Appendix E

Phase 1A Cultural Resource Literature Review

In accordance with Minnesota Rules, part 7829.0500 and Minnesota Statutes Chapter 13, Northern Wind Energy Redevelopment, LLC has designated portions of Appendix E – Phase IA Cultural Resource Literature Review as **NONPUBLIC DATA – NOT FOR PUBLIC DISCLOSURE** because it contains sensitive cultural resource location information. The Minnesota State Historic Preservation Office Manual for Archaeological Projects in Minnesota provides for restricted access to sensitive cultural resource location information.

Northern Wind Energy Redevelopment, LLC



October 23, 2020

Ms. Rachael Shetka Barr Engineering 325 South Lake Avenue, Suite 700 Duluth, MN 55802

Subject: Phase 1A Cultural Resource Literature Review for the ALETTE Clean Energy Repowering Project, Murray County, Minnesota (SHPO Number: 2020-2764)

Dear Ms. Shetka,

On behalf of ALETTE Clean Energy (ACE), Barr Engineering Co. (Barr), contracted In Situ Archaeological Consulting, LLC (In Situ) to conduct a literature review for a proposed wind energy project. This letter report presents the results of a cultural resource literature review conducted by In Situ for the ACE Repowering Project (Project). ACE owns and operates two existing wind generation facilities in Murray County and is proposing to repower both facilities: the Chanarambie facility, which currently consists of 57 turbines (1.5 MW each), and the Viking facility, which currently consists of 8 turbines (1.5 MW each). ACE is proposing to decommission all existing turbines on each facility and replace them with new turbines (2 to 3 MW each). By doing this, the number of turbines is expected to decrease but the height of the towers/blades will increase. At this time, a proposed layout is not set, and ACE intends to utilize existing infrastructure (roads, collector system, etc.) to the extent possible. However, new infrastructure and foundations may be necessary to support the larger turbines/equipment. The proposed Project is located in Murray County, Minnesota and within the legal locations listed in Table 1 (Project Area) and indicated in Figure 1.

Table 1: Legal Locations of the Proposed Project Area			
Township (T)	Range (R)	Section(s)	
106 North	43 West	3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 33, 34,	
107 North	43 West	27, 28, 29, 30, 31, 32, 33, 34	

This cultural resource literature review was performed for Barr in preparation for the permitting and design of the Project. The Project Area is located approximately 1.2 miles west of Lake Wilson, Minnesota and encompassing approximately 17,357 acres. The literature review was conducted on September 11, 2020 using the site data files and previous inventory files maintained at the Minnesota Office of the State Archaeologist (OSA) and at Minnesota State Historic Preservation Office (SHPO). The entire proposed Project Area is located within Murray County, Minnesota, although a portion of the literature review study area extends into Pipestone County, Minnesota.

BACKGROUND RESEARCH

A literature search was conducted within a 0.5-mile study area (Study Area) of the proposed Project Area (Figure 1). The task was completed using site data files and previous inventory files maintained at the Minnesota OSA, Minnesota SHPO. In addition, background research was completed by reviewing publicly available National Register of Historic Places (NRHP) data, historic maps, cemetery/burial records, atlases, current aerial photographs, soil maps, topographic and geomorphic data, and other sources that might provide information for the locations of historic-era sites, areas of prior disturbance, etc. Enclosed are the cultural resource literature review maps illustrating the Study Area around the Project Area and the previous cultural resource locations and cultural resource inventories as described below (see attached Figures 1-17).

The records search revealed 26 previously recorded archaeological resources (Table 2) and one previously recorded historic structure (Table 3) within the Study Area. Of these resources, 15 previously recorded archaeological resources and one previously recorded historic structure are located within the proposed Project Area.

Due to the implementation of Emergency Executive Order 20-20 in response to the Novel Coronavirus (COVID-19) Pandemic, at the time of the completion of this Phase IA literature review, the Minnesota SHPO and OSA offices were closed. Due to this, information regarding previous surveys and reports could not be obtained for this report, as most reports were not available at the time. However, for the purpose of this Phase IA literature review for a wind power project, the information regarding previous surveys and reports would only serve as context for the broad research area and is not directly related to the outcome of the current Project.

