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250kV DC Transmission Line Reroute Post-Construction Inspection Report PU-14-121

Prepared for:

North Dakota Public Service Commission

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Responsive partner.
Exceptional outcomes.

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Table of Contents

1.0 EXECUTIVE SUMMARY 1-3

2.0 BACKGROUND AND SCOPE 2-1

2.1 Introduction 2-1
2.2 Purpose 2-1
2.3 Methods and Scope of Inspection 2-1
2.3.1 Project Compliance Items Identified 2-1
2.3.2 Document Review 2-1
2.3.3 On-Site Inspection 2-1

3.0 FINDINGS 3-1

3.1 Site Information 3-1
3.1.1 Designated Location 3-1
3.1.2 Siting Criteria 3-1
3.1.3 Land Use & Agricultural Impacts 3-1
3.2 Project Design & Engineering 3-1
3.2.1 Structure Specifications 3-1
3.2.2 Codes and Specifications 3-1
3.2.3 Abandoned/Removed Structures 3-1
3.2.4 Engineering Design Drawings 3-2
3.2.5 As-Built Drawings and GIS Files 3-2
3.3 Pre-Construction 3-2
3.3.1 PSC-Required Documents 3-2
3.3.2 Pre-Construction Conference/Weekly Updates 3-2
3.3.3 Permits and Approvals from Other Agencies 3-2
3.3.4 PSC Approval of Modifications 3-3
3.4 Cultural Resources 3-3
3.4.1 Cultural Site Avoidance 3-3
3.4.2 Reporting of New Discoveries 3-3
3.5 Natural Resources 3-4
3.5.1 Wetlands, Surface Water, and Floodplain 3-4
3.5.2 Ground-dwelling Wildlife 3-4
3.5.3 Avian Species 3-4
3.5.4 Threatened and Endangered Species 3-4
3.5.5 Reporting 3-5
3.5.6 Tree & Shrub Mitigation 3-5
3.6 Construction, Reclamation & Soils 3-5
3.6.1 Erosion and Sedimentation Control 3-5
3.6.2 Reclamation and Roads 3-5
3.6.3 Construction Management 3-5
3.6.4 Reseeding 3-5
3.6.5 Repairs 3-6
3.6.6 Waste 3-6
3.7 Operation 3-6
3.7.1 Operation and Maintenance 3-6
3.7.2 Safety & Record-keeping 3-6
3.7.3 Public Complaints 3-6

3.7.4 Public Safety 3-6

4.0 ISSUES TO RESOLVE AND RECOMMENDATIONS..... 4-1

4.1 Project Specifications Needing Written Verification 4-1
4.2 Abandoned/Removed Structures 4-1

5.0 CONCLUSIONS..... 5-1

6.0 REFERENCES..... 6-1

7.0 SIGNATURES 7-1

TABLES

Table 1: Project Specifications with Written or Site Verification Information.....2-3

FIGURES

Figure 1: Field Observations Map – Transmission line reroute

APPENDICES

Appendix A: Photographs

1.0 Executive Summary

The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the 250 kV DC Transmission Line Reroute (Project) in Cass County, North Dakota (ND), owned and operated by Minnesota Power (MP) an operating division of ALLETE, Inc. Construction of the Project was completed in October 2015. Wenck reviewed all Project documents to identify those aspects that required compliance and visually inspected the Project area on 26 May 2016.

During the inspection, Wenck observed that the Project appears to have generally been constructed according to the specifications. New transmission line structures appear to have been installed at the locations described in the Project Application. Much of the site has been restored to its previous use. There was a disturbed soil pile where the old transmission line structure was estimated to have been located. No significant issues were documented during the inspection.

There were several non-critical issues that may need to be resolved for the Project to be considered complete and in full compliance, including written verification of some items. Wenck expects follow-up actions taken by Minnesota Power to address these particular issues can be corroborated in writing or photos and will not require a subsequent site visit. Wenck recommends the PSC take the following steps to resolve these issues.

Recommended Action Steps

- **Request now**
  - As-built design specifications, drawings, and GIS files to the PSC
  - Verification of removal of old transmission line structures with reclamation of the area

- **Review internally, clarify, then request if needed**
  - Removal and proper disposal of concrete waste left on site
  - Verification of compliance with the National Electric Safety Code
  - Ten-Year Plan
  - Pre and post-construction aviation monitoring studies

- **Expect Later, Request if Necessary**
  - Tree and Shrub Survival Report

2.0 Background and Scope

2.1 INTRODUCTION

The 250 kV Transmission Line Reroute (Project) is located in Cass County, ND. The Project consists of rerouting approximately 0.7 miles of transmission line in order to remove several structures out of a Southeast Cass Water Resource District flood control basin. The Project is owned and operated by Minnesota Power (MP) an operating division of ALLETE, Inc. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Order in Case No. PU-14-121 on 10 July 2014, granting a Certificate of Corridor Compatibility for a Transmission Facility No. 155 and Route Permit No. 167.

