

CULTURAL RESOURCES MONITORING AND MANAGEMENT PLAN FOR THE DAKOTA RANGE I WIND PROJECT

The following Cultural Resources Monitoring and Management Plan (CRMMP) has been developed to avoid or minimize potential impacts to cultural resources during construction of the proposed Dakota Range I Wind Project (Project) and to comply with the South Dakota Public Utilities Commission Wind Energy Conversion Facility Siting Permit requirements.

The Project is located entirely on private land in Grant and Codington Counties, South Dakota (**Attachment 1; Figure 1**) and involves no federal permits or funding that would trigger National Environmental Policy Act or National Historic Preservation Act Section 106 requirements.

ARCHAEOLOGICAL SURVEYS

Level I Records Search

A Level I Records Search was completed for the Project by Westwood Professional Services, Inc. on July 14, 2017. The records search identified 29 cultural resources surveys that have been completed within or partly within the Project Area, the majority (24) of which were conducted in the past 20 years and do not require additional survey per SD SHPO guidelines. Out of the 29 surveys, only two surveys recorded archaeological sites. Out of 41 archaeological sites recorded in the Project Area, 40 prehistoric sites are recorded as eligible for the National Register of Historic Places (NRHP), while one historic farmstead has been recorded as not eligible. The 40 eligible sites were recorded in 2016 during a survey for a transmission line project (Survey No. ESD-0573).

The fact that 93 percent of surveys conducted in or partly within the Project area recorded no archaeological sites suggests that the Project area does not have a high potential for intact archaeological sites. However, the fact that 40 eligible sites were identified in two small areas during a single survey suggests that dense concentrations of sites could occur in specific settings within the Project area.

Proposed Level III Intensive Survey

Low Probability Areas (LPAs): Because of the upland setting, archeological sites in this region are typically found on or near the current ground surface, and are unlikely to be intact in cultivated areas (which comprise ~54% of the Project area). The exceptions would be in floodplains of intermittent streams; however, these areas within the Project are at or near the headwaters and typically have gentle slopes. Thus, it would be unlikely that a campsite or other occupation would occur in these areas, and if any were present it would be unlikely to still be intact. Prior to Euro-American settlement, such settings would not have developed deep alluvial deposits quick enough to cover a site, such as campsites and processing or kill sites, to conceal it intact. Such sites would have been exposed for many years, if not decades, before they would have been covered by alluvial or colluvial processes. Since these sites would not be intensive occupations because of the lack of a reliable water source, the archaeological signature would

already be low. Therefore, after years of exposure to a variety of disturbances prior to being covered, they would be nearly impossible to detect and would lack research potential, and can reasonably be considered LPAs, not warranting intensive field survey.

No cultural resources surveys are proposed for the LPAs because these areas are cultivated, steeply sloped, more than 984 feet (300 meters) from the nearest water source, or have been surveyed in the last 20 years, and, therefore, do not have a high potential for intact archaeological sites. In the LPAs (as well as the high probability areas (HPAs) discussed in the next section), an Unanticipated Discoveries Plan (**Attachment 2**) will be implemented during construction in the unlikely event that cultural resources or human remains are discovered during construction.

High Probability Areas (HPAs): Areas most likely to contain intact archaeological sites in the region are primarily found on uncultivated level landforms (e.g., terraces, benches, knolls, ridge crests, ridge spurs, occasionally flood plains) around water sources such as rivers, streams, and lakes. For the purposes of this CRMMP, areas considered HPAs warrant Level III intensive field surveys to locate potentially important cultural resources. The most likely site types to be found in these areas are described in **Attachment 3**.

HPAs within the Project area were determined based on several environmental factors, including land cover, topography, and proximity to water sources using the following criteria and are shown in the attached maps (**Attachment 1, Figures 2a-2f**):

Prehistoric HPA:

- Not cultivated based on NLCD data
- Level terrain with vistas overlooking water sources or valleys

Historic HPA:

- Within 164 feet (50 meters) of historic homesteads based on 1910 and 1929 historic plat maps.

