

March 19, 2025

VIA *E*DOCKETS

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

RE: **Scoping Summary Comments and Recommendations**  
Big Stone South to Alexandria 345 kV Transmission Project  
Docket No. E017, ET10/TL-23-160

Dear Mr. Seuffert,

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

In the Matter of the Application of Otter Tail Power Company and Western Minnesota Municipal Power Agency, through its agent, Missouri River Energy Services, for a Route Permit for a High Voltage Transmission Line for the Big Stone South to Alexandria 345 kV Transmission Project in West-Central Minnesota.

EERA staff is providing the Commission with a summary of the scoping process for the environmental impact statement that will be prepared for the Big Stone South to Alexandria 345 kV Transmission Project. Staff recommends that the applicants' six proposed routes, three route connectors, and four route segment alternatives be studied in the environmental impact statement, along with 20 additional routing alternatives proposed by the public during the scoping comment period. Staff is available to answer any questions the Commission may have.

Sincerely,



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**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION  
ENERGY ENVIRONMENTAL REVIEW AND ANALYSIS  
SCOPING SUMMARY COMMENTS AND RECOMMENDATIONS  
BIG STONE SOUTH TO ALEXANDRIA 345 kV TRANSMISSION PROJECT**

**DOCKET NOS. E017, ET10/TL-23-160**

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**Date:** March 19, 2025

**EERA Staff:** Jenna Ness | 651-539-1693 | [jenna.ness@state.mn.us](mailto:jenna.ness@state.mn.us)

**In the Matter of the Application of Otter Tail Power Company and Missouri River Energy Services for a Route Permit for a High Voltage Transmission Line for the Big Stone South to Alexandria 345 kV Transmission Project**

**Attachments:**

(1) Attachment 1: Maps

**Issues Addressed:** These comments and recommendations summarize the environmental impact statement (EIS) scoping process, discuss the routing alternatives proposed during the scoping process, and identify those alternatives that EERA staff recommends for further analysis in the EIS.

Additional documents and information can be found on:

- eDockets: <https://www.edockets.state.mn.us/> (23-160) 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 October 22, 2024, Otter Tail Power Company and Western Minnesota Municipal Power Agency, through its agent, Missouri River Energy Services (hereinafter the applicants), filed a route permit application<sup>1</sup> with the Minnesota Public Utilities Commission (Commission) to construct approximately 91 to 106 miles of 345 kV transmission line using double-circuit capable structures from the Minnesota/South Dakota border, approximately one mile south of Ortonville, Big Stone County, Minnesota, to the existing Alexandria Substation in Alexandria, Douglas County, Minnesota. Subsequently, the Commission found the route permit application to be complete.<sup>2</sup>

The Big Stone South to Alexandria Project (Project) is the western segment of the larger Big Stone South – Alexandria – Big Oaks 345 kV Transmission Project. A Certificate of Need for the Big Stone South – Alexandria – Big Oaks Project was issued by the Commission in Docket No. E002, E017, ET2, E015, ET10/CN-22-538 on October 30, 2024.<sup>3</sup>

The comments that follow describe the scoping process and routing alternatives proposed during the scoping process for the EIS that will be prepared for the project. Comments discuss those alternatives that the Department of Commerce, Energy Environmental Review and Analysis (EERA) staff recommends for inclusion in the scope of the EIS. Following the Commission's review of these comments and based on any Commission input, the Department of Commerce (Department) will finalize and issue the scoping decision for the EIS.

## Project Purpose

The applicants indicate that the Big Stone South – Alexandria – Big Oaks 345 kV Transmission Project is needed to provide reliable, resilient, and cost-effective delivery of energy as the generation resource mix continues to evolve over the coming years.<sup>4</sup> Specifically, the Project is needed to address reliability issues on the existing 230 kV system in eastern North Dakota and South Dakota and in western and central Minnesota. This existing 230 kV system is at its capacity, leading to thermal and voltage issues; the Project would help to resolve these issues by adding another 345 kV circuit to the system in this area.

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<sup>1</sup> Otter Tail Power Company and Missouri River Energy Services. Big Stone South to Alexandria 345 kV Transmission Line Project, Application to the Minnesota Public Utilities Commission for a Route Permit for a High Voltage Transmission Line, October 22, 2024, eDockets Numbers [202410-211322-01](#) (through -07), hereinafter the Route Permit Application.

<sup>2</sup> Public Utilities Commission, Notice of Route Permit Application Completeness. October 30, 2024, eDockets No. [202412-212612-01](#)

<sup>3</sup> Public Utilities Commission, Order Granting Certificate of Need for the Big Stone South – Alexandria – Big Oaks Transmission Line Project. October 30, 2024, [202410-211465-01](#).

<sup>4</sup> Certificate of Need Application, Section 1.3



## Project Description

The applicants propose to construct approximately 91 to 106 miles of 345 kV transmission line using double-circuit capable structures, with only a single circuit installed initially and the other circuit remaining open for a possible future transmission line. The Project would run from the Minnesota/South Dakota border, approximately one mile south of Ortonville, Big Stone County, Minnesota, to the existing Alexandria Substation in Alexandria, Douglas County, Minnesota. The applicants proposed at least two possible high voltage transmission line (HVTL) routes as required by Minnesota Rules 7850.1900. Neither route is designated as “preferred” by the applicants.

The Project is divided into the following three regions, and within each region, there are two end-to-end route options that start and stop at a common point (Attachment 1 Map 1).<sup>5</sup>

- **South Region:** Up to 42 miles of HVTL between the Minnesota/South Dakota border and continuing east to a point in Tara Township, Swift County, Minnesota. Route options include **South 1 and South 2.**
- **Central Region:** Up to 39 miles of HVTL between a point in Tara Township and continuing east, northeast to a point in Ben Wade Township, Pope County, Minnesota. Route options include **Central 1 and Central 2.**
- **North Region:** Up to 25 miles of HVTL between a point in Ben Wade Township and continuing northeast to the existing Alexandria Substation southwest of Alexandria, Minnesota. Route options include **North 1 and North 2.**

The route width proposed for the route options is typically 1,000 feet, with a few exceptions where a wider or narrower route width is requested. The applicants propose to construct the 345 kV transmission line in a 150-foot right-of-way. In addition to the route options, the applicants also proposed route segment alternatives and connector segments, as described later in this document.

The Project also includes modifications to the existing Alexandria Substation, southwest of the city of Alexandria, Minnesota, and the Big Stone South Substation in Grant County, South Dakota. In addition, a new fiber optic regeneration station for amplifying and regenerating optical communications between substations is proposed to be constructed in the Central Region.

## Regulatory Process and Procedures

The proposed Big Stone South to Alexandria 345 kV Transmission Project requires a route permit from the Commission. On December 3, 2024, the Commission issued an order accepting the Project’s route

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<sup>5</sup> Route Permit Application, Section 3

permit application as complete.<sup>6</sup> Route permit applications are subject to environmental review conducted by EERA staff.

EERA staff will prepare an EIS that will inform the Commission’s decision on the applicants’ route permit application. The first step in preparing the EIS is scoping. The scoping process has two primary purposes: (1) to gather public input on the impacts, mitigation measures, and routing alternatives to study in the EIS, and (2) to focus the EIS on those impacts, mitigation measures, and routing alternatives that will aid in the Commission’s decision on the route permit application.

## Scoping Process Summary

Commission and EERA staff gathered input on the scope of the EIS through six public scoping meetings and an associated comment period, as summarized below:

Date	Location	Approximate Number of Attendees
January 14, 2025	Alexandria	14
January 14, 2025	Glenwood	21
January 15, 2025	Hancock	50
January 15, 2025	Benson	26
January 16, 2025	Ortonville	25
January 16, 2025	Virtual	2

Approximately 138 people attended the public meetings. Twenty-two persons provided verbal comments.<sup>7</sup> Commenters asked questions about the potential impacts to farming, personal property and easements, and water quality and wells, and provided comments on wildlife and natural resources. Commenters also noted concerns with electric and magnetic fields (EMF), stray voltage, frequency interference, and human health, among other topics.

## Written Comments Received

A comment period, ending on January 31, 2025, provided the public an opportunity to submit comments to EERA staff on potential impacts and mitigation measures for consideration in the scope of the EIS.<sup>8</sup> Written comments were received during this comment period from one federal agency, two

<sup>6</sup> Public Utilities Commission Order, December 3, 2024, eDockets Number [202412-212612-01](#).

<sup>7</sup> Big Stone South to Alexandria 345 kV Transmission Project – Scoping comments, eDockets Number [20252-215692-01](#).

<sup>8</sup> Public Utilities Commission Notice of Public Information and Environmental Impact Statement Scoping meetings, December 17, 2024, eDockets Number [202412-213102-01](#).

state agencies, two local units of government, one labor union, one private company, and 97 community members. All public comments referenced below have been compiled and can be viewed in eDockets.<sup>7</sup>

### ***U.S. Fish and Wildlife Service (USFWS)***

USFWS comments focused on potential environmental impacts to lands that are part of the National Wildlife Refuge System near the Project. These lands include Waterfowl Production Areas and conservation easement interest lands (habitat easements and wetland easements). The USFWS comments included several alternative routes proposed to minimize potential impacts to these lands.

### ***Morris Wetland Management District***

The Morris Wetland Management District, on behalf of USFWS, commented with a map of alternative routes identical to those submitted by the USFWS in its comment letter.

### ***Minnesota Department of Natural Resources (DNR)***

DNR comments focused on potential environmental impacts with a list of the agency's preferred routes and recommendations. The comment included two Natural Heritage Reviews that were completed for the Project and suggests that the EIS refer to these reviews and incorporate steps to minimize or avoid impacts to state-listed species or other rare resources, such as calcareous fens, Sites of Biodiversity Significance, and Native Plant Communities. Additionally, DNR requested the EIS analyze lighting, dust control, and erosion control.

### ***Minnesota Department of Transportation (MNDOT)***

MNDOT comments focused on potential impacts to scenic byways and requests that impacts to the following three scenic byways be discussed in the EIS: King of Trails Scenic Byway, Glacial Ridge Trail Scenic Byway, and Minnesota River Valley National Scenic Byway. MNDOT expressed its appreciation of extensive early coordination efforts by the applicants.

### ***Lake Mary Township Board***

The Lake Mary Township Board's comments focused on potential impacts to property values, agricultural properties, and associated farming activities. The comments also stated its preference for the route to follow existing rights-of-way.

### ***Local 49 of the International Union of Operating Engineers***

Local 49 of the International Union of Operating Engineers commented that while this Project would not provide a huge amount of work for its members, the projects that this Project would induce would benefit heavy equipment operators. The comment requests that the EIS discuss the potential benefits to its members.

### **Minnerath Investments LLC**

Minnerath Investments LLC's comments focused on potential impacts to gravel mining operations and associated properties in the vicinity of the Project. The comment requests that the EIS include the following: an assessment of the economic impact of the Project on aggregate availability, operational efficiency, and property values; consideration of alternative routes that minimize impacts on industrial operations; and mitigation measures to address any negative impacts on Minnerath Investments LLC's business.

### **Other Comments**

Community members who submitted written public comments expressed concern about a variety of potential impacts associated with the Project, including but not limited to farming operations, property values, multiple transmission lines on a property, human health, EMF, aesthetics, land use, wildlife and associated habitat, water resources, water quality, and noise. Approximately one-half of the comments expressed a preference for, or displeasure with, a routing option proposed in the route permit application. Commenters also proposed multiple route and alignment alternatives, as discussed further below.

### **Applicants' Response to Scoping Comments**

In preparing these comments, consistent with Minnesota Rules 7850.2500, subpart 3, EERA staff conferred with the applicants on the routing alternatives proposed for study in the EIS and reviewed their response to each proposed routing alternative.<sup>9</sup> The applicants included a list of all of the routing alternatives and whether they believed each should be included in the scope of the EIS along with their justification.<sup>10</sup> These comments from the applicants are discussed further below.

## **Proposed Routing Alternatives**

With respect to routing alternatives, EERA is charged with including only those alternatives that will assist in the Commission's "ultimate decision on the permit application" in the scope of the EIS.<sup>11</sup> EERA staff initially screens proposed routing alternatives using five criteria:

- Was the alternative submitted in a timely manner, prior to the end of the public comment period for scoping?
- Does the alternative contain an explanation of why the route should be included? EERA staff interprets this criterion to require that routing alternatives, to be included in the scope of the EIS, must mitigate a potential impact of the Project, and this mitigation must be, in general terms,

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<sup>9</sup> Applicants' Response to Scoping Comments, February 21, 2025, eDockets Number [20252-215667-01](#).

<sup>10</sup> Ibid. Attachment 1.

<sup>11</sup> Minn. R. 7850.2500, subp. 3.

explained by the proposer of the alternative. This suggests that the location of the route alternative must be known in order to determine if potential impacts are mitigated.

- Is the alternative outside areas prohibited in Minnesota Rules 7850.4300, for example, state and national parks?
- 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 permissible by state and federal agencies with authority for the construction or operation of the project?

After this initial screening, EERA staff then analyzes the remaining routing alternatives to determine if their inclusion in the EIS would aid in the Commission's decision on the route permit application. EERA staff compares each proposed alternative to other alternatives, if any, that could also avoid or mitigate the impact(s) described by the proposer. If a proposed alternative impacts relatively more human and environmental resources, it is likely that it would not aid in the Commission's decision on the route permit application and would not be advanced for analysis in the EIS.

EERA used the above criteria to analyze routing alternatives proposed during the scoping process. All proposed routing alternatives are indicated on the maps in Attachment 1 and discussed here. Commenters recommended a total of one route, 23 route segments, six route connectors, and six alignment alternatives.

The following terminology is used to discuss these routing alternatives:

- **Routes** are divided by the applicants into three regions for the Project: South, Central, and North, as described above. Routes extend the length of the region and connect designated region start and end points. Within each of the three regions, the applicants proposed two end-to-end routes for a total of six routes. The six route options include South 1, South 2, Central 1, Central 2, North 1, and North 2 (Attachment 1 Map 1). One additional route was proposed for the Central region during scoping: Central 3 (Attachment 1 Map 2–15).
- **Route connectors** connect the applicants' route options within a region to transition between different routes. The applicants included three route connectors in their application, two in the south region and one in the central region. An additional six route connectors were proposed during scoping. Unique, alpha-numeric identifications were given to route connectors, starting with 101 in each region. The unique identifier includes a prefix (S- South, C- Central, N- North) corresponding to the region the connector is in.
- **Route segments** leave and return to the same route or route connector they originate from. For example, a route segment originating from South 1 returns to South 1. The applicants included four route segments in their application, one in the south region and three in the north region. An additional 23 route segments were proposed during scoping. Unique, alpha-numeric identifications were given to route segments starting with 201 in each region. The unique

identifier includes a prefix (S- South, C- Central, N- North) corresponding to the region the connector is in.

- **Alignment alternatives** are alignments proposed during scoping that deviate from the proposed alignment but fall within one of the original route widths proposed by the applicants. Six alignment alternatives were proposed during scoping. Unique identifications were given to alternative alignments starting with AA1 in each region. The unique identifier includes a prefix (S- South, C- Central, N- North) corresponding to the region the alternative alignment is in.

### Routing Alternatives Recommended for Inclusion in the EIS Scope

In addition to the routes proposed by the applicants, EERA staff recommends that three route connectors, 12 route segments, and five alignment alternatives proposed during the scoping period be included for study in the EIS (Table 1). These routing alternatives are mapped in Attachment 1. Staff believes these alternatives would aid in the Commission’s decision regarding the route permit. In conferring with the applicants, all are feasible and could be constructed. Numbers provided after a commenter’s name in the “Source” column in Table 1 coincide with the comment number as indicated in the index of scoping comments received.<sup>12</sup>

**Table 1 Routing Alternatives Recommended for Inclusion in the EIS Scope**

Name	Map	Type	Associated Route	Source
<b>S104</b>	Attachment 1 – Map 2–2	Route Connector	Connects South 1 and South 2 Routes	Pam Rehn #60 and #94
<b>C101</b>	Attachment 1 – Map 2–14	Route Connector	Connects Central 1 and Central 2 Routes	USFWS #48
<b>C102</b>	Attachment 1 – Map 2–9	Route Connector	Connects Central 1 and Central 2 Routes	Lance Mumm #7 Allen Mumm #30
<b>S201</b>	Attachment 1 – Map 2–4	Route Segment	South 2	Brian Hamman #3
<b>S202</b>	Attachment 1 – Map 2–4	Route Segment	South 2	USFWS #48
<b>S203</b>	Attachment 1 – Map 2–4	Route Segment	South 2	Brian Hamman #3
<b>S204</b>	Attachment 1 – Map 2–5	Route Segment	South 1	Roger Schmidt #54
<b>S205</b>	Attachment 1 – Map 2–5	Route Segment	South 1	USFWS #48
<b>S207</b>	Attachment 1 – Map 2–2	Route Segment	South 2	USFWS #48

<sup>12</sup> Big Stone South to Alexandria 345 kV Transmission Project – Scoping comments, eDockets Number [20252-215692-01](https://www.ercot.com/efiling/20252-215692-01).

