Hearing informing interested persons that a public hearing on the Application would be held on February 16, 2017, at the Frank White Education Center in Park Rapids, Minnesota.[38] On that same day, the Commission filed proof of mailing of the Notice of Public Hearing to landowners along the Project.[39]

30. On February 7, 2017, the DOC-EERA published notice of the EA availability in the *EQB Monitor*.[40]

31. On February 9, 2017, Applicant filed an Affidavit of Publication of the Notice of Public Hearing confirming that notice for the public hearing was published in the *Park Rapids Enterprise* on January 28, 2017, and in the *Farmer's Independent* on January 25, 2017.[41]

32. On February 16, 2017, the Administrative Law Judge conducted a public hearing at the Frank White Education Center in Park Rapids, Minnesota.[42] Sixteen members of the public attended the public hearing. Eight members of the public spoke at the hearing.[43]

33. On February 23, 2017, the Minnesota Pollution Control Agency (PCA) filed comments indicating more information would be required to determine if a Clean Water Act Section 401 Permit would be required for the Project.[44]

34. On March 3, 2017, the DNR filed comments stating that it had worked closely with Applicant to develop a route that would minimize negative impacts to state resources. Accordingly, the DNR supported the Applicant's proposed route.[45]

35. Before the comment period closed on March 3, 2017, fourteen members of the public submitted written comments either to the Administrative Law Judge or Commission directly or through Speak Up!. The comments concerned property impacts, aesthetics, noise, electro-magnetic fields, and impacts on possible additional cultural resources and plant resources. [46]

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[37] Ex. 109 (Notice Availability of Environmental Assessment and Affidavit of Service); Ex. 110 (Environmental Assessment).
[38] Ex. 20 (Notice of Public Hearing).
[39] *Id.*
[40] Ex. 111 (Notice and Affidavit of Publication).
[41] Ex. 6 (Notice and Affidavits of Publication).
[42] Ex. 20 (Notice of Public Hearing).
[43] Sign in Sheets (Feb. 21, 2017) (eDocket No. 20172-129198-02); Public Hearing Tr. at 3 (Feb. 16, 2017).
[44] Letter from Karen Komar to William Storm (Feb. 23, 2017) (eDocket No. 20172-129299-01).
[45] Letter from Cynthia Warzecha to Cezar Panait (Mar. 3, 2017) (eDocket No. 20173-129617-01).
[46] Ex. 20 (Notice of Public Hearing); Comments by Scott Seeger (Mar. 1-2, 2017) (eDocket Nos. 20172-129523-01, 20172-129522-04, 20172-0129522-03, 20172-129522-02, 20172-129522-01, 20173-129594-02, 20173-129594-01); Comment by Tom Olson (Mar. 3, 2017) (eDocket No. 20173-129631-01); Comment by Mary and Ken Thompson (Mar. 2, 2017) (eDocket No. 20173-129593-01); Comment by Barbara Wacker (Mar. 3, 2017) (eDocket No. 20173-129835-01); Comment by Amy and Eric Espeseth (Mar. 3, 2017) (eDocket No. 20173-129835-01); Comment by Maggi White (Mar. 2, 2017) (eDocket No. 20173-129835-01); Comment by Zach Mjones (Mar. 2, 2017) (eDocket No. 20173-129835-01); Comment by Ama Riley

36. On March 14, 2017, Minnkota filed its Proposed Findings of Fact and Conclusion of Law.[47]

37. On March 22, 2017, the DOC-EERA filed Comments and Recommendations.[48] The DOC-EERA recommended the Commission grant a route permit for Applicant's Proposed Route.

38. On March 28, 2017, Applicant filed its response to certain comments from the public made orally at the public hearing and in writing during the public comment period.[49]

III. DETAILED DESCRIPTION OF THE PROJECT

39. Minnkota proposes to supply power to the MLP Laporte Station by construction of a new substation adjacent to the proposed pump station and a new overhead 115 kV transmission connecting via three-way switch to an existing 115 kV line. The length of the Project varies slightly by route alternative, but is approximately nine miles long.[50]

40. Located in Clearwater and Hubbard Counties, west of the City of Laporte, Minnesota, Minnkota's Proposed Route for the HVTL begins in Itasca Township. The Proposed Route extends west from the existing line and then south, adjacent to existing roadway right-of-way (ROW) along 281st Avenue for approximately 3.7 miles. The Proposed Route then turns east, and southeast, cutting cross-country until it reaches State Highway 200. The HVTL continues southeast adjacent to State Highway 200 and crosses the county line into Hubbard County. Just after entering Hubbard County, the line turns east and is located adjacent to 400th Street for approximately 1.7 miles. The HVTL turns south at 115th Avenue and continues south, adjacent to existing roadway ROW for approximately 2.0 miles before turning west for approximately 2,350 feet, adjacent to County Road 95. The line then turns south, crossing County Road 95 and entering the new substation site.[51]

41. Minnkota's request includes route widths ranging from 150 to 450 feet at the interconnection sites, and 400 to 810 feet at the substation site. The variable route widths are meant to allow for sufficient flexibility to work with landowners and address engineering constraints. Minnkota plans to acquire an 80- to 100-foot permanent easement or ROW (40 to 50 feet) on each side of the transmission line's anticipated alignment, or centerline, within the route.[52] Where the HVTL is placed cross-country on private land, an easement for the entire ROW will be acquired from affected landowners. When the HVTL parallels existing infrastructure ROW, a narrower easement may be required because parts of the existing ROW can often be shared with the ROW needed for the HVTL. Where a new line parallels existing ROW, Minnkota's usual practice is to

(Mar. 2, 2017) (eDocket No. 20173-129835-01); Comment by Travis Welling (Mar. 2, 2017) (eDocket No. 20173-129835-01); Lea and Ron Thull (Mar. 3, 2017) (eDocket No. 20173-129835-01); Comment by Kevin Wacker (Mar. 3, 2017) (eDocket No. 20173-129835-01); Comment by Rebecca Wacker (Mar. 3, 2017) (eDocket No. 20173-129835-01).

[47] Minnkota's Proposed Findings (Mar. 14, 2017) (eDocket No. 20173-129853-01).

[48] DOC-EERA Comments and Recommendations (Mar. 22, 2017) (eDocket No. 20173-130121-01).

[49] Minnkota Reply Comments (Mar. 28, 2017) (eDocket No. 20173-130289-01).

[50] Ex. 110 at 2 (Environmental Assessment).

[51] Ex. 2 at 10 (Application); Ex. 110 at 3 (Environmental Assessment).

[52] Ex. 2 at 10 (Application); Ex. 110 at 4 (Environmental Assessment).

place poles on adjacent private property, a few feet away from the existing ROW, thus sharing a portion of the existing ROW.[53]

42. The HVTL will be carried on single wood or steel poles with horizontal post or horizontal brace insulators, and a single shield wire for the majority of the Proposed Route.[54] The poles are proposed to be self-supporting (unguyed), and directly embedded. The structures will range in height from 80 to 110 feet, with a 300- to 350-foot span between structures. Where needed to span or cross wetlands, Minnkota may use guyed, three-pole structures with cross arms. [55]

IV. ROUTES EVALUATED

A. Routes Initially Evaluated by Minnkota

43. In response to feedback from several regulatory agencies with which Minnkota consulted regarding the proposed Project, Minnkota agreed to evaluate five alternative routes in the initial stages of the Alternative Permitting Process.[56] Minnkota labeled the routes the Orange, Purple, Red, Green, and Yellow routes. Minnkota eventually eliminated all but the Yellow Route, which became its Proposed Route.[57]

44. Minnkota considered the Orange Route because Minnkota believed it provided the best options for minimizing potential impacts. Following further consideration and consultation with the DNR, Minnkota rejected the Orange Route. Concerns about the Orange Route included the amount of greenfield that would be disturbed, habitat fragmentation, the presence of Minnesota Biological Survey (MBS) sites of High and Outstanding Biodiversity Significance, potential impacts to rare and natural features identified in the Natural Heritage Information System (NHIS) database, and the location of the proposed LaSalle Creek crossing.[58]

45. While the Purple Route avoided several of the problems of the Orange Route, Minnkota rejected the Purple Route because it ran adjacent to seven new occupied homes, raising significant landowner concerns.[59]

46. Minnkota studied the Red Route, which followed the existing MPL corridor in all the way from the northern interconnect to the new substation site. Minnkota reasoned that, if the HVTL could share the existing pipeline ROW, it would likely result in less tree clearing and habitat fragmentation, and would cross LaSalle Creek at the same location as the existing pipeline. The Red Route would also have been the shortest route. Minnkota rejected the Red Route after MPL indicated that, in order to protect the pipeline from induced currents, and to avoid encumbrances within the pipeline ROW, an additional 100 feet of new ROW would be required adjacent to its existing ROW. In addition, the Red Route crosses the LaSalle Creek Aquatic Management Area, as well as several sites of High Biodiversity Significance, and rare natural features identified in

[53] Ex. 2 at 15 (Application).
[54] Ex. 2 at 15, App. C (Application); Ex. 110 at 4 (Environmental Assessment).
[55] Ex. 2 at 15, App. C (Application); Ex. 110 at 4 (Environmental Assessment).
[56] Ex. 2 at 12 (Application).
[57] Ex. 110 at 36 (Environmental Assessment). The initial routes not proposed, along with the proposed route, are illustrated in Figure 9 of the Environmental Assessment.
[58] Ex. 2 at 12-13 (Application).
[59] *Id.* at 13.

the NHIS database. The DNR indicated that the Red Route's LaSalle Creek crossing route was not a preferred crossing location for the HVTL.[60]

47. In an effort to find a route that would minimize impacts on sensitive natural areas, and reduce total required greenfield, and that would provide an alternative LaSalle Creek crossing location, Minnkota examined the Green Route. Minnkota met on-site with the DNR to study the Green Route. The DNR preferred the Green Route's LaSalle Creek crossing location over the alternatives and determined that the Green Route was acceptable.[61] Minnkota modified the Green Route to avoid residences and conflicts with landowners. The modified route is referred to as the Yellow Route, or the Proposed Route.[62]

48. The Proposed Route avoids crossing Itasca State Park and does not cross LaSalle Creek within the Aquatic Management Area (AMA). According to Minnkota, approximately 42 percent of the Proposed Route follows existing distribution line corridors. Additionally, Minnkota states that, although the Proposed Route crosses 2.1 miles of sites of High Biodiversity Significance, the anticipated alignment minimizes impacts to these areas by following the edges and sharing existing ROWs to the extent practicable, thus avoiding impacts to rare plant species and features.[63]

B. Alternative Routes Included in the Environmental Assessment

49. Through the EA scoping process, the DOC-EERA identified seven alternative routes for evaluation in addition to the Proposed Route.[64] The seven evaluated alternative routes are:

A. the Co-locate Route, along the existing MPL corridor;

B. the Thompson Route;[65]

C. the Seeger 2 Route;[66]

D. the Seeger 3 Route;[67]

E. the Seeger 4 Route;[68]

F. the Seeger 5 Route;[69] and

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[60] *Id*.
[61] *Id*.
[62] *Id*.
[63] *Id*.
[64] Ex. 106 at 10 (Scoping Decision for Environmental Assessment).
[65] *Id.*, Figure (Fig.) 2.
[66] *Id.*, Fig. 3.
[67] *Id.*, Fig. 4.
[68] *Id.*, Fig. 5.
[69] *Id.*, Fig. 6.

G. the Seeger 6 Route.[70]

1. Co-locate Route

50. The DOC-EERA noted that the alternative route most commonly suggested during the scoping process was one that would co-locate the HVTL along the existing MPL pipeline corridor.[71] Advantages cited by the proponents of the Co-locate Route were that it would be a shorter route, leading to reduced tree-clearing and less habitat fragmentation. In addition, the Co-locate Route supporters believed it would impact fewer private residences and properties, and minimize the impacts to LaSalle Creek because it would cross LaSalle Creek in the same place as the existing MPL corridor.[72]

51. As discussed above, Minnkota considered a co-locate route before developing its Proposed Route. Minnkota rejected the co-locate alternative because the MPL would have required a buffer zone of at least 100 feet between the existing pipeline and any new HVTL alignment in order to avoid concerns with stray voltage and induced current that could damage the pipeline and lead to safety concerns on the ground.[73]

52. The DOC-EERA developed a Co-locate Route for evaluation purposes. The route ranges in width from 900 to 1200 feet centered over the MPL pipeline corridor with an anticipated alignment offset from the western border of the existing MPL pipeline corridor by 100 feet.[74] This alignment makes two crossings of the MPL pipeline corridor in order to avoid two homes.[75]

2. Thompson Route

53. The Thompson Route was offered by Kenneth and Mary Thompson during the EA scoping process as an alternative to Minnkota's Proposed Route.[76]

54. The Thompson Route travels east from the northern interconnection point for the proposed Project, located at the northern end of Big LaSalle Lake. After continuing east along the northern end of the lake, the anticipated alignment of the Thompson Route turns south and follows along the east side of 105th Avenue for about six miles until it intersects with State Highway 200. The Thompson Route follows Highway 200 for about two miles to County Road 95, then proceeds east on County 95 to the site of the proposed substation.[77] The portion of the Thompson Route that proceeds south of Highway 96 on 105th Avenue travels along a minimum maintenance forest road.[78]

55. Where possible, the DOC-EERA centered the Thompson Route over any roadways it paralleled to allow for maximum transmission line design flexibility. The DOC-EERA also

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[70] *Id.*, Fig. 7.
[71] Ex. 110 at 28, Fig. 2, Diagram (Diag.) 7 (Environmental Assessment).
[72] *Id.* at 28.
[73] *Id.* at 29; Ex. 5 at 2 (Minnkota Response to Scoping Concerns).
[74] Ex. 110 at 29 (Environmental Assessment).
[75] *Id.* at 30.
[76] *Id.* at 9.
[77] *Id.* at 30.
[78] *Id.* at 30, Diag. 8.

placed the anticipated alignments approximately five feet outside the existing roadway ROWs to maximize ROW sharing.[79]

3. Seeger 2 Route

56. Scott Seeger suggested six alternative routes during the EA scoping process. The Seeger 1 Route was essentially the same as Minnkota's rejected Red Route and the Co-locate Route. Analysis of the Seeger 1 Route was incorporated by the DOC-EERA into its discussion of the Co-locate Route.[80]

57. The Seeger 2 Route follows Minnkota's Proposed Route north to south, as far as the Proposed Route's intersection with the MPL pipeline corridor. At that point, the Seeger 2 Route follows the MPL pipeline corridor south to the Project ending.[81] For purposes of the EA, the DOC-EERA staff incorporated a varying route width of 300 to 900 feet where the Seeger 2 Route runs parallel to the pipeline to provide adequate flexibility near the pipeline corridor.[82]

4. Seeger 3 Route

58. The Seeger 3 Route follows the MPL pipeline corridor south approximately 4.5 miles, to its intersection with County Road 96/400th Street. At that point, the Seeger 3 Route continues west for three-quarters of a mile then turns south on 105th Avenue for approximately six miles to State Highway 200. The Seeger 3 Route progresses along State Highway 200 for two miles, turns east onto County Road 95, returns to the MPL corridor and ends at the proposed substation.[83]

59. The centerline of the portion of the Seeger 3 Route that is south of the intersection of 400th Street and 105th Avenue, including the section that runs along State Highway 200, is shifted east to avoid land within Itasca State Park.[84]

5. Seeger 4 Route

60. The Seeger 4 Route follows Minnkota's Proposed Route starting at the northern interconnection point, and continuing south to 105th Avenue where it turns south and continues for about six miles to State Highway 200. It turns east on State Highway 200 for another two miles to County 95 and then turns east to the proposed pump station.[85] As with the Seeger 3 Route, the Seeger 4 Route centerline has been shifted east to State Highway 200, 400th Street/County Road 96 and 105th Avenue to avoid Itasca State Park land.[86]

61. For purposes of the EA, the DOC-EERA staff used a route width that varied from 150 to 300 feet. The route was centered over roadways where the route paralleled roadways, and

[79] *Id.* at 30.
[80] *Id.*
[81] *Id.* at 10.
[82] *Id.* at 32, Appendix (App.) F.
[83] *Id.* at 32, Fig. 5.
[84] *Id.* at 33, App. G.
[85] *Id.* at 33, App. H.
[86] *Id.* at 33.

anticipated alignments were placed about five feet outside the existing roadway ROWs to maximize ROW sharing.[87]

6. Seeger 5 Route

62. The Seeger 5 Route follows the MPL pipeline corridor south for about 4.5 miles to County Road 96, then connects to Minnkota's Proposed Route. Seeger 5 Route departs from Minnkota's Proposed Route at T143 R35 S4 SW¼ to avoid two parcels of private property. The route instead crosses over tax forfeited lands to the east around the subject parcels, then returns west to rejoin the Proposed Route.[88]

63. The route width for EA purposes varied from 300 to 1,300 feet. The route was centered over roadways where it paralleled them and anticipated alignments were placed about five feet outside the existing roadway ROWs to maximize ROW sharing. Where it paralleled the MPL corridor, the route width was expanded from 300 to 900 feet to provide maximum flexibility.[89]

7. Seeger 6 Route

64. The Seeger 6 Route follows the Proposed Route, except it departs by routing towards the east around private lands and onto tax forfeited land at T143 R35 S4 SW¼, then returns west to rejoin the Proposed Route.[90]

65. For purposes of the EA, the DOC-EERA staff used route widths from 150 to 600 feet for the Seeger 6 Route and, where the route paralleled roadways, it was centered over the roadway to provide maximum flexibility in the final transmission line design. To maximize ROW sharing, the anticipated alignments in the Seeger 6 Route were placed about five feet outside the existing roadway ROWs.[91]

V. TRANSMISSION LINE STRUCTURE TYPES AND SPANS

66. Minnkota proposes to use primarily single-pole, wood or steel structures with horizontal post insulators and a single shield wire. The proposed structures will be direct-embedded, self-supporting (unguyed) poles.[92]

67. Minnkota plans structures with an average height of 80 feet and a 300- to 350-foot span between structures. Where necessary to cross wetlands, Minnkota may utilize guyed, three-pole structures with cross arms. The three-pole structures allow a span of 500 to 1,300 feet between them.[93]

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[87] *Id.*
[88] *Id.* at 34, App. I.
[89] *Id.*
[90] *Id.* at 35, Fig. 8.
[91] *Id.* at 35, App. J.
[92] Ex. 2 at 15 (Application); Ex. 110 at 21 (Environmental Assessment).
[93] Ex. 2 at 15 (Application); Ex. 110 at 21-22, Table 3 (Environmental Assessment).

VI. TRANSMISSION LINE CONDUCTORS

68. Minnkota's project is a single-circuit transmission line. The Applicant plans for the structures to carry one conductor per phase (also known as an unbundled conductor), for a total of three conductors in addition to a shield wire. This Project proposes to use aluminum core steel reinforced cables or conductors, accompanied by shield wire for lightning protection.[94]

69. Minnkota will design the Project to meet or surpass relevant local, state, and national codes, including the National Electric Safety Code (NESC), Rural Utilities Service (RUS) - US Department of Agriculture, and Minnkota's own standards.[95]

VII. TRANSMISSION LINE ROUTE WIDTHS

70. Minnkota is requesting approval of a variable width Proposed Route ranging from 150 to 450 feet along the transmission line and 400 feet at the interconnection site and 810 feet at the substation site.[96]

VIII. TRANSMISSION LINE RIGHT-OF-WAY

71. Minnkota proposes an 80 to 100 foot wide ROW for the Project.[97] The DOC-EERA estimates that the Project will require approximately nine miles of new ROW, depending on the route selected.[98]

72. A significant portion of the length of Minnkota's Proposed Route parallels or shares ROWs with existing electrical distribution lines. Much of the Proposed Route's planned ROW will need less than the specified 100 feet.[99]

IX. PROJECT SCHEDULE

73. Minnkota initially anticipated a winter 2017 in-service date when it filed its Application.[100]

74. Minnkota based its initial in-service date on its estimate that it would receive a route permit in this proceeding in the first quarter of 2017. Minnkota states it will develop a new project schedule depending on which route is selected.[101]

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[94] Ex. 110 at 21 (Environmental Assessment).
[95] Ex. 2 at 15 (Application).
[96] *Id.* at 10.
[97] *Id.*
[98] Ex. 110 at 23 (Environmental Assessment).
[99] *Id.* at 129, App. A.
[100] Ex. 2 at 8 (Application).
[101] Minnkota's Proposed Findings of Fact at 10 (Mar. 14, 2017) (eDocket No. 20173-129853-01).

X. PROJECT COSTS

75. Minnkota estimates that the installation of the new transmission line and the new substation will cost approximately $7.2 million. Of that amount, approximately $5.1 million is attributable to the transmission line and $2.1 million to the substation.[102]

XI. PERMITTEE

76. The permittee for the Project is Minnkota Power Cooperative, Inc.[103]

XII. PUBLIC AND GOVERNMENT PARTICIPATION

A. Public Hearing[104]

77. The Commission directed the Administrative Law Judge to preside over a public hearing in this matter.[105]

78. The public hearing took place on February 16, 2017, at the Frank White Education Center in Park Rapids, Minnesota, starting at 6:00 p.m.

79. Several presentations were made at the outset of the public hearing. Cezar Panait gave a presentation explaining the Commission's route permit process.[106] Bill Storm described the Department's role in the route permit process.[107] Joel Larson and Jay Bushy gave a presentation on Minnkota's need for the Project.[108]

80. Sixteen people attended the public hearing and signed the hearing register.[109] All members of the public were afforded a full opportunity to make a statement on the record and/or ask questions.

81. Scott Seeger, a landowner on Minnkota's Proposed Route, believes more public versus private land should be used for the Project.[110] Mr. Seeger commented that if the Project is truly "for the public good, all of the state of Minnesota residents need to be participating, not just the landowners that are out [of their land]."[111] Don Mitchell agreed with Mr. Seeger that more county land should be used for the project.[112]

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[102] Ex. 2 at 8 (Application).
[103] *Id.* at 1.
[104] As discussed in the Procedural Section above, comments made by members of the public and government agencies during the initial comment period and the scoping process had a significant impact on determining the routes considered in the Environmental Assessment.
[105] ORDER REFERRING ROUTE PERMIT APPLICATION TO THE OFFICE OF ADMINISTRATIVE HEARINGS UNDER MINN. R. 7850.3800 (Nov. 9, 2016) (eDocket No. 201611-126405-01).
[106] Public Hearing Tr. at 12-16 (Feb. 16, 2017).
[107] *Id.* at 17-22.
[108] *Id.* at 24-30.
[109] Sign-in sheets (Feb. 16, 2017) (eDocket No. 20172-129198-02).
[110] Public Hearing Tr. at 33 (Feb. 16, 2017) (Seeger).
[111] *Id.*
[112] Public Hearing Tr. at 56 (Feb. 16, 2017) (Mitchell).

82. Cezar Panait explained that the Commission granted a Certificate of Need for the pumping station in 2015, and that the need was based on the fact that MPL delivers all of the crude to the two refineries in the Twin Cities area that account for over 90 percent of the transportation fuel and other products in Minnesota. The Commission determined that the need for increased pumping capacity is related to increased output of the refineries, and thus is in the public interest.[113]

83. Tom Olson, a landowner on the Thompson Route, does not believe the route should be visible from the LaSalle Lake, which is the lake he lives on.[114] Mr. Olson believes a better route exists where the transmission line would cross through "90-percent" county-owned land and not be visible from the lake.[115]

84. Arlene Hanson commented that she understands the need for the Project but believes the environment deserves better protection.[116]

85. Court Hanson asked questions of Minnkota and the DOC-EERA's representative about the noise generated by the pumping station once the Project is completed.[117] Mr. Seeger expressed concerns about the noise levels as well.[118]

86. Mr. Hanson also asked about any effects the transmission line might have on "people and livestock" in the area.[119]

87. Garrett Tisdell, a landowner whose property sits on the north side of 400th Street just east of the MPL corridor, had similar questions about negative health effects the transmission line might have on his family. Mr. Tisdell stated that there are a number of metal buildings on his property and he is concerned about electric and magnetic fields.[120]

88. Mr. Seeger commented on the historical value of some of the land along the Proposed Route, which was the site for "the old Trapper Trail" and a trading post.[121] Mr. Seeger believes a better route exists that would avoid an historically significant area.[122]

B. Written Comments

89. Eight members of the public submitted written comments using the Speak Up! platform on the Commission's website.

90. Eric Espeseth cautioned against routes disrupting prime outdoor recreation areas, such as the snowmobile trails along the Thompson Route.[123] According to

[113] Public Hearing Tr. at 40-41 (Feb. 16, 2017 (Panait).
[114] Public Hearing Tr. at 41-42 (Feb. 16, 2017) (Olson).
[115] *Id.* at 45-46, 51; Public Hearing Ex. 200 (hand drawn route by Olson).
[116] Public Hearing Tr. at 59-60 (Feb. 16, 2017) (A. Hanson).
[117] Public Hearing Tr. at 60-61 (Feb. 16, 2017) (C. Hanson).
[118] Public Hearing Tr. at 70 (Feb. 16, 2017) (Seeger).
[119] Public Hearing Tr. at 62-65 (Feb. 16, 2017) (C. Hanson).
[120] Public Hearing Tr. at 65-66 (Feb. 16, 2017) (Tisdell).
[121] Public Hearing Tr. at 73 (Feb. 16, 2017) (Seeger).
[122] *Id.*
[123] Comment by Eric Espeseth (Mar. 1, 2017) (SpeakUp) (eDocket No. 20173-129835-01).

