

Archaeological Survey Report Summary

To	Burke Wind, LLC
Subject	Burke County Wind Energy Center Class III: Intensive Archaeological Resources Inventory Burke County, North Dakota
From	AECOM
Date	February 4, 2019

Introduction and Purpose

Burke Wind, LLC (Burke Wind), a wholly owned, indirect subsidiary of NextEra Energy Resources, LLC, proposes to construct the Burke County Wind Energy Center (Project), located approximately 11 miles (mi) (17.7 kilometer [km]) north of the town of Powers Lake in Burke County, in northwest North Dakota. The Project consists of up to 76 turbines, access roads, underground electrical collection systems, collection substations, an operations and maintenance (O&M) building, meteorological evaluation (Met) towers, a construction laydown area, and a batch plant.

The Project will require a Certificate of Site Compatibility from the North Dakota Public Service Commission (Commission) (Case No. PU-18-344); therefore, the Project is subject to review by the State Historical Society of North Dakota (SHSND) under North Dakota Century Code (NDCC) 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 the SHSND review by confirming the presence or absence of archaeological sites within the Survey Corridor, as more particularly described below. The Survey Corridor is shown in **Figure 1**.

The Survey Corridor includes all areas within the Project site plan that may be permanently or temporarily affected during construction of the Project and is based on:

- The turbine layout dated October 08, 2018;
- The service road layout dated January 02, 2019;
- The electrical collection line route layout dated December 17, 2018;
- The meteorological (Met) tower layout dated October 26, 2018;
- The collection substation and switchyard layout dated November 16, 2018;
- The O&M building layout dated June 25, 2018;
- The batch plant area layout June 25, 2018;
- The construction laydown area layout dated June 25, 2018; and
- The crane path layout dated June 22, 2018.

For these Project facilities, AECOM surveyed:

- A 600 foot (ft) (182.88 meter [m]) diameter circular area centered on the proposed turbine locations;
- A 232 ft (70.7 m) corridor for the service roads;
- A 50 to 200 ft (15.24 to 60.96 m) corridor for the collection lines;
- A 600 ft (182.88 m) diameter circular area centered on the proposed Met tower locations;
- A 30 acre (ac) (12.14 hectare [ha]) area for the collection substation and switchyard;
- A 30 ac (12.14 ha) area for the O&M building;
- A 7 ac (2.8 ha) area for the batch plant; and
- A 40 ac (16.20 ha) area for the proposed construction laydown area.

These areas comprise the Survey Corridor, which includes 3,506.13 ac (1,418.88 ha).

Results

A Class I: Literature Review was performed by Atwell, LLC in February 2017 and an updated review was completed by AECOM in December 2018. The literature reviews identified 40 previously recorded archaeological sites, architectural sites, or site leads within the Project Area.

During the Phase I Intensive Cultural Resource Survey, AECOM documented 49 archaeological resources including four Native American stone feature sites and twenty two Native American isolated finds; four Euro-American abandoned farmsteads, six Euro-American artifact scatters, and nine Euro-American isolated finds; and four multicomponent isolated finds. A total of 641 shovel test probes were completed in medium to high probability areas of the Survey Corridor with low ground surface visibility.

A survey for Sites of Religious and Cultural Significance to Tribes (SRCSTT) was also undertaken for the Project by Traditional Cultural Surveyors (TCS) from the Rosebud Sioux, Spirit Lake of Fort Totten, Turtle Mountain Band of Chippewa, and Northern Cheyenne Tribes. Forty one SRCSTT were documented and recorded on North Dakota State Historic Preservation Office's (ND SHPO) Cultural Heritage Forms by AECOM on behalf of the participating tribes.

