

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Phyllis Reha  
J. Dennis O'Brien  
David Boyd  
Betsy Wergin

Acting Chair  
Commissioner  
Commissioner  
Commissioner

Dan Leshner  
Great River Energy  
12300 Elm Creek Boulevard  
Maple Grove, MN 55369

SERVICE DATE: February 29, 2012

DOCKET NO. ET2/TL-08-1474

In the Matter of the Route Permit Application for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota

The above entitled matter has been considered by the Commission and the following disposition made:

**Approved the permittees requested minor alterations and issued a permit amendment authorizing:**

- 1. The addition of maps CF1-CF5 depicting the 115 kV line route between Cedar Mountain Substation and Franklin Substation to the official map set.**
- 2. The substitution of map LH22a in place of existing map LH22 to show the Prairie Island—Blue Lake 345 kV line connection and the correct area and location of the Hampton substation.**
- 3. A revision to the route permit text to clarify that the maximum area required for the new Hampton Substation is 15 acres and that it will be located in the southeast corner of the property directly adjacent to 215th Avenue on the south and State Highway 52 on the east. The space used will be minimized to the extent possible without compromising safety or the integrity of the substation.**
- 4. An addition to the route permit text allowing the installation of six conductors at the span across Interstate 35 in Dakota County.**

The Commission agrees with and adopts the recommendations of the Department of Commerce, which are attached and hereby incorporated into the Order. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION



Burl W. Haar  
Executive Secretary

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**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

**COMMENTS AND RECOMMENDATIONS OF THE  
DEPARTMENT OF COMMERCE  
ENERGY FACILITY PERMITTING STAFF**

**DOCKET NO. ET2/TL-08-1474**

Meeting Date: February 23, 2012 ..... Agenda Item # 1

Company: Great River Energy and Xcel Energy

Docket No.: **ET2/TL-08-1474**

**In the Matter of the Route Permit Application for a 345 kV Transmission  
Line from Brookings County, South Dakota to Hampton, Minnesota.**

Issue(s): Should the Commission authorize a minor alteration for the Brookings to Hampton transmission line project? If so, what conditions, if any, should attach to the minor alteration?

EFP Staff: Scott Ek ..... 651-296-8813

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**Relevant Documents**

Route Permit Application ..... December 29, 2008  
ALJ Findings of Fact, Conclusions, and Recommendation ..... April 22, 2010  
Amended ALJ Findings of Fact, Conclusions, and Recommendation ..... April 30, 2010  
Order Granting Route Permit..... September 14, 2010  
ALJ Findings of Fact, Conclusions, and Recommendation on Remand ..... December 22, 2010  
Amended ALJ Findings of Fact, Conclusions, and Recommendation Remand December 23, 2010  
Order Granting Route Permit on Remand ..... March 1, 2011  
Minor Alteration Application ..... January 5, 2012  
Notice of Minor Alteration Application and Comment Period ..... January 17, 2012

The enclosed materials are work papers of the Department of Commerce Energy Facility Permitting (EFP) staff. They are intended for use by the Minnesota Public Utilities Commission (Commission) and are based on information already in the record unless otherwise noted.

### **Documents Attached**

Figure – Hampton Substation

Proposed Permit Amendment

Figures CF1 to CF5 – Cedar Mountain Substation to Franklin Substation

Figure LH22a – Hampton Substation to Prairie Island – Blue Lake 345 kV line

*Note:* Relevant documents and additional information can be found on eDockets (Docket Number 08-1474) or the Commission's Energy Facilities Permitting website at: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=19860>.

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### **Statement of the Issues**

Should the Commission authorize a minor alteration for the Brookings to Hampton transmission line project? If so, what conditions, if any, should attach to the minor alteration?

### **Introduction and Background**

On December 29, 2008, Great River Energy and Xcel Energy (permittees) made joint application to the Commission for a new 345 kV (kilovolt) transmission line and associated facilities under the full permitting process. In separate Orders issued September 14, 2010 and March 1, 2011, the Commission determined that the environmental impact statement and the record created at the public hearings had adequately addressed the issues identified in the scoping decision. The Commission also designated and issued a high-voltage transmission line route permit, with appropriate conditions, to Great River Energy and Xcel Energy for the Brookings County, South Dakota, to Hampton project.