2.2 PURPOSE

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Post-construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order). The North Dakota PSC retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Project.

2.3 METHODS AND SCOPE OF INSPECTION

2.3.1 Project Compliance Items Identified

Wenck identified a list of "Project Specifications" which MP was obligated or responsible to follow and that can be verified either in written documentation or by an on-site inspection. These items were taken from 1) siting laws and rules, 2) Project activities or specifications proposed in the Application for a Certificate of Corridor Compatibility (Application), 3) Orders, and 4) recommendations by other agencies. These Project specifications are listed in Table 2.1 under 7 categories: Siting & Location; Project Design & Engineering; Pre-Construction; Cultural Resources; Natural Resources; Construction, Reclamation & Soils; and Operation.

2.3.2 Document Review

Wenck staff reviewed publicly-available Project documents in the PSC Online Case Search (ND PSC, 2016) to find written verification of compliance for the Project specifications listed in Table 2.1. If written verification was filed, the findings are described in Section 3 and the source and name of the documentation is listed in Table 2.1, Column 3 (Written Verification). Green boxes in the table represent Project specifications that are potentially non-compliant because they have no written verification.

2.3.3 On-Site Inspection

Sam Swanberg, a Wenck Environmental Scientist, visited the Project site on 26 May 2016. The site was inspected visually by walking the transmission line route and examining several points of interest within the corridor. Points of interest included new transmission line structures, and connections to existing structures. Digital photographs (Canon Power Shot A2500, 16 megapixel) were taken showing typical Project infrastructure and

documenting problem areas (see Appendix A). Geographic coordinates were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Garmin GPSMAP60CSx; <10m accuracy; NAD83 datum).

If Project specifications were verified during the site inspection, the findings are described in Section 3. In Table 2.1, Column 4 (Site Verification), green boxes represent Project specifications that are potentially non-compliant because they could not be verified during the site inspection.

Table 1: Project Specifications with Written or Site Verification Information

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	SITING & LOCATION		
App. p. 1	The proposed reroute occur in a segment of an existing 250 kV transmission line that travels between Duluth, Minnesota and Center, North Dakota. The Project is located in Cass County, ND.	N/A	Section 3.1.1
App. pp. 4, 11; Findings of Fact p. 2	The section involves the relocation of approximately 0.7 miles of transmission line. Four structures would be shifted approximately 530 feet north of the existing alignment. The reroute is needed to move MP's existing structures out of a Southeast Cass Water Resource District flood control basin.	N/A	Section 3.1.1
ND Admin. Code Article 69-06-08; App. pp. 6, 13-14; Findings of Fact p. 2	Siting Criteria analysis – exclusion, avoidance, selection, and policy. Avoidance areas: historical resources, woodlands, wetlands.	Docket #1, Application	Section 3.1.2
App. p. 15	Approximately 0.1 acres of land currently used for agricultural production would be permanently converted by the relocation of the four power line structures. The rest of the project area would remain available for farming.	None	Section 3.1.3
	PROJECT DESIGN & ENGINEERING		
App. pp. 11, 18; Findings of Fact p. 2	The Project consists of rerouting a 0.7 mile section of the line. The existing aluminum mast structures would be removed and replaced with approximately four-foot diameter tubular weathering steel, self-supporting, monopole tangent structures and dual-pole angle structures. The structures would range from approximately 70 to 100 feet tall and have an average span of 715 feet between each. All structures would be located within MP's easement.	Docket #1, Application	Section 3.2.1
App. pp. 11, 19;	Project shall meet or surpass all relevant state codes, National Electric Safety Code (NESC), Avian Power Line Interaction Committee (APLIC) raptor-safe design standards, and all appropriate safety standards.	None	Section 3.2.2
App. 18	Abandoned transmission structures will be relocated approximately 530 feet north of the existing alignment.	None	Section 3.2.3

