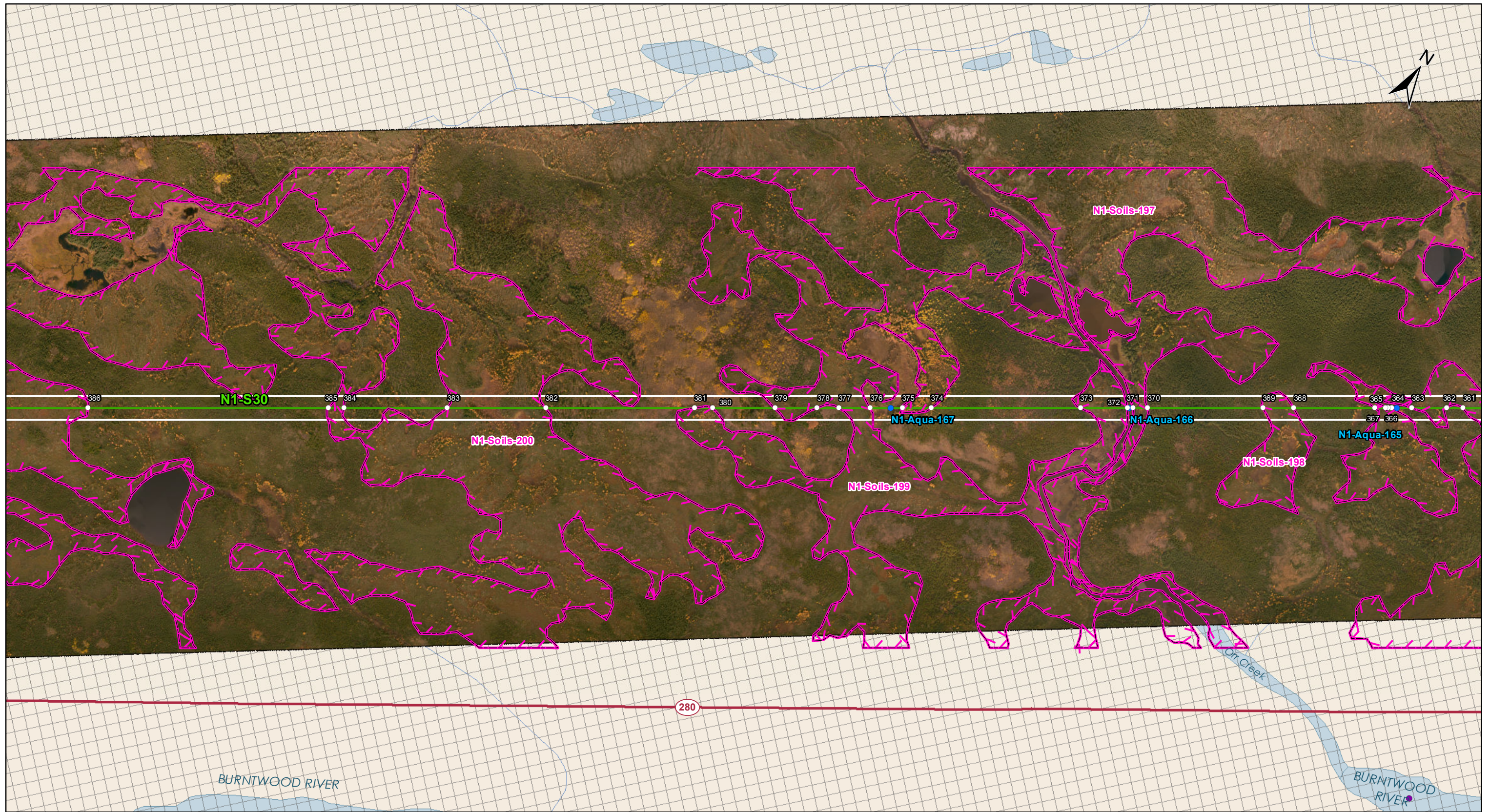


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Coordinate System: UTM Zone 14N NAD83
 Data Source: MB Hydro, ProvMB, NRCAN
 Date Created: December 09, 2013