On January 5, 2012, the permittees applied to the Commission for a minor alteration to the Brookings to Hampton 345 kV permit (Document ID 20121-69979-01).

### ***Project Description***

As detailed in the route permit, the project is to construct approximately 240 miles of new 345 kV transmission line and associated facilities in Lincoln, Lyon, Yellow Medicine, Chippewa, Redwood, Brown, Renville, Sibley, Le Sueur, Scott, and Dakota counties. The route includes six route segments to be constructed between (1) the Brookings County substation near White, South Dakota, and a new Hampton substation near Hampton, Minnesota, and (2) the Lyon County substation near Marshall, Minnesota, and the Minnesota Valley substation near Granite Falls, Minnesota.

The project includes the construction of four new substations (Hazel Creek, Cedar Mountain, Helena, and Hampton) and the expansion of and upgrades to three existing substations (Lyon County, Minnesota Valley, and Lake Marion). The variable width of the designated route is limited to between 600 feet to 1.1 miles as depicted on the official route maps. The 345 kV transmission line will be built primarily with single pole structures, which will typically require a 150 foot right-of-way.

The project includes two short transmission line interconnections. One approximately one-half mile between the existing Wilmarth – Blue Lake 345 kV line and the new Helena Substation; and a short transmission line connector (approximately one-half mile) between the existing Prairie Island – Blue Lake 345 kV line and the new Hampton Substation.

There is also an approved five-mile 115 kV transmission line interconnection to be constructed between the Cedar Mountain Substation and Franklin Substation and expansion of and modifications to the Franklin Substation to accommodate the new 115 kV transmission line facilities.

### ***Description of Request***

The permittees are requesting three changes to clarify the provisions of the route permit and to authorize additional conductors at the crossing of Interstate 35. The permittees contend that none of the requested changes will result in significant changes in the human or environmental impact of the facility. The changes as requested in the minor alteration application are described below.

#### **Cedar Mountain Substation to Franklin Substation 115 kV Transmission Line Connection**

The permittees request that the Commission approve an addition to the route permit that would incorporate maps of the 115 kV transmission line connection between the Cedar Mountain Substation and the Franklin Substation which was properly described in the route permit, but was inadvertently excluded from the official route permit maps. To correct the official route map set, permittees request that the maps labeled CF1-CF5 (attached to the minor alteration application) depicting the 115 kV line route between Cedar Mountain Substation and Franklin Substation be added to the official route map set.

#### **Hampton Substation to Prairie Island – Blue Lake 345 kV Transmission Line Connection**

The permittees request that the Commission approve a modification to the route permit that would substitute existing route map LH22 with a revised version of route map LH22 (attached to the minor alteration application) that properly depicts the Hampton Substation to Prairie Island – Blue Lake 345 kV transmission line connection which was properly described in the route permit, but not depicted on the official route permit map for the project.

### Hampton Substation

Permittees also argue that the route permit does not properly address the land necessary for the Hampton Substation, and that the minimum amount of space necessary to accommodate the 345 kV double circuit compatible design is approximately 15 acres (excluding road right-of-way). This 15 acres includes the substation fenced and graded area of five to eight acres, and facilities outside the fenced and graded area such as an access road, setbacks or buffer areas, water management requirements, grading and buffer.

Permittees request a revision to the route permit text to clarify that the area required for the new Hampton Substation is 15 acres and that it will be located in the southeast corner of the property directly adjacent to 215th Avenue on the south and State Highway 52 on the east. The permittees also request that official route map LH22 be replaced with a revised version of route map LH22 (attached to the minor alteration application) that correctly defines the area and location of the Hampton Substation.

### Six Conductors Across Interstate 35

The approved route for the project crosses Interstate 35 into the Chubb Lake Substation, formerly the Lake Marion Substation, north of Elko New Market. The configuration of the segment between Helena Substation and Lake Marion Substation is a double-circuit capable configuration with all arms installed, but conductors strung on only one side. The permittees, in response to preference by the Minnesota Department of Transportation (Mn/DOT), request a modification authorizing the initial installation of six conductors on the six arms at the span crossing Interstate 35. The conductors initially would be tied together and be separated with minimal disruption to traffic and operation of Interstate 35, if and when a second circuit is constructed.