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Certification Order 30	Provide engineering design drawings prior to construction upon request.	Docket #14, Supplemental information to application	N/A
Certification Order 32	Provide as-built design specifications and associated GIS files within 3 months after construction complete.	None	N/A
	PRE-CONSTRUCTION		
NDCC 49-22-07.1; ND Admin. Code Article 69-06-03	Letter of Intent.	None	N/A
NDCC 49-22-08; ND Admin. Code Article 69-06-04	Application for a Certificate of Corridor Compatibility	Docket #1, Application	N/A
NDCC 49-22-07; Certification Order 6, 36	Certificate of Corridor Compatibility; subject to suspension or revocation	Docket #18, Order	N/A
NDCC 49-22-04; ND Admin. Code Article 69-06-02;	Ten-Year Plan	None	N/A
Certification Order 2, 5	Conduct Pre-construction Conference. Provide notice of intent to start construction. Provide weekly updates on construction activities.	Docket #22, Preconstruction conference meeting notes, Notice of Construction; Docket #23, 27, Progress Reports	N/A
Certification Order 3, 4	Compliance with rules and regulations of other jurisdictional agencies. Obtain permits and approvals from other agencies and provide copies to the Commission prior to applicable permitted activity.	Docket #1, Application	N/A
Certification Order 31	Inform Commission of plans to modify the transmission facility or site plan, and obtain written approval. Any facilities not included in current Application must be applied for in a separate Route Permit or Site Certificate.	None filed to date	Section 3.3.4
	CULTURAL RESOURCES		
Certification Order 10, 11	If any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made, report	None reported to date	N/A

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	filed with the Commission and the State Historical Society, and clearance to proceed is given.		
App. p. 25; Certification Order 10	State Historical Society: Complete a Class III survey of the project area for review by State Historical Society.	Docket #1, Application, Appendix C, D	N/A
	NATURAL RESOURCES		
Certification Order 9	Report presence of critical habitat or T+E species, bald or golden eagles during construction and operation.	None reported to date	N/A
Certification Order 19	Tree and shrub removal and replacement will comply with "Tree and Shrub Mitigation Specifications."	Docket #14, Supplemental information; Docket #28, Tree and Shrub mitigation plan; Docket #29, Commission Motion approving Tree and Shrub plan	Section 3.5.6
Certification Order 19	Complete a tree and shrub survey and submit to the Commission.	Docket #14, Supplemental information; Docket #28, Tree and Shrub mitigation plan; Docket #29, Commission Motion approving Tree and Shrub plan	N/A
App. p. 31	Construction to take place in the fall months to avoid avian breeding seasons.	Docket #1, Application; Docket #23, 27 Progress Reports	N/A
App. pp. 37-39	Provide construction plans to USFWS and ND Game and Fish Department.	Docket #1, Application, Appendix A	N/A
App. p. 39, Appendix A	ND State Water Commission: All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.	Docket #1, Application, Appendix A	Section 3.6.6
	CONSTRUCTION, RECLAMATION & SOILS		
App. pp. 19, 26	Implement appropriate erosion control measures.	Docket #23, Progress Reports	Section 3.6.1

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Certification Order 13; App. pp. 21, 22	Temporarily disturbed areas and roads will be restored to original condition. Pre-existing township and county roads used during construction restored to equal or better condition. Restoration of area as soon as practicable upon completion of construction.	None	Section 3.6.2
Certification Order 14	Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land.	None	N/A
Certification Order 15	During construction, at least 12 inches of topsoil, where available, must be stripped and separated from subsoil. Topsoil and subsoil must be segregated and replaced separately.	None	None
Certification Order 16	Reclamation, fertilization, and reseeding are to be done according to the NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission.	None	None
Certification Order 21, 22	Repair/replace all damaged fences and gates. Repair/replace damaged drainage tile.	None	Section 3.6.5
Certification Order 23	No staging areas on land not owned by Company, unless otherwise negotiated with landowners.	None	None
Certification Order 24	Waste removed and disposed regularly.	None	Section 3.6.6
NDCC 49-23; Certification Order 35	Notify the Commission if any damage occurs to underground facilities during construction, suspend construction until compliance with One-Call Excavation Notice System requirements has been determined and clearance to proceed has been given.	None reported to date	N/A
App. p. 38	ND Department of Health: Minimize fugitive dust emissions created during construction, adverse effects to water bodies, and noise.	Docket #13, Comments	None
App. pp. 19, 30	Impacted areas to be revegetated with species native to Project area. Since the area is presently being farmed, it would remain available for farming upon completion of construction rather than being revegetated with native grassland species	None	Section 3.6.4

