January 23, 2024

VIA EDOCKETS

Will Seuffert, Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

RE: **EERA Comments and Recommendations on Scoping Process**
Xcel Energy Alexandria to Big Oaks 345 kV Transmission Project
Docket No. E002, ET2, ET10, E015, E017/TL-23-159
Docket No. E017, ET2, E002, ET10, E015/CN-22-538

Dear Mr. Seuffert,

Attached are comments and recommendations of Department of Commerce, Energy Environmental Review and Analysis (EERA) staff in the following matters:

> In the Matter of the Application of Xcel Energy for a Certificate of for the Alexandria to Big Oaks 345 kV Transmission Project in Central Minnesota
>
> In the Matter of the Application of Xcel Energy for a Route Permit for a High Voltage Transmission Line for the Alexandria to Big Oaks 345 kV Transmission Project in Central Minnesota

EERA staff is providing the Commission with a summary of the scoping process for the environmental assessment that will be prepared for the Alexandria to Big Oaks 345 kV Transmission Project. Staff recommends that the applicant's proposed route and three alternatives be studied in the environmental assessment. Staff is available to answer any questions the Commission may have.

Sincerely,

Jenna Ness
Environmental Review Manager
Energy Environmental Review and Analysis
651-539-1693| jenna.ness@state.mn.us

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COMMERCE DEPARTMENT

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS
COMMENTS AND RECOMMENDATIONS

ALEXANDRIA TO BIG OAKS 345 KV TRANSMISSION PROJECT
DOCKET NOS. E017, ET2, E002, ET10, E015/CN-22-538 AND
E002, ET2, ET10, E015, E017/TL-23-159

Date: January 23, 2024

EERA Staff: Jenna Ness | 651-539-1693 | jenna.ness@state.mn.us

In the Matter of the Application of Xcel Energy for a Route Permit for a High Voltage Transmission Line for the Alexandria to Big Oaks 345 kV Transmission Project in Central Minnesota

Documents Attached:
(1) Map 1: Xcel Energy Proposed River Crossing Options
(2) Map 2: DNR Alternative 1
(3) Map 3: DNR Alternative 2
(4) Map 4: DNR Alternative 3
(5) Attachment A: Xcel Energy Proposed Modifications to DNR Alternatives

Issues Addressed: These comments and recommendations address the environmental assessment (EA) scoping process and those alternatives which Department of Commerce staff recommends for inclusion in the scope of the EA.

Additional documents and information can be found on eDockets:

- https://www.edockets.state.mn.us/EFiling/search.jsp (22-538 and 23-159) and;
- The Department of Commerce's website: http://mn.gov/commerce/energyfacilities.

This document can be made available in alternative formats (i.e., large print or audio) by calling 651-539-1530 (voice).

Introduction and Background

On September 29, 2023, Northern States Power Company, doing business as Xcel Energy, along with Great River Energy, Minnesota Power, Otter Tail Power Company, and Missouri River Energy Services, on behalf of Western Minnesota Municipal Power Agency, (hereinafter the applicant or Xcel Energy)

filed certificate of need[1] and route permit applications[2] with the Minnesota Public Utilities Commission (Commission) to string approximately 105-108 miles of 345 kV transmission line on existing double-circuit capable structures from the existing Alexandria Substation in Alexandria, Douglas County to the proposed Big Oaks Substation on the north side of the Mississippi River in Becker, Sherburne County, Minnesota. Subsequently, the Commission found both applications to be complete. Department of Commerce (Department) and Commission staff held six public information and scoping meetings regarding the project on December 12, 13, and 14.[3]

The comments that follow describe the scoping process for the EA that will be prepared for the project. Following the Commission's review of these comments, and based on any Commission input, the Department will finalize and issue the scoping decision for the EA.

Project Purpose

Xcel Energy indicates that the project is needed to provide benefits to the Midwest subregion of the Midcontinent Independent System Operator (MISO) footprint by facilitating more reliable, safe, and affordable energy delivery.[4] The current 345 kV transmission system is at capacity which leads to several reliability concerns that could affect customers' service.[5] The project intends to provide additional transmission capacity, mitigate current capacity issues, and improve electric system reliability throughout the region as more renewable energy resources are added to the electric system in and around the region.[6]

Project Description

Xcel Energy proposes to string approximately 105-108 miles of new 345 kV high voltage transmission line (HVTL) along existing 345 kV HVTL structures from Alexandria to Becker, Minnesota (East Segment) utilizing current HVTL right-of-way for 95 percent of this length.[7] Existing transmission line structures originate from the CapX2020 projects,[8] which were permitted by the Commission and constructed as double-circuit capable along the entire route. A new Big Oaks Substation would be constructed near the city of Becker to interconnect the new second circuit of 345 kV transmission line.

The entire project includes an East Segment (route permit and certificate of need applications) and a future West Segment (certificate of need application). The West Segment would connect the existing Big Stone South Substation in South Dakota with the Alexandria Substation.

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[1] Big Stone South – Alexandria – Big Oaks Transmission Project, Application to the Minnesota Public Utilities Commission for a Certificate of Need for a High Voltage Transmission Line, September 29, 2023, eDockets Numbers 20239-199284-01 (through -05), hereinafter the Certificate of Need Application.

[2] Xcel Energy Alexandria to Big Oaks 345 kV Transmission Project, Application to the Minnesota Public Utilities Commission for a Route Permit for a High Voltage Transmission Line, September 29, 2023, eDockets Numbers 20239-199287-01 (through -08), hereinafter the Route Permit Application.

[3] Notice of Public Information and Environmental Assessment Scoping Meetings, November 28, 2023, eDockets Number 202311-200772-01.

[4] Route Permit Application, Section 1.1.

[5] *Ibid.*

[6] Ibid.

[7] Route Permit Application, Section 1.

[8] Monticello to St. Cloud 345 kV Transmission Project (E002, ET2/TL-09-246) and the Fargo to St. Cloud 345 kV Transmission Project (E002, ET2/TL-09-1056).

The proposed route follows existing HVTL right-of-way, with few deviations needed for new structures to facilitate stringing the second circuit. New structures are proposed in select areas to accommodate angles, highway crossings, or alignment modifications where installing the second monopole for the original CapX2020 project would not have been needed at the time. Approximately 67-78 new structures are proposed for the entire project, with the majority needed at four locations to accomplish:

(1) establishing new right-of-way to tap into the Alexandria Substation;

(2) reconfiguration of the Alexandria to Quarry Substation circuit to bypass the Riverview Substation near the city of Freeport;

(3) a bypass of the Quarry Substation near the city of Waite Park; and

(4) crossing the Mississippi River to connect the new 345 kV transmission line to the new Big Oaks Substation (hereinafter the Mississippi River Crossing).[9]

Of the new right of way areas to be created, the first three listed are cumulatively less than one mile of new HVTL and associated infrastructure.[10] For the Mississippi River Crossing, the applicant is considering two options ranging from 0.7 to 2.1 miles.[11] The project is currently scheduled to be placed in service by the fourth quarter of 2027.[12]

Regulatory Process and Procedures

The proposed Alexandria to Big Oaks 345 kV Transmission Project requires two approvals from the Commission – a certificate of need and a route permit. On December 5, 2023, the Commission issued an order accepting the Alexandria to Big Oaks 345 kV Transmission Project certificate of need and route permit applications as complete and authorized joint hearings and combined environmental review for these two approvals.[13] Accordingly, Department Energy Environmental Review and Analysis (EERA) staff are preparing an EA that will address the Alexandria to Big Oaks 345 kV Transmission Project's certificate of need and route permit applications.

