



June 10, 2024

Mr. Steven Kahl  
Director, Public Utilities Division  
North Dakota Public Service Commission  
600 East Boulevard; Department 408  
Bismarck, ND 58505-0480

Re: Basin Electric Power Cooperative  
Case No. PU-11-696 Antelope Valley Station to Naset 345-kV Transmission Line  
Application Amendment

Dear Mr. Kahl:

Enclosed please find an original and seven (7) copies of Basin Electric Power Cooperative's Amendment to the Application for a Consolidated Certificate of Corridor Compatibility and Route Permit for the Antelope Valley Station to Naset 345-kV Transmission Line Project. A USB flash drive containing the application in electronic format and corresponding GIS data and black and white newspaper map has also been included.

For inquiries regarding the application, please contact me at [rking@bepc.com](mailto:rking@bepc.com) or at (701) 557-5558 with copy to Ms. Casey Jacobson, Senior Staff Counsel, at [cjacobson@bepc.com](mailto:cjacobson@bepc.com) or at (701) 557-5413. If preferable, correspondence can be sent to our physical address of 1717 East Interstate Avenue, Bismarck, ND 58503.

Sincerely,

A handwritten signature in black ink, appearing to be "R. King", written over a white background.

Ryan King  
Environmental Coordinator

Enclosures

Cc: Casey Jacobson

1 PU-24-236 Filed 06/10/2024 Pages: 116  
Amendment to the Application for Consolidated Certificate of Corridor  
Compatibility & Route Permit and USB Drive Containing GIS Files  
Basin Electric Power Cooperative  
Ryan King, Environmental Coordinator

**Amendment to the Application to the  
North Dakota Public Service  
Commission for a Consolidated  
Certificate of Corridor Compatibility  
and Route Permit**

**for**

**Basin Electric Power Cooperative's  
Antelope Valley Station to Naset 345-kV  
Transmission Line  
Williams County, North Dakota**

**Case No. PU-11-696**

**Basin Electric Power Cooperative**  
1717 East Interstate Ave.  
Bismarck, North Dakota 58503



**BASIN ELECTRIC  
POWER COOPERATIVE**

A Touchstone Energy® Cooperative



**June 2024**

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## 1.0 INTRODUCTION

On April 23, 2014, the North Dakota Public Service Commission (Commission) adopted the Findings of Fact, Conclusions of Law and Order granting a waiver of procedures and time schedules in issuing Corridor Certificate No. 152 and Route Permit No. 164 to Basin Electric Power Cooperative (Basin Electric). This Corridor Certificate and Route Permit authorizes the construction of approximately 197 miles of 345-kV and 230-kV electric transmission line and associated facilities (Project) by Basin Electric. The Project was built and has been operational since 2016 and extends from the Antelope Valley Station (AVS) near Beulah, North Dakota to the Neset Substation near Tioga, North Dakota. Since the January 2016 Amendment and Corridor/Route revisions, additional facilities are being proposed as part of the Project and include:

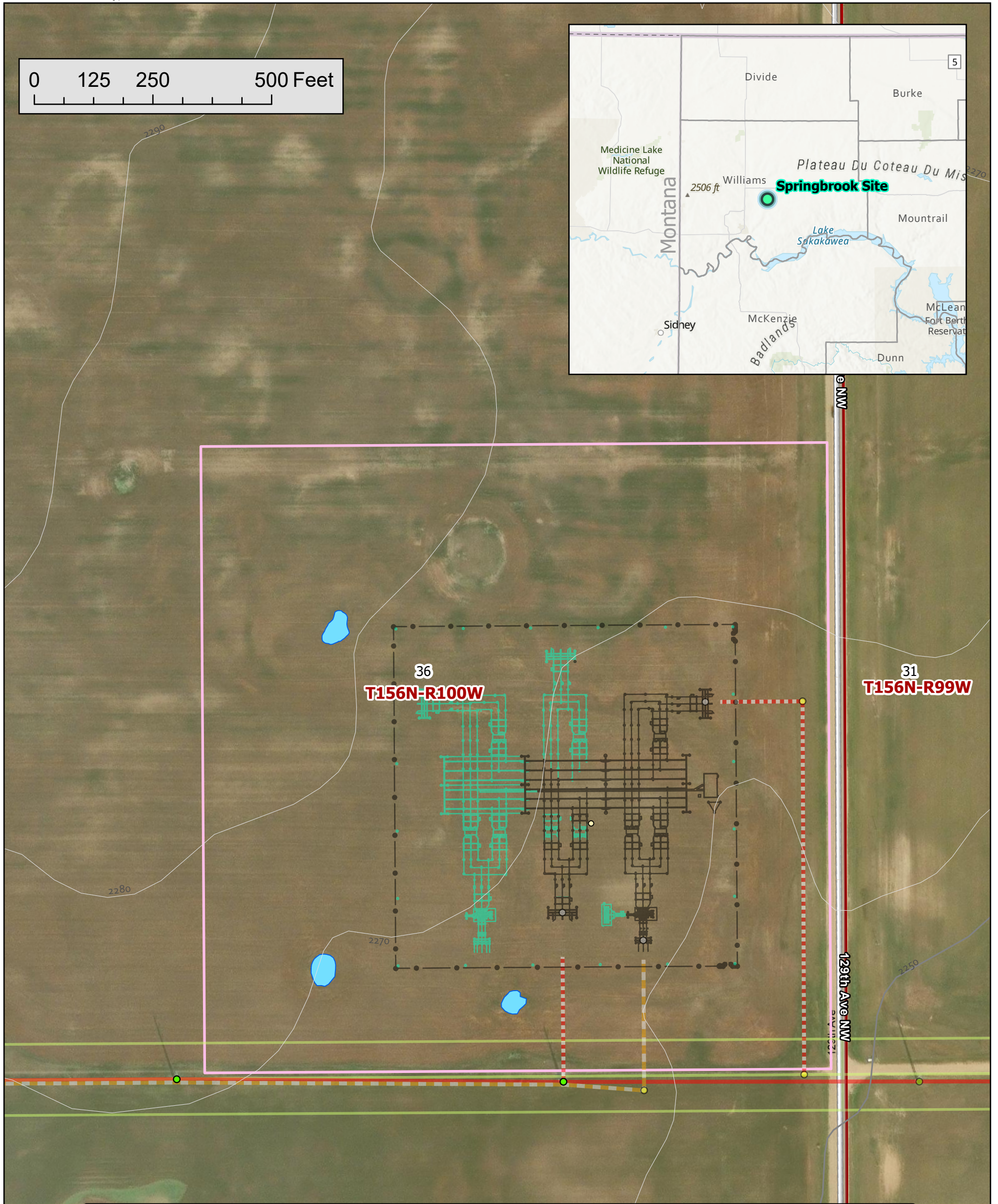
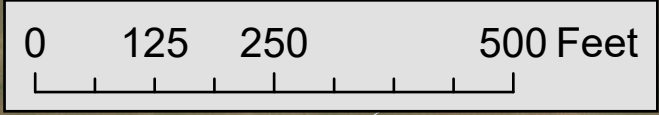
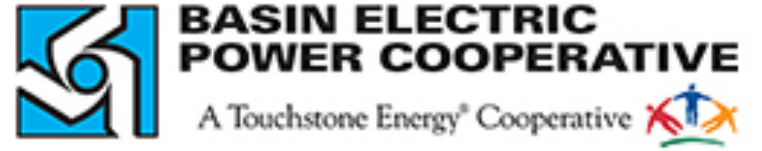
- Construction of a new 345/115-kV load-serving substation near Williston, North Dakota (Springbrook Substation) to serve the system of Basin Electric's member, Mountrail Williams Electric Cooperative (MWEC) (**Figure 1.0-1**).
- Installation of two new 345-kV structures to tie the existing AVS-Neset 345-kV transmission line to the proposed Springbrook Substation (**Figure 1.0-2**).
- Installation of a 115-kV circuit on approximately 6.8 miles of existing 345-kV structures to connect the proposed Springbrook Substation to the existing MWEC East Fork Substation (**Figure 1.0-3**).
- Installation of a 250-foot microwave tower to be located within the proposed Springbrook Substation's fence.

The addition of the proposed Springbrook Substation, additional 345-kV structures, and microwave tower does not significantly alter the information presented in the original application, or any subsequent addendum. One 345-kV structure relocation and the addition of the 115-kV circuit will remain within the existing corridor. The proposed Springbrook Substation, one new 345-kV structure, and the microwave tower would be located outside of the existing corridor. Only the siting criteria information that has changed because of the proposed additions is presented in this amendment. All other sections of the original March 2013 application and the July 2013, July 2014, December 2014, January 2015, and January 2016 Amendments remain in effect. The general structure of this amendment remains the same, with similar chapters and sections.

# Figure 1.0-1: Proposed Additional 345-kV Transmission Line Overview Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



● Existing Structures	— Active 345kV	— Future Equipment	□ Basin
● New Structures	⋯ Proposed 345kV	— Fence Line	□ Townships
○ Take Off Structures	● Structure Locations	■ Wetlands	□ Sections N
— Proposed 115kV	— Station Equipment	□ Right of Way	

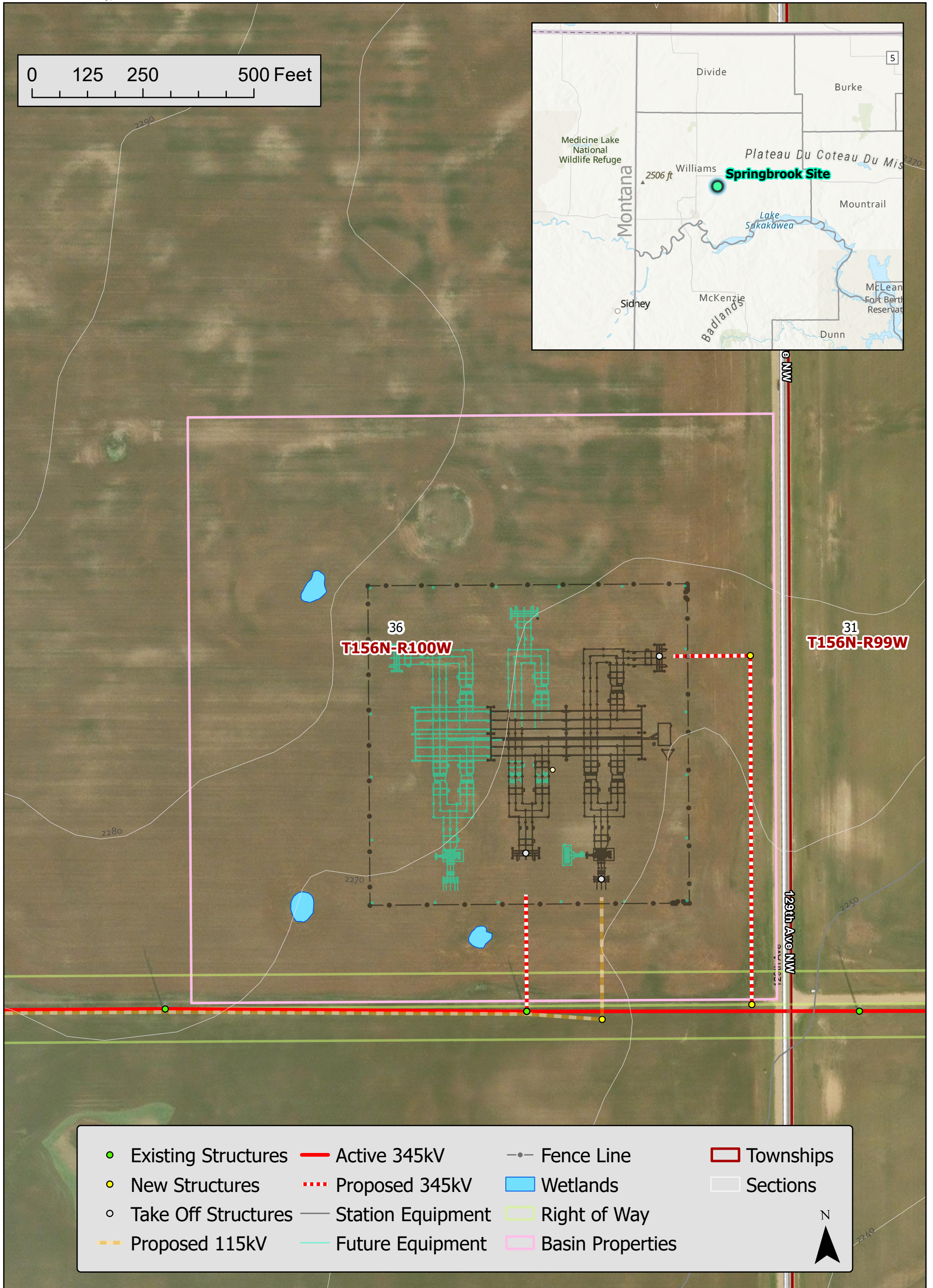
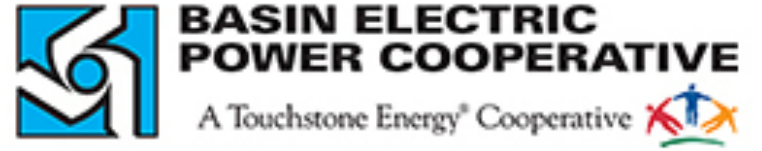
Source: USDA NAIP 2023 Aerials

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# Figure 1.0-2: Proposed Additional 345-kV Transmission Line Overview Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



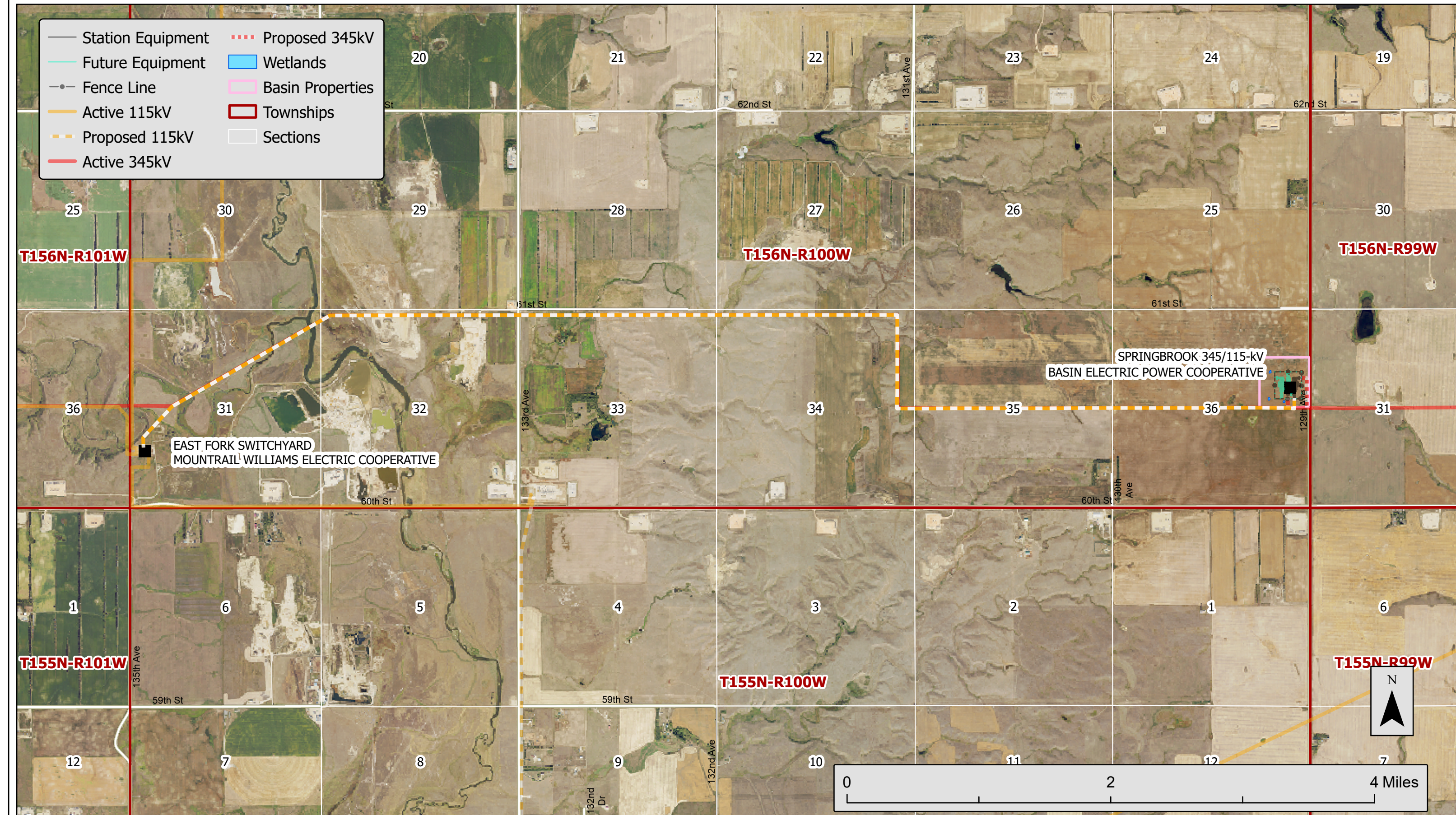
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# Figure 1.0-3: Proposed 115-kV Transmission Line Overview Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



Source: USDA NAIP 2023 Aerials

**1.1 Compliance with the Energy Conversion and Transmission Facility Siting Act**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

**1.1.1 Rural Utilities Service and Western Area Power Administration and U.S. Forest Service Planning Documents**

The Rural Utilities Service (RUS), along with Western Area Power Administration (Western) and U.S. Forest Service (USFS), as cooperating agencies, issued the Final Environmental Impact Statement for the Project in May 2014. USFS and RUS issued their individual Records of Decision (RODs) in September 2014, and Western issued its ROD in November 2014. There are no changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

**1.1.2 Letter of Intent**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

**1.1.3 Certificate of Corridor Compatibility**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower. **Table 1.1-1** below outlines the requirements to fulfill a Certificate and Route Permit application and the application addendum section that addresses the requirement.

**TABLE 1.1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist**

Description	Section(s) Addressed	
<b>NDAC 69-06-05-01 - Transmission Facility Permit</b>		
<b>Subsection 2 - Contents</b>		
a.	A description of the following:	
a. (1)	The type of facility proposed	1.0, 2.1, 4.1, 4.2
a. (2)	Purpose of the facility	1.0, 2.1
a. (3)	The technology to be used	1.0, 4.1, 4.2, 5.6
a. (4)	The type of product to be transmitted	1.0, 4.1, 4.2
a. (5)	The source of the product to be transmitted	1.0, 2.1
a. (6)	The final destination of the transmission line	1.0, 1.2, 2.1, 2.2, 4.1
a. (7)	The proposed size and design and any alternate size or design that was considered, including: (a) The width of right of way (ROW); (b) The approximate length of the facility; (c) The estimated span length for electric facilities; (d) The anticipated type of structure for electric facilities; (e) The voltage for electric facilities; and (f) The requirement for and location of any new associated facilities	1.0, 1.2, 2.2 4.1, 4.2

AVS to Naset 345-kV Transmission Line  
 Certificate of Corridor Compatibility and Route Permit Application Amendment

**TABLE 1.1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist**

Description	Section(s) Addressed
b. The anticipated time schedule for accomplishing major events, including: (1) Obtaining the certification of corridor compatibility; (2) Obtaining the route permit; (3) Completing right-of-way acquisition; (4) Starting construction; (5) Completing construction; (6) Testing operations; and (7) Commencing operations.	1.3
c. A copy of each evaluative study or assessment of the environmental impact of the proposed facility submitted to the agencies listed in section 69-06-01-05 and each response received.	5.0, Appendix C
d. An analysis of the need for the proposed facility based on present and projected demand for the product transmitted, including the most recent system studies supporting the analysis of the need.	1.0, 2.1
e. A description of any feasible alternative methods for serving the need	2.2
f. The width of a corridor must be at least ten percent of its length, but not less than one mile [1.61 kilometers] or greater than six miles [9.66 kilometers] unless another appropriate width is determined by the commission.	1.2
g. A study area that includes a proposed corridor of sufficient width to enable the commission to evaluate the factors addressed in North Dakota Century Code section 49-22-09.	1.2.1
h. A discussion of the factors in North Dakota Century Code section 49-22-09 to aid the commission's evaluation of the proposed route.	8.0
i. A discussion of the applicant's policies and commitments to limit the environmental impact of its facilities, including copies of board resolutions and management directives.	4.2.3.10
j. Identification and map of the criteria that led to the proposed route location within the designated corridor, including exclusion areas, avoidance areas, selection criteria, policy criteria, design construction limitations, and economic considerations.	3.0, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 5.0, Figure 3.1-1
k. A discussion of the relative value of each criteria and how the applicant selected the proposed corridor location, giving consideration to all criteria and how the location, construction, and operation of the facility will affect each criteria.	2.2, 3.1, 3.2, 3.3, 3.4, 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2, 5.6.2, 5.7.2, 5.8.2
l. A discussion of the general mitigative measures that the applicant will take to minimize adverse impacts that result from a route location in the proposed corridor and the construction and operation of the facility.	4.8, 4.9, 4.10, 4.11, 5.1.2, 5.2.2, 5.3.2, 5.4.2, 5.5.2, 5.6.2, 5.7.2, 5.8.2, 5.9.2, 5.10.2, 5.11.2, 5.12.2, 5.13.2
m. Qualifications of each person involved in the corridor location study.	9.0
n. A map identifying the criteria that led to the proposed route location within the designated corridor and the location of any new associated facilities. Several different criteria may be shown on each map depending on the map scale and the density and nature of the criteria.	Figure 1.0-1, Figure 3.1-1, Figure 5.2-1, Figure 5.13-1
o. An eight and one-half-inch by eleven-inch black and white map suitable for newspaper publication depicting the site area	Electronically submitted
p. A discussion of present and future natural resource development in the area	3.1, 3.2, 3.3, 3.4, 3.5, 5.1, 5.5.2, 5.6.2, 5.7.2, 5.8.2, 6.0
q. Map and geographic information systems (GIS) requirements. The applicant shall provide information that is complete, current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the commission.	Electronically submitted
<b>NDAC 69-06-08-02 - Transmission Facility Corridor and Route Criteria</b>	
The following criteria must guide and govern the preparation of the inventory of exclusion and avoidance areas, and the corridor and route suitability evaluation process:	
1. Exclusion Areas	3.1, Figure 3.1-1
2. Avoidance Areas	3.2, Figure 3.1-1
3. Selection Criteria	3.3, Figure 1.0-1, Figure 1.0-2, Figure 1.0-3, Figure 5.13-1
4. Policy Criteria	3.4

