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

# Tande to Saskatchewan 230-kV Transmission Line
# Basin Electric Power Cooperative
# Burke, Divide, and Mountrail Counties, North Dakota


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A Touchstone Energy® Cooperative

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Appendix C Policies and Commitments Statement to Limit Environmental Impacts
Appendix D Notice to Construct Approved Reliability Network Upgrades
Appendix E Cultural Resources Report (Redacted)
Appendix F Unanticipated Discovery Plan for Cultural Resources and Human Remains
Appendix G Natural Resource Inventory Report
Appendix H Agency Notification Letters and Responses
Appendix I Project Information Pamphlet for Landowners
Appendix J International Boundary Commission Approval
Appendix K Landowner Waivers

# 1.0 INTRODUCTION

Pursuant to North Dakota Century Code (NDCC) Section 49-22-08.2, Basin Electric Power Cooperative (Basin Electric) submits this consolidated application (Application) for a North Dakota Public Service Commission (Commission) Certificate of Corridor Compatibility (Certificate) and Transmission Facility Route Permit (Route Permit) to construct the Tande to Saskatchewan 230-kilovolt (kV) Transmission Project (Tande Circuit). The Tande Circuit is part of a project consisting of two independent 230-kV transmission lines from existing Basin Electric substations to the Canadian border, called the Wheelock and Tande to Saskatchewan 230-kV Transmission Project (Project). The other circuit (Wheelock Circuit) will be applied for in a separate consolidated application. The Tande Circuit is located in Burke, Divide, and Mountrail Counties, North Dakota.

The Tande Circuit is an approximately 58-mile-long electric transmission line connecting Basin Electric's existing Tande Substation, located near Tioga, North Dakota (ND), to the United States/Canadian border, near Crosby, ND. Saskatchewan Power Corporation (SaskPower), a generation and transmission provider in Saskatchewan, Canada, will continue the construction of the transmission line from the international border to the proposed Tableland Substation, near Estevan, Saskatchewan, Canada, see **Figure 1-1.**

The Southwest Power Pool Inc. (SPP) is the regional transmission organization (RTO) that administers bulk electric transmission system reliability upgrades and generation interconnections. SPP identified deficiencies in the transmission capability between the United States and Canada based on the request for additional transmission service from SaskPower. The Project was approved by the SPP Aggregate Transmission Service Study (ATSS) in 2022.

Basin Electric is an electric power generation and transmission cooperative, headquartered in Bismarck, ND. Basin Electric generates and transmits wholesale electricity to approximately 139-member rural cooperatives located in a 9-state service area, serving three million customers on their respective systems. Basin Electric received a Notice to Construct from SPP for the Project in June 2023 (see **Appendix D**). Basin Electric is the Project's designated transmission owner.

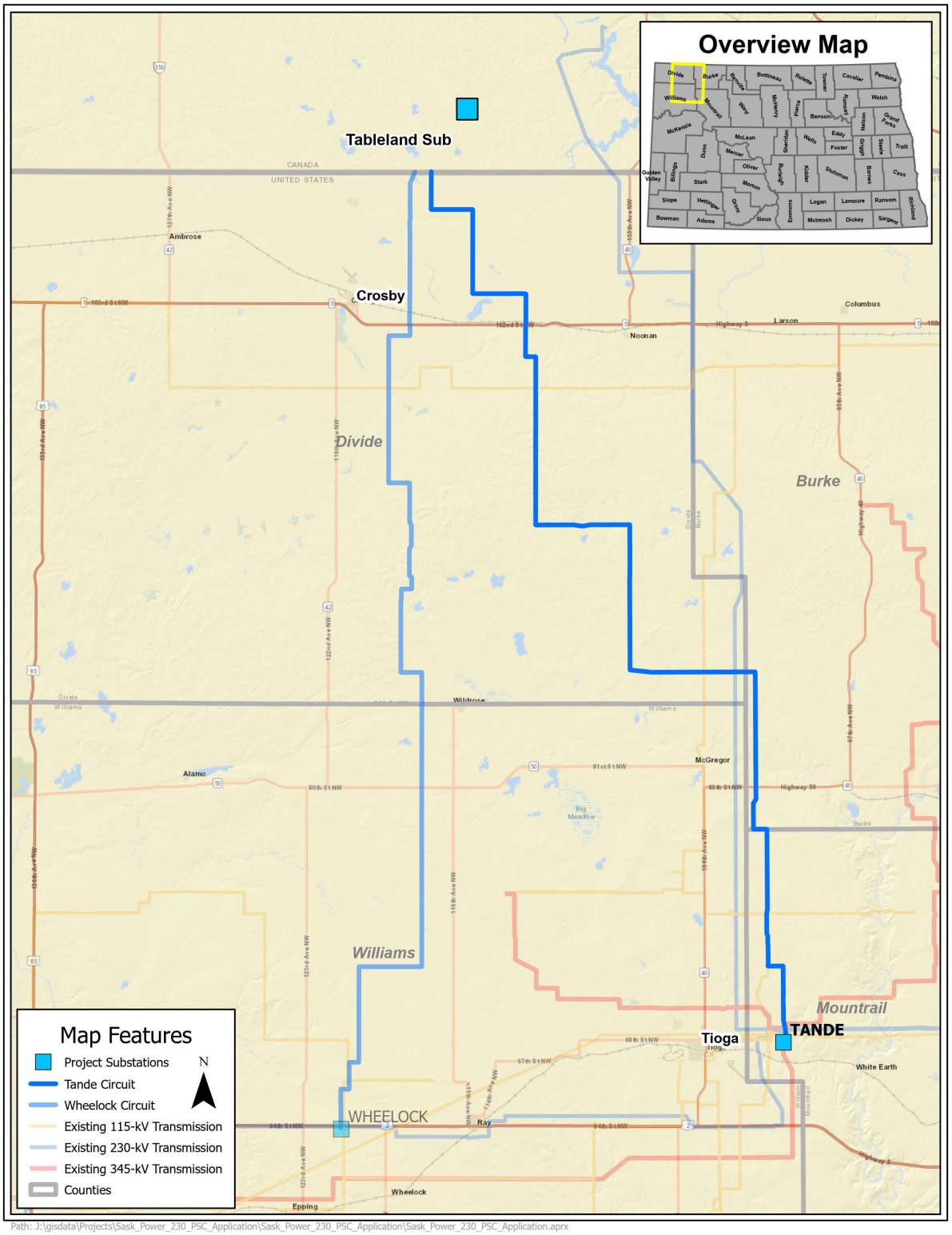


**Figure 1-1: Tande Circuit Overview Map**

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

The North Dakota Energy Conversion and Transmission Facility Siting Act requires an application for a Certificate to meet the criteria set forth in NDCC Chapter 49-22 and the North Dakota Administrative Code (NDAC) Article 69-06. The routing of a transmission facility is to be made "in an orderly manner compatible with environmental preservation and the efficient use of resources" (NDCC Section 49-22-02). As outlined in this Application, Basin Electric will comply with the exclusion and avoidance areas and selection criteria set forth in NDAC Section 69-06-08-02 in the design of the Tande Circuit. In addition, sufficient design and technical information have been provided for a thorough evaluation. **Table 1-1** below outlines the requirements to fulfill a Certificate and Route Permit application and the Application section that addresses the requirement.

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

| Description | | Section(s) Addressed |
|---|---|---|
| **NDAC 69-06-05-01 - Transmission Facility Permit** | | |
| **Subsection 2 - Contents** | | |
| a. | A description of the following: | |
| a. (1) | The type of facility proposed | 1.0, 2.1, 4.1 |
| a. (2) | Purpose of the facility | 1.0, 2.1 |
| a. (3) | The technology to be used | 1.0, 4.1.1, 4.1.2, 4.1.3 |
| a. (4) | The type of product to be transmitted | 1.0, 4.1.1, 4.1.2 |
| a. (5) | The source of the product to be transmitted | 1.0, 1.3, 2.1, Appendix A |
| a. (6) | The final destination of the transmission line | 1.0, 1.3, 2.1, 4.1, Appendix A |
| a. (7) | The proposed size and design and any alternate size or design that was considered, including: | 1.0, 1.2, 1.3, 1.8, 3.6, 4.1.1, 4.1.2 |
| | (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 | |
| b. | The anticipated time schedule for accomplishing major events, including: | 1.5 |
| | (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. | |
| 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. | 6.0, Appendix E, Appendix G, Appendix H |
| 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, 1.3 |
| 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 |
| 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. | 3.5 |
| 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. | 4.9, Appendix C |

| Table 1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist | | |
|---|---|---|
| **Description** | | **Section(s) Addressed** |
| 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, 3.6, 4.1, 5.1, Appendix A, Appendix E, Appendix G |
| 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. | 1.3, 2.2, 3.1, 3.2, 3.3, 3.4, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8 |
| 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, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8 |
| m. | Qualifications of each person involved in the corridor location study. | 8 |
| 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. | Appendix A |
| 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, 6 |
| 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 |
| **NDAC 69-06-08-02 - Transmission Facility Corridor and Route Criteria** | | |
| **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, Appendix A |
| 2 | Avoidance Areas | 3.2, Appendix A |
| 3 | Selection Criteria | 3.3, Appendix A |
| 4 | Policy Criteria | 3.4 |
| **NDCC 49-22-08 - Application for a certificate - Notice of filing - Amendment - Designation of a site or corridor.** | | |
| **Section 1 - An application for a certificate must be in such form as the Commission may prescribe, containing the following information:** | | |
| a. | A description of the size and type of facility. | 1.0, 4.1 |
| b. | A summary of any studies which have been made of the environmental impact of the facility. | 5.4, 5.7, 5.8, Appendix E, Appendix G |
| 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, 1.3, Appendix A |
| 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 |
| 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 | 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 |
| 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, 3.5 |
| i. | Such other information as the applicant may consider relevant or the commission may require. | 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 |
| **NDCC 49-22-08.1 - Application for a permit - Notice of filing - Amendment - Designation of a route.** | | |
| **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:** | | |
| a. | A description of the type, size and design of the proposed facility. | 1.0, 4.1 |
| b. | A description of the location of the proposed facility. | 1.0, 1.3 |
| 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, 3.5 |

| Table 1-1: Certificate of Corridor Compatibility and Route Permit Criteria Checklist | | |
|---|---|---|
| **Description** | | **Section(s) Addressed** |
| 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. | 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 |
| e. | A description of the right-of-way preparation and construction and reclamation procedures. | 4.2, 4.5, 4.10 |
| f. | A statement setting forth the manner in which: | 1.4, 4.5, Appendix I |
| | (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. | |
| g. | Such other information as the utility may consider relevant or the Commission may require. | 3.7 |
| **NDCC 49-22-09 - Factors to be considered in evaluating applications and designation of sites, corridors, and routes.** | | |
| **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:** | | |
| 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 E, Appendix G |
| b. | The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects. | Not Applicable |
| c. | The potential for beneficial uses of waste energy from a proposed energy conversion facility. | Not Applicable |
| d. | Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated. | 5 |
| e. | Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects. | To be determined |
| f. | Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated. | 3.5, 5.5.2, 5.6.2, 5.7.2, 5.8.2 |
| g. | The direct and indirect economic impacts of the proposed facility. | 5.1 |
| 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. | 3.5, 5.5, 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, 5.4, Appendix E |
| 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, 5.8.2, Appendix G |
| k. | Problems raised by federal agencies, other state agencies, and local entities. | 6, Appendix H |

## 1.2 Tande Circuit Terms

Key terms used in this Application associated with the Tande Circuit are defined in **Table 1-2.**

| Table 1-2: Tande Circuit Terms | |
|---|---|
| **Term** | **Definition/Description** |
| Tande Circuit Route | In accordance with NDCC Section 49-22-03(14), "Route" is defined as "the location of an electric transmission facility within a designated corridor." The Tande Circuit Route referred to herein is the approximately 58-mile-long transmission line centerline. |
| Tande Circuit Corridor | In accordance with NDCC Section 49-22-03(5), "Corridor" is "the area of land where a designated route may be established for a electric transmission facility." The Tande Circuit Corridor is 125 feet wide, which is the easement size and width that will be used for construction and maintenance throughout the life of the Tande Circuit. The Tande Circuit Corridor encompasses the Tande Circuit Route. |
| Study Area | The Study Area analyzed for the Tande Circuit is one-mile wide (0.5 mile on either side of the Tande Circuit Route) and encompasses approximately 37,322 acres.[a] |
| [a] NDAC Section 69-06-05-01(2)(f) states that the "width of the 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." For the Tande Circuit, Basin Electric proposes a 125-foot-wide Corridor with a one-mile-wide Study Area, the combination of which is sufficient for the Commission to evaluate the factors addressed in NDCC Section 49-22-09. | |

## 1.3 Tande Circuit Location

The Tande Circuit is located in Burke, Divide, and Mountrail Counties in North Dakota. The Tande Circuit Route is within primarily rural areas, starting approximately 3.8 miles west of Tioga, ND at the Basin Electric owned Tande Substation and terminating at the Canadian border, approximately 6.8 miles northeast of Crosby, ND. **Table 1-3** shows the Township, Range, and Sections of the Tande Circuit.

**Table 1-3: Tande Circuit Public Land Survey System Locations**

| County | Township | Range | Section |
|---|---|---|---|
| Burke | 159N | 94W | 6, 7, 18, 19, 30 |
| | 160N | 94W | 30, 31 |
| Divide | 160N | 95W | 6, 7, 18, 19, 25, 26, 27, 28, 29, 30 |
| | 161N | 95W | 19, 20, 21, 28, 33 |
| | 161N | 96W | 2, 11, 14, 23, 24 |
| | 162N | 96W | 2, 11, 14, 23, 26, 35 |
| | 163N | 96W | 5, 6, 8, 17, 20, 26, 27, 28, 29, 35 |
| | 163N | 97W | 1 |
| | 164N | 97W | 25, 36 |
| Mountrail | 157N | 94W | 5, 6, 8 ,17, 20, 29 |
| | 158N | 94W | 5, 8, 17, 19, 20, 30, 31 |

## 1.4 Easement Acquisition

There are a total of 120 landowners within the Tande Circuit Corridor. The Tande Circuit Route is 100% on privately owned land. Basin Electric is in the process of securing easement agreements over the required parcels for the Tande Route Corridor. As of October 2025, approximately 85 percent of landowner easements have been secured for the Tande Circuit.

## 1.5 Tande Circuit Schedule

Basin Electric plans to commence construction in spring 2026, pending permit approvals. Construction is anticipated to be complete by September of 2027, with reclamation extending into 2028, as needed. Private third-party contractors will construct the transmission line, with winter construction anticipated. Basin Electric will ensure that any contractors hired will be familiar with and comply with mitigation measures and any agency or permit requirements.

Key schedule milestones include:

1. **Certificate and Route Permit**: Requested by 1st Quarter 2026.
2. **Right-of-Way (ROW) Acquisition**: Anticipated in 1st Quarter 2026.
3. **Equipment Procurement, Manufacture and Delivery**: Ordering of long-lead equipment is in progress.
4. **Construction**: Approximately 16 months of construction beginning in 2nd Quarter 2026 to 4th Quarter 2027, with restoration extending into 2028, as necessary.
5. **Test and Operations**: Anticipated in 3rd Quarter 2027.
6. **Commercial Operation**: Anticipated in 3rd Quarter 2027.
7. **Expansions or Additions:** Basin Electric has no plans for expansions or additions to the Tande Circuit.

## 1.6 Tande Circuit Cost

The estimated cost of the Tande Circuit is $97 million.

## 1.7 Tande Circuit Ownership

Basin Electric will own the segment of the transmission line up to the United States/Canada border and will manage the construction of all equipment and associated facilities. The existing Tande Substation is owned and operated by Basin Electric.

## 1.8 Future Associated Facilities

There are no proposed or future Basin Electric associated facilities, or upgrades or improvements associated with the Tande Circuit.

# 2.0 NEED FOR PROJECT

## 2.1 Need Analysis

SaskPower submitted a transmission service request to Southwest Power Pool (SPP). SPP is the Regional Transmission Organization (RTO) that administers bulk electric transmission system reliability upgrades, generation interconnections and transmission service requests in the area. It is a non-profit corporation mandated by the Federal Energy Regulatory Commission (FERC) to ensure reliable supplies of power, adequate transmission infrastructure, and competitive wholesale electricity prices on behalf of its members. SPP identified deficiencies in the transmission capability between the United States and Canada based on the request for additional transmission service from SaskPower. The Project was approved by the SPP ATSS in 2022.

SaskPower, a generation and transmission provider in Saskatchewan, has signed a 20-year agreement with SPP to expand the transmission line capacity between Saskatchewan and the United States. The increased capacity will enable the import and export of up to 650-megwatts (MW) of electrical power. SaskPower will construct transmission lines from the border to a new substation in Canada, approximately five miles north of the border. The proposed Project would provide two new 230-kV transmissions lines to accompany the existing 230-kV transmission line to increase the export and import capabilities to a total of 650-MWs. This Project would also increase the stability of electrical grids for both the United States and Canada by increasing its resilience and providing additional power transmission redundancy.

In addition to enhancing cross-border grid stability, the Project offers significant local and regional benefits. The expanded import/export capabilities will improve operational flexibility, reduce congestion costs, and support more competitive market outcomes across the region. The new 230-kV transmission lines create opportunities to establish new load delivery points along the corridor, particularly in previously underserved areas such as Burke and Divide County, strengthening reliability and enabling future economic development through improved access to power infrastructure.

## 2.2 Alternatives

Basin Electric identified and evaluated several Project alternatives; however, none of these alternatives effectively satisfied the Project objective. These alternatives included:

- No Action Alternative;
- Route Alternatives;
- System Alternatives.

### 2.2.1 No Action Alternative

The primary objective of the Project is to provide electrical transmission connections between SPP and SaskPower facilities, transmitting power from the SPP region to SaskPower. Under the No Action alternative, the Project would not be constructed, and the transmission service request could not be met. As described under the Need Analysis section, there is a need for additional capacity in the to meet transmission service request obligation.

### 2.2.2 Route Alternatives

Basin Electric evaluated 269 miles of route alternatives in developing the final proposed alignment. The Tande Circuit Route is the most viable alternative based on landowner preferences, utilizing existing infrastructure corridors and following quarter lines and section lines where terrain allows, and it is the most direct route that also minimizes impacts on the exclusion,

avoidance, selection, and policy criteria identified in NDAC Section 69-06-08-02. The Tande Circuit Route alternatives are illustrated in **Figure 2-2**.

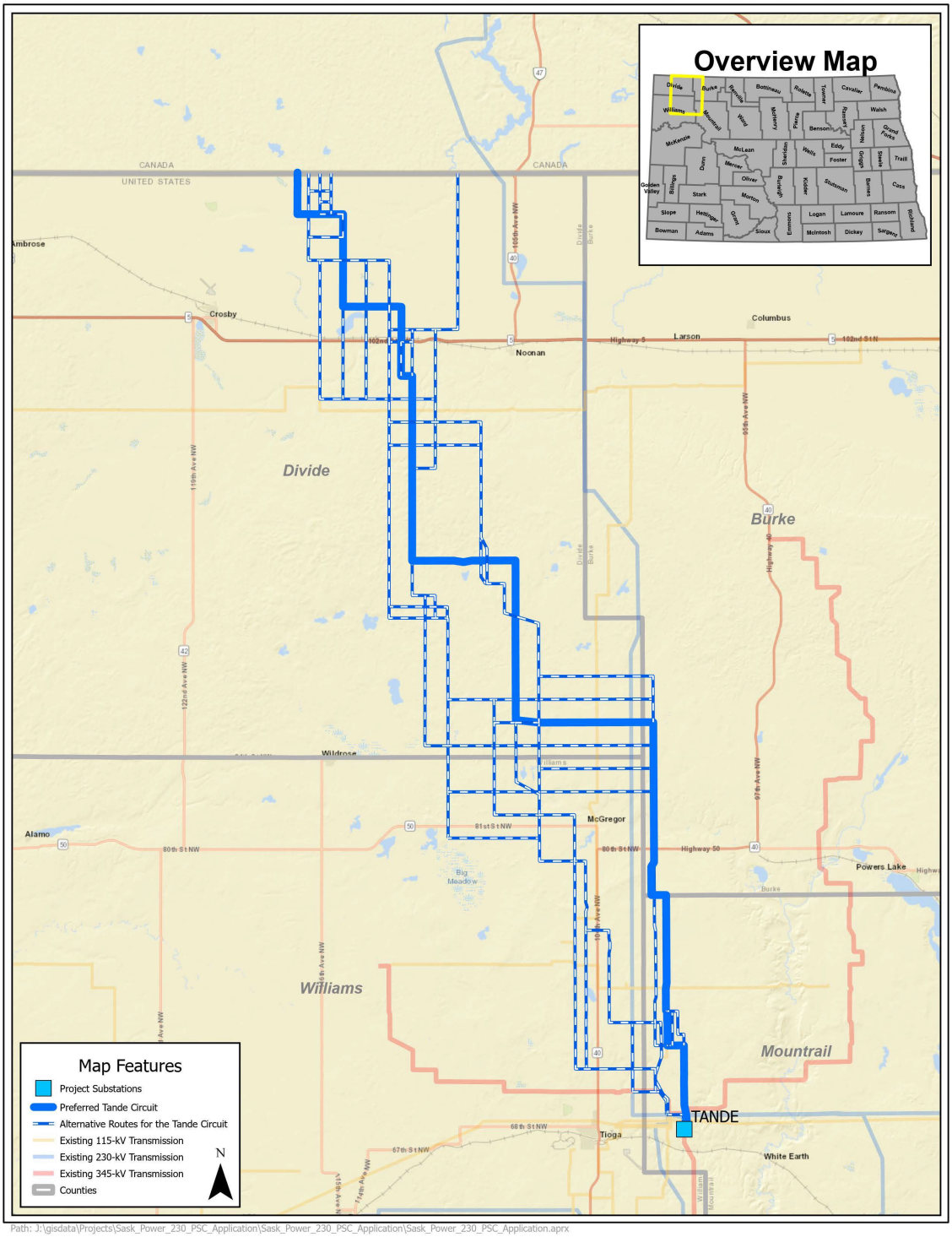


**Figure 2-1: Tande Circuit Route Alternatives**

### 2.2.3 System Alternatives

Other options considered by SPP in the study were to construct two 345-kV circuits. One would be directed to the Tande Substation on the existing 345-kV line, and the other circuit to a proposed substation near the existing 115-kv East Fork substation. 345-kV requires a wider ROW and larger structures. In addition, the proposed route lengths were longer than the 230-kV option to Wheelock and Tande. Therefore, the 345-kV option would have a higher cost and larger impacts, so the 230-kV option was selected.

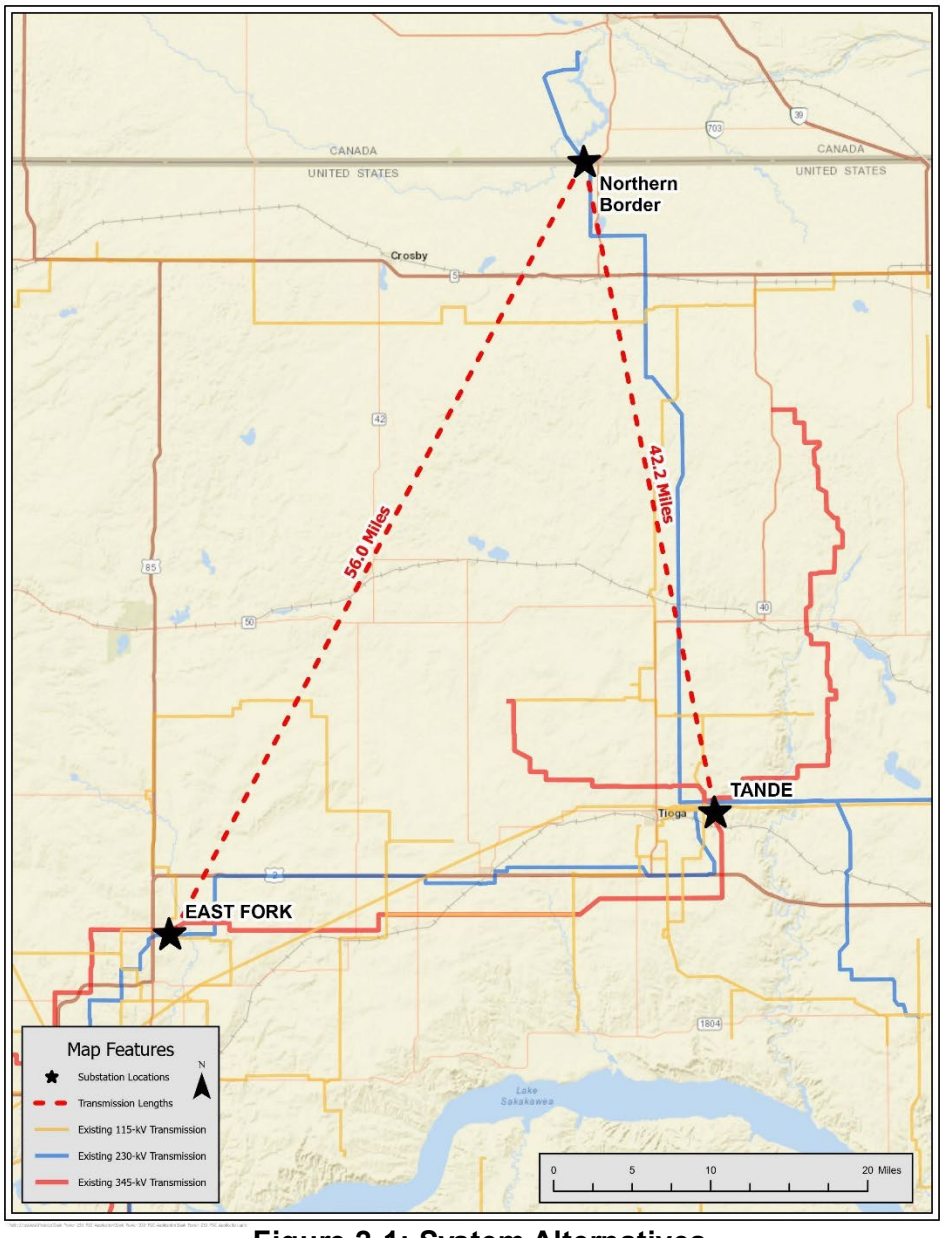


**Figure 2-1: System Alternatives**

### 2.2.4 Ten-Year Plan

Basin Electric filed a Ten-Year Plan with the Commission in June 2024. This Project is consistent with the Ten-Year Plan on file with the Commission.

# 3.0 SITE SELECTION CRITERIA

The Tande Circuit Corridor is based on landowner participation, field surveys, known environmentally sensitive areas, review of county and state transmission line 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 transmission line. Basin Electric has reviewed the criteria in NDAC Section 69-06-08-02 and has considered these criteria in the Tande Circuit design. These criteria are discussed in this section.

## 3.1 Exclusion Areas

In accordance with NDAC Section 69-06-08-02(1), which implements NDCC Section 49-22-05.1, the geographical areas listed in **Table 3-1** 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. **Appendix A** depicts the results of review for exclusion areas.

**Table 3-1: 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. | 5.5 |
| Designated or registered state: parks; historic sites; monuments; historical markers; archaeological sites; and nature preserves. | Archaeological sites are present within the Tande Circuit Corridor; however, structures and access roads have been placed outside of the boundaries of these sites and no impacts are anticipated. | No impacts are anticipated, and no buffer is proposed. Site boundaries will be fenced during construction activities. | 5.4, 5.5 |
| County parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions. | Not present within Corridor/Route. | No impacts are anticipated, and no buffer is proposed. | 5.5 |
| 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. | 5.8 |
| 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. | 5.8 |
| 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. | No impacts are anticipated, and no buffer is proposed. | 3.6 |
| Areas within 30 feet on either side of a direct line between ICBM launch or launch control facilities to avoid microwave interference. | The closest intercontinental ballistic missile launch or launch control facility is approximately 19.4 miles from the Tande Circuit Route. | No impacts are anticipated, and no buffer is proposed. | 3.6 |

## 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** 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. **Appendix A** depicts the avoidance areas.

**Table 3-2: 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 buffer is proposed. | 5.8 |
| 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. | 5.5 |
| Historical resources which are not specifically designated as exclusion or avoidance areas. | Not present within Corridor/Route. | No impacts are anticipated, and no buffer is proposed. | 5.4 |
| Areas which are geologically unstable. | There are 35.17 acres of geologically unstable soils within the Tande Circuit Corridor. No structures or access roads are located within these areas. | No impacts are anticipated, and no buffer is proposed. | 5.6, Appendix A |
| Within 500 feet of a residence, school, or place of business. | Four homesteads are located within 500 feet of the Tande Circuit Corridor.<br>Basin Electric has obtained landowner waivers for these properties, see **Appendix K**. | No impacts are anticipated, and no buffer is proposed. | 3.6, Appendix A, Appendix K |
| Reservoirs and municipal water supplies. | Not present within Corridor/Route. | No impacts are anticipated, and no buffer is proposed. | 5.2 |
| Water sources for organized rural water districts. | Not present within Corridor/Route. | No impacts are anticipated, and no buffer is proposed. | 5.2 |
| Irrigated land. | Not present within Corridor/Route. | No impacts are anticipated, and no buffer is proposed. | 5.5 |
| 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. | 5.5 |

## 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** below, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum.

**Table 3-3: Selection Criteria**

| Selection Criteria | Potential Effects | Section Addressed |
|---|---|---|
| **The impact upon agriculture:** | | |
| Agricultural production. | Negligible/minimal effect anticipated. To the maximum extent possible, structures were placed on field edges or adjacent to rock piles or riparian areas to avoid impacts to the middle of crop fields.<br>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 | 5.1, 5.5 |

| Table 3-3: Selection Criteria | | |
|---|---|---|
| **Selection Criteria** | **Potential Effects** | **Section Addressed** |
| **The impact upon agriculture:** | | |
| | that occurs as a result of construction and maintenance activities, and damage to soils would be redressed. | |
| Family farms and ranches. | Negligible/minimal effect anticipated. Transmission lines are a compatible use with existing family farms and ranches, and the Tande Circuit will not displace any farms or ranches. | 5.1, 5.5 |
| 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. | 5.5 |
| Surface drainage patterns and ground water flow patterns. | No impacts to surface drainage patterns or groundwater flow patterns are anticipated. The Tande Circuit 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. | 5.7 |
| **The impact upon:** | | |
| Sound-sensitive land uses. | Negligible/minimal effect anticipated. Following construction, there will be a minimal amount of sound from the Tande Circuit as a result of corona effects, which occur when air molecules near conducting wire are ionized due to changes in the electric field intensity at the conductor surface. The sound is most noticeable when conductors are wet as a result of precipitation. | 5.3 |
| The visual effect on the adjacent area. | Negligible/minimal effect anticipated. The Tande Circuit will be visible to landowners and travelers along roadways. Existing transmission lines, oil and gas well pads, and roads are present in the viewshed. | Appendix A |
| Extractive and storage resources. | The Tande Circuit 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. | 5.6, Appendix A |
| Wetlands, woodlands, and wooded areas. | Negligible/minimal effect anticipated. The Tande Circuit will avoid permanent impacts to all wetlands. Trees/shrubs will be replaced consistent with the Commission's Tree and Shrub Mitigation Specifications. | 5.5, 5.7 |
| Radio and television reception, and other communication or electronic control facilities. | No effect anticipated. | 5.2 |
| 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 Tande Circuit to confirm its continued integrity. | 5.3 |
| Animal health and safety. | No effect anticipated. Construction work will be coordinated with landowners to avoid impacts to livestock. Basin Electric is committed to mitigating potential impacts to wildlife. | 5.8 |
| Plant life. | Negligible/minimal effect anticipated. The transmission line structures will result in approximately 0.42 acres 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. | 4.2, 5.5 |

## 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** below and may require the adoption of such policies and practices as appropriate.

**Table 3-4: 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. Tande Circuit 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. | 1.4, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.0, 5.0, 6.0 |
| 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 and compiling this application and will continue to use local labor to the extent practicable. | 5.1 |
| Economies of construction and operation. | Basin Electric will use local contractors to the extent practicable. | 5.1 |
| Use of citizen coordinating committees. | Not applicable. | NA |
| A commitment of a portion of the transmitted product for use in this state. | The SaskPower Transmission Service Request necessitates the development of the Wheelock to Tableland and Tande to Tableland 230-kV lines, which strengthen transmission infrastructure within North Dakota. These facilities establish new interconnection points, unlock future development opportunities, and deliver reliability benefits to in-state loads.<br><br>The expanded infrastructure enables regional markets to dispatch generation more efficiently, alleviating congestion across constrained paths and reducing costs for all North Dakota consumers. Basin Electric maintains operational oversight and planning influence, ensuring that a portion of the transmitted product, through direct access, future generation tie-ins, or congestion relief, remains committed to serving North Dakota interests. | 1.0, 2.1 |
| Labor relations. | No labor relations would be negatively affected by the Tande Circuit. | NA |
| The coordination of facilities. | Existing facilities were considered in the location of the Tande Circuit. Basin Electric will avoid impacts to existing infrastructure. Basin Electric obtains crossing permits where required for utilities. | 4 |
| 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. | 4.2, 4.9, 4.10, 5.6 |
| Use of existing and proposed rights of way and corridors | Basin Electric has routed the Tande Circuit parallel to existing roadways and section lines to the extent practicable and in consideration of preferences from landowners crossed by the Tande Circuit. | Appendix A |
| Other existing or proposed transmission facilities. | Basin Electric has paralleled the Tande Circuit with existing utility corridors as practicable. | Appendix A |

## 3.5 Factors to be Considered

The North Dakota Energy Conversion and Transmission Facility Siting Act NDCC Section 49-22-09 lists the factors to be considered in evaluating applications and designation of sites (see **Table 3-5** below).

**Table 3-5: Factors to be Considered**

| Factors to be Considered | Evaluation | Section(s) Addressed |
|---|---|---|
| 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. | Effects of the location, construction, and operation on public health and welfare, natural resources, and the environment are described in Section 5. | 5.3, 5.8, Appendix G |

| Table 3-5: Factors to be Considered | | |
|---|---|---|
| **Factors to be Considered** | **Evaluation** | **Section(s) Addressed** |
| The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects. | The Tande Circuit has been designed to minimize adverse environmental effects including utilizing bird flight diverters to avoid and reduce bird mortality. | 5.8, Appendix G |
| The potential for beneficial uses of waste energy from a proposed energy conversion facility. | Not applicable. | Not applicable |
| Adverse direct and indirect environmental effects which cannot be avoided should the proposed site be designated. | Adverse direct and indirect environmental effects which cannot be avoided are described for each resource area in Section 5. | 5 |
| Alternatives to the proposed site which are developed during the hearing process and which minimize adverse effects. | Multiple alternatives were considered for the Tande Route. Basin Electric believes that the Tande Route is the most viable and most direct route alternative that also minimizes impacts on the exclusion, avoidance, selection, and policy criteria identified in NDAC Section 69-06-08-02. | 2.2, 3.1, 3.2 |
| Irreversible and irretrievable commitments of natural resources should the proposed site be designated. | Not applicable. | Not Applicable |
| The direct and indirect economic impacts of the proposed facility. | Direct and indirect economic impacts of the Tande Circuit include payments for participating landowners, employment, transmission line tax payment to the state of North Dakota based on mileage and voltage, and sales/use tax on materials. | 5.1 |
| 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 conflicts are anticipated with existing state, local government, or private entities' development plans. | 6.0, Appendix H |
| The effect of the proposed site on existing scenic areas, historic sites and structures, and paleontological or archaeological sites. | There are no designated scenic areas that will be affected by the Tande Circuit. As identified through a Class I Literature Review and the Class III Cultural Resources Inventory conducted to-date, archaeological sites are outside the Tande Circuit Corridor, are found to be not significant, or are spanned. See Section 5.4. | 5.4, Appendix E |
| The effect of the proposed site on areas which are unique because of biological wealth or because they are habitats for rare and endangered species. | The effect of the Tande Circuit on areas which are unique because of biological wealth or because they are habitats for rare and endangered species are described in Section 5. | 3.1, 3.2, 5.8 |
| Problems raised by federal agencies, other state agencies, and local entities. | Basin Electric and its representatives contacted key local, state, and federal agencies per Section 69-06-01-05 of the NDAC for assistance in identifying concerns or issues within the Study Area. | 6.0, Appendix H |

## 3.6 Setbacks

The setbacks used in designing the Tande Circuit comply with or exceed those required by the Commission, with the exception of four residences. Basin Electric has obtained waivers where the Tande Circuit Route will be within 500 feet of their residence. **Appendix A** shows the location of the four residences. **Appendix K** includes the landowner waivers. The Tande Circuit complies with or exceeds the following transmission line corridor and route criteria exclusion and avoidance areas provided in NDAC Section 69-06-08-02(1)-(2).

## 3.7 County Criteria

Electrical transmission facilities are conditional uses in Burke, Divide, and Mountrail Counties, and, as such, Conditional Use Permits will be applied for in each county. Specific township permits will be applied for, as needed.

# 4.0 DESIGN AND CONSTRUCTION

## 4.1 Tande Circuit Design

### 4.1.1 Transmission Line Design Parameters

The Tande Circuit construction and design will meet the requirements of the National Electrical Safety Code (NESC) 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. The Heavy Loading District refers to those areas that are subject to severe ice and wind loading. Minimum conductor clearance is measured at the point of greatest conductor sag and closest proximity to the ground. The transmission line will be constructed with clearances that exceed standards set by NESC. Minimum conductor height under maximum sag conditions will exceed 26 feet for all ground surfaces. **Table 4-1** below includes a description of various Tande Circuit design component characteristics.

**Table 4-1: Tande Circuit Design Components**

| Description of Design Component | Values |
|---|---|
| Voltage (kV) | 230-kV |
| Length of transmission line | 58 miles |
| Approximate total number of structures | 327 |
| Conductor size | 1.315 inches |
| Typical minimum and maximum span distances between structures | 200-1,300 feet |
| Average span | Approximately 950 feet |
| Minimum and maximum structure height | 100 – 150 feet |
| Average height of structures | 100 feet |
| Average number of structures | 5.5 per mile |
| Minimum conductor-to-ground clearance to agricultural land at 100 degrees Celsius (°C) | 26 feet |
| Minimum conductor-to-ground clearance to rural roads at 100°C | 30 feet |
| Minimum conductor-to-ground clearance to railroad at 100°C | 30 feet |
| Minimum conductor-to-ground clearance to paved highways at 100°C | 30 feet |
| Circuit configuration | Delta |

The Tande Circuit will consist of an approximately 53-mile-long, 230-kV transmission line with approximately 327 transmission line structures. The Tande Circuit will use galvanized steel monopoles with three steel davit arms for the conductor phases, one steel davit arm for overhead ground wire, and one steel davit arm for optical ground wire (OPGW). The OPGW will provide lightning suppression and fiber optic communication between the Tande Circuit Substations for systems control.

The structures will range in height from approximately 80 feet to 150 feet with an average of 100 feet, depending on the required span distances between structures and area topography. The span between structures will typically range from 200 to 1,300 feet and average approximately 950 feet. Depending on topography, taller structures could be used for crossing existing distribution and transmission lines or where unusual terrain exists.

The tangent structures will be directly imbedded into the ground and the angle structures (used where the transmission line changes direction) and dead-end structures (used to provide longitudinal stability along the length of the line), will be constructed on drilled concrete pier foundations. Permanent guy wires will not be used. See **Figure 4-1** below for typical structure design.

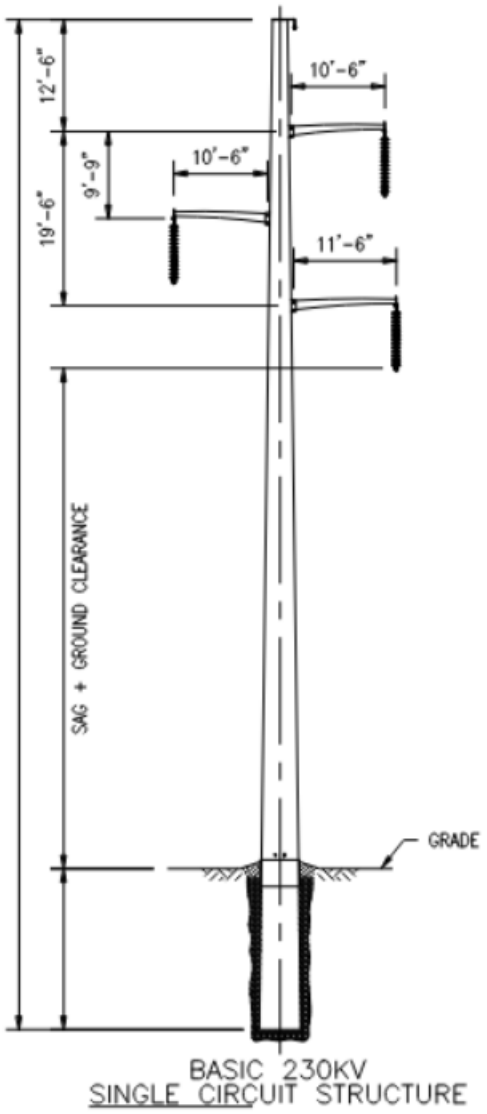


**Figure 4-1: Typical Structure Design**

### 4.1.2 Substation Design Parameters

A new 230-kV terminal will be needed at the Tande Substation for the Tande Circuit. The terminal addition will consist of one new 230-kV take-off structure, one new 230-kV strain bus structure, a 230-kV line disconnect switch, one 230-kV circuit breaker, two 230-kV breaker disconnect switches, three 230-kV potential transformers, and associated structure supports, foundations, connectors, cables, and equipment. All new components will remain within the existing substation footprint. **Figure 4-2** displays a before and after for the layout of Tande Substation.

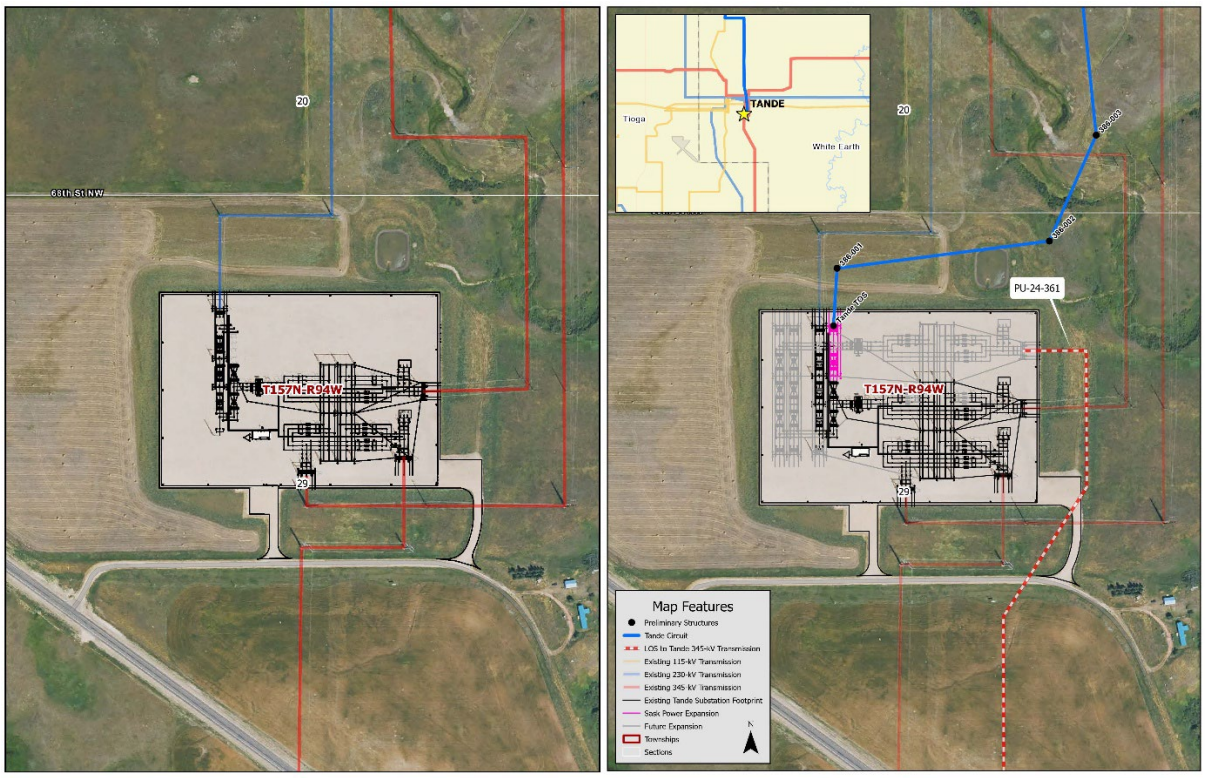


**Figure 4-2: Tande Substation Layout**

### 4.1.3 Supervisory Control and Data Acquisition System

A Supervisory Control and Data Acquisition (SCADA) system will be implemented at the Tande Substation. This will be used by the appropriate Dispatch Agency to monitor critical power system values as well as to operate the facilities in a reliable manner. This system will use a combination of an existing fiber optic and microwave communication network to provide Primary and Secondary connections to the Dispatch Agency. In addition, there will be direct communication between the Tande and Tableland Substations. These direct communications will be used for protective relaying to pass information in a secure, high-speed manner. These direct communications will use a combination of fiber optics within the OPGW that will be installed between the substations on transmission line structures. and existing microwave communications equipment.

## 4.2 Construction Activities

### 4.2.1 Pre-construction Surveying

Basin Electric and/or its contractors will perform initial transmission line survey work, consisting of survey control, route centerline location, profile surveys, and access surveys prior to construction. These surveys will likely be conducted concurrently with other pre-construction tasks.

### 4.2.2 Site Preparation

The Tande Circuit Corridor includes areas that are relatively flat and areas of more challenging, steeper terrain. It is anticipated that at some structure locations, blading of small areas (up to 40

feet by 40 feet for crane and manlift landings) may be required to level the ground surface to allow the safe operation of the equipment. Blading will be confined to the Tande Circuit Corridor and will be accomplished using bulldozers, skid steers, or front-end loaders. Soil removed during leveling will be stockpiled and replaced following construction; special emphasis will be placed on salvaging topsoil to be used for reclamation. The ground will be re-graded to the approximate original contour and revegetated (rangeland) or tilled (cropland) when the work is completed. Temporary disturbance to soils will be mitigated by returning the sites to grazing and farming unless other arrangements are made with the landowner in order to facilitate the long-term maintenance of the transmission line.

### 4.2.3 Borehole Excavation and Foundation Installation

Crews will use a truck-mounted auger or tracked vehicle equipped with a power auger to drill holes for foundations at the necessary structure locations.

Angle structures will require reinforced concrete drilled pier foundations. The pier diameters will range from 6 to 11 feet and extend to depths from 20 to 40 feet. Large volumes of excess soil will be disposed of at local landfills or in accordance with landowner wishes. Disposal of waste material, including concrete spoils, will comply with applicable regulations. Site-specific foundation diameters and depth are determined based on geotechnical and engineering evaluations.

### 4.2.4 Structure Assembly and Erection

Structure components (i.e., structure segments, davit arms, hardware, insulators, and related materials) will be hauled to structure work site locations and assembled. Davit arms, insulators, and other appurtenances will be attached to the poles while on the ground at each structure location. Erection crews will place the structure on drilled concrete pier foundations using cranes or large boom trucks.

### 4.2.5 Conductor Stringing and Tensioning

Following structure construction, crews will install the conductor, and OPGW using stringing blocks and line pulling and tensioning equipment. The lines will be kept under tension during the stringing process to keep the conductor clear of the ground and obstacles that could damage the wire surfaces.

Pulling and tensioning sites will be located at approximately 10,000-foot intervals and at angle point structures. Pulling and tensioning sites along tangent structures will be maintained within the Tande Circuit Corridor, whereas those at angle points will be partially outside of the Tande Circuit Corridor. Stringing equipment generally consists of wire pullers, tensioners, conductor reels, OPGW wire reels, steel wire reels, and sheave blocks. About 10,000 feet of conductor, steel shield wire, and OPGW will be installed for each pull. After the conductor/ground wire is pulled for a section of line, it will be tightened or sagged to the required design tension in compliance with the NESC. The process will be repeated until all conductor and OPGW are pulled through all sheaves. Conductor stringing will also require access to each structure for securing the conductor to the insulators or OPGW to each structure, once final line sag is established.

For public safety and property protection, temporary guard structures may be used to provide support when stringing wires across existing power lines, roads, highways, railroads, and other

linear obstacles. The structures will be removed when stringing is complete; the pole borings will be backfilled, and the temporary support structure sites will be reclaimed. All temporary guard structures will be installed within the Tande Circuit Corridor.

## 4.3 Tande Circuit Access

### 4.3.1 Transmission Structure Site Access and Traffic

Construction access to transmission structures will involve the use of existing roads where available and temporary overland access trails, where necessary. The use of temporary overland access trails between structure sites will not require new construction but will result in temporary disturbance. Occasional access from section line trails could result in temporary disturbance along the Tande Circuit Corridor; however, such disturbance will be limited to a 16-foot-wide track (approximately) and only long enough to provide vehicle access directly to structure locations. Some additional access disturbance could occur if truck or vehicle turnarounds are needed; however, the use of structure work sites will be encouraged.

Existing access roads (typically paved or maintained with a gravel or aggregate base) will be used in their original condition. Basin Electric will be responsible for reimbursing the appropriate public entity for the repair of any damage caused by construction equipment movement and will return existing roads to original or better condition following construction. Basin Electric will not be responsible for maintaining roads following construction. Basin Electric will not be responsible for maintaining fences and gates following construction and restoration; however, if necessary, access gates will be installed during construction will be left in place following construction in coordination with landowners.

Line segments that are parallel to section lines that do not have established roadways will use the 66-foot-wide public ROW to the extent practicable. Basin Electric will restore disturbed areas to pre-construction conditions, to the extent practicable, and will not be responsible for the long-term maintenance of such section line trails. As necessary, any fences, gates, or similar features that will be removed during construction will be replaced or rebuilt. Gates and fences that are installed during construction will be left in place for future use.

### 4.3.2 Temporary Land Requirements

Temporary impacts are those impacts that result during construction to accommodate equipment and temporary construction activities outside of the areas that will remain as the permanent Tande Circuit footprint during operation. All temporary impacts are included in **Table 4-2.**

Temporary overland access will be used in areas without existing roads. Landowners will be compensated for loss of crops caused by construction activities. Gates may be installed to facilitate access to some structures and the Tande Circuit Corridor. The gates will be left in place following construction activities.

Temporary access routes will result in a 16-foot-wide temporary disturbance and compaction of vegetation and soils. Temporary overland access routes will be subject to the same cultural resource and vegetation surveys as the Tande Circuit Corridor. Landowners will be compensated for access routes where public access does not exist.

An approximately 100-foot x 125-foot (12,500 square feet) temporary work site will be located at each structure location and within the Tande Circuit Corridor. The area will be graded, if required, to ensure safe movement and operation of heavy equipment.

Pulling and tensioning sites and splicing sites will result in temporary disturbance to lands within and extending outside of the Tande Circuit Corridor. Pulling and tensioning and splicing site impacts are summarized in **Table 4-2.**

Basin Electric will use one previously disturbed location for material storage.

Total temporary impacts associated with the Tande Circuit are estimated at approximately 247.81 acres.

## 4.4 Permanent Land Requirements

Permanent impacts are those required for the Tande Circuit operation, consisting mostly of individual structure locations. Permanent land disturbance has been estimated for directly embedded self-supporting tangent and self-supporting angle (turning) structures with concrete foundations. Total permanent impacts associated with the Tande Circuit are estimated at approximately 0.42 acres.

Estimated ground disturbance impacts are included in **Table 4-2** below.

**Table 4-2: Estimated Disturbance Impacts**

| Tande Circuit Component | Temporary Disturbance Assumptions | Permanent Disturbance Assumption | Per Unit Temporary Impact (acres) | Per Unit Permanent Impact (acres) | Impact Multiplier (qty) | Temporary Impact (acres) | Permanent Impact (acres) |
|---|---|---|---|---|---|---|---|
| Tande Substation | Existing substation, none | Existing substation, none | 0 | 0 | 1 | 0 | 0 |
| Single-pole Tangent | 100 ft x 125 ft = 0.29 acres | 8ft diameter = 0.0012 acres | 0.29 | 0.0012 | 296 | 85.84 | 0.3552 |
| Single-pole Angle on foundation | 100 ft x 125 ft = 0.29 acres | 11ft diameter = 0.002 acres | 0.29 | 0.002 | 31 | 8.99 | 0.062 |
| Pulling and Tensioning Site | 125ft x 300 ft x 2 = 1.72 acres | None | 1.72 | 0 | 36 | 61.92 | 0 |
| Splicing Sites | 100 ft x 125 ft = 0.29 acres | None | 0.29 | 0 | 30 | 8.7 | 0 |
| Access | 16' wide x 5280 ' = 1.94 acres per mile | None | 1.94 | 0 | 20.6 | 39.96 | 0 |
| Tande Laydown Yard | 42.4 acres | None | 42.4 | 0 | 1 | 42.4 | 0 |
| | | | | | **Totals** | **247.81** | **0.42** |

## 4.5 Easements

Landowners are contacted many times throughout the routing process. Initially, survey permissions are requested from each landowner along the route to allow access for engineering, environmental, and archeological surveys. Once a route is finalized, Basin Electric conducts a series of steps throughout the process of acquiring the ROW easements for the transmission line. Title searches going back 50+ years are completed to identify current ownership and all encumbrances that need to be addressed. A market analysis was conducted by a third-party

appraiser to identify the current land values, which was, in turn, used to establish monetary offers for the easements. Negotiations with landowners occur to acquire easements.

Basin Electric's ROW group works with utility companies, and State, Federal, county, and township officials to identify asset crossings (roadways, section lines, and utilities). Basin Electric then executes the necessary permits/agreements for each agency.

## 4.6 Construction Waste Management

Typical waste materials generated from construction activities include miscellaneous lumber and shipping materials used to protect equipment during transportation, paper products, soda cans, food related materials, and sanitary waste. Waste from construction materials and rubbish from all construction areas will be collected, hauled away, and disposed of in an approved landfill. Sanitary waste will be disposed of through arrangements with local municipal sanitary waste treatment facilities.

Material staging areas and vehicle maintenance and refueling areas will not be located near waterways. If any of the material staging areas include vehicle and equipment refueling or storage of petroleum products in excess of 1,320 gallons, a Spill Prevention, Control, and Countermeasure (SPCC) plan will be implemented. The SPCC plan will address: 1) operating procedures to prevent spills; 2) control measures to prevent a spill from reaching navigable waters; and, 3) countermeasures to contain, clean up, and mitigate the effects of a spill that reaches navigable waters. Additionally, spill containment and clean up materials (e.g., absorbent material, shovels) will be available at every work site. The materials will be used to contain and clean up oil and hydraulic spills that may result from equipment leaks. Workers will be trained in procedures to follow to contain and clean up released hazardous materials.

## 4.7 Construction Sequence, Work Force, and Equipment

Transmission line construction will generally follow a sequential set of activities performed by crews proceeding along the length of the line. **Table 4-3** lists the construction activities. Due to the scope of the Tande Circuit, there will likely be multiple contractors working in different areas of the Tande Circuit. The number of personnel vary depending on the means and methods of each contractor and are listed for reference.

**Table 4-3: Construction Personnel, Equipment, and Time Requirements**

| Task | Number of Personnel | Equipment | Length of Time |
|---|---|---|---|
| Structure site clearing and vegetation management | 10-15 | Pickups, all-terrain vehicles (ATVs) | Duration of Project |
| Gate installation | 3 | Flatbed and pickup trucks | 6 months |
| Structure assembly | 18-24 | Pickups, cranes, material trucks, rubber-tired crane, 4x4 pickups | 12 months |
| Foundation Installation | 15-20 | Rotary drilling rigs, backhoes, pickups, rubber-tired digging equipment, ATVs, portable compressors | 6 months |
| Structure erection | 18-24 | Rubber-tired cranes, boom trucks, 4x4 pickups | 14 months |
| Ground wire and conductor stringing | 20–30 | Pickups, manlifts/boom trucks, hydraulic tensioning machines, reel trailers | 12 months |
| Cleanup | 12 | Pickups, dump trucks, flatbed trucks | Duration of Project |

## 4.8 Worker Safety and Health Protocol

All construction and maintenance activities will be carried out in compliance with applicable federal and state worker safety regulations, as defined under the Occupation Safety and Health Administration Act of 1979. Worker safety and health is administered by Basin Electric's Transmission Systems Maintenance Division, which is a member of the National Safety Council.

## 4.9 Environmental Protection Measures and Policies

Mitigation measures have been developed to avoid or reduce the severity of environmental impacts. The measures are applicable to the Tande Circuit construction and operation. These measures are discussed under the Mitigation sections of each resource in Section 5.0, Environmental Analysis. Basin Electric's Policies and Commitments to Limit Environmental Impacts are included in **Appendix C**.

## 4.10 Reclamation

Following construction, disturbed areas will be graded and/or re-sloped to their approximate original contours to minimize erosion and visual alteration. In grassland or pasture areas, disturbed areas will be reseeded with native species unless an alternate seed mix is required by the landowner. Cultivated land will be tilled and returned to production. Fences and gates damaged as a result of the Tande Circuit will be repaired.

Rangeland from which vegetation has been removed, destroyed, or damaged will be reclaimed and revegetated. Reclamation activities, weather permitting, will be ongoing throughout construction and will take place as soon as construction activities are completed in a particular area. Drainage structures and similar improvements will be removed from areas to be reclaimed, where appropriate, and the area will be revegetated using a native seed mixture, as recommended by the County Agricultural Extension Service or the Natural Resources Conservation Service (NRCS) unless an alternate seed mix is required by the landowner.

Ruts and scars from overland travel will be leveled to break up compacted soils and aid in returning areas to approximate original contours. Cultivated areas disturbed by overland travel will be leveled and tilled to break up compacted soils (if necessary) and returned to production.

The optimal timing for revegetation success will be spring or fall to coincide with seasonal rains. Mulching may be required to protect seeded areas from erosion. Other erosion control devices, such as water bars, terracing, or water diversion structures will be constructed where needed. Follow-up inspections will be carried out during the next growing season. Areas that did not become revegetated will be reseeded again, as necessary.

The reclamation procedures described above will be applied to disturbed areas including temporary workspaces, access, staging areas, and other areas disturbed by construction activities.

## 4.11 Operation and Maintenance

The following operation and maintenance activities will be performed throughout the life of the Tande Circuit.

- Basin Electric's preventive maintenance program for the transmission line includes aerial and ground inspections. Aerial inspections will be conducted at least two times each year. Ground patrols will be conducted annually for the first three or four years, and less frequently thereafter. Climbing inspections of structures will be conducted on a five-year cycle with every fifth structure inspected each year. Inspections and patrols will involve the use of vehicles in areas where there is suitable vehicle access.
- Maintenance activities will include repairing damaged conductors, inspecting and repairing structures, replacing damaged and broken insulators, and tightening hardware.
- Basin Electric will maintain any gates initially installed for construction if continually used for access.
- Maintenance will include the control of noxious weeds. Herbicides will be applied in accordance with manufacturer's labels and in accordance with the ND Weed Control Guide. Basin Electric will hire a contractor licensed in chemical application in the state of ND.
- Disturbed areas will be monitored for erosion. Erosion control may include the installation and maintenance of necessary measures for temporary and permanent erosion, sedimentation, and dust control, as required by relevant agencies or property owners. Inspection and maintenance will be completed by Basin Electric or a contractor to ensure compliance with reclamation specifications.
- Basin Electric will remove trees that pose a clearance or safety problem to the operation of the transmission line. Specific requirements of the National Electric Reliability Council will be followed. This activity will be completed in accordance with the landowner easement.

## 4.12 Decommissioning

If the transmission line were to be abandoned or rebuilt, decommissioning and removal of structures, conductor, and ancillary equipment will be in accordance with applicable regulations in place at the time

# 5.0 ENVIRONMENTAL ANALYSIS

## 5.1 Local Economics

### 5.1.1 Description of Resources

Socioeconomic conditions include population, demographics, income, employment, and housing. These conditions can be analyzed and compared at various scales. The ND state population showed a 3.2% increase in population between the last five years, as shown in **Table 5-1**, below. Burke, Divide, and Williams Counties are below ahead of the statewide average increase at -1.41, -4.76% and 2.51%, respectively.

**Table 5-1: Tande Circuit Impacted Counties**

| Location | Population in 2025 | % Change from 2020 | % of State Population | Predominant Group | Predominant Minority |
|---|---|---|---|---|---|
| Burke County | 2,161 | -1.41% | 0.2% | White (91.3%) | Hispanic or Latino (2.6%) |
| Divide County | 2,100 | -4.76% | 0.2% | White (92%) | Asian (2.7%) |
| Mountrail County | 9,521 | -2.88% | 1.2% | White (58.2%) | American Indian (29%) |
| North Dakota | 804,089 | 3.2% | 100% | White (86.4%) | American Indian (5%) |

Source: U.S. Census Bureau 2020, 2025

As shown in **Table 5-2**, each county has a median household income higher than the North Dakota statewide average. Unemployment percentages in each county are lower than the 2.9% North Dakota average, except for Burke County, at 4.4%.

**Table 5-2: County Income and Unemployment**

| Location | Median Household Income | Unemployment Rate | People in Poverty |
|---|---|---|---|
| Burke County | $96,339 | 4.4% | 5.10% |
| Divide County | $89,297 | 1.8% | 7.30% |
| Mountrail County | $81,292 | 1.9% | 13.20% |
| North Dakota | $77,871 | 2.9% | 11.10% |

Source: 2023 American Community Survey 5-Year Estimates

According to the 2022 Census of Agriculture, all involved counties record below the North Dakota average for total market value of agricultural products sold. Principal crops include wheat, peas, canola, and corn; cattle are the primary livestock. See **Table 5-3** below for a summary of National Agriculture Statistics.

**Table 5-3: National Agricultural Statistics by County**

| Location | County Acreage | Number of Farms | Farm Acres | Market Value of Products Sold |
|---|---|---|---|---|
| Burke County | 706,304 | 422 | 617,662 | $116,656,000 |
| Divide County | 807,104 | 418 | 613,694 | $141,838,000 |
| Mountrail County | 1,168,128 | 512 | 1,165,469 | $250,772,000 |
| North Dakota | 44,144,960 | 25,068 | 38,537,022 | $12,138,799,000 |

Source: USDA, National Agriculture Statistics Service 2024

### 5.1.2 Impacts/Mitigation

The Tande Circuit will have positive economic impacts for the local population, including payments for participating landowners, employment, and transmission line tax payment to the state of North Dakota based on mileage and voltage, and sales/use tax on materials. No residents will be displaced.

Landowner compensation is established under individual easement agreements and includes compensation for loss of crops caused by construction activities. In general, agricultural areas surrounding each structure can still be farmed. Construction of the Tande Circuit will not cause additional impacts to leading industries.

In addition, wages and salaries paid to local contractors and workers will contribute to the personal income of the region. Additional personal income will be generated for county residents as well as the state by circulation and recirculation of dollars paid out by Basin Electric as business expenditures and state and local taxes. Expenditures made for equipment, energy, fuel, operating supplies, and other products and services will benefit businesses in each county and the state.

Specialized labor will be required for certain components of the Tande Circuit. It is likely that this labor will be imported from other areas of the state or from other states.

No effects on permanent housing are expected. During construction, out-of-town laborers will likely use lodging facilities in and around the major cities in each county.

## 5.2 Public Services

### 5.2.1 Description of Resources

#### Local Government Services

Within the Study Area is a network of established roads and utilities that provide access and necessary services to cities, communities, homesteads, and farms. There are no incorporated or unincorporated cities within the Tande Circuit Corridor. The nearest communities include Stanley, Noonan, and Crosby.

#### Transportation

Roads located within the Study Area are US Highway 2, ND Highways 5, 40, and 50, county roads (gravel graded and drained roads), private roads, section lines, and oil and gas access roads. Roads within the Study Area fall under the North Dakota Department of Transportation (NDDOT) Williston district.

#### Air Traffic

There are no public airports airports/airstrips within the Study Area. The closest commercial airport is the Williston International Airport in Williston, North Dakota, which is located approximately 20 miles southwest of the Tande Circuit Route.

There are no privately owned airstrips within the Tande Circuit Corridor or Study Area.

#### Water Supply

Western Area Water Supply supplies water to communities in Tande Circuit counties of Burke, Divide and Mountrail. Basin Electric will evaluate obtaining water for construction from municipal sources and truck the water to the construction site. Basin Electric will consult with towns and counties to obtain the appropriate permits and/or approvals. There are also many private water

suppliers that supply water for local oil and gas operations. Basin Electric may coordinate with these suppliers to supply water for construction.

**Telecommunications**

The corona-induced broadband electromagnetic radiation (EMR) from transmission lines can produce interference with some communications signals if there is an overlap in the signal and EMR frequencies. Broadband corona EMR discharge typically occurs in the frequency spectrum from below 100 kilohertz (kHz) to approximately 1,000 megahertz (MHz), which overlaps with the frequencies used for AM and FM radio and some television signals.

### 5.2.2 Impacts/Mitigation

**Local Government Services**

No impact is expected to local services.

**Transportation**

The transportation of materials and equipment will be conducted in accordance with the NDDOT regulations. All necessary provisions will be made to conform to safety requirements for maintaining the flow of public traffic. Construction operations will be conducted to offer the least possible obstruction and inconvenience to public traffic. Public roads, section lines and existing trails will be used, to the extent practicable, to access the transmission line (see **Section 4.3** above). Fugitive dust emissions generated as a result of surface disturbance activities and vehicle use of access roads will be controlled by the periodic application of water, if necessary. The speed of vehicles traveling on unpaved roads will be limited, to the extent practicable, to reduce the generation of fugitive dust. Vehicles and equipment will be properly maintained to avoid excessive emission of exhaust gases due to poor engine adjustments.

**Air Traffic**

The Tande Circuit will not be considered an obstruction to air navigation under Federal Aviation Administration (FAA) regulations. Using the FAA's Obstruction Evaluation/Airport Airspace Analysis Notice Criteria Tool, of the 327 structures, Basin Electric needed to file for 11 structures. Basin Electric filed the necessary information for the 11 structures, and the FAA conducted an aeronautical study for each. The FAA determined that all 11 structures do not exceed obstruction standards and would not be a hazard to air navigation. Furthermore, the FAA determined marking and lighting are not necessary for aviation safety.

**Water Supply**

Construction will not significantly impact local water supply. Construction water estimates are subject to change due to final site investigation and weather. Water for construction will be brought on-site via trucks. The abandonment of existing wells is not required. The Tande Circuit will not require appropriation of surface water or permanent dewatering. Temporary dewatering of groundwater (i.e., locally lowering groundwater levels in the vicinity of the excavation) may be required during construction of transmission structures.

**Telecommunications**

Existing telephone and fiber optic cables within the Tande Circuit Corridor will be located in the field by the respective utility companies prior to construction to ensure that impacts to telephone and fiber optic cables will be avoided.

With sufficient corona activity, some radio and television interference can be noticeable; however, the radio sound generated by a transmission line is very low in power and interference is generally only experienced in very close proximity to the transmission line. These effects are most pronounced directly underneath the line conductors and decrease with distance from the transmission line. The level of interference with reception of a radio signal also depends on the relative locations of the radio transmitter, the radio receiver, and the transmission line. A transmission line that is directly between a radio transmitter and a listener's receiver may be more likely to interfere with that listener's reception, whereas a transmission line behind or beside the listener in relation to the transmitter will not necessarily cause interference depending on the radio receiver's antenna.

As digital signal processing has been integrated into television and radio receivers, the potential interference impact of corona-generated radio sound has been further reduced. Moreover, the advent of cable and satellite television service, and the federally mandated conversion to digital television broadcast in June 2009 have greatly reduced the occurrence of corona-generated interference. Newer digital television receivers are equipped with systems to filter out interference.

## 5.3 Public Health, Welfare, and Safety

### 5.3.1 Description of Resources

#### Audible Sound, Corona Discharge, and Aeolian Vibration

Corona from transmission line conductors can generate electromagnetic "noise" at the same frequencies transmitted by radio and television signals. Corona consists of the breakdown or ionization of air within a few centimeters of conductors and hardware. Aeolian vibration is produced when a steady flow of wind interacts with an object such as a transmission line. Wind must blow steadily and perpendicular to the lines to set up oscillating forces.

The Study Area is primarily rural and agricultural. There are no populated towns within the Study Area. The existing acoustic environment if defined primarily by distant traffic sound from the nearby arterial highways and will also include intermittent aircraft overflights, sound from agricultural operations, and nearby oil and gas operations. In addition to anthropogenic sound sources, the windy conditions of this site define a somewhat elevated ambient sound level, which increases with wind speed. Windy conditions can generate sound caused by the rustling of grass and tree leaves.

#### Electromagnetic Fields

Power frequency electromagnetic fields (EMF) are created wherever electricity flows. Leading U.S. and international scientific organizations, such as the National Cancer Institute and the World Health Organization, have evaluated EMF research. These organizations generally conclude that overall, the body of scientific research does not show that exposure to EMF causes or contributes to any type of cancer or any other disease or illness (National Institute of Environmental Health Sciences [NIEHS] 1999).

### Hazardous Materials/Hazardous Waste

Fuels, hydraulic fluids, and other hazardous substances may be used during construction of the Tande Circuit. Potentially hazardous materials may also be encountered if historical contamination exists within the Tande Circuit Corridor (e.g., contamination associated with aboveground storage tanks or oil/gas development). Other potential hazards may exist in rural areas from farm dumps and agricultural chemicals.

## 5.3.2 Impacts/Mitigation

### Audible Sound

Construction and maintenance may cause short-term but unavoidable sound impacts due to construction and equipment. Construction and maintenance activities will also generate traffic that will have potential sound effects, such as trucks travelling to and from the area on public roads. Sound generated by construction activities is generally exempt from state and local noise regulation. Once the Tande Circuit has been built, no significant construction sound impacts are anticipated. Maintenance will occur periodically but is not expected to result in significant sound generation.

### Corona Discharge

Corona effects occur when air molecules near conducting wire are ionized due to changes in the electric field intensity at the conductor surface. Measures such as carefully handling the conductor during construction to avoid nicking or scraping or otherwise damaging the surface and using hardware with no sharp edges or points are typically adequate to control corona. Corona effects are expected to be low enough that no objectionable audible sound will result outside the Study Area. The sound is most noticeable when conductors are wet as a result of precipitation.

### Aeolian Vibration

Aeolian vibration is produced when a steady flow of wind interacts with an object such as a transmission line. Wind must blow steadily and perpendicular to the lines to set up oscillating forces. The resulting vibration can produce resonance if the frequency of the vibration matches the natural frequency of the line. However, aeolian vibration is expected to be minimal outside of the Tande Circuit Corridor.

### Electromagnetic Fields

Many studies of EMF have been conducted, but none has identified a cause-and-effect relationship between EMF exposure and health effects or a mechanism by which EMF could cause disease (NIEHS 1999). No impacts from EMF are expected.

### Hazardous Materials/Hazardous Waste

As with any construction activity, there is the possibility of accidentally spilling fuel, hydraulic fluid, or other hazardous substances or encountering unanticipated historical contamination during construction. The potential of such events will be minimized through implementation of a SPCC plan, which will include the following:

- Construction equipment will be equipped with spill cleanup kits.
- Equipment refueling will take place at secure areas, away from wetlands or drainages.
- Workers will be trained in spill clean-up and the use of the spill cleanup kits.
- Burning waste materials within the Tande Circuit Corridor will not be permitted and all waste materials will be disposed of at permitted waste disposal areas or landfills.

These measures will ensure that surface and groundwater quality will not be degraded through inadvertent spillage of contaminants.

## 5.4 Cultural Resources

### 5.4.1 Description of Resources

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) conducted a Class I: Literature Review and a Class III: Intensive Cultural Resources Inventory for the Tande Circuit. To date, survey work and reporting have covered 1,260.66 acres (510.17 hectares) and 82.8% of the Tande Circuit Corridor. Additional survey work and reporting will be completed in 2025 once access to the remaining portions of the survey corridor are granted. An updated report will be submitted to the North Dakota State Historic Preservation Office (NDSHPO) once the remaining 17.2% has been surveyed. Due to sensitivity of the resources, a redacted report of the results of these studies are included in **Appendix E**.

#### Class I Literature Review

In May 2024, Burns & McDonnell performed a Class I: Literature Review to identify any previously recorded archaeological, architectural, and Cultural Heritage sites documented during prior surveys within the area of potential ground disturbance or Area of Potential Effects (Physical APE) and within a 1-mile buffer surrounding the Physical APE (Study Area) for the proposed Tande Circuit. The literature review identified 59 previous cultural resource inventories within the Study Area. A total of 160 previously documented cultural resources were also identified in the Study Area. A majority of the resources were precontact and included various stone features, campsites, and possible cultural material scatters. Historic resources included post offices, schools, churches, cemeteries, and farmsteads. Of these previously documented cultural resources, 20 precontact site leads and one historical archaeological site lead were located within the Physical APE. Most of the precontact site leads were full-section or quarter-section-sized site leads noted as containing cultural material scatters. A total of 13 previously documented Cultural Heritage sites were noted within the Study Area; none of these overlapped the Physical APE.

#### Class III Cultural Resources Inventory

Burns & McDonnell conducted a Class III: Intensive Cultural Resources Inventory for the Tande Circuit with the primary goals of identifying historic and precontact cultural resources within the Physical APE and the survey corridor, assessing their National Register of Historic Places (NRHP) eligibility, or recommending additional work necessary to evaluate same, and assessing any potentially adverse effects the Tande Circuit could have on those resources considered eligible for listing in the NRHP. To allow for some flexibility during construction, Burns & McDonnell surveyed a 200 ft-wide corridor around the proposed transmission line route, a 30-ft wide corridor around off right-of-way access routes, and a minimum of 200 ft by 100 ft for pulling easements (Survey Corridor). In several instances, small shifts in the proposed transmission line

route or off right-of-way access roads required Burns & McDonnell to survey further areas to maintain the 200 ft-wide Survey Corridor. This resulted in an overall Survey Corridor which varies in width slightly throughout the length of the Tande Circuit.

Burns & McDonnell completed the survey in multiple field sessions between June and November 2024. Further survey work and reporting will be completed in 2025 once land access to the remaining Survey Corridor is obtained. Burns & McDonnell archaeologists updated the site forms for 20 precontact site leads and recorded 19 newly identified resources, including one precontact isolated find, four precontact archaeological sites, one historical archaeological site lead, seven historical archaeological sites, two architectural sites, one multicomponent site, two sites with both architectural and historical archaeological components, and one site of unknown cultural affiliation. A total of 75 shovel test probes were completed in medium to high probability areas of the Survey Corridor with low ground visibility or at surface finds locations, to determine the presence or absence of subsurface cultural materials.

The Tande-to-Saskatchewan Transmission Line report was submitted on September 26, 2025; concurrence was received from NDSHPO on October 28, 2025. An updated report will be submitted to NDSHPO with the final Survey Corridor and APE once access to the remaining Survey Corridor is obtained.

### 5.4.2 Impacts/Mitigation

Fourteen resources documented by Burns & McDonnell during 2024 field surveys were recommended as unevaluated or eligible for the NRHP. Burns & McDonnell recommends avoidance of all cultural resources that are potentially eligible for listing on the NRHP, or sites that have not been evaluated for eligibility following the guidelines outlined by the NDSHPO. For this investigation, Basin Electric has committed to avoiding physical effects to historic properties. It is Burns & McDonnell's understanding that the current proposed infrastructure incorporates all recommended avoidance buffers and includes protective fencing for sites within 50 ft of the APE. Therefore, no physical impacts are expected to historic properties, and a determination of No Historic Properties Affected has been recommended for the current Physical APE. For further details concerning site-specific avoidance recommendations, see the Class III Cultural Resources Report (McCarthy et al. 2025) in **Appendix E**.

Basin Electric has routed the Tande Circuit to avoid impacts to known cultural resources, and intends to avoid impacts to unanticipated cultural resources by implementing the following measures:

- If any previously unknown cultural resources are discovered during construction, all work within 100 ft of the discovery that might adversely affect the resource will cease until Burns & McDonnell, in consultation with the appropriate parties, can evaluate the find. Burns & McDonnell will be notified and will ensure that a qualified professional archaeologist and, if appropriate, a Tribal representative with expertise relevant to the resource type, is on-site as soon as possible. Construction in the immediate vicinity of the discovery will not resume until authorized by Burns & McDonnell.
- In the event that personnel identify what they believe to be human remains, construction will stop within 100 ft of the discovery, and Basin Electric and their cultural resource specialist will be notified immediately to determine whether the find includes human remains. The site will be protected, and, as required by law, Basin Electric will notify the County Sheriff within 24 hours of the discovery. Work cannot resume until the stipulations outlined in Protection of Human Burial Sites, Human Remains, and Burial Goods (NDCC

Section 23-06-27) and Protection of Prehistoric and Historic Human Burial Sites, Human Remains, and Burial Goods (NDAC Chapter 40-02-03) have been met.

- An Unanticipated Discoveries Plan has been prepared to outline procedures for addressing any unanticipated discoveries of cultural resources, including possible human remains (**Appendix F**). In the event that such discoveries occur during construction, the Unanticipated Discoveries Plan provides direction to on-site personnel and their consultants regarding the proper procedures for managing and reporting the finds.

## 5.5 Land Cover, Land Use, Noxious Weeds and Recreational Resources

### 5.5.1 Description of Resources

#### Land Cover

The Study Area is located in rural North Dakota in an area predominantly comprised of cultivated land, hayfields, pasturelands, and grasslands. Accordingly, much of the Study Area is used for agriculture supporting livestock grazing and crops. The main crops grown are canola, wheat, and soybeans; the main livestock raised is cattle. Wooded areas within the Study Area are limited to shelterbelts between fields, windbreaks surrounding farmsteads, within drainages, and near wetlands. No irrigated land is within the Tande Circuit Corridor.

Land cover classifications, including acreage within the Study Area and Tande Circuit Corridor, are shown in **Table 5-4** below and in **Appendix B**. The Tande Circuit Corridor comprises primarily of cultivated lands (79 percent) and herbaceous grasslands (14 percent).

**Table 5-4: Land Cover Classifications**

| Land Cover | Acreage within Study Area | Acreage within Tande Circuit Corridor |
|---|---|---|
| Cultivated Crops | 27,780 | 697 |
| Forested | 43 | 2.7 |
| Developed/Bare Ground | 126 | 0 |
| Wetlands/Open Water | 2,860 | 60.5 |
| Grasslands/Herbaceous | 6,512 | 123 |

Source: Sentinel-2 10m Land Use/Land Cover (Karra, Kontgis, et al. 2021)

#### Managed Land Uses

Basin Electric reviewed publicly available data and consulted with agencies to determine if various managed lands (i.e., public lands, easements, and agreements) were crossed by the Tande Circuit. Within the Study Area, there are US Fish and Wildlife Service (USFWS) Grassland Easements, USFWS Wetland Easements, and a Waterfowl Protection Area. (see **Appendix A**). Basin Electric has consulted with each agency and will obtain the necessary easement and/or approvals, as needed.

Conservation Reserve Program (CRP) lands are administered by the Farm Service Agency (FSA) through the USDA. In exchange for yearly compensation, CRP lands are removed from agriculture production and planted with species that will improve environmental quality and health, with a long-term goal of establishing valuable land cover to improve water quality, prevent soil erosion, and reduce the loss of wildlife habitat (USDA, FSA 2024). Specific CRP acres are subject to privacy laws between each landowner and the FSA; Basin Electric has consulted with landowners to determine if CRP lands are crossed by the Tande Circuit Corridor and if any requirements (e.g., restoration) need to be considered during construction of the Tande Circuit.

Private Land Open to Sportsmen (PLOTS) is located within the Tande Circuit Study Area. PLOTS is an agreement between private landowners and the North Dakota Game and Fish Department (NDGFD) which allows walk-in public access for hunting on private land.

The Study Area does not include any designated or registered national sites including: parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; civil works project lands; forests; or wilderness areas; wild, scenic, or recreational rivers.

The Study Area does not include any designated or registered state parks; trails; forests; forest management lands; historic sites; monuments; historical markers; wild, scenic or recreational rivers; or nature preserves.

**Noxious Weeds**

There are 13 state-listed noxious weeds: absinth wormwood (*Artemisia absinthium*); Canada thistle (*Cirsium arvense*); dalmatian toadflax (*Linaria genistifolia*); diffuse knapweed (*Centaurea diffusa*); houndstongue (*Cynoglossum officinale*); leafy spurge (*Euphorbia esula*); musk thistle (*Carduus nutans*); palmer amaranth (*Amaranthus palmeri*); purple loosestrife (*Lythrum salicaria*); Russian knapweed (*Acroptilon repens*); Saltcedar (*Tamarix chinensis, T. parviflora, T. ramosissima*); spotted knapweed (*Centaurea maculosa*); yellow toadflax (*Linaria vulgaris*).

Additionally, Common Tansy (*Tanacetum vulgare*) and false chamomile (*Matricaria recutita*) are listed in Burke County and Common Tansy (*Tanacetum vulgare*) is listed in Mountrail County (North Dakota Department of Agriculture 2023).

**Recreational Resources**

Multiple areas within the Tande Circuit Study Area can be associated with public recreational activities such as fishing, hunting, and camping. These include state and federal lands and privately owned lands that are open to the public. See **Appendix A** for public lands within the Tande Circuit Study Area.

### 5.5.2 Impacts/Mitigation

The Tande Circuit will not result in a significant change in land use. No residences or farms will be displaced due to construction activities. Basin Electric will implement the following mitigation measures for the Tande Circuit:

**Land Use**

- The movement of crews and equipment will be limited to the Tande Circuit Corridor and other areas that have been cleared for cultural, historical, and biological resources. The contractor will limit movement on the Tande Circuit Corridor to minimize damage to rangeland, cropland, or property.
- Where wooded areas cannot be avoided, the transmission line will be placed in areas with the lowest density of trees, whenever feasible, thereby reducing the number of trees that will require removal within the Tande Circuit Corridor. If Basin Electric encounters areas where more than a 50-foot width of trees will need to be removed, a request will be filed to the Commission.
- All vegetative materials resulting from clearing operations will either be chipped on site or removed and disposed of in a permitted facility.

- Existing native vegetation within the Tande Circuit Corridor will be preserved whenever feasible.
- Surface disturbance areas will be reclaimed using native species, as approved by the NRCS, county extension agency, or other desired seed mix if required by landowners, and will be planted at the appropriate times in order to reestablish native vegetative cover and minimize the potential for invasion by non-native species.
- Where feasible, wetland and riparian communities will be spanned by the transmission line, thereby avoiding impacts to these ecosystems. To the extent practicable, access routes and workspaces have been shifted to avoid impacts to wetlands and waterbodies. All access road impacts will be temporary and permitted under NWP 57, as well. Erosion and sedimentation controls will be implemented to minimize indirect impacts to wetlands and riparian areas.
- If herbicides are used to remove woody species that become established in the Tande Circuit Corridor and pose a hazard to the transmission line, they will be used in an appropriate manner.
- Mulch and seeds used for revegetation, erosion, and sediment control will be certified as weed-free.
- Where practical, construction activities will be scheduled during periods when agricultural activities will be minimally affected, or the landowner will be compensated accordingly.
- Fences, gates, and similar improvements that are removed or damaged will be promptly repaired or replaced. New gates may be installed, if deemed appropriate.
- The ROW easement will be purchased through negotiations with each landowner affected by the Tande Circuit and payment will be made of full value for crop damages or other property damage during construction or maintenance.
- When weather and ground conditions permit, all deep ruts that are hazardous to farming operations and to movement of equipment will be eliminated or compensation will be provided if the landowner desires. Such ruts will be leveled, filled, and graded, or otherwise eliminated in an approved manner. Ruts, scars, and compacted soils from construction activities in cropland or rangeland will be loosened and leveled by subsoiling, paraplowing, scarifying, harrowing, or disking, as appropriate. Damage to ditches, roads, and other features of the land will be repaired.

**Managed Lands**

- Basin Electric will abide by agreements with USFWS, and with landowners with CRP easements on their lands, including construction and restoration requirements.

**Noxious Weeds**

- Basin Electric will develop a Weed Management Plan for the Project and distributed to each county.
- **Appendix A** includes noxious weed locations within the Tande Circuit Corridor, per field surveys.
- If noxious weeds are observed in the surface disturbance areas, populations will be controlled with the application of herbicides, which will be applied by a certified herbicide applicator in accordance with label instructions and State and local County Weed Board regulations. Biological control methods (i.e., use of spurge beetles) also may be considered for weed control, in consultation with appropriate agencies.
- Herbicides will not be used near surface water.

- Prior to the initiation of construction activities, construction vehicles and equipment will be thoroughly cleaned to prevent the possible spread of noxious weed seeds within the Tande Circuit Corridor.
- The Tande Circuit Corridor and other surface disturbance areas will be monitored annually for noxious weeds for a three-year period following construction and reclamation. Landowners will be consulted regarding all noxious weed control measures and issues.
- Herbicide applications will occur in late spring or early summer to eradicate or control noxious weeds before they mature.

**Recreational Resources**

No permanent impact is expected to recreational resources as construction will be temporary and land use surrounding the transmission line will return to its previous use after construction.

## 5.6 Soils and Geologic Resources

### 5.6.1 Description of Resources

The Study Area is located within two Class III ecoregions, the Northwestern Glaciated Plains and the Northern Glaciated Plaines (Bryce et al. 1996). These Class III ecoregions are divided into Class IV ecoregions, which are more detailed ecoregions for state-level applications. The three Class IV ecoregions within the Study Area are the Missouri Coteau Slope, Northern Missouri Coteau, and the Northern Dark Brown Prairie.

There are approximately 77 active oil and gas wells within the Tande Circuit Study Area (NDDMR 2025). There are no active sand and/or gravel mines located within the Study Area (US-Mining 2025). There are no abandoned coal mines in the Study Area (ND GIS Hub 2025). Approximately 35.17 acres of geologically unstable area, as indicated by the North Dakota Geological Survey landslide mapping program (Anderson et al. 2022), are present within the Tande Circuit Study Area (see **Appendix A**). No structure or access roads are located within these geologically unstable areas.

### 5.6.2 Impacts/Mitigation

The Tande Circuit will not result in a significant change to soil and geologic resources. All active oil and gas wells will be avoided. No structures or access roads are within geologically unstable areas Basin Electric will implement the following mitigation measures for the Tande Circuit:

- Excess subsoils and rock will be hauled off-site to an approved landfill.
- Erosion and sediment controls will be established prior to construction, then maintained and controlled through application of the Storm Water Pollution Prevention Plan (SWPPP).
- Sediment control measures (e.g., installation of silt fences) will be used, where appropriate, to prevent sediment from moving off-site and into waterbodies.
- Maintenance operations will be scheduled during periods of minimum precipitation to minimize the potential of surface runoff and to reduce the risk of erosion, rutting, sedimentation, and soil compaction. However, emergency repairs to the transmission line may occur during periods of inclement weather. Ruts, scars, and compacted soils

resulting from emergency activities will be repaired by subsoiling, paraplowing, scarifying, harrowing, or disking, as appropriate.

## 5.7 Surface Water and Groundwater Resources

### 5.7.1 Description of Resources

The Tande Circuit is located within the Prairie Pothole Region. Prairie potholes (*i.e.*, emergent wetlands, freshwater ponds) are scattered throughout the Study Area. Intermittent drainages associated with the Missouri River are also present in the Study Area.

Western EcoSystems Technology, Inc. (WEST) conducted a desktop assessment for the 2,191.64-acre Survey Area, a 300-ft area centered on the Tande Circuit Route and a 30-ft area centered on access routes, to identify potential wetland and waterbody areas. The data was used as a precursor for field delineations. Field delineations were conducted between September 2023 and September 2025. 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 USACE Ordinary High Water Mark criteria and definitions provided by the US Environmental Protection Agency in *Draft Guidance on Identifying Waters Protected by the Clean Water Act* (Tucker et al. 2025). 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. A total of 261 wetlands, covering 178.01 acres and 9 waterbodies, covering 4.86 acres were recorded during field survey efforts (see **Appendix A** and **Appendix G**).

There are no mapped Federal Emergency Management Agency (FEMA) floodplains within the Tande Circuit Corridor. (FEMA 2025). Aquifers present within the Tande Circuit Study Area include the Wildrose and two unnamed. (DDWR 2025).

### 5.7.2 Impacts/Mitigation

The Tande Circuit will not result in a significant change to surface water and groundwater resources and will avoid direct, permanent impacts to all wetlands and waterbodies, where feasible. Access routes and workspaces have been shifted to avoid impacts to wetlands and waterbodies. Basin Electric will implement the following mitigation measures:

- A pre-construction wetland and waterbody survey has been conducted to determine the location and spatial extent of wetlands and waterbodies within the Tande Circuit Corridor (see **Appendix G**). All features will be mapped using a Global Positioning System device to enable feature avoidance and site-specific structure placement.
- A 30-foot buffer will be established adjacent to wetlands and streams, where practicable, to prevent or minimize impacts to those ecosystems.
- Transmission line structures will be sited so that streams and drainages are spanned and remain undisturbed. Temporary construction and maintenance impacts will be permitted under NWP 57, as necessary.
- Staging areas and refueling areas will not be located near surface waterbodies.
- Areas that need to be cleared during construction will be revegetated with an approved native seed mix as soon as technically feasible to minimize soil erosion and sediment runoff.

- A SPCC plan will be developed prior to the start of construction to prevent the potential for spills of hazardous substances into streams and drainages, and potential contamination of groundwater. The plan will include a procedure for storage of hazardous materials and refueling of construction equipment outside of riparian zones, spill containment and recovery plan, and notification and activation protocols.
- Refueling of construction vehicles will occur at commercial fueling facilities and staging areas, if on-site fuel storage is needed for refueling.
- A SWPPP will be developed and implemented prior to initial construction activities. The SWPPP will include an analysis of materials that will be used and site activities that could potentially impact storm water and the associated mitigation measures to minimize that potential. SWPPP implementation will include regular inspections of areas under construction, material storage and laydown areas, and structural devices for storm water management. All construction personnel will be trained and required to comply with SWPPP's requirements and the maintenance of all environmental protection measures. The SWPPP will be maintained until final stabilization of all disturbed areas has been completed.

## 5.8 Wildlife and Rare and Unique Natural Resources

### 5.8.1 Description of Resources

The USFWS administers the Endangered Species Act (ESA), which mandates protection of species federally listed as threatened and endangered, while also designated critical habitat for these species. An endangered species is a species that is in danger of extinction throughout all or a significant portion of its range. A threatened species is a species that is likely to become endangered in the foreseeable future. Critical habitat for these species can be designated if that habitat includes specific areas that are occupied by a species at the time of listing or unoccupied areas that are considered essential to the conservation of a species. Candidate species receive no statutory protection from the USFWS unless they are formally listed. North Dakota does not have a state threatened and endangered species list; however, it recognizes those federally listed under the ESA.

WEST conducted a natural resource inventory of the 2,191.64-acre Survey Area which included an evaluation of habitat for federally listed species. Assessments for federally listed threatened and endangered species were conducted by evaluating historic accounts and reported occurrences of listed species within the Study Area. A desktop evaluation was conducted, which was augmented with a field evaluation to confirm the presence or absence of potentially suitable habitat for federally listed species within the Survey Area. The findings are summarized in the Natural Resource Inventory Report (**Appendix G**).

Prior to field surveys, the USFWS Information for Planning and Conservation (IPaC) tool was reviewed and indicated that six threatened, endangered, and candidate species could potentially occur within the Survey Area (Tucker, et al 2025) (see **Table 5-5** below).

| Table 5-5: Threatened and Endangered Species | | |
|---|---|---|
| **Common Name** | **Scientific Name** | **Status** |
| Northern long-eared bat | *Myotis septentrionalis* | Endangered |
| Piping plover | *Charadrius melodus* | Threatened, Critical Habitat Designated |
| Red knot | *Calidris canutus rufa* | Threatened |
| Whooping crane | *Grus americana* | Endangered |
| Dakota skipper | *Hesperia dacotae* | Threatened, Critical Habitat Designated |
| Monarch butterfly | *Danaus plexippus* | Proposed Threatened |
| Western Regal Fritillary | *Argynnis idalia occidentalis* | Proposed Threatened |
| Suckley's Cuckoo Bumble Bee | *Bombus suckleyi* | Proposed Endangered |

Source: USFWS IPaC (Tucker, et al. 2025)

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act (BGEPA). The BGEPA protects bald and golden eagles throughout their range in the United States. Although it does not designate critical habitat, BGEPA protects individual eagles and nests from disturbance. The surveys conducted by WEST included surveying for raptor nests, including eagles.

A detailed analysis of each threatened, endangered, and proposed species, as well as bald and golden eagles, is included in **Appendix G**.

### 5.8.2 Impacts/Mitigation

During the field surveys, no federally listed species were observed.

#### Northern Long-Eared Bat

A desktop analysis was conducted to determine impacts to tree habitat and determine what locations have a higher probability of providing habitat for the northern long-eared bat (NLEB). By using 2024 National Agriculture Imagery Program imagery, it was determined that 21 tree patches, totaling 14.6 acres of potential treed habitat are located within the Survey Area. Of that, 1.3 acres of treed habitat are within the portion of the Survey Area that lies within the USFWS current NLEB range. This habitat consists of nine planted, deciduous tree rows and two single, natural growth deciduous trees.

To avoid incidental take, tree clearing activities will occur between the USFWS recommended dates, November 1st through April 14th. If localized tree clearing activities cannot be conducted during this window, the USFWS will be consulted to determine the necessary action.

#### Piping Plover

Critical habitat for the Northern Great Plains piping plover has been designated on alkali lakes and wetlands, the Yellowstone River, and the Missouri River in North Dakota. The field survey documented that the Survey Area is predominantly cropland and contains wetlands and waterbodies that are well vegetated and do not provide bare ground suitable for nesting habitat. The nearest critical habitat, Cottonwood Lake, is approximately 10.7 miles east of the Tande Circuit Route.

Prior to construction, during the period of concern (April 15 to August 15), a migratory bird and nest survey will be completed along the entire Tande Circuit Route. Wetlands and waterbodies within the Tande Circuit Corridor and within view of the Tande Circuit Corridor will be surveyed. If piping plovers are spotted in or around the Tande Circuit Corridor, a ½-mile buffer will be placed on that wetland or waterbody and no construction would occur until any chicks have fledged.