Level III intensive cultural resources surveys are proposed for areas within the Project footprint¹ identified as HPAs due to their likelihood to contain surface features, such as rock cairns, rock alignments, and rock circle sites, which are likely the most significant cultural resources present in the Project Area (see Figures 2a-f). In the event that changes are made to the current Project footprint, unevaluated areas will be reviewed, and additional Level III surveys will be completed in areas identified as HPAs in accordance with the CRMMP.

Previously identified archeological sites and previously conducted surveys are also shown on Figures 2a-f. Areas that have been previously surveyed within the last 20 years will not be re-surveyed for this Project; however, NRHP-eligible or unevaluated sites will be re-visited to confirm the current condition of the site(s), confirm actual site location and boundaries, and if additional information can be gleaned from the site.

¹ The Project footprint, or area of potential ground disturbance, includes the turbine sites + 200 ft buffer, meteorological towers + 200 ft buffer, electrical collection lines + 100 ft buffer, new and upgraded roads + 100 ft buffer, and other Project facilities (e.g., substation, O&M, construction laydown yard) + 25 ft buffer.

During the Level III intensive cultural resources survey, the historic and prehistoric HPAs within the Project footprint will be visually inspected and shovel tested if the ground surface visibility is poor. If surface rock features such as cairns or tipi rings are identified, no shovel testing or other disturbance to the site area and features will occur. They will be recorded and photographed and recommended for avoidance. Shovel testing or coring may be used to delineate the vertical and horizontal limits of other types of sites investigated. Any cultural resources will be photo-documented and recorded with GPS equipment with sub-meter accuracy. Archaeological sites will be documented on archaeological site forms from the South Dakota Archaeological Research Center (ARC).

Proposed Archeological Resources Management Plan

For cultural resources identified during the Level III intensive survey, the following steps will be taken.

1. The cultural resource specialist will make a recommendation on the NRHP eligibility of the resource and request SHPO concurrence on the recommendation. There is no federal agency with jurisdiction over this Project, and, therefore, this request will be made directly to SHPO.
2. Sites identified as potentially eligible for NRHP listing will be addressed by micrositing facilities to avoid impacts. If complete avoidance cannot be achieved, Dakota Range Wind will work with SHPO to minimize impacts to the maximum extent practicable.
 - a. An example of an avoidance measure that may be implemented is rerouting a collector line road around a resource, or boring under it to avoid ground disturbance.
 - b. If sites must be impacted that are afforded regulatory protection and would require mitigation, SHPO will be engaged to ensure regulatory compliance is achieved.
3. In accordance with the Siting Guidelines for Wind Power Projects in South Dakota 8(c), and in accordance with informal consultation completed between the Project and tribes, disruption of sensitive resources that are identified as important to Native Americans will be avoided by marking them with orange snow fencing and ensuring facilities are set back a minimum of 75 feet (personal communication between Apex and Diane Desrosiers, Tribal Historic Preservation Officer and James Whitted Section 106 Coordinator, for the Sisseton Wahpeton Oyate, July 25, 2017).

Reporting

A Level III Intensive Survey report will be prepared following guidelines established by the South Dakota State Historic Preservation Office and provided to SHPO and ARC upon completion.

Contingency Plan

If project facilities are modified to include additional areas of ground disturbance that are outside those shown in Attachment 1 Figures 2a-2f, the additional areas will be evaluated for HPAs and surveyed as appropriate, and included in a report addendum provided to the SHPO and ARC.

ARCHITECTURAL SURVEYS

Level I Records Search

The Level I Records Search identified 46 recorded historic resources within the Project area, including 21 farmsteads, 11 homesteads, 8 bridges, 2 barns, 2 schools, 1 church, and 1 cemetery. Of these resources, one farmstead and one school are listed as eligible for the NRHP; two farmsteads, one homestead, and two bridges have not been evaluated; and the remaining 39 resources are listed as not eligible for the NRHP.