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- Land Base**
- Transmission Line
 - Highway
 - Major Road
 - Local Road
 - Winter Road
 - Railway (Operational)
 - Railway (Discontinued)
 - Mining

- Project Infrastructure**
- Angle Tower Locations
 - BPIII Final Preferred Route
 - 66 m Right of Way

- Points of Access***
- Proposed Access Point
 - Major Stream Crossing
 - Abandoned Rail Crossing
 - Rail Crossing
 - Transmission Line Crossing
 - Proposed Access Route
- *Labels correspond to BPIII Access Management Database

- ESS Features**
- Heritage**
 - Archaeological
 - Water**
 - Water Crossing
 - Soils and Terrain**
 - Permafrost

**Bipole III Transmission Project
 Construction Environmental Protection Plan
 Construction Section N1
 Environmentally Sensitive Site Locations**

MAP NUMBER : 56

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S30	N1-Aqua-165	Unnamed tributary of Orr Creek	629876	6220183	14N	N/A	N/A	Moderate	Marginal
N1-S30	N1-Aqua-166	Orr Creek	629266	6219790	14N	12m	9m	Moderate	Important
N1-S30	N1-Aqua-167	Unnamed tributary of Orr Creek	628722	6219441	14N	N/A	N/A	Moderate	Marginal

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement; rutting of floodplain

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S30	N1-Soils-197	Permafrost	Site: 360 to 361	E-630086 N-6220317	E-630026 N-6220278	14N	71 m
N1-S30	N1-Soils-197	Permafrost	Site: 362 to 363	E-629988 N-6220254	E-629909 N-6220203	14N	94 m
N1-S30	N1-Soils-197	Permafrost	Site: 364 to 365	E-629863 N-6220174	E-629854 N-6220168	14N	10 m
N1-S30	N1-Soils-197	Permafrost	Site: 366 to 367	E-629849 N-6220164	E-629825 N-6220149	14N	28 m
N1-S30	N1-Soils-197	Permafrost	Site: 370 to 371	E-629307 N-6219816	E-629274 N-6219794	14N	39 m
N1-S30	N1-Soils-198	Permafrost	Site: 368 to 369	E-629640 N-6220030	E-629569 N-6219985	14N	84 m
N1-S30	N1-Soils-199	Permafrost	Site: 372 to 373	E-629261 N-6219786	E-629154 N-6219718	14N	127 m
N1-S30	N1-Soils-199	Permafrost	Site: 374 to 375	E-628813 N-6219498	E-628747 N-6219456	14N	78 m
N1-S30	N1-Soils-199	Permafrost	Site: 376 to 377	E-628674 N-6219409	E-628602 N-6219363	14N	85 m
N1-S30	N1-Soils-199	Permafrost	Site: 378 to 379	E-628553 N-6219331	E-628457 N-6219270	14N	113 m
N1-S30	N1-Soils-199	Permafrost	Site: 380 to 381	E-628315 N-6219178	E-628273 N-6219151	14N	49 m
N1-S30	N1-Soils-200	Permafrost	Site: 382 to 383	E-627934 N-6218933	E-627710 N-6218789	14N	266 m
N1-S30	N1-Soils-200	Permafrost	Site: 384 to 385	E-627474 N-6218637	E-627439 N-6218615	14N	41 m
N1-S30	N1-Soils-201	Permafrost	Site: 386 to 387	E-626891 N-6218263	E-626576 N-6218060	14N	375 m