### Rufa Red Knot

Rufa red knot does not nest in North Dakota but may use areas along the Missouri River as stopover habitat. At the nearest point, the Missouri River is approximately 15.79 miles from the Tande Circuit Route. Wetlands and waterbodies within the Survey Area do not have suitable shoreline stopover habitat for the rufa red knot. It is unlikely that the Tande Circuit will affect the red knot.

### Whooping Crane

The Tande Circuit is located within the migration corridor where 50% of whooping cranes travel. Land use within the area is a mixture of cropland and rangeland, and oil/gas development. The USFWS Database shows the Tande Circuit Counties (Burke, Divide, and Mountrail) have 235 verified whooping crane sightings. The closest confirmed sighting to the Tande Circuit Route was of three adult cranes in 2000, 0.02 miles south of the Tande Circuit Route, in Sec. 28, T163N, R96W.

The Tande Circuit was analyzed using the model developed by the US Geological Survey (USGS) Northern Prairie Wildlife Research Center and the USFWS Habitat and Population Evaluation Team. The Model predicts that 80% of the Tande Circuit Corridor, 1,697.76 acres, is within the 1st probability decile and 15% (893.32 ac) is within the 2nd probability decile. This is on a 1-10 scale where 1 is the lowest probability and 10 is the highest probability of use by whooping cranes (Niemuth et al., 2018).

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 (Tucker et al., 2025). If a crane is sighted within 1.0 mile of the Tande Circuit Corridor, construction activities using 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. Flight diverters will be installed on the transmission line to minimize bird strikes. **Appendix G** contains Basin Electric's Avian and Bat Protection Plan. Following these guidelines, it is reasonable to expect the Tande Circuit is unlikely to adversely affect the whooping cranes.

### Dakota Skipper

A desktop assessment of habitat within the Survey Area was used to divide habitat into one of two basic habitat groups: grassland habitat and unsuitable habitat. The assessment identified 452.31 acres (34%) of grassland habitat and 1,668.25 acres (66%) of unsuitable habitat. The field survey was conducted within the identified grassland habitat to determine if suitable habitat was present. 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 (Tucker et al., 2025). The field survey recorded seven locations of suitable habitat, totaling 0.18 acres, less than 1% of the Survey Area.

BEPC has designed the Tande Circuit to minimize impacts to suitable habitat for the Dakota skipper (DASK). This includes routing access trails around potential habitat and placing pole structures outside of potential habitat. Identified DASK habitat will be avoided during all construction activities. A ½ mi buffer around identified DASK habitat will be established and native grassland habitat within the 1/2 mi buffer will be disturbed at the minimum level practical. To minimize the impacts to foraging or dispersing adult DASK, a 500-meter (m) avoidance buffer will also be established around identified DASK habitat locations. Existing surfaced roads within the 500-m buffer may be used for travel, but construction within the 500-m buffers will not occur

during the flight window. In addition, dust abatement may be necessary on gravel surfaced roads during the flight window. The flight period is typically 14 days long between the dates of June 10 – July 25 and dates may be adjusted based on annual observations by the USFWS. The ½ mile and 500-m buffers are depicted in **Appendix G**.

### Bald and Golden Eagle

The transmission line will be outfitted with bird flight diverters following Avian Power Line Interaction Committee (APLIC) guidelines, which will also increase visibility of the lines for large raptors such as eagles, thereby reducing collision risk with the transmission lines. Therefore, the impacts on eagles are likely to be low.

In order to minimize impacts to threatened and endangered species, Basin Electric will implement mitigation measures in addition to the list below, if requested by USFWS. No irreversible damage to rare or unique animal or plant species is anticipated. Individual species are discussed below. Basin Electric will implement the following mitigation measures:

- Prior to surface disturbance activities during the migratory bird (not including raptors) breeding season (May 1 through July 15), a qualified biologist will survey suitable habitat within the Corridor (i.e., non-cultivated land) for nesting activity and other evidence of nesting (e.g., mated pairs, territorial defense, birds carrying nest material, transporting food). If active nests are located, or other evidence of nesting is observed, appropriate protection measures, including establishment of buffer areas and constraint periods, will be implemented until the young have fledged and dispersed from the nest area. These measures will be implemented on a site-specific and species-specific basis, in coordination with applicable state and federal agencies, as appropriate.
- Standard measures to minimize avian collision risk with overhead transmission lines, as outlined in the APLIC Reducing Avian Collisions with Power Lines (APLIC 2012), have been examined and appropriate measures developed as outlined in Basin Electric's Avian and Bat Protection Plan is included in **Appendix G**.
- Adequate raptor proofing designs, as described in the APLIC Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006), will be implemented on the structures in coordination with applicable state and federal agencies.
- Holes that are drilled or excavated for foundation construction and left unattended overnight will be marked and secured with temporary fencing and plywood covers to reduce the potential for livestock and wildlife entering the holes and for public safety.

# 6.0 PUBLIC AND AGENCY COORDINATION

Basin Electric contacted key local, state, and federal agencies per NDAC Section 69-06-01-05 for assistance in identifying concerns or issues within the Study Area. Public and agency correspondence as of October 2024 are included in **Appendix H**. Basin Electric has maintained close coordination with landowner stakeholders throughout the process via in-person meetings, mailers, and phone calls. Each landowner received a pamphlet that detailed information about the Project such as Project permitting, design and construction, construction, maintenance, and landowner relations (**Appendix I**). Basin Electric will continue to meet with various state and county officials as the Tande Circuit moves forward for all necessary permits.

## 7.0 POTENTIAL PERMITS/APPROVALS

**Table 7-1** below outlines the federal, state, county, and township permits or approvals that have been identified as required for the construction and operation of the Tande Circuit. Permits dependent on the final layout will be applied for after receiving Commission approval, but prior to construction.

**Table 7-1: Permits and Approvals Required**

| Federal | | | |
|---|---|---|---|
| **Agency** | **Type of Approval** | **Status*** | **Need** |
| International Boundary Commission | Concurrence | 1 | Required for transmission lines that cross the international border of the United States and Canada. (See **Appendix J**) |
| US Army Corps of Engineers | Individual Section 404 Permit | 3 | Required for discharge of dredged or fill material into waters of the US, including wetlands. |
| | NWP 57 Pre-Construction Notification | 3 | Required for discharges to jurisdictional wetlands and waterbodies. |
| US Department of Energy | Presidential Permit | 2 | Required for transmission lines that cross the international border of the United States and Canada. |
| **State of North Dakota** | | | |
| **Agency** | **Type of Approval** | **Status*** | **Need** |
| ND Public Service Commission | Certificate of Site Compatibility and Route Permit - Transmission Facility | 2 | Required for construction of a transmission facility over 115-kV. |
| ND State Historic Preservation Office | Concurrence with effect determinations | 2 | The Tande-to-Saskatchewan Transmission Line report was submitted September 26th, 2025; concurrence was received from NDSHPO on October 28, 2025. An updated report will be submitted to NDSHPO once the remaining Tande Circuit Corridor has been surveyed. |
| ND Department of Environmental Quality | National Pollutant Discharge Elimination System Permit: General Construction Storm Water | 3 | Required for disturbance of over one acre of land and a stormwater pollution prevention plan must be prepared |
| | 401 Water Quality Certification | 2 | Required for filling in jurisdictional water of the US; granted with NWP 57 |
| ND Highway Patrol | Oversize/Overweight Permit | 3 | Required to transport oversize loads on state-maintained roads. |
| ND Department of Transportation | Road Approach/Access Permit | 3 | Required for construction of access roads from state highways |
| | Utility Permit/Risk Management Documents | 3 | Required for utility crossings on state highway ROWs |
| ND Department of Trust Lands | Rights-of-way Easement | 3 | Required for transmission lines on NDDTL surface lands |
| **County/Townships** | | | |
| **Agency** | **Type of Approval** | **Status*** | **Need** |
| Burke County | Conditional Use Permit | 3 | Required for electrical transmission lines within Agriculture Districts |
| Divide County | Conditional Use Permit | 3 | Required for electrical transmission lines within Agriculture Districts |
| Mountrail County | Conditional Use Permit | 2 | Required for electrical transmission lines within Agriculture Districts |

*Status Explanation:
1: Complete and approved
2: Applied for and/or decision pending
3: Will be applied for prior to construction, as applicable

# 8.0 QUALIFICATIONS OF CONTRIBUTORS

| Table 8-1: Qualifications of Contributors | | |
|---|---|---|
| **Basin Electric Power Cooperative** | | |
| **Name** | **Responsibilities** | **Education and Experience** |
| Bobby Nasset | Project Manager | B.S. Civil Engineering<br>Registered Professional Engineer<br>20 Years of Experience |
| Shane Vasbinder | Project Engineer | B.S. Civil Engineering<br>Registered Professional Engineer<br>20 Years of Experience |
| Ryan King | Environmental/Permitting | Master of Natural Resources Management<br>B.S. Construction Management<br>13 Years of Experience |
| Erin Dukart | Environmental/Permitting | B.S. Biology<br>16 Years of Experience |
| Mike Murray | Right-of-Way | B.S. Management<br>16 Years of Experience |
| Jerry Haas | Right-of-Way | B.S. Political Science<br>20 Years of Experience |
| Jason Brekke | GIS Analyst | B.S. Geography<br>24 Years of Experience |
| Shannon Vaira | GIS Analyst | B.A. Geography; Minor in GIS<br>12 Years of Experience |
| **Metcalf Archaeological Consultants, Inc.** | | |
| **Name** | **Responsibilities** | **Education and Experience** |
| Melinda McCarthy | Cultural Resources Inventory | B.A. Anthropology<br>M.A. Historic Preservation<br>Registered Professional Archeologist<br>16 Years of Experience |
| Marcia Bender | Cultural Resources Inventory | B.A. Anthropology<br>M.A. Anthropology<br>Registered Professional Archeologist<br>24 Years of Experience |
| **Western EcoSystems Technology, Inc** | | |
| **Name** | **Responsibilities** | **Education and Experience** |
| Chad Tucker | Natural Resources Inventory/Report | B.S. Wildlife Fisheries Science<br>20 Years of Experience |
| Erica Matykiewicz | Natural Resources Inventory/Report | B.S. Biology<br>M.S. Natural Resources Stewardship<br>10 Years of Experience |

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## 10.0 ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| APLIC | Avian Power Line Interaction Committee |
| ATSS | Aggregate Transmission Service Study |
| Basin Electric | Basin Electric Power Cooperative |
| BGEPA | Bald and Golden Eagle Protection Act |
| Burns & McDonnel | Burns & McDonnell Engineering Company, Inc. |
| Certificate | Certificate of Corridor Compatibility |
| Commission | North Dakota Public Service Commission |
| CRP | Conservation Reserve Program |
| DASK | Dakota Skipper |
| EMF | electromagnetic fields |
| EMR | electromagnetic radiation |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| FSA | Farm Service Agency |
| GIS | geographic information systems |
| IPaC | Information for Planning and Conservation |
| kV | kilovolt |
| MW | megawatts |
| ND | North Dakota |
| NDAC | North Dakota Administrative Code |
| NDCC | North Dakota Century Code |
| NDDOT | North Dakota Department of Transportation |
| NDDTL | North Dakota Department of Trust Lands |
| NDSHPO | North Dakota State Historical Preservation Office |
| NESC | National Electrical Safety Code |
| NLEB | northern long-eared bat |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWP | Nationwide Permit |
| OPGW | optical ground wire |
| PLOTS | Private Land Open to Sportsmen |
| Project | Wheelock and Tande to Saskatchewan 230-kV Transmission Project |
| Route Permit | Transmission Facility Route Permit |
| ROW | right-of-way |
| RTO | Regional Transmission Organization |
| RUS | Rural Utilities Service |
| SaskPower | Saskatchewan Power Corporation |
| SCADA | Supervisory Control and Data Acquisition |
| SPP | Southwest Power Pool |
| SPCC | Spill Prevention, Control and Countermeasure (plan) |

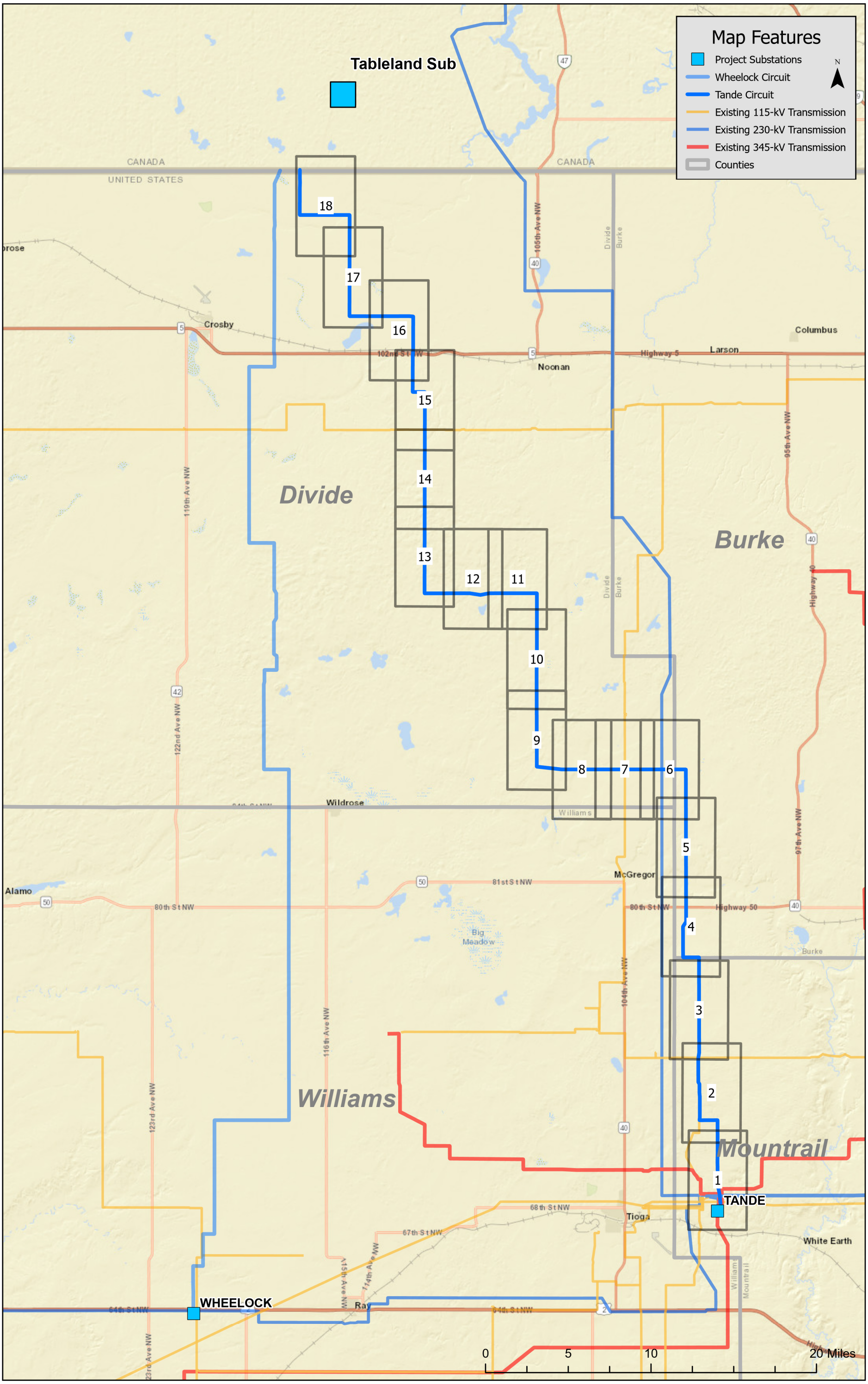
| | |
|---|---|
| SWPPP | Storm Water Pollution Prevention Plan |
| Tande Circuit | Tande to Saskatchewan 230-kV Transmission Line |
| USACE | U.S. Army Corps of Engineers |
| USDA | U.S. Department of Agriculture |
| USFWS | U.S. Fish and Wildlife Service |
| Wheelock Circuit | Wheelock to Saskatchewan 230-kV Transmission Line |
| WEST | Western EcoSystems Technology, Inc. |

# Appendix A

# Tande Circuit Map Book

# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

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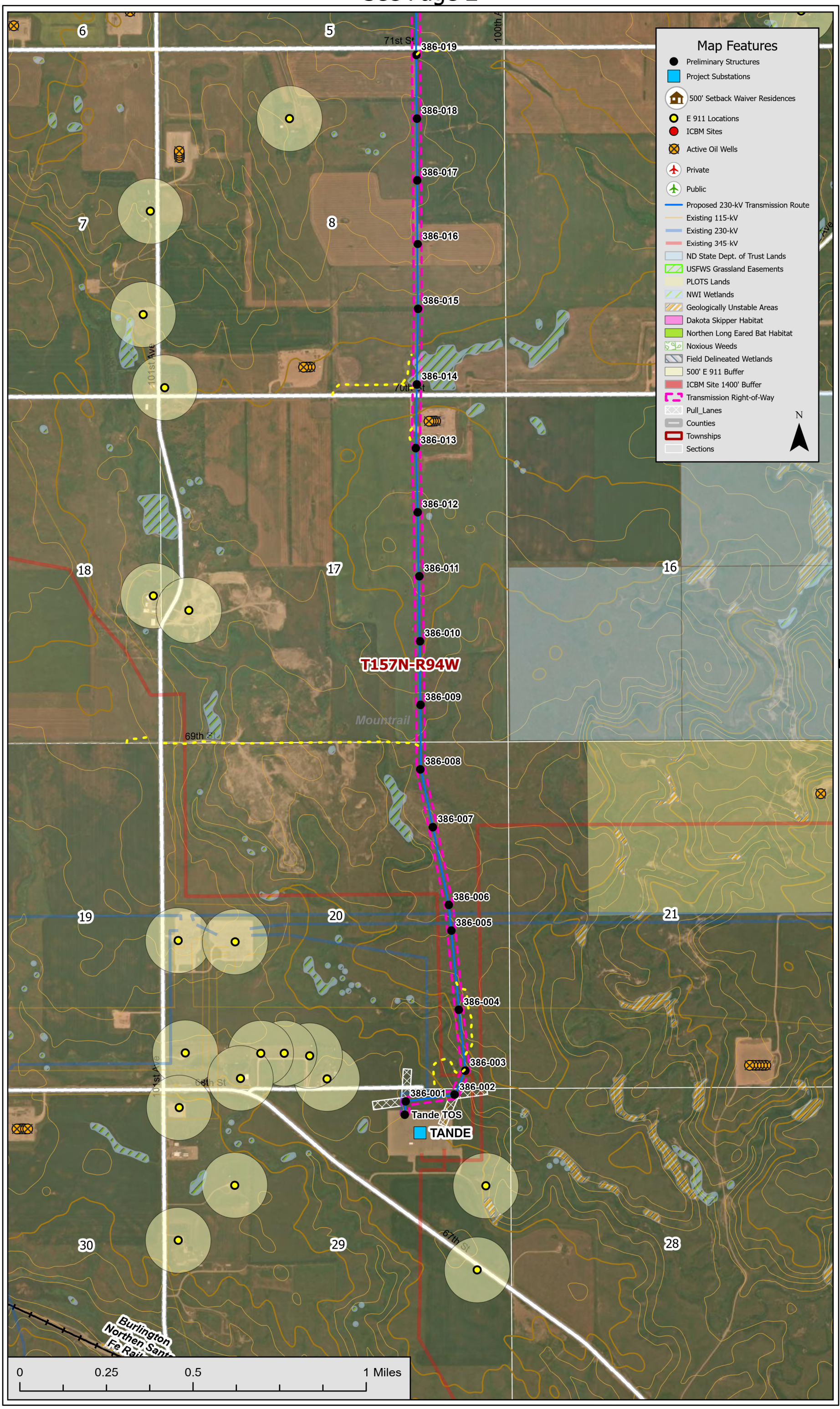




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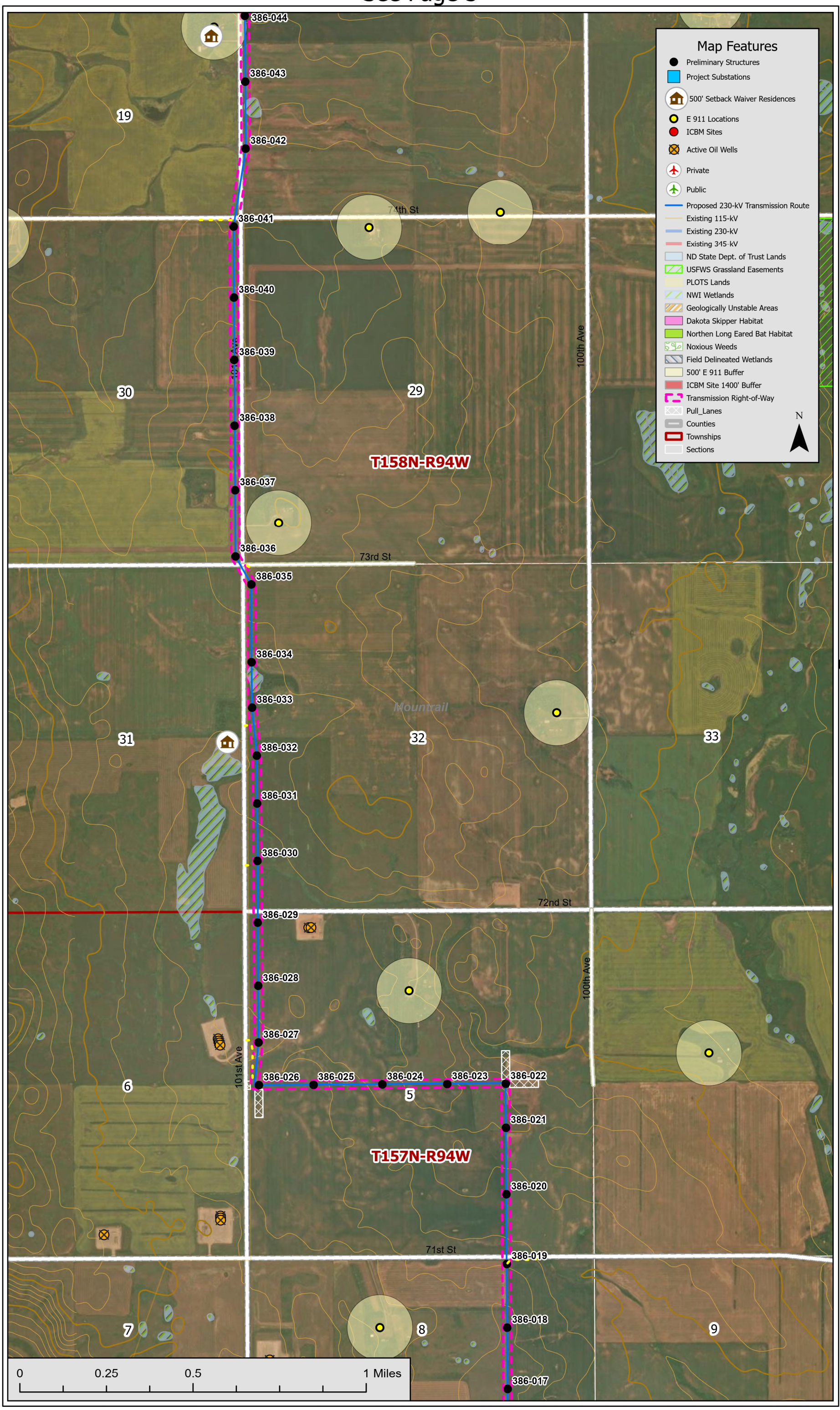




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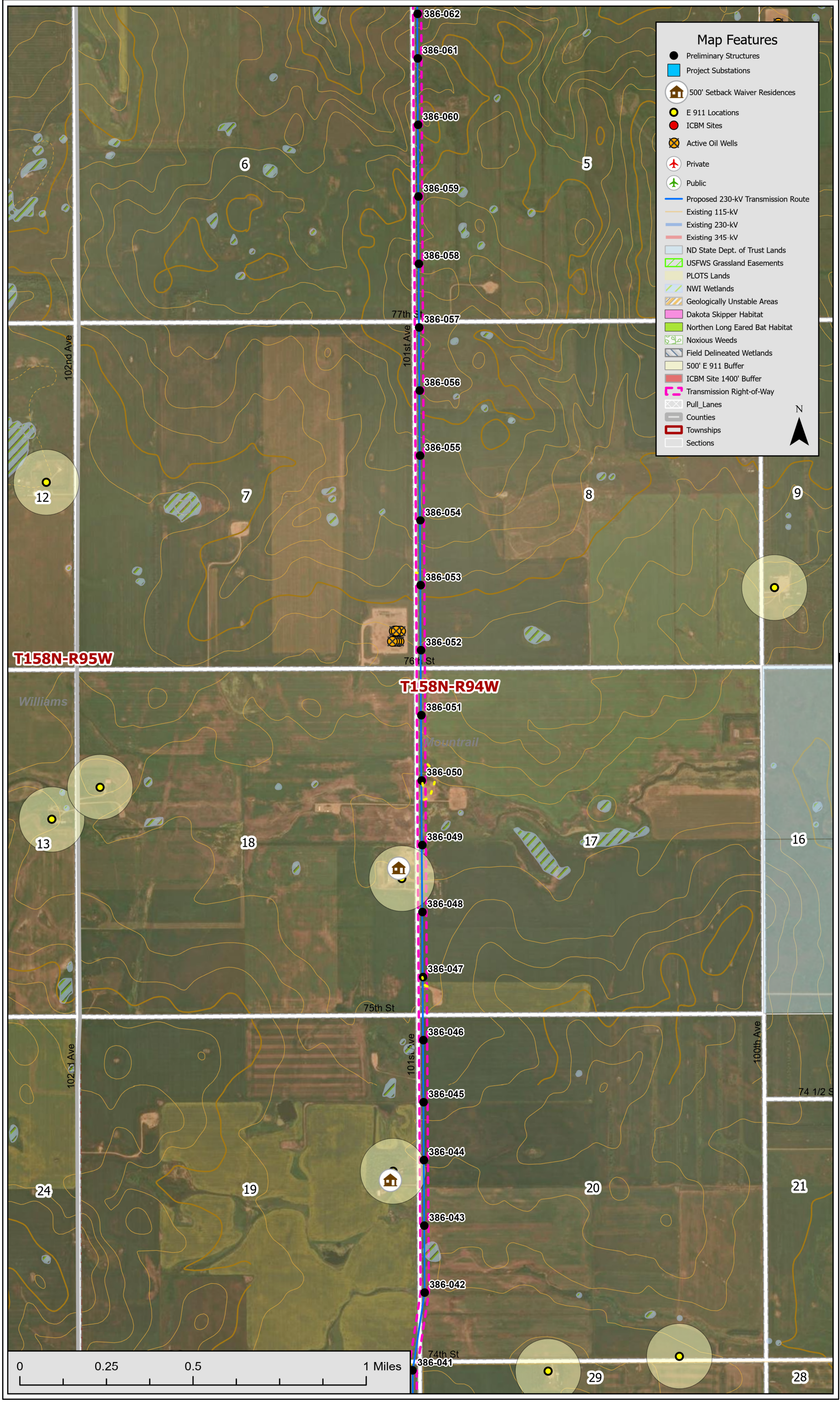




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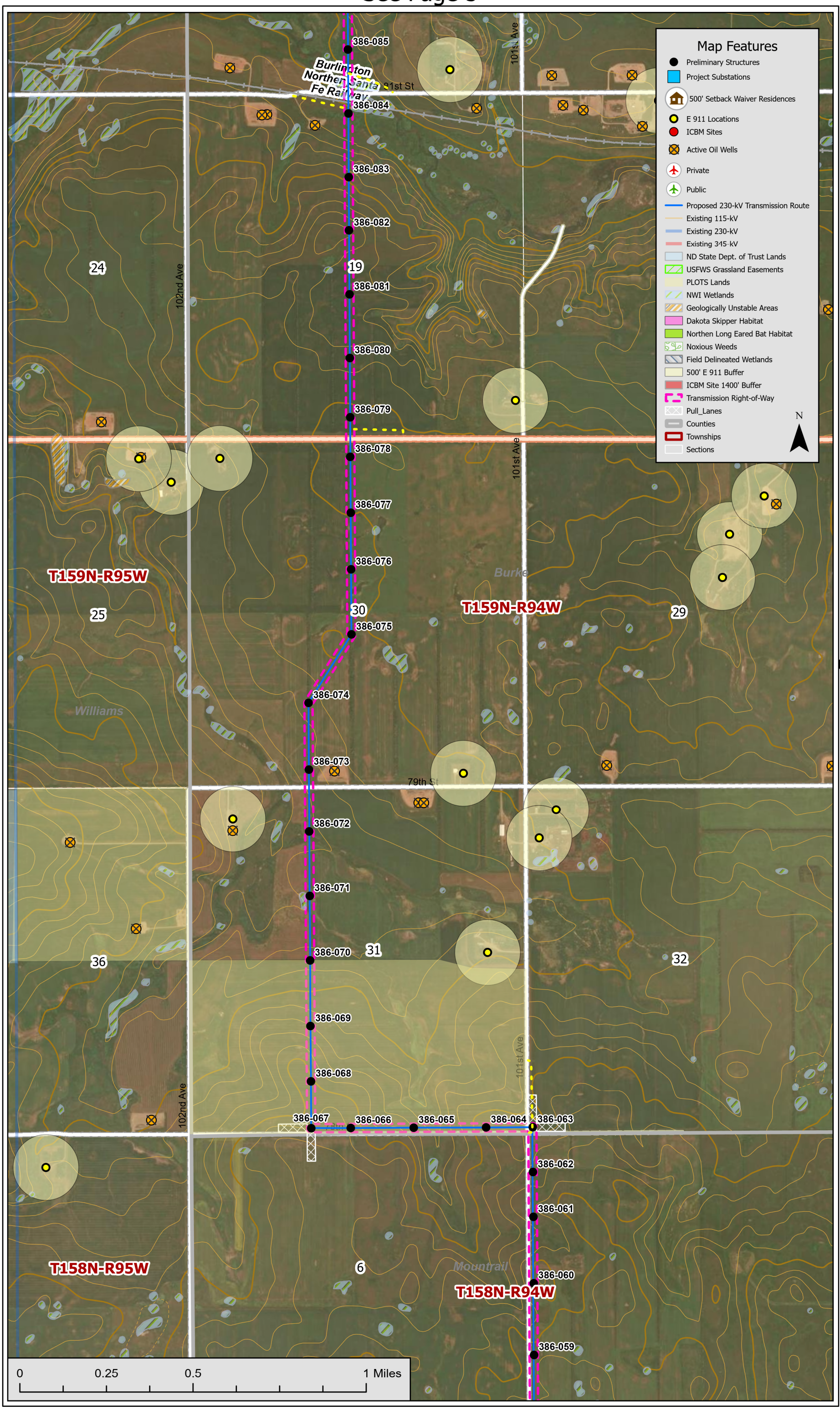




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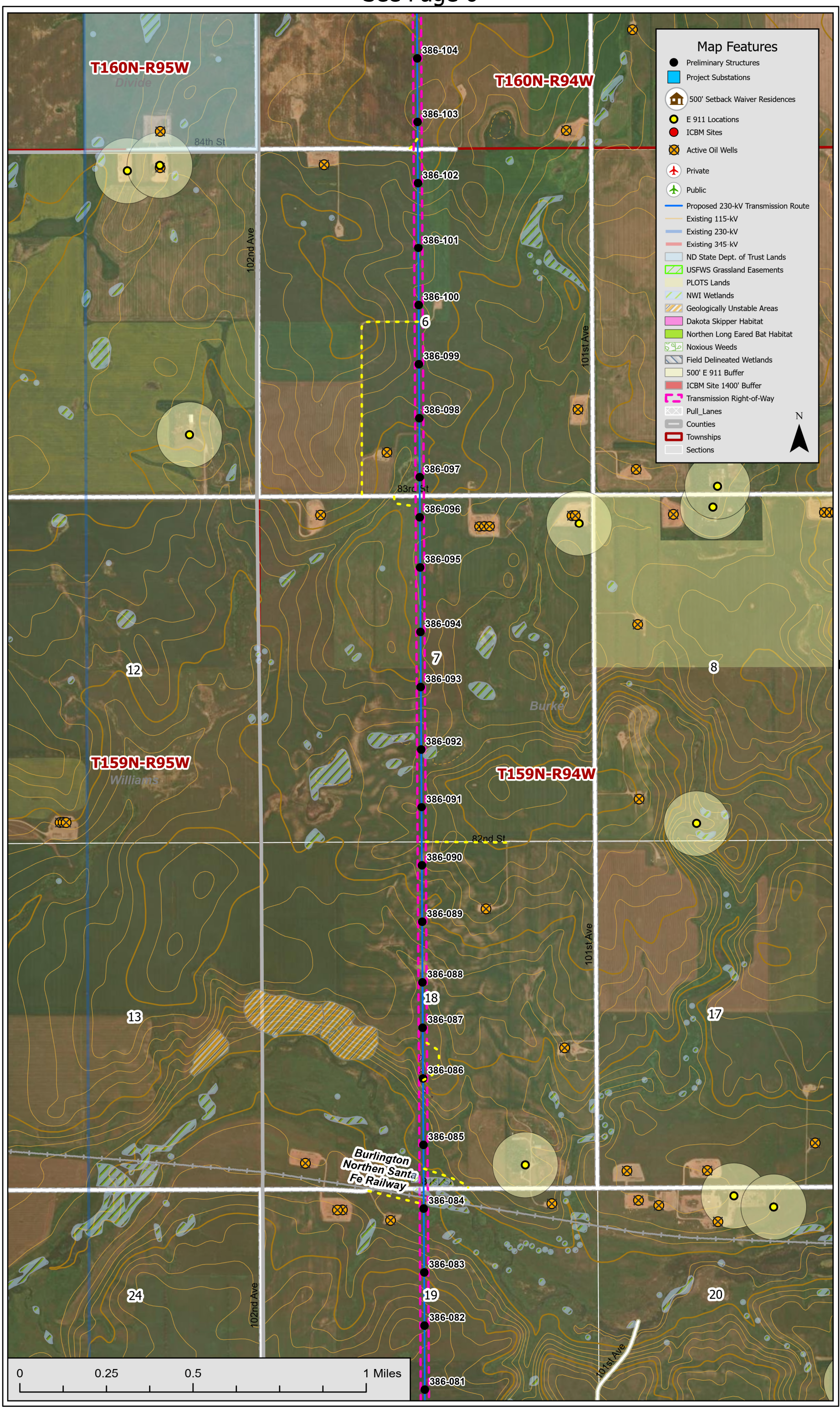


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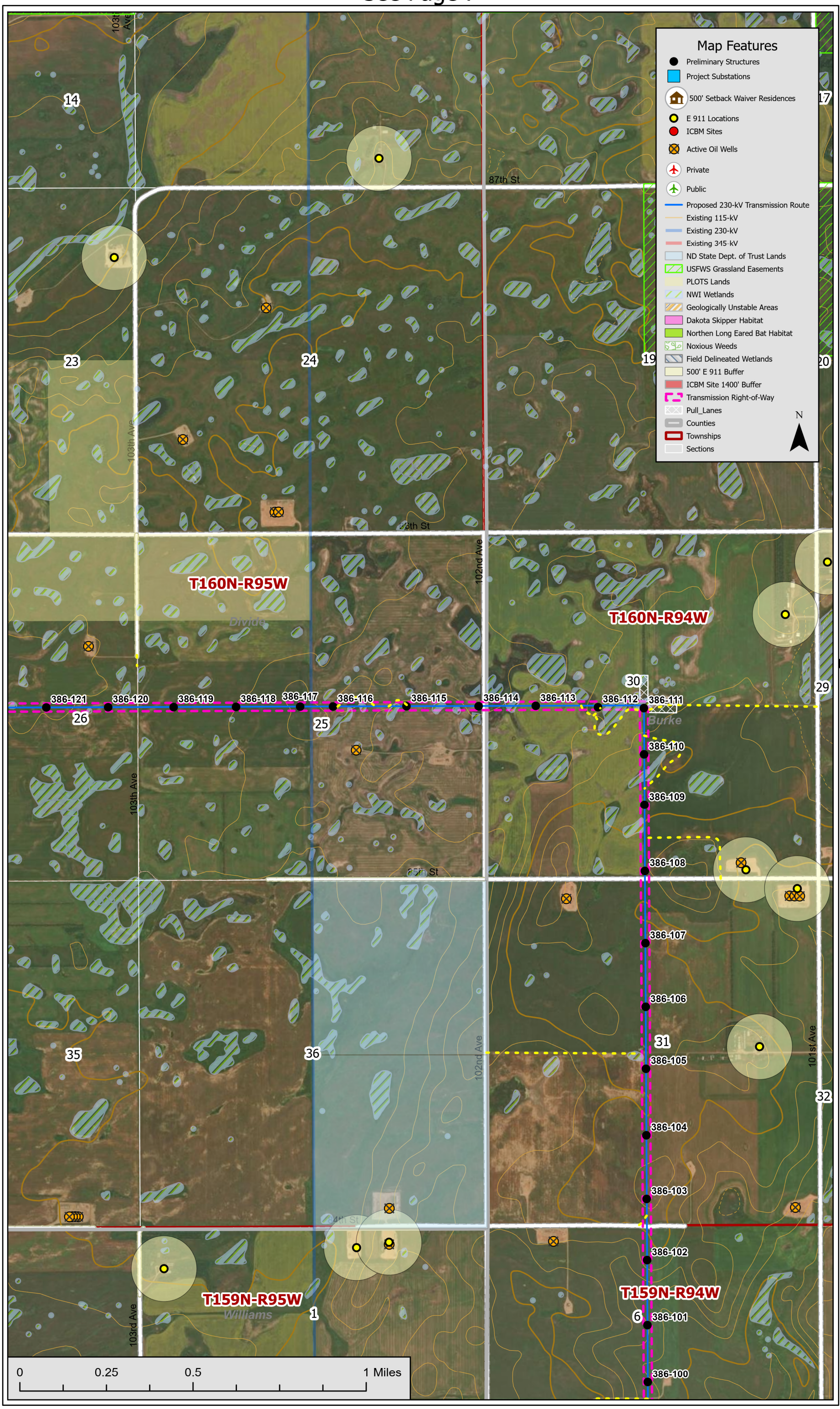


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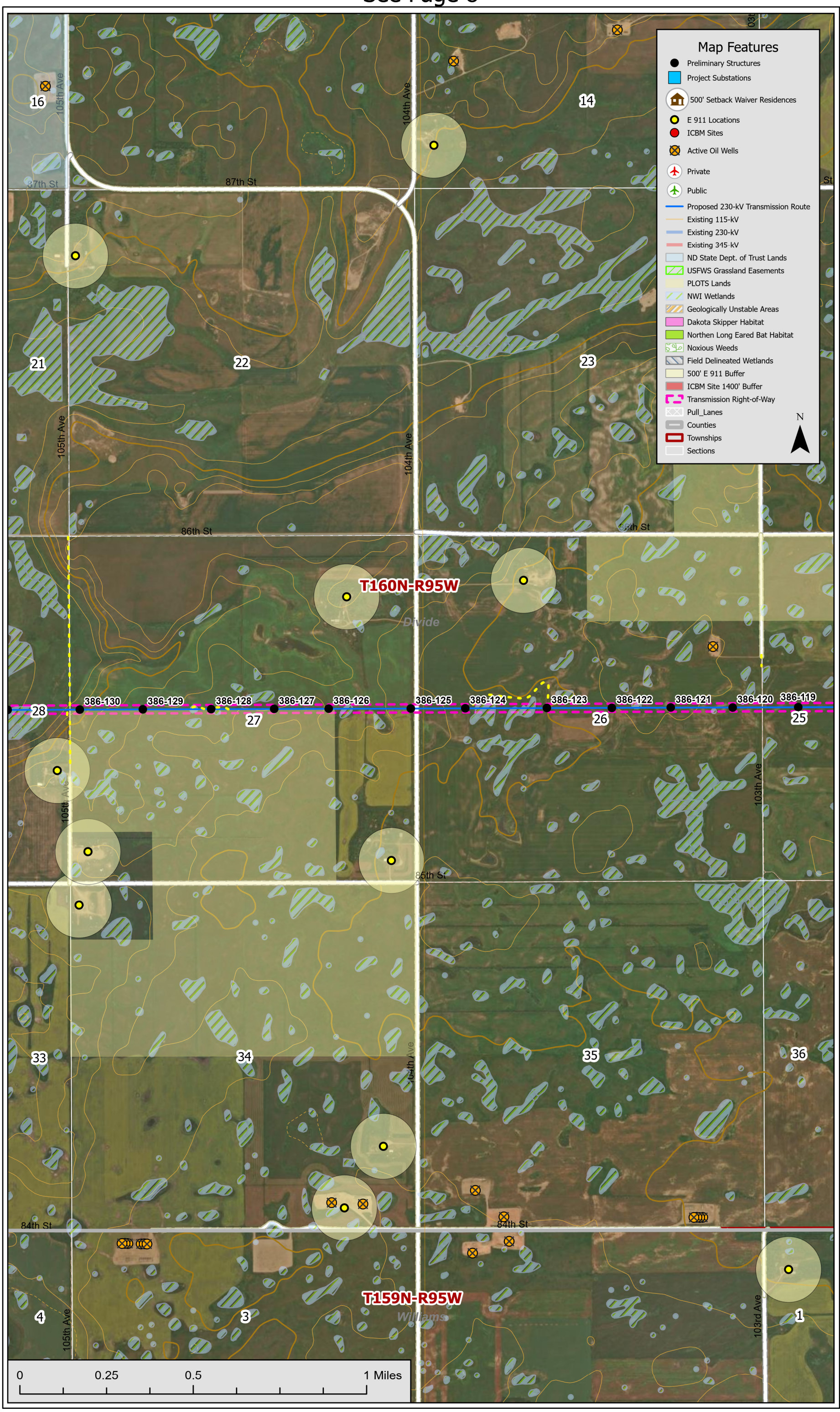




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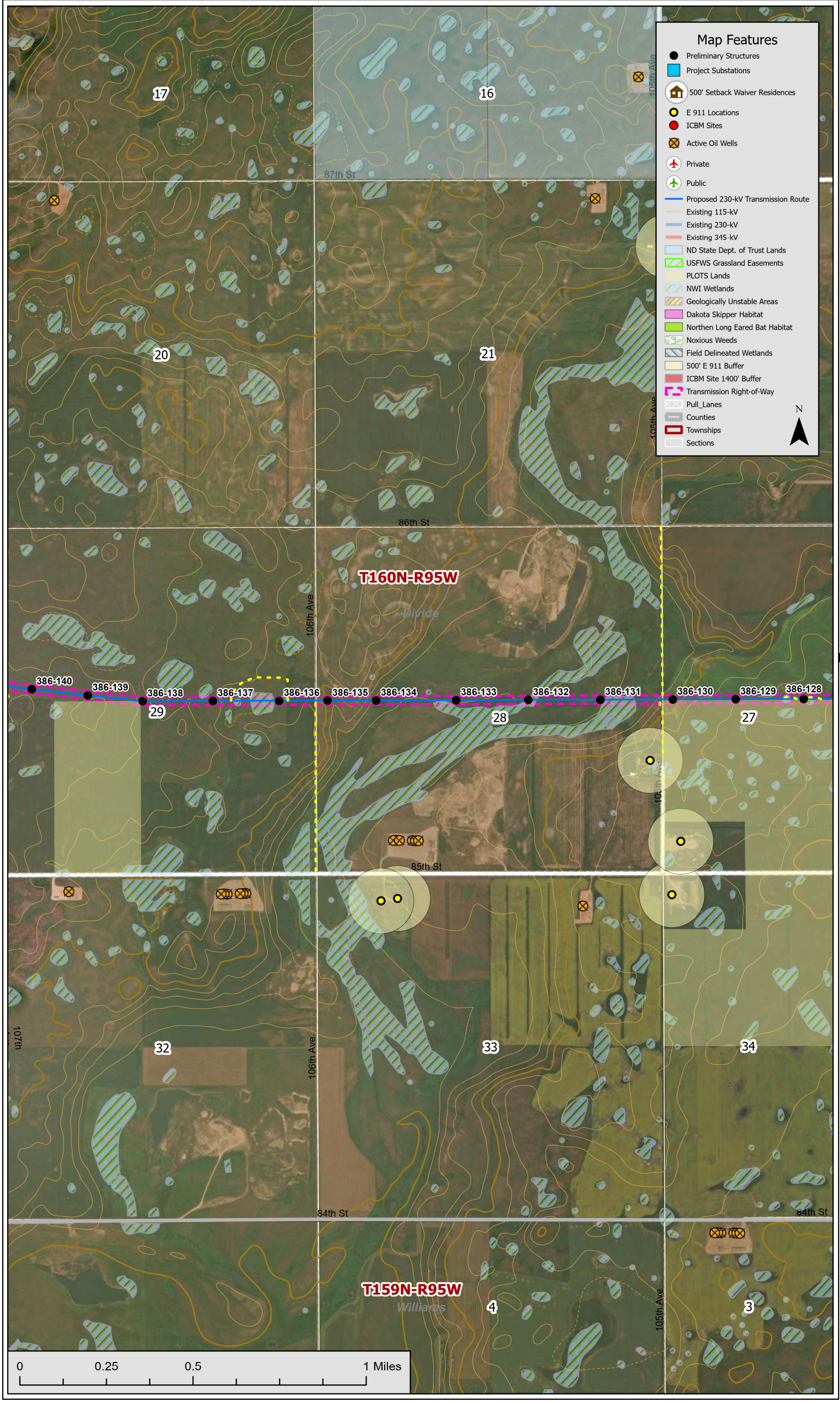


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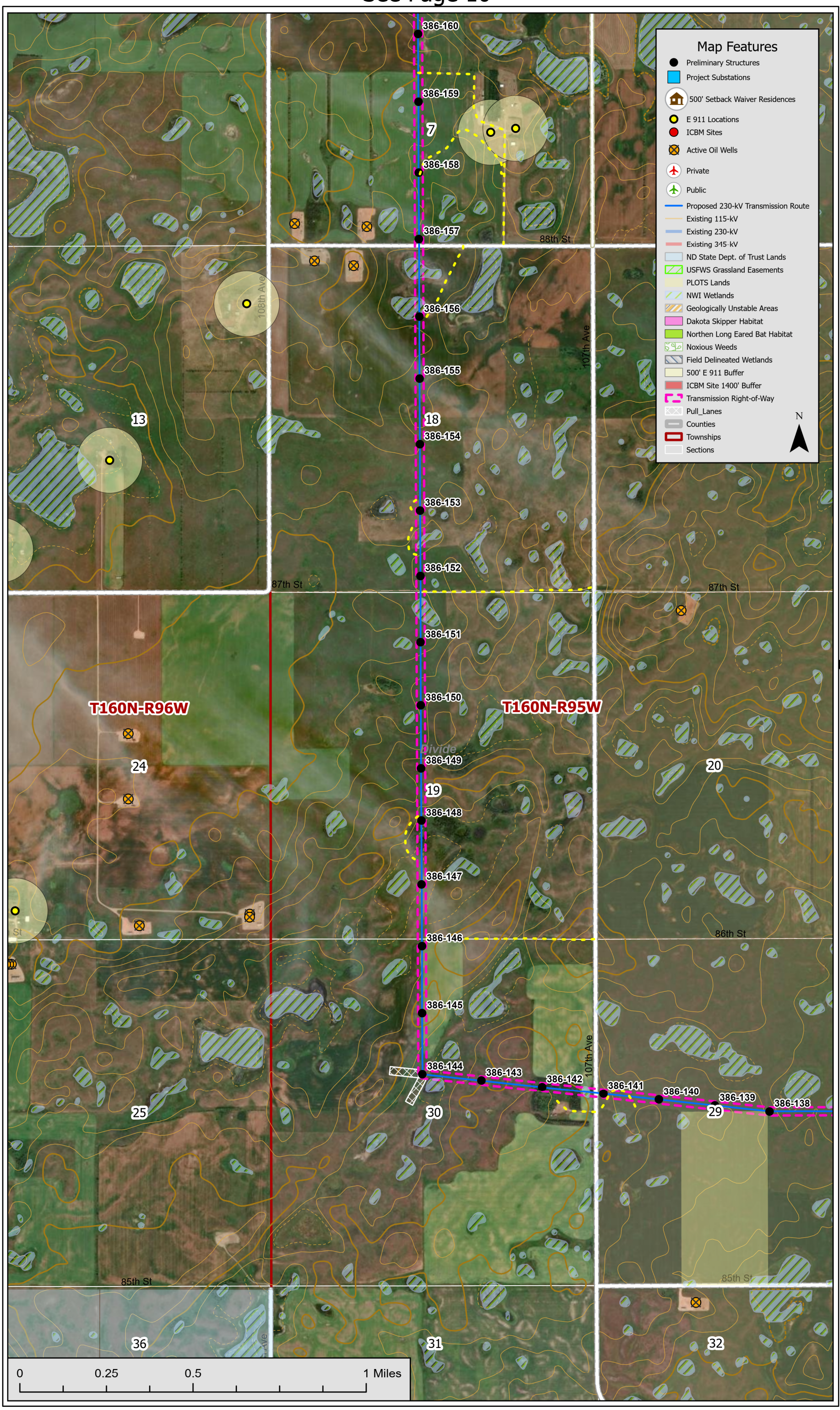




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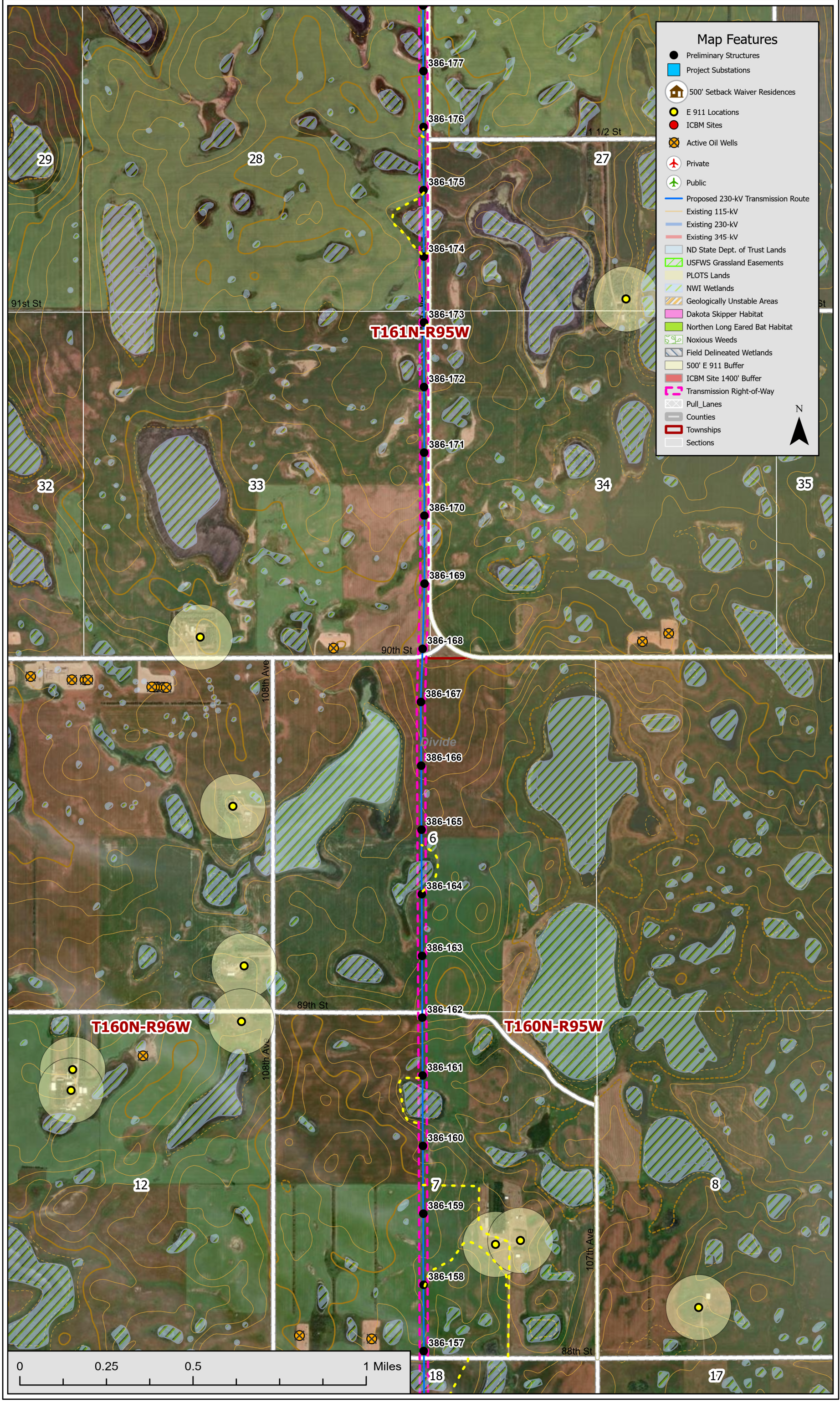




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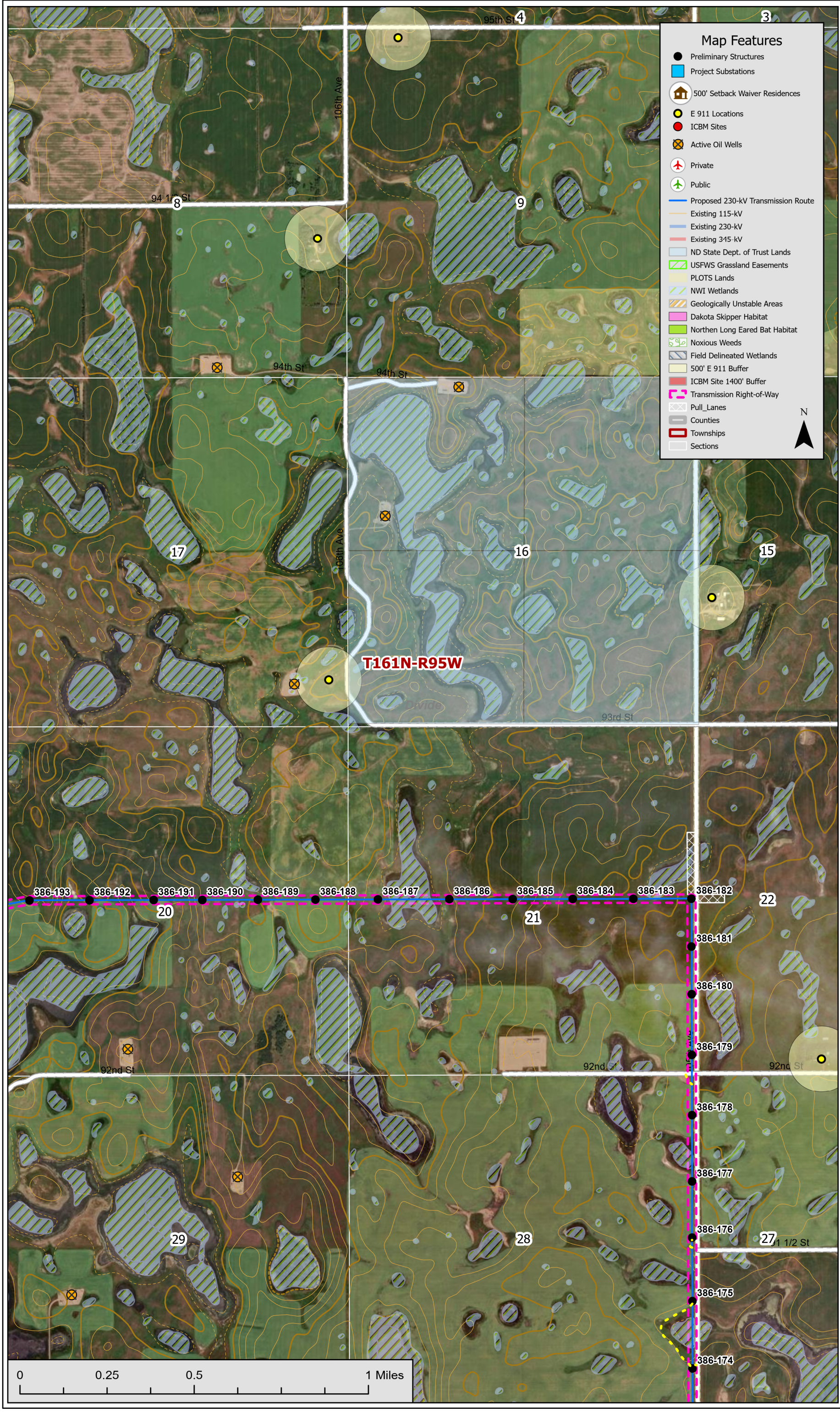




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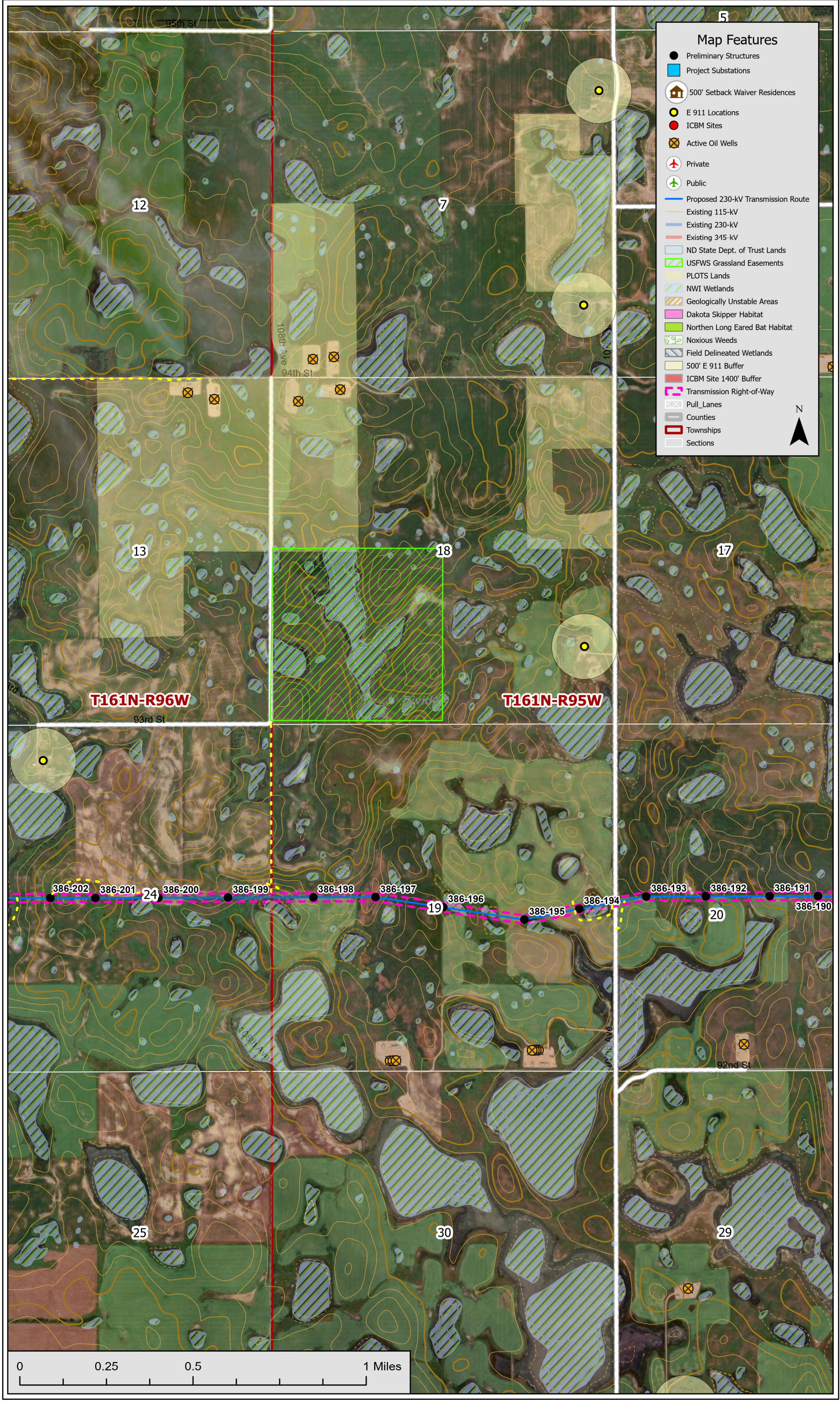


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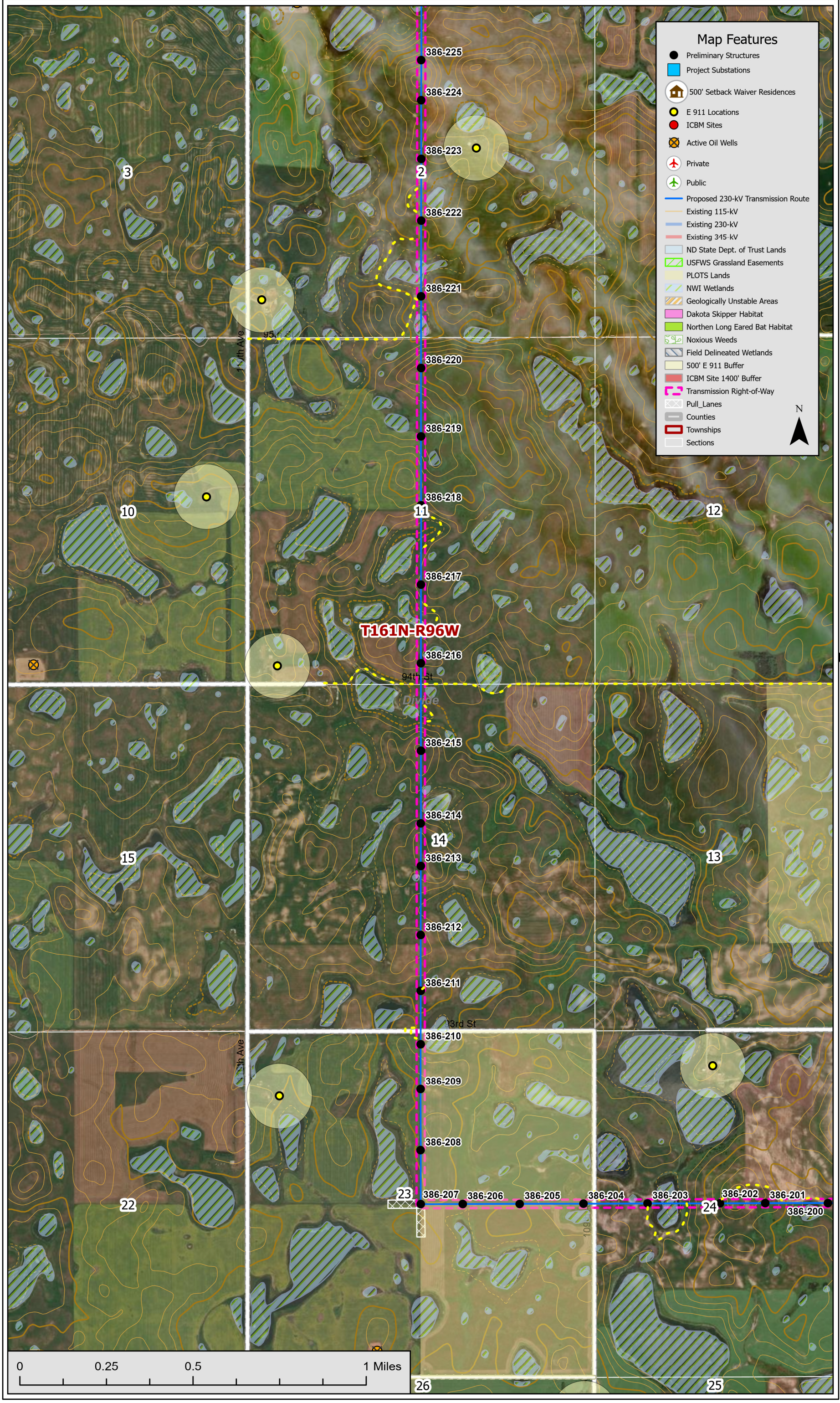




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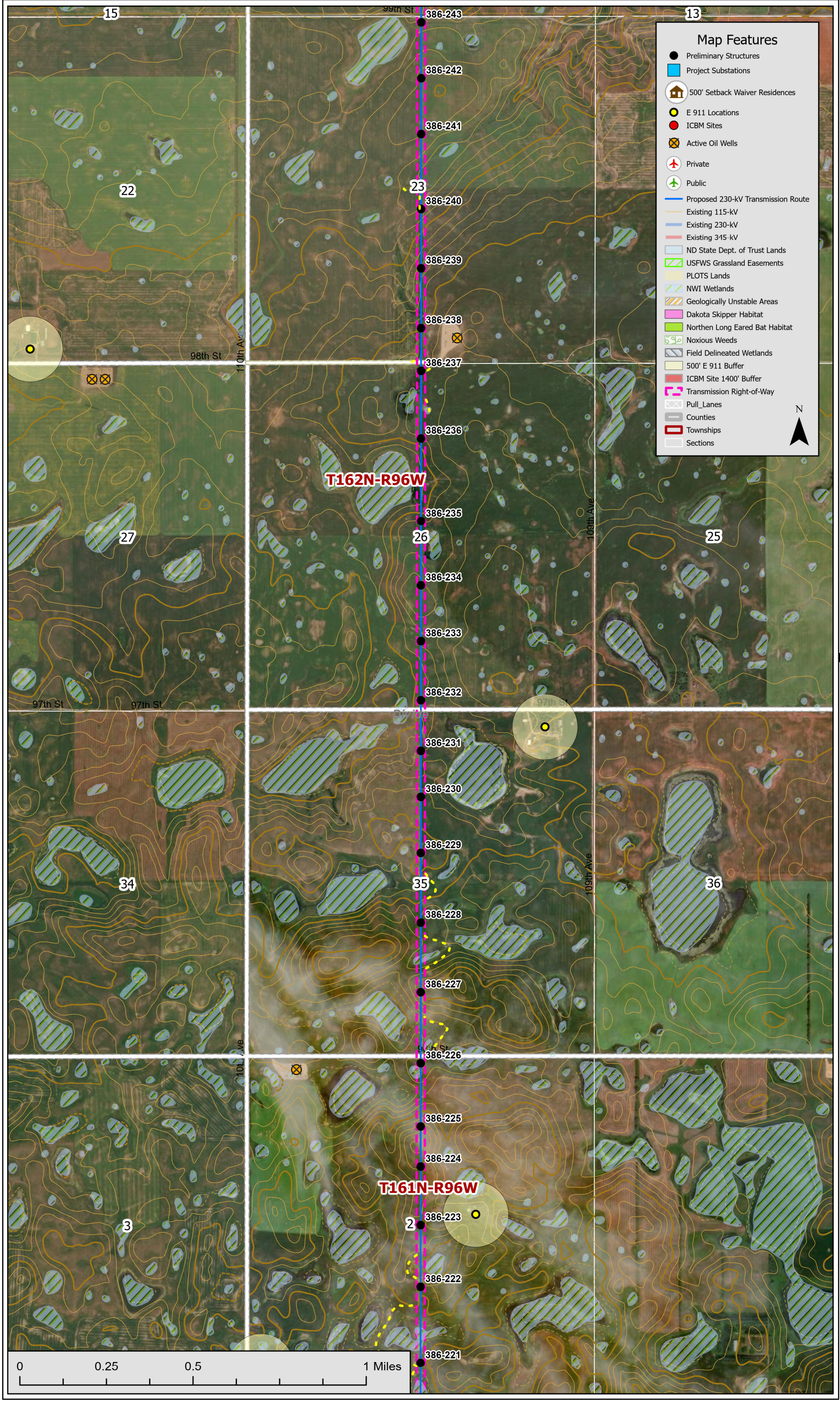


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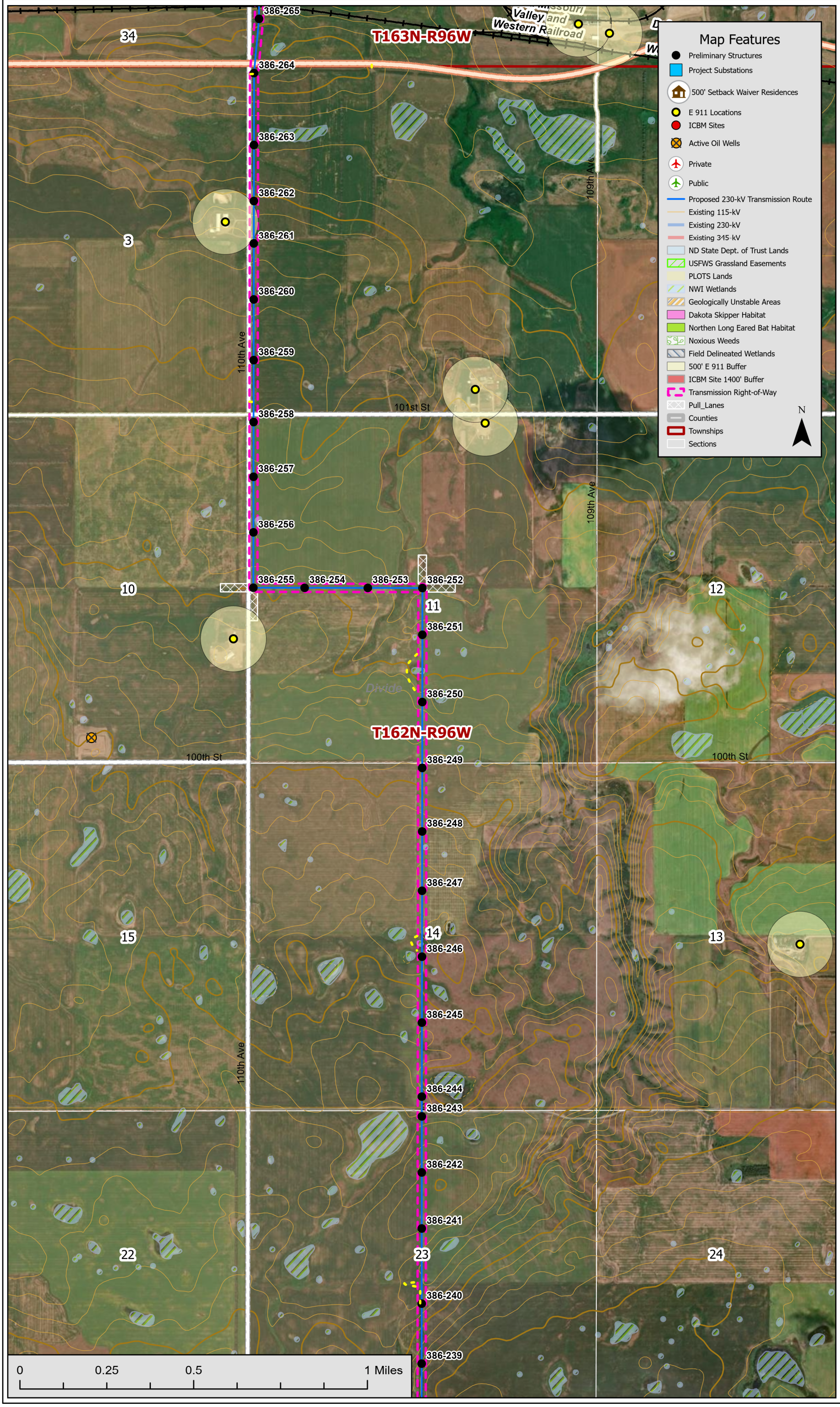




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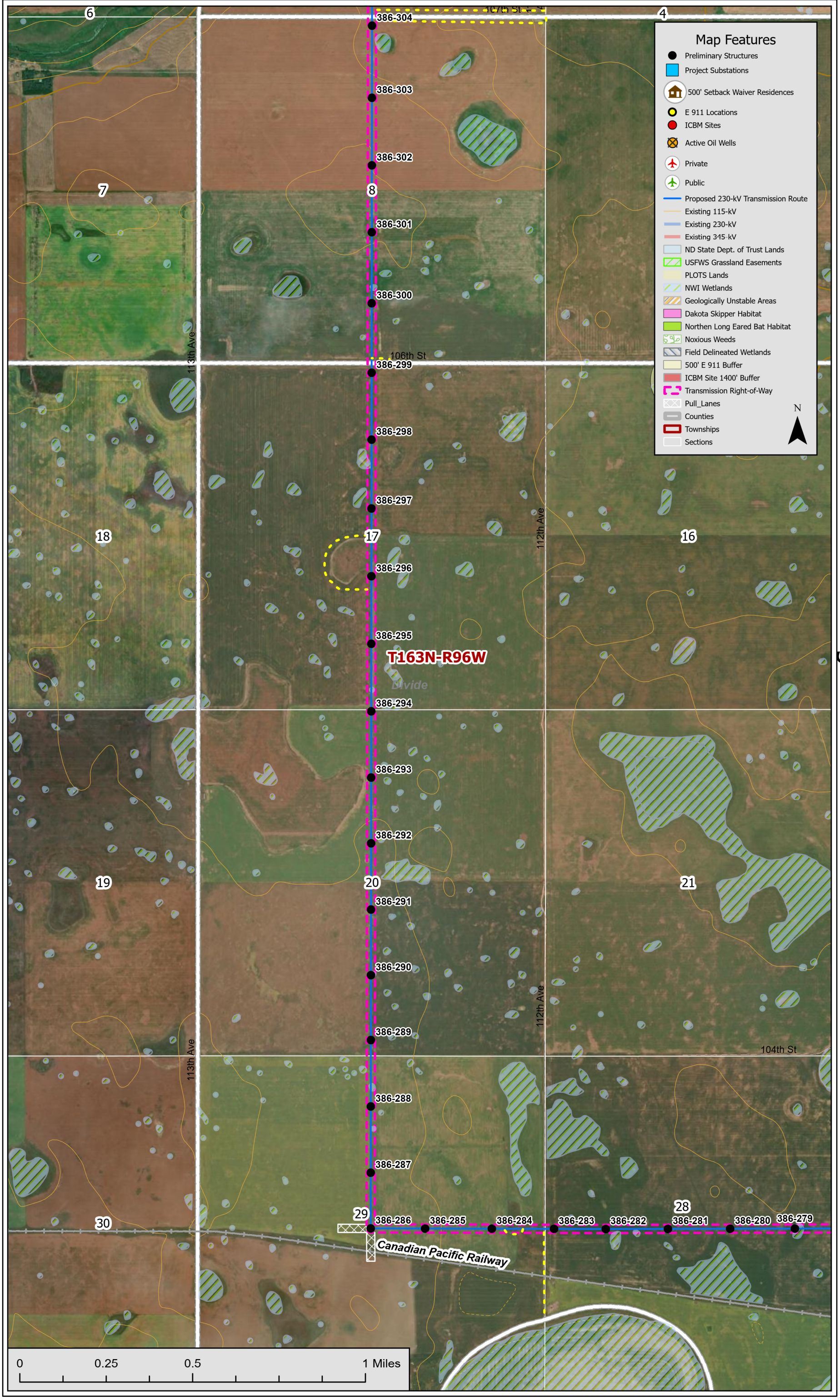




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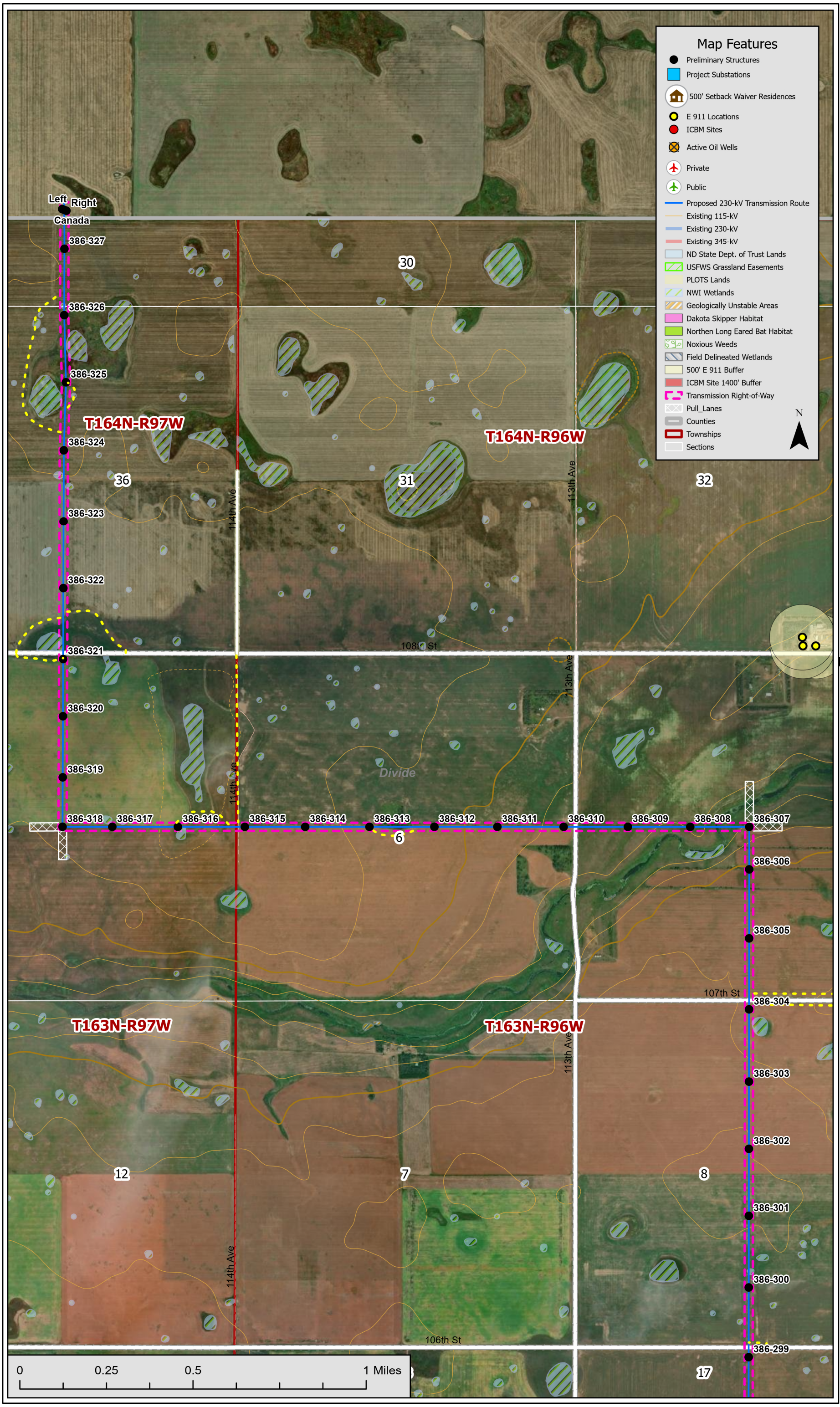
Map Features
Preliminary Structures
Project Substations
500' Setback Waiver Residences
E 911 Locations
ICBM Sites
Active Oil Wells
Private
Public
Proposed 230-kV Transmission Route
Existing 115-kV
Existing 230-kV
Existing 345-kV
ND State Dept. of Trust Lands
USFWS Grassland Easements
PLOTS Lands
NWI Wetlands
Geologically Unstable Areas
Dakota Skipper Habitat
Northen Long Eared Bat Habitat
Noxious Weeds
Field Delineated Wetlands
500' E 911 Buffer
ICBM Site 1400' Buffer
Transmission Right-of-Way
Pull_Lanes
Counties
Townships
Sections
N
Left
Right
Canada
386-327
386-326
386-325
386-324
386-323
386-322
386-321
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386-301
386-300
386-299
T164N-R97W
T164N-R96W
T163N-R97W
T163N-R96W
30
36
31
32
6
7
8
12
17
114th Ave
113th Ave
108th St
107th St
106th St
Divide
0
0.25
0.5
1 Miles



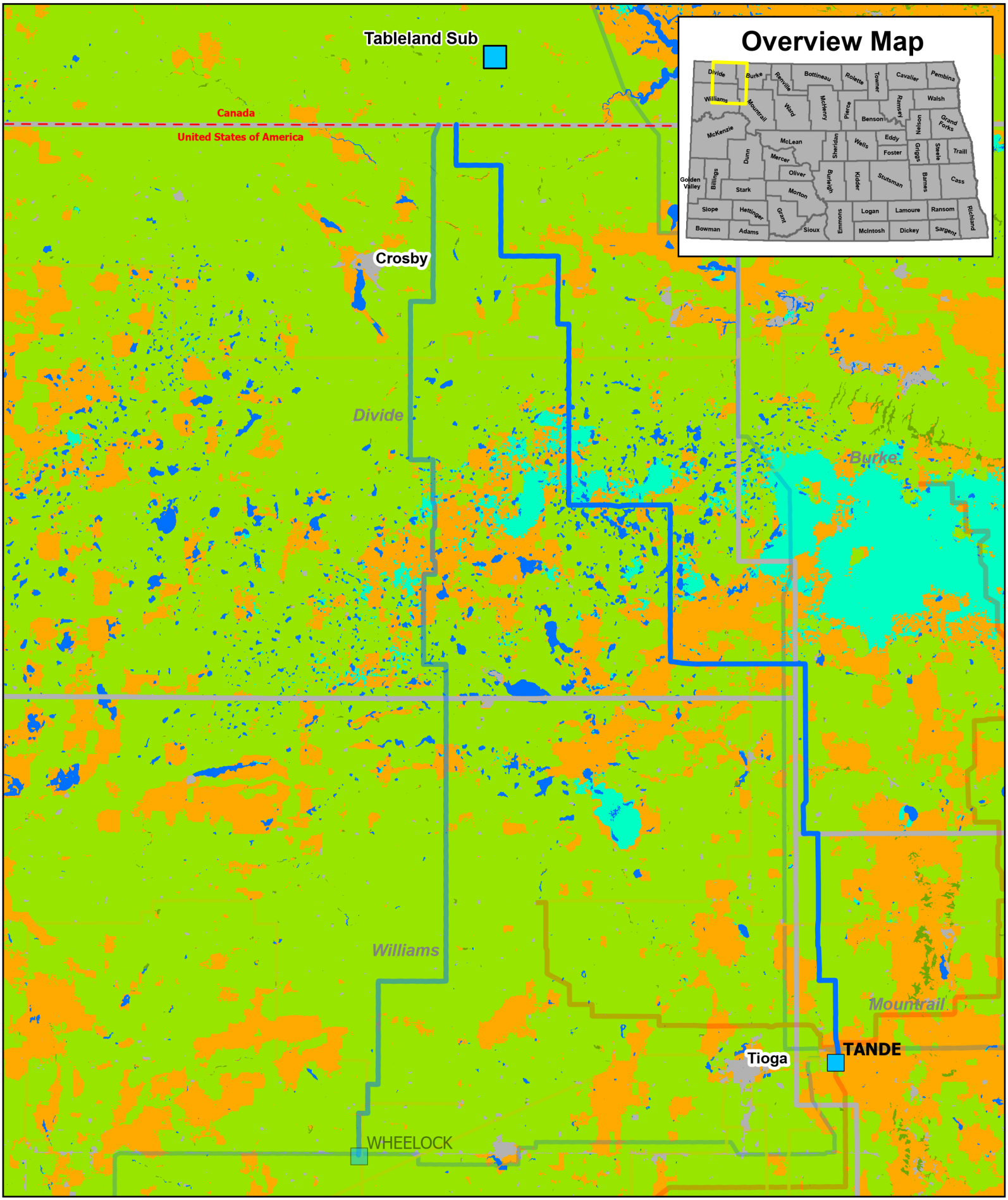
See Page 17

# Appendix B

# Land Use Index Map Book

# Tande to Saskatchewan 230-kV Transmission Project

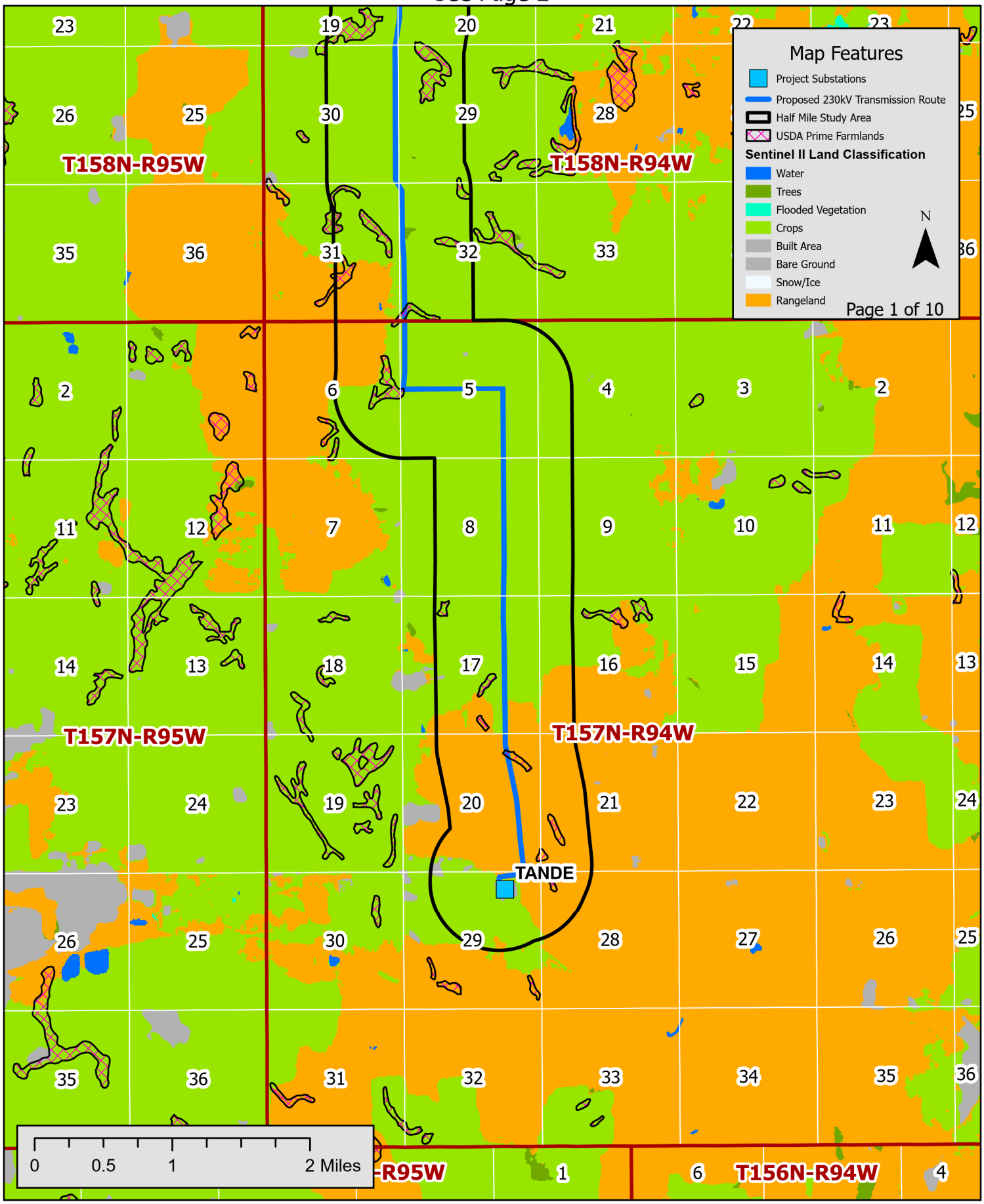
BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative



# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

See Page 2



# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
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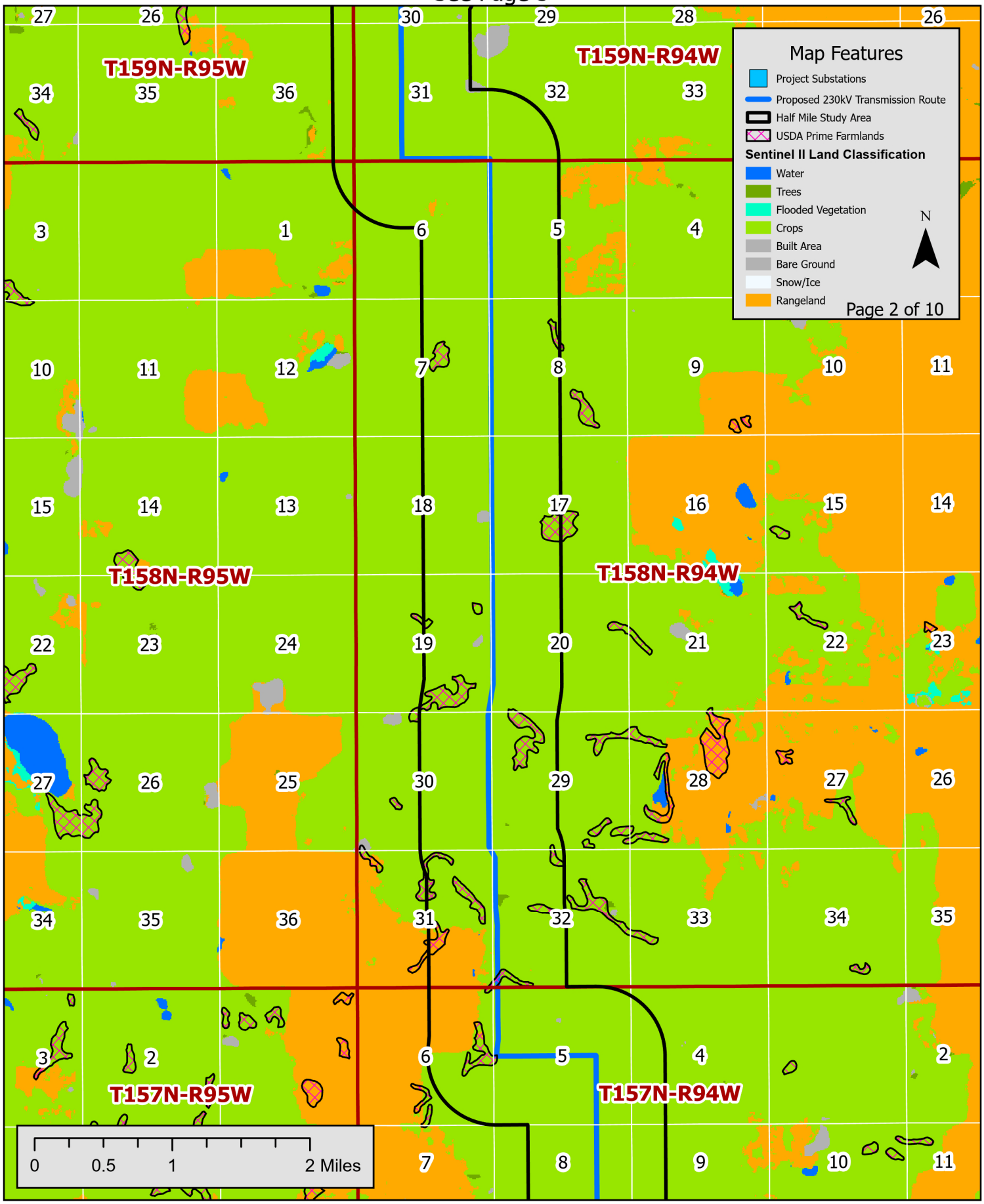
See Page 3

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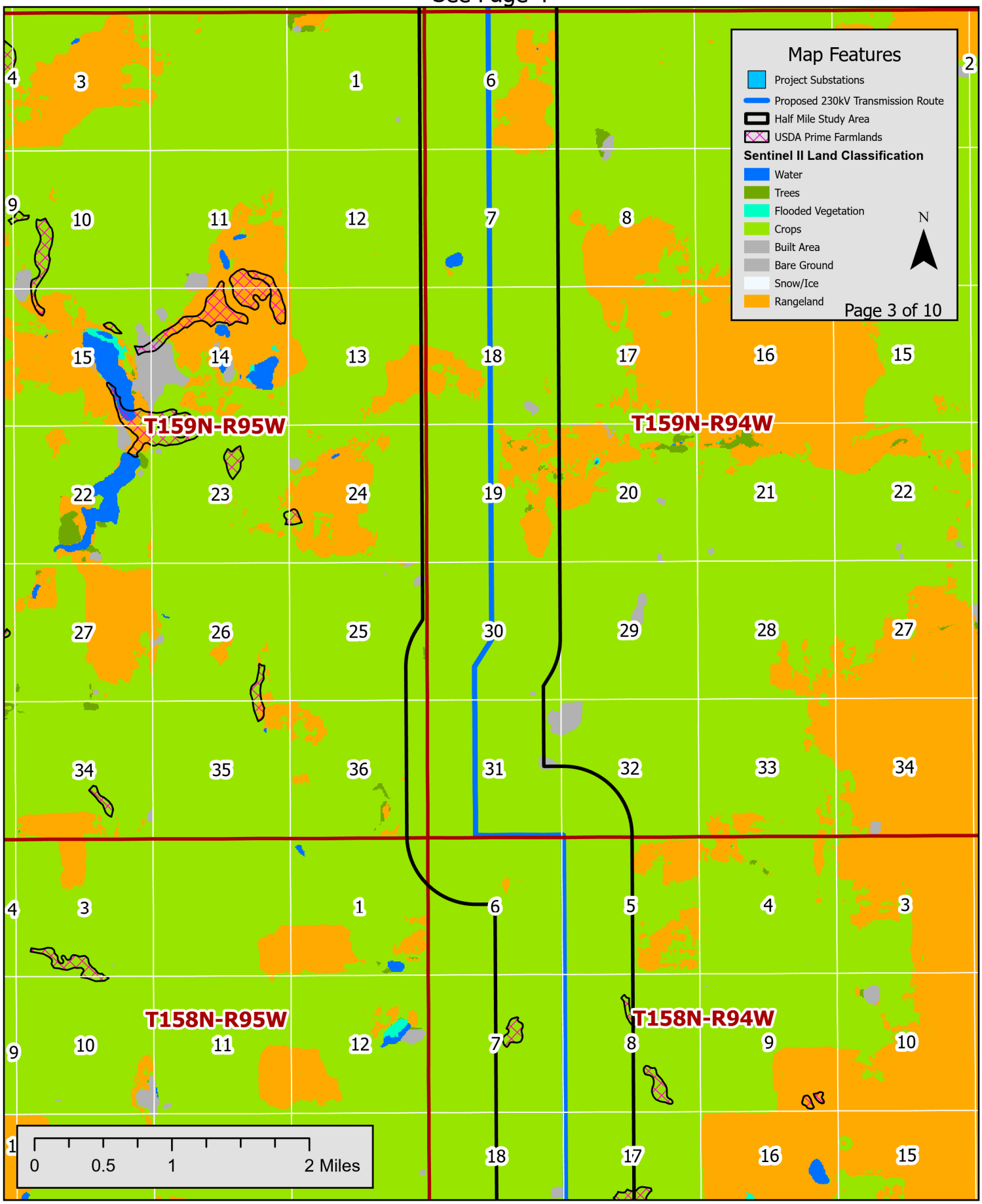
# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

