

# MANITOBA HYDRO BIPOLE III TRANSMISSION PROJECT

## Construction Access Opportunities



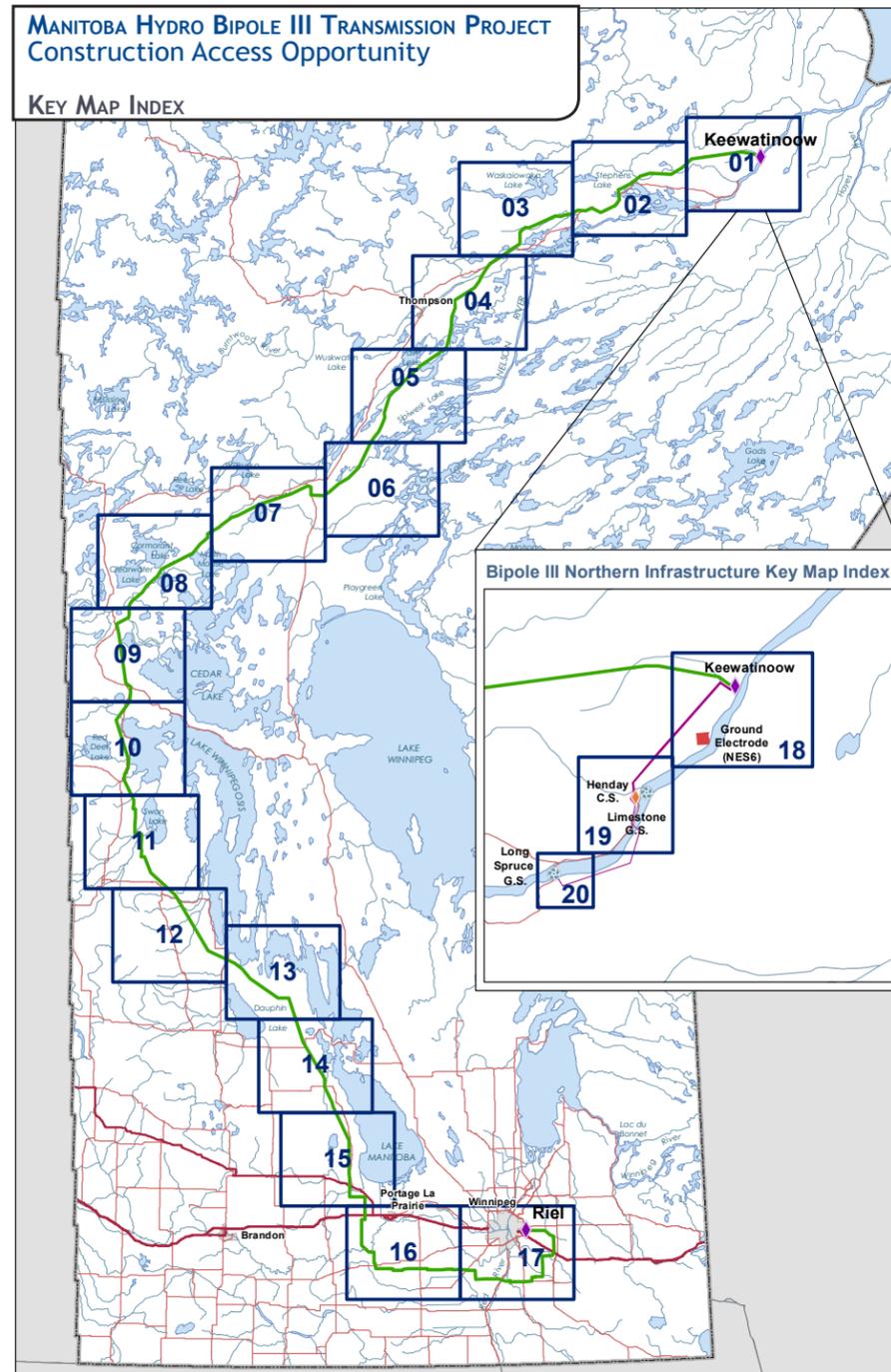
October 2013



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## PURPOSE

The purpose of this map book is to present the construction access opportunities for the Bipole III Final Preferred Route (FPR) and its northern infrastructure. The construction access opportunities defines access routes from the existing provincial and municipal road network to the FPR right of way (ROW). The overall objective of this work is to identify construction access routes to support the timely development of an access management plan as part of the Environmental Protection Program (EPP) process. Preliminary access identification was conducted to identify existing access opportunities, based on the existing road network and other linear disturbances (e.g., transmission lines, forestry roads, cut-lines, trails, etc.), in order to minimize the environmental footprint of construction access activities.



## MAP BOOK USER INFORMATION

This map book and associated access information tables include a summary of the following information:  
**Map book** - developed from 20 map sheets presented at a map scale of 1:250,000 covering the entire FPR from the Keewatinooow converter station to the Riel converter station and three maps at 1:60,000, 1:30,000, and 1:28,000 to show the infrastructure around Keewatinooow Converter Station. These maps include the following information:

- Project Infrastructure - infrastructure associated with the Bipole III project
- Infrastructure - other Manitoba Hydro infrastructure
- Landbase - pertinent landbase information including: communities, Rural Municipalities, First Nations, National and Provincial Parks and Wildlife Management Areas.
- Access - preliminary access routes and points, stream crossings, rail crossings and transmission line crossings. Access information consists of the following:
  - Access Routes - proposed access routes from existing Provincial or Municipal road to the FPR.
  - Access Points - access points consisting of the intersection of the access route and the existing provincial or municipal road and the FPR or where the FPR intersects a Provincial or Municipal road.