### **Regulatory Process and Procedures**

A minor alteration is a change in a large electric power generating plant or high voltage transmission line that does not result in significant changes in the human or environmental impact of the facility (Minnesota Rules 7850.4800). Upon receiving a minor alteration application the Commission is required to mail notice of receipt of the application to those persons on the general list and to those persons on the project contact list. The Commission is also required to provide at least a 10-day period for interested persons to submit comments on the request.

EFP staff issued notice of the minor alteration request on January 17, 2012, and mailed or e-mailed the notice to the general list and the project list on January 18, 2012. Comments were sought on whether the proposed project is a minor alteration, and any conditions that may be appropriate should the project be authorized as a minor alteration. Persons had until January 31, 2012, to submit comments. EFP staff received one comment letter (see below).

The Commission may authorize the minor alteration or determine that the alteration is not minor and requires a full permitting decision. The Commission may authorize the minor alteration but impose reasonable conditions on the approval (Minnesota Rules 7850.4800, subpart 3).

### ***Werner Comment Letter***

EFP staff received one comment letter dated January 26, 2012, from Mr. James M. Burkhardt, on behalf of Mr. Jerome Werner, the landowner affected the new Hampton Substation. The letter explains that Mr. Werner is not a large landowner and that every tillable acre of Mr. Werner's land is important and will be a painful loss; he basically requests that the amount of land for the Hampton Substation be limited to what is truly required. Mr. Werner requests that the Commission consider the following with regard to the Hampton Substation site:

- The Hampton Substation should be located in the southeast corner of the Werner property bounded by Highway 52 on the east and 215th on the south and be so configured as to lessen the damage to the remaining tillable acres; and
- The size of the Hampton Substation should be carefully considered; the taking should be limited to the actual property or acres required for the substation site and not some arbitrary number.

In general, Mr. Burkhardt explains in the letter that Mr. Werner's only hope is that the taking of land for the Hampton Substation be so configured and sited as to best minimize damage to the balance of his farm.

### **Staff Analysis and Comments**

EFP staff believes the following information from the record provides adequate rationale for approving the requested minor changes to the route permit.

### ***Cedar Mountain Substation to Franklin Substation 115 kV Transmission Line Connection***

EFP staff agrees that the route maps depicting the Cedar Mountain Substation to Franklin Substation 115 kV transmission line connection were inadvertently excluded from the route permit maps. Staff believes that the record was fully developed with regard to the Cedar Mountain Substation to Franklin Substation 115 kV transmission line connection, and that this segment was addressed in the route permit as indicated below.

"For the 115 kV transmission line between Cedar Mountain Substation and Franklin Substation, (1) The Revised Cedar Mountain 115 kV Route as shown on Attachment 7 (appended to the Applicants' Proposed Findings of Fact, Conclusions of Law, and Recommendation, Doc. Id. 20102-47095-01); (2) A route width of 4,225 feet; and (3) Expansion of and modifications to the Franklin Substation to accommodate the new 115 kV transmission line facilities."<sup>1</sup>

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<sup>1</sup> Office of Administrative Hearings, Amendments to Findings of Fact, Conclusions, and Recommendation, Recommendation 2B (as amended), Page 1.

"The route for the Revised Cedar Mountain South 115 kV Route is described as follows: from the Cedar Mountain Substation South Area the Revised Cedar Mountain South 115 kV Route heads west toward the City of Franklin and the Franklin Substation. The route length is approximately 0.8 miles. The southern edge is located 150 feet south of an existing Franklin- Winthrop 69 kV transmission line while the northern edge of the route is approximately 300 feet north of 660th Avenue. The western edge extends approximately 250 feet west of the Wilmarth-Franklin existing 115 kV transmission line at which point the route narrows to approximately 0.5 miles in width (from 4,225 feet) for approximately 0.9 miles. For this 0.5 mile segment, the southern edge of the route follows just south of the existing Wilmarth-Franklin 115 kV transmission line."<sup>2</sup>

"An approximate five-mile 115 kV transmission line will be constructed between the Cedar Mountain Substation and Franklin Substation and expansion of and modifications to the Franklin Substation to accommodate the new 115 kV transmission line facilities."<sup>3</sup>

EFP staff agrees the route permit should be modified to correct the official route maps by adding maps CF1-CF5 that depict the 115 kV line route between Cedar Mountain Substation and Franklin Substation, as provided in the attached proposed Permit Amendment.