The first step in preparing the EA is scoping. The purpose of scoping is to provide citizens, local governments, tribal governments, and agencies an opportunity to focus the EA on those issues that are relevant to the proposed project.

Scoping Process Summary

EERA and Commission staff held public information and scoping meetings regarding the Alexandria to Big Oaks 345 kV Transmission Project as summarized below:

Date	Time	Location	Attendees
December 12, 2023	10a – 1p	Alexandria	3
December 12, 2023	5p – 8p	Monticello	15-20
December 13, 2023	10a – 1p	Ortonville	1

[9] Route Permit Application, Section 1.
[10] Route Permit Application, Map 1.
[11] Route Permit Application, Appendix C, p. 71.
[12] Route Permit Application, Table 2.7-1.
[13] Commission Order, December 5, 2023, eDockets Number 202312-200978-02.

Date	Time	Location	Attendees
December 13, 2023	5p – 8p	Benson	15-20
December 14, 2023	10a – 1p	St. Joseph	7
December 14, 2023	6p – 9p	Remote-Access	3

Nine attendees (four in Monticello, one in Benson, and four at the remote-access meeting) provided public comments.[14] Commenters asked questions about the project layout and voltage, capacity, permitting process, and timing, as well as detailed concerns about new transmission infrastructure siting, public hearing timing, the EA, and personal property and easements. Commenters noted concerns with topics such as electric and magnetic fields (EMF), stray voltage, frequency interference, and human health in addition to requesting mitigation measures such as bird diverters for the project.

Written Comments Received

A comment period, ending on January 8, 2024, provided the public an opportunity to submit comments to EERA staff on potential impacts and mitigation measures for consideration in the scope of the EA. Written comments were received during this comment period from two state agencies, one local unit of government, one labor union, and seven community members. Per Minn. R. 7850.3700, subp. 2, B., Xcel Energy was provided the opportunity to respond to each route alternative request, and submitted this response on January 19, 2024.[15]

Minnesota Department of Natural Resources (DNR)

DNR comments focused on potential environmental impacts and three proposed alternative Mississippi River Crossing options (DNR Alternatives 1-3).[16] DNR requested that the EA analyze impacts to ecologically significant areas including several Minnesota Biological Survey (MBS) sites around the applicant's proposed Mississippi River Crossings, St. Martin 15 Calcareous Fen, and several fauna and flora species. Additionally, DNR requested the EA analyze lighting, dust control, erosion control, and control of invasive species. DNR's three alternatives aim to reduce environmental impacts and minimize disturbance to ecologic and biologic resources near the Mississippi River Crossing.

Applicant

Xcel Energy submitted a comment letter on January 19, 2024, in response to the DNR Alternatives 1-3.[17] Xcel Energy stated that while they do not oppose the study of DNR's alternatives in the EA, they requested slight modifications to ensure they can be feasibly constructed, operated, and maintained. Each modification suggested by the applicant is within DNR's recommended route widths.

Xcel Energy requested that the length of alternative routes, new private property easements, residence offset distances, and transmission structure configurations to reduce impacts to river and flyway corridors be included in the EA. The applicant also agreed with the DNR that the ecologically significant areas, calcareous fens, threatened and endangered fauna and flora, facility lighting, dust control, and erosion control measures outlined in their scoping comment letter should be studied in the EA. Xcel Energy committed to continuing to work with the DNR on these items to avoid or minimize impacts.

[14] Combined Public Comments on Scope of Environmental Assessment, eDockets No. 20241-202015-01.
[15] EA Scoping Response Letter, January 19, 2024, eDockets No. 20241-202407.
[16] Minnesota DNR Scoping Comments, January 8, 2024 eDockets No. 20241-201967-01.
[17] EA Scoping Response Letter, January 19, 2024, eDockets No. 20241-202407.

Minnesota Department of Transportation (MNDOT)

MNDOT comments focused on the applicant needing to prepare a Traffic Control Plan for helicopter use near trunk highways, scheduled lane closures, early consultation with MNDOT for each district impacted by the project, and requested the opportunity to participate in pre-construction meetings.

Swift County Commissioner

The Swift County Commissioner's comments focused on avoiding impacts to agriculture, specifically by placing transmission lines along current rights-of-way, considering irrigation systems along the route, and by requesting the applicant make proper alterations or repairs to damaged drainage systems.

International Brotherhood of Electrical Workers (IBEW) Local 160

The IBEW focused their comments on avoiding unnecessary delays for the project through the Commission's permitting and environmental review process, and how this project is an important part of needed investments into Minnesota's electric grid.

Other Comments

Community members that submitted written public comments presented a variety of topics, including but not limited to: considering decision-making within the context of all the Midcontinent Independent System Operator (MISO) approved Long Range Transmission Planning projects for Minnesota,[18] not analyzing the need for the project based on MISO's approval, not allowing the West and East segments of the project to be separated in the permitting and environmental review process, including a no-build alternative in the EA, connecting analysis of this project to the Northern Reliability[19] and Minnesota Energy Connection[20] projects, removing current transmission infrastructure from the CapX2020 project,[21] cumulative effects with the previous CapX2020 project, conflicts with recreational resources, wildlife, aesthetics, substation lighting, EMF, human health, and water resources.

EERA Staff Comments and Analysis

Staff provides comments here on route alternatives, the scope of EA, and on a rule variance related to issuance of the EA scoping decision.

Proposed Route Alternatives

With respect to route or route segment alternatives, EERA is charged with including only those alternatives that will assist in the Commission's "ultimate decision on the permit application."[22] When proposed during scoping, EERA analyzes alternative routes or route segments using five criteria:

- Was the alternative submitted in a timely manner, that is, within the public comment period?

[18] See generally *Grid North Partners Congestion Relief Projects*, retrieved from: https://mn.gov/puc-stat/documents/pdf_files/GNP_NT_CongestionProjects_010324.pdf.
[19] See eDockets CN-22-416 and TL-415.
[20] See eDockets CN-22-131 and TL-22-132.
[21] See eDocket TL-09-246.
[22] Minn. R. 7850.3700, subp. 2.

- Does the alternative contain an explanation of why the route should be included?[23]
- Is the alternative outside areas prohibited in Minnesota Rule 7850.4300?
- Does the alternative meet the applicant's stated need for the project?
- Is the alternative feasible, that is, can the alternative be constructed and is it permittable by state and federal agencies with authority for construction or operation of the project?

If an alternative meets the above criteria, EERA then considers if its evaluation in the EA would aid in the Commission's decision on the permit application. This includes comparing the alternative to the applicant's proposed route and other alternatives that could avoid or mitigate the impacts described by the proposer. If the suggested alternative impacts relatively more human and environmental resources, it is likely that the alternative would not aid in the Commission's decision on the permit application.

EERA used the above criteria to analyze route segment alternatives proposed during the scoping process. EERA finds that all proposals were timely, avoid prohibited areas, meet the stated need for the project, and appear feasible. EERA believes that DNR Alternatives 1-3 would aid in the Commission's decision on the permit application.

Need for the Project

Xcel Energy indicates that the project is needed to facilitate additional transmission with more reliable, safe, and affordable energy delivery for the current electric system which is at capacity while renewable energy resources continue to be added.[24]

To EERA staff's understanding, DNR's three proposed alternatives could meet the stated need for the project by interconnecting the project's new transmission line via three different pathways over the Mississippi River. EERA staff believes that further development of the record regarding DNR's three proposed alternatives and Xcel Energy's modifications would aid in the Commission's decision on Xcel Energy's permit application.