Proposed Architectural Survey

As part of a due diligence effort to identify significant historic properties that could be directly, indirectly, or otherwise adversely affected by the proposed Project, a qualified contractor will conduct a windshield reconnaissance within the Project footprint and 1-mile buffer (**Attachment 1, Figure 3**). The survey will be conducted from the public ROW and will include documentation of all resources 45-years-of-age or older that: 1.) have not been recorded in previous surveys; or 2.) have been previously recorded but have undetermined NRHP-eligibility status. Inaccessible complexes or buildings believed to be of historic-age would be noted on Project maps. All accessible resources within the 1-mile buffer would be photo-documented and their locations mapped.

Upon completion of the field survey, an architectural historian meeting the Secretary of the Interior standards would evaluate each recorded resource both for its NRHP eligibility and for the Project's potential to impact the resource. The historian would also evaluate whether any historic residential or commercial districts extend into the 1-mile buffer; however, a formal rural historic landscape evaluation will not be conducted. In addition to evaluating a resource's NRHP eligibility, the historian will also evaluate the Project's potential to adversely affect significant historic (NRHP-listed or eligible) resources either directly or via impacts to character-defining features such as their historic setting. The assessments and evaluations of effect will be included in the overall cultural resources survey report for this Project, and architectural inventory forms would be completed for newly-recorded historic-age architectural properties.

Proposed Architectural Resource Management Plan

Impacts to historically-significant buildings, structures, objects, or landscapes will be minimized or reduced through the implementation of alternative designs and landscape choices where feasible. If impact minimization is not possible, Apex will coordinate with SHPO and other interested parties (if applicable) to identify appropriate mitigation measures for resources that are protected by regulation.

Reporting

An Architectural Survey report will be prepared following guidelines established by the South Dakota State Historic Preservation Office and provided to SHPO upon completion.

ATTACHMENT 1 – FIGURES

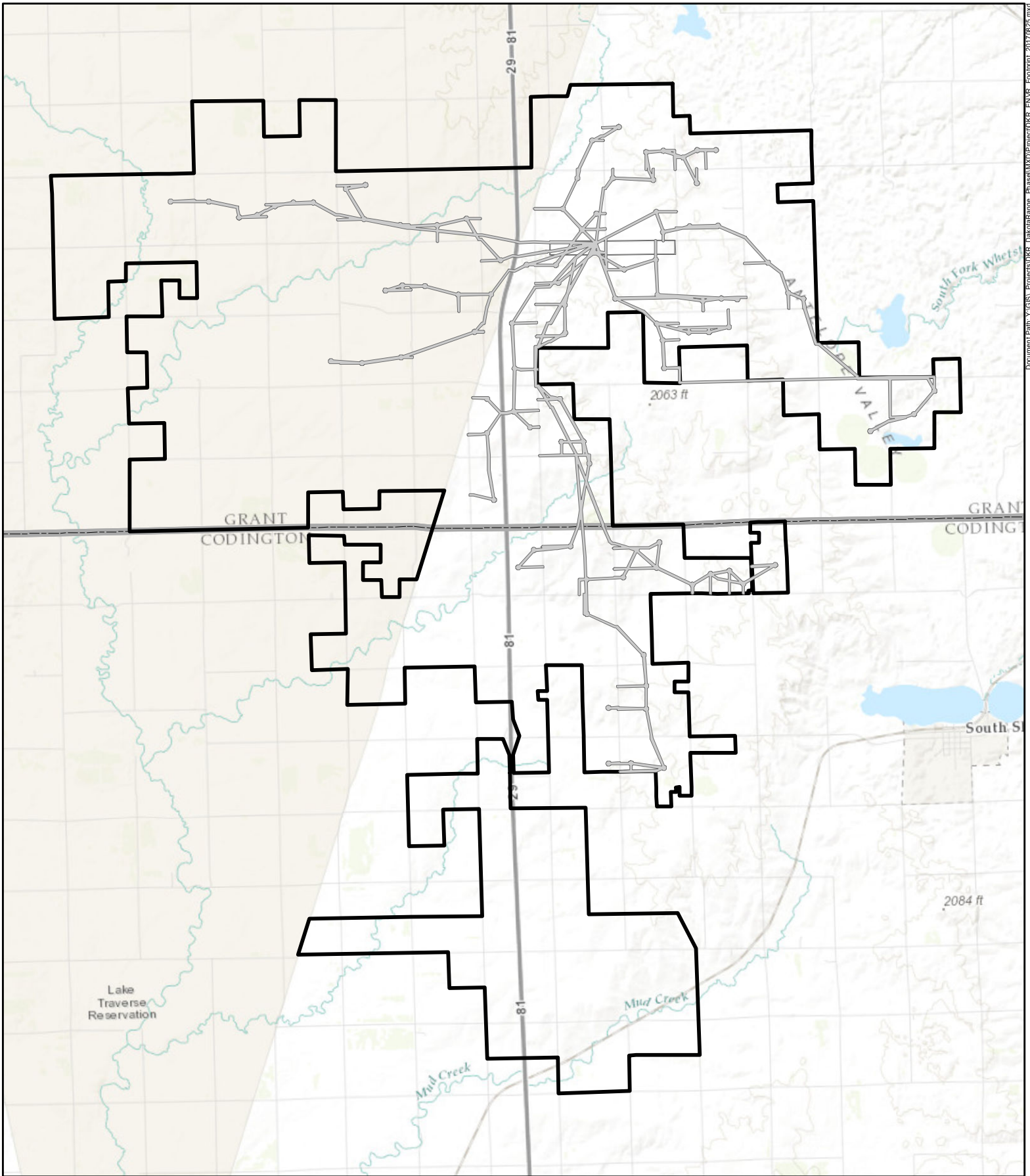
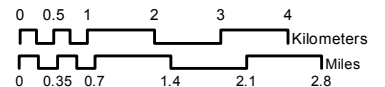


