Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: April 10, 2014
Version: Draft

0 125 250 500
Metres

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Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Mining
- Provincial Forest

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

Wildlife
- Birds and Habitat

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 195

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S16	N4-Hert-108	Waywayanagan River	368110	5820684	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

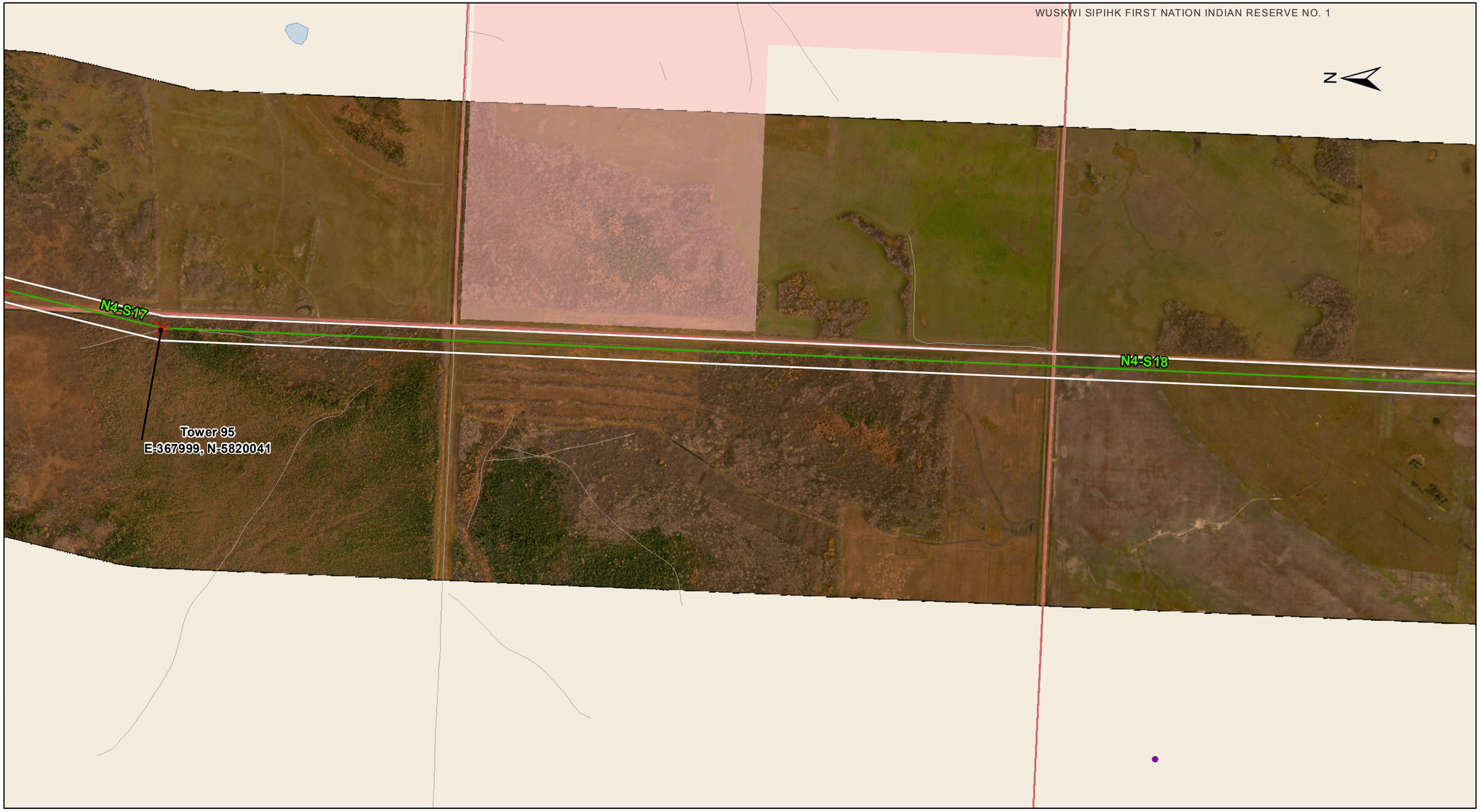
Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N4-S16	N4-Aqua-129	Unnamed Tributary of Bell Creek	367023	5824173	14N	N/A	N/A	None	None
N4-S16	N4-Aqua-130	Wawayanagan River	368103	5820699	14N	2m	3m	Moderate	Important