Name	Map	Type	Associated Route	Source
<b>S208</b>	Attachment 1 – Map 2–3	Route Segment	South 1	USFWS #48
<b>S210</b>	Attachment 1 – Map 2–1	Route Segment	South 1	Cathy Klebofski #33
<b>C202</b>	Attachment 1 – Map 2–14	Route Segment	Central 2	Loren Boysen #8
<b>C203</b>	Attachment 1 – Map 2–10	Route Segment	Central 2	Don/Michele Greiner #51
<b>C208</b>	Attachment 1 – Map 2–9	Route Segment	Central 2	John/Heidi Beyer #27 Daniel/Becky Beyer #28 Norman Beyer #29
<b>N205</b>	Attachment 1 – Map 2–16	Route Segment	North 1	Neal Kalina #39
<b>SAA01</b>	Attachment 1 – Map 2–8	Alignment Alternative	South 1 and South 2	Lance Mumm #7 Allen Mumm #30
<b>SAA02</b>	Attachment 1 – Map 2–8	Alignment Alternative	South 1 and South 2	Lance Mumm #7 Allen Mumm #30
<b>SAA03</b>	Attachment 1 – Map 2–7	Alignment Alternative	South 1	Nancy Vollmer #37
<b>SAA04</b>	Attachment 1 – Map 2–3	Alignment Alternative	South 2	David Hovde #20
<b>CAA01</b>	Attachment 1 – Map 2–13	Alignment Alternative	Central 2	Scott Johnson #44

### **Route Connectors**

#### **S104**

This route connector mitigates impacts to residences; it avoids two more residences than the corresponding portion of South 2 in this area. This alternative also passes near a calcareous fen. A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected by the state of Minnesota. EERA contacted the DNR to see if this alternative was feasible given its proximity to the fen. DNR indicated that S104 would be south of the fen and not directly cross over the fen as it is currently delineated. Thus, it is likely the applicants would be able to work with the DNR to span sensitive areas and develop a management plan if required. EERA staff recommends that route connector S104 be included in the EIS scope.

The applicants recommended that this route segment alternative not be included in the EIS scope because a similar alternative was previously considered and rejected in their application. The applicants

note that this alternative would cross relatively more USFWS lands. EERA staff believes it is possible, in several areas, to span the resources of concern or route away from these lands. EERA staff also notes that the impacts to USFWS lands along S104 are generally similar to those along the corresponding portion of South 2. On whole, EERA staff recommends that route connector S104 be included in the EIS scope.

### **C101**

This route connector was suggested by USFWS to mitigate impacts to federally protected USFWS lands. This alternative has fewer residents within 500 feet of the alignment (zero) than the corresponding portions of Central 1 and Central 2 (two). While this alternative still routes near federal lands, USFWS indicated to EERA that this alternative would not fragment a habitat complex between a USFWS WPA and a DNR WMA that would be fragmented by Central 2.<sup>13</sup> On whole, this alternative could mitigate impacts to federal land and residences; thus, EERA staff recommends that route connector C101 be included in the EIS scope.

The applicants recommended that this alignment alternative not be included in the EIS scope. Further, the applicants noted that a substation on the corner of County Road 24 and 323<sup>rd</sup> Avenue would introduce engineering constraints. EERA staff believes this substation can be avoided by adjusting the alignment to be on the opposite side of the road at the necessary distance.<sup>14</sup>

### **C102**

This route connector mitigates impacts to residences and farming operations. No residences are within 500 feet of the alignment of this alternative whereas five residences are along the corresponding portion of Central 1 and Central 2. However, this alternative uses less existing right-of-way compared to the corresponding portions of Central 1 and Central 2. On whole, EERA staff recommends that route connector C102 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

## **Route Segments**

### **S201**

This route segment alternative was suggested to mitigate impacts to farming operations by following roads instead of South 2, which bisects agricultural fields. EERA staff recommends that route segment S201 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

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<sup>13</sup> EERA personal communication with USFWS via phone call, March 19, 2025.

<sup>14</sup> EERA has modified the alignment of C101 to avoid this substation; see Attachment 1.



**S202**

This route segment alternative was suggested by USFWS to mitigate impacts to federally protected USFWS lands. This alternative is approximately 8 miles in length compared to the corresponding portion of South 2, which is approximately 3 miles, which may increase other human and environmental impacts. This alternative would have two fewer residences within 500 feet of the alignment and avoid routing through USFWS wetland easements and a Waterfowl Production Area (WPA) near the intersection of 600<sup>th</sup> Avenue and 360<sup>th</sup> Street. There is also a parcel pending USFWS acquisition that South 2 would route through, increasing impacts to federal lands in the future landscape.<sup>15</sup> On whole, EERA staff recommends that route segment S202 be included in the EIS scope for further study. The applicants are agreeable to including this route segment alternative in the EIS scope.

**S203**

This route segment alternative was suggested to mitigate impacts to farming operations by following roads instead of South 2, which bisects agricultural fields. EERA staff recommends that route segment S203 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

**S204**

This route segment alternative was suggested to mitigate impacts to farming operations along South 1. EERA finds that both this alternative and South 1 follow property lines, although the east half of Section 15 in Shible Township, which is bisected by South 1, is farmed contiguously as outlined by the commenter. The commenter noted that they would like to utilize these two quarters in Section 15 with an irrigation system. This alternative and the corresponding portion of South 1 would both have no residences within 500 feet of the alignment. On whole, EERA staff recommends that route segment S204 be included in the EIS scope for further study. The applicants are agreeable to including this route segment alternative in the EIS scope.

**S205**

This route segment alternative was suggested by USFWS to mitigate impacts to federally protected USFWS lands. There are three residences within 500 feet of the alignment of S205 whereas South 1 has no residences along the corresponding portion. While South 1 generally follows agricultural field boundaries, this alternative follows at least 2 miles more of existing road right-of-way (U.S. Highway 12) than South 1. On whole, EERA staff recommends that route segment S205 be included in the EIS scope for further study.

The applicants are agreeable to including this route segment alternative in the EIS scope with modifications as described in the applicants' comments. The applicants stated that this alternative

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<sup>15</sup> Parcel # 03-0067-000. EERA personal communication with USFWS via phone call, March 18, 2025.

bisects agricultural land as is currently proposed and should be modified to minimize these impacts. EERA agrees with these modifications, which would adjust the alignment of S205 approximately 0.7 miles to the north along U.S. Highway 12 for the first 3.5 miles of the route as it heads from the west to east. These modifications are incorporated into S205, as shown in Attachment 1.

### **S207**

This route segment alternative was suggested by USFWS to mitigate impacts to federally protected USFWS lands. This alternative has no residences within 500 feet of its alignment, whereas the corresponding portion of South 1 would impact two residences. While this alternative still routes through other federal land, USFWS indicated to EERA that the wetlands themselves within those parcel boundaries would be avoided with their alternative, as shown in Attachment 1 Map 2–2.<sup>16</sup> South 2 would disturb a permanently protected wetland conservation easement, whereas this alternative would avoid these wetlands within the USFWS parcel boundaries. The wetland easement specifically prohibits burn, drain, dredge and fill impacts and proposed uses of these lands cannot be allowed unless it is compatible.<sup>17</sup> EERA staff recommends that route segment S207 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

### **S208**

This route segment alternative was suggested by USFWS to mitigate impacts to federally protected USFWS lands. This alternative has four residences within 500 feet of its alignment, whereas the corresponding portion of South 1 has none. While this alternative still routes through other federal land, USFWS indicated to EERA that the grassland easements within those parcel boundaries would be avoided with this alternative, as well as USFWS-protected wetlands, as shown on Attachment 1 Map 2–3 in Attachment 1.<sup>18</sup> South 1 would disturb a grassland easement, which does not allow for any habitat changes,<sup>19</sup> whereas this alternative would not change any habitat in grassland easements. Depending on the final footprint and/or associated easement requirements, South 1 would have the potential to not be in accordance with the terms of the pre-existing grassland easement whereas S208 would avoid these issues. Additionally, this alternative would avoid routing near the Hillman WPA sooner than South 1 does, decreasing avian collision impacts in the WPA, which is a large contiguous block of habitat with a substantial portion of native prairie.<sup>20</sup> On whole, this alternative could mitigate impacts to federal land but increase impacts to residences; EERA staff recommends that route segment S208 be included in the EIS scope for further study. The applicants are agreeable to including this route segment alternative in the EIS scope.

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<sup>16</sup> EERA personal communication with USFWS via phone call, March 18, 2025.

<sup>17</sup> Compatibility Policy 603 FW2.

<sup>18</sup> EERA personal communication with USFWS via phone call, March 18, 2025.

<sup>19</sup> USFWS. Grassland Easements. Retrieved from: <https://www.fws.gov/service/grassland-easements>.

<sup>20</sup> Ibid.

**S210**

This route segment alternative was suggested to mitigate impacts to waterbodies. S210 crosses no lakes; South 1 crosses one lake. This alternative has three residences within 500 feet of its alignment, whereas the corresponding portion of South 1 has one residence. Additionally, this alternative parallels, in part, the existing transmission line right-of-way south of U.S. Highway 12 that could avoid several parcels of federally managed land to the north. Accordingly, this alternative also follows more existing road right-of-way while South 1 primarily follows property lines.

The applicants recommended that this route segment alternative not be included in the EIS scope because a similar alternative was previously considered and rejected in their application. The applicants noted this route would cross several USFWS and DNR lands as well as impact more residences. EERA contacted this public commenter to better design the route to mitigate the potential impacts raised by the commenter and to USFWS and DNR lands.<sup>21</sup> These modifications are incorporated into S210, as shown in Attachment 1. This alternative would impact about 2,500 feet of a USFWS wetland easement whereas the corresponding portion of South 1 would impact about 6,500 feet of two USFWS wetland easements. On whole, EERA staff recommends that route segment S210 be included in the EIS scope for further study.

**C202**

This route segment alternative mitigates impacts to residences; it avoids two more residences than Central 2. C202 follows agricultural field boundaries and utilizes less road right-of-way than Central 2.

The applicants recommended that this route segment alternative not be included in the EIS scope because a similar alternative was previously considered and rejected in their application. The applicants noted that the DNR strongly recommended avoiding the White Bear Wildlife Management Area (WMA) to the west of 310<sup>th</sup> Avenue, where this alternative is suggested. However, it appears possible to span the WMA at its narrowest point along this route alternative. It also appears possible to avoid the placement of structures within the WMA by routing to the east of its boundary after spanning the narrowest point. On whole, EERA staff recommends that route segment C202 be included in the EIS scope for further study.

**C203**

This route segment was suggested to mitigate impacts to farmland and to reduce costs by decreasing the number of 90-degree turns in the line. EERA contacted the applicants to ask if this alternative would mitigate costs, and they indicated that the cost differential would be negligible because of the similar

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<sup>21</sup> EERA personal communication with Cathy Klebofski via phone call, February 20, 2025. EERA staff notes that this route segment alternative was originally denoted as S103, and the applicants' comments on this alternative refer to S103. With the reworking of the alternative, EERA staff has renamed this alternative as S210.

distance and number of angle structures for both routes.<sup>22</sup> Impacts to farmland for this alternative appear to be similar to those along Central 2. This alternative could increase impacts to two parcels of USFWS land if they cannot be avoided. Both this alternative and the corresponding portion of Central 2 have one residence within 500 feet of their alignments. On whole, though impacts between the routing options are somewhat similar, EERA staff recommends that route segment C203 be included in the EIS scope for further study.

### **C208**

This route segment alternative mitigates impacts to residences; there are no residences within 500 feet of the C208 alignment compared to four residences along the corresponding portion of Central 2. EERA staff recommends that route segment C208 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

### **N205**

This route segment alternative mitigates impacts to residences by increasing the distance from one residence along the corresponding portion of North 1. EERA staff recommends that route segment N205 be included in the EIS scope. The applicants are agreeable to including this route segment alternative in the EIS scope.

## **Alignment Alternatives**

### **SAA01**

This alignment alternative for South 1 mitigates impacts to a residence by moving the alignment to agricultural fields on the south side of 60<sup>th</sup> Street NW. EERA staff recommends that alignment alternative SAA01 be included in the EIS scope.

The applicants recommended that this alignment alternative not be included in the EIS scope. The applicants noted that this alignment alternative would already be included in the EIS analysis of the proposed route width. EERA staff agrees that the alignment alternative is within the proposed route width. Staff also notes that SAA01 appears to mitigate impacts that are not mitigated by the proposed alignment of South 1. Thus, EERA staff believes that SAA01 should be studied as a distinct alignment.

### **SAA02**

This alignment alternative for South 2 mitigates impacts to a commercial building and a residence by moving the alignment to agricultural fields on the south side of 60<sup>th</sup> Street NW. EERA staff recommends that alignment alternative SAA02 be included in the EIS scope.

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<sup>22</sup> EERA personal communication with the applicants via email, February 25, 2025.

The applicants recommended that this alignment alternative not be included in the EIS scope. The applicants noted that this alignment alternative would already be included in the EIS analysis of the proposed route width. As noted above, EERA staff believes that distinct alignments that mitigate potential impacts should be analyzed in the EIS.

### **SAA03**

This alignment alternative mitigates potential impacts to a residence. EERA staff recommends that alignment alternative SAA03 be included in the EIS scope.

The applicants recommended that this alignment alternative not be included in the EIS scope because any alignment alternative would already be included in the EIS analysis of the proposed route width. As noted above, EERA staff believes that distinct alignments that mitigate potential impacts should be analyzed in the EIS.

### **SAA04**

This alignment alternative decreases potential impacts to farming operations by following a route preferred by the property owner with parcels on both sides of the proposed alignment along South 2 rather than following property lines. The commenter indicated that South 2 routes through the middle of their farm fields. EERA staff recommends that alignment alternative SAA04 be included in the EIS scope.

The applicants recommended that this alignment alternative not be included in the EIS scope because any alignment alternative would already be included in the EIS analysis of the proposed route width. As noted above, EERA staff believes that distinct alignments that mitigate potential impacts should be analyzed in the EIS.

### **CAA01**

This alignment alternative mitigates potential impacts to a residence. The commenter preferred that the alignment be moved to their own property east of County Road 1, which could mitigate impacts to a residence west of County Road 1. EERA staff recommends that alignment alternative CAA01 be included in the EIS scope.

The applicants recommended that this alignment alternative not be included in the EIS scope because any alignment alternative would already be included in the EIS analysis of the proposed route width. As noted above, EERA staff believes that distinct alignments that mitigate potential impacts should be analyzed in the EIS.

## Routing Alternatives Not Recommended for Inclusion in the EIS

EERA staff recommends that one route, three route connectors, 11 route segments, and one alignment alternative not be included in the scope of the EIS (Table 2). These items are not recommended for study in the EIS for one of two reasons: (1) they are not feasible (that is, not constructible), or (2) they would not aid the Commission’s decision on a route permit. Numbers provided after a commenter’s name in the “Source” column in Table 2 coincide with the comment number as indicated in the index of scoping comments received.<sup>23</sup>

**Table 2 Routing Alternatives Not Recommended for Inclusion in the EIS Scope**

Name	Map	Type	Associated Route	Source
<b>Central 3</b>	Attachment 1 – Map 2–15	Route	Central	Donald Boon #21
<b>S101</b>	Attachment 1 – Map 2–1	Route Connector	Connects South 1 and South 2 Routes	Cathy Klebofski #33
<b>S102</b>	Attachment 1 – Map 2–1	Route Connector	Connects South 1 and South 2 Routes	Cathy Klebofski #33 Pam Rehn #60
<b>N101</b>	Attachment 1 – Map 2–16	Route Connector	Connects North 1 and North 2 Routes	Jeff McCoy #4
<b>S206</b>	Attachment 1 – Map 2–3	Route Segment	South 2	David Hovde #20
<b>S209</b>	Attachment 1 – Map 2–6	Route Segment	South 1	Greg/Angela Krogsrud #11 Marcus Krogsrud #102
<b>C201</b>	Attachment 1 – Map 2–14	Route Segment	Central 2	Kris/Mike Lea #34
<b>C204</b>	Attachment 1 – Map 2–11	Route Segment	Central 1	Dean Solvie #56
<b>C205</b>	Attachment 1 – Map 2–11	Route Segment	Central 1	Jon Nohl #32
<b>C206</b>	Attachment 1 – Map 2–11	Route Segment	Central 1	Jon Nohl #32
<b>C207</b>	Attachment 1 – Map 2–11	Route Segment	Central 1	Jon Nohl #32
<b>N201</b>	Attachment 1 – Map 2–17	Route Segment	North 1	Randy Zeithamen #42
<b>N202</b>	Attachment 1 – Map 2–17	Route Segment	North 1	Tom Hills #15

<sup>23</sup> Big Stone South to Alexandria 345 kV Transmission Project – Scoping comments, eDockets Number [20252-215692-01](#).