Figure 1:
Project Overview Map
Dakota Range Wind Project

- Proposed Project Footprint
- Project boundary



Coordinate System: NAD 1983 UTM Zone 14N
 Projection: Transverse Mercator
 Datum: North American 1983
 False Easting: 500,000.0000
 False Northing: 0.0000
 Units: Meter



Date: 8/25/2017
 Author: SL

Figure 2
Proposed Level III Survey Area Based on HPAs
Dakota Range Wind Project

(Redacted)

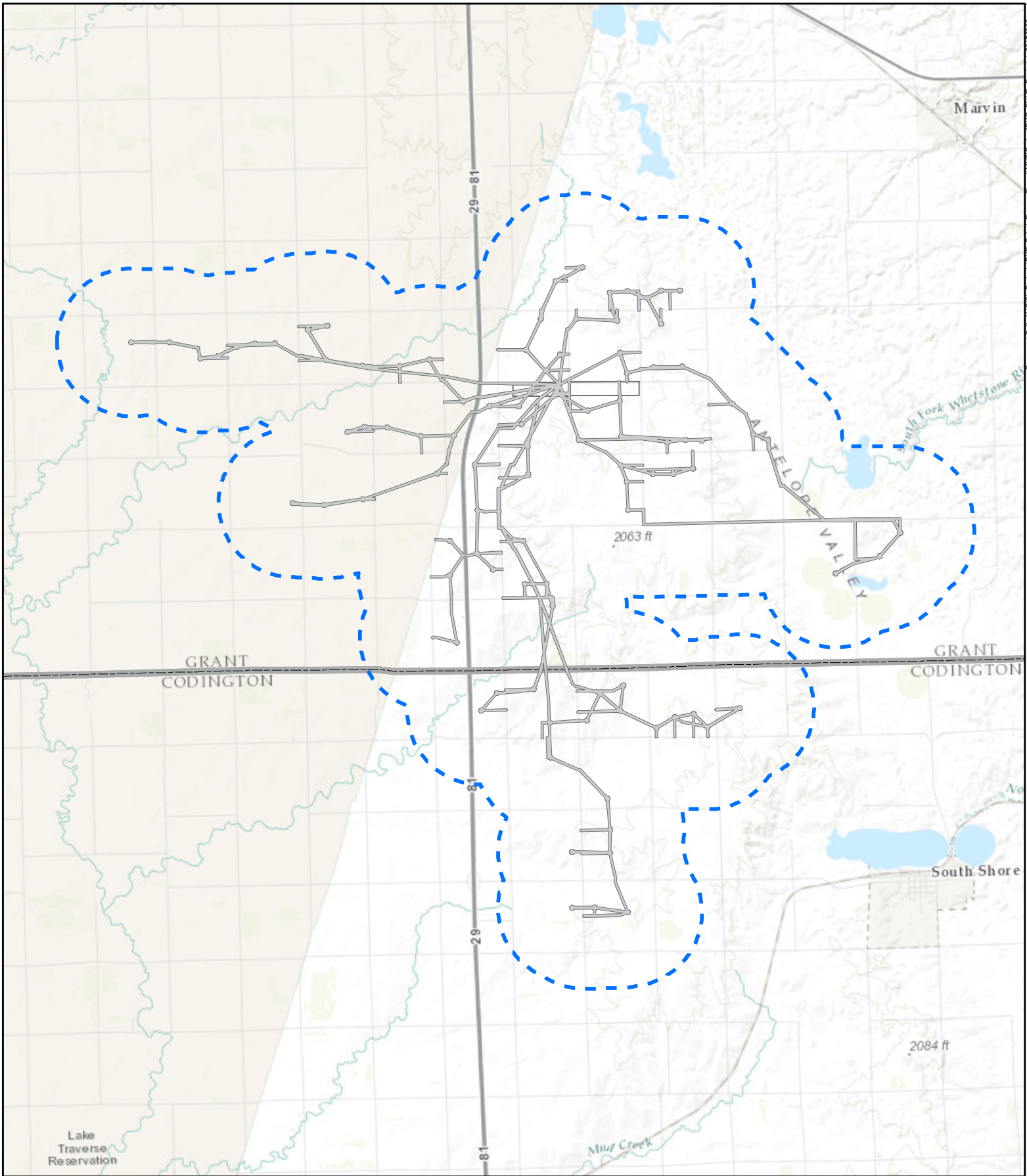
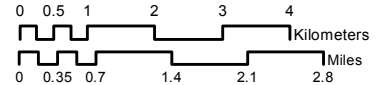


Figure 3:
Proposed Architectural Survey Area
Dakota Range Wind Project

- Proposed Architectural Survey Area
- Proposed Project Footprint



Coordinate System: NAD 1983 UTM Zone 14N
 Projection: Transverse Mercator
 Datum: North American 1983
 False Easting: 500,000.0000
 False Northing: 0.0000
 Units: Meter



Date: 8/25/2017
 Author: SL

ATTACHMENT 2 – UNANTICIPATED DISCOVERIES PLAN

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF
HUMAN SKELETAL REMAINS AND CULTURAL RESOURCES

DAKOTA RANGE WIND PROJECT
CODINGTON AND GRANT COUNTIES, SOUTH DAKOTA

1. INTRODUCTION

Dakota Range I, LLC (Dakota Range I), an affiliate of Apex Clean Energy Management, LLC. (Apex) plans to construct the Dakota Range I Wind Project (Project) in Codington and Grant Counties, South Dakota. The following Unanticipated Discovery Plan outlines procedures to follow if human remains or cultural resources are discovered during construction.

Human remains discovered anywhere onsite may be the result of a recent criminal action, accident, or historical event. Therefore, a plan is needed to make sure they are treated in an appropriate and legally compliant manner should they be discovered during construction of the Project.

