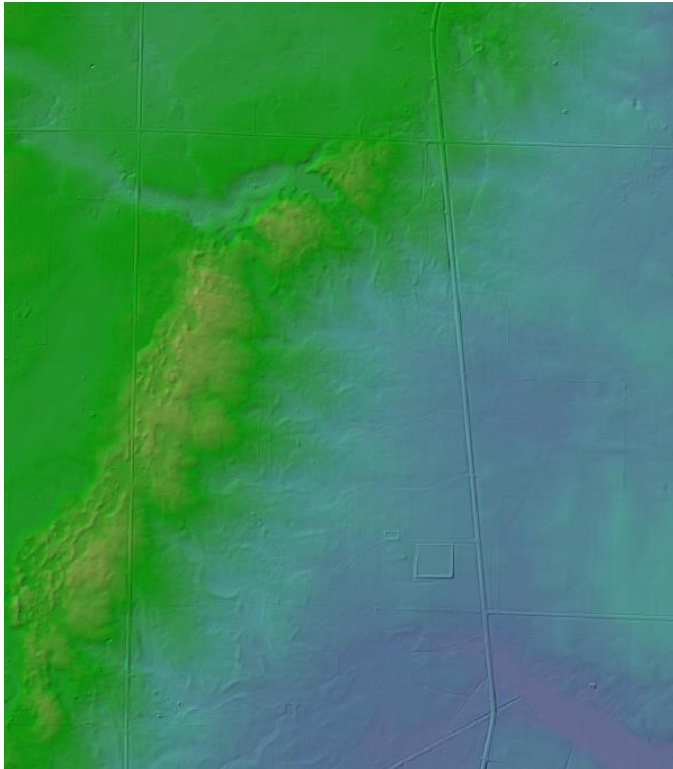


Appendix N

Cultural Literature Review

In accordance with Minnesota Rules, part 7829.0500, and Minnesota Statutes Chapter 13, Otter Tail has designated portions of Appendix N as **NONPUBLIC DATA—NOT FOR PUBLIC DISCLOSURE** because it contains sensitive cultural resource information. The Minnesota State Historic Preservation Office Manual for Archaeological Projects in Minnesota provides for restricted access to sensitive cultural resource information. Given the need to include nonpublic information, Otter Tail has prepared and is electronically filing both **NONPUBLIC** and public versions of Appendix N.

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Phase 1a Cultural Resources Literature Review and Assessment

Solway Solar Project

Prepared for Otter Tail Power Company

Beltrami County, Minnesota

July 29, 2024

Prepared By

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Executive Summary

Otter Tail Power Company (Otter Tail) is proposing construction of a new 50 MW AC solar facility north of Solway in Lammers Township, Minnesota (Project). The Project is anticipated to be constructed on land controlled by Otter Tail near the existing Solway Peaking Plant near Solway, MN. The existing 115kV substation adjacent to the Solway Peaking Plant will be modified for interconnection to the Project.

HDR understands there is no federal involvement for this Project at this time. If a federal nexus does become involved, the lead federal agency will determine if their involvement requires compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR 800). If this is so determined, the lead federal agency will formally define the Area of Potential Effects (APE), initiate consultation with the SHPO and interested parties under Section 106 regulations and determine if additional cultural resources studies may be needed to comply with Section 106. Otter Tail is intends to apply for a site permit from the Minnesota Public Utilities Commission (MN PUC), therefore the Project must comply with the Minnesota Field Archaeology Act (MS 138.31-138.42). The MN PUC may also require compliance with the Minnesota Historic Sites Act (MS 138.661-138.669). The purpose of this literature review and assessment is to determine if there are known archaeological sites or architecture/history properties located within or near the Project. The literature review will aid in determining if future archaeological or architecture/history survey is needed to comply with state and federal cultural resources laws.

The recommended Study Area for this Project is one mile around the Project Area. This one-mile Study Area has been utilized to identify resources that may potentially be impacted by the Project as well as inform the archaeological potential of the Project location.

A cultural resources literature search was completed for the proposed Project in July of 2024. No archaeological sites, no historical cemeteries, and no architectural properties were identified within the Study Area. No National Historic Landmarks or Locally Designated historic properties were identified within either Study Area. However, based on the elevation and prehistoric hydrology data, there is reasonable potential to encounter yet unrecorded Pre-Contact Archaeological Sites. Phase I Reconnaissance Survey is recommended for the areas of highest archaeological potential within the delineated Project Area at a minimum as indicated on **Figure 4**. Completion of this archaeological survey is recommended to facilitate compliance with the Minnesota Field Archaeology Act.