Name	Map	Type	Associated Route	Source
<b>N203</b>	Attachment 1 – Map 2–17	Route Segment	North 1	Randy Zeithamen #42
<b>N204</b>	Attachment 1 – Map 2–17	Route Segment	North 2	Thomas Erickson #97
<b>CAA02</b>	Attachment 1 – Map 2–12	Alignment Alternative	Central 2	Dean Solvie #56

### **Routing Alternatives that are Not Feasible**

Routing alternatives are not feasible if they cannot be constructed or are not permissible by state and federal agencies with authority for construction or operation of the project. Routing alternatives not recommended for inclusion in the EIS because they are not feasible include the following.

#### **Route Segment S206**

This route segment was suggested to mitigate impacts to farmland and farming operations. While this alternative may reduce impacts to farmland by creating fewer obstacles, this route would encounter engineering limitations from spanning 1,400 feet by running angled dead-end structures. This would result in a foundation size that is not reasonably feasible due to the corresponding increase in structure height that would be required.<sup>24</sup> To feasibly construct this route, an additional tangent structure in the middle of an agricultural field would be needed between the two running angle structures to accommodate the angled route, which would defeat the intent of the commenter’s mitigation.<sup>25</sup> Accordingly, EERA staff recommends that route segment S206 not be included in the EIS scope.

#### **Route Segment C204**

This route segment was suggested to mitigate impacts to residences, farming operations, and the number of existing transmission lines in the area. This route segment alternative would require crossing a lake with a span of over 2,500 feet, which significantly exceeds the maximum length that is constructible for the proposed structures (typically 1,000 – 1,400 feet). This alternative would also not aid in the Commission’s decision because it impacts more residences than Central 1 and shifts farming impacts rather than mitigating them. Accordingly, EERA staff recommends that route segment C204 not be included in the EIS scope.

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<sup>24</sup> EERA personal communication with the applicants via email, February 25, 2025.

<sup>25</sup> Ibid.

### **Routing Alternatives that Would Not Aid in the Commission's Decision**

Routing alternatives not recommended for inclusion in the EIS because EERA staff believes they would not aid in the Commission's decision on a route permit include the following.

#### **Routes**

##### *Central 3*

This route was suggested by the commenter to mitigate impacts to residences and populated areas. This route leaves South 1 near Holloway and heads east until the city of Benson, then routes north to reconnect with the route segment endpoint between the Central and North Regions, as shown in Attachment 1 Map 2–15. EERA staff developed the alignment for this route to avoid prohibited areas (e.g., Glacial Lakes State Park) and populated areas, as well as to parallel property lines, agricultural field boundaries, and existing rights-of-way. This route was also drawn to avoid state and federal land to the extent possible, which often conflicted with avoiding residences.

This route has 28 residences along 42 miles within 500 feet of the alignment compared to the 11 residences along 40 miles of the corresponding portions of Central 1 and Central 2. This alternative traverses similar geography and environmental conditions as Central 1 and Central 2. Thus, EERA staff believes that Central 3 would have greater residential impacts than Central 1 and Central 2 and would not result in fewer environmental impacts. Accordingly, EERA staff recommends that route Central 3 not be included in the EIS scope.

#### **Route Connectors**

##### *S101 and S102*

These route connectors were suggested by the same commenter to mitigate impacts to residences and lakes. EERA contacted this public commenter regarding another one of their suggested alternatives (S210).<sup>26</sup> During this communication, the commenter indicated they were amenable to studying only one of their proposed routing alternatives, S210, rather than S101 or S102.<sup>27</sup> The alternative EERA has proposed for study in the EIS, S210, is the least impactful of all the commenter's alternatives and the shortest. S210 also mitigates the most waterbody impacts, which addresses the impact of highest concern to the commenter. Accordingly, EERA staff recommends that route connectors S101 and S102 not be included in the EIS scope.

##### *N101*

This route connector was suggested to mitigate impacts to property values, Malmedal Lake, and wildlife along North 2. This alternative parallels an existing 400 kV transmission line for about 10 miles; North 2 follows 155<sup>th</sup> Street for about 2.5 miles and generally routes along property lines for about 12.5 miles

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<sup>26</sup> EERA personal communication with Cathy Klebofski via phone call, February 20, 2025.

<sup>27</sup> Ibid.



along the corresponding portion. There are eight agricultural fields bisected perpendicularly by North 2; N101 crosses five agricultural fields diagonally, resulting in relatively greater agricultural impacts.

Malmedal Lake is classified as a wildlife management priority by the DNR because it is a shallow lake, meaning it offers “the most important wildlife habitat” in Minnesota due to its surface area of over 50 acres, depth less than 15 feet, and aquatic plant characterization.<sup>28</sup> However, N101 would affect two new lakes that North 2 does not affect: John Lake and Lake Reno. While John Lake does not have any DNR classifications, Lake Reno is classified as an outstanding lake of biological significance, meaning certain species presiding this lake are unique.<sup>29</sup> For Lake Reno, fish communities meet the “outstanding” criteria.<sup>30,31</sup> Thus, this alternative shifts impacts from a wildlife management priority lake, Malmedal Lake, to an outstanding lake of biological significance, Lake Reno. N101 and North 2 pass by similar amounts of USFWS land with similar environmental landscapes.

This alternative has eight residences within 500 feet of its alignment compared to four residences along the corresponding portion of North 2. Lastly, the applicants note that there may be significant engineering concerns with paralleling the existing 400 kV transmission line along this route segment.<sup>32</sup> Accordingly, EERA staff recommends that route segment N101 not be included in the EIS scope.

## Route Segments

### S209

This route segment was suggested to mitigate impacts to residences and cropland. EERA contacted the commenter to ensure the route was depicted accurately, as no map was provided with the comment. The commenter responded with a map so the route could be redrawn accurately.<sup>33</sup>

This alternative would have greater impacts to residences. There are 52 residences along 26 miles within 500 feet of the S209 alignment, whereas there are 15 residences along 31 miles of the corresponding portion of South 1. This alternative does follow more existing right-of-way as it parallels Highway 75 for much of its length until it reaches the city of Appleton, where it deviates south then east through agricultural land, heading back north again along 200<sup>th</sup> Avenue SW until it joins Highway 59, paralleling that until it rejoins South 1. In contrast, South 1 generally follows agricultural field boundaries.

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<sup>28</sup> DNR Shallow Lakes Program. Retrieved from: <https://www.dnr.state.mn.us/wildlife/shallowlakes/index.html>. Accessed 03/12/2025.

<sup>29</sup> DNR Lakes of Biological Significance. (April 23, 2015). Retrieved from: [https://www.lcc.mn.gov/inactive/lwc/Meetings/150622/Lakes\\_of\\_Biological\\_Significance.pdf](https://www.lcc.mn.gov/inactive/lwc/Meetings/150622/Lakes_of_Biological_Significance.pdf)

<sup>30</sup> Ibid. Lakes meeting at least one of the following criteria: self-sustaining walleye, quality northern pike, native muskie, exceptional fish IBI, lake trout lake, and/or cisco refuge lake.

<sup>31</sup> Minnesota Geospatial Commons, DNR Lakes of Biological Significance GIS data. Retrieved from: <https://gisdata.mn.gov/dataset/env-lakes-of-biological-signific>

<sup>32</sup> Applicants' Response to Scoping Comments, February 21, 2025, eDockets Number [20252-215667-01](#).

<sup>33</sup> EERA personal communication with Marcus and Greg Krogsrod via postal mail, received February 24, 2025.

From the cities of Ortonville to Appleton, this alternative would impact over 100 acres more of USFWS and DNR lands, along with a private easement managed by the Nature Conservancy. While this alternative would utilize more existing right-of-way, it would impact significantly more residences and environmental resources. Accordingly, EERA staff recommends that route segment S209 not be included in the EIS scope.

#### *C201*

This route segment was suggested to mitigate impacts to residences and to avoid a steep ditch along the road that could create issues with accessing the transmission line once built. EERA contacted the applicants to discuss the steep ditch access, and their review did not identify concerns that would impede access as they believe strategic matting placement would address any issues.<sup>34</sup> This route segment alternative would shift impacts from one residence off 310<sup>th</sup> Avenue to one residence off County Road 24 rather than mitigate impacts from Central 2. This alternative would place the line within 350 feet of a lake, unlike Central 2, and require spanning or disturbing USFWS land and a Reinvest in Minnesota reserve partnership easement that is a protected landscape.<sup>35</sup> These conditions would result in relatively greater environmental impacts. Accordingly, EERA staff recommends that route segment C201 not be included in the EIS scope.

#### *C205, C206, and C207*

EERA contacted this commenter, who indicated they were amenable to studying only one of their proposed route segments, C207, not C205 or C206.<sup>36</sup> Accordingly, EERA staff recommends that route segments C205 and C206 not be included in the EIS scope. C207 is the least impactful of all the commenter's alternatives and the shortest. C207 also mitigates the most impacts to farming operations, which addresses the impact of highest concern to the commenter.

Route segment C207 mitigates impacts to farming operations by following agricultural field boundaries to a greater extent than the corresponding portions of Central 1. However, the alternative has four residences within 500 feet of its alignment compared to one residence along Central 1. Because of these residential impacts, EERA staff recommends that route segment C207 also not be included in the EIS scope.

#### *N201*

This route segment alternative was suggested to mitigate accessibility and financial impacts. EERA contacted the applicants to ask about both of these proposed mitigations. The applicants detailed that cost and accessibility are not mitigated with this alternative, even though it is 0.2 miles shorter than the corresponding portion of North 1.<sup>37</sup> While difficult to quantify, cost savings from the shorter route

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<sup>34</sup> Ibid.

<sup>35</sup> BWSR GIS data.

<sup>36</sup> EERA personal communication with Jon Nohl via phone call, February 20, 2025.

<sup>37</sup> EERA personal communication with the applicants via email, February 25, 2025.

segment would likely be offset by the need to install more running angle structures.<sup>38</sup> This route segment would also not have better access than North 1 because it bisects numerous parcels diagonally on the northwest side of Andrew Lake.<sup>39</sup> In addition, this alternative has 14 more residences within 500 feet of the alignment than the corresponding portion of North 1. Environmental impacts could also increase due to the alternative's proximity to Andrew Lake. Accordingly, EERA staff recommends that route segment N201 not be included in the EIS scope.

#### *N202*

This route segment alternative was suggested to mitigate impacts to wooded areas and lakeshore property along Alternate Segment N10. However, as proposed, the commenter's route is a segment alternative for North 1, not Alternate Segment N10. This alternative has 16 residences within 500 feet of the alignment compared to five residences along the corresponding portion of North 1.

Environmental impacts would increase due to the proximity to Andrew Lake, with no apparent environmental benefits along the alternative route. Accordingly, EERA staff recommends that route segment N202 not be included in the EIS scope.

#### *N203*

This route segment alternative was suggested to mitigate accessibility and financial impacts. EERA contacted the applicants to ask about both of these proposed mitigations. The applicants detailed that cost and accessibility would not be mitigated even though this alternative is 0.5 miles shorter than the corresponding portion of North 1.<sup>40</sup> While difficult to quantify, cost savings from the shorter route segment would likely be offset by the need to install more running angle structures.<sup>41</sup> The applicants indicated that a portion of this route segment could have better access than the corresponding portion of North 1 because it follows County Road 21 SW for approximately 0.9 miles.<sup>42</sup>

North 1 bisects several agricultural fields, whereas this alternative would follow 0.9 miles more of existing road right-of-way. However, this alternative has 15 residences within 500 feet of the alignment compared to four residences along the corresponding portion of North 1. This alternative would also increase environmental impacts as its closer to Andrew Lake. On whole, because of the relatively greater impacts to residences and Andrew Lake, EERA staff recommends that route segment N203 not be included in the EIS scope.

#### *N204*

This route segment alternative would mitigate impacts to a nearby pipeline as identified by the commenter. However, this alternative deviates from existing railroad and road right-of-way and does

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<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

not follow natural division lines. This alternative has three residences within 500 feet of the alignment whereas there are two residences along the corresponding portion of North 2. Additionally, this alternative would impact significantly more wetland complexes and federal land than North 2. EERA recommends that route segment N204 not be included in the EIS scope.

### **Alignment Alternatives**

#### *CAA02*

This alignment alternative was suggested to mitigate impacts to farming operations. This alternative shifts these impacts to another agricultural property rather than mitigating them. Accordingly, EERA staff recommends that alignment alternative CAA02 not be included in the EIS scope.

### **EERA Staff Recommendations**

The EIS will evaluate the six routes (South 1, South 2, Central 1, Central 2, North 1, and North 2), three route connectors, and four route segments proposed by the applicants in their route permit application.

EERA staff recommends that the EIS also evaluate the routing alternatives noted in Table 1. The EIS will analyze whether these alternatives mitigate potential human or environmental impacts and will assist in the Commission's decision on the route permit application. To the extent an alternative achieves these ends, it will be further studied in the EIS. If an alternative does not achieve these ends, the EIS will provide the reasons why, and the alternative will be excluded from detailed analysis.

EERA staff recommends that the routing alternatives noted in Table 2 not be carried forward for study in the EIS for the reasons discussed above.

To EERA staff's understanding, if the Commission concurs or takes no action, the Department will proceed to finalize and issue an EIS scoping decision. If the Commission takes an action other than concurring and modifies the Department's recommendations, the Department will incorporate the Commission's input and will finalize and issue an EIS scoping decision that reflects this input.

## **Attachment 1      Maps**

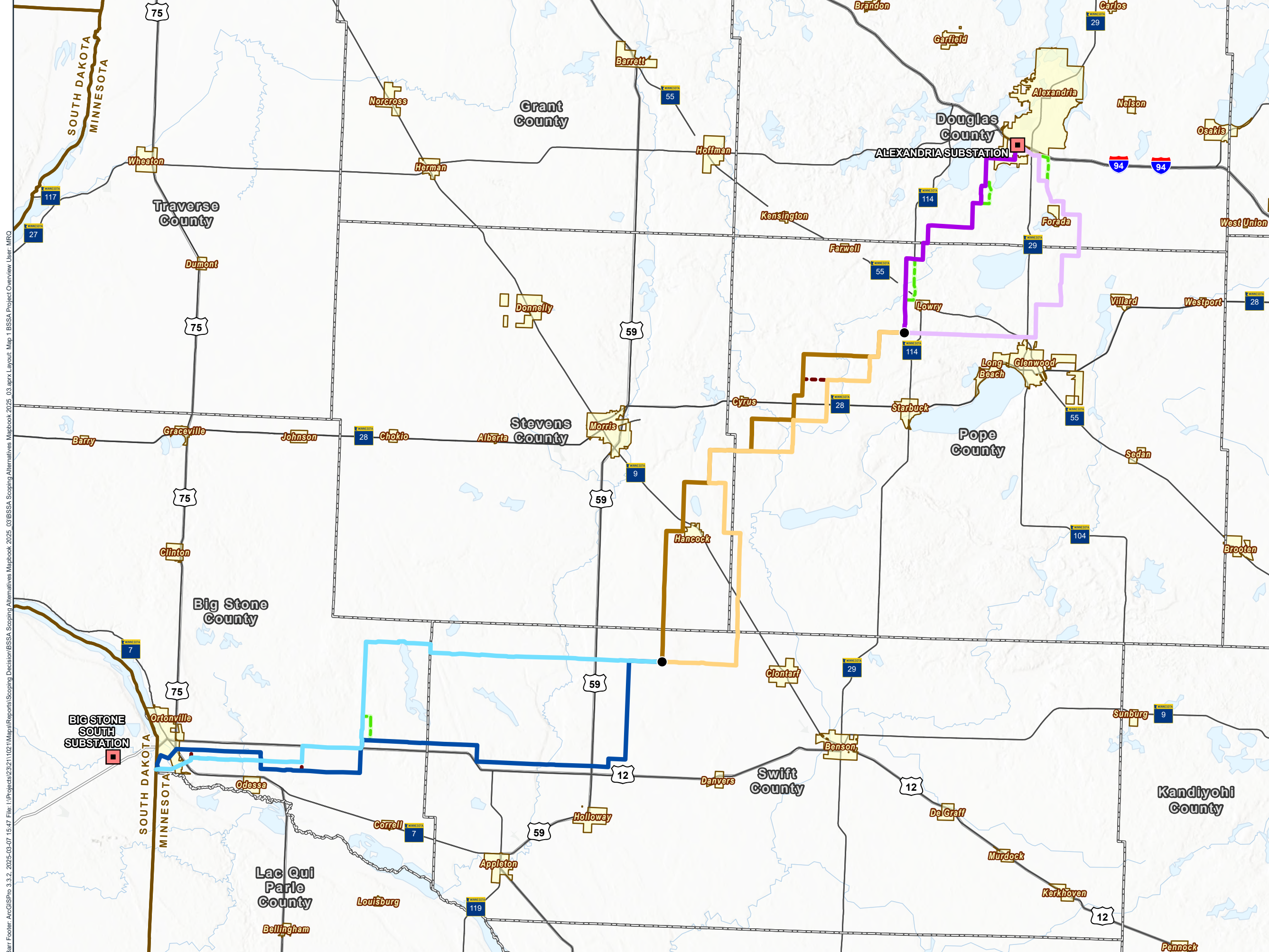
### **Overview**

Map 1    Proposed Routes and Routing Alternatives Overview

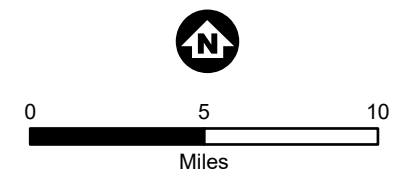
### **Alternatives Proposed During Scoping**