Mr. Espeseth, "clearing large amounts of land in the heart of prime recreation area[s] impacts everyone, not just local landowners."[124] Kevin Wacker similarly commented that "transmission towers are large, unsightly, and highly invasive" to the outdoor recreation areas.[125]

91. Mr. Espeseth also commented that removing large sections of forest to accommodate the new power line could have a detrimental impact on native animal species.[126] Maggi White pointed out that some of the property along the Co-locate Route and Seeger Routes 3 and 5 is "prime hunting land."[127] Mr. Wacker owns hunting land in the area and believes "adding a second 100-foot wide clearing to the area will fragment the diverse ecosystem and decrease animal populations."[128]

92. Maggi White believes a route should be chosen to "minimize damage to the trout stream area."[129] Zach Mjones agrees with Ms. White, commenting that "any new [designated trout stream area] crossings [should] get combined with an existing crossing" like the Proposed Route.[130]

93. Ama Riley supports the Proposed Route because it "follows existing road right of way and existing distribution power lines, which will decrease the need for new easements through the surrounding land."[131] Travis Welling agrees with Ms. Riley, pointing out that "building this new power line parallel to the existing pipeline requires a brand new 100 foot wide easement through private citizen property and will clear a large amount of trees through a high recreation area."[132] Ron Thull also agrees with Ms. Riley, commenting that 100-foot wide new easements are "only required if the power line is located away from roads."[133]

94. Rebecca Wacker commented that selection of the Proposed Route will minimize all negative impacts to the area.[134]

95. Six individuals and two government entities filed written comments by mail or electronically.

96. Amy Espeseth submitted a letter in support of the Proposed Route.[135] Ms. Espeseth supports the route because "only 55 feet of new easements" will be needed in contrast to "the full 100 feet of new easements needed by other options."[136] In addition, the route proposed by Minnkota "primarily follows the roadways" instead of "clearing a separate 100 foot easement through this exquisite land [that] would impact not only everyone in the area, but could have

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[124] *Id.*
[125] Comment by Kevin Wacker (Mar. 3, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[126] Comment by Eric Espeseth (Mar. 1, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[127] Comment by Maggi White (Mar. 2, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[128] Comment by Kevin Wacker (Mar. 3, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[129] Comment by Maggi White (Mar. 2, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[130] Comment by Zach Mjones (Mar. 2, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[131] Comment by Ama Riley (Mar. 2, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[132] Comment by Travis Welling (Mar. 2, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[133] Comment by Ron Thull (Mar. 3, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[134] Comment by Rebecca Wacker (Mar. 3, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
[135] Comment by Amy Espeseth (Mar. 1, 2017) (eDocket No. 20173-129859-01).
[136] *Id.*

devastating impacts on the wildlife" potentially causing the disappearance of [endangered] species like the rusty patched bumble bee, gray wolf, or Canada lynx.[137]

97. Barbara Wacker submitted a letter in support of the Proposed Route because the route "will maximize the existing roadways to minimize the impact on the environment and surrounding communities during construction of the line and future operation, maintenance, and repair."[138] According to Ms. Wacker, "all new water crossings, Greenfield ROW, and major environmental impacts such as outlined in the MPL Collocate, Thompson, and all Seeger routes should be avoided as they do not minimize the potential impacts."[139]

98. Scott Seeger provided comments, in written form and at both the public Information/Scoping meeting and the Public Hearing. Mr. Seeger owns property located on 115th Avenue in Lake Alice Township in Hubbard County on the Proposed Route. Among Mr. Seeger's concerns are the proximity of the Proposed Route to a homestead he plans to build on the property. He has already prepared a building site and has a trailer located on or near the site, but is concerned that the proposed home, which would have a steel structure, would have to move several hundred feet away from the road if the Proposed Route is chosen. Mr. Seeger expressed concerns about the effects of electric and magnetic fields on pacemakers.[140] Mr. Seeger has planted trees near the edge of his property as a privacy screen. He states those trees would have to be removed as part of the Project, downgrading the aesthetic value of his property.[141] In addition, Mr. Seeger purchased his land in part as timberland, to provide timber harvest for generations into the future. Mr. Seeger asserts he will permanently lose 3.3 acres of tree harvest if Minnkota proceeds with the Proposed Route.[142]

99. Mr. Seeger proposed the Seeger 1, 2, 3, 4, 5, and 6 Routes as possible alternatives to the Project Route.[143] Mr. Seeger favors the Seeger 1 Route, which is the same as the Co-locate Route, following the MPL pipeline. Mr. Seeger argues that the necessary trees have already been cut for the pipeline route and that MPL, rather than private landholders, should bear the burden of the HVTL needed to bring the power to the pipeline substation.[144]

100. Mary and Ken Thompson own significant acreage on the Proposed Route and will be impacted more significantly than some other landowners. They are concerned about the health and safety effects of the HVTL and about its effects on the value of their property due to noise and aesthetic impacts. Mary Thompson spoke at the initial scoping meeting and the Thompsons provided written comments. The Thompsons proposed an alternative route (the Thompson Route) which has significantly less traffic. Because 281st Avenue, where the Thompson's property is located, has more traffic, and the residents live there year-round, the Thompsons argue that 281st Avenue should be classified as most aesthetic sensitivity, rather than lowest aesthetic sensitivity.

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[137] *Id.*
[138] Comment by Barbara Wacker (Mar. 1, 2017) (eDocket No. 20173-129859-01).
[139] *Id.*
[140] Comment by Scott Seeger at Part 1 (Mar. 2, 2017) (eDocket No. 20172-129522-01).
[141] Ex. 102 at 40-43 (Scoping and Informational Meeting Transcript); Public Hearing Tr. at 34 (Feb. 16, 2017) (Seeger).
[142] Comment by Scott Seeger at Part 2A (Mar. 2, 2017) (eDocket No. 20173-129594-01).
[143] *Id.;* Ex. 110 at 10-11 (Environmental Assessment).
[144] Comment by Scott Seeger at Part 2A (Mar. 2, 2017) (eDocket No. 20173-129594-01).

The Thompsons allege that Minnkota seriously undervalued their property. Because they own so much property along the Proposed Route, the Thompsons say that they stand to lose the most due to understated property values. They argue that this alone is sufficient reason to choose the Thompson Route rather than the Proposed Route. The Thompsons assert that 281st Avenue is a "widely used" route between Itasca State Park and the LaSalle State Recreation Area because it is "the most scenic path between the two state resources" and will have a larger impact on tourists than the Thompson Route.[145] Conversely, the Thompsons argue that the Thompson Route, which gets much less traffic and where there are fewer year-round residents, should be classified in the lowest aesthetic sensitivity category.[146] The Thompsons also express concerns about a "prolific growth of Lady Slippers" along 281st Avenue that could be destroyed due to the construction of the HVTL and associated herbicidal spraying.[147]

101. Zachary Thompson, Mary and Ken Thompson's son, provided written comments affirming his parents' comments and adding that they are also opposed to alternative routes that include the existing pipeline. Mr. Thompson recently built a new home on property owned by his parents along the Proposed Route and feels the project will "reduce the property values significantly."[148] Mr. Thompson stated that the routes that follow the existing pipeline would disrupt his parents' farm and livelihood even more than the Proposed Route because it would go directly through the middle of their farm and pasture property. Mr. Thompson did not specify which portion of the Co-locate Route would interfere with his parents' farm and pasture property.[149]

102. Tom Olson submitted a letter opposing the Thompson Route and included a proposed new route that "does not cross any private property and is not visible from [Upper LaSalle Lake]," where he resides.[150]

103. The DNR submitted a letter in support of the Proposed Route because "the proposed route minimizes disturbance to a Minnesota Biological Survey site of high biodiversity significance, follows road right of way or current power lines, crosses the trout stream where it can be spanned without structures in the water, and avoids Itasca State Park property."[151] The DNR commented that the "alternative routes analyzed in the EA would result in greater impacts to natural and recreational resources than the proposed route."[152]

104. The PCA submitted a letter stating that whether a Clean Water Act Section 401 Water Quality Certification is required for the project is uncertain.[153] A more detailed project design is necessary to make the determination.[154]

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[145] Comment by Ken and Mary Thompson at 2 (Mar. 2, 2017) (eDocket No. 20173-129631-01).
[146] *Id.*
[147] *Id.*
[148] *Id.*
[149] Comment by Zachary Thompson (Mar. 3, 2017) (eDocket No. 20173-129615-01).
[150] Comment by Tom Olson (Feb. 28, 2017) (eDocket No. 20173-129631-01).
[151] Comment by MnDNR (Mar. 3, 2017) (eDocket No. 20173-129617-01).
[152] *Id.*
[153] Comment by PCA (Feb. 23, 2017) (eDocket No. 20172-129299-01).
[154] *Id.*

XIII. FACTORS FOR A ROUTE PERMIT

105. The Power Plant Siting Act (PPSA), Minn. Stat. ch. 216E (2016), requires that route permit determinations "be guided by the state's goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state's electric energy security through efficient, cost-effective power supply and electric transmission infrastructure."[155]

106. Under the PPSA, the Commission and the Office of Administrative Hearings must be guided by the following responsibilities, procedures, and considerations:

A. evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;

B. environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;

C. evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;

D. evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;[156]

E. analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;

F. evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;

G. evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivisions 1 and 2;

H. evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

[155] Minn. Stat. § 216E.03, subd. 7 (2016).
[156] Factor 4 is not applicable because Minnkota is not proposing to site a large electric generating plant.

I. evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

J. evaluation of future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

K. evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and

L. when appropriate, consideration of problems raised by other state and federal agencies and local entities.[157]

107. In addition, Minn. Stat. § 216E.03, subd. 7(e), provides that the Commission "must make specific findings that it has considered locating a route for a high-voltage transmission line on an existing high-voltage transmission route and the use of parallel existing highway ROW and, to the extent those are not used for the route, the [C]omission must state the reasons."

108. In addition to the PPSA, the Commission and the Office of Administrative Hearings are governed by Minn. R. 7850.4100, which mandates consideration of the following factors when determining whether to issue a route permit for a high voltage transmission line:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

[157] Minn. Stat. § 216E.03, subd. 7 (2016); *see also* Minn. Stat. § 216E.04, subd. 8 (2016).

I. use of existing large electric power generating plant sites;[158]

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.[159]

109. There is sufficient evidence on the record for the Administrative Law Judge to assess the Proposed Route and route alternatives using the criteria and factors set out above.

XIV. APPLICATION OF ROUTING FACTORS

110. This proceeding considered the Proposed Route and seven alternative routes: the Co-locate Route, the Thompson Route, and Seeger Routes 2, 3 4, 5 and 6.[160]

A. Effects on Human Settlement

111. The applicable statutory and rule routing factors require consideration of all of the proposed routes' effects on human settlement, including displacement of residences and businesses; noise created during construction and by operation of the Project; and impacts to aesthetics, cultural values, recreation, and public services.[161]

1. Displacement

112. There are no homes or structures within the anticipated ROW of any of the eight routing options.[162] While there are residences within the route width of all but the Seeger 4 Route, none of the residences is closer than 100 feet from the anticipated alignment of any of the routes.[163] Therefore, no displacement is anticipated as a result of the Project, regardless of the route chosen.[164]

2. Noise

[158] This factor is not applicable because it applies only to power plant siting.
[159] Minn. R. 7850.4100 (2015).
[160] Ex. 110 at 28 (Environmental Assessment).
[161] Minn. Stat. § 216E.03, subd. 7(b) (2016); Minn. R. 7850.4100(A) (2015).
[162] Ex. 110, App. A, D-J (Environmental Assessment).
[163] *Id.* at 47, Table 7.
[164] *Id.* at 50.

113. The PCA has established standards for the regulation of noise levels.[165]

114. The most restrictive PCA noise limits are 60 (L_{50}) to 65 (L_{10}) A-weighted decibels (dBa) during the daytime and 50 (L_{50}) to 55 (L_{10}) dBa at night.[166]

115. Noise concerns associated with the Project may arise from construction, or the operation of the transmission lines. Heavy equipment noise can range between 80 and 90 dBa at full power, 50 feet away from the source. Such equipment typically runs at full power up to 50 percent of the time. Noise from heavy construction equipment and increased traffic is expected to be intermittent, short-term, and limited to daytime hours.[167]

116. Transmission line noise comes from small electrical discharges occurring at specific locations along the surface of the conductor ionizing surrounding air molecules. This is a phenomenon known as corona and is common to all transmission lines. Any imperfection, including dirt and dust, or nicks and burrs from the construction process, can be a source for corona. Noise levels vary, depending on conductor conditions, voltage level, and weather conditions. Estimated corona effect noise in rainy weather, when such noise is worse than in fair weather, is 22 dBa at the edge of the 80-foot wide ROW. During heavy rain, the corona noise is not detectable above the sound of the rain itself. During dry weather, corona noise is generally imperceptible.[168]

117. Generally, activity-related noise levels during the operation and maintenance of transmission lines are minimal and do not exceed the PCA noise limits outside the ROW.[169] Noise is expected to have minimal impact for all routes under consideration.[170]

118. Transformer "hum" is the dominant noise source at substations. Transformer hum is caused by magnetic forces within the core of the transformer. These magnetic forces cause the core laminations to expand and contract, creating vibration and sound at a frequency of 120 Hz (twice the a.c. main frequency), and at multiples of 60 Hz (harmonics). Typically, the noise level does not vary with transformer load, as the core is magnetically saturated and cannot produce any more noise.[171]

119. For the proposed Substation, the maximum noise level at the transformer is estimated to be 69 dBA. Given the distance of over 1,500 feet from the proposed Substation to the nearest home, it would be unlikely that noise from this transformer would be audible to nearby residents. The proposed Substation will be designed and constructed to comply with state noise standards established by the MPCA.[172]

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[165] *Id.* at 54.
[166] *Id.* at 55.
[167] *Id.* at 55 (citing Federal Highway Administration, *Highway Traffic Noise: Construction Noise Handbook* (Nov. 2015)).
[168] *Id.* at 56.
[169] *Id.* at 55.
[170] *Id.* at 57, Table 19.
[171] *Id.* at 56.
[172] *Id.* at 56.

120. With the implementation of state design and construction standards, the new transmission line is not anticipated to result in adverse or significant impacts on the public as a result of noise.[173]

3. Aesthetics

121. The routes under consideration for the Project are located in a mixed landscape that includes rural residential development, forested land, agriculture, wetlands, lakes, and open space.[174]

122. All of the routes considered for the Project follow existing infrastructure of some type for the majority of their length. The existing infrastructure includes county roads, state highways, pipeline corridor, and electric distribution lines. A 500-foot region of influence (ROI) was identified for purposes of evaluating aesthetics because the Project is most likely to be visible within this zone. Views of the Project within this distance have the greatest potential to result in visual impacts for sensitive viewers.[175]

123. Aesthetic, or visual resources, are generally defined as the natural and built features of a landscape that may be viewed by the public and contribute to the visual quality and character of an area.[176] The DOC-EERA considers viewer interest and concerns for the visual quality of the landscape and possible changes to it, and for viewer exposure. In evaluating aesthetics, the DOC-EERA assumes high viewer sensitivity for groups engaged in recreational or leisure activities, travelers on scenic routes for pleasure, or to or from recreational, scenic, protected, cultural, historic or similar areas. Low viewer sensitivity is assigned to groups engaged in work activities or commuting to or from work. Viewer exposure includes the number of viewers, and the frequency and duration of their views of a particular location or route. [177]

124. The DNR classifies the visual sensitivity of state lands to aid in managing those lands for forestry and tourism purposes. The levels of visual sensitivity are:

A. Most sensitive: Applies to travel routes and areas where significant public use occurs and where the visual quality is of high concern to typical users. Examples of such routes may include public highways, local roads, recreational lakes and rivers, and designated recreational trails and areas that provide a high level of scenic quality.

B. Moderately sensitive: Applies to travel routes or recreation areas, not considered most sensitive, where visual quality is of moderate concern to typical users. Examples of these routes and areas may include public highways and local roads, recreational lakes and rivers, and designated

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[173] *Id.* at 57.

[174] *Id.* at 44.
[175] *Id.*
[176] *Id.* at 43.
[177] *Id.*

recreational trails that provide moderate to high scenic quality but less significant public use.

C. Less sensitive: Applies to travel routes or recreation areas, not considered most or moderately sensitive, where visual quality is of less concern to typical users. Examples of these routes may include public highways and low-volume local forest roads, non-designated trails, and non-recreational lakes and rivers.[178]

125. Based on these designations, the DOC-EERA illustrated the visual sensitivities of the various roadways that could be impacted by the Proposed Route and alternative routes.[179] The DOC-EERA's Figure 12 shows that the Proposed Route, the Thompson Route, and the Seeger Routes 2, 4, and 6 all follow roads in the most sensitive classification. The segment of the most sensitive road the Proposed Route and the Seeger Routes 2, 4, and 6 follow appears to be approximately one mile long and already has distribution lines located along it. The Seeger Route 6 follows most sensitively classified roads within the Proposed Route and when it joins the Thompson Route.[180]

126. The DOC-EERA reasonably relied on the DNR's classification of aesthetic sensitivities in classifying 281st Avenue as a road with lowest visual sensitivity and the Thompson Route with the most visual sensitivity. The Thompsons provided no objective evidence to demonstrate that 281st Avenue meets the criteria for a road that fits the most visual sensitivity classification, or that the Thompson Route meets the criteria for the lowest visual sensitivity classification.[181]

127. The Project will primarily use wood or steel monopole structures with horizontal post or brace insulators. Average pole height will be 80 feet, with a span length of 300 to 350 feet.[182]

128. Depending on the route selected, the HVTL structures would be visible along 281st Avenue, State Highway 200, 400th Street/County Road 96, 115th Avenue and County Road 95, 105th Avenue, Ridgeway Drive, and near the MPL pipeline corridor. The HVTL structures would be visible to drivers along the roads and to some residents near the structures.[183]

129. Where the HVTL parallels existing county roads, state highways, streets, avenues, power lines or other utilities, some clearing of trees may be needed, but the clearing would be less extensive than in ROW areas where there is no existing road or utility. The industry practice is to place poles on private property a few feet from existing roadway ROW, allowing the line to share a portion of the existing ROW.[184]

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[178] *Id.* at 46 (citing http://dnr.state.mn.us/forestry/visual_sensitivity/index.html).
[179] *Id.* at 47, Fig. 12.
[180] *Id.*
[181] *See* Comment by Ken and Mary Thompson at 2 (Mar. 2, 2017) (eDocket No. 20173-129631-01).
[182] *Id.*; Ex. 2 at 15 (Application).
[183] Ex. 110 at 44 (Environmental Assessment).
[184] *Id.;* Ex. 2 at 15 (Application).

130. On portions of the Project running parallel to 281st Avenue, 400th Street, 115th Avenue and County Road 95, the new HVTL will share ROW, and possibly even structures, with existing Clearwater-Polk Electric Cooperative low-voltage distribution lines. This shared ROW or combination of structures will lessen the aesthetic impact where the Project parallels distribution lines.[185]

131. On the route alternatives where the new HVTL parallels the existing MPL pipeline corridor, MPL requested a separation of 100 feet between the new HVTL and the pipeline ROW. Therefore, the ROW would be adjacent and parallel, but not shared. An additional 100 feet of new ROW would have to be cleared parallel to the existing MPL ROW.[186]

132. The Proposed Route, and the Seeger 5 and 6 Routes, would pass near a cemetery on 115th Avenue. All three routes avoid directly impacting the cemetery grounds, but the HVTL would be visible to cemetery visitors. [187]

133. The DOC-EERA maintains that, although the Proposed Route extends eastward approximately 150 feet from the road along 115th Avenue, because the anticipated alignment would be placed about five feet outside the existing road ROW, the HVTL ROW would only extend about 55 feet onto Mr. Seeger's private property.[188]

134. LaSalle Creek is a watercourse over which the DNR has regulatory jurisdiction. Portions of LaSalle Creek are identified as designated trout stream pursuant to Minn. R. 6264.0050 (2015). All of the routes being considered cross LaSalle Creek, but the Thompson Route is the only route that crosses the creek outside of a designated trout stream location.[189]

135. Because of the restrictions on structure placement, vegetation management, and the implementation of best management practices that would be required in the DNR's license to cross the creek, none of the routing options is expected to directly impact the creek. However, the new HVTL is likely to be visible to people fishing, hiking, boating, or engaging in similar recreational activities along LaSalle Creek.[190]

136. The Proposed Route, and the Seeger 2, 4, and 6 Routes, would cross LaSalle Creek at the same location as 400th Street/County Road 96 and the existing Clearwater-Polk Electric Cooperative low-voltage distribution line.[191]

137. The Proposed Route and the Co-locate Route parallel existing infrastructure to the greatest degree. Because the Proposed Route could overlap ROW where there is parallel existing infrastructure, it would have minimal aesthetic impact.[192]

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[185] Ex. 110 at 45 (Environmental Assessment). Clearwater-Polk Electric is a distribution cooperative and a member-owner of Minnkota. Ex. 2 at 5 (Application).
[186] Ex. 110 at 45 (Environmental Assessment); Ex. 2 at 13 (Application).
[187] Ex. 110 at 45-46, Fig. 10 (Environmental Assessment).
[188] DOC-EERA Comments and Recommendations at 7 (Mar. 28, 2017) (eDocket No. 20173-129853-01).
[189] *Id.* at 45, Fig. 15.
[190] *Id.* at 45.
[191] *Id.* at 45, Fig. 15.
[192] Ex. 110 at 122 (Environmental Assessment).

138. Because the Co-locate Route would require a completely separate ROW from the existing MPL, and it is located as much as a mile or more from an access road at some points north of 400th Street/County Road 96, the Administrative Law Judge finds that the Co-locate Route, along with the Seeger 3 and 5 Routes, would have moderate aesthetic impact.[193]

139. The Seeger 2 Route follows the Proposed Route until it intersects the MPL/Co-locate Route and continues south to the substation from there, a distance of approximately 1.7 miles. Because the section of the Co-locate Route south of 400th Street/County Road 96 is closer to access roads, does not parallel a road of most or moderate visual sensitivity, and contains less forested area, that route would have minimal aesthetic impact, despite the requirement for an ROW separate from the existing MPL.[194]

140. Moderate aesthetic impacts are anticipated for the Thompson Route, and the Seeger 3 and 4 Routes, since all three utilize the minimal maintenance forest road that extends south from the intersection of 105th Avenue and 400th Street to State Highway 200. This section of forest road also serves as the North Country Snowmobile Trail (Snowmobile Trail).[195]

141. The Seeger 5 and 6 Routes each deviate from paralleling 115th Avenue to avoid private parcels by routing to tax-forfeited land east of the private parcels and then turning back west to rejoin the Proposed Route. This deviation would create a new ROW through two remaining areas of cool temperate forest, resulting in likely moderate aesthetic impact.[196]

142. The Proposed Route and the Seeger 2 Route will each have minimal aesthetic impact. Each of the other routes under consideration will have moderate aesthetic impact.

4. Cultural Values

143. The region surrounding the Project area has cultural values tied to American Indian heritages, primarily from the Anishinabe Tribe. Cultivated wild rice paddies are located north of Clearbrook in Clearwater County. Wild rice has cultural significance for tribal communities. Other important heritages in the region are primarily European American, including German, Norwegian, Swedish, and English heritages. The communities in the area share cultures that value the outdoors, the natural world, outdoor recreation, and the scenic nature of the region.[197]

144. No significant impacts are anticipated to cultural values as a result of construction of the Project.[198] However, as discussed below, some of the routes under consideration will have moderate impacts on recreation. To the extent that those routes will have moderate impacts on recreation, they will affect recreation as a cultural value.

5. Recreation

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[193] *Id.* at 122, Fig. 12.
[194] *Id.*
[195] *Id.*
[196] *Id.* at 122, Fig. 11.
[197] *Id.* at 49; Ex. 2 at 34 (Application).
[198] Ex. 2 at 34 (Application); Ex. 110 at 49 (Environmental Assessment).