Recommendations

AECOM recommends avoidance of all cultural resources that are potentially eligible for listing on the National Register of Historic Places (NRHP), sites deemed culturally sensitive, or sites that have not been evaluated for eligibility following the guidelines outlined by the ND SHPO. For this investigation, Burke has committed to avoiding effects to archaeological resources that could be considered archaeologically or culturally significant. In the absence of a formal evaluation of the significance of the identified archaeological resources, AECOM recommends that resources, with the exception of isolated finds, be avoided. It is AECOM'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, AECOM recommends additional investigation that would constitute formal evaluation of site significance.

AECOM is not recommending avoidance for all 22 Native American isolated finds (**Table 1**), all nine historic Euro-American isolated finds (**Table 2**), all four multicomponent isolated finds (**Table 3**) and all ten historic Euro-American artifact scatters (**Table 4**), as it was determined through pedestrian survey and shovel test probes that these areas contained low artifact density with little to no potential for intact, stratified subsurface deposits. AECOM is recommending a 50-foot buffer on three Native American sites (**Table 5**) and a 150-foot buffer on one Native American site (BK1-126-CL). Per the recommendation of the participating tribes, all SRCSTT should be considered eligible for the NRHP, and avoidance is recommended (**Table 6**).

Table 1: Native American Isolated Finds Not Recommended for Avoidance

32BKX1010	32BKX1011	32BKX1013	32BKX1014	32BKX1016
32BKX1018	32BKX1019	32BKX1022	32BKX1023	32BKX1025
32BKX1026	32BKX1027	32BKX1029	32BKX1030	
32BKX1032	32BKX1039	32BKX1042	32BKX1043	
32BKX1044	BK3-088-AR63	BK3-113-CL36	BK3-114-T87	

Table 2: Historic Isolated Finds Not Recommended for Avoidance

32BK257	32BKX1017	32BKX1021
32BKX1024	32BKX1028	32BKX1033
32BKX1041	32BKX1045	BK1-101-CL60

Table 3: Multicomponent Isolated Finds Not Recommended for Avoidance

32BKX1020	32BKX1031	BKX1034	BK1-115-CL94
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Table 4: Historic Sites Not Recommended for Avoidance