Map 2    Scoping Routing Alternatives Mapbook





- Major Highway
- ▭ Municipal Boundary
- ▭ State Boundary
- ▭ County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- Central 1
- Central 2
- North 1
- North 2
- - - Alternate Segment
- - - Connector Segment
- Route Segment End
- ▣ Proposed Project Substation
- ▭ Project Study Area

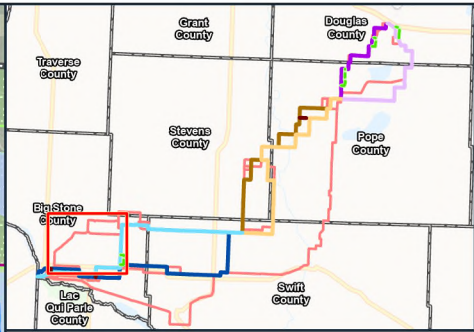
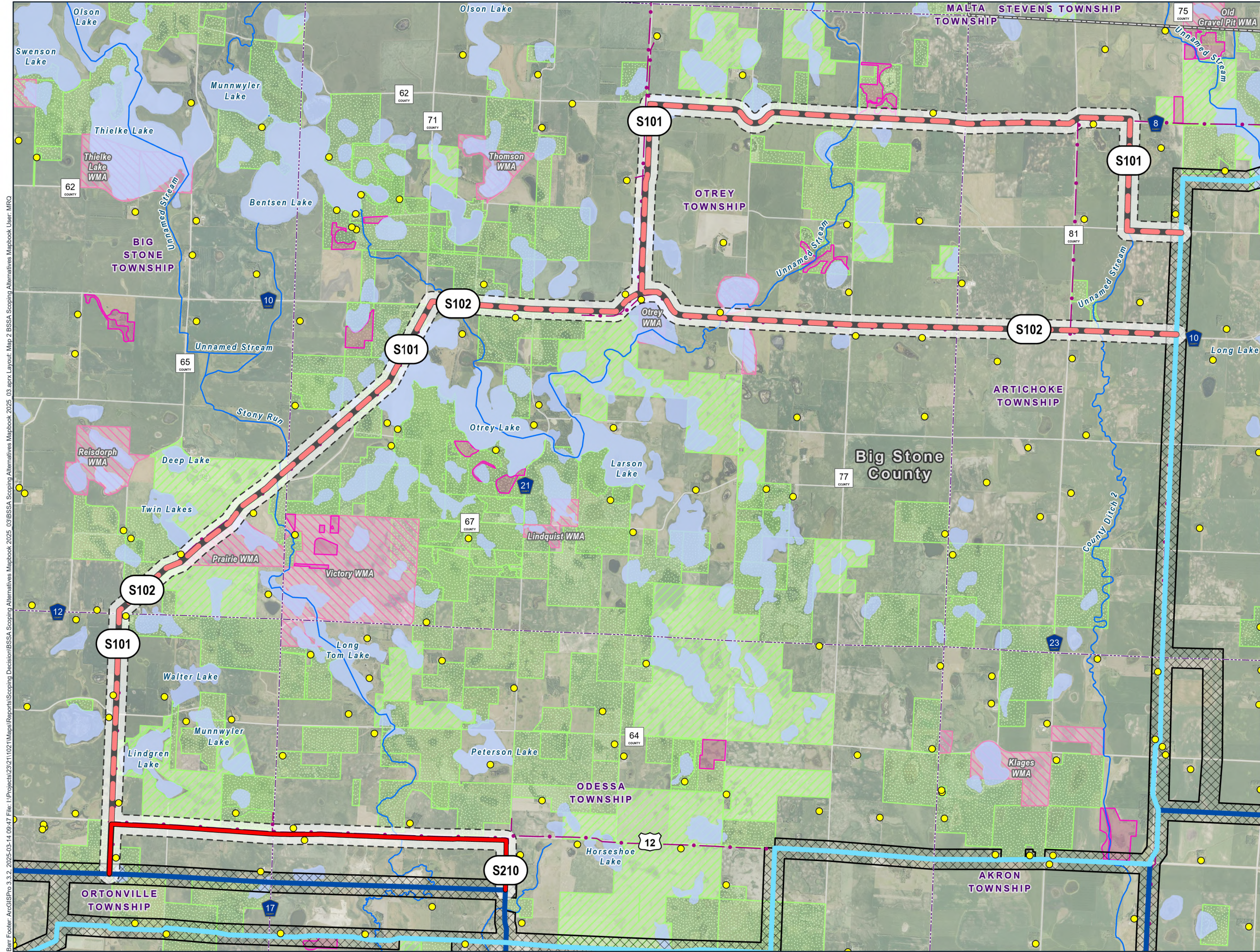


**Project Overview**  
Big Stone to Alexandria Project

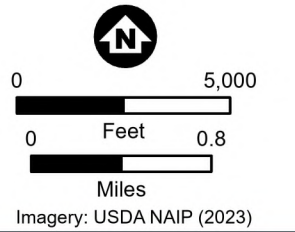
MAP 1

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- Residences
- ▭ Public Water Basin
- ~ Public Watercourse
- Existing Transmission Line
- ▭ Civil Township
- ▭ County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- ▭ Route Width
- Scoping Alternatives**
- ▭ Route Connector
- ▭ Route Segment
- ▭ Scoping Alternative Route Width
- Land Management**
- ▭ Federal Land
- ▭ Federally Managed Land
- ▭ State Land
- ▭ State Managed Land



**Scoping Alternatives  
S101, S102, and S210  
Big Stone to Alexandria Project**

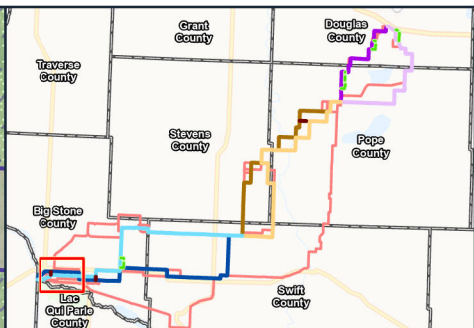
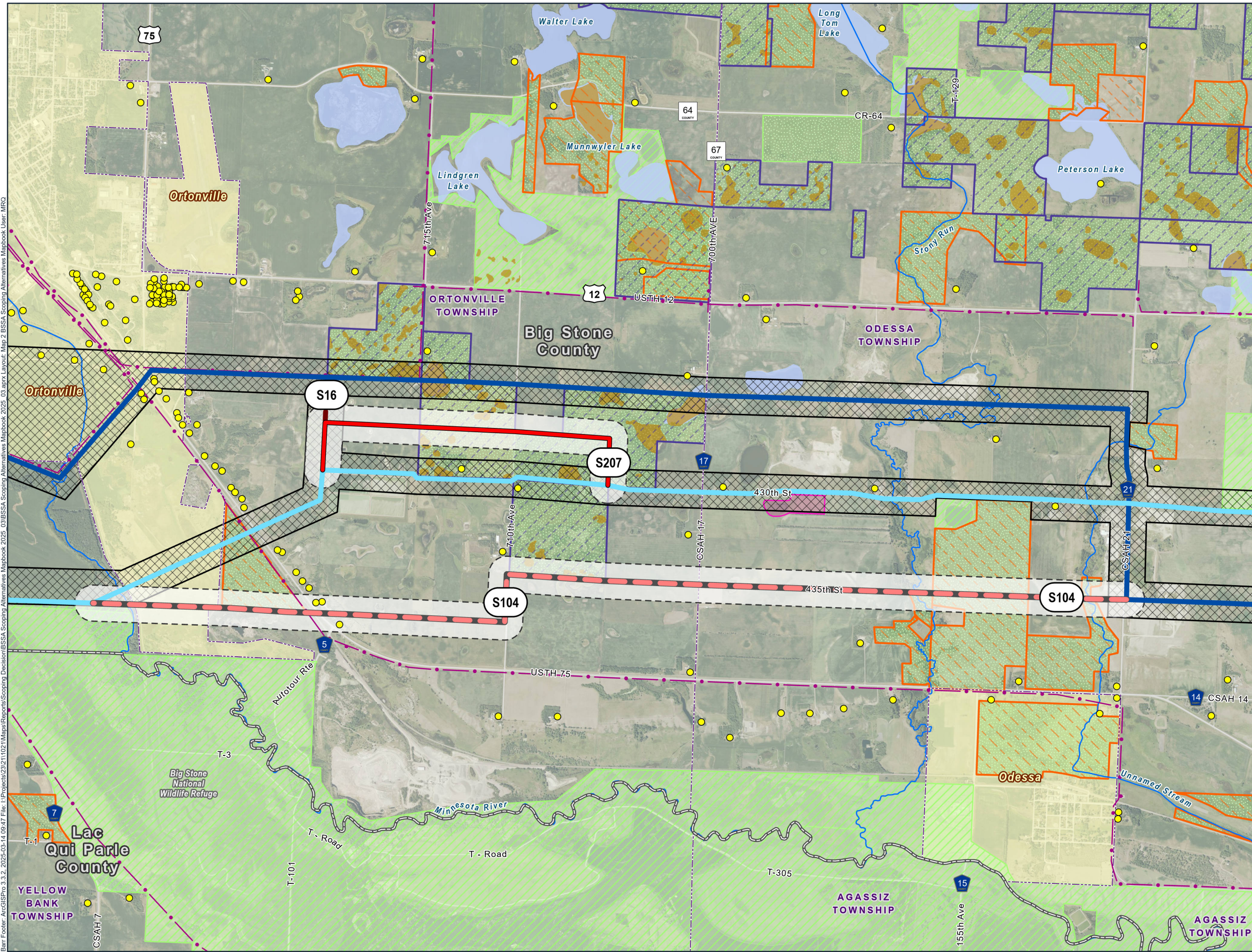
MAP 2-1



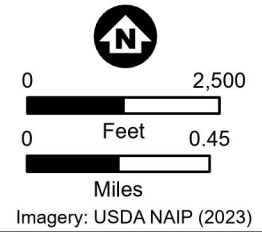
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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
  - South 1
  - South 2
  - Connector Segment
  - Route Width
- USFWS Land Interest**
  - Grassland Easement
  - Wetland Easement
  - Wetland Protected by USFWS Easement
- Scoping Alternatives**
  - Route Connector
  - Route Segment
  - Scoping Alternative Route Width
- Land Management**
  - Federal Land
  - Federally Managed Land
  - State Land
  - State Managed Land

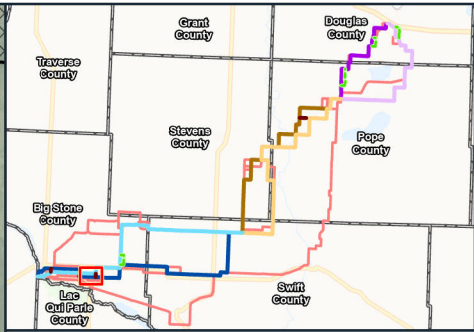
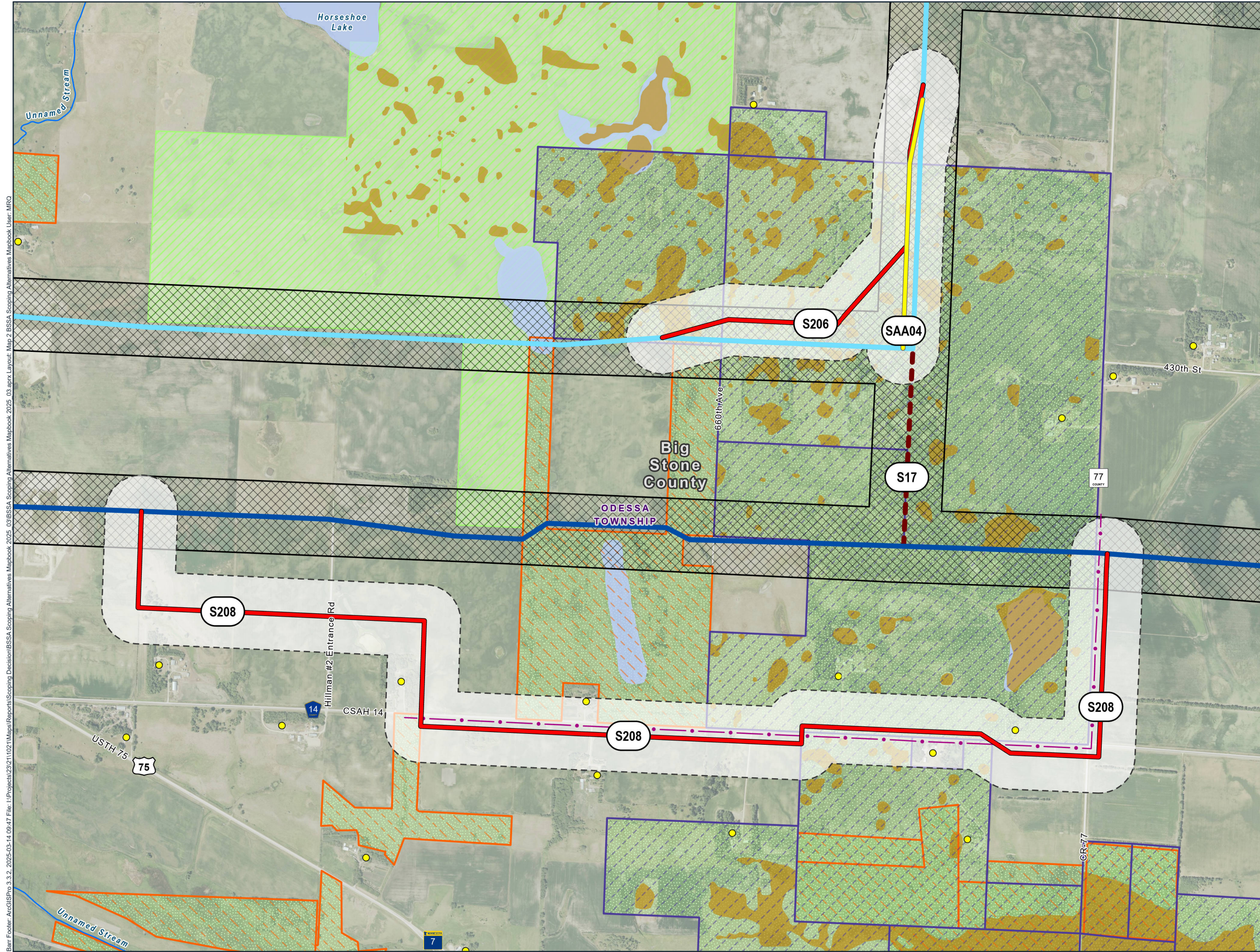