145. There are a number of significant recreational areas in the vicinity of the Project, including Mississippi Headwaters State Park, Itasca State Park, LaSalle Lake State Recreation Area, Itasca Wilderness Sanctuary, and the Paul Bunyan State Forest.[199]

146. LaSalle Creek, which is a Public Waters Inventory (PWI) water course, also passes through the Project area. Portions of LaSalle Creek are a designated trout stream because of the high water quality, cold temperatures, and ability to support cold-water fish species, such as trout. Segments of the creek are also within an AMA, the purpose of which is to ensure critical fish and wildlife habitat will be conserved, non-boat public access to water resources will always be available, and habitat can be developed on previously disturbed areas.[200]

147. South of the intersection of 105th Avenue and 400th Street, the Snowmobile Trail continues along a minimum maintenance forest road to State Highway 200 where it joins Forest Rider Trail and turns west into Itasca State Park. The Seeger 3 and 4 Routes both also follow the minimum maintenance forest road. The Thompson Route follows 105th Avenue and the Snowmobile Trail from its northern intersection with 105th Avenue south to State Highway 200. Each of the other route options also cross the Snowmobile Trail at some point.[201]

148. There are no state parks, state forests, Scientific and Natural Areas (SNA), Wildlife Management Areas (WMA), county parks, or federal forests or refuges within the anticipated alignment for any of the routing options.[202]

149. The impacts on recreation from construction are anticipated to be intermittent and short-term.[203]

150. The routes that cross the designated trout stream sections of the LaSalle Creek or the LaSalle Creek AMA are anticipated to have a minimal to moderate impact on persons utilizing those areas for recreation. Those areas include the Co-locate Route, and the Seeger 3 and 5 Routes.[204]

151. The Thompson Route, and the Seeger 3 and 4 Routes, all utilize the Snowmobile Trail located on the minimal maintenance forest road that extends south from the intersection of 105th Avenue and 400th Street to State Highway 200. This use of minimal maintenance forest road and Snowmobile Trail, where necessary tree clearing would likely be particularly obvious, is expected to have a minimal to moderate impact on persons using those areas for recreation.[205]

152. The Proposed Route, and the Seeger 2 and 6 Routes, are expected to have minimal impacts on recreation because they avoid both LaSalle Creek and the minimal maintenance forest road.[206]

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[199] Ex. 110 at 78, Fig. 13 (Environmental Assessment).
[200] *Id.*
[201] *Id.*
[202] *Id.* at 78.
[203] *Id.* at 79.
[204] *Id.* at 123.
[205] *Id.* at 79, 123.
[206] *Id.* at 123.

6. Public Service and Infrastructure

153. Public services in the Project area include emergency services provided by government entities, including hospitals, fire departments, and police departments, existing and future transportation corridors and projects, water supply, wastewater disposal systems, gas services, and electricity services.[207]

154. No impacts are anticipated from any of the routes under consideration for the Project to nearby airports or emergency communication systems.[208]

155. Impacts to roads, highways, and utilities from the all of the routes under consideration for the Project are expected to be minimal.[209]

156. During the construction phase of all of the routes under consideration, there could be some short-term, localized traffic delays due to construction activity, material delivery and worker transportation in the Project area. Minnkota has indicated that it will work with roadway authorities to minimize obstructions and inconvenience to the public and that construction equipment will be moved in a manner to minimize safety risks and avoid traffic congestion. Where the Project crosses roadways, Minnkota will use temporary guard structures to ensure that the Project does not interfere with traffic. No impacts to roads and highways are anticipated after Project construction.[210]

157. Involvement of the DOT can also mitigate interference during the construction phase.[211]

B. Effects on Public Health and Safety

158. Minnesota HVTL routing factors require consideration of the Project's effect on health and safety.[212]

1. Construction and Operation of Facilities

159. The Project will be designed in compliance with local, state, NESC, and Minnkota's standards regarding clearance to ground, clearance to crossing utilities, clearance to buildings, strength of materials, and ROW widths.[213]

160. Minnkota's construction crews and/or contract crews will comply with local, state, NESC, and Minnkota's standards regarding installation of facilities and standard construction

[207] *Id.* at 69.
[208] *Id.* at 71-72.
[209] *Id.* at 72.
[210] *Id.* at 70-72; Ex. 2 at 35 (Application).
[211] Ex. 110 at 72 (Environmental Assessment).
[212] Minn. Stat. § 216E.03, subd. 7(b)(1) (2016); Minn. R. 7850.4100(B) (2015).
[213] Ex. 2 at 26 (Application).

practices. Minnkota and industry safety procedures will be followed during and after installation of the transmission line. This will include clear signage during all construction activities.[214]

161. The Project will be equipped with protective devices that will safeguard the public if an accident occurs, such as a structure or conductor falling to the ground.[215]

2. Electric and Magnetic Fields

162. There are no official Minnesota or federal standards for transmission line electric fields.[216]

163. The Commission limits the maximum electric field directly under all transmission lines in Minnesota to 8 kV/m measured at one meter above the ground in route permits for transmission lines.[217]

164. The calculated electric fields for the Project are significantly less than the maximum limit of 8 kV/m that has been imposed by the Commission.[218]

165. There are no federal or Minnesota regulations for the permitted strength of magnetic fields from transmission lines. A few states have developed magnetic field limits ranging from 150 milliGauss (mG) to 250 mG at the edge of the transmission line ROW.[219]

166. Electric and Magnetic fields (EMF) have been the subject of study and research for over 35 years.[220] Research has not been able to establish a cause and effect relationship between exposure to magnetic fields and adverse health effects.[221]

167. Minnkota has modeled and calculated the magnetic fields associated with the Project.[222] The calculated maximum electric field strength for the project is .96 kV/m.[223] Modern bipolar pacemakers are unlikely to be affected by electric fields less than 6 kV/m. The range of interaction for older, unipolar pacemaker designs is 1.2 to 1.7 kV/m.[224] None of the proposed Project routes is expected to have an adverse impact on individuals using pacemakers.

168. The potential impacts of electromagnetic fields on human health were also at issue in the route permit proceeding for the Brookings Hampton 345 kV transmission line. In that proceeding, then Administrative Law Judge Richard Luis found that:

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[214] *Id.*
[215] *Id.*
[216] *Id.* at 22; Ex. 110 at 62 (Environmental Assessment).
[217] Ex. 110 at 62, App. C at 9 (Environmental Assessment).
[218] Ex. 2 at 22-23 (Application); Ex. 110 at 63 (Environmental Assessment).
[219] Ex. 110 at 62 (Environmental Assessment). Massachusetts has an 85 mG load trigger which is not a limit but may require a more extensive review of alternatives. *Id.* at 62, Table 12.
[220] *Id.* at 60.
[221] *Id.* at 61.
[222] Ex. 2 at 23-24, Table 8 (Application); Ex. 110 at 63-64, Table 15 (Environmental Assessment).
[223] Ex. 2 at 22-23, Table 7 (Application).
[224] Ex. 110 at 65 (Environmental Assessment).

> The absence of any demonstrated impact by [electromagnetic field] exposure supports the conclusion that there is no demonstrated impact on human health and safety that is not adequately addressed by the existing State standards for such exposure. The record shows that the current exposure standard for [electromagnetic fields] is adequately protective of human health and safety.[225]

169. Similarly, in the route permit proceeding for the St. Cloud–Fargo 345 kV transmission line, then Administrative Law Judge Beverly Jones Heydinger found:

> Over the past 30 years, many epidemiological studies have been conducted to determine if there is a correlation between childhood leukemia and proximity to electrical structures. Some studies have shown that there is an association and some have not. Although the epidemiological studies have been refined and increased in size, the studies do not show a stronger related effect. In addition, a great deal of experimental, laboratory research has been conducted to determine causality, and none has been found.[226]

170. No significant impacts to human health are anticipated to arise from electromagnetic field exposure or from other sources related to the construction and operation for any of the routes under consideration for the Project.

3. Stray Voltage

171. Stray voltage is caused when an electrical current from electrical equipment or an electrical distribution is grounded in the earth or in ground water. There are two kinds of stray voltage: neutral to earth voltage (NEV) and induced voltage. [227]

172. NEV occurs where distribution lines enter structures, often buildings, barns and other structures with metal surfaces. Typically, NEV is experienced by livestock when they contact one or more metal objects, such as feeders, waterers, or stalls. NEV can exist at any farm, house or building that uses electricity, regardless of whether there is a transmission line nearby.[228]

173. NEV can affect livestock health if it is prevalent in an agricultural operation. However, it is associated with distribution lines because they connect to buildings such as residences, barns or businesses. Transmission lines do not directly connect to residences, barns or businesses and do not create NEV voltage.[229]

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[225] *In the Matter of the Route Permit Application by Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota,* MPUC Docket No. ET-2/TL-08-1474, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING AN HVTL ROUTE PERMIT TO GREAT RIVER ENERGY AND XCEL ENERGY adopting ADMINISTRATIVE LAW JUDGE FINDINGS OF FACT, CONCLUSIONS AND RECOMMENDATION AS AMENDED at Finding 216 (Sept. 14, 2010).
[226] *In the Matter of the Application for a Route Permit for the Fargo to St. Cloud 345 kV Transmission Line Project*, Docket No. ET-2, E002/TL-09-1056, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER ISSUING AN HVTL ROUTE PERMIT TO XCEL ENERGY AND GREAT RIVER ENERGY adopting ADMINISTRATIVE LAW JUDGE FINDINGS OF FACT, CONCLUSIONS AND RECOMMENDATION at Finding 125 (June 24, 2011).
[227] Ex. 110 at 65 (Environmental Assessment).
[228] *Id.* at 66.
[229] *Id.*

174. Induced voltage occurs when the electric field from a transmission line extends to nearby conductive objects such as metal fences or buildings. The shape, size, orientation, and location of an object along the ROW affects whether and how induced voltage occurs. The primary concern with induced voltage is the current that flows through a person to the ground when the person touches the object upon which the voltage is induced.[230]

175. To ensure the safety of persons in the proximity of transmission lines, the NESC requires that any discharge be less than five milliamperes. In addition, the Commission's electric field limit of 8 kV/m is designed to prevent serious shocks due to induced voltage. Proper grounding of metal objects or buildings under or adjacent to transmission lines is the best way to protect individuals from these shocks.[231]

176. When transmission and distribution lines run parallel and are not properly wired and grounded, additional currents may create stray voltage.[232]

177. Where transmission lines are co-located with steel pipelines, the pipelines that share, parallel, or cross HVTLs, may be subject to electrical interference from electrostatic coupling, electromagnetic induction, and conductive effects. These effects can pose a safety hazard to personnel or compromise the integrity of the pipeline.[233]

178. No impacts are anticipated as a result of NEV because transmission lines will not connect to businesses or residences along the Project Route.[234]

179. Impacts due to induced voltage are not anticipated to occur as a result of the operation of the Project because the Commission requires that the lines be constructed and operated to meet NESC standards, as well as the Commission's own electric field limit of 8 kV/m.[235]

180. The proximity of the MPL to the Project's HVTL does pose stray voltage threats because of the steel pipelines in the MPL. These threats may affect personnel who could be exposed to step and touch hazards at above-ground appurtenances. In addition, the pipeline may be exposed to corrosion, and there are threats associated with conductive coupling during fault conditions as large amounts of current discharge rapidly into the ground at the fault location.[236]

181. Separation distance of a 100-foot offset between the HVTL and the MPL corridor of at least 100 feet is the first mitigation measure to consider. If electrical interference remains, a low resistance grounding system to pass interfering current to ground, using either surface or deep grounding designs, can be used as a another mitigation measure.[237]

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[230] *Id.* at 66-67.
[231] *Id.* at 67.
[232] *Id.*
[233] *Id.*
[234] *Id*.
[235] *Id.* at 68.
[236] *Id*.
[237] *Id*.

182. Because the Co-locate Route, and the Seeger 2, 3, and 5 Routes, all parallel the MPL corridor to some degree, they maybe be subject to electrical interference from electrostatic coupling, electromagnetic induction, and conductive effects. These effects may pose safety hazards to personnel or compromise the integrity to the pipeline. Therefore, these routes may have a moderate impact to public safety because of stray voltage.[238]

183. The moderate impact to public safety may be mitigated by the 100-foot separation distance from the MPL pipeline, and a low resistance grounding system. The grounding system is most likely to be needed in those areas where the HVTL crosses the pipeline corridor.

C. Effects on Land-Based Economies and Direct and Indirect Economic Impacts

1. Agriculture

184. Minnesota's high voltage transmission line routing factors require consideration of the Project's impacts to land-based economies, specifically agriculture, forestry, tourism, and mining.[239]

185. Clearwater and Hubbard Counties are not generally considered top agricultural producers relative to other areas of Minnesota. Nonetheless, agriculture is a land-based economic resource in the Project area. Clearwater County includes approximately 166,939 acres of farmland; Hubbard County includes about 116,941 acres of farmland. Farms average 322 acres in Clearwater County and 288 acres in Hubbard County. Agricultural lands in the project area are predominantly pasture and hay, with some areas of cultivated crops. Crops grown in the Project area include hay crops and silage, and soybeans and wheat. Farmers in the area also raise cattle.[240]

186. Federal regulations define prime farmland as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses."[241]

187. Impacts to agricultural operations as a result of the Project are anticipated to be minimal. Agricultural impacts along the Proposed Route and the alternative routes considered are predominantly along edges of existing road ROW, except where alternatives create new ROW**.** Because agricultural land within a transmission line ROW generally remains available for agricultural production, the permanent impact to agricultural operations is much less. The amount of land that will be permanently removed from agricultural production as a result of the Project is nominal.[242]

188. Temporary impacts, such as soil compaction, crop damage, and disruption to drainage systems may occur during construction of the Project. Construction vehicles are

[238] *Id.* at 123-124.
[239] Minn. Stat. § 216E.03, subd. 7(b)(5) (2016); Minn. R. 7850.4100(C) (2015).
[240] Ex. 110 at 73-74 (Environmental Assessment).
[241] 7 C.F.R. § 657.5(a)(1) (2012).
[242] Ex. 110 at 75 (Environmental Assessment).

relatively large and can cause rutting and compaction at structure locations and along the transmission line ROW.[243]

189. All of the routes under consideration include some prime farmland within their anticipated alignments as well as the broader proposed routes. The Proposed Route and Seeger 6 Route each have 47.32 acres of anticipated route alignment coincident with prime farmland. Seeger 2 Route has 47.71 acres of anticipated route alignment coincident with prime farmland.[244]

190. When HVTL structures are placed within fields, they may interfere with the use of farm equipment, causing a more significant impact on agricultural production. Structures can also prevent the use of larger-scale agricultural equipment, requiring farmers to incur costs for appropriately-sized equipment to work fields with transmission line structures.[245]

191. Of the prime farmland affected by the anticipated alignment of the Proposed Route, only about .04 of an acre is expected to be affected by proposed structures.[246]

192. The impact HVTL lines have on farmland can be minimized by selecting a route that avoids agricultural fields to the extent possible and minimizes intrusion into agricultural fields by following existing infrastructure ROW, field lines, and property lines. Where poles are placed in fields, impacts can be mitigated by not placing structures diagonally across fields, but rather parallel to existing infrastructure ROW or field lines.[247] Where it is necessary to encroach on agricultural fields, Minnkota plans to compensate landowners.[248]

193. Additional measures that can be taken to mitigate impacts to agriculture as a result of the Project include:

A. Scheduling construction during lulls in agricultural activity to the extent possible.

B. Limiting movement of crews and equipment to the transmission line ROW to the greatest extent possible and obtaining permission from the landowner for construction activities outside of the ROW.

C. Repairing and restoring areas disturbed by construction to pre-construction contours so that all surfaces drain naturally.

D. Repairing ruts and soil compaction; filling, grading, scarifying, harrowing, disking.

E. Placing structures to accommodate existing or proposed irrigation systems.

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[243] *Id.*
[244] *Id.* at 75, Table 16.
[245] *Id.*
[246] Ex. 2 at 38 (Application).
[247] Ex. 110 at 76 (Environmental Assessment).
[248] Ex. 2 at 38 (Application).

F. Promptly repairing or replacing fences, gates and other improvements that may be removed or damaged during construction.

G. Providing compensation to landowners for any crop and property damage.[249]

194. Because of the large degree of ROW paralleling and the compatibility of HVTLs and farming operations, along with effective mitigations such as micrositing of the alignment through agricultural areas, the long-term impacts on agriculture are expected to be minimal for all routes under consideration.[250]

2. Forestry

195. The predominant type of forest in the Project area is a mix of pine and boreal hardwood species, such as quaking aspen and paper birch. For safe operation of the HVTL, tall growing trees are not allowed in transmission line ROWs. Removal of trees directly impacts this resource which may be being used by landowners or sold through forestry operations. As a result of the removal of trees necessitated by the Project, there are potential impacts to forested areas and forestry operations.[251] The impacts to forested areas and forestry operations, including timber harvest, can be minimized or avoided by prudent routing and placement of structures within the route, along with tree replacement, where required.[252]

196. The Project will result in some tree loss. Nonetheless, with mitigation, direct impacts to forestry operations are not anticipated on any of the routes under consideration.[253]

3. Mining[254]

197. The route widths for the Proposed Route, and the Seeger 5 and 6 Routes, overlap a gravel pit area located along the west side of 115th Avenue.[255] All of the proposed alignments for these routing options are anticipated to be on the east side of 115th Avenue. Therefore, none of the routes under consideration would impact mining operations.[256]

D. Effects on Archeological and Historic Resources

198. Minn. R. 7850.4100(D) requires consideration of the effects of the proposed routes on historic and archaeological resources. Archaeological and historic resources are those places that represent the visible or otherwise tangible records of human occupation.[257] Minnesota has a

[249] Ex. 110 at 76 (Environmental Assessment).
[250] *Id.* at 75, 124.
[251] *Id.* at 76.
[252] *Id.* at 76; Ex. 2 at 39 (Application).
[253] Ex. 110 at 76, Table 19 (Environmental Assessment).
[254] Recreation and Tourism are discussed at Paragraphs 141 to 148.
[255] Ex. 110 at 125 (Environmental Assessment).
[256] *Id.,* App. A, plates 18-19, App. I, plate 14, App. J, plates 17-18.
[257] Ex. 2 at 39 (Application).

policy of preserving historic sites, buildings, structures or other antiquities of state or national significance.[258]

199. Minnkota hired 10,000 Lakes Archaeology, Inc. (TLA) to conduct a cultural resources investigation on the Project. The investigation included background research and a Phase I archaeological survey on Minnkota's original (Red Route) proposed alignment in September and October 2015. TLA conducted additional background research and an additional archaeological survey between February and April 2016, once Minnkota's final Proposed Route was established.[259] The Area of Potential Effect (APE) for the research was expanded beyond the Proposed Route to cover the alternative routes developed as a result of the EA scoping process.[260]

200. The review revealed that there are two historic sites, one archaeological site, and one possible archaeological site within 0.5 miles of the Proposed Route.[261] The historic sites are Itasca State Park and the Wicken Farmstead.

201. TLA concluded that because Itasca State Park is heavily wooded, and a transmission line already runs north of the park, the Project will not have an adverse effect on Itasca State Park.[262]

202. The Wicken Farmstead is a farmstead dating to circa 1919, located approximately 0.3 miles west-northwest of the Proposed Route. No recommendations were made regarding this property's National Registry of Historic Places eligibility.[263] There is no evidence that the Project will have an adverse effect on the Wicken Farmstead.

203. No archaeological sites are anticipated to be affected by any of the routes under consideration for the Project.[264]

204. In addition, the Proposed Route, and Seeger 5 and 6 Routes (which share this portion of the Proposed Route), all pass a cemetery located on the east side of 115th Avenue, but avoid crossing the cemetery, passing behind it to the east.[265]

205. Mr. Seeger submitted a copy of a map he identified as an 1875 Hubbard County trail map including evidence of a trapper trail and a trading post. He asserted that choosing the Co-locate Route would alleviate any possible concerns about the historical significance of the old trapper trail area.[266]

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[258] Minn. Stat. § 138.51 (2016).
[259] Ex. 2, App. G at 1 (Application); Ex. 110 at 79-80 (Environmental Assessment).
[260] Ex. 110 at 81 (Environmental Assessment).
[261] *Id.* at 80-81; Ex. 2, App. G (Application).
[262] Ex. 2, App. G at 34 (Application).
[263] Ex. 110 at 80 (Environmental Assessment).
[264] Ex. 2, App. G (Application); Ex. 110 at 82 (Environmental Assessment).
[265] Ex. 110 at 81, App. A, plates 20-21 (Environmental Assessment).
[266] Comment by Scott Seeger at Part 4 (Mar. 1, 2017) (eDocket No. 20172-129522-02); Public Hearing Tr. at 73 (Feb. 16, 2017) (Seeger).

206. There were no concerns expressed by the Historical Society and no clear indications on the map of a trail or trading post.

207. The standard Commission route permit requires that if previously unidentified archaeological sites are found during construction, Minnkota must stop construction and contact the State Historical Preservation Office (SHPO) to determine how to proceed. If human remains are discovered, all ground-disturbing activity must stop and local law enforcement must be notified.[267]

E. Effects on Natural Environment

208. Minnesota's high voltage transmission line routing factors require consideration of the proposed routes' effects on the natural environment, including effects on air and water quality resources, flora and fauna.[268]

1. Air Quality

209. Construction activities along any of the proposed routes, such as clearing vegetation and driving utility poles, may create exposed areas susceptible to wind erosion. Construction will create dust. Fugitive dust is a particulate air pollutant. Construction is also associated with emissions from construction vehicles, such as diesel exhaust. The amount of such emissions depends on weather conditions and the amount of construction activity taking place. Minnkota states it will use best management practices to reduce potential fugitive dust emissions during construction of the Project.[269] Any adverse impacts to air quality caused by Project construction are expected to be localized, minimal, and temporary.[270]

210. Emissions of ozone and nitrous oxide may occur during transmission line operation for all routes under consideration.[271] Ozone and nitrous oxide are reactive compounds that contribute to smog and can have adverse impacts on the human respiratory system.[272] For all routes under consideration, ozone and nitrous oxide emissions from the Project's HVTL are anticipated to be well below the federal and state limits for ozone and nitrous oxide emissions.[273]

2. Water Quality and Resources

a. Surface Water

211. The DNR PWI identifies lakes, wetlands, and watercourses over which the DNR has regulatory jurisdiction. Minnesota law requires that a license be obtained for the passage of any utility over, under, or across any state land or public waters.[274]

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[267] Ex. 110 at 82, App. C at 7-8 (Environmental Assessment).
[268] Minn. Stat. § 216E.03, subd. 7(b)(1), (2) (2016); Minn. R. 7850.4100(E) (2015).
[269] Ex. 2 at 42 (Application).
[270] Ex. 110 at 83 (Environmental Assessment).
[271] *Id.* at 82.
[272] *See* https://www.epa.gov/criteria-air-pollutants.
[273] Ex. 110 at 83 (Environmental Assessment); Ex. 2 at 41 (Application).
[274] Minn. Stat. § 84.415 (2016); Minn. R. ch. 6135 (2015).

212. The proposed Project is in the Mississippi – Headwaters Watershed, just east of the watershed divide from the Clearwater River Watershed.[275] The Project would cross the LaSalle Creek watercourse regardless of the routing option selected. The Co-locate Route, Thompson Route, and Seeger 3 and 5 Routes pass adjacent to Big LaSalle Lake.[276]

213. The Project avoids or spans surface waters, so impacts to surface water as a result of the Project are anticipated to be minimal. There is potential for adverse impacts to surface waters during Project construction due to vegetation clearing, ground disturbances, and construction traffic. These activities can speed water flow and expose previously undisturbed soils, increasing erosion and the potential for sediment to reach surface waters. Generally, disturbed soils only occur at pole locations. Other areas may be affected by construction traffic and removal of vegetation.[277]

214. The primary means of mitigating impacts to surface waters is by selecting routes, alignments, and pole placements that avoid or span the waters. Minnkota states that structures will not be placed in the creek or within a 50-foot buffer of the creek. In order to stabilize the soils, woody vegetation within a 50-foot buffer of the creek will only be removed to the ground surface, allow existing root systems to remain.[278]

215. The Proposed Route, the Seeger 2, 4, and 6 Routes, and the Thompson Route all cross LaSalle Creek outside of the AMA and designated trout stream areas. The Co-locate Route, and Seeger 3 and 5 Routes, all cross LaSalle Creek where it is designated as a trout stream.[279]

216. The Proposed Route, and the Seeger 2, 4, and 6 Routes, all cross LaSalle Creek at the same location that 400th Street/County Road 96 crosses the creek.[280]

217. The Proposed Route, Seeger 2, 4, and 6 Routes, and Thompson Route are anticipated to have a minimal impact on surface waters.

