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August 10, 2012

VIA ELECTRONIC AND FEDERAL EXPRESS

Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission, Dept 408
600 East Boulevard Avenue
Bismarck, ND 58505-0480

Re: **CAPX FARGO TRANSMISSION LINE SITING APPLICATION**
CASE NO. PU-07-759

Dear Mr. Nitschke:

Pursuant to North Dakota Administrative Code, Section 69-02-04-10, Northern States Power Company (“Xcel Energy” or the “Company”), on behalf of the utility participants in the CapX Fargo Line, submits the enclosed brief to provide context for the Commission’s deliberations at their scheduled August 16, 2012 Work Session in the above-referenced case.

Summary of Filing

At the July 17, 2012 Work Session, the Commission expressed a desire for an explanation from the Company regarding the rationale for selecting the proposed route for the CapX Fargo Line. Because the record in this proceeding supports the Commission’s granting of the requested Certificate of Corridor Compatibility and Route Permit (“Permit”), the Company will use the Commission’s rules regarding the submission of briefs to provide the information requested. Our legal area has assured me that all of the information provided in the enclosed brief is supported by the record or is based on information of which the Commission may take official notice.

After discussing our approach with Commission Staff last week, it was determined that providing the brief in a question and answer format would be helpful in the Commission’s evaluation of the information being provided. We believe the brief brings clarity to the record and provides the explanations needed by the Commission to render a decision on the requested Permit.

Because the current record supports the Commission granting the requested Permit, we do not believe that it is necessary to reopen the record in this case. The record reflects the CapX Fargo Line's compliance with all of the Commission's siting criteria and the North Dakota Siting Act (N.D.C.C. ch. 49-22). The record also contains sufficient information regarding the development and selection by the ownership utilities of the proposed route.

Project Need

The CapX Fargo Line is a key regional transmission project that will provide significant benefits to the state of North Dakota for many years to come. These benefits include reliability improvements for the state's largest metropolitan area and the surrounding region as well as an increase in the ability to export power from generation projects in North Dakota. To maximize the reliability benefits, the proposed route for the CapX Fargo Line is designed to accommodate future build-out of the transmission system in North Dakota in a way that minimizes impacts to its citizens.

Consequence of Extending this Regulatory Proceeding

The North Dakota portion of the CapX Fargo Line is part of the third and final phase of the project which runs from the Alexandria Substation in Alexandria, Minnesota to the proposed Bison Substation in Fargo, North Dakota ("Phase III"). The Commission's issuance of the Permit is a necessary prerequisite for the Company and its project partners to invest the many millions of dollars needed to complete this transmission facility. Without the certainty provided by the Permit, the Company and its project partners will not commence construction on Phase III of the CapX Fargo Line.

As noted in our Application, the in-service date for the CapX Fargo Line is fourth quarter 2015. If the Commission's decision were delayed beyond this fall, the delay would create significant permitting and construction complications, increase costs, and suspend for a time the benefits that the CapX Fargo Line is intended to provide. Following is an illustrative list of impacts such a delay may have.

- **No 2012/2013 winter construction:** One full winter construction season would be lost. More construction during the warmer months would result in increased crop damages for landowners.
- **In-service date risk:** The project schedule contemplated three winter construction seasons. A delay in North Dakota permitting results could result in a delayed in-service date.
- **Increased construction costs:** A compressed schedule will likely require the use of external utility resources for construction.
- **Contract impacts:** The project involves long-term, multimillion dollar materials contracts (steel, for example) which require long lead times for raw material and production reservations. A project delay would require changes to these agreements.

- **Conditional Use Permit expirations:** Conditional Use Permits obtained from various municipalities and townships in North Dakota will expire and would need to be sought again.
- **Expiration of options:** Currently held landowner easement options negotiated with North Dakota landowners will expire and would need to be renegotiated.

In addition, if the Red River crossing were to change significantly, the following additional impacts would occur.

- **New/amended regulatory processes:** If the location of the Red River crossing changes, the route in Minnesota will also need to be changed. The necessary regulatory proceedings to do this are estimated to take at least a year and likely longer. The necessary activities include landowner contacts, application preparation, hearings, works sessions, environmental reviews, agency consultations, etc. This timeline could be extended if landowners, seeing that a route can be altered, work against the reroute. These regulatory processes will put us outside the planned in-service date and add at least \$10 million to project costs.
- **Line cost increase:** If the Red River crossing were moved farther south, it is likely that additional miles of 345 kV line would need to be constructed. For example, if the river crossing was moved three to five miles south of Oxbow, line construction costs would be increased \$10-\$15 million.

Closing

The CapX utilities have worked in a open and considerate manner on this project and have sought to provide North Dakota with the best project possible. We have selected a route for the facility that balances the needs and concerns of the many stakeholders in a fair and thoughtful manner.

On behalf of all of the CapX Fargo Line utilities, we respectfully request that the Commission render a timely decision on our Application.

Please feel free to contact me or Darrin Lahr (763-493-1808) if you have any questions or concerns.

Sincerely,

/s/ Laura McCarten

Laura McCarten
Regional Vice President
Northern States Power Company,
a Minnesota corporation

cc: Jerry Lein
Mike Diller
Mitch Armstrong

**STATE OF NORTH DAKOTA
BEFORE THE
NORTH DAKOTA PUBLIC SERVICE COMMISSION**

**NORTHERN STATES POWER COMPANY
FARGO-ST. CLOUD MN 345 kV
CAP-X TRANSMISSION LINE SITING
APPLICATION**

Case No. PU-07-759

**Brief of Northern States Power Company
CapX Fargo-St. Cloud 345 kV Transmission Line Siting Application
Case No. PU-07-759**

In the Commission's July 17, 2012 Work Session, Commissioners expressed a desire for an explanation from Northern States Power Company ("Xcel Energy" or "Company"), the applicant in this proceeding, regarding the development of and rationale for selecting the proposed route for the CapX Fargo-St. Cloud 345 kV Transmission Line ("CapX Fargo Line" or the "Project"). The joint Application for a Certificate of Corridor Compatibility and a Route Permit ("Application") was submitted October 3, 2011 by Xcel Energy on behalf of itself and the anticipated co-owners of the CapX Fargo Line, currently contemplated to include Otter Tail Power, Great River Energy, Minnesota Power and Missouri River Energy Services. Xcel Energy previously submitted an application for a Certificate of Corridor Compatibility on December 30, 2010, which was amended on April 11, 2011. The current application requests that both applications be reviewed concurrently.