### Scoping Alternatives S104, S207, and S16 Big Stone to Alexandria Project

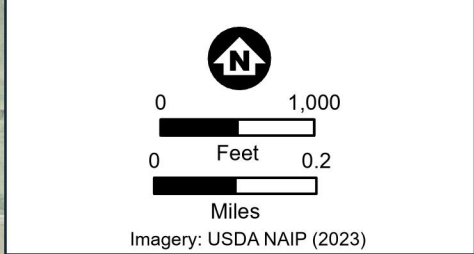
MAP 2-2







- Residences
- ▭ Public Water Basin
- ~ Public Watercourse
- Existing Transmission Line
- ▭ Civil Township
- ▭ County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- Connector Segment
- ▭ Route Width
- USFWS Land Interest**
- ▭ Grassland Easement
- ▭ Wetland Easement
- ▭ Wetland Protected by USFWS Easement
- Scoping Alternatives**
- Alignment Alternative
- Route Segment
- ▭ Scoping Alternative Route Width
- Land Management**
- ▭ Federal Land
- ▭ Federally Managed Land

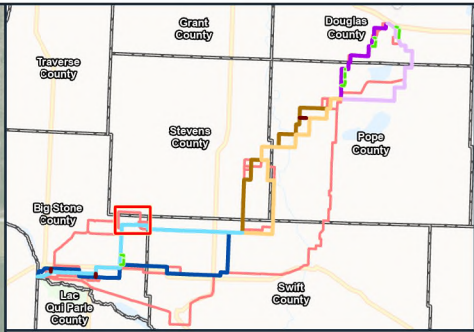
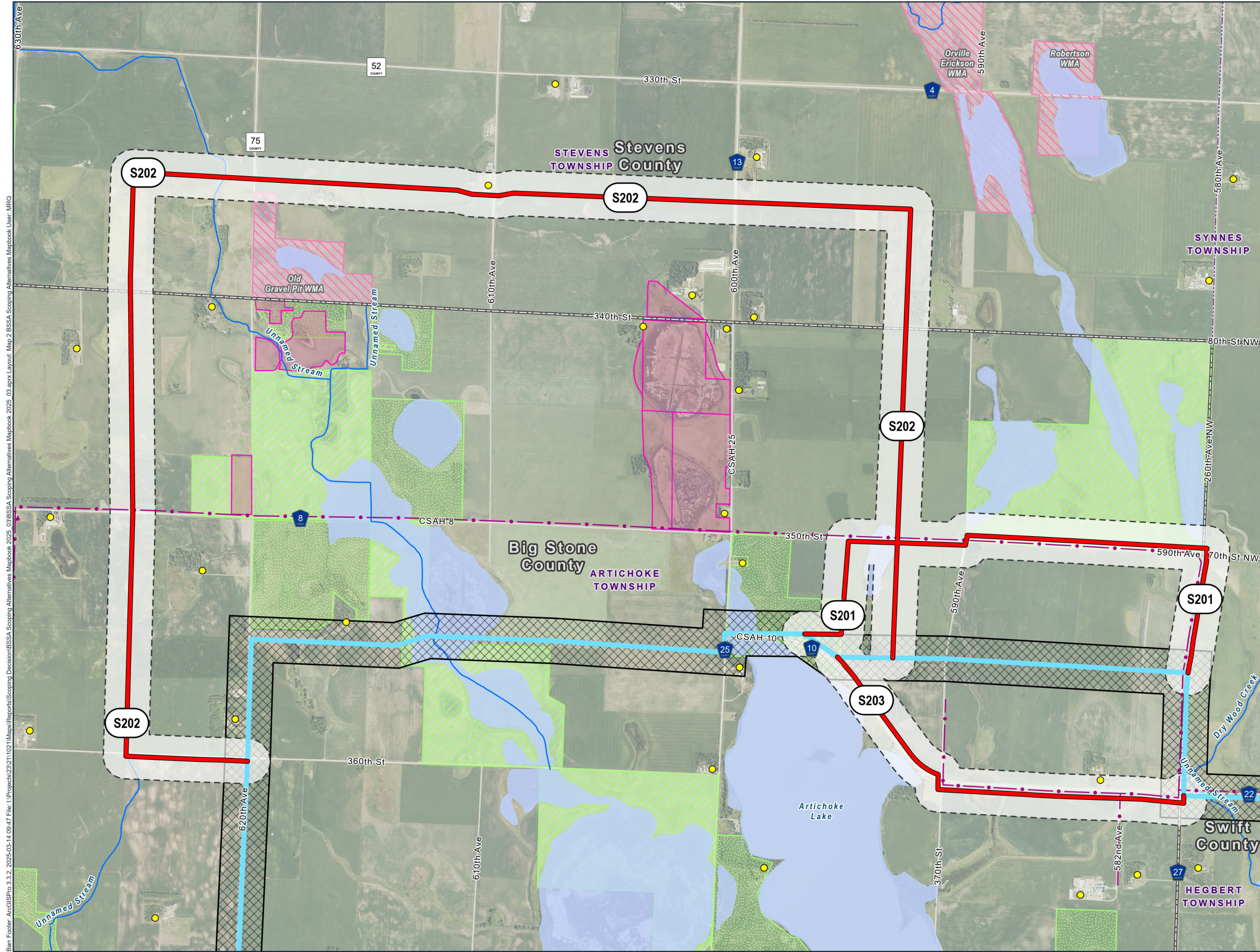


**Scoping Alternatives**  
**S206, S208, S17, and SAA04**  
 Big Stone to Alexandria Project

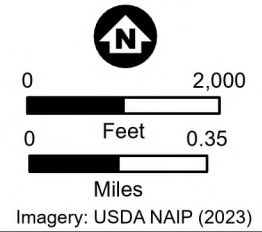
MAP 2-3

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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- South 2
- Route Width
- Scoping Alternatives**
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land



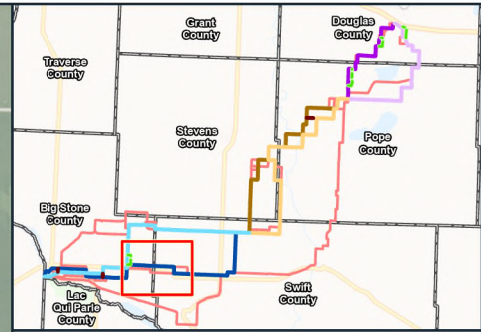
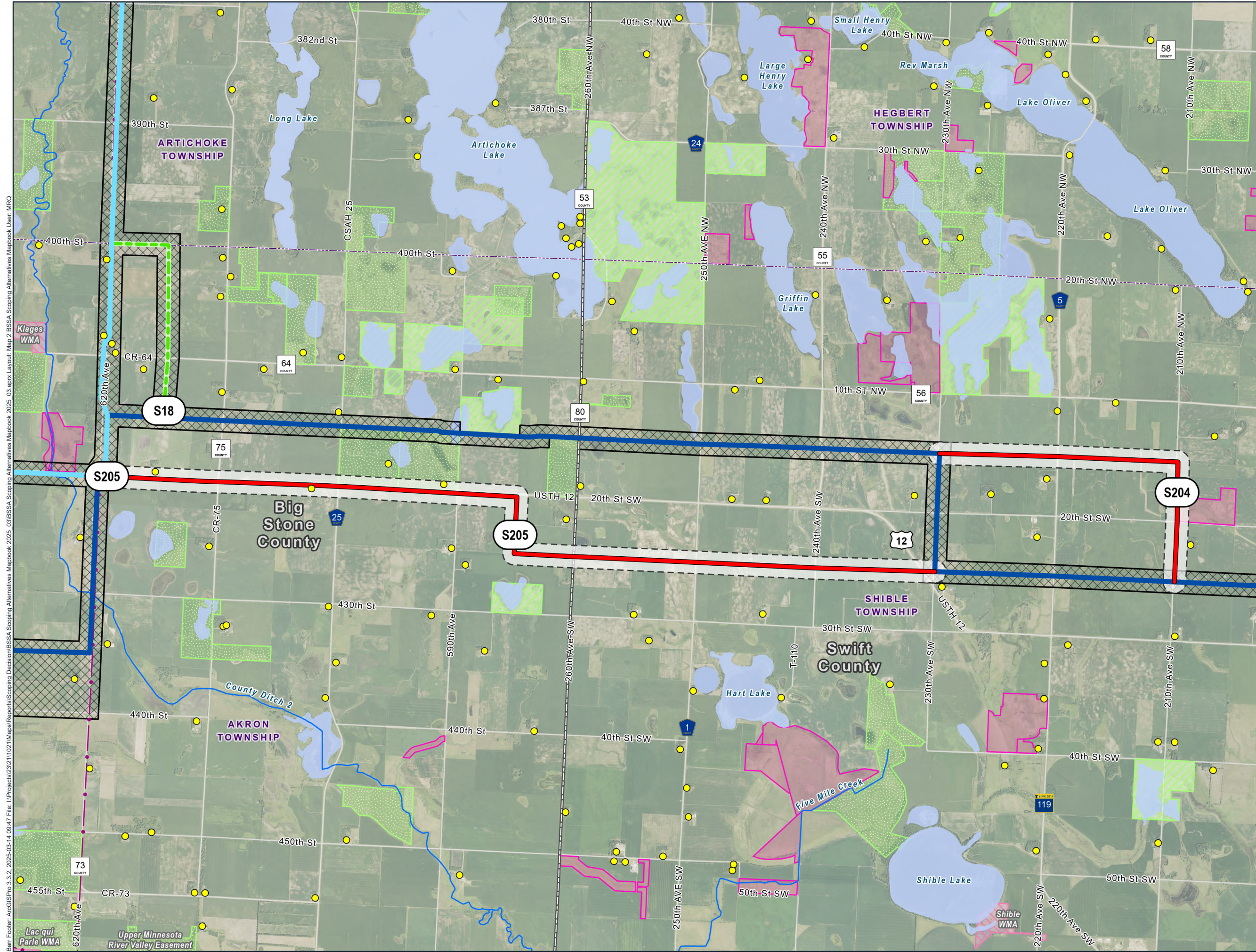
**Scoping Alternatives S201, S202, and S203**  
Big Stone to Alexandria Project

MAP 2-4

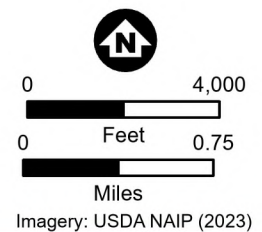


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- Residences
- ▭ Public Water Basin
- ~ Public Watercourse
- Existing Transmission Line
- ▭ Civil Township
- ▭ County Boundary
- Applicants' Proposed Route Options**
- ▭ South 1
- ▭ South 2
- ▭ Alternate Segment
- ▭ Route Width
- Scoping Alternatives**
- ▭ Route Segment
- ▭ Scoping Alternative Route Width
- Land Management**
- ▭ Federal Land
- ▭ Federally Managed Land
- ▭ State Land
- ▭ State Managed Land



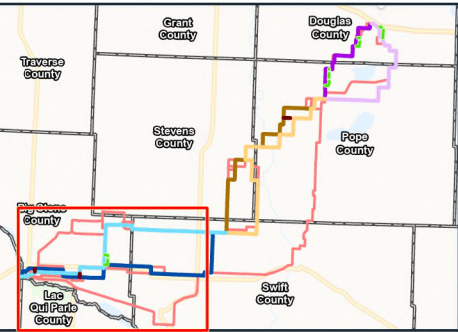
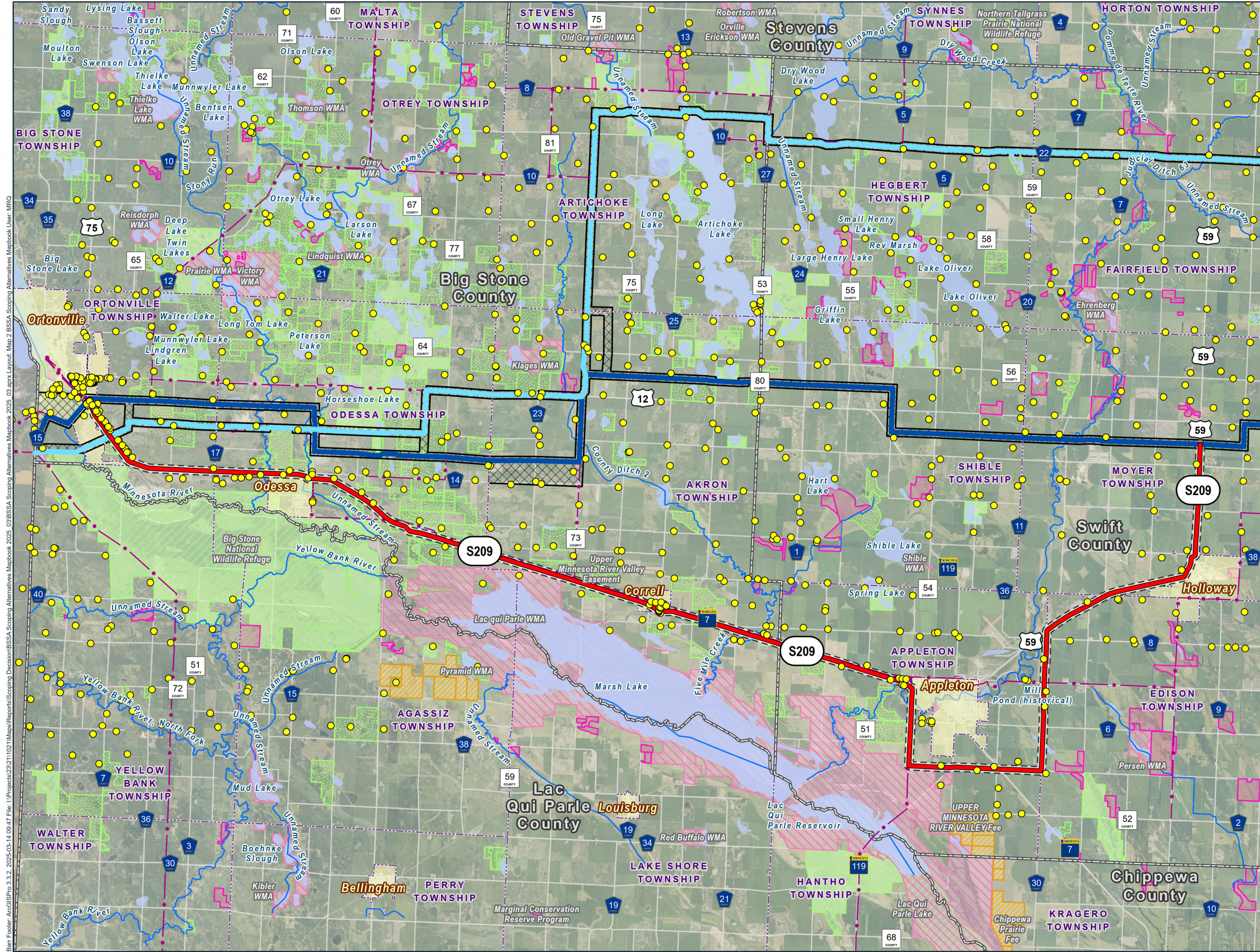
**Scoping Alternatives  
S204, S205 and S18  
Big Stone to Alexandria Project**

MAP 2-5

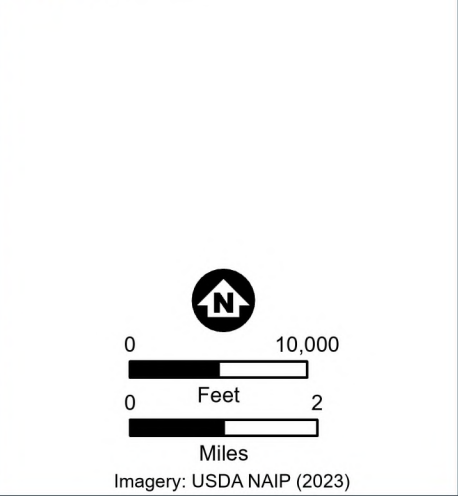


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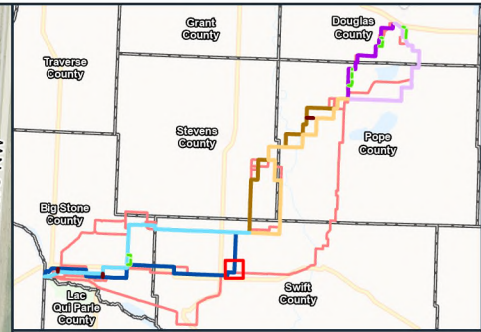
- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- Route Width
- Scoping Alternatives**
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land
- Joint Federal and State Managed Land
- Local Land



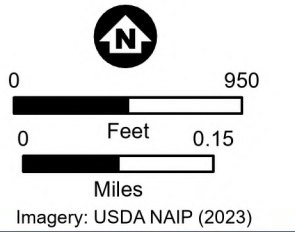
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Barr Footer-ArcGISPro 3.3.2, 2025-03-14 09:47 File: I:\Projects\2311021\Maps\Reports\Scoping\Decision\BSSA\Scoping Alternatives Mapbook 2025\_03.aprx Layout: Map 2\_BSSA Scoping Alternatives Mapbook User: MRQ