218. The Co-locate Route, and Seeger 3 and 5 Routes, are expected to have a moderate impact on surface waters.[281]

b. Ground Water

219. Transmission line construction can affect groundwater, especially if foundations require drilling or excavation to depths that penetrate shallow water tables. The Project area is located within a general area of low to medium groundwater susceptibility to contamination. Impacts to surface water that cause increased sedimentation through erosion can also cause indirect

[275] Ex. 110 at 84 (Environmental Assessment).
[276] *Id.* at 84, Fig. 15.
[277] *Id.* at 85.
[278] *Id.*; Ex. 2 at 45 (Application).
[279] Ex. 110 at 125, Fig. 15 (Environmental Assessment).
[280] *Id.* at 125-26, Diags. 15-16, Fig. 15.
[281] *Id.* at 132.

impacts to groundwater. Direct impacts to groundwater occur mainly if concrete foundations are used. [282]

220. For all of the routes under consideration, impacts to groundwater are expected to be minimal because of minimal impacts to surface water and limited use of concrete foundations for the Project. Minnkota proposes to directly embed the structures, eliminating the need for concrete foundations.[283]

c. Wetlands

221. Wetlands crossed by the Project are subject to the jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and current guidance regarding the jurisdictional status of isolated wetlands. Under the Clean Water Act, Section 401, water quality certification is also required for activities that may result in a discharge to waters of the United States. The PCA administers Section 401 water quality certification on non-tribal lands in Minnesota and has indicated that more detailed information is needed to determine whether a Section 401 permit will be required.[284]

222. The DOC-EERA calculated approximate acres of wetland based on the National Wetland Inventory (NWI) database within each of the route alternatives and their corresponding anticipated alignment. Wetlands along the routes evaluated are predominantly comprised of forested swamp, woody shrub, small tree, marshland or marshes. The total estimated acres of forested/shrub wetlands within the ROW of various routing options ranged from .28 acres for the Seeger 3 Route to 13.21 acres for the Seeger 6 Route.[285]

223. The maximum span length for the monopole horizontal post structure is 350 feet. The maximum span length for the two-pole post with cross arms is 500 feet. The maximum span length for the three-pole, guyed with cross arms, is 1,300 feet.[286]

224. The Seeger 5 and 6 Routes include wetland complexes that exceed 1,300 feet, making them too large to span. These routes would require that structures be placed within the wetlands.[287]

225. None of the other routes under consideration include wetlands within the proposed routes or anticipated alignments that cannot be spanned with structure choices presented in Minnkota's Route Permit Application.[288]

226. Construction and maintenance of the Project have the potential to result in both temporary and long-term loss of wetlands or wetland function. Direct impacts would occur in areas where construction activities occur within wetlands. During construction, there is also the

[282] *Id.* at 85-86.
[283] *Id.* at 86-87; Ex. 2 at 15 (Application).
[284] Ex. 110 at 87 (Environmental Assessment); Comment by PCA (Feb. 23, 2017) (eDocket No. 20172-129299-01).
[285] Ex. 110 at 87-88, Table 17 (Environmental Assessment).
[286] Ex. 2 at 15 (Application).
[287] Ex. 110 at 87 (Environmental Assessment).
[288] *Id.* at 87-88.

possibility for indirect impacts to wetlands from sediment as the ground is disturbed by excavation, grading, and construction traffic.[289]

227. Potential impacts to wetlands can be mitigated by selecting routes, alignments, and pole placements that avoid wetlands. Wetlands can be crossed by spanning them. If wetlands cannot be avoided, and crossing the wetland requires construction activities within the wetland, there is a strong potential for impacts such as vegetation clearing, movement of soils, and construction traffic. All of these activities can impair wetland functioning.[290]

228. Even where wetlands can be spanned, if trees must be cleared along the ROW, this may convert a forested/shrub type of wetland into an emergent wetland within the ROW, resulting in habitat conversion due to removal of woody vegetation. Because the change of vegetation would have to be maintained within the ROW, the conversion would be permanent.[291]

229. Potential impacts can be mitigated by a variety of strategies including: use of construction mats, constructing during winter months when the ground is frozen, assembling structures on upland areas prior to site installation, and transporting crews and equipment, to the extent possible, over improved roads and via routes that minimize transit over wetlands.[292]

230. Commission route permits require permittees to avoid and minimize wetland impacts. In addition, if any structure is located in a wetland, the USACE may require additional permits, as well as wetland mitigation for the conversion of forested wetlands to scrub-shrub or emergent wetlands, depending on the route selected.[293]

231. The Proposed Route, Co-locate Route, Thompson Route, and the Seeger 2, 3 and 4 Routes are all anticipated to have minimal impacts on wetlands. The Seeger 5 and 6 Routes are anticipated to have moderate impacts on wetlands.[294]

3. Flora

232. Construction equipment used during site preparation for grading, excavation, and soil stockpiling may cause short-term adverse impacts on existing vegetation, including localized physical disturbance and compaction. In addition, construction activities such as site preparation, establishment and use of access roads, staging and stringing areas, and installation of structures, may have short-term impacts on vegetation as a result of concentrating surface disturbance and equipment use. [295]

233. Construction activities can also have long-term impacts on vegetation by permanently removing vegetation at the footprint of each structure, which vary from 24 to 36 inches in diameter per structure, as well as within portions of the ROW currently dominated by forest or other woody vegetation. Required tree clearing in the ROW converts forested areas and

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[289] *Id.* at 88.
[290] *Id.*
[291] *Id.* at 89
[292] *Id.*
[293] *Id.* at 89-90, App. C at 5-6.
[294] *Id.* at 127, Table 19.
[295] *Id.* at 93.

shrub lands to low-stature vegetation. The resulting loss of forest may lead to fragmentation by reducing intact blocks of forest vegetation and creates long-term, regional, adverse impacts to species dependent on large contiguous blocks of interior forest. Similarly, removal of vegetation and conversion to open habitats could have indirect impacts on native vegetation by increasing the likelihood for spread of invasive species, as well as increasing the effects of light penetration, wind, and humidity that occur more prominently at the edges of habitats.[296]

234. Where the new HVTL is located adjacent to an existing ROW, these effects would largely be limited to one side of the ROW and would not create new fragmented areas.[297]

235. Construction of any sort can lead to the introduction or spread of noxious weeds or invasive species. This is especially likely with construction activities that disturb the ground and leave soils exposed for extended periods, or introduce topsoil or vehicles contaminated with weed seeds. Noxious weeds have the potential to dominate and displace native plants and plant communities, permanently altering ecosystem functions.

236. Minnkota will routinely clear woody vegetation from the HVTL ROW to maintain low-stature vegetation that will not interfere with the transmission line. Maintenance and emergency repair activities could result in direct impacts on vegetation, including removal of vegetation, localized physical disturbance, and soil compaction caused by the use of equipment. Maintenance and emergency repair impacts would be short-term and more localized than construction-related impacts.[298]

237. To minimize impacts to trees in the Project area, Minnkota will limit tree clearing and removal to the transmission line ROW, areas that limit construction access to the Project area, and areas that impact the safe operation of the facilities.[299] Trees outside the ROW that may need to be trimmed or removed will primarily include unstable trees that could potentially fall into transmission facilities. Minnkota will work with and compensate landowners for removal of trees outside the ROW. [300]

238. Impacts to vegetation can be mitigated by using best management, and standard construction practices to minimize soil erosion, as well as conducting surveys for sensitive plants during appropriate times of year to identify their presence or absence along the ROW before clearing begins. If sensitive plants or communities are identified during surveys, Minnkota would need to evaluate individual avoidance and minimization measures and submit them to the appropriate resource agencies. Preparation of a Vegetation Management Plan in consultation with resource agencies is a common condition of HVTL route permits.[301]

239. Measures to reduce the spread of non-native plant species during construction include frequent cleaning of construction equipment and vehicles, minimization of ground disturbance, rapid re-vegetation of disturbed areas with native or certified weed-free seed mixes,

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[296] *Id.*
[297] *Id.* at 94.
[298] *Id.*
[299] Ex. 2 at 44 (Application).
[300] *Id.*
[301] Ex. 110 at 95 (Environmental Assessment).

field surveys of the ROW prior to construction to identify areas that contain noxious weeds, and attending to new infestations within the ROW by identification and eradication as soon as practicable with input from property owners.[302]

240. Impacts to non-forested areas would be temporary and would primarily occur during construction of the Project.[303]

241. The Co-locate Route and the Thompson Route intersect the most acres of forested lands.[304]

242. The Co-locate Route is expected to have a moderate potential to impact vegetation.[305] The required MPL setoff is likely to result in fragmentation of forest lands adjacent to the MPL corridor.

243. The portion of the route that the Seeger 2 Route shares with the Co-locate Route is approximately 1.7 miles.[306] About one-third of that distance (just over 0.5 miles), passes through forest and would result in fragmentation of forest to clear additional ROW.[307]

244. The Seeger 5 and 6 Routes are expected to have a moderate potential to impact vegetation.[308] The Seeger 5 and 6 Routes veer away from 115th Avenue on to forest lands.[309]

245. The Thompson Route, and the Seeger 3 and 4 Routes, all utilize the minimal maintenance forest road that extends south from the intersection of 105th Avenue and 400th Street to State Highway 200, where the Snowmobile Trail also runs. These Routes are all anticipated to have a moderate potential to impact the forest vegetation on this section of the routes.[310]

246. The Proposed Route and the Seeger 2 Route are anticipated to have minimal impact on vegetation.[311]

4. Fauna

247. The landscape types and vegetation communities throughout the Project area provide forage, shelter, nesting, overwintering, and stopover habitat for a wide range of resident and migratory wildlife species. Habitat types are diverse and range from grassland habitat types to the dominant forested habitat types.[312]

248. The forested areas in the Project area provide habitat for a variety of fauna that are commonly found in wooded areas. These species may include deer, small mammals, waterfowl,

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[302] *Id.* at 95-96.
[303] *Id.* at 95.
[304] *Id.* at 128.
[305] *Id.*
[306] *Id.*
[307] *See* Ex. 110, Fig. 11.
[308] *Id.*
[309] *Id.* at 128, Figs. 11, 13.
[310] *Id.* at 128.
[311] *Id.*
[312] *Id.* at 96.

raptors, perching birds, and amphibians. Since the majority of the anticipated alignments for each of the routing options are located adjacent to existing infrastructure (roadways, pipelines, and electrical distribution lines) fauna present within the potential ROWs are likely adapted to anthropogenic disturbance.[313]

249. As discussed above, portions of LaSalle Creek are identified as a designated trout stream and portions are identified as AMAs.[314] Clearing of vegetation adjacent to trout streams can result in increased water temperature, rendering the habitat less suitable for the trout.[315]

250. Mr. Seeger expressed concerns about the impact of the Project on a black tail deer herd, a wolf pack, a mountain lion, a bobcat, and nesting swans, all of which he stated he has observed on his property.[316]

251. Other commenters expressed concerns about disruptions to wildlife in the MPL corridor if a second ROW were to fragment the forest habitat.[317]

252. Short-term, indirect impacts on wildlife are expected with construction activities that generate noise, dust, or disturbance of habitat. Regardless of the route chosen, wildlife will generally be displaced within the anticipated ROW during construction of the Project, with the possible exception of species habituated to human presence.[318]

253. Long-term adverse impacts on wildlife occur from the loss or conversion of habitat and habitat fragmentation. The Project would expand existing cleared corridors and, to some extent, create new corridors, depending on the chosen route. Some of the corridors would be converted from forest and shrub land to low-stature vegetation. In order to widen existing ROWs or create new ROWs, Minnkota will have to permanently clear woody vegetation within the ROW through existing forests and shrub lands. Wildlife species that previously occupied forested communities in the affected ROWs would be displaced in favor of species that prefer more open vegetation.[319]

254. New ROWs are expected to create greater impacts than impacts where an existing ROW is expanded.[320] Species that rely on shrub or grassland habitat may be less susceptible to, or may benefit from, alterations associated with HVTLs because the species would undergo fewer changes in vegetation community structure and environmental factors, such as light intensity.[321]

255. Fragmentation of habitat reduces the size of contiguous blocks of vegetation, such as forest, thus reducing the total area of continuous habitat and increasing the isolation of the habitat. Opportunistic and highly adaptable animals often succeed in highly fragmented habitats.

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313 *Id.*
314 *Id.* at 96, Fig. 15.
315 *Id.* at 97.
316 Comment by Scott Seeger at Part 2B (Mar. 2, 2017) (eDocket No. 20173-0129594-02).
317 *See* Comment by Eric Espeseth (Mar. 1, 2017) (SpeakUp) (eDocket No. 20173-129835-01); Comment by Kevin Wacker (Mar. 3, 2017) (SpeakUp) (eDocket No. 20173-129835-01).
318 Ex. 110 at 96 (Environmental Assessment).
319 *Id.* at 97.
320 *Id.*
321 *Id.*

Invasive or pioneering plant species may encroach where disturbance provides a competitive advantage. Alteration of plant community can adversely affect animal species that rely on the presence of certain plants. Fragmentation effects are greatest where large forest blocks are broken into smaller patches, reducing interior forest habitat necessary for some species, such as song birds. Such effects would be greatest where a new corridor is created, rather than where the new HVTL line parallels existing infrastructure ROWs.[322]

256. Minnkota will routinely maintain the ROW to support low-stature, non-woody vegetation, as well as make emergency repairs that may require additional clearing of vegetation. Operation, maintenance, and emergency repair activities are all anticipated to have long-term, indirect, localized impacts on birds, burrowing animals, and other foraging, breeding, or nesting species that utilize the ROW.[323]

257. Operation of the Project may result in other long-term impacts on wildlife, including the risk of avian collisions with transmission conductors and equipment resulting in injury or death of individual birds.[324] Several factors, such as body size, weight, and flight behavior affect the potential for birds to collide with overhead power lines. Larger birds, such as waterfowl, are generally the most likely to collide with transmission lines. Impacts are likely to occur more often near features that attract birds, such as wetlands, lakes, and feeding sites.[325]

258. The electrocution of large birds, such as raptors, is more commonly associated with small distribution lines than large transmission lines because the conductors are closer together or closer to grounded hardware on distribution lines. Because Minnkota's HVTL structures will be larger and the phase spacing for the Project's conductors greater compared to distribution lines, avian electrocutions are unlikely. In addition, Minnkota will build the HVTL according to Avian Power Line Interaction Committee (APLIC) recommended safety design standards for avian collisions and electrocutions with HVTLs, and will install bird flight diverters on the static line where the line crosses a water body to reduce further the likelihood of avian collisions. [326]

259. Such design standards and consultation with the DNR on the placement of bird flight diverters are appropriate to include as a Route Permit condition.[327]

260. Minnkota committed to refrain from placing HVTL structures in LaSalle Creek or within a 50-foot buffer of the creek, and to allow woody vegetation cleared from the 50-foot buffer to regrow as long as the vegetation does not pose a safety hazard. These mitigation commitments are anticipated to minimize impacts to the trout habitat.[328]

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[322] *Id.*
[323] *Id.*
[324] *Id.* at 98.
[325] *Id.*
[326] Ex. 2 at 45 (Application).
[327] Ex. 110 at 98, App. C at 8 (Environmental Assessment).
[328] *Id.* at 98-99; Ex. 2 at 45 (Application).

261. Displacement of fauna is expected to be minor and temporary in nature, and no long-term population-level impacts are anticipated from the Project, regardless of which of the routes under consideration is selected.[329]

F. Effects on Rare and Unique Natural Resources

262. Minnesota's high voltage transmission line routing factors require consideration of the proposed routes' effect on rare and unique natural resources.[330]

263. Minnesota designates species as endangered, as threatened, or as species of special concern.[331] A state-listed endangered species is defined as threatened with extinction throughout all, or a significant portion of its range, within Minnesota. A state-listed threatened species is likely to become endangered in the foreseeable future in all, or a significant portion of, its range. A species of special concern is extremely uncommon in Minnesota, or it has unique or highly specific habitat requirements that require careful monitoring of its status.[332]

264. The DNR has established several classifications of rare communities across the state, including SNAs, MBS sites of biodiversity significance, DNR high conservation value forests and MBS native plant communities. SNAs are areas designated to preserve natural features and rare resources of exceptional scientific and educational value.[333]

265. The DNR assigns a biodiversity significance rank to each site that is surveyed statewide. The rankings help to guide conservation and management activities. There are four biodiversity significance ranks: outstanding, high, moderate, and below. The biodiversity significance rank is based on presence of rare species populations, size and condition of native plant communities, and the landscape context of the site.[334]

266. Native plant communities are also identified by the DNR MBS. Native plant communities are groups of native plants that interact with one another and their environment in ways that have not been significantly changed by human activity or introduced organisms. They provide a range of ecological functions that are recognized as value for Minnesota's quality of life, as well as for their role as habitat, and in the development of the state's cultural heritage and history.[335]

267. The ROI for rare and unique natural resources varies for species and communities. For analysis of federally- and state-listed species, the ROI includes a one-mile buffer surrounding the proposed routes to provide a broad view of species that may be present, because no formal surveys have been conducted for the Project. The ROI, for analysis of impacts to rare

[329] Ex. 110 at 98 (Environmental Assessment).
[330] Minn. Stat. § 216E.03, subd. 7(b)(1) (2016); Minn. R. 7850.4100(F) (2015).
[331] Minn. Stat. § 84.0895 (2016); Minn. R. ch. 6134 (2015); Minn. R. 6212.1800-6212.2300 (2015).
[332] Minn. Stat. § 84.0895.
[333] Ex. 110 at 99 (Environmental Assessment).
[334] *Id.*
[335] *Id.* at 100.

communities, includes the anticipated ROW of the HVTL, as well as the footprint of the other elements of the Project.[336]

268. Minnkota's review of the USFWS list of federally threatened, endangered, proposed, and candidate species identified the federally-threatened gray wolf and the Northern Long-Eared bat in both Clearwater and Hubbard Counties, and the federally- threatened Canada lynx in Clearwater County.[337]

269. No critical habitat for these three species was identified in the Project area at this time.[338]

270. Minnkota reviewed the DNR's NHIS database to gather information on rare and unique natural resources within one mile of the Project. Seventeen features were identified within one mile of the proposed Project. Eight are special concern (not legally protected), one is on the watch list (not legally protected), six are rare communities (not legally protected), one is a plant listed as threatened (Clinton's bulrush), and one is a plant listed as endangered (Bog Adder's mouth).[339]

271. Minnkota also identified several sites of high biodiversity significance in the vicinity of the Project area.[340]

272. For all of the routes under consideration, the Project is not likely to adversely impact the named species or significant habitats.[341] While construction-related short-term indirect impacts may occur, these impacts would be similar to those described for non-listed flora and fauna, including temporary displacement of rare species during construction. These impacts are expected to be short-term and localized.[342]

273. Construction activities may have short- and long-term impacts on rare communities. Construction equipment may cause short-term impacts, including physical disturbance and soil compaction. Minnkota would span rare communities where feasible but some structures may have to be placed within them, causing long-term as well as short-term impacts.[343]

274. Routine maintenance, operation, and emergency repairs may have short-term, indirect, adverse impacts on rare species, including the displacement of rare birds, burrowing animals and other foraging, breeding, or nesting species that utilize the ROW or its vicinity.[344]

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[336] *Id.*
[337] Ex. 2 at 45 (Application).
[338] *Id.*; Ex. 110 at 100-101 (Environmental Assessment).
[339] Ex. 2 at 46 (Application).
[340] *Id.;* Ex. 110 at 102, Fig. 17 (Environmental Assessment).
[341] Ex. 2 at 46 (Application); Ex. 110 at 102 (Environmental Assessment).
[342] Ex. 110 at 102 (Environmental Assessment).
[343] *Id.* at 103.
[344] *Id.*

275. Some rare species frequently colonize disturbed areas and could benefit from new habitat created as a result of ground disturbance from the proposed Project.[345]

276. To the extent that each of the routes under consideration can share ROW with existing infrastructure, such as roadway, pipeline, or electrical distribution lines, the impact on rare and unique natural resources will be limited.

277. The Commission may require Minnkota to conduct field surveys to identify any rare species prior to construction within the ROW of the selected route, as part of a standard vegetation management plan or as a condition in the Commission's HVTL permit.[346]

278. Minnkota designed the Project to minimize impacts to rare and unique resources to the extent practicable. If avoiding such impacts is not feasible, Minnkota will work with regulatory agencies to identify appropriate measures to minimize impacts.[347]

279. For all of the routes under consideration, the Project is not likely to adversely impact the named species or significant habitats.[348] While construction-related, short-term, indirect impacts may occur, those impacts would be similar to those described for non-listed flora and fauna, including temporary displacement of rare species during construction. These impacts are expected to be short-term and localized.[349]

G. Application of Various Design Considerations

280. Minnesota's high voltage transmission line routing factors require consideration of the Project's applied design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity.[350]

281. The purpose of the Project is to serve MPL's pump station, which is referred to as the MPL Reliability Project.[351] The transmission line is sized to meet the expected load at the pump station. No further future expansions are contemplated for the Project area.[352]

H. Use or Paralleling of Existing Right-of-Way, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries

282. Minnesota's high voltage transmission line routing factors require consideration of the proposed routes' use or paralleling of existing ROWs, survey lines, natural division lines,

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345 *Id.*
346 Ex. 110 at 103, App. C at 6, 10 (Environmental Assessment).
347 Ex. 2 at 46 (Application).
348 *Id.*; Ex. 110 at 102 (Environmental Assessment).
349 Ex. 110 at 102 (Environmental Assessment).
350 Minn. Stat. § 216E.03, subd. 7(a), (b) (2016); Minn. R. 7850.1900, subp. 2(L) (2015).
351 MPUC Docket No. PL-5/CN-14-320.
352 Ex. 2 at 1, 7-8 (Application); Ex. 110 at 105 (Environmental Assessment).

agricultural field boundaries, as well as use of existing transportation, pipeline and electrical transmission systems or ROWs.[353]

283. Most of the route alternatives parallel or share existing ROWs for the majority of the route distance, whether it is road, transmission, or pipeline ROWs. The Co-locate Route (due to the required off-set of 100 feet from the MPL corridor), and the Seeger 5 and 6 Routes (due to the deviation from 115th Avenue), are the least consistent with this routing factor. [354]

284. The Thompson Route, and the Seeger 3 and 4 Routes, which utilize the minimal maintenance forest road that extends south from the intersection of 105th Avenue and 400th Street to State Highway 200, where the Snowmobile Trail also runs, are less consistent with the routing factors than the Proposed Route and the Seeger 2 Route.[355]

285. Of the eight routes evaluated, the Proposed Route and the Seeger 2 Route are the most consistent with the routing factors.[356] The Proposed Route follows road, distribution line, or both, for most of the length of the route. The Seeger 2 Route is contiguous with the Proposed Route until the last 2.7 miles, at which point it parallels the MPL ROW between 400th Street/County Road 96, and 200th Street. While this final MPL segment suffers from the same problem as the rest of the MPL ROW due to the required 100-foot set-off, there is less forest in the Seeger 2 Route section. Adverse impact on farmland is not as significant as it is on other land covers. Therefore, the Seeger 2 Route is less likely to be disruptive of habitat and is more consistent with the routing factors than the other Seeger Routes, or the Thompson or Co-locate Routes.

I. Electrical System Reliability

286. Minnesota's high voltage transmission line routing factors require consideration of the Project's impact on electrical system reliability.[357]

287. The Project will be constructed to meet reliability requirements.[358]

J. Costs of Constructing, Operating, and Maintaining the Facility

288. Minnesota's high voltage transmission line routing factors require consideration of the proposed routes' cost of construction, operation, and maintenance.[359]

289. The estimated total cost of the Project is approximately $7.2 million, including permitting, land acquisition, design and construction of the substation and transmission line.[360] This estimate will vary depending on which route is selected. In addition, annual operation and

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353 Minn. Stat. § 216E.03, subd. 7(b)(8), (9) (2016); Minn. R. 7850.4100(H), (J) (2015).
354 Ex. 110 at 130 (Environmental Assessment).
355 *Id.*
356 *Id.*
357 Minn. Stat. § 216E.03, subd. 7(b)(10) (2016); Minn. R. 7850.4100(K) (2015).
358 Ex. 2 at 8 (Application).
359 Minn. R. 7850.4100(L) (2015).
360 Ex. 2 at 8-9 (Application); Ex. 110 at 27 (Environmental Assessment).

maintenance costs, including ROW maintenance, are anticipated to be approximately $2,000 per mile.[361]

290. Minnkota provided no information on the specific costs of routes other than its Proposed Route.

K. Cumulative Potential Effects

291. The Commission must consider the cumulative impact on the environment that results from incremental effects of the Project in addition to other past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.[362]

292. Additionally, the Commission must take into account the cumulative potential effects of the Project. "Cumulative potential effects" is defined as the effect on the environment that results from the incremental effects of a project in combination with other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources. Other projects that must be taken into account include future projects that are actually planned, or for which there is a basis to expect they will occur.[363]

293. Significant cumulative potential effects can result from individually minor projects taking place over a period of time. In analyzing the contributions of past projects to cumulative potential effects, it is not required to list or analyze the impacts of individual past actions, unless such information is necessary to describe the cumulative potential effects. In determining whether there is a basis to expect a project will occur, the Commission must determine whether sufficiently detailed information is available about the project to contribute to the understanding of cumulative potential effects. A project that has not been permitted may still be found likely to occur if, for example, applications for permits have been filed, and detailed plans and specifications have been prepared for the project.[364]

294. The EA took into account actions that have occurred in the past and their associated impacts in its overall analysis of the Project. For example, the MPL corridor was included in the EA analysis of each of the factors analyzed and discussed above.[365]

295. A pipeline routing permit application has been filed with the Commission by Enbridge Pipeline, Limited Partnership (Enbridge Energy) for a pipeline routing permit for the Line 3 Replacement Project (Enbridge Line 3). Part of this project would occur in an environmentally relevant area to the Project.[366] Specifically, Enbridge Line 3 would intersect the Project area if the Co-locate Route were chosen.[367]

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[361] Ex. 2 at 8 (Application).
[362] Minn. R. 4410.0200, subp. 11 (2015).
[363] *Id.*, subp. 11a.
[364] *Id.*
[365] Ex. 110 at 104-105 (Environmental Assessment).
[366] *Id.* at 105; *see* http://mn.gov/commerce/energyfacilities//resource.html?Id=34130.
[367] Ex. 110 at 100 (Environmental Assessment).

296. A portion of the Enbridge Line 3 diverts from the existing line 3 and follows the MPL corridor south across the Clearwater-Hubbard County line, overlapping the environmentally relevant area of the Project. Enbridge Line 3 requires two approvals from the Commission before it may be constructed – a certificate of need and a pipeline route permit.[368] This analysis assumes that the permits will be granted and Enbridge Line 3 constructed as proposed in the environmentally relevant Project area, in following the MPL corridor.