Route Alternatives Analysis

DNR's three proposed alternatives connect to the same endpoints and traverse geography nearby the applicant's proposed Mississippi River Crossings (Map 1). Two of three options would require tree clearing and an additional right-of-way to span the new transmission line across the Mississippi River. One of the options would utilize existing Xcel Energy transmission structures, and thus avoid tree clearing and establishment of an additional right-of-way.

DNR states in their scoping comments that all three of their alternatives would have less human and environmental impacts than Xcel Energy's proposed Mississippi River Crossing options. DNR believes that Xcel Energy's crossing options would "further fragment the habitat in this area and would place two pole structures within the floodway of the Mississippi River, posing ongoing challenges for pole stability."[25]

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[23] *Ibid*. (Staff interprets this text to require that for route or route segment alternatives to be included in the scope of the EA, an alternative must mitigate a potential impact of the project. The proposer need not provide extensive supporting data but must provide enough explanation to ensure potential impacts being mitigated by the alternative is clear and understandable.)
[24] Route Permit Application, Section 1.1.
[25] Minnesota DNR Scoping Comments, January 8, 2024 eDockets No. 20241-201967-01.

DNR Alternative 1 is DNR's preferred route for crossing the Mississippi River. This option would rebuild an existing Xcel Energy 115 kV transmission line to accommodate the project's new 345 kV line (Map 2). This option would create a double-circuit 345/115 kV crossing of the river. An existing Xcel Energy 345 kV transmission line runs along Interstate 94 until it enters and terminates at Monticello Substation. An existing 115 kV line, which would have to be rebuilt to accommodate the project's new 345 kV line, exits Monticello Substation northwest to cross the Mississippi River, and ultimately routes near the north end of the Big Oaks Substation siting area. DNR Alternative 1 would route the new 345 kV line adjacent to the Monticello Substation and would connect to the existing 115 kV line west of the substation. Using existing infrastructure for the project's transmission line would combine new right-of-way with existing right-of-way to the greatest extent possible.

- Xcel Energy proposes this route be modified to shift south after crossing the river to avoid a building that is currently under construction and to provide adequate clearance between the proposed and existing transmission lines in the area (Attachment A, Figures 2a and 2b).

Human and Environmental Impacts (DNR Alternative 1)
Impacts would be reduced by decreasing tree clearing and vegetation disturbance in sensitive ecological areas that contains MBS Sites of High Biodiversity Significance, DNR Native Plant Communities, and a wild and scenic river district. Rebuilding existing 115 kV infrastructure to accommodate the project's 345 kV line would result in increased costs compared to the project.

DNR Alternative 2 would cross at a narrower point of the Mississippi River northwest of Xcel Energy's West Crossing Option (Map 3).

- Xcel Energy proposes this route be modified to shift east to avoid an existing pivot irrigation system that is north of Interstate 94 (Attachment A, Figure 3).

Human and Environmental Impacts (DNR Alternative 2)
Impacts would be reduced to MBS Sites of Biodiversity Significance and DNR Native Plant Communities by spanning the river entirely, thus avoiding impacts to the bank and floodway while also improving pole structure stability. This route would still disturb sensitive ecological areas and introduce an additional river crossing within a wild and scenic river district.

A suggested 1,500-foot right-of-way would provide flexibility to avoid impacts from placing infrastructure near residences and agricultural fields with center pivot irrigation. Xcel Energy states that DNR Alternative 2 would require acquisition of new right-of-way from private landowners as the project would be placed closer to residences, whereas Xcel Energy's proposed crossings are entirely on Xcel Energy owned land and have no residences within 500 feet. DNR Alternative 2 is within 500 feet of two residences and within 335 feet of the nearest residence. Lastly, new easements would be required from two landowners of agricultural land.

DNR Alternative 3 deviates from the proposed route further west along Interstate 94's existing transmission line infrastructure, then would route north and east by using existing roads and natural boundaries near agricultural fields as much as possible. The line would ultimately cross the Mississippi River northwest of the proposed Big Oaks Substation, and interconnect into or along existing Xcel Energy 345 kV transmission line infrastructure near Sherburne County Substation (Map 4).

- Xcel Energy proposes this route be modified to shift south after crossing the river to provide sufficient clearance between the proposed and existing transmission lines in this area (Attachment A, Figure 4). The applicant notes that this shift will likely result in impacts to sites of biodiversity significance and native plant communities.

Human and Environmental Impacts (DNR Alternative 3)

Impacts would be reduced by entirely avoiding sensitive MBS Sites of Biodiversity Significance and DNR Native Plant Communities. This crossing is at a narrow point that can likely be spanned, thus avoids disturbance to river bluffs and minimizes pole structure placement within a floodway. This route would still introduce an additional river crossing within a wild and scenic river district.

A suggested 1,500-foot right-of-way would provide flexibility to avoid impacts from placing infrastructure near residences and agricultural fields with center pivot irrigation. Xcel Energy states that DNR Alternative 3 would require acquisition of new right-of-way from private landowners as the project would be placed closer to residences, whereas Xcel Energy's proposed crossings are entirely on Xcel Energy owned land and have no residences within 500 feet. DNR Alternative 3 is within 500 feet of seven residences and within 118 feet of the nearest residence. Lastly, new easements would be required from eight landowners of agricultural land.

DNR Alternative 3 is 3.9 miles long while Xcel Energy's Western and Eastern Crossing Options are 0.7 and 2.1 miles long, respectively. This increased length would require more foundations and structures, resulting in increased costs compared to the project.

Summary

The applicant provided the following comparison of the proposed routes and DNR Alternatives 1-3 in their scoping comments.[26]

Crossing Options					
	Applicant Western Crossing	**Applicant Eastern Crossing**	**DNR Alternative 1**	**DNR Alternative 2**	**DNR Alternative 3**
Length of Alignment Outside of Existing CAPX2020 Right-of-Way					
Total	0.7 mi	2.1 mi	2.4 mi	1.1 mi	3.9 mi
Sites of Biodiversity Significance					
Moderate	5.9 ac	5.5 ac	19.6 ac	0.0 ac	2.2 ac
High	2.6 ac	19.0 ac	1.2 ac	3.4 ac	0.0 ac
Total	**8.6 ac**	**24.5 ac**	**20.8 ac**	**3.4 ac**	**2.2 ac**
New Private Property Easements					
Unique Landowners	0	0	0	2	8

[26] EA Scoping Response Letter, January 19, 2024, eDockets No. 20241-202407.

Acres of new Easements	0	0	0	6.9 ac	32.3 ac
Residence Offset Distances					
0 - 75 Feet	*0*	*0*	0	0	0
75 - 300 Feet	*0*	*0*	0	0	1
300 - 500 Feet	*0*	*0*	0	2	6

On whole, EERA staff believes that including DNR Alternatives 1-3 in the scope of the EA, with the modifications proposed by Xcel Energy within DNR's suggested route width, would aid in the Commission's decisions regarding the project.

Scope of Environmental Assessment

With respect to the scope of the EA and alternative routes for the project, EERA staff recommends studying all three of DNR's alternatives proposed during scoping. EERA staff believes that DNR's alternatives would aid in the Commission's decisions regarding the project.