Cultural resources are defined as evidence of the past activities and accomplishments of people. Cultural resources that are potentially discoverable onsite during construction of the Project may include such things as Native American artifacts, pottery sherds, cairns, tools, or other evidence of historical land use by humans. These may be of historic interest or value to the landowner, and in South Dakota may be protected by regulation if discovered on state or federal lands or in close association with waters or wetlands regulated by the U.S. Army Corps of Engineers (USACE). No state land is included within the Project footprint; however, USACE jurisdictional waterbodies and wetlands are present and could warrant consideration in the event of an unanticipated discovery.

2. ON-SITE RESPONSIBILITIES

If any Dakota Range I employee, contractor or subcontractor believes that he or she has uncovered human remains or significant cultural resources, the following steps should be taken. (NOTE THAT CAIRNS WERE OCCASIONALLY USED BY NATIVE AMERICAN'S TO MARK HUMAN REMAINS AND SHOULD BE TREATED AS SUCH).

STEP 1: STOP WORK. All work in the immediate vicinity of the discovery must stop immediately. The On-Site Construction Manager should be notified immediately, as described in Step 2 below, and the discovery location should be secured from any further disturbance until permission is granted by the On-Site Construction Manager to resume work in the area. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the stop-work area until notified by the Construction Manager.

Do not call 911 (unless there is an actual emergency warranting such action) or speak with the media.

STEP 2: NOTIFY THE DAKOTA RANGE I ON-SITE CONSTRUCTION MANAGER

TBD, cell #, email

If you can't reach the On-Site Construction Manager contact the Apex Project Manager:

TBD, cell #, email

STEP 3: DAKOTA RANGE I'S ON-SITE CONSTRUCTION MANAGER OR PROJECT MANAGER WILL TAKE APPROPRIATE ACTION ACCORDING TO THE FOLLOWING DECISION TREE.

- 1) If human remains are discovered, this could be either a crime scene or an historic site protected by law with specific reporting requirements to local law enforcement, landowner and coroner. Any person who encounters or discovers human skeletal remains or what he believes may be human skeletal remains in or on the ground shall immediately cease any activity which may disturb those remains and shall report the presence and location of such human skeletal remains to an appropriate law enforcement officer (SDCL 34-27-25).

Codington County Sherriff

PHONE: (605) 882-6280

Grant County Sherriff

PHONE: (605) 432-5853

The Sheriff will determine if the remains are human and whether the discovery site constitutes a crime scene and notify the landowner and coroner as appropriate. The Sheriff will advise on future actions to be taken by Dakota Range I, contractor, and landowner. Work in the immediate area will not resume until directed by the Sheriff or other appropriate official.

If the scene does not appear to be a crime scene warranting immediate action (i.e., calling 911 or the Sheriff), the on-site Construction Manager should contact Apex's Director of Environmental Permitting (Dave Phillips) or Apex's Environmental Permitting Manager (Jennie Geiger) for the Dakota Range I Wind Project to determine the appropriate course of action.

Dave Phillips, 434-906-9127, dave.phillips@apexcleanenergy.com

Jennie Geiger, 434-260-6982, jennie.geiger@apexcleanenergy.com

Such action will include, at a minimum, notifying the state archaeologist within 15 days (SDCL 34-27-28), and may include contacting the Project's on-call archaeologist to evaluate the find, the landowner, the South Dakota State Historical Society, and/or the USACE. The primary on-call archaeological firm for this Project is:

TBD, cell #, email

- 2) In instances where cultural resources that are not human remains are discovered on private land, such as Native American artifacts, pottery sherds, tools, or other evidence of historical land use by humans, the Construction or Project Manager will notify the

landowner of the find, take avoidance action if recommended by the landowner and practicable to do so, and notify the construction team when and where they may resume construction in this location. With landowner approval, the SHPO and Tribal Historic Preservation Officer (THPO) for the Sisseton Wahpeton Oyate will be notified of the discovery.

Diane Desrosiers, THPO, 605-268-3964

- 3) In instances where a discovery is within area potentially considered USACE jurisdictional, the Construction or Project Manager, in coordination with Apex's Director of Environmental Permitting, will determine the appropriate action, which may consist of the following.
 - a. Contact the on-call archaeological firm (**TBD**) to come to the Project to evaluate the spatial limits of the site and enable avoidance action through rerouting or relocating the Project feature to ensure impact avoidance before resuming construction in this location.
 - b. Contact the USACE and SHPO in the event the discovery triggers noncompliance with any USACE authorizations.