297. If both the proposed Project and the Enbridge Line 3 project were under construction at the same time, there could be short-term adverse cumulative impacts on aesthetics, noise, transportation and public services, recreation and tourism, agriculture, and non-listed and listed wildlife species.[369]

298. Long-term cumulative effects are not anticipated to aesthetics, land use compatibility, cultural values, displacement, noise, property values, electronic interference, transportation, public services, socioeconomic impacts, recreation and tourism, electric and magnetic fields, agriculture, forestry, mining and mineral resources, archaeological and historic resources, and non-listed wildlife.[370]

299. Long-term cumulative effects from induced stray voltage could occur if the DOC-EERA's recommended 100-foot offset from the Enbridge Line 3 and the Project's HVTL alignment is not adopted, or if a 100-foot offset proves insufficient. Should that occur, low resistance grounding systems are recommended as mitigation for induced voltage.[371]

300. The cumulative effect of the Project with the Enbridge Line 3 project could result in adverse regional impacts to wetlands because of the removal of woody vegetation from the project ROWs for construction and operation. Removal of woody vegetation from forested and shrub wetlands would convert the wetland to a different vegetation community and wetland type. While the addition of the Enbridge Line 3 project would increase the area that is affected, due to the amount of surrounding shrub and forested wetlands in the region, the overall impact is not anticipated to be significant.[372]

301. Because portions of LaSalle Creek are identified as a designated trout stream and as AMAs, the impact to LaSalle Creek would be minimized by drilling horizontally beneath LaSalle Creek to place the pipeline for the Enbridge Line 3.[373]

302. Permanent removal of trees and shrubs along the ROWs for both the proposed Project and the Enbridge Line 3 project could have significant cumulative effects. These impacts could be moderated by paralleling existing corridors.[374]

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[368] Ex. 110 at 106 (Environmental Assessment); *see* MPUC Docket Nos. PL-9/CN-14-916, PL-9/PPL-15-137.
[369] Ex. 110 at 107-117 (Environmental Assessment).
[370] Ex. 110 at 107-117 (Environmental Assessment).
[371] *Id.* at 113.
[372] *Id.* at 115.
[373] *Id.*
[374] *Id.* at 116.

303. A field survey is recommended if the Enbridge Line 3 is constructed in the relevant area to determine what impact there would be on rare species in the Enbridge Line 3's ROW prior to construction. If rare species are found, the permittee would be required to coordinate with the USFWS or the DNR regarding avoidance or mitigation.[375]

304. Cumulative impacts to rare communities could be significant if the proposed Project and the Enbridge 3 Line are constructed in close proximity to one another and disturbance is not minimized by paralleling existing corridors.[376]

305. On July 25, 2014, Minnesota Pipe Line Company, LLC (MPL) filed a certificate of need application to increase the pumping capacity on the system's newest pipeline – MPL Line 4 – to supply crude oil to Minnesota refineries, referred to as the MPL Reliability Project (Docket No. PL-5/CN-14-320).[377]

306. The Minnkota MPL-Laporte 115 kV HVTL proposed project is intended to provide electric service for the new Hubbard County pipeline pump station (MPL Reliability Project), which is an associated action.[378]

307. On August 31, 2015, the Commission granted Minnesota Pipe Line Company a certificate of need for the MPL reliability project.[379]

308. In response to a query from EERA in the Minnesota Pipe Line Company's Reliability Project docket, MPL has calculated that the closest residence to the pump station is over 500 feet; at that distance, noise should be well within the state standard. MPL also noted that as station designs are finalized, they will perform acoustic modeling to affirm that assumption or, failing that, to determine what provisions might be needed to be incorporated into designs to achieve compliance.[380]

L. Adverse Human and Natural Environmental Effects that Cannot be Avoided

309. Minnesota's high voltage transmission line routing factors require consideration of the adverse human and natural environmental effects that cannot be avoided for each proposed route.[381]

310. Unavoidable impacts are those that remain after applying mitigation measures. Unavoidable short-term adverse impacts related to construction of each of the routes under consideration are expected to include impacts to existing flora and fauna, soil disturbance, and

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[375] Ex. 110 at 117 (Environmental Assessment).

[376] *Id.*

[377] *Id. at 104*.

[378] *Id. at 105*.

[379] *Id.*

[380] *Id. at 109*.

[381] Minn. Stat. § 216E.03, subd. 7(b)(5), (6) (2016); Minn. R. 7850.4100(M) (2015).

traffic. In those locations where construction would be adjacent to an existing ROW, the impacts would be reduced.[382]

311. Unavoidable adverse effects from the proposed Project include: loss of forested areas, including forested wetlands within the ROW; visual impacts; impacts to migratory birds from collisions with the lines; and potential impacts to property values.[383]

312. Minnkota will implement measures as identified by regulatory agencies to minimize unavoidable impacts.[384]

M. Irreversible and Irretrievable Commitments of Resources

313. Minnesota's high voltage transmission line routing factors require consideration of the irreversible and irretrievable commitments of resources that are necessary for each proposed route.[385]

314. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of those resources have on future generations. Irreversible effects result primarily from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of action.[386]

315. There are few commitments of resources associated with this Project that are irreversible and irretrievable, but those few resources primarily relate to construction of the Project.[387]

316. Only construction resources, such as aggregate, concrete, steel, and hydrocarbon fuels, will be irreversibly and irretrievably committed to this Project.[388]

XV. SUMMARY OF POTENTIAL IMPACTS OF ROUTES CONSIDERED

317. The evidence on the record demonstrates the Proposed Route, the Co-locate Route, the Thompson Route, and the Seeger 2, 3, 4, 5, and 6 Routes do not present the potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.

318. The evidence on the record demonstrates that the Proposed Route, the Co-locate Route, the Thompson Route, and the Seeger 2, 3, 4, 5, and 6 Routes all satisfy the route permit factors set forth in Minn. Stat. § 216E.04, subd. 8 (2016), (incorporating by reference the

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[382] Ex. 110 at 118 (Environmental Assessment).
[383] *Id.*
[384] Ex. 2 (Application); Minnkota's Proposed Findings at 27 (Mar. 14, 2017) (eDocket No. 20173-129853-01).
[385] Minn. Stat. § 216E.03, subd. 7(b)(11) (2016); Minn. R. 7850.4100(N) (2015).
[386] Ex. 110 at 118 (Environmental Assessment).
[387] *Id*.
[388] *Id*.

factors set forth in Minn. Stat. § 216E.03, subd. 7) and Minn. R. 7850.4100.

319. The evidence on the record further demonstrates that the Proposed Route and the Seeger 2 Route best satisfy the route permit factors in statute and rule.

320. The Proposed Route is anticipated to have minimal impacts in all respects according to the route permit factors in statute and rule, with the exception of its impact on rare and unique resources. The Proposed Route is anticipated to have moderate adverse impacts on rare and unique resources because portions of the route intersect areas of rich biodiversity.[389] Minnkota has attempted to minimize the impacts on rare and unique resources by following existing infrastructure for the majority of the length of the Proposed Route. Where the Proposed Route does not follow existing infrastructure, Minnkota has, for the most part, directed the Proposed Route around the edges of areas of rich biodiversity.[390]

321. The Proposed Route is generally anticipated to have a minimal impact on vegetation and aesthetics. However, the Proposed Route is planned to diverge east briefly from its primary route contiguous with the distribution line and 115th Avenue in Lake Alice Township in order to avoid the front of a cemetery located on that road.[391] The jog to the east of the cemetery will involve additional ROW clearing away from existing infrastructure, with the resulting impact on vegetation and possible wildlife.[392]

322. Even with the Proposed Route directed away from the 115th Avenue side of the cemetery, the new HVTL is expected to be visible to visitors to the cemetery.[393]

323. The Seeger 2 Route is anticipated to have minimal impacts in all respects according to the route permit factors in statute and rule, with the exceptions of moderate impacts on rare and unique resources, and moderate impacts on stray voltage. The Seeger 2 Route only intersects areas of rare and unique resources in the portion of the route where it is contiguous with the Proposed Route.[394]

324. The Seeger 2 Route is contiguous with the Proposed Route until the Seeger 2 Route turns south at the intersection of 400th Street/County Road 96 and the MPL corridor/Co-locate Route.[395] The cause of the moderate stray voltage impacts attributed to the Seeger 2 Route is its co-location within the MPL corridor for the final portion of its route. If the Seeger 2 Route is chosen, the stray voltage may be mitigated by the 100-foot offset between the HVTL alignment and the MPL corridor. The adjacent ROW would have significantly less impact on surface waters and vegetation in the 1.7 miles of MPL corridor portion of the Seeger 2 Route than it would for those routes that follow the entire MPL corridor (the Co-locate Route), or only the longer northern portion of the MPL corridor (the Seeger 3 and 5 Routes). If the Seeger 2 Route is chosen and other

[389] Ex. 110 at 129, Fig. 17 (Environmental Assessment).
[390] Ex. 2 at 13 (Application).
[391] Ex. 110 at Fig. 1 (Environmental Assessment).
[392] *Id.,* App. A at Plates 20-21.
[393] *Id.* at 45.-46.
[394] *Id.* at Fig. 17.
[395] *Id.* App. F at Plates 16-18.

stray voltage mitigation measures are needed, Minnkota can implement a low-level grounding system to pass interfering current to ground.[396]

325. The Seeger 2 Route would avoid the Seeger property along with the properties of other landowners along 115th Avenue will be avoided. In addition, the Seeger 2 Route is expected to avoid most or all of the Tisdell property.

326. The Co-locate Route is anticipated to have moderate adverse impacts on aesthetics, recreation, stray voltage, tourism, surface waters, vegetation, and rare and existing resources. The Co-locate Route is not anticipated to utilize existing ROW effectively because of the required 100-foot separation from the MPL pipeline. [397]

327. The Thompson Route is anticipated to have moderate adverse impacts on aesthetics, recreation vegetation, and is not anticipated to use or parallel existing ROW.[398]

328. The Seeger 3 Route is anticipated to have moderate adverse impacts on aesthetics, recreation, stray voltage, tourism, surface waters, vegetation, rare and unique resources, and is not anticipated to utilize ROW effectively.[399]

329. The Seeger 4 Route is anticipated to have moderate adverse impacts on aesthetics, recreation, tourism, rare and unique resources, and is not anticipated to utilize ROW effectively.[400]

330. The Seeger 5 Route is anticipated to have moderate adverse impacts on aesthetics, recreation, stray voltage, tourism, surface waters, wetlands, vegetation, rare and unique resources, and is not anticipated to utilize ROW effectively.[401]

331. The Seeger 6 Route is anticipated to have moderate adverse impacts on aesthetics, wetlands, vegetation, rare and unique resources, and is not anticipated to utilize ROW effectively.[402]

332. Should the Co-locate Route be chosen in this proceeding, and the Enbridge Line 3 Project approved, there could be cumulative adverse regional impacts to wetlands and significant adverse cumulative effects on vegetation and rare and unique species.

XVI. NOTICE

333. Minnesota statutes and rules require Minnkota to provide certain notice to the public and local governments before and during the Application for a Route Permit process.[403]

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[396] Exhibit 110 at 68 (Environmental Assessment).
[397] *Id.* at Table 19.
[398] *Id.*
[399] *Id.*
[400] *Id.*
[401] *Id.*
[402] *Id.*
[403] Minn. Stat. §§ 216.03, subd. 4, 216E.04, subd. 4 (2016); Minn. R. 7850.3300, .2100, subps. 2, 4 (2015).

334. Minnkota provided notice to the public and local governments in satisfaction of Minnesota statutory and rule requirements.[404]

335. Minnesota statutes and rules also require the DOC-EERA and the Commission to provide certain notice to the public throughout the route permit process.[405]

336. The DOC-EERA and the Commission provided the notice in satisfaction of Minnesota statutes and rules.[406]

XVII. COMPLETENESS OF ENVIRONMENTAL ASSESSMENT

337. The EA process is the alternative environmental review approved by the Environmental Quality Board for high voltage transmission lines. The Commission is required to determine the completeness of the EA.[407] An EA is complete if the EA and the record address the issues and alternatives identified in the Scoping Decision.[408]

338. The evidence in the record demonstrates that the EA is adequate because the EA and the record created at the public hearing and during the subsequent comment period address the issues and alternatives raised in the Scoping Decision.[409]

Based upon the foregoing Findings of Fact and the record in this proceeding, the Commission makes the following:

CONCLUSIONS

1. The Commission has jurisdiction to consider Minnkota's Application for a Route Permit pursuant to Minn. Stat. §§ 216E.02, .04.

2. The Commission determined that the Application was substantially complete and accepted the Application on August 11, 2016.[410]

3. The DOC-EERA has conducted an environmental analysis of the Project for purposes of this route permit proceeding and the EA satisfies Minn. R. 7850.3700.

4. Minnkota gave notice as required by Minn. Stat. § 216E.04, subd. 4; Minn. R. 7850.2100, subps. 2, 4, .3300.

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[404] *See* Ex. 3 (Notice of Route Permit Application Submission); Ex. 6 (Affidavit of Publication of Notice of Public Hearing February 16, 2017).
[405] Minn. Stat. § 216E.04, subd. 6 (2016); Minn. R. 7850.2300, .3500, .3700, .3800 (2015).
[406] Ex. 7 (Notice of Comment Period on Application Completeness); Ex. 9 (Commission Meeting Notice on Completeness); Ex. 13 (Notice of Public Information and Scoping Meeting); Ex. 7 (Published Notice of Public Information and Scoping Meeting); Ex. 107 (Scoping Decision); Ex. 109 (Notice of Availability of Environmental Assessment); Ex. 111 (Environmental Assessment Notice in EQB Monitor); Ex. 20 (Public Hearing Notice); Ex. 6 (Published Public Hearing Notice).
[407] Minn. R. 7850.3900, subp. 2 (2015).
[408] *Id.*
[409] *See* Ex. 107 (Scoping Decision); Ex. 110 (Environmental Assessment).
[410] Ex. 12 (Order Finding Application Complete and Varying Rule).

5. Notice was provided by the Commission and the DOC-EERA as required by Minn. Stat. § 216E.04, subd. 6; Minn. R. 7850.3500, subp. 1, .3700, subps. 2, 3, 6, .3800.

6. A public hearing was conducted in a community near the Project area. Proper notice of the public hearing was provided, and the public was given the opportunity to speak at the hearing and to submit written comments.

7. All procedural requirements for the Route Permit were met.

8. As described in the Summary of Potential Impacts of Routes Considered, the evidence on the record demonstrates that the route permit should be granted for either the Proposed Route or for the Seeger 2 Route because these two routes best satisfy the route permit factors.

9. The evidence on the record demonstrates that the general route permit conditions are appropriate for the Project.

10. The Route Permit should require Minnkota to obtain all required local, state, and federal permits and licenses, to comply with the terms of those permits or licenses, and to comply with all applicable rules and regulations.

11. Any of the forgoing Findings of Fact more properly designated Conclusions of Law are hereby adopted as such.

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN
CLEARWATER AND HUBBARD COUNTIES

ISSUED TO
MINNKOTA POWER COOPERATIVE, INC.

PUC DOCKET NO. ET-6/TL-16-327

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

MINNKOTA POWER COOPERATIVE, INC.

Minnkota Power Cooperative, Inc. is authorized by this route permit to construct and operate approximately 9.4 miles of new 115 kilovolt (kV) transmission line in Clearwater and Hubbard counties, Minnesota.

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

Approved and adopted this _21st_ day of _June, 2017__

BY ORDER OF THE COMMISSION

Janet D. Gonzalez for

Daniel P. Wolf,
Executive Secretary

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FIGURES

ATTACHMENTS

1.0 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Minnkota Power Cooperative, Inc. (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes Permittee to construct and operate approximately 9.4 miles of new 115 kV transmission line in Clearwater and Hubbard counties, Minnesota (a.k.a. MPL-Laporte Line or Project), as identified in the attached route permit maps, hereby incorporated into this document.

1.1 Pre-emption

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

2.0 PROJECT DESCRIPTION

The Project includes the construction and operation of approximately 9.4 miles of new overhead 115 kV transmission line between the Minnesota Pipeline Company (MPL) Itasca Station and a newly proposed substation located west of the City of Laporte, Minnesota.

2.1 Project Location

The proposed Project is located in Clearwater and Hubbard counties, Minnesota, approximately 25 miles north of Park Rapids in the townships of Itasca, Lake Hattie, and Lake Alice.

County	Township Name	Township	Range	Section
Hubbard	Lake Alice	T143N	35W	4
Hubbard	Lake Alice	T143N	35W	5
Hubbard	Lake Alice	T143N	35W	8
Hubbard	Lake Alice	T143N	35W	9
Hubbard	Lake Alice	T143N	35W	17
Hubbard	Lake Hattie	T144N	35W	31
Hubbard	Lake Alice	T144N	35W	32
Clearwater	Itasca	T144N	36W	12
Clearwater	Itasca	T144N	36W	13
Clearwater	Itasca	T144N	36W	24
Clearwater	Itasca	T144N	36W	25
Clearwater	Itasca	T144N	36W	26

Clearwater	Itasca	T144N	36E	36

2.2 Substations and Associated Facilities

The associated facilities consist of a proposed substation located adjacent to the Minnesota Pipe Line Company pumping station (T143N R35W Sec. 17 NE ¼) and a tap of an existing 115 kV transmission line (T144N R36W Sec. 12 NW ¼). The proposed new 115/4.16 kV substation will have a 10 MVA transformer; a 115 kV disconnect, fusing and 115 kV and a 5 kV circuit breakers; a low side bus, metering equipment, station service, power factor correction capacitors, disconnect and a control house containing electrical/communications equipment enclosure.

In addition to the substation, there will be a system fault protection installed and there are two options under consideration:
The first option consists of a 115 kV circuit breaker added within the existing Otter Tail Power Company Northwoods Substation in addition to the proposed new substation located adjacent to the pumping station. The second option consists of a 115 kV breaker station on the north end of the project, along with the proposed new substation on the south end of the project adjacent to the existing pipeline pumping station. The proposed breaker station would be located on property owned by Otter Tail Power Company and Minnesota Dakota Generation Company.

2.3 Structures

The primary tangent structures authorized for the Project be will single-pole, wood or steel structures with horizontal post insulators and a single shield wire. The structures will be direct-embedded, self-supporting (un-guyed) poles. The structures will have an average height of 80-110 feet with a 300-foot to 350-foot span between structures.

However, specialty structures are authorized for the Project where it is necessary to cross wetlands, including guyed, three-pole structures with cross arms. The table below details specifics on the various structure types as presented in the route permit application

Line Type	Conductor type	Structure		Diameter (inches)	Height (feet)	Span (feet)
		Type	Material			
115 kV	266.8 MCM 26/7 ACSR	Monopole (horizontal post)	Wood, steel, or ductile iron	24 to 36	80-110	300-350
115 kV	266.8 MCM 26/7 ACSR	Two pole with cross arms	Wood, steel, or	24 to 36	80-110	350-500

			ductile iron			
115 kV	477 ACSR	Three pole guyed with cross arms	Wood, steel, or ductile iron	24 to 36	80-110	500-1,500

2.4 Conductors

The single circuit structures will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 266.8 thousand circular mil aluminum core steel reinforced (ACSR). For the longer span (approximately 1,500 feet) crossing LaSalle Creek, a 477 ACSR or similar conductor will be used. The shield wire will be 0.528 optical ground wire.

3.0 DESIGNATED ROUTE

The approved route width for the project varies between 150-450 feet along the transmission line and 400-810 feet at the interconnection and Substation sites. The route designated by the Commission in this permit is the route described below and shown on the route maps attached to this permit.

The new 115 kV transmission line originates in Section 12 of Township 144N, Range 36W in Itasca Township where it interconnects with Otter Tail Company's 115 kV line then extends west and south, adjacent to existing roadway right-of-way (ROW) along 281st Avenue for approximately 3.7 miles. The HVTL then turns east and southeast and cuts cross-country until it reaches State Highway 200. Then HVTL continues southeast adjacent to State Highway 200 and crosses the county line. Just after entering Hubbard County, the line turns east and is located adjacent to 400th Street for approximately 1.7 miles. The HVTL turns south at 115th Avenue and continues south adjacent to existing roadway ROW for approximately 2.0 miles before turning west for approximately 2,350 feet adjacent to County Road 95. The HVTL then turns south, crossing County Road 95 and entering the new Substation site in Section 17 of Township 143N, Range 35W.

The identified route widths will provide the Permittee with flexibility for minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized by the Commission.

4.0 RIGHT-OF-WAY

The approved right-of-way width for the project is up to 100 feet (50 feet on each side of the transmission centerline). Select locations may require a slightly wider right-of-way to accommodate transmission line guy wires and anchors. In certain areas, a narrower ROW may be utilized where paralleling an existing ROW allows for a portion of the ROWs to overlap or be shared.

This permit anticipates that the right-of-way will generally conform to the anticipated alignment as noted on the attached route permit maps unless changes are requested by individual landowners or unforeseen conditions are encountered or are otherwise provided for by this permit.

Any right-of-way modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

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

5.0 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the transmission line and associated facilities over the life of this permit.

5.1 Permit Distribution

Within 30 days of permit issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. In no case shall the landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. An affected landowner is any landowner or designee that is within or adjacent to the permitted route.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.[1]

[1] http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf

5.2 Notification

The Permittee shall notify landowners or their designee at least 14 days in advance but not greater than 60 days in advance of conducting construction or maintenance activities on the property related to the Project.

5.3 Construction and Operation Practices

The Permittee shall follow those specific construction practices and material specifications described in Minnkota Power Cooperative Application to the Commission for a route permit for the MPL-Laporte 115 kV transmission line project, dated June 2, 2016, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

5.3.1 Field Representative

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

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

5.3.2 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the transmission line of the terms and conditions of this permit.

5.3.3 Public Services, Public Utilities, and Existing Easements

During construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these will be temporary and the Permittee will restore service promptly. Where any impacts to utilities have

the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall work with the landowners, townships, cities, and counties along the route to accommodate concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

5.3.4 Temporary Work Space

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

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats shall be used to minimize impacts on access paths and construction areas where warranted by the presence of wetlands or other sensitive areas.

5.3.5 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0010 to 7030.0080. Construction and maintenance activities shall be limited to daytime working hours to the extent practicable to ensure nighttime noise level standards will not be exceeded.

5.3.6 Aesthetics

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

5.3.7 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program.

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

In accordance with MPCA requirements, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the MPCA.

5.3.8 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions where practicable and shall be according to permit requirements by the applicable permitting authority. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area.

Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by the Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

5.3.9 Vegetation Removal and Protection

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

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

5.3.10 Application of Pesticides

The Permittee shall restrict pesticide use in the right-of-way to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property that lies within the right-of-way. The landowner may request that there be no application of pesticides on any part of the site right-of-way within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners, and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.3.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

5.3.13 Roads

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

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

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.

5.3.14 Archaeological and Historic Resources

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

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law

enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

5.3.15 Avian Protection

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

5.3.16 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.3.17 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.3.18 Pollution and Hazardous Wastes

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

5.3.19 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.4 Electrical Performance Standards

5.4.1 Grounding

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

5.4.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements. The transmission line shall be equipped with protective devices to safeguard the public if an accident occurs.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of these permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

6.0 SPECIAL CONDITIONS

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

6.1 Clean Water Act Permit

The Permittee shall coordinate with the U.S. Army Corps of Engineers regarding any Clean Water Act Section 404 Permit that may be required for the project. If a Section 404 Individual Permit is required for any project activity, then a Minnesota Pollution Control Agency Clean Water Act Section 401 Water Quality Certification or waiver must also be obtained as part of the permitting process, in order to comply with the state water quality standards.

7.0 DELAY IN CONSTRUCTION

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

8.0 COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

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

9.0 COMPLIANCE REQUIREMENTS

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

9.1 Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

9.2 Status Reports

The Permittee shall report to the Commission on progress during finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly. Reports shall begin with the submittal of the plan and profile for the project and continue until completion of restoration.

