

July 15, 2026

Kara Laframboise
Project Manager
Minnkota Power Cooperative
5301 32nd Ave S
Grand Forks, North Dakota 58201

RE: Minnkota Power Cooperative Fiber Optic Project – Cultural & Environmental Desktop Review Memorandum

Dear Ms. Laframboise,

Minnkota Power Cooperative (MPC) proposes to replace the existing overhead shield wire on the Maple River–Bison 345-kilovolt (kV) Transmission Line in Cass County, North Dakota, with a new optical ground wire (OPGW) containing fiber optic communications capabilities (Project). The proposed OPGW will serve the same shielding and grounding function as the existing shield wire while also providing non-energized fiber optic communication capabilities. The replacement will occur entirely on existing transmission structures within the existing transmission line right-of-way and will not alter the voltage, alignment, capacity, or primary electrical function of the transmission line. Installation activities will consist of removing the existing shield wire and installing the replacement OPGW using helicopter-assisted construction methods. No new permanent transmission structures, foundations, access roads, or other permanent facilities will be constructed, and no modifications to existing transmission structures are proposed as part of the Project. Temporary matting will be installed as needed to provide construction access to splicing, pulling, and tensioning locations while minimizing impacts to soils, vegetation, and drainage features.

To support MPC's siting exclusion certification, Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) prepared this Cultural and Environmental Desktop Review Memorandum. This memorandum summarizes available environmental information within the Study Area, available cultural information within the Area of Interest (AOI), and evaluates the potential for impacts associated with the proposed activities.

Methods

Burns and McDonnell reviewed available environmental background information for the Study Area (Attachment A - Figure 1). The Study area is approximately 215-acres, and includes the existing transmission line right-of-way, temporary workspaces for the Project, and Project access roads. The broader environmental review was intentionally expanded beyond the specific impact locations to evaluate surrounding resources and constraints that could influence project construction and access.

The cultural resources review component of this memorandum focused on a smaller, more discrete area of interest (AOI) where ground-disturbing activities are proposed, including temporary matting, splicing, pulling, tensioning, and associated access locations (Attachment A - Figure 2). Because cultural resource impacts are generally tied to direct ground disturbance, the cultural review was limited to the AOI where construction-related impacts may occur. Areas previously approved by the NDPSC under Docket No. PU-26-022 and the North Dakota State Historic Preservation Office (SHPO) were not included in this desktop review because those locations were previously evaluated through desktop and field studies conducted. Accordingly, this desktop review and correspondence with SHPO was limited to areas that have not been previously studied or evaluated through prior cultural or environmental investigations.

Data sources reviewed included the following:

- North Dakota Administrative Code (NDAC) Section 69-06 and 69-09, and North Dakota Century Code (NDCC) Section 49-22;

- U.S. Geological Survey (USGS) 7.5-minute topographic map (multiple quadrangles);
- USGS Protected Areas Database (2022);
- National Park Service National Register of Historic Places (2026);
- USFWS Threatened & Endangered Species Active Critical Habitat Report (2026);
- North Dakota GIS Hub (2026);
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM);
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- USGS National Hydrography Dataset (NHD);
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) digital data for Cass County;
- 2024 National Agriculture Imagery Program (NAIP) aerial photography;
- North Dakota SHPO Cultural Heritage Inventory Database.

Results

Cultural

On July 7, 2026, the North Dakota SHPO determined that no significant cultural resources would be affected by the proposed activities, provided construction occurs in the locations (AOI) and manner described in the project documentation. Accordingly, SHPO concluded that supplemental cultural resources investigations are not necessary for the proposed temporary work areas.

A copy of the SHPO Response, State Historical Society of North Dakota Ref: 26-9044, is provided in **Attachment B**.

Environmental

Environmental results are summarized using exclusion areas, avoidance areas, selection criteria, and policy criteria noted in NDAC Section 69-06 and NDCC Section 49-22.