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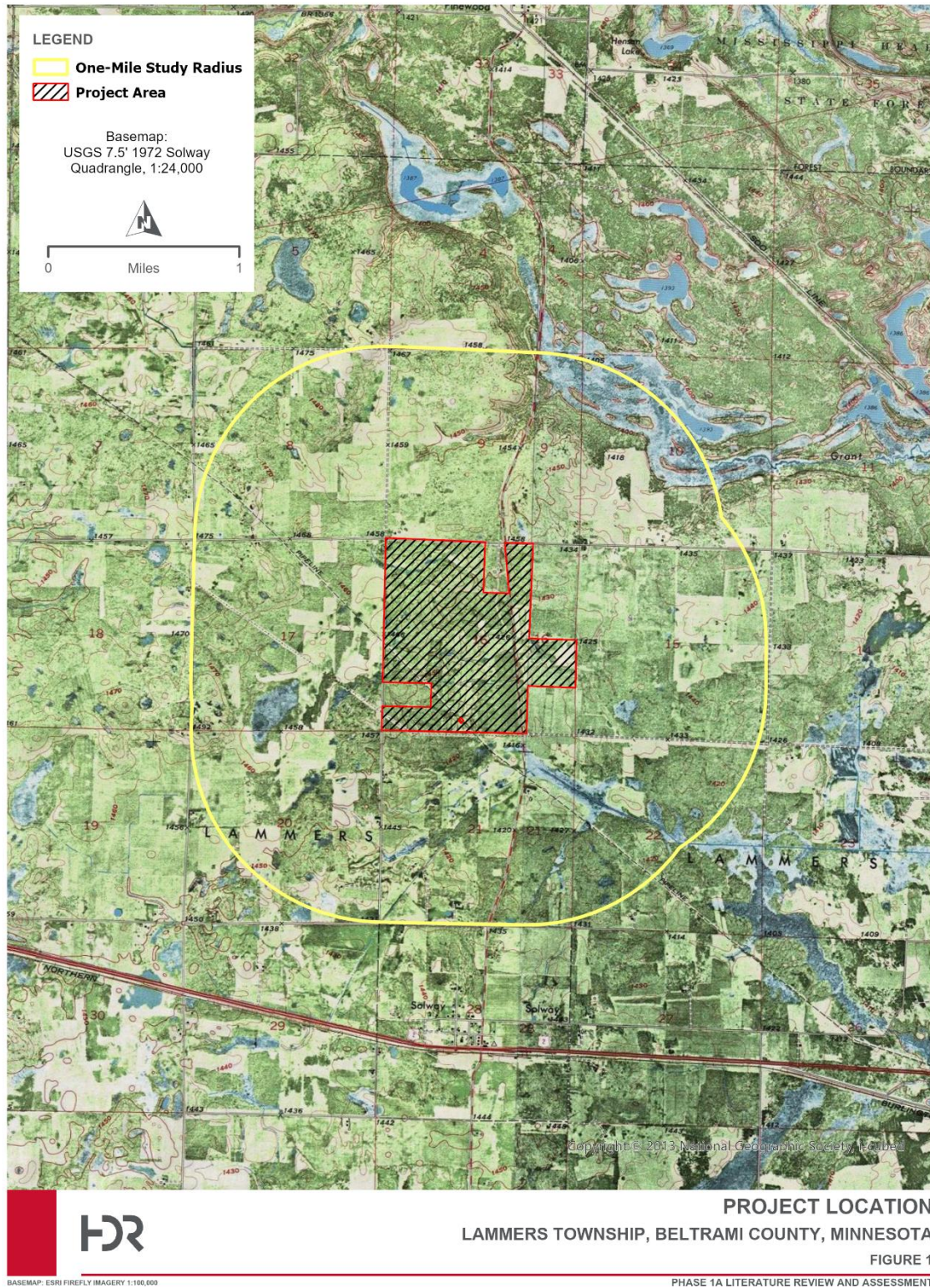
1 Introduction

Otter Tail Power Company (Otter Tail) is proposing construction of a new 50 MW AC solar facility within Lammers Township in Beltrami County, Minnesota (Project). The Project is anticipated to be constructed on land controlled by Otter Tail near the existing Solway Peaking Plant near Solway, MN. The existing 115kV substation adjacent to the existing Solway Peaking Plant will be modified for interconnection to the Project. The Project is approximately 487 acres in size and will be in Township 147N, Range 35W, Section 16 (**Figure 1**).