We provide the following information in response to Commissioners' comments in a question and answer format. The information provided in this document is drawn entirely from information contained in the record of this case and sources from which the Commission may take official notice.¹ All of the figures embedded in this brief are provided in full-page format as attachments to this document.

I. LOCATION OF RIVER CROSSING

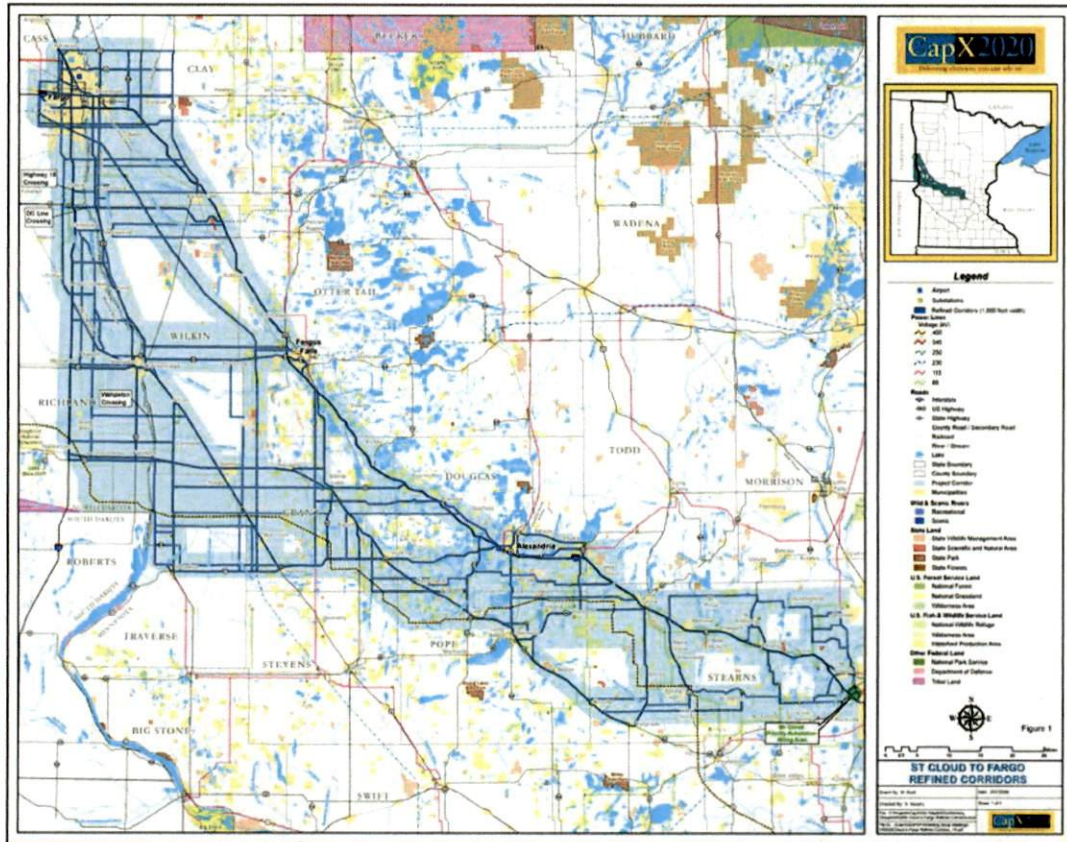
What other routes and river crossings did the Company evaluate south of the proposed Red River route crossing?

The proposed Red River route crossing is located north of Oxbow and south of County Road 16 and the anticipated location of the United States Army Corps of Engineers Diversion Project. The Company proposed this crossing after considering more than a dozen river crossings. (Application, p. 4-1). Conceptual preliminary route segments were developed for 11 of those crossings, as depicted on Figure 4-1 of the Application and shown below in Figure 1. Among these were three crossings south of the proposed Red River route crossing including:

- 1) the Wahpeton route crossing;
- 2) the Minnesota Power DC line crossing; and
- 3) the County Road 18 crossing.

These three crossings are identified in callouts on Figure 1.

Figure 1



Why didn't Xcel Energy recommend one of these three crossings in its North Dakota application?

There were several reasons. First, the Company was guided by the conclusions and siting recommendations of the CapX 2020 Group 1 Fargo Line Optimization Study (“Study”) (Late Filed Exhibit 30). The Study recommended, consistent with North Dakota’s policy of orderly siting of transmission infrastructure (N.D.C.C. § 49-22-02) that the CapX Fargo Line be sited near the existing Sheyenne-Audubon 230 kV line to facilitate a future upgrade and 345 kV connection between these two transmission lines. These three other routes and river crossings all presented inferior opportunities for an interconnection in comparison to the proposed route because they would have either increased the distance of

interconnection on the more preferable south and east sides of the metro area, or forced a less favorable 345 kV interconnection line through the heavily developed areas on the west side of Fargo.

Second, two of the crossing route segments (the DC line and County Road 18 options) would have conflicted with the Commission's designated Avoidance Areas as there are homes within 500 feet of these routes.

Third, while the Wahpeton alternative would have satisfied the state's routing criteria, it maximized the route length in North Dakota and consequently the overall impacts in North Dakota. The Wahpeton alternative also increased the overall CapX Fargo Line length and cost, adding 39 miles and approximately \$50 million to the Project.ⁱⁱ This alternative also provided far less desirable options for connecting the CapX Fargo Line to the Sheyenne-Audubon 230 kV line in the future.

If the Wahpeton route is inferior to the proposed route, why did the Company propose it as an alternative?

As a practical matter, the CapX utilities proposed the Wahpeton crossing as an alternative to comply with Minnesota siting statutes. The Minnesota siting statutes require that an applicant for a 345 kV line propose at least two route alternatives, to identify one as preferred and to state the rationale for the preference.ⁱⁱⁱ In October 2009, Xcel Energy filed a Route Permit application with the Minnesota Public Utilities Commission ("MPUC") requesting that the MPUC approve the Company's preferred route with a Red River crossing at County Road 16.^{iv}

What conclusions did the Company reach regarding the DC Line route alternative?

As shown in the picture below, the DC Line route is located where Minnesota Power's Center, North Dakota to Duluth, Minnesota line crosses the Red River. The DC Line alternative does not satisfy North Dakota's Avoidance Criteria – there is one home on the North Dakota side less than 250 feet from the line. In addition, this route is located farther south of the Sheyenne-Audubon 230 kV line and therefore would require a longer future interconnection line in North Dakota or Minnesota or a more impacting interconnecting line on the west side of Fargo. Finally, the new line would likely need to cross the Red River two times and require the removal of more trees situated along the river.