Table 1 – Exclusion Areas

Exclusion Area	Present in Study Area	Description
Designated or Registered National Resources		
Parks and memorial parks	No	N/A
Historic sites and landmarks	No	N/A
Natural landmarks and monuments	No	N/A
Wilderness areas	No	N/A
Designated or Registered State Resources		
Parks	No	N/A
Historic sites, historical markers, and archaeological sites	No	N/A
Monuments	No	N/A
Nature preserves	No	N/A
County and Local Resources		
Parks and recreational areas; municipal parks; and parks owned or administered by other governmental subdivisions	No	N/A

Exclusion Area	Present in Study Area	Description
Sensitive Species		
Areas critical to the life stages of threatened or endangered animal or plant species	No	N/A
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged	No	N/A
Military Resources		
Areas within 1,200 feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility	No	N/A
Areas within 30 feet on either side of a direct line between ICBM launch facility and a missile alert or launch control facilities to avoid microwave interference	No	N/A

Table 2 – Avoidance Areas

Avoidance Areas	Present in Study Area	Description
Designated or Registered <i>National</i> Resources		
Historic districts	No	N/A
Wildlife areas and wildlife refuges	No	N/A
Wild, scenic, or recreational rivers	No	N/A
Grasslands	No	N/A
Designated or Registered <i>State</i> Resources		
Wild, scenic, or recreational rivers	No	N/A
Game refuges and game management areas	No	N/A
Management areas	No	N/A
Forests and forest management lands	No	N/A
Grasslands	No	N/A
Other Historic Resources		
Historical resources which are not specifically designated as exclusion or avoidance areas	No	N/A
Geology		
Areas which are geologically unstable	No	N/A
Land Use		
Within 500 feet of a residence, school, or place of business	Yes	Site access, matting, and splicing locations will be within 500 feet of a residence.
Water Resources		

Avoidance Areas	Present in Study Area	Description
Reservoirs and municipal water supplies	Yes	Community Source Water Protection Area (CSWPA) for the Lake Shure Home Owners Association and City of West Fargo are present.
Water sources for organized rural water district	No	N/A
Recreational Resources		
Areas of recreational significance which are not designated as exclusion areas	No	N/A

For the avoidance areas indicated as present, the following mitigation measures are planned to be implemented:

- Land Use:** Construction activities associated with site access, temporary matting, and conductor splicing may occur within 500 feet of existing residences. To minimize potential impacts to nearby residents, construction activities will be temporary in duration and will be conducted in accordance with applicable local ordinances and permit conditions. Equipment and materials will be staged in a manner that minimizes disturbance to adjacent properties where practicable. Construction crews will implement dust suppression measures as needed, maintain equipment in good working order to reduce noise and emissions, and restore temporarily disturbed areas following completion of construction activities.
- Water Resources:** CSWPAs associated with the Lake Shure Home Owners Association and the City of West Fargo are located within the Study Area. No construction activities are proposed in the Lake Shure Home Owners Association CSWPA; however, areas in the City of West Fargo CSWPA are required for temporary access and matting. All construction activities in this area will be conducted in accordance with applicable federal, state, and local requirements intended to protect groundwater and drinking water resources. Best management practices will be implemented to prevent the release of fuels, lubricants, concrete washout, and other potential contaminants. Construction equipment will be regularly inspected for leaks, spill response materials will be maintained on-site, and any spills will be promptly contained and remediated in accordance with applicable regulations. Temporary disturbed areas will be stabilized following construction to minimize erosion and sediment transport.

Table 3 – Selection Criteria

Selection Criteria	Description & Potential Effects
Agriculture	
Agricultural production	Low impacts are anticipated. Agricultural activities may continue within and adjacent to the transmission line right-of-way following construction. Construction activities will be planned and implemented to minimize disruption to agricultural operations to the extent practicable. Temporarily disturbed areas will be restored following construction, including decompaction and grading as appropriate, to support the resumption of agricultural use. Any crop damage resulting from Project construction will be compensated in accordance with applicable easement agreements and landowner commitments. As a result, long-term impacts to agricultural land use are expected to be minimal.
Family farms and ranches	No impacts. No new lands or easements are needed to support the Project.
Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation	No impacts are anticipated. Construction and operation of the Project will not affect irrigation infrastructure, water delivery, or irrigation-related agricultural activities.
Water Resources	
Surface drainage patterns and ground water flow patterns	Low impacts are anticipated. No measurable changes to surface drainage patterns or groundwater flow are expected because ground disturbance will be limited in extent and temporary. Construction activities will be conducted using best management practices to minimize erosion, sedimentation, soil compaction, and disruption of existing drainage features. Temporary impacts will be mitigated through prompt restoration of disturbed areas, re-establishment of pre-construction contours where practicable, and implementation of appropriate erosion and sediment control measures. As a result, long-term impacts to floodplain function, surface water drainage, and groundwater flow are not anticipated.
Noise	
Sound-sensitive land uses	Minor impacts are anticipated. Temporary noise associated with construction activities, including operation of vehicles and equipment, may be perceptible at nearby residences and other sound-sensitive land uses. These impacts will be temporary and localized to active construction areas. To minimize construction-related noise, equipment and vehicles will be properly maintained in accordance with manufacturers' specifications, and construction activities will be conducted in compliance with applicable local noise requirements. No significant long-term noise impacts are anticipated.
Visual	