Table 2: Previous Archaeological Resources within 0.5 Miles of the Project Area.					
Site Number	Legal Location	Cultural Affiliation	Site Type	NRHP Eligibility	Within Project Area
21MU0006	E NW NE Section 21, T106N, R43W	Historic	Rock Art	Unevaluated	Yes
21MU0028	S SW SE NW Section 4, T105N, R43W	Prehistoric	Tipi Ring	Unevaluated	No
21MU0029	NW NW SW NW Section 4, T105N, R43W	Prehistoric	Artifact Scatter	Unevaluated	No
21MU0030	NW SW NE NW Section 4, T105N, R43W	Prehistoric	Artifact Scatter	Unevaluated	No
21MU0037	NW SE SW Section 33, T106N, R43W	Prehistoric	Camp	Unevaluated	No
21MU0048	NE SE NE SE Section 34, T106N, R43W	Prehistoric	Lithic Scatter	Unevaluated	Yes
21MU0062	SW SW Section 5, T106N, R43W	Prehistoric	Single Artifact	Unevaluated	Yes
21MU0063	NE NE NE Section 6, T106N, R43W	Prehistoric	Lithic Scatter	Unevaluated	Yes

Site Number	Lagal Lagation Sita Twi		Site Type	NRHP Eligibility	Within Project Area
21MU0064	NE NE SE Section 19, T107N, R43W	Prehistoric Archaic	Lithic Scatter	Unevaluated	No
21MU0065	NE SW SE Section 21, T106N, R43W	Prehistoric	Rock Lined Depression	Unevaluated	Yes
21MU0066	NW NE SW SE Section 10, T107N, R43W	Historic	Artifact Scatter	Unevaluated	No
21MU0067	SW NE SW and NW SE SW Section 19, T107N, R43W	Historic	Artifact Scatter	Unevaluated	No
21MU0068	SE SE NW Section 31, T107N, R43W	Prehistoric	Single Artifact Unevaluated		Yes
21MU0116	NE NE SE SE Section 32, T107N, R43W	Prehistoric	Single Artifact	Single Unevaluated	
21MU0118	SW NW SW Section 31, T107N, R43W	Prehistoric	Lithic Scatter	Unevaluated	Yes
21MU0119	SE NW SW Section 29, T107N, R43W	Prehistoric	Lithic Scatter	hic Unevaluated	
21MU0130	NE NE NE Section 15, T106N, R43W	Prehistoric Paleoindian	Single Artifact	Unevaluated	Yes
21MU0131	NW SE SE NE Section 15, T106N, R43W	Prehistoric Paleoindian	Single Artifact	Unevaluated	Yes
21MUb	SE SE Section 29, T106N, R43W	Prehistoric	Artifact Scatter – Alpha site	Unevaluated	No
21MUc	NE Section 32, T106N, R43W	Prehistoric	Lithic Scatter – Alpha site	Unevaluated	No
21MUf	Section 16, T106N, R43W	Prehistoric	Burial Mound – Alpha site	Unevaluated	Yes
21MUg	NW Section 21, T106N, R43W	Prehistoric	Lithic Scatter – Unevaluated Alpha site		Yes
21MUm	SE SW Section 10, T106N, R43W	Historic	Ghost Town – Alpha site	Unevaluated	Yes
21MUz	SE Section 33, T106N, R43W	Prehistoric	Habitation – Alpha site	Unevaluated	Yes
21MUab	E Section 3, T105N, R43W	Unknown	Artifact Scatter – Alpha site	Unevaluated	No
21MUac	N NW Section 4, T105N, R43W	Unknown	Artifact Scatter – Alpha site	Unevaluated	No

Of the 26 archaeological resources in the Study Area, there are two prehistoric artifact scatter sites (21MU0029 and 21MU0030), two historic artifact scatter sites (21MU0066 and 21MU0067), five prehistoric lithic scatter sites (21MU0048, 21MU0063, 21MU0064, 21MU0118, and 21MU0119), one prehistoric camp site (21MU0037), one prehistoric tipi ring site (21MU0028), one prehistoric rock-lined depression site (21MU0065), one historic rock art site (21MU0066), and five prehistoric single artifact find sites (21MU0062, 21MU0068, 21MU0116, 21MU0130, and 21MU0131), two prehistoric lithic scatter alpha sites (21MUc and 21MUg), one historic ghost town alpha site (21MUg), one prehistoric artifact scatter alpha site (21MUb), and two artifact scatter alpha site (21MUb), and two artifact scatter alpha sites of unknown cultural affiliation (21MUab and 21MUac). An "alpha site" is a resource that the exact site type and location remain unverified and has not been verified, recorded, or evaluated by an archaeologist. Of these, all 26 sites are unevaluated for the NRHP.