32BK245	32BK246	32BK249	32BK251
32BK253	32BK254	32BK258	
32BK259	32BK260	32BK267	

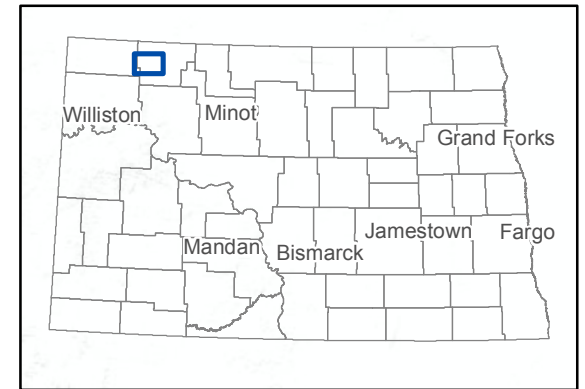
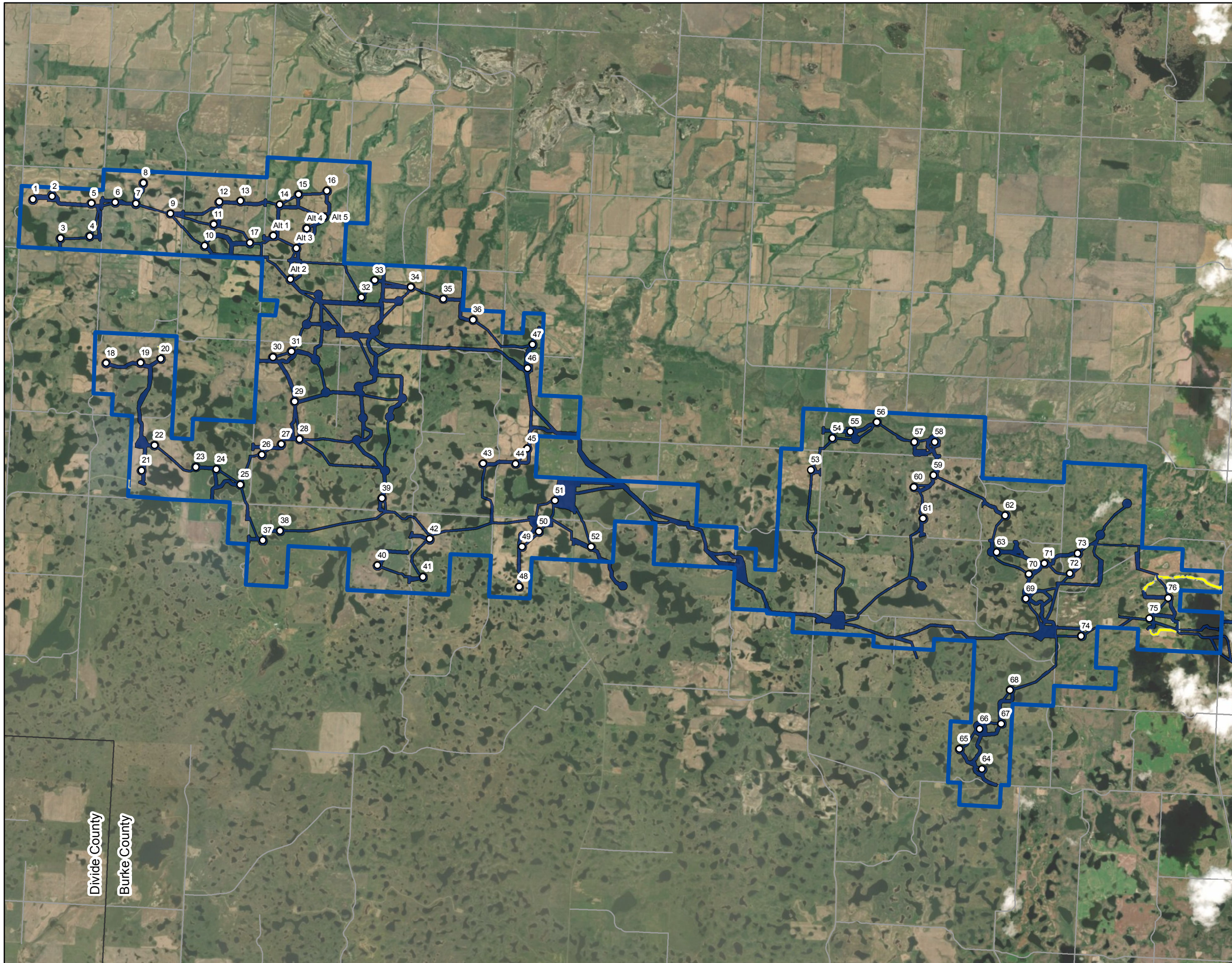
Table 5: Native American Sites Recommended for a 50-foot Avoidance Buffer

32BK247	32BK248	32BK261
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Table 6: SRCSTT Recommended for Avoidance

CHFBK103	CHFBK26	CHFBK39	CHFBK59	CHFBK78	CHFBK90
CHFBK104	CHFBK27	CHFBK47	CHFBK60	CHFBK79	CHFBK91
CHFBK21	CHFBK28	CHFBK48	CHFBK61	CHFBK82	CHFBK92
CHFBK22	CHFBK29	CHFBK49	CHFBK74	CHFBK83	CHFBK93
CHFBK23	CHFBK30	CHFBK50	CHFBK75	CHFBK87	CHFBK94
CHFBK24	CHFBK31	CHFBK56	CHFBK76	CHFBK88	CHFBK95
CHFBK25	CHFBK38	CHFBK58	CHFBK77	CHFBK89	

If these sites and their associated avoidance buffers can be avoided during construction, then AECOM recommends a determination of *No Historic Properties Affected* as documented and mapped in the Class III: Cultural Resources Inventory report. If areas beyond the Survey Corridor are to be used during construction, AECOM recommends completion of an addendum Class III cultural resources survey to determine the presence or absence of any cultural resources within these areas. Currently known areas where an addendum survey would be needed are shown in **Figure 1**. The Class III report will be submitted to ND SHPO and concurrence will be obtained prior to commencing construction of the Project in these areas. Once the ND SHPO concurrence letter is received, it will be submitted to the Commission.



