

Appendix C

Previously Issued Route Permit Example

This page intentionally left blank.

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A

HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN

MORRISON, CASS AND TODD COUNTIES

ISSUED TO

GREAT RIVER ENERGY AND MINNESOTA POWER

PUC DOCKET NO. ET2, E015/TL-15-204

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850, this route permit is hereby issued to:

GREAT RIVER ENERGY AND MINNESOTA POWER

Great River Energy and Minnesota Power are authorized by this route permit to construct and operate the Motley Area 115 kilovolt (kV) high voltage transmission line project and associated facilities.

The high-voltage transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the official route maps, and in compliance with the conditions specified in this permit.

Approved and adopted this 23rd day of March, 2016

BY ORDER OF THE COMMISSION

Daniel P. Wolf,
Executive Secretary

CONTENTS

1.0	ROUTE PERMIT.....	1
1.1	Pre-emption.....	1
2.0	PROJECT DESCRIPTION.....	1
2.1	Substations and Associated Facilities	2
2.2	Project Location	2
2.3	Structures	2
2.4	Conductors	3
3.0	DESIGNATED ROUTE.....	3
4.0	RIGHT-OF-WAY	5
5.0	GENERAL CONDITIONS	6
5.1	Notification	6
5.2	Construction and Operation Practices.....	6
5.2.1	Field Representative.....	6
5.2.2	Employee Training and Education of Permit Terms and Conditions	7
5.2.3	Public Services, Public Utilities, and Existing Easements.....	7
5.2.4	Temporary Work Space	7
5.2.5	Noise.....	7
5.2.6	Aesthetics	8
5.2.7	Site Sediment and Erosion Control	8
5.2.8	Wetlands and Water Resources.....	8
5.2.9	Vegetation Removal and Protection.....	9
5.2.10	Application of Herbicides	9
5.2.11	Invasive Species	10
5.2.12	Noxious Weeds	10
5.2.13	Roads.....	10
5.2.14	Archaeological and Historic Resources	10
5.2.15	Avian Mitigation	11
5.2.16	Restoration	11
5.2.17	Cleanup.....	11
5.2.18	Pollution and Hazardous Wastes.....	12
5.2.19	Damages	12
5.3	Electrical Performance Standards.....	12
5.3.1	Grounding.....	12
5.3.2	Electric Field	12
5.3.3	Interference with Communication Devices.....	12

5.4	Other Requirements	13
5.4.1	Safety Codes and Design Requirements	13
5.4.2	Other Permits and Regulations.....	13
6.0	SPECIAL CONDITIONS	13
6.1	Phase I Archeological Survey	13
6.2	Avian Mitigation Plan.....	13
6.3	Vegetation Management Plan	14
6.4	Rare and Unique Natural Resources	14
6.5	Erosion Control.....	15
7.0	DELAY IN CONSTRUCTION	15
8.0	COMPLAINT PROCEDURES	15
9.0	COMPLIANCE REQUIREMENTS.....	16
9.1	Plan and Profile.....	16
9.2	Status Reports	16
9.3	Notification to Commission.....	16
9.4	As-Builts	16
9.5	GPS Data.....	17
10.0	PERMIT AMENDMENT.....	17
11.0	TRANSFER OF PERMIT	17
12.0	REVOCATION OR SUSPENSION OF THE PERMIT	17

FIGURES

Official Route Maps

ATTACHMENTS

Complaint Procedures for Permitted Energy Facilities

Compliance Filing Procedures for Permitted Energy Facilities

1.0 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Great River Energy and Minnesota Power (Permittees) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes Great River Energy (GRE) and Minnesota Power (MP) to construct and operate new 115 kV electric facilities including two new high voltage transmission line segments, a substation conversion from 34.5 kV to 115 kV service, installation of a new switch at the Motley Substation, construct a new Crow Wing Power 115 kV substation, and install a manual three-way switch for the future Shamineau Substation, and as identified in the attached route permit maps, hereby incorporated into this document.