See Page 4

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BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

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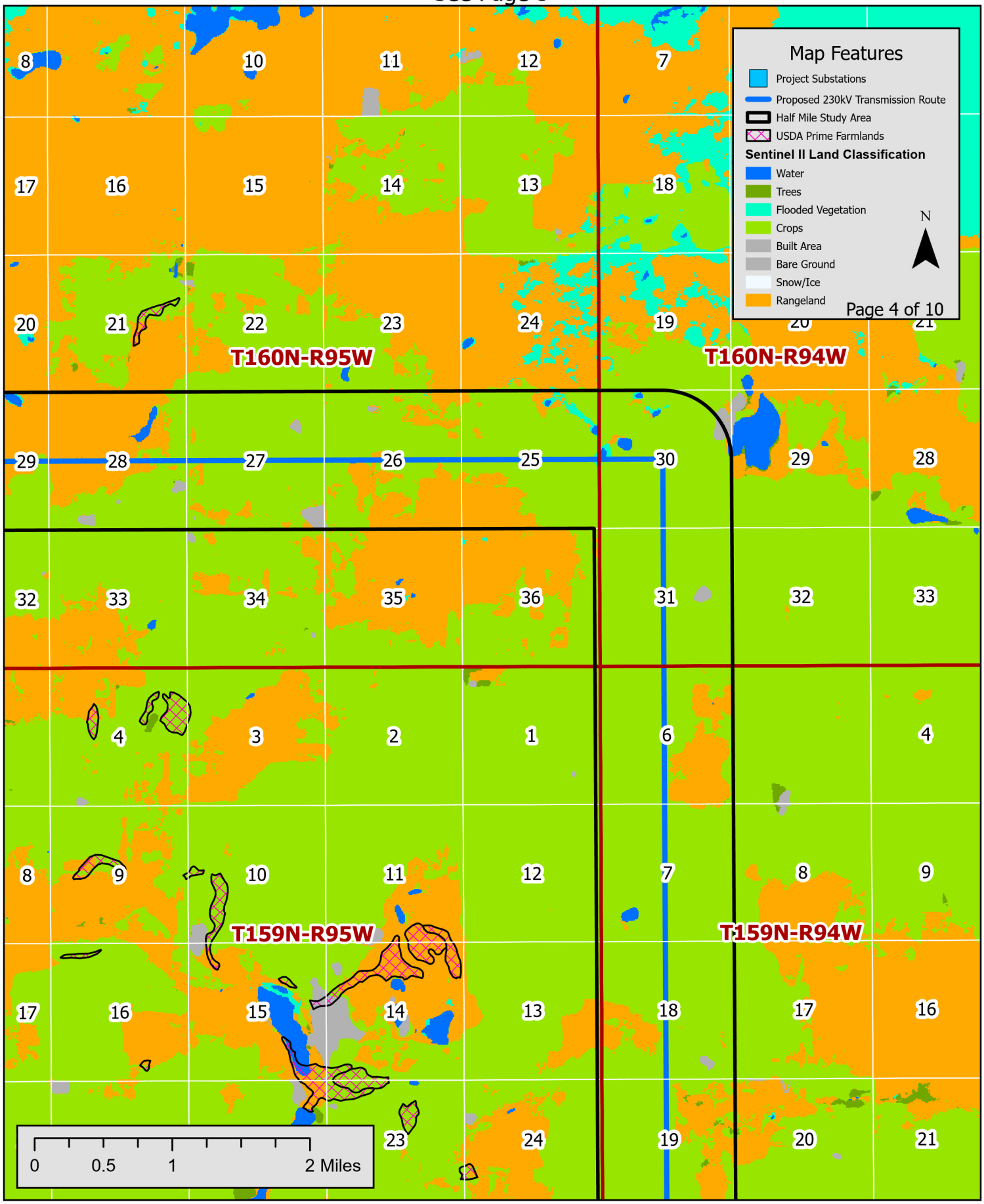


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A Touchstone Energy® Cooperative

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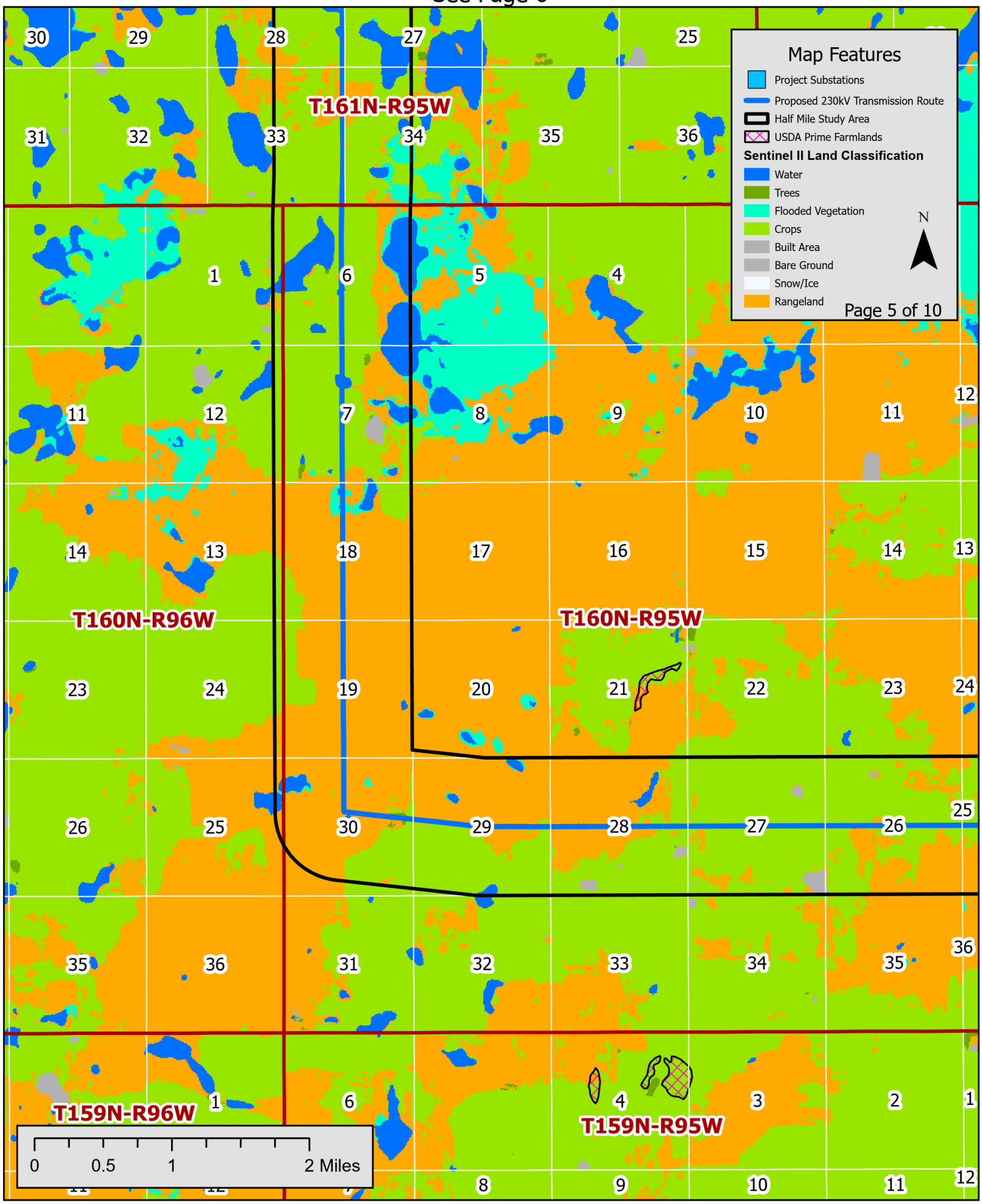


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BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

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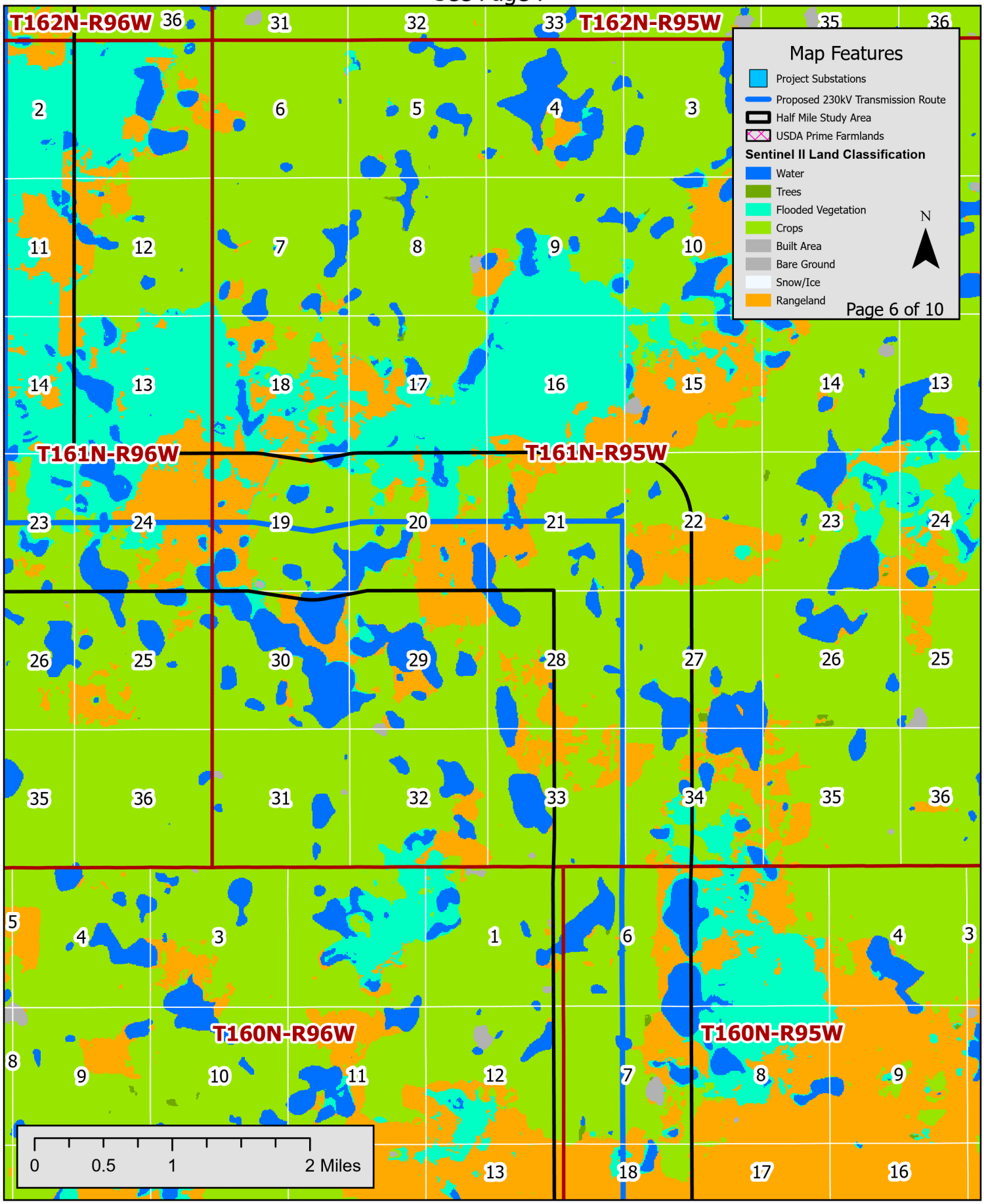


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BASIN ELECTRIC POWER COOPERATIVE
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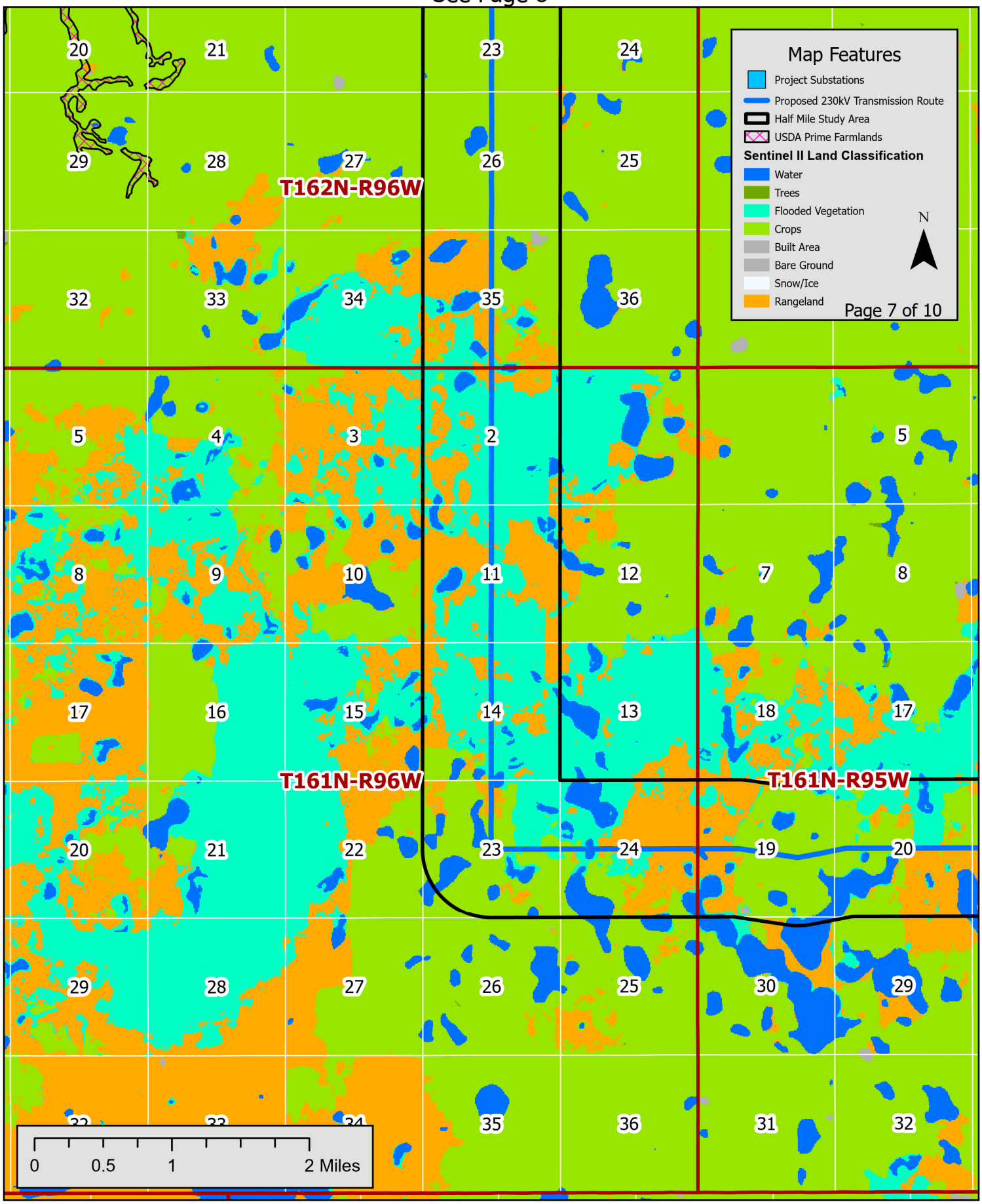


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# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

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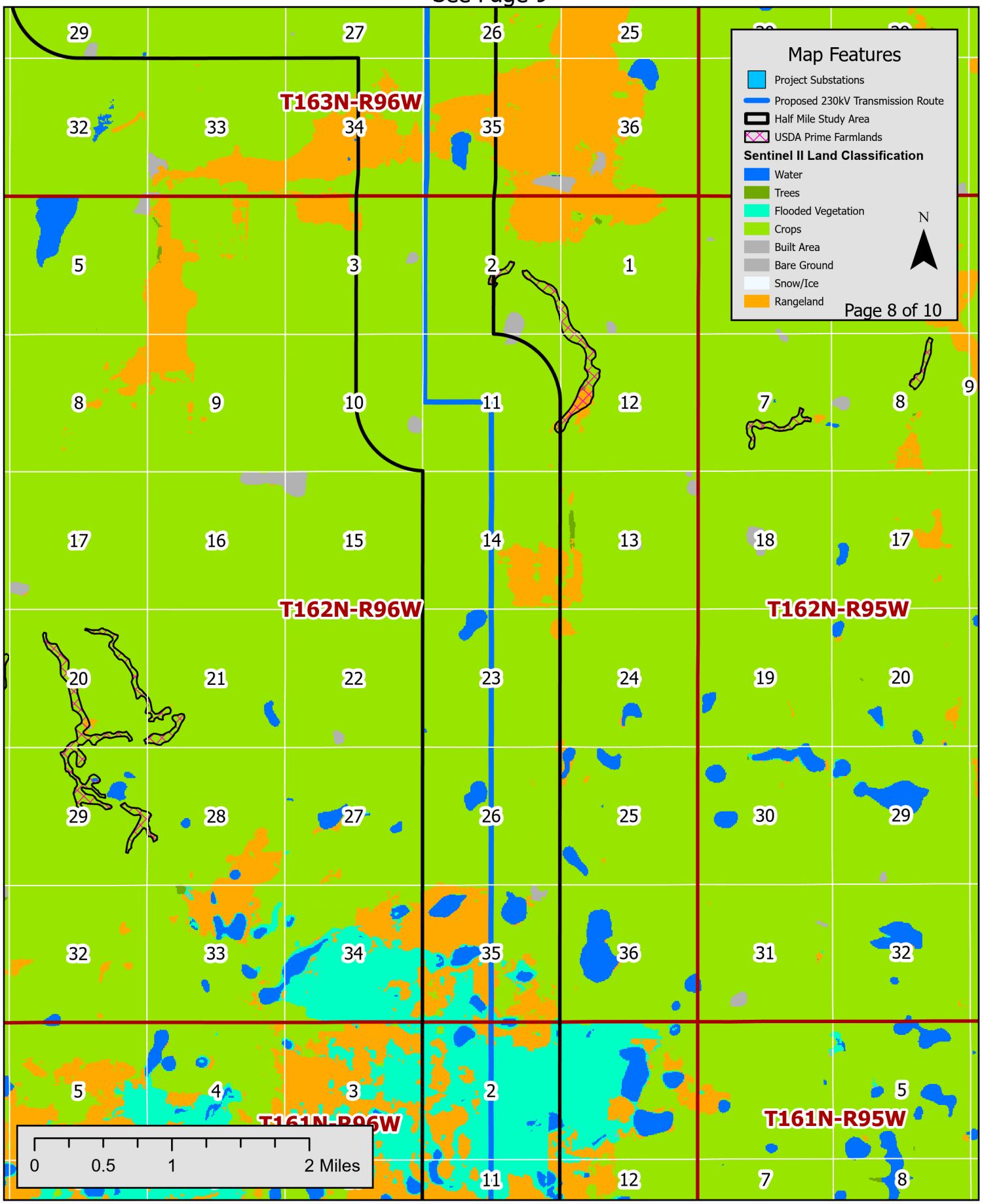


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# Tande to Saskatchewan 230-kV Transmission Project

BASIN ELECTRIC POWER COOPERATIVE
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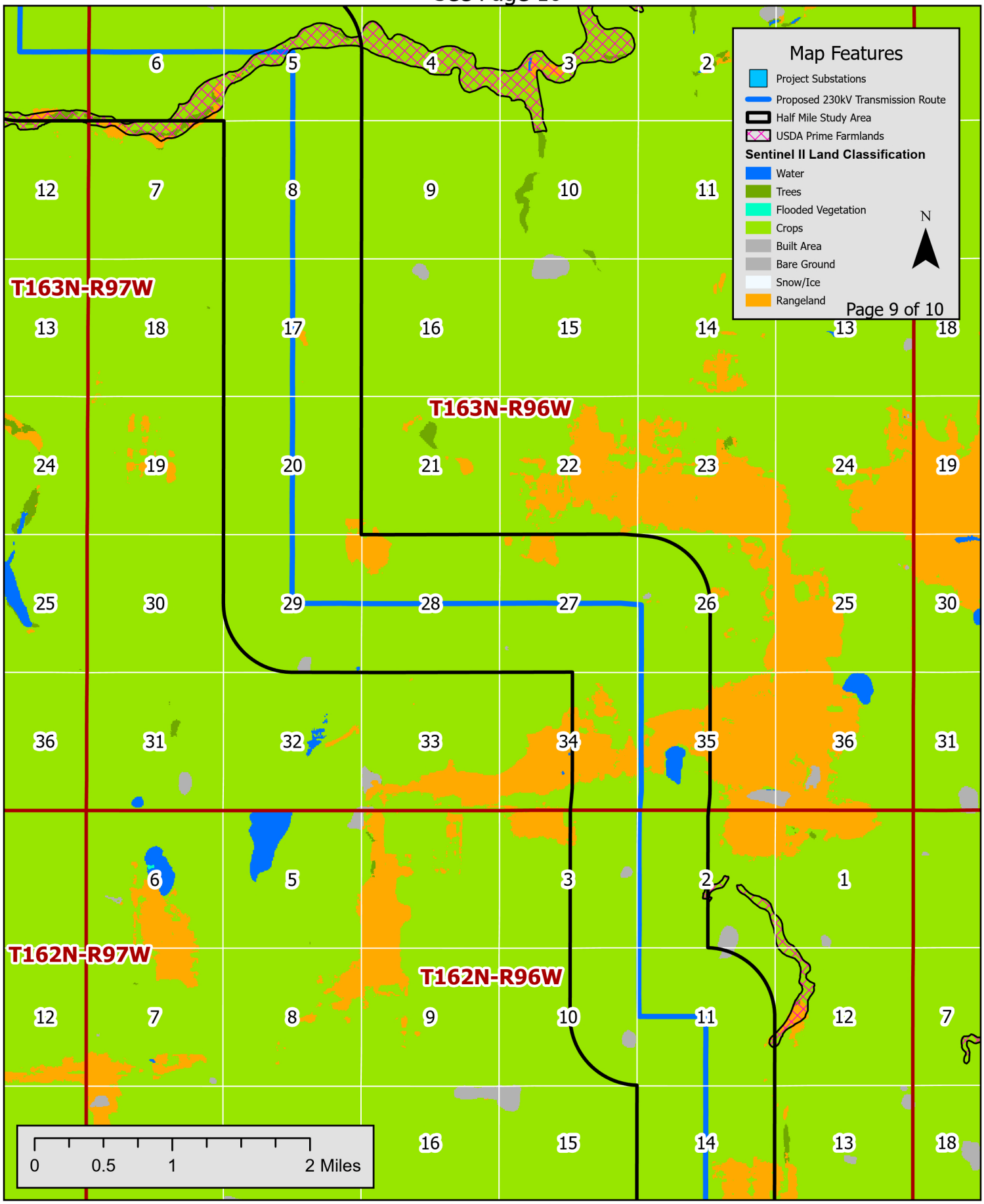


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# Tande to Saskatchewan 230-kV Transmission Project

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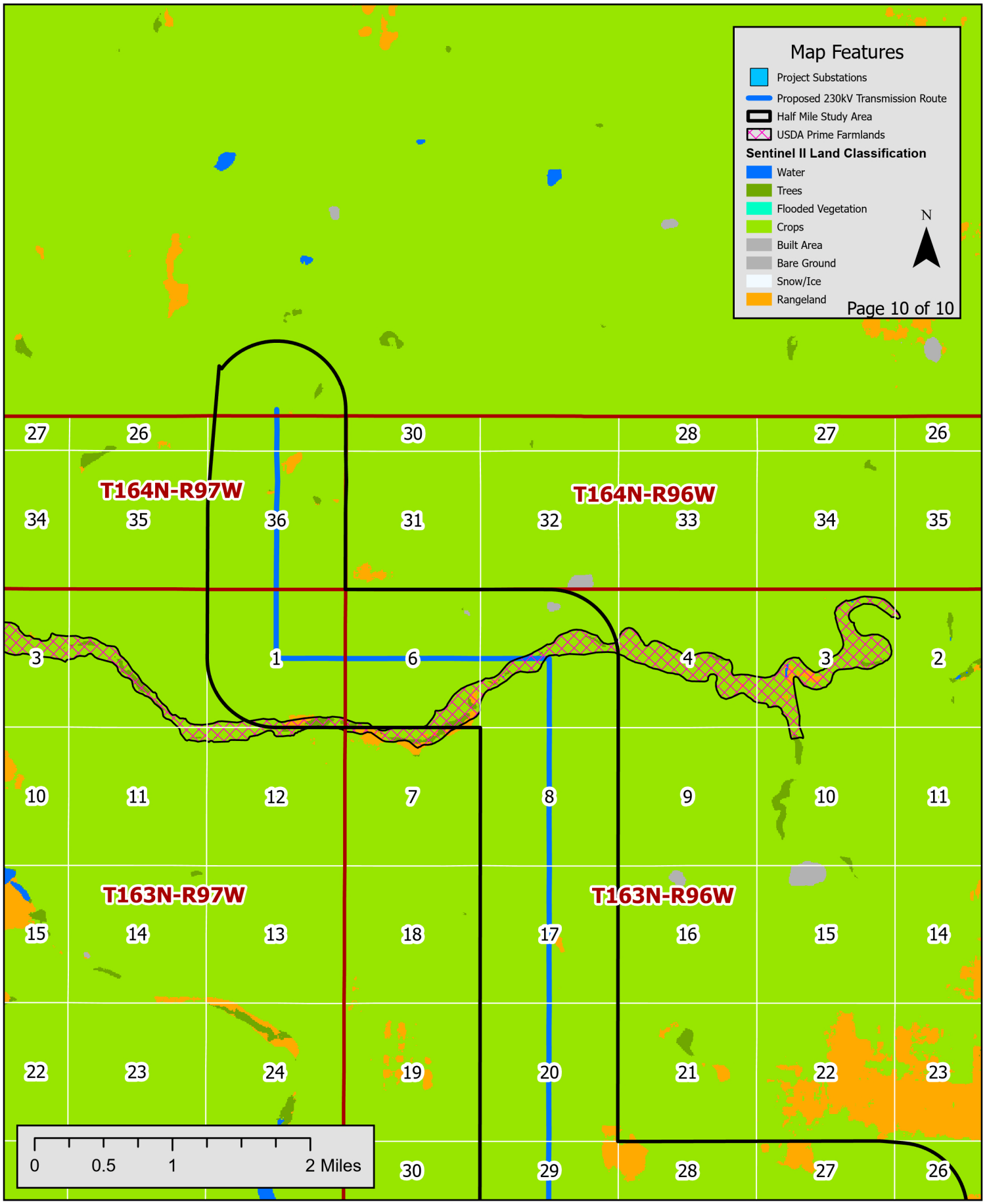


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# Appendix C

# Policies and Commitments Statement to Limit Environmental Impacts

Excerpts from **"RESOLUTIONS ADOPTED BY THE MEMBER OF BASIN ELECTRIC POWER COOPERATIVE"** Dated August 14, 2024

## STATEMENT OF PURPOSE

The Basin Electric Resolutions Committee shall review all resolutions before presentation to the membership at each Annual Meeting, and that all resolutions are subject to change by the membership at the Annual Meeting.

## STATEMENT OF IDEALS AND OBJECTIVES

This statement was initially adopted by the Membership at the 1967 Annual Meeting.

It has been reviewed and readopted by the Membership at each subsequent Annual Meeting, and was last revised in 2023.

Basin Electric Power Cooperative (Basin Electric) was organized by its member systems in the Missouri River Basin to provide an adequate wholesale supply of dependable, low-cost electric power under democratic member control, consistent with the public interest.

**We believe:**

1. That an adequate, universally available, and safe supply of affordable electricity is a vital ingredient for maintaining and improving the economy and the people's standard of living. Basin Electric commits to ensuring that our generation and transmission resources are used for the benefit of Basin Electric and its member-owners, now and in the future, through cooperation with our power-supply partners.

2. That a clean and healthy environment, which we all need and enjoy, must be maintained and that the energy industry should minimize impacts to the environment.

3. That Basin Electric is dedicated to supporting a healthy agricultural economy, which is essential to the greater development of rural areas and the nation's general welfare. Furthermore, our commercial and industrial consumer-members are similarly important to cooperative health and should be encouraged.

4. That the Rural Utilities Service program of providing long-term, low-interest loan funds and loan guarantees to rural electric cooperatives is a vital element in providing low cost electricity for the social and economic benefit of people, and is one of the most beneficial programs ever undertaken by our federal government, and that this program should be supported as an important device to foster the economic development of rural areas and to help improve the standard of living of its consumer-owners.

5. That federal hydropower is an important renewable energy resource in the region, providing competitive cost-based rates to the membership. The long-standing statutory and contractual relationship between the membership and the federal government for preference power from these facilities should continue uninterrupted.

6. That the benefits of the development of our national resources should accrue to the people and that the federal government has the principal responsibility for establishing and maintaining programs and policies to protect the public interest in the multipurpose development, conservation, and utilization of our water and power resources.

7. That Basin Electric was established for all its members and the benefits of its operation should accrue to them on a consistent and uniform basis.

8. That people have the right to organize themselves to provide needed goods and services; that cooperatives and their associated entities can provide a yardstick of costs which benefit all consumers; and that they are consistent and help preserve our private enterprise system.

9. That members of Basin Electric Power Cooperative should strive to resolve issues through the established cooperative board/committee or other member engagement processes prior to pursuing legal actions, including FERC intervention/protest, adverse to Basin Electric. After exhausting all internal processes in the event any issue is not then resolved, prior to any adverse filing, members should notify Basin Electric of their intent to file.

**We pledge:**

1. To provide our members with an adequate supply of wholesale electric power and high- quality service at the lowest-possible cost by:

a. Supporting use of the federal hydroelectric generating plants so these facilities continue to serve as the backbone of a region-wide power supply system.

b. Encouraging prudent development of clean and efficient power technologies, legislation, and research in the fuels and energy fields as it affects our lives and environment.

c. Operating Basin Electric's energy production facilities in the most efficient, productive, and safe manner possible.

2. To maintain a competent staff of dedicated employees by establishing policies which provide challenging careers and fair compensation, and which recognize their rights and responsibilities.

3. To conduct the business affairs of Basin Electric as trustees for the interest of the members on a basis of honesty and equity.

4. To help promote economic development throughout Basin Electric's service area by working with member systems in the planning and execution of programs to help develop the natural, human, and economic resources within the region, and to encourage conservative and efficient use of electrical energy.

5. To conduct a vigorous communication and education program to promote Basin Electric's policies, plans, and progress among its employees, members, and the public.

6. Through membership, aid other rural electric cooperatives, public agencies, and consumer-controlled organizations to obtain reliable wholesale power at the lowest-possible cost.

7. To encourage development of and work with consumer-owned and other organizations having similar objectives.

## Resolution 4 - Environment

Basin Electric Power Cooperative (Basin Electric) supports the care and utilization of our natural resources. Basin Electric believes that is best accomplished through 1) clear and easily interpreted environmental laws and regulations; 2) single, efficient, and predictable permitting processes; and 3) local oversight of compliance that ensures needed interpretations consider the realities of the environment and local interests are being fairly considered.

### Background:

*Basin Electric has provided leadership, resources, and efforts in research to advance state-of-the-art conservation measures, including land reclamation and significant development of renewable generation sources from its inception. Basin Electric, its membership, and member-consumers are committed to maintaining a clean and healthy environment for us and our communities. Basin Electric also recognizes the economic realities that dictate both an achievable environmental standard be maintained while providing satisfactory balance between protecting the environment and sustaining the economy.*

# Appendix D

# Southwest Power Pool Notice to Construct

**SPP-NTC-220722**

# SPP
# Notification to Construct

June 9, 2023

Mr. Jeremy Severson
Basin Electric Power Cooperative
1717 E. Interstate Ave.
Bismarck, ND 58503

RE: Notification to Construct for Transmission Service Request resulting from Aggregate Transmission Service Study SPP- 2021-AG2

Dear Mr. Severson,

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 May 11, 2022, SPP concluded that the project(s) is required on the BEPC system to fulfill Transmission Service Requests as detailed in Aggregate Facility Study SPP- 2021-AG2.

**New Network Upgrades**
**Project ID:** 92371
**Project Name:** Line - North Dakota/Saskatchewan Border (Tableland) - Tande 230 kV
**Need Date for Project:** 10/1/2027
**Estimated Cost for Project:** $81,442,496

**Network Upgrade ID:** 156240
**Network Upgrade Name:** North Dakota/Saskatchewan Border (Tableland) - Tande 230 kV Ckt 1
**Network Upgrade Description:** Build new 67 mile 230 kV line from Tande substation to the United Sates/Canada border toward Sask Power's Tableland substation.
**Network Upgrade Owner:** BEPC
**MOPC Representative(s):** Jason Mazigian
**TWG Representative(s):** Phil Westby
**Categorization:** Transmission Service
**Network Upgrade Specification:** All elements and conductor must have at least an emergency rating of 325 MVA.

**Network Upgrade Justification:** SPP-2021-AG2
**Estimated Cost for Network Upgrade (current day dollars):** $78,880,406
**Cost Allocation of the Network Upgrade:** Base Plan
**Estimated Cost Source:** BEPC
**Date of Estimated Cost:** 5/8/2023

**Network Upgrade ID:** 156241
**Network Upgrade Name:** Tande 230 kV Terminal Equipment
**Network Upgrade Description:** Install any necessary terminal equipment at the Tande substation to accommodate a terminal for the North Dakota/Saskatchewan Border (Tableland) - Tande 230 kV Ckt 1.
**Network Upgrade Owner:** BEPC
**MOPC Representative(s):** Jason Mazigian
**TWG Representative(s):** Phil Westby
**Categorization:** Transmission Service
**Network Upgrade Specification:** All elements and conductor must have at least an emergency rating of 325 MVA
**Network Upgrade Justification:** SPP-2021-AG2
**Estimated Cost for Network Upgrade (current day dollars):** $2,562,090
**Cost Allocation of the Network Upgrade:** Base Plan
**Estimated Cost Source:** BEPC
**Date of Estimated Cost:** 5/8/2023

**Project ID:** 92372
**Project Name:** Line - North Dakota/Saskatchewan Border (Tableland) - Wheelock 230 kV
**Need Date for Project:** 10/1/2027
**Estimated Cost for Project:** $67,599,614

**Network Upgrade ID:** 156248
**Network Upgrade Name:** North Dakota/Saskatchewan Border (Tableland) - Wheelock 230 kV Ckt 1.
**Network Upgrade Description:** Build new 70 mile 230 kV line from Wheelock substation to the United States/Canada border toward Sask Power's Tableland substation.
**Network Upgrade Owner:** BEPC
**MOPC Representative(s):** Jason Mazigian
**TWG Representative(s):** Phil Westby
**Categorization:** Transmission Service
**Network Upgrade Specification:** All elements and conductor must have at least an emergency rating of 325 MVA.
**Network Upgrade Justification:** SPP-2021-AG2
**Estimated Cost for Network Upgrade (current day dollars):** $65,123,051
**Cost Allocation of the Network Upgrade:** Base Plan
**Estimated Cost Source:** BEPC
**Date of Estimated Cost:** 5/8/2023

**SPP-NTC-220722**

**Network Upgrade ID:** 156249
**Network Upgrade Name:** Wheelock 230 kV Terminal Upgrade
**Network Upgrade Description:** Install any necessary terminal equipment at Wheelock substation to accommodate a new terminal for the North Dakota/Saskatchewan Border (Tableland) - Wheelock 230 kV Ckt 1.
**Network Upgrade Owner:** BEPC
**MOPC Representative(s):** Jason Mazigian
**TWG Representative(s):** Phil Westby
**Categorization:** Transmission Service
**Network Upgrade Specification:** All elements and conductor must have at least an emergency rating of 325 MVA.
**Network Upgrade Justification:** SPP-2021-AG2
**Estimated Cost for Network Upgrade (current day dollars):** $2,476,563
**Cost Allocation of the Network Upgrade:** Base Plan
**Estimated Cost Source:** BEPC
**Date of Estimated Cost:** 5/8/2023

## Commitment to Construct

Please provide to SPP a written commitment to construct the Network Upgrade(s) by September 7, 2023, 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,



David Kelley
Vice President, Engineering
Phone: (501) 688-1671 • Fax: (501) 482-2022 • dkelley@spp.org

cc: Lanny Nickell - SPP
Casey Cathey - SPP
Tony Green - SPP
Natasha Henderson - SPP
Jason Mazigian - BEPC
Phil Westby - BEPC
Gavin McCollam - BEPC
Matt Ehrman - BEPC
Boyd Trester - BEPC

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

SPP NTC-220722

June 21, 2023

Mr. David Kelley
Southwest Power Pool
201 Worthen Drive
Little Rock, AR 72223-4936

Dear Mr. Kelley,

Thank you for your letter dated June 9, 2023 regarding the SPP-NTC-220722.

In that letter, SPP provided a Notification to Construct (NTC) directing Basin Electric Power Cooperative (BEPC), as the Designated Transmission Owner, to construct Network Upgrade(s) for various portions of the following Project ID's:

- Project ID 92371 - Line - North Dakota/Saskatchewan Border (Tableland) - Tande 230 kV
- Project ID 92372 - Line - North Dakota/Saskatchewan Border (Tableland) - Wheelock 230 kV

Your letter requests two components. The first is our commitment as the DTO to construct the projects. The second is to provide updated cost estimates to SPP's TRAC system.

**Commitment to Construct**
This letter documents BEPC's commitment to construct all the Network Upgrades for which BEPC was identified as the DTO within SPP-NTC-220722. This includes:

- Project ID 92371 - Line - Tande - US/Saskatchewan Border (Tableland) 230 kV
  - UID 156240 - Tande - US Border 230 New Line
  - UID 156241 - Tande 230 kV line terminal

- Project ID 92372 - Line - Wheelock - US/Saskatchewan Border (Tableland) 230 kV
  - UID 156248 - Wheelock - US Border 230 New Line
  - UID 156249 - Wheelock 230 kV line terminal

BEPC's Board took action at its September 13th, 2022 meeting by giving authorization to commit to SPP to build the projects.

**CPE**
BEPC has completed cost estimates and SCERTS associated with each of these UIDs. All cost estimates and project details were uploaded in SPP's TRAC system and have been verified as matching with the costs identified in this NTC letter.

**Mitigation Plan**
BEPC does not plan on formulating any mitigation plan as our schedules are to place these 230 kV facilities into service prior to the 10/1/2027 need by date. These projects are unique in the fact

that a presidential permit is required for the new 230 kV lines to cross the United States / Canadian border. Delays in processes such as this could delay the in service date of these projects. BEPC continues to progress with the presidential permit process.

**Construction and Operation**

BEPC will keep SPP apprised on the construction schedule and in-service operation as these projects get under way. Attachment #1 to this letter is a preliminary construction schedule for each of the projects.

Sincerely yours,

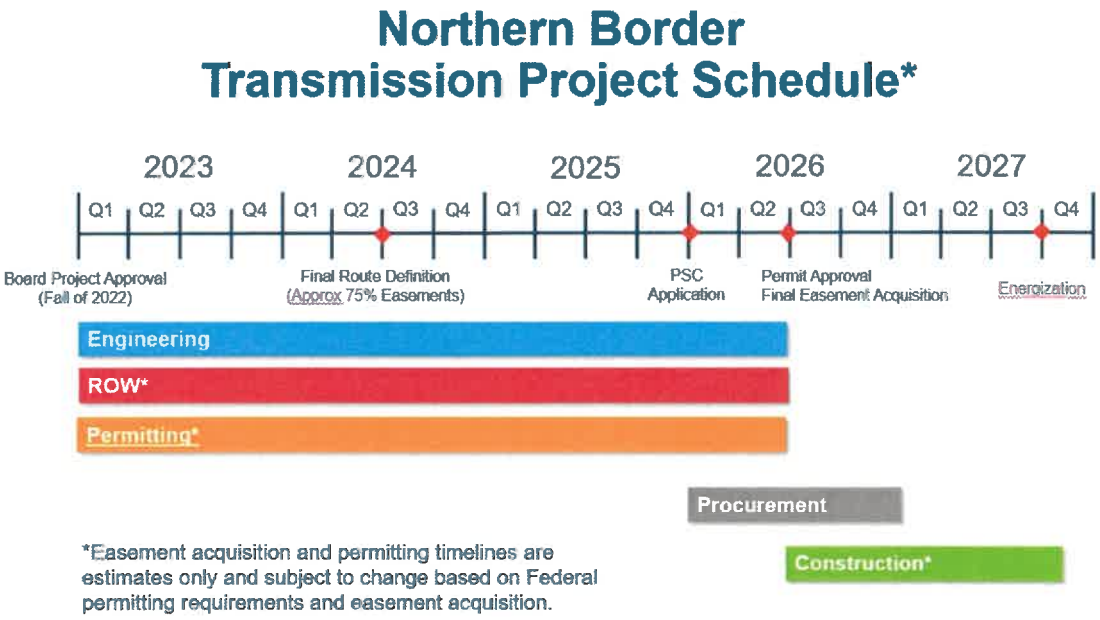
/s/ 6-21-2023

Jeremy Severson
Vice President Transmission

Cc: Todd Telesz - BEPC
Gavin McCollam - BEPC
Matt Erhman - BEPC
Mike Kraft - BEPC
Boyd Trester - BEPC
Jason Mazigian - BEPC
Phil Westby – BEPC
Bobby Nasset - BEPC
Lanny Nickell - SPP
Casey Cathey – SPP
Tony Green – SPP
Natasha Henderson - SPP

**Attachment #1**

Preliminary Construction Schedule



# Appendix E

# Cultural Resources Report (Redacted)

BASIN ELECTRIC POWER COOPERATIVE

# TANDE-TO-SASKATCHEWAN TRANSMISSION LINE: A CLASS III CULTURAL RESOURCE INVENTORY IN BURKE, DIVIDE, AND MOUNTRAIL COUNTIES, NORTH DAKOTA

TANDE-TO-SASKATCHEWAN TRANSMISSION LINE

NDSHPO REFERENCE NO. 24-0251

PROJECT NO. 172284

September 2025

# Management Summary

Basin Electric Power Cooperative (Basin Electric) proposes to construct the Tande-to-Saskatchewan Transmission Line (Project). The Project consists of approximately 58.01 miles (mi) (93.35 kilometers) of new 230-kilovolt overhead transmission line in Burke, Divide, and Mountrail Counties, North Dakota. The Project will extend from the existing Tande Substation in Mountrail County to the United States (U.S.) - Canada border.

The U.S. Department of Energy (DOE) Grid Deployment Office is considering issuing a Presidential Permit in accordance with Executive Order (E.O.) 10485, as amended by E.O. 12038, and 10 CFR Part 205.

The Project will also require a Certificate of Site Compatibility from the North Dakota Public Service Commission; therefore, the Project is subject to review by the State Historical Society of North Dakota (SHSND) under North Dakota Century Code 49-22-09 - Factors to be considered in evaluating application and designations of sites, corridors, and routes.

The purpose of this investigation is to provide the necessary information for DOE and SHSND review by confirming the presence or absence of cultural resources within the Survey Corridor, which include a 200 foot (ft) or 60.96 meter (m) wide corridor around the proposed transmission line route, a 30 ft or 9.14 m wide corridor around off right-of-way access routes, and a minimum of 200 ft by 100 ft (60.96 m by 30.48 m) for pulling easements (Survey Corridor). This report covers only areas within the Project where land access was granted for inventory in 2024, that may be permanently or temporarily physically affected during construction of the Project (Physical APE). The Survey Corridor discussed within this report includes a total of 1260.66 acres (510.17 hectares) which were inventoried during June and November 2024. Further survey work and reporting will be completed in 2025 once access to the remaining Survey Corridor is granted. An updated report will be submitted to SHSND with the final Survey Corridor and Physical APE.

Burns & McDonnell Engeneering Company, Inc. (Burns & McDonnell) literature review identified 160 previously recorded archaeological sites, site leads, isolated finds, and architectural sites within a 1-mi Study Area surrounding the proposed transmission line, including the Survey Corridor. Of these, 20 previously recorded precontact site leads and one previously documented historical archaeological site lead were located within the Survey Corridor. A total of 13 previously documented North Dakota Cultural Heritage Sites were noted within the Study Area. None of these Cultural Heritage Sites overlap the Survey Corridor.

During the Class III: Intensive Cultural Resource Inventory, Burns & McDonnell documented 19 newly recorded resources, including one historical archaeological site lead, one precontact isolated find, four precontact sites, seven historical archaeological sites, two architectural sites, one multicomponent site, two sites with an architectural and historical archaeological component, and one site of unknown cultural affiliation. Burns & McDonnell also updated 20 previously recorded precontact site leads. No update was completed for one historical archaeological site lead that overlaps the Survey Corridor, as the resource was noted to be modern. A total of 75 shovel test probes were completed in medium to high probability areas of the Survey Corridor where ground surface visibility was low or at the location of surface finds to determine the presence or absence of subsurface cultural materials.

Burns & McDonnell recommends avoidance of all cultural resources that are potentially eligible for listing on the National Register of Historic Places (NRHP) or sites that have not been evaluated for eligibility following the guidelines outlined by the North Dakota State Historical Preservation Office. For this investigation, Basin Electric has committed to avoiding physical effects to historic properties. In the absence of a formal evaluation of the significance of the identified resources, Burns & McDonnell recommends that cultural resources, with the exception of isolated finds, be avoided. It is Burns & McDonnell's understanding that the current proposed infrastructure incorporates all recommended avoidance buffers. If the Project is redesigned in such a way that a resource cannot be avoided, Burns & McDonnell recommends additional investigation that would constitute a formal evaluation of site significance.

Recommended avoidance buffers for these resources vary and have been determined based on two primary factors: the probability, based on the nature of the resource, the topography, and the extent of STPs in the surrounding area, that the resource retains a subsurface component that extends beyond the identified boundary of the resource; and the predicted likelihood, based on the surrounding topography, that earthmoving near the resource would have the potential to indirectly contribute to damage to the resource through erosion.

Burns & McDonnell is not recommending avoidance for one newly documented precontact isolated find, three historical archaeological sites, and one architectural site, as it was determined through pedestrian survey and STPs that the areas contained low artifact density with little to no potential for intact subsurface deposits and the sites are recommended not eligible for the NRHP. Burns & McDonnell is also not recommending further work for 20 previously documented precontact site leads that were not identified within the Survey Corridor. See **Table 1** for a list of the resources not recommended for avoidance.

**Table 1: Resources Not Recommended for Avoidance**

| | | | | | |
|---|---|---|---|---|---|
| 32BKX257 | 32BKX264 | 32BKX279 | 32BK388 | 32BK390 | 32DVX12 |
| 32DVX32 | 32DVX33 | 32DVX42 | 32DVX43 | 32DVX44 | 32DVX45 |
| 32DVX46 | 32DVX47 | 32DVX278 | 32DVX279 | 32DVX282 | 32DVX284 |
| 32DVX285 | 32DVX297 | 32DVX298 | 32DVX398 | 32DVX506 | 32DV365 |
| 32MN1787 | | | | | |

Burns & McDonnell is recommending avoidance and protective fencing with no additional buffer for two architectural sites, one site with an architectural and historical archaeological component, one multicomponent site, and one historical archaeological site. Burns & McDonnell is not recommending further work at this time for one newly documented historical archaeological site lead that lies outside the current Physical APE due to Project updates which have rerouted the Physical APE away from the site boundary. However, if the Project shifts back to within 50 ft of this site, Burns & McDonnell is recommending avoidance by placing fencing around the site boundary but no additional avoidance buffer.

**Table 2: Resources Recommended for Avoidance and Protective Fencing; No Additional Buffer**

| | | | | | |
|---|---|---|---|---|---|
| 32DVX507 | 32DV369 | 32DV370 | 32DV371 | 32DV372 | 32DV373 |

Burns & McDonnell is recommending a 25 ft avoidance buffer and protective fencing for three historical archaeological sites and one site of unknown cultural affiliation (**Table 3**).

**Table 3: Resources with 25 ft Avoidance Buffer and Protective Fencing Recommended**

| | | | |
|---|---|---|---|
| 32DV366 | 32DV368 | 32DV374 | 32MN1786 |

Burns & McDonnell is recommending a 50 ft avoidance buffer and protective fencing for two precontact sites (**Table 4**).

**Table 4: Resources with 50 ft Avoidance Buffer and Protective Fencing Recommended**

| | |
|---|---|
| 32BK389 | 32DV367 |

Burns & McDonnell is recommending a 100 ft avoidance buffer and protective fencing for one precontact site, 32DV375, and a 150 ft avoidance buffer and protective fencing for one precontact site, 32DV376.

If the recommendations above are incorporated into the final Project infrastructure, design, and construction methods, Burns & McDonnell recommends a determination of *No Historic Properties Affected* for the portions of the Project's Physical APE documented herein and mapped. Burns & McDonnell recommends the completion of additional Class III Inventory for the portions of the Project's Physical APE that were not surveyed during the 2024 field season or for any areas of Project redesign which fall outside the Survey Corridor covered in this report.

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# List of Abbreviations

| Abbreviation | Term/Phrase/Name |
|---|---|
| ac | acre(s) |
| A.D. | *Anno Domini* |
| B.C. | Before Christ |
| Basin Electric | Basin Electric Power Cooperative |
| Burns & McDonnell | Burns & McDonnell Engineering Company, Inc. |
| C. | Concentration |
| ca. | circa |
| CFR | Code of Federal Regulations |
| cm | centimeter(s) |
| cmbgs | centimeter(s) below ground surface |
| Commission | Public Service Commission |
| DOE | Department of Energy |
| E | east |
| EA | Environmental Assessment |
| F. | Feature |
| FCP | field-clearing pile |
| ft | foot, feet |
| GLO | General Land Office |
| GPS | global positioning system |
| GSU | Garrison Study Unit |
| ha | hectare(s) |
| km | kilometer(s) |
| KRF | Knife River Flint |
| kV | kilovolt |
| m | meter(s) |
| mi | mile(s) |
| MS No. | manuscript record number (MS No.) |
| N | north |
| NBI | National Bridge Inventory |
| NDCC | North Dakota Century Code |
| NDCRS | North Dakota Cultural Resources Survey |

| Abbreviation | Term/Phrase/Name |
|---|---|
| NDSHPO | North Dakota State Historic Preservation Office |
| NEPA | National Environmental Policy Act |
| NHPA | National Historic Preservation Act |
| NRHP | National Register of Historic Places |
| Physical APE | physical area of potential effects |
| Project | Tande-to-Saskatchewan Transmission Line |
| ROW | right(s)-of-way |
| S | south |
| SHSND | State Historical Society of North Dakota |
| SITS | Smithsonian Institution Trinomial System |
| SRSU | Souris River Study Unit |
| State Trust Lands | North Dakota Department of Trust Lands |
| STP | shovel test probe(s) |
| Study Area | 1-mi area surrounding the proposed Project route that defines the spatial parameters for the literature review |
| Survey Corridor | a 200 ft wide corridor around the proposed transmission line route, a 30 ft wide corridor around off right-of-way access routes, and a minimum of 200 ft by 100 ft for pulling easements |
| URP | Unassociated Rock Pile |
| U.S. | United States |
| USFWS | United States Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| W | west |

# 1.0 Introduction

Basin Electric Power Cooperative (Basin Electric) proposes to construct the Tande-to-Saskatchewan Transmission Line (Project). The Project consists of approximately 58.01 miles (mi) (93.36 kilometers [km]) of new single-circuit 230-kilovolt (kV) overhead transmission line in Burke, Divide, and Mountrail Counties, North Dakota (**Figures 1-1**). The Project will extend from the existing Tande Substation in Mountrail County to SaskPower's transmission line at the United States (U.S.)-Canada border.

## 1.1 Description of Project and Survey Corridor

The proposed Project layout is dated August 23, 2024 and consists of approximately 58.01 mi (93.36 km) of new 230-kV overhead transmission line in Burke, Divide, and Mountrail Counties, North Dakota. The Project will extend from the existing Tande Substation in Mountrail County to the U.S.-Canada border. The proposed Project comprises 58.01 mi of transmission line, off right-of-way (ROW) access routes, and pulling and tensioning easements. The proposed Project will comprise 321 galvanized steel monopole structures. The poles range in height from 85 feet (ft) to 110 ft (25.91 meters [m] to 33.53 m) tall with an average height of 101 ft (30.78 m). Some structures may need to be raised at overhead crossings. A 25-acre laydown yard is proposed for construction. The location for the laydown yard has not yet been identified but only locations with previous disturbance such as agricultural fields or mined areas are being considered; it will be surveyed in 2025 and is not included in the results of this report. No new ground disturbance is needed for upgrades to the Tande Substation. All upgrades will occur within the existing substation footprint.

The U.S. Department of Energy (DOE) Grid Deployment Office (GDO) is considering issuing a Presidential Permit. Based on guidelines from the DOE and SHSND that the physical area of potential effects (Physical APE) for the Project covers all areas where permanent or temporary ground disturbance will occur during construction of the Project and consists of a permanent 125-ft (38.1 m) ROW with numerous pulling easements and off ROW access roads. The pulling easements and off ROW access roads will be temporary impacts, which will be reclaimed after construction has been completed. When practicable, off ROW access roads will be contained to existing gravel or dirt trails. The Project is located largely on private land with several sections of North Dakota Department of Trust Lands (State Trust Lands) present. No federal lands are located within the Project.

The proposed Project Survey Corridor covered in this report is based on the transmission line layout dated August 23, 2024, and includes all areas where land access was granted for inventory in 2024 within the Project site plan that may be permanently or temporarily affected during construction of the Project (**Figure 1-2**; **Table 1-1**). To allow for some flexibility during construction, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) surveyed a 200 ft or 60.96 m wide corridor around the proposed transmission line route, a 30 ft (9.14 m) wide corridor around off ROW access routes, and a minimum of 200 ft by 100 ft (60.96 m by 30.48 m) for pulling easements (Survey Corridor). In several instances, small shifts in the proposed transmission line route or off ROW access roads required Burns & McDonnell to survey further areas to maintain the 200 ft wide transmission line Survey Corridor and the 30 ft wide off ROW access route Survey Corridor. This resulted in an overall Survey Corridor which varies in width slightly throughout the length of the Project.

To date, the total Survey Corridor for the Project comprised 1260.66 acres (ac) (510.17 hectares ha]), which were inventoried between June and November 2024. The Survey Corridor is located in the U.S. Geological Survey (USGS) quadrangles of White Earth, Battleview, McGregor, Grand View, Bush Lake, Hamlet, Noonan, and Paulson.

**Table 1-1: Public Land Survey System Locations for the Survey Corridor**

| County | Township | Range | Section |
|---|---|---|---|
| Burke | 159 | 94 | 6, 7, 18, 19, 30, & 31 |
| | 160 | 94 | 30 & 31 |
| Divide | 160 | 95 | 6, 7, 18, 19, & 25-30 |
| | 161 | 95 | 19-22, 28, & 33 |
| | | 96 | 2, 11, 14, 23, & 24 |
| | 162 | 96 | 2, 3, 11, 14, 23, 26, & 35 |
| | 163 | 96 | 5, 6, 8, 17, 20, 26-29, 34, & 35 |
| | | 97 | 1 |
| | 164 | 97 | 25 & 36 |
| Mountrail | 157 | 94 | 5, 6, 8, 17, 20, & 29 |
| | 158 | 94 | 5-8, 17-20, 30, & 31 |

## 1.2 Regulatory Requirements

The DOE GDO is considering issuing a Presidential Permit in accordance with Executive Order (E.O.) 10485, as amended by E.O. 12038, and 10 CFR Part 205.

The Project will also require a Certificate of Corridor Compatibility and Transmission Facility Route Permit from the North Dakota Public Service Commission (Commission); therefore, the Project is subject to review by the State Historical Society of North Dakota (SHSND) under North Dakota Century Code (NDCC) Section 49-22-09 -- Factors to be considered in evaluating application and designations of sites, corridors, and routes (State of North Dakota 2024). NDCC Section 49-22-09 states the Commission shall be guided by, but is not limited to, several considerations, where applicable, to aid in the evaluation and designation of sites, corridors, and routes. Item 1.(i.) of NDCC Section 49-22-09 includes consideration of the effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.

The purpose of this report is to provide the necessary information for DOE, Commission, and North Dakota State Historic Preservation Office (NDSHPO) review by confirming the presence or absence of archaeological sites within the Survey Corridor and Physical APE.

The Project must also comply with North Dakota's "Protection of Human Remains and Burial Goods" law (NDCC Section 23-06-27) and accompanying administrative rules (North Dakota Administrative Code Chapter 40-02-03). These codes also apply to the Project if human remains or burial goods are inadvertently discovered during the course of construction (State of North Dakota 2024).

## 1.3 Study Area

The Study Area for the Class I: Literature Review completed for the Project consists of a 1-mi (1.61 km) buffer surrounding the Survey Corridor (Study Area). The file search and the historical background review included the Survey Corridor and Study Area.

Canada

Divide County

Burke County

Williams County

Mountrail County

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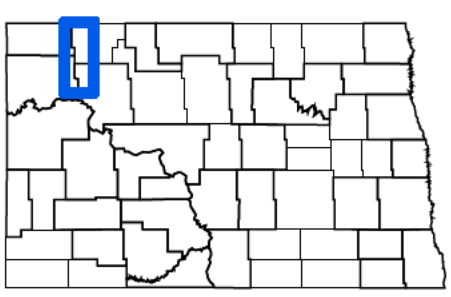
## Legend

- County Boundary
- Physical Area of Potential Effects
- U.S.-Canadian Border



N W E S

0 4 8 Miles

# Figure 1-1
## Physical Area of Potential Effects

Tande-to-Saskatchewan
Transmission Line Project
Cultural Resource Inventory
Burke, Divide, & Mountrail Counties, ND

BURNS McDONNELL

Canada

Divide County

Burke County

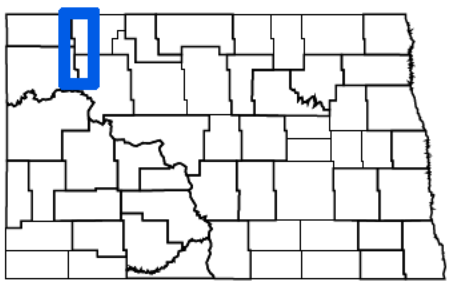
Williams County

Mountrail County

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

## Legend

- County Boundary
- Physical Area of Potential Effects
- U.S.-Canadian Border



N

W E

S

0 4 8 Miles

# Figure 1-2
## Physical Area of Potential Effects

Tande-to-Saskatchewan
Transmission Line Project
Cultural Resource Inventory
Burke, Divide & Mountrail Counties, ND

BURNS McDONNELL

# 2.0 Literature Review

## 2.1 File Search

Burns & McDonnell performed a Class I: Literature Review or file search for archaeological, architectural, and Tribal resources for the Project and the 1-mi Study Area around the Survey Corridor in May of 2024. The literature review included identifying previously recorded archaeological, architectural, and Cultural Heritage sites documented during previous surveys within the Project Survey Corridor and within 1 mi of the Survey Corridor.

The literature review identified 59 previous cultural resource inventories within the Survey Corridor and a 1mi Study Area. See **Table 2-1** for a summary of these inventories including their manuscript record number (MS No.), title, and author(s). Of these, 25 are located partially within the Survey Corridor.

A total of 160 previously documented cultural resources were identified within the Study Area. These resources consist of 94 precontact site leads, four historical archaeological site leads, two architectural site leads, four precontact isolated finds, three historic isolated finds, 28 precontact sites, nine historical archaeological sites, 12 architectural sites, two multicomponent sites, and two sites with an architectural and historical archaeological component. See **Table 2-2** for a summary of these sites, their Smithsonian Institution Trinomial System (SITS) numbers (No.), and the previous National Register of Historic Places (NRHP) recommendations provided in the North Dakota Cultural Resources Survey (NDCRS) site forms procured during the file search. Site lead refer to resources that lack enough information to fully record and complete all necessary data fields on the NDCRS forms. Examples of site leads include 1) locations recorded from various historic documents; 2) locations reported by a landowner or other non-professional; 3) isolates, a location with five or fewer surface visible artifacts that, in the professional judgment of the archaeologist, is likely to be a limited surface expression of a former occupation area where most of the artifacts are still buried; and/or 4) locations recorded by a cultural resource specialist outside of the project area(s) and, thus, not fully recorded.

A total of 13 previously recorded Cultural Heritage sites are located within the 1-mi Study Area (**Table 2-3**). The Cultural Heritage Form (CHF) may be used to document and initially record traditional cultural properties, sacred sites, and/or sites of cultural and religious significance to tribes or other groups. The eligibility recommendations provided on this form are not considered formal determinations of significance by Federal, Tribal, or State officials. **Table 2-3** provides a summary of these sites, their State-issued CHF No., date recorded, and the NRHP-eligibility recommendations provided by the consultant. None of these Cultural Heritage sites overlap the Survey Corridor.

**Table 2-1: Previous Cultural Resource Inventories Completed in the Study Area**

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| **Bold = Overlaps the Survey Corridor** | | | |
| 2797 | Texaco Government Gin-Han Partnership NCT Well #1 Survey Report, Divide Co., ND | Rippeteau, Bruce E. | 1982 |
| **5393** | **Results of an Intensive, Class III Cultural Resource Inventory of Divide County Highway 21 (CRS-1249) Project** | **Christensen, Robert C.** | **1991** |
| **6163** | **Burke Divide Electric Cooperative Utility Line Upgrade: A Class III Cultural Resource Inventory Divide County, North Dakota** | **Stine, Edward** | **1993** |

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| **7144** | **Dakota Gasification Company Co2 Pipeline Selected Segments in Mercer, Dunn, McKenzie, Williams and Divide Counties, ND: A Class III Cultural Resources Inventory and Appendix B: USGS Topographic Coverage of the Pipeline** | **Olson, Byron L.** | **1998** |
| 7292 | Mountrail County Road Improvement Project in Portions of T157N, R94W, North Dakota UW #2107 | Klinner, Duane G. | 1999 |
| 7569 | Dakota Gasification CO2 Pipeline Compliance Report in McKenzie, Williams, Dunn, and Divide Co., ND | Olson, Byron L. | 2000 |
| **8271** | **Four NCC Exchanges: A Class II & Class III Cultural Resources Inventory, Burke, Divide, Williams and Mountrail Counties, ND** | **Bluemle, William J.** | **2002** |
| 10560 | Rindell/Lovdahl Pit: A Class III Cultural Resource Inventory in Divide Co., ND | Reinhart, Damien S. | 2008 |
| 10798 | Williston to Tioga: A Class III Cultural Resource Inventory for a Proposed 230kV Transmission Line in Williams and Mountrail Counties, ND | Hiemstra, Damita J. & Aaron L. Barth | 2008 |
| **10855** | **BDW Waterline: A Class II Cultural Resource Inventory in Divide & Burke Counties, ND** | **Harty, Jennifer L.** | **2009** |
| 11097 | Williston to Tioga: A Class III Cultural Resource Inventory for a Proposed 230kV Transmission Line in Williams and Mountrail Counties, ND Addendum 1 | Engel, Damita J. | 2009 |
| 11770 | Williston to Tioga: A Class III Cultural Resource Inventory for a Proposed 230kV Transmission Line in Williams and Mountrail Counties, North Dakota: Addendum 2: Site Staking and Additional Inventory of Three Segments | Williams, Garrett & Andrea Kulevsky | 2010 |
| **11870** | **Cultural Resources Survey Report State Route 40: Near Tioga North to East Junction ND 50 State Route 50: McGregor South to West Junction ND 40 Williams and Burke Counties, ND** | **Gilmore, Kevin P. & Kathleen C. Croll** | **2010** |
| 12380 | A Class III Cultural Resource Inventory Enger Borrow Area Mountrail Co., ND. | Rothaus, Dr. Richard M. | 2011 |
| **12951** | **Class II-III Cultural Resources Investigations for the Tioga Lateral Project in Williams, Mountrail, Burke, Ward, and Renville Counties, North Dakota** | **McLean, Janice A., Paul A. Demers, Jennifer L. Evans, Nicholas V. Kessler, Tyler J. Leben, Rolfe D. Mandel, C. April Miller, Alan R. Potter, & Shannon R. Ryan** | **2012** |
| **13056** | **Basin Electric Power Cooperative's Antelope to Neset 345 kV Substation: A Class III Cultural Resource Inventory in Mountrail County, North Dakota** | **Kinsey, Matthew** | **2012** |
| 13564 | Samson Resources' Heron #22-15-163-96H Well Pad and Access Road: A Class III Cultural Resource Inventory in Divide County, North Dakota | Bailly, Danielle | 2012 |

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| 13588 | Addendum Report 2: Supplemental Class III Cultural Resources Investigations for the Tioga Lateral Project in Williams, Mountrail, Burke, and Renville Counties, North Dakota & Archeological Assessment of 32BK116, Burke County, North Dakota | Evans, Jennifer L., Robert W. Conrad, Paul A. Demers, Rebecca J. Gatewood, Adam M. Hefling, Tyler J. Leben, Janice A. McLean, Dawn L. Munger, & Alan R. Potter | 2012 |
| **13948** | **A Class I and Class III Cultural Resource Inventory of the Hess Avalanche Pipeline, Burke, Divide, Mountrail, and Williams Counties, North Dakota** | **Cox, Matthew A., Damien S. Reinhart, & Nicholas Smith** | **2013** |
| 14492 | Bakken Hunter, LLC Border-CDP Pipeline: Class III Cultural Resource Inventory, Divide County, North Dakota | Brewster, Jonathan | 2013 |
| 14553 | Basin Electric Power Cooperative, Neset Substation Project, Class III Cultural Resource Survey | Good, Kent N. | 2008 |
| 14589 | A Class I and Class III Cultural Resource Inventory of Segments of the ONEOK Rockies Midstream, L.L.C., Williston Hunter 1 Gathering Pipeline, Divide County, North Dakota | Picka, Craig M. | 2013 |
| 14988 | Rindel Pit Material Source Area: A Class III Intensive Cultural Resource Inventory in Divide County, North Dakota | Person, Amanda C. | 2013 |
| 15070 | Class III Architectural and Archaeological Resources Inventory for the BNSF Railway Glasgow Subdivision Improvements Segment 5 Project, Mountrail County, North Dakota (USACE #NWO-2013-1749-BIS) | Palmer, Kevin & Steven W. Sabatke | 2014 |
| **15086** | **Larson Material Source Area: A Class III Intensive Cultural Resource Inventory in Mountrail County, North Dakota** | **Person, Amanda C.** | **2013** |
| **15380** | **A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota** | **Schleicher, Jolene, Aidan McCarty, Craig M. Picka, & Carolyn Riordan** | **2014** |
| **15523** | **Addendum to A Class I and Class III Cultural Resource Inventory of the Meadowlark Midstream Company Global Stampede Pipeline, Burke and Divide Counties, North Dakota, for Pipeline Alignment Reroutes** | **Lechert, Stephanie** | **2014** |
| **16139** | **North Dakota Department of Transportation's Highway 5 from Crosby to Noonan: A Class III Cultural Resource Inventory in Divide County, North Dakota** | **Cecil, Carrie** | **2015** |
| 16636 | Basin Electric Power Cooperative's Tande Laydown Yard: A Class III Cultural Resource Inventory in Mountrail County, North Dakota | Snortland-Banks, Dierdre | 2016 |
| **16889** | **Basin Electric Power Cooperative's Antelope Valley Station to Neset 345 kV Transmission Line: A Class II and Class III Cultural Resource Inventory in Dunn, McKenzie, Mercer, Mountrail, and Williams Counties, North Dakota** | **Harty, Jennifer L., Carrie Cecil, Damita J. Engel, Patrick K. O'Brien, & Dierdre Snortland-Banks** | **2015** |

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| 17009 | Brodal Material Source Area: A Class III Intensive Cultural Resource Inventory in Divide County, North Dakota | Brooks, Brittany | 2014 |
| 17173 | Knife River Corporation 2014 Material Source Areas: Class III Intensive Cultural Resource Inventories in Oliver, Mountrail, Kidder, Logan, and Burleigh Counties, North Dakota | Domine, Andrew | 2015 |
| 17324 | West White Earth WAWSA Waterline Expansion: A Class III Cultural Resource Inventory, Mountrail and Williams Counties, North Dakota | Rohe, Chris M. & Kaelyn M. Olson | 2017 |
| 17819 | Update to the West White Earth Waterline Service Area: A Class III Cultural Resource Inventory, Mountrail and Williams Counties, North Dakota | Morrison, John G. | 2018 |
| **18058** | **Addendum to Basin Electric Power Cooperative's Antelope Valley Station to Neset 345 kV Transmission Line: A Class II and Class III Cultural Resource Inventory in Dunn, McKenzie, Mountrail, and Williams Counties, North Dakota** | **Meens, Daan, Cody M. Anderson, William J. Bluemle, Dierdre Bostyan, Damita J. Engel, Jena Gray, Lynsee Langsdon, Matt Radermacher, Kimberly Troendle, & Brenna Weston** | **2018** |
| **18203** | **Class III Cultural Resource Inventories for the Fisher Sand and Gravel Company 2017 Material Source Areas in Emmons, Kidder, Mountrail, Oliver, Pierce, and Sheridan Counties, North Dakota** | **Neumiller, Alex & Matthew Beavers** | **2018** |
| 18210 | Class III Cultural Resource Inventories for the Strata Corporation's 2017 Material Source Areas in Burleigh, Divide, McHenry, and Morton Counties, North Dakota | Neumiller, Alex & Paul van Wandelen | 2018 |
| **18220** | **Aurora Wind Project: A Class III Cultural Resources Inventory Mountrail and Williams Counties, North Dakota** | **Latham, Mark A.** | **2019** |
| **18235** | **Class III Cultural Resource Inventory of the Upland Pipeline System Project Study Corridor and Addendum, McKenzie, Williams, Mountrail and Burke Counties, North Dakota (EEU4936-EXP-EN-RP-0024 & EEU4936-EXP-EN-RP-0031)** | **Wagers, Scott, Douglas Davidson, Blain Fandrich, Patrick Kuntz, Lynelle A. Peterson, Jennifer L. Thomas, & Christopher J. Tinti** | **2015** |
| **18236** | **Burke Transmission Line: A Class III Cultural Resource Inventory in Burke and Mountrail Counties, North Dakota** | **McCarthy, Melinda M., Marcia L. Bender, Christina Huling, & Alexander Neumiller** | **2019** |
| 18433 | TI-Ives-157-95-0601H-6, H-7, H-8, H-9 Well Pad and Access Road Project: A Class III Cultural Resource Inventory in Mountrail County, North Dakota | Shaw, Allen R. | 2019 |
| 18535 | Additional Aurora Wind Project Class II Cultural Resources Inventory Mountrail and Williams Counties, North Dakota | Latham, Mark A. | 2019 |
| **18678** | **A Class I and Class III Cultural Resource Inventory for the Liberty Midstream Residue Pipeline, Williams and Mountrail Counties, North Dakota** | **Gilmer, Anastasia & Jolene Schleicher** | **2020** |

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| **18694** | **Northern Divide Transmission Line: A Class III Cultural Resource Inventory in Burke and Mountrail Counties, North Dakota** | **Huling, Christina, Marcia L. Bender, Alexander Cassidy-Neumiller, & Melinda McCarthy** | **2020** |
| 18760 | A Class III Cultural Resource Inventory of the Willie Federal 3-36H, 4-36H1, 5-36H, and 6-36H1 and Willie 7-36H Well Pad and Access Road in Williams County, North Dakota | Reich, Arielle & Aaron Kidwell | 2020 |
| **18771** | **Supplement II for the Aurora Wind Project Area Class III Cultural Resources Inventory, Mountrail and Williams Counties, North Dakota** | **Latham, Mark A.** | **2020** |
| 18851 | Northern Divide Transmission Line Due Diligence Addendum: A Class III Intensive Cultural Resource Inventory in Burke and Mountrail Counties, North Dakota | McCarthy, Melinda M. | 2020 |
| **18861** | **A Class III Intensive Cultural Resource Inventory for the Part II of the 29 Mile Waterline Project in Burke, Divide, and Williams Counties, North Dakota** | **Baker, Amanda** | **2020** |
| 18896 | Northern Divide Wind Energy Center and Transmission Line Negative Survey Addendum: A Class III Cultural Resource Inventory in Burke County, North Dakota | McCarthy, Melinda M. & Rebecca Pace | 2020 |
| **18977** | **Basin Electric: A Class III Cultural Resource Inventory for the Neset to North Shore 230-kV Transmission Line in Mountrail County, North Dakota** | **Stine, Edward, Dierdre Bostyan, Andrea Kulevsky, & Daan Meens** | **2020** |
| 19118 | Northern Divide Transmission Line Fall 2020 Addendum: A Class III Intensive Cultural Resource Inventory in Burke and Mountrail Counties, North Dakota | Huling, Christina & Melinda McCarthy | 2021 |
| **19144** | **Class III Archaeological Survey and Select Site Testing: WBI Energy Transmission, Inc. North Bakken Expansion Project, Burke, McKenzie, Mountrail, and Williams Counties, North Dakota** | **Malloy, Kevin, Verna Gentil, Jeffrey Holland, Emily Laird, Pat Robblee, Edward Schneider, William F. Stanyard, Larissa Thomas, & Jayson Zoino** | **2021** |
| 19145 | Class III Historic Architectural Survey, North Bakken Expansion Project, Burke, McKenzie, Mountrail, and Williams Counties, North Dakota | Derrick, Mary Beth, Anna Downing, Jeffrey Holland, Kevin Malloy, Larissa Thomas, Emily Tucker-Laird, & Megan Wiginton | 2020 |
| 19165 | An Account of the Traditional Cultural Survey for the North Bakken Pipeline Expansion in Burke, McKenzie, Mountrail, and Williams Counties, North Dakota | Reich, Arielle | 2020 |
| 19513 | Class III Archaeological Survey Addendum 2: WBI Energy Transmission, Inc. North Bakken Expansion Project, Burke, McKenzie, Mountrail, and Williams Counties, North Dakota | Malloy, Kevin & Larissa Thomas | 2021 |

| MS No. | Title | Author(s) | Year |
|---|---|---|---|
| 19902 | TI-H-Bakken-157-95-0712 H3, H4, & LN-H-1 Well Pad and Access Road project: A Class III Cultural Resource Inventory in Mountrail County, North Dakota | Wiker, Michelle | 2022 |
| 19938 | Mountrail Country Road 6 Improvements: A Class III Cultural Resource Inventory in Mountrail County, North Dakota | Pace, Rebecca & John G. Morrison | 2022 |
| 20097 | County Line Receipt Station Upgrade - A Class III Cultural Resource Inventory in Williams County, North Dakota | McCarthy, Melinda M. & Stanton Morse | 2023 |
| 20114 | A Class III Intensive Cultural Resource Inventory for the 29 Mile Waterline Addendum Project in Burke, Divide, and Williams Counties, North Dakota | Brooks, Brittany | 2023 |

**Table 2-2: Previously Documented Resources within the Study Area**

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| **Bold = Overlaps the Survey Corridor** | | | | |
| 32BKX255 | 1980 | Archaeological Site Lead: Stone Circles | Native American | Unevaluated |
| 32BKX256 | 1980 | Archaeological Site Lead: Stone Circles | Native American | Unevaluated |
| **32BKX257** | **1980** | **Archaeological Site Lead: Stone Circles** | **Native American** | **Unevaluated** |
| 32BKX263 | 1980 | Archaeological Site Lead: Stone Circles & Trail | Native American | Unevaluated |
| **32BKX264** | **1980** | **Archaeological Site Lead: Stone Circles & Trail** | **Native American** | **Unevaluated** |
| **32BKX279** | **1980** | **Archaeological Site Lead: Stone Circles** | **Native American** | **Unevaluated** |
| 32BKX564 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32BKX565 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32BKX577 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32BKX578 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32BKX1068 | 2020 | Architectural Site Lead: Farmstead | Euro-American | Unevaluated |
| 32BK44 | 1999 | Architectural Site: Scandia Lutheran Church | Euro-American | Unevaluated |
| 32BK169 | 2014 | Historical Archaeological Site: Trash Dump | Euro-American | Not Eligible |
| 32BK280 | 2019 | Archaeological Site: 19 Stone Circles & 4 Cairns | Native American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32BK281 | 2019 | Archaeological Site: 2 Stone Circles & 1 Cairn | Native American | Unevaluated |
| 32BK282 | 2019 | Archaeological Site: 2 Stone Circles, 2 Possible Hearths, & 1 Lithic Core | Native American | Unevaluated |
| 32BK283 | 2019 | Archaeological Site: 4 Stone Circles & 1 Stone Alignment | Native American | Unevaluated |
| 32BK285 | 2019 | Archaeological Site: 1 Stone Alignment | Native American | Unevaluated |
| 32BK294 | 2020 | Architectural Site: Well Pad | Euro-American | Unevaluated |
| 32BK295 | 2020 | Architectural Site: North Tioga Gas Plant | Euro-American | Unevaluated |
| 32BK297 | 2020 | Architectural Site: Hoiby Farm | Euro-American | Unevaluated |
| 32DVX9 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX10 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX11 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX12** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX13 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX14 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX15 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX27 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX28 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX29 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX30 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX31 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX32** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX33** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32DVX34 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX35 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX36 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX37 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX39 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX40 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX41 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX42** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX43** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX44** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX45** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX46** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX47** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX48 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX49 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX50 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX51 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX52 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX53 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX125 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX126 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX127 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32DVX128 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX129 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX130 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX211 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX224 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX274 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX275 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX276 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX277 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX278** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX279** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX280 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX281 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX282** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX283 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX284** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX285** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX286 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX287 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX288 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX289 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX290 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32DVX294 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX296 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX297** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| **32DVX298** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX299 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX300 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX301 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX314 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX315 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX370 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX371 | 1980 | Historical Archaeological Site Lead: Johncox Post Office | Euro-American | Unevaluated |
| 32DVX372 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32DVX373 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| **32DVX398** | **1980** | **Archaeological Site Lead: Cultural Material Scatter** | **Native American** | **Unevaluated** |
| 32DVX435 | 2014 | Historic Isolate: Car Parts & Scrap Metal | Euro-American | Not Eligible |
| 32DVX489 | 1997 | Archaeological Site Lead: 1 Stone Circle | Native American | Unevaluated |
| **32DVX491** | **2015** | **Historical Archaeological Site Lead: Modern Stone Alignment** | **Euro-American** | **Unevaluated** |
| 32DVX503 | 2022 | Historical Archaeological Site Lead: Thad. C. Hecker Homestead | Euro-American | Unevaluated |
| 32DV8 | 1980 | Multicomponent Site: Cultural Material Scatter | Native American & Euro-American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32DV9 | 1980 | Multicomponent Site: Cultural Material Scatter | Native American & Euro-American | Unevaluated |
| 32DV25 | 1990 | Archaeological Site: "Sally Duck" 1 Stone Circle | Native American | Potentially Eligible |
| 32DV29 | 1997 | Archaeological Site: 9 Stone Circles & 1 Cairn or Hearth | Native American | Unevaluated |
| 32DV30 | 1997 | Architectural/Historical Archaeological Site: Farmstead | Euro-American | Not Eligible |
| 32DV122 | 2010 | Historical Archaeological Site: Cultural Material Scatter | Euro-American | Unevaluated |
| 32DV123 | 2010 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32DV124 | 2010 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32DV162 | 2014 | Historical Archaeological Site: 1 Depression & Cultural Material Scatter | Euro-American | Not Eligible |
| 32DV193 | 2017 | Architectural Site: Stoneview Township School | Euro-American | Unevaluated |
| 32DV195 | 2017 | Architectural Site: Upland Township School No. 1/Highland School No. 2 | Euro-American | Unevaluated |
| 32DV198 | 2017 | Architectural Site: Long Creek Township School/Bounty School | Euro-American | Not Eligible; Destroyed |
| 32DV342 | 2020 | Architectural Site: Long Creek Township School #2 | Euro-American | Unevaluated |
| 32MNX477 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX478 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX484 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX485 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX486 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX492 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX493 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX578 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32MNX579 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32MNX899 | 2010 | Precontact Isolate: 1 Projectile Point & 1 Flake | Native American | Not Eligible |
| 32MNX936 | 2014 | Historic Isolate: Farm Equipment | Euro-American | Not Eligible |
| 32MNX945 | 2015 | Architectural Site Lead: Beauty Valley Church | Euro-American | Unevaluated |
| 32MNX1031 | 2018 | Precontact Isolate: 1 Knife River Flint (KRF) Flake | Native American | Not Eligible |
| 32MNX1032 | 2018 | Precontact Isolate: 2 KRF Flakes | Native American | Not Eligible |
| 32MNX1038 | 2019 | Precontact Isolate: 1 Biface | Native American | Not Eligible |
| 32MN44 | 1980 | Archaeological Site: "River-Leap" Lithic Scatter | Native American | Eligible |
| 32MN83 | 1980 | Architectural/Historical Archaeological Site: Burlington Northern Railroad/Great Northern Railroad | Euro-American | Eligible |
| 32MN503 | 1993 | Archaeological Site: 3 Stone Circles | Native American | Unevaluated |
| 32MN504 | 1993 | Archaeological Site: 3 Stone Circles | Native American | Unevaluated |
| 32MN516 | 1998 | Archaeological Site: 3 Stone Circles | Native American | Unevaluated |
| 32MN692 | 1999 | Architectural Site: Norman Free Lutheran Church & Cemetery | Euro-American | Unevaluated |
| 32MN920 | 2011 | Archaeological Site: 7 Stone Circles & 3 Cairns | Native American | Unevaluated |
| 32MN1012 | 2010 | Archaeological Site: 2 Cairns | Native American | Unevaluated |
| 32MN1013 | 2010 | Archaeological Site: 1 Cairn | Native American | Unevaluated |
| 32MN1014 | 2010 | Archaeological Site: 2 Cairns | Native American | Unevaluated |
| 32MN1305 | 2014 | Historical Archaeological Site: Abandoned Well Pad & Access Road | Euro-American | Not Eligible |
| 32MN1310 | 2014 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32MN1311 | 2014 | Historical Archaeological Site: Abandoned Well Pad | Euro-American | Not Eligible |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32MN1393 | 2017 | Architectural Site: Bicker Township School | Euro-American | Unevaluated |
| 32MN1516 | 2018 | Historical Archaeological Site: 1 Foundation & Cultural Material Scatter | Euro-American | Not Eligible |
| 32MN1522 | 2018 | Archaeological Site: 1 Cairn | Native American | Unevaluated |
| 32MN1527 | 2017 | Archaeological Site: 3 Cairns | Native American | Unevaluated |
| 32MN1556 | 2019 | Historical Archaeological Site: Cultural Material Scatter | Euro-American | Not Eligible |
| 32MN1557 | 2019 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32MN1558 | 2019 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32MN1584 | 2020 | Architectural Site: Farmstead | Euro-American | Unevaluated |
| 32MN1585 | 2020 | Architectural Site: Granary & 2 Grain Bins | Euro-American | Unevaluated |
| 32MN1590 | 2020 | Archaeological Site: 3 Cairns | Native American | Unevaluated |
| 32MN1599 | 2020 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32MN1608 | 2020 | Archaeological Site: 6 Stone Circles | Native American | Unevaluated |
| 32MN1679 | 2021 | Historical Archaeological Site: Trash Dump | Euro-American | Not Eligible |
| 32MN1693 | 2023 | Archaeological Site: 1 Stone Circle | Native American | Unevaluated |
| 32WIX216 | 1980 | Historical Archaeological Site Lead: Harry Post Office | Euro-American | Unevaluated |
| 32WIX284 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32WIX290 | 1980 | Archaeological Site Lead: Cultural Material Scatter | Native American | Unevaluated |
| 32WIX504 | 1996 | Archaeological Site Lead: 1 Stone Circle | Native American | Unevaluated |
| 32WIX607 | 2010 | Historic Isolate: Threshing Machine | Euro-American | Not Eligible |
| 32WI19 | 1980 | Archaeological Site: "McGregor Tipi Ring" 3 Stone Circles & 1 Possible Hearth | Native American | Unevaluated |

| SITS No. | Year Initially Recorded | Site Type | Cultural Affiliation | Previous NRHP Recommendation |
|---|---|---|---|---|
| 32WI20 | 1980 | Archaeological Site: "High Ridge" Stone Circles | Native American | Unevaluated |
| 32WI355 | 1997 | Historical Archaeological Site: Cultural Material Scatter & 1 Possible Cairn | Euro-American | Unevaluated |

**Table 2-3: Previously Documented Cultural Heritage Sites within the Study Area**

| Identification No. | Year Recorded | Site Type | Previous NRHP Recommendation |
|---|---|---|---|
| CHFBK136 | 2020 | 4 Cairns & 24 Stone Circles | Eligible |
| CHFBK137 | 2020 | 4 Stone Circles & 2 Stone Alignments | Eligible |
| CHFBK138 | 2020 | 2 Cairns & 2 Stone Circles | Eligible |
| CHFBK139 | 2020 | 2 Stone Circles & 1 Possible Hearth | Eligible |
| CHFBK140 | 2020 | 1 Stone Alignment | Eligible |
| CHFMN4 | 2018 | 2 Cairns, 2 Carved Stones, & 1 Stone Alignment | Eligible |
| CHFMN5 | 2017 | 1 Cairn & 2 Stone Circles | Eligible |
| CHFMN6 | 2017 | 2 Stone Alignments, 1 Stone Circle, 2 Stone Effigies, & 2 Ceremonial Stone Features | Eligible |
| CHFMN7 | 2017 | 2 Stone Circles & 1 Stone Effigy | Eligible |
| CHFMN11 | 2018 | 1 Stone Alignment | Eligible |
| CHFMN12 | 2018 | 5 Cairns & 1 Stone Alignment | Eligible |
| CHFMN34 | 2019 | 1 Stone Circle & 1 Cairn | Eligible |
| CHFMN37 | 2020 | 1 Cairn & 2 Stone Features | Eligible |

## 2.2 Historical Maps, Aerial Photographs, & Atlas

Burns & McDonnell also completed a review of historical General Land Office maps, topographical maps, plat maps, aerial photographs, and a historical atlas to assist in determining the past locations of farmsteads, trails, roads, mines, or other historic features that may have been located during the field survey.

Bureau of Land Management (BLM) General Land Office patent records were reviewed for this inventory to identify potential undocumented historic sites associated with rural communities. The original land patents within the Survey Corridor indicate that much of the area was patented through Cash Entry Sales (3 Statute [Stat.] 566) or the Homestead Act (12 Stat. 392) with one “School Land” section being patented under the Enabling Act (17 Stat. 226) (BLM 2025).

Apart from the “School Land”, patented in 1899, the rest of the land within the Survey Corridor was settled between 1904 and 1916 with the most patents being issued in 1908 (BLM 1899, 1904, 1908a, 1916). Many of the earliest settlers in the area were of Northern European descent with some family members choosing to patent adjoining land (BLM 1908a, 1909, 1911a, 1912a). A considerable number of these original settler family surnames appear in the Mountrail, Burke, and Divide County maps platted in 1917, 1914, and 1915, respectively; however, local banks also begin to appear on these plat maps implying

some early settlers may have encountered financial struggles which led to them moving away from the area.

The patterns of settlement surrounding the Survey Corridor are consistent with that of other rural communities in the area. Topographical maps and aerial imagery show limited activity in the Survey Corridor which remains primarily rural and agricultural. The most common features surrounding the Survey Corridor consist of rural farmsteads, schoolhouses, and churches. Many of these farmsteads and schoolhouses appear to have been abandoned between 1953 and 1984 (USGS 1953, 1984). There are active farmsteads and churches in the area, none of which fall within the Survey Corridor. The only notable feature located within the Survey Corridor is an abandoned farmstead located on the eastern portion of Section 30 in Township 160N Range 95W. This farmstead was noted through aerial imagery and appears on only one map from 1974 (USGS 1974). This farmstead was documented as 32DV372 in **Section 6.2.4** of this report.

**NRHP Database**

A search of the NRHP and NDSHPO databases indicates no sites within the Survey Corridor are listed on the NRHP (NPS 2025a, NPS 2025b, NPS 2025c).

**Cemetery Search**

A review of available USGS maps (USGS 1953, 1969, 1979, 1982, 1984, 2014, 2017a, 2017b, 2020) and the Mountrail, Burke, and Divide County cemetery location databases on Find-A-Grave indicate no known cemeteries within the Survey Corridor (Find-A-Grave 2025a, 2025b, 2025c).

# 3.0 Archaeological and Historical Overview

## 3.1 Precontact

Humans have inhabited North Dakota for at least 12,000 years. As shown in **Table 3-1**, this lengthy period of occupation is divided into chronologically ordered traditions, which in turn are divided into one or more cultural periods and complexes (Gregg et al. 2021).

**Table 3-1: Precontact Chronology**

| Years B.C./A.D. | Cultural Traditions | Cultural Periods | Cultural Complexes |
|---|---|---|---|
| 1880 | EQUESTRIAN/FUR TRADE | Equestrian Nomadic A.D. 1780-1880 | One Gun |
| 1780 | PLAINS VILLAGE | Plains Village A.D. 1200-1780 | Knife River<br>Heart River<br>Painted Woods<br>Middle Missouri<br>Shea<br>Northeastern Plains<br>Devils Lake/Sourisford |
| 1500 | | | |
| 1250 | | | |
| 1000 | PLAINS WOODLAND | Late Plains Woodland A.D. 600-1200 | Charred Body<br>Sandy Lake<br>Blackduck<br>Kathio<br>Arvilla<br>Avonlea<br>Laurel<br>Besant<br>Sonota |
| 750 | | | |
| 500 | | Middle Plains Woodland 100 B.C.-A.D. 600 | |
| 250 | | | |
| 0 | | Early Plains Woodland 400-100 B.C. | |
| 250 | | | |
| 500 | PLAINS ARCHAIC | Late Plains Archaic 1000-400 B.C. | Pelican Lake<br>Yonkee<br>Hanna<br>Duncan<br>McKean Lanceolate<br>Oxbow<br>Hawken<br>Logan Creek |
| 750 | | | |
| 1000 | | Middle Plains Archaic 2800-1000 B.C. | |
| 2000 | | | |
| 3000 | | Early Plains Archaic 5500-2800 B.C. | |
| 4000 | | | |
| 5000 | | | |
| 6000 | PALEO-INDIAN | Paleo-Indian 9500-5500 B.C. | Caribou Lake<br>Pryor Stemmed<br>Parallel-Oblique Flaked<br>Cody<br>Hell Gap<br>Agate Basin<br>Folsom<br>Goshen<br>Clovis |
| 7000 | | | |
| 8000 | | | |
| 9000 | | | |

The **Paleo-Indian Tradition** (circa [ca.] 9500-5500 Before Christ [B.C.]) is a specialized adaptation to late Pleistocene/early Holocene environments, characterized by the hunting of now-extinct species of large game such as mammoth, camels, and bison.

Paleo-Indian components are recognized by the presence of large, well-made, flaked stone tools, which define technological complexes: Clovis, Goshen, Folsom, Agate Basin, Hell Gap, Cody, Pryor Stemmed, and Caribou Lake, as well as unnamed Parallel-Oblique Flaked varieties. Paleo-Indian artifacts have been found in the northwestern corner of North Dakota, where remnants of the early Holocene landscape are found, but they are rare in the eastern half of the state, where erosion and deposition have destroyed or buried sites (Gregg et al. r 2021).

The succeeding **Plains Archaic Tradition** (5500-400 B.C.) was a time of changing environmental conditions that required modification of the Paleo-Indian lifestyle. Archaic people broadened their resource base by hunting both large and small game animals, as well as increasing their emphasis upon plant resources. Archaic components are recognized by a diversified tool kit, groundstone artifacts, smaller stemmed and notched projectile points, firepits, storage pits, and architectural features. The tradition is also characterized by (1) regionalization in projectile point styles, (2) decline in the quality of stone working craftsmanship, and (3) reduction in the degree and extent of interaction between human populations in different archaeological areas and subareas (Gregg, Swenson, & Bleier 2021). The Archaic Tradition includes three periods, subdivided further into distinctive technological complexes: Early Plains Archaic (5500-2800 B.C.) – Logan Creek, Hawken, and Oxbow; Middle Plains Archaic (2800-1000 B.C.) – McKean Lanceolate, Duncan, and Hanna; and Late Plains Archaic (1000-400 B.C.) – Yonkee and Pelican Lake.

The **Plains Woodland Tradition** (400 B.C. - Anno Domini [A.D.] 1200) represents a continuation of the Plains Archaic lifestyle, with several important cultural innovations, including burial mound ceremonialism, production and use of ceramics, and limited horticulture (Gregg et al. 2021).

This stage is divided into three periods and several technological complexes that are defined by distinctive ceramic wares: Early Plains Woodland (400-100 B.C.) – unnamed Early Woodland; Middle Plains Woodland (100 B.C.-A.D. 600) – Sonota, Besant, Laurel, and Avonlea; and Late Plains Woodland (A.D. 600-1200) – Arvilla, Kathio, Blackduck, Sandy Lake, and Charred Body.

The **Plains Village Tradition** (A.D. 1200-1780) represents a continuation of the Plains Woodland lifestyle, augmented by more intensive food production, food storage, and increased use of ceramic vessels. Stored surpluses of food encouraged the formation of larger, more permanently occupied residential earthlodge communities (Gregg et al. 2021). The tradition includes several regional complexes, including Devils Lake/Sourisford, Northeastern Plains, Shea, Middle Missouri, Painted Woods, Heart River, and Knife River.

The concluding **Equestrian Nomadic Tradition** (A.D. 1780-1880) begins with European contact and ends with the period of permanent settlement by non-aboriginal groups (Gregg et al. 2021). The introduction of the horse (ca. mid-1700s) resulted in dramatic cultural and territorial changes throughout the High Plains, resulting in a period of cultural dynamism. Regional complexes, such as One Gun, are often identified through diagnostic artifacts, especially those of European and/or American manufacture.

## 3.2 Historic Period

The use of horses resulted in significant changes in subsistence economies, demographic characteristics, social organization, and settlement patterns with reference to pre-horse cultures (Gregg 1984). Ethnic and material cultural diversity fluoresced, spurred on by these drivers. Communicable European diseases, to which the indigenous populations had no resistance, quickly swept through the northern Great Plains, decimating the populations of Mandan, Hidatsa, and Arikara villages along the Missouri River trench.

Economic and population pressures pushed plains groups north and west, up the Missouri and Yellowstone Rivers (Mattes 1960). European exploration and settlement of the northern Great Plains centered on the major waterways and lakes, including the Missouri River, where traders and frontiersmen explored the river from the western frontier. Indeed, the river was a major transcontinental thoroughfare, and fur trade routes, trading posts, and settlements were established at Native villages, including Fort Clark and Fort Berthold.