Legend

- Turbines
- County Roads
- Area to be Surveyed
- County Boundary
- ▭ Proposed Project Boundary
- ▭ Previously Surveyed Corridor

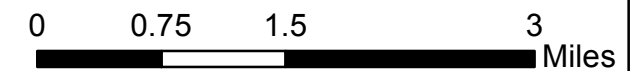
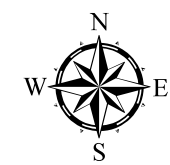
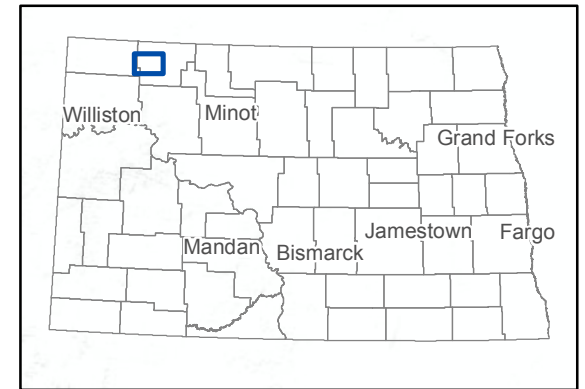
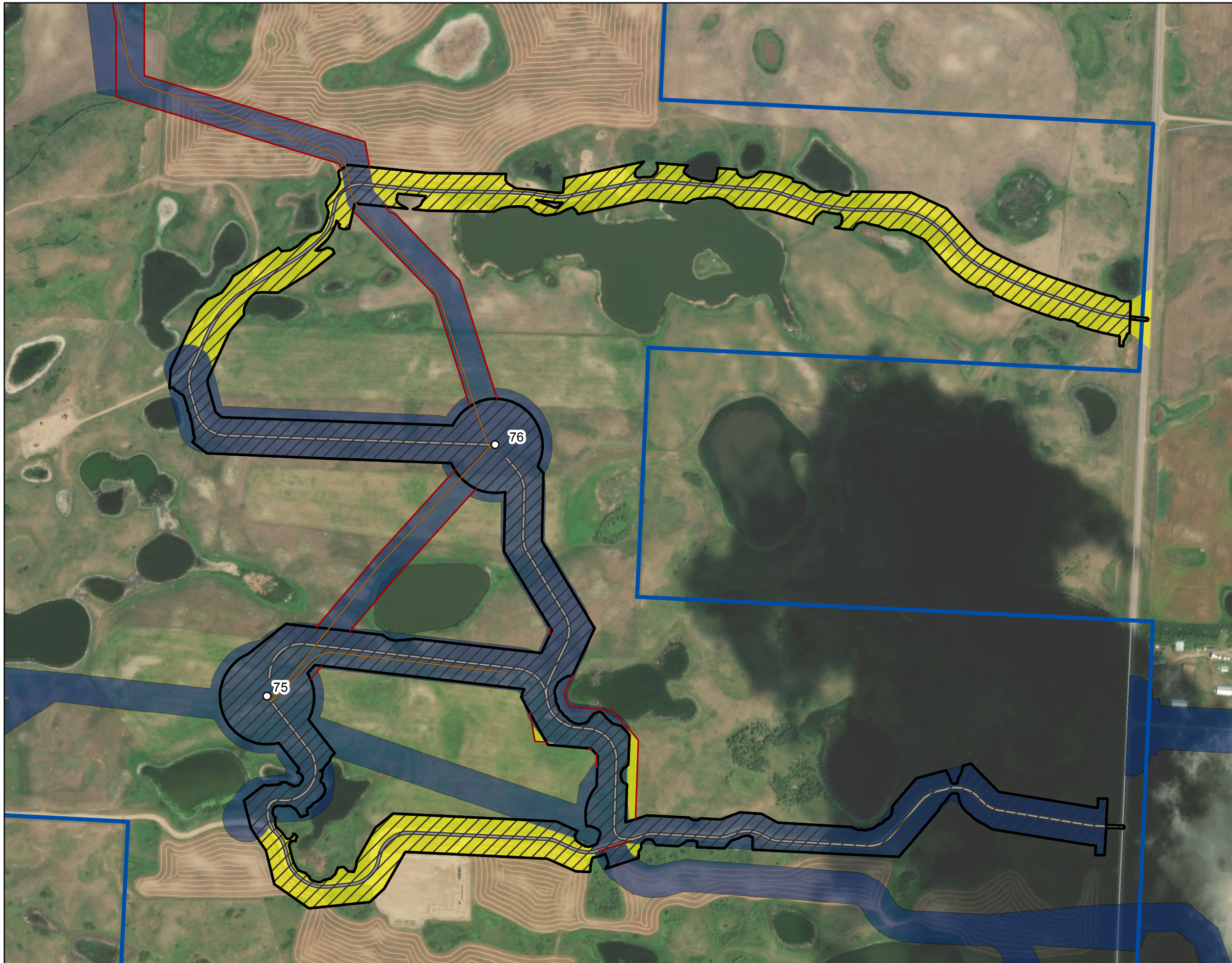