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	OPERATION		
Certification Order 9, 27, 28	Construct and operate in accordance with Application and safety requirements. Maintain records of compliance with Order and Certificate of Site Compatibility. Extraordinary events (e.g. injuries, T+E wildlife fatalities, discovery of large numbers of dead birds or bats) reported within 5 business days.	None reported to date	Section 3.7.1
Certification Order 17, 18, 24	Reclamation and maintenance throughout life of facility. Waste removed & disposed regularly.	None	Section 3.7.1
Certification Order 20, 29	Mitigate any increase in television and residential radio interference that results from the construction of the facility. Establish a procedure for handling complaints concerning the proposed facility.	None	N/A
Certification Order 26	Provide any necessary safety measures for traffic control or to restrict public access to transmission facility.	None	Section 3.7.4

*** Green boxes indicate potential non-compliance items**

3.0 Findings

3.1 SITE INFORMATION

3.1.1 Designated Location

The Project was built generally as proposed in the designated location described in the Application and Order (see Appendix A). Maps of the approved corridor and observations of structures during the site inspection appeared to coincide. The new transmission line structures were observed in upland areas and outside of wetlands.

3.1.2 Siting Criteria

Siting criteria were analyzed in detail in the Application for the Project (Docket #1, Application). Wenck confirmed during the site inspection that there were no exclusion or avoidance areas within the Project area. Wenck also confirmed that impacts to selection and policy criteria were considered and kept at a minimum. Minor impacts to agricultural production are described in Section 3.1.3.

3.1.3 Land Use & Agricultural Impacts

Installation of the new transmission line structures has resulted in approximately 0.1 acres of land currently used for agricultural production would be permanently converted by the relocation of the power line structures. The rest of the project area would remain available for farming. (Docket #1, Application). Wenck confirmed during the site inspection that the area surrounding the new structures has resumed its previous agricultural production use (see Appendix A, Photos 6, 7, 9 and 14).

3.2 PROJECT DESIGN & ENGINEERING

3.2.1 Structure Specifications

The existing aluminum mast structures would be removed and replaced with tubular weathering steel, self-supporting, monopole tangent structures and dual-pole angle structures (see Appendix A, Photos 1, 3, 9 and 13). The structures would range from approximately 70 to 100 feet tall and have an average span of 715 feet between each, and all structures would be located within MP's easement (Docket #1, Application). Span lengths and structure heights appeared to match those specified in the Application, the sign placards on the structures stated heights ranging from 65 to 100 ft. Design, construction, and operation of the transmission line would be completed in accordance with the National Electric Safety Code (NESC) standards (Docket #1, Application).

3.2.2 Codes and Specifications

There was no written verification of compliance with the National Electric Safety Code (NESC) or Avian Power Line Interaction Committee (APLIC) raptor-safe standards, but the application stated that the transmission line would be completed in accordance with NESC, APLIC and raptor safe design standards, and appropriate safety standards would be met for construction, operation, and maintenance of the facility (Docket #1, Application). No bird flight diverters were observed. Wenck observed during the site inspection that it appears the Project complies with the APLIC design standards.

3.2.3 Abandoned/Removed Structures

The Project application calls for replacing four existing structures. Wenck confirmed that the existing structures along the original alignment have been removed. There were no

apparent remains of any structures; only some disturbed soil piles in a couple areas, the first disturbed area appeared to be where the previous transmission line structure was located (see Appendix A, Photo 4), the second disturbed soil area appeared to be a little lower on the landscape than where the estimated location of the old structure would have been (see Appendix A, Photo 5).

3.2.4 Engineering Design Drawings

Engineering design drawings were provided (June 9, 2014) prior to construction (Docket #14, Supplemental information to Application, Appendix 1).

3.2.5 As-Built Drawings and GIS Files

As-built alignment drawings were not submitted for the Project. Wenck was supplied GIS files from MP. Wenck recommends the PSC request the as-built drawings from MP.

3.3 PRE-CONSTRUCTION

3.3.1 PSC-Required Documents

There was no Letter of Intent filed with the PSC. The Application for Certificate of Corridor Compatibility and Route Permit was submitted on 14 March 2014. (Docket #1, Application). The PSC issued Certificate of Corridor Compatibility No. 155 and Route Permit No. 167 on 10 July 2014 (Docket #18, Order). Minnesota Power filed a Ten-Year Plan with the PSC in 2012 and 2015 under case number: PU-12-440 and PU-15-480.

3.3.2 Pre-Construction Conference / Weekly Updates

There was documentation of a pre-construction meeting and letter of intent to start construction (Docket #22, Preconstruction conference meeting notes, Notice of Construction). Construction reports were filed for two weeks of construction (Docket # 23, 27, Progress Reports).