In 1861, the Dakota Territory was established and covered the land encompassing modern day North Dakota and South Dakota, as well as much of Wyoming and Montana (Fey 2007). The Homestead Act of 1862 facilitated the settlement of the American West, and brought settlers, farmers, and ranchers pouring into the Territory, and the area experienced a rapid influx of European settlers. Despite the attempts of most Native American communities to live peacefully with the white settlers arriving during the population boom, Native Americans continually found themselves at odds with the European ideals of manifest destiny, money, political boundaries, and human dominion over the land and its resources, including the bison, on which the indigenous cultures depended. Violence between the native Dakota populations and soldiers led to several military expeditions by the U.S. government. Massacres at places like Whitestone Hill, the Killdeer Mountains, and in the Badlands lessened native resistance, and led to the removal of Native Americans to reservations (Fey 2007).

Unrestrained westward European migration continued through the 1860s and 1870s, and U.S. military outposts were established across the Territory. Known as the Dakota Boom, the migration of Europeans into the northern plains lasted until the mid-1880s and brought with it the establishment of cities and towns due at least in part to the expansion of railroad lines like the Canada Pacific, Great Northern, Burlington Northern, and Northern Pacific railroads. In 1889, following the Dakota Boom, North Dakota became the 39th state in the Union under President Benjamin Harrison.

# 4.0 Environmental Background

The Project is located in Burke, Divide, and Mountrail Counties in northwestern North Dakota. The Project's southern terminus is located in rural Mountrail County, approximately 3 mi (4.83 km) east of the town of Tioga. From this point, the Project Physical APE runs northward, passing 2.3 mi (3.70 km) to the west of the town of McGregor and 4.1 mi (6.6 km) to the west of the town of Noonan before reaching its northern terminus at the U.S.-Canada border in rural Divide County.

The Project sits primarily in the Missouri Coteau Slope and Northern Missouri Coteau subregions of the Northwestern Glaciated Plains ecoregion and the Northern Dark Brown Prairie subregion of the Northern Glaciated Plains ecoregion (Bryce et al. 1996). The southernmost extent of the Project lies in the River Breaks subregion of the Northwestern Great Plains ecoregion. The Northern Glaciated Plains and Northwestern Glaciated Plains are characterized by a gently rolling, glacially formed landscape with high concentrations of permanent and seasonal wetlands. Historically, the area was dominated by transitional prairie; current land use is divided between cultivated agricultural land and remnant prairie utilized for livestock grazing.

The Project straddles the boundary between the Garrison Study Unit (GSU) and the Souris River Study Unit (SRSU). The GSU is located in the Missouri Valley in northwestern North Dakota and is situated within the Glaciated Missouri Plateau subsection of the Great Plains Physiographic Province (Waldkirch 1999). The SRSU is located in northwestern and north-central North Dakota and extends across two physiographic provinces: the Central Lowlands and the Great Plains. Landforms in the GSU include glaciated uplands, breaks terrain, valley wall side slopes and foot slopes, draws, alluvial terraces, and floodplains; landforms in the SRSU include upland till plains, valley wall side slopes, valley wall foot slopes, alluvial fans, river terraces, and river floodplains.

The selection of native grasslands surrounding the Project include needle grasses (*Stipa*), slender wheat grass (*Elymus trachycaulus*), needle and thread grass (*Hesperostipa comata*), grama grasses (*Bouteloua*), and bluestem (*Andropogon*); common trees include the bur oaks (*Quercus macrocarpa*), aspens (*Populus tremula*), junipers (*Juniperus*), cottonwoods (*Populus*), willows (*Salix*), elms (*Ulmus*), box elders (*Acer negundo*), and green ash (*Fraxinus pennsylvanica*); edible shrubs include the chokecherry (*Prunus virginiana*), juneberry (*Amelanchier*), buffaloberry (*Shepherdia*), gooseberry (*Ribes*), and the wild rose (*Rosa*). The prairie and riparian environments are host to a variety of large and small animals. Animals native to the area that were utilized by hunters in the past include white-tailed deer (*Odocoileus virginianus*), pronghorn (*Antilocapra americana*), elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), moose (*Alces alces*), caribou (*Rangifer tarandus*), bison (*Bison bison*), grizzly bear (*Ursus arctos*), mountain lion (*Puma concolor*), wolves (*Canus lupus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), bobcats (*Lynx rufus*), jackrabbits (*Lepus*), ground squirrels (*Marmotini*), the long-tailed weasel (*Mustela frenata*), golden eagles (*Aquila chrysaetos*), bald eagles (*Haliaeetus leucocephalus*), hawks (*Accipitridae*), owls (*Strigiformes*), grouse (*Tetraoninae*), and a variety of waterfowl, fish, turtles, and mussels (Gregg et al. 2021).

Surface water drainages in the SRSU are split between those waterbodies that are located southwest of the Missouri Coteau, which drain to the Gulf of Mexico; and those that that are northeast of the Coteau, which drain northward toward Canada (USGS 2024). The northern portion of the Project falls within the Souris River Watershed, while the southern portions of Project drain into tributaries of the Missouri River. The Souris River drains into the Assiniboine River to the north, while the Missouri River drains into the Mississippi River to the southeast. Annual precipitation in the SRSU and the GSU averages around 16 inches.

Named streams in the GSU include Big Muddy Creek, Painted Woods Creek, Douglas Creek, Shell Creek, and Deepwater Creek. Small streams located in the SRSU include Little Deep Creek, Willow Creek, Cut Bank Creek, Ox Creek, and Wintering River (Gregg et al. 2021). The SRSU is also accompanied by an extensive prairie pothole wetland system that includes ephemeral and seasonal wetlands. Notable examples include the Crosby Reservoir and Lake Darling. These areas are favorable for waterfowl nesting and migratory stop-over habitats. Beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), mink (*Neovison vison*), coots (*Fulica*), numerous duck and geese species, perch (*Perca*), and northern pike (*Esox lucius*) are some of the more common types of animals found in riverine areas within the Project.

Within the Survey Corridor, the U.S. Department of Agriculture has mapped 64 soil map units (NRCS 2025). Of these, four soil map units comprise more than 50 percent of the land area within the Survey Corridor. These are Williams-Zahl loams, 3 to 6 percent slopes (19.4 percent); Zahl-Williams-Zahill complex, 6 to 9 percent slopes (18.3 percent); Zahl-Williams loams, 9 to 15 percent slopes (7.3 percent); and Noonan-Niobell loams, 0 to 6 percent slopes (7.1 percent).

# 5.0 Theoretical and Methodological Overview

## 5.1 Research Goals

At the request of Basin Electric, the primary goal of the Project was to identify historic and precontact cultural resources in the Survey Corridor, assess their NRHP eligibility, or recommend additional work necessary to evaluate same, and evaluate any potentially adverse effects the proposed Project could have on those resources that are considered historic properties (i.e., eligible for listing in the NRHP).

Class III: Intensive Cultural Resource Investigations of the Survey Corridor were completed to determine the number and extent of cultural resources present and their relationships to proposed Project features. The study was designed this way to provide the information required to make recommendations for additional testing and/or archival research of those resources that could provide important cultural and scientific data.

In general, cultural resources investigations are useful for identifying loci of human occupation across the landscape and through time. These data can be applied to investigate changes in habitation locations through time, delineating patterns of human habitation relative to other factors, such as population density, availability of local resources (e.g., food, water, and raw materials); the presence and exchange of non-local resources, such as lithic tool raw materials; precontact and historic site formation processes in the Project; and the nature and extent of natural and cultural impacts to sites in the Project.

Within the Project Survey Corridor, cultural resources relating to rural settlement and agriculture are the most common historic site types, while the most common precontact site types within the area are stone feature complexes and cultural material scatters. Precontact isolated finds and sites are frequently located on elevated landforms, including hilltops, ridges, and terraces, with greater site diversity near perennial waterways (Gregg et al. 2021).

## 5.2 Definitions

Cultural resources can be defined as any resource that has cultural character (King 2012). Expanding upon this simple definition, “cultural resources” include all landscapes, buildings, sites, districts, structures, or objects that have been created by or associated with humans and are considered to have historical or cultural value. The term “historic property” includes only those cultural resources that are listed in or eligible for listing in the NRHP, which was established by National Historic Preservation Act, 1966 (54 U.S. Code 300101 et seq., as amended through 2016). Finally, “site” refers to any location in which human activities have occurred and where material evidence of those activities remains.

Sites are defined as locations of past human activity older than 50 years, containing one or more cultural features, six or more artifacts, intact subsurface cultural materials, or a combination of these qualities, within an area of approximately 60 square m (645 square ft), and spatially discrete from areas of similar content by approximately 60 m (approximately 200 ft) (SHSND 2020). Isolated finds are defined as areas of past human activity older than 50 years, containing five or fewer artifacts with limited potential to possess subsurface cultural materials. Isolated finds, as objects not designed for or associated with a specific location and lacking the requisite density to be classified as a site, are defined by the National Park Service as a category of resource not considered eligible for the NRHP; objects such as sculptures or monuments that retain association with a location may have significance (NPS 1997). Site leads are either a) isolated finds, as defined above, with the potential to possess substantial subsurface deposits, or b) locations reported by non-archaeologists as containing cultural resources that have not been field verified by an archaeologist (SHSND 2020).

The criteria for NRHP eligibility are set forth at 36 Code of Federal Regulation Part 60.4 as follows:

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:*
>
> *a) That are associated with events that have made a significant contribution to the broad patterns of our history; or*
> *b) That are associated with the lives of persons significant in our past; or*
> *c) That embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *d) That has yielded, or may be likely to yield, information important in prehistory or history.*

All resources may be eligible under any one or more of these criteria. In many cases, however, historic resources within a given data set are typically eligible under criteria A, B, or C, while the majority of precontact resources are eligible under Criterion D. Guidelines for how to apply the criteria are provided in *How to Apply the National Register Criteria for Evaluation* (NPS 1997) and *Guidelines for Evaluating and Registering Archeological Properties* (Little et al. 2000). These guidelines were used for evaluating the historic properties within the Project's Survey Corridor and are briefly summarized in the following paragraph.

For a resource to be eligible under Criterion A, it must be associated with a particular event or pattern of events that can be demonstrated through historic contexts, either regional or local, that document its significance within history (Little et al. 2000). For a resource to be eligible under Criterion B, it must be demonstrated that the associated person is "individually significant within a historic context" and "has made an important contribution to history". The association can be on a local, state, or national level and can usually be demonstrated through historic documents, accounts, or other resources.

For a resource to be eligible under Criterion C, the distinctive architectural characteristics of the resource must have importance within historic contexts that are relevant to its particular theme in history (Little et al. 2000). In addition to contextual resources, a comparison of other related properties is usually necessary to evaluate how well it illustrates its distinctive characteristics. Finally, for a resource to be eligible under Criterion D, it must contain or have the potential to contain important information that contributes to the understanding of human history.

Definitions of site features generally follow NDSHPO guidelines for feature types; however, for the purpose of this Project, more specific definitions have been set for certain feature types to ensure consistency and assist in reporting. A cairn is a mound or pile of three or more stones, sized small to medium, which have been relocated by hand to serve as a marker, memorial, or guide. A cairn can be a precontact or a historic aged feature. An Unassociated Rock Pile (URP) is considered to be any collection of rocks which contains more or larger stones than would normally be associated with a cairn, as is observed in field clearing or picking rock piles, but that cannot clearly be directly associated with a historic farmstead or agricultural field; rests in an area of high to medium probability for cultural resources, such as the top of a hill or ridge line; and/or appears to be of significant age. The supposition is that an URP may not be a historic-aged field clearing feature and, therefore, may be related to precontact activities.

## 5.3 Field Methods

The Survey Corridor discussed within this report includes a total of 1260.66 ac (510.17 ha) which could be accessed in 2024 and were inventoried during June and November 2024. The remaining Survey Corridor will be surveyed in 2025. Additional Survey Corridor required to accommodate shifts to the transmission line route, the addition of off ROW access roads, and ancillary facilities such as laydown yards, will be inventoried in 2025, after such areas are identified and land access permissions are secured.

The methods employed for archaeological surveys were planned and conducted in consideration of the requirements described in the NDSHPO Guidelines Manual for Cultural Resource Inventory Projects (SHSND 2020). A systematic pedestrian surface survey was conducted in the Survey Corridor to determine the presence of artifacts or features on the surface. Where ground visibility was greater than 50 percent, 15-m (49.21 ft) interval transects were utilized, and where ground visibility was less than 50 percent, 10 m (32.81 ft) interval transects were utilized, as required. If the location was in an area of medium to high potential for an archaeological site, the transect interval was decreased to 5 m (16.4 ft).

In areas of low surface visibility (30 percent or less) and/or with medium to high potential for site presence, subsurface testing was conducted using shovel test probes (STPs) to detect buried cultural materials. STPs were excavated by hand with shovels to depths exceeding post-glacial strata and historic plow zones. The horizontal and vertical extent, soil characteristics, and presence or absence of any cultural materials were recorded during excavation. All sediments were screened through ¼-inch hardware cloth mesh. STP locations were recorded with global positioning system (GPS) units. STPs were excavated to a minimum of 60 centimeters below ground surface (cmbgs) or 10 centimeters (cm) into subsoil.

For surface finds located in agricultural fields, STPs were completed at the location of the surface finds and at 10 m intervals off surface finds in cardinal directions, unless constrained by access or topographical restrictions. If further cultural material was noted, STPs were continued in similar intervals until two negative STPs were reached in each direction off the positive. For cultural material recovered from STPs in native prairie, radial STPs were completed at 5 m and 10 m (16.4 ft and 32.81 ft) intervals in cardinal directions from positive STPs. In instances where multiple positive STPs were encountered on a landform, radial STPs were focused on delineating the boundary of the resource within the Survey Corridor.

## 5.4 Data Collection

Once the extent of a site was determined, the boundary of the site was recorded using a Trimble® Geo7X™ GPS unit running TerraSync® software. Site mapping procedures followed standard archaeological techniques.

Sites and isolated finds were digitally mapped using a geographic information system, and the data were collected with GPS units that collect Universal Transverse Mercator coordinates with sub-m accuracy.

High-resolution digital photographs were taken of each feature and of facets of diagnostic or especially unique artifacts. Site overview photos were taken with the intention of representing pertinent elements of the natural and culturally modified landscape, as well as a given area's location relevant to the Survey Corridor.

Data pertaining to the necessary fields of the appropriate standardized NDCRS site forms were collected during fieldwork. Preliminary assessments of NRHP eligibility were made based on the combined data presented on the site forms. Site forms were subsequently completed and submitted to the NDSHPO for review. Original field forms, field notes, and associated digital files are housed at the Burns & McDonnell office in Bismarck, North Dakota.

## 5.5 Collection Policies

In accordance with the conditions of Burns & McDonnell's North Dakota Cultural Resource Investigation Permit and State Trust Lands Planning and Preconstruction Survey Access Permit, artifacts were not collected from private land or State Trust Lands without permission from the landowner.

## 5.6 Laboratory Methods

Permission to collect artifacts was not obtained from any of the landowners within the Project. No artifacts were collected in the course of the fieldwork described herein, and all artifact analysis (mapping, photography, measurement, and description) was performed in the field.

# 6.0 Archaeological Results and Evaluations

## 6.1 Archaeology Results

The cultural resources survey for the Project included a total of 1260.66 ac (510.17 ha) (**Figure 6-1**). Burns & McDonnell archaeologists completed the survey under the direction of Principal Investigator, Melinda McCarthy, in multiple field sessions that took place between June and November 2024. The results of the survey are detailed below in **Section 6.2**.

## 6.2 Results Summary

The Class III: Intensive Cultural Resource Inventory resulted in the updating of 20 precontact site leads and the recordation of 19 newly documented archaeological resources. A total of 75 STPs were completed in medium to high probability areas of the Survey Corridor with low ground surface visibility or in the vicinity of surface finds.

Of the updated precontact site leads, one was not updated during the current inventory. 32DVX491 is a site lead for a modern stone alignment, noted in the previous site form to have been constructed in 1989 (Cecil & Green 2015). No site update was completed for the resource during the current survey, as it is not historic-age and was previously noted to have not achieved exceptional significance within the 35 years since its creation. Only small portions of the previously documented boundaries overlap the Survey Corridor. Site leads are typically locations reported by non-archaeologists as containing cultural resources that have not been field verified by an archaeologist (SHSND 2020). They tend to cover large geographic areas such as quarter sections, entire sections, or landforms. During the 2024 surveys, none of the previously documented site leads were identified within the Survey Corridor and, therefore, could not be evaluated for NRHP eligibility. See **Table 6-1** for a summary of the updated previously documented site lead locations that overlap the Survey Corridor according to the Class I. If evidence of the site lead was not observed within the Survey Corridor, an NDCRS update form was completed for the site lead.

The newly documented resources include one historical archaeological site lead, one precontact isolated find, four precontact sites, seven historical archaeological sites, two architectural sites, one multicomponent site, two sites with an architectural and historical archaeological component, and one site of unknown cultural affiliation. See **Table 6-2** for a summary of these sites, their official SITS numbers, and their NRHP eligibility. See **Section 7** for detailed management recommendations for these resources.

Two historic-age railroad tracks or grades without associated features were also identified during the inventory but were not documented on NDCRS site forms. As outlined by the NDSHPO's *Defined Non-Sites and Property Types Requiring No Formal Documentation*, these features were not documented on NDCRS forms due to the lack of associated features (NDSHPO 2015). One abandoned railroad grade was noted in the N½ of Section 19, Township 159N, Range 94W, while two sections of active railroad tracks were noted in the S½ of Section 34, Township 163N, Range 96W.

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Divide County

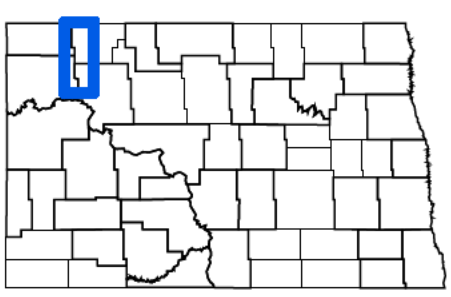
Burke County

Williams County

Mountrail County

## Legend

- County Boundary
- Survey Corridor
- U.S.-Canadian Border



N

W E

S

# Figure 6-1
## Survey Corridor

Tande-to-Saskatchewan
Transmission Line Project
Cultural Resource Inventory
Burke, Divide, & Mountrail Counties, ND

0 3.75 7.5
Miles

BURNS McDONNELL

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**Table 6-1: Previously Documented Site Leads Updated During the Current Survey**

| SITS No. | Site Type | NRHP Recommendation | Map Reference |
|---|---|---|---|
| 32BKX257 | Archaeological Site Lead: Stone Circles | Not Relocated; Left Unevaluated | Appendix A, Map 20 |
| 32BKX264 | Archaeological Site Lead: Stone Circles & Trail | Not Relocated; Left Unevaluated | Appendix A, Map 20 |
| 32BKX279 | Archaeological Site Lead: Stone Circles | Not Relocated; Left Unevaluated | Appendix A, Map 22 |
| 32DVX12 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 13 |
| 32DVX32 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated at Site Lead Location; Left Unevaluated | Appendix A, Map 14 |
| 32DVX33 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 14 |
| 32DVX42 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 17 |
| 32DVX43 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 17 |
| 32DVX44 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated at Site Lead Location; Left Unevaluated | Appendix A, Map 16 |
| 32DVX45 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 16 |
| 32DVX46 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 15 &16 |
| 32DVX47 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 15 |
| 32DVX278 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 2 |
| 32DVX279 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 2 |
| 32DVX282 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 2 |
| 32DVX284 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 2 |
| 32DVX285 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 1 |
| 32DVX297 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 1 |
| 32DVX298 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 1 |
| 32DVX398 | Archaeological Site Lead: Cultural Material Scatter | Not Relocated; Left Unevaluated | Appendix A, Map 1 |

**Table 6-2: Newly Documented Resources in the Survey Corridor**

| SITS No. | Site Type | NRHP Evaluation | Map Reference |
|---|---|---|---|
| 32BK388 | Historical Archaeological Site: Trash Dump | Not Eligible | Appendix A, Map 19 |
| 32BK389 | Archaeological Site: 1 Stone Circle | Unevaluated | Appendix A, Map 21 |
| 32BK390 | Architectural Site: Bridge No. 000000007103280 | Not Eligible | Appendix A, Map 21 |
| 32DVX506 | Precontact Isolate: 1 Chalcedony Tool | Not Eligible | Appendix A, Map 1 |
| 32DVX507 | Historical Archaeological Site Lead: Paulson Townsite | Unevaluated | Appendix A, Map 4 |
| 32DV365 | Historical Archaeological Site: 2 Foundations & Artifact Scatter | Not Eligible | Appendix A, Map 8 |
| 32DV366 | Historical Archaeological Site: Foundation and Artifact Scatter | Unevaluated | Appendix A, Map 5 |
| 32DV367 | Archaeological Site: 1 Cairn | Unevaluated | Appendix A, Map 14 |
| 32DV368 | Unknown Site: 2 URPs | Unevaluated | Appendix A, Map 14 |
| 32DV369 | Architectural/Historical Archaeological Site: Granary & Artifact Scatter | Unevaluated | Appendix A, Map 3 |
| 32DV370 | Architectural Site: 2 Granarie & Scatter | Unevaluated | Appendix A, Map 8 |
| 32DV371 | Multicomponent Site: Farmstead & Artifact Scatter | Unevaluated | Appendix A, Map 5 |
| 32DV372 | Architectural/Historical Archaeological Site: Abandoned Farmstead | Unevaluated | Appendix A, Map 15 |
| 32DV373 | Historical Archaeological Site: Trash Dump | Unevaluated | Appendix A, Map 15 |
| 32DV374 | Historical Archaeological Site: Trash Dump | Unevaluated | Appendix A, Map 10 |
| 32DV375 | Archaeological Site: 1 Stone Circle | Unevaluated | Appendix A, Map 15 |
| 32DV376 | Archaeological Site: 6 Stone Circles | Unevaluated | Appendix A, Map 16 |
| 32MN1786 | Historical Archaeological Site: Artifact Scatter | Unevaluated | Appendix A, Map 25 |
| 32MN1787 | Historical Archaeological Site: Trash Dump | Not Eligible | Appendix A, Map 25 |

### 6.2.1 Previously Documented Site Leads

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### 6.2.2 Newly Documented Isolated Find

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### 6.2.3 Newly Documented Site Lead

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### 6.2.4 Newly Documented Sites

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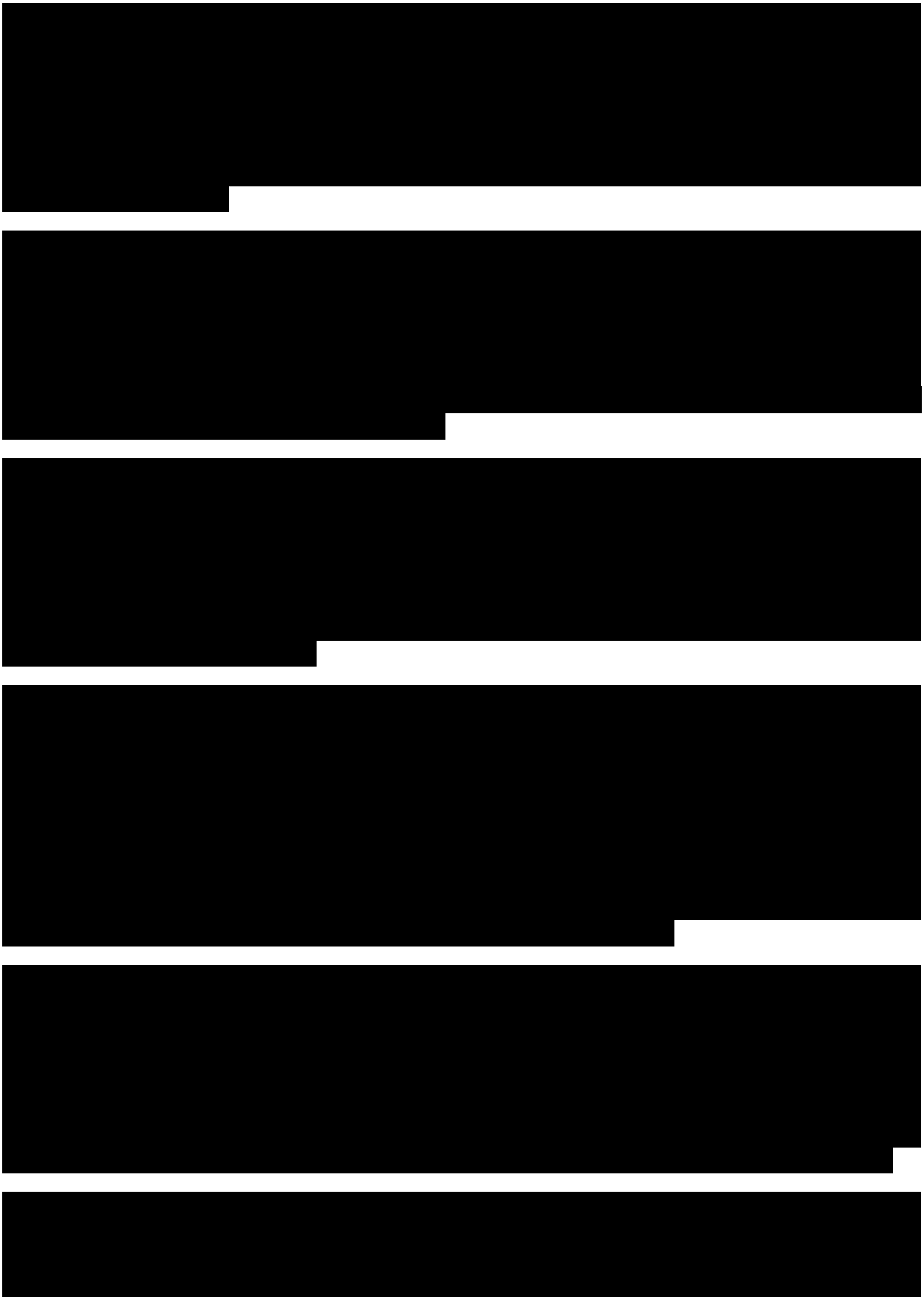

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Further work would be necessary to determine the site's significance and eligibility for the NRHP. Burns &

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# 7.0 Summary and Recommendations

The Class III: Intensive Cultural Resource Inventory resulted in updated documentation of 20 precontact site leads and the recordation of 19 newly documented resources. The newly documented resources include one historical archaeological site lead, one precontact isolated find, four precontact sites, seven historical archaeological sites, two architectural sites, one multicomponent site, two sites with an architectural and historical archaeological component, and one site of unknown cultural affiliation.

A total of 75 STPs were completed in medium to high probability areas of the Survey Corridor with low ground surface visibility or in the vicinity of surface finds.

Avoidance is recommended for 13 of the newly recorded resources. Recommended avoidance buffers for these resources vary and have been determined based on two primary factors: the probability, based on the nature of the resource, the topography, and the extent of STPs in the surrounding area, that the resource retains a subsurface component that extends beyond the identified boundary of the resource; and the predicted likelihood, based on the surrounding topography, that earthmoving near the resource would have the potential to indirectly contribute to damage to the resource through erosion.

## 7.1 No Avoidance - No Further Work Recommended

Burns & McDonnell is not recommending avoidance or further work for all 20 previously documented precontact site leads which were not identified by the current survey. Burns & McDonnell is also not recommending avoidance for one newly documented precontact isolated find, three historical archaeological sites, or for one architectural site, as it was determined through pedestrian survey and STPs that these areas contained low artifact density with little to no potential for intact subsurface deposits. See **Table 7-1** for a list of resources that are not recommended for avoidance.

**Table 7-1: No Avoidance - No Further Work Recommended**

| SITS No. | Site Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32BKX257 | Archaeological Site Lead: Stone Circles | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32BKX264 | Archaeological Site Lead: Stone Circles & Trail | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32BKX279 | Archaeological Site Lead: Stone Circles | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32BK388 | Historical Archaeological Site: Trash Dump | Not Eligible | No further work is recommended. |
| 32BK390 | Architectural Site: Bridge No. 000000007103280 | Not Eligible | No further work is recommended. |
| 32DVX12 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |

| SITS No. | Site Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DVX32 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated | No further work is recommended for the surveyed portion of this site lead in which no cultural resources were identified. (See **Table 7-5** for notes pertaining to site 32DV375.) |
| 32DVX33 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX42 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX43 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX44 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated | No further work is recommended for the surveyed portion of the site lead in which no cultural resources were identified. (See **Table 7-6** for noted pertaining to site 32DV376.) |
| 32DVX45 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX46 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX47 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX278 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX279 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX282 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX284 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX285 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX297 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX298 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX398 | Archaeological Site Lead: Cultural Material Scatter | Unevaluated; Not Located within the Survey Corridor | No further work is recommended. |
| 32DVX506 | Precontact Isolate: 1 Chalcedony Tool | Not Eligible | No further work is recommended. |

| SITS No. | Site Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DV365 | Historical Archaeological Site: 2 Foundations & Artifact Scatter | Not Eligible | No further work is recommended. |
| 32MN1787 | Historical Archaeological Site: Trash Dump | Not Eligible | No further work is recommended. |

## 7.2 Avoidance and Fencing Recommended – No Buffer

Burns & McDonnell is recommending avoidance and protective fencing or staking of the site's boundaries prior to construction for one historical archaeological site, one architectural site, one multicomponent site and two sites with an architectural and historical archaeological component. One newly documented historical archaeological site lead is presently located outside the Project's Physical APE due to Project reroutes. If the Project were to shift back to within 50 ft of this site, Burns & McDonnell is recommending avoidance and protective fencing until further work is completed to document the site. See **Table 7-2** for these resources and their avoidance recommendation.

**Table 7-2: Avoidance and Fencing Recommended - No Buffer**

| SITS No. | Resource Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DVX507 | Historical Archaeological Site Lead: Paulson Townsite | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing if within 50 ft of the Physical APE. |
| 32DV369 | Architectural/Historical Archaeological Site: Granary & Artifact Scatter | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing. |
| 32DV370 | Architectural Site: 2 Granaries and Artifact Scatter | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing. |
| 32DV371 | Multicomponent Site: Farmstead & Artifact Scatter | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing. |
| 32DV372 | Architectural/Historical Archaeological Site: Abandoned Farmstead | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing. |
| 32DV373 | Historical Archaeological Site: Trash Dump | Unevaluated | Avoidance recommended. Clearly mark prior to construction with protective fencing. |

32DV369 is located within the Project's Physical APE; however, impacts to the site will be easily avoided during construction by placing infrastructure outside the site boundary within the ROW. Further, there is approximately 35 ft of remaining Survey Corridor to the south of the site boundary for construction equipment to utilize as an off-ROW access road while driving around the site. 32DV370 is located outside of the Project's ROW. The site is situated on the edge of an off-ROW access road's Survey Corridor. The Physical APE for off ROW access roads for the Project is 30 ft; there is approximately 38 ft of Survey Corridor to the west of the site boundary. Therefore, the off-ROW access road will be designed to keep the Physical APE outside the site boundary. The Project is currently being redesigned to avoid placing infrastructure within 32DV371.

32DV372 is located within the Physical APE; however, impacts to the site will be avoided by redesigning this area of the Project to avoid placing infrastructure within the site boundary within the current ROW. An existing gravel two-track road runs east-west through 32DV372, and although this road will be utilized as an off-ROW access road for the Project, impacts to the site are not expected, as construction equipment's usage will be restricted to the existing gravel path, will avoid the standing structures on site, and will minimize dirt work within the site boundary. 32DV373 is located within the Physical APE; however, impacts to the site will be easily avoided during construction by placing infrastructure outside the site boundary within the current ROW. Further, there is approximately 45 ft of the Physical APE remaining to the north of the site boundary for construction equipment to utilize while driving around the site.

32DVX507 is presently located outside the Physical APE for the Project due to a redesign completed during 2024 survey work.

Due to these factors, the integrity of these sites will not be impacted by Project work. See **Appendix A** for a depiction of these sites in relation to Project's Physical APE. Project design and infrastructure changes are ongoing, and those discussed above will be depicted in the final cultural report for the Project, which will contain updated infrastructure at these locations and updated impact statements.

## 7.3 25 ft Avoidance Buffer - Fencing Recommended

Burns & McDonnell is recommending a 25 ft avoidance buffer and protective fencing or staking of the avoidance buffers prior to construction for four resources, including three historical archaeological sites and one site of unknown cultural affiliation. See **Table 7-3** for these resources and their avoidance recommendation.

**Table 7-3: Resources With 25 ft Avoidance Buffer Recommendation; Fencing Recommended**

| SITS No. | Resource Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DV366 | Historical Archaeological Site: Foundation and Artifact Scatter | Unevaluated | 25 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |
| 32DV368 | Unknown Site: 2 URPs | Unevaluated | 25 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |
| 32DV374 | Historical Archaeological Site: Trash Dump | Unevaluated | 25 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |
| 32MN1786 | Historical Archaeological Site: Trash Dump | Unevaluated | 25 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |

32DV366 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, there is approximately 50 ft of the Physical APE remaining to the west of the avoidance buffer for construction equipment to utilize while driving around the site. 32DV368 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, there is approximately 60 ft of the Physical APE remaining to the east of the avoidance buffer for construction equipment to utilize while driving around the site.

32DV374 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, an off-ROW access road running north of the avoidance buffer will be used to access pole locations west of the site. 32MN1786 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, there is approximately 75 ft of the Physical APE remaining to the south of the avoidance buffer for construction equipment to utilize while driving around the site.

Therefore, the integrity of the sites will not be damaged by Project work. See **Appendix A** for a depiction of these sites and their avoidance buffers in relation to Project's Physical APE. Project design and infrastructure changes are ongoing, and those discussed above will be depicted in the final cultural report for the Project, which will contain updated infrastructure at these locations and updated impact statements.

## 7.4 50 ft Avoidance Buffer - Fencing Recommended

Burns & McDonnell is recommending a 50 ft avoidance buffer and protective fencing or staking of the avoidance buffers prior to construction for two precontact sites. See **Table 7-4** for these resources and their avoidance recommendation.

**Table 7-4: Resources With 50 ft Avoidance Buffer Recommendation; Fencing Recommended**

| SITS No. | Resource Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32BK389 | Archaeological Site: 1 Stone Circle | Unevaluated | 50 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |
| 32DV367 | Archaeological Site: 1 Cairn | Unevaluated | 50 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |

32BK389 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer in the current ROW. Further, an off-ROW access road running east of the site will be utilized to access infrastructure locations south of the site. 32DV367 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, an off-ROW access road running west of the avoidance buffer will be utilized to access infrastructure locations north of the site.

Therefore, the integrity of the sites will not be damaged by Project work. See **Appendix A** for a depiction of these sites and their avoidance buffers in relation to Project's Physical APE. Project design and infrastructure changes are ongoing, and those discussed above will be depicted in the final cultural report for the Project, which will contain updated infrastructure at these locations and updated impact statements.

## 7.5 100 ft Avoidance Buffer - Fencing Recommended

Burns & McDonnell is recommending a 100 ft avoidance buffer and protective fencing or staking of the avoidance buffer prior to construction for one precontact site. See **Table 7-5** for this resource and its avoidance recommendation.

**Table 7-5: Resource With 100 ft Buffer Recommendation; Fencing Recommended**

| SITS No. | Resource Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DV375 | Archaeological Site: 1 Stone Circle | Unevaluated | 100 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |

32DV375 is located within the Project's Physical APE; however, impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW. Further, there is 75 ft of the Physical APE remaining to the east of the avoidance buffer for construction to utilize while driving around the site.

Therefore, the integrity of the site will not be damaged by Project work. See **Appendix A** for a depiction of this site and its avoidance buffer in relation to Project's Physical APE. Project design and infrastructure changes are ongoing, and those discussed above will be depicted in the final cultural report for the Project, which will contain updated infrastructure at these locations and updated impact statements.

## 7.6 150 ft Avoidance Buffer and Fencing Recommended

Burns & McDonnell is recommending a 150 ft avoidance buffer and protective fencing or staking of the avoidance buffer prior to construction for one precontact site. See **Table 7-6** for this resource and its avoidance recommendation.

**Table 7-6: Resource With 150 ft Avoidance Buffer; Fencing Recommended**

| SITS No. | Resource Type | NRHP Recommendation | Management Recommendation |
|---|---|---|---|
| 32DV376 | Archaeological Site: 6 Stone Circles | Unevaluated | 150 ft avoidance buffer. Clearly mark buffer prior to construction with protective fencing. |

32DV376 is located entirely on the southern side of the Project's Physical APE. Its avoidance buffer has been clipped back to the fence line running north-south above the site due to extensive disturbance from field stripping, cultivation, field clearing, and mining that has been documented north of the fence line. Impacts to the site will be avoided during construction by placing infrastructure outside the site's avoidance buffer within the current ROW and containing construction equipment to the portion of the Physical APE to the north of the fence line.

Therefore, the integrity of the site will not be damaged by Project work. See **Appendix A** for a depiction of this site and its avoidance buffer in relation to Project's Physical APE. Project design and infrastructure changes are ongoing, and those discussed above will be depicted in the final cultural report for the Project, which will contain updated infrastructure at these locations and updated impact statements.

## 7.7 Project Summary and Recommendation

If the recommendations above are incorporated into the final Project infrastructure, design, and construction methods, Burns & McDonnell recommends a determination of *No Historic Properties Affected* for the portions of the Project's Physical APE documented herein and mapped. Burns & McDonnell recommends the completion of additional Class III Inventory for the portions of the Project's Physical APE that were not surveyed during the 2024 field season or for any areas of Project redesign which fall outside the Survey Corridor covered in this report.

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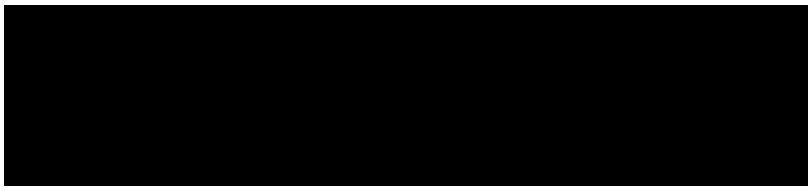
# APPENDIX A – SURVEY RESULTS MAPBOOK




BURNS McDONNELL

# Appendix F

# Unanticipated Discovery Plan for Cultural Resources and Human Remains

# Unanticipated Discovery Plan for Cultural Resources and Human Remains

**Wheelock and Tande to Saskatchewan 230-kV Transmission Lines Project**

**Burke, Divide, Mountrail, and Williams Counties, North Dakota**

October 2025

BASIN ELECTRIC POWER COOPERATIVE

A Touchstone Energy® Cooperative

## Introduction

Although Basin Electric Power Cooperative (Basin Electric) has conducted thorough surveys for cultural resources along the Wheelock and Tande to Saskatchewan 230-kV Transmission Lines Project (Project) routes, the potential exists for exposure of previously unidentified or buried cultural material during excavation and construction of the transmission line as associate facilities. The purpose of this Unanticipated Discovery Plan (UDP) is to document the procedures to be implemented by Basin Electric's construction coordinator and/or contractor if cultural resources, including archaeological sites and possible human remains, are inadvertently discovered during construction. This plan complies with the North Dakota's "Protection of Human Burial Sites, Human Remains, and Burial Goods" law (North Dakota Century Code [NDCC] 23-06-27) and accompanying administrative rules (North Dakota Administrative Code [NDAC] 40-02-03).

## Unanticipated Discovery

In the event that previously unknown cultural (or paleontological) resources are discovered within the Area of Potential Effects (APE) during construction activities for the Project, or should those activities directly or indirectly affect known cultural resources in an unanticipated manner, the following actions, at a minimum, will be initiated by Basin Electric or a representative duly authorized to perform these tasks:

1. All activities will halt in the immediate vicinity of the discovery and all actions will be redirected to areas at least 100 feet from the edge of the discovery.
    a. Basin Electric's construction coordinator and/or contractor will immediately report the discovery to the appropriate parties identified in the Emergency Contact List found later in this document.
    b. Ground disturbing construction activities will not occur within 100 feet in any direction from the cultural resource until the site has been properly assessed as described in paragraph 2 (below) and the State Historical Society of North Dakota (SHSND) concurs that construction may resume.
    c. In the event that a cultural resource specialist or other necessary persons are not immediately available, Basin Electric will require that the discovery be covered or otherwise protected until such time that the cultural resource specialist can be present for inspection and evaluation.

2. Upon arriving at the site of the discovery, the cultural resource specialist will assess the resource. The assessment will include:
    a. The cultural resource specialist, in conjunction with a tribal monitor if appropriate, will ascertain the nature and the extent of the resource, and the potential for intact deposits. Evaluation will involve an examination of the ground surface, backfill piles, and exposed construction surfaces. The cultural resource specialist will discuss the potential for additional impacts to the resource with the construction manager.
    b. Based on this examination, the cultural resource specialist will recommend the unanticipated discovery location is:
        (1) not a site (e.g., isolated find or less than 50 years in age);
        (2) not a historic property, i.e., not eligible for inclusion in the National Register of Historic Places (NRHP);
        (3) a historic property, i.e., eligible for inclusion in NRHP or a culturally sensitive site for which no further impacts are likely to occur;
        (4) an NRHP-eligible or a culturally sensitive site (e.g., exposed hearths, house pits) that is likely to be impacted with further construction; or,
        (5) a site for which additional information is required to ascertain extent and NRHP eligibility.

The cultural resource specialist will provide information and a recommendation regarding the potential resource to SHSND to determine the most appropriate course of action.

## Emergency Stabilization of Cultural Resources

Unstable earth conditions during construction or other unforeseen natural or man-made events could endanger cultural resources discovered during construction of the Project. If cultural resources are in imminent danger of destruction, Basin Electric will apply prudent methods to stabilize landforms around the unanticipated discovery. Once stabilized, the resource shall be assessed as described above, subject to safety concerns.

## Salvage, Curation or Disposition of Cultural Materials

As stated in item 2.b.5 above, additional information may be required for the cultural resource specialist to assess the nature and extent of an unanticipated discovery and to provide a recommendation to SHSND regarding NRHP eligibility. With appropriate concurrence from SHSND, cultural materials may be salvaged for this purpose. This does not include cultural resources that are covered under North Dakota's "Protection of human remains, and burial goods" law (NDCC 23-06-27) and accompanying administrative rules (NDAC 40-02-03). All other cultural materials recovered from privately owned lands are considered the property of the landowner. After necessary laboratory analysis is completed, Basin Electric will provide the landowner with photographs and descriptions of cultural material from his/her property. The landowner will be encouraged to contribute the materials for curation at the SHSND. If the landowner desires, Basin Electric will return cultural materials recovered from his/her land to him/her.

## Unanticipated Discovery of Human Remains

If construction or other Project personnel identify what they believe to be human remains, they will immediately halt construction at that location and Basin Electric and the cultural resource specialist will be notified immediately. The construction coordinator will ensure that further construction does not occur within an area less than 100 feet in any direction from the edge of the discovery until a cultural resource specialist, in conjunction with Basin Electric environmental personnel, arrive to assess the discovery. The inspector will also secure the area of the apparent human remains to ensure no further disturbance or removal of those remains and associated material.

After arrival at the site, the cultural resource specialist will evaluate the discovery to determine if it does in fact consist of human remains. As required by law, Basin Electric will notify the appropriate county Sheriff within 24 hours of the discovery. Basin Electric will also notify the SHSND of the finding.

Basin Electric and/or the contractor will secure the location by means of flagging or roping the perimeter of the avoidance area and covering or otherwise protecting the human remains and any associated materials. The remains will not be further disturbed prior to completion of consultations with respective agencies unless such disturbance is necessary to preserve or protect the human remains. Any disturbance necessary to preserve or protect the remains must be done in consultation with law enforcement, SHSND, and the cultural resource specialist. The 100-foot-radius avoidance area may be expanded if the context of the human remains suggests additional human remains may be present within the construction area or if construction activities outside the 100-foot-radius area might destabilize or otherwise degrade the context of the human remains.

Law enforcement will determine whether the finding is associated with a crime scene within 15 days. If deemed not a crime scene, law enforcement will notify the SHSND of their findings. No cultural resource investigations of human remains can occur without a permit from SHSND. The cultural resource specialist will work with SHSND to obtain a permit to conduct investigations of the location. If the remains are determined to be Native American, or if the ethnic identity of the remains is unknown, SHSND will notify the Intertribal Re-interment Committee. A meeting of interested parties will be set up as soon as possible, preferably within 36 hours of the decision that there is no evidence of a crime, to ensure that the disturbed remains receive the maximum protection. SHSND, in consultation with the tribes (as appropriate) and Basin Electric, will agree upon a suitable action.

Work cannot proceed until the stipulations of Protection of Human Burial Sites, Human Remains and Burial Goods in NDCC Section 23-06-27 and Protection of Prehistoric Sites and Deposits in NDAC Section 40-02-03 have been met.

## Emergency Contact List

| Entity | Name | Role | Telephone Number |
|---|---|---|---|
| Basin Electric Power Cooperative | Ryan King | Environmental Coordinator | 701.426.9469 |
| Basin Electric Power Cooperative | Bobby Nasset | Project Manager | 701.223.0441 |
| Burns & McDonnel Engineering Company, Inc. | Melinda McCarthy | Cultural Resource Specialist | 573.225.6751 |
| Burke County Sheriff | Nicolas Throntveit | County Sheriff | 701.377.2311 |
| Burke County Coroner | Nicolas Throntveit | County Coroner | 701.377.2311 |
| Divide County Sheriff | Zach Schroeder | County Sheriff | 701.965.6461 |
| Divide County Coroner | Zach Schroeder | County Coroner | 701.965.6461 |
| Mountrail County Sheriff | Corey Bristol | County Sheriff | 701.628.2975 |
| Mountrail County Coroner | Corey Bristol | County Coroner | 701.628.2975 |
| Williams County Sheriff | Verlan Kvande | County Sheriff | 701.577.7700 |
| Williams County Coroner | Kurt Baade | County Coroner | 907.330.7777 |
| State Historical Society of North Dakota | Andrew Clark | Chief Archaeologist | 701.328.3574 |

# Appendix G

# Natural Resources Inventory Report

# Tande to Saskatchewan 230-kV Transmission Project
## *Divide, Burke, and Mountrail Counties, North Dakota*

### *Natural Resources Inventory Report*



**Prepared for:**

**Basin Electric Power Cooperative**

1717 East Interstate Avenue
Bismarck, North Dakota 58503

**Prepared by:**

Western EcoSystems Technology, Inc.
4007 State Street, Suite 109
Bismarck, North Dakota 58503
Phone: (307) 772-1083
**September 29, 2025**

Confidential Business Information

## STUDY PARTICIPANTS

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| Erica Matykiewicz | Associate Biologist |
| Nick Hill | Associate Biologist |

## REPORT REFERENCE

Tucker, C., E. Matykiewicz, and N. Hill. 2025. Tande to Saskatchewan Power Wes 230-kV Transmission Project, Divide, Burke, and Mountrail Counties, North Dakota: Natural Resources Inventory Report. Prepared by Western EcoSystems Technology, Inc. (WEST), Bismarck, North Dakota. September 29, 2025.

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# ACRONYMS AND ABBREVIATIONS

| Acronym | Definition |
|---|---|
| ac | acre |
| BEPC | Basin Electric Power Cooperative |
| DASK | Dakota Skipper |
| DBH | diameter at breast height |
| ESA | Endangered Species Act |
| Final Rule | *Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-Eared Bats; Final Rule* |
| ft | foot |
| IPaC | Information for Planning and Consultation |
| kV | kilovolt |
| m | meter |
| mi | mile |
| N | north |
| NLEB | Northern long-eared bat |
| NRCS | Natural Resources Conservation Service |
| NWI | National Wetlands Inventory |
| PAB | Palustrine aquatic bed |
| PEM | Palustrine emergent |
| PEMA | Palustrine emergent temporarily flooded |
| PEMC | Palustrine emergent seasonally flooded |
| PLSS | Public Land Survey System |
| Project | Tande to Saskatchewan 230-kilovolt (kV) Transmission Project |
| R | Range |
| Route of Focus | Centerline of the route selected to pursue permitting |
| ROW | Right-of-way |
| ROW Access Route Survey Area | 71.08 acres |
| Sec. | Section |
| Survey Area | Survey Corridor and ROW Access Route Survey Area combined (2,191.64 acres) |
| Survey Corridor | 300-ft corridor centered on Focus Route (2,120.56 acres) |
| T | Township |
| USACE | US Army Corps of Engineers |
| USEPA | US Environmental Protection Agency |
| USFWS | US Fish and Wildlife Service |
| USGS | US Geological Survey |
| W | west |
| WEST | Western EcoSystems Technology, Inc. |
| WMD | Wetland Management District |
| WNS | White-nose syndrome |

# 1.0 INTRODUCTION

Basin Electric Power Cooperative (BEPC) proposes to construct and operate the Tande to Saskatchewan 230-kilovolt (kV) Transmission 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, an aerial eagle nest survey, a noxious weed inventory, a tree and shrub inventory, and a review of U.S Fish and Wildlife Service (USFWS) Easements associated with the Project. The proposed Project is located within Divide, Burke, and Mountrail Counties, North Dakota. The Project would begin at BEPC's Tande Substation, located 4.20 miles (mi) east of the town of Tioga, and would extend north to the Canadian border (Figure 1). The Project would be approximately 58.32 mi. Table 1 identifies the Public Land Survey System Sections within which the Project is located.

**Table 1. Legal descriptions of the Route of Focus.**

| Section | Township | Range |
|---|---|---|
| 5, 8, 17, 20, 29 | 157 | 94 |
| 5, 8, 17, 19, 20, 30, 31, 32 | 158 | 94 |
| 6, 7, 18, 19, 30, 31, 32 | 159 | 94 |
| 30, 31 | 160 | 94 |
| 6, 7, 18, 19, 25, 26, 27, 28, 29, 30 | 160 | 95 |
| 19, 20, 21, 28, 33 | 161 | 95 |
| 2, 11, 14, 23, 24 | 161 | 96 |
| 2, 11, 14, 23, 26, 35 | 162 | 96 |
| 1 | 163 | 97 |
| 5, 6, 8, 17, 20, 26, 27, 28, 29, 35 | 163 | 96 |
| 25, 36 | 164 | 97 |

BEPC considered multiple route alignments to minimize impacts to cultural and natural resources. The natural resources discussed in this report are those associated with the Route of Focus. The Route of Focus is the centerline of the route BEPC has selected to pursue permitting. The Survey Corridor is 300 feet (ft) centered on the Route of Focus and contains 2,120.56 acres (ac). Additionally, 110 potential access routes, with a combined length of 23.89 mi, were accessed. A 30-ft wide corridor was surveyed for the access routes. Collectively, the surveyed features will be referred to as the Project Survey Area with a total of 2,191.64 ac.

The pedestrian field surveys began on September 29, 2023 and were completed on September 3, 2025.

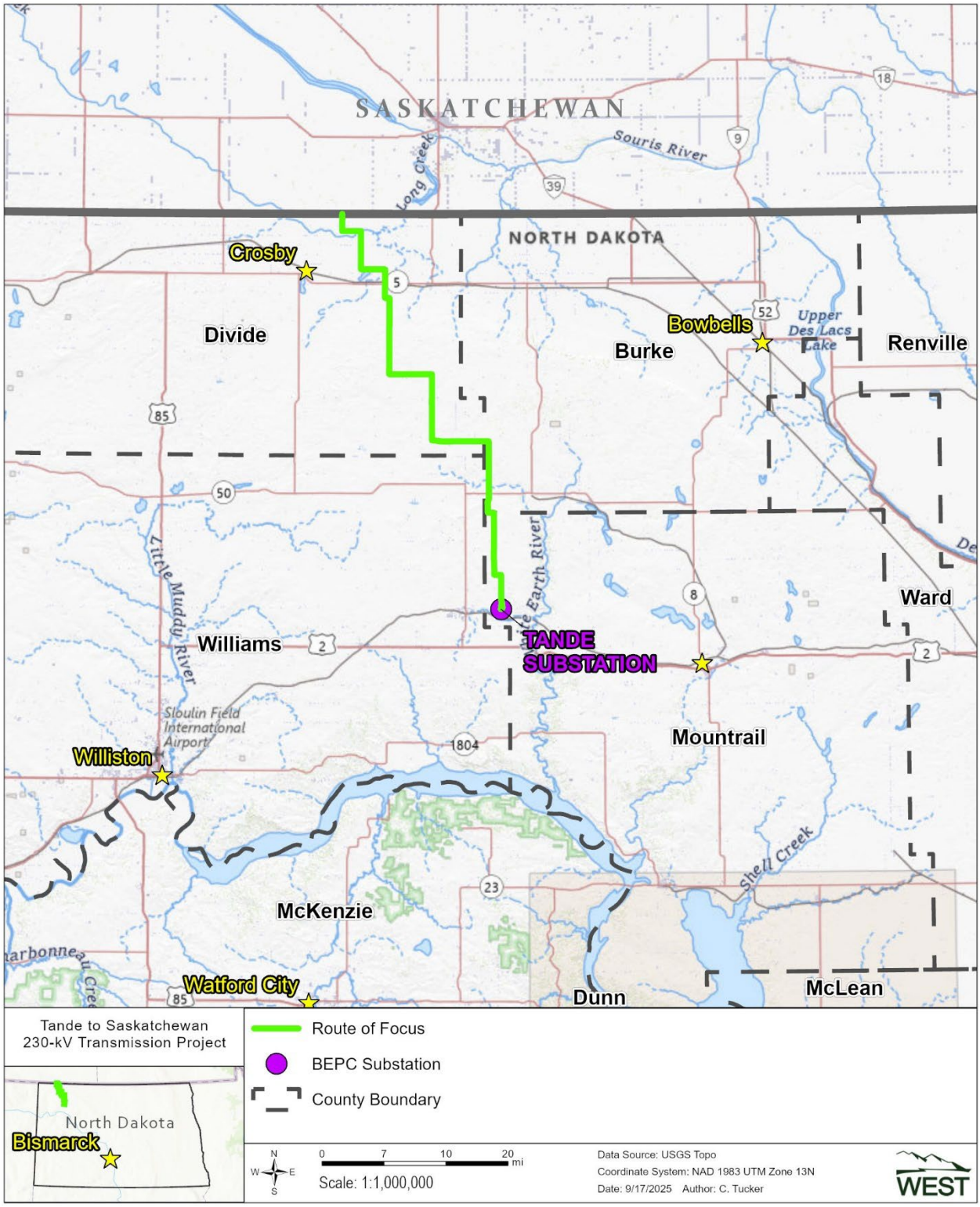


**Figure 1. Location of the proposed Tande to Saskatchewan 230-kV Transmission Project.**

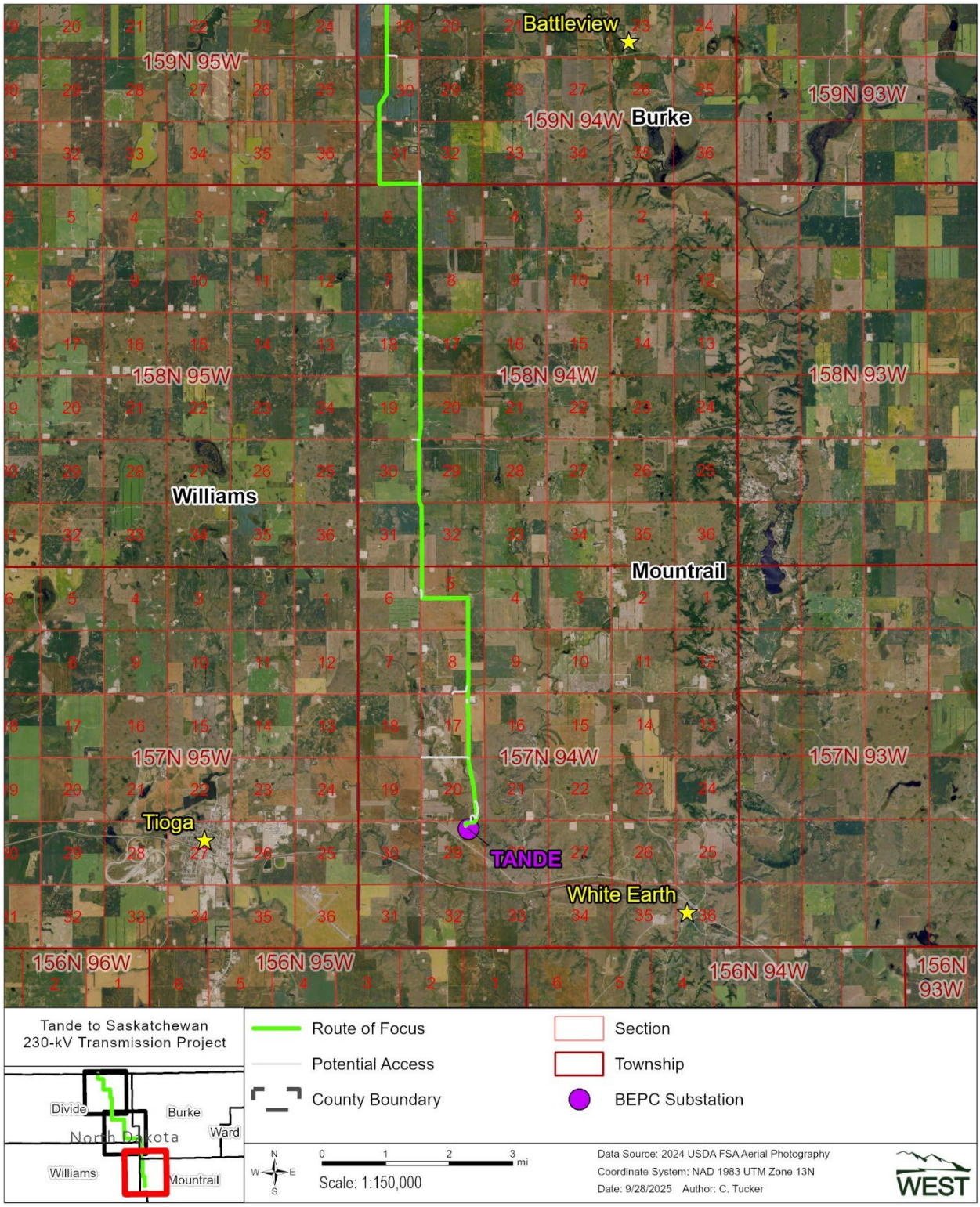


**Figure 2. Detailed view of the proposed Tande to Saskatchewan 230-kV Transmission Project**

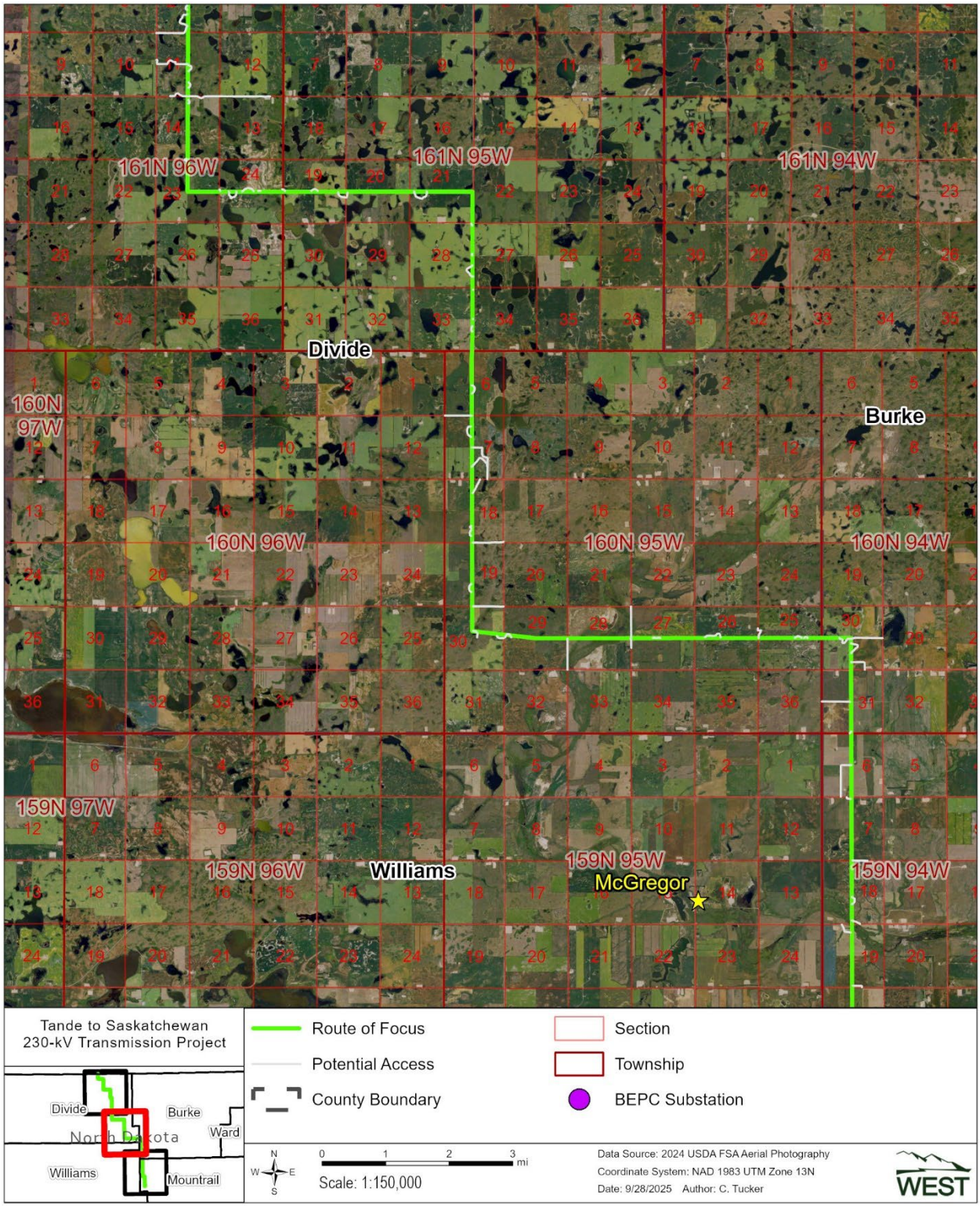


**Figure 2 (continued). Detailed view of the proposed Saskatchewan 230-kV Transmission Project**

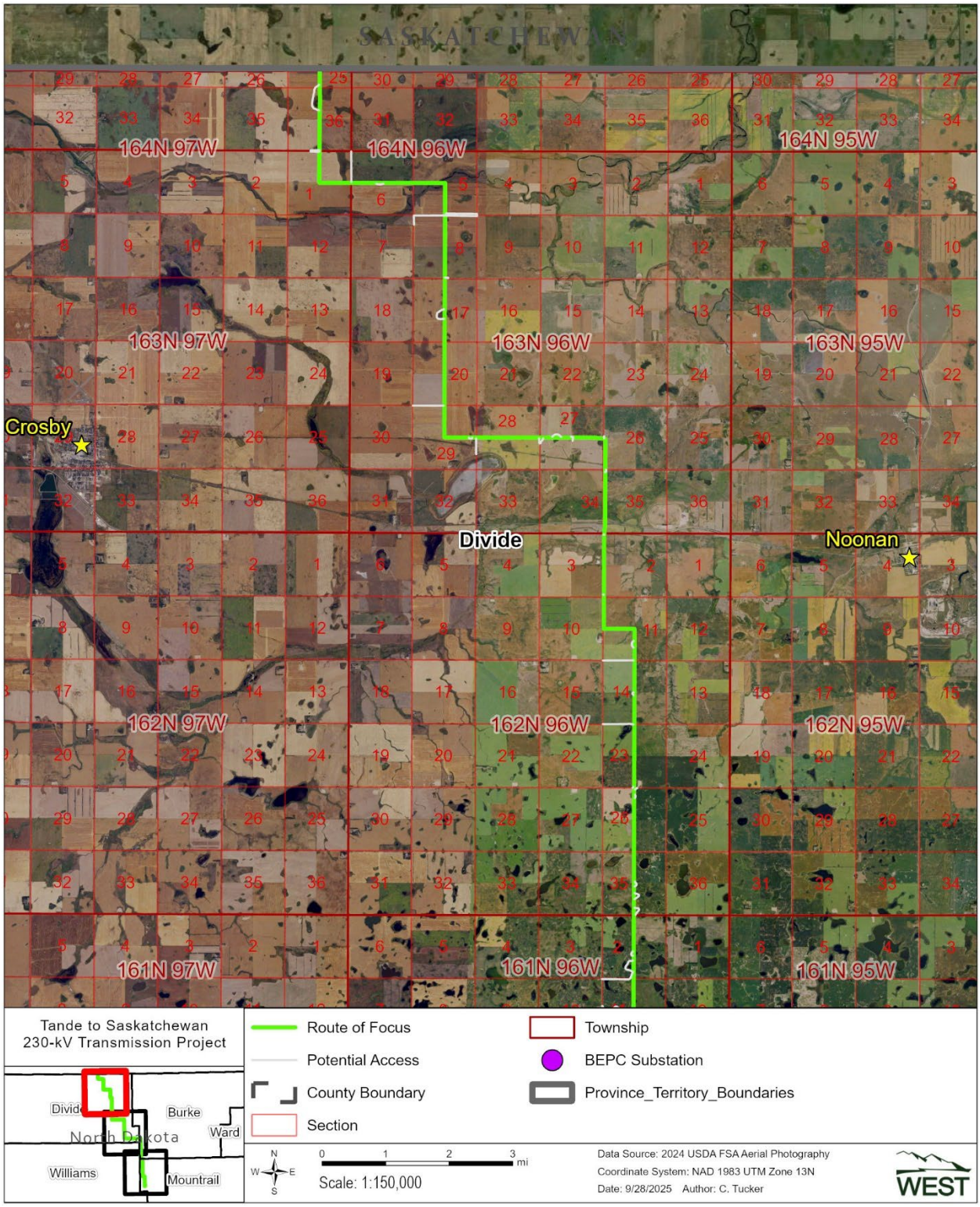


**Figure 2 (continued). Detailed view of the proposed Saskatchewan 230-kV Transmission Project**

# 2.0 PROCEDURES

## 2.1 Wetland and Waterbody Field Determination

Wetland identification was based on the presence of hydrophytic vegetation and landscape hydrology and/or topographic position. Wetland boundary mapping utilized US Army Corps of Engineers (USACE) guidance from the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains (Version 2.0; USACE 2010). Waterbody boundaries were recorded utilizing the criteria and definitions provided by the USACE National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams – Final Version (USACE 2025) and revised definition of "Waters of the United States" (USEPA 2023). 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 vegetation within the area surveyed was characterized using the hydrophytic criteria outlined in the National Wetland Plant List (USACE 2022).

The following resources were reviewed prior to the wetland field determination to aid in identifying potential wetlands within the Survey Corridor:

- National Agriculture Imagery Program (NAIP) aerial photographs (USDA 2024).
- US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI; USFWS NWI 2021).
- USGS National Hydrography Dataset (USGS 2023).
- US Department of Agriculture Natural Resources Conservation Service (USDA NRCS) digital Web Soil Survey (USDA NRCS 2024).

## 2.2 Federally Listed Wildlife Species Evaluation

The USFWS Information for Planning Consultation (IPaC) site was used to identify federally listed species within the Survey Corridor (USFWS 2025b). The review also included the USFWS designated critical habitat for threatened and endangered species geospatial data (2023a), along with known range, reported occurrences, and habitat needs for each species. Table 2 identifies the federally listed species with the potential for occurrence within the Survey Corridor.

**Table 2. Federally listed threatened and endangered species.**

| Common Name | Scientific Name | Status |
|---|---|---|
| Northern long-eared bat | *Myotis septentrionalis* | Endangered |
| Whooping crane | *Grus americana* | Endangered |
| Dakota skipper | *Hesperia dacotae* | Threatened, Critical Habitat Designated |
| Piping plover | *Charadrius melodus* | Threatened, Critical Habitat Designated |
| Red knot (rufa) | *Calidris canutus rufa* | Threatened |
| Monarch butterfly | *Danaus plexippus* | Proposed Threatened |
| Western Regal Fritillary | *Argynnis idalia occidentalis* | Proposed Threatened |
| Suckley's Cuckoo Bumble Bee | *Bombus suckleyi* | Proposed Endangered |

Source: US Fish and Wildlife Service 2025b

Field evaluations were conducted from September 29, 2023, to September 3, 2025, to confirm the presence or absence of potentially suitable habitat for federally listed species within the Project Survey Area. Background data was collected for preliminary review and to aid in the field inventory of biological resources. Minimization efforts for threatened or endangered species are discussed in Section 3.3.

## 2.3 Nesting Raptor Survey

An aerial survey for nesting raptors was conducted for the Project on May 9, 2024. A helicopter with a pilot and two observers was utilized to survey out to one mi on both sides of the Route of Focus. No additional aerial surveys for raptor nests will be conducted for the Project. If construction starts between May 1 and July 15, a pedestrian pre-construction migratory bird nest survey will be performed. A ½-mile line-of-sight raptor nest survey will be performed in conjunction with the migratory bird nest survey.

## 2.4 Noxious Weed Inventory

North Dakota has 13 state-listed noxious weed species. The Burke County Weed Control District lists two additional species and Mountrail County Weed Control District list one additional species as invasive (North Dakota Department of Agriculture 2024). Table 3 provides a list of noxious and/or invasive weed species listed for the Project.

**Table 3. North Dakota State and Project County listed noxious and invasive weeds.**

| North Dakota State Listed Noxious Weeds | | Project County Invasive Weeds | |
|---|---|---|---|
| **Common Name** | **Scientific Name** | **Common Name** | **Scientific Name** |
| Absinth wormwood | *Artemisia absinthium* | **Burke County** | |
| Canada thistle | *Cirsium arvense* | Common tansy | *Tanacetum vulgare* |
| Dalmatian toadflax | *Linaria genistifolia* | Common burdock | *Arctium minus* |
| Diffuse knapweed | *Centaurea diffusa* | **Mountrail County** | |
| Houndstongue | *Cynoglossum officinale* | Common tansy | *Tanacetum vulgare* |
| Leafy spurge | *Euphorbia esula* | | |
| Musk thistle | *Carduus nutans* | | |
| Palmer amaranth | *Amaranthus palmeri* | | |
| Purple loosestrife | *Lythrum salicaria* | | |
| Russian knapweed | *Acroptilon repens* | | |
| Saltcedar | *Tamarix chinensis* | | |
| Spotted knapweed | *Centaurea maculosa* | | |
| Yellow toadflax | *Linaria vulgaris* | | |

## 2.5 Tree and Shrub Inventory

BEPC will identify trees that will need to be removed to comply with the National Electric Reliability Council. WEST will inventory the identified trees, to species and count, and compile the data into a report that will be submitted to the North Dakota Public Service Commission.

## 2.6 U.S. Fish and Wildlife Service Conservation Easements.

The Survey Corridor was reviewed for USFWS Easement tracts. The desktop review used the USFWS National Realty Tracts database in comparison to the Survey Corridor to determine if Easements would be impacted.

# 3.0 RESULTS

## 3.1 Wetlands

A pre-survey review of the USFWS NWI database identified 140 palustrine emergent wetland (PEM) signatures, 40 prior farmed (Pf) signatures, and one forested/shrub wetland within the Survey Corridor (USFWS NWI 2024a). The field survey identified 242 palustrine emergent wetlands, covering 178.01 ac within the Survey Corridor. The field survey determined that 33 of the NWI signatures within the Survey Corridor were found to not exhibit wetland or waterbody hydrology or contain hydric vegetation. Upland points were recorded at these sites to document that the features had been surveyed and lacked wetland or waterbody characteristics.

A pre-survey review of the USFWS NWI database identified 19 PEM wetland signatures within the potential access road survey corridors (USFWS NWI 2024a). The field survey identified 19 PEM wetlands, covering 2.21 ac within the potential access road survey corridors. The field survey determined that 22 of the NWI signatures within the access road survey corridors were found to not exhibit wetland hydrology or contain hydric vegetation. Upland points were recorded at these sites to document that the features had been surveyed and lacked wetland characteristics.

The wetland features and upland points are depicted in Appendix A - Natural Resource Inventory Figures. Attributes for the wetland are listed in Appendix B - Wetland Attributes. Attributes for the upland points are listed in Appendix C - Upland Points. Photographs are included in Appendix D - Project Field Photographs.

BEPC has committed to avoiding impacts to aquatic resources. The Project has been designed to place structures outside of aquatic features and route access roads around features. By avoiding impacts to aquatic resources, BEPC does not anticipate the need for a Clean Water Act Section 404 Permit.

## 3.2 Waterbodies

The pre-survey review of the USFWS NWI database indicated 57 signatures classified as riverine, freshwater pond, or lake within the Survey Corridor. This includes 17 R4 (intermittent) riverine signatures, 40 freshwater ponds signatures and one lake signature.

The field survey identified 9 waterbodies, totaling 4.86 ac within the Survey Corridor. Of the nine waterbodies, two are classified as perennial streams, five are classified as Intermittent, and two are classified as excavated ponds. The field survey determined the remaining NWI signatures within the Survey Corridor were found to not exhibit wetland or waterbody hydrology or contain hydric vegetation. Upland points were recorded at these sites to document that the features had been surveyed and lacked wetland or waterbody characteristics.

The potential access road survey corridors include five freshwater pond NWI signatures and four NWI riverine signatures. The field survey identified one waterbody, totaling 0.01 ac within the potential access road survey corridors. The field survey determined that the remaining NWI signatures within the access road survey corridors were found to not exhibit wetland or waterbody hydrology or contain hydric vegetation. Upland points were recorded at these sites to document that the features had been surveyed and lacked wetland or waterbody characteristics.

The waterbody features are depicted in Appendix A - Natural Resource Inventory Figures. Attributes for the waterbodies are listed in Appendix E - Waterbody Attributes. Attributes for the upland points are listed in Appendix C - Upland Points. Photographs are included in Appendix D - Project Field Photographs

## 3.3 Threatened and Endangered Species Habitat Assessment

Threatened and endangered species that have been documented and/or that have the potential to occur within the Survey Corridor are listed in Table 2 along with designated critical habitat (USFWS 2025a, 2023a). A review of USFWS species information datasets and habitat data gathered from the field surveys was conducted. 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. Numerous treed areas (more than three inches [in.] diameter at breast height [DBH]) with the potential to provide summer roosting habitat for the northern long-eared bat were documented and suitable habitat for the Dakota skipper was documented in seven locations.

### *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 (NLEB) is approximately 150 ac, including a summer and winter habitat. In the summer, NLEB roost under bark or in crevices of trees, preferring to roost in tall trees with greater than three inches (in.; eight centimeters [cm]) DBH, and under the exfoliating bark of dead or dying trees. In the winter, NLEB hibernate in caves and mines. The NLEB prefers foraging in edge habitats and forests comprising trees with a diversity of life stages (USFWS 2014a).

Occurrences of the NLEB are uncertain in North Dakota, although two NLEB were documented during the 2024 North Dakota Bat Survey in McKenzie County (Edens, etal., 2025). White-nose syndrome (WNS) currently remains the predominant threat to the NLEB. North Dakota is included in the current extent of WNS zone per the Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-Eared Bat; Final Rule (Final Rule; 88 Federal Register [FR] 4908 [January 26, 2023]; USFWS 2023b). With the Final Rule reclassifying the NLEB 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 April 14 when bats have either migrated or are hibernating in underground caves.

There are no known winter hibernacula in Burke, Divide, or Mountrail, Counties (NDGFD 2023). The USFWS has developed a NLEB Known Range shapefile (USFWS 2025c) that is found on the IPaC website. Approximately 10.5 miles the Project are within the NLEB Known Range (Figures 4). The remainder of the Project is outside of the NLEB Known Range.

Tree habitat is sparse within the Project Survey Area with the majority of the trees present being planted trees rows of either Siberian elm (*Ulmus pumila*) or Russian olive (*Elaeagnus angustifolia*). A desktop review, using 2024 National Agriculture Imagery Program (U.S. Department of Agriculture Farm Production and Conservation Business Center 2024) imagery of the Survey Area, determined that 21 patches, totaling 14.60 ac of potential treed habitat are located within the Survey Area. Table 4 lists the attributes of the habitat polygons. Maps depicting the results of the analysis are in Appendix A - Natural Resource Inventory Figures.

There are 1.3 acres of treed habitat within the portion of the Survey Area that lies within the USFWS current range. This habitat consists of nine planted, deciduous tree rows and two single, natural growth

deciduous trees. BEPC has committed to removing trees outside of the active period for the NLEB. If tree removal in the active period cannot be avoided, BEPC will consult with the USFWS.

**Table 4. NLEB Habitat within the Survey Corridor**

| Name | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|
| NLEB 182 | Sec 6-T163N-R96W | 48.974132 | -103.191749 | 1.17 |
| NLEB 183 | Sec 8-T163N-R96W | 48.953834 | -103.169476 | 0.61 |
| NLEB 184 | Sec 3-T162N-R96W | 48.89367 | -103.114837 | 0.03 |
| NLEB 185 | Sec 19-T160N-R95W | 48.666417 | -103.005992 | 1.75 |
| NLEB 186 | Sec 30-T160N-R95W | 48.655093 | -102.995957 | <0.01 |
| NLEB 187 | Sec 28-T160N-R95W | 48.655133 | -102.968305 | 1.88 |
| NLEB 188 | Sec 30-T160N-R94W | 48.653605 | -102.875708 | 0.37 |
| NLEB 189 | Sec 30-T160N-R94W | 48.650051 | -102.875664 | 1.36 |
| NLEB 190 | Sec 31-T160N-R94W | 48.644165 | -102.875669 | 1.68 |
| NLEB 191 | Sec 19-T159N-R94W | 48.581449 | -102.875361 | 0.12 |
| NLEB 192 | Sec 30-T159N-R94W | 48.573243 | -102.875565 | 1.20 |
| NLEB 193 | Sec 30-T159N-R94W | 48.569818 | -102.875589 | 0.43 |
| NLEB 194 | Sec 30-T159N-R94W | 48.568429 | -102.875606 | 0.08 |
| NLEB 195 | Sec 30-T159N-R94W | 48.568115 | -102.875654 | 0.04 |
| NLEB 196 | Sec 30-T159N-R94W | 48.567143 | -102.875455 | 0.46 |
| NLEB 197 | Sec 17-T158N-R94W | 48.507717 | -102.863975 | 0.21 |
| NLEB 198 | Sec 32-T158N-R94W | 48.469243 | -102.864122 | 0.36 |
| NLEB 199 | Sec 32-T158N-R94W | 48.466481 | -102.86416 | 0.38 |
| NLEB 200 | Sec 8-T157N-R94W | 48.442802 | -102.84835 | 0.13 |
| NLEB 479 | Sec 31-T159N-R94W | 48.550932 | -102.878127 | 0.18 |
| NLEB 480 | Sec 30-T159N-R94W | 48.563097 | -102.87814 | 2.16 |
| NLEB 182 | Sec 6-T163N-R96W | 48.974132 | -103.191749 | 1.17 |
| NLEB 183 | Sec 8-T163N-R96W | 48.953834 | -103.169476 | 0.61 |
| NLEB 184 | Sec 3-T162N-R96W | 48.89367 | -103.114837 | 0.03 |
| NLEB 185 | Sec 19-T160N-R95W | 48.666417 | -103.005992 | 1.75 |
| NLEB 186 | Sec 30-T160N-R95W | 48.655093 | -102.995957 | <0.01 |
| NLEB 187 | Sec 28-T160N-R95W | 48.655133 | -102.968305 | 1.88 |
| NLEB 188 | Sec 30-T160N-R94W | 48.653605 | -102.875708 | 0.37 |
| NLEB 189 | Sec 30-T160N-R94W | 48.650051 | -102.875664 | 1.36 |
| NLEB 190 | Sec 31-T160N-R94W | 48.644165 | -102.875669 | 1.68 |
| NLEB 191 | Sec 19-T159N-R94W | 48.581449 | -102.875361 | 0.12 |
| | | | **Total** | **14.60** |

N = north, R = Range, Sec. = Section, T = Township, W = west.

### *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 (USFWS 2023c).

The whooping crane is federally listed and has the potential to occur in all counties of North Dakota. The Project is located within the portion of the migration corridor where 50% of whooping cranes travel; the 60-mi corridor with the highest concentration of whooping cranes during spring and fall migration.

Land use within the Project is a mixture of cropland and rangeland, and oil/gas development. The USFWS Database (USFWS 2025a) shows the Project Counties (Divide, Burke, and Mountrail) have 235 verified whooping crane sightings. The closest confirmed sighting to the Project was of three adult cranes in 2000, 0.02 mi south of the Project in Sec. 28, T163N, R96W. The sighting locations are depicted on Figure 4.

The Project was analyzed using the model developed by the US Geological Survey (USGS) Northern Prairie Wildlife Research Center and the USFWS Habitat and Population Evaluation Team (HAPET). The Model predicts that 80% of the Project's Survey Corridor (1697.76 ac) is within the 1st probability decile and 17% (367.56 ac) is within the 2nd probability decile. This is on a 1-10 scale where one is the lowest probability of use and 10 is the highest probability of use by whooping cranes. (Niemuth et al., 2018). The Model also predicts the relative probability of use of whooping cranes; the results of this analysis are displayed in Figure 3.

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 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. Flight diverters will be installed, and maintained in working order, on the transmission line to minimize bird strikes. BEPC is currently working with the USFWS to develop a beneficial mitigation strategy for the whooping crane. BEPC's Avian and Bat Protection Plan is in Appendix F - Basin Electric Power Cooperative 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 (DASK) have been associated with relatively low, wet, prairie-dominated, high-quality, tall grass prairie habitat (Type A habitat). Researchers have found that DASK 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 DASK (Dana 1991). The nearest USFWS designated critical habitat for the DASK is located 21.5 mi south of the Project (Figure 4). The species is known to occur in all Project Counties, and a portion of the Project is within the USFWS's known range of the DASK (USFWS 2025).

A desktop assessment of habitat within the Survey Corridor was used to divide habitat into one of two basic DASK habitat groups: grassland habitat and unsuitable habitat. The assessment identified 452.31 ac (21%) of grassland habitat (includes broken and unbroken grasslands) and 1,668.25 ac (79%) of unsuitable habitat. The field survey was conducted within the identified grassland habitat to determine if suitable habitat was present. Suitable DASK 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 (USFWS 2023d).

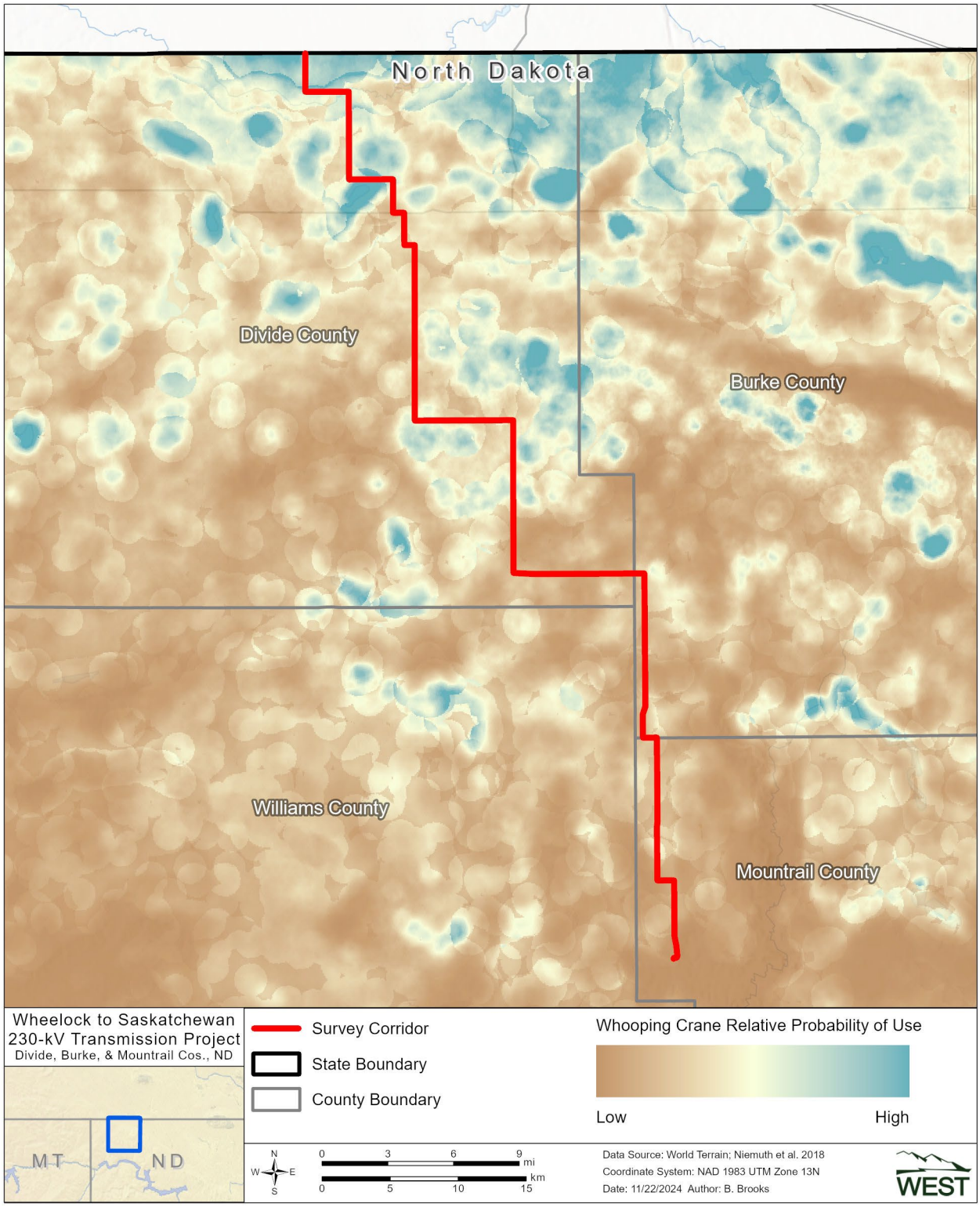


**Figure 3. USGS / HAPET Model of Whooping Crane Relative Probability of Use.**

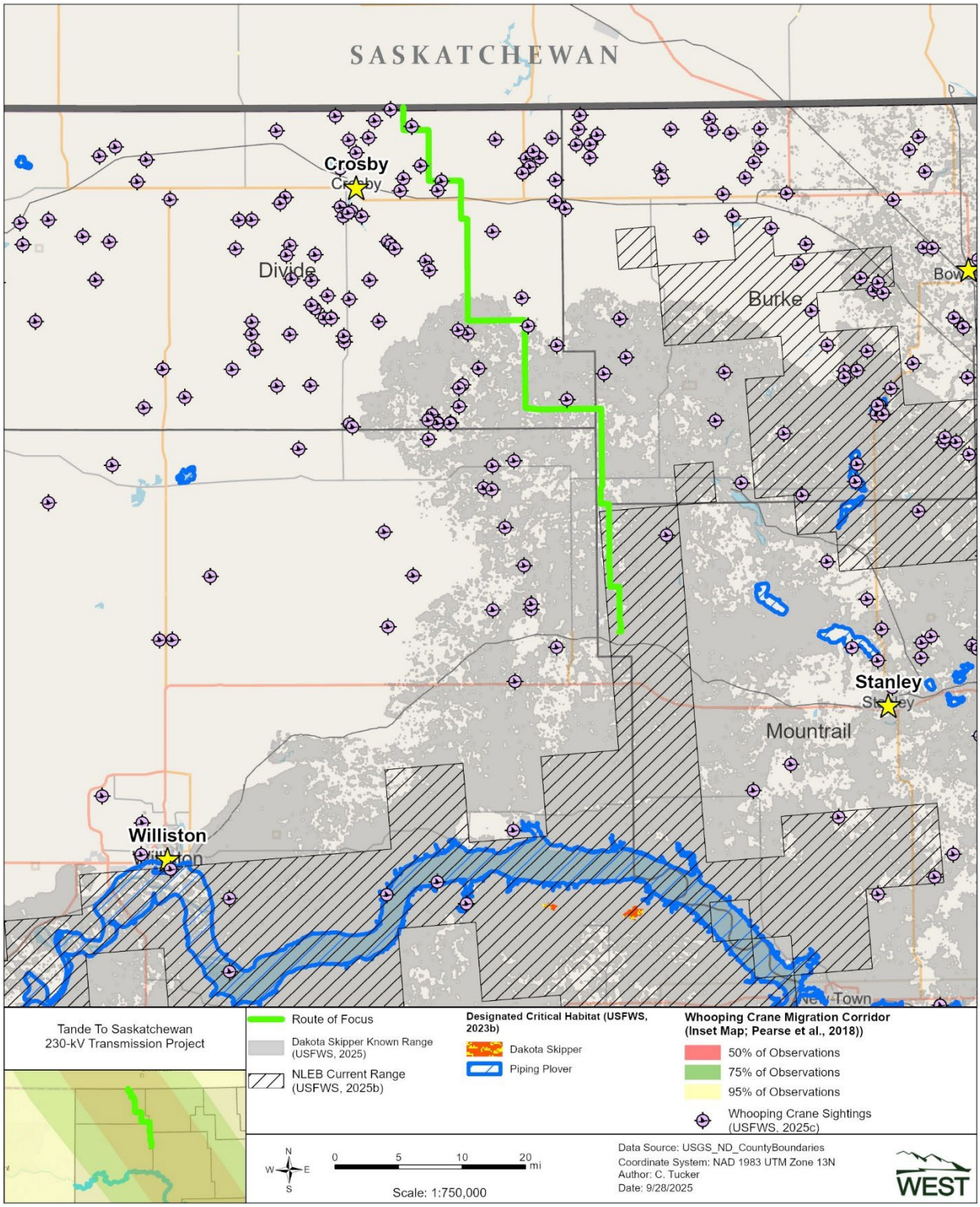


**Figure 4. Known sightings, species range, and designated critical habitats in relation to the proposed Tande to Saskatchewan 230-kV Transmission Project.**

The field survey recorded seven locations of suitable DASK habitat, totaling 0.18 ac less than 1% of the area within the Survey Corridor. Table 5 contains the attributes for the suitable habitat identified and Appendix A - Natural Resource Inventory Figures.

**Table 5. Areas of suitable habitat for the Dakota skipper (DASK) within the Survey Corridor.**

| Name | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|
| DASK 137 | Sec 18-T159N-R94W | 48.595308 | -102.87568 | 0.05 |
| DASK 138 | Sec 18-T159N-R94W | 48.594805 | -102.875648 | 0.02 |
| DASK 139 | Sec 18-T159N-R94W | 48.594703 | -102.875679 | 0.01 |
| DASK 140 | Sec 18-T159N-R94W | 48.594624 | -102.875469 | 0.03 |
| DASK 141 | Sec 18-T159N-R94W | 48.594392 | -102.875685 | 0.03 |
| DASK 142 | Sec 18-T159N-R94W | 48.593923 | -102.875435 | 0.03 |
| DASK 143 | Sec 18-T159N-R94W | 48.593672 | -102.874988 | 0.01 |
| | | | **Total** | **0.18** |

N = north, R = Range, Sec. = Section, T = Township, W = west.

BEPC has designed the Project to minimize impacts to suitable habitat for the DASK. This includes routing access trails around potential habitat and placing pole structures outside of potential habitat. Identified DASK habitat will be avoided during all construction activities. A ½ mi buffer around identified DASK habitat has been established and native grassland habitat within the ½ mi buffer will be disturbed at the minimum level practical. To minimize the impacts to foraging or dispersing adult DASK, a 500-meter (m) avoidance buffer will be established around identified DASK habitat locations. Existing surfaced roads within the 500-m buffers may be used for travel, but construction within the 500-m buffers will not occur during the flight window. In addition, dust abatement may be necessary on gravel surfaced roads during the flight window. The period is typically 14 days long between the dates of Jun 10 – July 25 and dates may be adjusted based on annual observations by the USFWS.

### *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 of 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. The nearest critical habitat, Cottonwood Lake, is located 10.70 miles east of the Project. The field survey documented that the Survey Corridor is predominantly cropland and contains wetlands and waterbodies that are well vegetated and are unlikely to provide bare ground suitable for nesting habitat. Prior to construction, during the period of concern (April 15 to August 15), a migratory bird and nest survey will be completed along the entire Project Route. Wetlands and waterbodies within the Project Corridor and within view from the Project Corridor will be surveyed. If piping plovers are spotted

in or around the Project Corridor, a ½-mile buffer will be placed on that wetland or waterbody, and no construction would occur until any chicks have fledged. In addition, flight diverters will be installed, and maintained in working order, on the transmission line to minimize bird strikes. BEPC's Avian and Bat Protection Plan is in Appendix F - Basin Electric Power Cooperative Avian and Bat Protection Plan.

### *3.3.5 Rufa Red Knot*

The red knot (*Calidris canutus rufa*) 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 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 and seeds (USFWS 2013b).

The shoreline of the Missouri River provides stopover habitat for red knots utilizing a midcontinental migratory route during annual migrations. However, this 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, where the Project is located, 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 nearest point of the Missouri River is located 15.79 miles south of the Project. Wetlands within the Survey Corridor are well vegetated and/or do not contain suitable shoreline stopover habitat for the rufa red knot. Flight diverters will be installed, and maintained in working order, on the transmission line to minimize bird strikes. BEPC's Avian and Bat Protection Plan is in Appendix F - Basin Electric Power Cooperative Avian and Bat Protection Plan.

### *3.3.6 Monarch Butterfly*

The USFWS proposed that the monarch butterfly (*Danaus plexippus*) be listed as threatened under the Endangered Species Act (ESA; 89 FR 100662 [December 12, 2024]). The public comment period is open from December 12, 2024, to March 12, 2025. The ESA final rule is expected to be issued within 12 months of the end of the public comment period.

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 and roadsides with common milkweed (*Asclepias syriaca*), and upland grassland habitat with flowering species, was observed during the field survey. Much of the herbaceous habitat is rangeland used for livestock grazing or grasslands in roadside ditches. Due to the presence of suitable habitat, it is possible for this species to occur within the Survey Corridor.

### *3.3.7 Western Regal Fritillary*

The USFWS proposed that the western regal fritillary (*Argynnis idalia occidentalis*) be listed as threatened under the Endangered Species Act (ESA). The species is found in 14 states, including North Dakota, and the proposed project lies within the USFWS's known range for the species (USFWS 2025).

The species utilizes native grasslands with tall vegetation and flowering plants. Violet species (*Viola spp*.) are the sole food source for western regal fritillary larvae and are therefore a key component of larval habitat (Federal Register 2024b).