HDR understands there is no federal involvement for this Project at this time. If a federal nexus does become involved, the lead federal agency will determine if their involvement requires compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR 800). If this is so determined, the lead federal agency will formally define the Area of Potential Effects (APE), initiate consultation with the SHPO and interested parties under Section 106 regulations and determine if additional cultural resources studies may be needed to comply with Section 106. Otter Tail intends to apply for a site permit from the Minnesota Public Utilities Commission (MN PUC); therefore, the Project must comply with the Minnesota Field Archaeology Act (MS 138.31-138.42). The MN PUC may also require compliance with the Minnesota Historic Sites Act (MS 138.661-138.669). The purpose of this literature review and assessment is to determine if there are known archaeological sites or architecture/history properties located within or near the Project. The literature review will aid in determining if future archaeological or architecture/history survey is needed to comply with state and federal cultural resources laws.

The recommended Study Area for this Project is one mile around the Project Area. This one-mile Study Area has been utilized to identify resources that may potentially be impacted by the Project as well as inform the archaeological potential of the Project location.

Figure 1. Project Location



2 Methods

2.1 Study Area

The recommended Study Area for this Project is one mile around the Project. This one-mile Study Area has been utilized to identify resources that may potentially be impacted by the Project. Researching previously identified cultural resources within the Study Area also helps develop the cultural resource context for the Project Area, and what survey, if any, would be recommended for the Project.

2.2 Background Research

In July of 2024, HDR staff conducted research using the Minnesota Statewide Historic Inventory Portal (MnSHIP) records maintained by the State Historic Preservation Office (SHPO) and the Minnesota Office of the State Archeologist (OSA) online portal to identify known Precontact and Post-Contact archaeological sites, as well as architectural properties that have been previously inventoried within the Study Area. The National Park Service's online National Register of Historic Places (NRHP) information was reviewed to confirm if NRHP Listed Historic Properties or National Historic Landmarks are present within the Study Area.

All work was conducted in accordance with the Minnesota State Historic Preservation Office (SHPO) Manual for Archaeological Projects in Minnesota (SHPO 2005), Historic and Architectural Survey Manual (SHPO 2017), the State Archaeologist's Manual for Archaeological Projects in Minnesota (OSA 2011), and The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation [48 Federal Register 44716-44740] (National Park Service [NPS] 1983).

3 Literature Search Results

In July 2024, a cultural resources literature search was completed for the proposed Project. No archaeological sites, no historical cemeteries, no architectural properties, No National Historic Landmarks, and no Locally Designated historic properties were identified within the Study Area.

3.1 Site Conditions

The site is located on relatively flat land within most of Section 16 of Township 147N, Range 35W. The southern portion of the Project Area has been developed as utility land. There is a peaking power plant owned by Otter Tail located near the south boundary of the Project Area. There is a habited residence with associated outbuildings in the northeastern corner of the Project Area. 2024 Satellite imagery for the Project area (obtained via Google Earth) indicates the Project Area north of the peaking plant has been recently and historically utilized for agricultural purposes (most recently hay) while the remainder of the land to the west and northwest is forested. An approximately 180-foot-wide buried and cleared pipeline right-of-way crosses the southwest portion of the Project Area. Additionally, an approximately 150-foot-wide transmission line right-of-way passes south of the pipeline in the southwestern most corner of the Project Area (**Figure 2**).

