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ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S2-S40	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 165 to 166	E-660940 N-5525233	E-650224 N-5524973	14N	10719 m

Potential Effects:

Potential groundwater contamination from a contingency event (e.g., spill).

Specific Mitigation:

- Marshaling yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery.
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S2-S40	S2-Aqua-205	Freshwater artesian areas	Site: 163 to 164	E-661084 N-5525236	E-658226 N-5525173	14N	2859 m

Potential Effects:

Wetting the surficial environment near potential discharge from tower foundation drill hole (ground saturation); also, potential level drop in the aquifer.

Specific Mitigation:

- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S2-S40	S2-RUse-311	Shelterbelt	Site: 167 to 168	E-656640 N-5525132	E-656633 N-5525132	14N	7 m
S2-S40	S2-RUse-312	Shelterbelt	Site: 169 to 170	E-655006 N-5525088	E-654997 N-5525088	14N	9 m

Potential Effects:

Removal in area of ROW intersect.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S2-S40	S2-Aqua-158	Unnamed Drain	653343	5524996	14N	N/A	N/A	None	None

Potential Effects:

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. If wet conditions, one time fording is permitted
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- Limit machinery fording of the watercourse to a one-time event (over and back) only if no alternative crossing method is available. If repeated crossings of the watercourse are necessary prior approval from the MH Environmental Inspector is required
- Locate crossings perpendicular to the bank, whenever possible.
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.

ESS Group: Groundwater

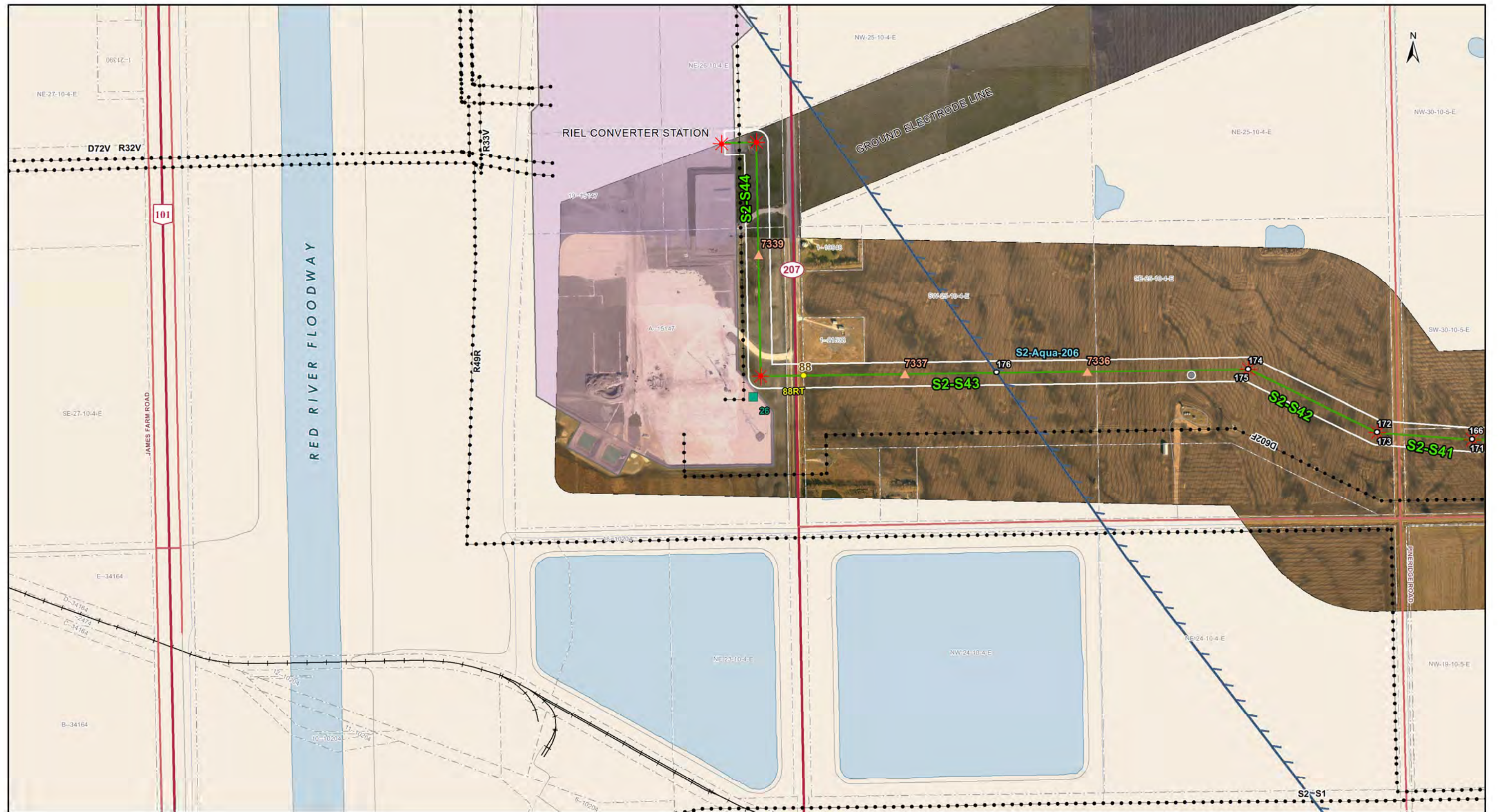
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S2-S40	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 165 to 166	E-660940 N-5525233	E-650224 N-5524973	14N	10719m

Potential Effects:

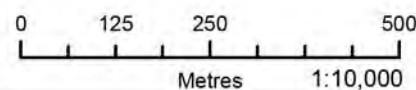
Potential groundwater contamination from a contingency event (e.g., spill).

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- Emergency response plans for sealing/grouting and pumping will be implemented as required.



Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: November 03, 2016
Version: Final 2.0



Land Base

- Transmission Line
- Highway
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Mining
- Provincial Forest
- Parcel Fabric

Project Infrastructure

- Angle Tower Locations
- Towers (Preliminary)
- BPIII Final Preferred Route
- 66 m Right of Way
- Ground Electrode Line
- Proposed Converter Station

**Towers subject to change, only used as a rough guide*

Sensitive Sites

- Point Features
- Linear Features
- Area Features

Points of Access*

- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Proposed Access Route

**Labels correspond to BPIII Access Mgmt Database*

ESS Features

Water

- Groundwater

Bipole III Transmission Project Construction Environmental Protection Plan Construction Section S2 Environmentally Sensitive Site Locations

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ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S2-S41	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 171 to 172	E-650224 N-5524973	E-649966 N-5524990	14N	258m
S2-S42	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 173 to 174	E-649966 N-5524990	E-649616 N-5525160	14N	389m
S2-S43	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 175 to 176	E-649616 N-5525160	E-648934 N-5525145	14N	682m

Potential Effects:

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