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Bipole III Southern Ground Electrode Line Route Selection

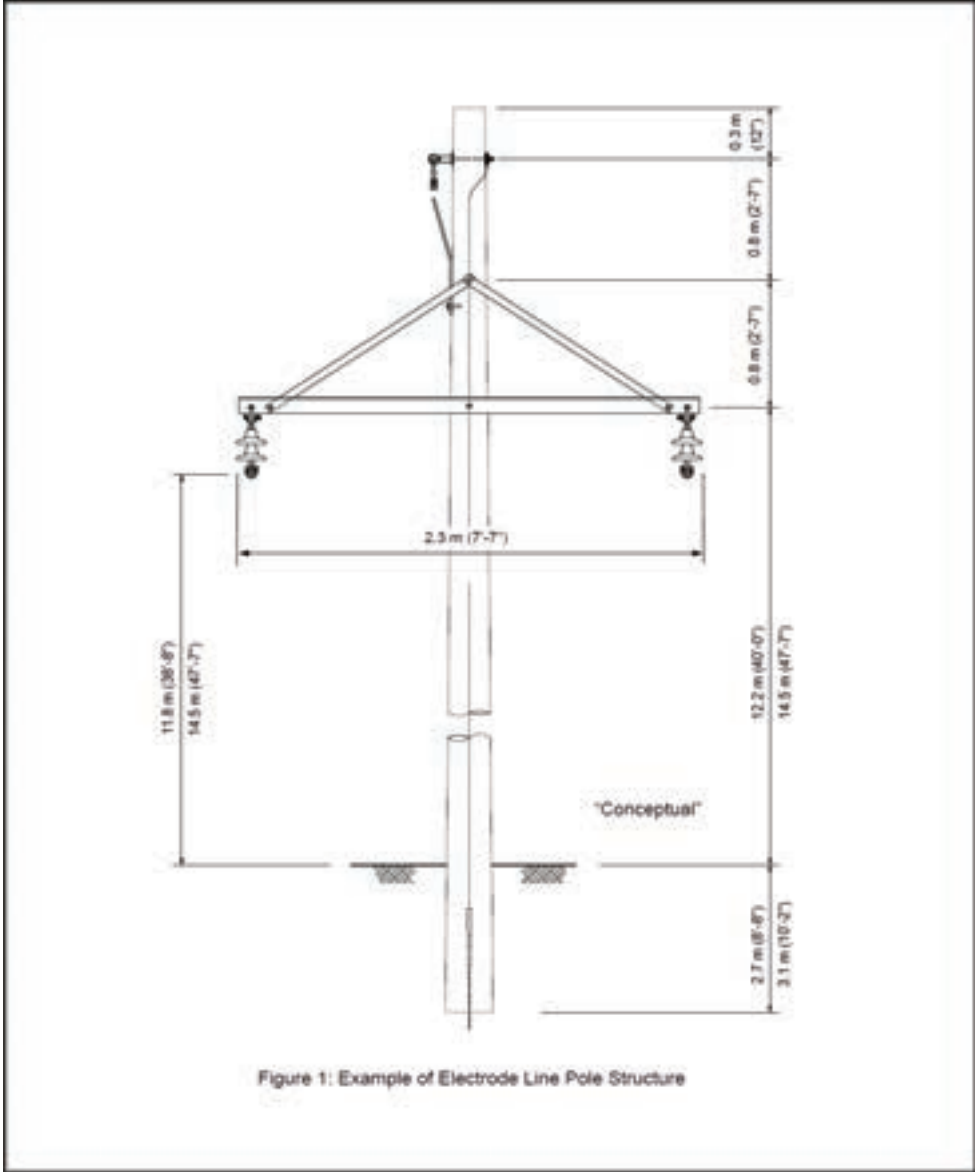
Introduction

Manitoba Hydro has recently selected a route for the southern ground electrode line (Map 1). At the time of filing the Environmental Impact Statement (EIS) for the project, Manitoba Hydro had not selected the route for the low voltage electrode line required to connect the southern ground electrode to the Riel converter station due to on-going planning that has since been completed. The following report describes the electrode line component as well as the process for selecting the southern ground electrode line route for the Bipole III project. No new right-of way or private land easement is required for the preferred route of this line.

Southern Ground Electrode Line Description

The ground electrode line connects the ground electrode (one mile south of Hazelridge in the Rural Municipality of Springfield) to the Riel converter station (immediately east of the Winnipeg Floodway and north of the City of Winnipeg Deacon Water Supply Reservoir). The function of the ground electrode (described and assessed in the Bipole III EIS) and electrode line is to ground the HVdc system to the earth when imbalances occur between the Bipole III lines, and is also used as a ground return for system maintenance and emergency operation of the system. During normal operation (i.e., bipolar operation) of the converter station, the electrode line will carry very low levels of current between the station and the ground electrode. However, during maintenance or emergency outages, the electrode line will carry current equal to the amount of current on the HVdc transmission line (i.e., monopolar operation).