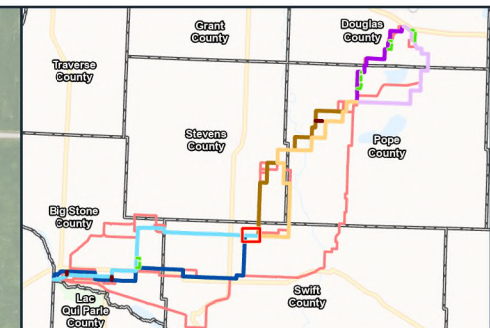
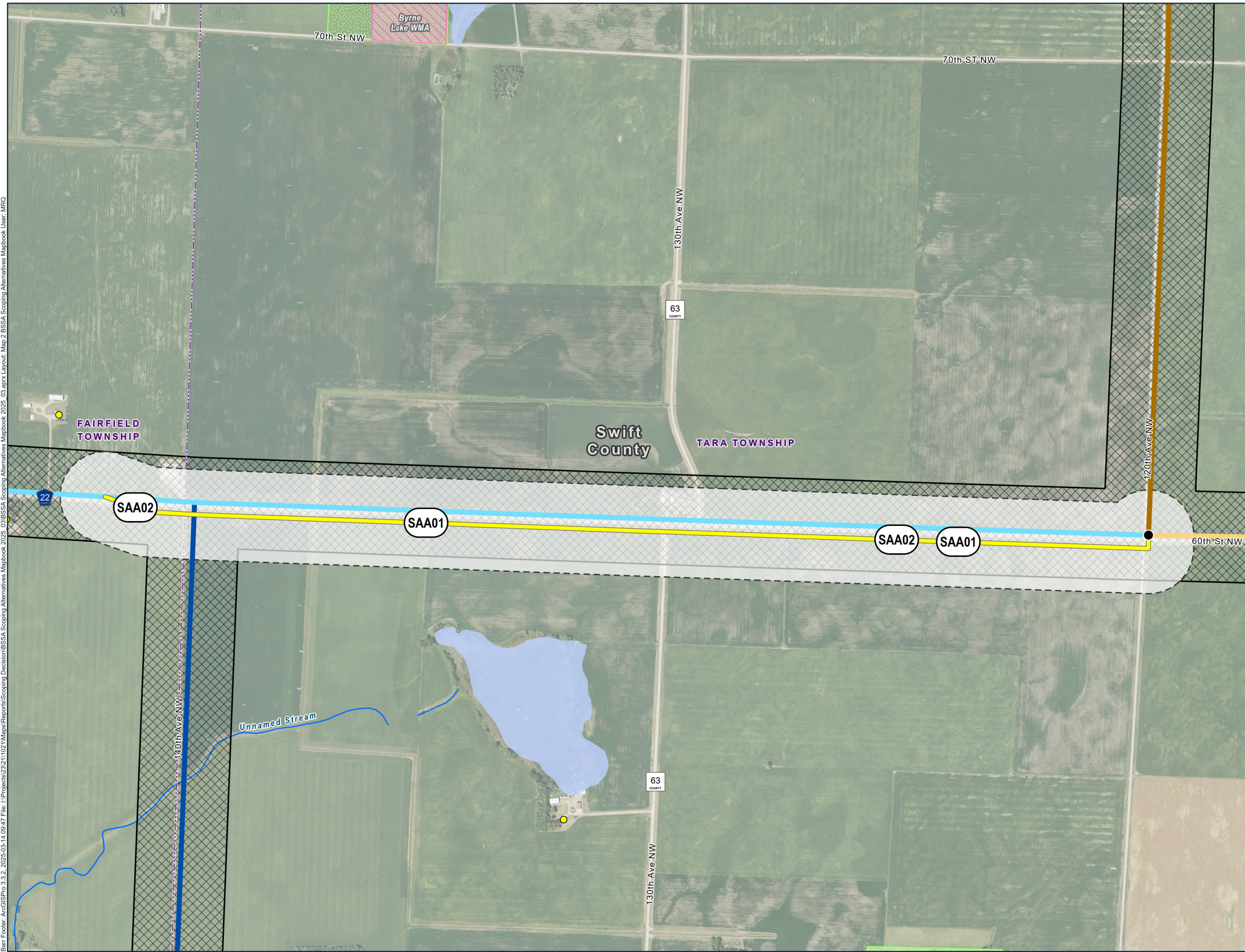


- Residences
- Existing Transmission Line
- ▭ Civil Township
- ▭ County Boundary
- Applicants' Proposed Route Options**
- South 1
- ▨ Route Width
- Scoping Alternatives**
- Alignment Alternative
- ▭ Scoping Alternative Route Width

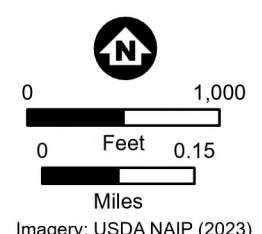




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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
  - South 1
  - South 2
  - Central 1
  - Central 2
  - Route Width
  - Route Segment End
- Scoping Alternatives**
  - Alignment Alternative
  - Scoping Alternative Route Width
- Land Management**
  - Federal Land
  - Federally Managed Land
  - State Land



Imagery: USDA NAIP (2023)

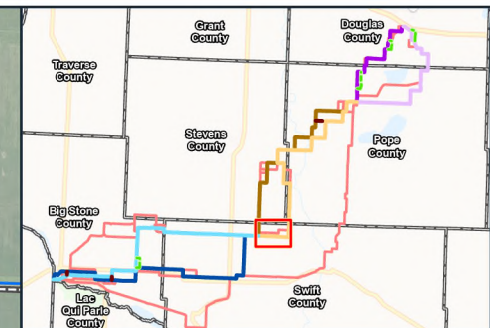
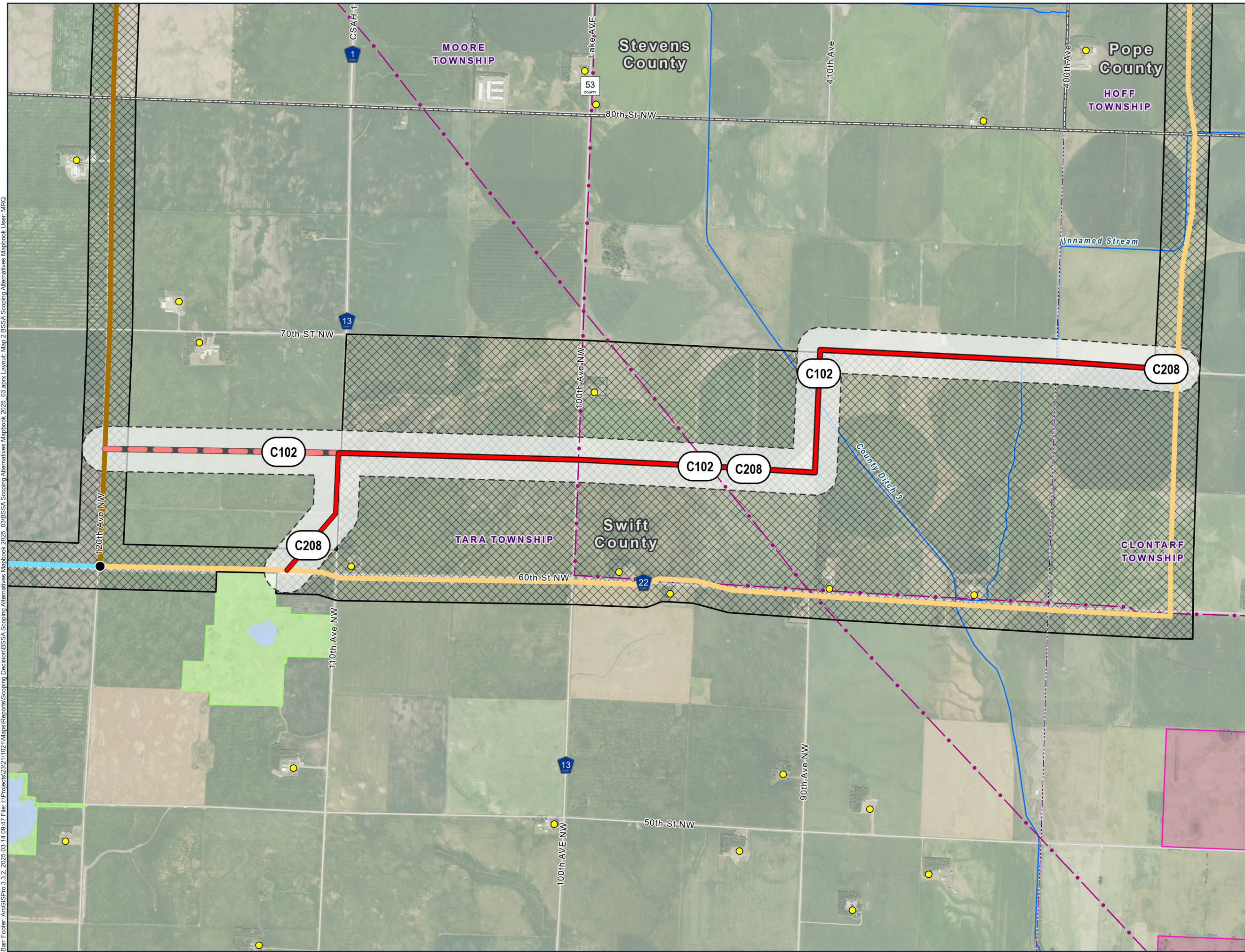
**Scoping Alternatives  
SAA01 and SAA02**  
Big Stone to Alexandria Project

MAP 2-8

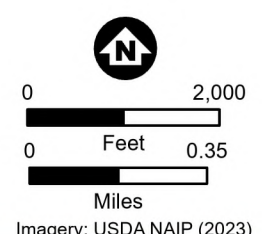




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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- Central 1
- Central 2
- Route Width
- Route Segment End
- Scoping Alternatives**
- Route Connector
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- State Managed Land



Imagery: USDA NAIP (2023)

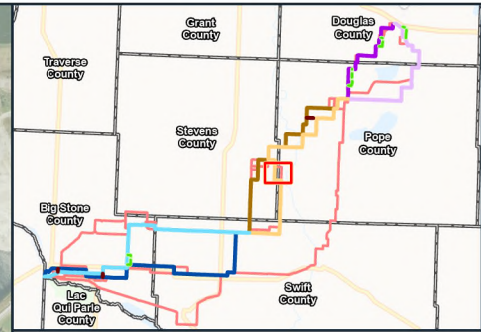
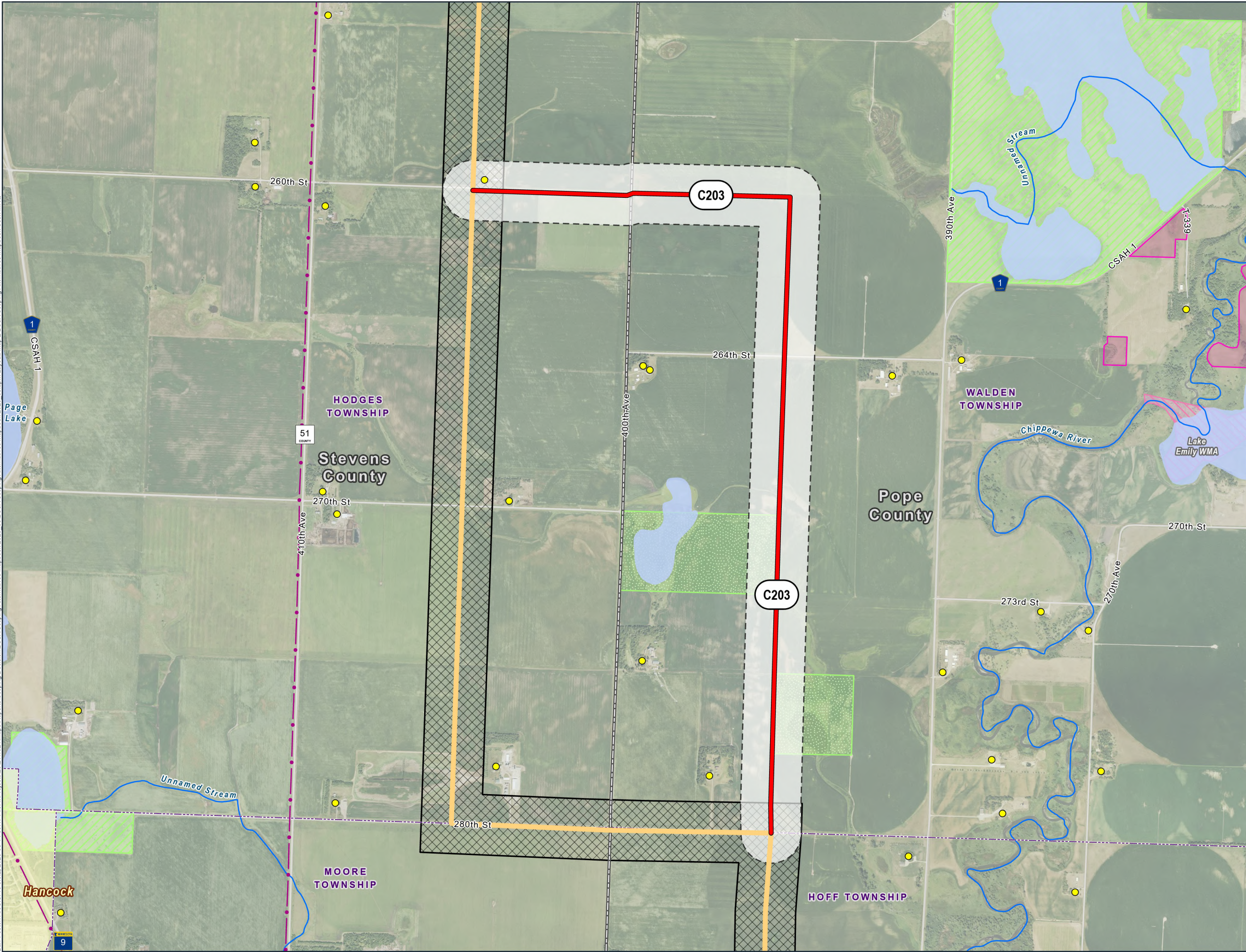
**Scoping Alternatives  
C102 and C208**  
Big Stone to Alexandria Project

MAP 2-9

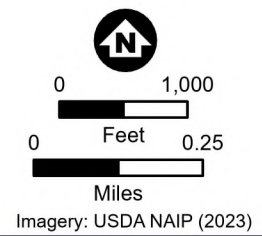




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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 2
- Route Width
- Scoping Alternatives**
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land