3.3.3 Permits and Approvals from Other Agencies

There were multiple agency letters in the Application (Docket #1, Appendix C) which included:

- Natural Resources Conservation Service stated that, since the project is not supported by federal funding, the Farmland Protection Policy Act would not apply.
- Army Corps of Engineers, North Dakota Regulatory Office, outlined the agency's regulatory authority over dredge and fill in waters of the U.S. (section 404), as well as work impacting navigable waters.
- Fish and Wildlife Service, North Dakota field office, stated that the project, as described will have no significant impact on fish and wildlife resources and that no endangered or threatened species are known to occupy the project area and/or are not likely to be adversely affected.
- Fish and Wildlife Service, Valley City Wetland Management District stated that the USFWS has no property interests within one mile of the proposed project area.
- North Dakota Department of Health stated that it believed the environmental effects from the proposed project will be minor and can be controlled by proper construction methods. These methods include minimizing: fugitive dust emissions, adverse effects to water bodies, noise, and obtaining a North Dakota Discharge Elimination System (NDPDES) Permit if the project results in more than one acre of disturbance. Included with the letter were the department's construction and environmental disturbance requirements. It was also stated that the North Dakota Department of Health owns no land in or adjacent to the proposed project, nor does it have any projects scheduled in the area. In addition, it believes the project is consistent with

the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

- North Dakota Game and Fish Department stated in a voice message that the agency does not anticipate having comments on the project.
- North Dakota Parks and Recreation Department states the North Dakota National Heritage Inventory did not identify any sensitive species or habitat in the proposed project area; the nearest recorded species is more than 0.5 miles away. The department requested that all efforts be made to avoid impacts to waterfowl and wildlife species and their habitats. It suggested pre- and post-construction aviation monitoring studies to identify and assess adverse impacts to waterfowl and wildlife. In addition, the department requested that impacted areas be revegetated with species native to the project area.
- North Dakota State Water Commission stated that the proposed project is not in an identified or mapped floodplain and that no floodplain permits would be required; all waste material must be disposed of properly and not within floodways; that no sole source aquifers have been designated in North Dakota; and that the project sponsor is responsible for acquiring appropriate local, state, and federal agencies are contacted for any required permits, approvals, and easements.
- State Historical Society of North Dakota concurred with the no significant historic properties affected recommendation made for the project.
- Cass County Water Resource District stated in a phone conversation that no district permits are required if county drains are not crossed.
- Cass County Planning Department has no recommendations or concerns regarding the project.
- Highland Township, Cass County, does not require a permit for transmission line projects s and requested that the proposed project not contribute to inundation of township rights-of-way

Of the 39 agencies and other interested parties that were solicited for this project, 28 did not respond (Docket #1, Application).

3.3.4 PSC Approval of Modifications

There were no notifications to modify the facility filed to date. Observations of on-the-ground infrastructure coincided with maps on the Application.

3.4 CULTURAL RESOURCES

3.4.1 Cultural Site Avoidance

The North Dakota State Historical Society reviewed the Class III Cultural Resources Survey and concurred with the “No Historic Properties Affected” and “No Significant Sites” determination (Docket #1, Application, Appendix D).

A class III cultural resources survey was completed for the Project Corridors to locate and identify cultural resources within the Project Corridors (Docket #1, Application, Appendix C).

3.4.2 Reporting of New Discoveries

No new discoveries of cultural, archeological, or historical sites have been reported to the PSC to date and no discoveries were recorded on the weekly construction reports for the Project. Presumably no new sites were encountered during construction of the Project.

3.5 NATURAL RESOURCES

3.5.1 Wetlands, Surface Water, and Floodplain

A wetland delineation report was not included in the Application. The National Wetland Inventory figure was included in the Application, there are no wetlands within the proposed project area, and there are no U.S. Fish and Wildlife Service (USFWS) easement wetlands in the vicinity of the project (Docket #1, Application). The primary purpose of the Project was to remove transmission line structures from wetland areas and relocate them to upland areas. Temporary construction occurred within the wetland while removing the structures. Wenck verified during the site inspection that the structures within the wetland appeared to be removed (as noted in Section 3.2.3), and that there don't appear to be any significant impacts to the wetland.

Wenck verified during the site inspection that there were no bodies of water located within the new transmission line structures. The line crosses a small tributary to the Maple River. The structures in this area appeared to be located in upland areas and were not inundated.

The North Dakota State Water Commission stated in a letter (dated 14 February 2014) that there are no floodplains identified and/or mapped in the proposed Project area, and that no floodplain permits would be required, and the project sponsor is responsible for acquiring local, state and federal agencies for any required permits, approvals, and easement; and that permitting is done by a local entity, which has jurisdiction in the area in question (Docket #1, Application, Appendix A).