Figure 2



What conclusions did the Company reach regarding the County Road 18 route alternative?

This alternative, with a crossing south of Oxbow, also does not meet the Avoidance Criteria – there are two homes within 450 feet of the center of the route. In addition, it is even farther south of the Sheyenne-Audubon 230 kV line than the DC Line route, which would add more cost to a south or east side interconnection, and share the same complications of a west side interconnection that the DC Line has. The crossing is shown in Figure 3.

Figure 3



Does the record demonstrate that the Proposed Route meets North Dakota siting criteria?

Yes. Consistent with North Dakota's siting policy (N.D.C.C. § 49-22-02), the Company sought to identify a proposed corridor and route that balanced the need to minimize impacts to the environment and residents of North Dakota with meeting identified system needs and providing for orderly future expansion of the transmission system.

To guide the development of the corridor within the Study Area and the route within the corridor the Commission has, in accordance with N.D.C.C. § 49-22-05.1, developed guiding criteria, namely the Exclusion Areas, Avoidance Areas, and Selection Criteria (N.D. Admin. Code § 69-06-08-02). Further, the Commission has established certain Policy Criteria to also help guide the development of a Corridor and Route. Finally, the Siting Act provides the Commission guidance as to what factors it should consider when evaluating and approving a proposed Corridor and Route (N.D.C.C. § 49-22-09). As demonstrated in Chapter 6 of the Application, all of these factors are satisfied by the proposed CapX Fargo Line corridor as well as the proposed route.

Is the proposed route the least impactful route on people?

Yes. The fact of the matter is that the CapX Fargo Line will have an impact on residents no matter where it is located. The proposed route satisfies the state routing criteria and just as important, reduces the potential of routing future high voltage facilities through the more densely populated areas of Fargo and West Fargo, further minimizing the overall impacts on human settlement.

How does the CapX Fargo Line meet North Dakota's siting criteria in relation to its proximity to the Bakke Addition?

The Commission's Avoidance Area criteria require that the line be located at least 500 feet from any occupied residence. The northern most residences of the Bakke Addition are more than a half-mile from the proposed transmission line, or about five times the Avoidance Area limit of 500 feet. There are additional residences located north and south of the propose route along the east/west segment in Township 137N, 48W, Sec-18 and Township 137N, R-49 W, sections 13-16.

As a result, the line cannot be shifted in line north or south without coming closer to other residences than it currently is to the Bakke homes as shown on Appendix B1 of the Application.

Would it be accurate to say that Minnesota regulators selected the proposed Red River crossing for the Project?

No. The co-owners of the CapX Fargo Line analyzed, developed, and recommended the current route as the optimal path for the line segments located in both North Dakota and Minnesota. The utilities recommended the proposed route because it balances human and environmental impacts, cost, and the project's objectives appropriately. The proposed route best meets the Commission's Avoidance Area, Exclusion Area, Selection and Policy Criteria, as well as Minnesota state routing criteria. While the Company did its best to coordinate the regulatory approval processes in both states, inevitably differing circumstances resulted in the completion of the MPUC process first.

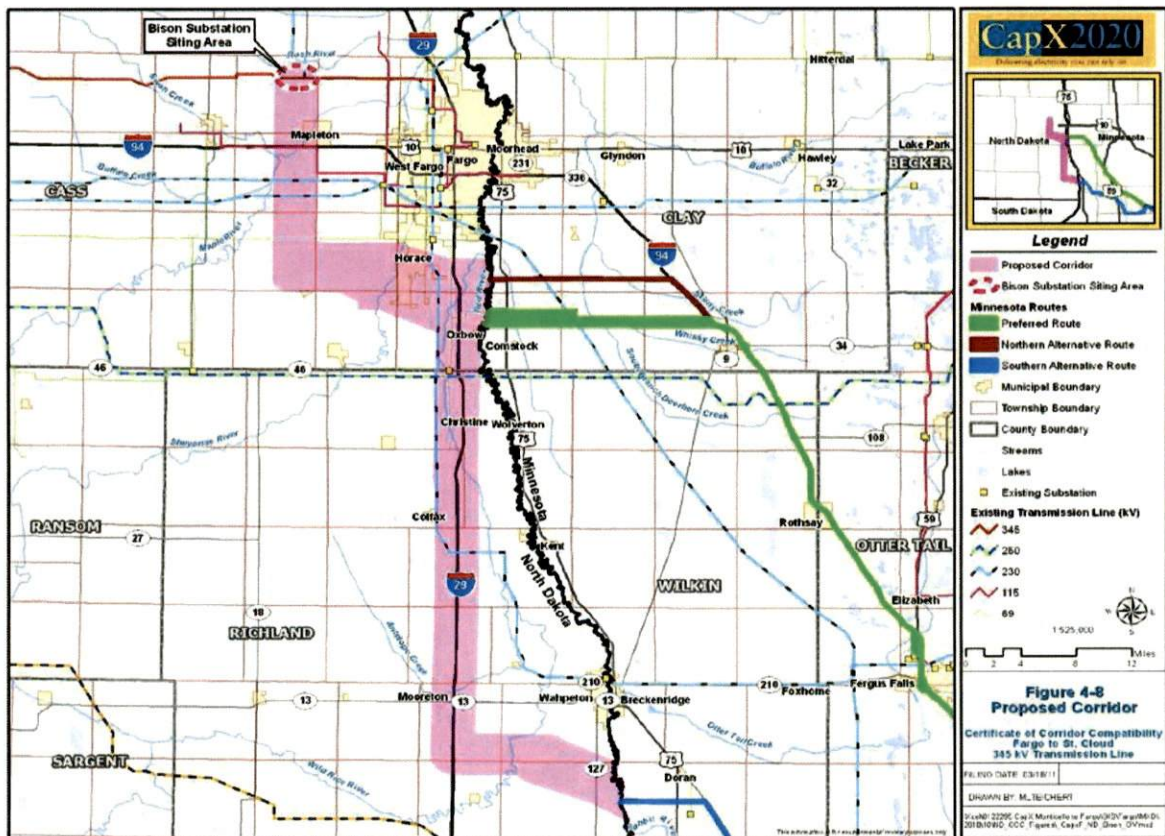
Did stakeholder input from North Dakota affect the Minnesota proceeding?