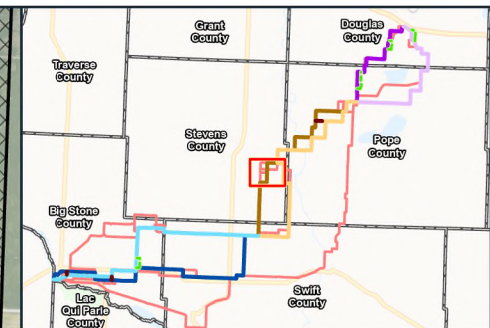
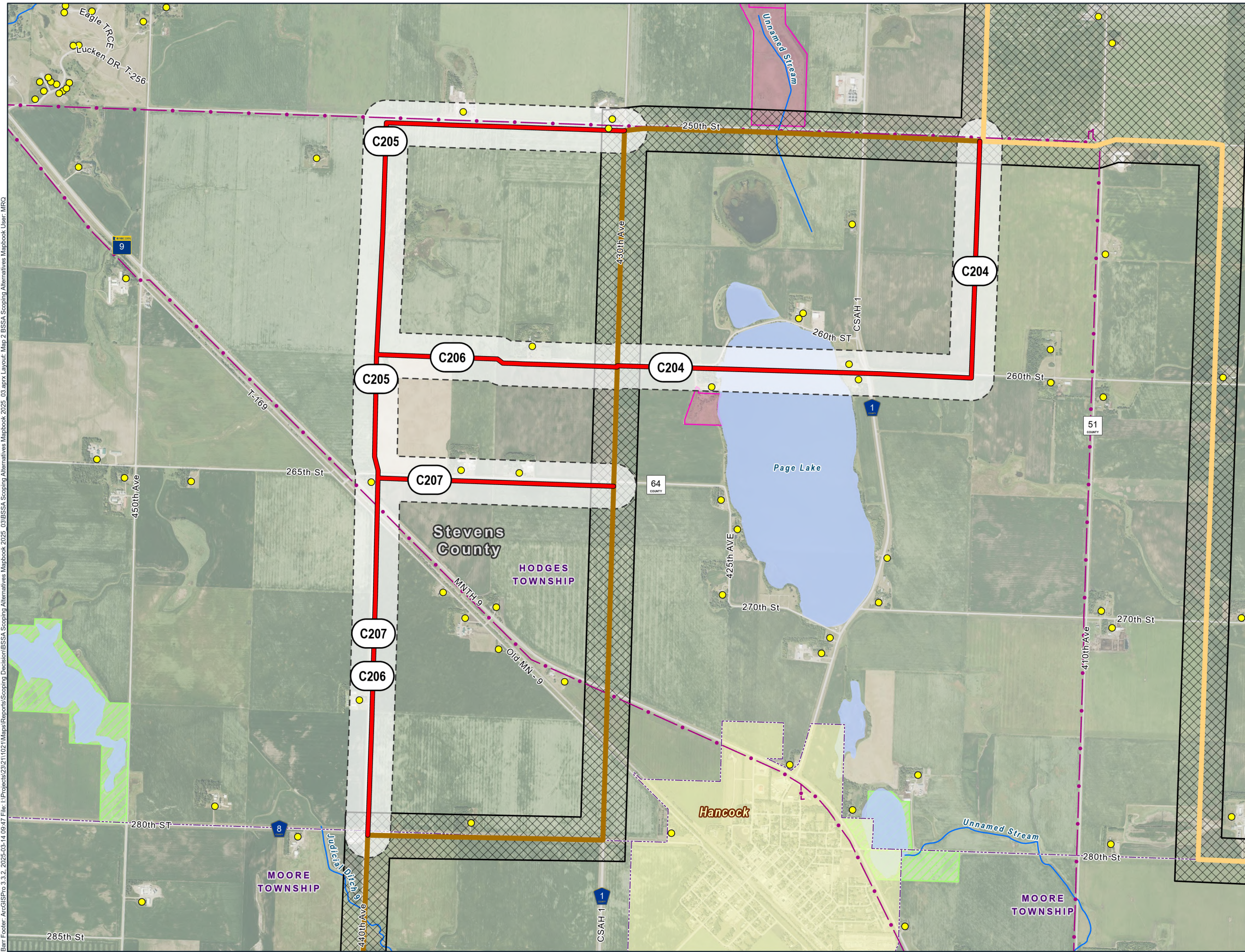


**Scoping Alternatives C203**  
Big Stone to Alexandria Project

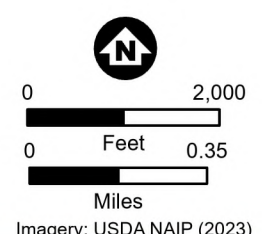
MAP 2-10



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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 1
- Central 2
- Route Width
- Scoping Alternatives**
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- State Managed Land



Imagery: USDA NAIP (2023)

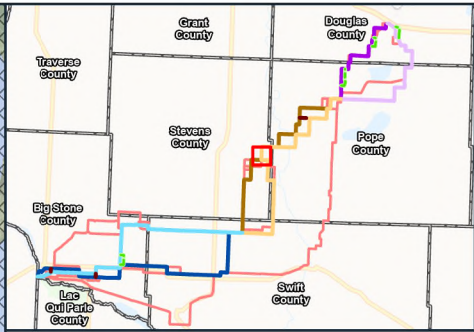
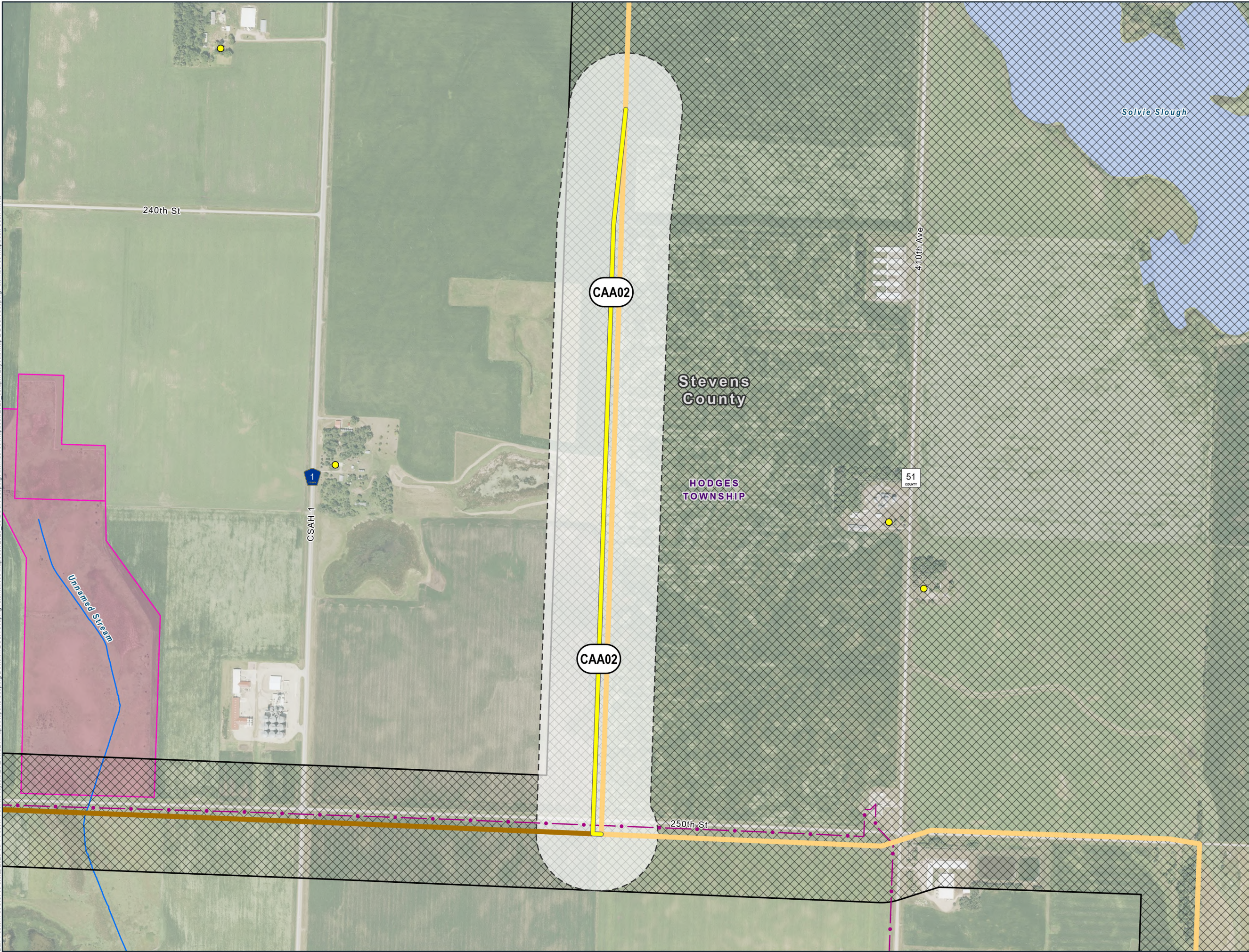
### Scoping Alternatives C204, C205, C206, and C207 Big Stone to Alexandria Project

MAP 2-11

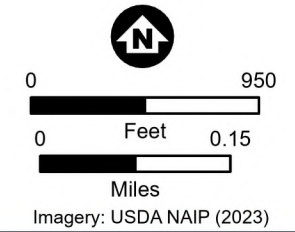




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- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 1
- Central 2
- Route Width
- Scoping Alternatives**
- Alignment Alternative
- Scoping Alternative Route Width
- Land Management**
- State Managed Land

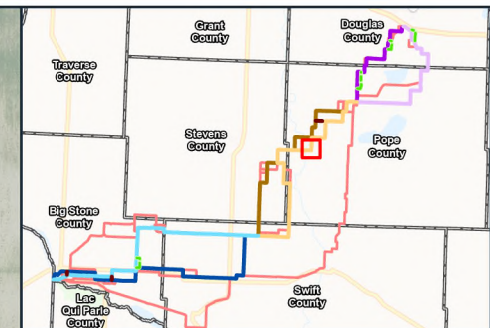
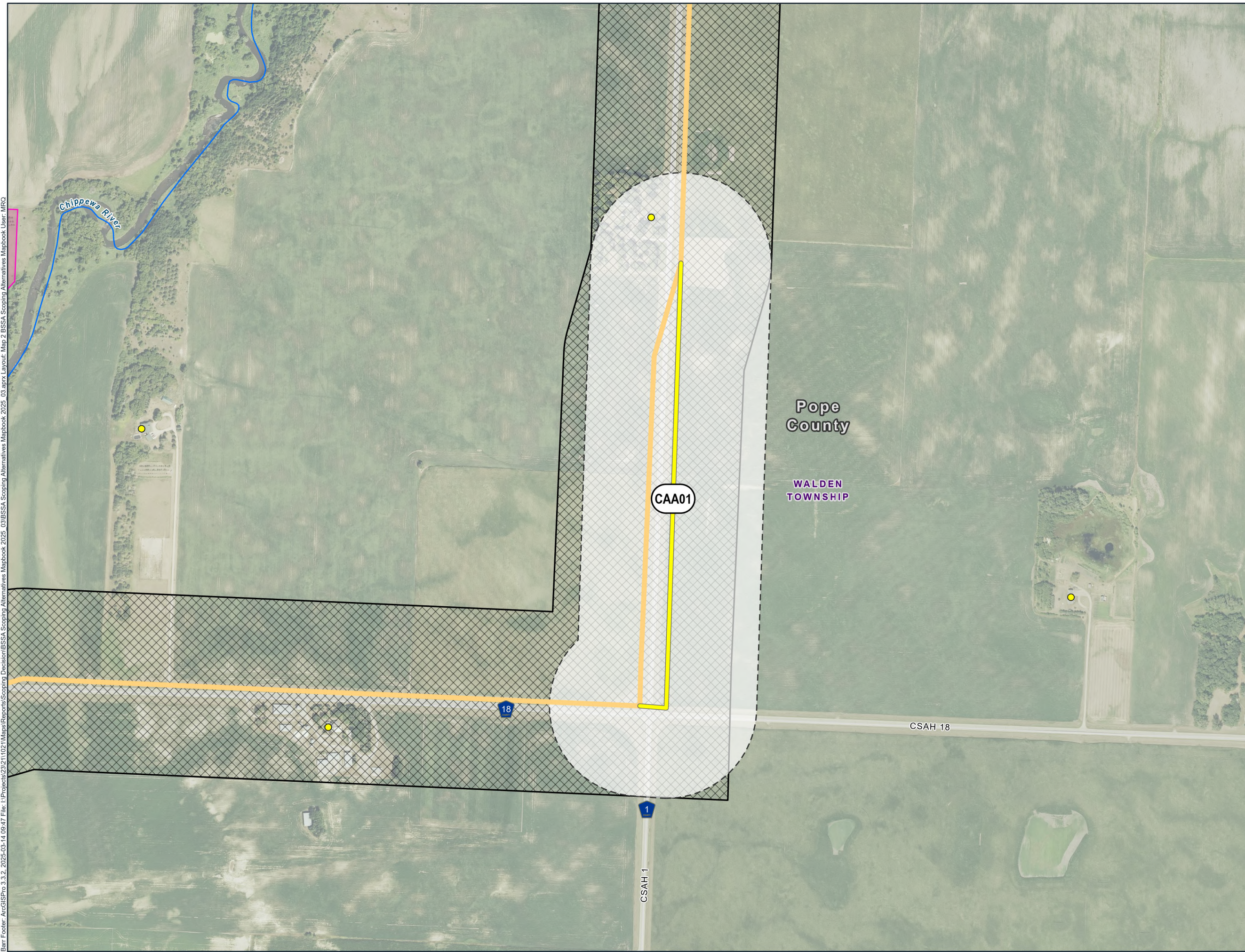


**Scoping Alternatives  
CAA02**  
Big Stone to Alexandria Project

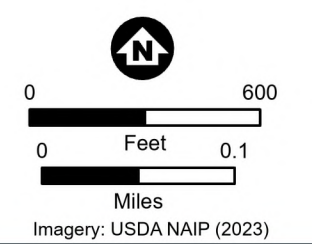
MAP 2-12



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- Residences
- Public Watercourse
- Existing Transmission Line
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 2
- Route Width
- Scoping Alternatives**
- Alignment Alternative
- Scoping Alternative Route Width
- Land Management**
- State Managed Land

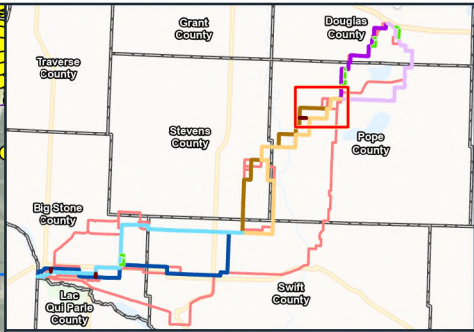
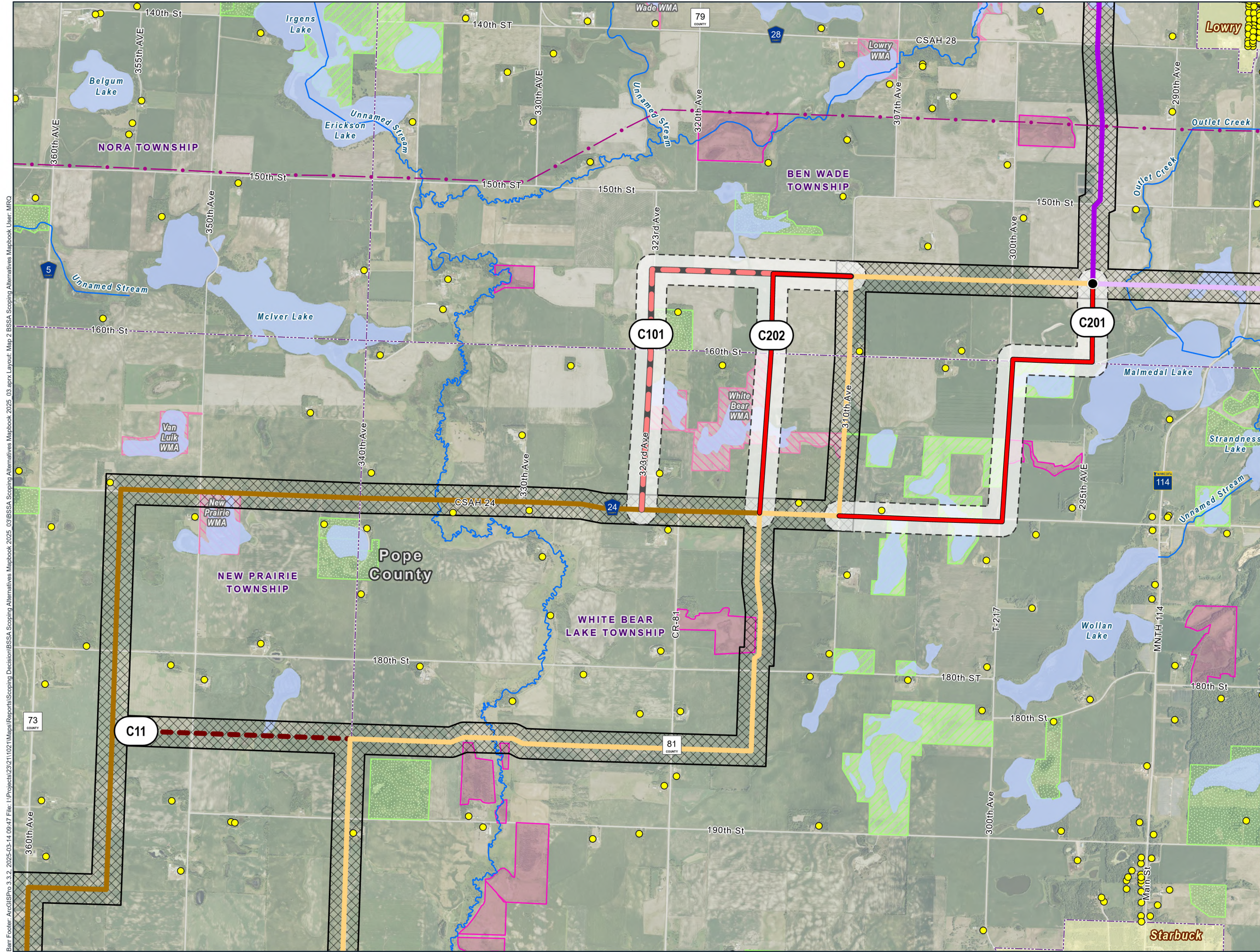