3.5.2 Ground-dwelling Wildlife

Temporary impacts to ground-dwelling wildlife were expected due to construction activity. However, due to the relatively small area being affected, long-term impacts to such wildlife are not expected. Wenck did not observe any impacts to wildlife during the site inspection.

3.5.3 Avian Species

Similar to other wildlife, temporary impacts to avian species during construction were expected. No long-term impacts are anticipated. Wenck did not observe any impacts to avian species during the site inspection.

An official list of federally-listed species in the vicinity of the proposed project was requested through the USFWS IPaC online program (Consultation Tracking Number 06E15000-2014-SLI-0007) on December 17, 2013. According to the IPaC results the following species are listed in the vicinity of the project area: Whooping Crane and Poweshiek skipperling. The project area does not provide suitable habitat for these animals and the project is anticipated to have no effect. The North Dakota Parks and Recreation Department requested that all efforts be made to avoid impacts to waterfowl and wildlife species and their habitats. It suggested pre- and post-construction aviation monitoring studies to identify and assess adverse impacts to waterfowl and wildlife.

3.5.4 Threatened and Endangered Species

Several threatened, endangered, and candidate species are listed near the Project area. There were no Endangered, Threatened or Species of Concern that have been identified within the reroute corridor. Due to the Project being a minor reroute of a small portion of an existing transmission facility, the Project was anticipated to have no effect on those species.

3.5.5 Reporting

There were no reports filed documenting the presence of threatened or endangered species or bald or golden eagles during construction or operation to date and no observations were recorded on the weekly construction reports for the Project. It is assumed none were observed during construction.

3.5.6 Tree & Shrub Mitigation

MP filed a tree and shrub mitigation plan (Docket #28, Tree and Shrub mitigation plan). In the progress report it stated that twelve Box Elders were removed from the tree row and inventoried for replacement (Docket #23, progress report 9-28-2014). The Commission approved the tree replacement plan on 5 January 2016 (Docket #29, Commission motion approving tree mitigation plan; Docket #30, Letter enclosing Commission motion).

3.6 CONSTRUCTION, RECLAMATION & SOILS

3.6.1 Erosion and Sedimentation Control

The Project Application states that Best Management Practices (BMPs) would be utilized during construction to minimize the potential for sedimentation and erosion control. The ND Department of Health (NDDoH) requested that the project minimize fugitive dust, degradation of waterways, manage stormwater, and noise (Docket #1, Application, Appendix A). The progress report from Sept. 28 2014 states BMPs were added at structure 1415 in case of a rain event due to the proximity to the Maple River (Docket #23, progress report). No erosion problems were observed during the site inspection. Fugitive dust and noise were presumably controlled during construction.

3.6.2 Reclamation and Roads

The Project did not require cutting into any existing roadways. Roads accessing the site appeared to be in a condition typical for the area and do not appear to have been negatively impacted by construction traffic. Temporary access paths had been used, but no evidence of disturbance was observed during the site inspection.

Areas disturbed during construction appear to have been mostly restored to their previous condition. But there were two areas observed of disturbed soil/ mounds of dirt, which could have been from the previous transmission structures (see Appendix A, Photos 4 and 5). Around most of the new structures there is an area approximately 5 feet in diameter where tall grasses and weeds are present, a few of the areas could have been sprayed with herbicide/pesticides, and there were areas of crop land next to the structures (see Appendix A, Photos 3, 7, 8 and 12).

No written verification of NRCS recommendations for reclamation, fertilization, and reseeding has been provided to the PSC.

3.6.3 Construction Management

Two construction reports were submitted for the project, covering two weeks total (Docket #23, 27, Progress Reports). It is assumed that these reports cover the entirety of the Project. No issues were reported, and construction appears to have been completed in October 2015.

3.6.4 Reseeding

The application stated that the land in the immediate vicinity of the project is farmed. One wind row of trees is located in the project area. Since the area is presently being farmed, it would remain available for farming upon completion of construction rather than being

revegetated with native grassland species (Docket #1, Application). There were disturbed areas where the previous transmission lines could have been removed from, which may need to be reclaimed.

3.6.5 Repairs
No damages to property were observed during the site inspection.

3.6.6 Waste
The Project area was mostly free of debris and equipment. Small chunks of concrete waste were observed around two of the new transmission line structures (see Appendix A, Photos 11 and 12). A letter from the North Dakota State Water Commission stated that all waste material associated with the project must be disposed of properly and not placed in identified floodway areas (Docket #1, Application, Appendix A).