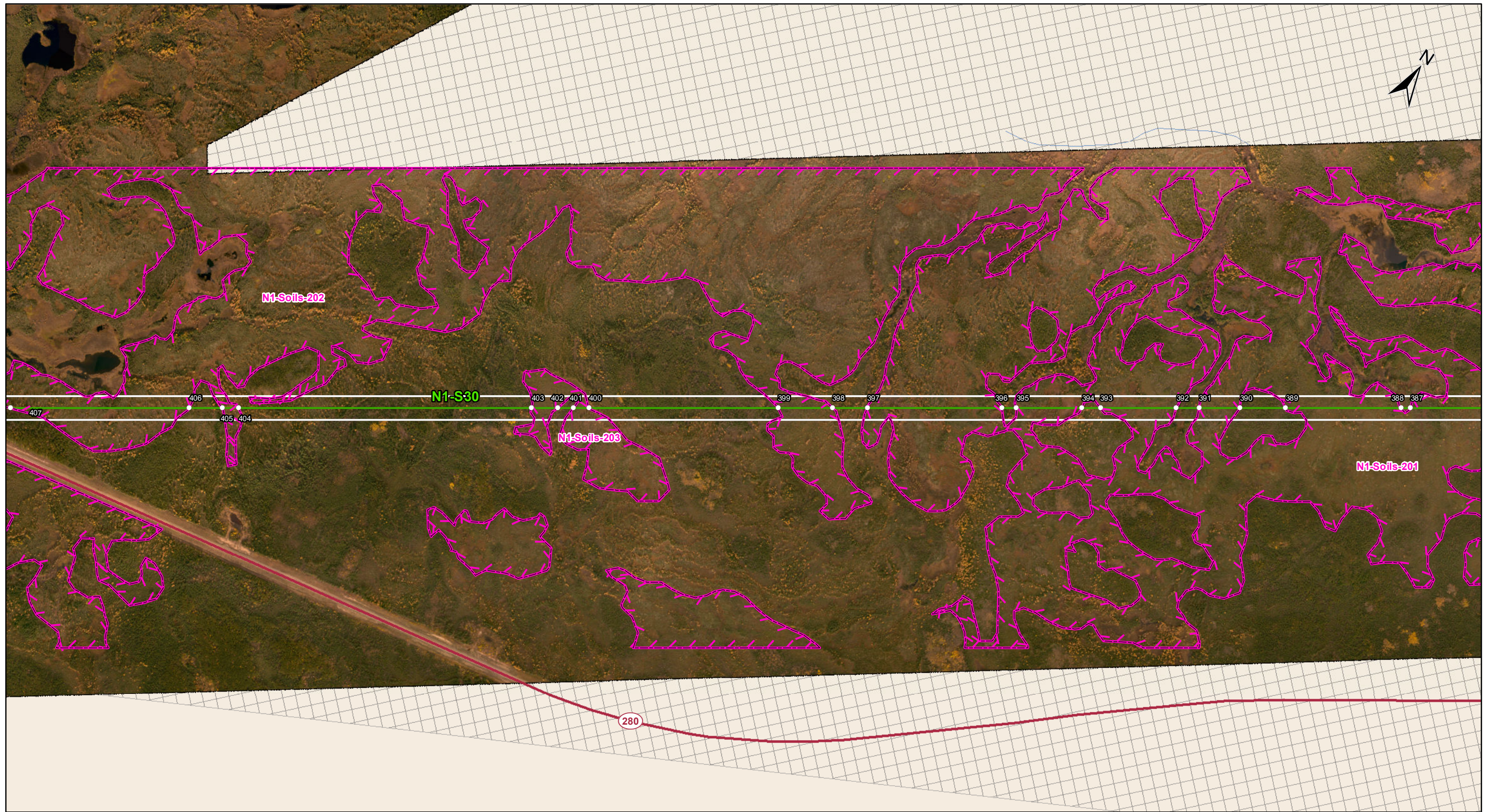
Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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 - Railway (Discontinued)
 - Mining

- Project Infrastructure**
- * Angle Tower Locations
 - BPIII Final Preferred Route
 - 66 m Right of Way

- Points of Access***
- Proposed Access Point
 - Major Stream Crossing
 - ▲ Abandoned Rail Crossing
 - ▲ Rail Crossing
 - Transmission Line Crossing
 - Proposed Access Route
- *Labels correspond to BPIII Access Management Database

- ESS Features**
- Soils and Terrain
 - Permafrost

**Bipole III Transmission Project
 Construction Environmental Protection Plan
 Construction Section N1
 Environmentally Sensitive Site Locations**