The electrode line is approximately 23 kilometers in length and will be located largely on the Cooks Creek Diversion (CCD) right-of-way which does not require private easement (further description provided below). Conductors will be strung on wooden pole structures approximately 15-16 m in height (50 feet), similar to distribution poles located throughout Manitoba. The typical wooden pole structure planned for this line is shown below (Figure 1).



Routing and Consultation

In November 2011, the Bipole III Study Team identified two potential routing options for the southern ground electrode line with the ultimate goal of avoiding/minimizing impacts to residences and agricultural activities. One route alternative takes advantage of the south side of the CCD right-of-way, which does not require acquiring private lands. The other route alternative takes advantage of road allowances, although private easements would be required.

Manitoba Hydro's preference at that time was to utilize the CCD right-of-way for the following reasons:

- requires no private land easements,
- meets the site selection criteria of taking advantage of existing utility corridors,
- has fewer residences within 100 meters of the route as compared to the alternative route,
- has no livestock barns within 100 meters of the route, and
- has fewer occupied yards within 100 meters of the route as compared to the alternative route.

Manitoba Hydro had an informal discussion with the Cooks Creek Board on December 1, 2011, to determine the feasibility of utilizing the CCD right-of-way. It was agreed to in principle that siting the electrode line on the CCD right-of-way was an option if the route was selected. Once an alignment is determined, Manitoba Hydro and the Cooks Creek Board will work together to site the line in the right-of-way if the project is licenced.

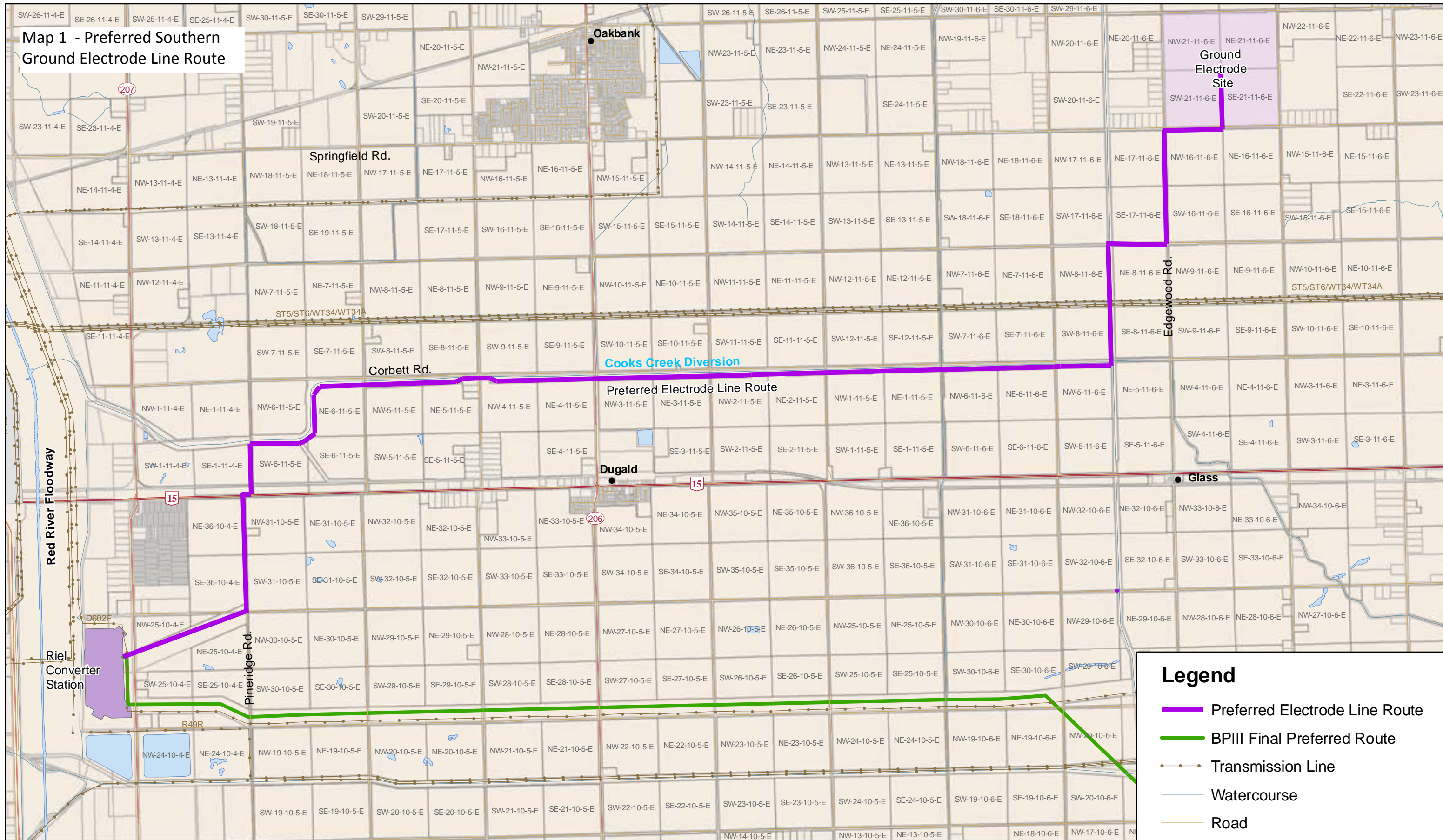
On December 6, 2011, Manitoba Hydro met with the Rural Municipality of Springfield to review the ground electrode line for the Bipole III project. A description of the ground electrode line was provided along with a presentation of the two routing options. The advantages and disadvantages of each route were discussed and Manitoba Hydro expressed its preference to utilize the CCD right-of-way since no private lands need to be acquired. Council was supportive of Manitoba Hydro's plan to use the CCD right-of-way since no landowners would be affected. Manitoba Hydro informed council that letters would be mailed to property owners in the vicinity of the preferred ground electrode line route.