1.1 Pre-emption

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole approval required to be obtained by the Permittee for construction of the transmission facilities and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

2.0 PROJECT DESCRIPTION

Great River Energy and Minnesota Power are authorized to build an approximately 15.5-16.5 mile, 115 kV transmission line in Morrison, Cass and Todd counties, Minnesota. The Permittees are authorized to construct the following:

- **“24 Line” transmission line – Motley Substation transmission segment (East Route Option)** – A 115 kV transmission line from Minnesota Power’s “24 Line” 115 kV transmission line¹ northeast of Motley, Minnesota to the existing Crow Wing Power 34.5 kV Motley Substation (also known in the record as the East Route Option). This includes a motor-operated three-way switch to be installed to interconnect the new transmission line to the “24 Line.” Construction will include approximately five miles of new 115 kV transmission line.
- **Motley Substation – Fish Trap Lake Substation transmission segment (Common Route)** – A new single circuit 115 kV transmission line totaling approximately 10.5 miles from the existing Crow Wing Power Motley Substation to the proposed Crow Wing Power Fish Trap Lake Substation.

¹ Ex. 2, at 1-5 to 1-6 (Application). The existing Minnesota Power “24 Line” transmission line segment between the Dog Lake Substation and the Verndale Substation, including where the Motley project will interconnect, will be renamed the “155 Line” transmission line segment upon completion of the Project.

2.1 Substations and Associated Facilities

The Permittees are authorized to construct the following project associated facility components:

- **Dog Lake Substation ring bus conversion** – A conversion of MP’s existing Dog Lake Substation to a ring bus design.
- **“24 Line” transmission line – Dog Lake Substation segment** – A new 115 kV transmission line segment extending approximately one-half mile to loop MP’s “24 Line” 115 kV transmission line into and out of the Dog Lake Substation.
- **Motley Substation conversion** – Conversion of the Crow Wing Power’s Motley Substation from 34.5 kV to 115 kV. This includes installation of a manual three-way switch to provide the 115 kV service to the substation.
- **Fish Trap Lake Substation** – Construction of a new Crow Wing Power Fish Trap Lake 115 kV Substation to serve the electric load of MPL’s proposed Fish Trap pump station.
- **Shamaineau Tap Switch** – Installation of a manual three-way switch along Highway 10 to allow for a future Shamaineau Substation to interconnect to the proposed 115 kV transmission line.

2.2 Project Location

County	Township Name	Township	Range	Section
Cass	Becker	T134N	R32W	26, 27, 35
Cass	May	T133N	R31W	2, 11, 14, 15, 22, 23, 26
Morrison	Motley	T133N	R31W	19, 20, 21, 22, 26, 27, 28, 29, 30, 31
Morrison	Scandia Valley	T132N	R31W	6, 7, 18, 19, 24, 25, 30, 31
Todd	Fawn Lake	T132N	R32W	1, 25

2.3 Structures

The new segment of transmission line to be constructed by MP from the MP Dog Lake substation to the MP “24 Line” will use H – Frame design, and the structures will range from 60 to 90 feet above the ground with typical span lengths of 500 to 900 feet. The applicants propose to primarily utilize single pole wood structures for the remainder of the

proposed project transmission line construction. Single pole structures typically range in height from 60 to 90 feet above the ground with span lengths of between 250 to 400 feet. The average diameter of the wood structures at ground level is 20 inches.

Underbuild span lengths between single pole structures will not exceed 350 feet. If rugged terrain is encountered or if longer span lengths are necessary H-Frame design may be utilized. Span lengths average 600 to 800 feet, with 1,000-foot spans possible with certain topography. Structure heights typically range from 60 to 90 feet above ground with taller structures required for exceptionally long spans and in circumstances requiring additional vertical clearance exceeding the National Electrical Safety Code (NESC) and other agency requirements.