Selection Criteria	Description & Potential Effects
The visual effect on the adjacent area	No impacts are anticipated. The Project consists of modifications to existing facilities and will not result in substantial changes to the appearance, scale, or visual character of the site. Existing infrastructure will remain visually consistent with current conditions, and the Project is not expected to introduce new visual elements that would alter views from adjacent properties or surrounding areas. As a result, the visual effect on the adjacent area is expected to remain unchanged, and no mitigation measures are required.
Extractive Resources	
Extractive and storage resources	No impacts. No designated extractive or storage resources occur in the Study Area.
Biological Resources	
Wetlands	No impacts. Several wetlands, streams, and other water resources, including the Sheyenne River and Lake Shure, occur within the Study Area. These features will be aerially spanned by the Project, and no structures, fill, grading, or other ground-disturbing activities are proposed within these resources. Construction activities will be planned to avoid direct impacts to wetlands and waterways.
Woodlands and wooded areas	Low impacts are anticipated. Woodlands and wooded areas within the Project vicinity have previously been affected by the existing Maple River–Bison Line right-of-way and associated vegetation management activities. Limited tree trimming or removal may be necessary in the vicinity of Structure 1269 to facilitate safe access and construction activities. Impacts will be minimized to the greatest extent practicable using existing access routes, selective vegetation clearing, and limiting disturbance to only those areas necessary for construction and operation. Any temporarily disturbed areas will be restored following construction, as appropriate. As a result, impacts to woodlands and wooded areas are expected to be minor and localized.
Animal health and safety	Low impacts. The Project is located within existing utility and transportation corridors and on agricultural land used for cultivated crops. No domesticated animals will be affected, and potential impacts will be limited to minor, temporary construction disturbance of common wildlife accustomed to disturbed areas. Through implementation of no-activity buffers of nesting birds, if present, the Project will avoid significant adverse impacts to wildlife. MPC will construct the Project in accordance with Avian Power Line Interaction Committee (APLIC) guidance as feasible.
Plant life	Low impacts. The Project is located within previously disturbed agricultural fields with little to no native vegetation remaining.
Communications	
Radio and television reception, and other communication or electronic control facilities	Low impacts. Local use of television and radio receivers could experience minor and intermittent interference with sufficient corona activity along the transmission line; the standard use of digital signal processing for television and radio has greatly reduced corona-generated interference.

Selection Criteria	Description & Potential Effects
Public Safety	
Human health and safety	Low impacts. Project construction and operation will follow industry safety standards for electrical facilities. Any fuels, lubricants, and other regulated materials, if used, will be managed in accordance with applicable spill prevention and response procedures.

Table 4 – Policy Criteria

Policy Criteria	Potential Benefits
Location and design	The Project will utilize the existing Maple River–Bison 345-kV Transmission Line right-of-way and existing transmission structures. No new transmission line alignment, structures, foundations, or permanent facilities are proposed. By replacing the existing shield wire with OPGW on existing facilities, the Project minimizes environmental impacts, avoids new land disturbance, and maximizes the use of existing utility infrastructure.
Training and utilization of available labor in this state for the general and specialized skills required	Construction activities will utilize specialized transmission line contractors and support personnel, including helicopter crews, line workers, and inspection personnel. To the extent practicable, MPC and its contractors will utilize qualified North Dakota labor and service providers.
Economies of construction and operation	The Project leverages existing transmission infrastructure by replacing the existing shield wire rather than constructing new communications facilities. Installation of OPGW will improve communications capabilities and support operation of the existing transmission system while minimizing construction costs, land impacts, and long-term maintenance requirements.
Use of citizen coordinating committees	The Project is limited to replacement of an existing shield wire within an existing transmission line right-of-way and does not involve new transmission facilities, route selection, or expansion of the existing corridor. As a result, use of a citizen coordinating committee is not warranted.
A commitment of a portion of the transmitted product for use in this state	The Project does not alter the transmission line's electrical function, transmission capacity, or service territory. The transmission line will continue to serve MPC's existing electric transmission system and North Dakota customers.
Labor relations	MPC maintains positive labor relations and does not anticipate the Project will adversely affect labor relations.
The coordination of facilities	The Project supports coordination and operation of MPC's existing electric transmission system by providing enhanced communications capabilities through installation of OPGW while maintaining the existing shielding and grounding functions of the transmission line.
Monitoring of impacts	Because the Project consists of replacing an existing shield wire on existing structures, potential impacts are limited and temporary. Construction activities will be monitored to ensure compliance with applicable environmental, cultural resource, and landowner commitments.
Utilization of existing and proposed rights-of-way and corridors	The Project is entirely located within an existing transmission line right-of-way and utilizes existing transmission structures. No new rights-of-way, corridor expansions, or permanent access improvements are required.