On December 9, 2011, letters were mailed to fifty three landowners who have property within a half mile of the preferred ground electrode line route notifying them of the location of the line (Attachment 1). A contact number was provided in case landowners had any questions about the route. To date, Manitoba Hydro has not received any calls or queries from landowners.

Conclusion

Manitoba Hydro has selected a preferred route for the southern ground electrode line (Map 1). The route selection process sought to minimize impacts of the line on agricultural activities by placing the line on existing right-of-ways and road allowances and, therefore, avoiding inconvenience to farm operations. The routing of the line also avoided site-specific areas of concern such as residences. The preferred route requires no private land easements and minimizes effects on any nearby landowners.

Map 1 - Preferred Southern Ground Electrode Line Route



Legend

- Preferred Electrode Line Route
- BPIII Final Preferred Route
- Transmission Line
- Watercourse
- Road



Coordinate System: UTM Zone 14N NAD83
 Data Source: MB Hydro, Stantec, ProvMB, NRCAN
 Date Created: Dec 8, 2011

0 1 2 Kilometers
 0 0.5 1 Miles

1:50,000

Preferred Ground Electrode Line Route



P.O. Box 7950 Stn Main, 820 Taylor Avenue • Winnipeg Manitoba Canada • R3C 0J1
Telephone / N° de téléphone : (204) 360-7888 or 1-877-343-1631 • Fax / N° de télécopieur : (204) 360-3734
bipole3@hydro.mb.ca

December 9th, 2011

[Title]

[Address]

[City/Town]

[Postal Code]

Dear Landowner:

Re: Bipole III Transmission Project – Notification of Preferred Ground Electrode Line Route

Manitoba Hydro has recently completed an Environmental Impact Statement (EIS) for the Bipole III project, which has been submitted to Manitoba Conservation as part of the regulatory approvals process. A map illustrating the final preferred route is enclosed.

As part of the project, a ground electrode is required at both the northern and southern converter stations to ensure proper functioning of the transmission system. A ground electrode generally consists of a buried metal ring located within a section of land. It is not visible at ground level and is generally undetectable in its function. The preferred location for the ground electrode is approximately one mile south of Hazelridge (see enclosed map). Manitoba Hydro consulted with landowners adjacent to the ground electrode site in March of 2011 to discuss any issues or concerns with the location.

A low voltage electrode line will be required to connect the southern ground electrode to the Riel Converter Station. The electrode line will be strung on single wooden poles similar to distribution lines located throughout the province. A preferred route has been selected for the line which is proposed to be constructed within existing right-of-ways including the Cooks Creek Diversion and local road allowances in the area (see enclosed map). No private land easements are required for the ground electrode line and it will not affect your land. This letter is just to notify you of the preferred location of the electrode line since it is part of the Bipole III Transmission Project and subject to regulatory review.

If you have any questions about the electrode line or Bipole III project in general, further project information is available online at www.hydro.mb.ca/bipole3, or you can contact us toll free at 1-877-343-1631 or in Winnipeg at 360-7888.

Sincerely,

A handwritten signature in black ink, appearing to read "Pat. McGarry". The signature is written in a cursive, slightly slanted style.

Patrick McGarry
Senior Environmental Assessment Officer
Licensing & Environmental Assessment Department

Map(s) enclosed:

Preferred Ground Electrode Line Route Map
BP III Final Preferred Route Map