3.2 Environmental-Cultural History

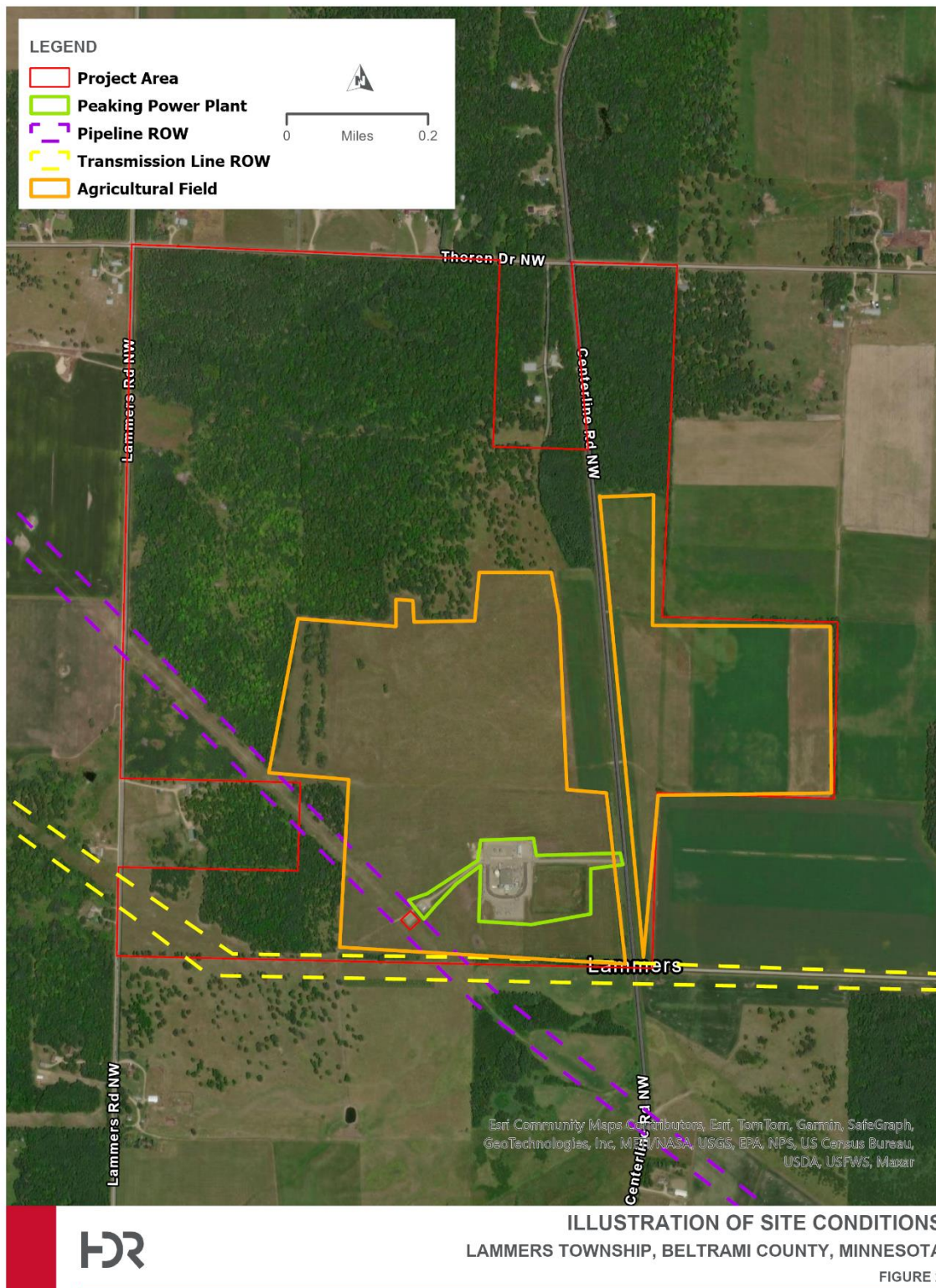
The Project is located within Archaeological Region 5: Central Coniferous Lake (Anfinson 1990). This region spans central and northeastern Minnesota, it includes Aitkin, Beltrami, Carlton, Cass, Clearwater, Crow Wing, Hubbard, Itasca, Kanabec, Koochiching, Lake, and St. Louis counties. The region is characterized by hilly terminal moraines in the center surrounded by ground moraines, outwash plains, and lake plains. The region also contains Lake Itasca, the headwaters of the Mississippi.

The Central Coniferous Lake Region contains soils that are generally coarse to medium in texture. In the northeast of the region are Pre-Cambrian bedrock exposures as well as deposits of taconite. These materials are useful for lithic stone tool production (Anfinson 1990).