9.3 Notification to Commission

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

9.4 As-Builts

Within 180 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

9.5 GPS Data

Within 180 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

10.0 PERMIT AMENDMENT

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

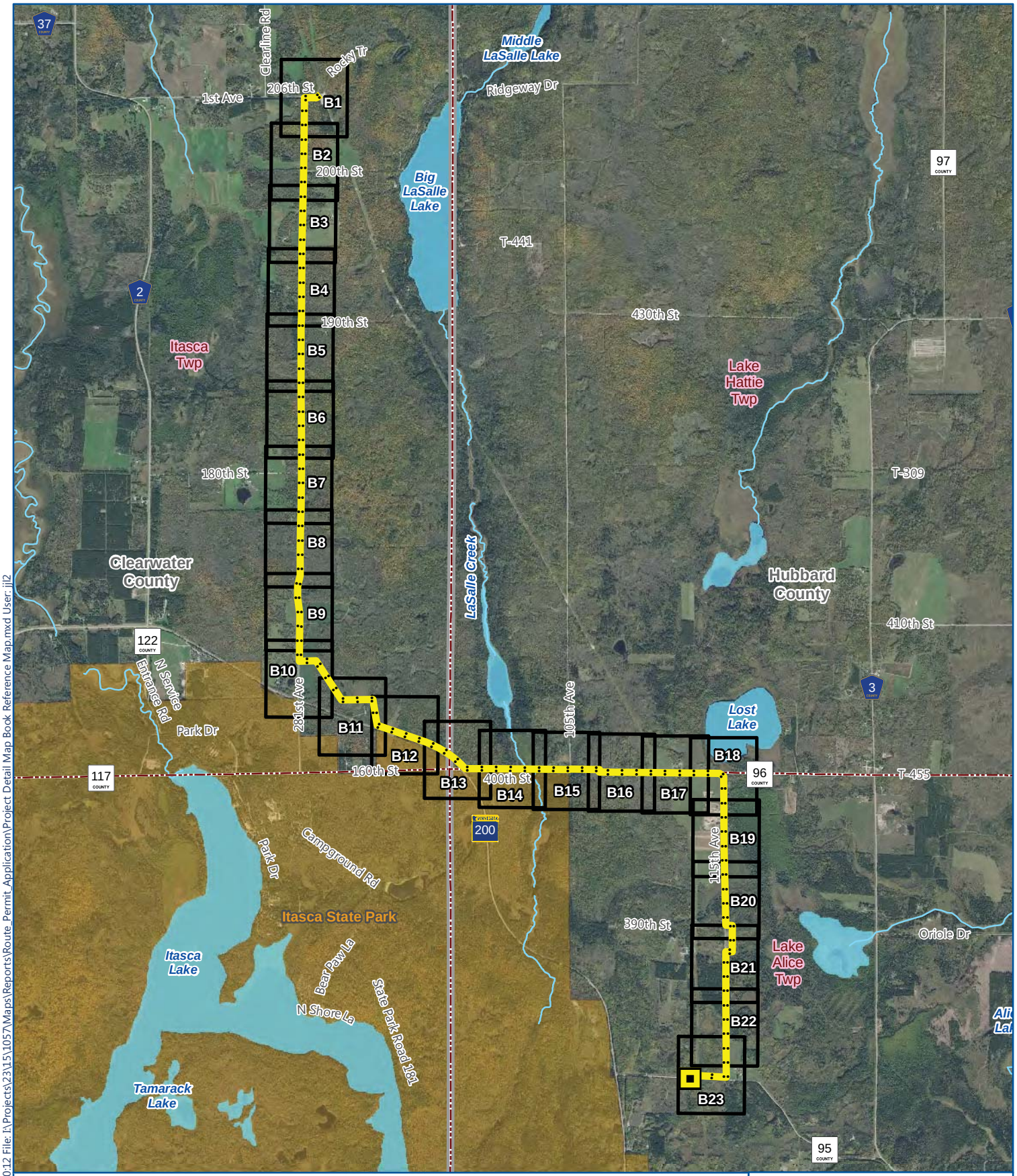
11.0 TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

12.0 REVOCATION OR SUSPENSION OF THE PERMIT

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



New Substation
Proposed Route
PWI Watercourse
PWI Basin
Township Boundary
Map Book Reference Indicator
County Boundary
State Park

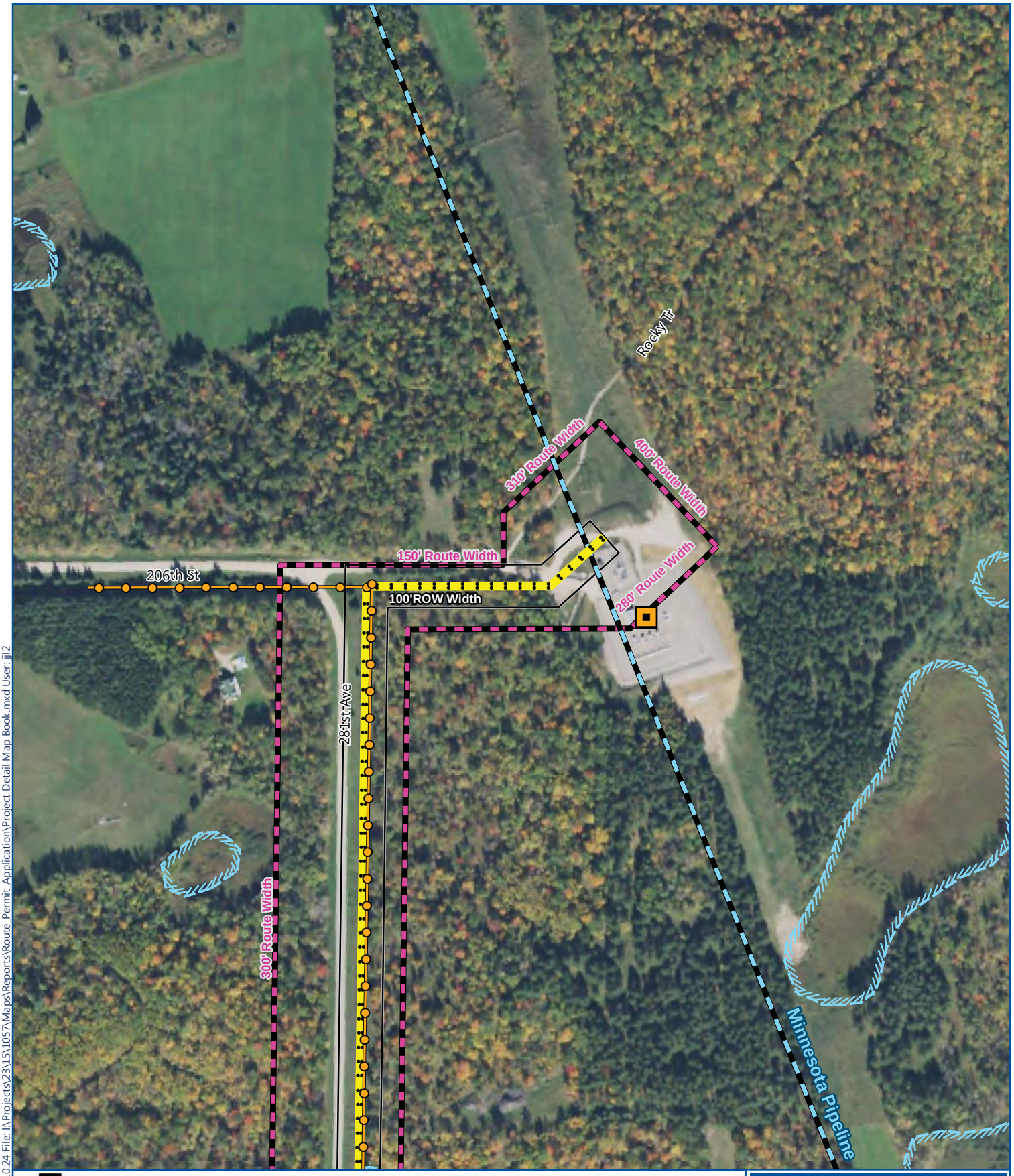
N

0 2,250 4,500
Feet

Image Source: FSA (2015)

PROJECT DETAIL MAP
BOOK REFERENCE MAP
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and Hubbard Counties

Barr Footer: ArcGIS 10.4, 2016-05-26 10:12 File: I:\Projects\23\15\1057\Maps\Reports\Route_Permit_Application\Project Detail Map Book Reference Map.mxd User: jjl2



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

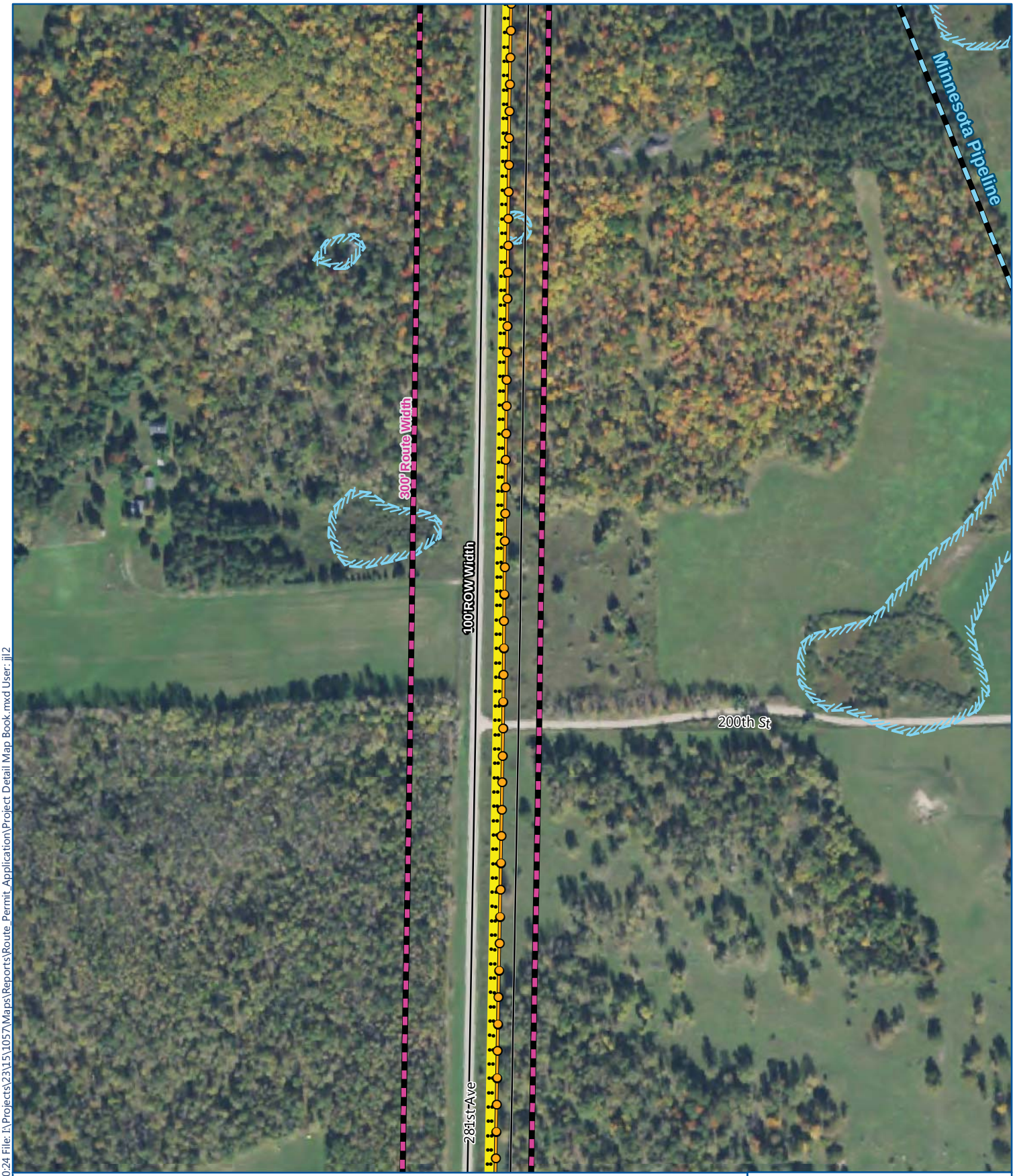
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 1 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-1



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

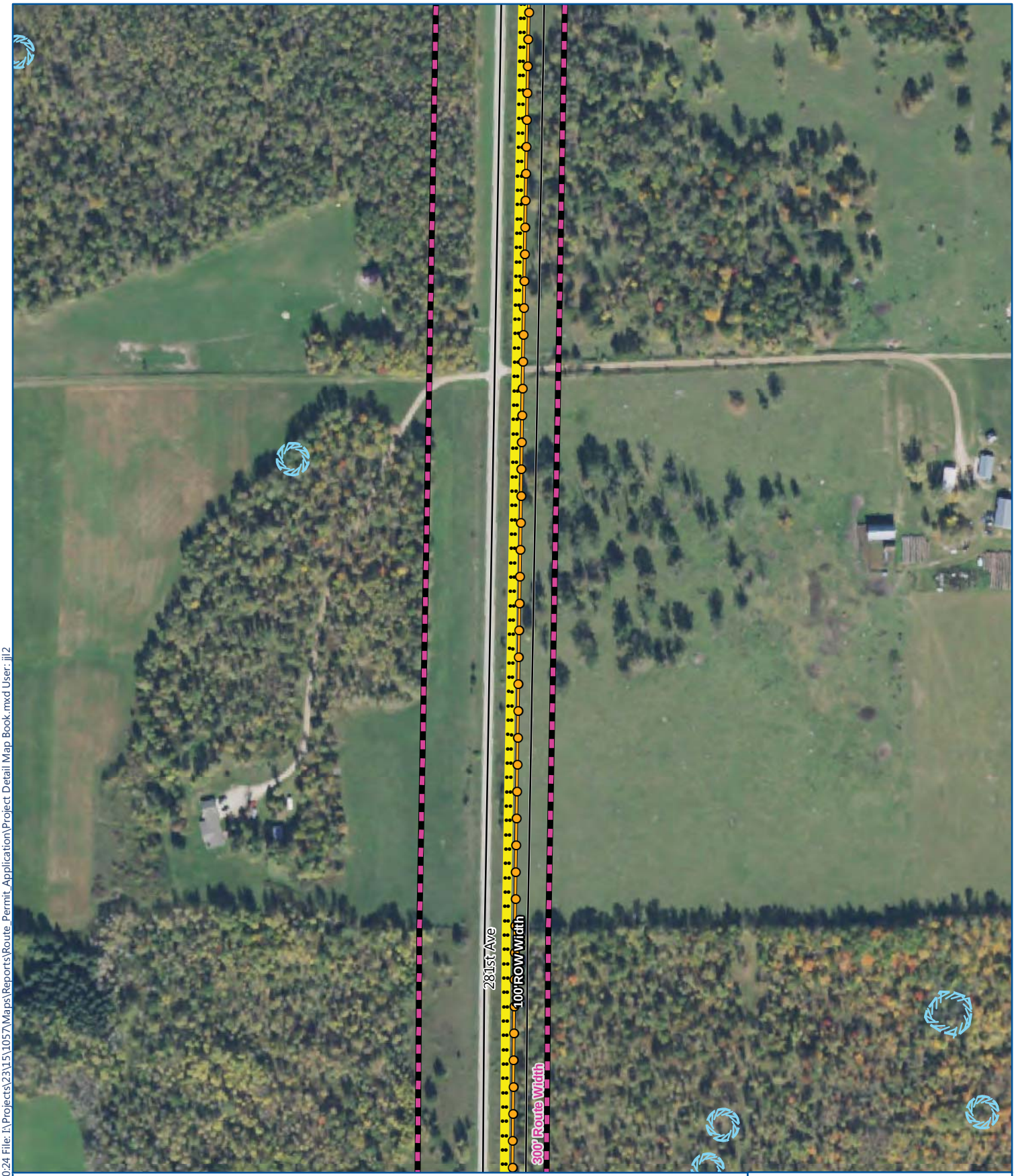
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 2 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-2



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 3 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-3

New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

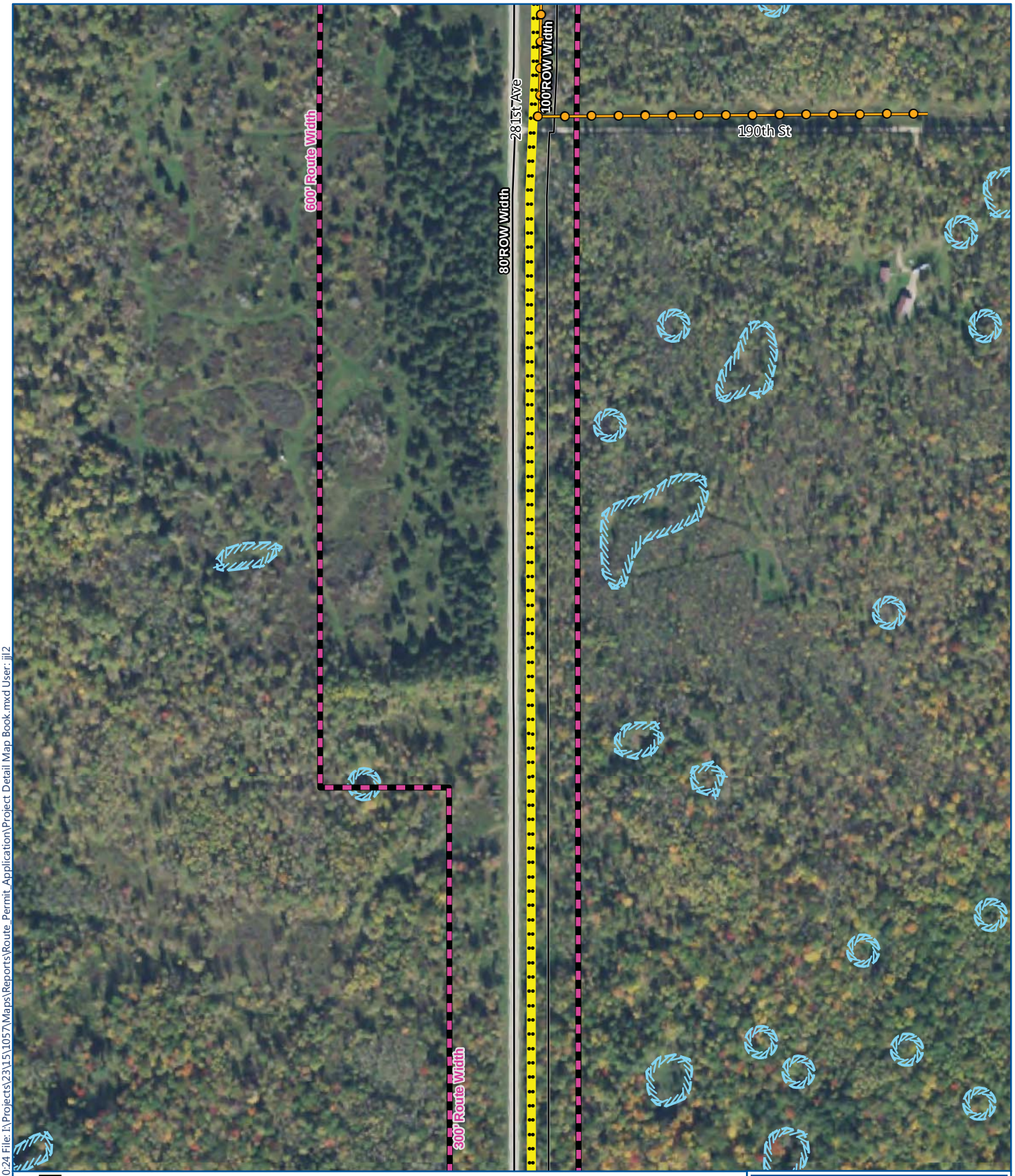
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 4 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-4



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 5 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-5

New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

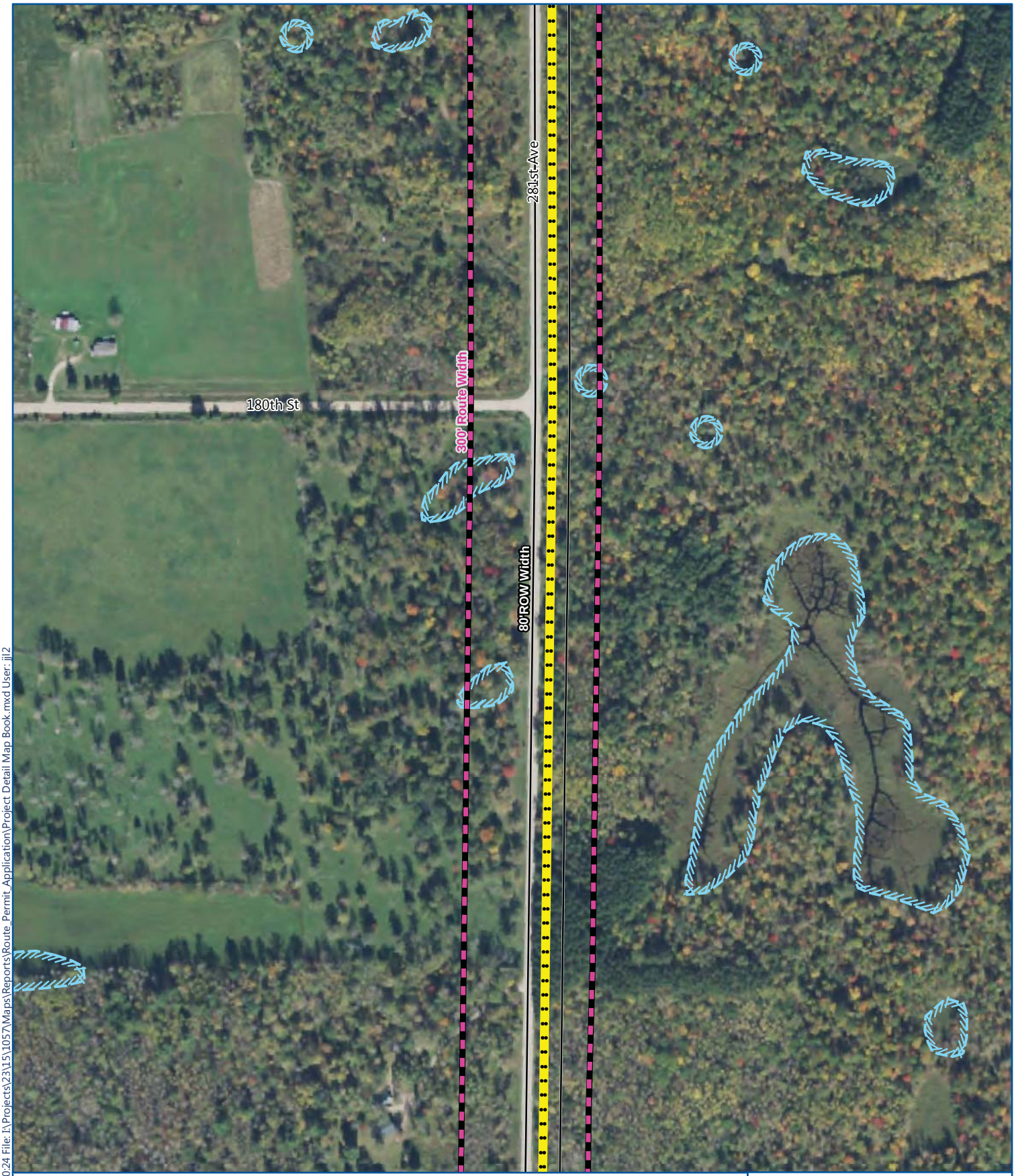
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 6 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-6



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 7 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-7

New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

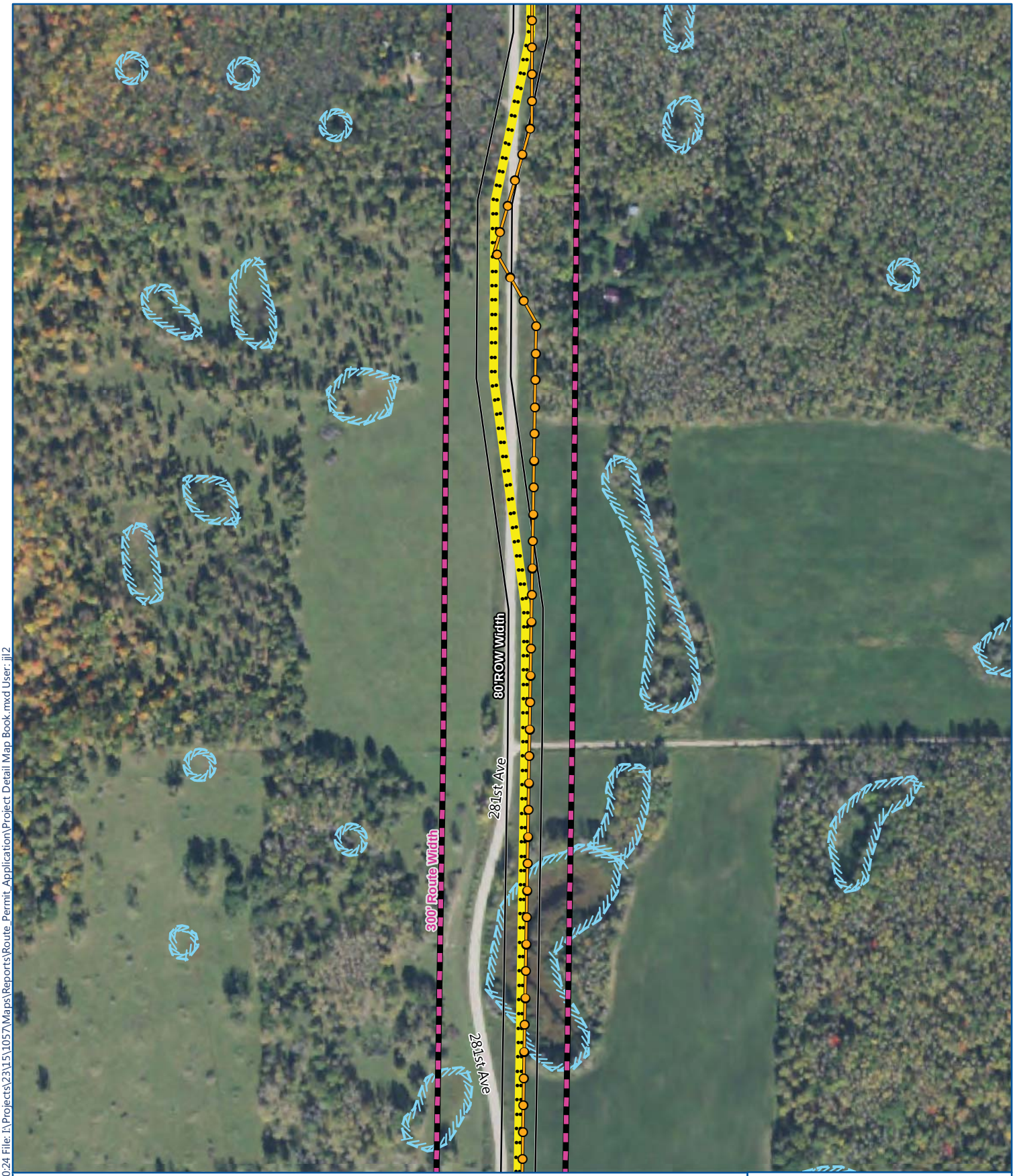
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 8 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-8