With respect to the comments of the DNR, EERA staff will include in the EA, as appropriate, discussion of impacts to MBS sites around the Mississippi River Crossing, St. Martin 15 Calcareous Fen, Blanding's turtles, loggerhead shrikes, butternuts, lighting, dust control, erosion control, and invasive species. In response to the Swift County Commissioner's comments, EERA staff will include in the EA, as appropriate, discussion of impacts to agriculture, irrigation systems, and drainage systems. Lastly, EERA staff will include in the EA, as appropriate, discussion of potential impacts related to wildlife, EMF, human health, water resources, and lighting.

Rule Variance

Minnesota Rule 7850.3700, subpart 3 requires that the Department issue an EA scoping decision within 10 days of the close of the scoping comment period. EERA finds that the 10-day schedule is insufficient to accommodate the procedural steps necessary to issue the scoping decision – preparing EA scoping comments and recommendations for the Commission, receiving the Commission's response, and issuing a scoping decision. Accordingly, EERA believes that a variance of the rule is appropriate. A variance would ensure that sufficient time is provided for development and issuance of the scoping decision.

Minnesota Rule 7829.3200 allows the Commission to vary its rules when it determines that the following requirements are met:

A. Enforcement of the rule would not impose an excessive burden upon the applicant or others affected by the rule;
B. Granting the variance would not adversely affect the public interest; and
C. Granting the variance would not conflict with standards imposed by law.

EERA staff believe that these requirements are met for a variance of Minnesota Rule 7850.3700, subpart 3. Granting a variance furthers the public interest by allowing enough time to develop an informed and robust scoping decision without imposing an excessive hardship on the applicant. Further, a variance would not conflict with any standards imposed by law.

EERA Staff Recommendations

EERA staff recommends that Xcel Energy's proposed route and DNR's three proposed alternatives for the Mississippi River Crossing (DNR Alternatives 1-3, with Xcel Energy's proposed modifications) be included in the EA scoping decision.

Additionally, EERA staff recommends that the Commission vary Minnesota Rule 7850.3700, subpart 3, to allow time for Commission input regarding the scope of the EA and preparation of the scoping decision.

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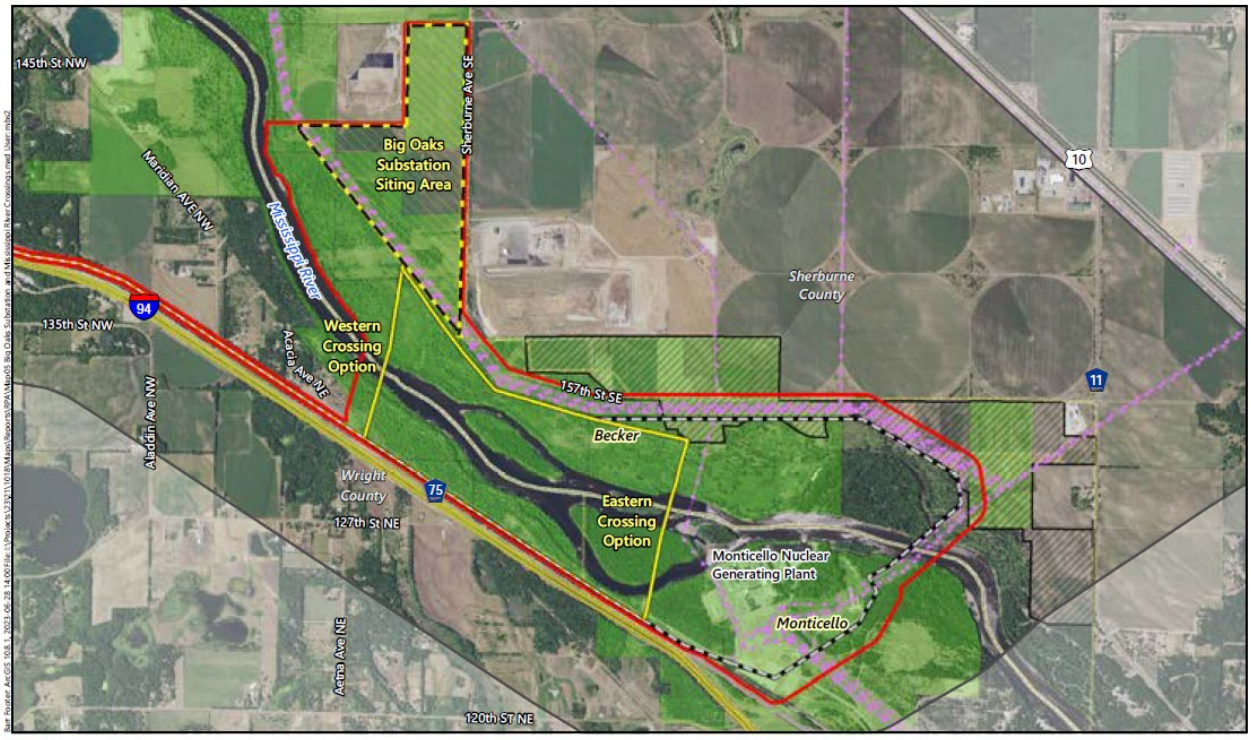
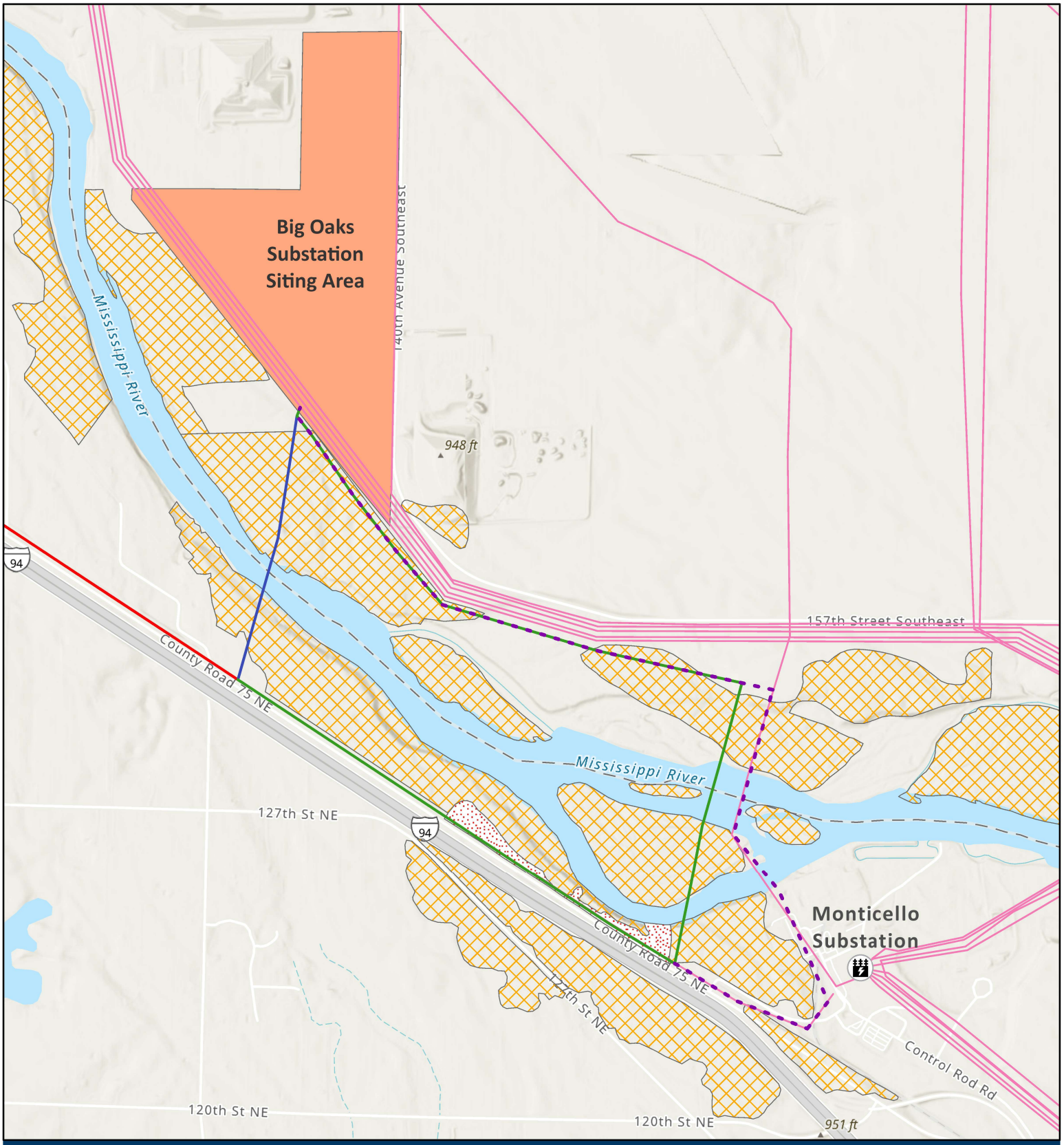
Map 1: Xcel Energy Proposed River Crossing Options