3.7 OPERATION

3.7.1 Operation and Maintenance
The site appeared to be operating as described in the Application. There is likely little maintenance required due to the nature of the transmission facility and work done by landowners on the adjacent agricultural land.

Wenck observed a couple small areas of disturbed soil at what appeared to be where the old structures were which may require further reclamation, as noted in Section 3.2.3 and 3.6.2. There were small amounts of concrete waste around a couple of the new structures, but no other debris or equipment was observed during the inspection, as noted in Section 3.6.6.

3.7.2 Safety & Record-keeping
No concerns were identified during the site inspection that would indicate that Project construction or operation was out of compliance with the Application or safety regulations. Weekly reports document no safety concerns. No injuries or extraordinary events have been reported to date.

3.7.3 Public Complaints
No records of complaints regarding the facility have been filed to date.

3.7.4 Public Safety
Access to the transmission facility is not limited in any way. However, electrical components of the facility are not easily accessible and the Project spans private property used for agricultural production, so safety concerns regarding the public appear to be minimal.

4.0 Issues to Resolve and Recommendations

4.1 PROJECT SPECIFICATIONS NEEDING WRITTEN VERIFICATION

Several components of the Project were asserted in the Application or proposed construction and could be verified in writing, but have not been filed with the PSC. Table 2-1 summarizes these items, which are indicated as those shaded green in the "Written Verification" column, indicating no written verification was provided where applicable and necessary. Wenck does not consider any of these items to be critical for Project compliance. However, Wenck suggests they be on file with the PSC to confirm compliance. Wenck recommends the PSC request from Minnesota Power the following list of "Necessary" items, and if the PSC deems appropriate, the list of "Potential" items could also be requested.

Necessary Items

- As-built drawings

Potential Items

- Verification of compliance with the National Electric Safety Code
- Removal and proper disposal of concrete waste left on site
- Ten-Year Plan
- Pre and post-construction aviation monitoring studies
- Tree and Shrub Survival Report

4.2 REMOVED STRUCTURES RECLAMATION

It appeared that there might be some areas where the previous structures were removed that were not reclaimed properly. Wenck recommends that the PSC request documentation from MP showing that all old structures along the original alignment were fully removed and reclaimed.

5.0 Conclusions

Overall, the Project appeared to have been constructed as designed, with minimal impacts to the surrounding natural or human environment. The Project site was well-maintained and in good condition. However, Wenck observed several issues that may need to be resolved before the Project is considered complete and in full compliance. This includes: clarification of the Ten-Year plan, as-built drawings, and verification of complete removal of construction waste and reclamation of the area of the transmission line structures. None of these are critical issues, but the PSC should determine which are necessary for the company to comply with and then notify the company what actions are required on their part.

6.0 References

North Dakota Public Service Commission (ND PSC). 2016. Online Case Search. Available from: http://www.psc.nd.gov/database/company_case_list.php. Accessed May 2016.

7.0 Signatures

The services performed by Wenck scientists for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

Lead Project Manager, Kevin Magstadt, and Environmental Scientist, Samantha Swanberg, prepared the report.