AVS to Neset 345-kV Transmission Line  
 Certificate of Corridor Compatibility and Route Permit Application Amendment

**TABLE 1.1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist**

Description	Section(s) Addressed
<b>NDCC 49-22-08 - Application for a certificate - Notice of filing - Amendment - Designation of a site or corridor.</b>	
<b>Section 1 - An application for a certificate must be in such form as the commission may prescribe, containing the following information:</b>	
a. A description of the size and type of facility.	1.0, 4.1, 4.1
b. A summary of any studies which have been made of the environmental impact of the facility.	5.8, 5.12, 5.13 Appendix C
c. A statement explaining the need for the facility.	1.0, 2.1
d. An identification of the location of the preferred site for any electric energy conversion facility	1.0, 2.1, 2.2
e. An identification of the location of the preferred corridor for any electric transmission facility	1.0, 1.2, Figure 1.0-2, Figure 1.0-3
f. A description of the merits and detriments of any location identified and a comprehensive analysis with supporting data showing the reasons why the preferred location is best suited for the facility	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13
g. A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the location, construction, and operation of the proposed facility	5.1.3, 5.2.3, 5.3.3, 5.4.3, 5.5.3, 5.6.3, 5.7.3, 5.8.3, 5.9.3, 5.10.3, 5.11.3, 5.12.3, 5.13.3
h. An evaluation of the proposed site or corridor with regard to the applicable considerations set out in section 49-22-09 and the criteria established pursuant to section 49-22-05.1.	3.1, 3.2
i. Such other information as the applicant may consider relevant or the commission may require.	4.2
<b>NDCC 49-22-08.1 - Application for a permit - Notice of filing - Amendment - Designation of a route.</b>	
<b>Section 1 - An application for a route permit for a transmission facility within a designated corridor shall be filed no later than two years after the issuance of the certificate and shall be in such form as the commission may prescribe, containing the following information:</b>	
a. A description of the type, size and design of the proposed facility.	1.0, 4.1, 4.2
b. A description of the location of the proposed facility.	1.0, 1.2
c. An evaluation of the proposed route with regard to the applicable considerations set out in section 49-22-09 and the criteria established pursuant to section 49-22-05.1.	3.1, 3.2
d. A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the location, construction, and operation of the proposed facility.	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13
e. A description of the right-of-way preparation and construction and reclamation procedures.	4.2.3
f. A statement setting forth the manner in which: (1) The utility will inform affected landowners of easement acquisition, and necessary easement conditions and restrictions. (2) The utility will compensate landowners for easements, without reference to the actual consideration to be paid.	1.5
g. Such other information as the utility may consider relevant or the commission may require.	3.0
<b>NDCC 49-22-09 - Factors to be considered in evaluating applications and designation of sites, corridors, and routes.</b>	
<b>Section 1 - The commission shall be guided by, but is not limited to, the following considerations, where applicable, to aid the evaluation and designation of sites, corridors, and routes:</b>	
a. Available research and investigations relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources, and the environment.	5.0, Appendix C
b. The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects.	4.2.3.10
c. The potential for beneficial uses of waste energy from a proposed energy conversion facility.	N/A
d. Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated.	5.0
e. Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects.	To be determined

**TABLE 1.1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist**

Description		Section(s) Addressed
f.	Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated.	3.5, 5.8, 5.12, 5.15
g.	The direct and indirect economic impacts of the proposed facility.	3.6
h.	Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site, corridor, or route.	3.0, 5.2, 6.0
i.	The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.	3.1, 3.2, 5.8, Appendix B
j.	The effect of the proposed site or route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species.	3.1, 5.13, Appendix E
k.	Problems raised by federal agencies, other state agencies, and local entities.	6.0

## 1.2 Project Summary

No changes to this section other than the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

The addition includes one 345/115-kV load-serving substation (Springbrook Substation) to tie MVEC’s 115-kV system to the AVS to Neset 345-kV transmission line. The proposed Springbrook Substation would be adjacent to the existing AVS to Neset transmission line, northeast of the City of Williston in Section 36, Township 156N, Range 100W, Williams County, North Dakota. Basin Electric has land rights thru an Option to Purchase the entire 40.06-acre parcel on which the substation site would be located. The proposed substation would occupy approximately 11.9 acres within the site’s fenced area; graded and bermed areas around the site will occupy 6.92 acres. Two additional 345-kV structures will also be located within the Basin Electric owned parcel and would occupy less than 0.01 acres. The 115-kV circuit runs in an east to west direction and is approximately 6.8 miles long, connecting the proposed Springbrook substation to MVEC’s East Fork Substation. The 115-kV circuit would not occupy any additional area as the circuit would be installed on the existing 345-kV double-circuit structures. The microwave tower will be installed within the proposed substation fence. The additions are entirely within Williams County, North Dakota (see **Figure 1.0-1** through **Figure 1.0-3**). **Table 1.2-1** below shows the Township, Range, and Sections each proposed Project addition encompasses.

**Table 1.2-1: Project Additions Route and Corridor Public Legal Descriptions**

Project Addition	County	Township	Range	Sections
Springbrook Substation	Williams	156N	100W	36
345-kV Structure Additions		156N	100W	36
115-kV Circuit Addition		156N	100W	31, 32, 33, 34, 35, 36
Microwave Tower		156N	100W	36

### 1.2.1 Study Area, Project Corridor, and Route Development Summary

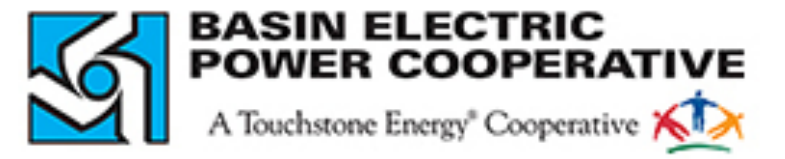
No changes to the original study area or project corridor. The study area for the Project additions was the entire 40.06-acre Basin Electric owned parcel. **Figure 1.2-1** is updated to include the proposed additions.

### 1.2.2 Product

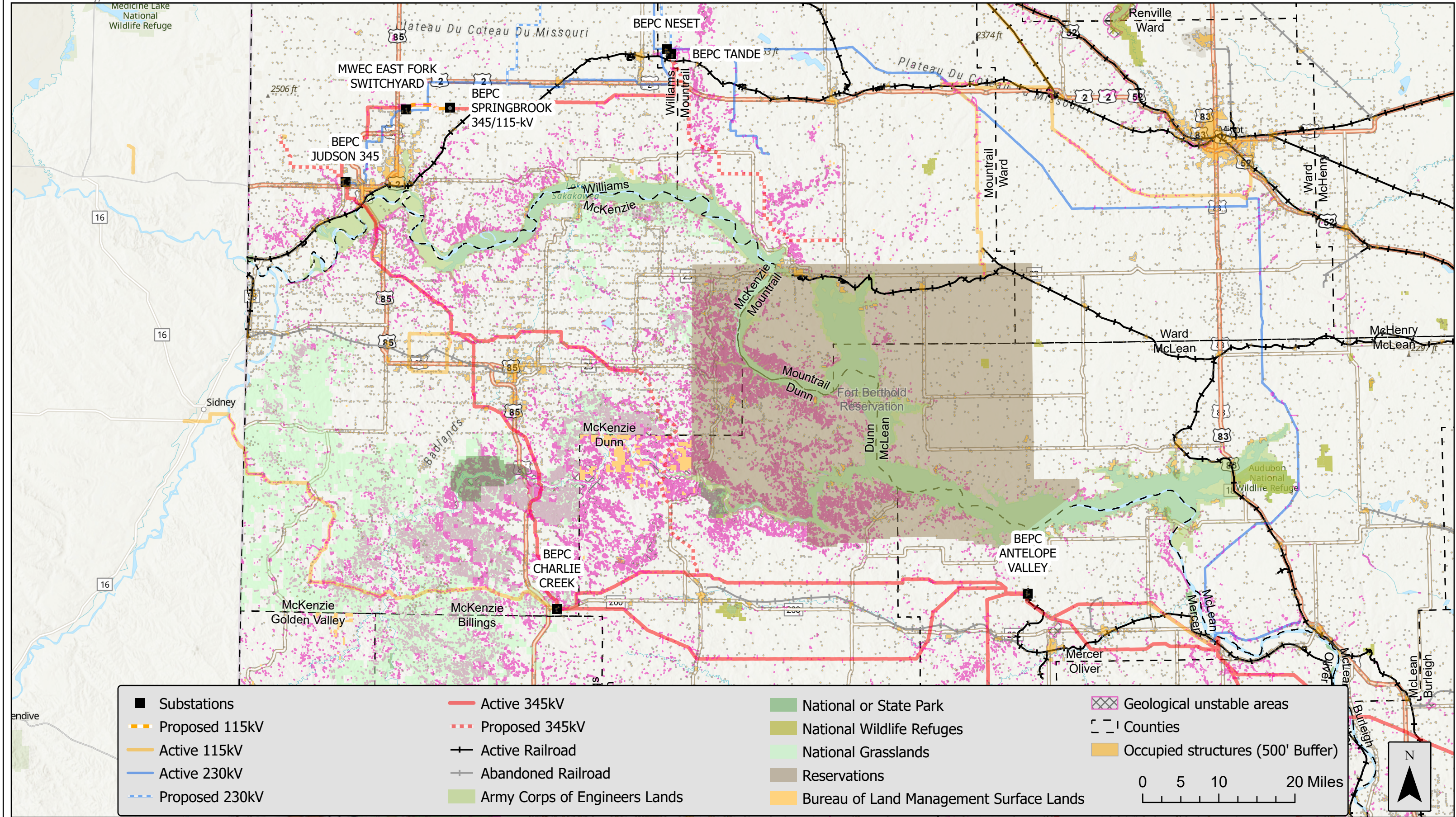
No changes from the addition of the Springbrook Substation, associated transmission lines, and microwave tower.

# Figure 1.2-1: Overall Proposed Project Area and Proposed Corridor/Route

## Antelope Valley Station to Naset 345-kV Transmission Project



Basin Electric Power Cooperative  
Williams County, North Dakota



■ Substations	— Active 345kV	■ National or State Park	⊠ Geological unstable areas
— Proposed 115kV	- - - Proposed 345kV	■ National Wildlife Refuges	□ Counties
— Active 115kV	— Active Railroad	■ National Grasslands	■ Occupied structures (500' Buffer)
— Active 230kV	- - - Abandoned Railroad	■ Reservations	
- - - Proposed 230kV	■ Army Corps of Engineers Lands	■ Bureau of Land Management Surface Lands	

0 5 10 20 Miles



**1.3 Project Schedule**

Basin Electric will commence construction of the proposed additions in July 2024, pending permit approvals. Construction is anticipated to be completed September 2025, with reclamation extending into 2026. An overview of the Project addition construction schedule is provided in **Table 1.3-1**.

**Table 1.3-1: Project Addition Construction Schedule**

Corridor Certificate/Route Permit Issued	April 2014
Corridor Certificate/Route Permit Amendment Application for the Springbrook Substation and Associated Transmission Lines	June 2024
Corridor Certificate/Route Permit Amendment for the Springbrook Substation and Associated Transmission Lines Approved	Anticipated July 2024
Property Acquisition Complete	June 2024
Overall Project Addition Start Date	July 2024
Substation Construction Start Date	July 2024
345-kV Structure Addition/Relocations Start Date	March 2025
115-kV Circuit Addition Start Date	March 2025
Microwave Tower Start Date	May 2025
Construction Completion	August 2025
Test Operations	August 2025
In-Service Date	September 2025

**1.4 Future Associated Facilities**

Basin Electric currently has no planned future associated facilities for this Project.

**1.5 Easement Acquisition**

Basin Electric has secured an Option to Purchase the 40.06-acre parcel in which the substation, additional 345-kV structures, and microwave tower are proposed to be located. The 115-kV circuit will occupy the existing corridor and no further easement acquisition is necessary. Current landowners will be notified prior to work commencing on the 115-KV circuit.

## **2.0 NEED FOR FACILITY**

### **2.1 Need Analysis**

An additional substation, associated transmission lines, and microwave tower have been added to the Project, as indicated in this addendum. In July 2022, Basin Electric received a Notice to Construct (NTC – 210675) from Southwest Power Pool (SPP) for an Approved Reliability Network Upgrade project to construct a new 345/115-kV substation (**Appendix A**). The upgrade was selected as part of the 2021 SPP Interregional Transmission Planning (ITP) Assessment to include a new 115-kV delivery point from the existing 345-kV system to support regional reliability and growing electric demand. The microwave tower is needed in order to provide communications to the Springbrook Substation critical to the reliability of the bulk electric system. The addition of the substation, transmission lines and microwave tower are a minor change in the overall Project Corridor/Route.

### **2.2 Alternatives**

The previous alternatives for the overall Project remain unchanged. Alternate locations were discussed for the proposed substation but would have required additional 345-kV and 115-kV transmission lines to accommodate the interconnection.

#### **2.2.1 System Upgrades**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **2.2.2 Additional 115-kV Transmission Lines**

Approximately 6.8 miles of 115-kV transmission circuit is part of the proposed Project addition. This 115-kV circuit would connect the proposed Springbrook Substation to the existing MVEC East Fork substation and would be installed on existing 345/115-kV double-circuit structures.

#### **2.2.3 Additional 345-kV Transmission Lines**

To connect the proposed Springbrook Substation to the existing 345-kV transmission line, one additional structure will be constructed approximately 705 feet north of the existing corridor. A second new structure will be installed within the existing 345kV corridor, approximately 33 feet north of the current transmission centerline.

#### **2.2.4 No Action Alternative**

A no action alternative would leave the region constrained by limited transmission capacity. The no action alternative does not meet the commercial needs of Basin Electric and does not serve the load growth in the area and public at-large. For these reasons, Basin Electric rejected the no action alternative.

#### **2.2.5 Recommended System Alternatives**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **2.3 New Generation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **2.4 Ten-Year Plan**

Basin Electric filed a Ten-Year Plan with the Commission in July 2022. This Project addition is consistent with the Ten-Year Plan on file with the Commission.

### 3.0 TRANSMISSION FACILITY CORRIDOR AND ROUTE CRITERIA

The Project Corridor is based on landowner participation, field surveys, known environmentally sensitive areas, review of Williams County and state requirements, and communications with local, state, and federal agencies. North Dakota has several site selection criteria that are considered by the Commission to determine suitability of the proposed Project additions. Basin Electric has reviewed the criteria in NDAC Chapter 69-06-08-02 and has considered these criteria in Project design. These criteria are discussed in this section.

#### 3.1 Exclusion Areas

In accordance with NDAC Section 69-06-08-02(1), which implements North Dakota Century Code (NDCC) Section 49-22-05.1, the geographical areas listed in **Table 3.1-1** below must be excluded in the consideration of a transmission facility route. Exclusion and avoidance areas may be located within a corridor, but at no given point can such an area or areas encompass more than 50 percent of the corridor width unless there is no reasonable alternative. NDAC Section 69-06-08-02 further specifies that a buffer zone of a reasonable width to protect the integrity of the area must be included. Natural screening may be considered in determining the width of the buffer zone. Exclusion areas are mapped for the Project Corridor/Route and revisions in Volume II of the original application and in each subsequent addendum. **Figure 3.1-1** depicts the results of review for exclusion areas with the Project addition areas only.

**TABLE 3.1-1: Exclusion Areas**

Exclusion Area	Present in Corridor/Route	Proposed Buffer	Section Addressed
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; monuments; and wilderness areas.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	NA
Designated or registered state: parks; historic sites; monuments; historical markers; archaeological sites; and nature preserves.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	NA
County parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions.	Not present within Corridor/Route. The closest County Park or recreational area is the Epping/Springbrook Dam which is located approximately 3.5 miles southeast of Springbrook Substation.	No impacts are anticipated and no buffer is proposed.	5.9
Areas critical to the life stages of threatened or endangered animal or plant species.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.13
Areas where animal or plant species that are unique or rare to this state will be irreversibly damaged.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.13
Areas within 1,200 feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	Not present within Corridor/Route. The closest ICBM launch or launch control facility is approximately 40 miles from the Project.	No impacts are anticipated and no buffer is proposed.	6.0
Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference.	Not present within Corridor/Route. The closest ICBM launch or launch control facility is approximately 40 miles from the Project.	No impacts are anticipated and no buffer is proposed.	6.0

### 3.2 Avoidance Areas

In accordance with NDAC Section 69-06-08-02(2), approval of a transmission facility cannot be in the geographical areas listed in **Table 3.2-1** below unless the applicant shows that, under the circumstances, there is no reasonable alternative. NDAC Section 69-06-08-02(2) further requires a buffer zone of a reasonable width to protect the integrity of the area. Natural screening may be considered in determining the width of the buffer zone. **Figure 3.1-1** depicts the results of review for avoidance areas with the Project addition areas only.

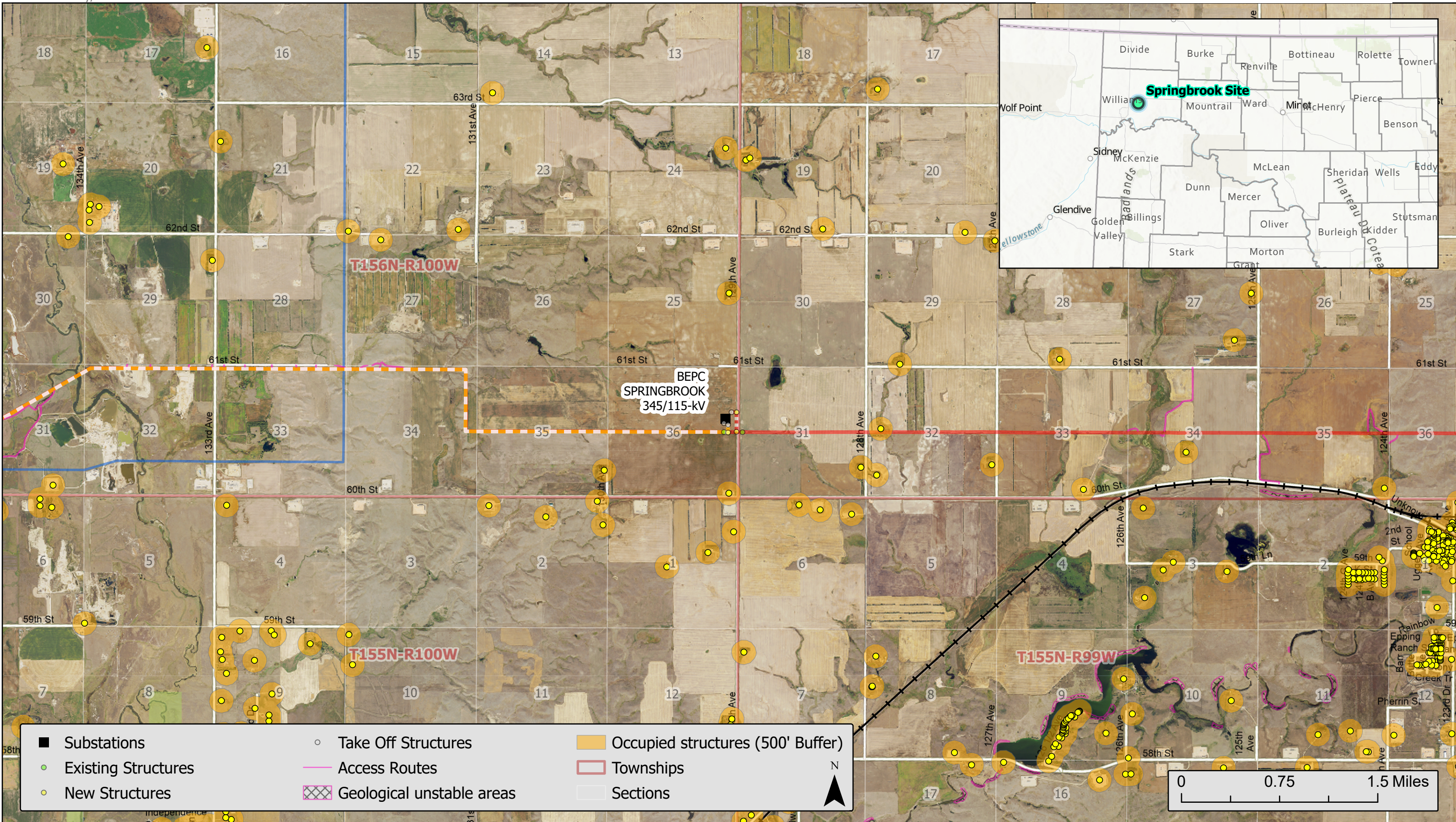
**TABLE 3.2-1: Avoidance Areas**

Avoidance Areas	Present in Corridor/Route	Proposed Buffer	Section Addressed
Designated or registered national: historic districts; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.9, 5.13
Designated or registered state: wild, scenic, or recreational rivers; game refuges; game management areas; management areas; forests; forest management lands; and grasslands.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.9, 5.13
Historical resources which are not specifically designated as exclusion or avoidance areas.	As identified through a Class I Literature Review and the Class III Cultural Resources Inventory conducted to-date, no historic sites were found within the study area	No impacts are anticipated and no buffer is proposed.	5.8
Areas which are geologically unstable.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.11, Figure 3.1-1
Within 500 feet of a residence, school, or place of business.	No residence, school or place of business is located within 500 feet of the Project Corridor.	No impacts are anticipated and no buffer is proposed.	5.7, Figure 3.1-1
Reservoirs and municipal water supplies.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.12
Water sources for organized rural water districts.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.12
Irrigated land.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.12
Areas of recreational significance which are not designated as exclusion areas.	Not present within Corridor/Route.	No impacts are anticipated and no buffer is proposed.	5.9

# Figure 3.1-1: Exclusion and Avoidance Areas Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



Source: USDA NAIP 2023 Aerials

**3.3 Selection Criteria**

In accordance with NDAC Section 69-06-08-02(3), a site can be approved in an area only when the applicant demonstrates to the Commission that any significant adverse effects resulting from the location, construction, and operation of the facility in that area, as they relate to the criteria listed in **Table 3.3-1** below, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum.