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 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 work or fording from April 1 to June 30



Manitoba Hydro

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Version: Draft

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Land Base
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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
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Proposed Access Route

*Labels correspond to BPIII Access Management Database

ESS Features
Heritage
- Archaeological

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 196

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Coordinate System: UTM Zone 14N NAD83
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Date Created: April 10, 2014
Version: Draft

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Metres

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Land Base
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Project Infrastructure
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ESS Features
Heritage
- Archaeological

Water
- Water Crossing

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 197

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S16	N4-Hert-109	Creek	367904	5816287	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

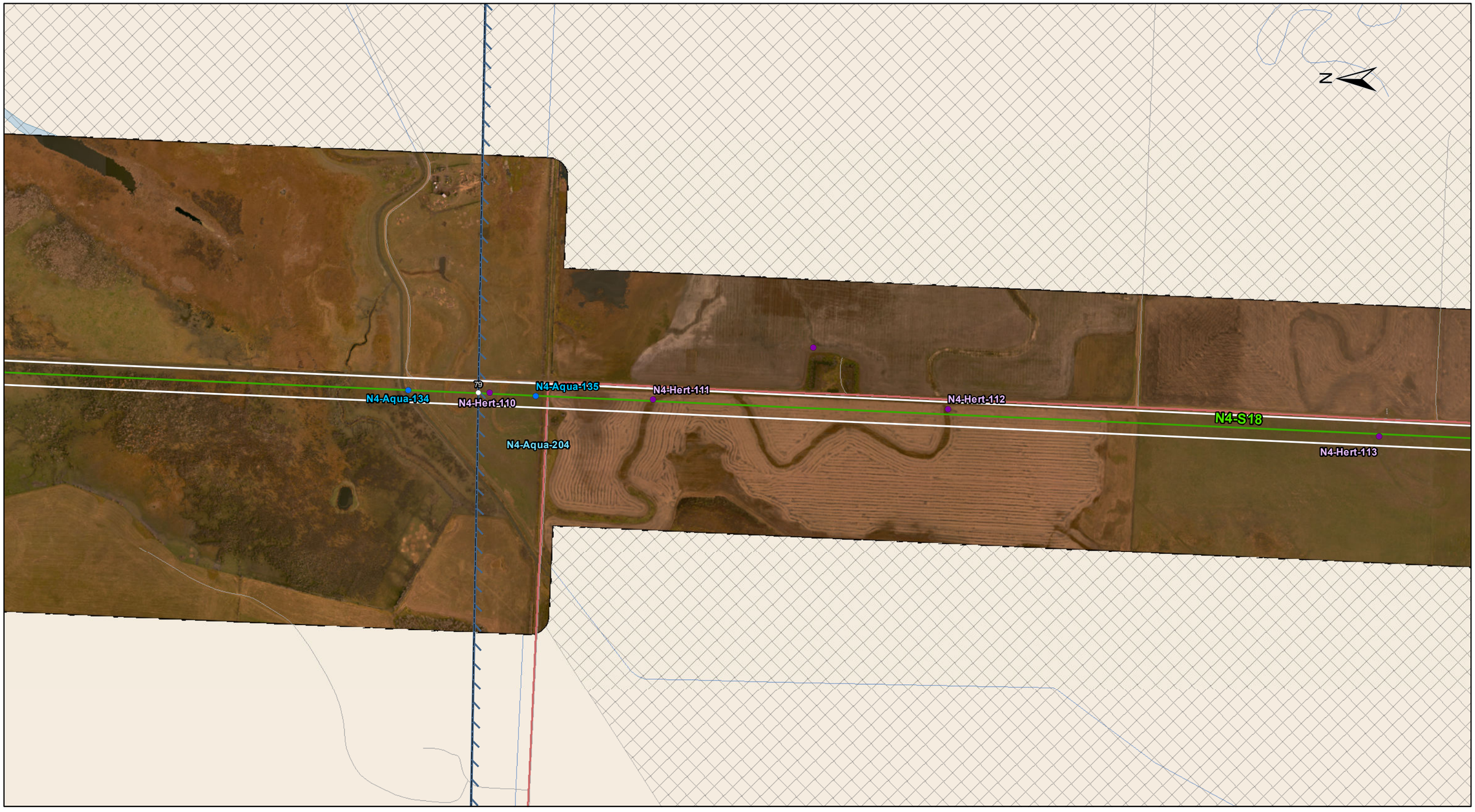
Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N4-S18	N4-Aqua-131	Unnamed Creek	367905	5816290	14N	N/A	N/A	Low	No Fish Habitat
N4-S18	N4-Aqua-132	Fishtown Creek	367842	5813788	14N	N/A	N/A	Low	Marginal
N4-S18	N4-Aqua-133	Unnamed agricultural drain	367817	5812793	14N	N/A	4m	Low	Important