Yes. Feedback in North Dakota caused us to revise our proposed route in Minnesota. The Company initially recommended a preferred route that crossed the Red River along County Road 16. This option is approximately three and a half miles north of the current Proposed Route's Red River crossing area and provided the best opportunity for a future interconnection with the Sheyenne-Audubon 230 kV line as identified in the Study. During the concurrent state proceedings, meetings between the Company and stakeholders in North Dakota revealed concerns about the location of the CapX Fargo Line relative to

the United States Army Corps of Engineers Flood Diversion Project. Stakeholders suggested co-locating the transmission lines with the flood diversion project where possible, and with that ensure the transmission line is located south of the Diversion Project to preserve development land on the “dry side” of the Diversion Project.^v The Company assessed these needs with the objectives of the CapX Fargo Line and consequently modified its preferred route.^{vi} To accommodate the desires of these North Dakota stakeholders the Company made a formal request to propose the revised route (and subsequent river crossing) in the Minnesota routing process.

A map of the initial preferred route along County Road 16 and the new preferred route south of the Diversion Project are shown on Figure 4-8 in the Route Permit Application, copied below as Figure 4.

Figure 4



II. RELIABILITY IMPLICATIONS OF THE PROPOSED ROUTE

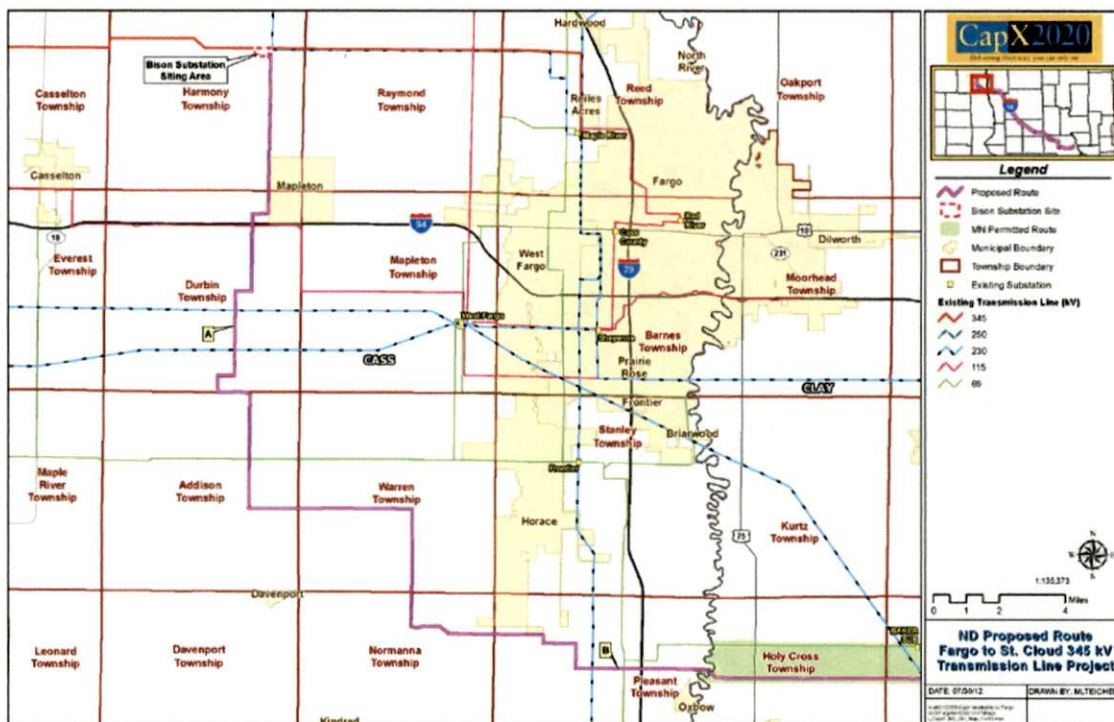
What were the goals of the CapX 2020 Group 1 Fargo Line Optimization Study?

The goals of the study were to evaluate future electrical needs of the region and to evaluate how best to maximize the load serving benefits and generation export capability of the CapX Fargo Line through route selection. The Study engineers developed a long-term integrated development plan for the transmission system to maximize export capability and load serving capability in this fast growing region and to ensure system efficiency and security (Late Filed Exhibit 30, pp. 2 and 98).

What problems did the Study find?

Study engineers found that when additional generation to meet eastern North Dakota load growth is added to the system, power flows through the lower voltage system located in Fargo and subsequently the Sheyenne-Audubon 230 kV line overloads. To increase export capability, this overload potential must be remedied. The Study recommended that the CapX Fargo Line be terminated at the new Bison Substation and that the route be located on the south side of Fargo as close to the Sheyenne-Audubon 230 kV line as practical to facilitate a low-impacting, low-cost interconnection of these two facilities in the future. The Sheyenne-Audubon line originates in a fast developing area in south central Fargo and runs eastward to the Audubon Substation in Audubon, Minnesota. The Application, Appendix A, is a map of the electrical facilities and the proposed route, which follows the Study's recommended route. Appendix A is reproduced here as Figure 5.

Figure 5



Why did the Study recommend locating the CapX Fargo Line south of Fargo?