**TABLE 3.3-1: Selection Criteria**

Selection Criteria	Potential Effects	Section Addressed
The impact upon agriculture:		
Agricultural production.	Negligible/minimal effect anticipated. Where practical, construction activities will be scheduled during periods when agricultural activities will be minimally affected, or the landowner will be compensated accordingly. Landowners would be compensated for crop and forage loss that occurs as a result of construction and maintenance activities, and damage to soils would be redressed.	5.2, 5.10
Family farms and ranches.	Negligible/minimal effect anticipated. Substations and transmission lines are a compatible use with existing family farms and ranches, and the Project will not displace any farms or ranches.	5.2, 5.7, 5.10
Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation.	There is no known irrigation within the Study Area, thus, no effects are anticipated. Participating landowners have not expressed concerns related to economically suitable irrigation on their land.	NA
Surface drainage patterns and ground water flow patterns.	No impacts to surface drainage patterns or groundwater flow patterns are anticipated. The Project will be designed in such a manner that runoff from the upper portions of the watershed can flow unrestricted to the lower portion of the watershed.	5.12
The impact upon:		
Sound-sensitive land uses.	Negligible/minimal effect anticipated. Following construction, there will be a minimal amount of sound from the Project.	5.6
The visual effect on the adjacent area.	Negligible/minimal effect anticipated. The Project will be visible to landowners and travelers along roadways. Existing transmission lines, oil and gas well pads, and roads are present in the viewshed.	5.7
Extractive and storage resources.	The Project would not directly affect any wells or drill rigs, because the Corridor/Route has been designed to avoid these areas and provide sufficient clearance for well maintenance and operation.	NA
Wetlands, woodlands, and wooded areas.	Negligible/minimal effect anticipated. The Project addition will impact one, 0.06-acre wetland. Impacts to wetlands and waterbodies impacted during construction will be permitted under Nationwide Permit 57. No trees or shrubs are anticipated to be removed.	5.13
Radio and television reception, and other communication or electronic control facilities.	No effect anticipated.	5.3
Human health and safety.	No effect anticipated based on compliance with sound standards and design and construction standards to meet or exceed the National Electrical Safety Code. Regular maintenance and inspections will be performed during the life of the Project to confirm its continued integrity.	5.4
Animal health and safety.	No effect anticipated. Construction work will be coordinated with landowners to avoid impacts to livestock.	5.13
Plant life.	Negligible/minimal effect anticipated. The transmission line structures will result in less than one acre of permanent ground disturbance, including loss of the existing plant life. Trees and shrubs will be replaced consistent with the Commission's Tree and Shrub Mitigation Specifications. Temporarily disturbed areas will be restored as practicable.	5.2

**3.4 Policy Criteria**

In accordance with NDAC Section 69-06-08-02(4), the Commission may give preference to an applicant who will maximize benefits that result from the adoption of the policies and practices

listed in **Table 3.4-1** below and may require the adoption of such policies and practices as appropriate.

**TABLE 3.4-1: Policy Criteria**

Policy Criteria	Potential Benefits	Section Addressed
Location and design.	The location is based on landowner participation, field surveys, known environmentally sensitive areas, and state transmission line requirements. Project design will meet the requirements of the National Electrical Safety Code for the Heavy Loading District, Basin Electric, U.S. Department of Agriculture (USDA) Rural Utilities Service (RUS) design criteria, and other applicable local or national building codes.	1.0, 1.1, 2.1, 3.1, 3.2, 3.3, 3.4
Training and use of available labor in this state for the general and specialized skills required.	Basin Electric has used several local firms in developing the Project and compiling this application and will continue to use local labor to the extent practicable.	4.2
Economies of construction and operation.	Basin Electric will use local contractors to the extent practicable.	4.2
Use of citizen coordinating committees.	Not applicable.	NA
A commitment of a portion of the transmitted product for use in this state.	The Project will meet the need for additional electric transmission capacity in northwestern North Dakota as a result of increased load growth and will meet reliability and system stability requirements for the region.	1.0, 2.1
Labor relations.	No labor relations would be negatively affected by the Project.	NA
The coordination of facilities.	Existing facilities were considered in the location of the Project. Basin Electric will avoid impacts to existing infrastructure.	1.2, 2.2
Monitoring of impacts.	Basin Electric and the contractor will employ Best Management Practices during construction to monitor soil impacts and segregate topsoil. A stormwater pollution prevention plan will be prepared for the Project.	4.2, 5.10
Use of existing and proposed rights of way and corridors	Basin Electric has routed the Project parallel to existing roadways and section lines to the extent practicable and in consideration of preferences from landowners crossed by the Project.	Figure 1.0-1, Figure 1.0-2, Figure 1.0-3
Other existing or proposed transmission facilities.	Basin Electric has paralleled the Project with existing utility corridors as practicable.	Figure 1.0-1, Figure 1.0-2, Figure 1.0-3

**3.5 Design and Construction Limitations**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

**3.6 Economic Considerations**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## 4.0 DESIGN AND CONSTRUCTION

### 4.1 General Corridor/Route Description

The general Corridor/Route description remains essentially the same as presented in the original application and subsequent amendments. The only change includes the addition of the Springbrook Substation, associated transmission lines, and microwave tower, addressed in this amendment. The proposed Springbrook Substation is located in Williams County, North Dakota, approximately 10 miles northeast of Williston, in Section 36 of Township 156N, Range 100W. The proposed substation will be approximately 155 feet north of the existing AVS to Neseet transmission corridor and will extend approximately 720 feet to the north. One additional 345-kV structure will be approximately 710 feet north of the existing corridor and one additional 345-kV structure will be approximately 33 feet north of the existing transmission centerline, within the existing corridor. Approximately 6.8 miles of 115-kV circuit will be installed on existing AVS to Neseet 345-kV structures, connecting the proposed Springbrook substation to MWEC's East Fork substation (**Figure 1.0-1** through **Figure 1.0-3**).

### 4.2 Description of Proposed Facilities

Basin Electric is proposing to construct a new 345/115-kV substation, approximately 1,560 feet of new 345-kV transmission line, and 6.8 miles of new 115-kV transmission line. A 250-foot-tall microwave tower will be installed within the proposed substation fence.

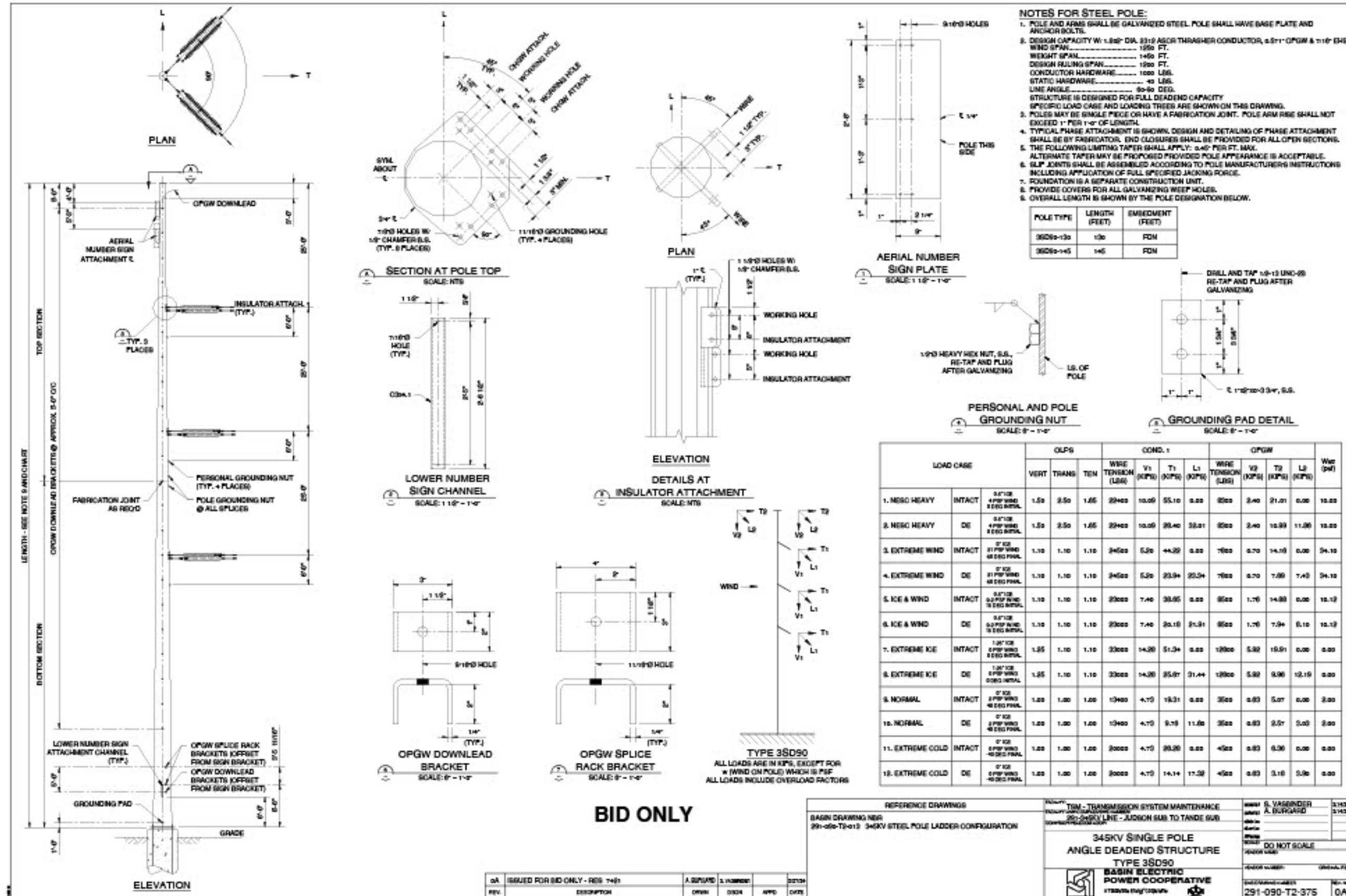
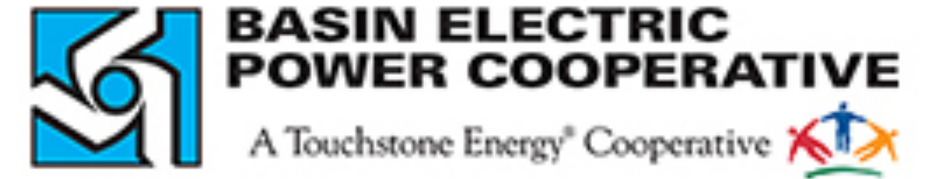
#### 4.2.1 Transmission Line Characteristics

To complete the substation construction, two additional 345-kV structures will be installed to tie the existing AVS to Neseet transmission line into the proposed Springbrook Substation. One structure is located approximately 710' feet outside of the existing corridor on Basin Electric property, and the other is within the existing 345kV corridor with Basin Electric property. The structures will be a single pole, self-supporting on drilled pier concrete foundations. **Figure 4.2-1** shows a typical single pole, self-supporting structure design.

Approximately 6.8 miles of 115-kV transmission circuit will be added to the existing AVS to Neseet 345-kV structures to connect the proposed Springbrook Substation to MWEC's existing East Fork substation. This addition will be accomplished by adding the 115-kV circuit to 37 existing structures. **Figure 4.2-2** shows how the 115-kV transmission circuit will be added to the existing 345-kV structures.

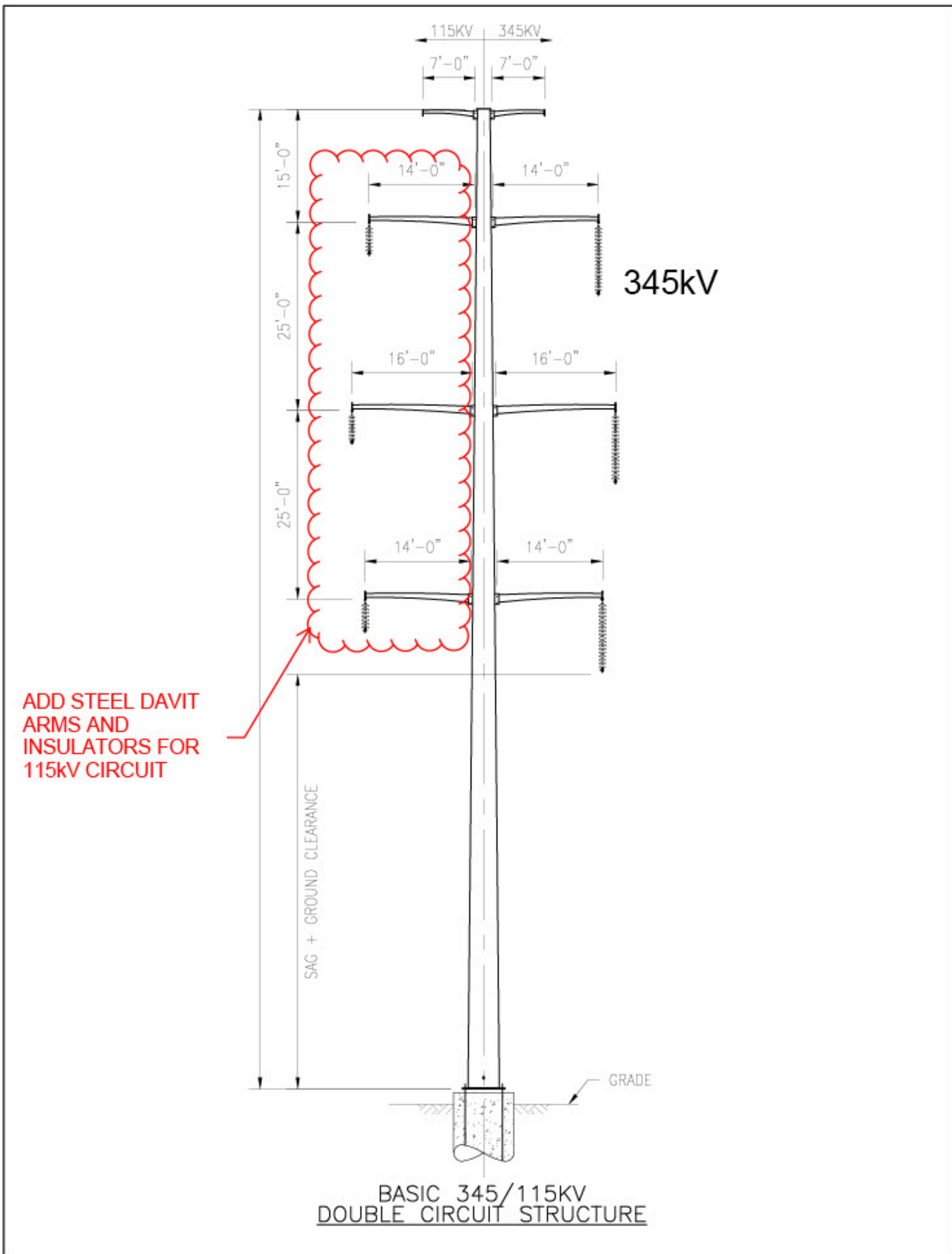
# Figure 4.2-1: Proposed 345-kV Structure Design

Antelope Valley Station to Naset 345-kV Transmission Project



# Figure 4.2-2: Proposed 345/115-kV Double Circuit Structure Design

Antelope Valley Station to Naset 345-kV Transmission Project



## 4.2.2 Associated Facilities and Project Components

The proposed addition to the Project would require the addition of the following associated facility and Project components:

- **Springbrook 345-kV Substation.** The proposed 345/115-kV Springbrook Substation, near Williston, ND, would be approximately 11.9 acres in size, and the two access roads would occupy 0.48 acres on the 40.06-acre parcel. The substation would require the installation of a 345/115-kV transformer, and the necessary bus, circuit breakers, disconnect switches, grounding switches, and protection and control equipment to support the 345-kV interconnection.
- **Microwave Tower.** A 250-foot tall, self-supporting lattice microwave tower will be installed within the proposed substation fence.

## 4.2.3 Construction Techniques

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.1 Pre-Construction Activities

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.2 Transmission Structure Site Preparation

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.3 Structure Assembly and Erection

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.4 Stringing and Tensioning of Conductors

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.5 Structure Site Access and Traffic

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.6 Substation Construction Procedures

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### 4.2.3.7 Transmission Line Maintenance and Operation

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **4.2.3.8 Substation Maintenance**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **4.2.3.9 Construction Schedule and Projected Workforce**

The Project addition construction is estimated to be completed within a 14-month timeframe. Pending obtaining all necessary approvals, substation construction would start in July 2024, 345-kV structure additions would start in March 2025, 115-kV circuit addition would start in March 2025, and the microwave tower construction would start in May 2025, with an estimated in-service date for all Project additions of September 2025. The workforce is anticipated to range from 8 to 15 employees, depending on the stage of construction.

#### **4.2.3.10 Procedures for Minimizing Environmental Impact During Construction**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **4.2.3.11 ROW and Property Issues**

Basin Electric will soon acquire ownership of the 40.06-acre parcel of land in which the substation, additional 345-kV structure, and microwave tower would be constructed on.

#### **4.2.3.12 Reclamation**

Following construction, all disturbed areas will be graded and/or re-sloped to pre-construction conditions to minimize erosion and visual alteration. Cultivated land will be tilled and returned to production. Ruts and scars from overland travel will be leveled to break up compacted soils and aid in returning areas to original contours.

## **5.0 ENVIRONMENTAL ANALYSIS**

This amendment addresses only the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower to the Project. As previously discussed, no other changes to the Project are proposed at this time. As a result, the type of resources and associated impacts are similar to those presented in the original application and each subsequent amendment. For each resource, a general description is provided, followed by a discussion of potential impacts and potential mitigation measures. However, this section presents information on only those resources for which a material change resulted in the type or quantify of an affected resource as a result of the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

The description of resources subsections describe the resources and environmental settings found in the vicinity of the Project additions. The overall Corridor/Route extends through Mercer, Dunn, McKenzie, Williams, and Mountrail Counties in North Dakota. However, the proposed substation, associated transmission lines, and microwave tower are confined to a small area within Williams County.

The area within the proposed substation fence is 11.9 acres, the two access roads total 0.48 acres, and the two additional 345-kV structures will occupy less than 0.01 acres. An additional 6.92 acres outside of the fenced substation site will be impacted by site grading and berms, totaling 19.3 acres of permanent impact. The impact discussion subsections describe the potential effects on each resource from the Project additions. For many of the resources discussed, such as vegetation and soils, permanent impacts will be limited to the Project additions area within Basin Electric property. For other resources such as wildlife, recreation, and visibility, impacts may extend outside this footprint.

The mitigation discussion subsections provide potential measures to reduce or eliminate anticipated adverse impacts identified. Standard mitigation measures have been incorporated into the development and construction of the proposed Project. These mitigation measures are designed to reduce or eliminate anticipated impacts resulting from the construction or operation of the proposed Project. They include Best Management Practices (BMPs), such as the use of silt fencing and other erosion-control measures. These standard mitigation measures are included in Appendix I, Standard Mitigation Measures of the original application.

### **5.1 Demographics**

#### **5.1.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.1.2 Impacts**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.1.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.2 Land Use**

### **5.2.1 Description of Resources**

#### **Existing Land Use**

The existing land use within the proposed substation, access roads, and new transmission corridor is cropland.

#### **Zoning**

A Condition Use Permit for the proposed Springbrook Substation is required for Williams County. Transmission lines are a permitted use in Williams County and do not require permitting. A Conditional Use Permit for the microwave tower has been applied for and approval is expected in July 2024.

### **5.2.2 Impacts**

#### **Existing Land Use**

Construction of the Springbrook Substation, access roads, associated transmission lines, and microwave tower would result in the permanent conversion of approximately 19.3 acres from cropland to utility use. **Figure 5.2-1** displays existing land use surrounding the proposed substation.