  - Access Route and Point Labeling - access routes are labeled in ascending numerical order from the Keewatinooow converter station to the Riel converter station. Access points are labeled to correspond to an access route, where an access route is present, and are labeled with an "R" where the route intersects an existing Provincial or Municipal road or with a "T" where the route intersects the FPR transmission line. For example, for access route 12, access points have been identified as 12R and 12T, for the road intersection and FPR intersection, respectively. Where the FPR intersects the existing Provincial or Municipal road network, access points have been identified without a corresponding access route, and are denoted with an "RT" as the point represents the access intersection of the road and the FPR.

**Supporting Access Information** - data summary tables and stream crossing photos are presented and correspond with each map book map sheet. Information presented is as follows:

- **Waterbody Crossings** - tabular summary of stream crossing information provided is based on data provided by North/South Consultants Inc. Stream crossings are numbered in ascending numerical order from the Keewatinooow converter station to the Riel converter station. Stream crossing information includes the geographic coordinate (UTM Zone 14, NAD1983) of the intersection of the stream and the FPR, the name of the stream, access notes/comments, and stream crossing parameters (water width, channel width, bank stability parameters, and an indication of substrate material, where available). Photos associated with stream crossings that have been included, were provided by North/South Consultants Inc.
- **Proposed Access Points** - tabular summary of access point id numbers, geographic coordinate (UTM Zone 14, NAD1983) of the access point, descriptive comments, access type (e.g., road or right of way [ROW]), and distance information. Distance information includes distance from the previous access point along the FPR ROW and to the next access point along the FPR ROW for "T" points, and distance from the previous access point along the road and to the next access point along the road for "R" points
- **Proposed Access Routes** - tabular summary of access route id numbers, descriptive comments, rationale for the inclusion of the access route, potential issues associated with the route, and the length of the route from the existing road to the FPR.
- **Rail Crossings** - tabular summary of active and abandoned rail crossings, including the geographic coordinate (UTM Zone 14, NAD1983) of the intersection of the railway and the FPR, and an indication of the status of the railway crossing (abandoned or active rail).
- **Transmission Line Crossings** - tabular summary of transmission line crossings, including the geographic coordinate (UTM Zone 14, NAD1983) of the intersection of the existing transmission line and the FPR, and the name of the transmission line.