The region was covered by glaciers during the last several glacial periods. The region was ice free by 11,500 years ago and the region was defined by large lakes developed through glacial melt with Glacial Lake Duluth to the east, Glacial Lake Agassiz to the west, and Glacial Lakes Upham and Aitkin in the east central part of the region. These central lakes eventually drained through the Mississippi and St. Croix Rivers. Woodland period vegetation consisted of a majority coniferous trees and some deciduous tree species. The southeast of the region is covered by peat bog vegetation. The area is home to widespread wild rice beds. Deer, beaver, moose, waterfowl, fish, and black bear were vital wild game resources (Anfinson 1990).

Generally, precontact archaeological sites are concentrated near waterways both for ease of transportation and resource procurement access. These sites tend to include habitation (i.e. camps and villages) and burial sites. Both site types are considered culturally

Figure 2. Illustration of Site Conditions



significant to living peoples with indigenous ancestry connected to the region. Habitation sites tend to include features and dense artifact deposits that can inform precontact lifeways. Uplands between waterways may contain precontact archaeological deposits related to traveling between destinations or hunting and foraging activities. These sites tend to be smaller in scope due to the limited and brief activity occurring in these locations. A review of precontact vegetation mapping developed by Marschner (1895) indicates the Project Area was populated “Big Woods - Hardwood” tree species such as oak, maple, basswood, and hickory during the late Precontact period, and approximately 0.3 square miles of the Project Area in the south was “Wet Prairie” (**Figure 3**). A review of hydrography geospatial data (MnDNR) and LiDAR data (MnGIO 2024) indicates the presence of a relative upland terrace surrounding what appears to be an ancient riverbed cut in the northwestern corner of the Project Area overlooking a drainage basin to the southeast (**Figure 3, Figure 4**). A review of Government Land Office (GLO) plat maps (MnGIO 1875) and contemporary satellite imagery revealed smaller streams and wetlands in the footprint of the riverbed (**Figure 5**). Water resources noted within the Project Area today include minor creeks and ditches that have been altered for irrigation and drainage (**Figure 3**).

3.3 Archaeology

A review of previous archaeological surveys stored onsite at the OSA and a review of the SHPO survey reports database did not identify any previously completed archaeological surveys within the Project Area. No previously recorded archaeological sites, historical cemeteries, or Minnesota Indian Affairs Council (MIAC) sites of interest were identified within the Study Area.