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 9 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-9

New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

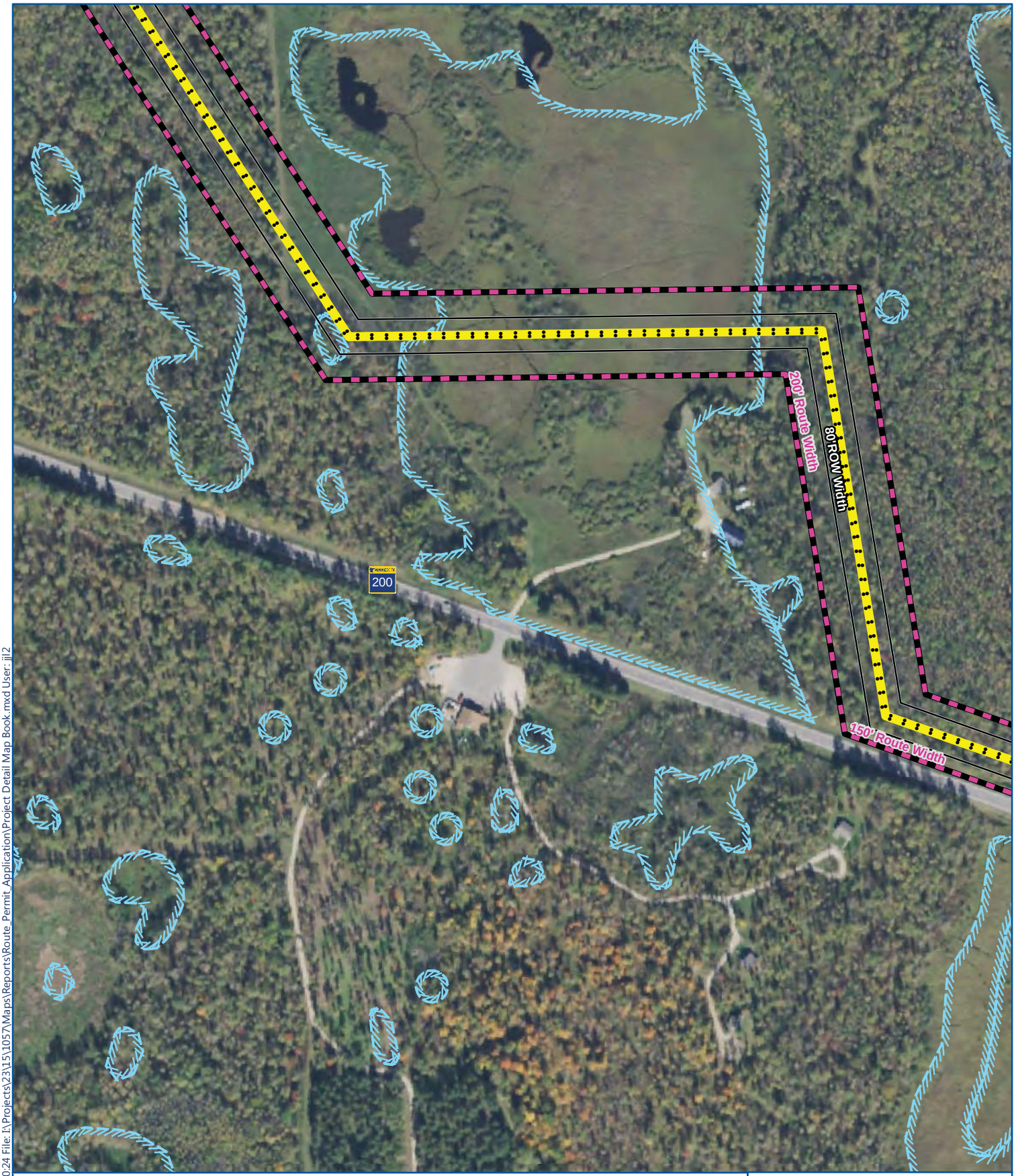
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 10 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-10



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

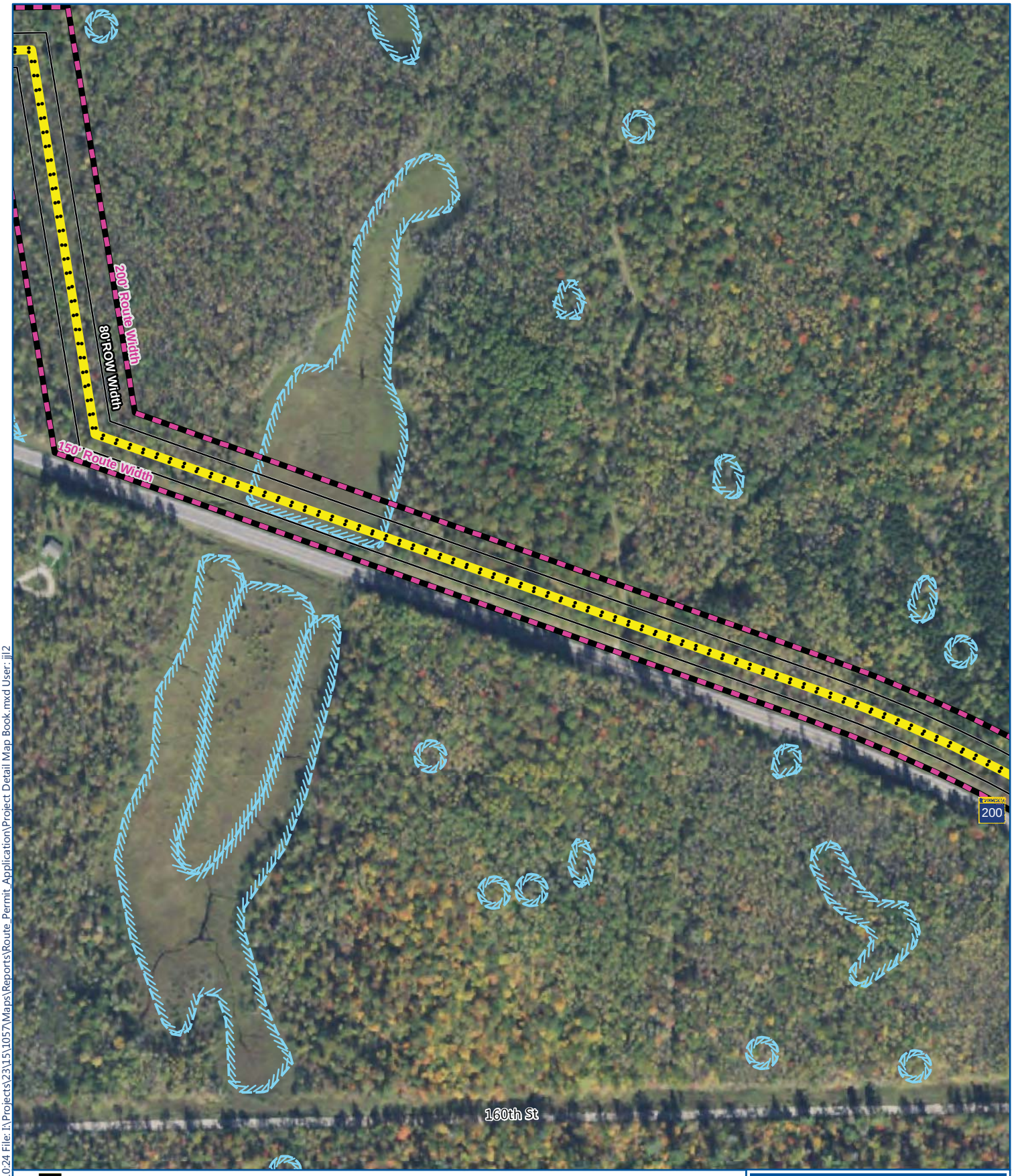
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 11 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-11



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 12 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-12

New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

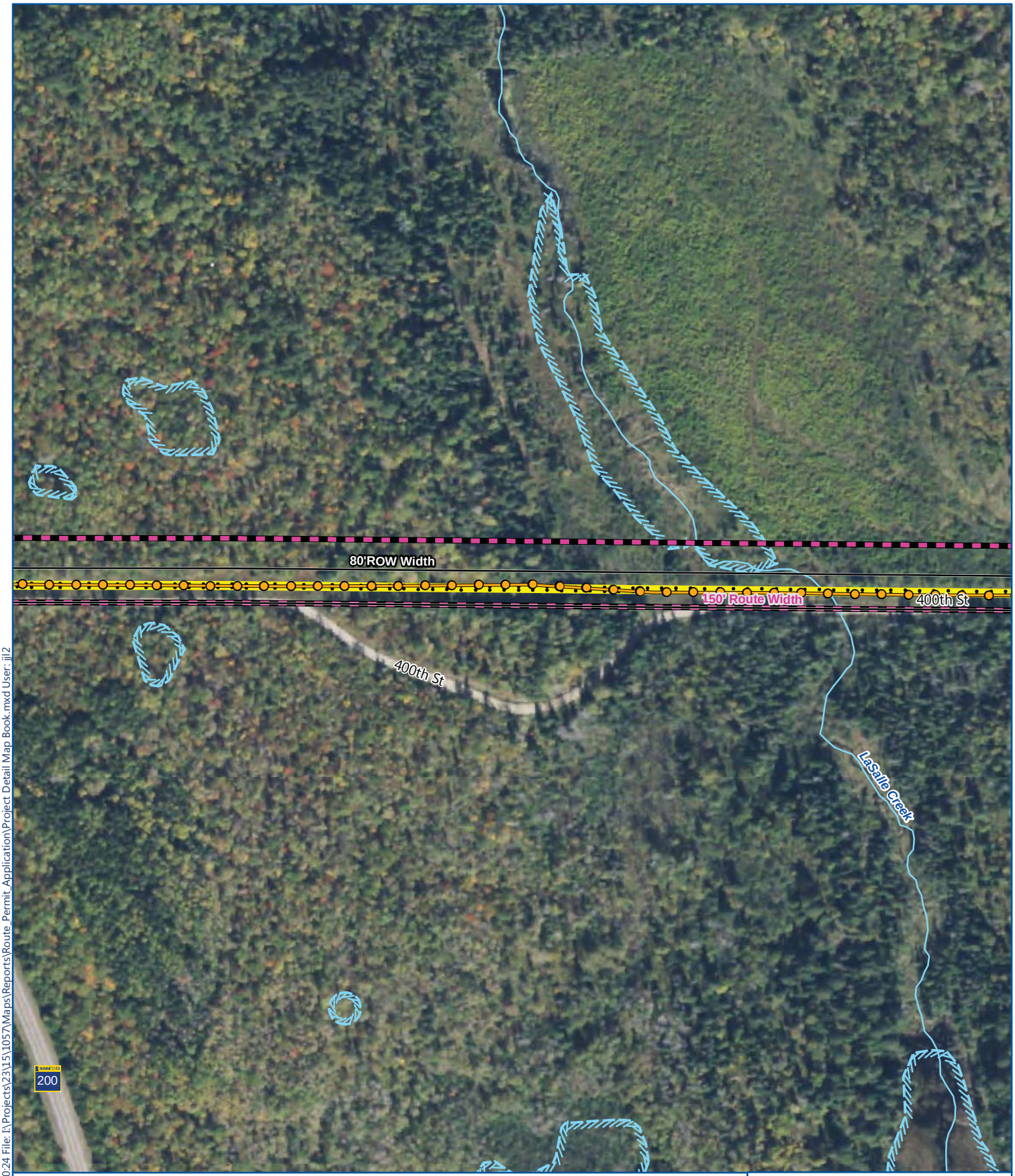
0 150 300

Feet

Image Source: FSA (2015)

Plate 13 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-13



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

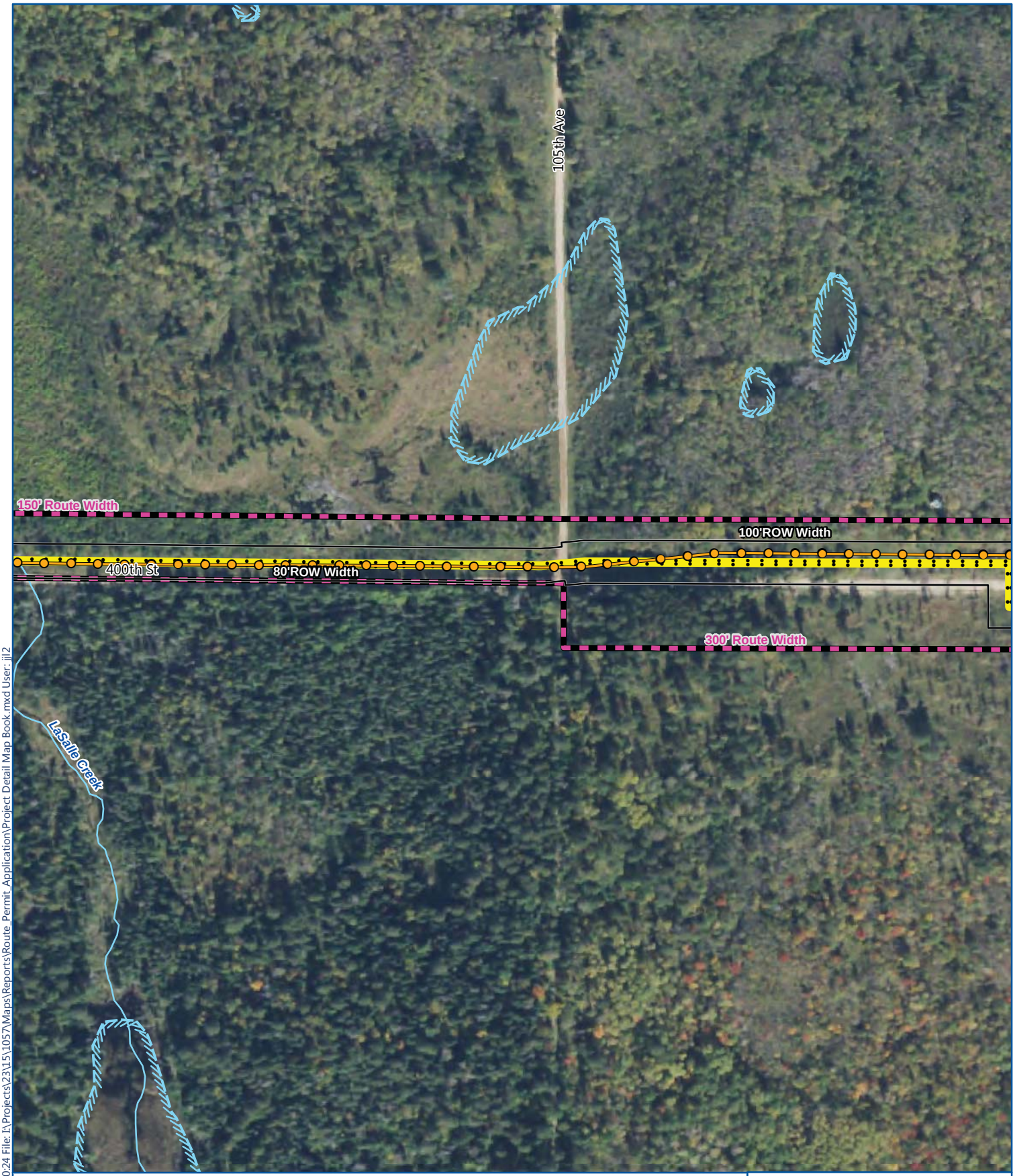
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 14 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-14



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

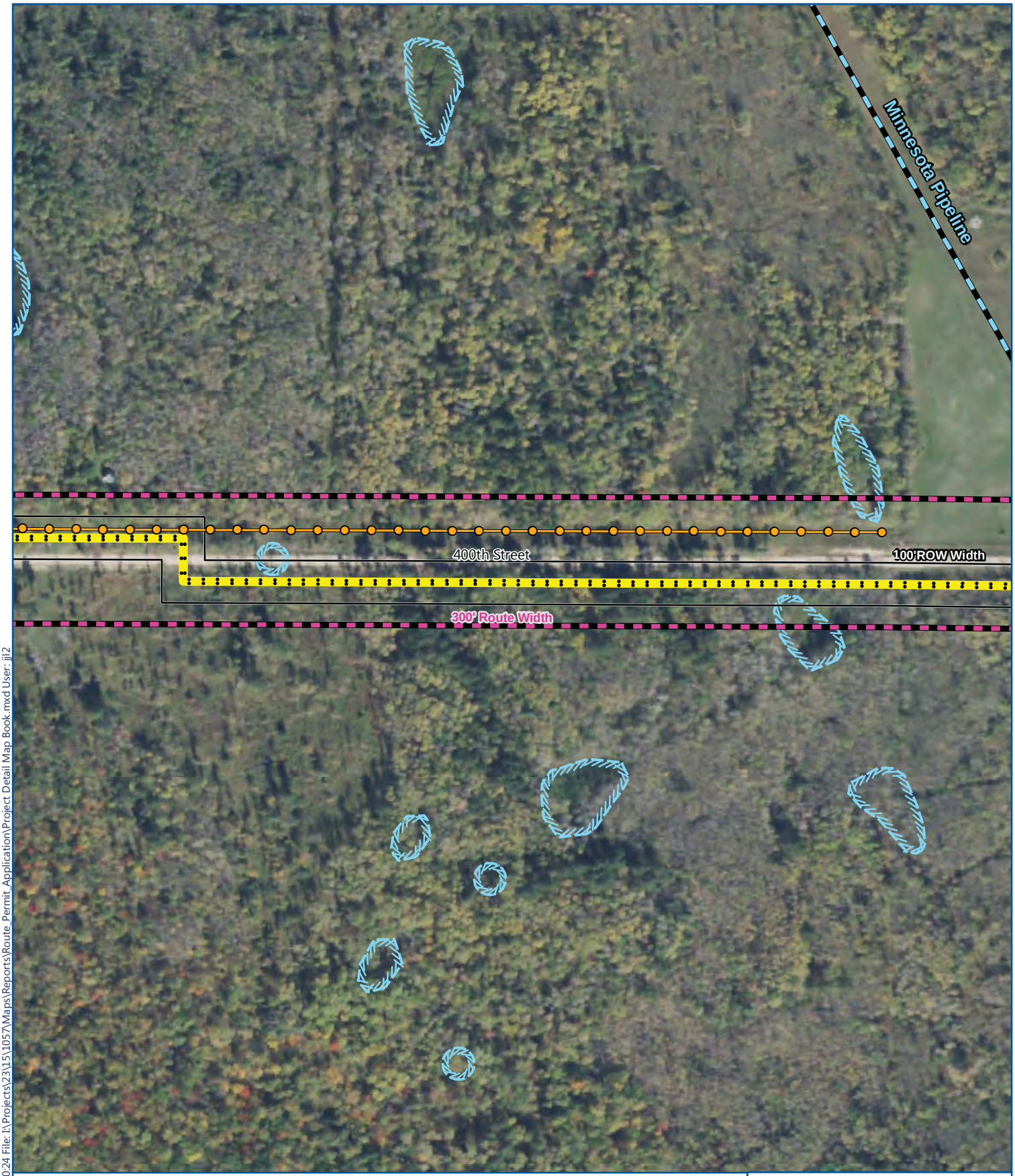
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 15 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-15



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

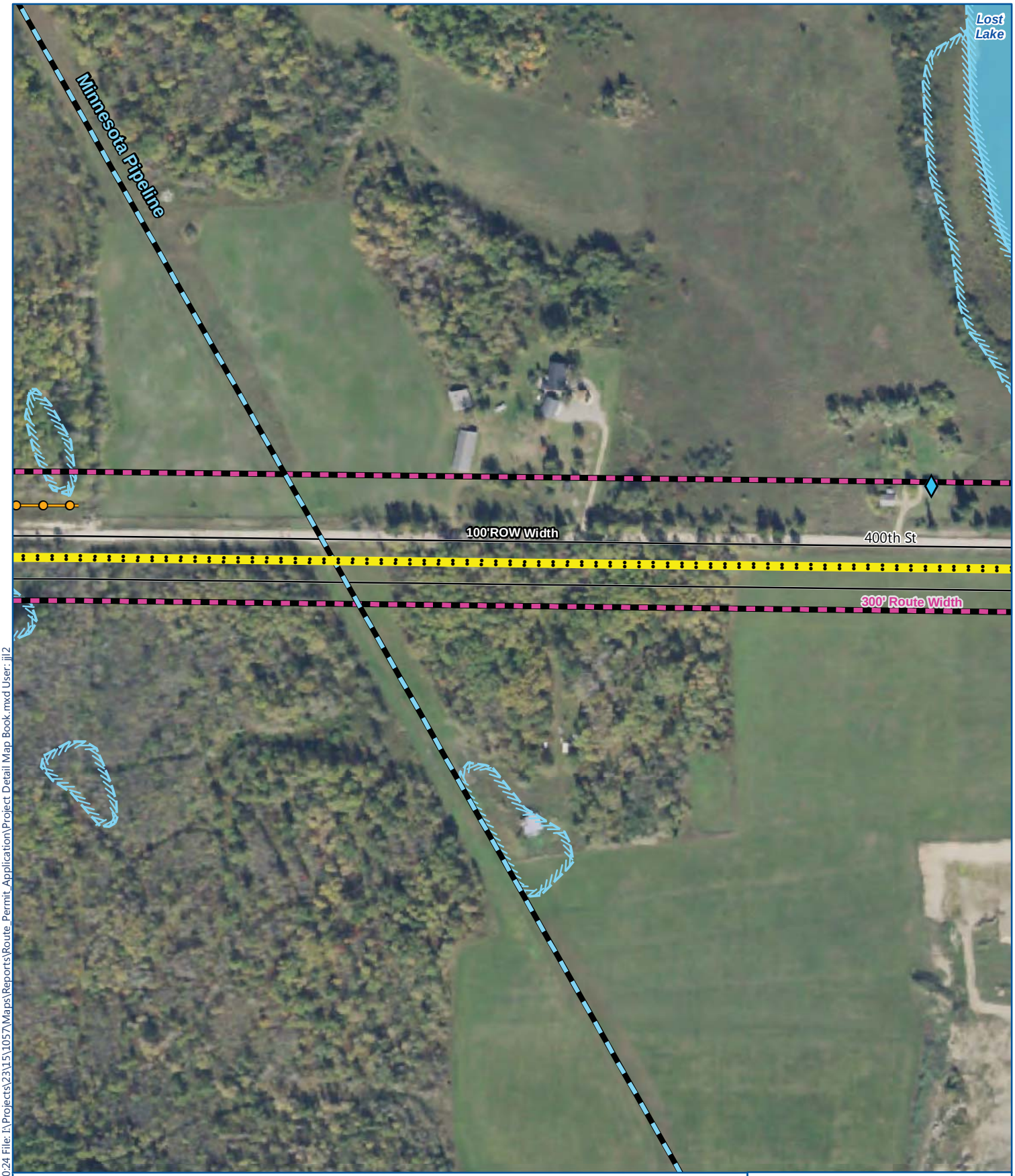
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 16 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-16



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

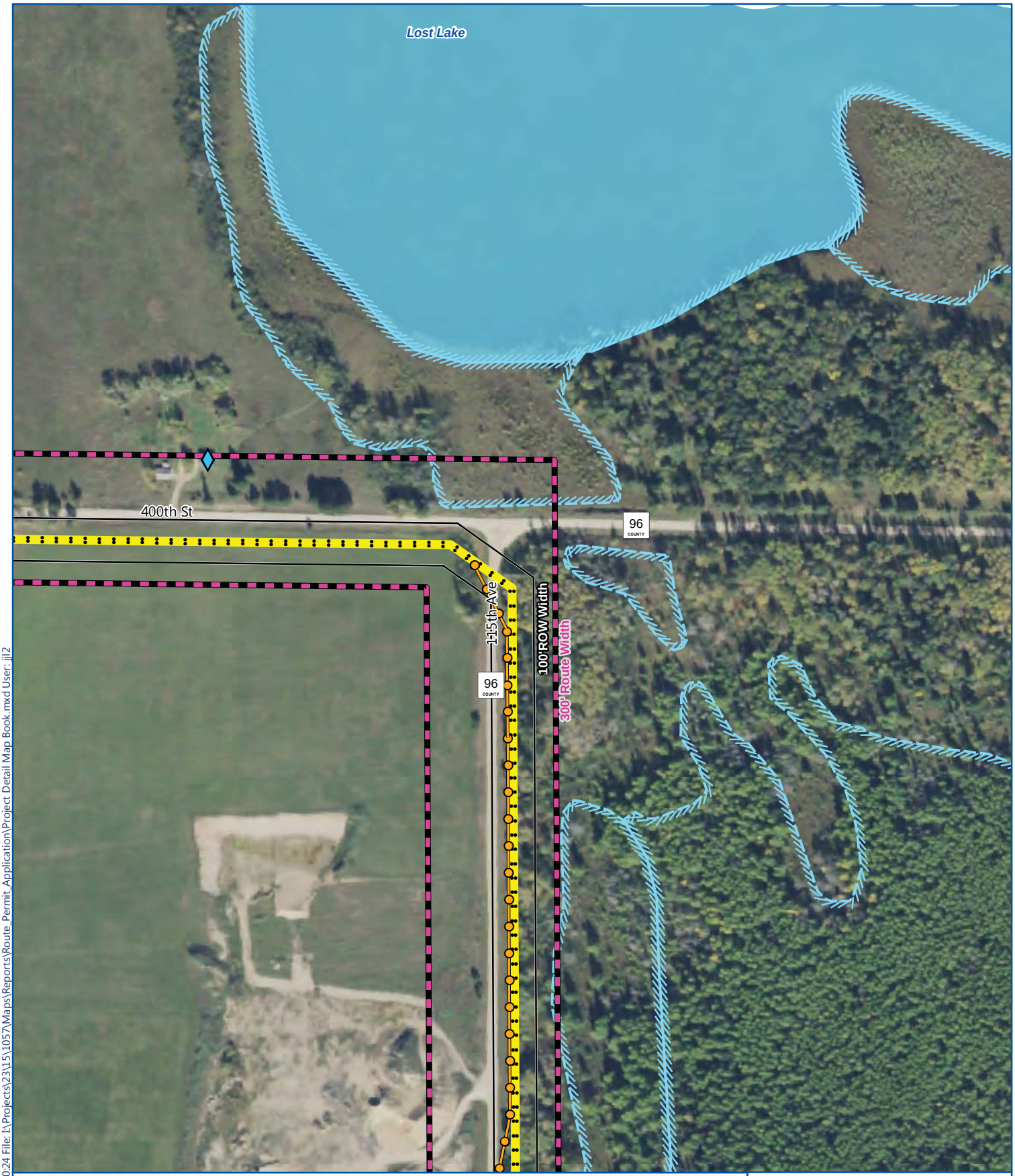
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 17 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