#### ***Hampton Substation to Prairie Island – Blue Lake 345 kV Transmission Line Connection***

EFP staff agrees that the depiction of the Hampton Substation to Prairie Island – Blue Lake 345 kV transmission line connection was inadvertently excluded on the official route permit map (map LH22) for the project. Staff believes the record was fully developed with regard to the Hampton Substation to Prairie Island – Blue Lake 345 kV transmission line connection, and that this segment was addressed in the route permit as indicated below.

"A short transmission line connector between the existing Prairie Island – Blue Lake 345 kV line and the new Hampton Substation."<sup>4</sup>

"Routing of a 345 kV power line can be accomplished around a pivot irrigation system, and the existing Prairie Island to Blue Lake 345 kV power line in the Hampton area is located in proximity to several pivot irrigation systems. Standards for accommodating pivot irrigation systems are specifically set forth in the Agricultural Impact Mitigation Plan, and farmers will be compensated for adverse impacts to pivot Irrigation. Any adverse impacts to pivot irrigation will be mitigated."<sup>5</sup>

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<sup>2</sup> Office of Administrative Hearings, Findings of Fact, Conclusions, and Recommendation and Amendments to Findings of Fact, Conclusions, and Recommendation, Finding 525, Page 91.

<sup>3</sup> Route Permit, Condition II.B(4), Page 6.

<sup>4</sup> Office of Administrative Hearings, Findings of Fact, Conclusions, and Recommendation and Amendments to Findings of Fact, Conclusions, and Recommendation, Recommendation 2A(6), Page 3.

<sup>5</sup> Office of Administrative Hearings, Findings of Fact, Conclusions, and Recommendation and Amendments to Findings of Fact, Conclusions, and Recommendation, Finding 451, Page 78.

"The project will include... a short transmission line connector (approximately one-half mile) between the existing Prairie Island – Blue Lake 345 kV line and the new Hampton Substation."<sup>6</sup>

EFP staff agrees that the route permit should be modified to correct the official route permit maps by replacing existing map LH22 with revised map LH22a that depicts the Prairie Island – Blue Lake 345 kV line connection as provided in the attached proposed Permit Amendment.

### ***Hampton Substation***

The description of the Hampton Substation in section II.B.4 of the route permit notes that the fenced and graded area will be approximately five to eight acres; however, this does not constitute the entire amount of land required for the substation or for the project. Substation facilities outside the fenced and graded area generally include an access road, setbacks or buffer areas, and a stormwater management system, with grading and a pond. It is the experience of EFP staff that these additional facilities generally yield a substation area that is double the size of the “fenced and graded” area. A figure (Hampton Substation) similar to the one included with the minor alteration application illustrating these requirements is attached for your information.

Staff believes that the record was fully developed with regard to the Hampton Substation, and that the size and location of the Hampton Substation was addressed in the route permit as indicated below.

"The proposed Hampton Substation North site will be located on the west side of Highway 52 near 215th Street on the north side of 215th Street... The record demonstrates that the Hampton North Substation site would be better located for any route chosen, as it would minimize the distance when connecting to the Prairie Island – Blue Lake 345 kV line."<sup>7</sup>

"The Hampton Substation will be located on the west side of Highway 52 near 215th Street on the north side of 215th Street. The substation fenced and graded area will be approximately five to eight acres. The substation will be designed and constructed with one 345 kV breaker and a half-yard with nine breaker positions and five breakers. The new substation will require line switches, a control house, relay panels, foundations, and steel structures. The substation yard will require graded access roads. The Hampton Substation will be designed to connect with the existing Prairie Island – Blue Lake 345 kV transmission line. The Prairie Island – Blue Lake 345 kV transmission line will be split prior to the connection point, creating two transmission lines."<sup>8</sup>

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<sup>6</sup> Route Permit, Condition II.C, Page 5.