Figure 1
Cultural Survey Corridor
 Burke County Wind Energy Center
 Cultural Resources Survey
 Burke County, ND





Legend

- Turbine
- Collection Corridor
- Collection Lines
- County Roads
- Service Road
- Area to be Surveyed
- ▨ Construction Easement
- ▭ Proposed Project Boundary
- ▭ Previously Surveyed Corridor

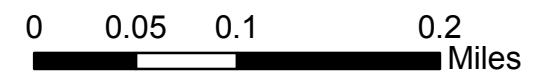
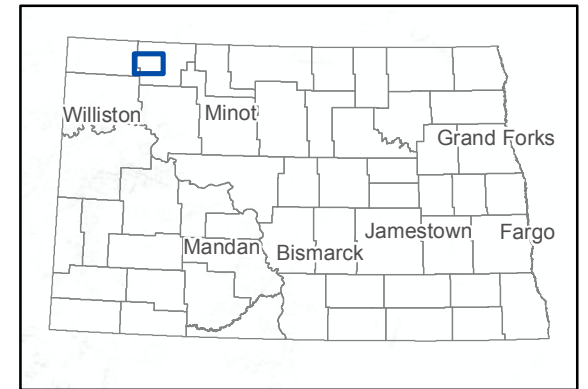


Figure 1a
Cultural Survey Corridor
 Burke County Wind Energy Center
 Cultural Resources Survey
 Burke County, ND





Legend

- ▲ Meteorological Tower
- Turbine
- County Roads
- Collection Line
- Service Road
- Area to be Surveyed
- ▨ Construction Easement
- ▭ Proposed Project Boundary
- Previously Surveyed Corridor