MAP NUMBER : 57

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S30	N1-Soils-201	Permafrost	Site: 386 to 387	E-626891 N-6218263	E-626576 N-6218060	14N	375 m
N1-S30	N1-Soils-201	Permafrost	Site: 388 to 389	E-626554 N-6218045	E-626291 N-6217877	14N	312 m
N1-S30	N1-Soils-201	Permafrost	Site: 390 to 391	E-626187 N-6217809	E-626094 N-6217750	14N	110 m
N1-S30	N1-Soils-201	Permafrost	Site: 392 to 393	E-626041 N-6217716	E-625868 N-6217605	14N	205 m
N1-S30	N1-Soils-201	Permafrost	Site: 394 to 395	E-625826 N-6217578	E-625677 N-6217482	14N	177 m
N1-S30	N1-Soils-201	Permafrost	Site: 396 to 397	E-625644 N-6217461	E-625337 N-6217263	14N	364 m
N1-S30	N1-Soils-202	Permafrost	Site: 398 to 399	E-625258 N-6217212	E-625133 N-6217132	14N	147 m
N1-S30	N1-Soils-202	Permafrost	Site: 404 to 405	E-623904 N-6216341	E-623866 N-6216317	14N	45 m
N1-S30	N1-Soils-202	Permafrost	Site: 406 to 407	E-623791 N-6216269	E-623383 N-6216007	14N	485 m
N1-S30	N1-Soils-203	Permafrost	Site: 400 to 401	E-624702 N-6216855	E-624666 N-6216832	14N	42 m
N1-S30	N1-Soils-203	Permafrost	Site: 402 to 403	E-624632 N-6216809	E-624571 N-6216771	14N	71 m

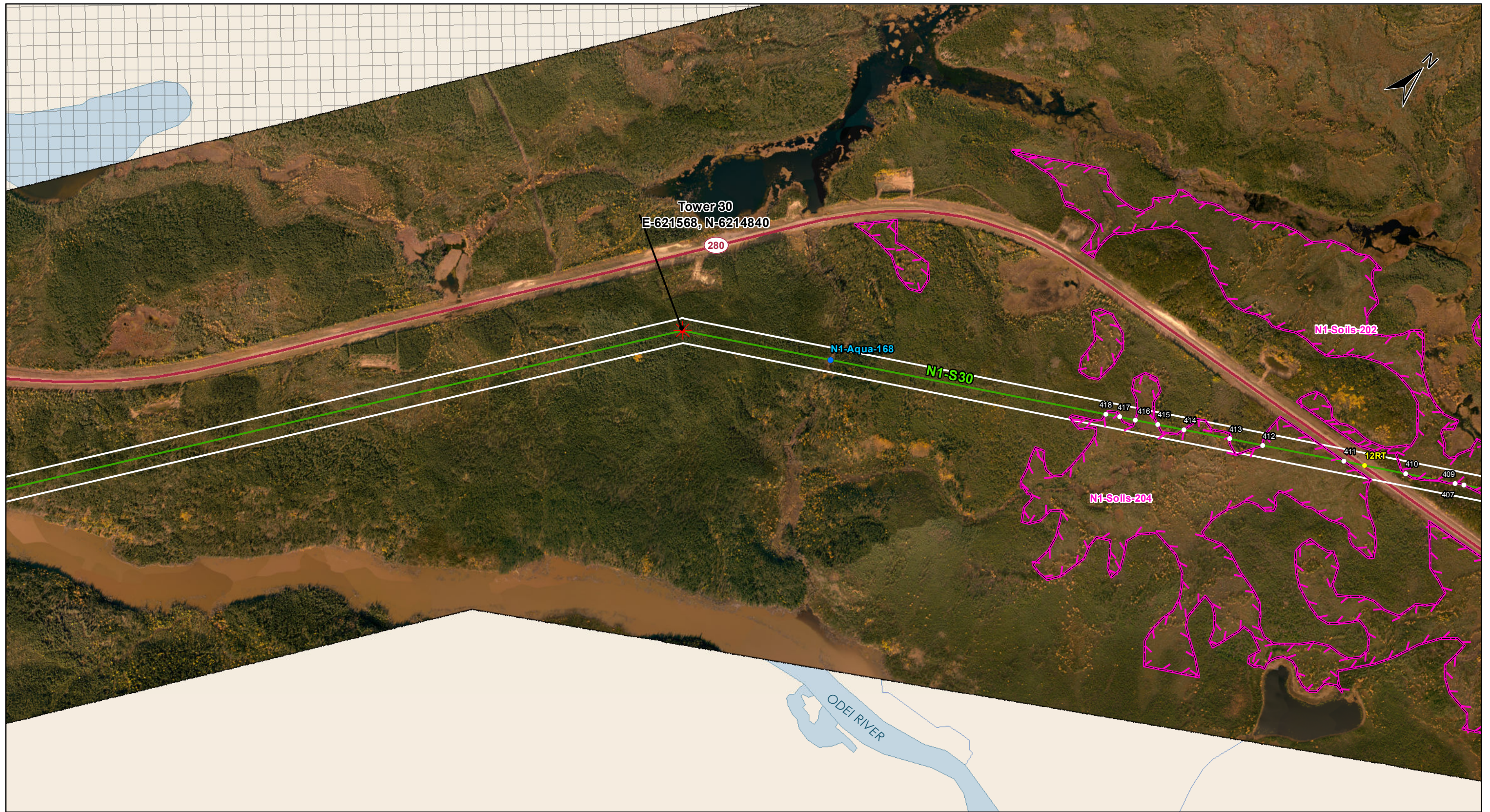
Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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Land Base

- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining

Project Infrastructure

- Angle Tower Locations
- BPIII Final Preferred Route
- 66 m Right of Way

Points of Access*

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

*Labels correspond to BPIII Access Management Database

ESS Features

- Water
 - Water Crossing
- Soils and Terrain
 - Permafrost

**Bipole III Transmission Project
 Construction Environmental Protection Plan
 Construction Section N1
 Environmentally Sensitive Site Locations**

MAP NUMBER : 58

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S31	N1-Aqua-168	Unnamed tributary of Burntwood River	621912	6215061	14N	N/A	N/A	Moderate	Marginal

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S30	N1-Soils-202	Permafrost	Site: 406 to 407	E-623791 N-6216269	E-623383 N-6216007	14N	485 m
N1-S30	N1-Soils-202	Permafrost	Site: 409 to 410	E-623364 N-6215994	E-623248 N-6215920	14N	137 m
N1-S30	N1-Soils-204	Permafrost	Site: 411 to 412	E-623105 N-6215828	E-622916 N-6215706	14N	225 m
N1-S30	N1-Soils-204	Permafrost	Site: 413 to 414	E-622839 N-6215657	E-622733 N-6215589	14N	125 m
N1-S30	N1-Soils-204	Permafrost	Site: 415 to 416	E-622672 N-6215549	E-622619 N-6215515	14N	62 m
N1-S30	N1-Soils-204	Permafrost	Site: 417 to 418	E-622584 N-6215493	E-622551 N-6215471	14N	39 m