<sup>7</sup> Minnesota Public Utilities Commission, Findings of Fact, Conclusions of Law, and Order Issuing an HVTL Route Permit to Great River Energy and Xcel Energy for a 345 kV Transmission Line from Brookings County, South Dakota to Hampton, Minnesota, Finding 282, Page 3.

<sup>8</sup> Route Permit, Condition II.B(4), Page 4.



EFP staff agrees that the route permit should be modified to correct the official route permit maps by replacing existing map LH22 with revised map LH22a that depicts the correct size and location of the Hampton Substation as provided in the attached proposed Permit Amendment. Staff also agrees that amending the text in the permit with regard to the Hampton Substation would provide a more exact description of the Hampton Substation size and location (see the attached proposed Permit Amendment). Additionally, EFP staff believes these two changes to the permit would alleviate the concerns expressed by Mr. Jerome Warner (the owner of the land in which the Hampton Substation is to be located) by providing more certainty..

### ***Six Conductors Across Interstate 35***

EFP staff agrees with this request, and notes that it is consistent with similar conditions in route permits issued for the Monticello—St. Cloud 345 kV Project, Docket No. ET2/TL-09-246, and the Fargo—St. Cloud 345 kV Project, Docket No. ET2/TL-09-1056. In both route permits Condition K.2 (Special Conditions) states that, "The Permittees are allowed to install six conductors at highway crossings and interchange locations in order to minimize transportation disruption in the event additional lines are authorized along the route." Language similar to this is provided in the attached proposed Permit Amendment.

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EFP staff has reviewed the request for minor alteration and concludes that the permittees have offered reasonable argument to amend the permit for the alterations. The modifications will not result in any additional changes in the human or environmental impacts of the approved route as contained within the record. In addition, the existing route permit includes conditions to ensure the line is constructed in a safe, reliable manner and that impacts are minimized or mitigated.

### **Commission Decision Options**

- A. Approve the permittees requested minor alterations and issue a permit amendment authorizing:
1. The addition of maps CF1-CF5 depicting the 115 kV line route between Cedar Mountain Substation and Franklin Substation to the official map set.
  2. The substitution of map LH22a in place of existing map LH22 to show the Prairie Island—Blue Lake 345 kV line connection and the correct area and location of the Hampton substation.
  3. A revision to the route permit text to clarify that the maximum area required for the new Hampton Substation is 15 acres and that it will be located in the southeast corner of the property directly adjacent to 215th Avenue on the south and State Highway 52 on the east.
  4. An addition to the route permit text allowing the installation of six conductors at the span across Interstate 35 in Dakota County.
- B. Reject the permittees request for a minor alteration.
- C. Make another decision deemed more appropriate.

**EFP Staff Recommendation:** Option A.

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION**

**PERMIT AMENDMENT**

**ROUTE PERMIT FOR CONSTRUCTION OF A HIGH-VOLTAGE  
TRANSMISSION LINE AND ASSOCIATED FACILITIES  
IN**

**LINCOLN, LYON, YELLOW MEDICINE, CHIPPEWA, REDWOOD,  
BROWN, RENVILLE, SIBLEY, LE SUEUR, SCOTT, AND DAKOTA  
COUNTIES**

**ISSUED TO  
GREAT RIVER ENERGY AND  
NORTHERN STATES POWER COMPANY**

**PUC DOCKET No. ET2/TL-08-1474**

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

**GREAT RIVER ENERGY AND NORTHERN STATES POWER COMPANY**

Great River Energy and Northern States Power Company, d/b/a Xcel Energy, are authorized by this permit amendment to construct the interconnections, the Hampton Substation, and the six conductors across Interstate 35 as depicted on the attached official route clarification maps, and in compliance with the amended permit conditions.