Table 3: Previously Recorded Historic Structures within 0.5 Miles of the Project Area.				
Site	Site Name/Type	Address/ Location	NRHP Eligibility	Within Project Area
XX-ROD-027	Trunk Highway 30	Multiple Counties	Unevaluated	Yes

The one previously recorded historic structure within the Study Area (XX-ROD-027) is *unevaluated* for the NRHP.

A total of 15 previously recorded archaeological resources and one previously recorded historic structure are located within the proposed Project Area (see Figures 2-16). The archaeological sites include: 21MU0006, 21MU0048, 21MU0062, 21MU0063, 21MU0065, 21MU0068, 21MU0116, 21MU0118, 21MU0119, 21MU0130, 21MU0131, 21MUf, 21MUg, 21MUm, and 21MUz. All of the archaeological sites within the proposed Project Area are *unevaluated* for the NRHP. The one historic structure is comprised of XX-ROD-027 and is *unevaluated* for the NRHP. Two of the sites, 21MU0006 and 21MU0065, are culturally sensitive resources that are in close proximity of the existing Chanarambie Wind Power Plant.

REPORT SUMMARY

In Situ completed a cultural resource literature review for the ALETTE Clean Energy (ACE) Repowering Project in Murray County, Minnesota. The results reveal a total of 26 previously recorded cultural resources and one previously recorded historic structure within the Study Area.

Of these resources, 15 previously recorded archaeological resources and one previously recorded historic structure are located within the proposed Project Area. The archaeological sites include: 21MU0006, 21MU0048, 21MU0062, 21MU0063, 21MU0065, 21MU0068, 21MU0116, 21MU0118, 21MU0119, 21MU0130, 21MU0131, 21MUf, 21MUg, 21MUm, and 21MUz. All of the archaeological sites within the proposed Project Area are *unevaluated* for the NRHP. The one historic structure is comprised of XX-ROD-027 and is *unevaluated* for the NRHP. Two of the sites, 21MU0006 and 21MU0065, are culturally sensitive resources that are in close proximity of the existing Chanarambie Wind Power Plant.

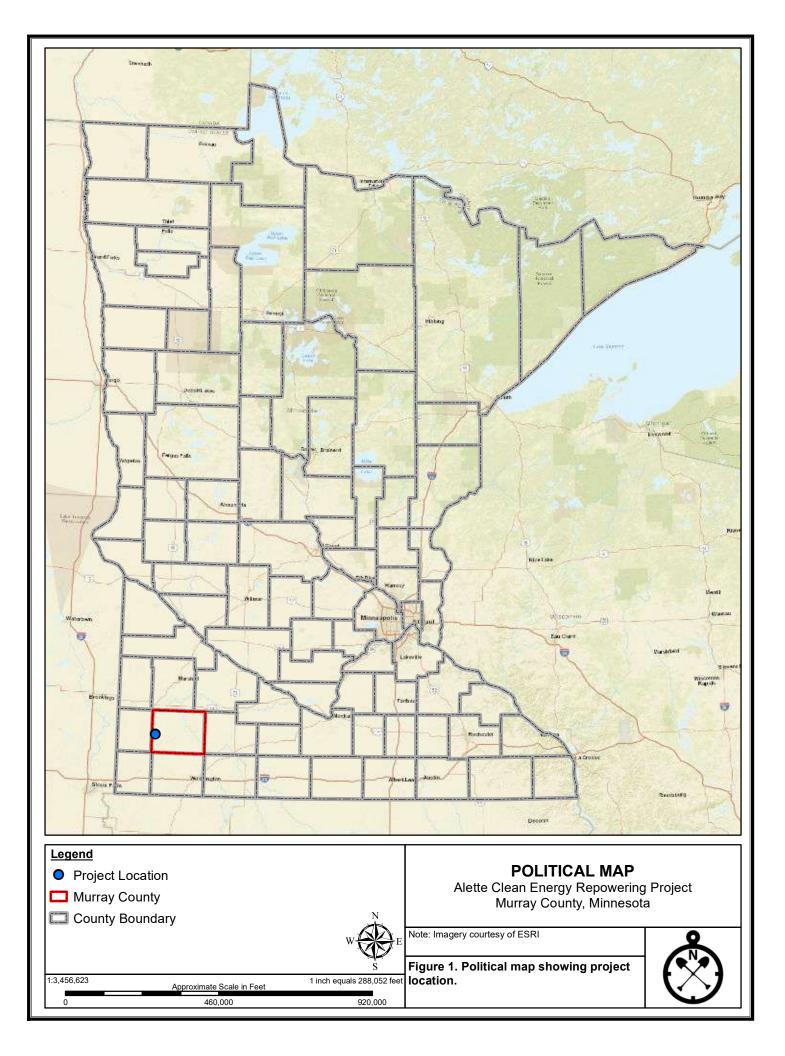
Since the proposed project layout is not set, In Situ recommends avoidance of all of the *unevaluated* sites within the Project Area until the eligibility of these sites are assessed for the NRHP. Due to the sensitive nature of archaeological sites 21MU0006 and 21MU0065 and the close proximity of the existing facilities, In Situ recommends careful planning and avoidance of these resources. If the new infrastructure for the Project extends outside of the original Project footprints, a Phase I cultural resource management survey may be warranted for this Project if the Project needs to meet the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800.