The desktop assessment identified 452.31 ac of grassland habitat, including broken and unbroken grasslands within the Survey Corridor. These areas have the potential to provide habitat for the western regal fritillary. Due to the presence of suitable habitat, it is possible for this species to occur within the Area.

### *3.3.8 Suckley's Cuckoo Bumble Bee*

The Suckley's cuckoo bumble bee (*B. suckleyi*) has been proposed for listing as endangered under the ESA (89 FR 102074 [December 17, 2024]). The western portion of the Suckley's cuckoo bumble bee range spans from the Yukon down to Arizona and east to Nebraska and Minnesota (USFWS 2024b). Probability of occupancy is estimated to have declined by 85% between 1900 and 2020 (USFWS 2024b). Current threats include loss of host species (e.g., western bumble bee [*B. occidentalis*] and Nevada bumble bee [*B. nevadensisl*]), pesticides, habitat loss, climate change, and diseases introduced by non-native bee species (89 FR 102074; Montana Field Guide 2024; Washington Department of Fish and Wildlife [WDFW] 2024). The viability of Suckley's cuckoo bumble bee is dependent on its host species, many of which have declined historically and are expected to continue to do so in the future (USFWS 2024b).

Suckley's cuckoo bumble bees are obligate social parasites: they kill or subdue a host species and nest in colonies of other social bumble bees in the genus Bombus (USFWS 2024b). Little is known about Suckley's cuckoo bumble bees overwintering sites, but mated queens may use above and below-ground sites with mulch or other decomposing vegetation for overwintering (WDFW 2024; USFWS 2024b). Queens emerge from early April to late May shortly after their host species (Montana Field Guide 2024; USFWS 2024b). Nests for confirmed host bumble bee species (i.e., western bumble bee and the Nevada bumble bee) occur more often underground (e.g., animal burrow) than aboveground (e.g., logs, stumps; WDFW 2024; USFWS 2024b). New queens likely go into hibernation by August or September, while males may be active on the landscape until October (USFWS 2024b).

Suckley's cuckoo bumble bees are found in similar habitats to their host species: prairies, grasslands, meadows, woodlands, croplands, and urban areas (NDGFD 2018; Montana Field Guide 2024; USFWS 2024b). In general, this species is rare to encounter as a naturally less abundant social parasite without a worker caste (USFWS 2024b). Suckley's cuckoo bumble bees generally have distributions smaller than their host species and are likely in lower abundance at

the edge of their host species range (USFWS 2024b). There are no known sightings of the Suckley's cuckoo bumble in North Dakota in recent years, therefore the species is unlikely to occur in the Survey Area (Richardson 2023).

## 3.4 Nesting Raptor Survey

An aerial survey of the Project Survey Corridor plus a one mi buffer on either side was conducted on May 9, 2024. Two active raptor nests were documented during the survey. The first nest is a great horned owl (*Bubo virginianus*) nest, located 0.09 mi from the Project centerline in Section 19, T160N, R95W. The second nest is a red-tailed hawk (*Buteo jamaicensis*) nest, located 0.07 mi from the Project centerline in Section 18, T160N, R95W.

The nest attributes are listed in Table 6 and locations of the nests discovered during the aerial survey are depicted in Appendix A - Natural Resource Inventory Figures.

**Table 6. Raptor Nest Attributes**

| Feature | Classification | Location | Latitude | Longitude |
|---|---|---|---|---|
| Great Horned Owl Nest | Active Nest | Sec. 19-T160N-R95W | 48.667203 | -103.004273 |
| Red-tailed Hawk Nest | Active Nest | Sec. 18-T160N-R95W | 48.680174 | -103.004593 |

N = north; R = Range; Sec. = Section; T = Township; W = west.

If construction occurs during the nesting season, and the nests are active, USFWS will be consulted to determine the proper measures to avoid disturbing the nests. No additional aerial surveys for raptor nests will be conducted for the Project. Prior to construction, a pedestrian migratory bird nest survey will be performed. A ½-mile line-of-sight raptor nest survey will be done in conjunction with the migratory bird nest survey.

## 3.5 Noxious Weed Inventory

A pedestrian survey of the Survey Area was conducted for state and county listed noxious weeds. Two populations of leafy spurge (*Euphorbia esula*), three populations of absinth wormwood (*Artemisia absinthium),* and 198 populations of Canada thistle (*Cirsium arvense*), covering 138.36 ac total were documented within the Survey Corridor. Four patches of Canada thistle, totaling 0.29 ac, were documented within the access road survey corridors.

Noxious weed attributes are depicted in Appendix A - Natural Resource Inventory Figures and listed in Appendix G - Noxious Weed Attributes.

## 3.6 Tree and Shrub Inventory

BEPC will identify trees that will need to be removed to comply with the National Electric Reliability Council. WEST will inventory the identified trees, to species and count, and compile the data into a report that will be submitted to the North Dakota Public Service Commission.

## 3.7 U.S. Fish and Wildlife Service Conservation Easements

The Project crosses the Crosby Wetland Management District (WMD) in Divide and Burke Counties and the Lostwood WMD in Mountrail County. The review of the FWS National Realty Tracts database determined that there are 494.21 ac under USFWS easement within the Survey Corridor. The Survey Area does not cross any easements in the Lostwood WMD. The Project Survey Area contains 465.80 ac of wetland easements and 28.41 ac of Farm Service Agency transfer parcels. BEPC has designed the Project to avoid placing structures within wetland

easement basins. Table 7 contains the totals of easement acres within each WMD. The easement locations are depicted in Appendix A - Natural Resource Inventory Figures.

**Table 7. U.S. Fish and Wildlife Service Easements in Survey Corridor**

| Easement | Location | Acres in Survey Area |
|---|---|---|
| **Crosby Wetland Management District – Divide County** | | |
| Farm Service Agency Transfer | Sec. 5-T163N-R96W | 28.56 |
| Wetland Easement | Sec 14 T161N-R96W | 27.70 |
| Wetland Easement | Sec 19 T160N-R95W | 31.63 |
| Wetland Easement | Sec 26 T160N R95W | 4.79 |
| Wetland Easement | Sec 33 T161N-R95W | 2.49 |
| Wetland Easement | Sec. 11 T161N-R96W | 0.08 |
| Wetland Easement | Sec. 12-T161N-R96W | 15.01 |
| Wetland Easement | Sec. 13-T161N-R96W | 41.46 |
| Wetland Easement | Sec. 14-T161N-R96W | 45.92 |
| Wetland Easement | Sec. 18-T160N-R95W | 47.81 |
| Wetland Easement | Sec. 19-T161N-R95W | 10.87 |
| Wetland Easement | Sec. 1-T163N-R96W | 6.31 |
| Wetland Easement | Sec. 20-T161N-R95W | 4.74 |
| Wetland Easement | Sec. 21-T161-R95W | 21.49 |
| Wetland Easement | Sec. 24-T161N-R96W | 12.12 |
| Wetland Easement | Sec. 25-T160N-R94W | 25.28 |
| Wetland Easement | Sec. 27-T160N-R95W | 5.45 |
| Wetland Easement | Sec. 27-T161N-R95W | 46.78 |
| Wetland Easement | Sec. 27-T163N-R96W | 19.37 |
| Wetland Easement | Sec. 28-T160N-R95W | 18.78 |
| Wetland Easement | Sec. 29-T160N-R95W | 10.79 |
| Wetland Easement | Sec. 2-T161N-R96W | 22.00 |
| Wetland Easement | Sec. 2-T162N-R96W | 16.76 |
| Wetland Easement | Sec. 35-T163N-R96W | 3.13 |
| Wetland Easement | Sec. 36-T164N-R97W | 10.54 |
| Wetland Easement | Sec. 6-T160N-R95W | 21.08 |
| Wetland Easement | Sec. 7-T160N-R95W | 10.94 |
| **Totals** | **Acres in Survey Area** | **468.21** |
| **Crosby Wetland Management District – Burke County** | | |
| Wetland Easement | Sec. 30-T160N-R94W | 26.00 |
| **Overall Totals** | **Acres in Survey Area** | **494.21** |

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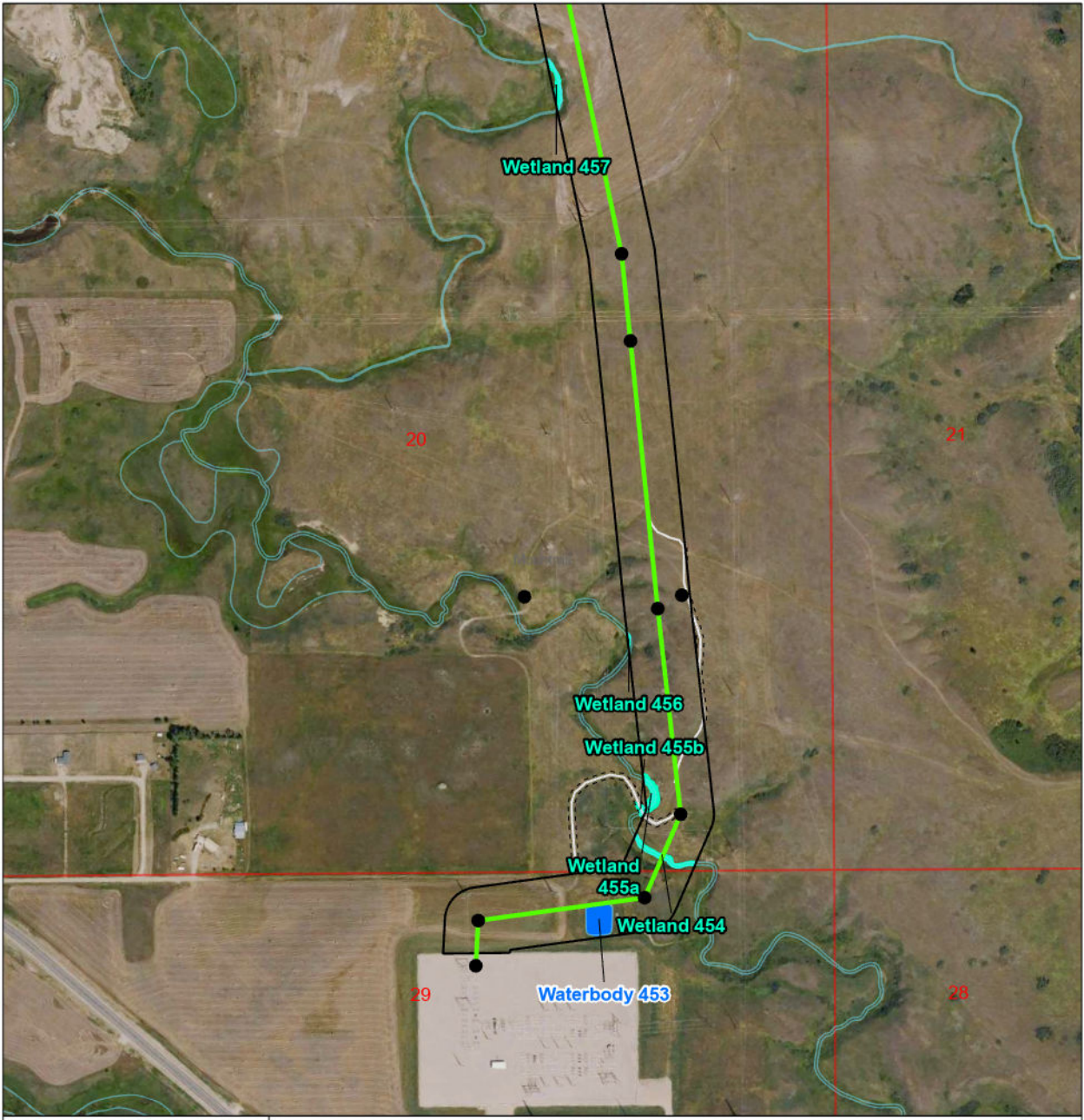
# Appendix A - Natural Resource Inventory Figures

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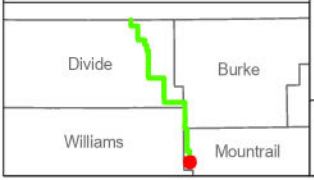


Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
DASK Habitat
NLEB Habitat
Waterbody
Wetland

**DASK Avoidance Buffers**
1/2-mi Minimal Grassland Impact Buffer
500-m Flight Window Avoidance Buffer

**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

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W E
S

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Date: 9/29/2025 Author: C. Tucker

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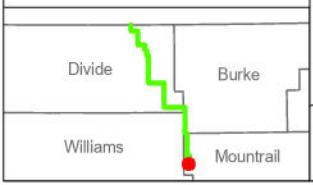
Tande to Saskatchewan 230-kV Transmission Project

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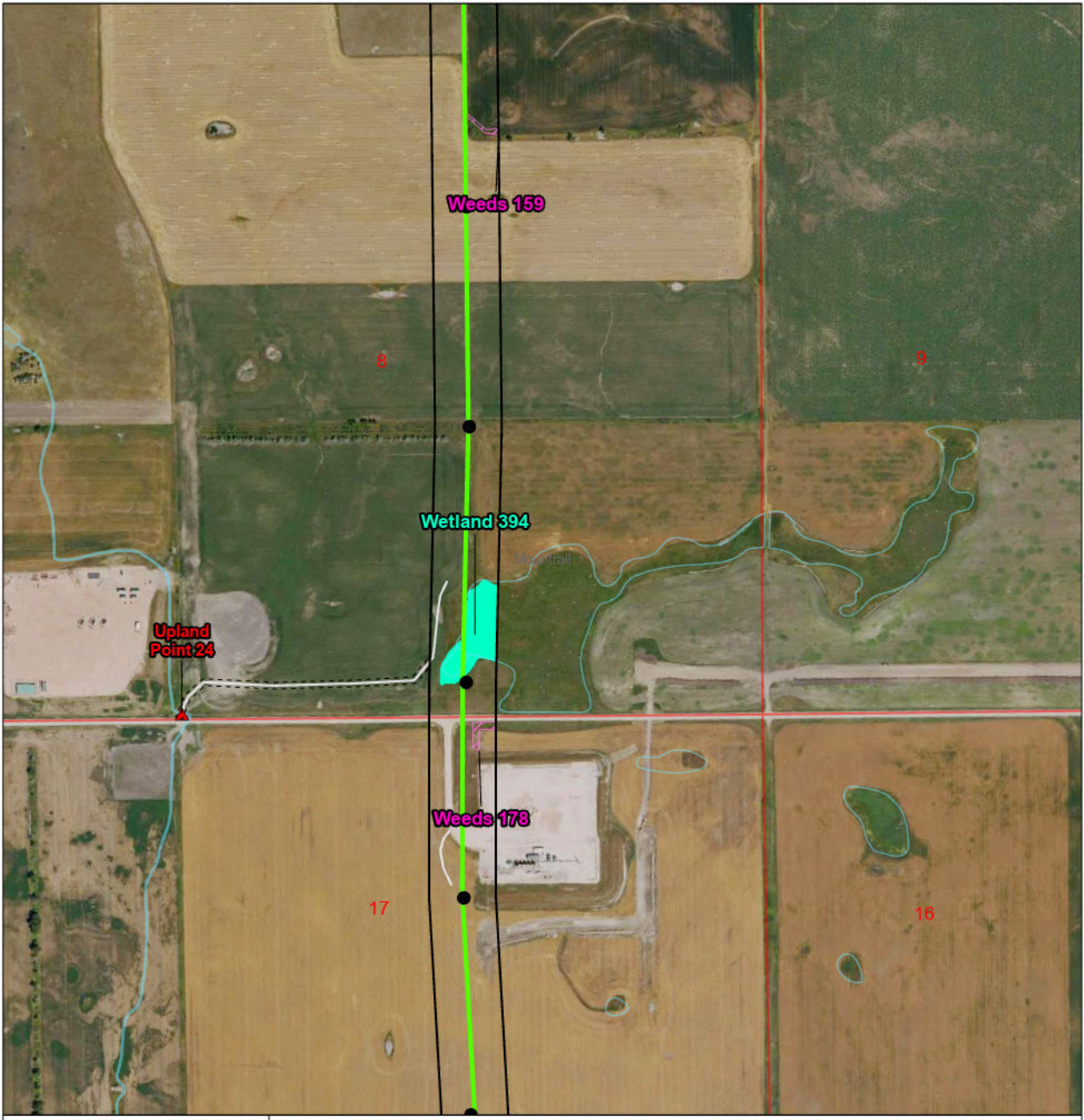


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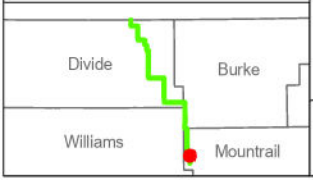


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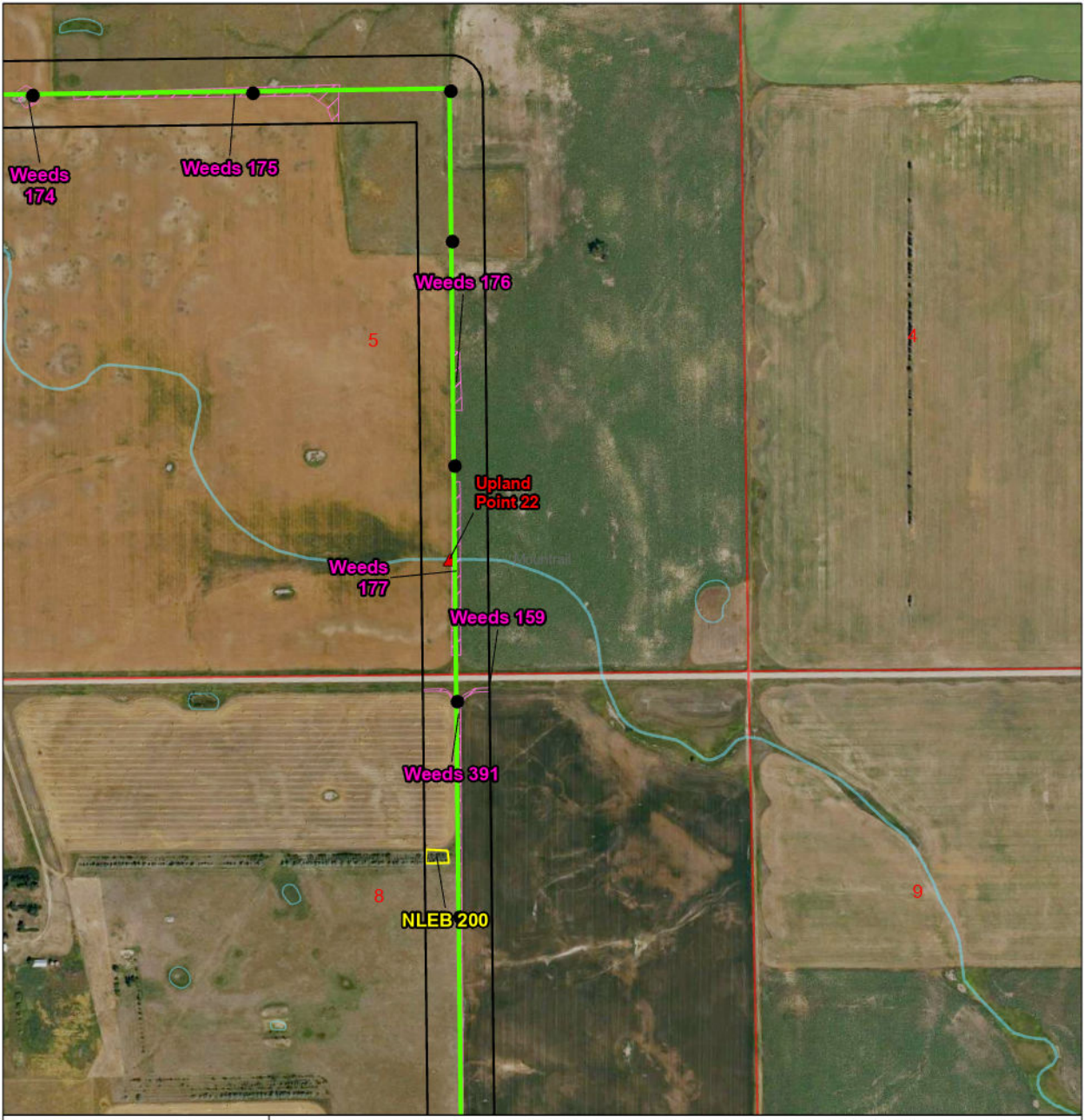


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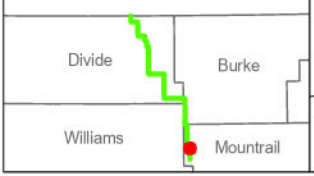


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Structure

N W E S

0 0.06 0.1 0.2 mi

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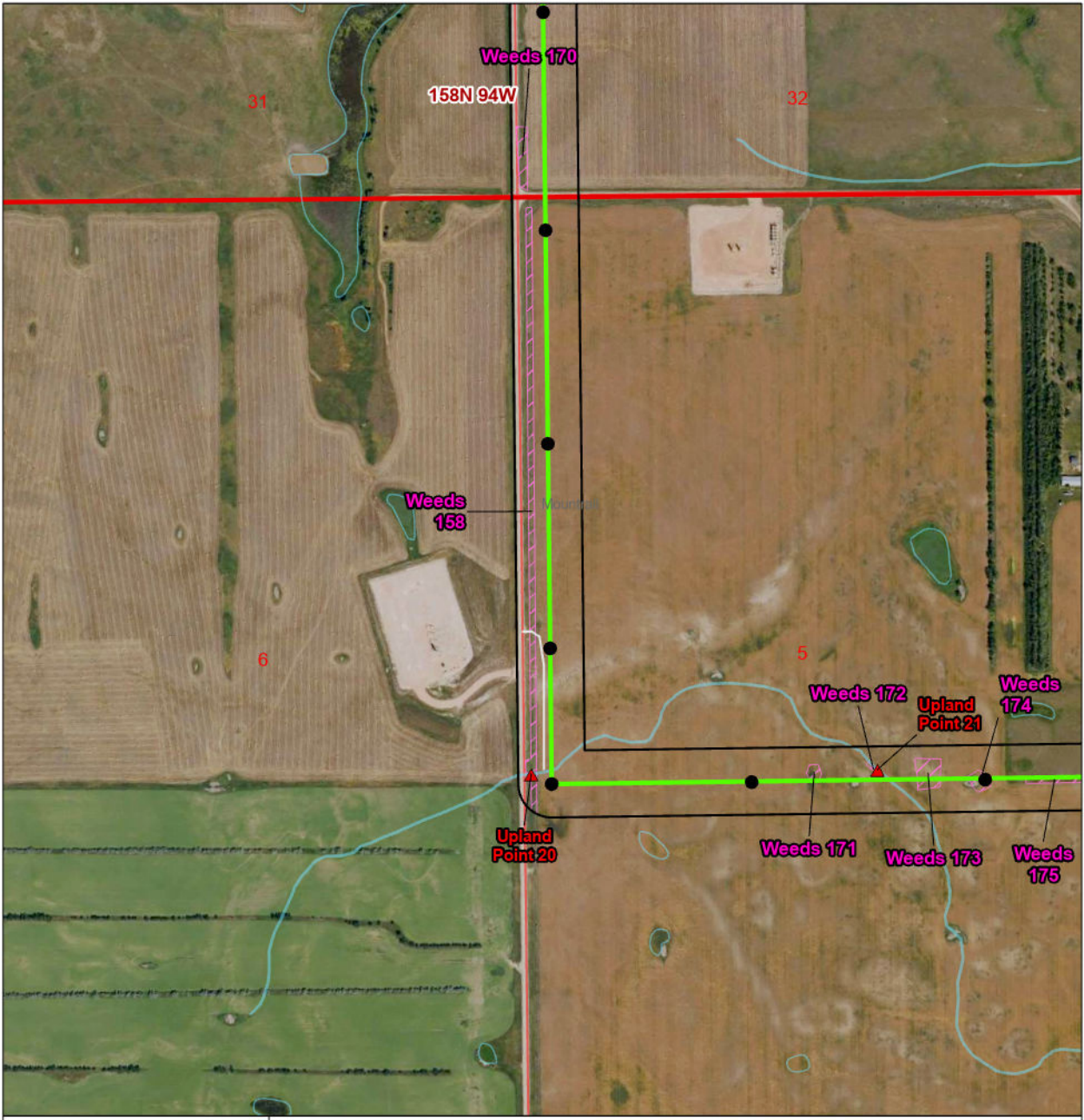


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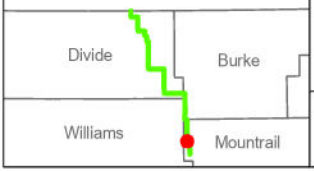


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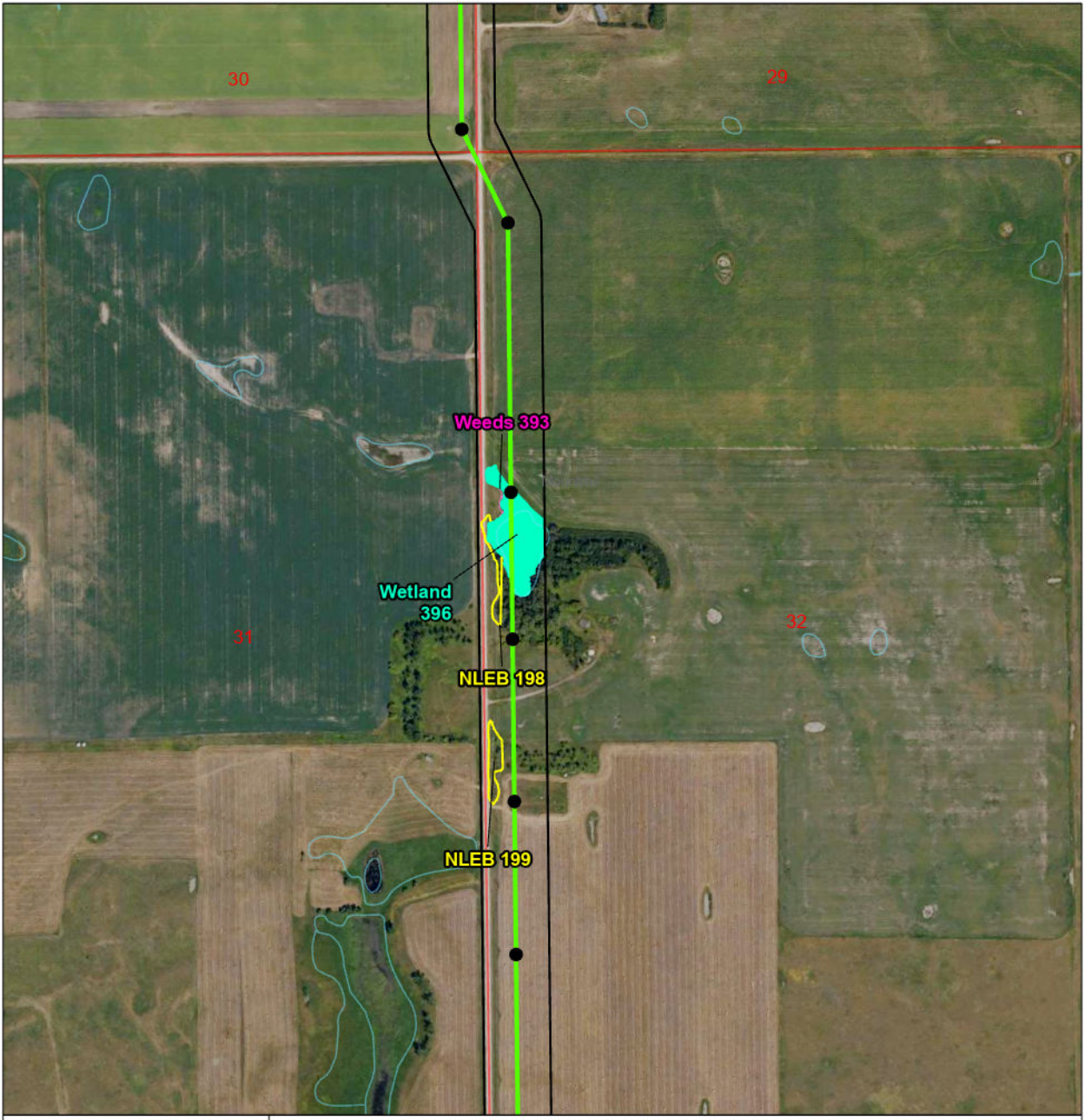
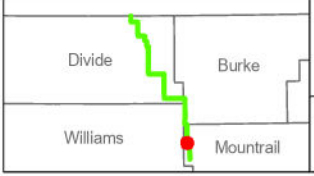
Date: 9/29/2025 Author: C. Tucker

WEST




Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
DASK Habitat
NLEB Habitat
Waterbody
Wetland

**DASK Avoidance Buffers**
1/2-mi Minimal Grassland Impact Buffer
500-m Flight Window Avoidance Buffer

**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N
W E
S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

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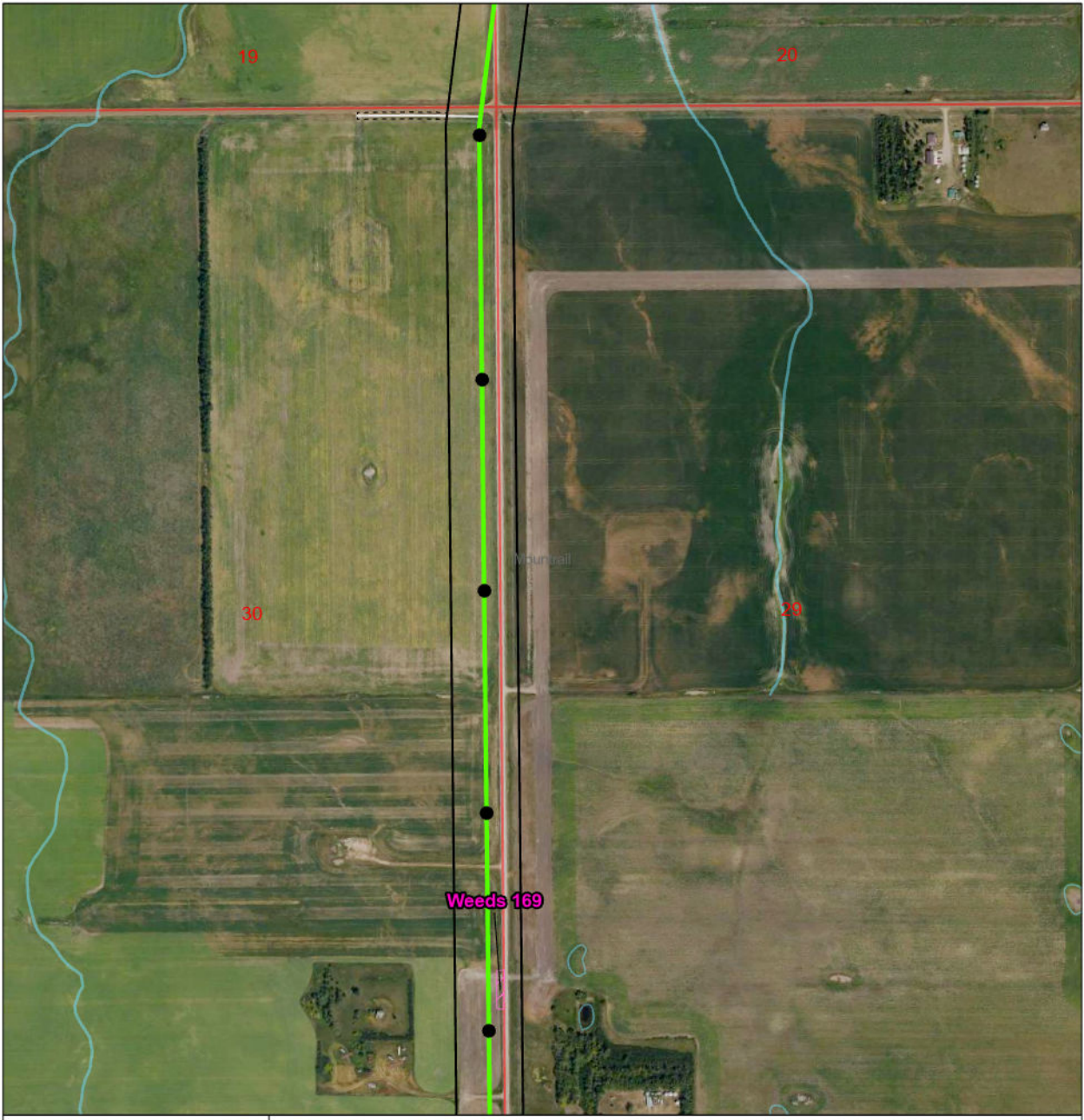
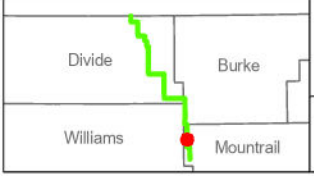



Tande to Saskatchewan
230-kV Transmission Project

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Scale: 1:9,000 Page Number: 7

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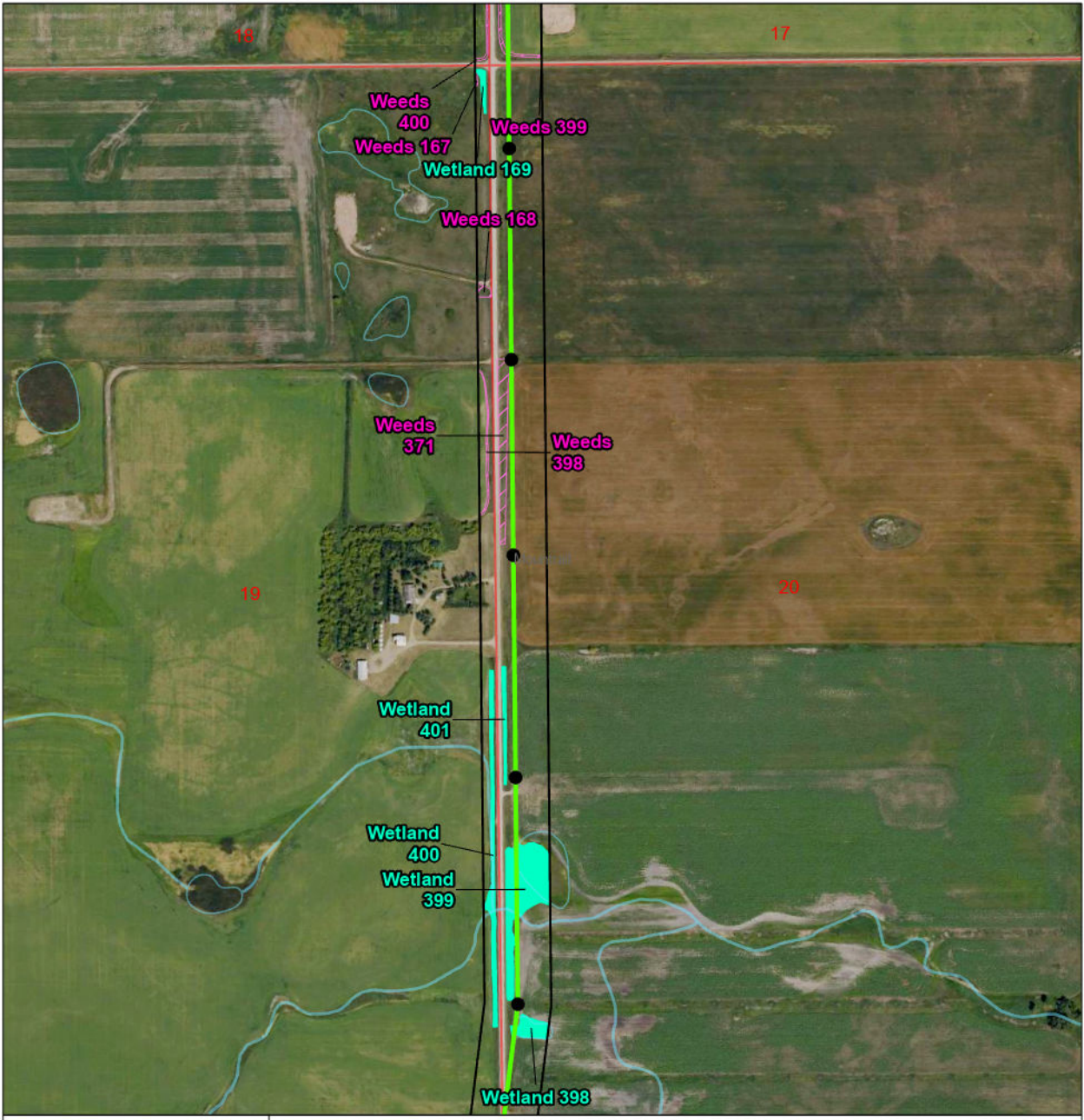
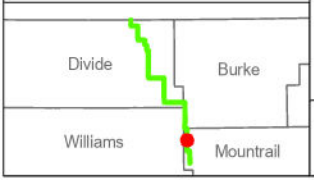



Tande to Saskatchewan 230-kV Transmission Project

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Page Number: 8

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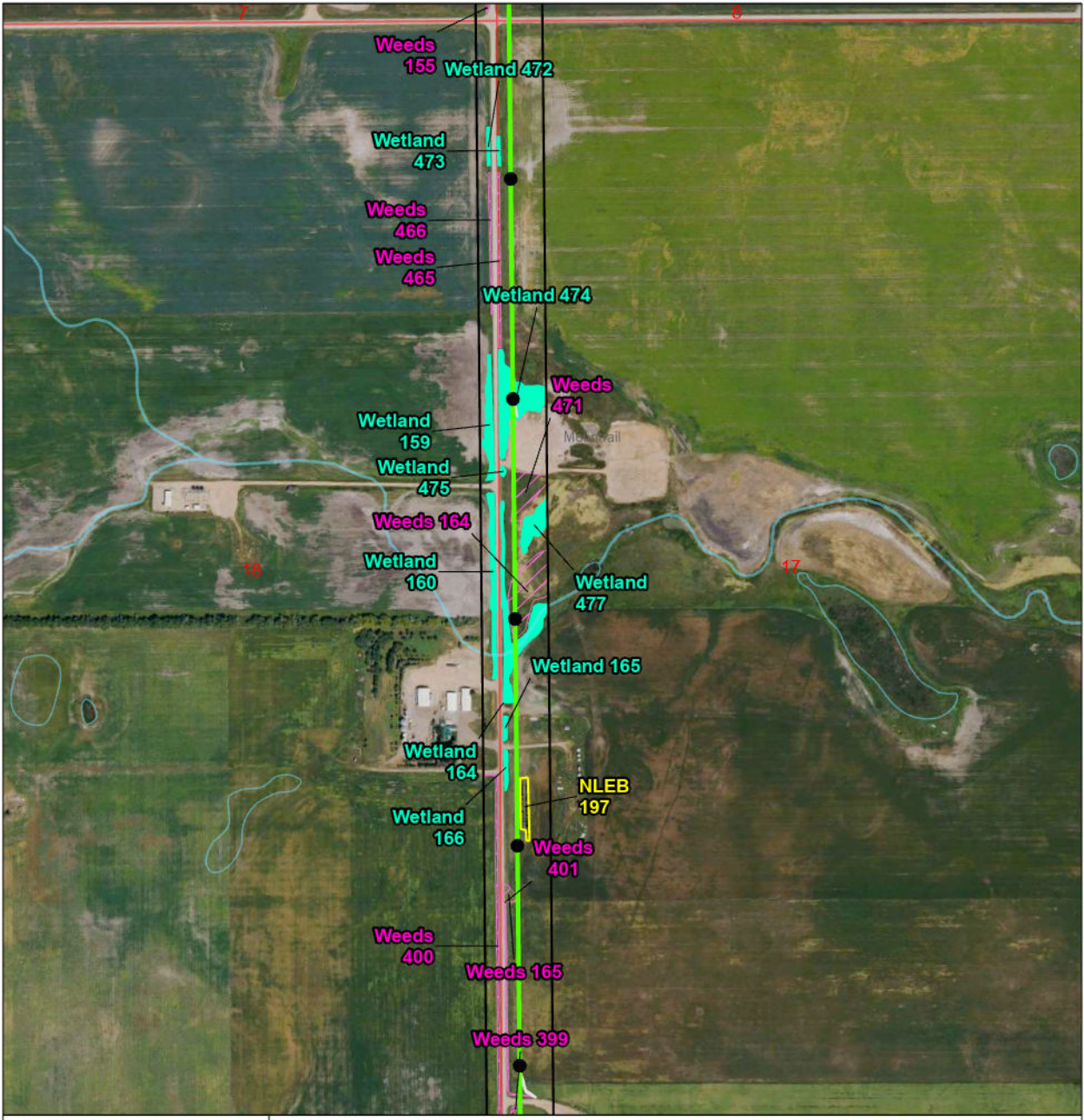
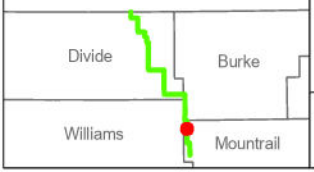



Tande to Saskatchewan 230-kV Transmission Project

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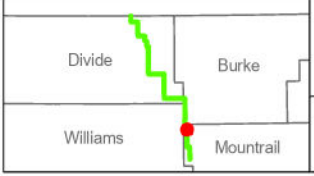
Tande to Saskatchewan 230-kV Transmission Project

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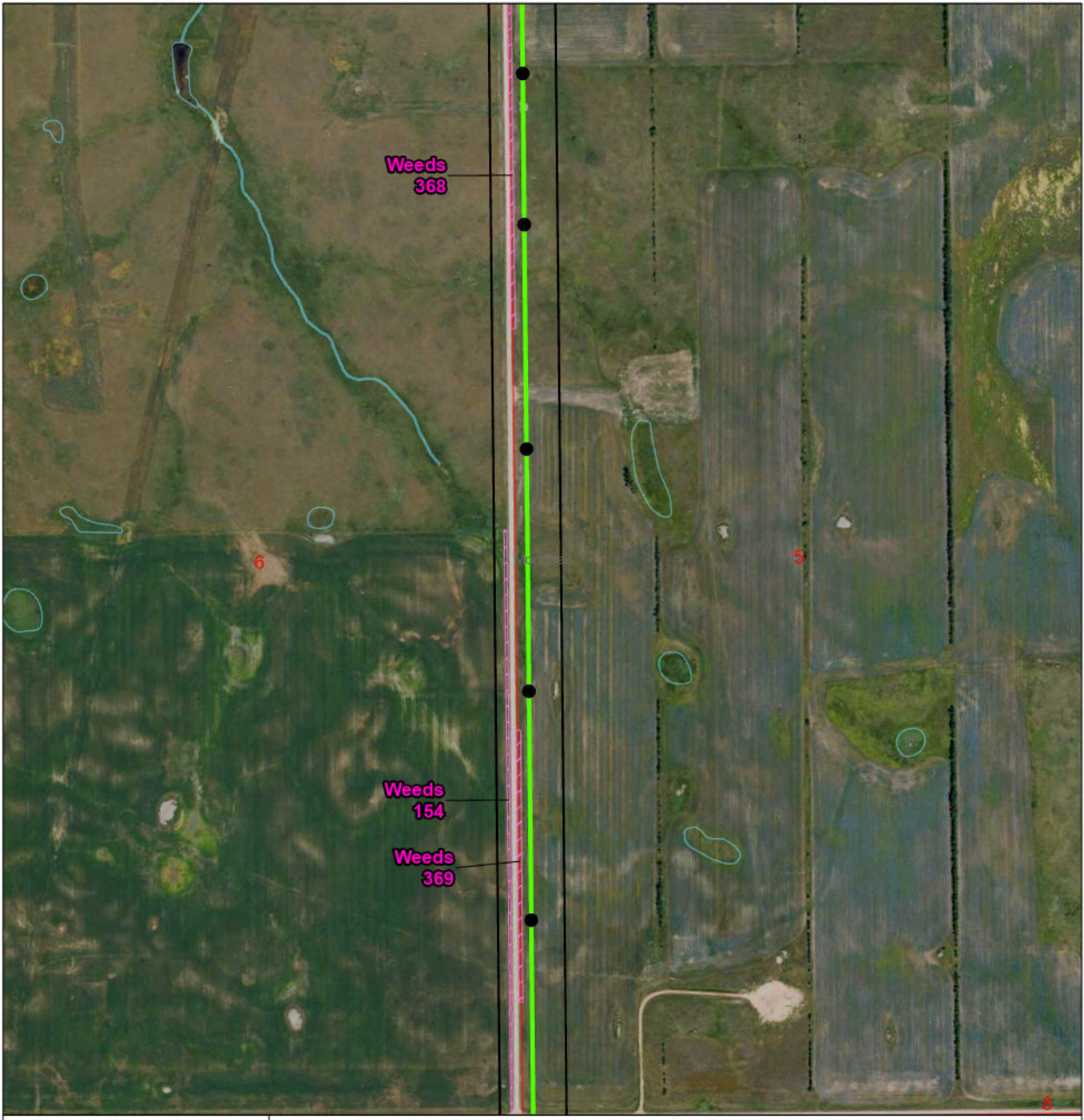
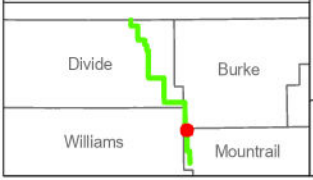



Tande to Saskatchewan
230-kV Transmission Project

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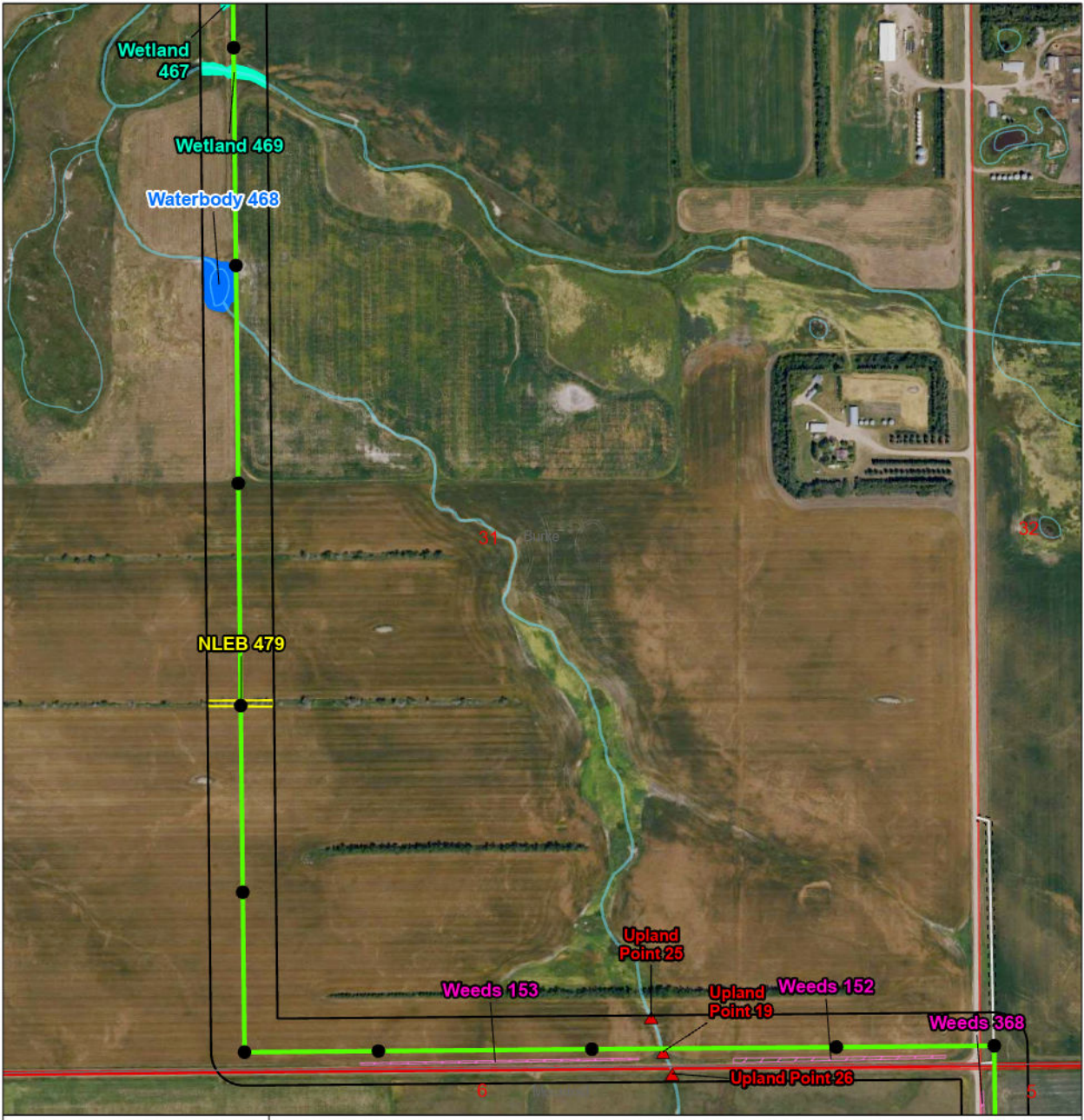
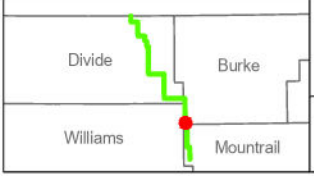



Tande to Saskatchewan 230-kV Transmission Project

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0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 12

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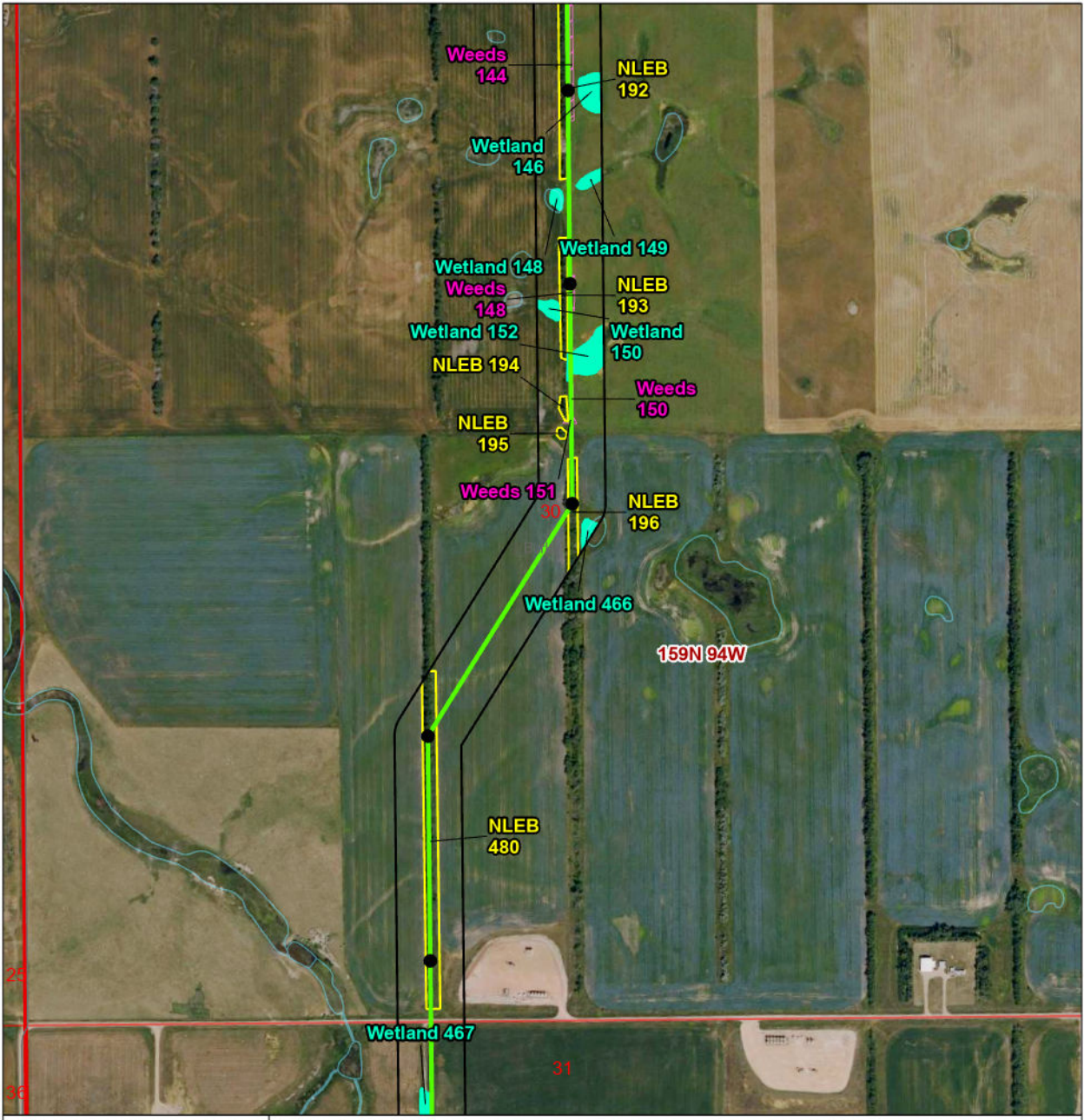
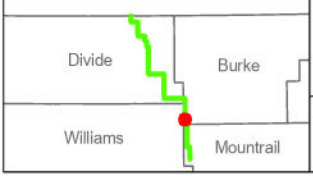



Tande to Saskatchewan 230-kV Transmission Project

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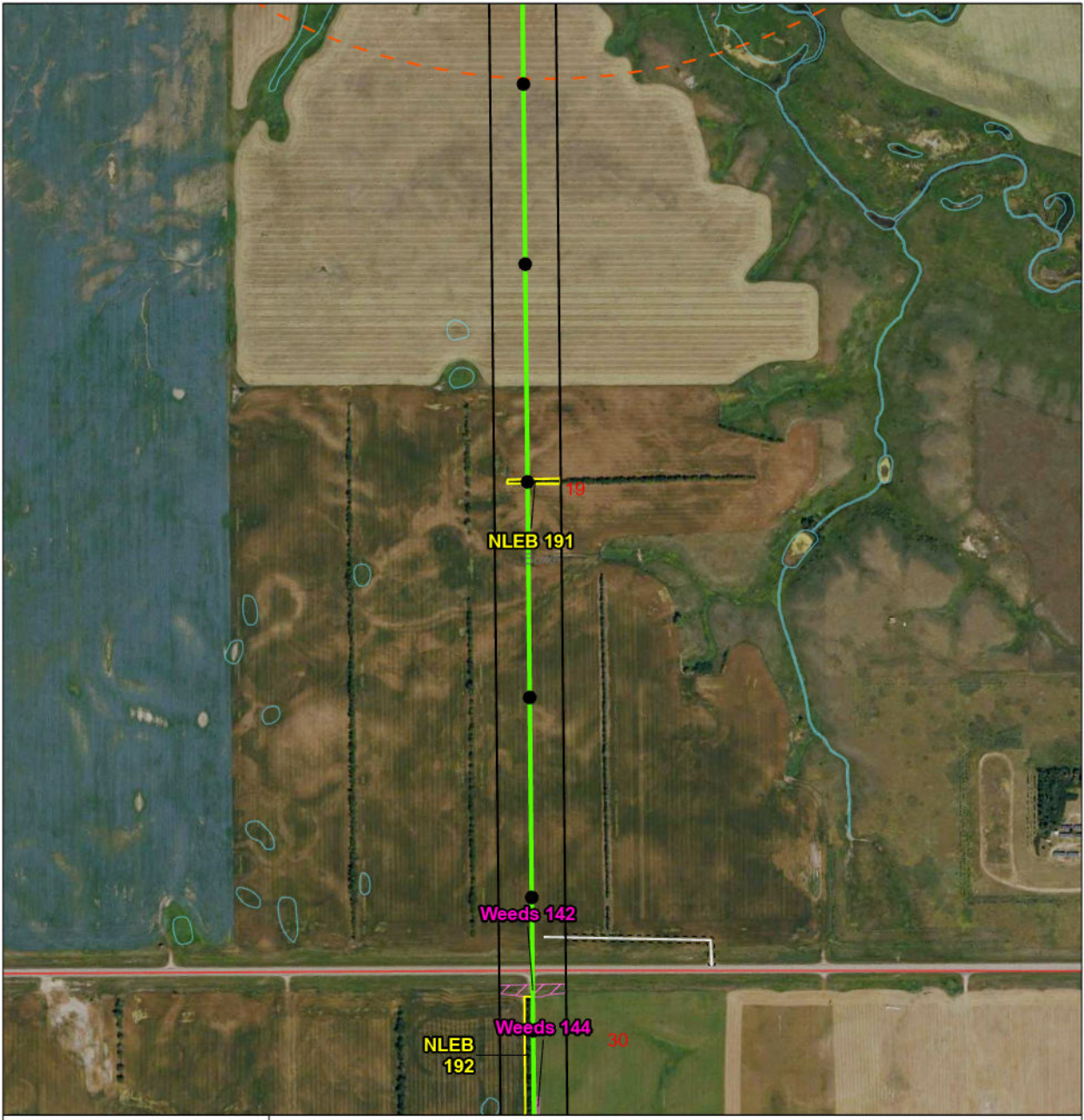
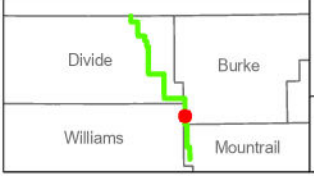



Tande to Saskatchewan
230-kV Transmission Project

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Page Number: 14

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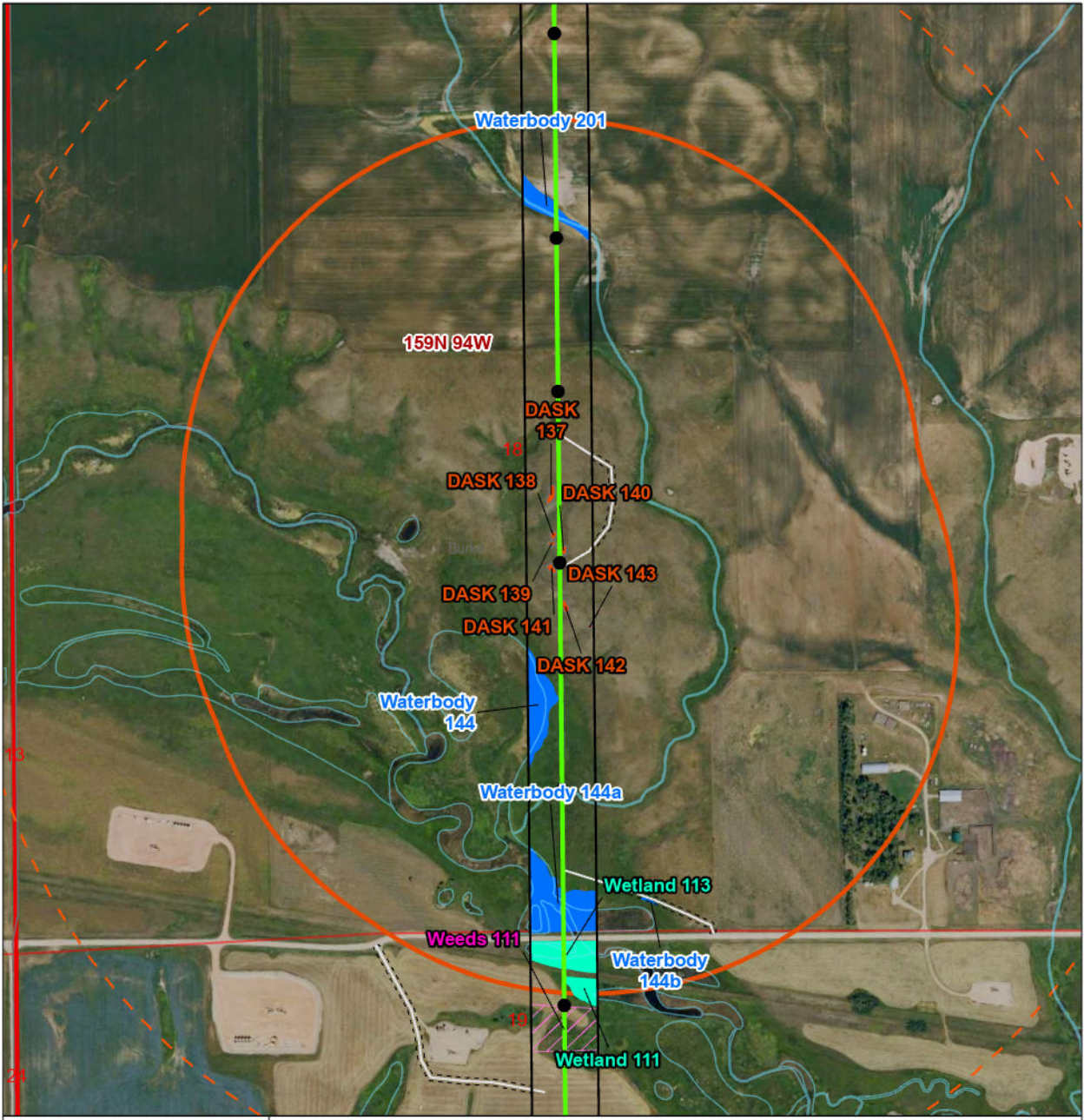
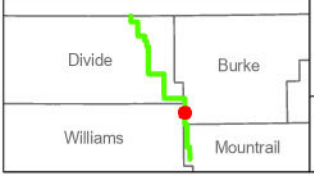



Tande to Saskatchewan 230-kV Transmission Project

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Great Horned Owl Nest
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N W E S

0 0.06 0.1 0.2 mi

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Page Number: 15

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

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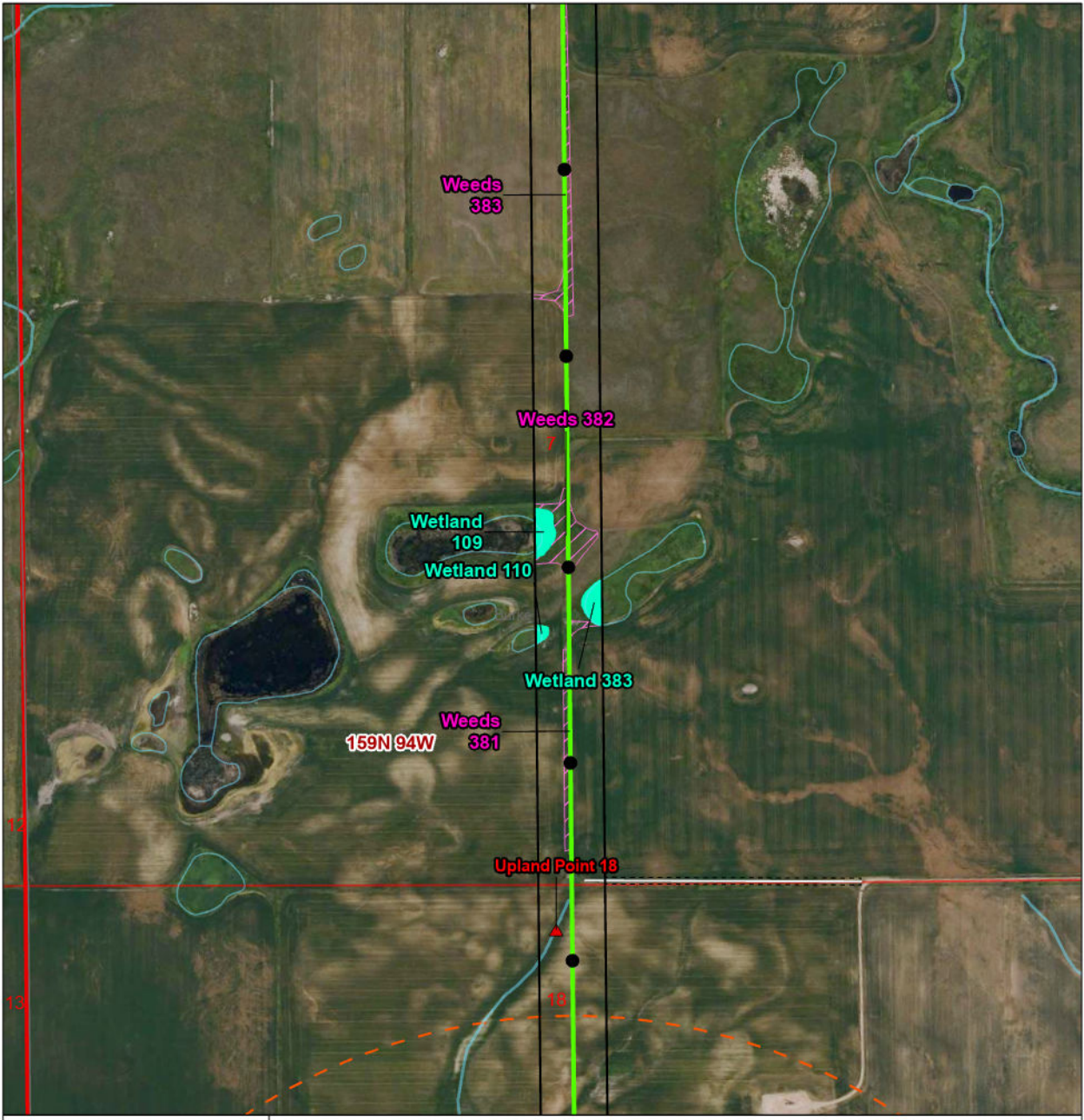
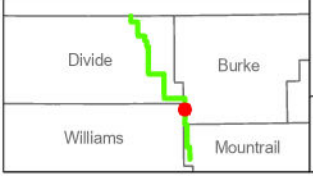



Tande to Saskatchewan 230-kV Transmission Project

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0 0.06 0.1 0.2 mi

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Page Number: 16

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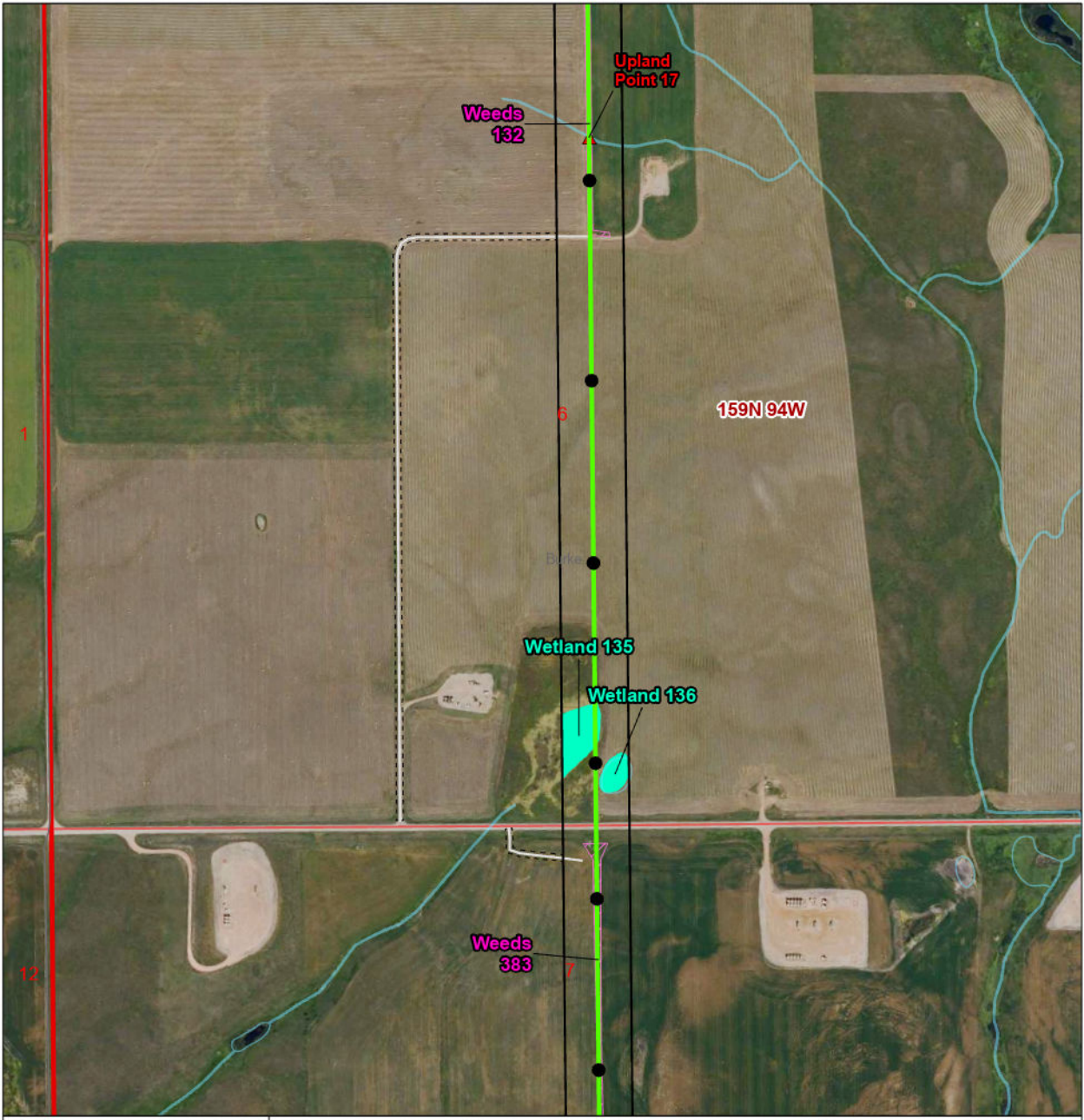
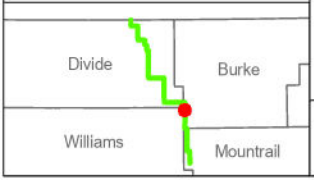



Tande to Saskatchewan 230-kV Transmission Project

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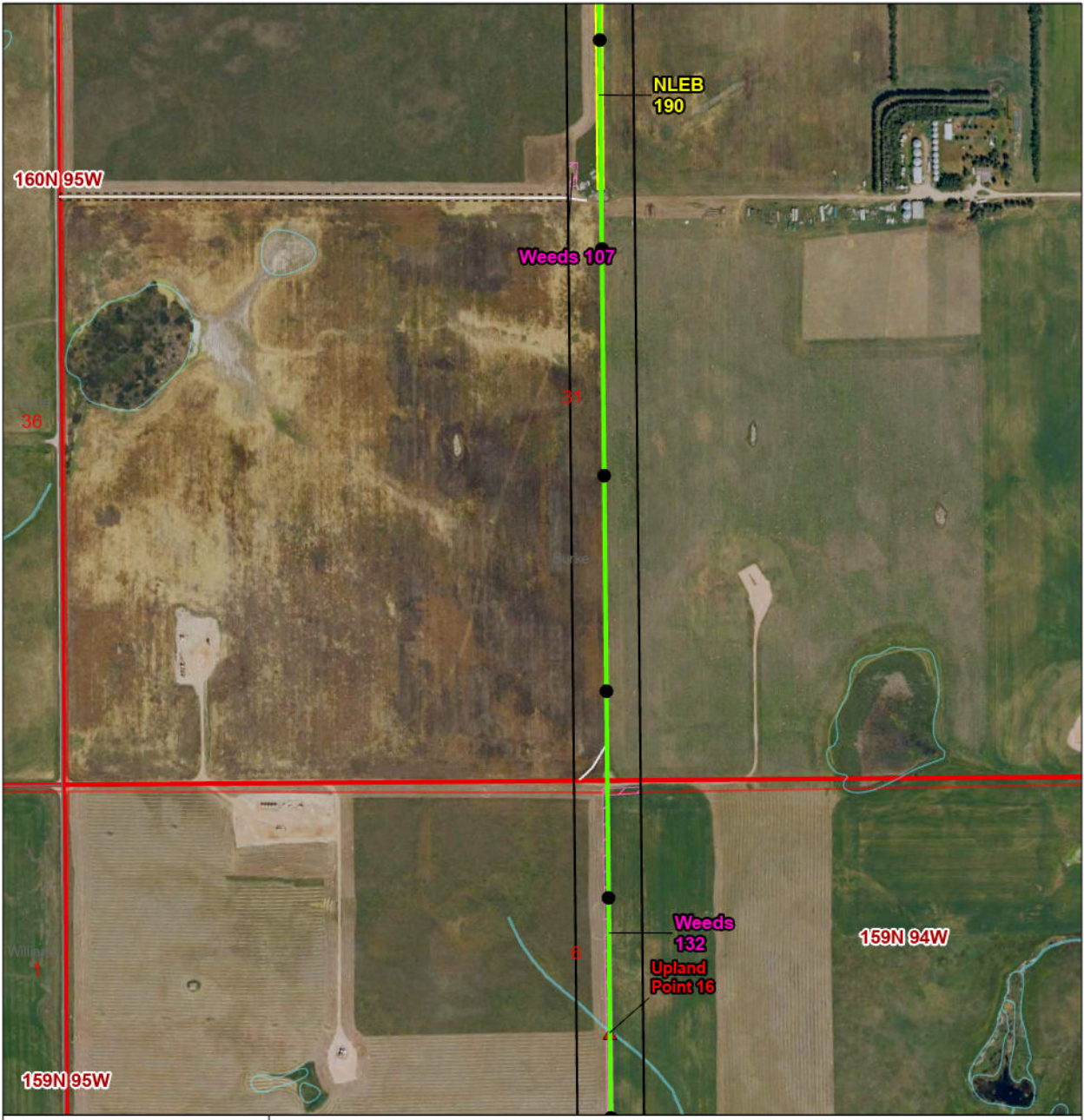


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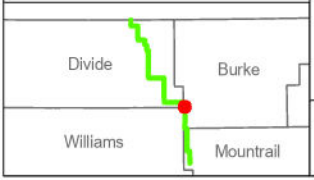


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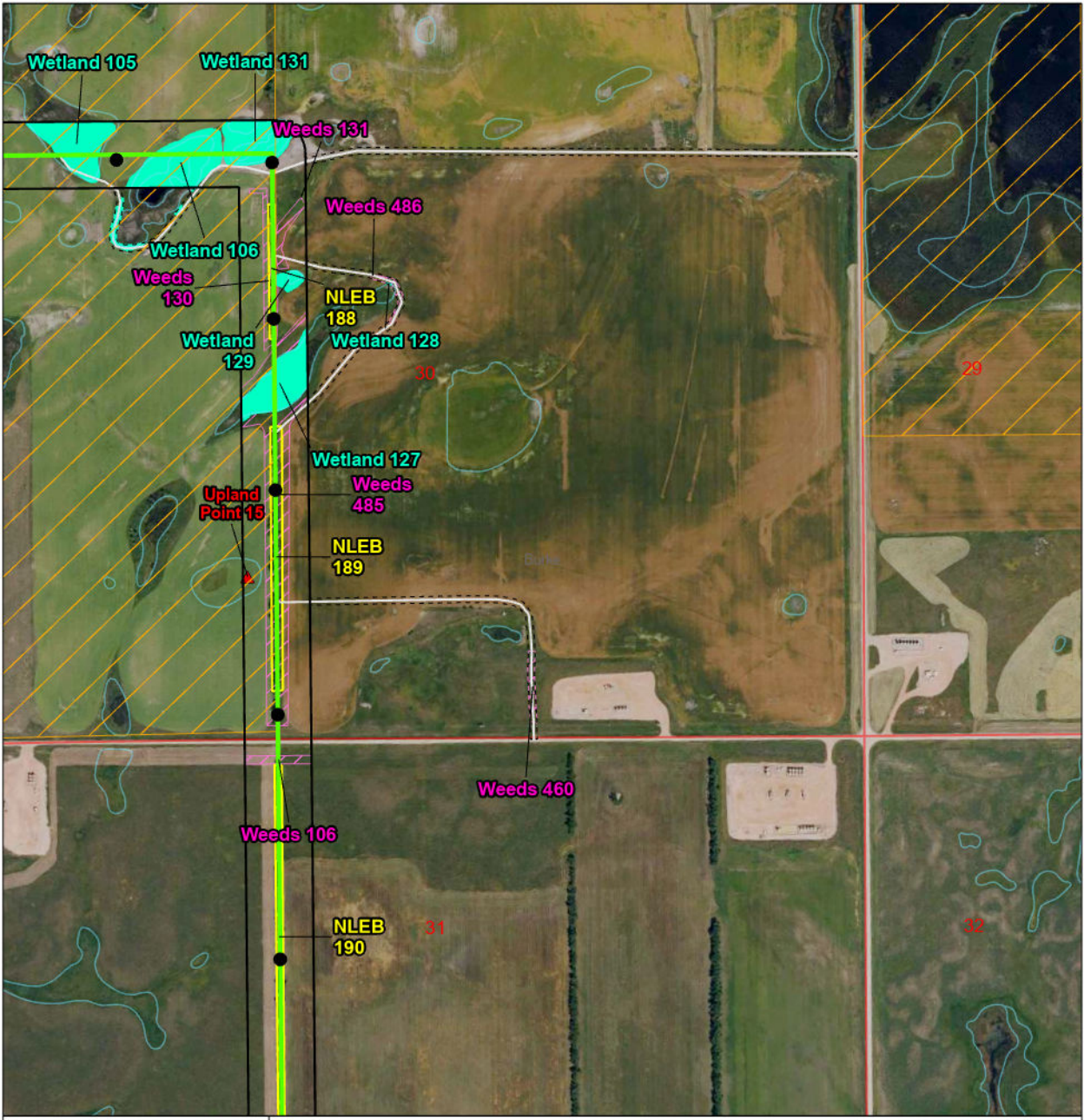


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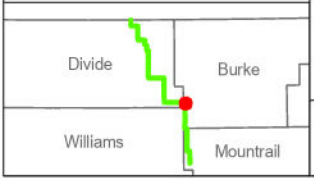


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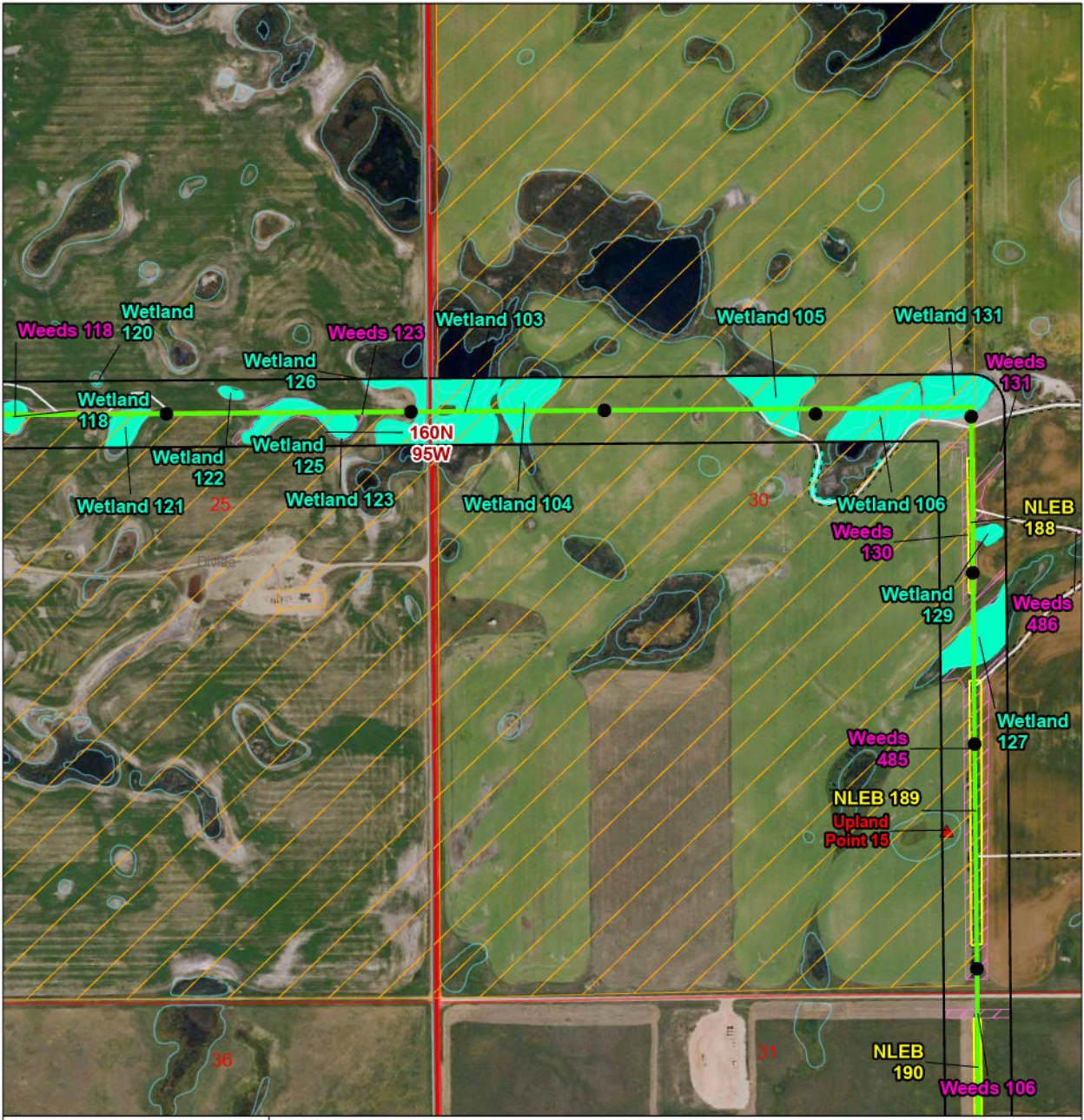


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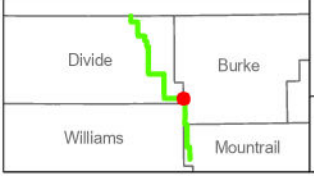


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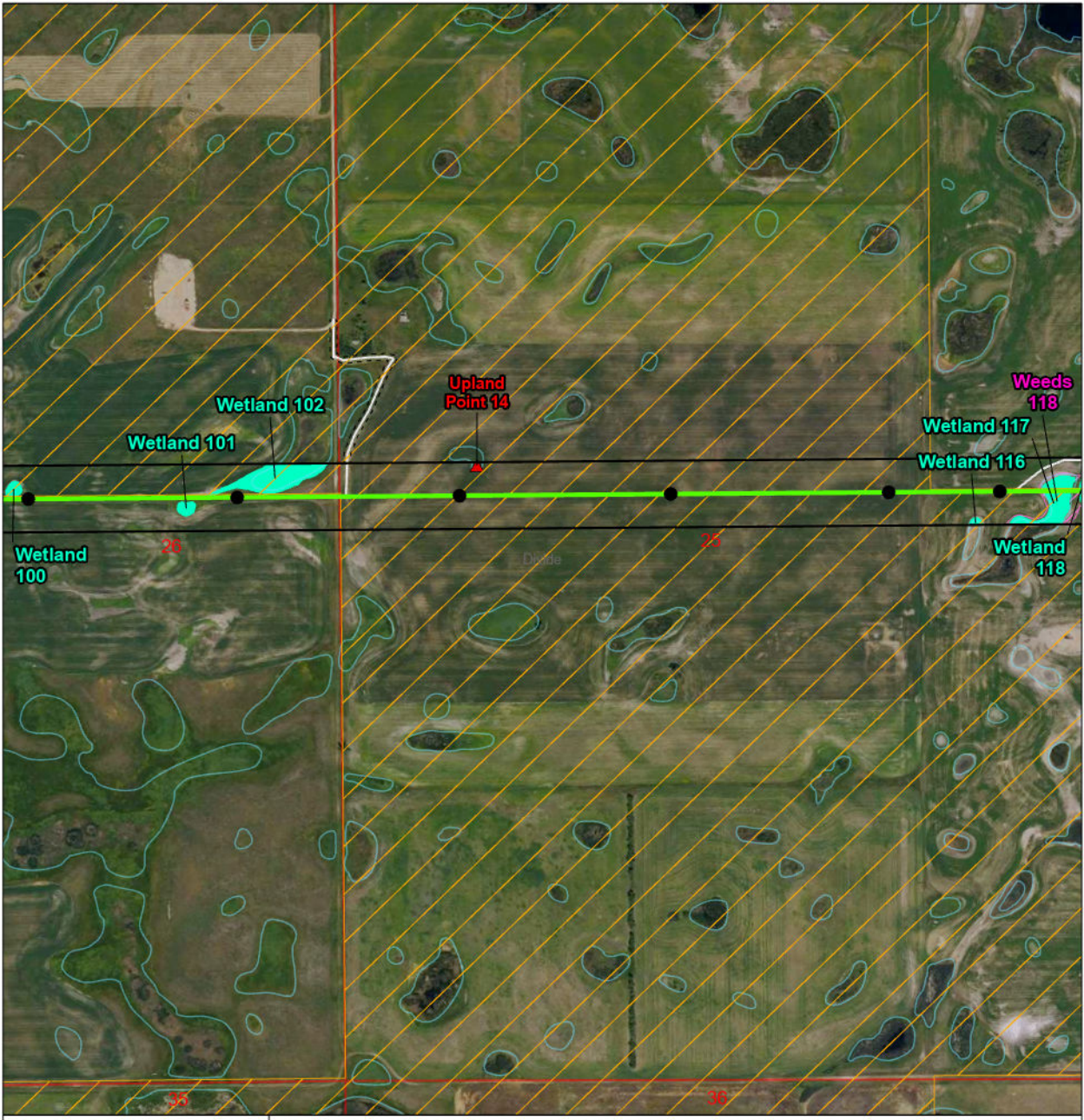


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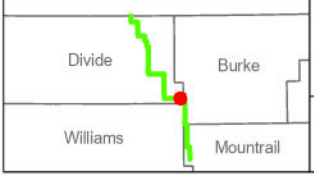


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Structure

N W E S

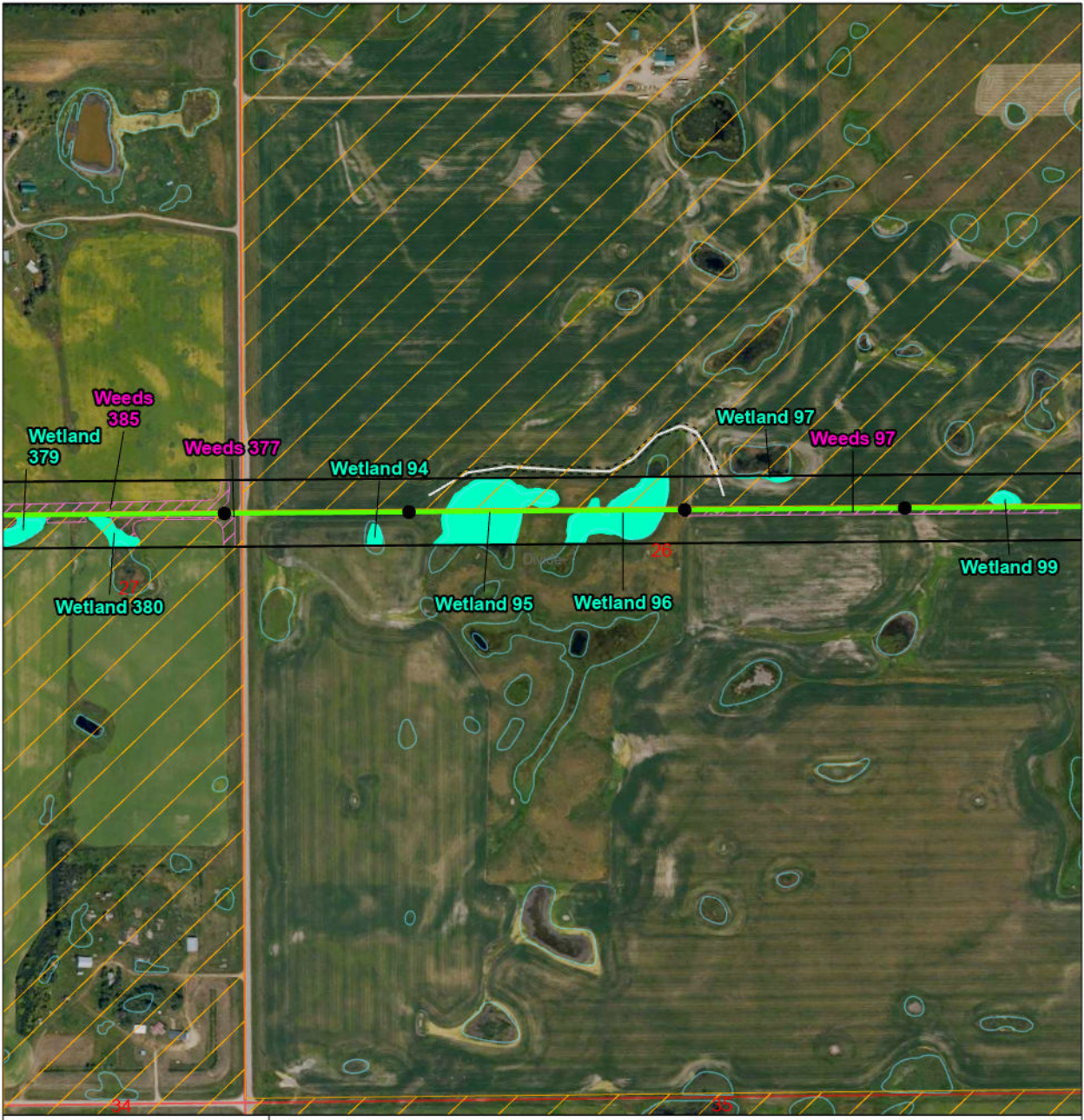
0 0.06 0.1 0.2 mi

Scale: 1:9,000

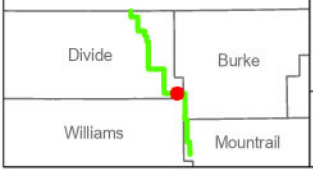


Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

WEST




Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
DASK Habitat
NLEB Habitat
Waterbody
Wetland

**DASK Avoidance Buffers**
1/2-mi Minimal Grassland Impact Buffer
500-m Flight Window Avoidance Buffer

**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 22

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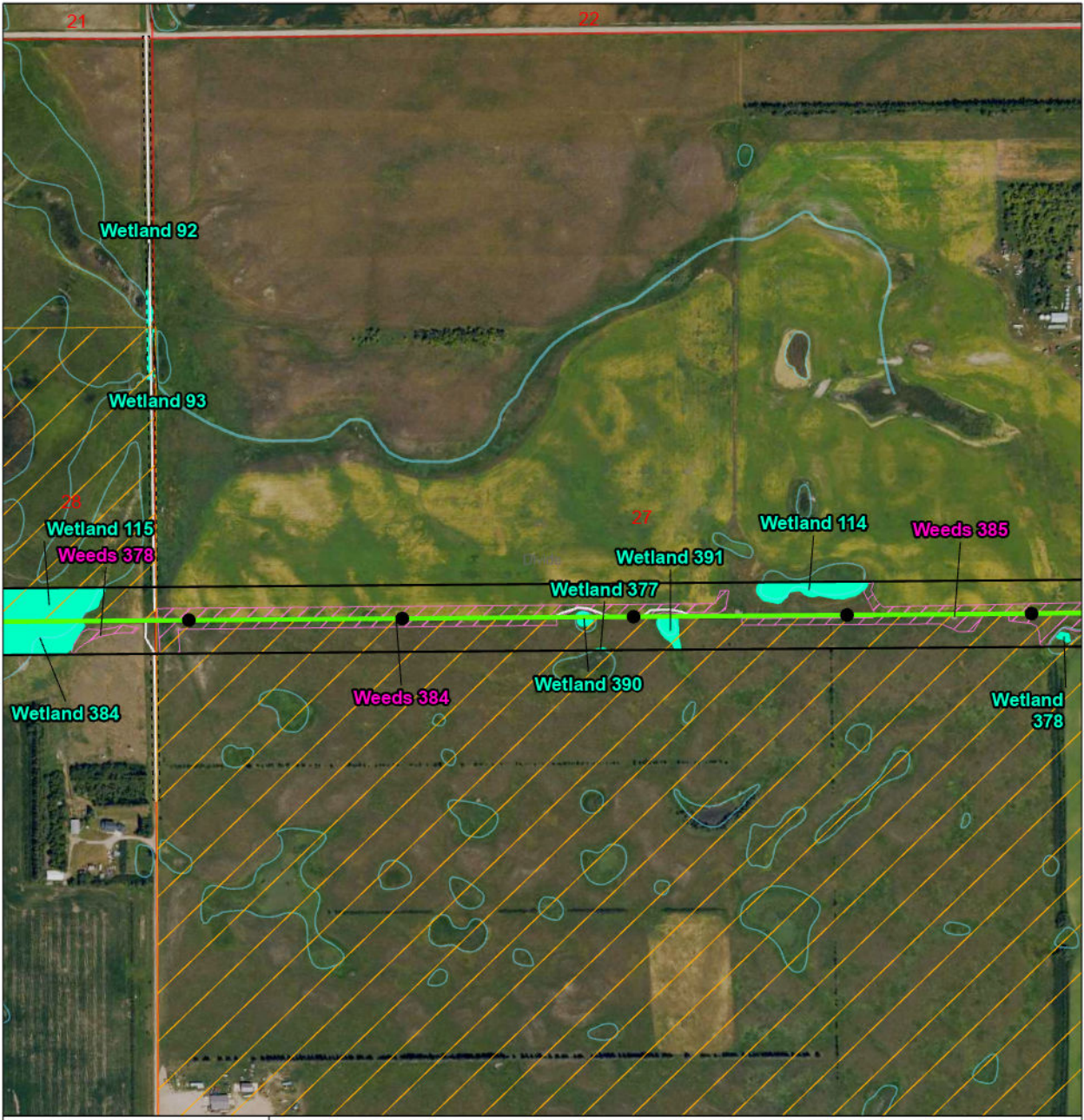
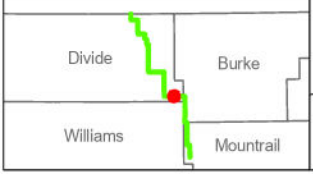



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
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Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000

Page Number: 23

Data Source: 2024 USDA FSA Aerial Photograph
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Date: 9/29/2025 Author: C. Tucker