Approved and adopted this 29th day of February, 2012

BY ORDER OF THE COMMISSION

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Burl W. Haar,  
Executive Secretary



Permit Section II.B.4 is amended as follows:

1. Hampton Substation

The Hampton Substation will be located in the southeast corner of the property directly adjacent to 215th Avenue on the south and State Highway 52 on the east ~~on the west side of Highway 52 near 215<sup>th</sup> Street on the north side of 215<sup>th</sup> Street.~~ The maximum area required for the substation will be 15 acres including the substation fenced and graded area of ~~will be~~ approximately five to eight acres. The substation will be designed and constructed with one 345 kV breaker and a half-yard with nine breaker positions and five breakers. The new substation will require line switches, a control house, relay panels, foundations, and steel structures. The substation yard will require graded access roads. The Hampton Substation will be designed to connect with the existing Prairie Island – Blue Lake 345 kV transmission line. The Prairie Island – Blue Lake 345 kV transmission line will be split prior to the connection point, creating two transmission lines.

Permit Section IV.J.6 is added as follows:

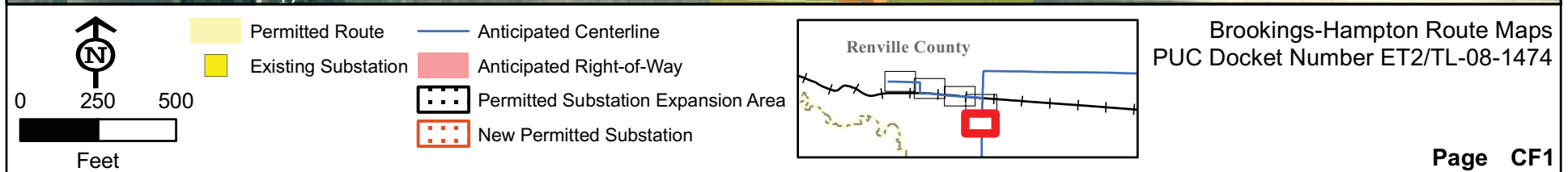
6. Highway Conductor Installation

The Permittees are allowed to install six conductors at the span crossing Interstate 35 in order to minimize transportation disruption in the event additional lines are authorized along the route.

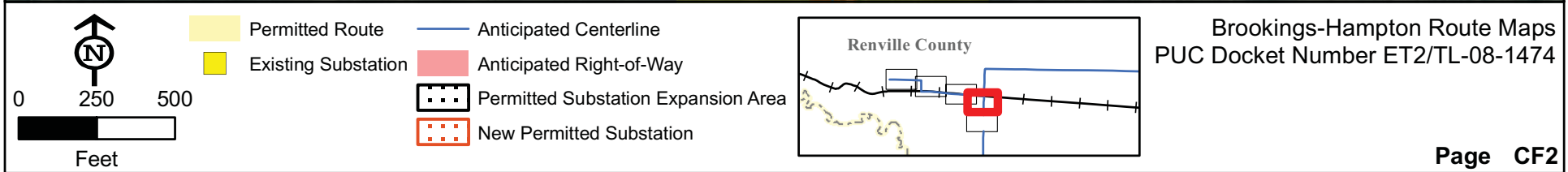
**Attachment A** is amended as follows:

Route segment map LH22 should be replaced with attached route segment map LH22a.

Attached route segment maps CF 1-5 (Cedar Mountain Substation to Franklin Substation) should be added.









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Feet

Permitted Route	Anticipated Centerline
Existing Substation	Anticipated Right-of-Way
Permitted Substation Expansion Area	New Permitted Substation