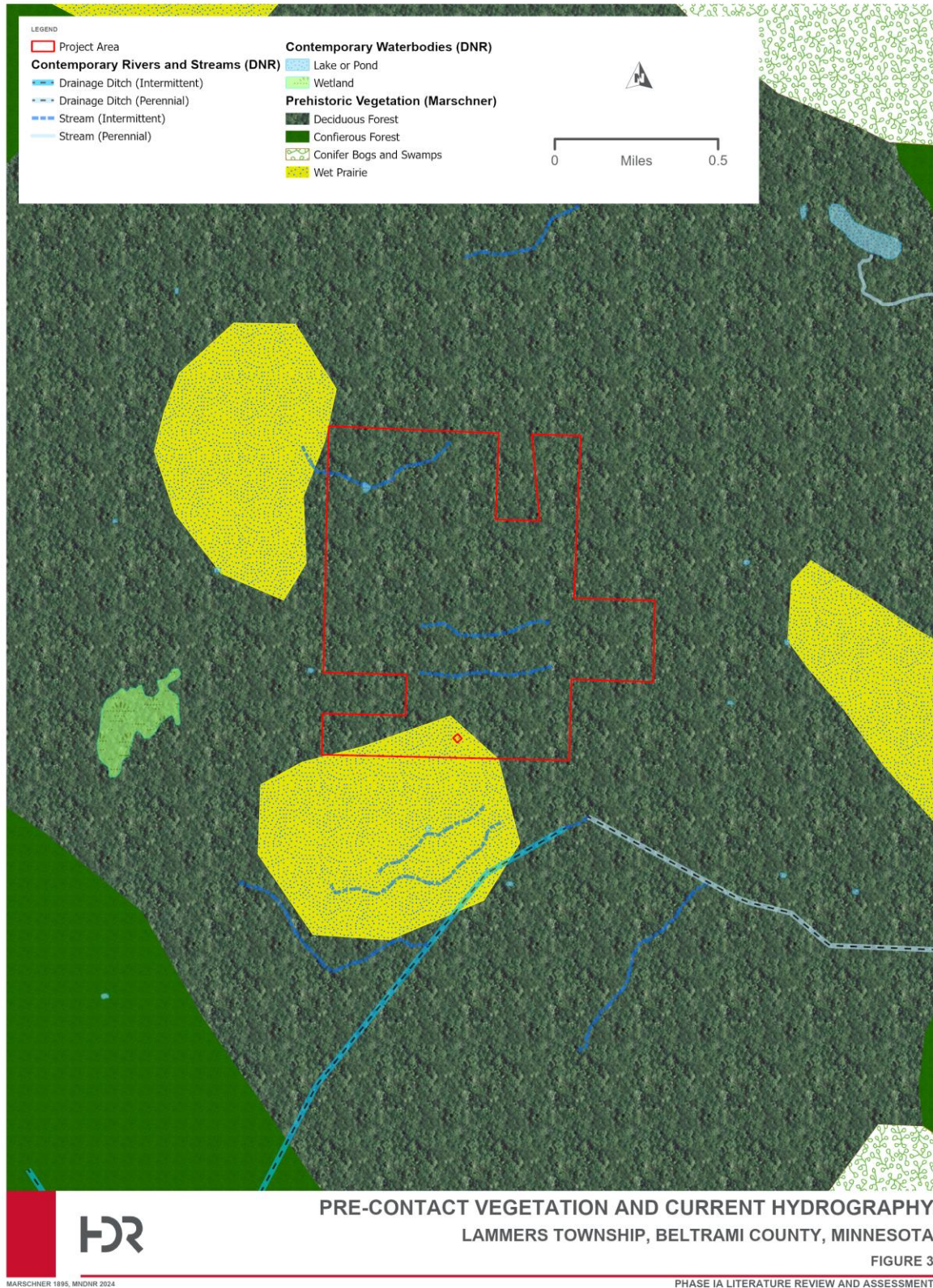
Archaeological Potential

The lack of previously identified sites within the Study Area does not indicate a lack of archaeological potential, rather, it may indicate a potential lack of previous archaeological survey in the area. This is likely the case considering the minimal development having occurred recently within the general area. A review of the geospatial environmental and LiDAR data for the Project Area does suggest the potential for yet unrecorded archaeological resources to be present on the property. The area of highest probability is located within the northwestern corner of the Project Area. While not well recorded on USGS topographic or historical GLO mapping, an ancient riverbed cut is clearly visible in the LiDAR hillshade (**Figure 4**). This location also overlooks an ancient drainage bed to the southeast, possibly developed during the draining of the glacial lakes. This upland terrace may have been attractive as a location for a habitation site or resources procurement location during the Precontact period. Historical GLO mapping does not indicate a settled early historical Euro-American presence in this location, however, the area could have been used as an ephemeral campsite during northern travels.

3.4 Architectural History

The literature search utilizing SHPO’s MnSHIP portal identified no architectural properties (SHPO inventoried properties) within the Study Area. Additionally, no National Historic Landmarks or Locally Designated historic properties were identified within Study Area.

Figure 3. Pre-Contact Settlement Vegetation and Current Hydrography





[NONPUBLIC DATA HAS BEEN EXCISED...]