Map 2: DNR Alternative 1



DNR Alternative 1

- Existing Substations
- Big Oaks Substation Siting Area
- Existing Lines
- Native Prairies
- MBS Sites of Biodiversity Significance

DNR Alternatives

- Option 1

Proposed Transmission Line Alignments

- Western Crossing Option
- Eastern Crossing Option
- Project Transmission Line

N

Miles

0 0.5

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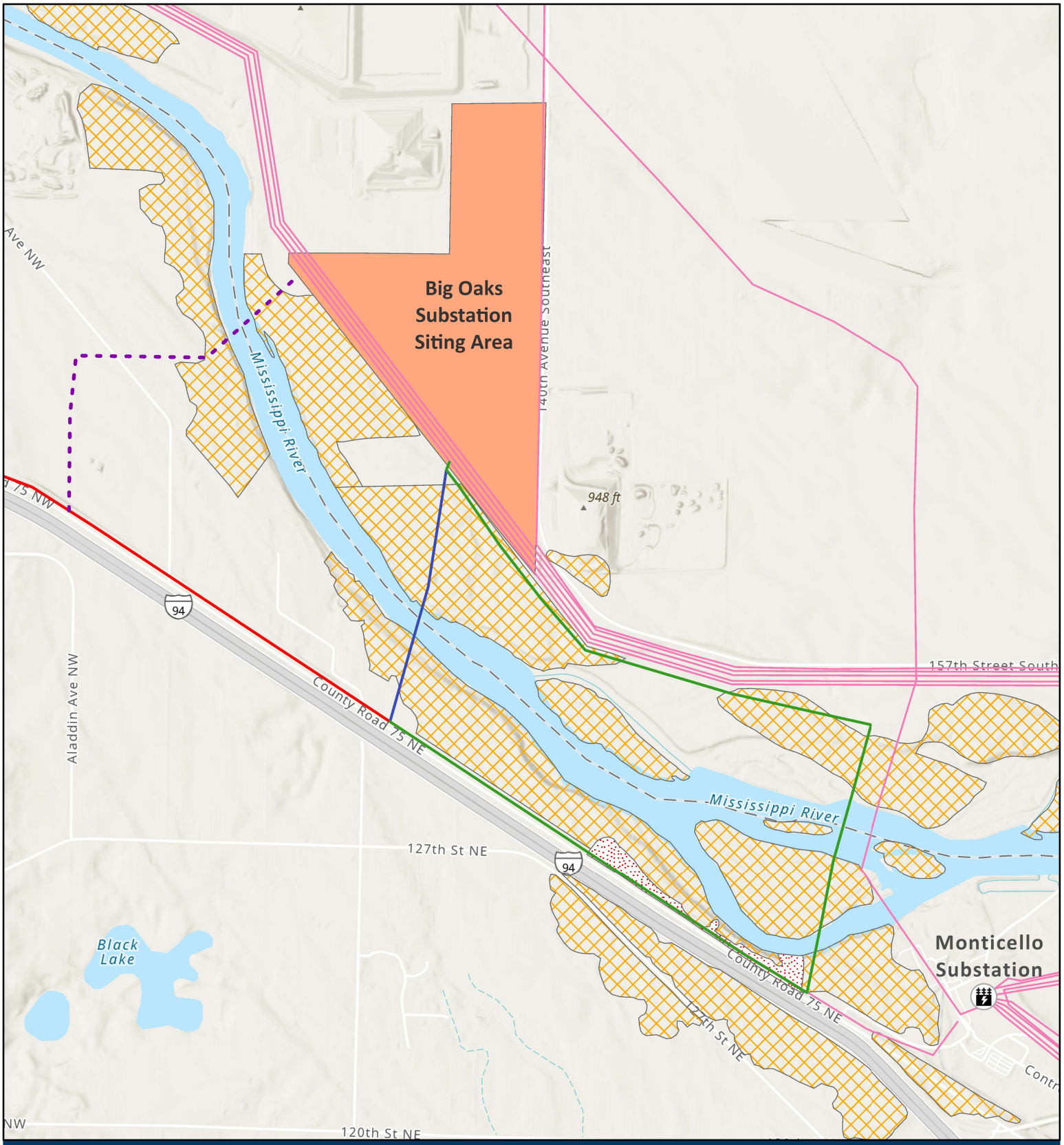
Map 3: DNR Alternative 2



DNR Alternative 2

- Existing Substations
- Big Oaks Substation Siting Area
- Existing Lines
- Native Prairies
- MBS Sites of Biodiversity Significance