3. ON-SITE CONSTRUCTION MANAGER'S RESPONSIBILITIES

- A. Secure Site and Protect Find: The Dakota Range I On-Site Construction Manager is responsible for:
 - Taking appropriate steps to protect the discovery site if determined necessary.
 - Ensuring that all work is stopped in an area adequate to provide for the total security, protection, and integrity of the site.
 - Ensuring vehicles, equipment, and unauthorized personnel do not traverse the stop-work area until notified by the Construction Manager.
 - Ensuring that human remains, if discovered, are covered without disturbance, using a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed or disturbed by weather.
- B. Contact Sheriff, Apex Director of Environmental Permitting and Archaeologist: As described above in Section 2, Step 3.
- C. Direct Construction: The Dakota Range I's On-Site Construction Manager may direct construction away from the immediate area of discovery prior to contacting the identified parties so that construction activities can continue without risk of degrading the discovery.

APPENDIX A
ARCHAEOLOGICAL RESOURCE IDENTIFICATION



Pottery sherds: This picture shows several examples of ceramic rim sherds and other broken pieces of bowls and jars.



Native American Tools: This picture shows several examples of awls, bone fleshers, knives, and fish hooks.



Cairns: Cairns are piles of stones built and used by Native Americans for a variety of reasons, including burials (the photo on the top is a potential burial cairn, the one on the bottom is a non-burial cairn). Stone piles that appear relatively new, required heavy machinery to move, or appear un-weathered are likely field stone piles rather than cairns. However, if unsure which type of stone pile you are looking at, follow the steps outlined in Section 2 of the Unanticipated Discovery Plan.

ATTACHMENT 3 – SITE TYPES

Native American Site Types

The following Native American site types represent those most likely to be found in and near the Project footprint.

Habitation Sites

Habitation sites contain cultural deposits related to the seasonal occupation of the area by Native Americans and may include subsurface features. Residential structures and task-specific activities may be represented by organic staining of the soil. Site size can range from moderate to extensive and may include multiple landforms. Density of cultural debris and diversity of tool classes are generally moderate to high. Based on the cultural history of region, two types of habitation sites may be found in the Project corridor:

- Residential Base Camps or Villages form the hub of subsistence activities, the locus out of which foraging parties originate and where most processing, manufacturing, and maintenance activities take place. Residential base camps may be identified archaeologically as large sites with a high artifact density and a wide diversity of tools (e.g., lithic tools, projectile points, knives, scrapers, etc.) and other artifacts (e.g., cooking hearths, teepee rings). Features related to site activities, such as lithic debitage associated with tool-making, are usually present.
- Field Camps serve as temporary operational centers for a task group that maintains itself while away from the residential base. The individual sites may be further differentiated according to the nature of the resources to be procured and the size of the social group the task force is supplying. Subsurface features may be present at such sites.

Lithic Scatters/Task Specific Sites

These sites are associated with the procurement of a limited number of locally available resources and/or the reduction of raw lithic materials. Subsurface features, structures, organic staining, or cultural deposits of substantial integrity related to seasonal occupation are not generally found at such sites. Site size is generally small, a result of a short-term occupation. Density of cultural debris and diversity of artifact classes are limited severely due to the nature of the activities evident. Artifact content often consists entirely of task-specific expedient tools, occasionally supplemented with a broken or discarded, curated tools. Lithic scatters often fall below the threshold of visibility even with excellent survey conditions. Cultural resources identified as isolated finds often may be examples of lithic scatters. In rugged terrain, these sites often occur on landforms that offer only a small area suitable for occupation, such as small benches and ridge spurs. Sites included in this category may include some preliminary food processing sites, lithic procurement and/or reduction sites, small kill and processing sites, and artifact scatters.