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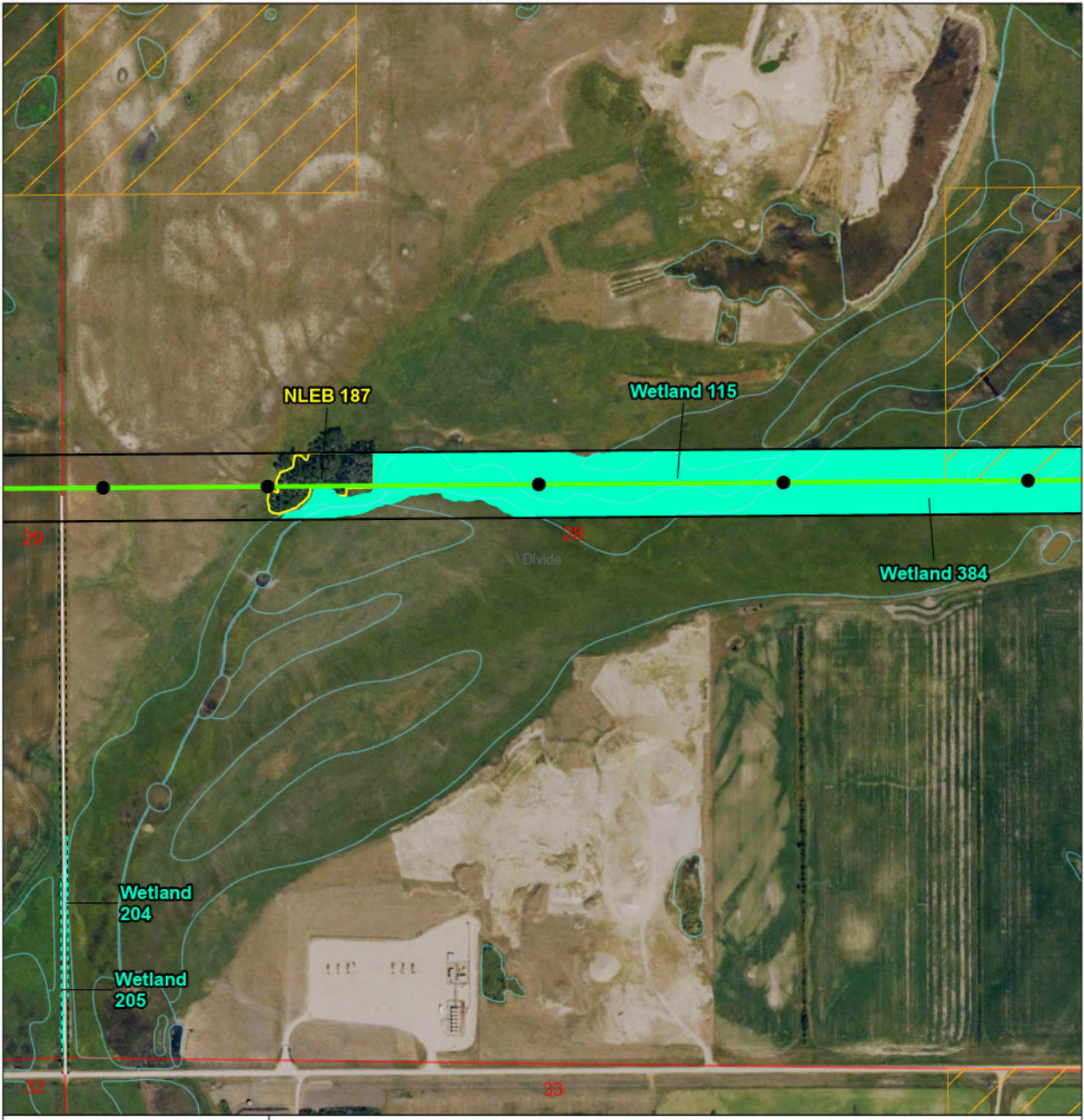
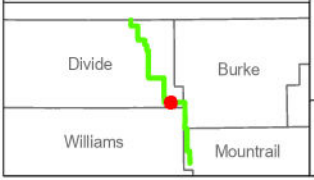



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
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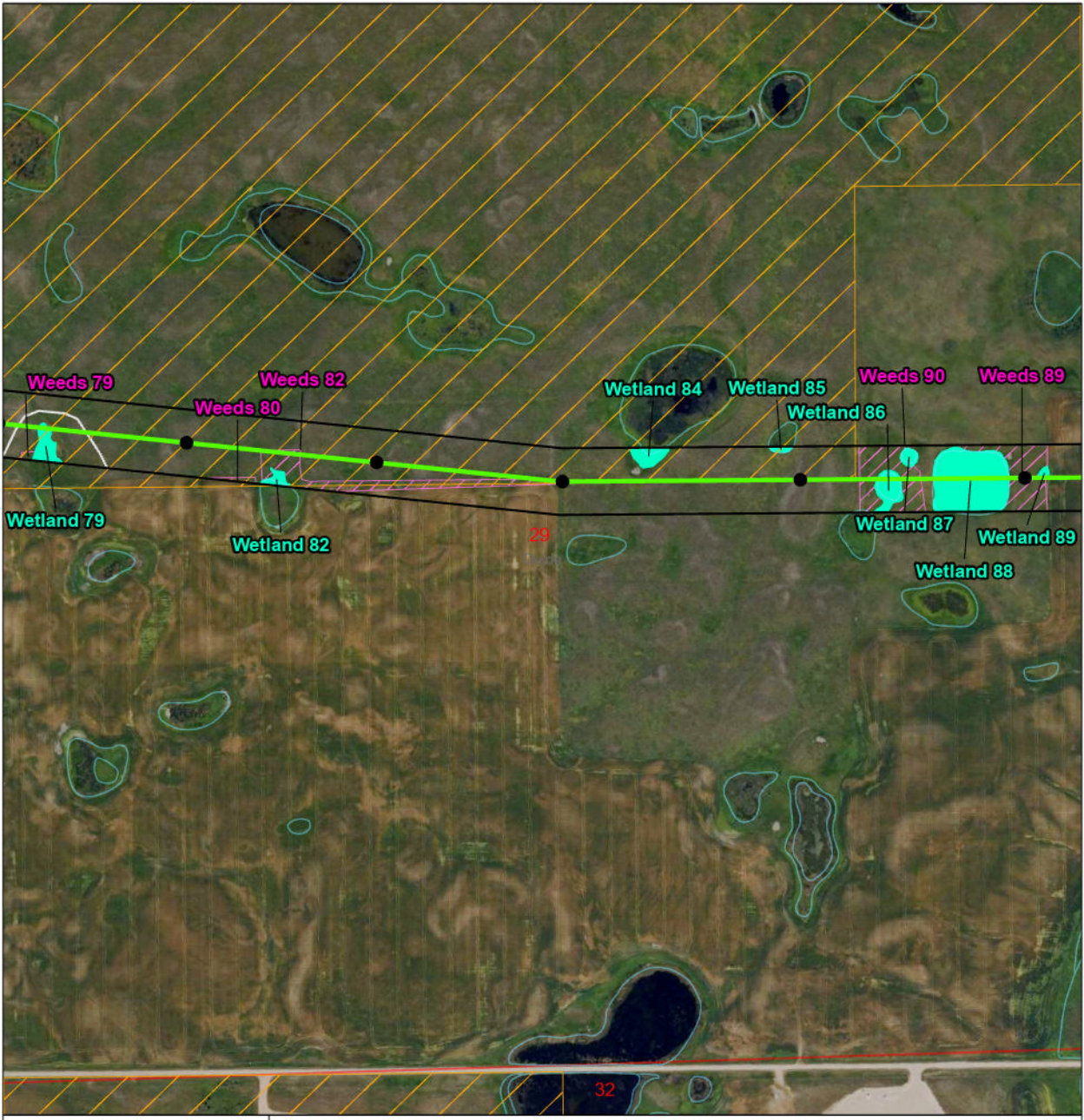
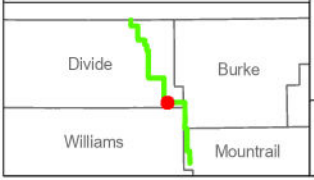



Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
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N W E S

0 0.06 0.1 0.2 mi

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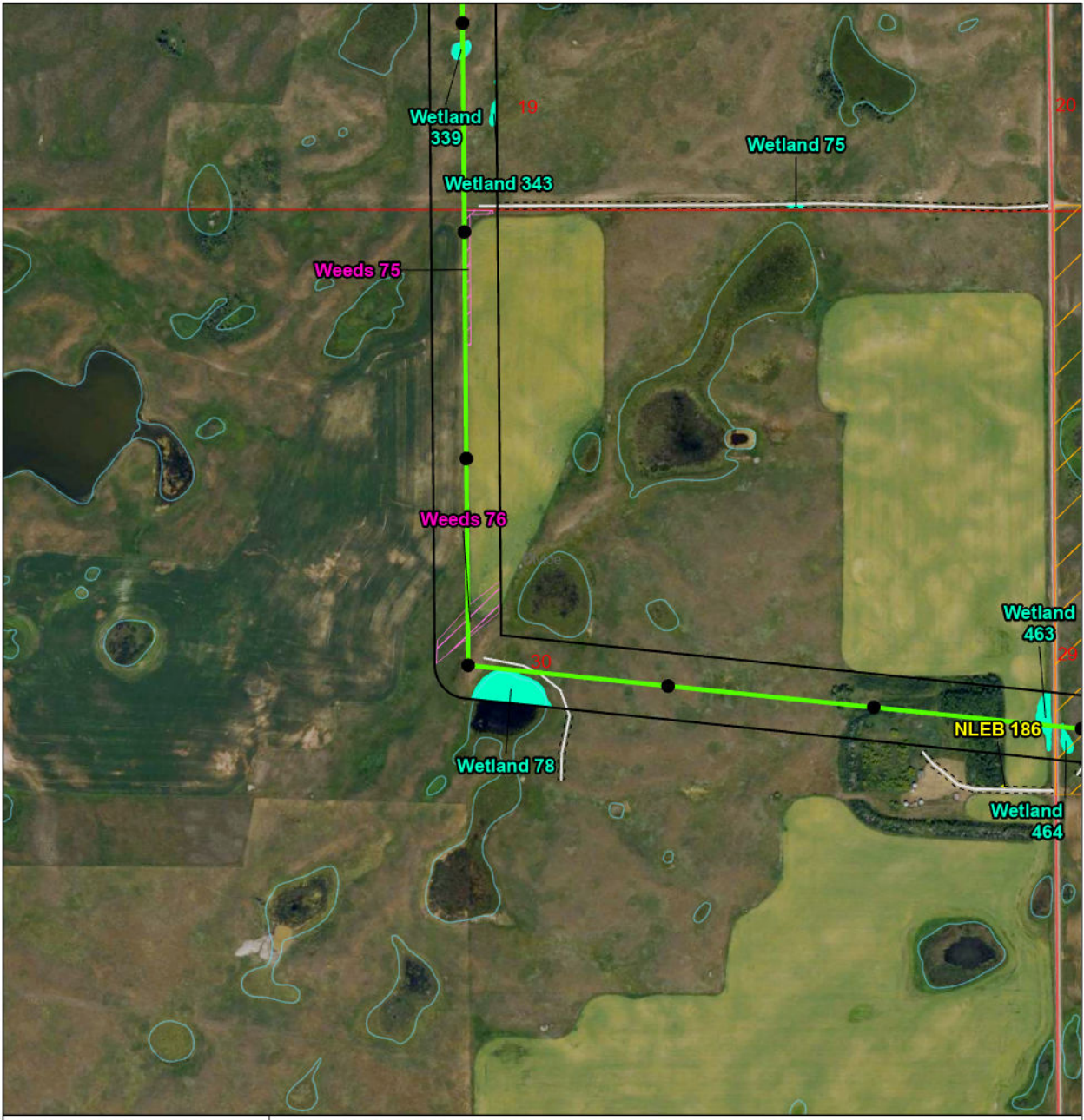
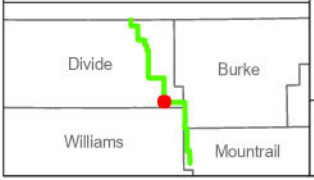



Tande to Saskatchewan 230-kV Transmission Project

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Access Route Survey Area (30-ft)
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Red-tailed Hawk Nest
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Structure

N
W E
S

0 0.06 0.1 0.2 mi

Scale: 1:9,000

Page Number: 26

Data Source: 2024 USDA FSA Aerial Photograph
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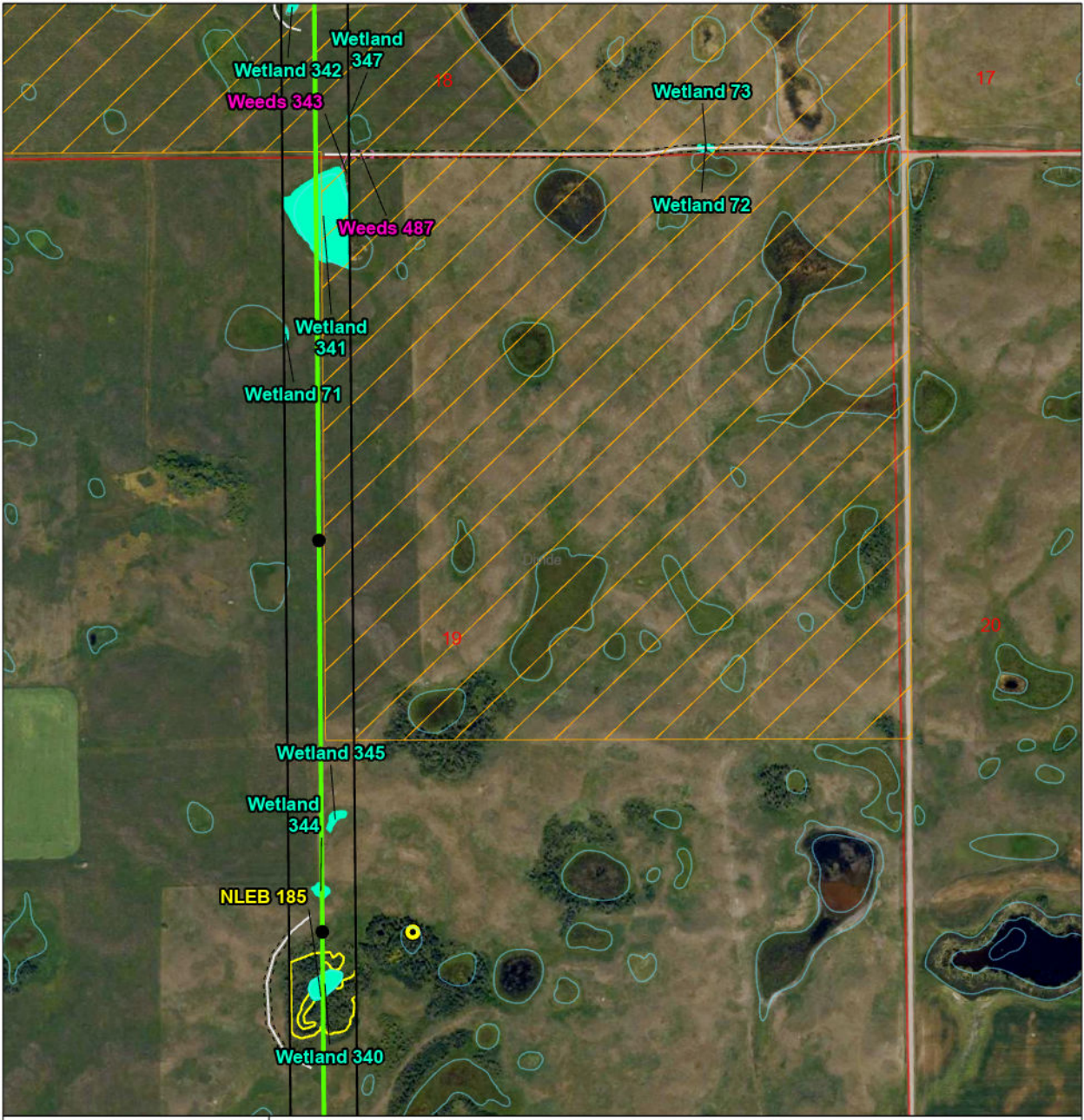
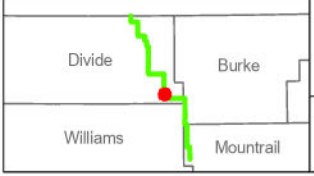



Tande to Saskatchewan 230-kV Transmission Project

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N
W E
S

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Data Source: 2024 USDA FSA Aerial Photograph
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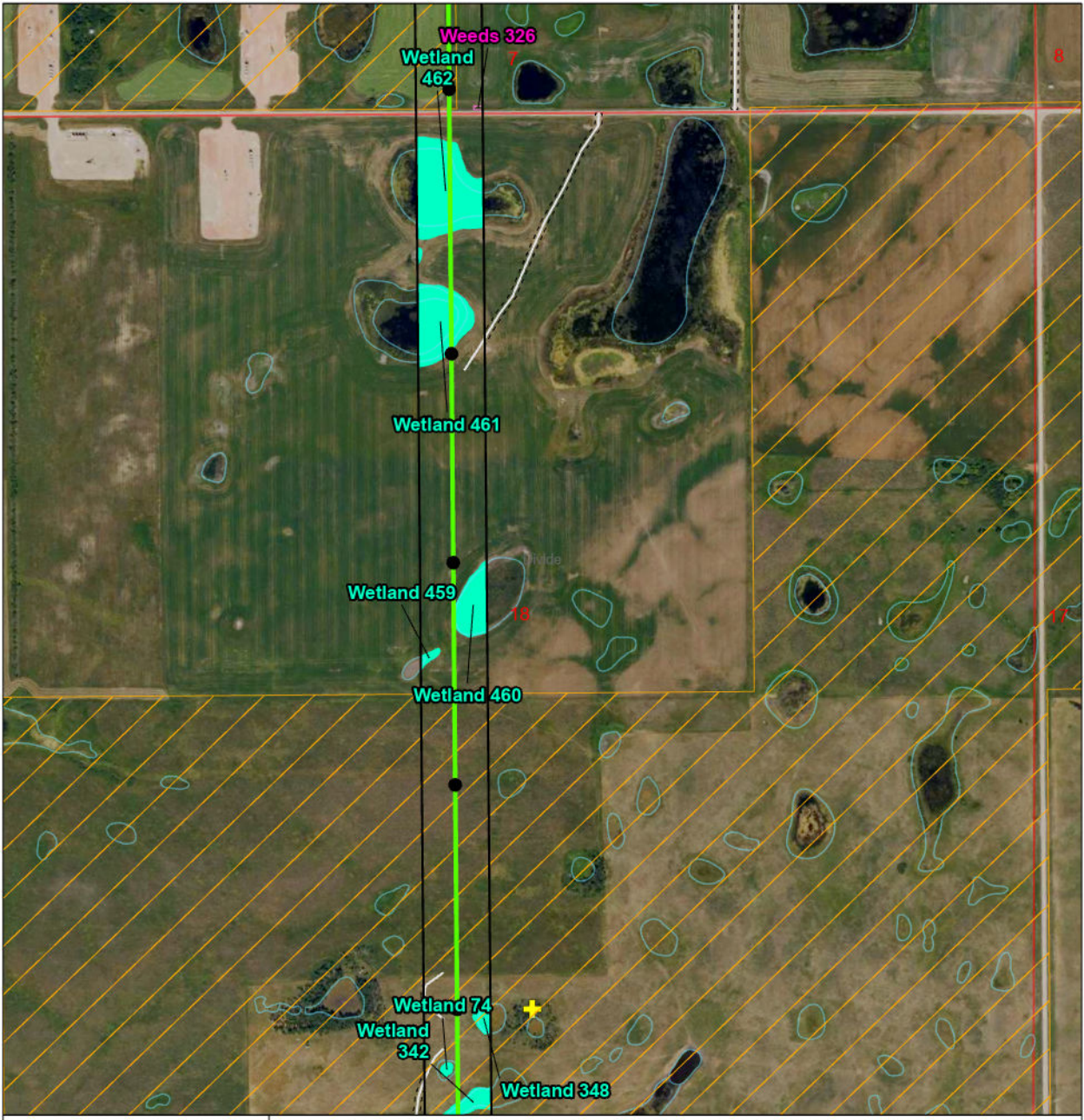
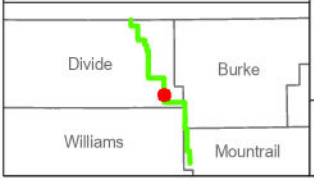



Tande to Saskatchewan 230-kV Transmission Project

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Structure

N W E S

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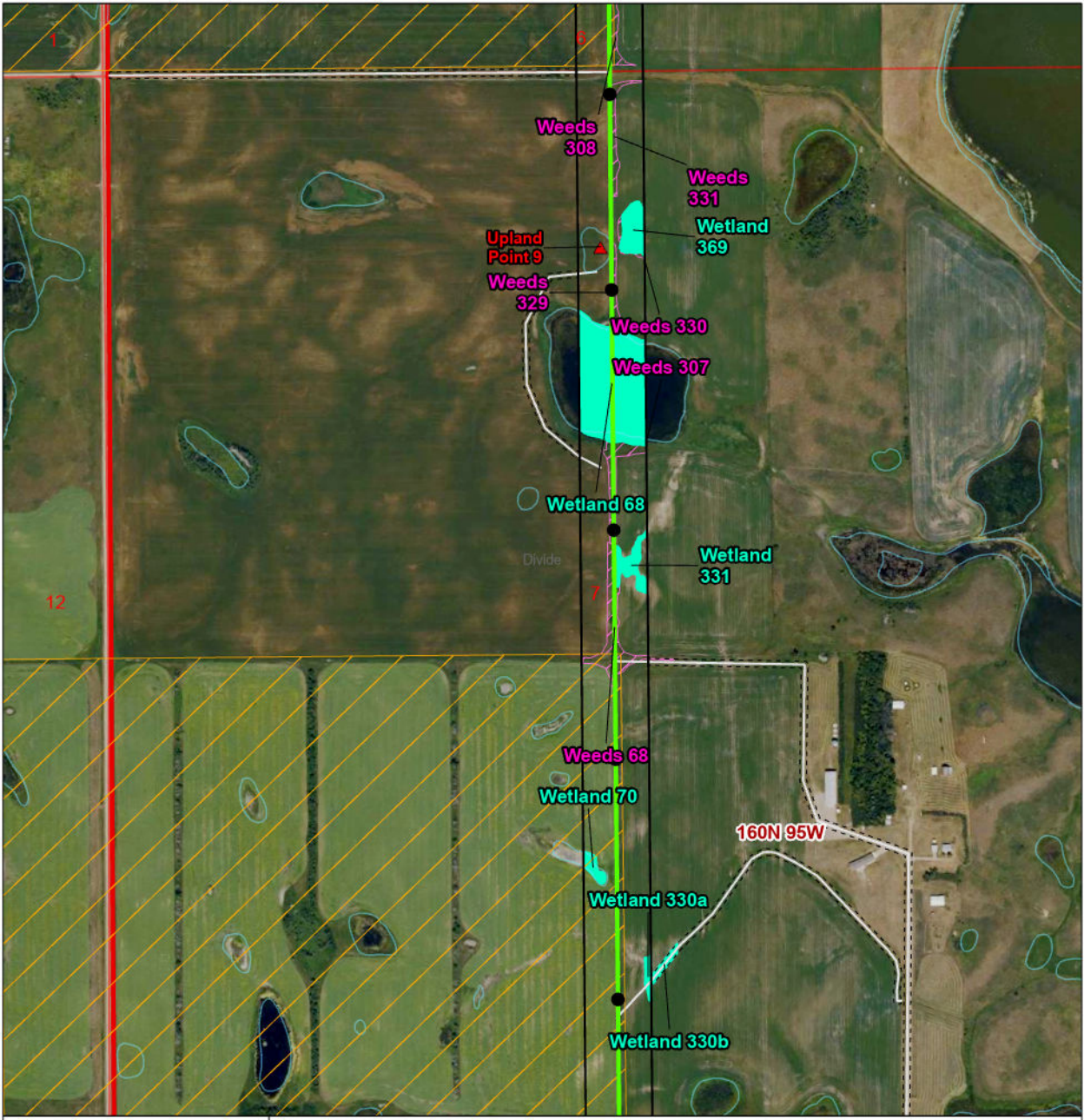
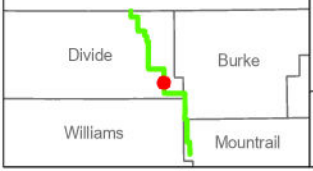



Tande to Saskatchewan 230-kV Transmission Project

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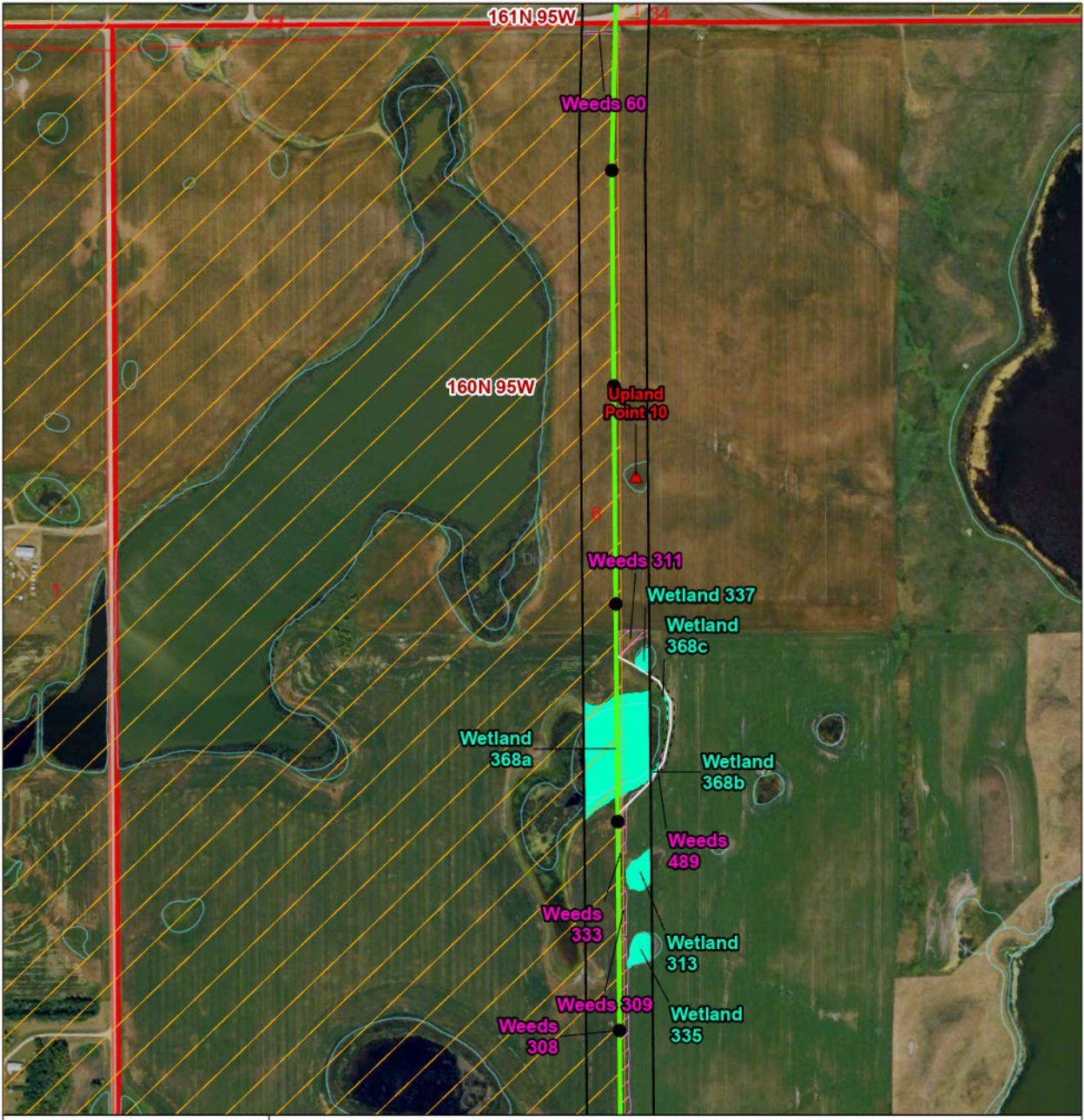
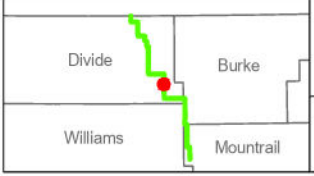



Tande to Saskatchewan 230-kV Transmission Project

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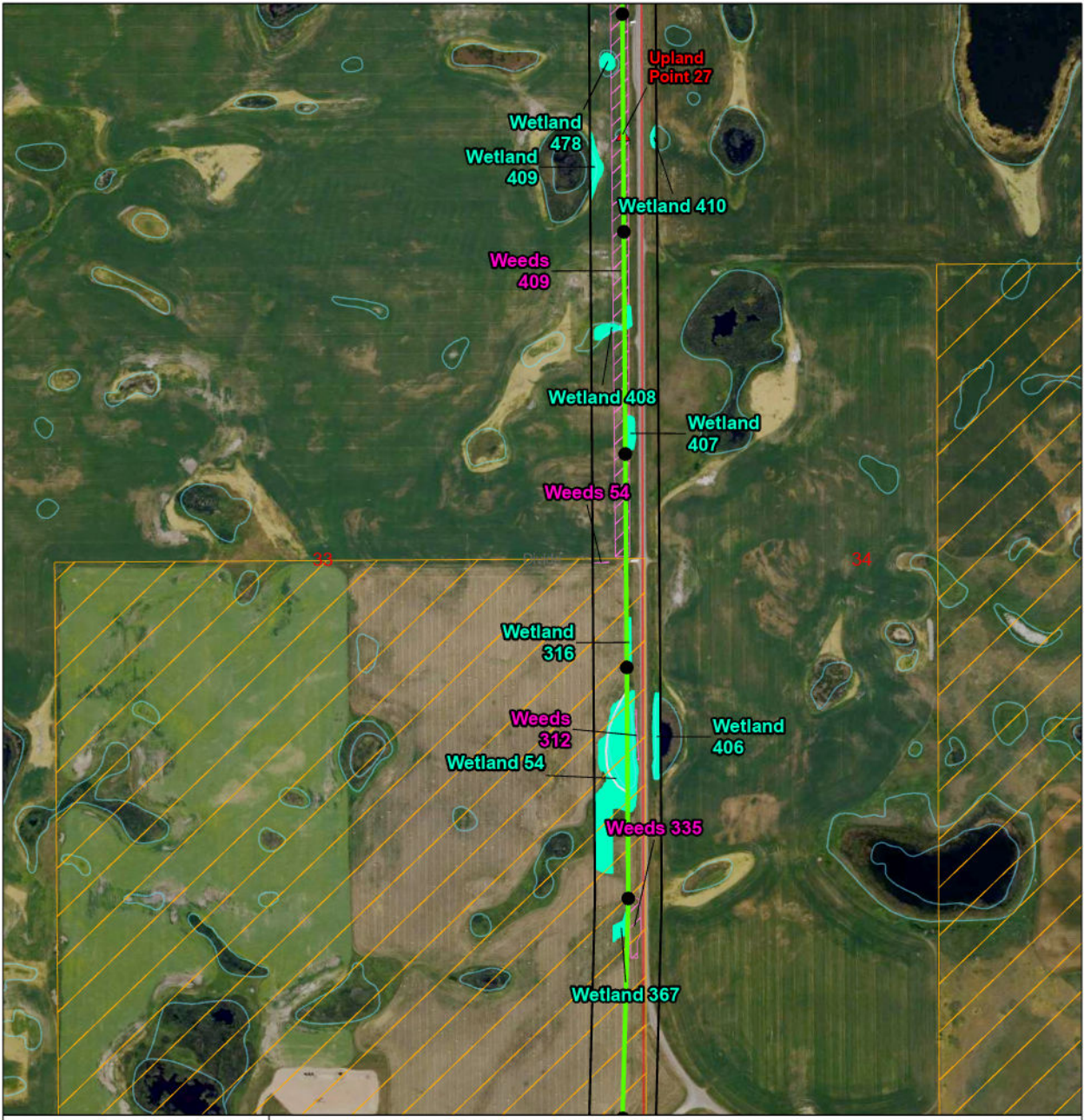
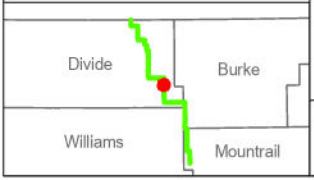



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
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Structure

N W E S

0 0.06 0.1 0.2 mi

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Page Number: 31

Data Source: 2024 USDA FSA Aerial Photograph
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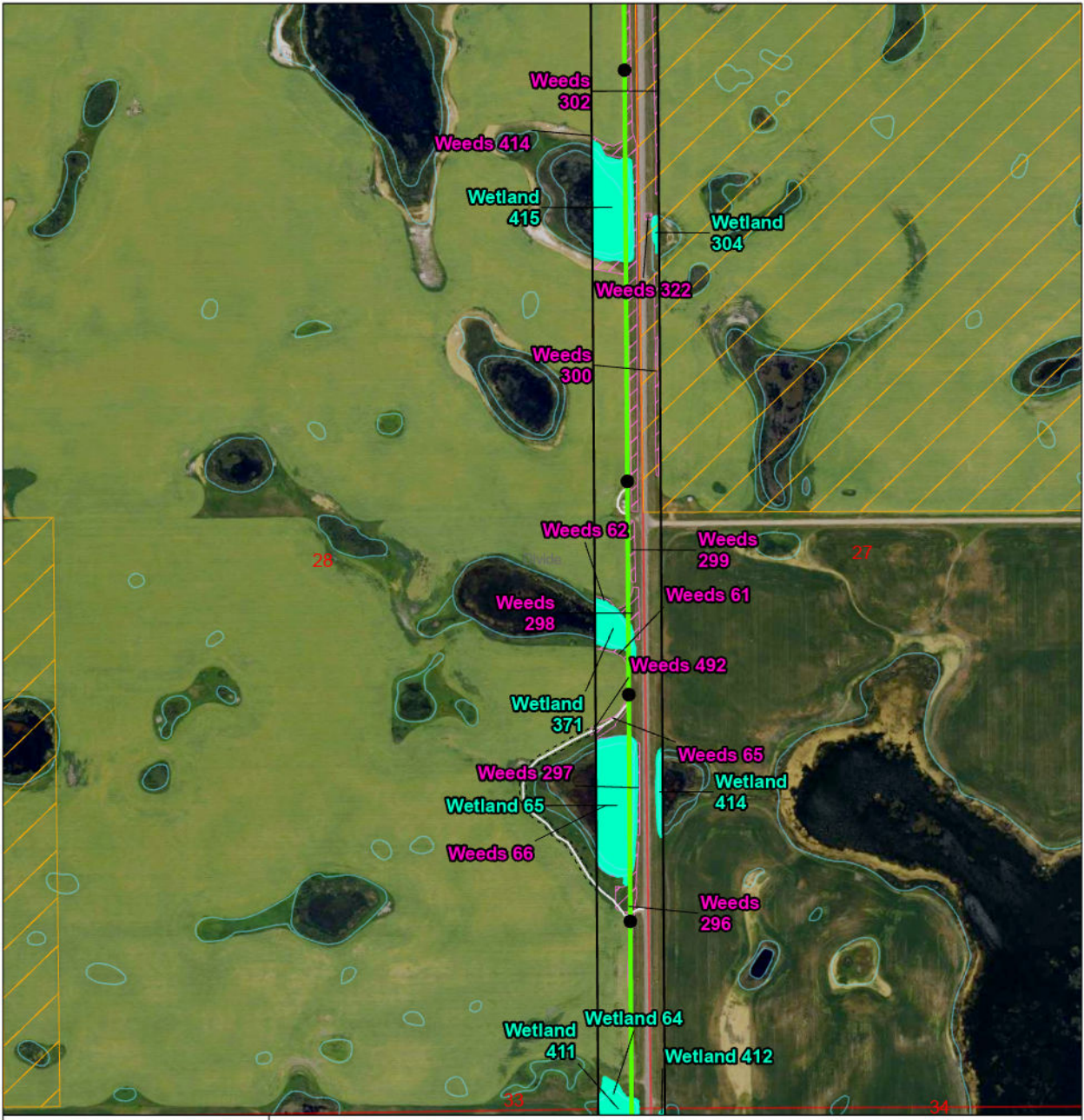


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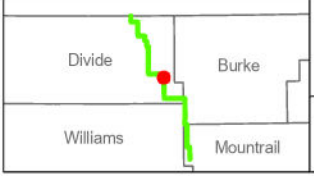


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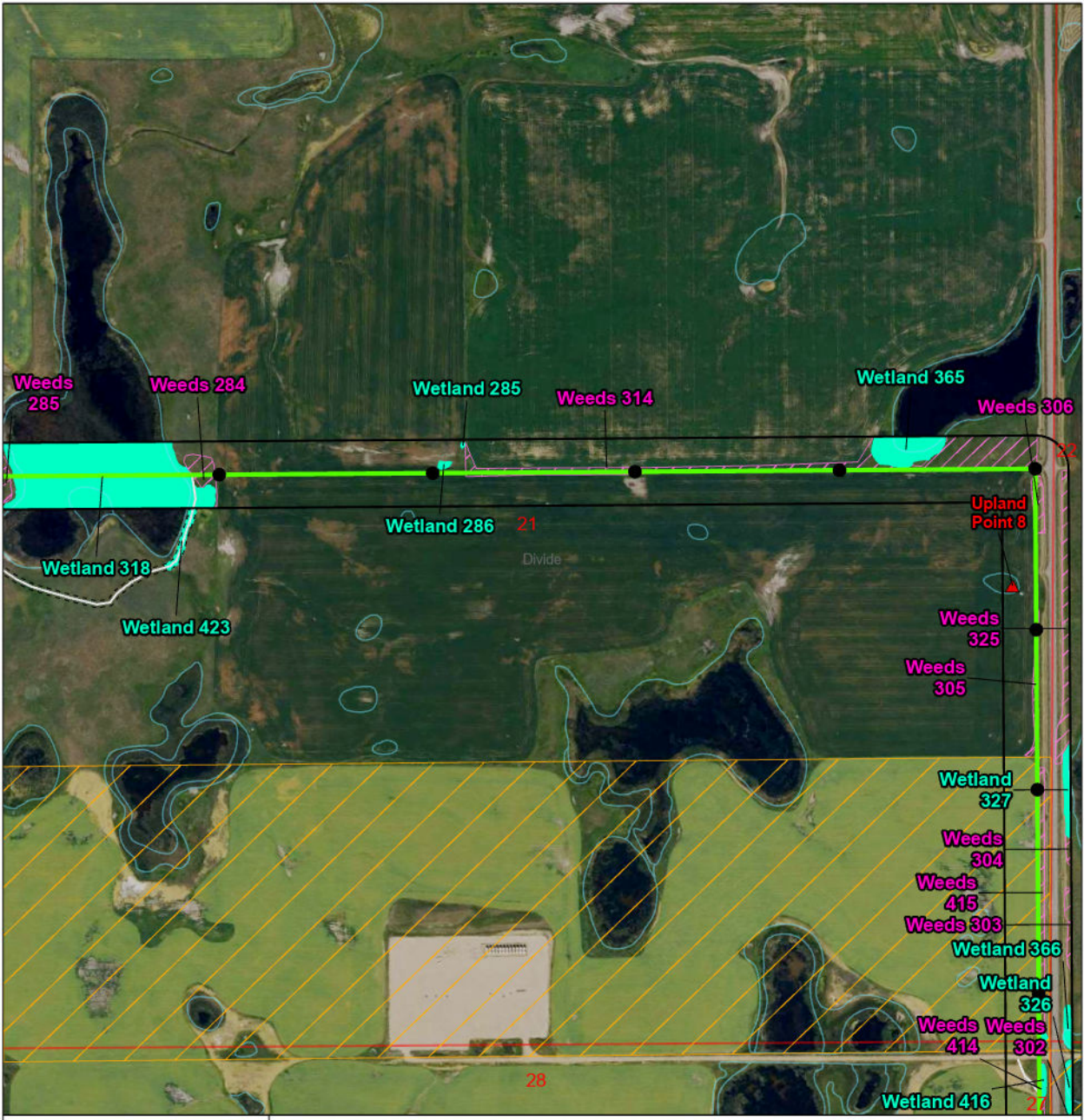


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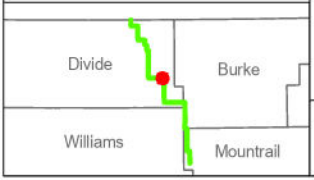


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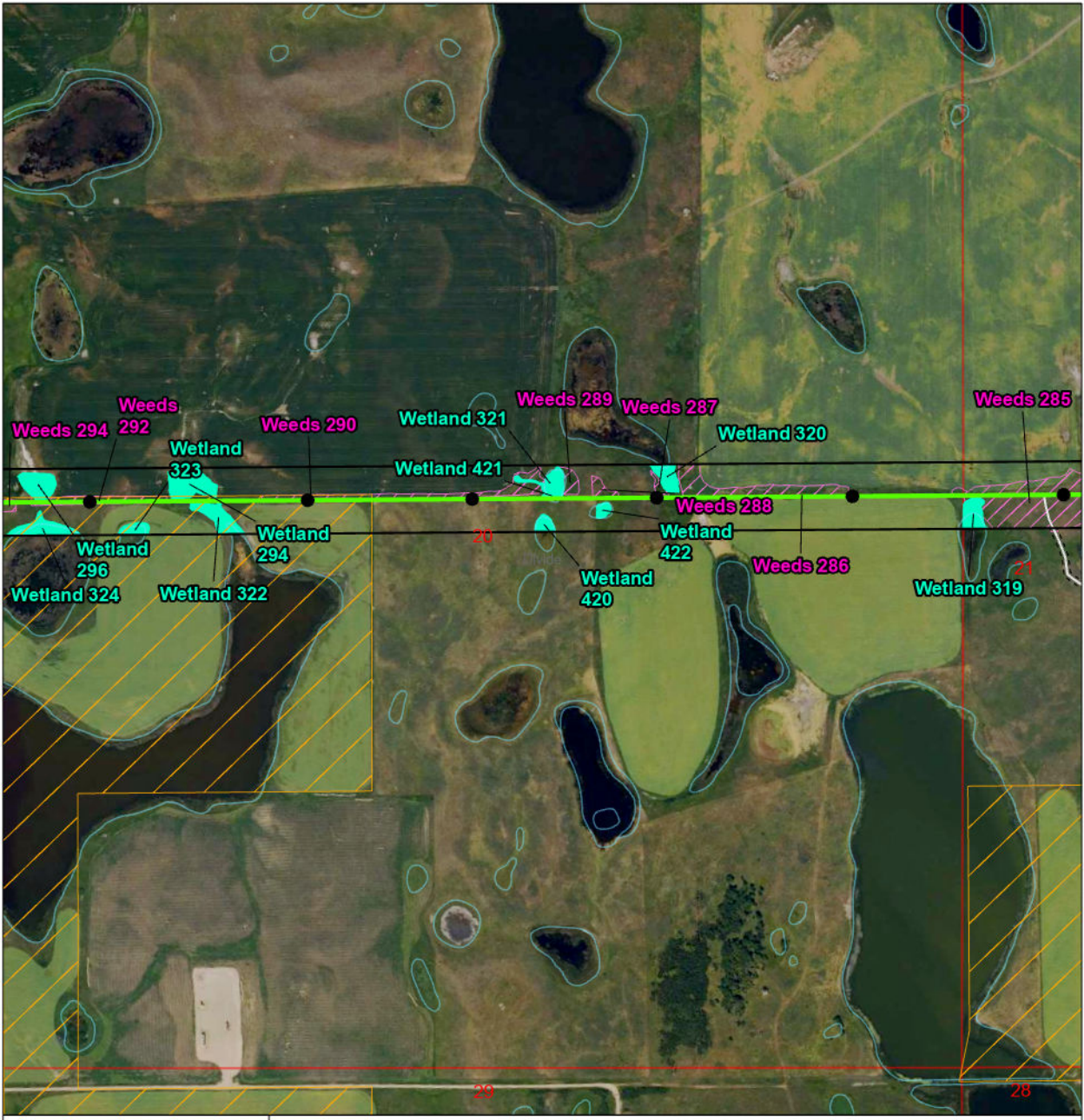


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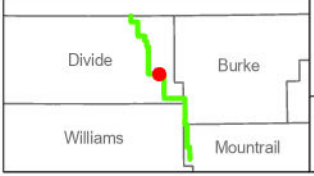


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Structure

N
W E
S

0 0.06 0.1 0.2 mi

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Page Number: 34

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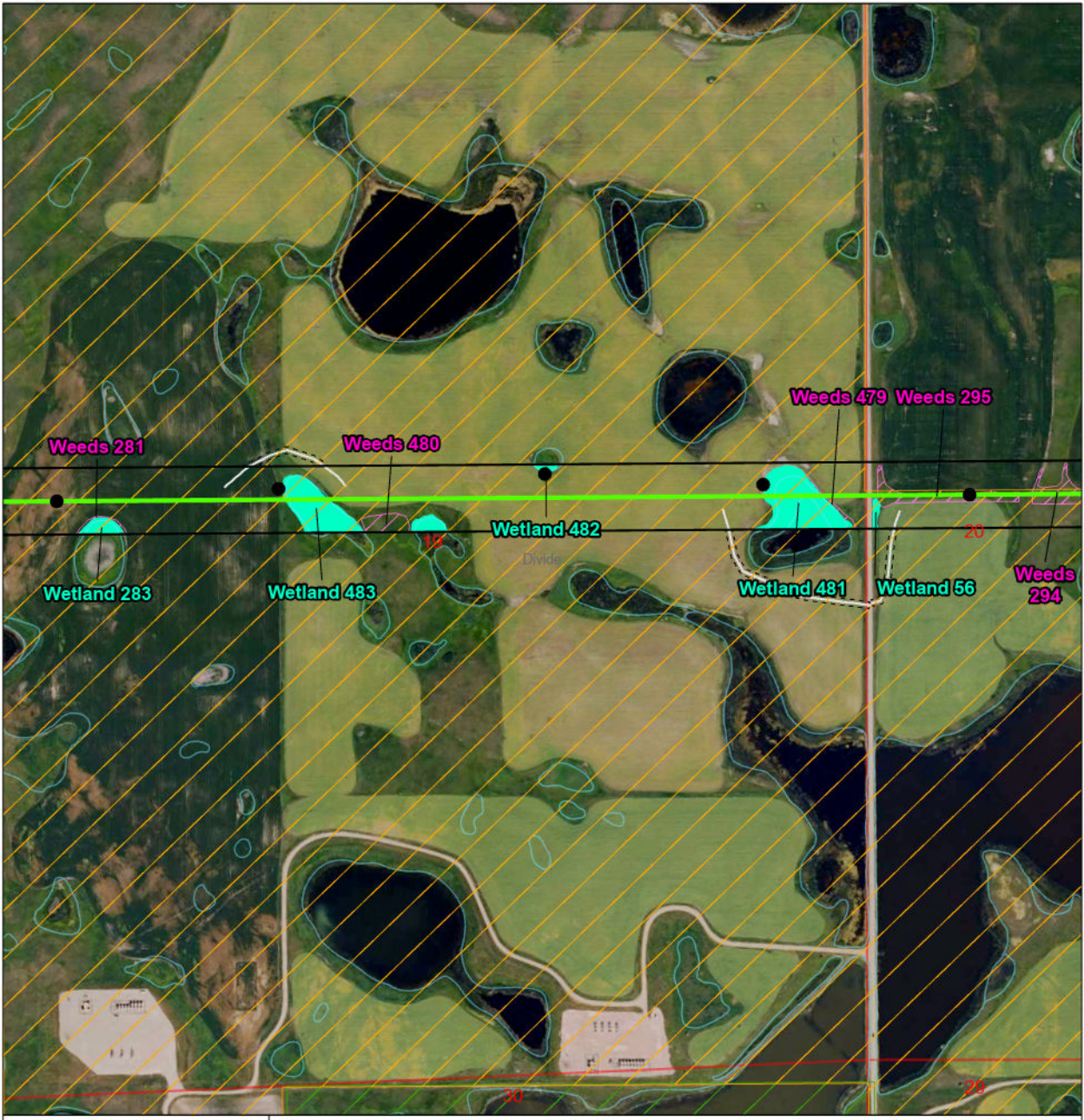


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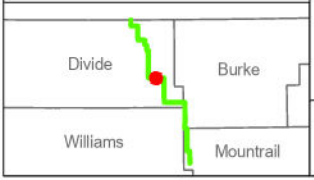


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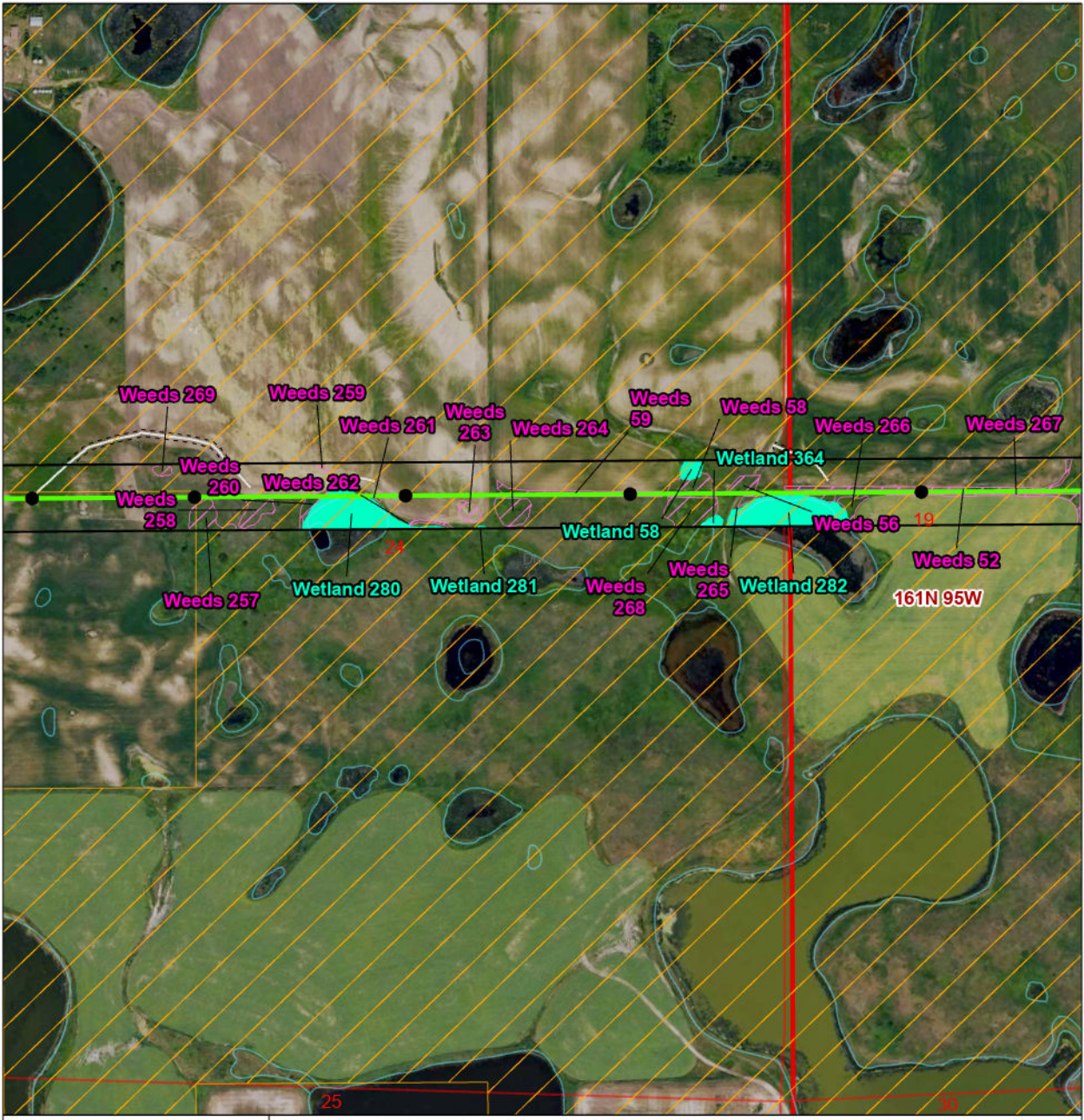


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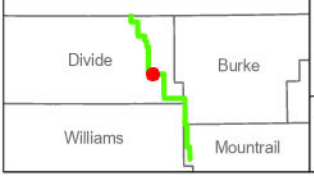


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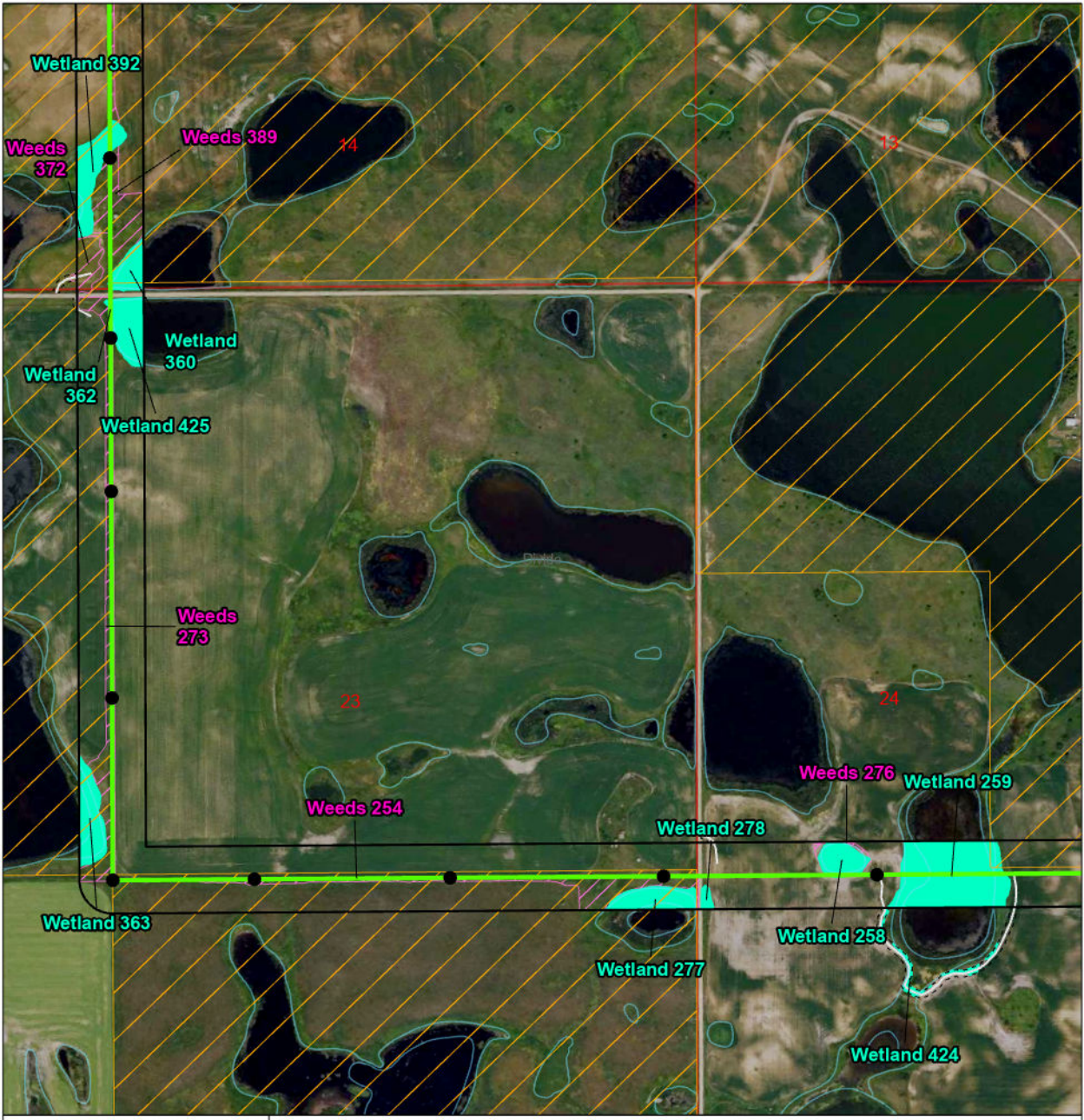
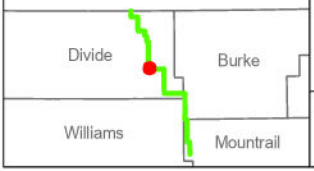



Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

Field Survey Feature
Weeds
DASK Habitat
NLEB Habitat
Waterbody
Wetland

DASK Avoidance Buffers
1/2-mi Minimal Grassland Impact Buffer
500-m Flight Window Avoidance Buffer

USFWS Easement
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N
W E
S

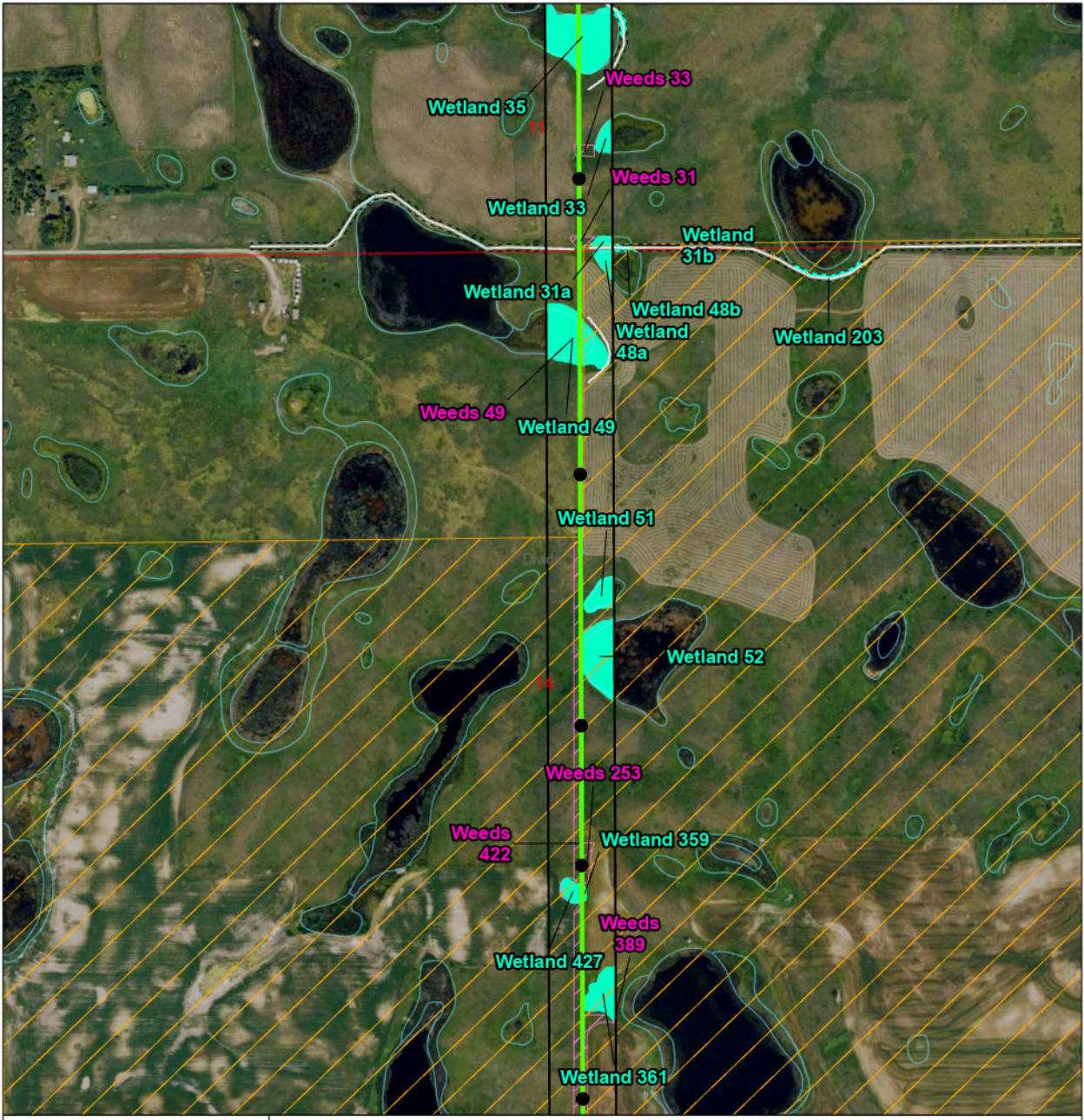
0 0.06 0.1 0.2 mi

Scale: 1:9,000

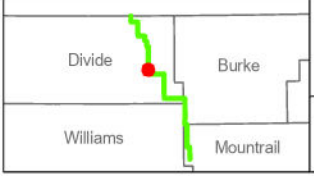
Page Number: 37

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

WEST




Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
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NWI Signature

Field Survey Feature
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Scale: 1:9,000



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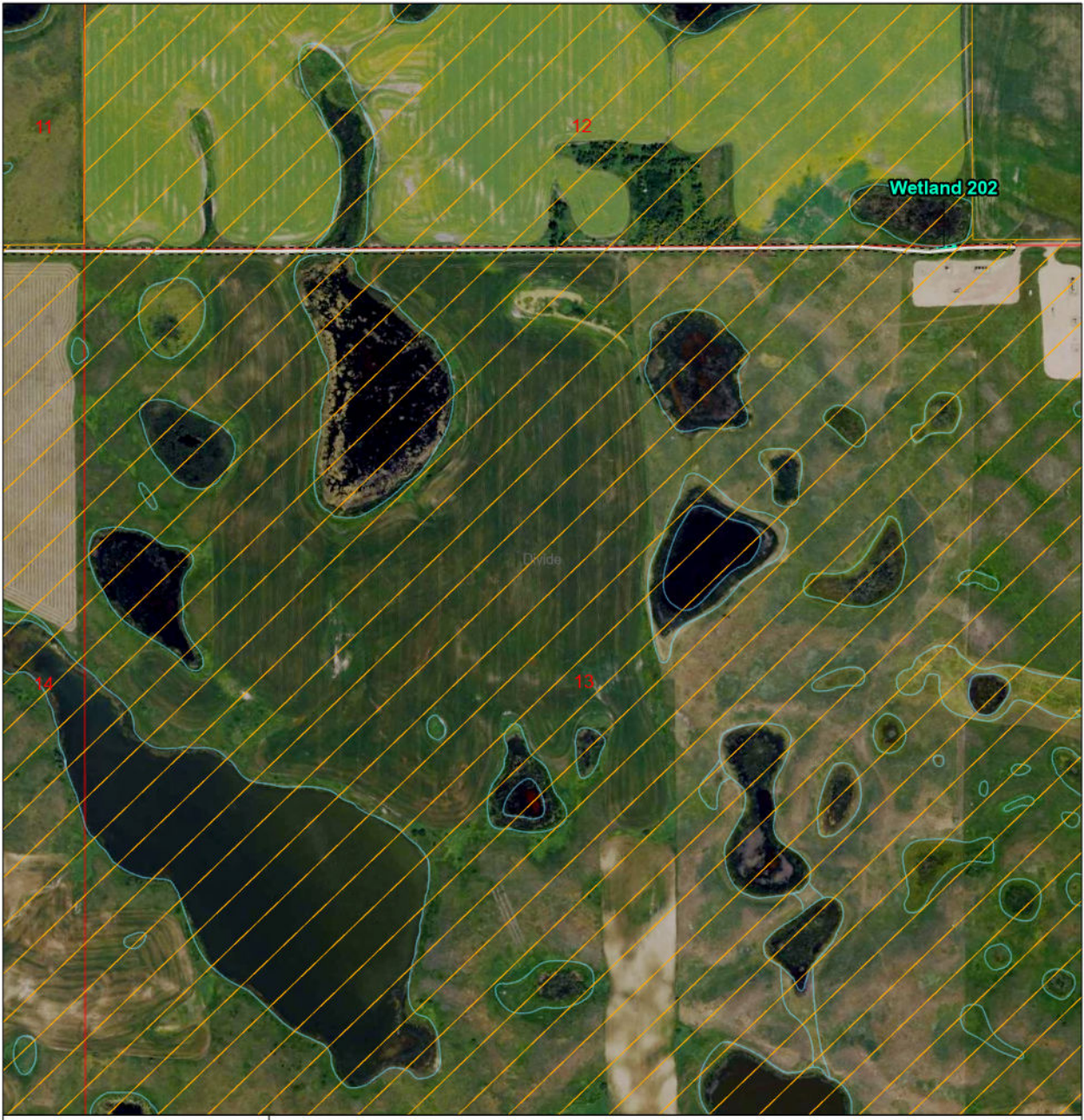
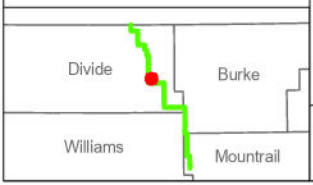



Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
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NLEB Habitat
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1/2-mi Minimal Grassland Impact Buffer
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Waterfowl Production Area
Wetland Easement

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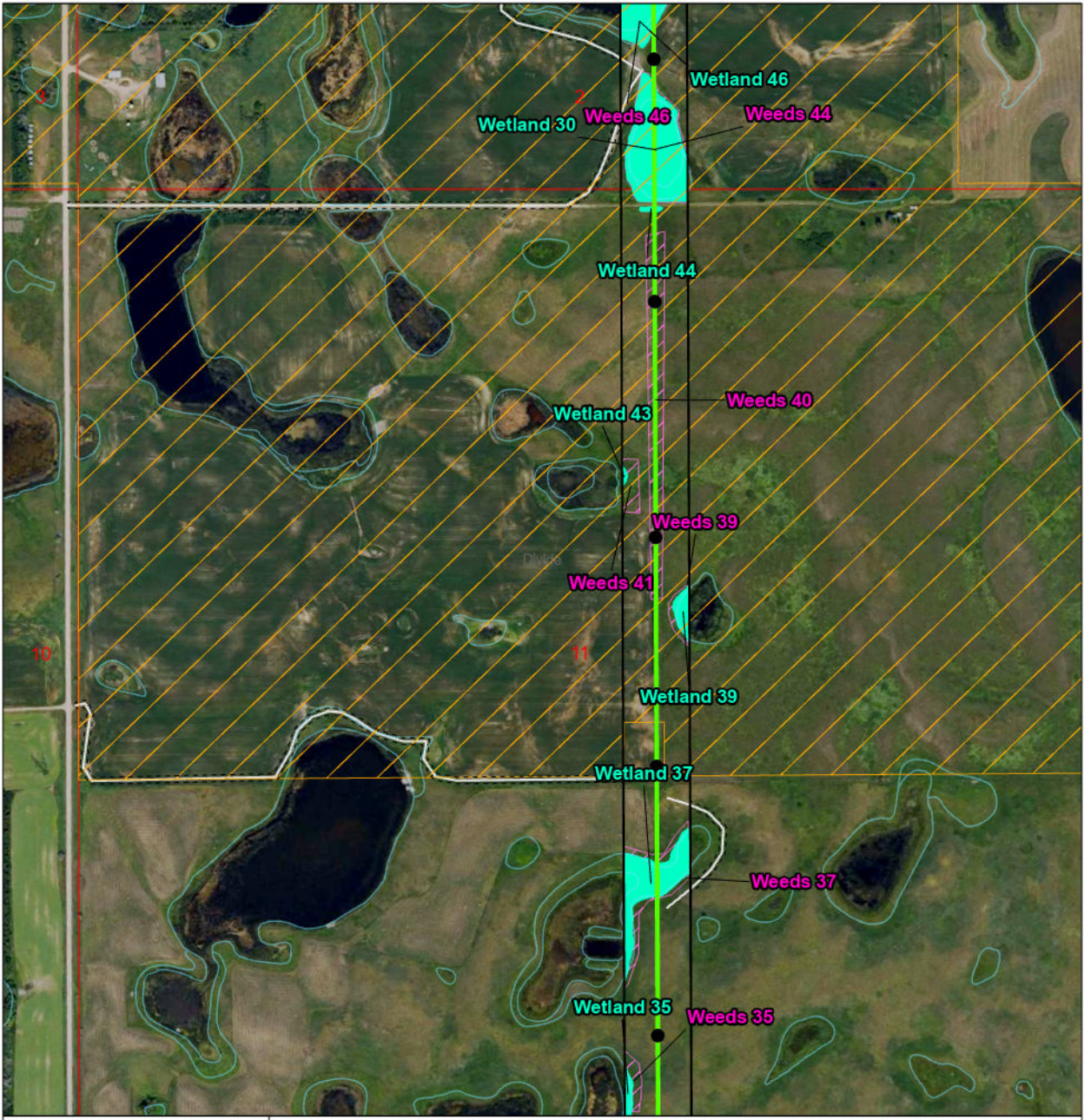
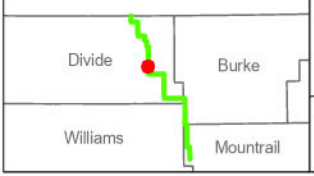



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
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**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 40

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

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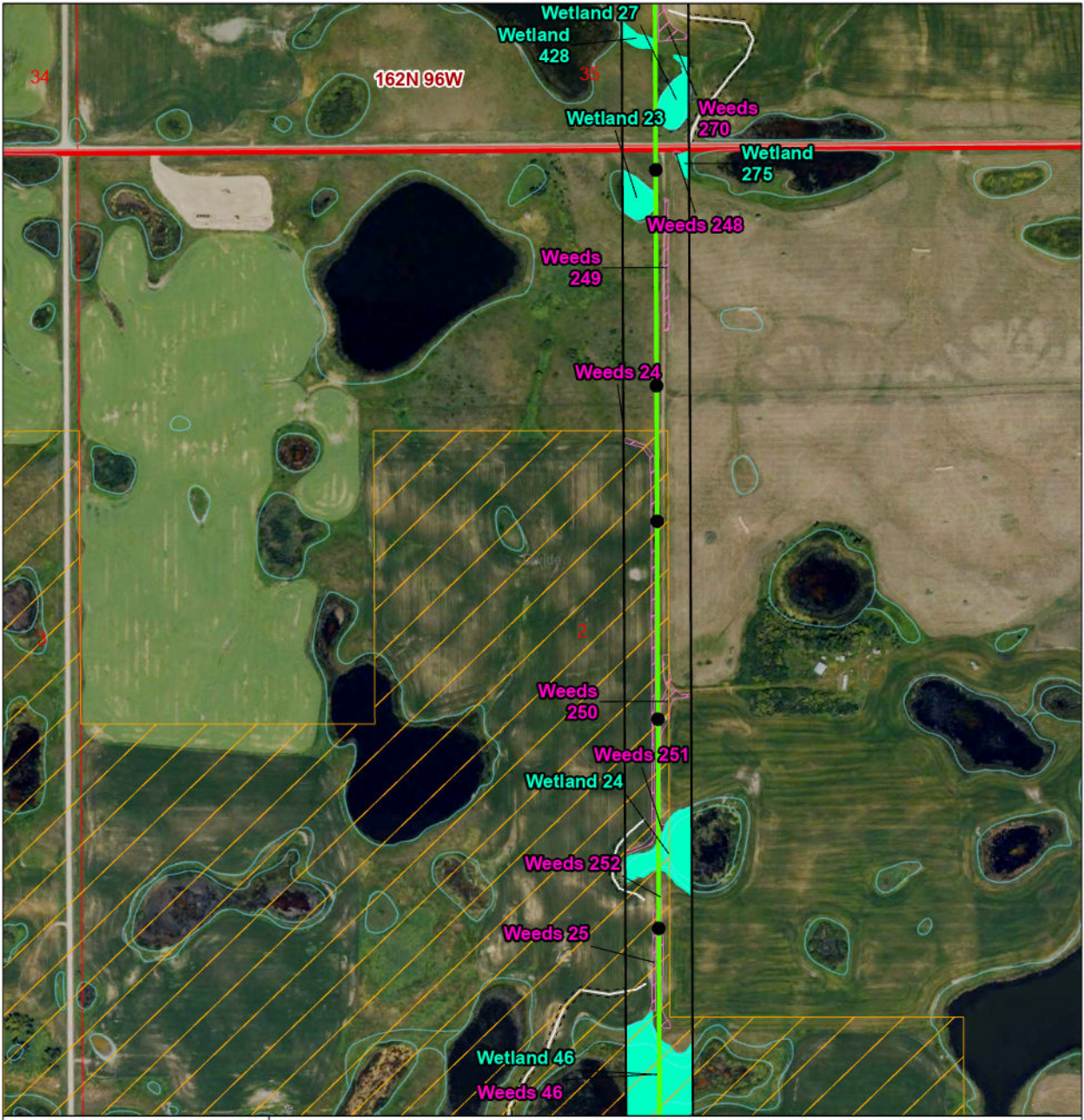
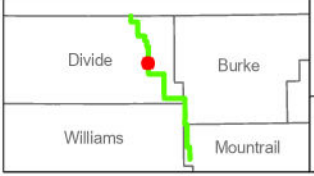



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
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**Field Survey Feature**
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Farm Service Agency Transfer
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Great Horned Owl Nest
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Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



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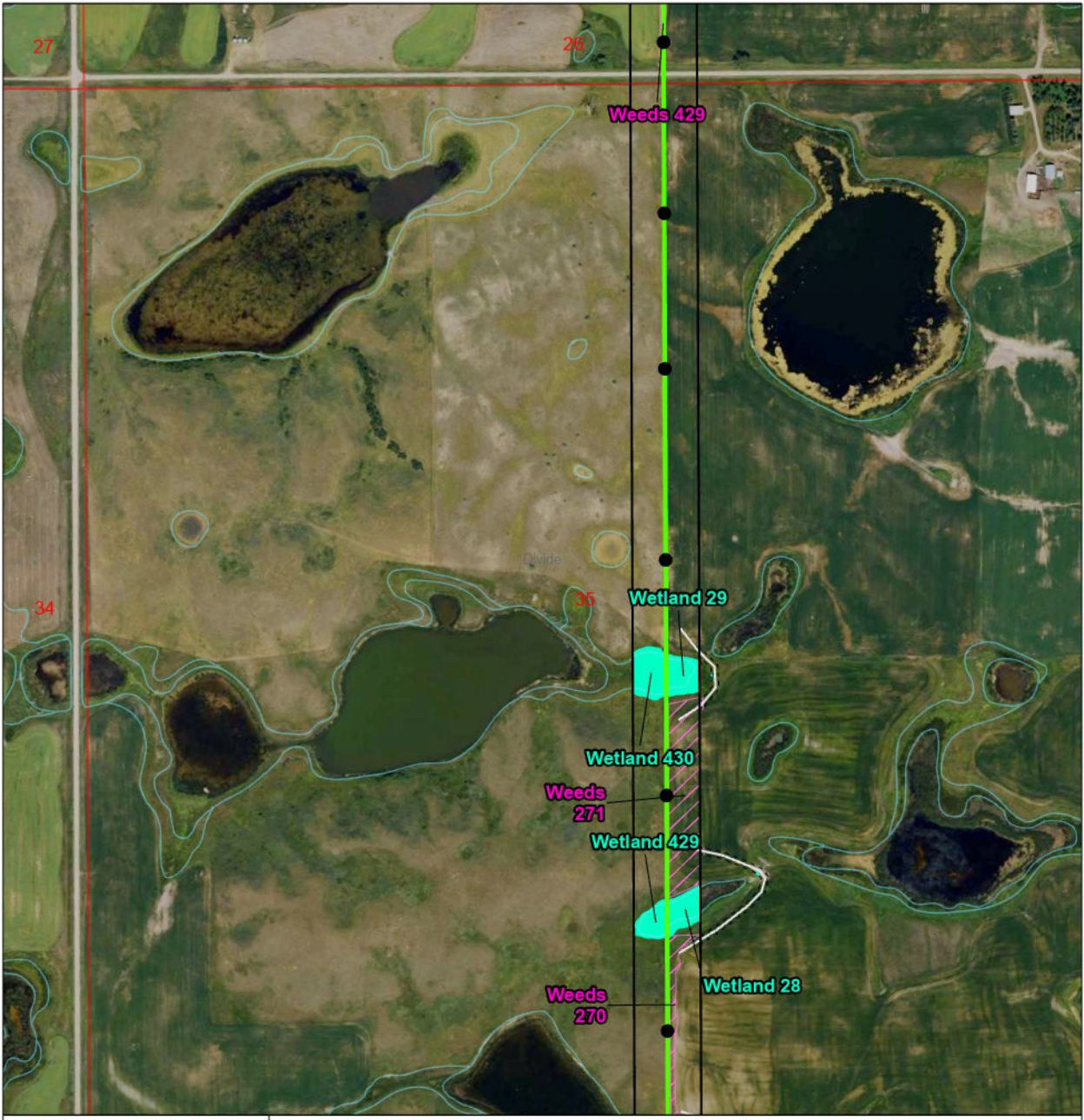
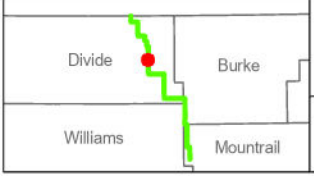



Tande to Saskatchewan 230-kV Transmission Project




- Route of Focus
- Potential Access
- Survey Corridor (300-ft)
- Access Route Survey Area (30-ft)
- NWI Signature

**Field Survey Feature**
- Weeds
- DASK Habitat
- NLEB Habitat
- Waterbody
- Wetland

**DASK Avoidance Buffers**
- 1/2-mi Minimal Grassland Impact Buffer
- 500-m Flight Window Avoidance Buffer

**USFWS Easement**
- Farm Service Agency Transfer
- Waterfowl Production Area
- Wetland Easement

- Great Horned Owl Nest
- Red-tailed Hawk Nest
- Upland Point
- Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 42

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

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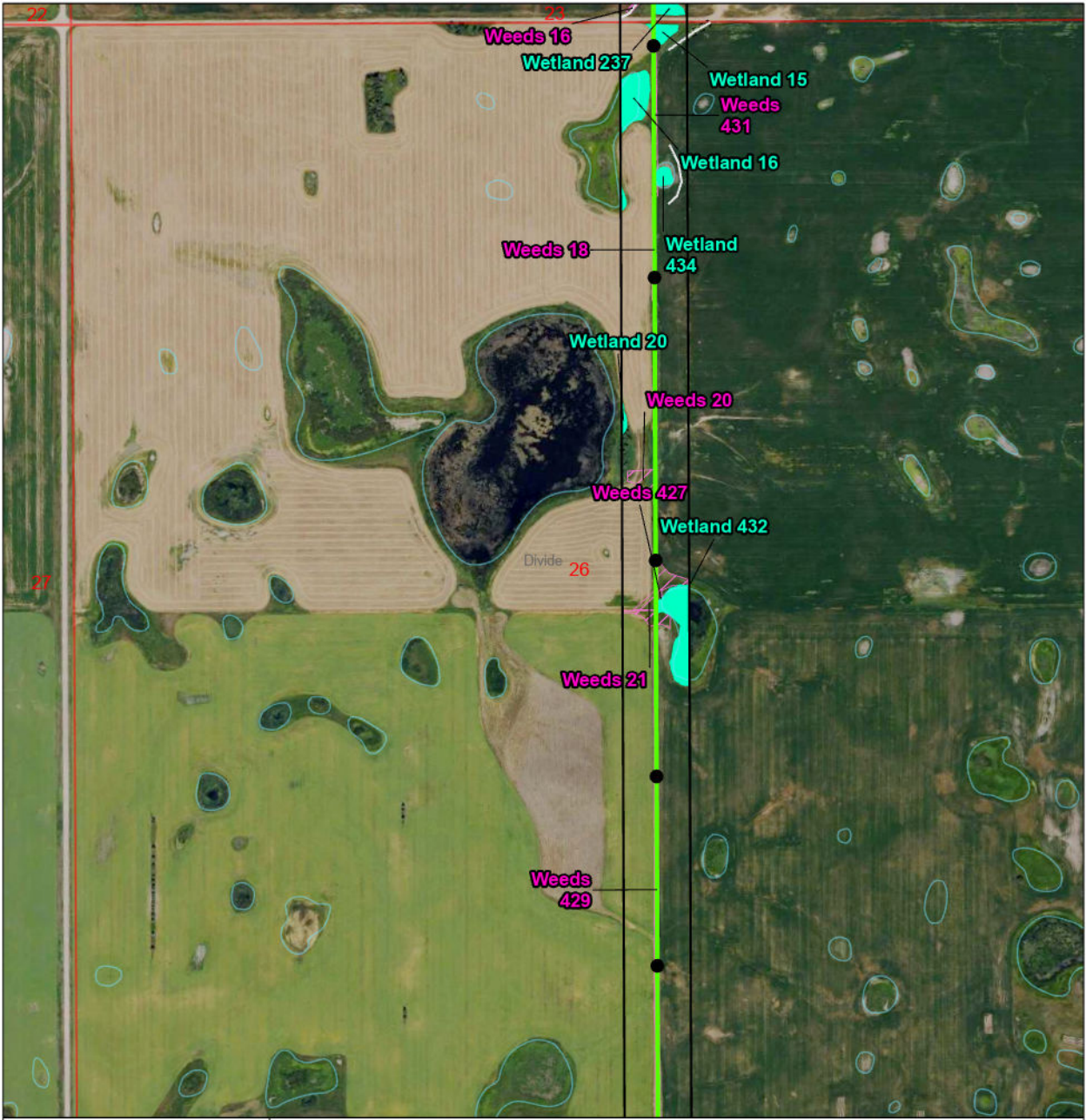
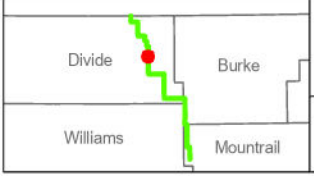



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

**Field Survey Feature**
Weeds
DASK Habitat
NLEB Habitat
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**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 43

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

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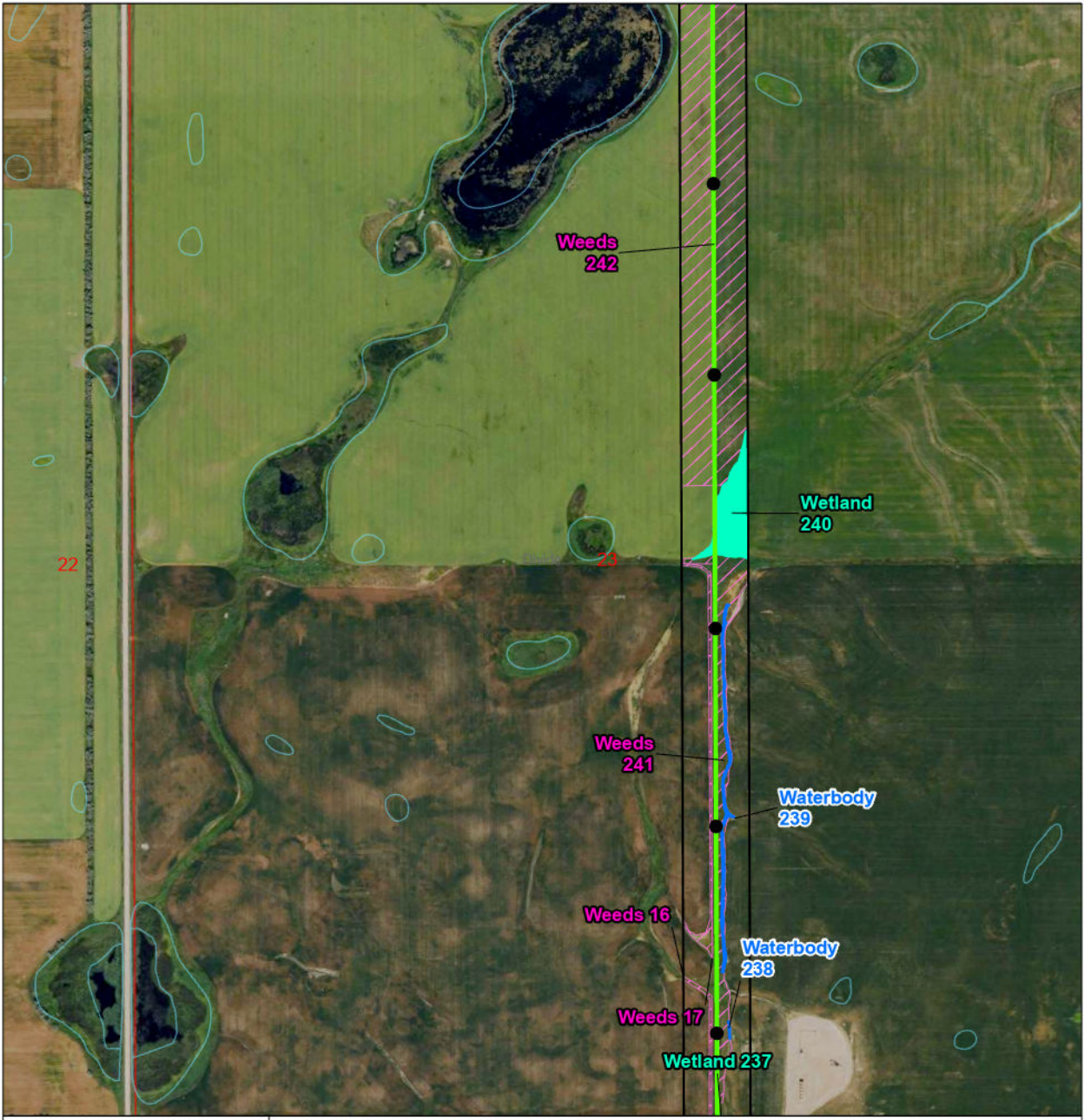


Tande to Saskatchewan
230-kV Transmission Project

Route of Focus
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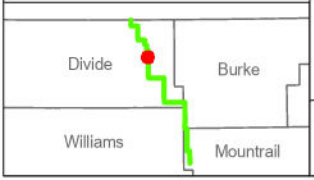
USFWS Easement
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure




N
W E
S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



Data Source: 2024 USDA FSA Aerial Photograph
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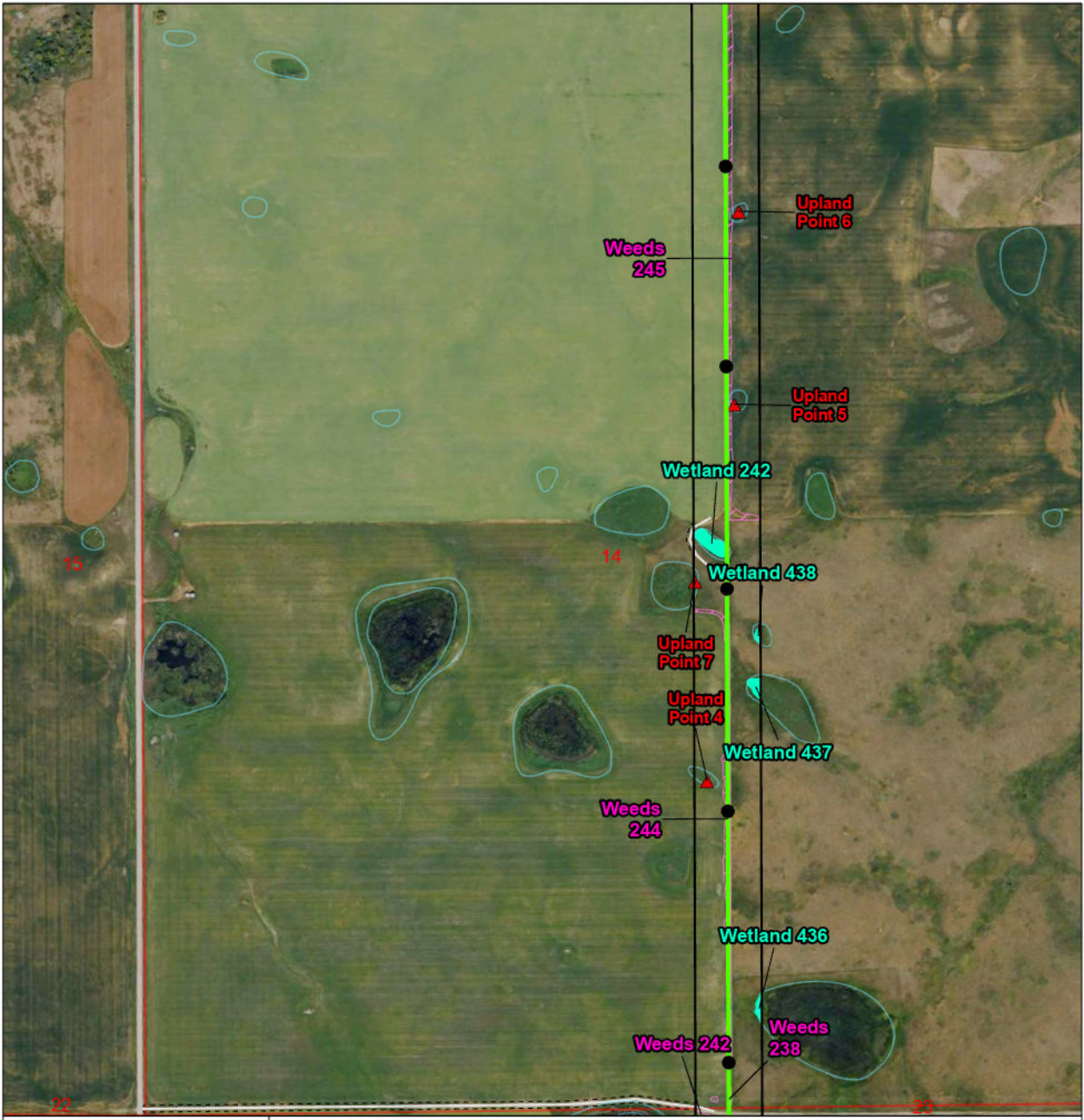
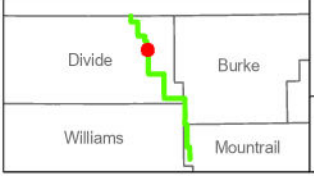



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
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**Field Survey Feature**
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NLEB Habitat
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**USFWS Easement**
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



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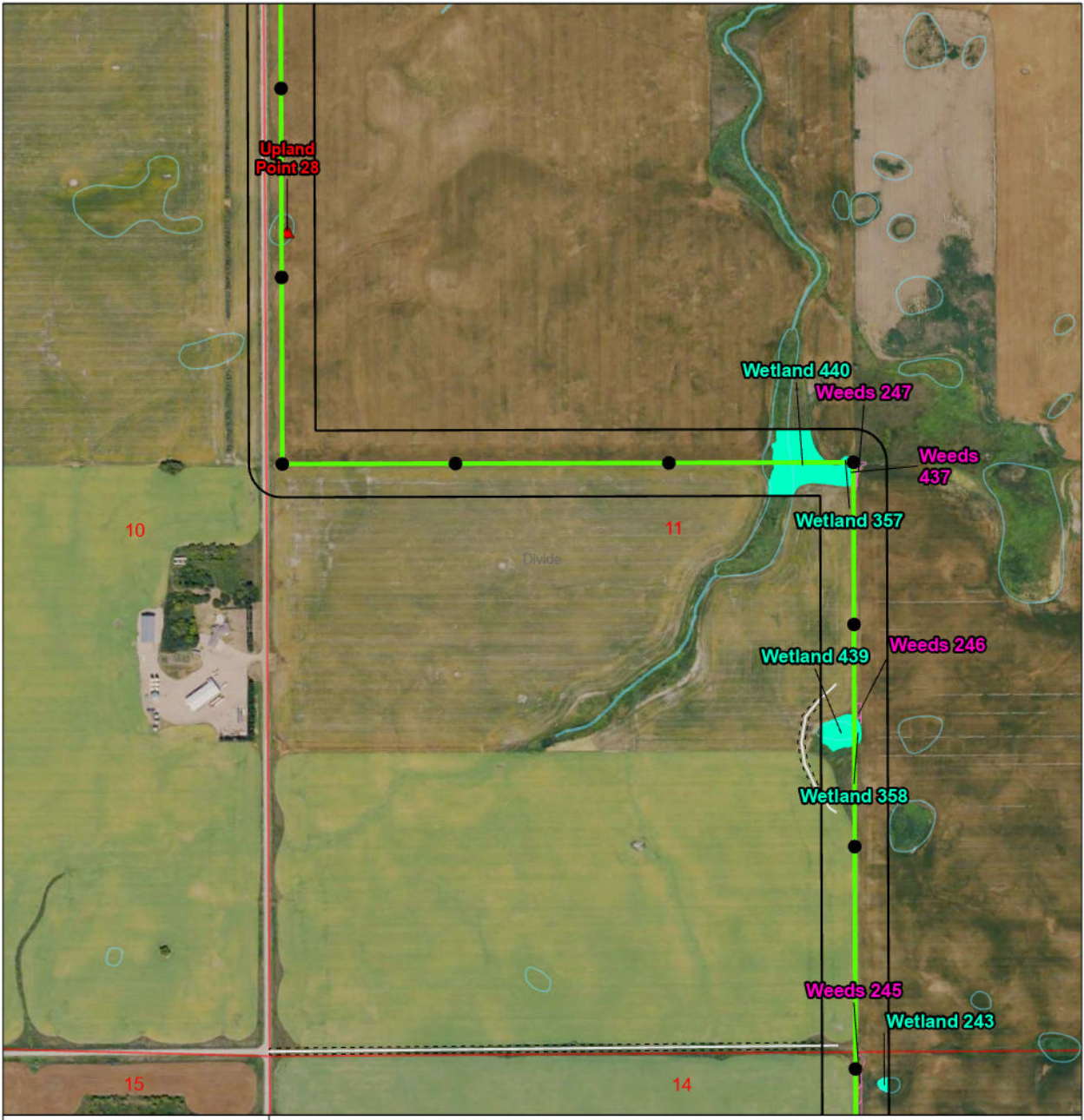
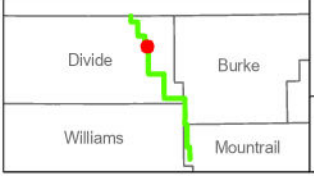



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
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Access Route Survey Area (30-ft)
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Field Survey Feature
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USFWS Easement
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