### Bipole III Transmission Project

#### Project Infrastructure

- Final Preferred Route
- Planning Segment Division
- AC Collector Lines
- Ground Electrode Line
- - - Construction Power (KN36)
- Construction Power Station
- Keewatinooow Converter Station
- Ground Electrode Site
- Construction Camp Site
- Henday Storage
- Limestone Stores Area
- Manitoba Hydro and Contractor Work Area Site
- Local Study Area

#### Infrastructure

- ◆ Converter Station
- ⊙ Generating Station
- Bipole I and II
- Transmission Line

#### Access

- 12 Proposed Access Route
- 12RT Proposed Access Point\*
- ▲ 12 Abandoned Rail crossing
- ▲ 12 Rail crossing
- 12 Transmission Line Crossing
- 12 Major Stream Crossing

\* R=Access point along existing highway  
T= Access point along Bipole III Final Preferred Route

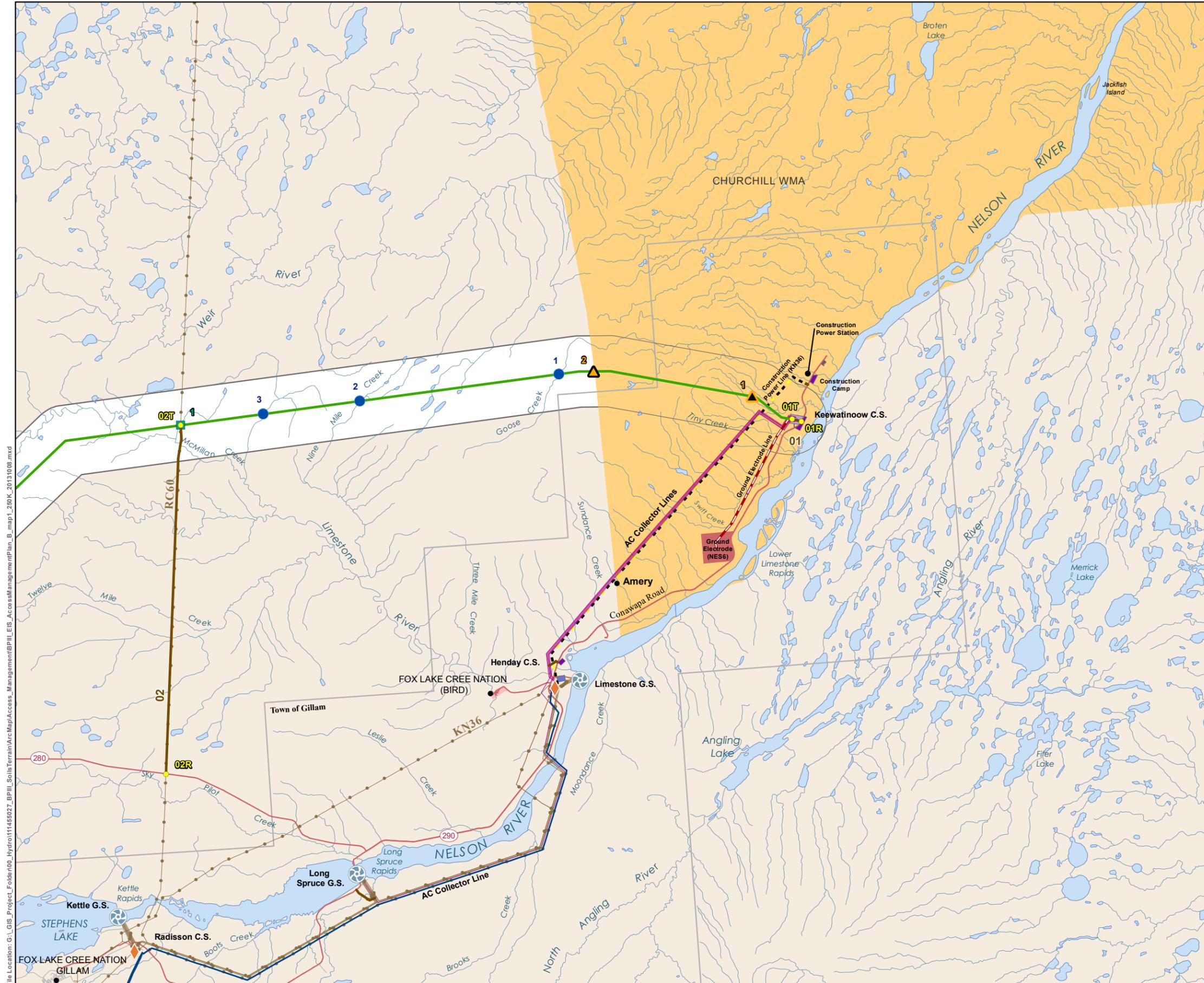
#### Landbase

- Community
- City / Town
- First Nation
- National/Provincial Park
- Rural Municipality
- Wildlife Management Area

Coordinate System: UTM Zone 14N NAD83  
Data Source: MBHydro, Stantec, ProvMB  
Date Created: October 08, 2013



## Construction Access Opportunities



File Location: g:\GIS\Project\_Folder\00\_Hydro\11455027\_BP\11\_Soils\Terrain\Map\Access\_Management\BP\11\_EIS\_AccessManagementPlan\_B\_map1\_250K\_20131008.mxd

C:\GIS\_Projects\Bipole III\Hydro\11255079\_BPHI\_Soils\DD\BPHI\AccessDatabaseTables\_2010412\_1.mxd

STREAM CROSSINGS									
ID	Easting	Northing	Waterbody Name	Access Notes and Comments	Water Width (m)	Channel Width (m)	Bank Stability (Right Bank)	Bank Stability (Left Bank)	Substrate