Figure 4. Project Location over LiDAR Hillshade Imagery

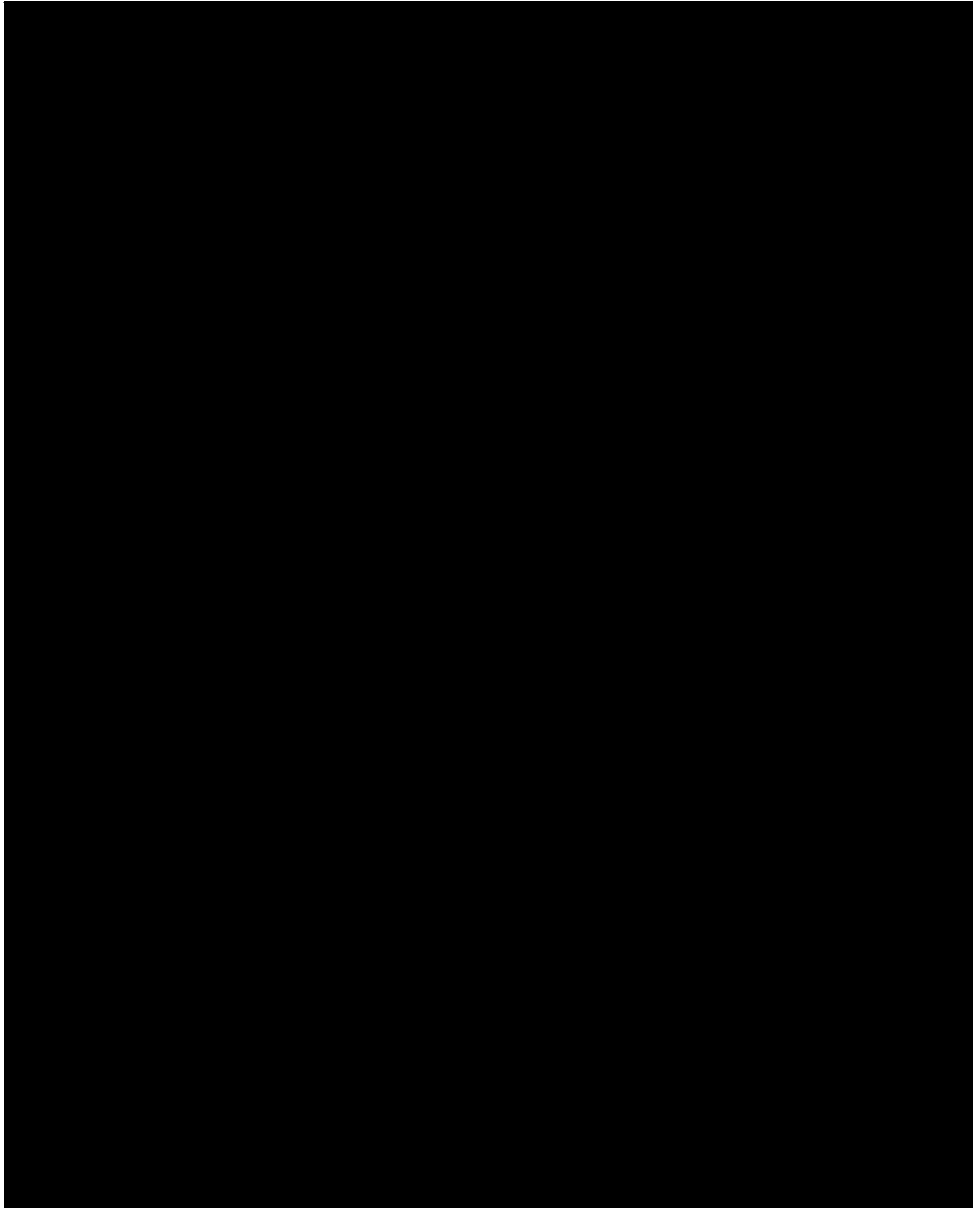
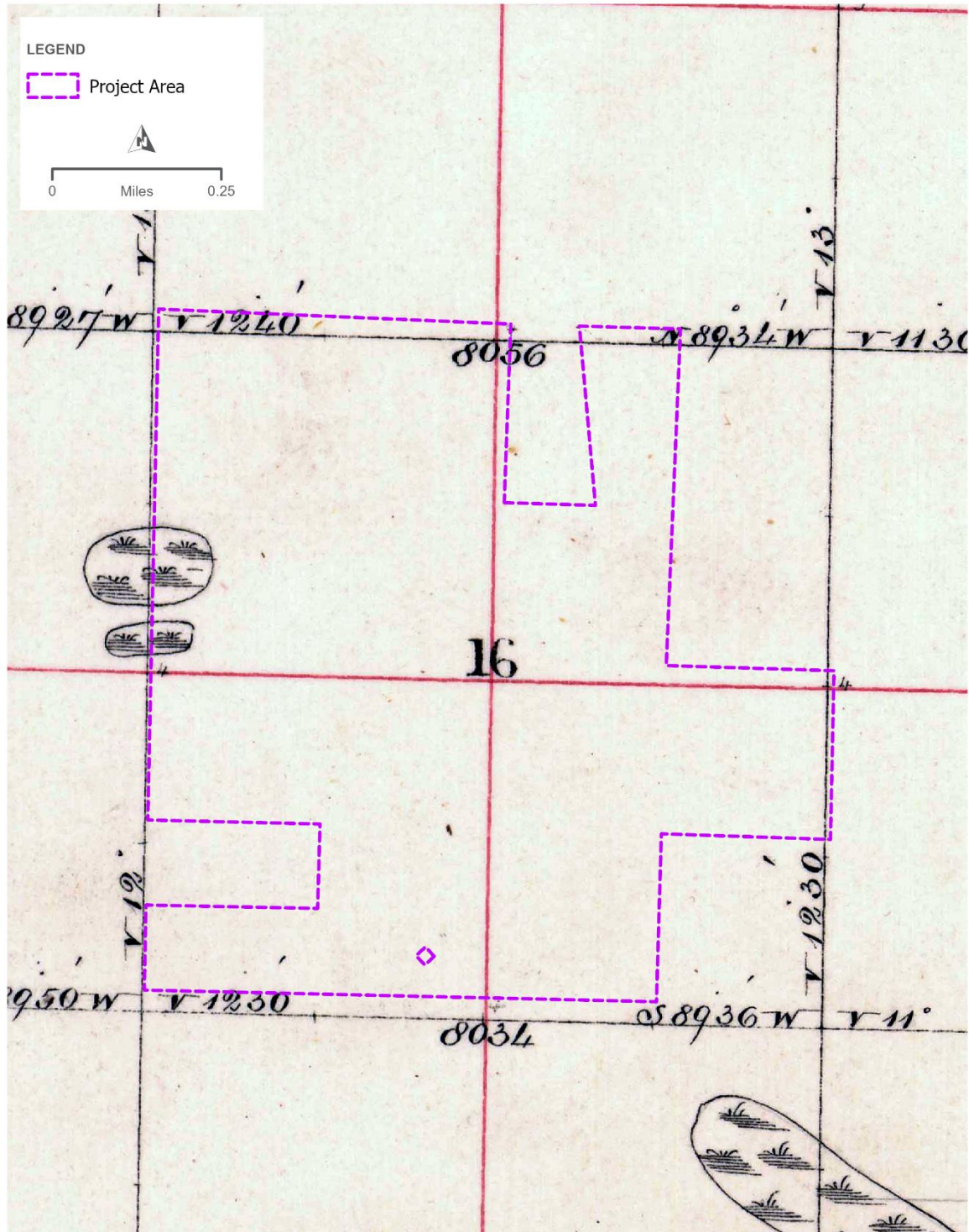