Kevin J. Magstadt, P.E., Principal/Regional Manager — Date 6/7/2016

Samantha Swanberg, Environmental Scientist — Date 6/7/2016

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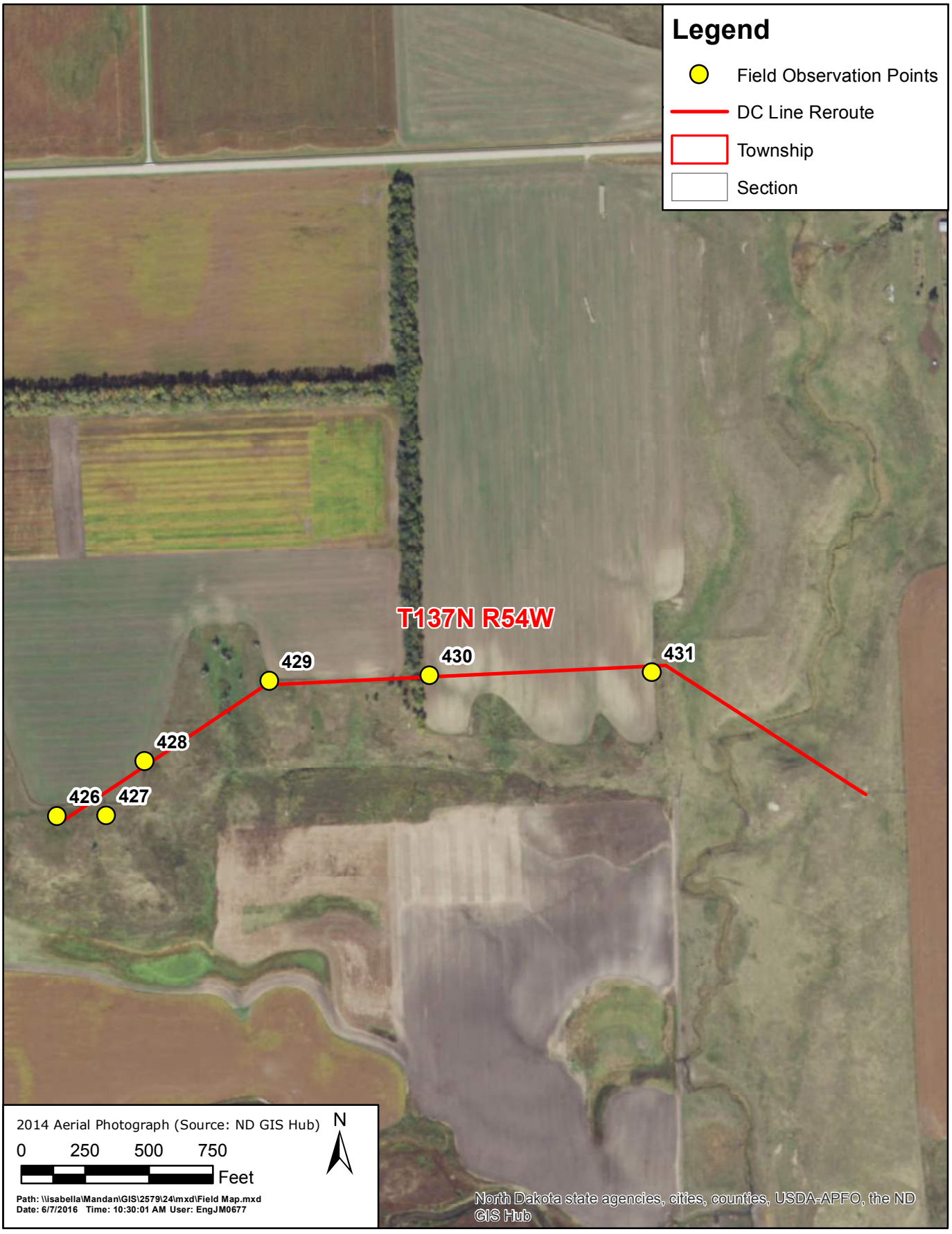
Figures



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Field Observation Map

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JUN 2016

Figure 1

Photographs

Above: Photo 1 (Structure 1391, Point 426) – Reroute connection to existing transmission line structure at west end of the reroute of the Project. Looking south.

Below: Photo 2 (Structure 1391, Point 426) – Structure's sign placards.

Above: Photo 3 (Structure 1391, Point 426) – Structure bases with vegetation around bases and some small soil mounds, shown on the left side of photo.

Below: Photo 4 (Point 427) – Disturbed soil pile with little vegetation, appears to be from previous transmission line structure, on west end of reroute. The new transmission line structure is observed behind disturbed area. Looking west.

Above: Photo 5 (Near structure 1395) – Disturbed soil area on east end of reroute. Observe the new structure and previous transmission line structures behind disturbed area. Unknown if soil disturbance is from old structure or something else. Looking east.

Below: Photo 6 (Structure 1391D, Point 431) – Typical 2-pole structure. Next to recently planted agricultural field. Looking east.

Above: Photo 7 (Structure 1391D, Point 431) –Base of 2-pole structures along edge of an agricultural field with a fence behind bases. Looking north.

Below: Photo 8 (Structure 1391B, Point 429) – Transmission line structures going through a tree row. Looking east.

Above: Photo 9 (Structure 1391C, Point 430) – Single pole structure near tree row and recently planted agricultural field.

Below: Photo 10 (Structure 455) – Trees and shrubs were cut down in the tree row, assumed for transmission line reroute work.

Above: Photo 11 (Structure 1391B, Point 429) – Small amount of concrete waste observed slightly uphill of structure.

Below: Photo 12 (Structure 1391D Point 431) – Observe small chunks of concrete waste and small flow paths forming around structure base.

Above: Photo 13 – Overview of the area showing 5 of the 6 new rerouted transmission line structures.

Below: Photo 14 – Overview of the area showing where the reroute connects to the existing transmission line (on the right). Looking east.

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