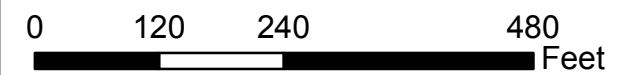
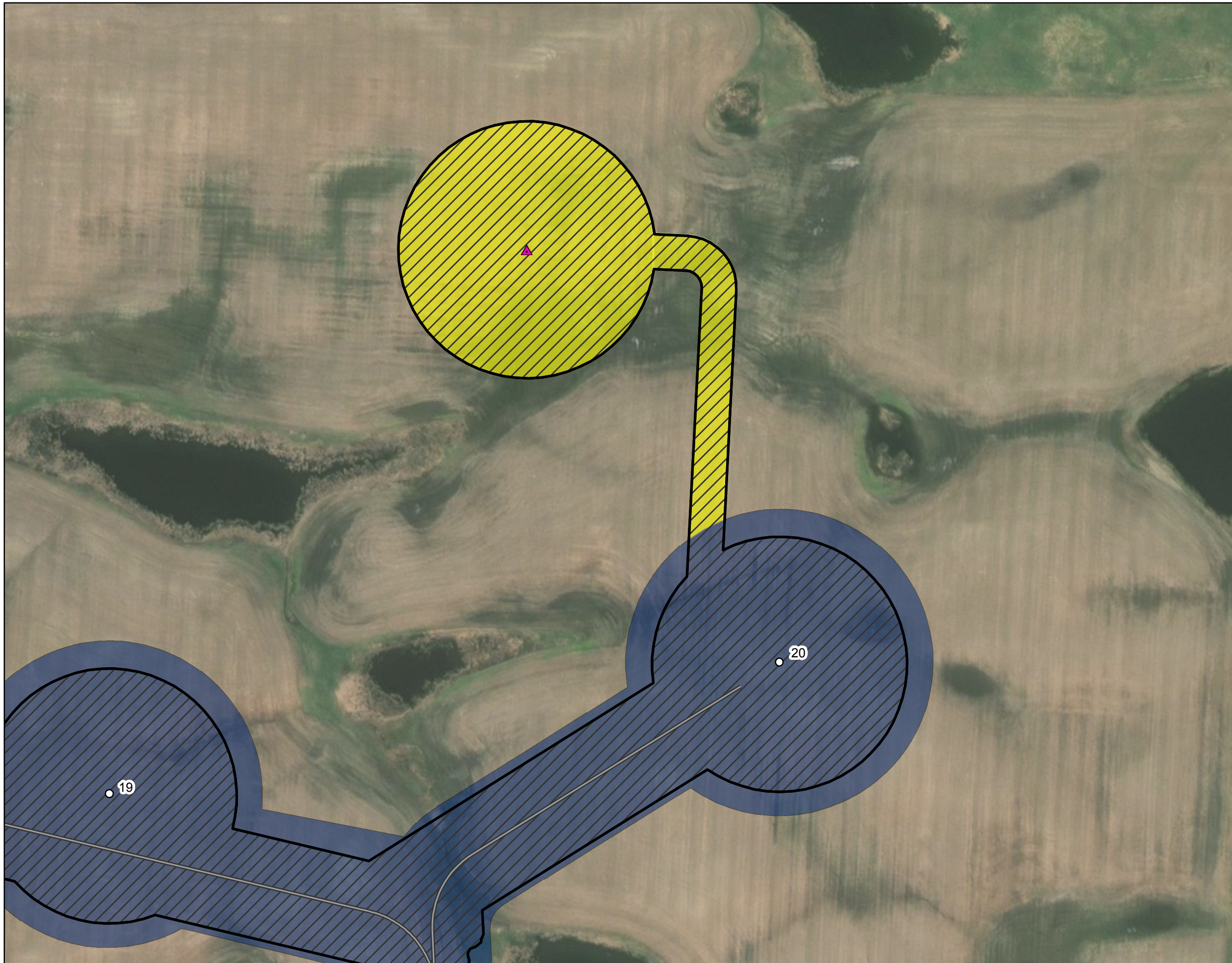








Figure 1b
Cultural Survey Corridor
 Burke County Wind Energy Center
 Cultural Resources Survey
 Burke County, ND





Legend

-  Meteorological Tower
-  Turbine
-  Service Road
-  Area to be Surveyed
-  Construction Easement
-  Previously Surveyed Corridor

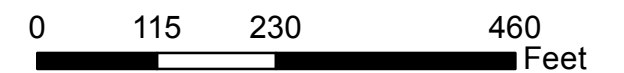


Figure 1c
Cultural Survey Corridor
 Burke County Wind Energy Center
 Cultural Resources Survey
 Burke County, ND