Please contact me at 952.658.9981 or <u>cpicka@insirucrm.com</u> should you have any further questions or concerns regarding the information assembled.

Sincerely,

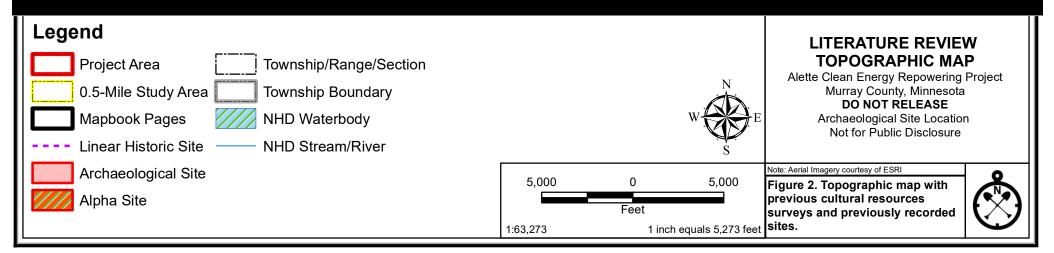
Čraig Picka, M.S., RPA Principal Investigator

Enclosures:	Figure 1 Figure 2	Political map showing project location. Topographic map with previous cultural resources surveys and previously recorded sites (Project Overview).
	Figures 3-6	Topographic map with previous cultural resources surveys and previously recorded sites (Detailed).
	Figure 7	Aerial map with previous cultural resources surveys and previously recorded sites (Project Overview).
	Figured 8-16	Aerial map with previous cultural resources surveys and previously recorded sites (Detailed).
	Figure 17	Project Area on the USGS BLM GLO Plat Map.



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LITERATURE REVIEW Legend **TOPOGRAPHIC MAP** Alette Clean Energy Repowering Project Murray County, Minnesota Project Area Township/Range/Section DO NOT RELEASE 0.5-Mile Study Area Township Boundary Archaeological Site Location Not for Public Disclosure Linear Historic Site NHD Waterbody - - -NONPUBLIC DATA HAS BEEN EXCISED] Note: Aerial Imagery courtesy of ESRI Archaeological Site NHD Stream/River 2,000 0 2,000 Figure 3. Topographic map with Alpha Site previous cultural resources Feet surveys and previously recorded 1 inch equals 2,000 feet sites. 1:24,000

1:24,000

Legend

Project Area

0.5-Mile Study Area

Linear Historic Site - - -

Archaeological Site

Alpha Site

Township/Range/Section

Township Boundary

NHD Stream/River

NHD Waterbody

2,000 0 2,000 Feet

LITERATURE REVIEW **TOPOGRAPHIC MAP**

Alette Clean Energy Repowering Project Murray County, Minnesota DO NOT RELEASE Archaeological Site Location

Not for Public Disclosure NONPUBLIC DATA HAS BEEN EXCISED]

Note: Aerial Imagery courtesy of ESRI

Figure 4. Topographic map with previous cultural resources surveys and previously recorded 1 inch equals 2,000 feet sites.