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 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 work or fording from April 1 to June 30



Manitoba Hydro

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Date Created: April 10, 2014
Version: Draft

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Metres
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Land Base
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- Railway (Discontinued)
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- Mining
- Provincial Forest

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

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 198

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S18	N4-Hert-110	Former Creek Bed	367780	5811292	14N
N4-S18	N4-Hert-111	Former Creek Bed	367770	5810847	14N
N4-S18	N4-Hert-112	Creek	367759	5810041	14N
N4-S18	N4-Hert-113	Former River Bed	367705	5808865	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
N4-S18	N4-Aqua-134	Swede Creek	367784	5811514	14N	N/A	7m	Low	Important
N4-S18	N4-Aqua-135	Unnamed agricultural drain	367775	5811166	14N	N/A	2m	Low	Marginal

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 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 work or fording from April 1 to June 30

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S18	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 79 to 80	E-367779 N-5811322	E-367686 N-5807954	14N	3370m

Potential Effects:

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

Specific Mitigation:

- Marshalling 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.

MAP SHEET FULLY WITHIN THE N4-AQUA-204 FEATURE

N4-Aqua-204

N

N4-S18

N4-S19

Woody River crossing

N4-Aqua-137

L19 L20

N4-Hert-114

N4-Wild-108

N4-Aqua-136

N4-Aqua-139

N4-Hert-116

N4-Wild-109

L21 L22

N4-Hert-115

N4-Aqua-138

80

81

Tower 96
E-367686, N-5807954

WOODY RIVER

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: April 10, 2014
Version: Draft

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Metres

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Land Base
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- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Mining
- Provincial Forest

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

Wildlife
- Birds and Habitat

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 199

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S19	N4-Hert-114	Woody River	369392	5807907	14N
N4-S19	N4-Hert-115	Creek	370890	5807865	14N
N4-S19	N4-Hert-116	Creek	371335	5807852	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
N4-S19	N4-Aqua-136	Unnamed tributary of Woody River	368893	5807920	14N	N/A	N/A	Low	Marginal
N4-S19	N4-Aqua-137	Woody River	369365	5807906	14N	30m	28m	High	Important
N4-S19	N4-Aqua-138	Tributary of Woody River	370909	5807864	14N	11.7m	9.7m	Moderate	Marginal
N4-S19	N4-Aqua-139	Tributary of Woody River	371353	5807852	14N	N/A	N/A	Low	Marginal

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 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 work or fording from April 1 to June 30

ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S19	N4-Wild-108	Waterfowl sensitivity area	Site: L19 to L20	E-369335 N-5807908	E-369386 N-5807906	14N	50m
N2-S19	N4-Wild-109	Waterfowl sensitivity area	Site: L21 to L22	E-370876 N-5807865	E-370935 N-5807863	14N	59m

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 applicable setback during nesting and breeding 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

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S18	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 79 to 80	E-367779 N-5811322	E-367686 N-5807954	14N	3370m
N4-S19	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 81 to 82	E-367686 N-5807954	E-372545 N-5807818	14N	4860m

Potential Effects:

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

Specific Mitigation:

- Marshalling 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.