Line Type	Conductor	Structure		Foundation (inches)	Height (feet)	Span (feet)
		Type	Material			
115 kV	477 ACSR	Single Pole	Wood	20	60-90	250-400
115 kV	447 ACSR	H-Frame	Wood	20	60-90	600-1,000
115 kV	636 ACSR	H-Frame	Wood	20	60-90	500-900

2.4 Conductors

The single circuit conductors will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 477 ACSR or 636 ACSR with seven steel core strands and 24 or 26 outer aluminum strands. The shield wire will be 0.528 optical ground wire. If H-frame structures are utilized, three-conductor phase wires and two shield wires would be utilized.

3.0 DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the route maps attached to this permit. The route is generally described as noted below.

Route Width

The route width varies between 250 and 995 feet for the new 115 kV transmission line with the following specifications, as noted in the record:

- Where the route crosses open land with no existing roadways to follow, a 250 foot wide route is permitted.
- Where the route follows a rural road or county highway, a 300 foot wide route is permitted. The route will extend 150 feet in each direction perpendicular to the road centerline.
- Where the route follows U.S. Highway 10, the route extends 250 feet east and west out from the outside road edge of the north and south bound lanes, respectively, of

U.S. Highway 10, and includes both lanes of U.S. Highway 10 and the entire highway median. This portion of the route will have a width range of 975 to 995 feet due to variability in the highway median width.

- Additional route width provided for in the following areas:
 1. Interconnect point of the new transmission line with existing Minnesota Power “24 Line,”
 2. Crossing of the Crow Wing River,
 3. Near the Motley Substation to accommodate interconnection,
 4. Near a large American elm tree located on the south side of Azalea Road in the NW of Section 30, T133N, R31W, Motley Township in Morrison County,
 5. Along the East Route Option at the intersection of Cass County Road 31 (51st Ave SW) and 132nd Street SW,
 6. Near the proposed MPL Fish Trap pump station and the FishTrap Lake Substation,
 7. In areas where guy wires will be used.

The identified route widths will provide the Permittee with flexibility for minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized by the Commission.

Route Description

Dog Lake Segment

Minnesota Power will upgrade the existing Dog Lake Substation by converting the substation to a more reliable ring bus design, then it will construct a new one-half mile segment of 115 kV transmission line to connect to the MP “24 Line” paralleling an the 115 kV transmission line.

East Route Segment

The East Route will extend south directly adjacent to the 51st Avenue SW (or Birch Hill Road SW) right-of-way from its interconnection with the existing MP “24 Line” to the intersection of 51st Avenue SW and 132nd St. SW. At this intersection the East Route Option will turn to go west directly adjacent to 51st Avenue SW for approximately one-half mile at which point the line will turn to the south and follow directly adjacent to the 53rd Avenue SW right-of-way. The line will follow 53rd Avenue SW until it intersects the existing MP 34.5 kV sub-transmission line where it will turn west approaching the crossing of the Crow Wing River. The transmission line will cross south of the existing MP 34.5 kV sub-transmission line river crossing and the sub-transmission line will be relocated and attached to the 115 kV structures

as underbuild. After crossing the Crow Wing River the transmission line will travel west to the Motley Substation, directly adjacent to the Morrison County Road 28/Azalea Road right-of-way.

Common Route – West of Highway 10

The proposed Common Route will begin at the Motley substation, traveling west adjacent to the Morrison County Road 28/Azalea Road ROW to the intersection with U.S. Highway 10. The alignment will overtake the existing MP 34.5 kV sub-transmission line, and the MP 34.5 KV sub-transmission line will be attached to the Motley 115 kV structures as underbuild. Once at the intersection of Morrison County Road 28/Azalea Road and U.S. Highway 10 the Common Route of the Motley 115 kV transmission line will travel south directly adjacent to the U.S. Highway 10 ROW on the West side to the intersection with Holt Road. The Common Route will then travel east directly adjacent to the Holt Road (or Aster Road) ROW for a short distance terminating at the proposed Fish Trap Lake substation.

