

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

0 120 240 480  
 Metres

1:10,000

- 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 : 50

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-S27	N1-Aqua-155	Unnamed tributary of Assean Lake	643398	6234798	14N	5m	N/A	Low	Marginal
N1-S27	N1-Aqua-156	Unnamed tributary of Assean Lake	643387	6233758	14N	N/A	N/A	Moderate	Marginal
N1-S27	N1-Aqua-157	Unnamed tributary of Clay River	643376	6232818	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-S27	N1-Soils-188	Permafrost	Site: 320 to 321	E-643398 N-6234827	E-643398 N-6234789	14N	37 m
N1-S27	N1-Soils-188	Permafrost	Site: 322 to 323	E-643398 N-6234748	E-643397 N-6234682	14N	66 m
N1-S27	N1-Soils-189	Permafrost	Site: 324 to 325	E-643388 N-6233935	E-643388 N-6233887	14N	48 m

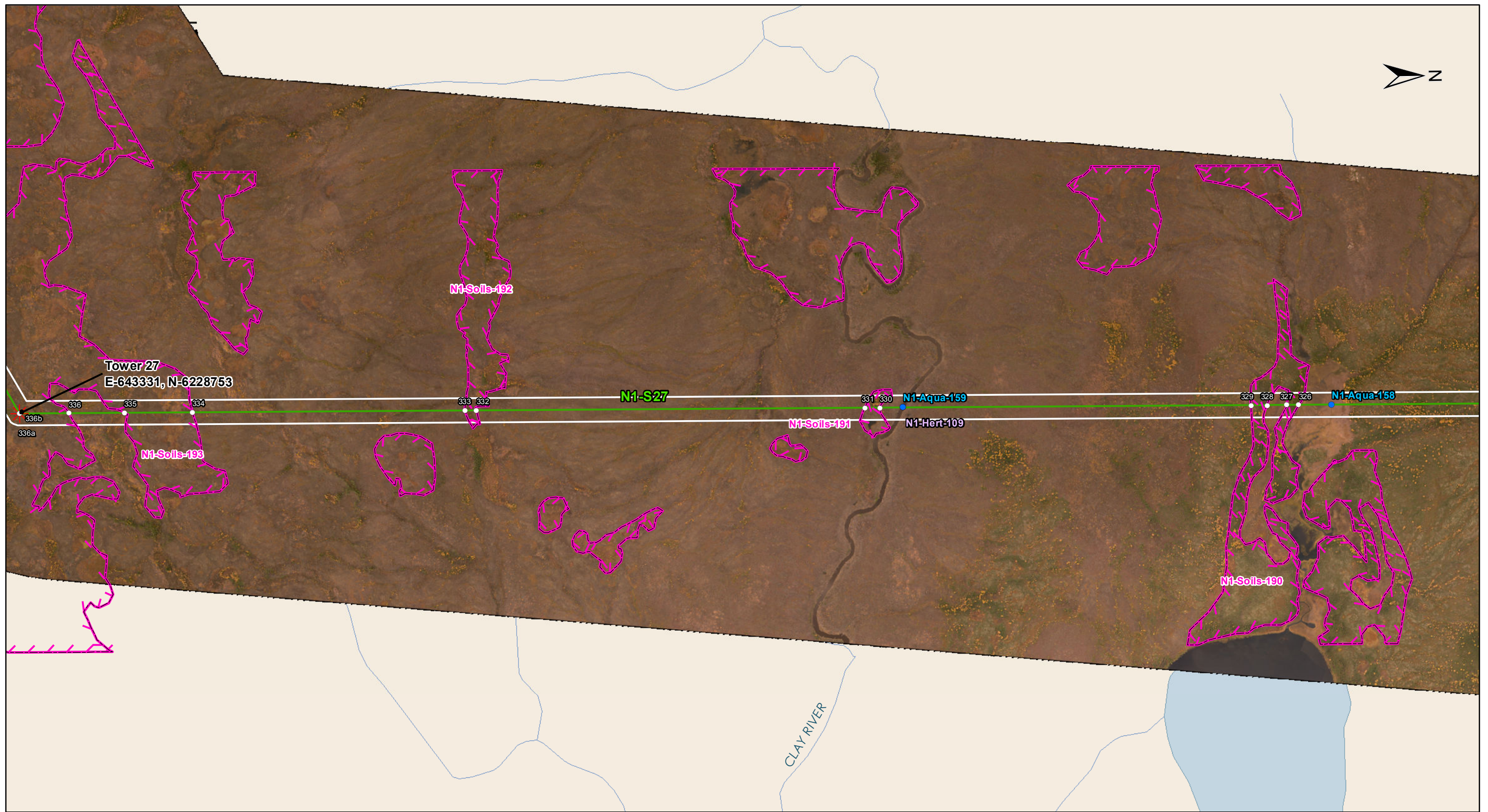
**Potential Effects:**

*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

DOCUMENT PATH: G:\GIS\PROJECT\_FOLDER\011440054\_BPIII\_EPP\ARCMAPIESS\_N1\BPIII\_CENVPP\_N1\N2\N3\N4\C1\SECTION\BASEMAP\_MAPBOOK\_BTIB\_STANTEC\_20131207.MXD



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**Land Base**

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- 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 : 51

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S27	N1-Hert-109	Clay River	643358	6231150	14N