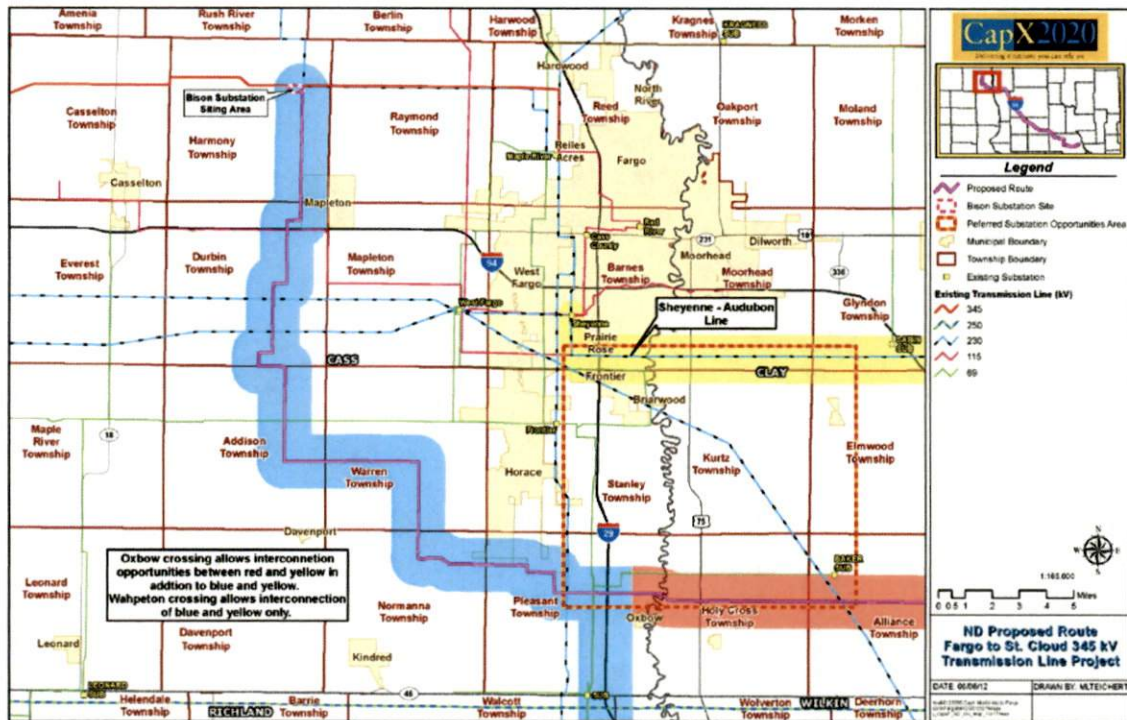
To remedy the Sheyenne-Audubon 230 kV line overload situation, the recommended electric system improvement would be to upgrade and connect the Sheyenne-Audubon 230 kV line with the CapX Fargo Line at a new substation generally located south and/or southeast of the Sheyenne Substation (this new substation is referred to as the “Flint Substation”). A new substation is necessary because the Sheyenne Substation is not capable of expansion due to its location in the rapidly developing urban areas of south central Fargo. The connection would be made with a new double-circuit 345 kV transmission line running between the CapX Fargo Line and the Sheyenne-Audubon 230 kV line.

How does the Proposed Route best meet the Study’s recommendation?

The Proposed Route accomplishes two important objectives: 1) it provides for the figure routing of a new transmission line connecting the Sheyenne-Audubon 230 kV Line and the CapX Fargo Line in the least developed or populated area to the east of the Fargo-Moorhead area, and 2) it minimizes the length of transmission line that would be required to make the connection. The red dashed box in Figure 6 shows that by placing the line on this new interconnection line on the Proposed Route, there are more opportunities in lower density areas (within the red dashed box) to interconnect somewhere along the east-west Sheyenne-Audubon 230 kV line (including areas in Minnesota) compared to a CapX Fargo

Line route located along the I-29 corridor. Specifically, if the Wahpeton route were selected, the interconnection could only be made along the blue segment. If the Proposed Route were selected, the interconnection could be made on the blue or pink areas.

Figure 6



The proposed Route for the CapX Fargo Line would also minimize the cost of the future connecting line. By way of illustration, double circuit 345 kV line is estimated to cost \$1.8 million per mile. If the CapX Fargo Line were located five miles south of the current crossing location, not only would the length and cost of the CapX Fargo Line be increased, but so would the future interconnection line at a cost of \$9 million. By placing the line in a location where interconnection opportunities are maximized due to the relatively low population density the costs for additional future facilities and impacts would be minimized.

Does the Study say when the connection between the CapX Fargo Line and the Sheyenne-Audubon 230 kV line will be needed?

The Study did not estimate a specific timeframe for when the facilities will be needed. However, the population and load in the Fargo/West Fargo and surrounding areas continue to grow and additional generation development is likely to take advantage of the additional export capability that the CapX Fargo Line will provide, thereby prompting the need for the connection. The Study concluded that to facilitate this load growth and future

export capability and to maintain reliable service to the Fargo area, the Sheyenne-Audubon/CapX Fargo Line connection will be needed.

Would it be possible to connect the Sheyenne-Audubon 230 kV line to the CapX Fargo line at a location to the west of the Sheyenne Substation?

Yes, but there would be greater impacts on North Dakota residents. If the future Flint Substation were located south or southeast of Fargo, the new connecting line would likely be able to run through less densely populated areas including areas in Minnesota. Additionally, future transmission lines from the Flint Substation will generally run eastward towards other significant electric markets. Placement of the Flint Substation to the west of Fargo would require constructing new high voltage transmission line facilities from the Sheyenne-Audubon 230 kV line in Fargo west through rapidly developing and populated areas which would be costly and face substantial public opposition. Strategic placement of the CapX Fargo Line helps reduce likely significant impacts of future lines by avoiding the need to run additional connecting lines through the rapidly developing Fargo and West Fargo areas. This not only reduces impacts on North Dakota citizens, but also keeps costs as low as possible.

Also, placement of the substation to the south or east of Fargo facilitates development of a larger high voltage transmission line loop than if the line were constructed to the west. Figure 7, below, illustrates how this loop is maximized with the Proposed Route. The large black circle within the red dashed box shows a conceptual location of the future Flint Substation. The yellow highlighted transmission line shows the Sheyenne-Audubon 230 kV line which would connect to the CapX Fargo Line (highlighted in purple) at the Flint Substation as well as other transmission facilities that would connect to the CapX Fargo Line at the new Bison Switching Station. When all of these connections are made, a large loop around the Fargo area is created as shown by the yellow and purple highlights, with the Bison Switching Station and Flint Substation providing the two interconnection points to the CapX Fargo Line. On the other hand, interconnecting the Sheyenne-Audubon 230 kV Line on the west side of Fargo would reduce the size of the transmission loop.

Figure 7



III. CLOSING

Xcel Energy appreciates the opportunity to submit this brief and requests that the Commission issue a Certificate of Corridor Compatibility and a Route Permit for the CapX Fargo Line.

Respectfully submitted

By: /s/ Lisa Agrimonti

Lisa Agrimonti (#06547)

Zeviel Simpser (#06794)

Briggs and Morgan, P.A.

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**ATTORNEYS FOR NORTHERN STATES
POWER COMPANY**

ⁱ The Commission is empowered to take judicial notice of the proceedings of the Minnesota Public Utilities Commission. N.D.C.C. § 28-32-24; N.D.R. Evid. 201; *Aggie Investment GP v. Pub. Serv. Comm'n of N.D.*, 470 N.W.2d 805 (N.D. 1991). This document contains some references to the order of the Minnesota Public Utilities Commission ("MPUC"): *In re Application for a Route Permit for the Fargo to St. Cloud 345 kV Transmission Line Project*, MPUC Docket No. E002, ET2/TL-09-1056, Findings of Fact, Conclusions of Law and Order Issuing an HVTL Route Permit to Xcel Energy and Great River Energy ("Route Permit").