4.0 RIGHT-OF-WAY

The approved right-of-way width for the project is up to 100 feet.

This permit anticipates that the right-of-way will generally conform to the anticipated alignment as noted on the attached route permit maps unless changes are requested by individual landowners or unforeseen conditions are encountered or are otherwise provided for by this permit.

Any right-of-way modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this permit, and shall be specifically identified, documented and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100 and the other requirements of this permit; and for highways under the jurisdiction of the Minnesota Department of Transportation (Mn/DOT), the procedures for accommodating utilities in trunk highway rights-of-way.

5.0 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the transmission line and associated facilities over the life of this permit.

5.1 Notification

The Permittee shall provide all affected landowners with a copy of this permit and, as a separate information piece, the complaint procedures at the time of the first contact with the landowners after issuance of this permit. The Permittee shall contact landowners prior to entering the property or conducting maintenance along the route. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.²

5.2 Construction and Operation Practices

The Permittee shall follow those specific construction practices and material specifications described in Great River Energy and Minnesota Power's Application to the Commission for a route permit for the Motley Area HVTL Project, dated March 19, 2015, unless this permit establishes a different requirement in which case this permit shall prevail.

5.2.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative 14 days prior to commencing construction. The Permittee shall provide the field representative's contact information to affected landowners, residents, local government units and other interested persons. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.

² http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf

5.2.2 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the transmission line of the terms and conditions of this permit.

5.2.3 Public Services, Public Utilities, and Existing Easements

During construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these will be temporary and the Permittee will restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall consult with landowners, townships, cities, and counties along the route and consider concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

5.2.4 Temporary Work Space

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. Temporary easements outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats should be used to minimize impacts on access paths and construction areas.

5.2.5 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0100 to 7030.0080, at all times at all appropriate locations during operation of the facility. Construction and maintenance activities shall be limited to daytime working hours to the extent practicable to ensure nighttime noise level standards will not be exceeded.

5.2.6 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the project during construction and maintenance.

Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highway, or trail crossings and could cross roads to minimize or avoid impacts.

5.2.7 Site Sediment and Erosion Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

Where larger areas of one acre or more are disturbed or other areas designated by the MPCA, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the MPCA.

5.2.8 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions where practicable and shall be according to permit requirements by the applicable permitting authority. When construction during winter is not possible, wooden or composite mats shall be used to

protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area.

Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by the Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

5.2.9 Vegetation Removal and Protection

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

5.2.10 Application of Herbicides

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the right-of-way within the landowner's property. All herbicides shall

be applied in a safe and cautious manner so as not to damage crops, orchards, tree farms, or gardens. The Permittee shall provide notice of herbicide application to known beekeepers operating apiaries within one mile of the project site at least 14 days prior to such application.

5.2.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.2.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

5.2.13 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city or township roads that will be used during the construction phase of the project. Where practical, existing roadways shall be used for all activities associated with construction of the transmission facilities. Oversize or overweight loads associated with the facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the least number of access roads it can. Access roads shall not be constructed across streams and drainage ways without the required permits and approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the route, unless otherwise negotiated with the affected landowner.

5.2.14 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the transmission facility. The Permittee shall consult the State Historic Preservation Office (SHPO) on the need to conduct a survey of the project site. If a survey is required, the results shall be submitted to the Commission with the plan and profile pursuant to Section 9.1.

In the event that a resource is encountered, the Permittee shall contact and consult with SHPO and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with SHPO and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

5.2.15 Avian Mitigation

The Permittee's standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

The Permittee will consult with the Minnesota Department of Natural Resources (DNR) regarding type and placement of bird diverters.

5.2.16 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.2.17 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.2.18 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.2.19 Damages

The Permittee shall fairly compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.3 Electrical Performance Standards

5.3.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliamperes rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the NESC. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.3.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

5.3.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

5.4 Other Requirements

5.4.1 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements.