#### **Zoning**

A Condition Use Permit for the Springbrook Substation has been obtained from Williams County. Approval for the microwave tower Conditional Use Permit is expected in July 2024.

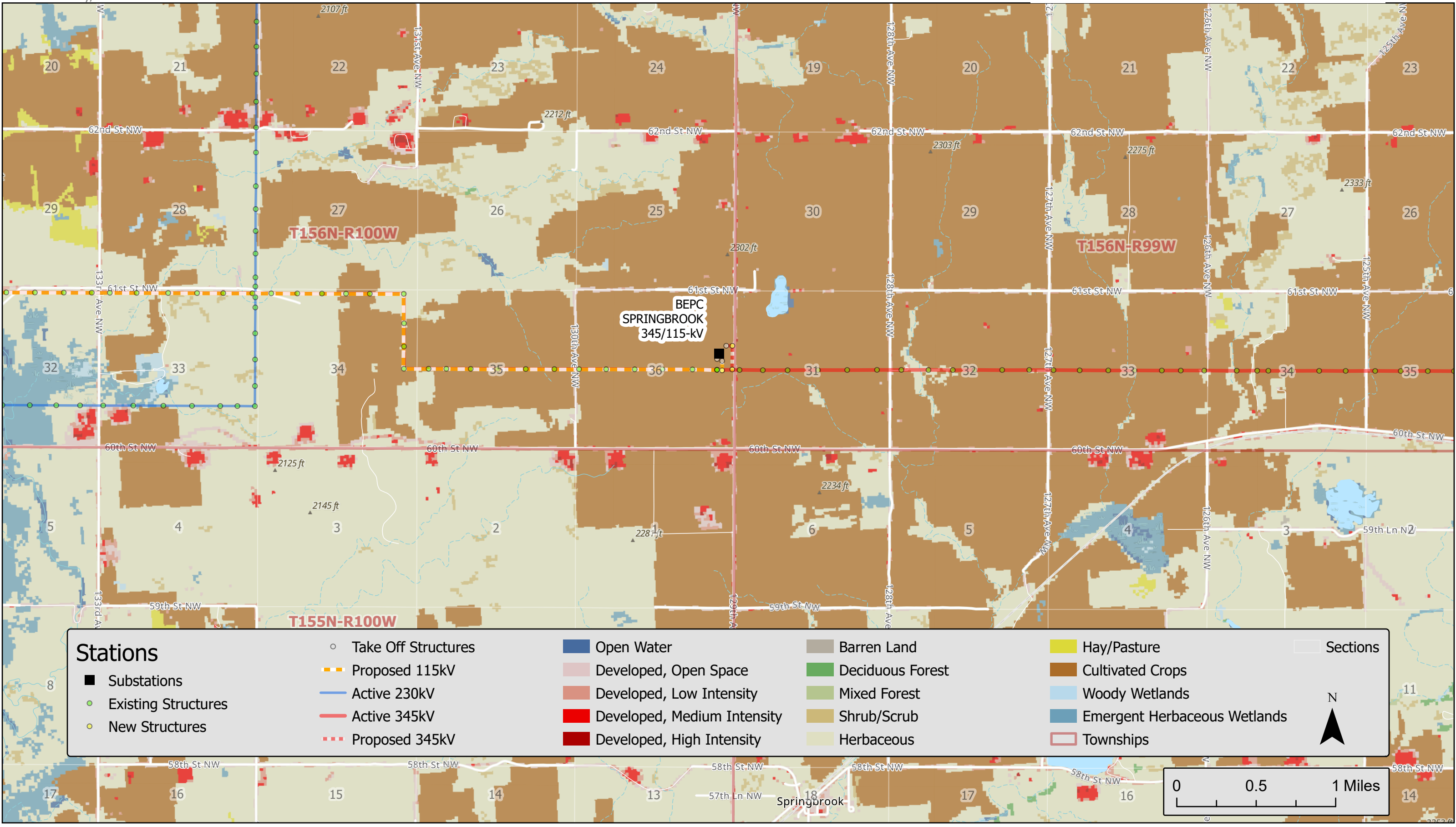
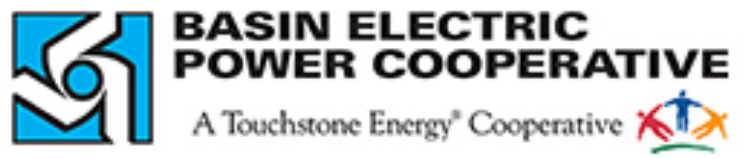
### **5.2.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

# Figure 5.2-1: Existing Land Use Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



### Stations

- Substations
- Existing Structures
- New Structures

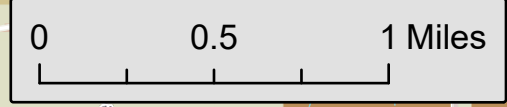
- Take Off Structures
- Proposed 115kV
- Active 230kV
- Active 345kV
- Proposed 345kV

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity

- Barren Land
- Deciduous Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceous

- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands
- Townships

Sections



### **5.3 Infrastructure/Transportation**

#### **5.3.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.3.2 Impacts**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.3.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.4 Public Health and Safety**

#### **5.4.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.4.2 Impacts**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.4.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.5 Air Quality**

#### **5.5.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

#### **5.5.2 Impacts**

As a result of the addition of the Springbrook Substation and associated transmission lines to the Project, additional air emissions would be emitted from construction vehicles and equipment used in the substation construction process. These vehicles and equipment would emit additional hydrocarbons, particulate matter, and carbon dioxide. Air emissions from construction are expected to be minimal and short-term, as these activities are temporary and would involve limited equipment.

### **5.5.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.6 Noise**

### **5.6.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.6.2 Impacts**

Additional noise impacts during substation and transmission line construction would include temporary increases in noise levels from construction vehicles and equipment onsite and on the surrounding roads. The potential increases in sound due to construction would be temporary in nature and these sources of noise would be removed after construction is complete.

Future sound levels in areas directly adjacent to the proposed Springbrook Substation would potentially be impacted by operation of new substation equipment, particularly noise generated by transformers. In addition, the transformers would have cooling fans that would create noise at various times. Predictive modeling was conducted to determine potential noise levels generated by substation operations.

It is not expected that operation of the Springbrook Substation would cause sound levels that exceed the U.S. Environmental Protection Agencies guidelines at any current residences, provided Basin Electric installs a transformer rated at the modeled noise level of 90 decibels or lower for Institute of Electrical and Electronics Engineers distances. This noise level would be well within the range of noise levels for such equipment.

### **5.6.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.7 Visual Impacts**

### **5.7.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.7.2 Impacts**

The new substation and transmission line would be an added visual element in the existing landscape. The proposed Springbrook Substation would be constructed approximately 10 miles northeast of the City of Williston. No residences are located within 500 feet of the proposed substation site, but several would likely be within sight of the substation. The new facilities would be considered a compatible component of the visual landscape due to its location along the AVS to Neset line and utility and oil development in the area.

### **5.7.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.8 Cultural Resources**

### **5.8.1 Description of Resources**

In 2023, Metcalf Archaeological Consultants, Inc. (Metcalf) conducted a Class III cultural resources inventory of the proposed Springbrook Substation location. During the inventory, Metcalf did not identify any cultural resources and recommended a finding of No Significant Site (N.D.C.C § 49-22-09). The North Dakota State Historic Preservation Office (NDSHPO) concurred with the findings. NDSHPO's concurrence letter can be found in **Appendix B**.

### **5.8.2 Impacts**

No impacts to cultural resources are expected as a result of construction of the Springbrook Substation, associated transmission lines, and microwave tower.

### **5.8.3 Mitigation**

No impacts to cultural resources are expected as a result of construction of the Springbrook Substation, associated transmission lines, and microwave tower.

## **5.9 Recreational Resources**

### **5.9.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.9.2 Impacts**

Construction and operation of the proposed Springbrook Substation, associated transmission lines, and microwave tower would potentially result in minor impacts to recreation. Construction of the substation would convert land from agricultural to industrial use, limiting future recreational use of the area. However, as the proposed substation is located on privately owned agricultural land, recreation at this location is likely limited. The closest public park is the Epping/Springbrook Dam and is approximately 3.5 miles southeast of the Springbrook Substation. During construction, noise, ground disturbance, access restrictions, and human activity may impede hunting activities around the substation site. However, following construction, these disturbances would cease and game species would likely return to the vicinity. Only the approximate 19.3 acres developed for the Project additions would be lost for future recreational use. **Figure 5.9-1** displays publicly available recreational opportunities near the proposed substation.

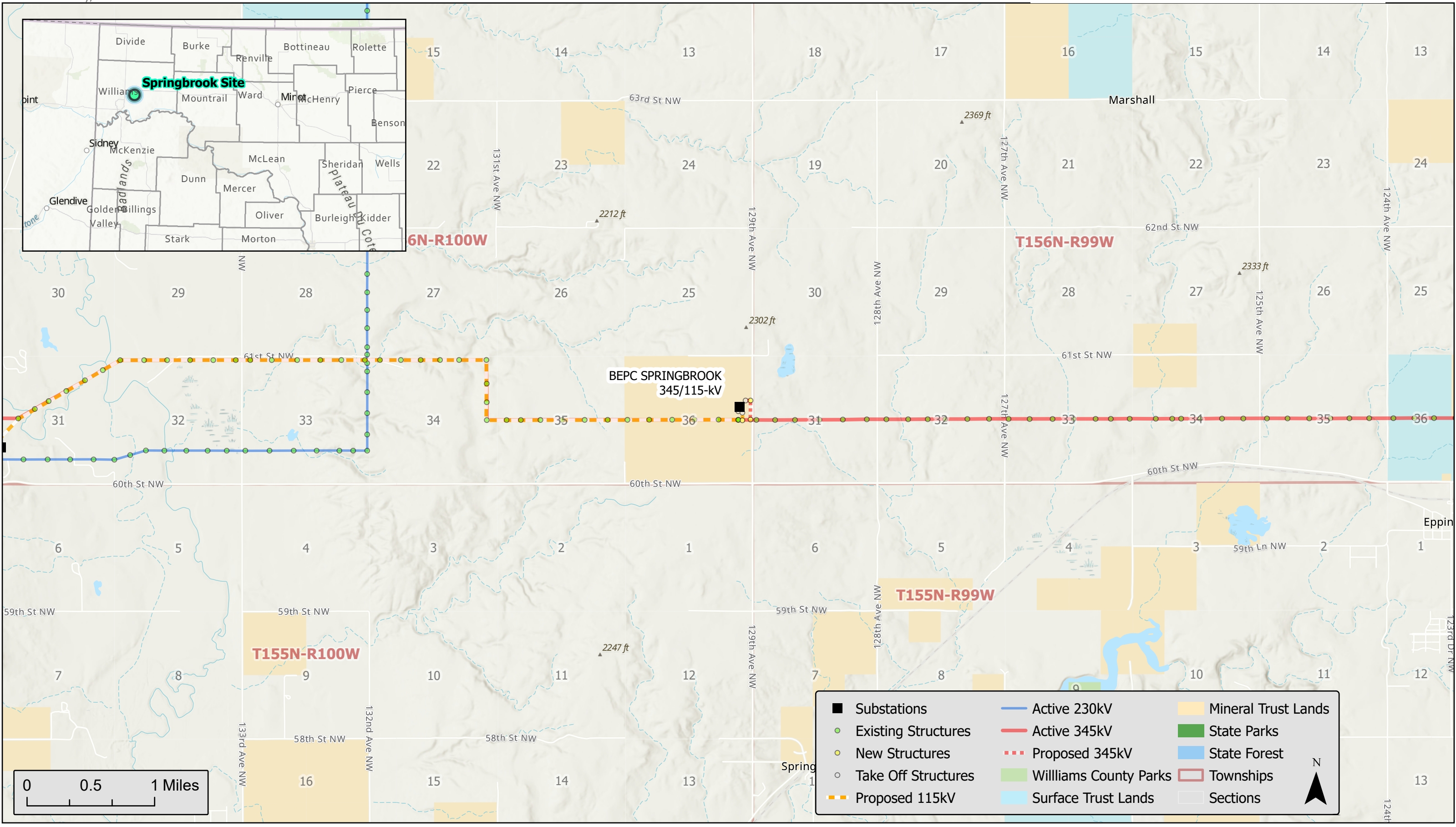
### **5.9.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

# Figure 5.9-1: Recreational Resources Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



## **5.10 Soils and Farmlands**

### **5.10.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.10.2 Impacts**

#### **5.10.2.1 Soils**

Approximately 19.3 additional acres of surface soil will be disturbed for construction of the Springbrook Substation and access roads. Less than 0.01 acres will be permanently disturbed for the additional 345-kV structures. Potential impacts include soil erosion, soil compaction and rutting, and the introduction of noxious weeds on the soil surface. Construction activities such as vegetation clearing, excavating, grading, topsoil segregation, and back-filling may also increase erosion potential by destabilizing the soil surface. Soil compaction and rutting can result from the movement of heavy construction vehicles. The degree of compaction and rutting would depend on the moisture content and texture of the soil. These impacts would be short-term in nature and minimized as much as possible.

Stormwater runoff and erosion control BMPs would be developed for the proposed Project under National Pollutant Discharge Elimination System (NPDES) stormwater pollution prevention plan (SWPPP) permit requirements for construction activities. Typical BMPs that would be part of a SWPPP include, but are not limited to, silt fencing, dust control measures, check dams, erosion control blankets, and seeding of exposed soil surfaces to minimize the potential for wind and water erosion.

#### **5.10.2.2 Farmland**

Approximately 19.3 additional acres of crop land would be permanently converted to utility use at the proposed Springbrook Substation site, access roads, and additional 345-kV structure locations.

#### **5.10.2.3 Prime Farmland**

No prime farmland occurs within the Project additions area. No prime farmland will be impacted during construction. **Figure 5-10.1** displays the prime and important farmland around the proposed substation.

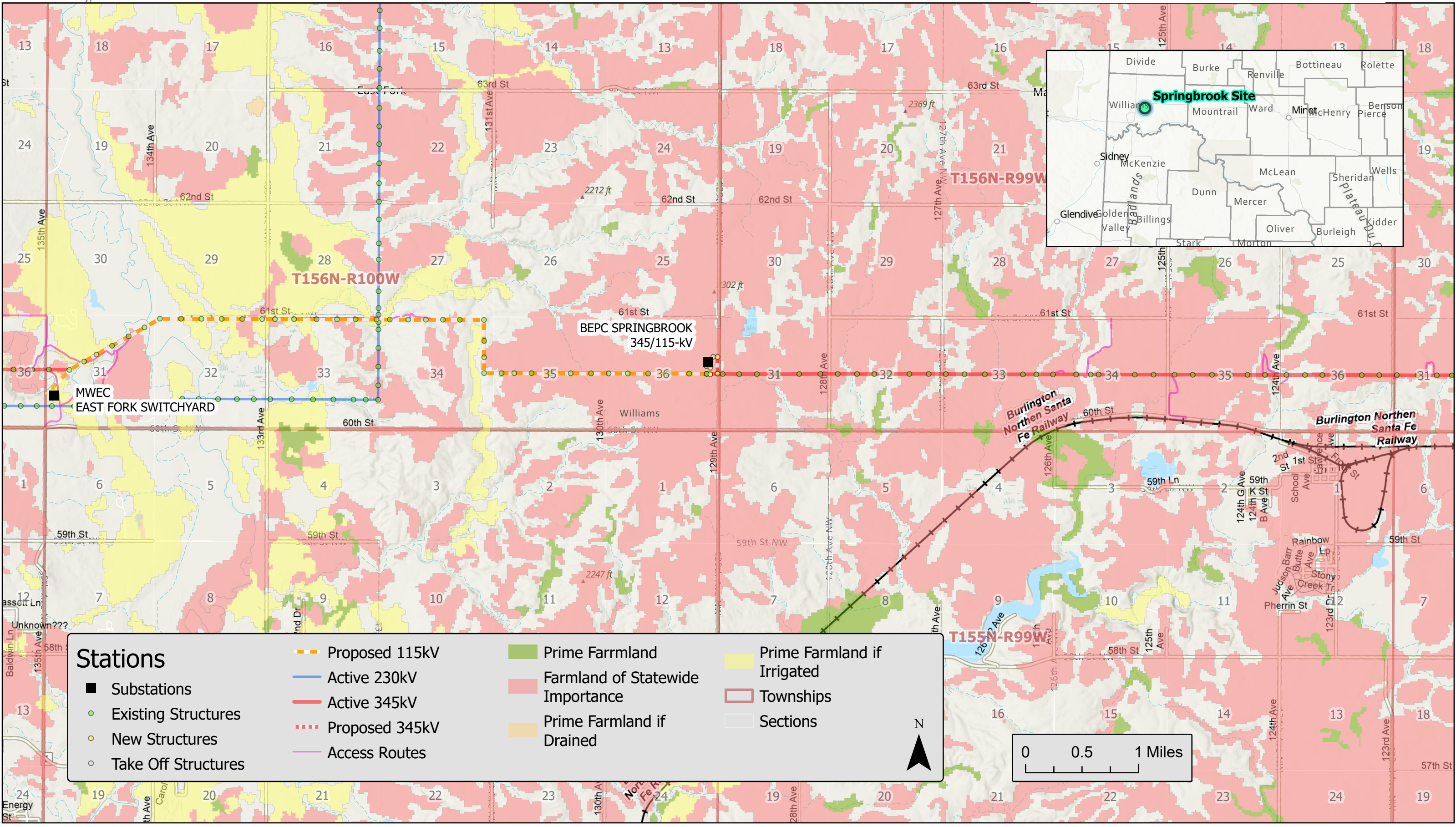
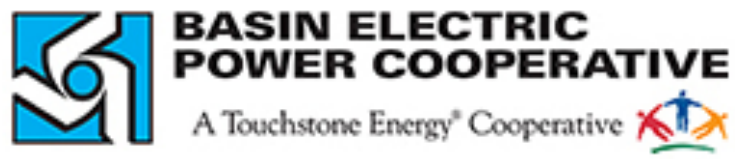
### **5.10.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

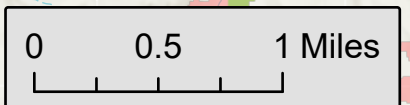
# Figure 5.10-1: Prime and Important Farmland Map

## Antelope Valley Station to Neset 345-kV Transmission Project

Basin Electric Power Cooperative  
Williams County, North Dakota



Stations		Farmland	
■ Substations	— Proposed 115kV	■ Prime Farmland	■ Prime Farmland if Irrigated
● Existing Structures	— Active 230kV	■ Farmland of Statewide Importance	■ Townships
● New Structures	— Active 345kV	■ Prime Farmland if Drained	■ Sections
○ Take Off Structures	— Proposed 345kV		
	— Access Routes		



## **5.11 Geology and Landforms**

### **5.11.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.11.2 Impacts**

Impacts to geologic features, resources, or surface landforms resulting from the construction and operation of the proposed Springbrook Substation, associated transmission lines, and microwave tower are anticipated to be negligible. The substation site is located on terrain with little slope, and impacts to geological resources related to construction and operation of the substation are not anticipated. Some surface grading and subsurface excavation and trenching would be necessary but would be relatively shallow and not expected to encounter significant bedrock.

### **5.11.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.12 Water Resources**

### **5.12.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **5.12.2 Impacts**

No impacts to water resources are expected as a result of construction of the proposed substation, associated transmission lines, and microwave tower. No streams or water bodies are present within the substation site, and the substation site is not located within a Federal Emergency Management Agency designated floodplain. No shallow aquifers are located within the Project addition area.

### **5.12.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.13 Biological Resources**

### **5.13.1 Description of Resources**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **5.13.2 Impacts**

### **5.13.2.1 Vegetation**

All vegetation would be removed within the fenced area of the proposed substation site (approximately 11.9 acres), adjacent graded and bermed area (approximately 6.92 acres), the two access roads (approximately 0.48 acres), and the additional 345-kV structure (approximately 0.01 acres), totaling 19.3 acres. This vegetation removal would be long-term, for the life of the Project.

Temporary vegetation impacts will occur during the construction of the additional 345-kV and 115-kV transmission lines. However, these temporarily impacted areas will return to previous conditions following construction.

### **5.13.2.2 Wetlands**

One wetland will be impacted during the construction of the proposed Springbrook Substation. This wetland is a 0.06-acre emergent, temporary wetland. U.S Army Corps of Engineers Nationwide Permit 57 authorizes the construction of electrical substations in waters of the US, provided constructions does not result in the loss of greater than ½-acre of waters of the US. Further details on wetlands within the area can be found in the Natural Resources Inventory Report (**Appendix C**).

### **5.13.2.3 Wildlife**

Potential impacts to wildlife resulting from construction of the Project additions would include long-term loss of habitat within the 19.3-acre permanent impact footprint. Additionally, some mortality of less mobile or burrowing species may occur during construction activities. Site clearing would occur outside of bird nesting season, or, if clearing needs to be completed during nesting season, a nest survey will be performed prior to construction and appropriate buffers will be implemented. However, the proposed substation site, additional 345-kV locations, and microwave tower location are within a crop field and is currently disturbed each year through tilling, planting, and harvesting. Further details on impacts to wildlife within the area can be found in the Natural Resources Inventory Report (**Appendix C**).

## **5.13.3 Mitigation**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **6.0 PUBLIC AND AGENCY COORDINATION**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower except for a Federal Communications Commission Tower Construction Notification, being completed for the microwave tower. Approval is expected in the fall of 2024.