ⁱⁱ The Wahpeton alternative would have increased the line length located in North Dakota by 50 miles and reduced the portion of line located in Minnesota by 11 miles. See Route Permit.

ⁱⁱⁱ Minn. Stat. § 216E.03, subd. 3.

^{iv} Route Permit, adopted ALJ Findings 1 and 3.

^v Route Permit, adopted ALJ Finding 144.

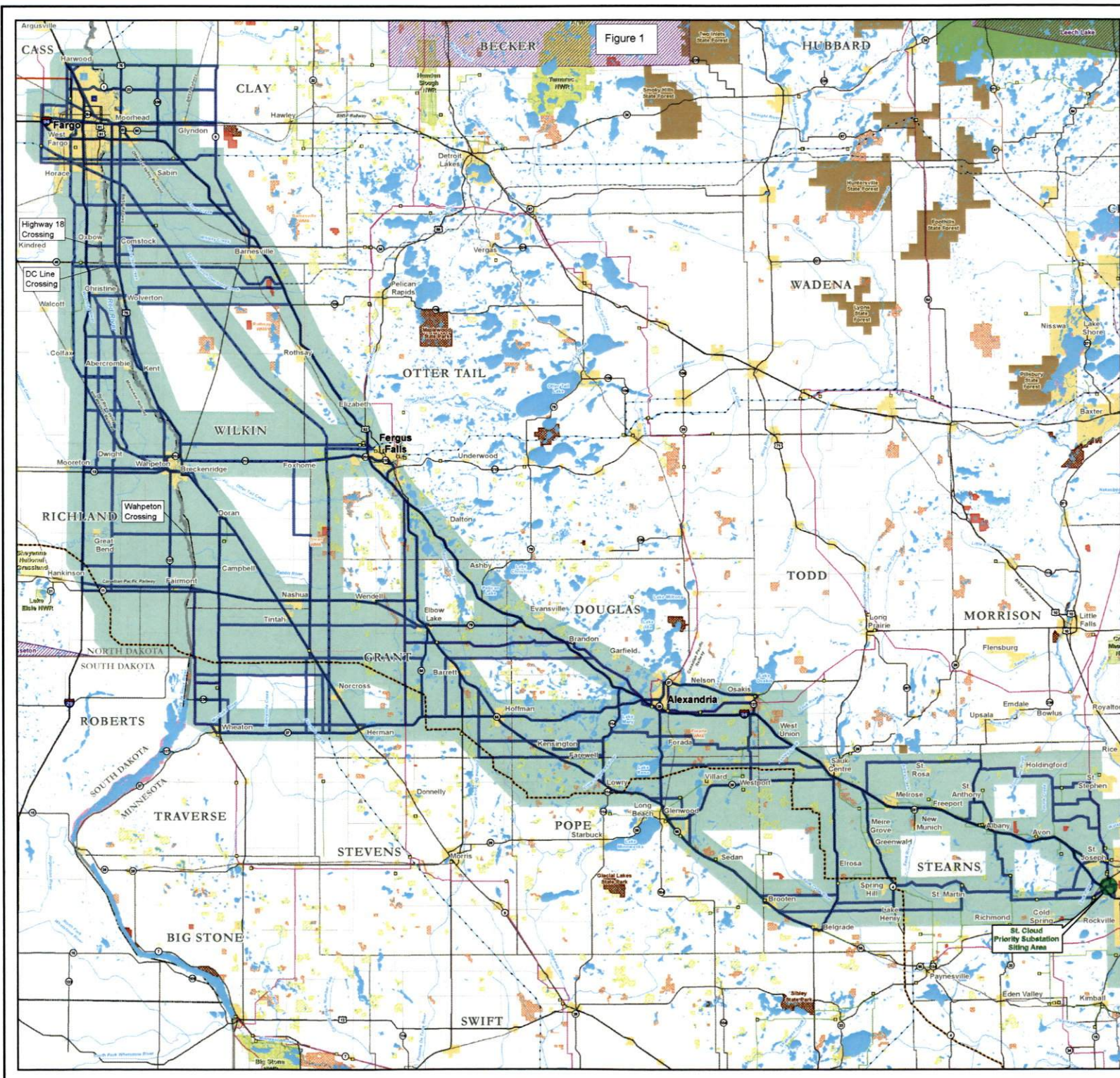
^{vi} Route Permit, adopted ALJ Finding 54.

ATTACHMENTS TO

BRIEF OF NORTHERN STATES POWER COMPANY

CAPX FARGO-ST. CLOUD 345 KV TRANSMISSION LINE SITING APPLICATION

CASE NO. PU-07-759



CapX2020

Delivering electricity you can rely on



Legend

- Airport
- Substations
- Refined Corridors (1,000 foot width)
- Power Lines**
- Voltage (kV)**
- 400
- 345
- 250
- 230
- 115
- 69
- Roads**
- Interstate
- US Highway
- State Highway
- County Road / Secondary Road
- Railroad
- River / Stream
- Lake
- State Boundary
- County Boundary
- Project Corridor
- Municipalities
- Wild & Scenic Rivers**
- Recreational
- Scenic
- State Land**
- State Wildlife Management Area
- State Scientific and Natural Area
- State Park
- State Forests
- U.S. Forest Service Land**
- National Forest
- National Grassland
- Wilderness Area
- U.S. Fish & Wildlife Service Land**
- National Wildlife Refuge
- Wilderness Area
- Waterfowl Production Area
- Other Federal Land**
- National Park Service
- Department of Defense
- Tribal Land

0 2.5 5 10 15 20 25 Miles

ST CLOUD TO FARGO REFINED CORRIDORS

Drawn By: M. Koch Date: 2/27/2006
 Checked By: D. Murphy Sheet: 1 of 1

File: C:\projects\CapX08 Data\MXD\Working Group\MQSR Cloud to Fargo Refined Corridors.mxd
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Figure 2