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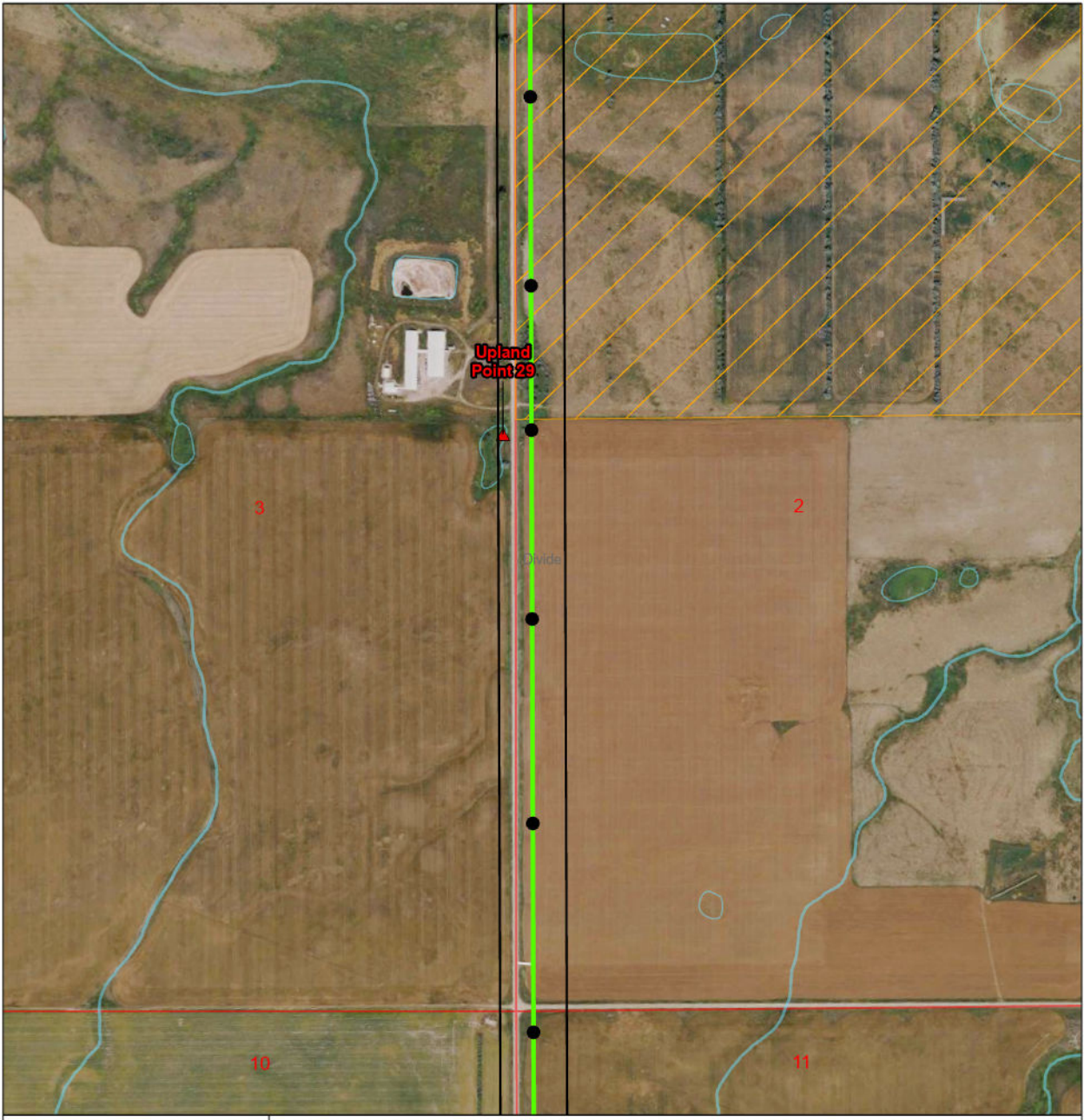
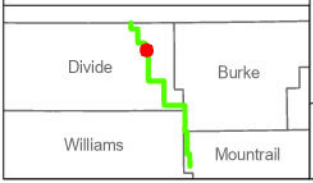



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
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Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

0 0.06 0.1 0.2 mi

Scale: 1:9,000

Page Number: 47

Data Source: 2024 USDA FSA Aerial Photograph
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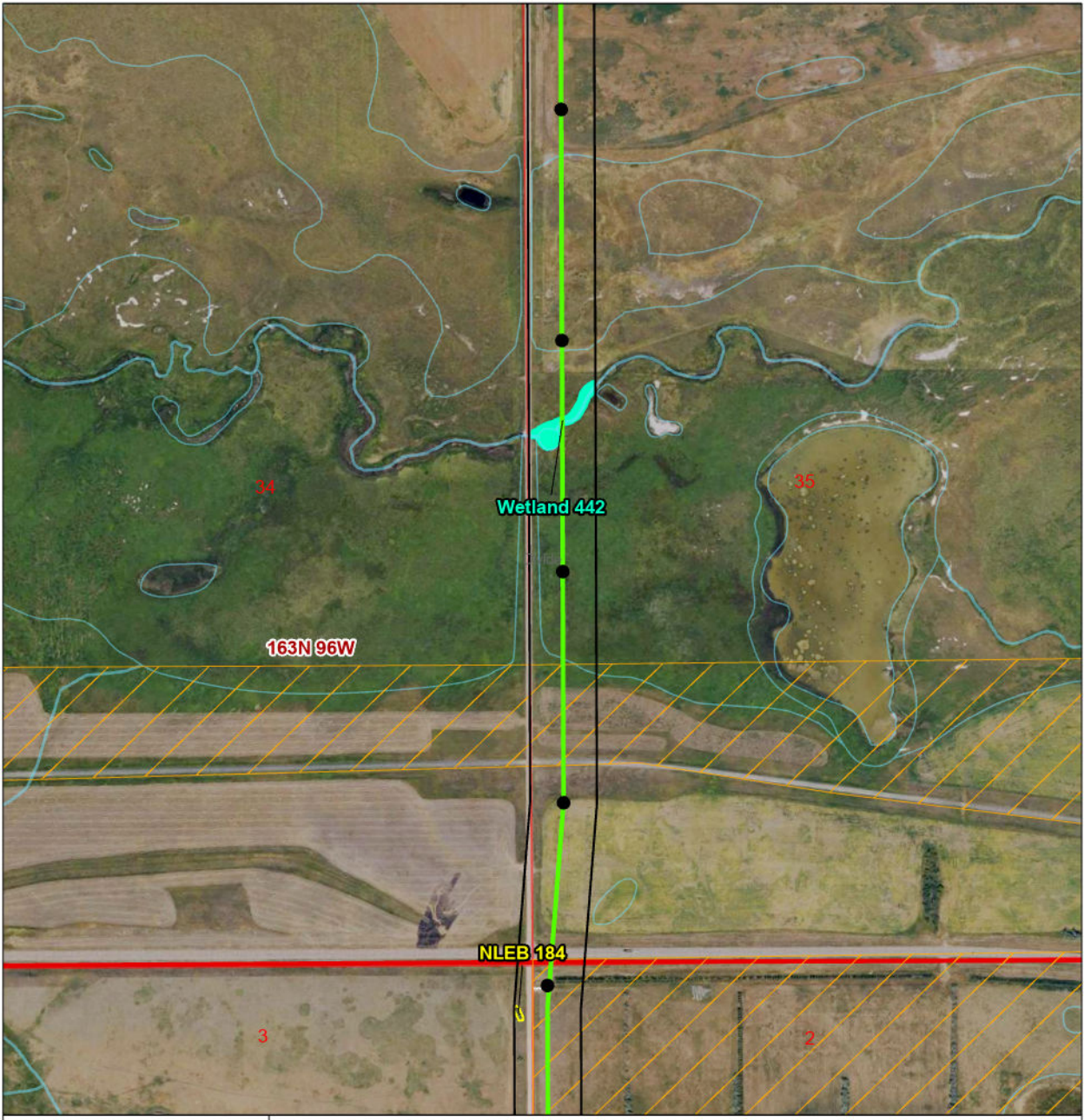
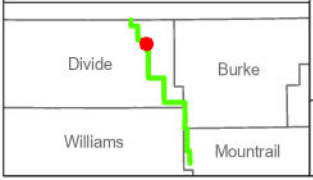



Tande to Saskatchewan
230-kV Transmission Project




Route of Focus
Potential Access
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Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N
W E
S

0 0.06 0.1 0.2 mi

Scale: 1:9,000



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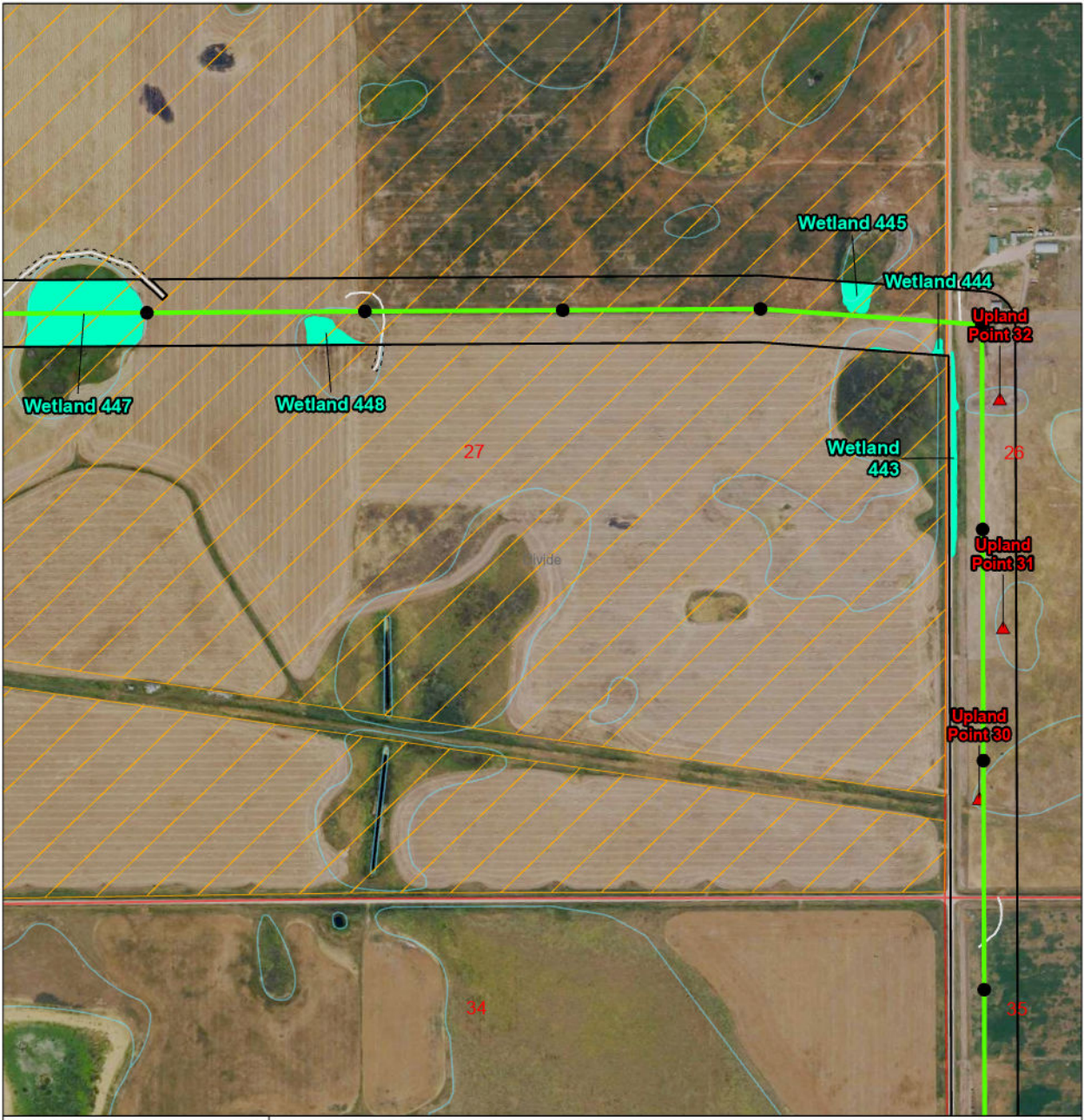
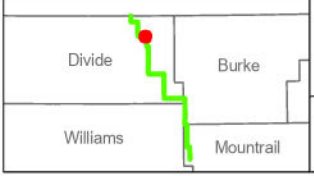



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
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Great Horned Owl Nest
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Upland Point
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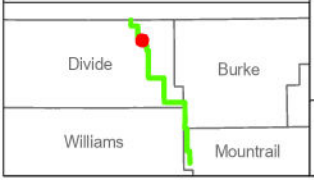
Tande to Saskatchewan
230-kV Transmission Project

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Red-tailed Hawk Nest
Upland Point
Structure

N
W E
S

0 0.06 0.1 0.2 mi

Scale: 1:9,000 Page Number: 50

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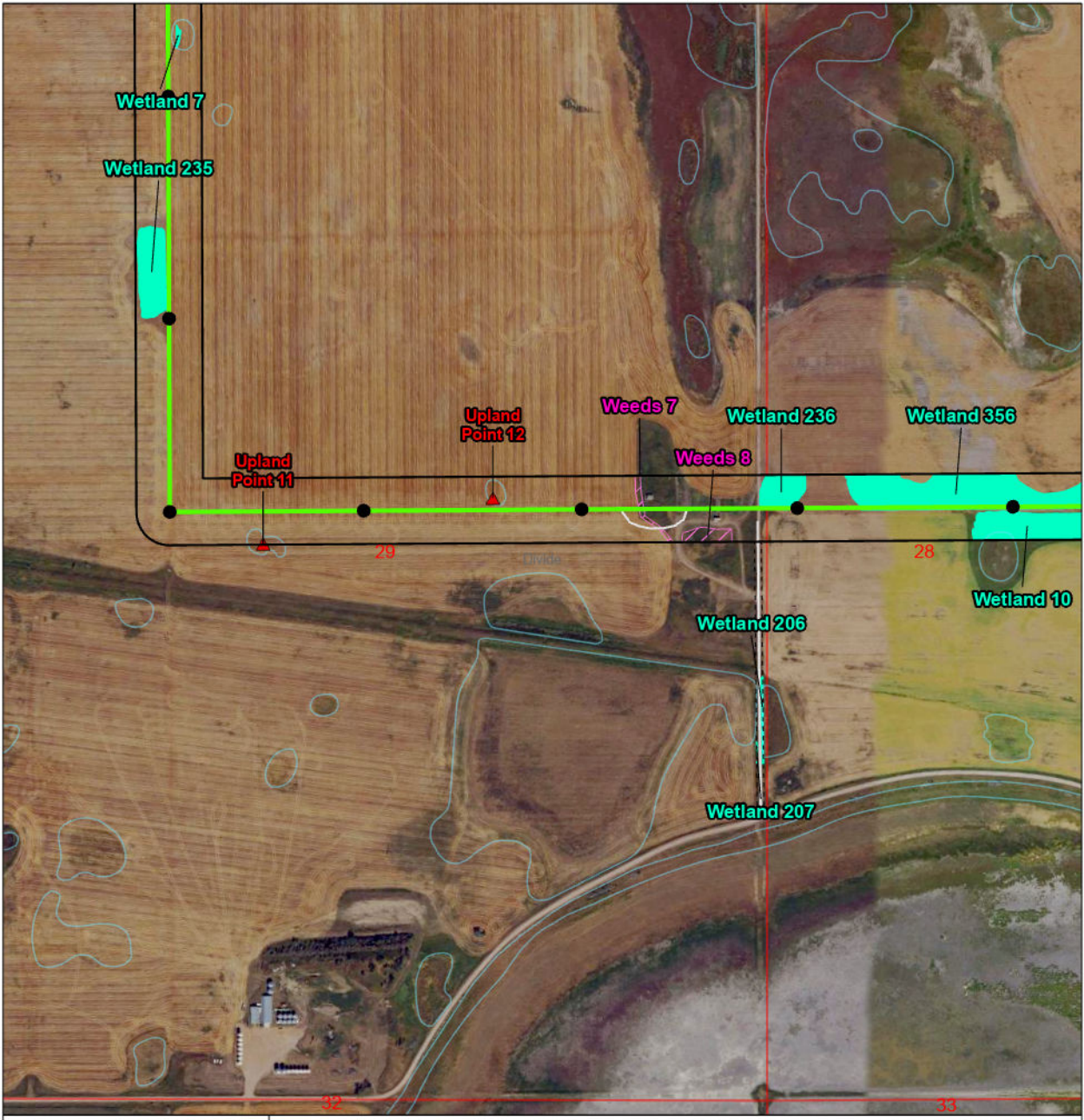
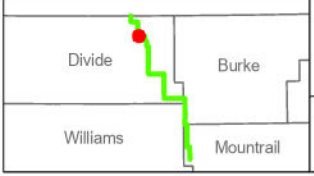



Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
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Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
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Scale: 1:9,000



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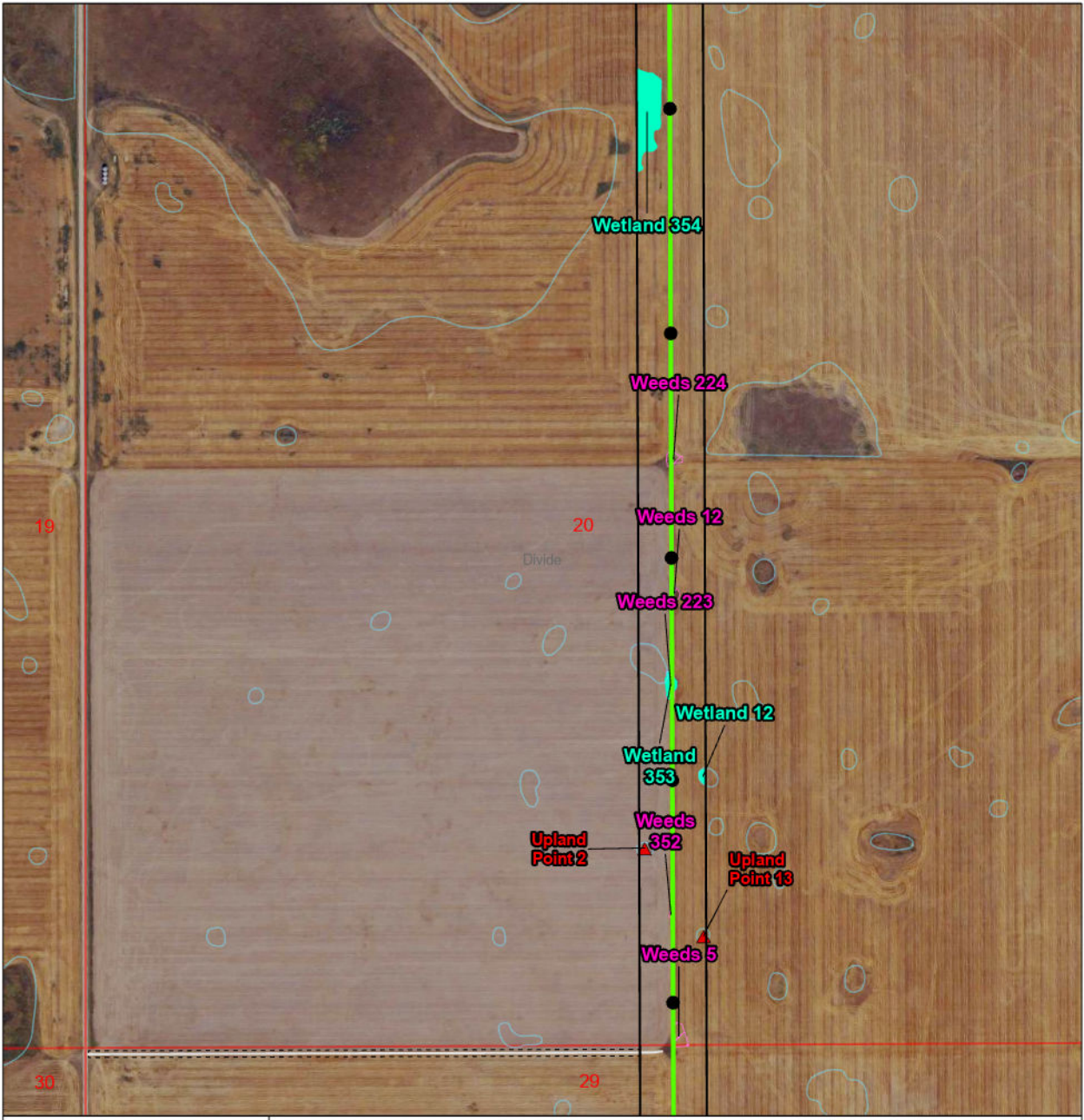
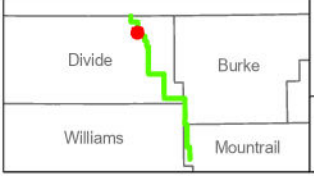



Tande to Saskatchewan 230-kV Transmission Project

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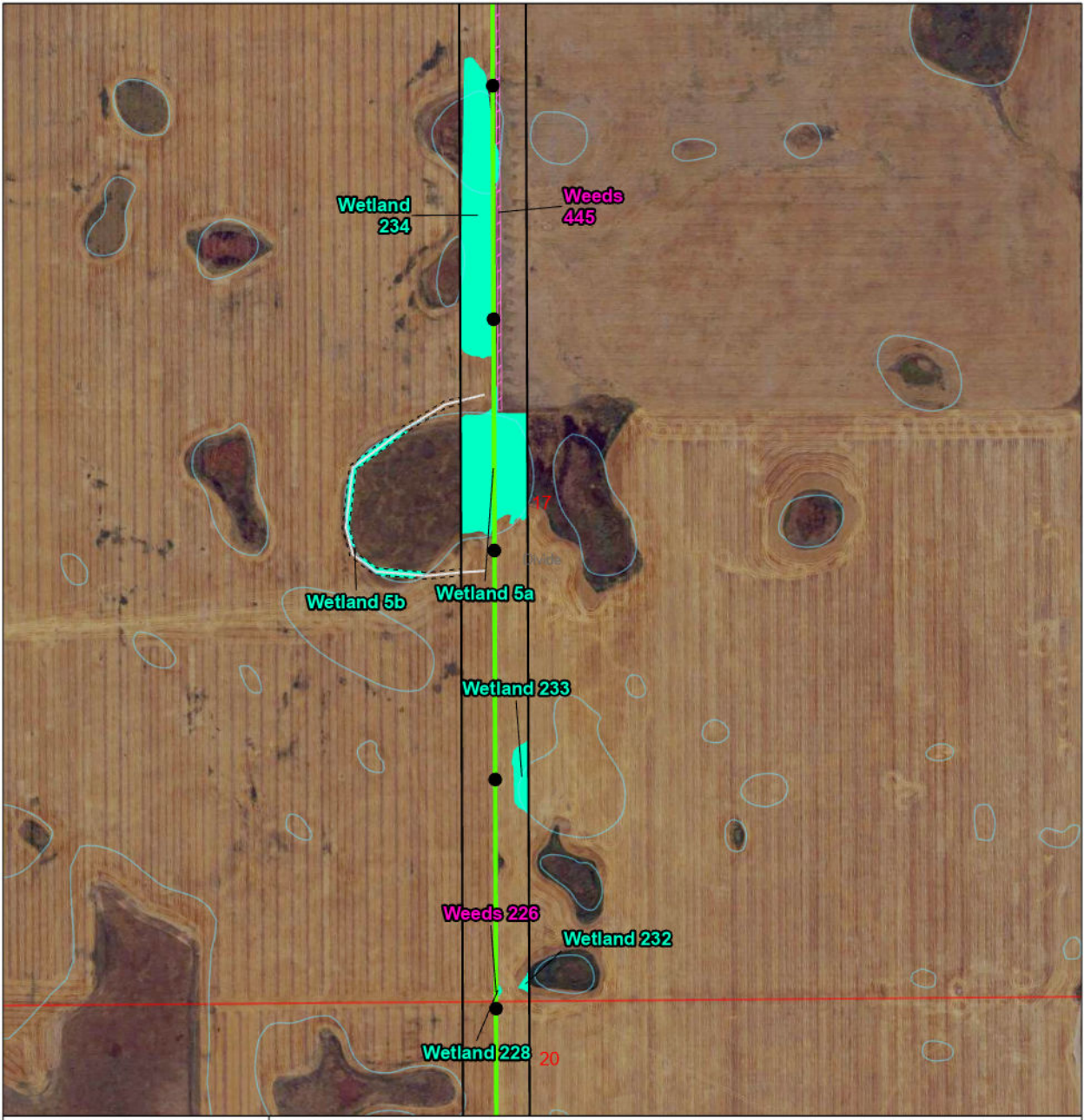
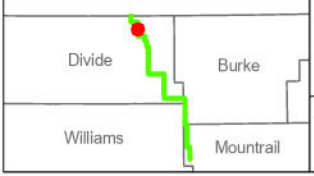
Date: 9/29/2025 Author: C. Tucker

WEST




Tande to Saskatchewan 230-kV Transmission Project




Route of Focus
Potential Access
Survey Corridor (300-ft)
Access Route Survey Area (30-ft)
NWI Signature

Field Survey Feature
Weeds
DASK Habitat
NLEB Habitat
Waterbody
Wetland

DASK Avoidance Buffers
1/2-mi Minimal Grassland Impact Buffer
500-m Flight Window Avoidance Buffer

USFWS Easement
Farm Service Agency Transfer
Waterfowl Production Area
Wetland Easement

Great Horned Owl Nest
Red-tailed Hawk Nest
Upland Point
Structure

N W E S

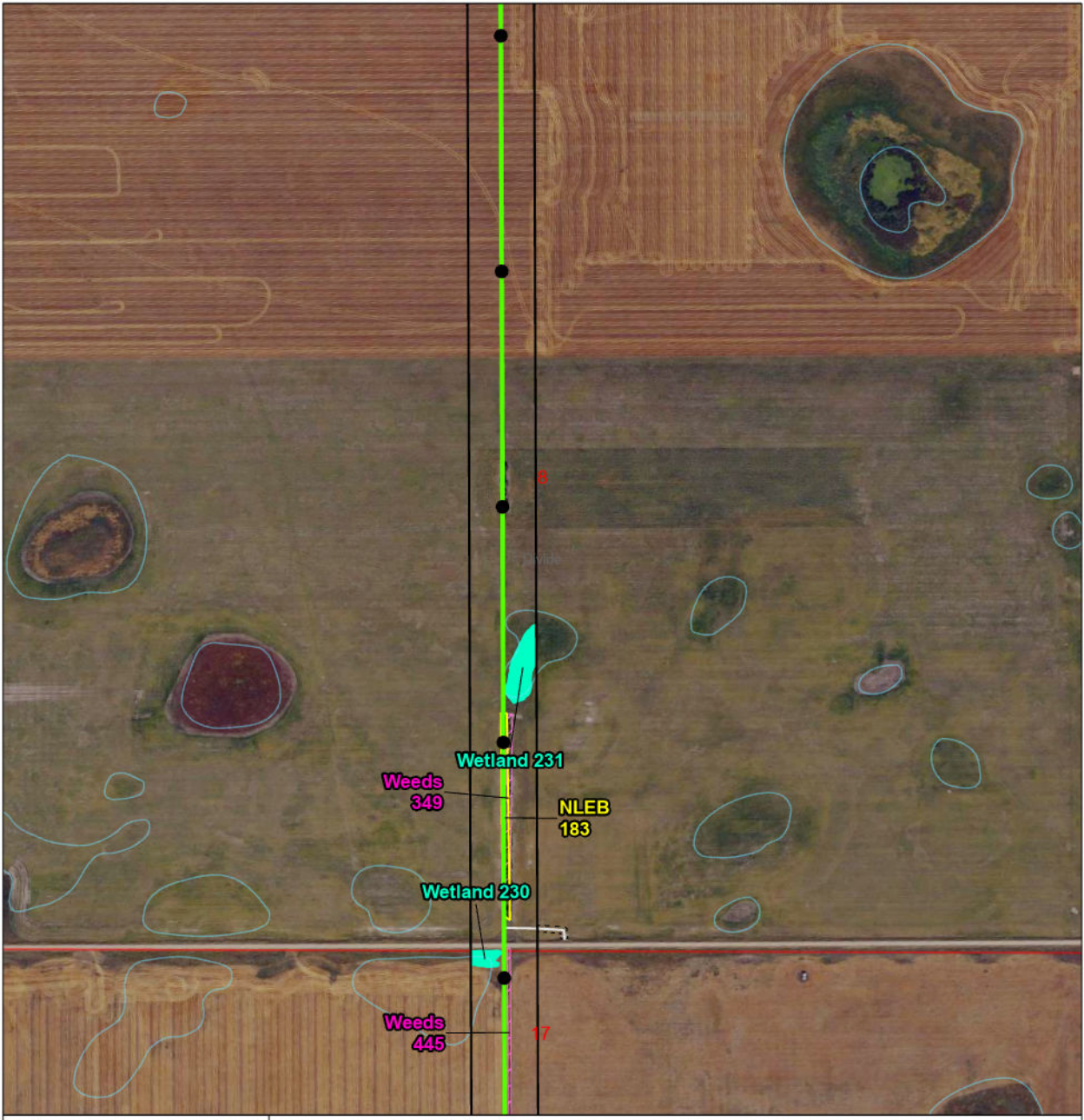
0 0.06 0.1 0.2 mi

Scale: 1:9,000

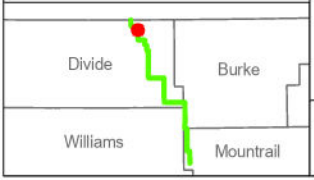
Page Number: 53

Data Source: 2024 USDA FSA Aerial Photograph
Coordinate System: NAD 1983 UTM Zone 13N
Date: 9/29/2025 Author: C. Tucker

WEST




Tande to Saskatchewan
230-kV Transmission Project

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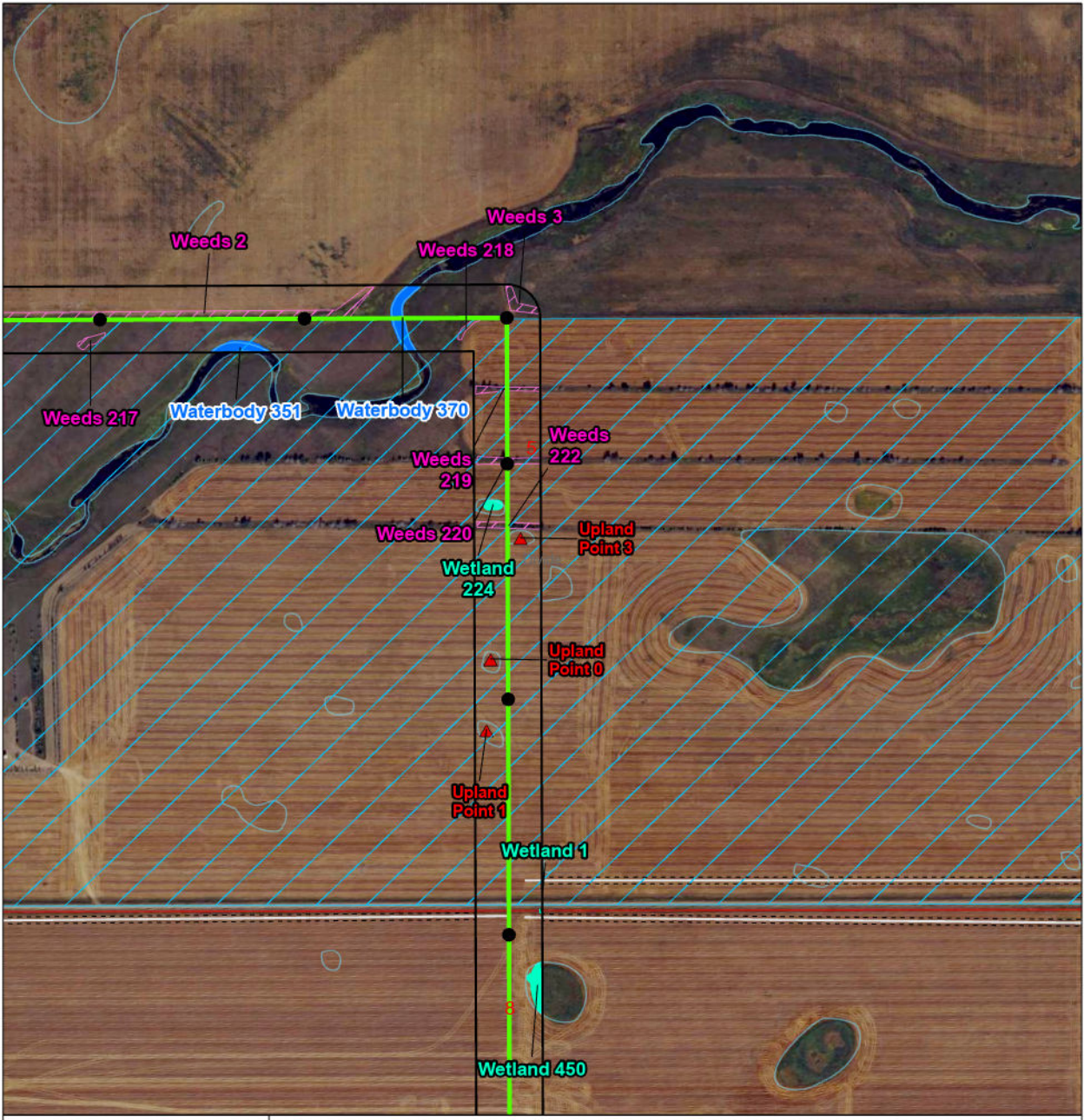
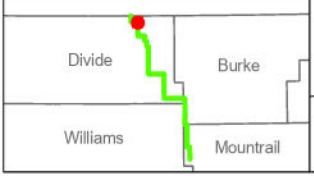



Tande to Saskatchewan 230-kV Transmission Project

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Page Number: 55

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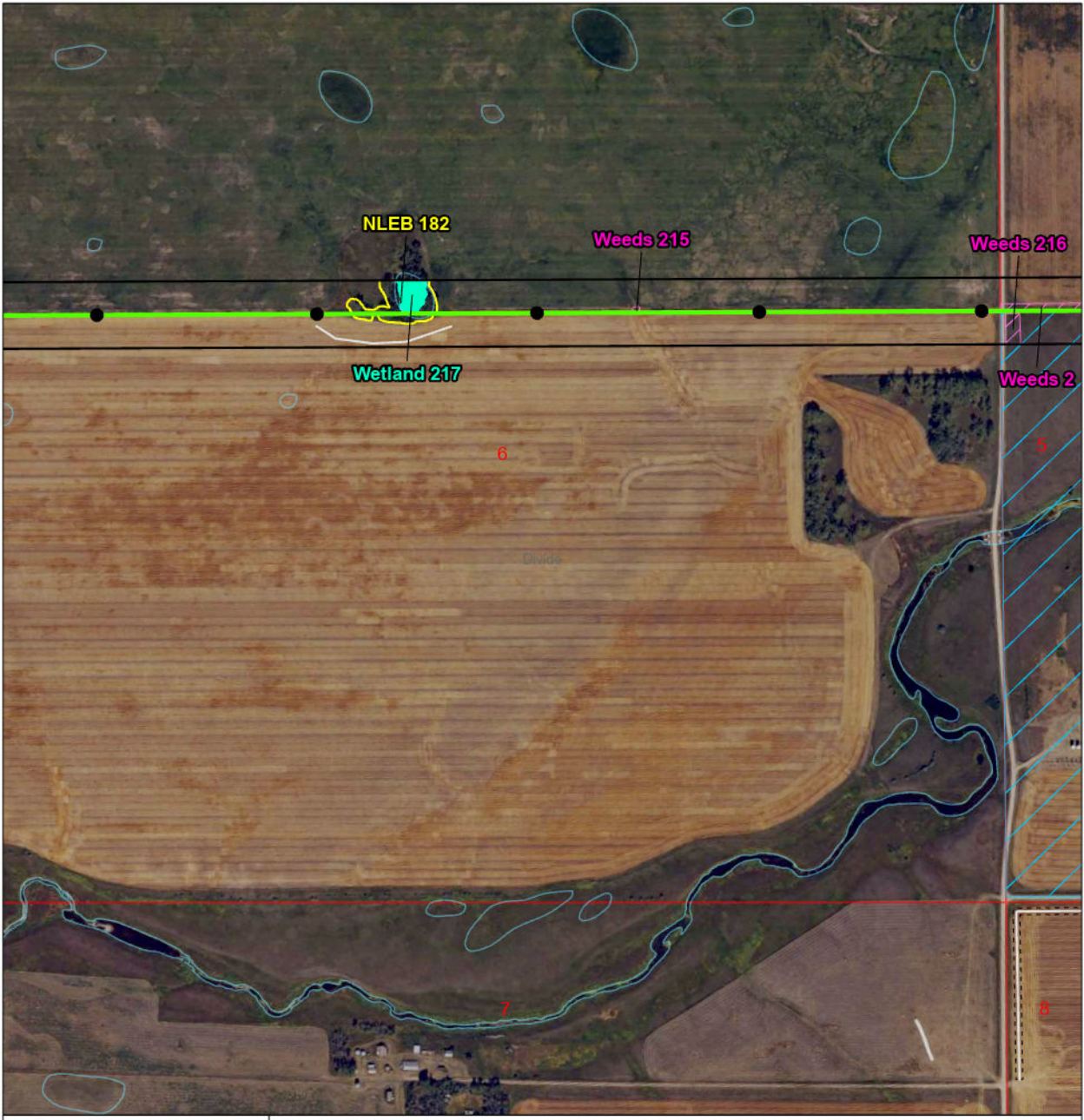
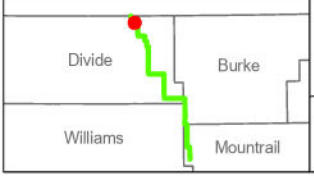



Tande to Saskatchewan
230-kV Transmission Project

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W E
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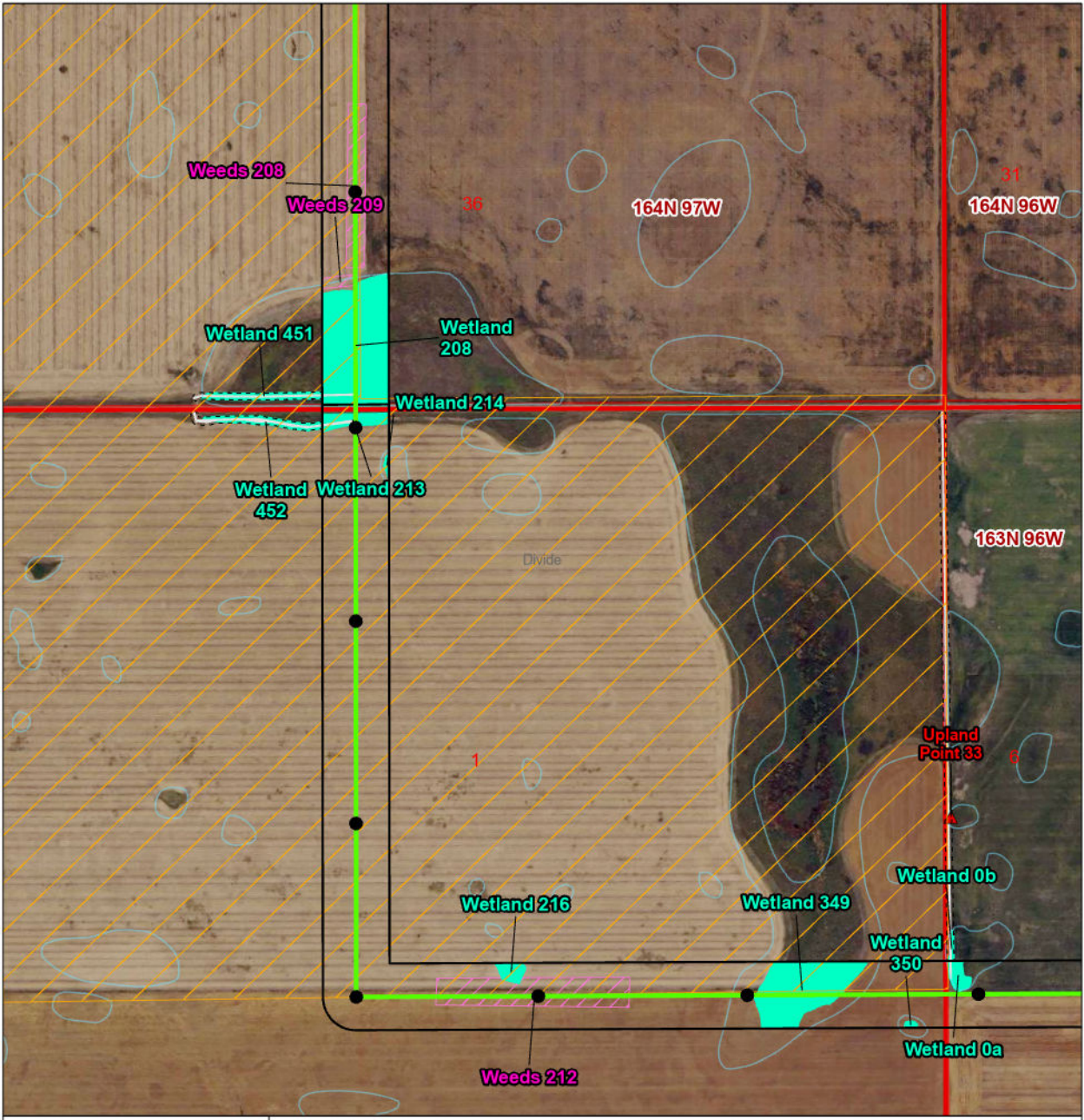
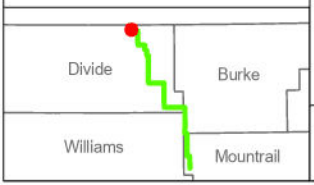



Tande to Saskatchewan 230-kV Transmission Project

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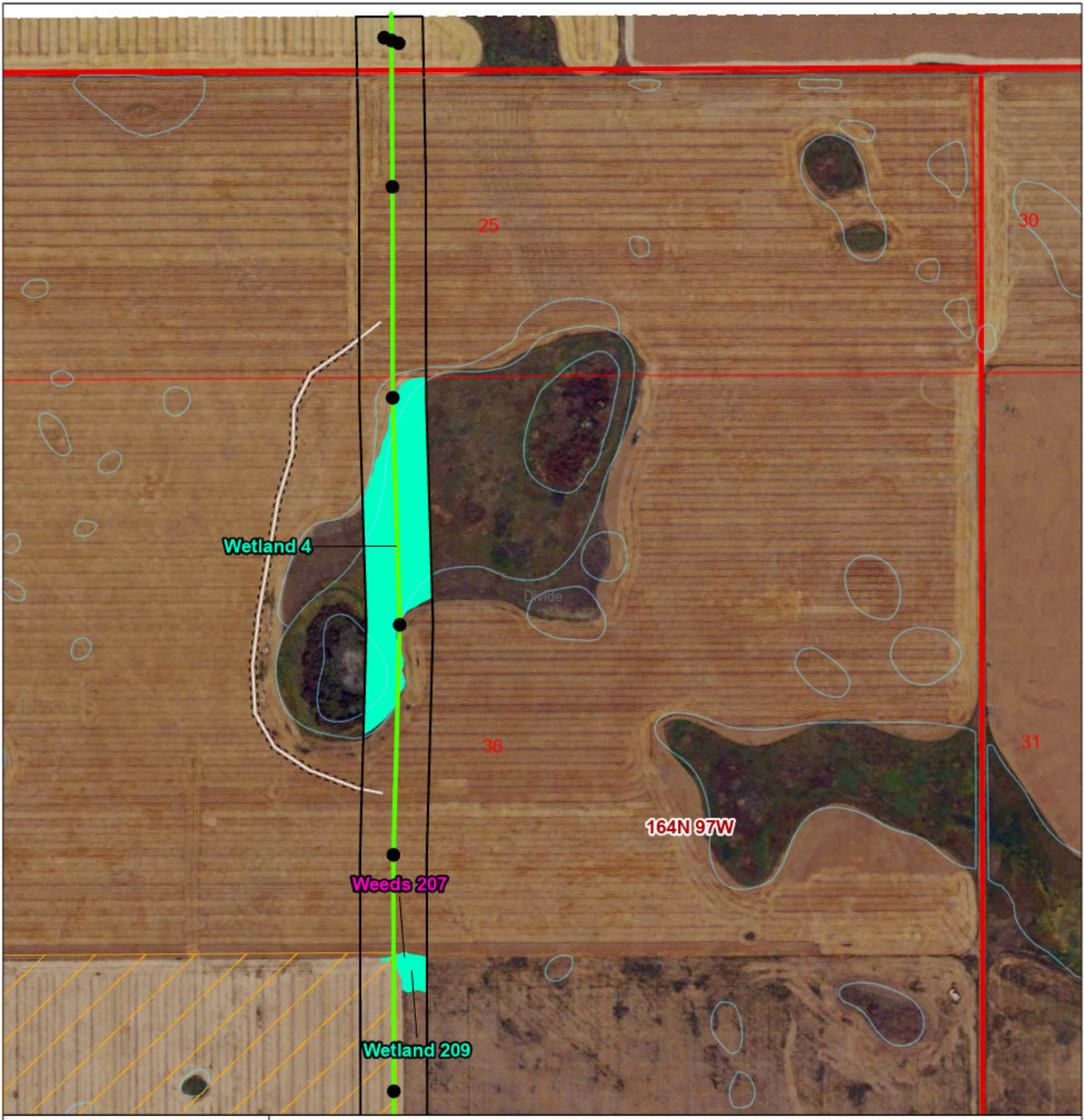
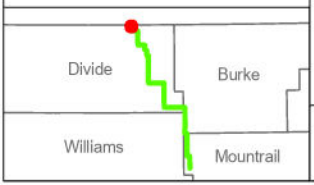



Tande to Saskatchewan
230-kV Transmission Project

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WEST

# Appendix B - Wetland Attributes

**Wetlands Documented within the Survey Corridor**

| Name | Classification | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|---|
| Wetland 0a | PEMA | Sec 6-T163N-R96W | 48.97422 | -103.20177 | 0.21 |
| Wetland 1 | PEMC | Sec 5-T163N-R96W | 48.96668 | -103.168876 | <0.01 |
| Wetland 4 | PEMC | Sec 36-T164N-R97W | 48.99355 | -103.212909 | 7.54 |
| Wetland 5a | PEMC | Sec 17-T163N-R96W | 48.94434 | -103.169545 | 3.45 |
| Wetland 7 | PEMA | Sec 29-T163N-R96W | 48.92191 | -103.169386 | 0.03 |
| Wetland 10 | PEMA | Sec 28-T163N-R96W | 48.91581 | -103.153365 | 1.58 |
| Wetland 11 | PEMA | Sec 28-T163N-R96W | 48.91592 | -103.14239 | 0.56 |
| Wetland 12 | PEMC | Sec 20-T163N-R96W | 48.9267 | -103.168992 | 0.04 |
| Wetland 14 | PEMC | Sec 28-T163N-R96W | 48.91616 | -103.136724 | 0.53 |
| Wetland 15 | PEMA | Sec 26-T162N-R96W | 48.83619 | -103.103629 | 0.15 |
| Wetland 16 | PEMC | Sec 26-T162N-R96W | 48.83531 | -103.104189 | 0.64 |
| Wetland 20 | PEMC | Sec 26-T162N-R96W | 48.83139 | -103.104406 | 0.05 |
| Wetland 23 | PEMC | Sec 2-T161N-R96W | 48.80675 | -103.104233 | 0.53 |
| Wetland 24 | PEMF | Sec 2-T161N-R96W | 48.79866 | -103.103713 | 1.35 |
| Wetland 27 | PEMF | Sec 35-T162N-R96W | 48.80795 | -103.103491 | 0.65 |
| Wetland 28 | PEMC | Sec 35-T162N-R96W | 48.81154 | -103.103516 | 0.47 |
| Wetland 29 | PEMC | Sec 35-T162N-R96W | 48.81442 | -103.103531 | 0.51 |
| Wetland 30 | PEMC | Sec 2-T161N-R96W | 48.79344 | -103.103873 | 2.60 |
| Wetland 31a | PEMA | Sec 11-T161N-R96W | 48.77846 | -103.103499 | 0.09 |
| Wetland 33 | PEMC | Sec 11-T161N-R96W | 48.77973 | -103.103445 | 0.18 |
| Wetland 35 | PEMC | Sec 11-T161N-R96W | 48.78105 | -103.103934 | 1.85 |
| Wetland 37 | PEMC | Sec 11-T161N-R96W | 48.7844 | -103.104042 | 1.48 |
| Wetland 39 | PEMC | Sec 11-T161N-R96W | 48.78774 | -103.103418 | 0.26 |
| Wetland 43 | PEMC | Sec 11-T161N-R96W | 48.78942 | -103.104506 | 0.03 |
| Wetland 44 | PEMA | Sec 11-T161N-R96W | 48.79271 | -103.103971 | 0.04 |
| Wetland 46 | PEMC | Sec 2-T161N-R96W | 48.7957 | -103.104006 | 3.48 |
| Wetland 48a | PEMC | Sec 14-T161N-R96W | 48.77822 | -103.103462 | 0.16 |
| Wetland 49 | PEMC | Sec 14-T161N-R96W | 48.77727 | -103.104084 | 1.27 |
| Wetland 51 | PEMC | Sec 14-T161N-R96W | 48.77409 | -103.103571 | 0.33 |
| Wetland 52 | PEMC | Sec 14-T161N-R96W | 48.77334 | -103.103611 | 0.97 |
| Wetland 54 | PEMC | Sec 33-T161N-R95W | 48.72504 | -103.006089 | 2.18 |
| Wetland 56 | PEMA | Sec 20-T161N-R95W | 48.75648 | -103.049261 | 0.06 |
| Wetland 58 | PEMC | Sec 24-T161N-R96W | 48.75697 | -103.07294 | 0.16 |
| Wetland 64 | PEMC | Sec 28-T161N-R95W | 48.73509 | -103.006194 | 0.26 |
| Wetland 65 | PEMH | Sec 28-T161N-R95W | 48.73864 | -103.006098 | 2.54 |
| Wetland 68 | PEMH | Sec 7-T160N-R95W | 48.70188 | -103.006066 | 3.49 |
| Wetland 70 | PEMC | Sec 7-T160N-R95W | 48.69592 | -103.006472 | 0.17 |
| Wetland 71 | PEMC | Sec 19-T160N-R95W | 48.67458 | -103.006563 | 0.02 |
| Wetland 72 | PEMC | Sec 18-T160N-R95W | 48.67687 | -102.998727 | 0.01 |
| Wetland 73 | PEMC | Sec 18-T160N-R95W | 48.6768 | -102.998711 | 0.01 |
| Wetland 74 | PEMA | Sec 18-T160N-R95W | 48.67944 | -103.006193 | 0.05 |

| | | | | | |
|---|---|---|---|---|---|
| Wetland 78 | PEMC | Sec 30-T160N-R95W | 48.65633 | -103.005139 | 0.89 |
| Wetland 79 | PEMC | Sec 29-T160N-R95W | 48.6555 | -102.993647 | 0.28 |
| Wetland 82 | PEMC | Sec 29-T160N-R95W | 48.65507 | -102.98935 | 0.12 |
| Wetland 84 | PEMC | Sec 29-T160N-R95W | 48.65534 | -102.982428 | 0.25 |
| Wetland 85 | PEMA | Sec 29-T160N-R95W | 48.65541 | -102.979974 | 0.05 |
| Wetland 86 | PEMA | Sec 29-T160N-R95W | 48.6549 | -102.977969 | 0.37 |
| Wetland 87 | PEMA | Sec 29-T160N-R95W | 48.65529 | -102.977582 | 0.11 |
| Wetland 88 | PEMA | Sec 29-T160N-R95W | 48.65499 | -102.976446 | 2.03 |
| Wetland 89 | PEMA | Sec 29-T160N-R95W | 48.65508 | -102.975077 | 0.04 |
| Wetland 94 | PEMC | Sec 26-T160N-R95W | 48.65474 | -102.926963 | 0.12 |
| Wetland 95 | PEMC | Sec 26-T160N-R95W | 48.65502 | -102.924819 | 2.44 |
| Wetland 96 | PEMC | Sec 26-T160N-R95W | 48.655 | -102.922342 | 1.83 |
| Wetland 97 | PEMC | Sec 26-T160N-R95W | 48.65542 | -102.919607 | 0.08 |
| Wetland 99 | PEMC | Sec 26-T160N-R95W | 48.65513 | -102.915226 | 0.17 |
| Wetland 100 | PEMC | Sec 26-T160N-R95W | 48.65515 | -102.913639 | 0.08 |
| Wetland 101 | PEMC | Sec 26-T160N-R95W | 48.6549 | -102.910435 | 0.09 |
| Wetland 102 | PEMC | Sec 26-T160N-R95W | 48.65527 | -102.908758 | 0.82 |
| Wetland 103 | PEMC | Sec 30-T160N-R94W | 48.65503 | -102.885109 | 1.86 |
| Wetland 104 | PEMC | Sec 30-T160N-R94W | 48.65513 | -102.883996 | 1.12 |
| Wetland 105 | PEMC | Sec 30-T160N-R94W | 48.65517 | -102.879321 | 1.33 |
| Wetland 106 | PEMC | Sec 30-T160N-R94W | 48.65484 | -102.877495 | 1.82 |
| Wetland 109 | PEMC | Sec 7-T159N-R94W | 48.60864 | -102.87603 | 0.37 |
| Wetland 110 | PEMC | Sec 7-T159N-R94W | 48.60739 | -102.876086 | 0.08 |
| Wetland 111 | PEMC | Sec 19-T159N-R94W | 48.58921 | -102.875144 | 0.28 |
| Wetland 113 | PEMC | Sec 19-T159N-R94W | 48.58963 | -102.875469 | 0.79 |
| Wetland 114 | PEMC | Sec 27-T160N-R95W | 48.65535 | -102.939056 | 0.74 |
| Wetland 115 | PEMC | Sec 28-T160N-R95W | 48.65511 | -102.960964 | 18.47 |
| Wetland 116 | PEMA | Sec 25-T160N-R95W | 48.65466 | -102.895745 | 0.03 |
| Wetland 117 | PEMC | Sec 25-T160N-R95W | 48.65489 | -102.894301 | 0.56 |
| Wetland 118 | PEMC | Sec 25-T160N-R95W | 48.65501 | -102.893543 | 0.35 |
| Wetland 120 | PEMA | Sec 25-T160N-R95W | 48.65542 | -102.891951 | 0.01 |
| Wetland 121 | PEMC | Sec 25-T160N-R95W | 48.65487 | -102.891427 | 0.51 |
| Wetland 122 | PEMA | Sec 25-T160N-R95W | 48.65528 | -102.889469 | 0.09 |
| Wetland 123 | PEMC | Sec 25-T160N-R95W | 48.6551 | -102.888168 | 0.98 |
| Wetland 125 | PEMC | Sec 25-T160N-R95W | 48.65478 | -102.886283 | 0.58 |
| Wetland 126 | PEMC | Sec 25-T160N-R95W | 48.65538 | -102.886257 | 0.35 |
| Wetland 127 | PEMC | Sec 30-T160N-R94W | 48.65219 | -102.875578 | 1.29 |
| Wetland 129 | PEMC | Sec 30-T160N-R94W | 48.65346 | -102.875396 | 0.19 |
| Wetland 131 | PEMC | Sec 30-T160N-R94W | 48.65518 | -102.876 | 1.23 |
| Wetland 135 | PEMC | Sec 6-T159N-R94W | 48.61992 | -102.875901 | 0.89 |
| Wetland 136 | PEMC | Sec 6-T159N-R94W | 48.61944 | -102.875234 | 0.37 |
| Wetland 146 | PEMC | Sec 30-T159N-R94W | 48.57232 | -102.875047 | 0.35 |
| Wetland 148 | PEMC | Sec 30-T159N-R94W | 48.57101 | -102.875701 | 0.10 |

| | | | | | |
|---|---|---|---|---|---|
| Wetland 149 | PEMC | Sec 30-T159N-R94W | 48.57124 | -102.875078 | 0.13 |
| Wetland 150 | PEMC | Sec 30-T159N-R94W | 48.56965 | -102.875849 | 0.15 |
| Wetland 152 | PEMC | Sec 30-T159N-R94W | 48.56906 | -102.875153 | 0.54 |
| Wetland 159 | PEMA | Sec 18-T158N-R94W | 48.51244 | -102.864573 | 0.34 |
| Wetland 160 | PEMA | Sec 18-T158N-R94W | 48.51057 | -102.864527 | 0.35 |
| Wetland 164 | PEMC | Sec 17-T158N-R94W | 48.51001 | -102.864099 | 0.72 |
| Wetland 165 | PEMC | Sec 17-T158N-R94W | 48.50869 | -102.864323 | 0.04 |
| Wetland 166 | PEMC | Sec 17-T158N-R94W | 48.50818 | -102.864317 | 0.06 |
| Wetland 169 | PEMA | Sec 19-T158N-R94W | 48.50266 | -102.864586 | 0.08 |
| Wetland 202 | PEMC | Sec 12-T161N-R96W | 48.77838 | -103.076828 | 0.01 |
| Wetland 207 | PEMC | Sec 29-T163N-R96W | 48.91301 | -103.158627 | <0.01 |
| Wetland 208 | PEMC | Sec 36-T164N-R97W | 48.98203 | -103.212993 | 3.72 |
| Wetland 209 | PEMA | Sec 36-T164N-R97W | 48.9883 | -103.212642 | 0.47 |
| Wetland 213 | PEMC | Sec-1-T163N-R97W | 48.98111 | -103.213065 | 0.37 |
| Wetland 214 | PEMA | Sec 1-T163N-R97W | 48.98055 | -103.212428 | 0.03 |
| Wetland 216 | PEMA | Sec 1-T163N-R97W | 48.9743 | -103.210141 | 0.20 |
| Wetland 217 | PFMA | Sec 6-T163N-R96W | 48.97423 | -103.191539 | 0.37 |
| Wetland 224 | PEMA | Sec 5-T163N-R96W | 48.97169 | -103.169739 | 0.07 |
| Wetland 228 | PEMA | Sec 17-T163N-R96W | 48.93792 | -103.16951 | 0.02 |
| Wetland 230 | PEMC | Sec 17-T163N-R96W | 48.9521 | -103.169871 | 0.20 |
| Wetland 231 | PEMA | Sec 8-T163N-R96W | 48.95569 | -103.169136 | 0.69 |
| Wetland 232 | PEMA | Sec 17-T163N-R96W | 48.938 | -103.168979 | 0.05 |
| Wetland 233 | PEMA | Sec 17-T163N-R96W | 48.94055 | -103.169037 | 0.41 |
| Wetland 234 | PEMC | Sec 17-T163N-R96W | 48.94747 | -103.169821 | 3.90 |
| Wetland 235 | PEMA | Sec 29-T163N-R96W | 48.91901 | -103.169896 | 1.07 |
| Wetland 236 | PEMA | Sec 28-T163N-R96W | 48.91625 | -103.158137 | 0.63 |
| Wetland 237 | PEMA | Sec 23-T162N-R96W | 48.83654 | -103.103555 | 0.21 |
| Wetland 240 | PEMA | Sec 23-T162N-R96W | 48.84419 | -103.103452 | 1.41 |
| Wetland 242 | PEMA | Sec 14-T162N-R96W | 48.85778 | -103.104033 | 0.20 |
| Wetland 243 | PEMA | Sec 14-T162N-R96W | 48.86488 | -103.103182 | 0.06 |
| Wetland 258 | PEMC | Sec 24-T161N-R96W | 48.75684 | -103.090411 | 0.59 |
| Wetland 259 | PEMF | Sec 24-T161N-R96W | 48.75665 | -103.088358 | 3.19 |
| Wetland 275 | PEMF | Sec 2-T161N-R96W | 48.80716 | -103.103336 | 0.10 |
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| Wetland 278 | PEMF | Sec 24-T161N-R96W | 48.75637 | -103.092934 | 0.10 |
| Wetland 280 | PEMF | Sec 24-T161N-R96W | 48.75645 | -103.079281 | 1.31 |
| Wetland 281 | PEMF | Sec 24-T161N-R96W | 48.75627 | -103.076871 | 0.01 |
| Wetland 282 | PEMF | Sec 24-T161N-R96W | 48.75643 | -103.071127 | 1.41 |
| Wetland 283 | PEMC | Sec 19-T161N-R95W | 48.75636 | -103.063698 | 0.23 |
| Wetland 285 | PEMA | Sec 21-T161N-R95W | 48.75705 | -103.016521 | 0.01 |
| Wetland 286 | PEMA | Sec 21-T161N-R95W | 48.75681 | -103.016872 | 0.03 |
| Wetland 294 | PEMA | Sec 20-T161N-R95W | 48.7569 | -103.041824 | 0.50 |
| Wetland 296 | PEMA | Sec 20-T161N-R95W | 48.75691 | -103.044653 | 0.35 |

| | | | | | |
|---|---|---|---|---|---|
| Wetland 304 | PEMC | Sec 27-T161N-R95W | 48.74571 | -103.005288 | 0.09 |
| Wetland 313 | PEMC | Sec 6-T160N-R95W | 48.70998 | -103.005663 | 0.34 |
| Wetland 316 | PEMA | Sec 33-T161N-R95W | 48.72672 | -103.00582 | 0.09 |
| Wetland 318 | PEMH | Sec 21-T161N-R95W | 48.75669 | -103.023246 | 5.64 |
| Wetland 319 | PEMF | Sec 21-T161N-R95W | 48.75647 | -103.027222 | 0.28 |
| Wetland 320 | PEMH | Sec 20-T161N-R95W | 48.75696 | -103.032933 | 0.23 |
| Wetland 321 | PEMC | Sec 20-T161N-R95W | 48.7569 | -103.035112 | 0.24 |
| Wetland 322 | PEMF | Sec 20-T161N-R95W | 48.75649 | -103.041297 | 0.35 |
| Wetland 323 | PEMC | Sec 20-T161N-R95W | 48.75635 | -103.042855 | 0.14 |
| Wetland 324 | PEMH | Sec 20-T161N-R95W | 48.75637 | -103.044572 | 0.36 |
| Wetland 326 | PEMF | Sec 27-T161N-R95W | 48.74906 | -103.005293 | 0.18 |
| Wetland 327 | PEMH | Sec 21-T161N-R95W | 48.75275 | -103.005287 | 0.25 |
| Wetland 330a | PEMA | Sec 7-T160N-R95W | 48.69458 | -103.005462 | 0.11 |
| Wetland 331 | PEMA | Sec 7-T160N-R95W | 48.69964 | -103.005718 | 0.38 |
| Wetland 335 | PEMA | Sec 6-T160N-R95W | 48.70902 | -103.005666 | 0.26 |
| Wetland 337 | PEMA | Sec 6-T160N-R95W | 48.71259 | -103.005568 | 0.11 |
| Wetland 339 | PEMA | Sec 19-T160N-R95W | 48.66422 | -103.00598 | 0.11 |
| Wetland 340 | PEMC | Sec 19-T160N-R95W | 48.66657 | -103.00592 | 0.30 |
| Wetland 341 | PEMC | Sec 19-T160N-R95W | 48.67603 | -103.005846 | 2.06 |
| Wetland 342 | PEMC | Sec 18-T160N-R95W | 48.67895 | -103.005862 | 0.44 |
| Wetland 343 | PEMA | Sec 19-T160N-R95W | 48.66344 | -103.005376 | 0.06 |
| Wetland 344 | PEMA | Sec 19-T160N-R95W | 48.66772 | -103.005976 | 0.08 |
| Wetland 345 | PEMA | Sec 19-T160N-R95W | 48.66861 | -103.005698 | 0.08 |
| Wetland 347 | PEMC | Sec 18-T160N-R95W | 48.67722 | -103.005372 | <0.01 |
| Wetland 348 | PEMC | Sec 18-T160N-R95W | 48.68006 | -103.005498 | 0.17 |
| Wetland 349 | PEMC | Sec 1-T163N-R97W | 48.97406 | -103.204702 | 2.23 |
| Wetland 350 | PEMA | Sec 1-T163N-R97W | 48.97363 | -103.202664 | 0.03 |
| Wetland 353 | PEMA | Sec 20-T163N-R96W | 48.92783 | -103.16959 | 0.09 |
| Wetland 354 | PEMA | Sec 20-T163N-R96W | 48.93488 | -103.169974 | 0.84 |
| Wetland 356 | PEMC | Sec 28-T163N-R96W | 48.91622 | -103.153901 | 4.47 |
| Wetland 357 | PEMA | Sec 11-T162N-R96W | 48.87258 | -103.103848 | 0.02 |
| Wetland 358 | PEMA | Sec 11-T162N-R96W | 48.86922 | -103.103631 | 0.02 |
| Wetland 359 | PEMA | Sec 14-T161N-R96W | 48.77042 | -103.103916 | 0.02 |
| Wetland 360 | PEMH | Sec 14-T161N-R96W | 48.76417 | -103.10361 | 0.53 |
| Wetland 361 | PEMC | Sec 14-T161N-R96W | 48.76918 | -103.103584 | 0.52 |
| Wetland 362 | PEMF | Sec 23-T161N-R96W | 48.76368 | -103.103985 | 0.05 |
| Wetland 363 | PEMF | Sec 23-T161N-R96W | 48.75741 | -103.10442 | 0.97 |
| Wetland 364 | PEMC | Sec 24-T161N-R96W | 48.75632 | -103.072533 | 0.08 |
| Wetland 365 | PEMF | Sec 21-T161N-R95W | 48.75696 | -103.00826 | 0.82 |
| Wetland 366 | PEMH | Sec 21-T161N-R95W | 48.74981 | -103.005308 | 0.14 |
| Wetland 367 | PEMA | Sec 33-T161N-R95W | 48.7232 | -103.005992 | 0.12 |
| Wetland 368a | PEMH | Sec 6-T160N-R95W | 48.7115 | -103.006105 | 3.07 |
| Wetland 369 | PEMA | Sec 7-T160N-R95W | 48.70378 | -103.005641 | 0.50 |

| | | | | | |
|---|---|---|---|---|---|
| Wetland 371 | PEMH | Sec 28-T161N-R95W | 48.74082 | -103.006142 | 0.71 |
| Wetland 377 | PEMC | Sec 27-T160N-R95W | 48.65464 | -102.94295 | 0.01 |
| Wetland 378 | PEMC | Sec 27-T160N-R95W | 48.65475 | -102.934326 | 0.04 |
| Wetland 379 | PEMC | Sec 27-T160N-R95W | 48.65485 | -102.933512 | 0.35 |
| Wetland 380 | PEMC | Sec 27-T160N-R95W | 48.6548 | -102.93181 | 0.32 |
| Wetland 383 | PEMC | Sec 7-T159N-R94W | 48.60775 | -102.875099 | 0.30 |
| Wetland 384 | PEMA | Sec 28-T160N-R95W | 48.65482 | -102.956275 | 5.48 |
| Wetland 390 | PEMC | Sec 27-T160N-R95W | 48.65501 | -102.943254 | 0.08 |
| Wetland 391 | PEMA | Sec 27-T160N-R95W | 48.65487 | -102.94166 | 0.22 |
| Wetland 392 | PEMC | Sec 14-T161N-R96W | 48.76538 | -103.104297 | 1.08 |
| Wetland 394 | PEMA | Sec 8-T157N-R94W | 48.43155 | -102.847845 | 1.49 |
| Wetland 396 | PEMC | Sec 32-T158N-R94W | 48.46927 | -102.863709 | 1.86 |
| Wetland 398 | PEMA | Sec 20-T158N-R94W | 48.49103 | -102.86384 | 0.27 |
| Wetland 399 | PEMA | Sec 20-T158N-R94W | 48.49273 | -102.863952 | 1.54 |
| Wetland 400 | PEMA | Sec 19-T158N-R94W | 48.49317 | -102.86453 | 0.56 |
| Wetland 401 | PEMA | Sec 20-T158N-R94W | 48.49485 | -102.864284 | 0.14 |
| Wetland 406 | PEMF | Sec 34-T161N-R95W | 48.72555 | -103.005308 | 0.28 |
| Wetland 407 | PEMA | Sec 34-T161N-R95W | 48.7293 | -103.005754 | 0.11 |
| Wetland 408 | PEMA | Sec 33-T161N-R95W | 48.73061 | -103.006099 | 0.15 |
| Wetland 409 | PEMC | Sec 33-T161N-R95W | 48.73259 | -103.006399 | 0.22 |
| Wetland 410 | PEMA | Sec 34-T161N-R95W | 48.73294 | -103.005284 | 0.05 |
| Wetland 411 | PEMC | Sec 33-T161N-R95W | 48.73485 | -103.006108 | 0.41 |
| Wetland 412 | PEMA | Sec 34-T161N-R95W | 48.73481 | -103.005307 | 0.02 |
| Wetland 414 | PEMF | Sec 27-T161N-R95W | 48.7388 | -103.005292 | 0.25 |
| Wetland 415 | PEMF | Sec 28-T161N-R95W | 48.74602 | -103.006107 | 1.99 |
| Wetland 416 | PEMA | Sec 28-T161N-R95W | 48.74917 | -103.005781 | 0.07 |
| Wetland 417 | PEMA | Sec 21-T161N-R95W | 48.74968 | -103.005769 | 0.04 |
| Wetland 420 | PEMC | Sec 20-T161N-R95W | 48.75638 | -103.035221 | 0.12 |
| Wetland 421 | PEMC | Sec 20-T161N-R95W | 48.75674 | -103.035073 | 0.02 |
| Wetland 422 | PEMC | Sec 20-T161N-R95W | 48.75655 | -103.034128 | 0.08 |
| Wetland 425 | PEMF | Sec 23-T161N-R96W | 48.76345 | -103.103631 | 0.87 |
| Wetland 427 | PEMC | Sec 14-T161N-R96W | 48.77045 | -103.104138 | 0.18 |
| Wetland 428 | PEMF | Sec 35-T162N-R96W | 48.8087 | -103.104223 | 0.20 |
| Wetland 429 | PEMF | Sec 35-T162N-R96W | 48.81139 | -103.104079 | 0.49 |
| Wetland 430 | PEMB | Sec 35-T162N-R96W | 48.81446 | -103.104137 | 0.80 |
| Wetland 432 | PEMC | Sec 26-T162N-R96W | 48.82915 | -103.103393 | 0.82 |
| Wetland 434 | PEMA | Sec 26-T162N-R96W | 48.83441 | -103.103635 | 0.12 |
| Wetland 436 | PEMC | Sec 14-T162N-R96W | 48.85204 | -103.103185 | 0.06 |
| Wetland 437 | PEMC | Sec 14-T162N-R96W | 48.856 | -103.103222 | 0.08 |
| Wetland 438 | PEMA | Sec 14-T162N-R96W | 48.85663 | -103.103166 | 0.03 |
| Wetland 439 | PEMC | Sec 11-T162N-R96W | 48.86922 | -103.103948 | 0.49 |
| Wetland 440 | PEMC | Sec 11-T162N-R96W | 48.87253 | -103.104645 | 1.55 |
| Wetland 442 | PEMF | Sec 35-T163N-R96W | 48.90097 | -103.113948 | 0.57 |

| | | | | | |
|---|---|---|---|---|---|
| Wetland 443 | PEMC | Sec 26-T163N-R96W | 48.91421 | -103.11445 | 0.36 |
| Wetland 444 | PEMC | Sec 27-T163N-R96W | 48.91557 | -103.115062 | 0.07 |
| Wetland 445 | PEMC | Sec 27-T163N-R96W | 48.91623 | -1.03E+02 | 0.36 |
| Wetland 446 | PEMF | Sec 27-T163N-R96W | 48.9161 | -103.136095 | 1.33 |
| Wetland 447 | PEMC | Sec 27-T163N-R96W | 48.91605 | -103.130707 | 3.36 |
| Wetland 448 | PEMC | Sec 27-T163N-R96W | 48.9158 | -103.126177 | 0.46 |
| Wetland 450 | PEMC | Sec 8-T163N-R96W | 48.96576 | -103.168956 | 0.22 |
| Wetland 454 | PEMC | Sec 20-T157N-R94W | 48.40177 | -102.845493 | 0.15 |
| Wetland 455a | PEMC | Sec 20-T157N-R94W | 48.40253 | -102.845687 | 0.15 |
| Wetland 456 | PEMC | Sec 20-T157N-R94W | 48.40444 | -102.846085 | 0.01 |
| Wetland 457 | PEMA | Sec 20-T157N-R94W | 48.41128 | -102.847335 | 0.12 |
| Wetland 459 | PEMF | Sec 18-T160N-R95W | 48.68452 | -103.006471 | 0.08 |
| Wetland 460 | PEMC | Sec 18-T160N-R95W | 48.68516 | -103.00564 | 0.81 |
| Wetland 461 | PEMF | Sec 18-T160N-R95W | 48.68867 | -103.006222 | 1.57 |
| Wetland 462 | PEMF | Sec 18-T160N-R95W | 48.69028 | -103.006102 | 2.50 |
| Wetland 463 | PEMC | Sec 30-T160N-R95W | 48.65594 | -102.9952 | 0.23 |
| Wetland 464 | PEMC | Sec 29-T160N-R95W | 48.65564 | -102.994808 | 0.09 |
| Wetland 466 | PEMA | Sec 30-T159N-R94W | 48.56691 | -102.87518 | 0.13 |
| Wetland 467 | PEMA | Sec 31-T159N-R94W | 48.55977 | -102.878297 | 0.20 |
| Wetland 469 | PEMC | Sec 31-T159N-R94W | 48.55871 | -102.878163 | 0.35 |
| Wetland 472 | PEMA | Sec 18-T158N-R94W | 48.51586 | -102.864544 | 0.05 |
| Wetland 473 | PEMA | Sec 17-T158N-R94W | 48.51581 | -102.864352 | 0.03 |
| Wetland 474 | PEMC | Sec 17-T158N-R94W | 48.51273 | -102.864086 | 0.92 |
| Wetland 475 | PEMA | Sec 17-T158N-R94W | 48.51185 | -102.864329 | 0.02 |
| Wetland 477 | PEMA | Sec 17-T158N-R94W | 48.51119 | -102.863751 | 0.32 |
| Wetland 478 | PEMA | Sec 3-T162N-R97W | 48.73388 | -103.006142 | 0.09 |
| Wetland 481 | PEMC | Sec 19-T161N-R95W | 48.7566 | -103.050702 | 1.64 |
| Wetland 482 | PEMA | Sec 19-T161N-R95W | 48.75707 | -103.055405 | 0.06 |
| Wetland 483 | PEMA | Sec 19-T161N-R95W | 48.75654 | -103.059376 | 1.33 |
| | | | | **Total** | **178.01** |

N = North, PEMA = palustrine emergent temporarily flooded wetland, PEMC = palustrine emergent seasonally flooded wetland, PEMF = palustrine emergent semi permanently flooded, PEMH= palustrine emergent permanently flooded, R = Range, Sec. = Section, T = Township, W = West.

**Wetlands Documented within Potential Access Road Survey Corridors**

| Name | Classification | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|---|
| Wetland 0b | PEMA | Sec 6-T163N-R96W | 48.97458 | -103.202 | 0.05 |
| Wetland 5b | PEMC | Sec 17-T163N-R96W | 48.94459 | -103.172 | 0.46 |
| Wetland 31b | PEMA | Sec 11-T161N-R96W | 48.77841 | -103.103 | 0.02 |
| Wetland 48b | PEMC | Sec 14-T161N-R96W | 48.77835 | -103.103 | 0.01 |
| Wetland 92 | PEMC | Sec 28-T160N-R95W | 48.65814 | -102.951 | 0.09 |
| Wetland 93 | PEMC | Sec 27-T160N-R95W | 48.65855 | -102.951 | 0.01 |
| Wetland 128 | PEMA | Sec 30-T160N-R94W | 48.6534 | -102.874 | <0.01 |
| Wetland 203 | PEMC | Sec 14-T161N-R96W | 48.77801 | -103.099 | 0.1 |
| Wetland 204 | PEMC | Sec 28-T160N-R95W | 48.64997 | -102.973 | 0.06 |
| Wetland 205 | PEMC | Sec 28-T160N-R95W | 48.64892 | -102.973 | 0.06 |
| Wetland 206 | PEMC | Sec 29-T163N-R96W | 48.91349 | -103.159 | 0.04 |
| Wetland 330b | PEMA | Sec 7-T160N-R95W | 48.69472 | -103.005 | 0.13 |
| Wetland 368b | PEMH | Sec 6-T160N-R95W | 48.71121 | -103.005 | 0.01 |
| Wetland 368c | PEMH | Sec 6-T160N-R95W | 48.71211 | -103.005 | 0.01 |
| Wetland 423 | PEMF | Sec 21-T161N-R95W | 48.75589 | -103.022 | 0.18 |
| Wetland 424 | PEMF | Sec 24-T161N-R96W | 48.75523 | -103.089 | 0.21 |
| Wetland 451 | PEMC | Sec 36-T164N-R97W | 48.98141 | -103.215 | 0.36 |
| Wetland 452 | PEMC | Sec 1-T163N-R97W | 48.98109 | -103.215 | 0.38 |
| Wetland 455b | PEMC | Sec 20-T157N-R94W | 48.40235 | -102.846 | 0.03 |
| | | | | **Total** | **2.21** |

N = North, PEMA = palustrine emergent temporarily flooded wetland, PEMC = palustrine emergent seasonally flooded wetland, R = Range, Sec. = Section, T = Township, W = West.

# Appendix C - Upland Points

**Upland Points Documented within the Survey Area**

| Name | Location | Notes |
|---|---|---|
| Upland Point 0 | Sec 5-T163N-R96W | ROW |
| Upland Point 1 | Sec 5-T163N-R96W | ROW |
| Upland Point 2 | Sec 20-T163N-R96W | ROW |
| Upland Point 3 | Sec 5-T163N-R96W | ROW |
| Upland Point 4 | Sec 14-T162N-R96W | ROW |
| Upland Point 5 | Sec 14-T162N-R96W | ROW |
| Upland Point 6 | Sec 14-T162N-R96W | ROW |
| Upland Point 7 | Sec 14-T162N-R96W | ROW |
| Upland Point 8 | Sec 21-T161N-R95W | ROW |
| Upland Point 9 | Sec 7-T160N-R95W | ROW |
| Upland Point 10 | Sec 6-T160N-R95W | ROW |
| Upland Point 11 | Sec 29-T163N-R96W | ROW |
| Upland Point 12 | Sec 29-T163N-R96W | ROW |
| Upland Point 13 | Sec 20-T163N-R96W | ROW |
| Upland Point 14 | Sec 25-T160N-R95W | ROW |
| Upland Point 15 | Sec 30-T160N-R94W | ROW |
| Upland Point 16 | Sec 6-T159N-R94W | ROW |
| Upland Point 17 | Sec 6-T159N-R94W | ROW |
| Upland Point 18 | Sec 18-T159N-R94W | ROW |
| Upland Point 19 | Sec 31-T159N-R94W | ROW |
| Upland Point 20 | Sec 5-T157N-R94W | ROW |
| Upland Point 21 | Sec 5-T157N-R94W | ROW |
| Upland Point 22 | Sec 5-T157N-R94W | ROW |
| Upland Point 23 | Sec 20-T157N-R94W | ROW |
| Upland Point 24 | Sec 8-T157N-R94W | access |
| Upland Point 25 | Sec 31-T159N-R94W | ROW |
| Upland Point 26 | Sec 6-T158N-R94W | ROW |
| Upland Point 27 | Sec 33-T161N-R95W | ROW |
| Upland Point 28 | Sec 11-T162N-R96W | ROW |
| Upland Point 29 | Sec 3-T162N-R96W | ROW |
| Upland Point 30 | Sec 26-T163N-R96W | ROW |
| Upland Point 31 | Sec 26-T163N-R96W | ROW |
| Upland Point 32 | Sec 26-T163N-R96W | ROW |
| Upland Point 33 | Sec 6-T163N-R96W | access |
| Upland Point 34 | Sec 20-T157N-R94W | access |

N = north, R = Range, Sec. = Section, T = Township, W = west.

# Appendix D - Project Field Photographs



**Photo 1. View of Wetland 129 facing west.**



**Photo 2. View of Wetland 131 facing southwest.**



**Photo 3. View of Wetland 136.**



**Photo 4. View of Wetland 97.**



**Photo 5. View of Wetland 88 facing east.**



**Photo 6. View of Wetland 84 facing north.**



**Photo 7. View of Wetland 20 facing south.**



**Photo 8. View of potential Dakota skipper patch DASK 142 facing west.**



**Photo 9. View of potential Dakota skipper patch DASK 144 facing north.**



**Photo 10. View of Wetland 4 facing east.**



**Photo 11. View of Waterbody 453 facing south.**



**Photo 12. View of Waterbody 468 facing north.**



**Photo 13. View of Wetland 391 facing southeast.**



**Photo 14. View of Wetland 78 facing south.**



**Photo 15. View of Wetland 44A facing south.**



**Photo 16. View of Wetland 429 facing east.**



**Photo 17. View of Wetland 65 facing north.**

# Appendix E - Waterbody Attributes

**Waterbodies Documented within the Survey Corridor**

| Name | Classification | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|---|
| Waterbody 201 | Intermittent stream | Sec 18-T159N-R94W | 48.598866 | -102.875732 | 0.42 |
| Waterbody 238 | Ephemeral stream | Sec 23-T162N-R96W | 48.837821 | -103.103567 | 0.01 |
| Waterbody 239 | Ephemeral stream | Sec 23-T162N-R96W | 48.84071 | -103.103632 | 0.4 |
| Waterbody 351 | Perennial stream | Sec 5-T163N-R96W | 48.973643 | -103.174463 | 0.21 |
| Waterbody 370 | Perennial stream | Sec 5-T163N-R96W | 48.974007 | -103.171417 | 0.37 |
| Waterbody 453 | Excavated pond | Sec 29-T157N-R94W | 48.400994 | -102.84668 | 0.33 |
| Waterbody 468 | Excavated pond | Sec 31-T159N-R94W | 48.556105 | -102.878478 | 0.68 |
| Waterbody 144 | Intermittent stream | Sec 18-T159N-R94W | 48.59271 | -102.875964 | 0.86 |
| | | | | **Total** | **4.86** |

N = North, R = Range, Sec. = Section, T = Township, W = West.

**Waterbody Documented within Potential Access Road Survey Corridors**

| Name | Classification | Location | Latitude | Longitude | Acres |
|---|---|---|---|---|---|
| Waterbody 144b | Intermittent stream | Sec 18-T159N-R94W | 48.590292 | -102.873953 | 0.01 |

N = North, R = Range, Sec. = Section, T = Township, W = West.

# Appendix F - Basin Electric Power Cooperative Avian and Bat Protection Plan

# Appendix G - Noxious Weed Attributes

**Noxious Weeds Documented within the Survey Corridor**

| Name | Location | Latitude | Longitude | Species 1 | Species 2 | Acres |
|---|---|---|---|---|---|---|
| Weeds 2 | Sec 5-T163N-R96W | 48.974068 | -103.175835 | Canada thistle | Absinth wormwood | 1.53 |
| Weeds 3 | Sec 5-T163N-R96W | 48.97417 | -103.16923 | Canada thistle | | 0.16 |
| Weeds 5 | Sec 20-T163N-R96W | 48.923495 | -103.169464 | Canada thistle | | 0.14 |
| Weeds 7 | Sec 29-T163N-R96W | 48.91606 | -103.160667 | Canada thistle | | 0.16 |
| Weeds 8 | Sec 29-T163N-R96W | 48.915717 | -103.159525 | Canada thistle | | 0.30 |
| Weeds 12 | Sec 20-T163N-R96W | 48.928959 | -103.169503 | Canada thistle | | 0.05 |
| Weeds 16 | Sec 23-T162N-R96W | 48.83749 | -103.104016 | Canada thistle | | 0.23 |
| Weeds 17 | Sec 23-T162N-R96W | 48.840906 | -103.10394 | Canada thistle | | 0.56 |
| Weeds 18 | Sec 26-T162N-R96W | 48.833516 | -103.103817 | Canada thistle | | 0.19 |
| Weeds 20 | Sec 26-T162N-R96W | 48.830685 | -103.104042 | Canada thistle | | 0.21 |
| Weeds 21 | Sec 26-T162N-R96W | 48.829175 | -103.103942 | Canada thistle | | 0.12 |
| Weeds 24 | Sec 2-T161N-R96W | 48.801494 | -103.104012 | Canada thistle | | 0.68 |
| Weeds 25 | Sec 2-T161N-R96W | 48.797316 | -103.10399 | Canada thistle | | 0.16 |
| Weeds 31 | Sec 11-T161N-R96W | 48.778472 | -103.103915 | Canada thistle | | 0.08 |
| Weeds 33 | Sec 11-T161N-R96W | 48.779585 | -103.103838 | Canada thistle | | 0.10 |
| Weeds 35 | Sec 11-T161N-R96W | 48.781968 | -103.104378 | Canada thistle | | 0.27 |
| Weeds 37 | Sec 11-T161N-R96W | 48.784307 | -103.103977 | Canada thistle | | 1.13 |
| Weeds 39 | Sec 11-T161N-R96W | 48.78768 | -103.103539 | Canada thistle | | 0.16 |
| Weeds 40 | Sec 11-T161N-R96W | 48.790357 | -103.103903 | Canada thistle | | 2.53 |
| Weeds 41 | Sec 11-T161N-R96W | 48.789296 | -103.104384 | Canada thistle | | 0.42 |
| Weeds 44 | Sec 2-T161N-R96W | 48.793453 | -103.103869 | Canada thistle | | 2.77 |
| Weeds 46 | Sec 2-T161N-R96W | 48.795702 | -103.104004 | Canada thistle | | 3.52 |
| Weeds 49 | Sec 14-T161N-R96W | 48.777265 | -103.10408 | Canada thistle | | 1.30 |
| Weeds 52 | Sec 19-T161N-R95W | 48.756752 | -103.068539 | Canada thistle | | 0.43 |
| Weeds 54 | Sec 33-T161N-R95W | 48.727708 | -103.006328 | Canada thistle | | 0.01 |
| Weeds 56 | Sec 24-T161N-R96W | 48.756769 | -103.071964 | Canada thistle | | 0.23 |
| Weeds 58 | Sec 24-T161N-R96W | 48.75675 | -103.07291 | Canada thistle | | 0.41 |
| Weeds 59 | Sec 24-T161N-R96W | 48.756693 | -103.075116 | Canada thistle | | 0.44 |
| Weeds 60 | Sec 6-T160N-R95W | 48.720338 | -103.006309 | Canada thistle | | 0.05 |
| Weeds 61 | Sec 28-T161N-R95W | 48.740506 | -103.006038 | Canada thistle | | 0.12 |
| Weeds 62 | Sec 28-T161N-R95W | 48.741169 | -103.006293 | Canada thistle | | 0.02 |
| Weeds 65 | Sec 28-T161N-R95W | 48.739722 | -103.006154 | Canada thistle | | 0.19 |
| Weeds 66 | Sec 28-T161N-R95W | 48.738645 | -103.00628 | Canada thistle | | 1.31 |
| Weeds 68 | Sec 7-T160N-R95W | 48.698879 | -103.006056 | Canada thistle | | 0.96 |
| Weeds 75 | Sec 30-T160N-R95W | 48.661511 | -103.005878 | Canada thistle | | 0.47 |
| Weeds 76 | Sec 30-T160N-R95W | 48.657174 | -103.005884 | Canada thistle | | 0.85 |
| Weeds 79 | Sec 29-T160N-R95W | 48.655391 | -102.993979 | Canada thistle | | 0.05 |
| Weeds 80 | Sec 29-T160N-R95W | 48.655079 | -102.99008 | Canada thistle | | 0.08 |
| Weeds 82 | Sec 29-T160N-R95W | 48.655093 | -102.987657 | Canada thistle | | 1.48 |
| Weeds 89 | Sec 29-T160N-R95W | 48.655063 | -102.975487 | Canada thistle | | 1.33 |
| Weeds 90 | Sec 29-T160N-R95W | 48.655022 | -102.977969 | Canada thistle | | 1.38 |
| Weeds 97 | Sec 26-T160N-R95W | 48.655 | -102.918065 | Canada thistle | | 1.07 |
| Weeds 106 | Sec 31-T160N-R94W | 48.64755 | -102.875658 | Canada thistle | | 0.25 |
| Weeds 107 | Sec 31-T160N-R94W | 48.640783 | -102.876183 | Canada thistle | | 0.09 |
| Weeds 111 | Sec 19-T159N-R94W | 48.588722 | -102.875537 | Canada thistle | | 1.37 |
| Weeds 118 | Sec 25-T160N-R95W | 48.654939 | -102.894005 | Canada thistle | | 1.38 |
| Weeds 123 | Sec 25-T160N-R95W | 48.65493 | -102.88821 | Canada thistle | | 1.32 |
| Weeds 130 | Sec 30-T160N-R94W | 48.653447 | -102.875777 | Canada thistle | | 0.67 |
| Weeds 131 | Sec 30-T160N-R94W | 48.654049 | -102.875439 | Canada thistle | | 0.31 |

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|---|---|---|---|---|---|---|
| Weeds 132 | Sec 6-T159N-R94W | 48.629926 | -102.875612 | Canada thistle | | 1.66 |
| Weeds 142 | Sec 30-T159N-R94W | 48.575177 | -102.87549 | Canada thistle | | 0.33 |
| Weeds 144 | Sec 30-T159N-R94W | 48.572853 | -102.875405 | Canada thistle | | 0.21 |
| Weeds 148 | Sec 30-T159N-R94W | 48.569849 | -102.87544 | Canada thistle | | 0.09 |
| Weeds 150 | Sec 30-T159N-R94W | 48.56854 | -102.875451 | Canada thistle | | 0.03 |
| Weeds 151 | Sec 30-T159N-R94W | 48.568272 | -102.875485 | Canada thistle | | 0.03 |
| Weeds 152 | Sec 31-T159N-R94W | 48.546485 | -102.867236 | Canada thistle | | 0.35 |
| Weeds 153 | Sec 31-T159N-R94W | 48.546488 | -102.873469 | Canada thistle | | 0.25 |
| Weeds 154 | Sec 6-T158N-R94W | 48.5358 | -102.86458 | Canada thistle | | 0.63 |
| Weeds 155 | Sec 7-T158N-R94W | 48.523542 | -102.864552 | Canada thistle | | 0.47 |
| Weeds 158 | Sec 5-T157N-R94W | 48.455589 | -102.864077 | Canada thistle | | 1.65 |
| Weeds 159 | Sec 8-T157N-R94W | 48.441258 | -102.847862 | Canada thistle | | 0.66 |
| Weeds 160 | Sec 8-T158N-R94W | 48.528193 | -102.864093 | Canada thistle | | 0.48 |
| Weeds 164 | Sec 17-T158N-R94W | 48.510372 | -102.863893 | Canada thistle | | 0.95 |
| Weeds 165 | Sec 17-T158N-R94W | 48.506633 | -102.864284 | Canada thistle | | 0.09 |
| Weeds 167 | Sec 19-T158N-R94W | 48.502741 | -102.8647 | Canada thistle | | 0.01 |
| Weeds 168 | Sec 19-T158N-R94W | 48.500129 | -102.864597 | Canada thistle | | 0.06 |
| Weeds 169 | Sec 30-T158N-R94W | 48.477591 | -102.864448 | Canada thistle | | 0.13 |
| Weeds 170 | Sec 32-T158N-R94W | 48.459973 | -102.864182 | Canada thistle | | 0.27 |
| Weeds 171 | Sec 5-T157N-R94W | 48.452339 | -102.858879 | Canada thistle | | 0.09 |
| Weeds 172 | Sec 5-T157N-R94W | 48.452381 | -102.857782 | Canada thistle | | 0.02 |
| Weeds 173 | Sec 5-T157N-R94W | 48.452321 | -102.856764 | Canada thistle | | 0.33 |
| Weeds 174 | Sec 5-T157N-R94W | 48.452221 | -102.855802 | Canada thistle | | 0.16 |
| Weeds 175 | Sec 5-T157N-R94W | 48.452223 | -102.851972 | Canada thistle | | 1.19 |
| Weeds 176 | Sec 5-T157N-R94W | 48.448658 | -102.847907 | Canada thistle | | 0.24 |
| Weeds 177 | Sec 5-T157N-R94W | 48.446323 | -102.847943 | Canada thistle | | 0.68 |
| Weeds 178 | Sec 17-T157N-R94W | 48.430344 | -102.847743 | Canada thistle | | 0.14 |
| Weeds 207 | Sec 36-T164N-R97W | 48.98848 | -103.21278 | Leafy spurge | | 0.03 |
| Weeds 208 | Sec 36-T164N-R97W | 48.983988 | -103.212987 | Canada thistle | | 1.35 |
| Weeds 209 | Sec 36-T164N-R97W | 48.982816 | -103.213287 | Canada thistle | | 0.17 |
| Weeds 212 | Sec 1-T163N-R97W | 48.97405 | -103.209706 | Canada thistle | | 2.55 |
| Weeds 215 | Sec 6-T163N-R96W | 48.974032 | -103.187332 | Canada thistle | | 0.02 |
| Weeds 216 | Sec 5-T163N-R96W | 48.973774 | -103.180288 | Canada thistle | | 0.21 |
| Weeds 217 | Sec 5-T163N-R96W | 48.973734 | -103.177267 | Canada thistle | | 0.09 |
| Weeds 218 | Sec 5-T163N-R96W | 48.973861 | -103.17023 | Canada thistle | | 0.05 |
| Weeds 219 | Sec 5-T163N-R96W | 48.973113 | -103.169535 | Canada thistle | | 0.14 |
| Weeds 220 | Sec 5-T163N-R96W | 48.972231 | -103.169467 | Canada thistle | | 0.20 |
| Weeds 222 | Sec 5-T163N-R96W | 48.971435 | -103.169443 | Canada thistle | Absinth wormwood | 0.17 |
| Weeds 223 | Sec 20-T163N-R96W | 48.927818 | -103.169591 | Canada thistle | | 0.10 |
| Weeds 224 | Sec 20-T163N-R96W | 48.930605 | -103.169515 | Canada thistle | | 0.08 |
| Weeds 226 | Sec 17-T163N-R96W | 48.937903 | -103.169541 | Leafy spurge | Canada thistle | 0.02 |
| Weeds 238 | Sec 14-T162N-R96W | 48.850921 | -103.103746 | Canada thistle | | 0.02 |
| Weeds 241 | Sec 23-T162N-R96W | 48.841155 | -103.103641 | Canada thistle | | 3.01 |
| Weeds 242 | Sec 23-T162N-R96W | 48.847621 | -103.103776 | Canada thistle | | 15.5 |
| Weeds 243 | Sec 14-T162N-R96W | 48.85092 | -103.104033 | Canada thistle | | 0.02 |
| Weeds 244 | Sec 14-T162N-R96W | 48.854358 | -103.103767 | Canada thistle | | 0.98 |
| Weeds 245 | Sec 14-T162N-R96W | 48.861787 | -103.103633 | Canada thistle | | 1.05 |
| Weeds 246 | Sec 11-T162N-R96W | 48.86946 | -103.103618 | Canada thistle | | 0.04 |
| Weeds 247 | Sec 11-T162N-R96W | 48.872477 | -103.103591 | Canada thistle | | 0.03 |
| Weeds 248 | Sec 2-T161N-R96W | 48.807283 | -103.103485 | Canada thistle | | 0.01 |
| Weeds 249 | Sec 2-T161N-R96W | 48.80585 | -103.103688 | Canada thistle | | 0.25 |

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|---|---|---|---|---|---|
| Weeds 250 | Sec 2-T161N-R96W | 48.800522 | -103.103712 | Canada thistle | 0.33 |
| Weeds 251 | Sec 2-T161N-R96W | 48.798951 | -103.10383 | Canada thistle | 0.02 |
| Weeds 252 | Sec 2-T161N-R96W | 48.797124 | -103.103832 | Canada thistle | 0.15 |
| Weeds 253 | Sec 14-T161N-R96W | 48.77083 | -103.103858 | Canada thistle | 0.13 |
| Weeds 254 | Sec 23-T161N-R96W | 48.756561 | -103.096287 | Canada thistle | 1.68 |
| Weeds 257 | Sec 24-T161N-R96W | 48.756411 | -103.081992 | Canada thistle | 0.38 |
| Weeds 258 | Sec 24-T161N-R96W | 48.756511 | -103.08106 | Canada thistle | 0.33 |
| Weeds 259 | Sec 24-T161N-R96W | 48.757027 | -103.079828 | Canada thistle | 0.02 |
| Weeds 260 | Sec 24-T161N-R96W | 48.756578 | -103.080025 | Canada thistle | 0.17 |
| Weeds 261 | Sec 24-T161N-R96W | 48.756652 | -103.078852 | Canada thistle | 0.02 |
| Weeds 262 | Sec 24-T161N-R96W | 48.756335 | -103.077808 | Canada thistle | 0.06 |
| Weeds 263 | Sec 24-T161N-R96W | 48.756468 | -103.077089 | Canada thistle | 0.16 |
| Weeds 264 | Sec 24-T161N-R96W | 48.75648 | -103.076275 | Canada thistle | 0.39 |
| Weeds 265 | Sec 24-T161N-R96W | 48.756619 | -103.0711 | Canada thistle | 0.14 |
| Weeds 266 | Sec 19-T161N-R95W | 48.756507 | -103.069958 | Canada thistle | 0.17 |
| Weeds 267 | Sec 19-T161N-R95W | 48.756595 | -103.066765 | Canada thistle | 0.23 |
| Weeds 268 | Sec 24-T161N-R96W | 48.756464 | -103.072955 | Canada thistle | 0.63 |
| Weeds 269 | Sec 24-T161N-R96W | 48.757005 | -103.082798 | Canada thistle | 0.08 |
| Weeds 270 | Sec 35-T162N-R96W | 48.809956 | -103.103701 | Canada thistle | 0.82 |
| Weeds 271 | Sec 35-T162N-R96W | 48.812945 | -103.103528 | Canada thistle | 2.78 |
| Weeds 273 | Sec 23-T161N-R96W | 48.759736 | -103.104094 | Canada thistle | 3.09 |
| Weeds 276 | Sec 24-T161N-R96W | 48.756843 | -103.090413 | Canada thistle | 0.19 |
| Weeds 281 | Sec 19-T161N-R95W | 48.756395 | -103.063682 | Canada thistle | 0.08 |
| Weeds 284 | Sec 21-T161N-R95W | 48.756651 | -103.021355 | Canada thistle | 0.51 |
| Weeds 285 | Sec 21-T161N-R95W | 48.756609 | -103.026072 | Canada thistle | 2.67 |
| Weeds 286 | Sec 20-T161N-R95W | 48.756827 | -103.03142 | Canada thistle | 0.95 |
| Weeds 287 | Sec 20-T161N-R95W | 48.756837 | -103.033085 | Canada thistle | 0.08 |
| Weeds 288 | Sec 20-T161N-R95W | 48.756805 | -103.034156 | Canada thistle | 0.15 |
| Weeds 289 | Sec 20-T161N-R95W | 48.756901 | -103.034738 | Canada thistle | 0.17 |
| Weeds 290 | Sec 20-T161N-R95W | 48.756789 | -103.037373 | Canada thistle | 0.95 |
| Weeds 292 | Sec 20-T161N-R95W | 48.756715 | -103.043528 | Canada thistle | 0.47 |
| Weeds 294 | Sec 20-T161N-R95W | 48.756705 | -103.045765 | Canada thistle | 0.57 |
| Weeds 295 | Sec 20-T161N-R95W | 48.756684 | -103.04813 | Canada thistle | 0.70 |
| Weeds 296 | Sec 28-T161N-R95W | 48.737366 | -103.005881 | Canada thistle | 0.46 |
| Weeds 297 | Sec 28-T161N-R95W | 48.738849 | -103.005689 | Canada thistle | 0.12 |
| Weeds 298 | Sec 28-T161N-R95W | 48.74101 | -103.005781 | Canada thistle | 0.29 |
| Weeds 299 | Sec 28-T161N-R95W | 48.741782 | -103.005772 | Canada thistle | 0.14 |
| Weeds 300 | Sec 27-T161N-R95W | 48.744019 | -103.005287 | Canada thistle | 0.36 |
| Weeds 302 | Sec 27-T161N-R95W | 48.747635 | -103.005271 | Canada thistle | 0.37 |
| Weeds 303 | Sec 21-T161N-R95W | 48.751086 | -103.00528 | Canada thistle | 0.19 |
| Weeds 304 | Sec 21-T161N-R95W | 48.752014 | -103.00528 | Canada thistle | 0.07 |
| Weeds 305 | Sec 21-T161N-R95W | 48.754031 | -103.00587 | Canada thistle | 0.28 |
| Weeds 306 | Sec 21-T161N-R95W | 48.756268 | -103.005798 | Canada thistle | 0.27 |
| Weeds 307 | Sec 7-T160N-R95W | 48.700816 | -103.005947 | Canada thistle | 0.59 |
| Weeds 308 | Sec 6-T160N-R95W | 48.707384 | -103.005967 | Canada thistle | 0.90 |
| Weeds 309 | Sec 6-T160N-R95W | 48.709501 | -103.005982 | Canada thistle | 0.13 |
| Weeds 311 | Sec 6-T160N-R95W | 48.712855 | -103.005819 | Canada thistle | 0.19 |
| Weeds 312 | Sec 33-T161N-R95W | 48.725547 | -103.005701 | Canada thistle | 0.06 |
| Weeds 314 | Sec 21-T161N-R95W | 48.756828 | -103.009417 | Canada thistle | 3.26 |
| Weeds 322 | Sec 27-T161N-R95W | 48.745903 | -103.005434 | Canada thistle | 0.02 |
| Weeds 325 | Sec 21-T161N-R95W | 48.754761 | -103.005314 | Canada thistle | 1.05 |

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|---|---|---|---|---|---|---|
| Weeds 326 | Sec 7-T160N-R95W | 48.691292 | -103.005484 | Canada thistle | | 0.02 |
| Weeds 329 | Sec 7-T160N-R95W | 48.703009 | -103.005998 | Canada thistle | | 0.23 |
| Weeds 330 | Sec 7-T160N-R95W | 48.703764 | -103.005765 | Canada thistle | | 0.15 |
| Weeds 331 | Sec 7-T160N-R95W | 48.70491 | -103.005989 | Canada thistle | | 0.43 |
| Weeds 333 | Sec 6-T160N-R95W | 48.710746 | -103.005871 | Canada thistle | | 0.25 |
| Weeds 335 | Sec 33-T161N-R95W | 48.72323 | -103.005749 | Canada thistle | | 0.27 |
| Weeds 343 | Sec 19-T160N-R95W | 48.676558 | -103.005406 | Canada thistle | | 0.09 |
| Weeds 349 | Sec 8-T163N-R96W | 48.954055 | -103.169412 | Canada thistle | Absinth wormwood | 0.45 |
| Weeds 333 | Sec 6-T160N-R95W | 48.710746 | -103.005871 | Canada thistle | | 0.25 |
| Weeds 335 | Sec 33-T161N-R95W | 48.72323 | -103.005749 | Canada thistle | | 0.27 |
| Weeds 343 | Sec 19-T160N-R95W | 48.676558 | -103.005406 | Canada thistle | | 0.09 |
| Weeds 349 | Sec 8-T163N-R96W | 48.954055 | -103.169412 | Canada thistle | Absinth wormwood | 0.45 |
| Weeds 352 | Sec 20-T163N-R96W | 48.924995 | -103.169599 | Canada thistle | | 0.01 |
| Weeds 368 | Sec 5-T158N-R94W | 48.543699 | -102.864423 | Canada thistle | | 0.62 |
| Weeds 369 | Sec 5-T158N-R94W | 48.535044 | -102.864385 | Canada thistle | | 0.58 |
| Weeds 370 | Sec 8-T158N-R94W | 48.523638 | -102.864368 | Canada thistle | | 0.38 |
| Weeds 371 | Sec 20-T158N-R94W | 48.498351 | -102.864268 | Canada thistle | | 0.75 |
| Weeds 372 | Sec 14-T161N-R96W | 48.764259 | -103.104395 | Canada thistle | | 0.60 |
| Weeds 377 | Sec 27-T160N-R95W | 48.654884 | -102.930585 | Canada thistle | | 0.42 |
| Weeds 378 | Sec 28-T160N-R95W | 48.654862 | -102.952265 | Canada thistle | | 0.24 |
| Weeds 381 | Sec 7-T159N-R94W | 48.606157 | -102.875587 | Canada thistle | | 0.73 |
| Weeds 382 | Sec 7-T159N-R94W | 48.608587 | -102.875607 | Canada thistle | | 1.08 |
| Weeds 383 | Sec 7-T159N-R94W | 48.614742 | -102.875574 | Canada thistle | | 1.81 |
| Weeds 384 | Sec 27-T160N-R95W | 48.655058 | -102.946762 | Canada thistle | | 4.86 |
| Weeds 385 | Sec 27-T160N-R95W | 48.655044 | -102.934741 | Canada thistle | | 4.00 |
| Weeds 389 | Sec 14-T161N-R96W | 48.765546 | -103.103859 | Canada thistle | | 2.19 |
| Weeds 391 | Sec 8-T157N-R94W | 48.444797 | -102.848215 | Canada thistle | | 0.04 |
| Weeds 393 | Sec 32-T158N-R94W | 48.469679 | -102.863979 | Canada thistle | | 0.03 |
| Weeds 398 | Sec 19-T158N-R94W | 48.498131 | -102.864576 | Canada thistle | | 0.11 |
| Weeds 399 | Sec 17-T158N-R94W | 48.503445 | -102.864127 | Canada thistle | | 0.16 |
| Weeds 400 | Sec 18-T158N-R94W | 48.505555 | -102.864508 | Canada thistle | | 0.36 |
| Weeds 401 | Sec 17-T158N-R94W | 48.505185 | -102.864315 | Canada thistle | | 0.14 |
| Weeds 409 | Sec 33-T161N-R95W | 48.73134 | -103.005923 | Canada thistle | | 4.12 |
| Weeds 414 | Sec 28-T161N-R95W | 48.745705 | -103.005818 | Canada thistle | | 2.21 |
| Weeds 415 | Sec 21-T161N-R95W | 48.751483 | -103.005773 | Canada thistle | | 0.52 |
| Weeds 422 | Sec 14-T161N-R96W | 48.770929 | -103.104022 | Canada thistle | | 2.51 |
| Weeds 427 | Sec 26-T162N-R96W | 48.829226 | -103.103722 | Canada thistle | | 0.43 |
| Weeds 429 | Sec 26-T162N-R96W | 48.825287 | -103.103839 | Canada thistle | | 1.07 |
| Weeds 431 | Sec 26-T162N-R96W | 48.835109 | -103.103772 | Canada thistle | | 0.19 |
| Weeds 437 | Sec 11-T162N-R96W | 48.872434 | -103.103737 | Canada thistle | | 0.10 |
| Weeds 445 | Sec 17-T163N-R96W | 48.948504 | -103.16942 | Canada thistle | | 0.92 |
| Weeds 460 | Sec 30-T160N-R94W | 48.648424 | -102.870935 | Canada thistle | | 0.22 |
| Weeds 465 | Sec 17-T158N-R94W | 48.514448 | -102.864362 | Canada thistle | | 0.19 |
| Weeds 466 | Sec 18-T158N-R94W | 48.514718 | -102.864523 | Canada thistle | | 0.10 |
| Weeds 471 | Sec 17-T158N-R94W | 48.511593 | -102.863911 | Canada thistle | | 0.52 |
| Weeds 479 | Sec 19-T161N-R95W | 48.75658 | -103.05006 | Canada thistle | | 0.10 |
| Weeds 480 | Sec 19-T161N-R95W | 48.756384 | -103.058389 | Canada thistle | | 0.36 |
| Weeds 485 | Sec 30-T160N-R94W | 48.65082 | -102.875633 | Canada thistle | | 5.45 |
| | | | | | **Total** | **138.36** |

N = North, R = Range, Sec. = Section, T = Township, W = West.