## **7.0 POTENTIAL PERMITS/APPROVALS**

Basin Electric has obtained a Conditional Use Permit from Williams County for the proposed substation. A Conditional Use Permit application for the microwave tower has been submitted and approval is expected in July 2024. No permitting was necessary for the additional 345-kV or 115-kV circuits. Basin Electric will obtain county road encroachment permits, if needed, prior to construction.

## **8.0 FACTORS CONSIDERED**

NDCC Section 49-22-09 of the North Dakota Energy Conversion and Transmission Facility Siting Act lists 11 factors to guide the Commission in evaluation of the sites, corridors, and routes. The following sections address these factors where applicable to this Project's Corridor/Route revisions.

### **8.1 Available Research and Investigations Relating to the Effects of the Location, Construction, and Operation of the Proposed Facility on Public Health and Welfare, Natural Resources, and the Environment**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **8.2 The Effects of the New Energy Conversion and Transmission Technologies and System Designed to Minimize Adverse Environmental Effects**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **8.3 The Potential for Beneficial Uses of Waste Energy from a Proposed Energy Conversion Facility**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **8.4 Adverse Direct and Indirect Environmental Effects Which Cannot Be Avoided Should the Proposed Site or Route be Designated**

Unavoidable impacts are those that would occur after implementation of mitigation measures. In summary, construction and operation of the proposed Project additions would convert an additional 19.3 acres of land from agriculture to utility uses. No other changes to this section were identified.

### **8.5 Alternatives to the Proposed Site, Corridor, or Route Which are Developed During the Hearing Process and Which Minimize Adverse Effects**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

### **8.6 Irreversible and Irretrievable Commitments of Natural Resources Should the Proposed Site, Corridor, or Route be Designated**

Irreversible resource commitments include damage to a resource that is not recoverable for use by future generations. The small size of the substation, access roads, and additional transmission structure, approximately 19.3 acres, means that there would be minimal irreversible damage to regional natural resources. This would primarily involve the soil and agricultural property use for the substation; restoration after the life of the Project would reduce these potential irreversible impacts.

## **8.7 The Direct and Indirect Economic Impacts of the Proposed Facility**

Section 5.1.2 of the original application includes discussion of the direct and indirect economic impacts of the proposed Project. Furthermore, the Project will provide induced economic benefits to businesses and the surrounding communities from increased electrical capacity and reliability.

## **8.8 Existing Plans of the State, Local Government, and Private Entities for Other Developments at or in the Vicinity of the Proposed Site, Corridor, or Route**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## **8.9 The Effect of the Proposed Site or Route on Existing Scenic Areas, Historic Sites and Structures, and Paleontological or Archaeological Sites**

Section 5.8 discusses the potential effects of the Project additions on cultural resources. A Class III cultural resources inventory of the Project addition area did not identify any cultural resources present. Concurrence from the NDSHPO can be found in **Appendix B**.

## **8.10 The Effect of the Proposed Site or Route on Areas Which are Unique Because of Biological Wealth or Because They are Habitats for Rare and Endangered Species**

Section 5.13 of the original application and this addendum discuss the effects of the Project additions on biological resources, including vegetation, wildlife, wetlands, and special status species. The construction of the Project additions would have no effect on special status species. One, 0.06-acre wetland will be impacted during substation construction.

## **8.11 Problems Raised by Federal Agencies, Other State Agencies, and Local Entities**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## 9.0 QUALIFICATIONS OF CONTRIBUTORS

Table 9.0-1 below details qualifications of contributors to this addendum.

**Table 9.0-1: Qualifications of Contributors**

<b>Name</b>	<b>Responsibility</b>	<b>Education and Experience</b>
<b>Basin Electric Power Cooperative</b>		
Nathan Miller	Project Manager	B.S. Electrical Engineering Registered Professional Engineer 19 Years of Experience
Bobby Nasset	Supervisor Civil Engineering	B.S. Civil Engineering Registered Professional Engineer 19 Years of Experience
Ryan King	Environmental/Permitting Application Addendum Lead	B.S. Construction Management Master of Natural Resources Management 12 Years of Experience
Shannon Vaira	GIS Analyst	B.A. Geography; Minor in GIS 10 Years of Experience
Nathan Kleyer	Right-of-Way	16 Years of Experience
<b>Metcalf Archaeological Consultants, Inc.</b>		
Damita Engel	Cultural Resources Inventory	B.A. Anthropology Master of Anthropology, Specialization in Cultural Resource Management 31 Years of Experience
<b>Western EcoSystems Technology, Inc.</b>		
Chad Tucker	Natural Resources Inventory	B.S. Wildlife Fisheries Science 19 Years of Experience

## **10.0 LITERATURE CITED**

No changes from the addition of the proposed Springbrook Substation, associated transmission lines, and microwave tower.

## 11.0 ACRONYMS AND ABBREVIATIONS

AVS	Antelope Valley Station
Basin Electric	Basin Electric Power Cooperative
BMP	Best Management Practice
Commission	North Dakota Public Service Commission
FCC	Federal Communications Commission
GIS	geographic information systems
ICBM	intercontinental ballistic missile
kV	kilovolt
Metcalf	Metcalf Archaeological Consultants, Inc.
MWEC	Mountrail Williams Power Cooperative
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDSHPO	North Dakota State Historic Preservation Office
Project	Pioneer to Judson 345-kV Transmission Project
ROD	Record of Decision
ROW	right-of-way
RUS	Rural Utilities Service
SPP	Southwest Power Pool
SWPPP	Storm Water Pollution Prevention Plan
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
NTC	Notice to Construct
USDA	U.S. Department of Agriculture

## **Appendix A**

### **Southwest Power Pool Notice to Construct**

**SPP-NTC-210675**

**SPP  
Notification to Construct**

July 12, 2022

Mr. Tom Christensen  
Basin Electric Power Cooperative  
1717 E. Interstate Ave.  
Bismarck, ND 58503

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Christensen,

Pursuant to Section 3.3 of the Southwest Power Pool, Inc. ("SPP") Membership Agreement and Attachments O and Y of the SPP Open Access Transmission Tariff ("OATT"), SPP provides this Notification to Construct ("NTC") directing Basin Electric Power Cooperative ("BEPC"), as the Designated Transmission Owner, to construct the Network Upgrades.

On January 25, 2022, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of 2021 ITP.

**New Network Upgrades**

**Previous NTC Number:** 210652

**Previous NTC Issue Date:** 3/11/2022

**Project ID:** 92113

**Project Name:** Line - Kummer Ridge - Round Up 345 kV

**Need Date for Project:** 1/1/2023

**Estimated Cost for Project:** \$78,977,357

**Network Upgrade ID:** 143588

**Network Upgrade Name:** Kummer Ridge - Round Up 345 kV

**Network Upgrade Description:** Build 33.2 mile new 345 kV line from Kummer Ridge to Round Up

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**SPP-NTC-210675**

**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1792/1792/1792/1792 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$78,293,357

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 143589

**Network Upgrade Name:** Kummer Ridge 345 kV Terminal Upgrades

**Network Upgrade Description:** Install terminal equipment at Kummer Ridge substation 345 kV to support a new 345 kV line from Round Up

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1792/1792/1792/1792 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$342,000

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 143590

**Network Upgrade Name:** Round Up 345 kV Terminal Upgrades

**Network Upgrade Description:** Install terminal equipment at Round Up substation 345 kV to support a new 345 kV line from Kummer Ridge

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1792/1792/1792/1792 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$342,000

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

## SPP-NTC-210675

**Previous NTC Number:** 210652  
**Previous NTC Issue Date:** 3/11/2022  
**Project ID:** 92168  
**Project Name:** Multi - Tande - Finstad - Leland Olds 345 kV  
**Need Date for Project:** 1/1/2023  
**Estimated Cost for Project:** \$325,562,264 (this project cost reflects Network Upgrades not included in this NTC)

**Network Upgrade ID:** 143714  
**Network Upgrade Name:** Finstad - Tande 345 kV New Line  
**Network Upgrade Description:** Build a 48 mile 345 kV line from Finstad to Tande.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1792(SE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$67,411,405  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** BEPC  
**Date of Estimated Cost:** 5/26/2022

**Network Upgrade ID:** 144227  
**Network Upgrade Name:** Finstad 115 kV Substation  
**Network Upgrade Description:** Build a new 115 kV Substation with terminal equipment to support a line from Vanhook 115 kV substation.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 239/239/239/239  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$4,675,697  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** SPP  
**Date of Estimated Cost:** 5/31/2022

**SPP-NTC-210675**

**Network Upgrade ID:** 144230

**Network Upgrade Name:** Finstad 345 kV New Substation

**Network Upgrade Description:** Build a new 345 kV Substation including 345 kV terminals for lines from Leland Olds 345 kV substation, Tande 345 kV substation and high side terminal equipment for Finstad 345/115 kV Ckt 1 transformer and Finstad 345/115 kV Ckt 2 transformer

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1792/1792/1792/1792 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$18,822,018

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144231

**Network Upgrade Name:** Finstad Switched Shunt

**Network Upgrade Description:** Install a switched shunt at Finstad.

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** Switched shunt and supporting elements must be rated for minimum of 25 MVAR

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$385,021

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144233

**Network Upgrade Name:** Finstad 345/115 kV Ckt 1 Transformer

**Network Upgrade Description:** Install a 345/115 kV Ckt 1 Transformer at Finstad 345

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**SPP-NTC-210675**

**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 332/415/332/415 (SN/SE/WN/WE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$5,315,254  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** BEPC  
**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144235  
**Network Upgrade Name:** Finstad 345/115 kV Ckt 2 Transformer  
**Network Upgrade Description:** Install a 345/115 kV Ckt 2 transformer at Finstad 115 and upgrade any necessary 115 kV terminal equipment.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 332/415/332/415 (SN/SE/WN/WE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$5,315,254  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** BEPC  
**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144236  
**Network Upgrade Name:** Leland Olds - Finstad - 345 kV New Line  
**Network Upgrade Description:** Build a 123 mile 345 kV line from Leland Olds to Finstad.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1195/1195/1195/1195 (SN/SE/WN/WE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$200,761,539  
**Cost Allocation of the Network Upgrade:** Base Plan

**SPP-NTC-210675**

**Estimated Cost Source:** BEPC  
**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144237  
**Network Upgrade Name:** Leland Olds 345 kV Substation  
**Network Upgrade Description:** Build a new 345 kV Substation with terminal equipment to support a new line from Finstad 345 kV substation.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1195/1195/1195/1195 (SN/SE/WN/WE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$9,277,339  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** SPP  
**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144238  
**Network Upgrade Name:** Tande 345 kV Terminal Equipment  
**Network Upgrade Description:** Install new terminal equipment at Tande to support a new 345 kV line from Finstad. Install a series compensation device at Finstad or Tande.  
**Network Upgrade Owner:** BEPC  
**MOPC Representative(s):** Jason Doerr  
**TWG Representative(s):** Phil Westby  
**Categorization:** Regional Reliability  
**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 1195/1195/1195/1195 (SN/SE/WN/WE) MVA  
**Network Upgrade Justification:** 2021 ITP  
**Estimated Cost for Network Upgrade (current day dollars):** \$5,085,047  
**Cost Allocation of the Network Upgrade:** Base Plan  
**Estimated Cost Source:** BEPC  
**Date of Estimated Cost:** 5/31/2022

**Previous NTC Number:** 210652  
**Previous NTC Issue Date:** 3/11/2022

**SPP-NTC-210675**

**Project ID:** 92211

**Project Name:** Multi - NE Williston - Folvag 115 kV - Judson - East Fork - Tande 345 kV

**Need Date for Project:** 1/1/2023

**Estimated Cost for Project:** \$34,634,441 (this project cost reflects Network Upgrades not included in this NTC)

**Network Upgrade ID:** 144171

**Network Upgrade Name:** East Fork 345/115 kV Substation

**Network Upgrade Description:** Bisect the Judson to Tande 345 kV line approximately 18 miles from Judson and build a new 345 kV Substation.

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** All 345 kV elements and conductor must meet seasonal rating criteria of 1792/192/1792/1792 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$17,766,381

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**Network Upgrade ID:** 144198

**Network Upgrade Name:** East Fork 345/115 kV Transformer

**Network Upgrade Description:** Install a 345/115 kV Transformer at the new East Fork 345/115 kV Substation.

**Network Upgrade Owner:** BEPC

**MOPC Representative(s):** Jason Doerr

**TWG Representative(s):** Phil Westby

**Categorization:** Regional Reliability

**Network Upgrade Specification:** All elements and conductor must meet seasonal rating criteria of 332/415/332/415 (SN/SE/WN/WE) MVA

**Network Upgrade Justification:** 2021 ITP

**Estimated Cost for Network Upgrade (current day dollars):** \$5,904,650

**Cost Allocation of the Network Upgrade:** Base Plan

**Estimated Cost Source:** BEPC

**Date of Estimated Cost:** 5/31/2022

**SPP-NTC-210675**

**Commitment to Construct**

Please provide to SPP a written commitment to construct the Network Upgrade(s) by October 10, 2022, in addition to providing a construction schedule and an updated -20% to +20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by the SPP OATT could result in the Network Upgrade(s) being assigned to another entity.

**Mitigation Plan**

The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

**Notification of Commercial Operation**

Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

**Notification of Progress**

On an ongoing basis, please keep SPP advised of any inability on BEPC's part to complete the approved Network Upgrade(s). For project tracking, SPP requires BEPC's to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, BEPC shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this project(s), and nothing in this letter shall vary such terms and conditions.

Don't hesitate to contact me if you have questions or comments about these requests. Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

A handwritten signature in blue ink, appearing to read "Antoine Lucas", is written over a light blue horizontal line.

Antoine Lucas

**SPP-NTC-210675**

Vice President, Engineering

Phone: (501) 614-3382 • Fax: (501) 482-2022 • [alucas@spp.org](mailto:alucas@spp.org)

cc: Lanny Nickell - SPP  
Casey Cathey - SPP  
David Kelley - SPP  
Jeremy Severson - BEPC  
Jason Doerr - BEPC  
[SPPprojecttracking@spp.org](mailto:SPPprojecttracking@spp.org)

## **Appendix B**

### **Cultural Resources Report and NDSHPO Concurrence Letter**

**MANUSCRIPT DATA RECORD FORM**

1. Manuscript Number: [SHPO assigns]
2. SHPO Reference #:
3. Author(s): J. Signe Snortland
4. Title: Basin Electric Power Cooperative: A Class III Inventory of Springbrook Substation, Williams County, North Dakota.
5. Report Date: November 2023
6. Number of Pages: 9
7. Type – I
8. List formally tested or excavated sites (not probes): n/a
9. Acres: 39.9
10. List the legal description\* and study unit. For study unit assignment, use the township tables in the *State Plan*, [http://history.nd.gov/hp/stateplan\\_arch.html](http://history.nd.gov/hp/stateplan_arch.html).  
Study Units: LM, CB, KN, HE, SM, GA, JA, GR, NR, SR, SO, SH, YE

\*For *inventory, formal testing and excavation* projects, list the *CLASS III* legal locations only.

<u>County</u>	<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Study Unit</u>
Williams	156 N	100 W	36	Garrison

# Negative Class III Survey Form Report (for surveys 40 acres or less)

## Cultural Resource Report Information

Report Title: Basin Electric Power Cooperative: A Class III Inventory of Springbrook Substation, Williams County, North Dakota.

Funding/Permitting Agency(s): Basin Electric Power Cooperative

Cultural Resource Firm/Federal Agency/State Agency: Metcalf Archaeological Consultants, Inc.

Report Author: J. Signe Snortland

Principal Investigator (Signature and Title): PI William Bluemle



Report Date: November 2023

Field Personnel: William Bluemle and Carter Greff

Survey Date(s): August 1, 2023

## Location Information and Survey Conditions

County(s): Williams

USGS 7.5' Topographic Quadrangle(s): Spring Brook (1978)

Project Type/Title: Basin Electric Power Cooperative Springbrook Substation

Section: 36

Township: 156 N

Range: 100 W

Project Description and Purpose: Basin Electric Power Cooperative proposes to build a new substation near Epping, North Dakota. To the east, the project area borders the west edge of 129<sup>th</sup> Avenue NW and to the south, an existing overhead power line extends along this half section line. BEPC is applying for a permit from the North Dakota Public Service Commission to construct the project. The Public Service Commission is responsible for ensuring the project complies with state law, *North Dakota Century Code* 49-22-09 – Factors to be considered in evaluating applications and designation of sites, corridors, and routes – 1.i – the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. BEPC contracted Metcalf Archaeological Consultants, Inc. to conduct a Class I and Class III cultural resource inventory the 39.9 acres in the project area.

General Project Location (Directions to project area): From the intersection of Highway 85 and Highway 2, go south for 4 miles to 60<sup>th</sup> Street NW. Go east for 7 miles and turn north on County 11 for ½ mile. The project area is west of County 11, which is also 129<sup>th</sup> Avenue NW.

APE Area (Acres): 39.9

Number of Acres Surveyed: 39.9

Instructions: Submission of this report must include: 1) a paper copy, 2) a PDF version, and 3) the corresponding shapefiles. Submit to the Archaeology & Historic Preservation Division of the State Historical Society of North Dakota at 612 E Boulevard Ave, Bismarck, ND 58505.

Topography: The general area of the project is in the rolling plains of the Coteau Slope Physiographic Region north of the Missouri River in northwestern North Dakota (Bluemle 2000).

Soils: Soils are sandy loams – Williams-Zahl-Zahill complex (6-9% slopes), Williams-Bowbells loams (0-3% slopes), and Williams-Bowbells loams (3-6% slopes) (Natural Resources Conservation Service, n.d.).

Current and Historical Land Use: Cultivated field

Vegetation (including % visibility): The specific project location is in a flat to gently rolling cultivated field with mid-season small grain crops providing 20-40% ground surface visibility (GSV). Bare ground is visible at the base of row crops, and several areas with sparse crop cover supplement GSV (Figure 2). A cluster of field clearing rock piles lies in the center of the project area (Figure 3). An existing buried gas line extends along east edge of the road ROW between the cultivated field edge and the road.

Environmental Limitations to Survey: None

Surface and/or Minerals Ownership: Private

Other comments:

## **Background and Survey Information**

Historic Plats/Atlases/Sources:

Study Unit: Garrison (Gregg et al. 2021).

Previous Sites within APE<sup>1</sup>: None

Previous Sites outside APE within 1 mile: See Table 1 and Map 1.

Previous Surveys within APE: None

Previous Surveys outside APE within 1 mile: See Table 2 and Map 2.

Date of File Search: July 27, 2023

Survey Methodology (transect intervals):

The inventory conformed to *North Dakota's Guidelines for Cultural Resource Inventories* (SHSND 2020). The inventory employed a pedestrian transect methodology with transects spaced no more than 15 meters apart. This method was used to inventory the entire undertaking's APE.

During the inventory, Archaeologist William Bluemle used a handheld R1 unit to map APE boundaries, took representative digital photographs, and maintained detailed field notes. Copies of all photos, maps, GPS data, and field notes are on file at the Metcalf Bismarck office.

Shovel/Auger Probing Methodology: n/a

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<sup>1</sup> Any project that includes a site, site lead, or isolated find within the APE is considered a positive find requires a full report.

Area Surveyed (Acres): 39.9

Time Expended (Person Hours): 2

**Recommendation:**

Archaeologist William Bluemle did not identify any cultural resources in the borrow area APE; therefore, Metcalf recommends a finding of *No Significant Sites* (N.D.C.C. § 49-22-09) for this project.

**Other Comments:**

**References:**

Bluemle, J. P.

2000 *The Face of North Dakota* 3<sup>rd</sup> Edition. Education Series 26. North Dakota Geological Survey. Bismarck, North Dakota.

Gregg, Michael L., Amy C Bleier, and Fern E. Swenson

2021 *The Garrison Study Unit, In The North Dakota Comprehensive Plan for Historic Preservation*: [https://www.history.nd.gov/hp/PDFinfo/6\\_GarrisonStudyUnit.pdf](https://www.history.nd.gov/hp/PDFinfo/6_GarrisonStudyUnit.pdf), accessed October 30, 2023.

Natural Resource Conservation Service

n.d. Web soil survey <https://websoilsurvey.nrcs.usda.gov/app/>, accessed October 31, 2023.

State Historical Society of North Dakota

2020 *North Dakota SHPO Guidelines Manual for Cultural Resource Inventory Projects*. Electronic document (Revised Edition: updated 2020), <http://history.nd.gov/hp/PDFinfo/North-Dakota-SHPO-Guidelines-Manual-for-Cultural-Resource-Inventory-Projects.pdf>, accessed May 2023.

**Required Attachments**

USGS 7.5' Topographic Quadrangle Map(s) Showing: 1) Project Location; 2) Previously Recorded Sites; 3) Previously Conducted Surveys.

Project Map(s) Depicting: 1) APE; 2) Survey Limits

Project Overview Photograph(s) Showing Field Conditions



December 21, 2023

Damita Engel  
Metcalf Archaeological Consultants  
PO Box 2154  
Bismarck, ND 58502

**SHSND Ref: 24-9006 Springbrook Substation in portions of [T156N R100W Section 36] in Williams County, North Dakota**

Dear Damita,

From your submission on behalf of Basin Electric Power Cooperative, it is our understanding that SHSND Ref: 24-9006 Springbrook Substation involves construction of a new substation with connection to an existing overhead power line. Therefore, it is our determination that there are no significant sites affected by this project provided it takes place in the location and in the manner described in the documentation.