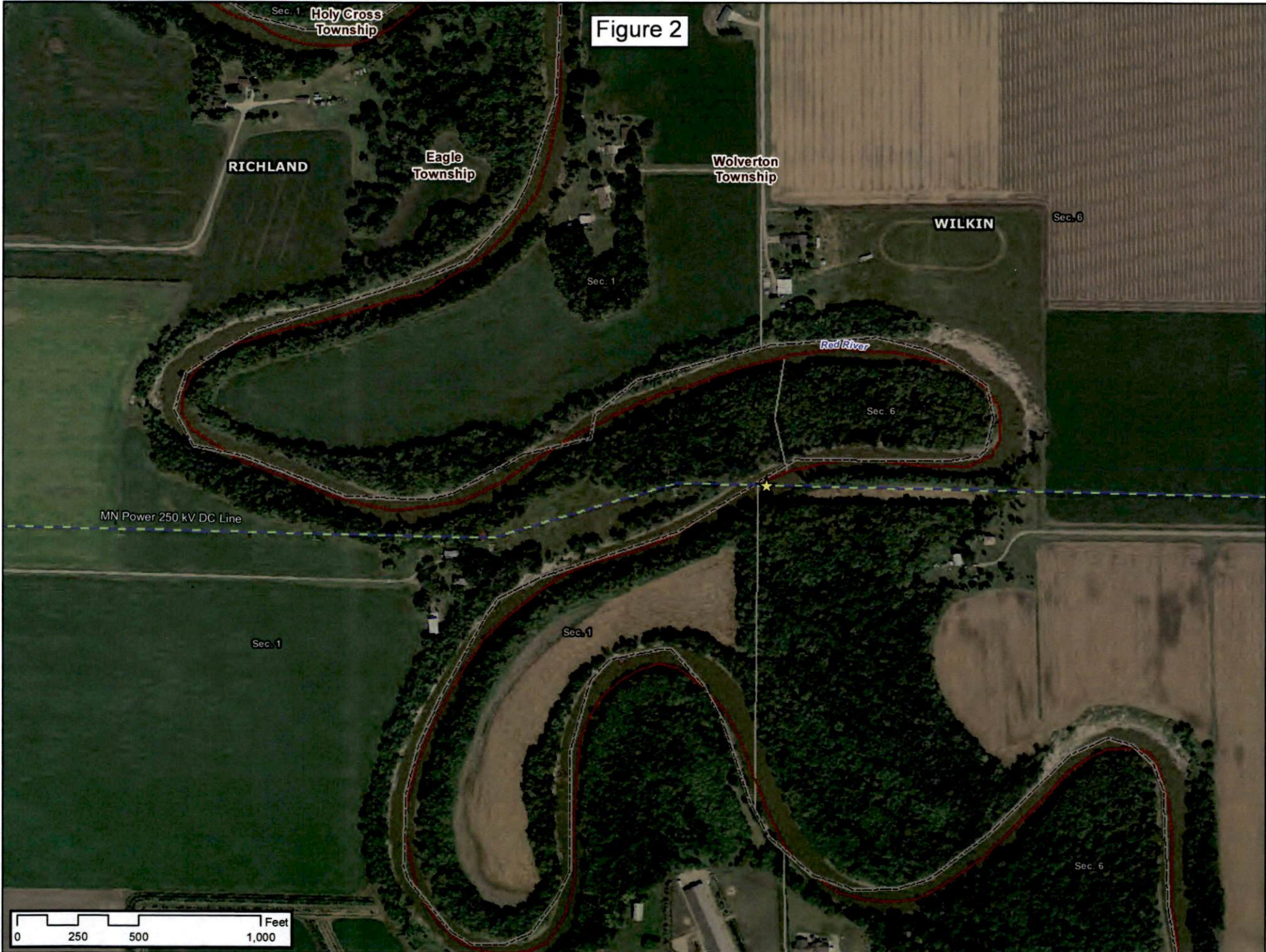


Figure 3



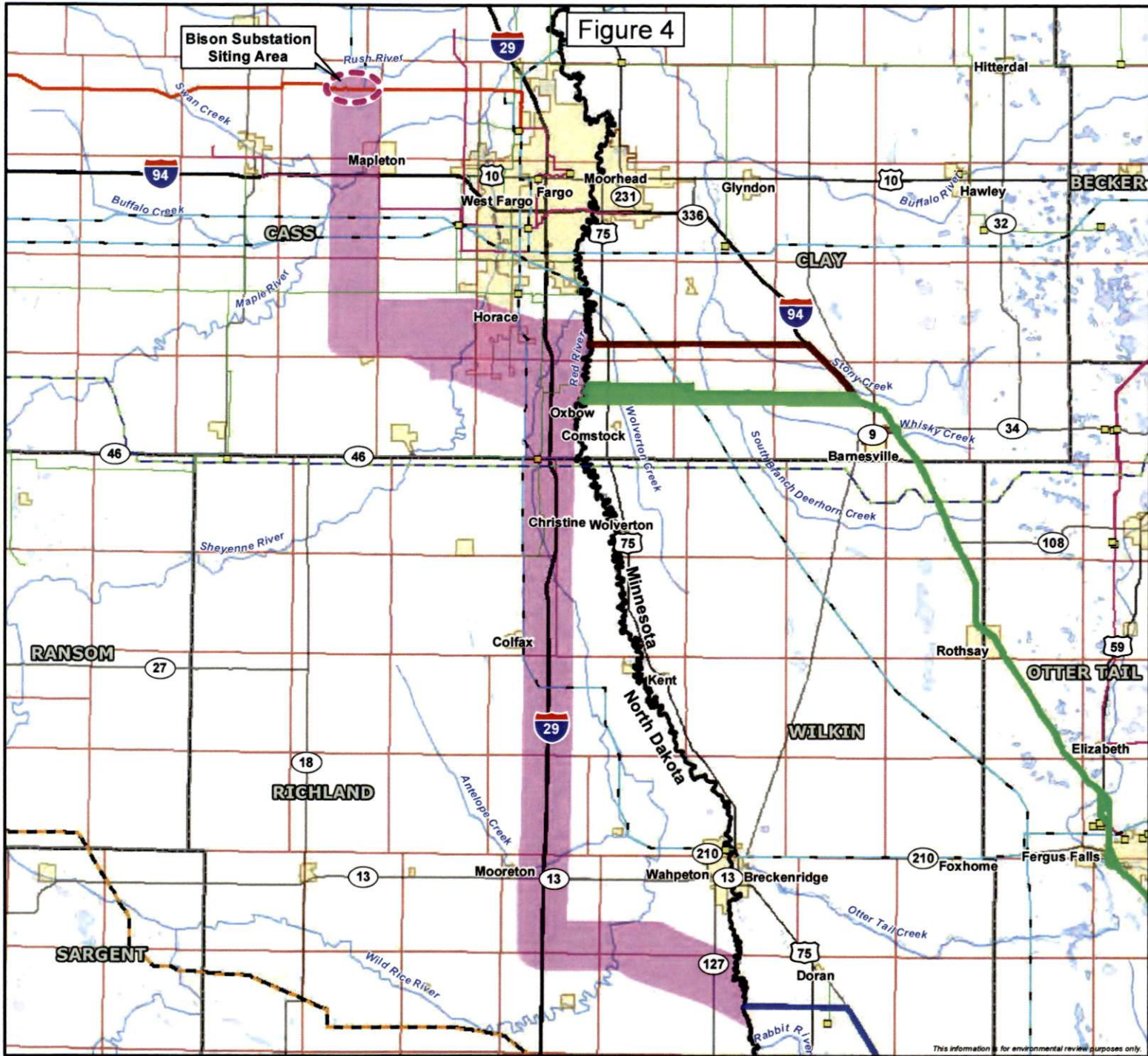


Figure 4

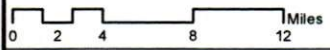


Legend

- Proposed Corridor
- Bison Substation Siting Area
- Minnesota Routes**
- Preferred Route
- Northern Alternative Route
- Southern Alternative Route
- Municipal Boundary
- Township Boundary
- County Boundary
- Streams
- Lakes
- Existing Substation
- Existing Transmission Line (kV)**
- 345
- 250
- 230
- 115
- 69



1:525,000



**Figure 4-8
Proposed Corridor**

Certificate of Corridor Compatibility
Fargo to St. Cloud
345 kV Transmission Line

FILING DATE: 03/19/11

DRAWN BY: MLTEICHERT