**Potential Effects:**

*Potential disturbance to Heritage Resource*

**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-S27	N1-Aqua-158	Unnamed tributary of Clay River	643371	6232314	14N	N/A	2m	Moderate	Important
N1-S27	N1-Aqua-159	Clay River	643358	6231152	14N	10m	10m	Moderate	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; 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

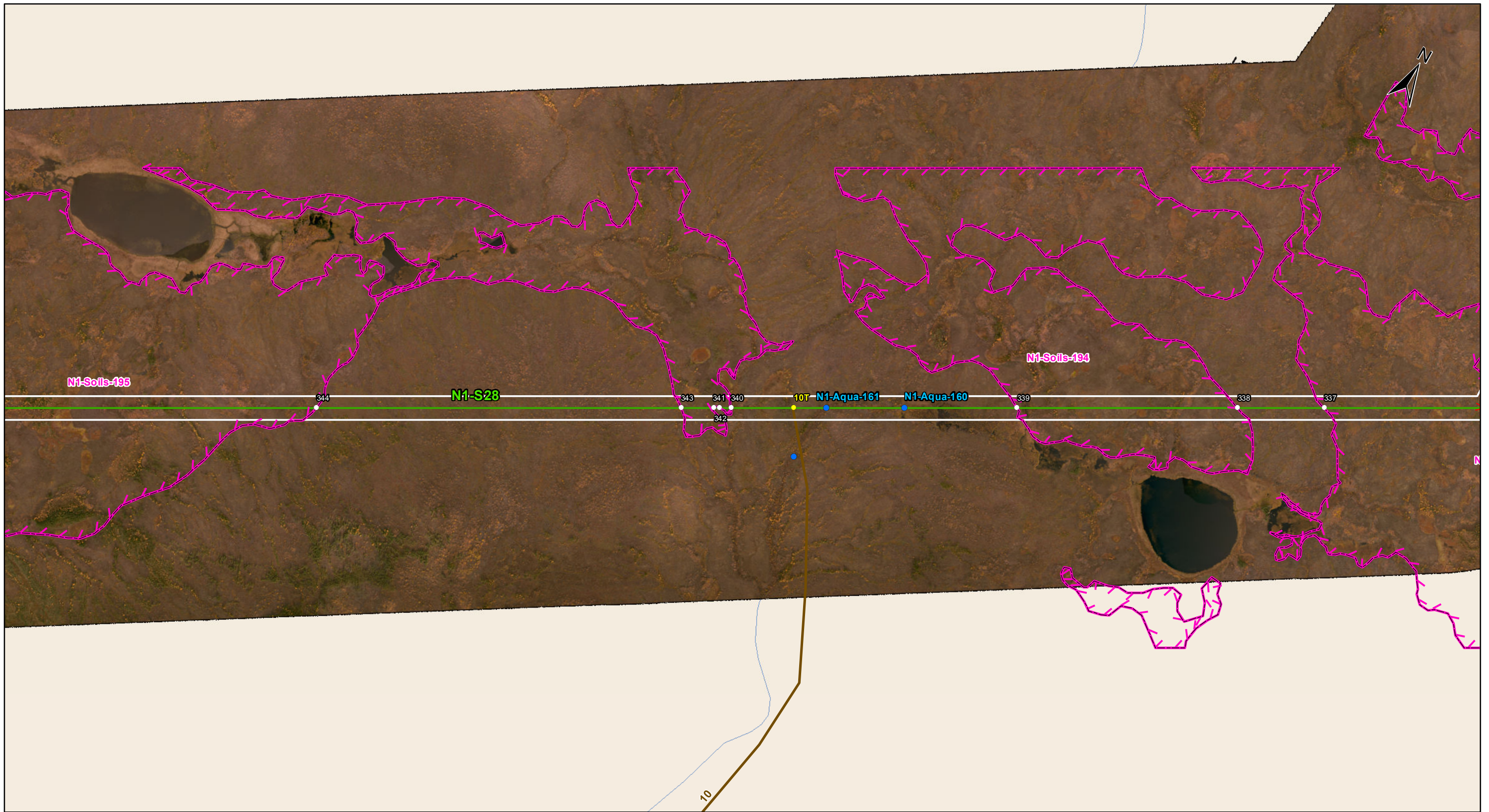
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S27	N1-Soils-190	Permafrost	Site: 326 to 327	E-643369 N-6232225	E-643369 N-6232192	14N	32 m
N1-S27	N1-Soils-190	Permafrost	Site: 328 to 329	E-643369 N-6232139	E-643368 N-6232095	14N	44 m
N1-S27	N1-Soils-191	Permafrost	Site: 330 to 331	E-643357 N-6231087	E-643356 N-6231047	14N	39 m
N1-S27	N1-Soils-192	Permafrost	Site: 332 to 333	E-643345 N-6229993	E-643344 N-6229962	14N	31 m
N1-S27	N1-Soils-193	Permafrost	Site: 334 to 335	E-643336 N-6229222	E-643334 N-6229037	14N	184 m
N1-S27	N1-Soils-193	Permafrost	Site: 336 to 336a	E-643332 N-6228887	E-643331 N-6228753	14N	134 m
N1-S28	N1-Soils-193	Permafrost	Site: 336b to 337	E-643331 N-6228753	E-642953 N-6228539	14N	434 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 (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
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- 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 : 52