Thank you for the opportunity to review this project under North Dakota cultural resources consultation. This letter does not serve as federal agency consultation or SHPO consultation for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, (36 CFR Part 800), or the National Environmental Policy Act, as amended, (42 U.S.C. §§ 4321- 4347).

If you have any questions, please contact Lorna Meidinger, Lead Historic Preservation Specialist at [lbmeidinger@nd.gov](mailto:lbmeidinger@nd.gov) or (701) 328-2089.

Sincerely,

*for* William D. Peterson, PhD  
Director, State Historical Society of North Dakota

24-9006

## **Appendix C**

### **Natural Resources Inventory Report**

**Springbrook Substation Project**  
***Williams County, North Dakota***

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***Natural Resources Inventory Report***



**Prepared for:**

**Basin Electric Power Cooperative**

1717 East Interstate Avenue  
Bismarck, North Dakota 58503

---

**Prepared by:**

**Chad Tucker**

Western EcoSystems Technology, Inc.  
4007 State Street, Suite 109  
Bismarck, North Dakota 58503  
Phone: (307) 772-1083

**January 16, 2024**



**STUDY PARTICIPANTS**

Chad Tucker

Project Manager, GIS Technician

**REPORT REFERENCE**

Tucker, C. 2023. Springbrook Substation Project, Williams County, North Dakota: Natural Resources Inventory Report. Prepared by Western EcoSystems Technology, Inc. (WEST), Bismarck, North Dakota. January 16, 2024.

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## **ACRONYMS AND ABBREVIATIONS**

<b>Acronym</b>	<b>Definition</b>
ac	acre
BEPC	Basin Electric Power Cooperative
cm	centimeter
DBH	diameter at breast height
ESA	Endangered Species Act
FR	Federal Register
ft	foot
ha	hectare
in.	inch
IPaC	Information for Planning and Consultation
km	kilometer
m	meter
mi	mile
N	north
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
PEMA	Palustrine emergent temporarily flooded
Pf	palustrine farmed wetland
PLSS	Public Land Survey System
R	Range
Sec.	Section
Survey Area	40.0 acres
T	Township
USACE	US Army Corps of Engineers
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFS	US Forest Service
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
W	west
WEST	Western EcoSystems Technology, Inc.
WNS	white nose syndrome

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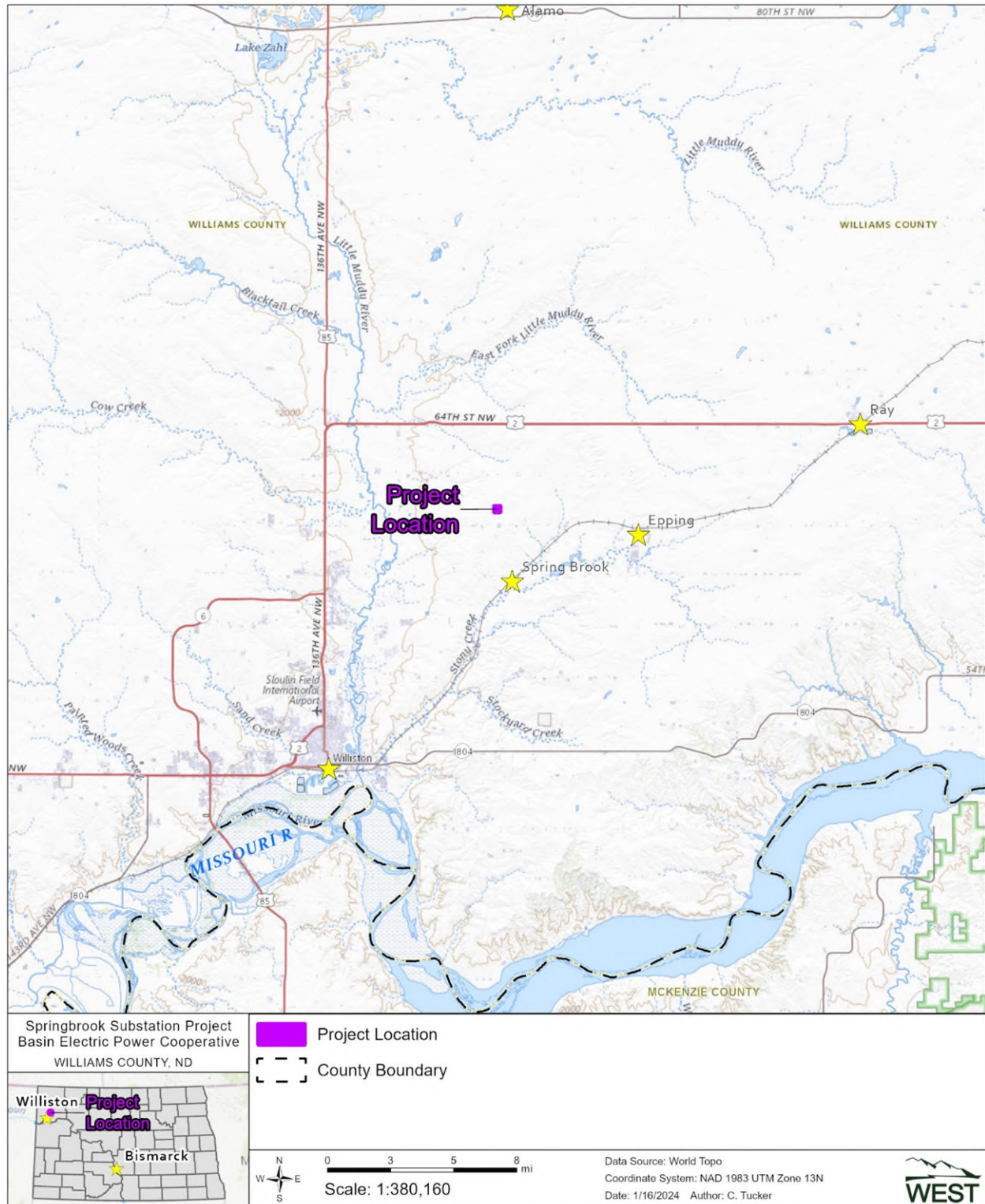
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## **1.0 INTRODUCTION**

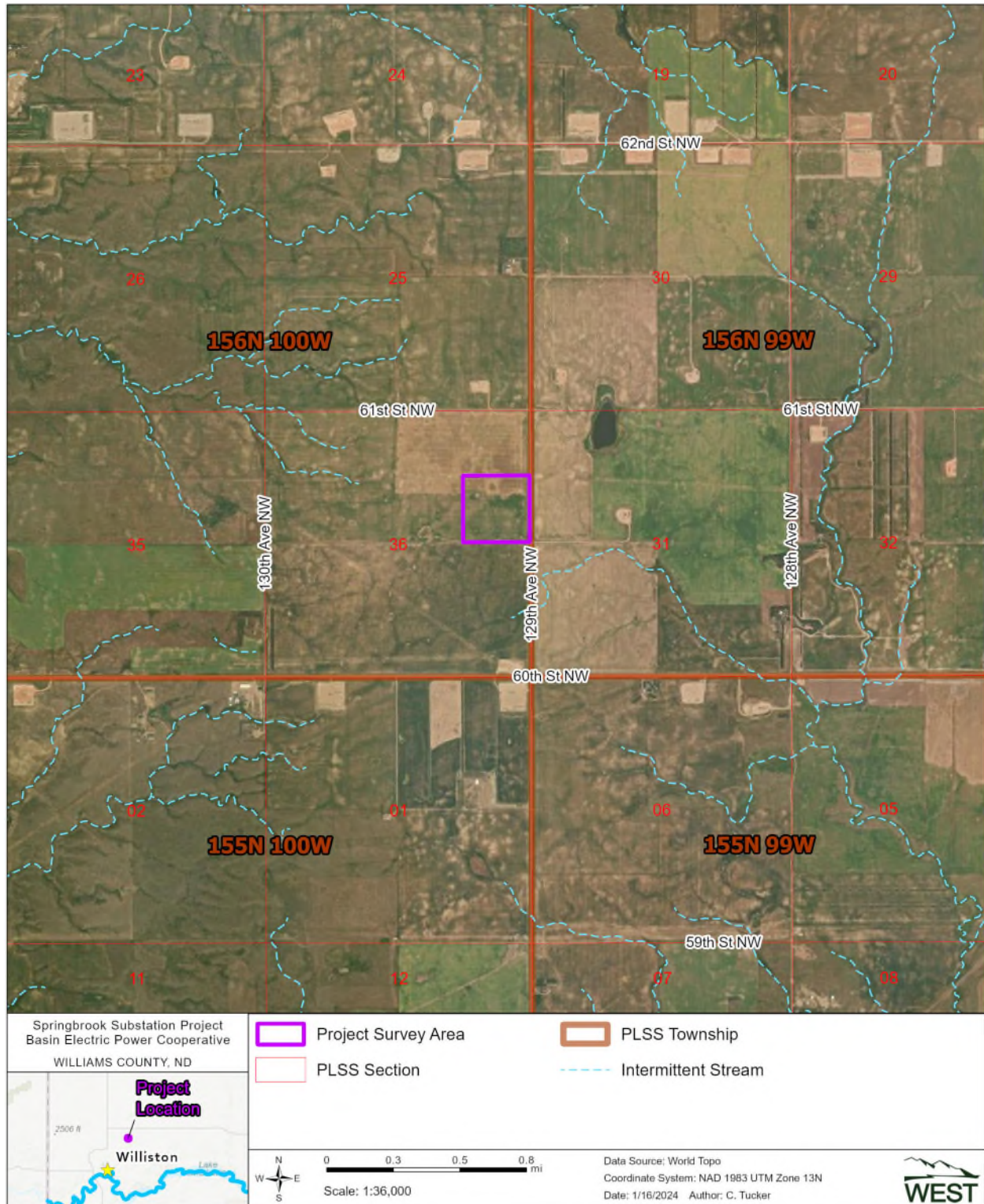
Basin Electric Power Cooperative (BEPC) proposes to construct and operate the Springbrook Substation Project (Project). Western Ecosystems Technology, Inc. (WEST), was retained by BEPC to provide natural resources inventory services, which include the identification of waterbody/wetland boundaries, an evaluation of habitat for federally listed species, a noxious weed inventory, a woody vegetation inventory, and a line-of-sight raptor nest survey. The proposed Project is located within the NE $\frac{1}{4}$  of Section 36, Township (T) 156 North (N), Range (R) 100 West (W) of Williams County, North Dakota. The Project would be approximately 12 miles (mi; 19 kilometers [km]) northeast of the city of Williston (Figure 1).

The natural resources discussed in this report are those within the Project's Survey Area, as shown on Figure 1 and Figure 2. The Survey Area is 1,320 feet (ft; 402 meters [m]) wide by 1,320 ft wide and contains approximately 40.0 acres (ac; 16.2 hectares [ha]). WEST biologists performed the field surveys on July 31, 2023. Geospatial field data was collected using an Android tablet paired with an EOS ARROW Lite Global Positioning System unit capable of recording data to sub-meter accuracy.

**Springbrook Substation Project  
Natural Resources Inventory Report**



**Figure 1. Location of the proposed Springbrook Substation Project in Williams County, North Dakota.**



**Figure 2. Detailed view of the proposed Springbrook Substation Project.**

## 2.0 PROCEDURES

### 2.1 Wetland and Waterbody Field Determination

Wetland identification utilized the presence of hydrophytic vegetation and landscape hydrology and/or topographic position. Waterbody boundaries were recorded utilizing the criteria and definitions provided by the US Army Corps of Engineers (USACE) Ordinary High Water Mark criteria and definitions provided by the US Environmental Protection Agency (USEPA) in *Draft Guidance on Identifying Waters Protected by the Clean Water Act* (USEPA and USACE 2011). Wetlands and waterbodies were field classified in accordance with guidelines set forth in the *Classification of Wetlands and Deepwater Habitats of the United States* by the Federal Geographic Data Committee (2013). The following resources were reviewed prior to the wetland field determination to aid in identifying potential wetlands with the Survey Area. Williams County National Agriculture Imagery Program aerial photographs (US Geological Survey [USGS] 2023); US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI; USFWS NWI 2021); USGS National Hydrography Dataset (NHD; USGS 2023); and the US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) digital Web Soil Survey (USDA NRCS 2023). The vegetation within the area surveyed was characterized using the hydrophytic criteria as outlined in the *National Wetland Plant List* (USACE 2020). Soil data was not collected.

### 2.2 Federally Listed Wildlife Species Evaluation

The USFWS Information for Planning Consultation (IPaC) site was used to review federally listed species within the Survey Area and Williams County (USFWS 2023a). The review also included the USFWS designated critical habitat for threatened and endangered species geospatial data (2023b), along with known range, reported occurrences, and habitat needs for each species. Table 1 identifies the federally listed species with the potential for occurrence within the Survey Area. Field evaluations were conducted on July 31, 2023 to confirm the presence or absence of potentially suitable habitat for federally listed species within the Survey Area. Background data was collected for preliminary review and to aid in the field inventory of biological resources.

**Table 1. Federally listed threatened and endangered species.**

Common Name	Scientific Name	Status
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered
Whooping crane	<i>Grus americana</i>	Endangered
Dakota skipper*	<i>Hesperia dactotae</i>	Threatened, Critical Habitat Designated
Piping plover	<i>Charadrius melodus</i>	Threatened, Critical Habitat Designated
Red knot (rufa)	<i>Calidris canutus rufa</i>	Threatened
Monarch butterfly	<i>Danaus plexippus</i>	Candidate

\* This species is listed as occurring in Williams County; however, the Project is outside of the current known species range.

Source: US Fish and Wildlife Service 2023a, 2023b

### 2.3 Nesting Raptor Survey

A 0.5-mi (0.8-km) line-of-sight survey for nesting raptors was conducted for the Project. The survey used 10x power magnification binoculars to scan tree lines and wooded areas from either the Survey Area or public roads.

### 2.4 Noxious Weed Inventory

North Dakota has 13 state-listed noxious weed species. The Williams County Weed Control District lists one additional species as invasive (North Dakota Department of Agriculture 2023). Table 2 provides a list of noxious and/or invasive weed species listed for the Project.

**Table 2. North Dakota State and Williams County listed noxious and invasive weeds.**

North Dakota State Listed Noxious Weeds		Williams County Invasive Weeds	
Common Name	Scientific Name	Common Name	Scientific Name
Absinth wormwood	<i>Aremisia absinthium</i>	Narrowleaf hawksbeard	<i>Crepis tectorum</i>
Canada thistle	<i>Cirsium arvense</i>		
Dalmatian toadflax	<i>Linaria genistifolia</i>		
Diffuse knapweed	<i>Centaurea diffusa</i>		
Houndstongue	<i>Cynoglossum officinale</i>		
leafy spurge	<i>Euphorbia esula</i>		
Musk thistle	<i>Carduus nutans</i>		
Palmer amaranth	<i>Amaranthus palmeri</i>		
Purple loosestrife	<i>Lythrum salicaria</i>		
Russian knapweed	<i>Acroptilon repens</i>		
saltcedar	<i>Tamarix chinensis</i>		
Spotted knapweed	<i>Centaurea maculosa</i>		
Yellow toadflax	<i>Linaria vulgaris</i>		

### 2.5 Woody Vegetation (Tree and Shrub) Inventory

The tree and shrub inventory utilized a methodology previously approved by the North Dakota Public Service Commission. Trees and shrubs were recorded within the Survey Area that could potentially be cleared by the Project, including those that are considered non-native species. The location, number, and species of each tree and shrub were documented for this inventory. The trees and shrubs were enumerated by one of two methods: individual count; or by inference utilizing a representative subsample plot to count and then extrapolate the number of individuals or stems based upon the area within the Survey Area.

## 3.0 RESULTS

### 3.1 Wetlands

A pre-survey review of the USFWS NWI database identified three palustrine farmed (Pf) wetlands (USFWS NWI 2023). The field survey identified three wetlands, covering 0.16 ac (0.06 ha) combined. The identified wetlands are isolated natural depressions with a palustrine emergent temporarily flooded (PEMA) classification. Additionally, one of the Pf classified NWI signatures was found to not exhibit wetland hydrology or contain hydric vegetation. An upland point (Upland

Point 1) was recorded at this site. Wetland information is summarized in Table 3 and point locations are identified below in Figure 3. Photographs of the Survey Area are included in Appendix A.

**Table 3. Wetlands documented within the Survey Area**

<b>Name</b>	<b>Classification</b>	<b>Type</b>	<b>PLSS</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Acres</b>
Wetland 1	PEMA	Depression	Sec. 36, T156N, R100W	48.292297	-103.477535	0.04
Wetland 2	PEMA	Depression	Sec. 36, T156N, R100W	48.292491	-103.479178	0.06
Wetland 3	PEMA	Depression	Sec. 36, T156N, R100W	48.294460	-103.479051	0.06
<b>Total</b>						<b>0.16</b>

N = north, PEMA = palustrine emergent temporarily flooded wetland, PLSS = Public Land Survey System, R = Range, Sec. = Section, T = Township, W = west.

### **3.2 Waterbodies**

The pre-survey review of the USFWS NWI and the USGS NHD databases indicated that there are no waterbodies within the Survey Area and the field survey did not identify any features.



Figure 3. Result of the wetland and waterbody field survey.

### **3.3 Threatened and Endangered Species Habitat Assessment**

Threatened and endangered species that have been documented and/or have the potential to occur within the Survey Area are listed in Table 1 along with designated critical habitat (USFWS 2023a, 2023b). A review of USFWS species information datasets, along with habitat data gathered from the field surveys, were used to aid in the determinations. Threatened and endangered species information gathered from the review is documented below in the species discussions.

During the field surveys, no federally listed species were observed and no potential habitat for listed species was documented during the field survey.

#### **3.3.1 Northern Long-eared Bat**

The northern long-eared bat (*Myotis septentrionalis*) is a forest-dwelling mammal. The home range of the northern long-eared bat is approximately 150 ac (61 ha), including a summer and winter habitat. In the summer, northern long-eared bats roost under bark or in crevices of trees, preferring to roost in tall trees greater than three inches (in.; eight centimeters [cm]) diameter at breast height (DBH), and under the exfoliating bark of dead or dying trees. In the winter, northern long-eared bats hibernate in caves and mines. The northern long-eared bat prefers foraging in edge habitats and forests comprising trees with a diversity of life stages (USFWS 2014a).

Occurrences of the northern long-eared bat are uncertain in North Dakota. White-nose syndrome (WNS) currently remains the predominant threat to the northern long-eared bat. North Dakota is included in the current extent of WNS zone per the Final Rule (88 Federal Register [FR] 4908 [January 26, 2023]; USFWS 2023c). With the Final Rule reclassifying the northern long-eared bat as endangered, incidental take of the species is prohibited. To avoid incidental take, it is recommended to conduct tree clearing activities between November 1 to March 31 when bats have either migrated or are hibernating underground caves.

The field survey documented that the Survey Area does not contain any potential roosting trees or hibernacula.

#### **3.3.2 Whooping Crane**

The primary nesting area for the whooping crane (*Grus americana*) is in Canada's Wood Buffalo National Park. Aransas National Wildlife Refuge in Texas is the primary wintering area for whooping cranes. In the spring and fall, the cranes migrate, primarily along the Central Flyway. During the migration, whooping cranes make numerous stops, roosting in relatively large, shallow marshes and feeding and loafing in harvested grain fields. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss.

The whooping crane is federally listed and has the potential to occur in all counties of North Dakota. The Project is located within the migration corridor where 75-95% of whooping cranes travel. Land use within the Project is a mixture of cropland and rangeland, and oil/gas development. The USFWS Database (USFWS 2022) shows Williams County has had 29 verified whooping crane sightings. The closest confirmed sighting to the Project was of four adult whooping cranes in 1979, approximately 9.5

mi (15.3 km) northwest of the Project in Sec. 28, T157N, R100W. The sighting locations are depicted on Figure 4.

Noise and vehicle activity during construction activities may cause migratory cranes to divert from the area but would be unlikely to contribute to any indirect or direct effect that would result in an increase of fatalities and, therefore, would be considered insignificant. If a crane is sighted within 1.0 mi (1.6 km) of the project area, construction activities utilizing heavy equipment would be suspended, and the sighting would be promptly reported to the USFWS. In coordination with the USFWS, suspended activities would resume once the bird(s) have left the area. Appendix B contains BEPC's Avian and Bat Protection Plan.