Renville County

Brookings-Hampton Route Maps  
PUC Docket Number ET2/TL-08-1474

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0 250 500  
Feet

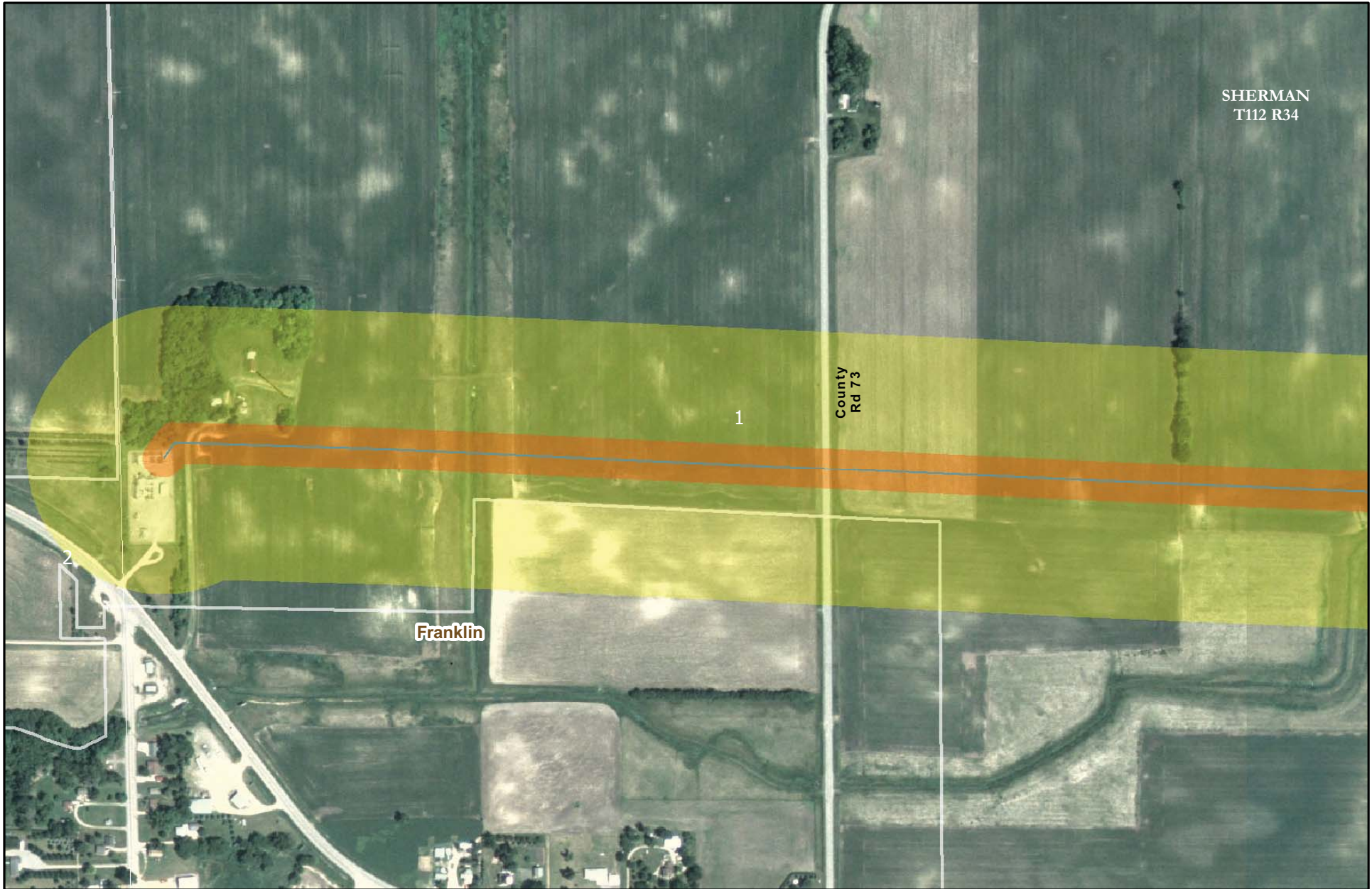
Permitted Route	Anticipated Centerline
Existing Substation	Anticipated Right-of-Way
Permitted Substation Expansion Area	New Permitted Substation

Renville County

Brookings-Hampton Route Maps  
PUC Docket Number ET2/TL-08-1474

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0 250 500  
Feet

	Permitted Route		Anticipated Centerline
	Existing Substation		Anticipated Right-of-Way
	Permitted Substation Expansion Area		New Permitted Substation

Renville County

Brookings-Hampton Route Maps  
PUC Docket Number ET2/TL-08-1474

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