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Legend

Project Area

0.5-Mile Study Area

Linear Historic Site - - -



Archaeological Site

Alpha Site

Township/Range/Section Township Boundary

NHD Stream/River

NHD Waterbody

2,000 0

1:24,000

2,000 Feet 1 inch equals 2,000 feet sites.

LITERATURE REVIEW **TOPOGRAPHIC MAP**

Alette Clean Energy Repowering Project Murray County, Minnesota DO NOT RELEASE

Archaeological Site Location Not for Public Disclosure

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Note: Aerial Imagery courtesy of ESRI Figure 5. Topographic map with previous cultural resources surveys and previously recorded



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Legend

Project Area

0.5-Mile Study Area

Linear Historic Site - - -



Archaeological Site

Alpha Site

Township/Range/Section

NHD Waterbody

Township Boundary

NHD Stream/River

2,000 0 2,000 Feet 1 inch equals 2,000 feet sites. 1:24,000

LITERATURE REVIEW **TOPOGRAPHIC MAP**

Alette Clean Energy Repowering Project Murray County, Minnesota DO NOT RELEASE

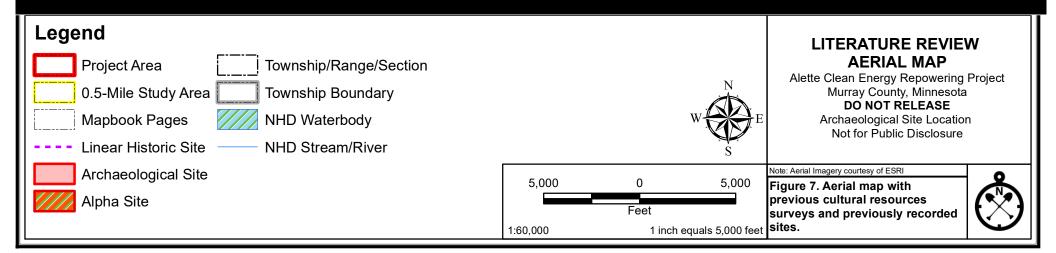
Archaeological Site Location Not for Public Disclosure NONPUBLIC DATA HAS BEEN EXCISED]

Note: Aerial Imagery courtesy of ESRI

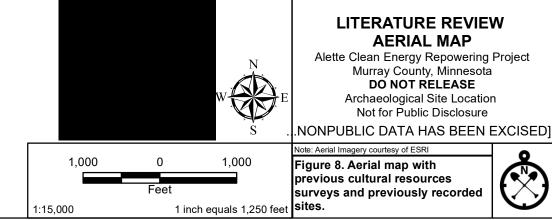
Figure 6. Topographic map with previous cultural resources surveys and previously recorded



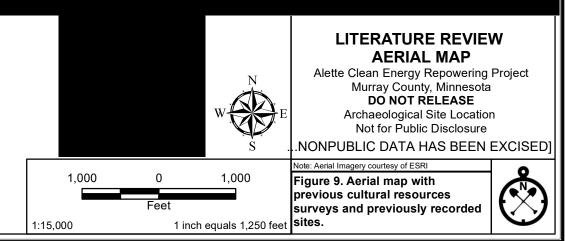
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- Project Area
 Image: Comparison of the study of the
 - Archaeological Site —— NHD Stream/River
 - /// Alpha Site



- Project Area Township/Range/Section
 0.5-Mile Study Area Township Boundary
- --- Linear Historic Site
- NHD Waterbody
 - Archaeological Site —— NHD Stream/River
- /// Alpha Site



Project Area

0.5-Mile Study Area

-- Linear Historic Site

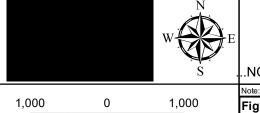
Archaeological Site



dy Area _____ Township Boundary ic Site //// NHD Waterbody

NHD Waterbody
NHD Stream/River

Township/Range/Section



Feet

1:15,000

LITERATURE REVIEW AERIAL MAP

Alette Clean Energy Repowering Project Murray County, Minnesota **DO NOT RELEASE**

Archaeological Site Location Not for Public Disclosure

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 Note: Aerial Imagery courtesy of ESRI

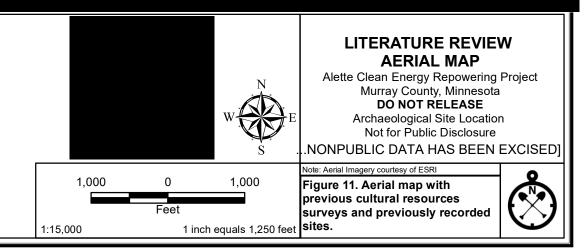
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 Figure 10. Aerial map with previous cultural resources surveys and previously recorded sites.