DNR Alternatives

- Option 2

Proposed Transmission Line Alignments

- Western Crossing Option
- Eastern Crossing Option
- Project Transmission Line

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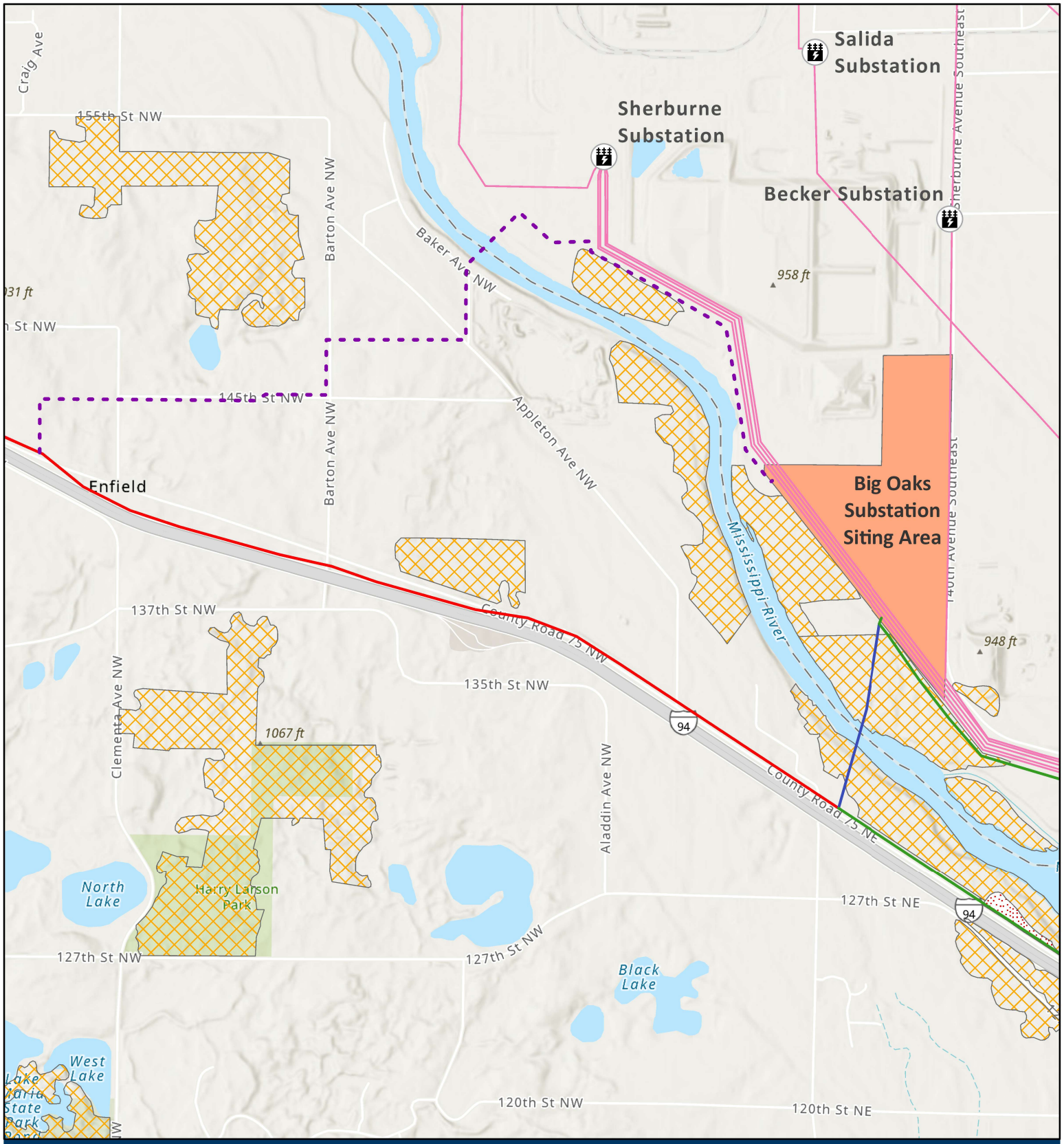
Map 4: DNR Alternative 3



DNR Alternative 3

- Existing Substations
- Big Oaks Substation Siting Area
- Existing Lines
- Native Prairies
- MBS Sites of Biodiversity Significance

DNR Alternatives

- Option 3

Proposed Transmission Line Alignments

- Western Crossing Option
- Eastern Crossing Option
- Project Transmission Line

N

Miles

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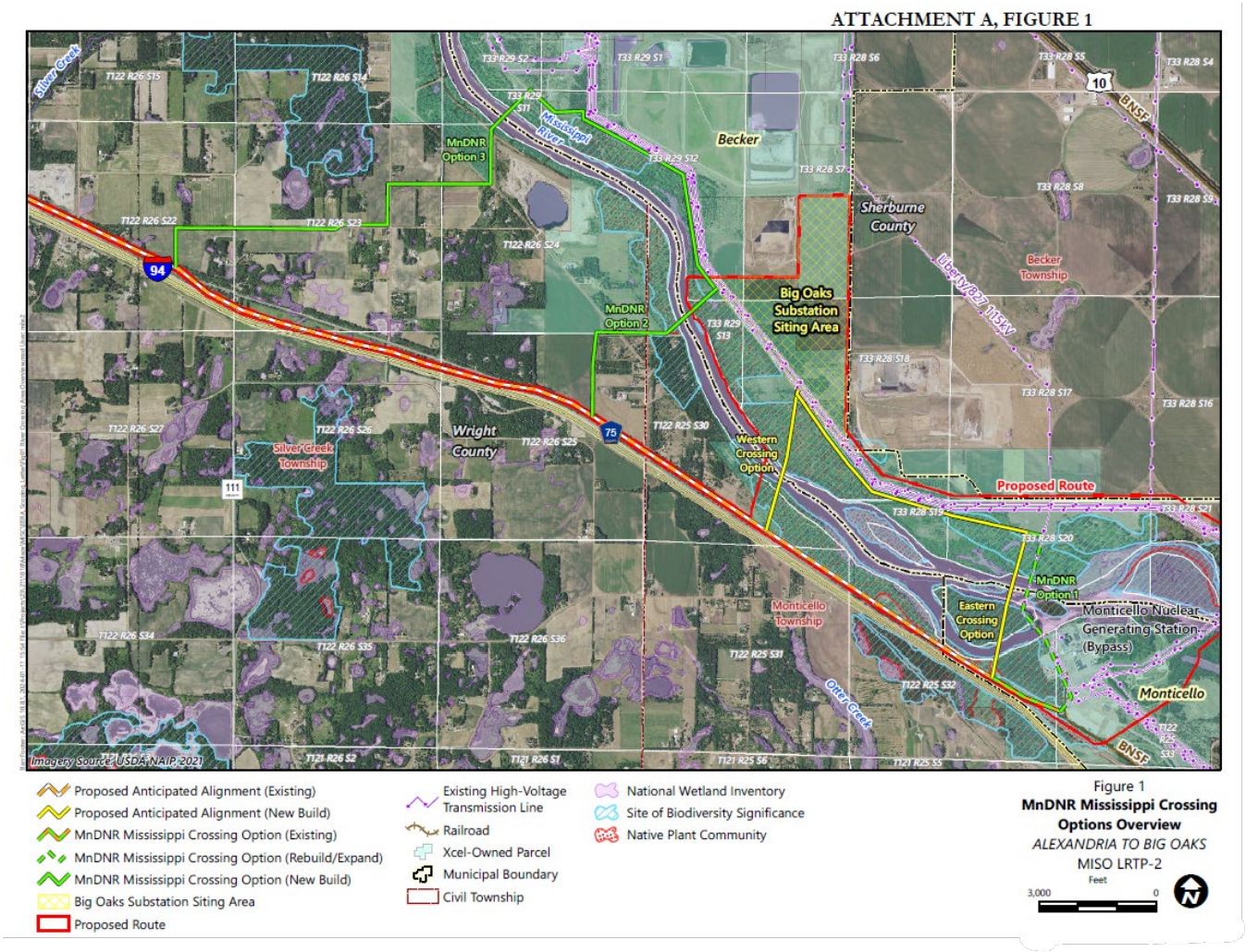
Attachment A:
Xcel Energy Proposed Modifications to DNR Crossing Options