Policy Criteria	Potential Benefits
Other existing or proposed transmission facilities	The Project is being installed on an existing 345-kV transmission line and does not require construction of additional transmission facilities. The OPGW will support operation, communications, and reliability of MPC's existing transmission network.

Summary

Burns & McDonnell conducted a cultural and environmental desktop review for MPC's proposed replacement of the existing overhead shield wire with OPGW along the existing Maple River–Bison 345-kV Transmission Line in Cass County, North Dakota. The review evaluated approximately 215 acres encompassing the existing transmission line right-of-way, fiber optic right-of-way, temporary workspaces, and access routes using publicly available environmental data sources (Attachment A - Figure 1). The cultural resources review focused on a smaller subset of the Study Area, an AOI consisting of locations where ground-disturbing activities are proposed, including temporary matting, splicing, pulling, tensioning, and associated access areas (Attachment A - Figure 2). Please note that areas approved by the NDPS Case No. PU-26-022, or other areas outside those evaluated in Case No. PU-26-022 where previous SHPO concurrence has been acquired, are not included in this desktop review.

Based on the desktop review and consultation with the SHPO, no additional cultural resources investigations are recommended for the proposed temporary work areas associated with the OPGW installation. In a letter dated July 7, 2026, SHPO concluded that the proposed activities, as described, would not affect significant cultural resources, provided construction occurs within the locations and in the manner identified in the project documentation (Attachment B). Accordingly, the proposed work may proceed without supplemental cultural resources survey for the AOI.

Based on the desktop review, no exclusion areas identified under NDAC Section 69-06 were identified within the Study Area. Similarly, no historic districts, wildlife refuges, designated rivers, grasslands, geologically unstable areas, or other avoidance areas requiring route modifications were identified. The review identified portions of the Study Area located within 500 feet of existing residences and within CSWPA associated with the Lake Shure Home Owners Association and the City of West Fargo. Appropriate best management practices and mitigation measures will be implemented during construction to minimize potential temporary impacts to nearby residents and protect water resources.

Temporary impacts associated with construction activities, including access, matting, splicing, pulling, and tensioning operations, are expected to be minor, localized, and short-term in nature. Potential impacts to environmental resources, including avoidance areas noted above, are anticipated to be minimal and can be effectively avoided or minimized through implementation of standard construction practices and applicable environmental protection measures. Based on the results of this desktop review, the Project is not expected to result in significant adverse impacts to cultural, environmental, residential land uses, or other public resources. The proposed use of existing transmission infrastructure and right-of-way minimizes potential impacts while providing enhanced communications capabilities and continued reliable operation of MPC's electric transmission system.