1	799343	6294065	Goose Creek		9.48	9.48	100	100	Fines
2	785821	6292246	Nine Mile Creek		7.5	7.5	100	100	Fines
3	779264	6291362	McMillan Creek		5	5	70	40	Fines

PROPOSED ACCESS POINTS									
ID	Easting	Northing	Comments	Access Type	Distance to Previous Access Point Along ROW	Distance to Next Access Point Along ROW	Distance to Previous Access Point Along Road	Distance to Next Access Point Along Road	
01R	815809	6290862	Future access at converter station along Conawapa road	Road	NA	NA	NA	63km	
01T	815415	6290959	Future access at converter station at termination of ROW	ROW	NA	42km	NA	NA	
02R	772640	6266980	Access point 02 along existing transmission line intersecting with PR 280	Road	NA	NA	63km	50km	
02T	773646	6290603	Access point 02 along existing transmission line intersecting with PR 280	ROW	42km	54km	NA	NA	

PROPOSED ACCESS ROUTES					
ID	Description	Rationale	Issues	Access Length	
01	Access route within footprint of proposed converter station	Access to start of line	No existing disturbance	600m to Conawapa Road	
02	Access route along T-line (Radisson to Churchill 138kV "RC60")	Existing MB Hydro linear disturbance	Outside study corridor, entirely in Stephens Lake Area of Special Interest, water crossings	24km to PR 280	

TRANSMISSION LINE CROSSINGS				
ID	Easting	Northing	T-Line Name	
1	773644	6290606	Radisson to Churchill	

RAILWAY CROSSINGS				
ID	Easting	Northing	Status	
1	812110	6292126	Abandoned Rail	
2	801696	6294250	Rail	



Manitoba Hydro - Red Hen

2-Nine Mile Creek



North South Consultants Inc.

3-McMillan Creek