5.4.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of these permits. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

6.0 SPECIAL CONDITIONS

The Permittee shall provide a report to the Commission as part of the plan and profile submission that describes the actions taken and mitigative measures developed regarding the project and the following special conditions. Special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1 Phase I Archeological Survey

The Permittees shall consult with the State Historic Preservation Office concerning the extent of a Phase I archeological survey and appropriate mitigation measures for the Project. Permittees shall document and submit to the Commission the results of the consultation, including those portions of the Project that will be surveyed.

6.2 Avian Mitigation Plan

The Permittees shall consult with the DNR and USFWS to develop an avian mitigation plan for the Project. It is appropriate for the plan to incorporate recommendations of the DNR and USFWS, including the use of bird flight diverters at public water crossings. The plan should include eagle nest survey protocols developed in consultation with the USFWS. Results of eagle nest surveys should be filed with the Commission at the time of submission of the plan and profile.

6.3 Vegetation Management Plan

The Permittee shall consult with the DNR to develop a vegetation management plan for the Project. It is appropriate for the plan to incorporate expressed recommendations of the DNR including management of vegetation within the right-of-way to maintain low-growing plants on the border of the right-of-way (wire zone / border zone management) and maintaining natural vegetation buffers at all water crossings (particularly Crow Wing River). The Vegetation Management Plan shall also include a right-of-way management approach, invasive species control and prevention measures, shoreland vegetation management, and herbicide used.

6.4 Rare and Unique Natural Resources

Rare species or other significant natural features that include state-listed endangered, threatened, and special concern species and sites of biodiversity significance have been identified within or near the project area. The Permittee, in consultation with the DNR, will determine the need for surveys where the right-of-way passes through areas where rare species and unique natural resources are likely to exist. The Permittee shall submit results of the surveys to the Commission with the plan and profile. The Permittee shall follow measures and recommendations for avoiding and minimizing impacts to rare species and unique natural resources in all areas of the project including temporary workspaces associated with the project. Construction and maintenance personnel will be made aware of rare species and unique natural resources during pre-construction meetings to minimize potential disturbance.

Blanding's Turtle

The Permittee shall follow measures and recommendations for avoiding and minimizing impacts to Blanding's turtle populations as outlined in the DNR Environmental Review Fact Sheet Series for the Blanding's Turtle.³

State-Listed Mussels

The Permittee shall use appropriate construction techniques and sediment control measures in the area where the project crosses the Crow Wing River to minimize potential impacts to state-listed mussel species of special concern.

³ http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/factsheet.pdf

Wildlife-Friendly Erosion Control Materials

The Permittee shall use wildlife-friendly erosion control materials in areas known to be inhabited by wildlife species (birds, small mammals, reptiles, and amphibians) susceptible to entanglement in plastic netting as outlined in the DNR Wildlife-Friendly Erosion Control Fact Sheet.⁴

Northern Long Eared Bat

The Permittees shall comply with the USFWS final Northern Long-eared Bat (NLEB) 4(d) rule. If the Permittees are required to obtain an incidental take permit from the USFWS, the Permittees shall file a copy with the Commission. Any bat studies undertaken on the project should be filed with the Commission.

6.5 Erosion Control

The Permittees shall implement erosion control measures near the Crow Wing River to mitigate potential impacts to the Creek Heelsplitter and Black Sandshell mussel as identified in Finding 166.

7.0 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

8.0 COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

⁴ <http://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf>

9.0 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

9.1 Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, structure specifications and locations, cleanup, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

9.2 Status Reports

The Permittee shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly.

9.3 Notification to Commission

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

9.4 As-Builts

Within 60 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

9.5 GPS Data

Within 60 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

10.0 PERMIT AMENDMENT

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

11.0 TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

12.0 REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend the permit.