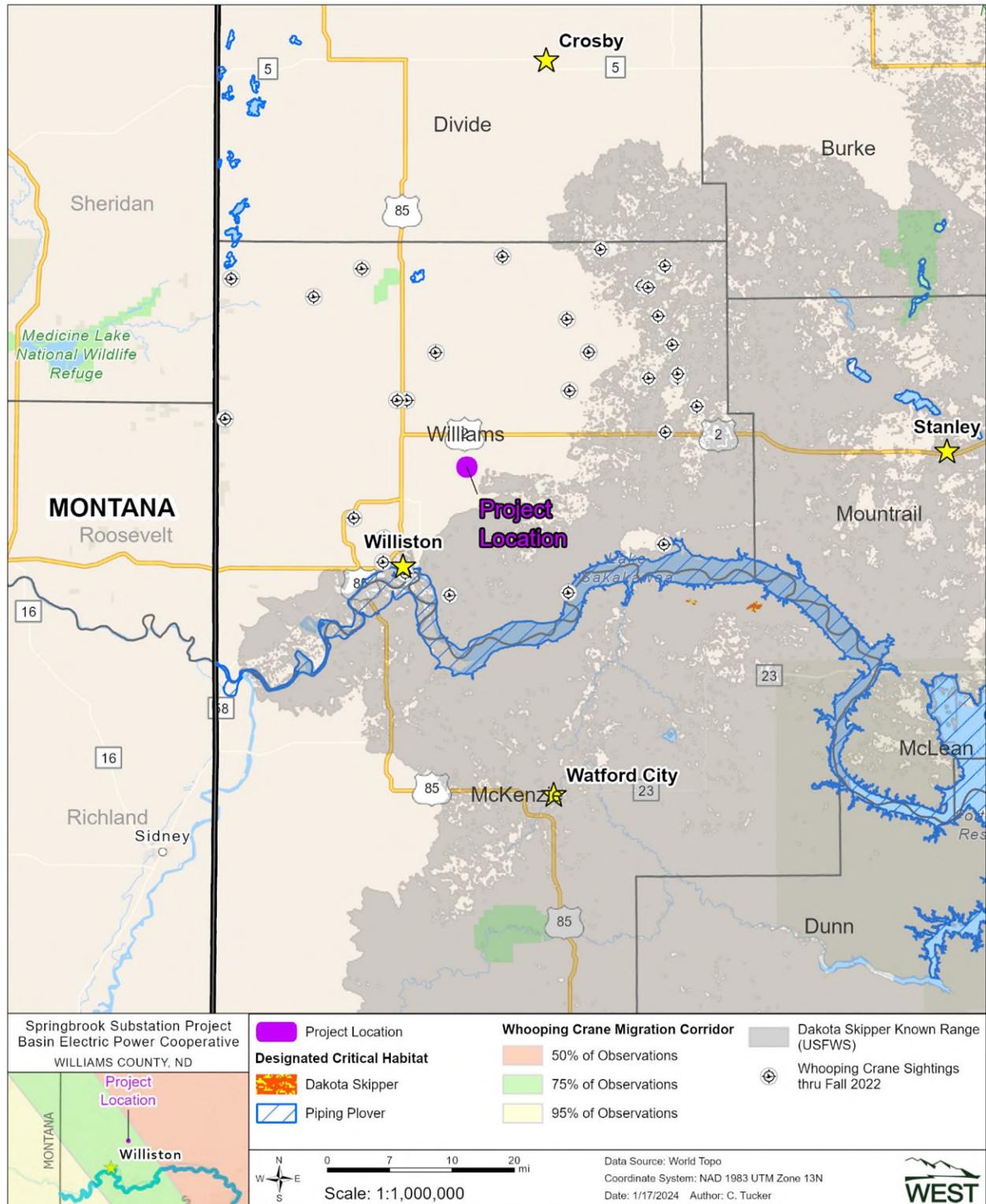
### 3.3.3 *Dakota Skipper*

The Dakota skipper (*Hesperia dacotae*), a prairie obligate species, requires nectar-producing native flowers and native grasses. Historically, Dakota skippers have been associated with relatively low, wet, prairie-dominated, high-quality, tall grass prairie habitat (Type A habitat). Researchers have found that Dakota skippers also use upland mixed grass prairie that is relatively dry and includes ridges and hillsides (Type B habitat; USFWS 2013a). These habitats often have small inclusions of areas with species more commonly typified with tall grass prairie. Larvae require grass components of mixed-grass prairie that include bluestem grasses (*Andropogon* spp.) and needlegrasses, while adults require nectar sources; therefore, suitable prairie must include nectar-producing forbs. These forbs may include purple coneflower (*Echinacea purpurea*), blue bells (*Campanula rotundifolia*), blanket flower (*Gaillardia aristata*), wood lily (*Lilium philadelphicum*), or other species that are in bloom during the adult life cycle of the Dakota skipper (Dana 1991).

Suitable habitat is defined as native grassland that contains one or more primary constituent elements for the skipper to complete its entire life cycle, including breeding, feeding/foraging, and sheltering behaviors. Dispersal habitat is defined as grassland lacking primary constituent elements needed to complete the entire Dakota skipper life cycle. Grassland was defined as dispersal habitat if it lacked forbs and bunchgrasses. Unsuitable habitat includes everything that does not fit into the above groups and would include cultivated lands, wooded areas, wetlands, and streams (USFWS 2014c)

The nearest USFWS designated critical habitat for the Dakota skipper is located approximately 26 mi (42 km) southeast of the Project (Figure 4). The species is known to occur in Williams County; however, the Project is located approximately two miles outside of the USFWS's known range of the Dakota skipper (USFWS 2023a). The USFWS range is the official legal definition for the species' extent.

The field survey documented that the Survey Area is used for row crop agriculture and suitable habitat and/or foraging habitat is not present.



**Figure 4. Known sightings, species range, and designated critical habitats in relation to the proposed Springbrook Substation.**

### 3.3.4 *Piping Plover*

The piping plover (*Charadrius melodus*) is a migratory shorebird that breeds in North Dakota. Suitable nesting habitat for piping plovers includes alkaline wetlands and the shoreline of the Missouri River system; this habitat has been characterized as sparsely vegetated channel sandbars, sand and gravel beaches on islands, temporary pools on sandbars and islands, and island margins that interface with the river channel. The piping plover feeds on worms, insects, and mollusks. The decline of piping plover populations is due to the loss of habitat from river impoundment(s), as well as the degradation of habitat related to the channelization river systems, nest predation, and human disturbance (USFWS 1985).

Critical habitat for the Northern Great Plains piping plover has been designated on alkali lakes and wetlands, the Yellowstone River, and Missouri River in North Dakota. The physical and biological features that are essential to the conservation of the species, referred to as the primary constituent elements, require special consideration for protection. These include sparsely vegetated alkaline wetlands, sand and gravel beaches on islands, temporary pools on sandbars and islands, and island margins that interface with the river channel. This Project is approximately 11.5 mi (18.5 km) north of the nearest critical habitat, which is the Missouri River system. (Figure 4; USFWS 2023b). The field survey documented that the Survey Area is predominantly cropland and contains wetlands that are well vegetated and do not provide bare ground suitable for nesting habitat.

### 3.3.5 *Rufa Red Knot*

The red knot (*Calidris canutus*) is a shorebird that breeds in the central Canadian Arctic, with primary breeding grounds in Nunavut Territory, but some potential breeding habitat extending into the Northwest Territories (USFWS 2013b). The rufa red knot (*C. canutus rufa*) winters along the Atlantic coasts of Argentina and Chile (particularly the island of Tierra del Fuego), the north coast of Brazil, and further north into Mexico and the southeast United States (USFWS 2014b). During migration, the rufa red knot primarily follows the Atlantic coastline to and from breeding and wintering grounds. However, geolocator results from red knots wintering in Texas showed that a comparatively small population of birds migrate using the Central Flyway across the Midwestern US and may have a northern Great Plains stopover (USFWS 2013b). Rufa red knots spend two to three months annually on the breeding grounds located in northern Canada.

Red knots are specialized molluscivores, feeding primarily on hard-shelled mollusks in relatively soft, wet sand/sediment (USFWS 2014b). In addition to mollusks, red knots may feed upon shrimp, crabs, marine worms, horseshoe crab (*Limulus* spp.) eggs, and other similar invertebrates. On the breeding grounds, rufa red knots feed mostly on terrestrial invertebrates and grass shoots/seeds (USFWS 2013b).

The shoreline of the Missouri River provides stopover habitat for red knots utilizing a midcontinental migratory route during annual migrations. However, the species is rare and is not reported in North Dakota every year. Reported historical sightings since 1900 (Igl 2015) are primarily composed of single individuals or relatively small flocks; however, on rare occasions, larger flocks have been reported. Many of these sightings have been made in the prairie pothole

region during the spring migration in late April through May. An increase in future sightings may result from an increase in public awareness.

The red knot migrates twice annually from its breeding grounds in the Arctic to wintering habitat in southern climates. It does not nest in North Dakota but may use areas along the Missouri River as stopover habitat. The Project is located approximately 11.5 mi (18.5 km) north of the Missouri River system and the Survey Area does not have suitable shoreline stopover habitat for the rufa red knot.

### **3.3.6 Monarch Butterfly**

The monarch butterfly (*Danaus plexippus*) is currently a candidate for listing under the Endangered Species Act (ESA), and a listing decision is currently anticipated in 2024. Candidate species do not receive statutory protections under the ESA, but are reevaluated annually for listing priority, and, therefore, are likely to be listed in the future.

The species occurs throughout the Great Plains and much of North America. Monarchs prefer open habitats with flowering plants and lay their eggs exclusively on milkweeds (*Asclepias* spp.), which the larvae feed on until pupation (U.S. Forest Service [USFS] 2021). Monarch butterflies will breed in North Dakota during the summer and migrate south to Mexico for the winter; eventually, the butterflies will make their way back to North Dakota during spring migration. Suitable habitat, including wetlands, roadsides with common milkweed, and upland grassland habitat with flowering species, was observed during the field survey. The Survey Area is used for row crop agriculture and is unlikely to provide usable habitat for the monarch butterfly.

## **3.4 Nesting Raptor Survey**

No active raptor nests were observed within 0.5-mi (0.8-km) of the Survey Area

## **3.5 Noxious Weed Inventory**

A pedestrian survey of the Survey Area was conducted for state and county listed noxious weeds. Noxious weeds were not observed during the field survey.

## **3.6 Tree and Shrub Inventory**

No trees or shrubs were documented during the field survey.

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## **Appendix A. Project Field Photographs**



**Photograph 1. View looking west across Wetland 1, a PEMA classified wetland. This wetland has been partially field with rocks and farmed through.**



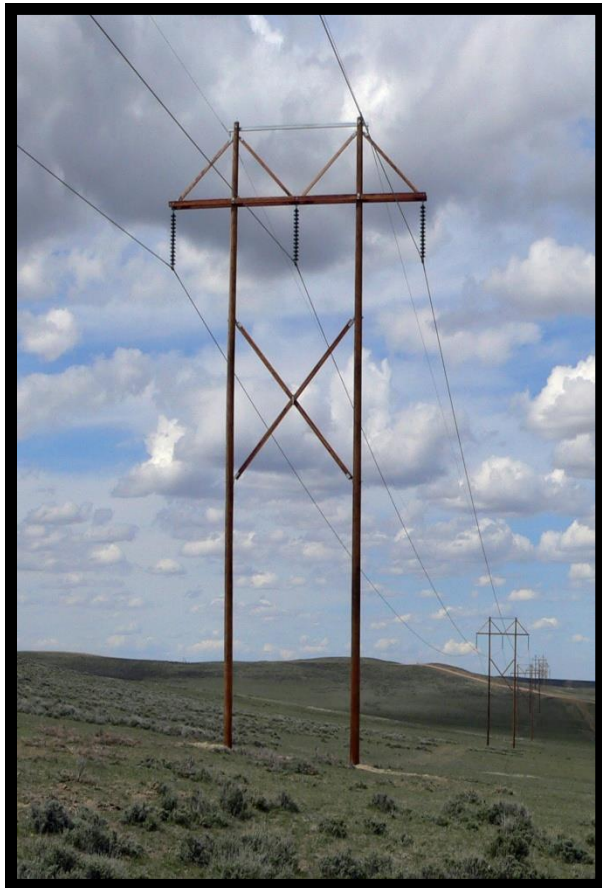
**Photograph 2. View looking west across Wetland 1, a PEMA classified wetland. This wetland has also been partially field with rocks and farmed through**



**Photograph 3. View looking across Wetland 3. Wetland 3 is a farmed through PEMA classified wetland. The crop (wheat) displayed water stress and wheel ruts were present, indicating saturated soils during planting season.**

**Appendix B. Basin Electric Power Cooperative Avian and Bat Protection Plan**

# Basin Electric Power Cooperative Avian and Bat Protection Plan (ABPP)



**BASIN ELECTRIC  
POWER COOPERATIVE**

A Touchstone Energy® Cooperative 

# Adoption and Approval of Basin Electric Power Cooperative's Avian and Bat Protection Plan

This plan is hereby adopted and approved.

By: T. Brickhouse  
Todd Brickhouse, Interim CEO and General Manager  
Basin Electric Power Cooperative

Date: October 12, 2023

<b>Version</b>	<b>Date Issued</b>	<b>Date Effective</b>	<b>Changes or Additions</b>	<b>Owner's Initials</b>
1.0	04/05/2013	05/01/2013	Original	ENFD
2.0	08/26/2022	09/01/2022	Updated Forms	ENFD
3.0	10/2/2023	10/9/2023	Updated Forms	ENFD

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## 1.0 Introduction

Basin Electric Power Cooperative (Basin Electric) is one of the largest electric generation and transmission (G & T) cooperatives in the United States. Basin Electric, along with its subsidiaries, has long promoted the balance between environmental responsibility and providing affordable electricity to its members. This balance is a consideration during all activities of Basin Electric including but not limited to the generation of electricity, developing, siting and building new projects, expansion and updating of current facilities, and building and maintaining transmission lines.

Basin Electric recognizes that necessary operations may impact the environment, including avian and bat species. Basin Electric has developed this Avian and Bat Protection Plan (ABPP) with the overall goal of minimizing avian and bat mortality. This ABPP attempts to identify and potentially remedy situations where negative impacts to avian and bat species may occur. In addition, it provides guiding principles for Basin Electric project developers to build mechanisms to minimize potential impacts to avian and bat species into projects. This ABPP also provides guidelines for training, a monitoring and reporting system, and quality control.

Basin Electric is subject to a number of state and Federal laws that protect avian and bat species. Among the Federal regulations are the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA) and the Endangered Species Act (ESA). These laws, and others, provide protection for some of the wildlife species that may come into contact with Basin Electric facilities and operations.

Basin Electric's ABPP addresses issues associated with overhead transmission lines such as roosting and collision as well as wind turbine disturbance and collision issues. Many of the environmental considerations, for example siting, are applicable to both transmission lines and wind farms. Sections of the ABPP may address concerns collectively or specifically directed to a particular structure or activity, depending upon applicability. While distribution lines also pose a risk to avian species, this document is intended for use by Basin Electric, and therefore, focuses on transmission lines and wind turbines only.

Basin Electric believes that environmental responsibility is a cooperative-wide issue. The goal of this ABPP is to minimize the risks to avian and bat species from Basin Electric wind farms and transmission lines. Basin Electric believes that the development of an ABPP is an evolving process. As more data is collected, the ABPP will be modified to reflect the lessons learned as well as incorporating advances in research and technology. It is Basin Electric's intent that the ABPP will continue to expand, develop and improve as the knowledge regarding these issues within the industry advances and regulatory requirements change.

## 2.0 Cooperative Policy

Basin Electric is committed to a policy of environmental responsibility, coupled with providing reliable electricity in as low a cost manner as possible to cooperative members. This commitment extends to compliance with regulatory requirements protecting wildlife, obtaining and complying with all state and Federal permits, and making reasonable and prudent efforts to minimize the impact and mortality of avian and bat species while building and maintaining electric generation and transmission facilities.

This ABPP supports that commitment. It provides guidelines for the implementation of cooperative policy and provides a reference for project developers. Through this ABPP, Basin Electric commits to the following:

- Execute the policies and guidelines outlined in this ABPP to the extent practicable while ensuring the health and safety of employees;
- Execute the policies and guidelines outlined in this ABPP to the extent practicable under engineering and economic constraints;
- Act in accordance with all applicable state and Federal regulations regarding avian and bat species;
- Provide necessary training for applicable Basin Electric personnel in methods to minimize impact, identify species of concern, and proper mechanisms for monitoring and reporting;
- Whenever it is reasonably possible, through risk assessment and site selection, Basin Electric will minimize effects to avian and bat species in regard to placement of facilities and supporting infrastructure;
- Design structures to minimize negative impacts to the extent reasonably possible;
- Use best management practices during site construction and maintenance;
- After construction and commissioning, Basin Electric will follow developed monitoring and reporting procedures for mortalities and species of interest as necessary;
- During maintenance activities, Basin Electric will follow developed best management practices;
- As necessary, Basin Electric will consult with local, state and federal experts to gain guidance and share information;
- Whenever reasonable and possible, Basin Electric will take measures to reduce mortality to avian and bat species;
- Basin Electric will implement quality control measures to ensure compliance with the ABPP and identify any necessary updates and/or revisions to the ABPP;
- When retrofitting existing structures, Basin Electric will follow the same standards as new construction whenever practicable.

## 3.0 Permit Compliance

Basin Electric has developed the following process to obtain and comply with all necessary permits and laws pertaining to avian and bat issues. This process may continue past commissioning and through the life of a project, facility or infrastructure. The Basin Electric person(s) assigned to a project or facility as the environmental lead is responsible for obtaining and ensuring compliance with all permits. Basin Electric has facilities in multiple states, and therefore, may be subject to a variety of permits, laws and agencies, depending upon location.

### Permit Process

1. During the project initiation stage, an individual or team from Environmental Services of Basin Electric should be assigned to the project.
2. During the project development stage, the Environmental Services personnel assigned to the project must develop a working list of permits that may potentially be required for the project. This list may continue to develop as the project develops.
3. Basin Electric Environmental Services staff has the lead responsibility for permitting. Environmental Services staff will work with Basin Electric engineering, drafting, GIS, right-of-way, other Basin Electric staff, and consultants to prepare permit applications.
4. When permits have been received, Environmental Services staff will submit the permits to the Records division and notify the project manager of the permit.
5. If the permit contains provisions regarding construction, monitoring and/or reporting, Environmental Services staff must inform appropriate individuals.

## **4.0 Training**

As needed, training on avian and bat issues will be provided for Basin Electric staff as well as contracted staff. This training may vary based on type of project, length of project, project stage, time of year and potentially affected species. An individual's role may dictate the training that may be provided for project development, construction and/or operations. Depending upon the project, training may occur during project development, construction and/or operation. It is not anticipated that all projects will require training at all or any level. Additionally, some projects, such as wind farms, may require project or site specific training to be developed.

## 5.0 Site Selection and Site Design

Site selection applies the risk assessment analysis to potential project sites. In addition, site selection involves Basin Electric meeting with applicable agencies and landowners. Basin Electric is committed to contacting applicable state and federal agencies early in the project development process. These contacts help ensure that avian, bat and other environmental issues are illuminated as soon as possible.

### *Wind Turbine Site Layout and Design*

Basin Electric uses a number of data sources to determine locations of good wind resource. Basin Electric typically sites wind projects as close to existing transmission lines as possible to minimize the construction of new transmission lines. All collector lines and communication cables are buried to avoid habitat loss and prevent collisions. Typically, this infrastructure would be adjacent to the access roads or along public rights-of-way or easements when possible.

### *Wind Turbine Siting Parameters*

Generally, in addition to high quality wind resource and available transmission, Basin Electric looks to site wind turbines in areas of high pre-existing disturbances when possible. In areas that are going to be monitored closer for wind potential, simultaneously, these areas may also be examined closer for potential avian and bat concerns. A Potential Impact Index (PII) may be done on any site being considered for possible development.

Often, the wind farm layout goes through a series of iterations. Each turbine is micrositied in relation to wind potential, wildlife, permitting, and other environmental and cultural constraints. Specifically, the following guidelines may be used when siting each wind turbine:

- Distance from section line or road;
- Distance from occupied residence;
- Out of hydric soils of a wetland;
- Near edges of a grassland;
- Avoid land with encumbrances, easements or other restrictions;
- Distance from a missile site or military installations;
- Distance from another turbine in the predominant wind direction;
- Distance from a transmission line; and
- Potential impacts on human, cultural, environmental, and natural resources and populations.

### *Transmission Line Siting Parameters*

A preferred transmission line route is chosen from a number of alternatives. The preferred route would be selected after assessing each alternative based on a series of project-specific criteria. The following specific guidelines may be used when siting transmission lines:

- Length of the transmission line;
- Right-of-way requirements and availability;
- Land use considerations such as visual impacts, proximity to residences, and impact on agricultural activities as well as existing and future land use;

- Environmental resource considerations such as impacts on cultural or biological resources such as wildlife, plants, and wetlands;
- Jurisdiction and regulatory considerations;
- Conflicts with airport height restrictions;
- Cost; and
- Requirements of Federal and state law.

The technical performance of each transmission line alternative must be checked with a system analysis to ensure the project meets National Electric Reliability Council standards. Often the termination points of a transmission line are dictated by a need to reinforce a certain area of the transmission system or to provide access for a new generation or load. Usually there is flexibility in the routes of a transmission alternative as long as the line is terminated at the critical sending and receiving locations.

There are a number of factors regarding transmission line placement that may be considered when evaluating the potential impact the transmission line may have to avian species. Among these factors are proximity, vegetation and topography. Engineering and economic concerns must also be considered.

Proximity refers to the distance of the transmission line to any area of prime habitat or potential stopover habitat such as shallow wetlands. The closer the transmission line is to the habitat, the greater the chance for potential collisions.

In instances where the transmission line may be near areas where birds concentrate (e.g., wetlands, stream crossings, historic staging areas, roosts and nesting colonies) Basin Electric will assess if bird diversion devices should be utilized. These devices enhance line visibility, and therefore can reduce the risk of collision.

## 6.0 Construction Design Standards and Development Practices

### *General Construction Standards*

Basin Electric will use best management practices during construction to minimize impacts to avian and bat species and their habitats. Pre-construction surveys may or may not be conducted depending upon the project. Examples of potential pre-construction surveys are breeding bird surveys, raptor breeding surveys, habitat of concern surveys and lek identification surveys. If pre-construction surveys are conducted, appropriate actions will be taken during construction as a result of the survey(s).