Figure 5. Project Location over Historic GLO Plat Map



HDR

**PROJECT LOCATION OVER HISTORIC GLO PLAT MAP
 LAMMERS TOWNSHIP, BELTRAMI COUNTY, MINNESOTA**

FIGURE 5

GLO PLAT MAP (MNGIO 1875)

PHASE 1A LITERATURE REVIEW AND ASSESSMENT

4 Conclusions and Recommendations

4.1 Archaeology

Otter Tail intends to apply for a site permit from the MN PUC therefore the Project must comply with the Minnesota Field Archaeology Act (MS 138.31-138.42). The literature search identified no previously recorded archaeological sites, historical cemeteries, or previously completed surveys within the one-mile Study Area. Geospatial environmental data and LiDAR elevation data was reviewed to determine the archaeological potential of the Project Area. Based on the elevation and prehistoric hydrology data, there is reasonable potential to encounter yet unrecorded Pre-Contact Archaeological Sites. Phase I Reconnaissance Survey is recommended for the areas of highest archaeological potential within the delineated Project Area at a minimum as indicated on **Figure 4**. Completion of this archaeological survey is recommended to facilitate compliance with the Minnesota Field Archaeology Act.

4.2 Architectural History

HDR understands there is no federal involvement for this project at this time. If a federal nexus does become involved, the lead federal agency will determine if their involvement requires compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR 800). If this is so determined, the lead federal agency will formally define the Area of Potential Effects (APE), initiate consultation with the SHPO and interested parties under Section 106 regulations and determine if additional cultural resources studies may be needed to comply with Section 106. The Project is applying for a permit from the MN PUC. The MN PUC may also require compliance with the Minnesota Historic Sites Act (MS 138.661-138.669). However, considering the literature search identified no historic properties within the one-mile Study Area for the Project, it is unlikely action for compliance with the Minnesota Historic Sites Act will be required.

5 References

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