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-S28	N1-Aqua-160	Unnamed tributary of Burntwood River	641964	6227981	14N	N/A	N/A	Moderate	Marginal
N1-S28	N1-Aqua-161	Unnamed tributary of Burntwood River	641779	6227876	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
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- 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-S28	N1-Soils-193	Permafrost	Site: 336b to 337	E-643331 N-6228753	E-642953 N-6228539	14N	434 m
N1-S28	N1-Soils-194	Permafrost	Site: 338 to 339	E-642749 N-6228424	E-642229 N-6228130	14N	597 m
N1-S28	N1-Soils-195	Permafrost	Site: 340 to 341	E-641554 N-6227749	E-641526 N-6227733	14N	31 m
N1-S28	N1-Soils-195	Permafrost	Site: 342 to 343	E-641513 N-6227726	E-641436 N-6227682	14N	89 m
N1-S28	N1-Soils-195	Permafrost	Site: 344 to 345	E-640576 N-6227196	E-639611 N-6226651	14N	1107 m

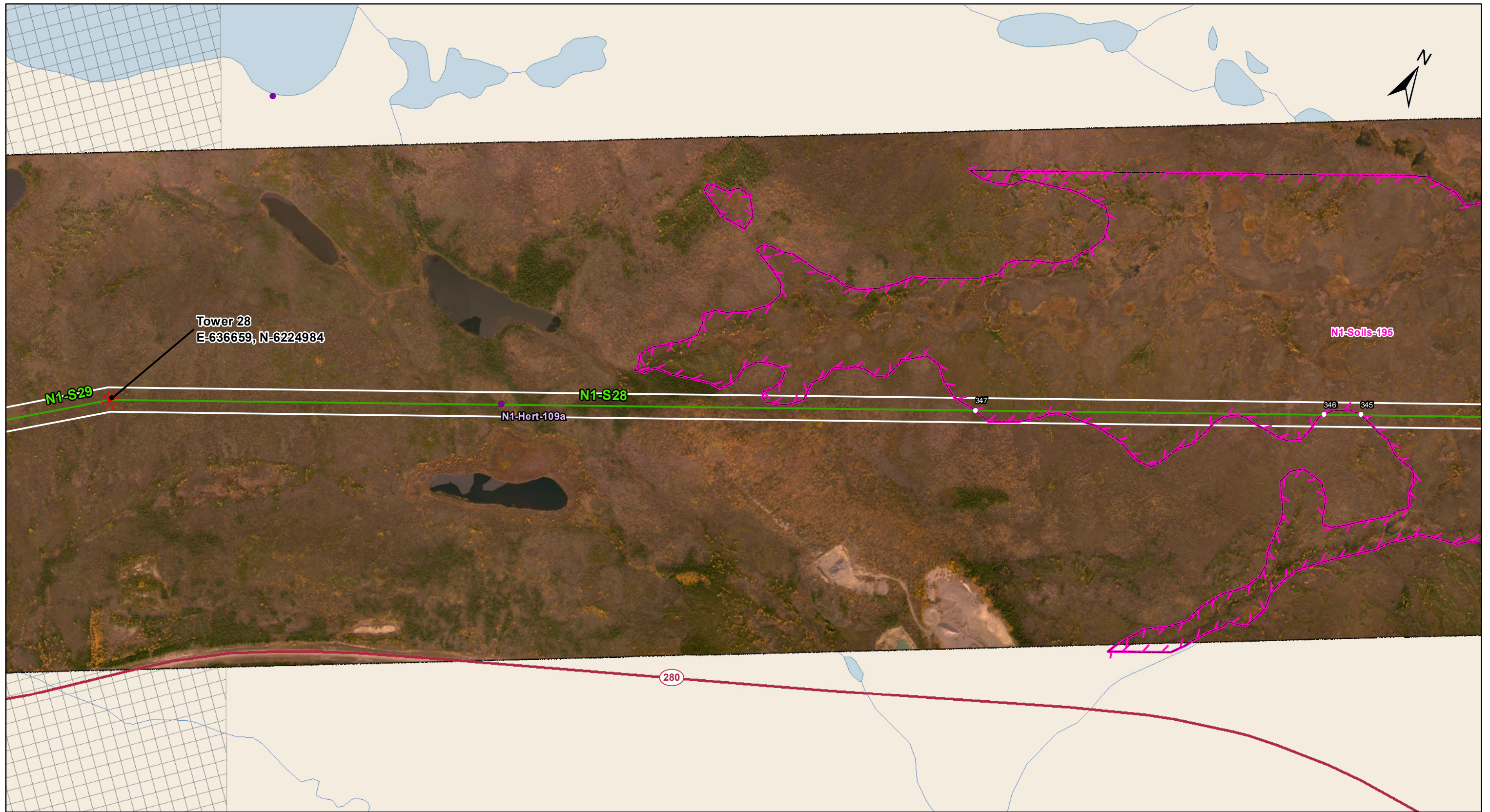
**Potential Effects:**

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

- Points of Access\***
- Proposed Access Point
  - Major Stream Crossing
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  - Rail Crossing
  - Transmission Line Crossing
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- ESS Features**
- Heritage**
- Archaeological
- Soils and Terrain**
- Permafrost

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

MAP NUMBER : 53

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S28	N1-Aqua-162	Possible portage route between Pukatawakan Lake and Burntwood	637585	6225507	14N

**Potential Effects:**

*Potential disturbance to Heritage Resource*

**Specific Mitigation:**

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- 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 : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S28	N1-Soils-195	Permafrost	Site: 344 to 345	E-640576 N-6227196	E-639611 N-6226651	14N	1107 m
N1-S28	N1-Soils-195	Permafrost	Site: 346 to 347	E-639525 N-6226602	E-638702 N-6226137	14N	945 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
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- Land Base**
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- \* Angle Tower Locations
  - BPIII Final Preferred Route
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- Points of Access\***
- Proposed Access Point
  - Major Stream Crossing
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- Water Crossing
- Soils and Terrain**
- Permafrost

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

MAP NUMBER : 54

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-S29	N1-Aqua-163	Unnamed tributary of Burntwood River	635357	6223851	14N	N/A	10m	Moderate	Marginal