FPlate B-17



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

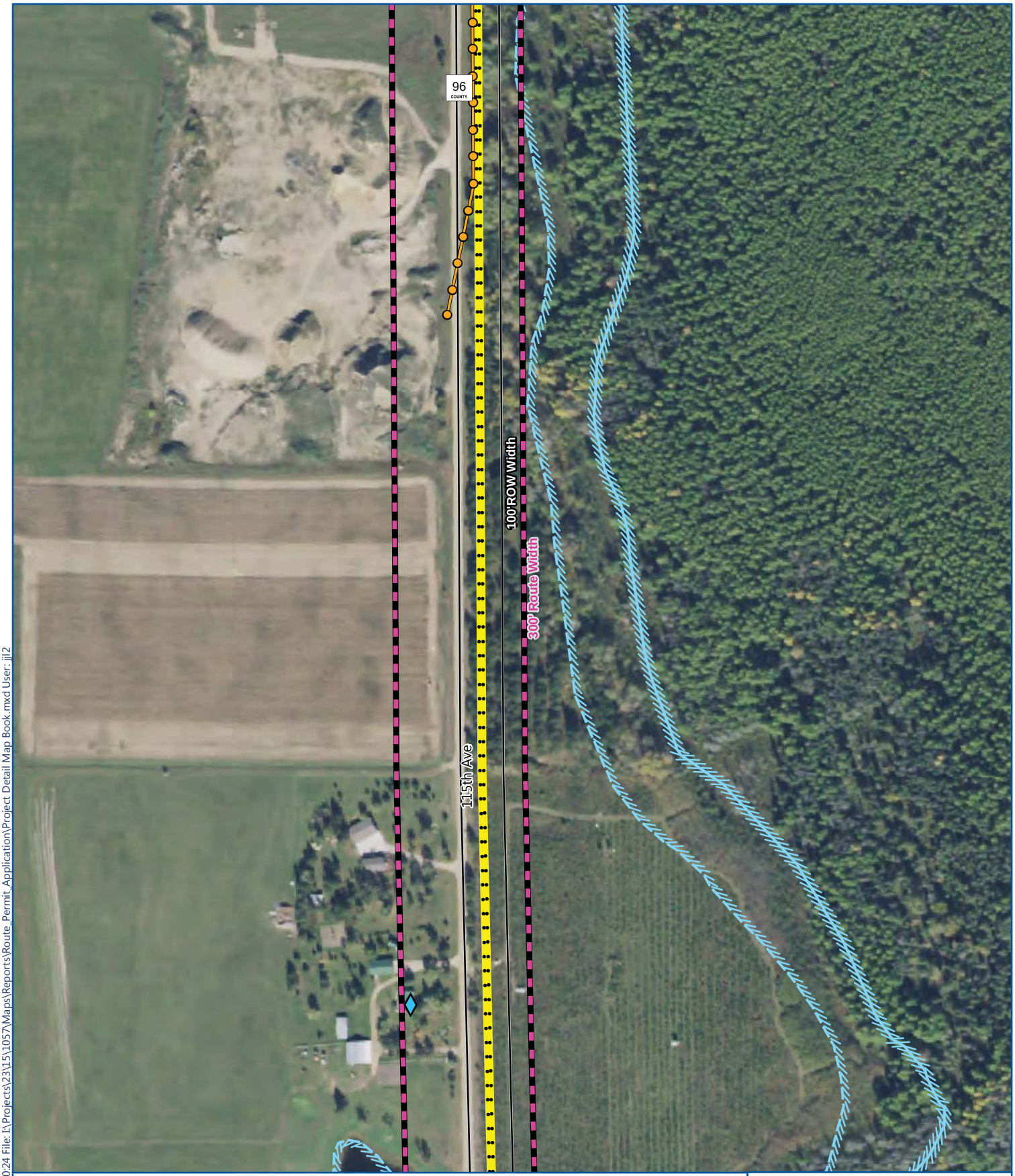
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 18 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-18



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

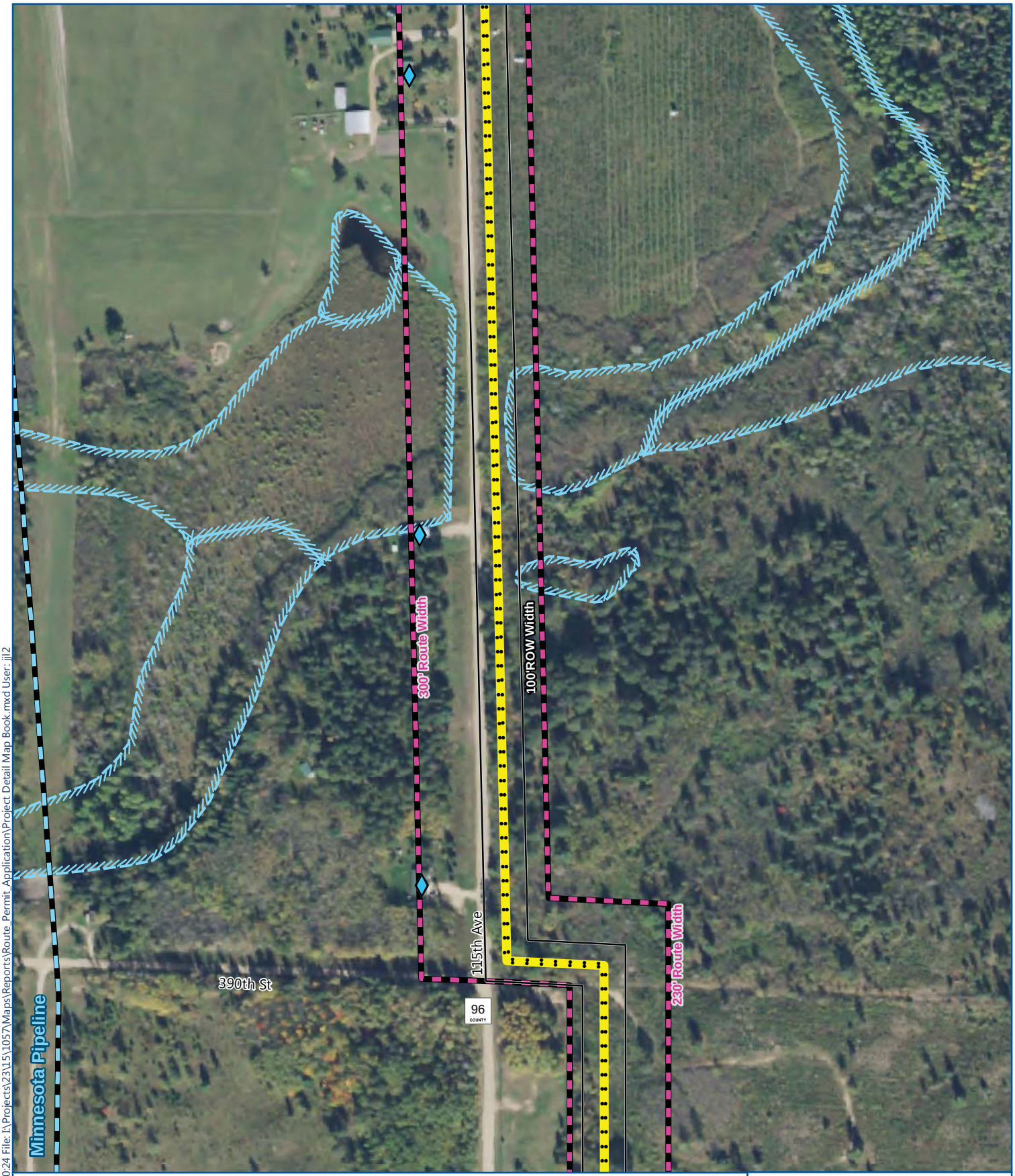
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 19 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-19



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

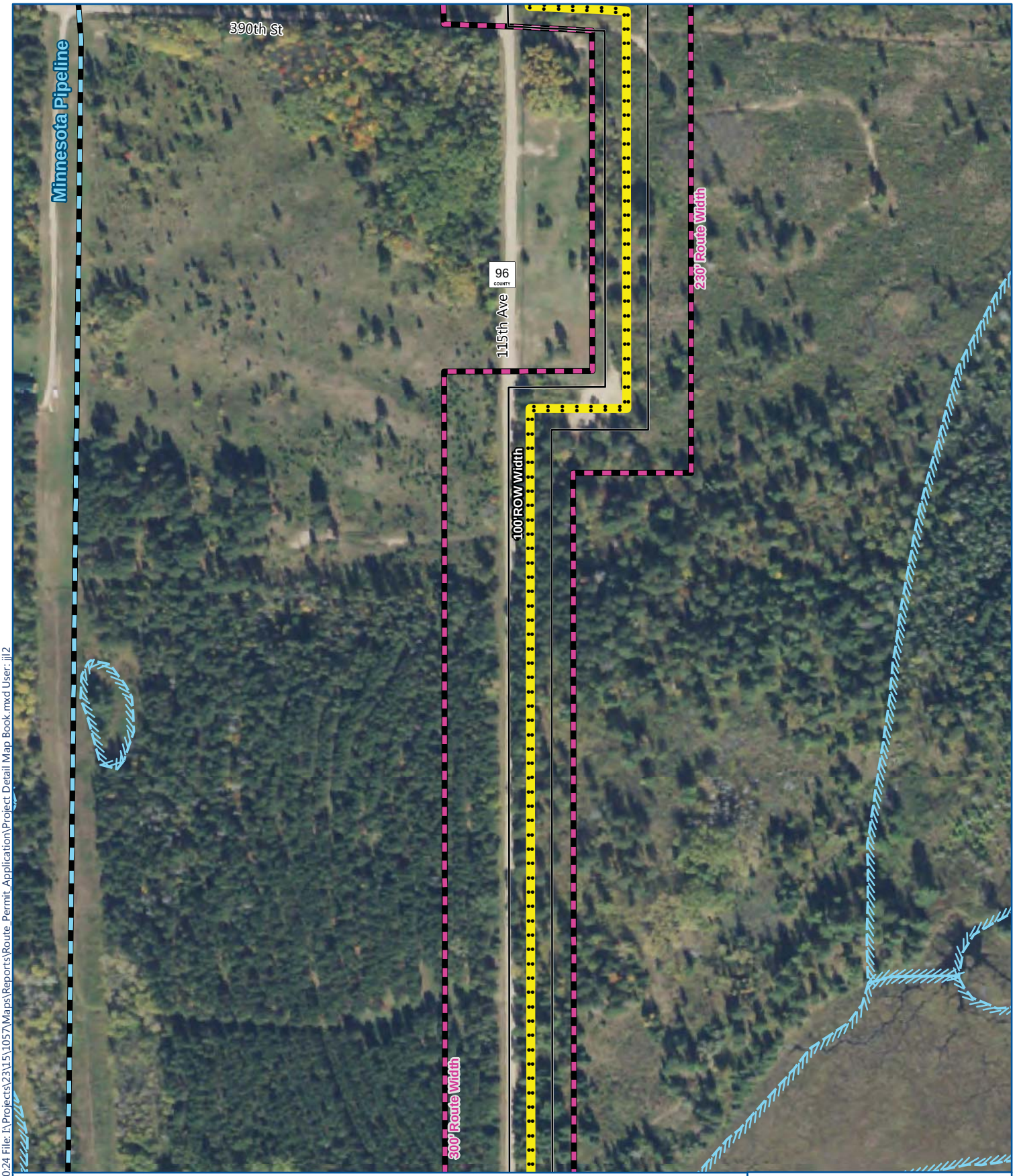
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 20 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-20



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

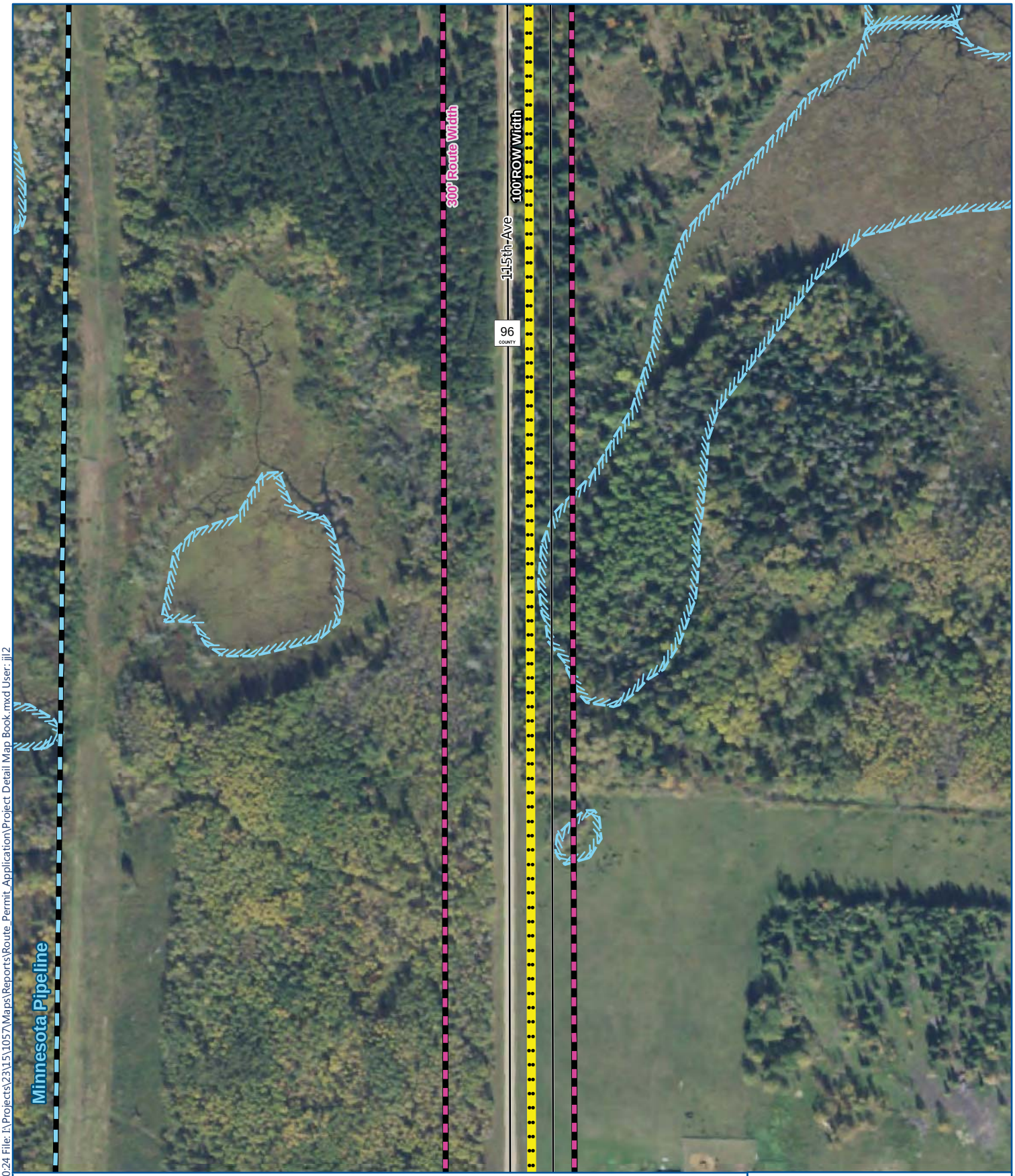
0 150 300
Feet

Image Source: FSA (2015)

Plate 21 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-21

Barr Footer: ArcGIS 10.4, 2016-05-26 10:24 File: I:\Projects\23\15\1057\Maps\Reports\Route_Permit_Application\Project Detail Map Book.mxd User: jil2



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

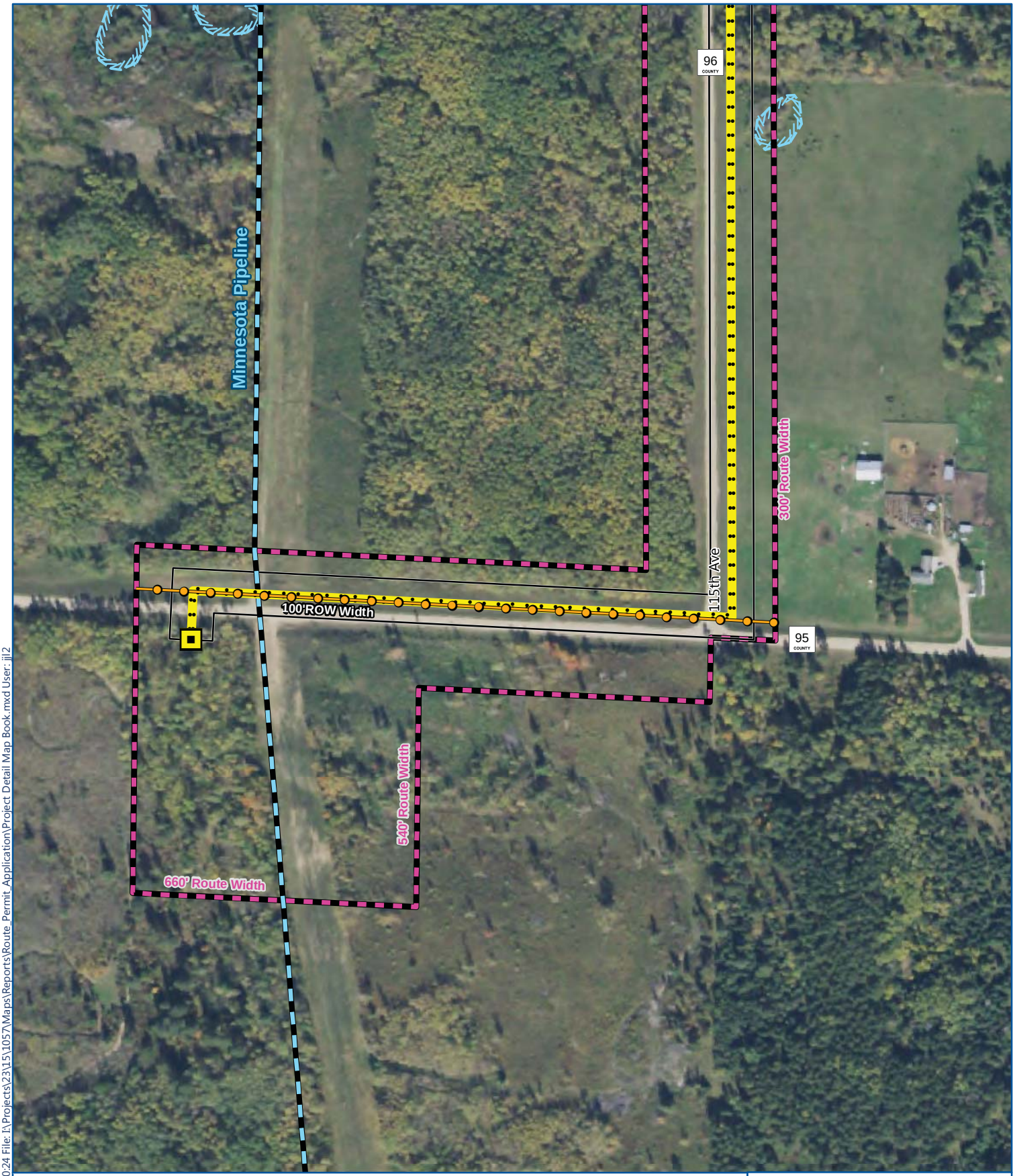
N

0 150 300
Feet

Image Source: FSA (2015)

Plate 22 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-22



New Substation Location
Existing Substation Location
Residential Building within the Proposed Route
Existing Distribution Line
Minnesota Pipeline
PWI Watercourse
PWI Basin
NWI Wetland
Anticipated Alignment
Anticipated Centerline
Proposed Route

N

0 150 300
Feet

Image Source: FSA (2015)

Plate 23 of 23
PROJECT DETAIL MAP BOOK
MPL - Laporte Project
Minnkota Power Cooperative, Inc.
Clearwater and
Hubbard Counties

Plate B-23

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLIANCE FILING PROCEDURE FOR
PERMITTED ENERGY FACILITIES

A. Purpose

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

B. Scope and Applicability

This procedure encompasses all compliance filings required by permit.

C. Definitions

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

D. Responsibilities

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

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

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

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

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

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

PERMIT COMPLIANCE FILINGS[1]

PERMITTEE: Minnkota Power Cooperative
PERMIT TYPE: HVTL Route Permit
PROJECT LOCATION: Cass County
PUC DOCKET NUMBER: ET-6/TL-16-327

Filing Number	Permit Section	Description of Compliance Filing	Due Date
1	5.1	Permit Distribution to landowners	Within 30 days of Permit Issuance
2	5.2	Notification to landowners for entering their property	At least 14 days in advance, but not more than 60 days
3	5.3.1	Contact information for field representative	14 days prior to construction
4	5.3.10	Application of Pesticides (Herbicides)	14 days prior to application
5	5.3.14	Notification of previously unrecorded archaeological sites	Upon discovery
6	5.3.16	Restoration complete	60 days after completion of all restoration activities
7	8.0	Complaint procedures	Prior to start of construction
8	9.1	Plan and profile of right-of-way (ROW)	30 days before ROW preparation for construction
9	9.2	Periodic status reports	Monthly

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

Filing Number	Permit Section	Description of Compliance Filing	Due Date
10	9.3	Notice of completion and date of placement in service	Three days prior to energizing
11	9.4	Provide as-built plans and specifications	Within 180 days after completion of construction
12	9.5	Provide GPS data	Within 180 days after completion of construction
13	Complaint Handling Procedures	Complaint reports	By the 15th of each month

MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT HANDLING PROCEDURES FOR
PERMITTED ENERGY FACILITIES

A. Purpose

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

B. Scope

This document describes complaint reporting procedures and frequency.

C. Applicability

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

D. Definitions

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

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

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

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

E. Complaint Documentation and Processing

1. The permittee shall designate an individual to summarize complaints for the Commission. This person's name, phone number and email address shall accompany all complaint submittals.

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

    a. name, address, phone number, and email address;
    b. date of complaint;
    c. tract or parcel number; and
    d. whether the complaint relates to a permit matter or a compliance issue.

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

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

F. Reporting Requirements

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

Immediate Reports: All substantial complaints through the term of the permit shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Consumer Affairs Office at 1-800-657-3782 (voice messages are acceptable) or consumer.puc@state.mn.us. For e-mail reporting, the email subject line should read "PUC EFP Complaint" and include the appropriate project docket number.

Monthly Reports: During project construction and restoration, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be filed by the 15th of each month to Daniel P. Wolf, Executive Secretary, Public Utilities Commission, using the eDockets system. The eDockets system is located at: https://www.edockets.state.mn.us/EFiling/home.jsp

If no complaints were received during the preceding month, the permittee shall file a summary indicating that no complaints were received.

G. Complaints Received by the Commission

Complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the permittee.

H. Commission Process for Unresolved Complaints

Commission staff shall perform an initial evaluation of unresolved complaints submitted to the Commission. Complaints raising substantial permit issues shall be processed and resolved by the Commission. Staff shall notify the permittee and appropriate persons if it determines that the complaint is a substantial complaint. With respect to such complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the staff notification. The complaint will be presented to the Commission for a decision as soon as practicable.

I. Permittee Contacts for Complaints and Complaint Reporting

Complaints may be filed by mail or email to:

Craig Bleth
Environmental Manager
Minnkota Power Cooperative
PO Box 13200
Grand Forks, ND 58208-3200
701-795-4661
CBleth@minnkota.com

This information shall be maintained current by informing the Commission of any changes as they become effective.