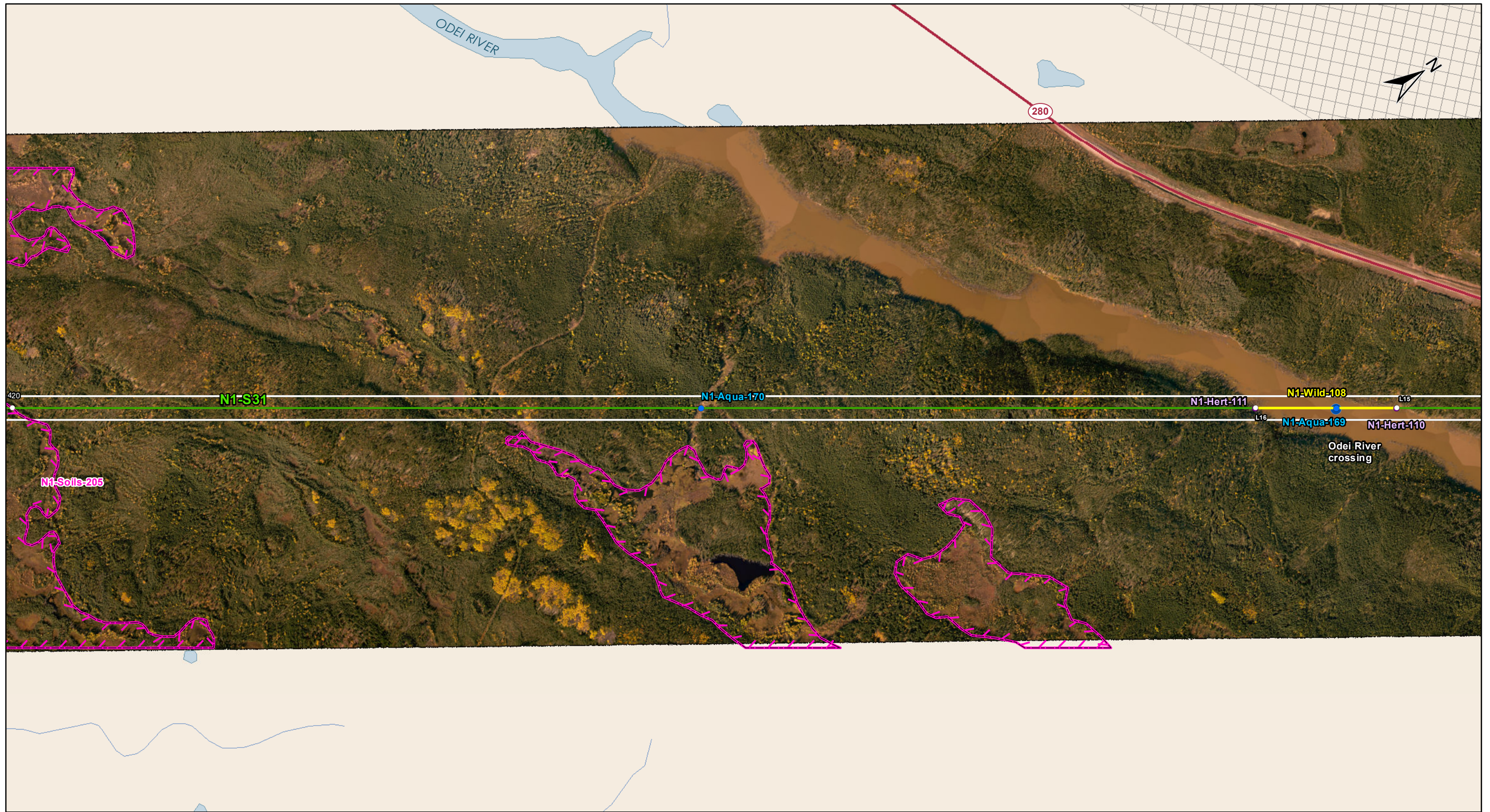
Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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- Land Base**
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- Project Infrastructure**
- ★ Angle Tower Locations
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 - 66 m Right of Way

- Points of Access***
- Proposed Access Point
 - Major Stream Crossing
 - ▲ Abandoned Rail Crossing
 - ▲ Rail Crossing
 - Transmission Line Crossing
 - Proposed Access Route
- *Labels correspond to BPIII Access Management Database

- ESS Features**
- Heritage**
 - Archaeological
 - Water**
 - Water Crossing
 - Wildlife**
 - Birds and Habitat
 - Soils and Terrain**
 - ▨ Permafrost

**Bipole III Transmission Project
 Construction Environmental Protection Plan
 Construction Section N1
 Environmentally Sensitive Site Locations**

MAP NUMBER : 59

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S31	N1-Hert-110	Odei River	620453	6213114	14N
N1-S31	N1-Hert-111	Odei River	620246	6212793	14N

Potential Effects:

Potential disturbance to Heritage Resources

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
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S31	N1-Aqua-169	Odei River	620364	6212978	14N	119m	119m	Low	Important

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from September 1 - July 15

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S31	N1-Aqua-170	Unnamed Tributary of Odei River	619430	6211533	14N	19.01m	19.01m	Low	Marginal

Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S31	N1-Wild-108	Odei River crossing; movement route for raptors and waterfowl	Site: L15 to L16	E- 620452 N- 6213114	E- 620245 N- 6212792	14N	382 m

Potential Effects:

Higher risk of wire collision, risk of wire collision is localized to the right-of-way

Specific Mitigation:

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain setback during timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

MAP NUMBER : 59 cont'd

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S31	N1-Soils-205	Permafrost	Site: 420 to 421	E-618416 N-6209963	E-618208 N-6209642	14N	382 m

Potential Effects:

Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid organic soils containing permafrost to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

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