**Scoping Alternatives  
CAA01**  
Big Stone to Alexandria Project

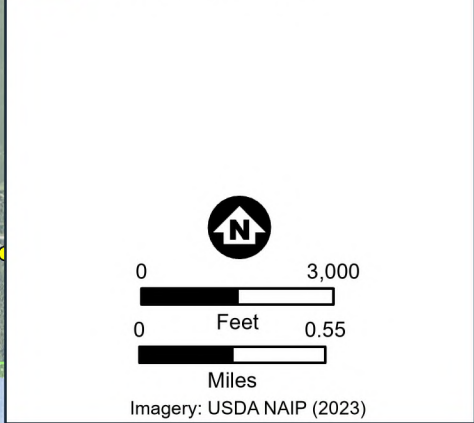
MAP 2-13







- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 1
- Central 2
- North 1
- North 2
- Connector Segment
- Route Width
- Route Segment End
- Scoping Alternatives**
- Route Connector
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land



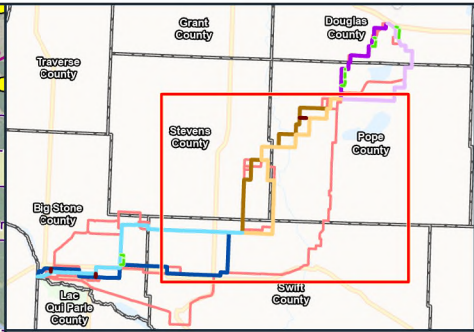
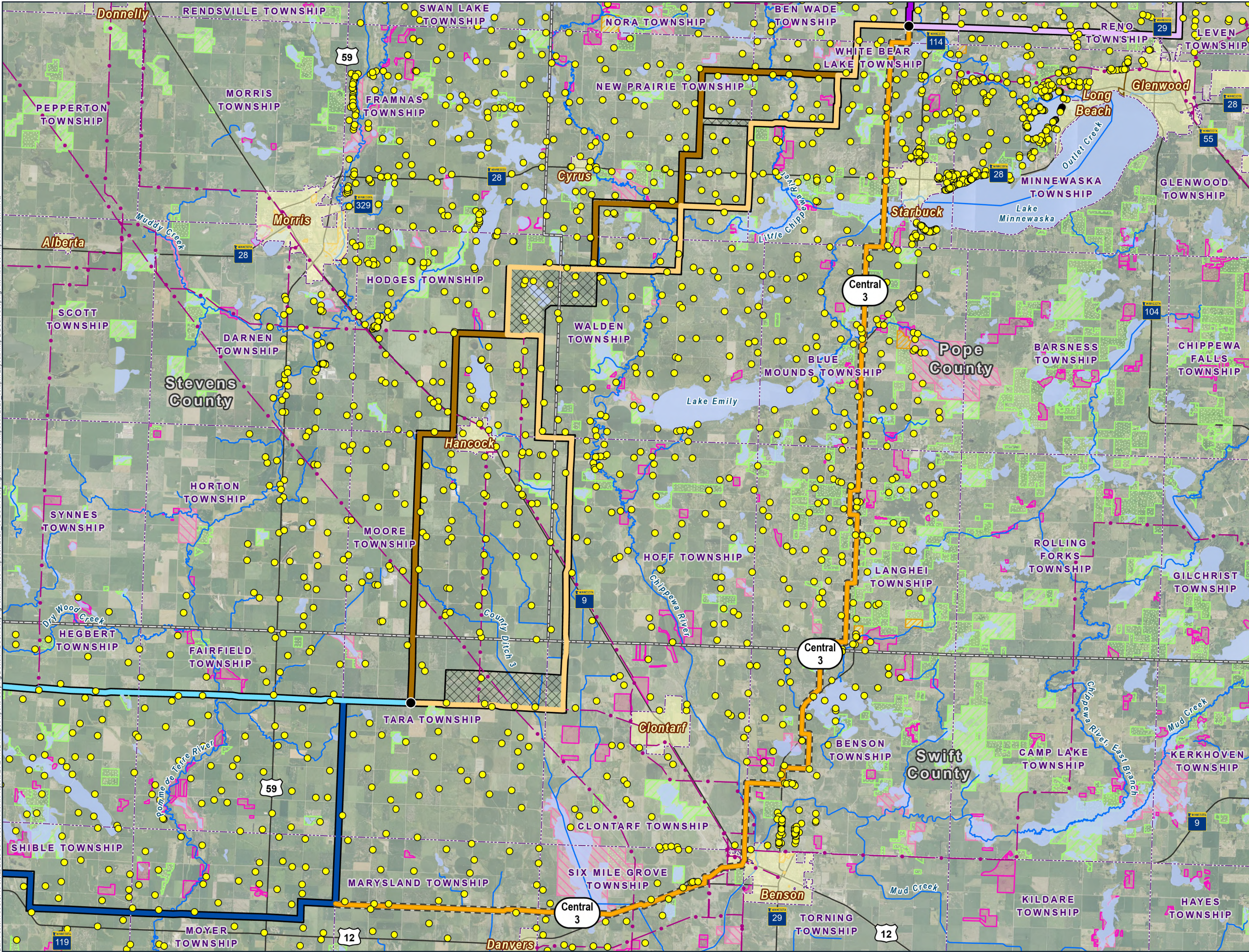
**Scoping Alternatives**  
**C101, C201, C202, and C11**  
 Big Stone to Alexandria Project

MAP 2-14

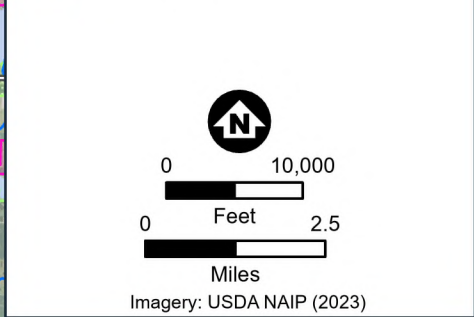
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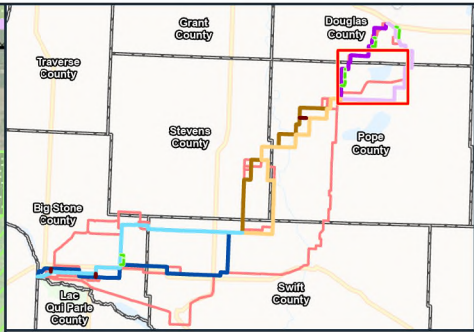
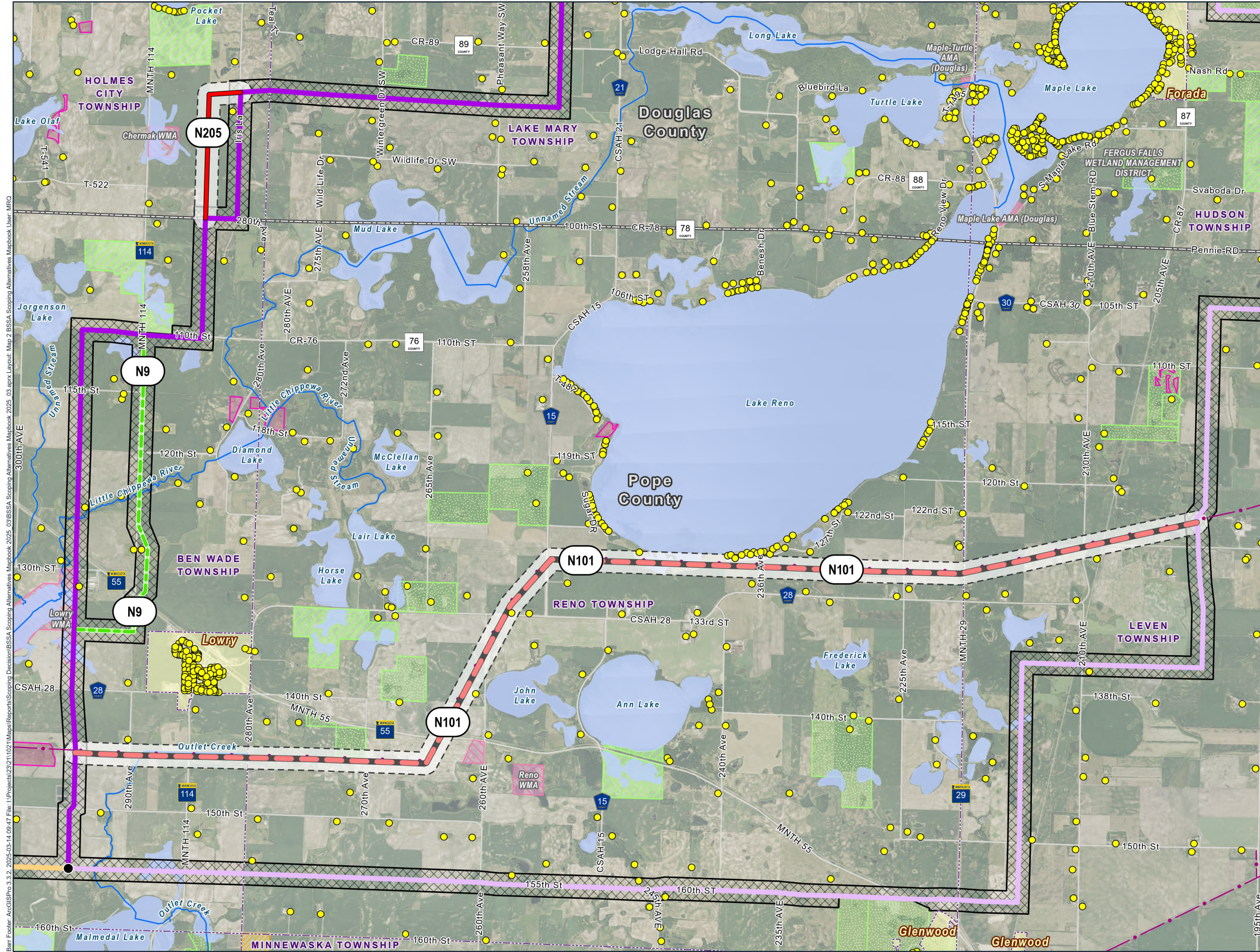
- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- South 1
- South 2
- Central 1
- Central 2
- North 1
- North 2
- Route Width
- Route Segment End
- Scoping Alternatives**
- Route
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land
- Joint Federal and State Managed Land
- Local Land



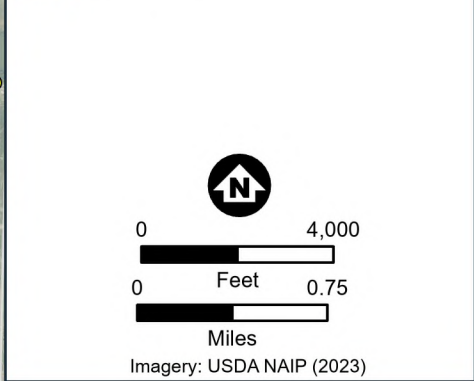
**Scoping Alternatives**  
Central 3  
Big Stone to Alexandria Project

MAP 2-15





- Residences
- Public Water Basin
- Public Watercourse
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
- Central 1
- Central 2
- North 1
- North 2
- Alternate Segment
- Route Width
- Route Segment End
- Scoping Alternatives**
- Route Connector
- Route Segment
- Scoping Alternative Route Width
- Land Management**
- Federal Land
- Federally Managed Land
- State Land
- State Managed Land
- Local Land



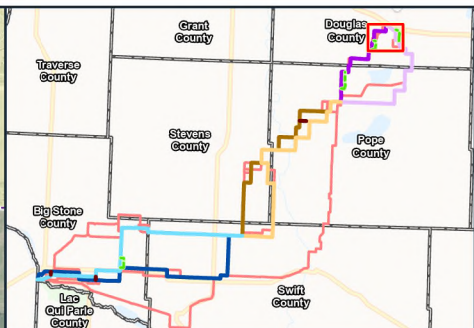
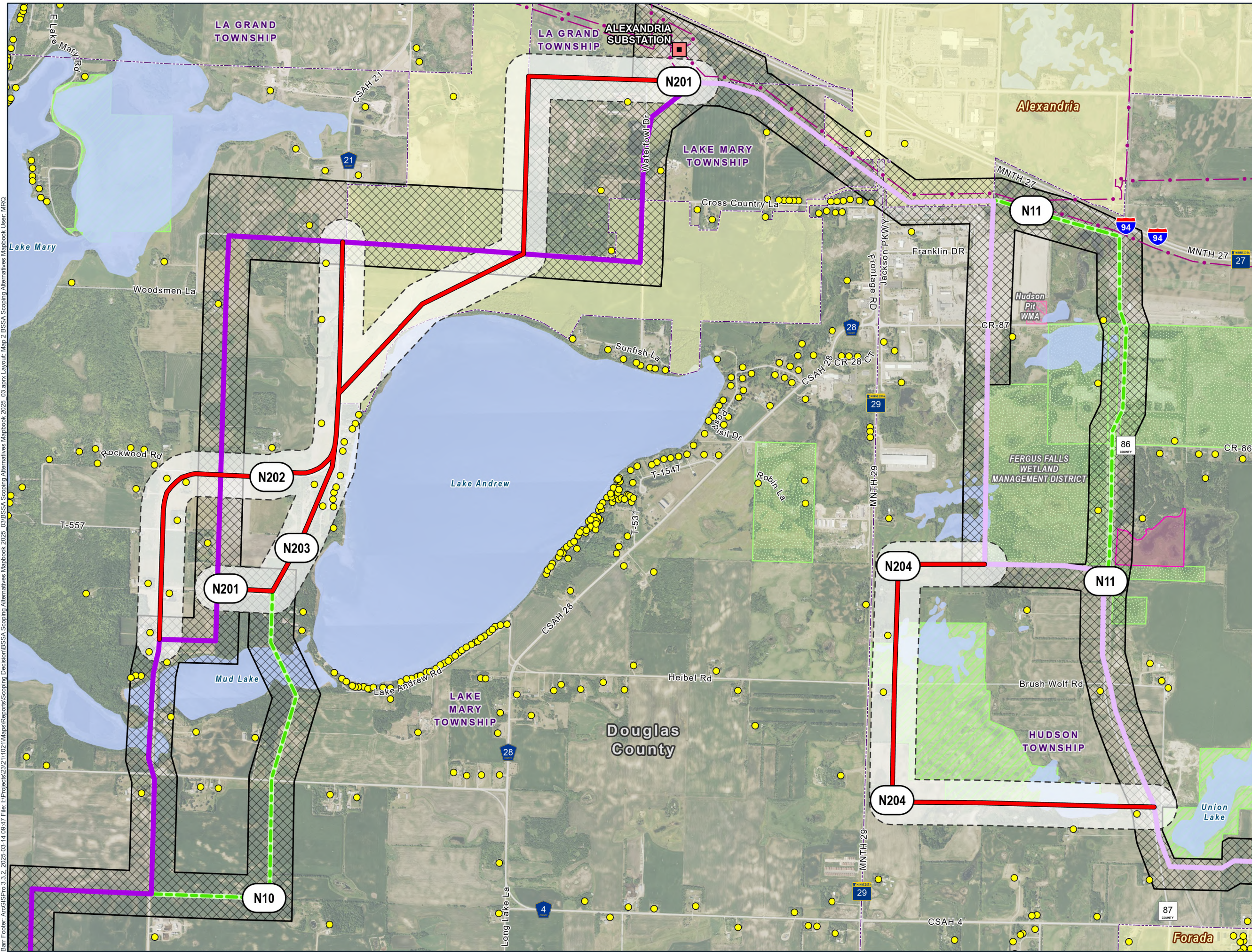
**Scoping Alternatives  
N101, N205, and N9  
Big Stone to Alexandria Project**

MAP 2-16

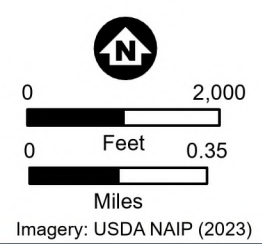
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- Residences
- Public Water Basin
- Existing Transmission Line
- Municipal Boundary
- Civil Township
- County Boundary
- Applicants' Proposed Route Options**
  - North 1
  - North 2
  - Alternate Segment
  - Route Width
  - Proposed Project Substation
- Scoping Alternatives**
  - Route Segment
  - Scoping Alternative Route Width
- Land Management**
  - Federal Land
  - Federally Managed Land
  - State Land
  - State Managed Land



Scoping Alternatives  
N201, N202, N203, N204, N10 and  
N11  
Big Stone to Alexandria Project