Bison Kill Sites

Bison kill sites are essentially task specific sites; however, due to the uniqueness of these sites they are treated separately. Such sites can have great range in size and number of individuals present. They are usually associated with favorable terrain for impoundments or jumps.

Impoundments can often be traps found in the natural environment, including steep-walled ravines, draws, or arroyos and other areas where the animals can be trapped or become bogged down. Jump sites are generally found at the bases of steep to moderately steep ravines and canyons where the herd can be driven off. Kill sites with significant integrity are generally found buried in sediments. Many such kill sites have been recorded in the Dakotas, but none within the project domain.

Sacred, Specialized Ceremonial, or Mortuary Sites

Sites in this category are those that served specialized ceremonial functions. Examples include cemeteries, cairns, mounds, and petroglyph and pictograph sites. Such sites may or may not be spatially separated from habitation sites.

Euro-American Site Types

The following Euro-American site types represent those most likely to be found in the Project area. Cemeteries, while a significant cultural resource, are not usually assigned state archaeological site numbers since other laws protect them.

Homesteads

Identifying the presence of early homesteads is often difficult because they may not be archaeologically visible. These buildings were small, square or rectangular, simple sod, log, or framed structures, and often a combination of two or more of these styles. In the Project area, due to the high concentration of glacial cobbles, it is likely that these structures were built upon stone foundations. With the addition of more reliable trade routes, these homes were often sided with weather-boards, and porches and additions may have been added to the existing structure. The perishable nature of most of the construction materials and rebuilding over the site at a later date may make these sites difficult to identify. Archaeological materials that could be associated with an early homestead may include a well/cistern, privy, foundation piers, and kitchen and personal items.

Farmstead Complex

Farmsteads generally consisted of a dwelling with outside activity areas and yard features (wells, privies, cisterns, cellars, detached kitchens, etc.). More distant activity areas may include structures or outbuildings such as barns, corncribs, sheds, smokehouses, and ice houses. Other activity areas such as agricultural row crops and pastureland may surround these outbuildings.

Farmstead layout is often determined by acceptable regional standards, which are generally based on the previous patterns each ethnic group practiced. A farmer and his family are largely responsible for the layout of their farmstead. However, the restricted distribution of timber and the remoteness of many areas of the Dakotas caused individuals to vary types of construction materials. Early house types that may be found in association with a farmstead complex include log, framed, and sod styles.

Rural One-Room Schoolhouses

During the nineteenth and early to middle twentieth century rural one-room schoolhouses were distributed throughout the rural landscape of the Dakotas. These schoolhouses tended to be situated in proximity to rural population centers such as dispersed farming communities.

Schoolhouses also functioned as places of social gatherings for members of the rural community. Archaeological features often observed in association with rural one-room schoolhouses include foundations, privies, and possibly wells or cisterns. The type of foundation and lining of the excavated features are often temporally diagnostic. Construction materials or type of structures were, as with the habitation structures, dependent on the locally available materials. Artifacts typically associated with a schoolhouse include coins, jewelry, and other small personal items lost or broken and discarded, as well as bowls, cups, plates, stoneware, and glass bottles, jars, and glasses.

Churches

Rural churches are distributed across the landscape much the same way as schoolhouses. The rural populations generally desired these structures to be placed in areas of easy access for the population, generally along principal roads. Features and artifacts were generally the same as those found at schoolhouses. In many instances school and church activities were conducted in the same building.

Discard/Disposal Sites

These sites originate strictly for the purpose of refuse disposal from other sites. Intentional discard areas generally contain larger objects such as expended machinery parts, portions of razed buildings, and household items. Gullies, ravines, and steep slopes beyond the periphery of the active right-of-way were common areas for the discard of refuse. Discarded material was often placed in areas of active erosion or washed out areas to maintain or reduce the additional erosion. Some discard sites include excavated trenches that have been filled with razed buildings. Intentional or accidental discard areas for smaller items are often found within the immediate activity areas of other historic-age site types.