Wetlands will be avoided to the extent practicable during the construction phase of any project. If impacts to United States Army Corp of Engineers (USACE) jurisdictional waters are unavoidable, then Basin Electric will seek coverage under a Section 404 USACE Nationwide Wetland Permit. Permanent impacts to jurisdictional waters will be mitigated according to USACE requirements.

### *Wind Farm Construction*

The building of new roads for wind farm construction and maintenance will be minimized. The existing road system will be used to the extent possible. When additional access roads are necessary, they will generally be built on ridges away from wetlands. When possible, new roads will follow the route of underground collector lines to minimize surface disturbance, and minimizing the disturbance of natural prairie and habitat. Additional road width necessary for construction will be reclaimed after construction.

Typically, temporary meteorological towers associated with a wind farm will be removed when construction begins. Any permanent meteorological tower will be freestanding and have no guy wires except for unusual circumstances when no other operations are practicable. Basin Electric continues to monitor new technology advancements in the market to find additional, less intrusive ways to monitor meteorological conditions.

Training for construction personnel will be site specific. Any observation of threatened or endangered avian and bat species will be reported to state and Federal agencies according to site-specific protocol. In the event of a sighting, construction activities, including curtailing would proceed according to site-specific protocol. Additionally, trained biologists may be on site during construction. This will be determined on a project by project basis.

Basin Electric will use best management practices during construction and operation of any wind farm to protect topsoil and adjacent wetland resources and to minimize soil erosion. Practices may include containing excavated material, use of silt fences, protecting exposed soil, stabilizing restored material, and revegetating disturbed areas with native species to preserve habitat.

### *Transmission Line Construction*

Basin Electric uses *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006) and *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012), or the most current versions of these documents as guidance. In general, in areas where electrocution may be a concern, a minimum of 150 cm (60 in) will be provided between phase conductors. Basin Electric builds and maintains transmission lines.

These transmission lines are constructed such that electrocution is typically not a concern. In some situations, perch deterrents may be necessary to discourage birds from landing on or utilizing areas where avian safety is a concern. A combination of the above options may be necessary to protect avian species to the extent possible.

## 7.0 Post-construction Monitoring and Reporting and Management

Active monitoring and/or use surveys for wind farms and transmission lines are not considered routine operation. Rather, incidental finds or finds resulting from maintenance activities would typically be documented and/or reported. All monitoring protocols, if necessary, will be developed on a site-specific basis. Depending upon the site or project, monitoring efforts may be very limited or unnecessary. If monitoring is appropriate, fatality monitoring and/or avian use surveys may be done.

Basin Electric considers incidental finds and reporting of avian and bat injuries or mortalities on the project site a basic job duty of all on-site personnel. All on-site personnel will be trained in appropriate procedures for identifying and reporting avian or bat injuries or mortalities.

Upon discovery of an injured or deceased avian or bat species on the project site, the following procedure will be followed by on-site personnel.

### 7.1 Wind Farm Operational Monitoring and Reporting

1. Do not remove, touch or move the bird or bat.
2. Photograph the bird or bat and complete the appropriate form.
3. If the bird or bat is a threatened or endangered species or otherwise a species of interest, such as a raptor, immediately notify the Distributed Generation Manager and Environmental Services of Basin Electric. Contact information for Environmental Services is provided on the form in Appendix C.
4. Environmental Services will work with trained biologists for proper handling of the bird or bat and notification of appropriate state and Federal agencies.
5. All completed forms, associated pictures, and any additional documentation will be forwarded to Environmental Services at Basin Electric headquarters in a timely manner.

### 7.2 Transmission Line Monitoring and Reporting

1. Do not remove, touch or move the bird or bat.
2. Complete the appropriate inspection in Minmax by contacting a TSM planner. Photograph the bird, bat or nest. The completed inspection is then automatically emailed to Environmental Services.
3. Environmental Services will work with trained biologists for proper handling of the bird or bat and notification of appropriate state and Federal agencies.
4. All completed forms, associated pictures, and any additional documentation will be forwarded to Environmental Services at Basin Electric headquarters in a timely manner.

### 7.3 Nest Management

Raptors and other avian species may use transmission line poles as a nesting site. The risk of avian electrocution with these nests is not high, but the nests may cause operation and maintenance issues. The Migratory Bird Treaty Act protects all active nests. A nest is

considered active if it has eggs or young birds. If an active nest has the potential to interfere with transmission line operations, the USFWS and the state game and fish department must be conferred with. The Migratory Bird Treaty Act prohibits the collecting of any active nest belonging to a migratory bird. Facility operators will at no time move or destroy any nest without receiving approval from Environmental Services of Basin Electric. Contact information for Environmental Services is provided on the form in Appendix B. Environmental Services will use environmental consultants, the USFWS, and the state game and fish department to determine the best course of action in each situation. Nests of eagles and threatened and endangered species may not be moved or destroyed at any time without consultation with the USFWS and the state game and fish department.

Avian species tend to nest in site specific locations. Therefore, moving a nest does not mean that the nest will not be re-built in the same location. As a result, nesting platforms may need to be utilized. If nesting platforms are to be used, they should be installed on or near the transmission tower that had been utilized for the avian nesting. A nearby, non-energized pole is preferred. The nesting platform should be installed in a way such that nesting materials and avian excrement will not contaminate the lines. If a platform is used, plastic poles, corrugated pipe, or other materials may be placed on the transmission structure to discourage the building of nests particularly in situations where nest building in general should be discouraged for the protection of people, the nesting birds, and/or the power system.

## **8.0 Consultation and Information Sharing**

Basin Electric understands that a great deal of information regarding wildlife interactions with wind turbines, transmission lines and other structures may potentially be gained through the use of routine data collection and surveys. This information, in addition to information gained from other utilities, may result in better practices and new technology that provides more protection to wildlife, particularly avian and bat species. In efforts to facilitate this information gathering, Basin Electric will consider all requests for non-proprietary data and information.

Additionally, Basin Electric looks to the USFWS and state game and fish departments to provide consultation services and expert advice throughout the life of projects.

## 9.0 Mortality Reduction Measures

The information gained through risk management activities, along with additional data collection, will be analyzed by Basin Electric Environmental Services staff and/or wildlife consultants. This analysis will then be translated for future project development as best practices to prevent avian and bat mortality and injury. This information will also be used by Basin Electric to determine whether or not a mortality reduction plan for the project or site is warranted. The data collected through the implementation of the ABPP will also help determine the need for a mortality reduction plan.

If a mortality reduction plan is needed there are a number of elements that may be included. A risk assessment may provide information predicting the best approach. Biological and electrical design information should also be utilized to prioritize transmission poles, identify benefits and causes of injury or mortality to avian species and bats.

## **10.0 Avian and Bat Enhancement Options**

Basin Electric has for many years provided excellent avian habitat through the use of reclaimed mine land, and other mitigation and reclamation projects and opportunities Basin Electric has also sought out opportunities to partner in habitat conservation with non-governmental organizations. In addition, Basin Electric welcomes collaboration between Basin Electric and volunteer groups and service organizations to enhance avian and bat populations.

## **11.0 Quality Control**

Quality control and review is vital to ensuring that the ABPP accomplishes the goals set forth and remains a useful tool in avian and bat protection. Training will be conducted annually for facility maintenance staff. The ABPP will be reviewed and updated as needed by Basin Electric environmental and project staff, and/or consultants.

## 12.0 Key Resources

The following have been identified as key resources for the ABPP, particularly within Basin Electric's Service area.

### **U.S. Fish and Wildlife Service Migratory Bird Permit Regional Offices**

*Region 3: (Iowa, Illinois, Indiana, Minnesota, Missouri, Michigan, Ohio, Wisconsin)*

U.S. Fish and Wildlife Service Migratory Bird Permit Office

One Federal Drive

Fort Snelling, MN 55111

Telephone (612) 713-5436

Fax: (612) 713-5393

Email: [permitsR3MB@fws.gov](mailto:permitsR3MB@fws.gov)

*Region 6: (Colorado, Kansas, Montana, North Dakota, Nebraska, South Dakota, Utah, Wyoming)*

U.S. Fish and Wildlife Service Migratory Bird Permit Office

P.O. Box 25486 DFC (60154)

Denver, CO 80225-0486

Telephone: (303) 236-8171

Fax: (303) 236-8017

Email: [permitsR6MB@fws.gov](mailto:permitsR6MB@fws.gov)

### **U.S. Fish and Wildlife Service Office of Law Enforcement**

*National Headquarters*

Office of Law Enforcement

U.S. Fish and Wildlife Service

4401 North Fairfax Drive,

MS-LE-3000

Arlington, Virginia, USA 22203

Telephone: (703) 358-1949

Fax: (703) 258-2271

*Great Lakes – Big Rivers Region (3): Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin*

U.S. Fish and Wildlife Service

Office of Law Enforcement

One Federal Drive

Fort Snelling, Minnesota, USA 55111-0045

Telephone (612) 713-5320

Fax: (612) 713-5283

*Mountain-Prairie Region (6): Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming*

U.S. Fish and Wildlife Service

Office of Law Enforcement

P.O. Box 25486 - DFC

Denver, Colorado USA 80225

Telephone: (303) 236-7540  
Fax: (303) 236-7901

## **U.S. Fish and Wildlife Service Ecological Services Field Offices**

U.S. Fish and Wildlife Service  
Montana Ecological Services Field Office  
585 Shepard Way  
Helena, MT 59601  
Telephone: (406) 449-5225  
Fax: (406) 449-5339  
Email: [MontanaFieldOffice@fws.gov](mailto:MontanaFieldOffice@fws.gov)  
<http://www.fws.gov/montanafieldoffice>

U.S. Fish and Wildlife Service  
Nebraska Ecological Services Field Office  
203 West Second Street  
Federal Building, Second Floor  
Grand Island, NE 68801-5907  
Telephone: (308) 382-6468  
Fax: (308) 384-8835  
Email: [June\\_Deweese@fws.gov](mailto:June_Deweese@fws.gov)  
<http://www.fws.gov/mountain-prairie/es/Nebraska/index.htm>

U.S. Fish and Wildlife Service  
North Dakota Ecological Services Field Office  
3425 Miriam Avenue  
Bismarck, ND 58501-7926  
Telephone: (701) 250-4481  
Fax: (701) 355-8513  
Email: [northdakotafieldoffice@fws.gov](mailto:northdakotafieldoffice@fws.gov)  
<http://www.fws.gov/northdakotafieldoffice>

U.S. Fish and Wildlife Service  
South Dakota Ecological Services Field Office  
420 S. Garfield Avenue, Suite 400  
Pierre, SD 57501-5408  
Telephone: (605) 224-8693  
Fax (605) 224-9974  
Email: [southdakotafieldoffice@fws.gov](mailto:southdakotafieldoffice@fws.gov)  
<http://www.fws.gov/southdakotafieldoffice>

U.S. Fish and Wildlife Service  
Wyoming Ecological Services Field Office  
5353 Yellowstone Road, Suite 308A  
Cheyenne, WY 82009  
Telephone: (307) 772-2374  
Fax: (307) 772-2358  
<http://www.fws.gov/wyominges>

## **U.S. Fish and Wildlife Service National Eagle Repository**

U.S. Fish and Wildlife Service  
National Eagle Repository  
Rocky Mountain Arsenal, Building 619  
Commerce City, CO 80022  
Telephone: (303) 287-2110  
Fax: (303) 287-1570  
<http://mountain-prairie.fws.gov/law/eagle>

## **Code of Federal Regulations (CFR) websites**

*Main CFR webpage*  
<http://gpoaccess.gov/cfr/>

*List of migratory birds, 50CFR10.13*

[http://a257.g.akamaitech.net/7/257/2422/01dec20031500/edocket.access.gpo.gov/cfr\\_2003/oct\\_qtr/50cfr10.13.htm](http://a257.g.akamaitech.net/7/257/2422/01dec20031500/edocket.access.gpo.gov/cfr_2003/oct_qtr/50cfr10.13.htm)

*General permit procedures, 50CFR13*

[http://access.gpo.gov/nara/cfr/waisidx\\_03/50cfr13\\_03.html](http://access.gpo.gov/nara/cfr/waisidx_03/50cfr13_03.html)

*Endangered and threatened wildlife and plants, 50CFR17*

[http://access.gpo.gov/nara/cfr/waisidx\\_03/50cfrv2\\_03.html](http://access.gpo.gov/nara/cfr/waisidx_03/50cfrv2_03.html)

*Migratory bird permits, 50CFR21*

[http://access.gpo.gov/nara/cfr/waisidx\\_03/50cfr21\\_03.html](http://access.gpo.gov/nara/cfr/waisidx_03/50cfr21_03.html)

*Eagle permits, 50CFR22*

[http://access.gpo.gov/nara/cfr/waisidx\\_03/50cfr22\\_03.html](http://access.gpo.gov/nara/cfr/waisidx_03/50cfr22_03.html)

## **State Agencies**

Iowa Department of Natural Resources  
502 E. 9th Street  
Des Moines, IA 50319-0034  
Telephone: (515) 281-5918  
Fax: (515) 281-8895  
Email: [webmaster@dnr.iowa.gov](mailto:webmaster@dnr.iowa.gov)  
<http://www.iowadnr.gov/>

Minnesota Department of Natural Resources  
500 Lafayette Road  
St. Paul, MN 55155-4040  
Telephone: (651) 296-6157  
Email: [info@dnr.state.mn.us](mailto:info@dnr.state.mn.us)  
<http://www.dnr.state.mn.us>

Montana Department of Fish, Wildlife and Parks  
1420 East Sixth Avenue  
P.O. Box 200701  
Helena, MT 59620-0701  
Telephone: (406) 444-2535

Fax: (406) 444-4952  
E-mail: [fwpgen@mt.gov](mailto:fwpgen@mt.gov)  
<http://fwp.mt.gov/default.html>

Nebraska Game and Parks Commission  
2200 N 33<sup>rd</sup> Street  
Lincoln, NE 68503  
Telephone: (402) 471-0641  
Email: [ngpc.webmaster@nebraska.gov](mailto:ngpc.webmaster@nebraska.gov)  
<http://www.ngpc.state.ne.us>

North Dakota Game and Fish Department  
100 N Bismarck Expressway  
Bismarck, ND 58501-5095  
Telephone: (701) 328-6300  
Fax: (701) 328-6352  
Email: [ndgf@nd.gov](mailto:ndgf@nd.gov)  
<http://gf.nd.gov/>

South Dakota Department of Game, Fish and Parks  
523 East Capitol Avenue  
Pierre, SD 57501  
Telephone: (605) 773-3485  
Email: [Wildinfo@state.sd.us](mailto:Wildinfo@state.sd.us)  
<http://www.sdgfp.info/Index.htm>

Wyoming Game and Fish Department  
5400 Bishop Boulevard  
Cheyenne, WY 82006  
Telephone: (307) 777-4600  
<http://gf.state.wy.us/>

### **Consultants**

*Corporate Headquarters*  
Western EcoSystems Technology, Inc. (WEST)

2003 Central Avenue  
Cheyenne, Wyoming 82001  
Phone: (307) 634-1756  
Fax: (307) 637-6981  
Email: [admin@west-inc.com](mailto:admin@west-inc.com)  
<http://www.west-inc.com/index.php>

*Midwest-West Region*  
Western EcoSystems Technology, Inc. (WEST)  
Bismarck Branch Office  
4007 State Street, Suite 109  
Bismarck, North Dakota 58503  
Phone: (701) 250-1756

## **13.0 Appendices**

- 13.1 *Appendix A – Dead or Injured Bird Form – Transmission Line and Substation***
- 13.2 *Appendix B – Nest Form – Transmission Line and Substation***
- 13.3 *Appendix C – Dead or Injured Bird or Bat Form – Wind Farm***
- 13.4 *Appendix D - Whooping Crane Notification Form - Wind Farm***

# Dead or Injured Bird Form – Transmission Line or Substation

This form will be completed using the Minmax Inspection tool. Screenshot of actual inspection questions below:

No.	Status	Question	Action	Results	Comments	Question History
1		Take a photograph of the bird	Inspected	Any Text 20 Char	Type Comment Here...	
2		If the bird has a band and is it's visible take a picture of it.	Inspected	Any Text 20 Char	Type Comment Here...	
3		Provide a description of location approximate from a structure or piece of equipment in comments	Inspected	Any Text 20 Char	Type Comment Here...	

Notification to USFWS (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

Notification to State Game and Fish (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

Corrective Action (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

## Environmental Services Contacts

1. Erin Fox Dukart – Office: (701) 557-5557; Cell: (701) 426-8116
2. Ryan King – Office: (701) 557-5558; Cell: (701) 426-9469

# Nest Form – Transmission Line or Substation

This form will be completed using the Minmax Inspection tool. Screenshot of actual inspection questions below:

No.	Status	Question	Action	Results	Comments	Question History
1		Take a photograph of the nest	Inspected	Any Text 20 Char	<input type="checkbox"/> Type Comment Here...	
2		Is the nest active if yes take a picture of the bird if possible?	Inspected	Yes	<input type="checkbox"/> Type Comment Here...	
3		Provide a description of location approximate from a structure or piece of equipment in comments	Inspected	Any Text 20 Char	<input type="checkbox"/> Type Comment Here...	

Notification to USFWS (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

Notification to State Game and Fish (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

Corrective Action (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

## Environmental Services Contacts

1. Erin Fox Dukart – Office: (701) 557-5557; Cell: (701) 426-8116
2. Ryan King – Office: (701) 557-5558; Cell: (701) 426-9469

# Dead or Injured Bird or Bat Form – Wind Farm (Adapted from APLIC 2006)

Date of Form Completion: \_\_\_\_\_ Name of Wind Farm: \_\_\_\_\_

## AVIAN/BAT INFORMATION

### Avian Species

- Bald Eagle
- Golden Eagle
- Whooping Crane
- Hawk (specify if possible): \_\_\_\_\_
- Owl (specify if possible): \_\_\_\_\_
- Waterfowl (specify if possible): \_\_\_\_\_
- Other (specify if possible): \_\_\_\_\_

If unable to identify, please describe:

\_\_\_\_\_

### Bat Species

Please describe:

\_\_\_\_\_

Bird or Bat Count: \_\_\_\_\_ Did avian/bat die: Yes No

If any bands or tags, please notify Environmental Services and write the tag/band number and agency \_\_\_\_\_

Physical Condition of Bird or Bat: (Body intact, just feathers, type of injury, etc).

\_\_\_\_\_

\_\_\_\_\_

Sign of Death or Injury (circle one)      Collision      Electrocutation      Shot      Roadkill  
Unknown      Other: \_\_\_\_\_

Date Found: \_\_\_\_\_ Time Found: \_\_\_\_\_

If known, describe how the bird or bat was injured or died (bird contacted transformer bushings, turbine collision, etc.) \_\_\_\_\_

\_\_\_\_\_

Weather conditions at time of death if known (e.g. rainy and cold, sunny and warm, etc)

---

Status of carcass/remains:            No carcass            Left on-site

**LOCATION INFORMATION**

Closest Turbine Identification No. \_\_\_\_\_

County and State: \_\_\_\_\_

Finder's Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Location Description (Include nearest structure, distance from structure, etc.)

\_\_\_\_\_  
\_\_\_\_\_

Description of Terrain and Vegetation in Area (e.g. near agriculture area, near wetlands, rugged terrain, native prairie, dense city area, residential housing, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Nest visible nearby? If so, please provide detailed description of the size and location of the nest. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Comments/Additional Information:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---

Notification to USFWS (if necessary) \_\_\_\_\_ Date \_\_\_\_\_  
Notification to State Game and Fish (if necessary) \_\_\_\_\_ Date \_\_\_\_\_  
Corrective Action (if necessary) \_\_\_\_\_ Date \_\_\_\_\_

---

### **Environmental Services Contacts**

1. Steve Smokey – Office (701) 557-5180; Cell: (701) 204-8197
2. Erin Fox Dukart – Office: (701) 557-5557; Cell: (701) 426-8116
3. Ryan King – Office: (701) 557-5558; Cell: (701) 426-9469
4. Joe Fiedler - Office (701) 557-5094; Cell: (701) 390-3633

# PrairieWinds Whooping Crane Notification

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Name of Person Calling: \_\_\_\_\_

Phone Number of Caller: \_\_\_\_\_

Description of the Bird: \_\_\_\_\_

Sighting Location: \_\_\_\_\_

If Killed or Wounded, Location: \_\_\_\_\_

## The Following People Need to be Notified Immediately:

1. Joe Fiedler - Office: (701) 557-5094; Cell: (701) 390-3633
2. Erin Fox Dukart - Office: (701) 557-5557; Cell: (701) 426-8116
3. Ryan King – Office: (701) 557-5558; Cell: (701) 426-9469
4. Steve Smokey - Office: (701) 557-5180; Cell: (701) 204-8197
5. Lindsey Chumley - Office: (701) 557-5038; Cell: (701) 400-8784

Date of Turbine(s) Shutdown: \_\_\_\_\_ Time of Turbine(s) Shutdown: \_\_\_\_\_

Wind Turbine ID Number(s) Shutdown: \_\_\_\_\_

Date of Turbine Restart: \_\_\_\_\_ Time of Turbine Restart: \_\_\_\_\_

Date the Park was Shutdown: \_\_\_\_\_ Time the Park was Shutdown: \_\_\_\_\_

Additional Comments:

Name: \_\_\_\_\_

Whooping Crane Migration Season:

- April 1<sup>st</sup> to May 15<sup>th</sup>  
September 10<sup>th</sup> to October 31<sup>st</sup>