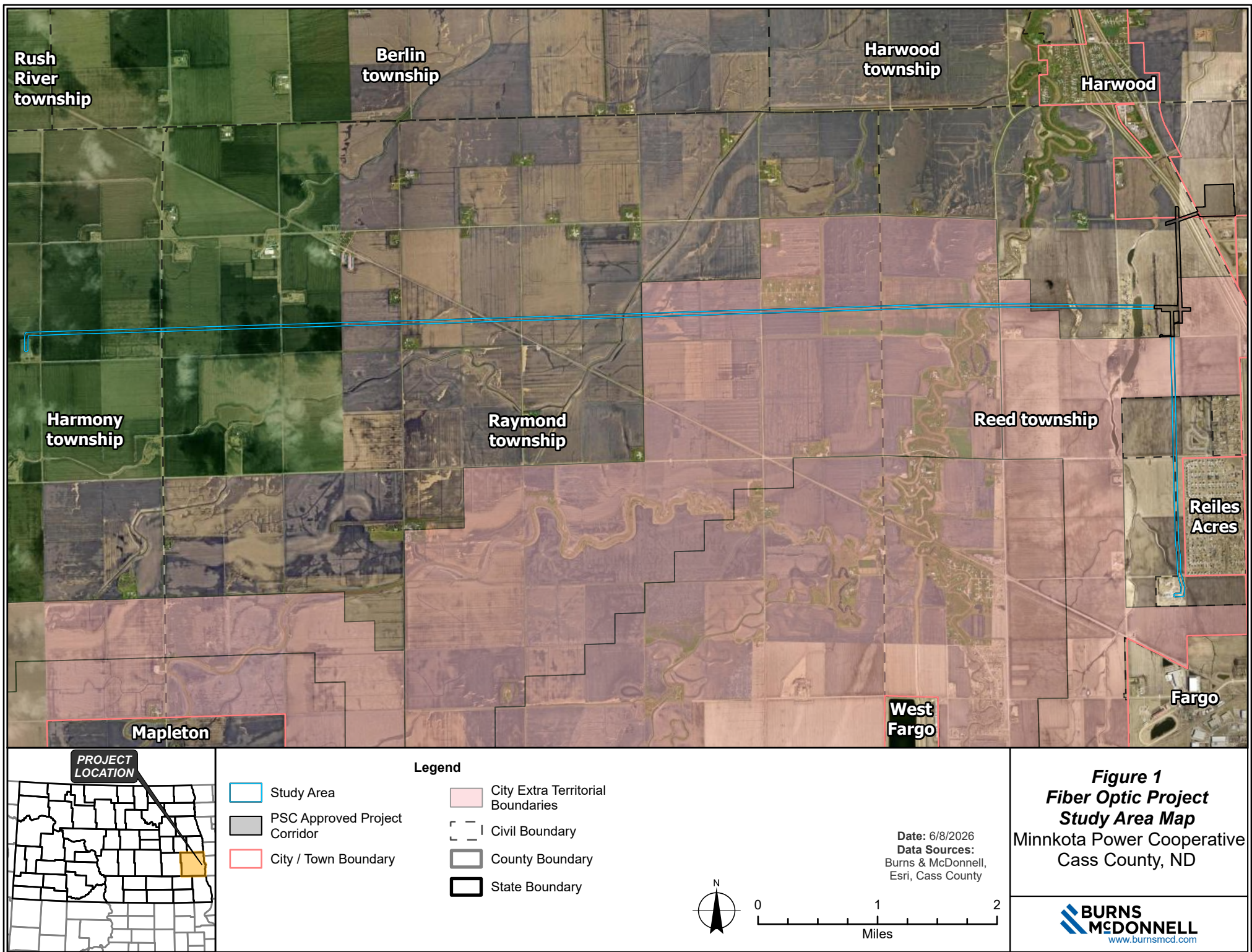
Sincerely,

Burns & McDonnell Engineering Company, Inc.



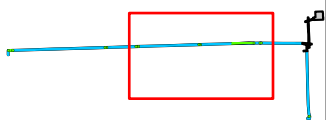
Jacob Schaffer
Senior Environmental Scientist
651-485-5826
jrschaffer@burnsmcd.com

Attachment A – Figures





Map Extent Location



Legend

- Cultural Area of Interest
- Study Area

Date: 7/14/2026
Data Sources:
Burns & McDonnell,
Esri, Cass County

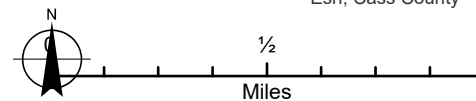


Figure 2
Fiber Optic Project
Area of Interest Map
Minnkota Power Cooperative
Cass County, ND



Attachment B – Cultural Consultation Letter



July 7, 2026

Melinda McCarthy
Burns and McDonnell Engineering Company
3255 Greensboro Drive
Suite 104
Bismarck, ND 58503

SHSND Ref.: 26-9044 Minnkota Maple River–Bison 345-kilovolt (kV) Transmission Line 3 pole replacements in portions [T140N R50W Section 10 and T140N R49W Section 7] in Cass County, North Dakota

Dear Melinda,

From your submission on behalf of Minnkota Power Cooperative, it is our understanding that SHSND Ref: 26-9044 involves the replacement of optical ground wire on three existing transmission line poles that were not part of the previous project area. All activity will take place in the existing line right-of-way and the pole structures will not be modified. It is our determination that there are no significant sites affected by this project provided it takes place in the location and in the manner described in the documentation.

Thank you for the opportunity to review this project under North Dakota cultural resources consultation. This letter does not serve as federal agency consultation or SHPO consultation for compliance with Section 106 of the National Historic Preservation Act of 1966, as amended, (36 CFR Part 800), or the National Environmental Policy Act, as amended, (42 U.S.C. §§ 4321- 4347).

If you have any questions, please contact Lorna Meidinger, Lead Historic Preservationist at lbmeidinger@nd.gov or (701) 328-2089.

Sincerely,

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

Cc: Inga Fonder

26-9044