 1 inch equals 1,250 feet
 sites.



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- Project Area [____] Township/Range/Section 0.5-Mile Study Area [____] Township Boundary Linear Historic Site MHD Waterbody
 - Archaeological Site —— NHD Stream/River
 - Alpha Site



- Project Area Township/Range/Section 0.5-Mile Study Area Township Boundary
- Linear Historic Site
- Archaeological Site
- Alpha Site
- NHD Waterbody
- NHD Stream/River
- DO NOT RELEASE Archaeological Site Location Not for Public Disclosure NONPUBLIC DATA HAS BEEN EXCISED] Note: Aerial Imagery courtesy of ESRI 1,000 0 1,000 Figure 12. Aerial map with previous cultural resources Feet surveys and previously recorded 1 inch equals 1,250 feet sites. 1:15,000
- LITERATURE REVIEW **AERIAL MAP**
- Alette Clean Energy Repowering Project Murray County, Minnesota

Project Area

0.5-Mile Study Area

-- Linear Historic Site

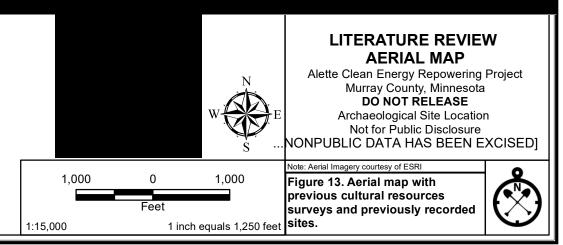
NHD Waterbody

Township/Range/Section

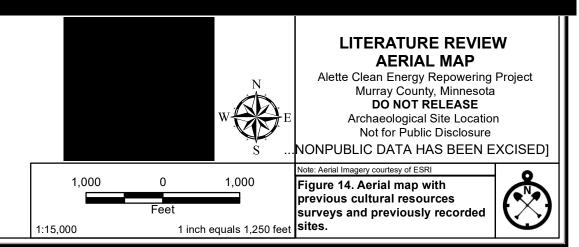
Township Boundary

Archaeological Site —— NHD Stream/River

/// Alpha Site



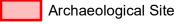
- Project Area Township/Range/Section 0.5-Mile Study Area Township Boundary
- Linear Historic Site
- NHD Waterbody
 - Archaeological Site NHD Stream/River
- Alpha Site





0.5-Mile Study Area

Linear Historic Site



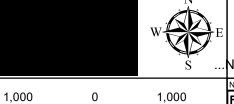


Township/Range/Section

Township Boundary

NHD Waterbody

NHD Stream/River



1 inch equals 1,250 feet sites.

Feet

1:15,000

LITERATURE REVIEW **AERIAL MAP**

Alette Clean Energy Repowering Project Murray County, Minnesota DO NOT RELEASE

Archaeological Site Location Not for Public Disclosure

NONPUBLIC DATA HAS BEEN EXCISED]

Note: Aerial Imagery courtesy of ESRI Figure 15. Aerial map with

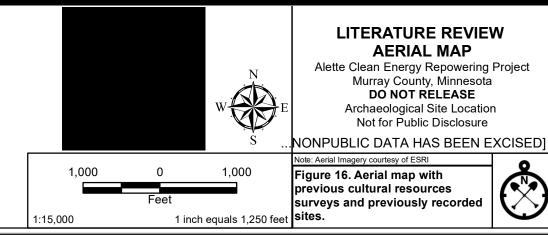
previous cultural resources

surveys and previously recorded

Alpha Site

Project Area Township/Range/Section 0.5-Mile Study Area Township Boundary Linear Historic Site NHD Waterbody

Archaeological Site NHD Stream/River



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