ATTACHMENT A, FIGURE 2a

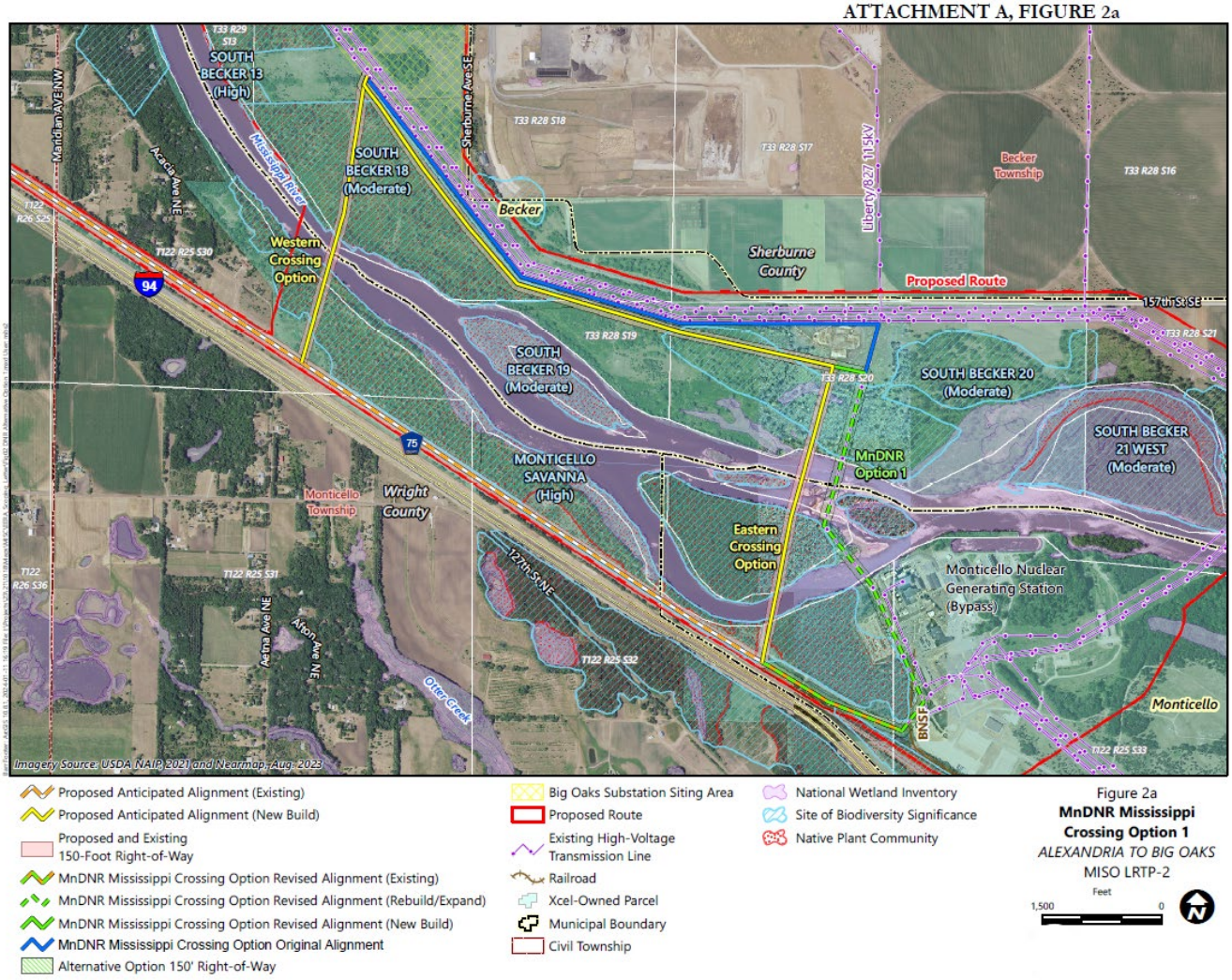
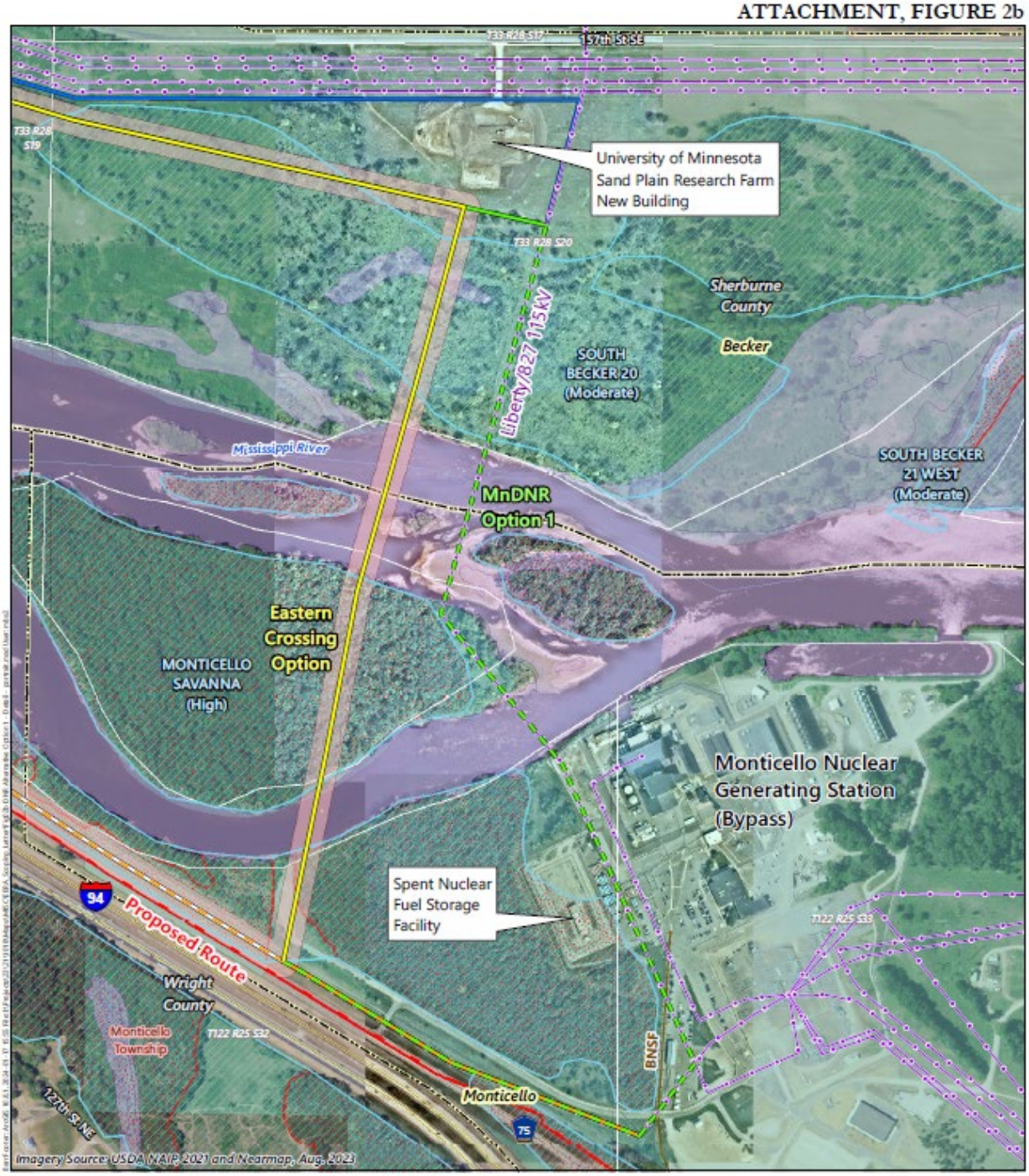
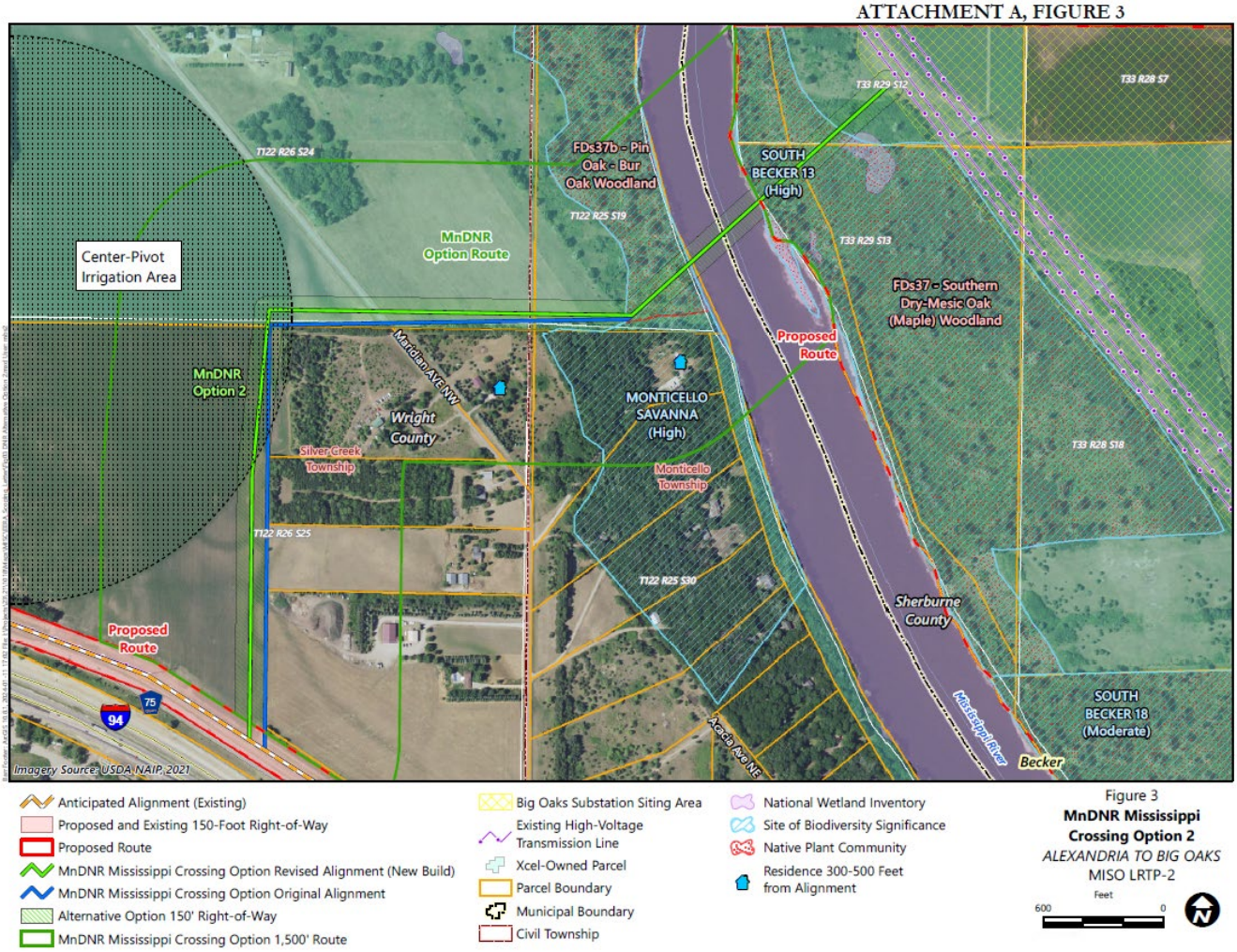