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This information is for environmental review purposes only.

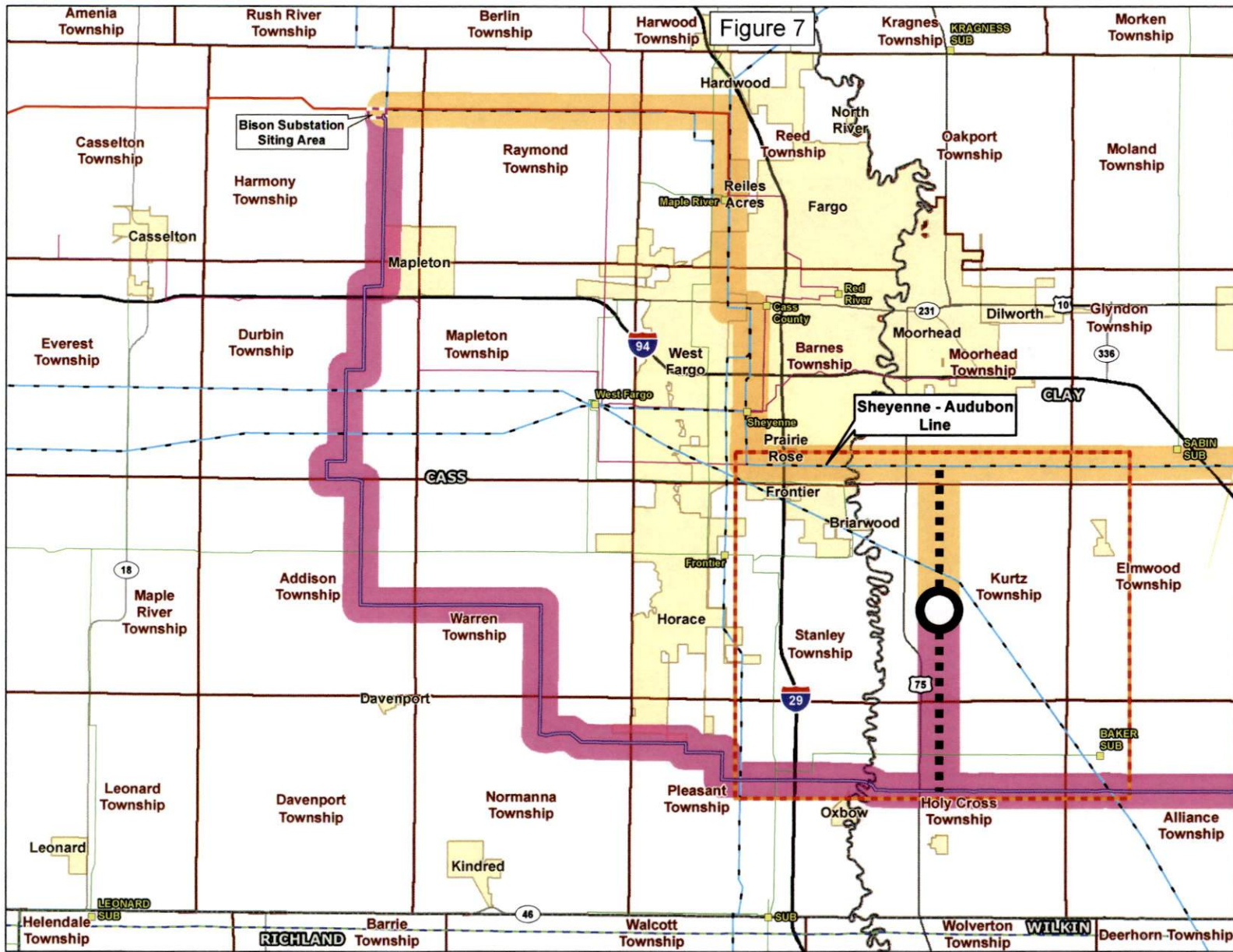
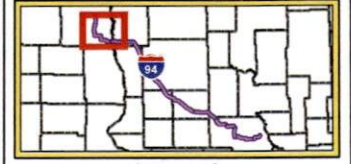
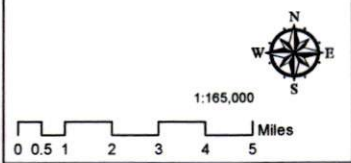


Figure 7



Legend

- Proposed Route
 - Bison Substation Site
 - Preferred Substation Opportunities Area
 - Example Future Flint Substation Connection
 - Municipal Boundary
 - Township Boundary
 - Existing Substation
- Existing Transmission Line (kV)**
- 345
 - 250
 - 230
 - 115
 - 69



**Future Reliability Loop
Fargo to St. Cloud 345 kV
Transmission Line Project**

DATE: 08/06/12 DRAWN BY: MLTEICHERT

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