**Noxious Weeds Documented within the Potential Access Road Survey Corridors**

| Name | Location | Latitude | Longitude | Species 1 | Acres |
|---|---|---|---|---|---|
| Weeds 486 | Sec 30-T160N-R94W | 48.653447 | -102.873489 | Canada thistle | 0.14 |
| Weeds 487 | Sec 19-T160N-R95W | 48.676789 | -103.005133 | Canada thistle | 0.07 |
| Weeds 489 | Sec 6-T160N-R95W | 48.711246 | -103.005322 | Canada thistle | 0.06 |
| Weeds 492 | Sec 28-T161N-R95W | 48.739571 | -103.006525 | Canada thistle | 0.02 |
| | | | | **Total** | **0.29** |

N = North, R = Range, Sec. = Section, T = Township, W = West.

# Appendix H

# Agency Notification Letters and Responses

| Summary of Agency Comments | | | | |
|---|---|---|---|---|
| **Agency** | **Notification Date** | **Response Date** | **Comment Summary** | **Basin Electric Response** |
| Aeronautics Commission | 5/21/2025 | No response received | | |
| Attorney General | 5/21/2025 | No response received | | |
| Bureau of Land Management | 5/21/2025 | 5/22/2025 | BLM received the notification and determined the BLM does not have any land involved in this project and have no concerns. | |
| Divide County Commission | 5/21/2025 | No response received | | |
| Federal Aviation Administration | 5/21/2025 | 5/21/2025 | Please provide a sketch of the location of the construction of the two separate 230-kV electric transmission lines which depicts the public use airports listed.<br><br>The FAA has a web site to determine who shall file in FAA web site OE/AAA om accordance to heights above ground or locations near a public airport. You must file with the FAA at least 45 days prior to construction if one of eight parameters are met. | Basin Electric provided a figure with the transmission line locations and the listed public use airports.<br><br>Basin Electric inputted each structure location and height into the FAA web site. 30 structures were filed for, with all having a Determination of No Hazard to Air Navigation. |
| Governor's Office | 5/21/2025 | No response received | | |
| Grand Forks Air Force Base | 5/21/2025 | No response received | | |
| Jobs Service North Dakota | 5/21/2025 | No response received | | |
| Military Aviation and Installation Assurance Siting Clearinghouse | 5/21/2025 | 7/11/2025 | The Clearinghouse did coordinate within the Department of Defense an informal review of the Project. The results of our review indicated that the transmission line project, as proposed, will have minimal impact on operations conducted in the area. | |
| Minot Air Force Base | 5/21/2025 | No response received | | |
| Mountrail County Commission | 5/21/2025 | No response received | | |
| Natural Resources Conservation Service | 5/21/2025 | 5/28/2025 | A review concluded the Project is not supported by federal funding; therefore, Farmland Protection Policy Act does not apply. The Project will have minimal impacts to wetlands if disturbance to wetlands is temporary, and no wetlands are drained or filled. | |
| ND Department of Agriculture | 5/21/2025 | No response received | | |
| ND Department of Career and Technical Education | 5/21/2025 | No response received | | |
| ND Department of Commerce | 5/21/2025 | No response received | | |
| ND Department of Environmental Quality | 5/21/2025 | No response received | | |
| ND Department of Health | 5/21/2025 | No response received | | |
| ND Department of Human Services | 5/21/2025 | No response received | | |
| ND Department of Labor and Human Rights | 5/21/2025 | No response received | | |

| Summary of Agency Comments | | | | |
|---|---|---|---|---|
| **Agency** | **Notification Date** | **Response Date** | **Comment Summary** | **Basin Electric Response** |
| ND Department of Transportation | 5/21/2025 | No response received | | |
| ND Department of Trust Lands (Minerals Management) | 5/21/2025 | No response received | | |
| ND Department of Trust Lands (School/Surface Trust) | 5/21/2025 | 6/1/2025 | Basin Electric has been working through the NDDTL process for this proposed project. | |
| ND Energy Infrastructure and Impact Office | 5/21/2025 | No response received | | |
| ND Forest Service | 5/21/2025 | No response received | | |
| ND Game and Fish Department | 5/21/2025 | 7/19/2025 | A primary concern is the disturbance of native prairie. NDGF asks that work within these ares be avoided to the extent possible, and disturbed areas be reclaimed to pre-project conditions. NDGF recommends avoiding construction during sharp-tailed grouse lekking and nesting season (March 15-July 15). Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns and above-ground appurtenances should not be placed in wetlands. Unavoidable destruction or degradation of wetland acres should be mitigated in kind. Aerial surveys should be conducted for raptor nests before construction begins. NDGF does not believe the Project will have significant adverse effects provided these recommendations are implemented, where appropriate. | |
| ND Geological Survey | 5/21/2025 | 5/27/2025 | NDGS reviewed the route against our landslide mapping information and did not note any areas of concern along the proposed route from a geological standpoint. There are four locations where the planned route passes close to existing oil well pads that may be of concern. | Basin Electric adjusted several structures to be further away from the referenced oil well pads. |
| ND Indian Affairs Commission | 5/21/2025 | No response received | | |
| ND Industrial Commission | 5/21/2025 | No response received | | |
| ND Parks and Recreation Department | 5/21/2025 | 6/19/2025 | The project does not appear to affect the properties NDPRD owns, leases, or manages. The project does not appear to affect any properties protected under Section 6(f) of the LWCF. Based on this review, we have no know plant or animal species of concern or significant ecological communities documented within or immediately adjacent to the project site. | |
| ND Pipeline Authority | 5/21/2025 | No response received | | |

| Summary of Agency Comments | | | | |
|---|---|---|---|---|
| **Agency** | **Notification Date** | **Response Date** | **Comment Summary** | **Basin Electric Response** |
| ND State Water Commission (Department of Water Resources) | 5/21/2025 | 7/17/2025 | There are no FEMA NFIP floodplains identified or mapped where the proposed project is to take place. Please work directly with the local floodplain administrator of the zoning authority impacted to achieve NFIP compliance.<br>The Project does not require a conditional or temporary permit for water appropriation. If a DWR observation well is encountered during construction and must be removed, contact the Water Appropriation Division. | |
| ND Transmission Authority | 5/21/2025 | 5/21/2025 | We support the project as presented. | |
| State historical Society of North Dakota | 5/21/2025 | 6/20/2025 | SHSND recommends a Class I and Class III of cultural resources in the Project area. | Basin Electric, through their consultant, Burns & McDonnell, are completing a Class III of the Project area. |
| Twentieth Airforce Ninety-First Missile Wing | 5/21/2025 | No response received | | |
| US Army Corps of Engineers | 5/21/2025 | 6/12/2025 | A section 404 permit would be required for the discharge of dredge or fill material in water of the US. | Basin Electric will be applying for NWP 57 compliance. |
| US Department of Defense | 5/21/2025 | No response received | | |
| US Fish and Wildlife Service | 5/21/2025 | No response received | | |
| Burke County Commission | 5/21/2025 | 6/9/2025 | Requested a list of agencies the notification letter went to to determine next steps. | Basin Electric will be applying for a Conditional Use Permit with Burke County. |
| Williams County Commission | 5/21/2025 | No response received | | |
| Williams County Auditor | 5/21/2025 | No response received | | |
| State Representative - District 2 | 5/21/2025 | No response received | | |
| State Representative - District 2 | 5/21/2025 | No response received | | |
| State Senator - District 2 | 5/21/2025 | 5/25/2025 | No questions at this point nor have I heard anything from constituents. | |
| Mountrail County Auditor | 5/21/2025 | No response received | | |

**Bureau of Land Management**

| | |
|---|---|
| **From:** | McKenzie, Chelsie J |
| **To:** | Ryan King |
| **Subject:** | [External] External: Basin Electric Power Cooperative"s Proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project |
| **Date:** | Thursday, May 22, 2025 3:38:43 PM |

***External Email - Use caution clicking links or opening attachments***

Ryan,

I have received the notification for the Project listed in the subject line, after reviewing the legal land descriptions BLM doesn't have any lands involved in this project and have no concerns. Please advise us if the project changes.

Thank you

**Chelsie McKenzie**
***Realty Specialist***
***Bureau of Land Management***
***North Dakota Field Office***
***99 23rd Avenue West, Suite A***
***Dickinson, ND 58601***
***Office: 701-227-7702***
***Cell: 701-502-1271***

**Federal Avian Administration**

**From:** Holzer, Mark (FAA)
**To:** Ryan King
**Cc:** Anderson, David P (FAA); Erwin, Grant
**Subject:** External: Status Basin Electric Power Cooperative"s Tande - Wheelock 230kV Transmission Project
**Date:** Wednesday, October 22, 2025 11:23:02 AM
**Attachments:** image001.jpg
image002.png
image003.png
image004.png
image005.png
image006.png
image007.png
image008.png
image009.png
image010.png
image011.png
image012.png
image013.png

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Ryan
Thanks for providing me an update on the Wheelock/Tande 230-KV routing.

Good to know that these case studies were determined to be no hazard to air navigation.

Mark J. Holzer
Program Manager
Federal Aviation Administration
Dakota Minnesota Airports District Office
2301 University Drive, Bldg 23B
Bismarck, ND 58504
701.323.7393

---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Tuesday, October 14, 2025 1:25 PM
**To:** Holzer, Mark (FAA) <Mark.Holzer@faa.gov>
**Cc:** Anderson, David P (FAA) <David.P.Anderson@faa.gov>; Schmit, Travis L (FAA) <Travis.L.Schmit@faa.gov>; Jenny, Melissa M (FAA) <Melissa.M.Jenny@faa.gov>; Schuck, Brian P (FAA) <Brian.P.Schuck@faa.gov>; Erwin, Grant <gerwin@nd.gov>
**Subject:** RE: [External] External: Basin Electric Power Cooperative's Tande - Wheelock 230kV Transmission Project

Some people who received this message don't often get email from rking@bepc.com. Learn why this is important

**CAUTION:** This email originated from outside of the Federal Aviation Administration (FAA). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Mark,

I apologize for the delayed response, but we have had a few route changes, and I wanted to give you the final or at least very close to being final route. Attached is the figure you requested with our two lines in relation to the below airports.

I also wanted to provide an update on the structure filing with the obstruction evaluation tool. We have input each structure and the tool suggested we file 11 structures – each of which were determined to have no hazard to air navigation.

Thank you,

**Ryan King** | Environmental Coordinator
Direct: 701.557.5558 | Cell: 701.426.9469

---

**From:** Holzer, Mark (FAA) <Mark.Holzer@faa.gov>
**Sent:** Wednesday, May 21, 2025 3:45 PM
**To:** Ryan King <RKing@bepc.com>

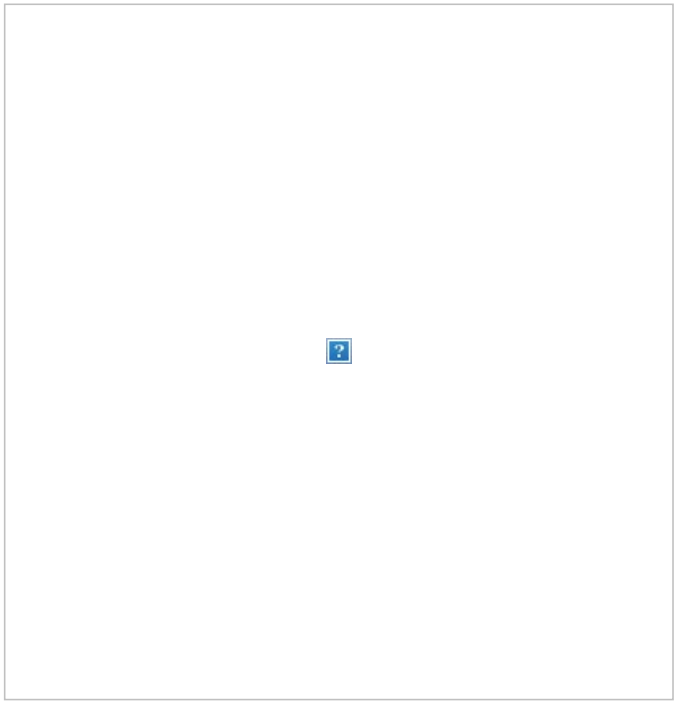
**Cc:** Anderson, David P (FAA) <David.P.Anderson@faa.gov>; Schmit, Travis L (FAA) <Travis.L.Schmit@faa.gov>; Jenny, Melissa M (FAA) <Melissa.M.Jenny@faa.gov>; Schuck, Brian P (FAA) <Brian.P.Schuck@faa.gov>; Erwin, Grant <gerwin@nd.gov>
**Subject:** [External] External: Basin Electric Power Cooperative's Tande - Wheelock 230kV Transmission Project

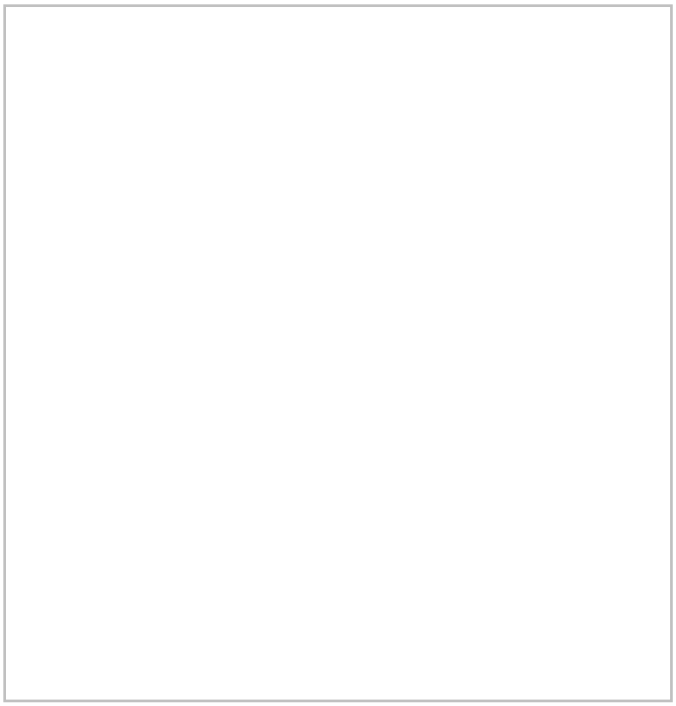
***External Email - Use caution clicking links or opening attachments***

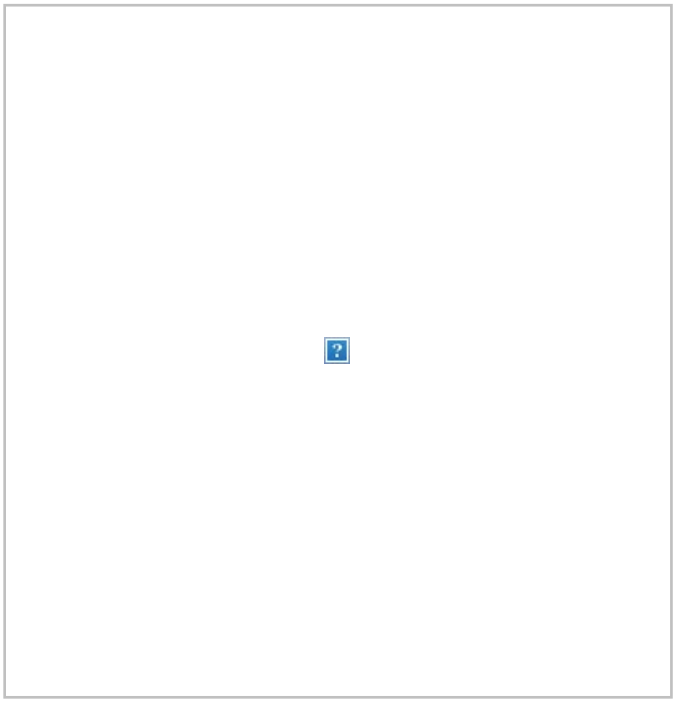
Ryan
Good afternoon,

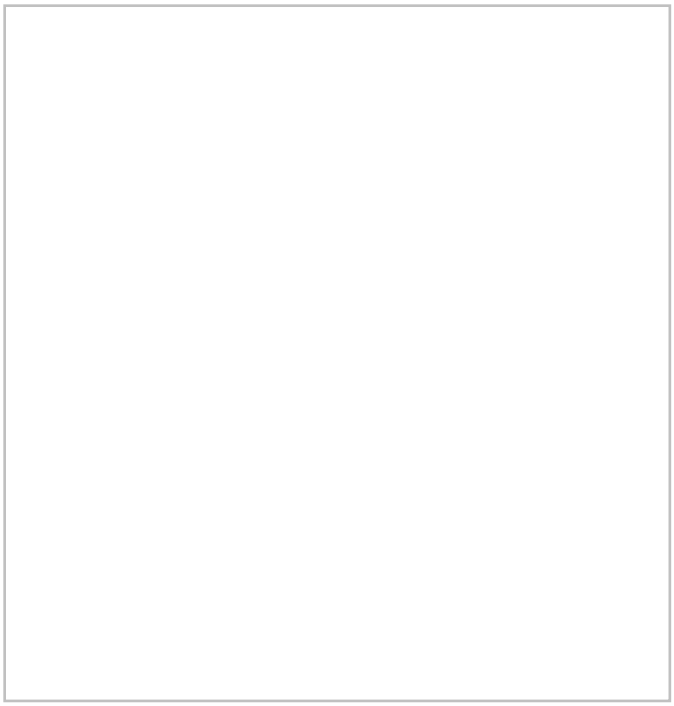
Please provide as sketch of the location of the construction of two separate 230-kilovolt electric transmission lines, totaling approximately 111.3 miles which depicts the public use airports as listed below.

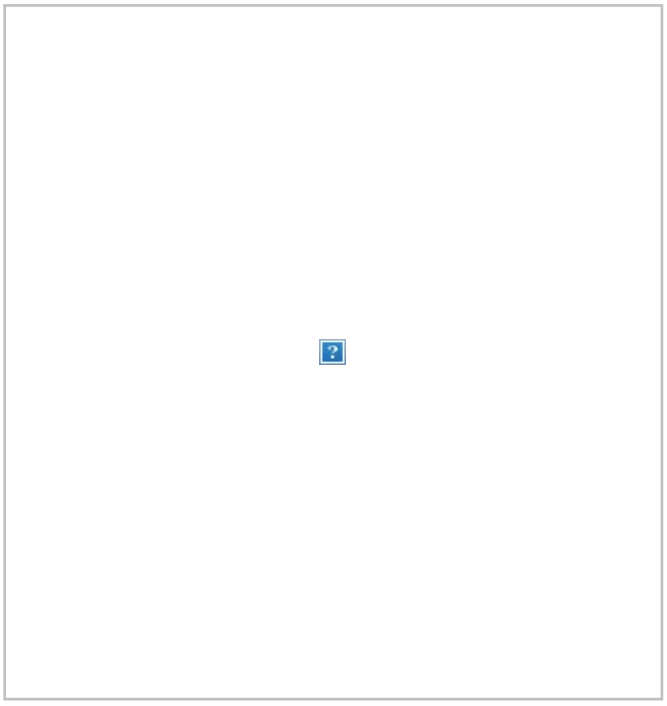
The Project is located within Burke, Divide, Mountrail, and Williams Counties, North Dakota. The Public owned Airports in these counties are as follows with coordinates and site elevations as:

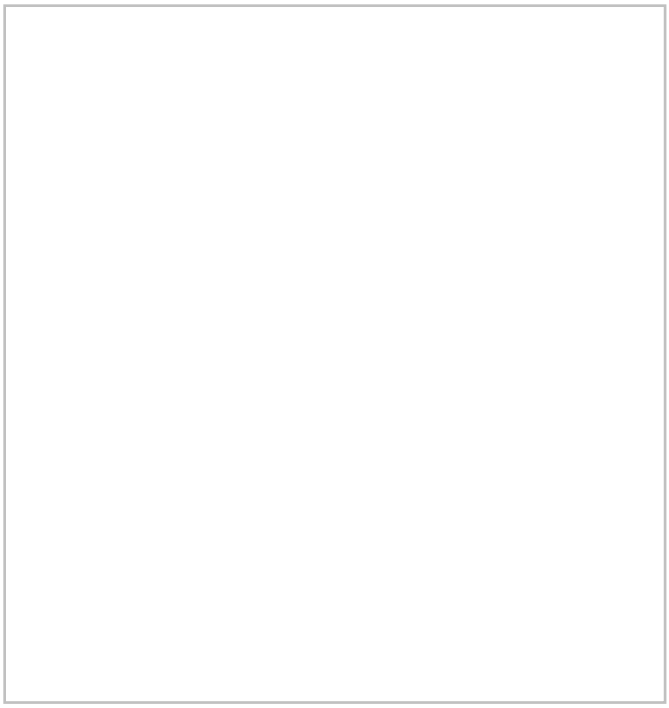


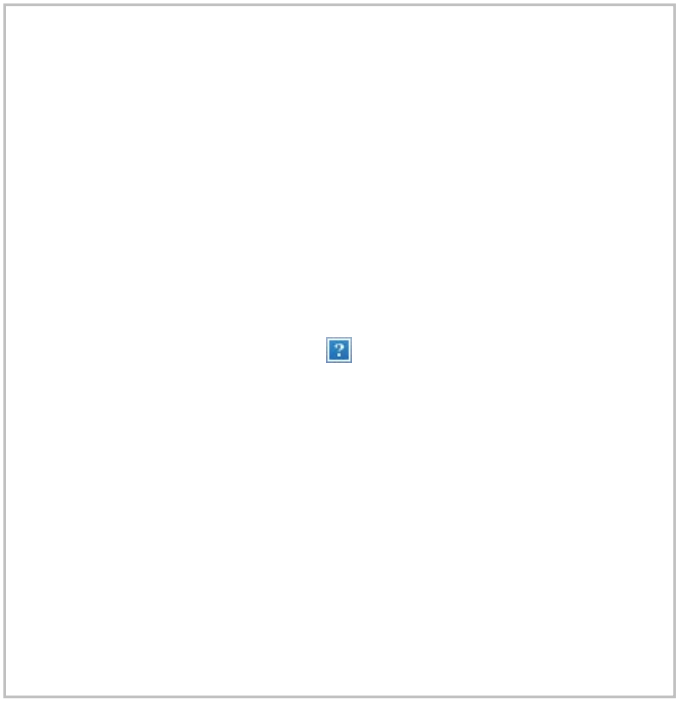


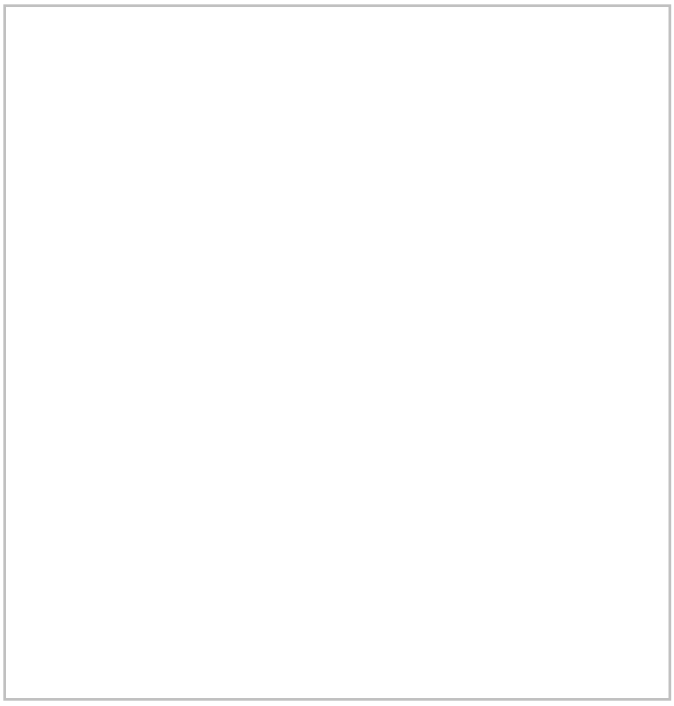


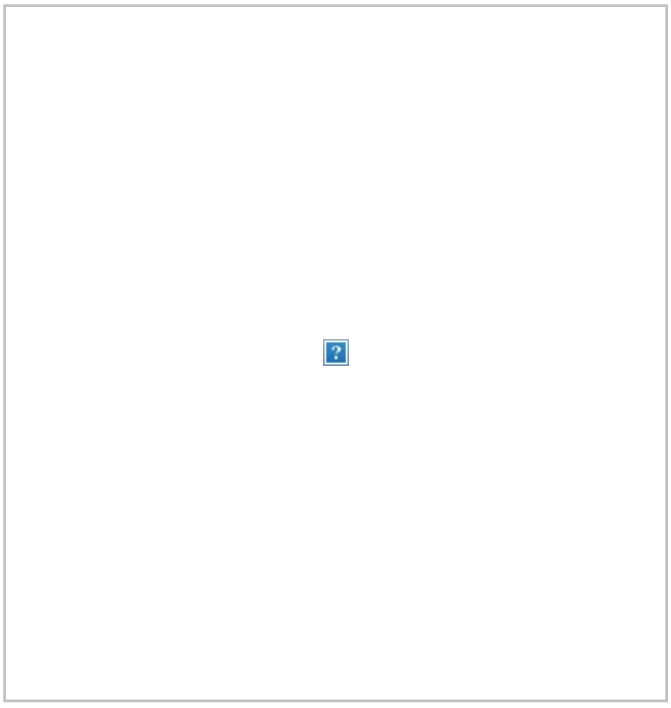




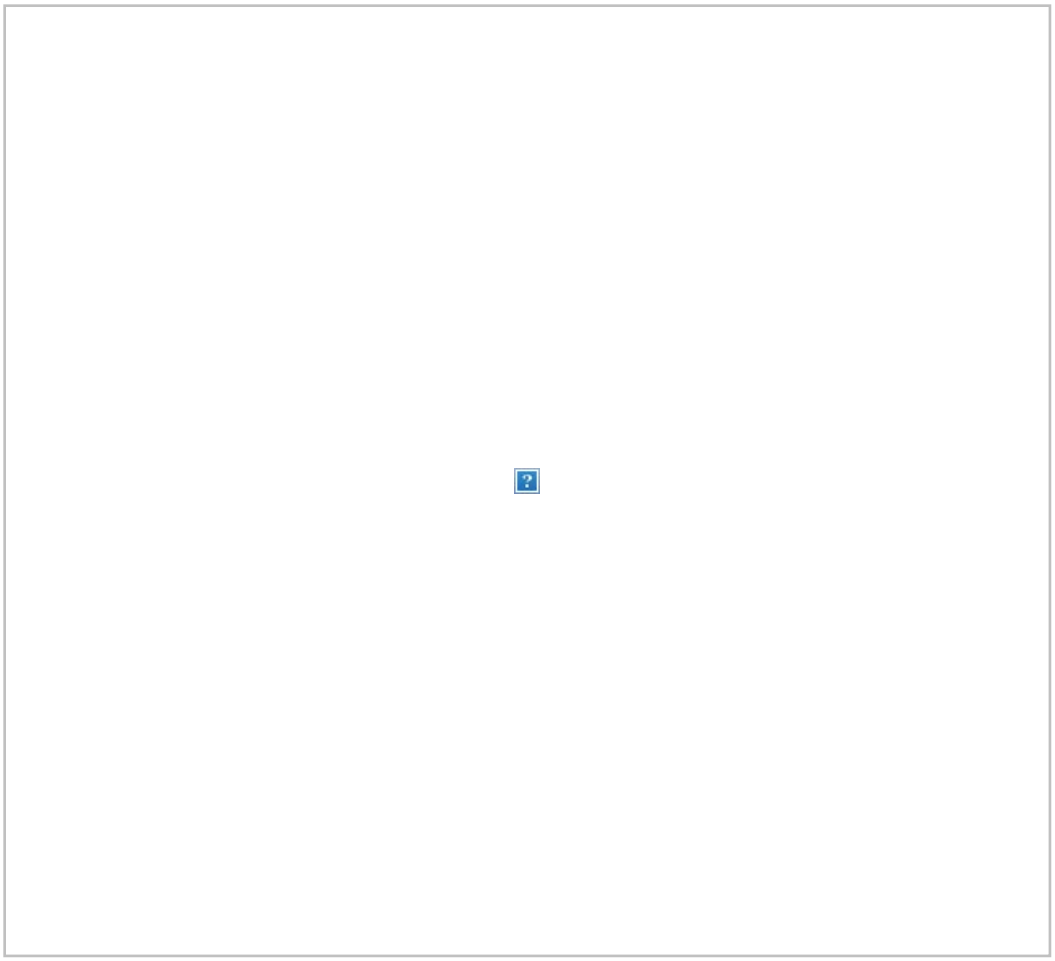








FAA has a web site for obstruction evaluation as pasted below, however it maybe down this week for updates. The Notice Criterial tool will allow you to input airport locations to the nearest points of the proposed line location to determine if any impacts may occur. Once case studies for the line location is developed, this Tool can allow preliminary determinations to be reviewed. The proposed line locations can be studies under this 7460 filing process to allow FAA to determine the safe and efficient use of airspace for the airports, navaids and flight paths in these counties.



FAA has a filing notice under FAR PART 77 as follows for filing proposed projects near a public airport as follows:



If requested by the FAA, or if you propose any of the following types of construction or alteration, you must file notice with the FAA of:

(a)Any construction or alteration that is more than 200 ft. AGL at its site.

(b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

(1) 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports.

(2) 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports.

(3) 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section.

(c) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a) or (b) of this section.

(d) Any construction or alteration on any of the following airports and heliports:

(1) A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific Chart Supplement of the U.S. Government Flight Information Publications;

(2) A military airport under construction, or an airport under construction that will be available for public use;

(3) An airport operated by a Federal agency or the DOD.

(4) An airport or heliport with at least one FAA-approved instrument approach procedure.

(e) You do not need to file notice for construction or alteration of:

(1) Any object that will be shielded by existing structures of a permanent and substantial nature or by natural terrain or topographic features of equal or greater height, and will be located in the congested area of a city, town, or settlement where the shielded structure will not adversely affect safety in air navigation;

(2) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device meeting FAA-approved siting criteria or an appropriate military service siting criteria on military airports, the location and height of which are fixed by its functional purpose;

(3) Any construction or alteration for which notice is required by any other FAA regulation.

(4) Any antenna structure of 20 feet or less in height, except one that would increase the height of another antenna structure.

If you have any questions on the proposed new powerline routing process, please reach out to me for advise.

Mark J. Holzer
Program Manager
Federal Aviation Administration
Dakota Minnesota Airports District Office
2301 University Drive, Bldg 23B
Bismarck, ND 58504
701.323.7393

---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, May 21, 2025 10:21 AM
**To:** Holzer, Mark (FAA) <Mark.Holzer@faa.gov>
**Cc:** Anderson, David P (FAA) <David.P.Anderson@faa.gov>
**Subject:** Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

**CAUTION:** This email originated from outside of the Federal Aviation Administration (FAA). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Mr. Holzer,

Please find the attached consultation letter requesting review of Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230-kV Transmission Project. The Project involves construction of two separate 230-kilovolt electric transmission lines, totaling approximately 111.3 miles. The Project is located within Burke, Divide, Mountrail, and Williams Counties, North Dakota. To stay aligned with our Project schedule, I am respectfully requesting your review and any response within 45 days of receiving this notification.
If you have any questions or require additional information, please contact me directly at 701-557-5558 or RKing@bepc.com.

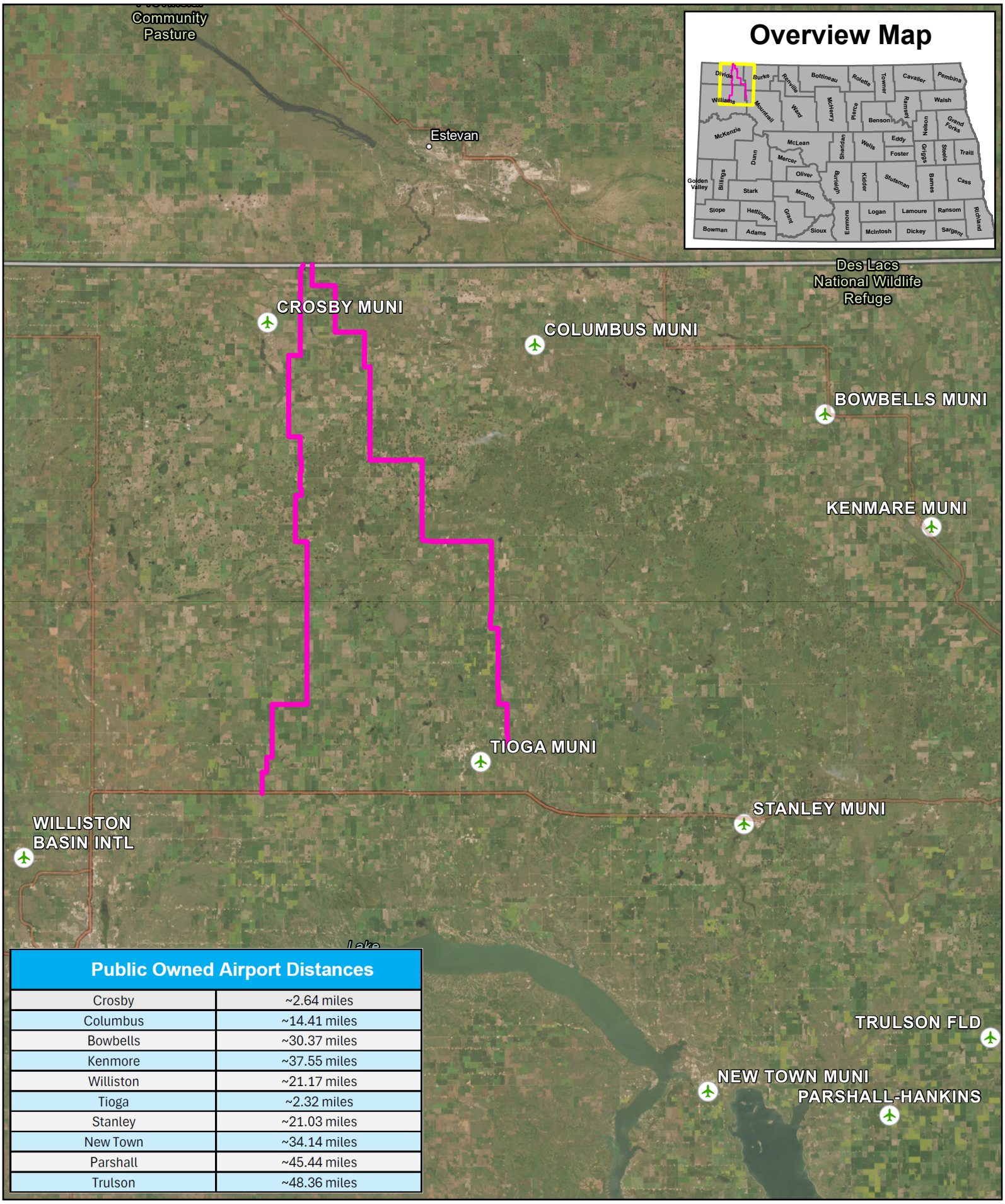
Thank you,

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative
1717 E Interstate Avenue | Bismarck, ND 58503
Direct: 701.557.5558 | Cell: 701.426.9469
RKing@bepc.com | basinelectric.com

# Wheelock/Tande to Saskatchewan 230-kV Transmission Project

Public Owned Airports

BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative




| Public Owned Airport Distances | |
|---|---|
| Crosby | ~2.64 miles |
| Columbus | ~14.41 miles |
| Bowbells | ~30.37 miles |
| Kenmore | ~37.55 miles |
| Williston | ~21.17 miles |
| Tioga | ~2.32 miles |
| Stanley | ~21.03 miles |
| New Town | ~34.14 miles |
| Parshall | ~45.44 miles |
| Trulson | ~48.36 miles |

**Military Aviation and Installation Assurance Siting Clearinghouse**

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS
AND ENVIRONMENT

July 11, 2025

Mr. Ryan King
Basin Electric Power Cooperative
1717 E Interstate Avenue
Bismarck, ND 58503

Dear Mr. King,

Recently, the Secretary of Defense received a letter from you requesting review of the proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project (the Project) located in Burke, Divide, Mountrail, and Williams Counties, North Dakota. This request was forwarded to the Department of Defense (DoD) Military Aviation and Installation Assurance Siting Clearinghouse (Clearinghouse).

Pursuant to Section 183a of Title 10, United States Code, the Clearinghouse is designated by the Secretary of Defense as the entity responsible for handling review by the DoD of applications for energy projects. While we sincerely appreciate early engagement with you regarding this project and thank you for your proactive stance, requests mailed directly to the Secretary of Defense are inconsistent with the required procedure and take considerable time to reach us, often resulting in increased processing time. We would appreciate your assistance in informing others involved at the Basin Electric Power Cooperative that requests for informal reviews should be made directly to the Clearinghouse using forms available at the Clearinghouse website: https://www.dodclearinghouse.osd.mil. Requests for formal reviews are initially submitted to the Federal Aviation Administration in accordance with the process explained on the Clearinghouse website.

However, the Clearinghouse did understand this communication to be a request for informal review. Subsequently, the Clearinghouse did coordinate within the Department of Defense (DoD) an informal review of the Project. The results of our review indicated that the transmission line project, as proposed, will have minimal impact on military operations conducted in the area. Please note, any subsequent changes will require an additional review by the DoD.

This informal review by the Clearinghouse does not constitute an action under 49 United States Code Section 44718 and that the DoD is not bound by the conclusion arrived at under this informal review. To expedite our review in the Obstruction Evaluation Airport Airspace Analysis (OE/AAA) process, please add the project number 2025-6-T-DEV-06 in the comments section of any subsequent filings. If you have any questions, please contact Ms. Robbin Beard, Acting Executive Director Siting Clearinghouse (robbin.e.beard.civ@mail.mil).

Sincerely,

ISACOWITZ.REBECCA.1634045860 Digitally signed by ISACOWITZ.REBECCA.1634045860 Date: 2025.07.11 09:28:45 -04'00'

Rebecca Isacowitz
Deputy Assistant Secretary of Defense
Energy, Resilience and Optimization

**Natural Resources Conservation Service**

USDA
United States Department of Agriculture

Natural Resources
Conservation Service

Bismarck State Office
PO Box 1458
Bismarck, ND
58502-1458

Voice 701.530.2000
Fax 855-813-7556

May 28, 2025

Ryan King
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503

Dear Mr. King:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated May 20, 2025, regarding the Basin Electric Power Cooperative's Proposed Tande and Wheelock to Saskatchewan 230kV Transmission Lines Project.

Farmland Protection Policy Act

NRCS has a major responsibility with the Farmland Protection Policy Act (FPPA) in documenting conversion of farmland (i.e., Prime, Statewide Importance and/or Local Importance) to non-agricultural use when a federal funding source is utilized. It appears the proposed project is not supported by federal funding; therefore, FPPA does not apply, and no further action is needed.

Wetlands

The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose or to have the effect of making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of permanent structures where wetlands occur. If these guidelines are followed the impacts to the wetland will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements:

- Disturbance to the wetland must be temporary.
- No drainage of wetland is allowed (temporary or permanent).
- Mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained.
- Temporary side cast material must be placed in such a manner not to be dispersed in the wetland.
- All trenches must be backfilled to the original wetland bottom elevation.

NRCS recommends that impacts to wetlands be avoided.



USDA is an equal opportunity provider, employer, and lender.

If you have additional questions pertaining to FPPA, please contact Lance Duey, Assistant State Soil Scientist, NRCS, Bismarck, North Dakota, at (701) 530-2109.

Sincerely,

SUSAN SAMSON LIEBIG

Digitally signed by SUSAN SAMSON LIEBIG
Date: 2025.05.28 09:36:07 -05'00'

SUSAN SAMSON-LIEBIG
Acting State Soil Scientist

**ND Department of Trust Lands**

| | |
|---|---|
| **From:** | -Info-ROW-ND Dept. of Trust Lands |
| **To:** | Ryan King |
| **Subject:** | [External] External: RE: Basin Electric Power Cooperative"s Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project |
| **Date:** | Sunday, June 1, 2025 11:42:51 AM |
| **Attachments:** | image002.png<br>image003.png<br>We sent you safe versions of your files.msg<br>ND Department of Trust Lands  BEPC Tande to Saskatchewan 230-kV Transmission Line Notification.pdf |

***External Email - Use caution clicking links or opening attachments***
Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Hello,

Basin has been working through the NDDTL process for this proposed project.

Please let me know if you have any questions.

Thank you,

Kayla Spangelo, SR/WA
*Natural Resources Professional - Rights of Ways*

701.328.1916 • landrow@nd.gov • kspangelo@nd.gov
land.nd.gov/rightsofway • 1707 N 9th St • Bismarck, ND 58501

image002.png

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, May 21, 2025 11:24 AM
**To:** -Info-DTL Surface <dtlsurface@nd.gov>; -Info-DTL Minerals <dtlminerals@nd.gov>
**Subject:** Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Some people who received this message don't often get email from rking@bepc.com. Learn why this is important

***** **CAUTION:** This email originated from an outside source. Do not click links or open attachments unless you know they are safe. *****

To Whom It May Concern,

Please find the attached consultation letter requesting review of Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230-kV Transmission Project. The Project involves construction of two separate 230-kilovolt electric transmission lines, totaling approximately 111.3 miles. The Project is located within Burke, Divide, Mountrail, and Williams Counties, North Dakota. To stay aligned with our Project schedule, I am respectfully requesting your review and any response within 45 days of receiving this notification.
If you have any questions or require additional information, please contact me directly at 701-557-5558 or RKing@bepc.com.

Thank you,

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative
1717 E Interstate Avenue | Bismarck, ND 58503
Direct: 701.557.5558 | Cell: 701.426.9469
RKing@bepc.com | basinelectric.com



**ND Game and Fish Department**

NORTH Dakota | Game and Fish

Be Legendary.

June 19, 2025

Ryan King
Environmental Coordinator
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503

Dear Mr. King:

RE: Proposed Tande and Wheelock to Saskatchewan Transmission Lines Project

Basin Electric Power Cooperative is proposing to develop two new 230-kV electric transmission lines from existing substations in North Dakota to the Canadian border. The North Dakota Game and Fish Department has reviewed this project for wildlife concerns.

A primary concern is the possible disturbance of native prairie associated with construction of the transmission lines and associated access roads. Avoidance of native prairie areas reduces impacts to a number of grassland species including many of the species of conservation priority. We ask that work within these areas be avoided to the extent possible, and disturbed areas be reclaimed to pre-project conditions.

We recommend structure siting be avoided in nesting habitat within a 1-mile buffer of any Sharp-tailed Grouse lek, and construction within these buffer zones be restricted during the lekking and nesting seasons (March 15-July 15). Mr. Jesse Kolar, Upland Game Management Supervisor, may be contacted at 701-690-5711 for additional information regarding best management practices for prairie grouse.

The National Wetland Inventory indicates a variety of wetlands within the proposed project corridor. Steps should be taken to protect any wetlands that cannot be avoided, no alterations should be made to existing drainage patterns, and above-ground appurtenances should not be placed in wetland areas. Unavoidable destruction or degradation of wetland acres should be mitigated in kind.

We recommend that surveys be conducted for raptor nests before construction begins, and a construction buffer be implemented around active Bald Eagle nest sites as determined by the National Bald Eagle Management Guidelines. Ms. Sandra Johnson, Conservation Biologist, may be contacted at 701-328-6382 for additional information on eagle sites in the state.

We do not believe this project will have significant adverse effects on wildlife or wildlife habitat, including species of conservation priority, provided these recommendations are implemented where appropriate.

Sincerely,

Bruce Kreft
Chief
Conservation & Communications Division

**ND Geological Survey**

**From:** Anderson, Fred J.
**To:** Ryan King
**Subject:** [External] External: N.D. Geological Survey: Comments on the Proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Line Project
**Date:** Tuesday, May 27, 2025 11:46:00 AM
**Attachments:** image001.png

***External Email - Use caution clicking links or opening attachments***

Dear Mr. King,

The NDGS appreciates the opportunity to review and provide comment on this proposed project.

We reviewed the route against our landslide mapping information and did not note any areas of concern along the proposed route from a geologic standpoint.

There are however four locations where the planned route passes close to existing oil well pads that may be of concern.

These well pads are at the following locations:

| | |
|---|---|
| -102.848202 | 48.428990 |
| -103.235167 | 48.967958 |
| -103.222588 | 48.603013 |
| -103.287567 | 48.431650 |

Please contact me if there are any additional questions or comments regarding this review.

Regards,

Fred J. Anderson
*Geologist*

701.328.8000 (O) . fjanderson@nd.gov . www.dmr.nd.gov

Text Description automatically generated

**ND Parks and Recreation Department**

NORTH Dakota | Parks & Recreation
Be Legendary.™

June 19, 2025

Ryan King
Basin Electric
1717 East Interstate Ave.
Bismarck, ND 58503

Re: Basic Electric Power Cooperative Proposed Tande and Wheelock to Saskatchewan

Dear Ryan,

The North Dakota Parks and Recreation Department (NDPRD) has reviewed the above-referenced transmission line in Williams and Divide Couty, North Dakota.

NDPRD's scope of authority and expertise covers properties that NDPRD owns, leases, or manages; properties protected under Section 6(f) of the Land and Water Conservation Fund (LWCF); rare plants; and ecological communities established through the Natural Heritage Program.

The project does not appear to affect the properties NDPRD owns, leases, or manages positively.

The project does not appear to affect any properties protected under Section 6(f) of the LWCF.

A North Dakota Natural Heritage biological conservation database query determines whether any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, we have no known plant and animal species of concern or significant ecological communities documented within or immediately adjacent to the project site.

We appreciate your commitment to rare plant, animal, and ecological community conservation, management, and inter-agency cooperation. For additional information, please contact Kathy Duttenhefner at 701-328-5370, 701-220-3377 (cell), or kgduttenhefner@nd.gov.

Thank you for the opportunity to comment on the proposed project.

Sincerely,
Kathy Duttenhefner
Kathy Duttenhefner, Chief Natural Resources Division

604 E Boulevard Ave Dept. 750 | Bismarck, ND 58505
PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

**ND Department of Water Resources**

NORTH Dakota | Water Resources
Be Legendary.

June 17, 2025

Mr. Ryan King

Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503
701-557-5558
rking@bepc.com

Dear Mr. King,

This is in response to your request for a review of the environmental impacts associated with the Basin Electric Power Cooperative's Proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project.

The proposed project has been reviewed by Department of Water Resources (DWR), and the following comments are provided:

- There are no FEMA National Flood Insurance Program (NFIP) floodplains identified or mapped where the proposed project is to take place. No permits relative to the NFIP are likely required based on the current Flood Insurance Rate Map and State minimum standards. However, flood risk has been identified through the North Dakota Risk Assessment Mapservice and Base Level Engineering (BLE) (ndram.dwr.nd.gov). In the absence of FEMA NFIP data, BLE is often considered best available data and is recommended to be considered in the design process. The State of North Dakota has no formal NFIP permitting authority as all NFIP permitting decisions are considered by impacted NFIP participating communities, the community with zoning authority for the area in question. Please work directly with the local floodplain administrators of the zoning authorities impacted.

- Initial review indicates the project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of any future projects identified in the plan, a water permit will be required per North Dakota Century Code § 61-04-02. Please consult with the DWR Water Appropriation Division if you have any questions at (701) 328-2754 or appropinfo@nd.gov.

- The DWR maintains a network of observation wells across the state for monitoring the water levels and quality in glacial and bedrock aquifers. These wells are often installed in road and highway rights-of-way to limit inconvenience to the adjacent landowners. DWR observation wells have a yellow protective casing extending between 1 and 3 feet above ground surface, and their locations are marked with a stake. If an observation well is encountered during project activities and must be removed, please contact the Water Appropriation Division. The DWR hopes to keep all observation wells, but otherwise will ensure the well is properly abandoned.

Thank you for the opportunity to provide review comments. Should you have further questions, please contact me at 701-328-4970 or kyrkoski@nd.gov.

Sincerely,

Kyle Kyrkoski

Kyle Yrkoski
Planner III

KY:mg/1570

**ND Transmission Authority**

**From:** Vigesaa, Claire
**To:** Ryan King
**Subject:** [External] External: RE: Basin Electric Power Cooperative"s Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project
**Date:** Wednesday, May 21, 2025 8:03:32 PM
**Attachments:** image001.png

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***External Email - Use caution clicking links or opening attachments***

Ryan,

We support your project as presented!

Best to you as you proceed,

Claire

Claire Vigesaa, Executive Director
North Dakota Transmission Authority
406-489-3881

---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, May 21, 2025 11:33 AM
**To:** Vigesaa, Claire <cvigesaa@nd.gov>
**Subject:** Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

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Executive Director Vigesaa,

Please find the attached consultation letter requesting review of Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230-kV Transmission Project. The Project involves construction of two separate 230-kilovolt electric transmission lines, totaling approximately 111.3 miles. The Project is located within Burke, Divide, Mountrail, and Williams Counties, North Dakota. To stay aligned with our Project schedule, I am respectfully requesting your review and any response within 45 days of receiving this notification.
If you have any questions or require additional information, please contact me directly at 701-557-5558 or RKing@bepc.com.

Thank you,

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative

1717 E Interstate Avenue | Bismarck, ND 58503
Direct: 701.557.5558 | Cell: 701.426.9469
RKing@bepc.com | basinelectric.com



**ND State Historical Preservation Office**

June 20, 2025

Ryan King
Basin Electric Power Cooperative
1717 E Interstate Avenue
Bismarck, ND 58503
rking@bepc.com

**SHSND Ref.: 25-9056 Basin Electric Power Cooperative's Proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project in portions of Burke, Divide, Mountrail, and Williams Counties**

Dear Ryan,

We reviewed the notification letter for 25-9056 Basin Electric Power Cooperative's Proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project in portions of Burke, Divide, Mountrail, and Williams Counties. We recommend a Class I literature review for the project route and any access roads or staging areas. The Class I should include recommendations of areas that may need a Class III survey. The literature review must follow "North Dakota SHPO Guidelines Manual for Cultural Resource Inventory Projects," which is available at https://www.history.nd.gov/hp/hpforms.html.

Thank you for your notification of this project. We look forward to reviewing the Class I literature review. If you have any questions please contact Lorna Meidinger, Lead Historic Preservation Specialist at (701) 328-2089 or lbmeidinger@nd.gov.

Sincerely,

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

25-9056

**US Army Corps of Engineers**

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

June 12, 2025

NWO-2025-802-BIS

Basin Electric Power Cooperative
Attn: Ryan King
1717 East Interstate Avenue
Bismarck, North Dakota 58503

Dear Mr. King:

This is in response to your solicitation letter received on May 21, 2025 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments on the proposed Tande and Wheelock to Saskatchewan 230-kV Transmission Lines Project. The project is located throughout Burke, Divide, and Mountrail Counties, North Dakota as follows:

| **Tande to Saskatchewan 230-kV Transmission Line** | | | |
|---|---|---|---|
| **County** | **Township** | **Range** | **Section** |
| Mountrail | 157N | 94W | 5, 6, 8 ,17, 20, 29 |
| | 158N | 94W | 5, 8, 17, 19, 20, 30, 31 |
| Burke | 159N | 94W | 6, 7, 18, 19, 30 |
| | 160N | 94W | 30, 31 |
| Divide | 160N | 95W | 6, 7, 18, 19, 25, 26, 27, 28, 29, 30 |
| | 161N | 95W | 19, 20, 21, 28, 33 |
| | 161N | 96W | 2, 11, 14, 23, 24 |
| | 162N | 96W | 2, 11, 14, 23, 26, 35 |
| | 163N | 96W | 5, 6, 8, 17, 20, 26, 27, 28, 29, 35 |
| | 163N | 97W | 1 |
| | 164N | 97W | 25, 36 |
| **Wheelock to Saskatchewan 230-kV Transmission Line** | | | |
| Williams | 156N | 98W | 4, 5, 8, 17 |
| | 157N | 98W | 1, 12, 13, 24, 25, 36 |
| | 157N | 97W | 4, 5, 6 |
| | 158N | 97W | 4, 9, 16 ,21, 28, 33 |
| | 159N | 97W | 4, 9, 16, 21, 28, 33 |
| Divide | 160N | 97W | 4, 5, 8, 17, 20, 28, 29, 33 |
| | 161N | 97W | 3, 10, 11, 14, 23, 26, 35 |
| | 162N | 97W | 2, 3, 10, 15, 22, 27, 34 |
| Divide | 163N | 97W | 2, 11, 14, 23, 26, 35 |

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| | | | |
|---|---|---|---|
| | 164N | 97W | 26, 35 |

Corps Regulatory Offices administers Section 404 of the Clean Water Act. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

Enclosed for your information is the fact sheet for Nationwide Permit 57, Electric Utility Line and Telecommunications Activities. Utility lines are already authorized by Nationwide Permit 57 provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification. Please note the pre-construction notification requirements on page 2 of the fact sheet. If a project involves any one of the seven notification requirements, the project proponent must submit a DA application. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 23 thru 30 of the fact sheet.

In the event your project(s) requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the project impacts and comments received through the public notice may extend well beyond 120 days.

This correspondence letter does not approve the proposed construction work or does not verify the proposed project complies with the Nationwide Permit(s).

If any of these projects require a Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 4345) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, North Dakota 58504 or to the email address below. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

The North Dakota Regulatory office prefers that all submissions are sent electronically to the following email address: CENWO-OD-RND@usace.army.mil instead of a hard copy by mail. Please split large attachments (>25 MB) into multiple emails if needed.

Please refer to identification number NWO-2025-802-BIS in any correspondence concerning this project. If you have any questions, please contact Jason Renschler at U.S. Army Corps of Engineers, North Dakota Regulatory Office, 3319 University Drive, Bismarck, North Dakota 58504-7565, by email at Jason.J.Renschler@usace.army.mil, or telephone at 701-989-6429. For more information regarding our program, please visit our website at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx.

Sincerely,

Jason Renschler
Senior Project Manager
North Dakota

Enclosures:
- ENG Form 4345
- Nationwide Permit 57 Fact Sheet

**Burke County Commission**

| | |
|---|---|
| **From:** | Edwards, Jill |
| **To:** | Ryan King |
| **Subject:** | RE: [External] External: FW: Basin Electric Power Cooperative"s Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project |
| **Date:** | Thursday, June 26, 2025 12:24:48 PM |
| **Attachments:** | image001.jpg<br>image004.jpg<br>image005.jpg<br>image006.png |

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Ok, no hurry, and thank you!



---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Thursday, June 26, 2025 12:23 PM
**To:** Edwards, Jill <edwardsjill@nd.gov>
**Cc:** Erin Dukart <EDukart@bepc.com>
**Subject:** Re: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

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Sounds good, Jill.

I will get with our ROW and GIS team for that. Just a heads up, we are still adjusting the line placement and will likely be submitting this CUP application later this summer or early fall when we know the route is solidified. So, if you do not get this list from me for a little bit, that is why.

Thank you!

**Ryan King** | Environmental Coordinator

Direct: 701.557.5558 | Cell: 701.426.9469

**From:** Edwards, Jill <edwardsjill@nd.gov>
**Sent:** Thursday, June 26, 2025 8:18 AM
**To:** Ryan King <RKing@bepc.com>
**Subject:** RE: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Good morning Ryan,

Yes, looking for a list of the impacted landowners for Battleview and Thorson townships.

Thank you!



---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, June 25, 2025 9:58 AM
**To:** Edwards, Jill <edwardsjill@nd.gov>
**Cc:** Erin Dukart <EDukart@bepc.com>
**Subject:** RE: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

You don't often get email from rking@bepc.com. Learn why this is important

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Hi Jill,

Below is the list of agencies/persons that I sent the notification letter to. This list is dictated by the ND PSC and does not include impacted landowners. Landowner correspondence is handled by our right-of-way team. Are you looking for the list below, or a list of impacted landowners in Burke County? If it is the impacted landowners you are looking for, that should be an easy exercise for our ROW/GIS folks.

Aeronautics Commission
Attorney General

Bureau of Land Management
Federal Aviation Administration
Governor's Office
Grand Forks Air Force Base
Jobs Service North Dakota
Military Aviation and Installation Assurance Siting Clearinghouse
Minot Air Force Base (Twentieth Airforce Ninety-First Missile Wing)
Natural Resources Conservation Service
ND Department of Agriculture
ND Department of Career and Technical Education
ND Department of Commerce
ND Department of Environmental Quality
ND Department of Health
ND Department of Human Services
ND Department of Labor and Human Rights
ND Department of Transportation
ND Department of Trust Lands (Minerals Management)
ND Department of Trust Lands (School/Surface Trust)
ND Energy Infrastructure and Impact Office
ND Forest Service
ND Game and Fish Department
ND Geological Survey
ND Indian Affairs Commission
ND Industrial Commission
ND Parks and Recreation Department
ND Pipeline Authority
ND State Water Commission (Department of Water Resources)
ND Transmission Authority
State historical Society of North Dakota
US Army Corps of Engineers
US Department of Defense
US Fish and Wildlife Service
Williams County Commission
Williams County Auditor
Williams County Planning and Zoning
Mountrail County Commission
Mountrail County Auditor
Mountrail County Planning and Zoning
Burke County Commission
Burke County Auditor
Burke County Planning and Zoning
Divide County Commission
Divide County Auditor
Divide County Planning and Zoning
State Representative - District 2
State Representative - District 2
State Senator - District 2

**Ryan King** | Environmental Coordinator
Direct: 701.557.5558 | Cell: 701.426.9469

**From:** Edwards, Jill <edwardsjill@nd.gov>
**Sent:** Tuesday, June 24, 2025 2:10 PM
**To:** Erin Dukart <edukart@bepc.com>
**Subject:** RE: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Hi Erin,

Would you be able to share with me the notification and list of people it was mailed to? I would appreciate being able to compare it with mine so as not to miss anyone.

Thank you,

---

**From:** Edwards, Jill
**Sent:** Friday, June 13, 2025 4:05 PM
**To:** Erin Dukart <Edukart@bepc.com>
**Subject:** RE: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Hi Erin,

Thanks for getting back to me. I was out of the office yesterday and today has gotten away from me. For Burke County, you will need to submit a CUP application which can be found on our website- burkecountynd.com under Planning & Zoning. I will prepare a notice for you to send out to the landowners per registered mail. You'll need to keep the green cards associated. There will be a public hearing which I will have published twice in the local newspaper. I'll reach back out to you early next week.

Thanks, and have a great weekend!



---

**From:** Erin Dukart <Edukart@bepc.com>
**Sent:** Wednesday, June 11, 2025 8:40 AM
**To:** Edwards, Jill <edwardsjill@nd.gov>
**Subject:** RE: [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

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Ms. Edwards,

I apologize for not responding to your email sooner. The notification that Ryan King sent is a required step in the North Dakota Public Service Commission siting process. We are required to solicit input from any agencies and/or government officials that may have interest in the project. Whether or not a Conditional Use Permit (CUP) is required has typically been a county by county determination, based on the county ordinances. Some counties require CUPs for transmission lines and other counties consider transmission lines a permitted use and no CUP is required. Please let me know if you would like to discuss further. I'm happy to jump on a call and talk through anything.

Thanks,
Erin

**Erin Fox Dukart** | Director, Environmental Services
Direct: 701.557.5557 | Cell: 701.426.8116



---

**From:** Edwards, Jill <edwardsjill@nd.gov>
**Sent:** Monday, June 9, 2025 10:37 AM
**To:** Erin Dukart <Edukart@bepc.com>
**Subject:** [External] External: FW: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

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Forwarding to you since Ryan is out of the office, thanks!



---

**From:** Edwards, Jill
**Sent:** Monday, June 9, 2025 10:34 AM
**To:** Ryan King <RKing@bepc.com>
**Subject:** RE: Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Hello Ryan,

I am working on determining exactly what you will need from us/what we will need from you regarding this project. Are other counties requiring you to apply for a CUP? Have you notified the landowners listed in the May 21st notice you sent us?

Thank you,



---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, May 21, 2025 11:41 AM
**To:** Jarret Van Berkom <jvanberkom@outlook.com>; Vandegraft, Amie <avandegraft@nd.gov>; Edwards, Jill <edwardsjill@nd.gov>
**Subject:** Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230kV Transmission Project - Consultation Request - NDPSC Project

Some people who received this message don't often get email from rking@bepc.com. Learn why this is important

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Chairman Van Berkom,

Please find the attached consultation letter requesting review of Basin Electric Power Cooperative's Tande and Wheelock to Saskatchewan 230-kV Transmission Project. The Project involves construction of two separate 230-kilovolt electric transmission lines, totaling approximately 111.3 miles. The Project is located within Burke, Divide, Mountrail, and Williams Counties, North Dakota. To stay aligned with our Project schedule, I am respectfully requesting your review and any response within 45 days of receiving this notification.
If you have any questions or require additional information, please contact me directly at 701-557-5558 or RKing@bepc.com.

Thank you,

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative
1717 E Interstate Avenue | Bismarck, ND 58503
Direct: 701.557.5558 | Cell: 701.426.9469
RKing@bepc.com | basinelectric.com



**State Senator Enget – District 2**

**From:** OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC
**To:** Ryan King
**Cc:** Erin Dukart; OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC
**Subject:** [External] External: RE: Basin Electric LOS to Tande 345-kV Transmission Project – Landowner Reroutes - Consultation Request
**Date:** Friday, June 6, 2025 11:36:36 AM
**Attachments:** image001.png

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Good afternoon Mr. King,

Your Informal Review request for the Leland Olds Station to Tande 345-kV Transmission Line Reroutes Project has been received. We will begin processing the request shortly.

Thank you for the opportunity to review the project.

Very Respectfully,

The Clearinghouse
Military Aviation and Installation Assurance Siting Clearinghouse
Office of the Assistant Secretary of Defense (Energy Resilience and Optimization)
Email: osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil

---

**From:** Ryan King <RKing@bepc.com>
**Sent:** Wednesday, June 4, 2025 3:27 PM
**To:** Townes, Daniel W CTR OSD OUSD A-S (USA) <daniel.w.townes.ctr@mail.mil>; OSD Pentagon OUSD A-S Mailbox ASD EIE-RP-SC <osd.pentagon.ousd-a-s.mbx.asd-eie-rp-sc@mail.mil>
**Cc:** Erin Dukart <EDukart@bepc.com>
**Subject:** Basin Electric LOS to Tande 345-kV Transmission Project – Landowner Reroutes - Consultation Request

Mr. Townes,

Please see the attached Informal Review Request Form and ND Public Service Commission consultation letter requesting review of two reroute locations on Basin Electric's LOS to Tande 345-kilovolt (kV) Transmission Line Project. I have also attached shapefiles of the route and spreadsheets with structure coordinates and heights. The Project, which has been approved by the North Dakota Public Service Commission, involves construction of approximately 161 miles of 345-kV electric transmission line with about 30.5 miles being built as a double-circuit. The Project is located in Mercer, McLean, Ward, Mountrail, and Williams Counties, North Dakota; the two reroutes are located in Mountrail County. Reroute #1 is approximately 2.16 miles in length; reroute #2 is approximately 4.20 miles in length. To stay aligned with our construction schedule, I am respectfully requesting a review of the material within 30 days.
If you have any questions or need additional information, please contact me directly at 701-557-5558 or RKing@bepc.com.

Thank you,

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative
1717 E Interstate Avenue | Bismarck, ND 58503
Direct: 701.557.5558 | Cell: 701.426.9469
RKing@bepc.com | basinelectric.com

# Appendix I

# Project Information Pamphlet for Landowners

## After Construction

Construction crews will work to minimize potential damage to property during construction. After construction, work areas and access roads not required for line maintenance will be restored to their previous condition, as possible. Construction refuse and scrap material will also be removed.

Landowners will be compensated for crop and property damage that occurs as a result of construction or maintenance of the transmission line. If a landowner believes that damage has occurred and has not been remediated, they should contact their assigned right-of-way agent.

## Maintenance

After the line is energized, maintenance crews will periodically inspect, repair, and maintain its components. Transmission lines are inspected from the air and on the ground. Aerial inspections are routinely performed, particularly after wind, ice, or lightning storms. Ground inspections are usually performed annually to detect items needing repair or replacement that are not found by aerial inspections.

## Contact Information

If you have any questions, concerns, or would like a map showing the line route in your area, please contact:


**Jerry Haas**
Right-of-Way Lead, Basin Electric
701-557-5457
jhaas@bepc.com

**Bobby Nasset**
Project Manager, Basin Electric
701-557-5673
rnasset@bepc.com

**Erin Dukart**
Director Environmental Services, Basin Electric
701-557-5557
edukart@bepc.com

**Scott Gross**
Regional Manager, Contract Land Staff, LLC
314-293-3527
scott.gross@contractlandstaff.com



BASIN ELECTRIC POWER COOPERATIVE
A Touchstone Energy® Cooperative

1717 East Interstate Avenue
Bismarck, ND 58503-0564
**basinelectric.com**

8/2024


Project information for landowners along the proposed Tande-to-Saskatchewan and Wheelock-to-Saskatchewan 230-kilovolt Transmission Line Project

# Tande-to-Saskatchewan and Wheelock-to-Saskatchewan 230-kilovolt Transmission Line Project





## About Basin Electric Power Cooperative

Basin Electric Power Cooperative is an electric power generation and transmission cooperative, headquartered in Bismarck, North Dakota. Basin Electric generates and transmits wholesale electricity to 140 member rural electric cooperatives located in a nine-state service area, and serves 3 million customers.

## Project Purpose & Overview

Southwest Power Pool (SPP) is the regional transmission organization that administers bulk electric transmission system reliability upgrades and generation interconnections. SPP identified deficiencies in the transmission capability between the United States and Canada based on a request for additional transmission services from SaskPower, a generation and transmission provider in Saskatchewan.

The project was approved by the SPP Aggregate Transmission Service Study in 2022. SPP provided Basin Electric an Approved Reliability Network Upgrade notice. Basin Electric is the designated transmission owner for the upgrade in the United States, and SaskPower will complete the circuit within Canada. The project will provide export and import capabilities of up to 650 megawatts, strengthening the local and regional electric system.

The project includes approximately 110 miles of new 230-kilovolt (kV) electric transmission lines from existing Basin Electric substations to the Canadian border. One circuit will be routed from the Wheelock substation (near Ray, ND), and the second circuit from the Tande substation (near Tioga, ND). Pending permit and easement acquisition, construction is scheduled to begin in 2026. It is anticipated that construction will take approximately 12-18 months.

## Permitting

Per the North Dakota Public Service Commission (NDPSC), the project requires evaluation of environmental, engineering, land use, economics, reliability, existing electric transmission facilities, biological, cultural resources, and land survey to help determine the final transmission line route.

Transmission lines that cross an international border require a Presidential permit from the U.S. Department of Energy (DOE). Before issuing a Presidential permit, DOE must determine that the permit is consistent with the public interest and must obtain favorable recommendations from the Secretary of State and the Secretary of Defense. In addition, the issuance of a Presidential permit is considered a major federal action that requires DOE to comply with the National Environmental Policy Act (NEPA). Accordingly, DOE must take into account potential environmental impacts of the proposed facility and will likely prepare an Environmental Impact Statement (EIS) for the project.

Permitting-associated work began in the summer of 2023.

Once the preferred transmission line route is determined, structure locations and configurations are selected to satisfy structural design and electrical clearance criteria and to minimize impacts to the property.

## Landowner Outreach & Engagement

A right-of-way agent will be assigned to work with landowners potentially impacted by the project. The agent will explain the steps involved in route and pole location selection, land rights acquisition, and construction, and work to answer any questions landowners may have. Landowner input is encouraged and welcomed throughout the process.

As a first step for landowners along the preliminary routes, a right-of-way agent will request permission for crews to enter a portion of the property to conduct surveys and studies. This work may be performed by Basin Electric employees or by those under contract with Basin Electric. The work will be conducted in a manner that minimizes disturbances to the landowner or tenant. Should damage to crops, fences, or other property occur because of these surveys and studies, the landowner will be fairly compensated, or the damage will be repaired.

The right-of-way agent will then work with landowners along the preferred route to acquire a 125-foot-wide easement for the transmission line. In addition, easements for access roads, typically 30-feet wide, may be acquired in certain areas. Easements are needed to construct, operate, and maintain the transmission line and will be purchased through negotiations with landowners. The landowner retains title to the land and only easement rights would be granted to Basin Electric. If proposed construction activities interfere with land use, the right-of-way agent will discuss those concerns with the landowner and the project team, and work to accommodate the landowner's concerns as possible.

Landowners will be presented with a written offer based on a market analysis of similar land types and use of property in the project area. The right-of-way agent will work with landowners to explain the easement agreement and offer of compensation as the basis for payment. Every effort is made to obtain an agreement that is fair and reasonable to both parties. Once the conditions of the agreement are met, the transactions are processed as efficiently as possible. Basin Electric will make full payment or annual installments for up to five years for easements to landowners, and will pay fees for recording the easement, including title insurance.

Landowners may continue to use the portion of the property encumbered by an easement in ways that are compatible with the transmission line as long as care is taken to prevent damage and maintain access to transmission line structures. No buildings or structures may be erected within the easement area, as they may impede the safe operation of the line or interfere with access needed for line maintenance. For safety reasons, pumps, wells, swimming pools, and flammables must not be placed in the easement area. Basin Electric has other requirements for transmission rights-of-way to maintain system reliability, such as federal regulations on vegetation management intended to prevent trees on the right-of-way from causing fires or transmission line outages.

## Design & Construction

Basin Electric designs, constructs, operates, and maintains transmission lines and substation facilities to meet or exceed the requirements of the National Electric Safety Code. These standards provide for the safety and protection of landowners and their property, the public, and utility employees.

Basin Electric will keep landowners apprised of the construction schedule. Reasonable attempts will be made to account for the use and condition of the land, such as planting, irrigation, and harvest schedules, to minimize inconvenience to landowners. Preparing the right-of-way for construction may require gates and culverts be installed, vegetation cleared, trees trimmed or removed, and structures removed that reduce adequate ground clearance for the conductors or access to the right-of-way. It may also be necessary to build access roads in hilly or rough terrain.

Where required, foundations are constructed by digging or drilling holes, which are filled with steel-reinforced concrete. Steel structure components are then transferred to the site and assembled. Completed structures are raised by a crane and set on foundations or directly embedded in the ground. Finally, conductor wires are installed.

# Appendix J

# International Boundary Commission Approval

International Boundary Commission

Commission de la frontière internationale

June 3rd, 2025
Ref: 202519012

**Via electronic mail**

**Jerrid Riegel**
Manager, Transmission Construction Lines & Geomatics
SaskPower
2025 Victoria Avenue
Regina, SK S4P 0S1

**Ryan King**
Environmental Coordinator
Basin Electric Power Cooperative
1717 E Interstate Avenue
Bismarck, ND 58503

**RE: Request for permission to install two new transmission lines**

Messrs. Riegel and King,

Referring to your request, submitted on April 4th, 2025 (SaskPower) and May 13th, 2025 (Basin Electric), to obtain the permission to install two new transmission lines crossing the regulated zone of the International Boundary 207ft West of Monument 609 and 2343ft West of Monument 610.

Under the authority of the International Boundary Commission, we hereby permit the lines to cross the international boundary as described in your request, subject to the following conditions:

1. The work shall be carried out in compliance with your letter of application and corresponding plans, the Commission should be notified of any changes to the original request.

2. No international boundary monuments shall be damaged, disturbed or endangered by the work.

3. No additional object or structures, other than the transmission lines, shall be placed within 3.05 meters (10 feet) of the international boundary line.

4. The permission from the IBC does not override any other approvals or authority that may be required from the property owners and appropriate federal, provincial and state land planning authorities.

5. The International Boundary Commission and its members do not in any way assume any responsibility or liability with respect to any damage or loss incurred or sustained as a result of this letter of authorization.

Should you have any questions or concerns, do not hesitate to contact us.

Yours Truly,

Martin Gingras
Canadian Commissioner

J.T. Moore
Acting United States Commissioner

United States Section
1717 H Street, N.W.
Suite 845
Washington, DC
20006 U.S.A.

Tel : (202) 736-9100

Canadian Section
580 Booth Street

Ottawa (Ontario)
K1A 0Y7 Canada

Tel : (343) 543-6619

# Appendix K

# Landowner Waivers

Return Recorded Document to:
Casey Jacobson
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503-0564
cjacobson@bepc.com
Phone (701) 557-5413

# ACKNOWLEDGMENT AND WAIVER

This agreement made this 31st day of March, 2025.

WHEREAS, Basin Electric Power Cooperative is developing an overhead 230-kV transmission line project ("**Project**") to be located in Mountrail County, North Dakota;

WHEREAS, the North Dakota Energy Conversion and Transmission Facility Siting Act provides that areas within five hundred (500) feet of an inhabited rural residence must be designated avoidance areas and further provides that this requirement may be waived by the owner of the inhabitated rural residence in writing;

WHEREAS, Ardis M. Rice wishes to grant a Waiver to Basin Electric Power Cooperative to allow them to place the transmission line within 500 feet of an occupied rural residence.

The following is acknowledged:

1. Ardis M. Rice is/are the owner(s) of real property located at 7531 101st Avenue NW, Tioga, ND 58852, in the N2 of the SE4 of Section 18, Township 158 North, Range 94 West, Mountrail County, North Dakota.

2. Ardis M. Rice acknowledges that N.D.C.C. § 49-22-05.1 provides that, "Except for transmission lines in existence before July 1, 1983, areas within five hundred feet of an inhabited rural residence must be designated avoidance areas."

3. Ardis M. Rice further acknowledges that this avoidance area requirement may be waived by the owner of the inhabited rural residence in writing.

4. Ardis M. Rice agrees to Basin Electric Power Cooperative locating an overhead 230-kV transmission line within five hundred feet of an inhabited rural residence in the area of land described above.

Name: Ardis M. Rice
Print: Ardis M. Rice
Date: 3-31-25

STATE OF Maricopa )
)ss
COUNTY OF Arizona )

On this 31st day of March, 2025 before me personally appeared Ardis M. Rice, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

(SEAL)

Notary Public

Elizabeth Franklin
Notary Public
Maricopa County, Arizona
My Comm. Expires 06-10-28
Commission No. 669214

Return Recorded Document to:
Casey Jacobson
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503-0564
cjacobson@bepc.com
Phone (701) 557-5413

## ACKNOWLEDGMENT AND WAIVER

This agreement made this 13th day of March, 2025

WHEREAS, Basin Electric Power Cooperative is developing an overhead 230-kV transmission line project ("**Project**") to be located in Mountrail County, North Dakota;

WHEREAS, the North Dakota Energy Conversion and Transmission Facility Siting Act provides that areas within five hundred (500) feet of an inhabited rural residence must be designated avoidance areas and further provides that this requirement may be waived by the owner of the inhabited rural residence in writing;

WHEREAS, Nathan Dahl, Sonja. H. Dahl, Wesley Dahl and Sherri Dahl wish to grant a waiver to Basin Electric Power Cooperative to allow them to place the transmission line within 500 feet of an occupied rural residence.

The following is acknowledged:

1. Wesley Dahl and Sherri Dahl, Nathan Dahl and Sonja H. Dahl are the owners of real property located on 7451 101st Avenue NW, Tioga, North Dakota 58852, in the NE4 and the SE4 of Section 19, Township 158 North, Range 94 West, Mountrail County, North Dakota.

2. Wesley Dahl and Sherri Dahl, Nathan Dahl, and Sonja H. Dahl acknowledge that N.D.C.C. § 49-22-05.1 provides that, "Except for transmission lines in existence before July 1, 1983, areas within five hundred feet of an inhabited rural residence must be designated avoidance areas."

3. Wesley Dahl and Sherri Dahl, Nathan Dahl, Sonja H. Dahl further acknowledge that this avoidance area requirement may be waived by the owner of the inhabited rural residence in writing.

4. Wesley Dahl and Sherri Dahl, Nathan Dahl and Sonja H. Dahl agree to Basin Electric Power Cooperative locating an overhead 230-kV transmission line within five hundred feet of an inhabited rural residence in the area of land described above.

Name: Wes Dahl Date: 3-13-2025
Wesley Dahl

STATE OF North Dakota )
)ss
COUNTY OF Cass )

On this 13th day of March, 2025 before me personally appeared Wesley Dahl, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

Craig E Johnson
Notary Public

(SEAL)

CRAIG E JOHNSON
Notary Public
State of North Dakota
My Commission Expires July 18, 2027

Name: Sherri Dahl Date: 3-14-2025
Sherri Dahl

STATE OF North Dakota )
)ss
COUNTY OF Cass )

On this 14th day of March, 2025, before me personally appeared Sherri Dahl, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

Craig E Johnson
Notary Public

(SEAL)

CRAIG E JOHNSON
Notary Public
State of North Dakota
My Commission Expires July 18, 2027

Name: Nathan Dahl Date: 3-13-2025
Nathan Dahl

STATE OF North Dakota )
)ss
COUNTY OF Cass )

On this 13th day of March, 2025 before me personally appeared Nathan Dahl, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

(SEAL)

CRAIG E JOHNSON
Notary Public
State of North Dakota
My Commission Expires July 18, 2027

Craig E Johnson
Notary Public

Name: Sonja H. Dahl Date: 3-14-2025
Sonja H. Dahl

STATE OF North Dakota )
)ss
COUNTY OF Cass )

On this 14th day of March, 2025 before me personally appeared Sonja H. Dahl, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

(SEAL)

CRAIG E JOHNSON
Notary Public
State of North Dakota
My Commission Expires July 18, 2027

Craig E Johnson
Notary Public

Return Recorded Document to:
Casey Jacobson
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503-0564
cjacobson@bepc.com
Phone (701) 557-5413

# ACKNOWLEDGMENT AND WAIVER

This agreement made this 28th day of August, 2024.

WHEREAS, Basin Electric Power Cooperative is developing an overhead 230-kV transmission line project ("**Project**") to be located in Divide County, North Dakota;

That an Option for Transmission Line Easement, dated August 28th 2024, has been granted by Gerald Otis Rosenquist, of PO Box 476, Crosby, ND 58730 unto Basin Electric, covering a tract of land in the SW4, of Section 26 and the NW4 of Section 35, all in Township 163 North, Range 96 West, Divide County, North Dakota and more particularly described as follows:

**Township 163 North, Range 96 West of the 5th P.M.**
**Section 26: An area 125 feet wide starting 87.5 feet East of the section line in the SW4**
**Section 35: An area 125 feet wide starting 87.5 feet East of the section line in the NW4**

WHEREAS, the North Dakota Energy Conversion and Transmission Facility Siting Act provides that areas within five hundred (500) feet of an inhabited rural residence must be designated avoidance areas and further provides that this requirement may be waived by the owner of the inhabitated rural residence in writing;

WHEREAS, Gerald Otis Rosenquist wishes to grant a Waiver to Basin Electric Power Cooperative to allow them to place the transmission line within 500 feet of an occupied rural residence.

The following is acknowledged:

1. Gerald Otis Rosenquist is/are the owner(s) of real property located at 10350 110th Ave NW, Noonan, ND 58765, in the NW4 of Section 26, Township 163 North, Range 96 West, Divide County, North Dakota.

2. Gerald Otis Rosenquist acknowledges that N.D.C.C. § 49-22-05.1 provides that, "Except for transmission lines in existence before July 1, 1983, areas within five hundred feet of an inhabited rural residence must be designated avoidance areas."

3. Gerald Otis Rosenquist further acknowledges that this avoidance area requirement may be waived by the owner of the inhabitated rural residence in writing.

4. Gerald Otis Rosenquist agrees to Basin Electric Power Cooperative locating an overhead 230-kV transmission line within five hundred feet of an inhabited rural residence in the area of land described above.

Name: [signature]
Title: land owner
Date: Aug 28, 2024

STATE OF North Dakota )
)ss
COUNTY OF Divide )

On this 28th day of August, 2024, before me personally appeared Gerald Otis Rosenquist, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

(SEAL) [signature] Notary Public

MELISSA MOOG
NOTARY PUBLIC for the
State of Montana
Residing at Malta, Montana
My Commission Expires
March 14, 2028

Return Recorded Document to:
Casey Jacobson
Basin Electric Power Cooperative
1717 East Interstate Avenue
Bismarck, ND 58503-0564
cjacobson@bepc.com
Phone (701) 557-5413

## ACKNOWLEDGMENT AND WAIVER

This agreement made this 9th day of June, 2025

WHEREAS, Basin Electric Power Cooperative is developing an overhead 230-kV transmission line project ("**Project**") to be located in Mountrail County, North Dakota;

WHEREAS, the North Dakota Energy Conversion and Transmission Facility Siting Act provides that areas within five hundred (500) feet of an inhabited rural residence must be designated avoidance areas and further provides that this requirement may be waived by the owner of the inhabitated rural residence in writing;

WHEREAS, June E. McGuiness wishes to grant a Waiver to Basin Electric Power Cooperative to allow them to place the transmission line within 500 feet of an occupied rural residence.

The following is acknowledged:

1. June E. McGuiness is/are the owner(s) of real property located at 101st Avenue NW, Tioga, North Dakota 58852, in the SE4 of Section 31, Township 158 North, Range 94 West, Mountrail County, North Dakota.

2. June E. McGuiness acknowledges that N.D.C.C. § 49-22-05.1 provides that, "Except for transmission lines in existence before July 1, 1983, areas within five hundred feet of an inhabited rural residence must be designated avoidance areas."

3. June E. McGuiness further acknowledges that this avoidance area requirement may be waived by the owner of the inhabitated rural residence in writing.

4. June E. McGuiness agrees to Basin Electric Power Cooperative locating an overhead 230-kV transmission line within five hundred feet of an inhabited rural residence in the area of land described above.

Name: June E. McGuiness
Title: Landowner
Date: June 9th 2025

STATE OF Montana )
)ss
COUNTY OF Gallatin )

On this 9th day of June, 2025 before me personally appeared June E. McGuiness, known to me to be the person(s) who is/are described in and who executed the within instrument, and acknowledged to me that he/she/they executed the same.

Nick L. Cebulski
Notary Public

(SEAL)

NICK L CEBULSKI
NOTARY PUBLIC for the
State of Montana
Residing at Malta, Montana
My Commission Expires
February 15, 2027

NICK L CEBULSKI
NOTARY PUBLIC for the
State of Montana
Residing at Malta, Montana
My Commission Expires
February 15, 2027