Figure 2a
MnDNR Mississippi Crossing Option 1
ALEXANDRIA TO BIG OAKS
MISO LRTP-2

ATTACHMENT, FIGURE 2b



ATTACHMENT A, FIGURE 3



ATTACHMENT A, FIGURE 4

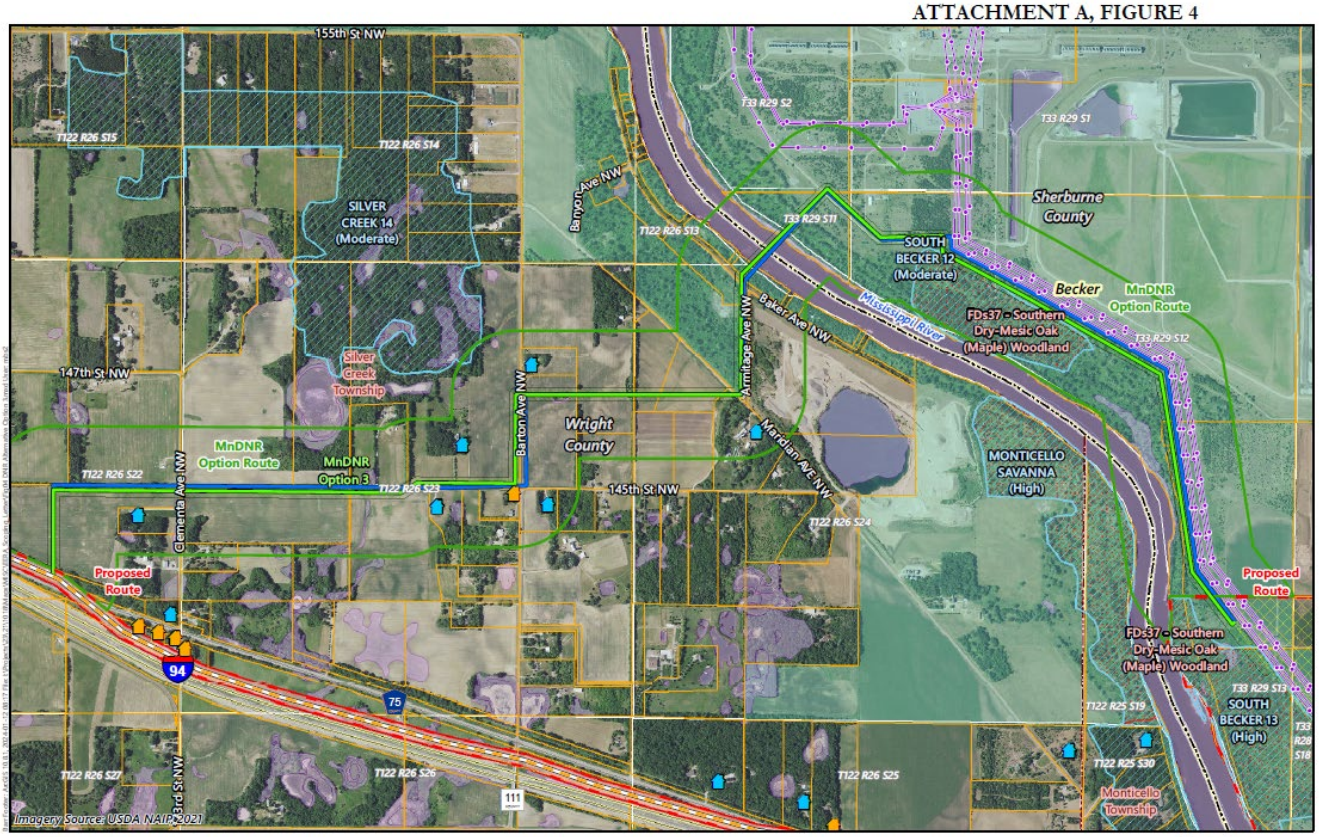


Figure 4
MnDNR Mississippi Crossing Option 3
ALEXANDRIA TO BIG OAKS
MISO LRTP-2