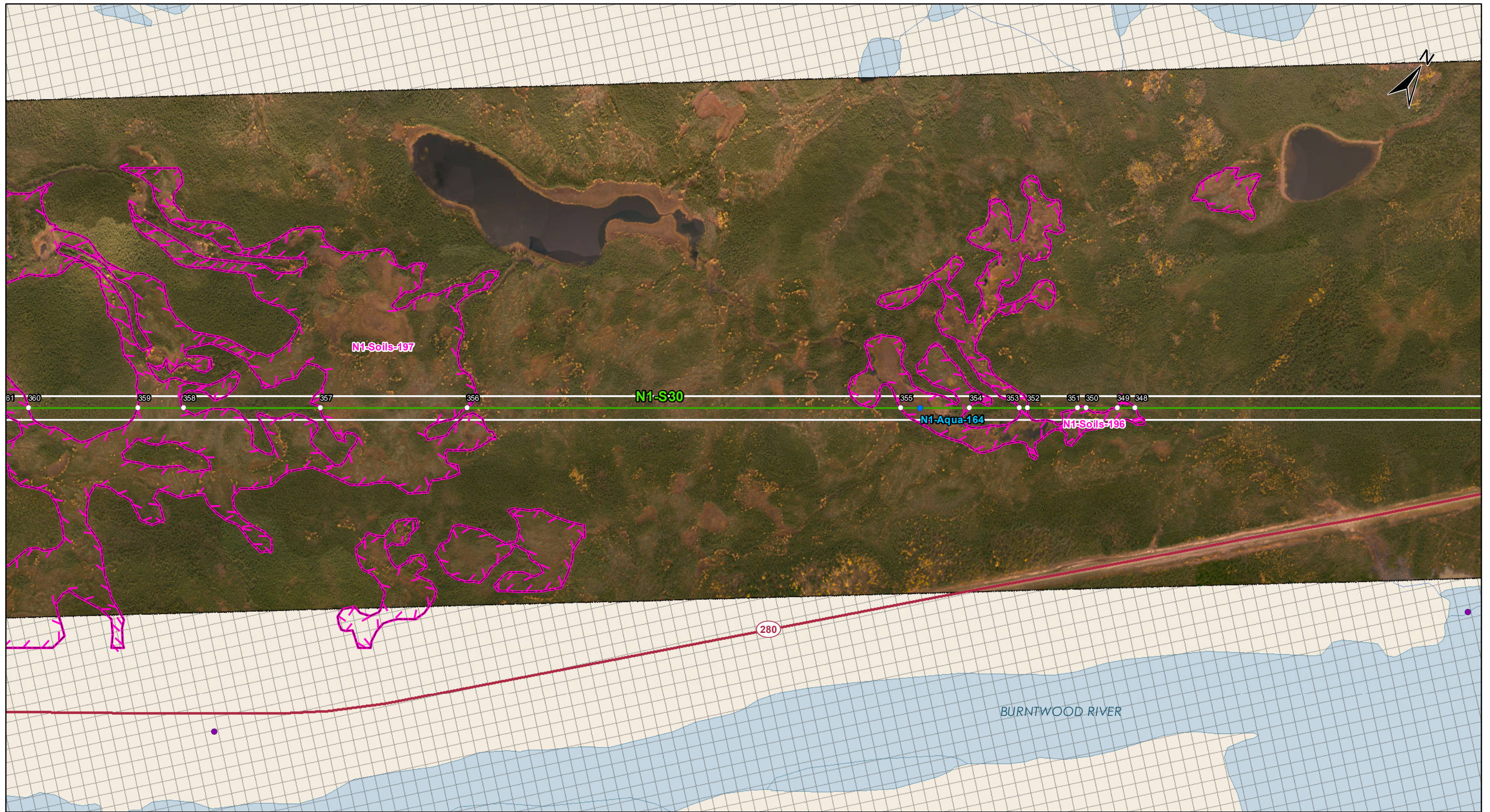
**Potential Effects:**

*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*

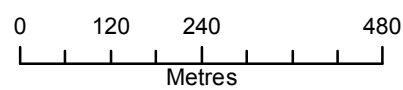
**Specific Mitigation:**

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- 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

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**Land Base**

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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
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**ESS Features**

- Heritage**
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**Bipole III Transmission Project  
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 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 55

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-164	Unnamed tributary of Burntwood River	632120	6221625	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
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- 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-196	Permafrost	Site: 348 to 349	E-632609 N-6221940	E-632568 N-6221913	14N	48 m
N1-S30	N1-Soils-196	Permafrost	Site: 350 to 351	E-632497 N-6221868	E-632478 N-6221855	14N	23 m
N1-S30	N1-Soils-196	Permafrost	Site: 352 to 353	E-632363 N-6221781	E-632345 N-6221770	14N	21 m
N1-S30	N1-Soils-196	Permafrost	Site: 354 to 355	E-632231 N-6221697	E-632074 N-6221595	14N	187 m
N1-S30	N1-Soils-197	Permafrost	Site: 356 to 357	E-631085 N-6220960	E-630751 N-6220744	14N	397 m
N1-S30	N1-Soils-197	Permafrost	Site: 358 to 359	E-630439 N-6220544	E-630335 N-6220477	14N	122 m
N1-S30	N1-Soils-197	Permafrost	Site: 360 to 361	E-630086 N-6220317	E-630026 N-6220278	14N	71 m

**Potential Effects:**

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

**Specific Mitigation:**

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- 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