MAP SHEET FULLY WITHIN THE N4-AQUA-204 FEATURE

N4-Aqua-204

N

83 82

Tower 97
E-372545, N-5807819

N4-Aqua-140

N4-Hert-117

N4-S19

N4-Aqua-141

N4-Hert-118

N4-Hert-119

N4-Aqua-142

N4-Aqua-143

N4-Hert-120

Swan
River
(oxbow lake) crossing

N4-Wild-110

L23

N4-Aqua-144

L24

N4-Hert-121

N4-Hert-122

N4-Aqua-145

Swan River
(Oxbow Lake)

L25

N4-Wild-111

L26

N4-Hert-123

L27

N4-Aqua-146

N4-Hert-124

L28

N4-Hert-125

N4-Wild-112

N4-S20

Swan
River
crossing

POPLAR CREEK

SWAN RIVER

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
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Date Created: April 10, 2014
Version: Draft

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Metres

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Land Base
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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
- 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

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 200

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S20	N4-Hert-117	Poplar Creek	372288	5807826	14N
N4-S20	N4-Hert-118	Poplar Creek	372517	5806746	14N
N4-S20	N4-Hert-119	Poplar Creek	372513	5806601	14N
N4-S20	N4-Hert-120	Poplar Creek	372506	5806363	14N
N4-S20	N4-Hert-121	Swan River	372495	5805936	14N
N4-S20	N4-Hert-122	Swan River	372475	5805556	14N
N4-S20	N4-Hert-123	Swan River	372481	5805409	14N
N4-S20	N4-Hert-124	Swan River	372478	5805314	14N
N4-S20	N4-Hert-125	Swan River	372475	5805195	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: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S19	N4-Wild-110	Waterfowl sensitivity area	Site: L23 to L24	E-372497 N-5806018	E-372495 N-5805949	14N	68m
N2-S19	N4-Wild-111	Waterfowl sensitivity area	Site: L25 to L26	E-372480 N-5805395	E-372478 N-5805337	14N	54m
N2-S19	N4-Wild-112	Waterfowl sensitivity area	Site: L27 to L28	E-372476 N-5805260	E-372475 N-5805206	14N	57m

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 applicable setback during nesting and breeding 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

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N4-S20	N4-Aqua-140	Poplar Creek	372265	5807827	14N	N/A	N/A	Low	Marginal
N4-S20	N4-Aqua-141	Poplar Creek	372516	5806728	14N	27m	N/A	Low	No Fish Habitat
N4-S20	N4-Aqua-142	Poplar Creek	372513	5806612	14N	14m	N/A	Low	No Fish Habitat
N4-S20	N4-Aqua-143	Poplar Creek	372507	5806380	14N	17m	N/A	Low	No Fish Habitat
N4-S20	N4-Aqua-144	Oxbow lake/wetland of Swan River	372497	5805981	14N	N/A	N/A	Low	Marginal
N4-S20	N4-Aqua-145	Oxbow lake/wetland of Swan River	372480	5805375	14N	N/A	N/A	Low	No Fish Habitat
N4-S20	N4-Aqua-146	Swan River	372476	5805227	14N	50m	50m	Moderate	Important

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 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 work or fording from April 1 to June 30

ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S19	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 81 to 82	E-367686 N-5807954	E-372545 N-5807818	14N	4860m
N4-S20	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 83 to 84	E-372545 N-5807818	E-372374 N-5801434	14N	6387m

Potential Effects:

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

Specific Mitigation:

- Marshalling 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.

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Coordinate System: UTM Zone 14N NAD83
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Version: Draft

0 125 250 500
Metres
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Land Base
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Project Infrastructure
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- 66 m Right of Way

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- 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

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section N4
Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 201

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S20	N4-Hert-126	Kitzul Drain	372435	5803752	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
N4-S20	N4-Aqua-147	Kitzul Drain	372436	5803765	14N	10m	10m	Low	Marginal

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 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

ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S20	N4-Wild-113	Waterfowl sensitivity area	Site: L29 to L30	E-372437 N-5803782	E-372435 N-5803718	14N	64m

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 applicable setback during nesting and breeding 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

ESS Group: Groundwater

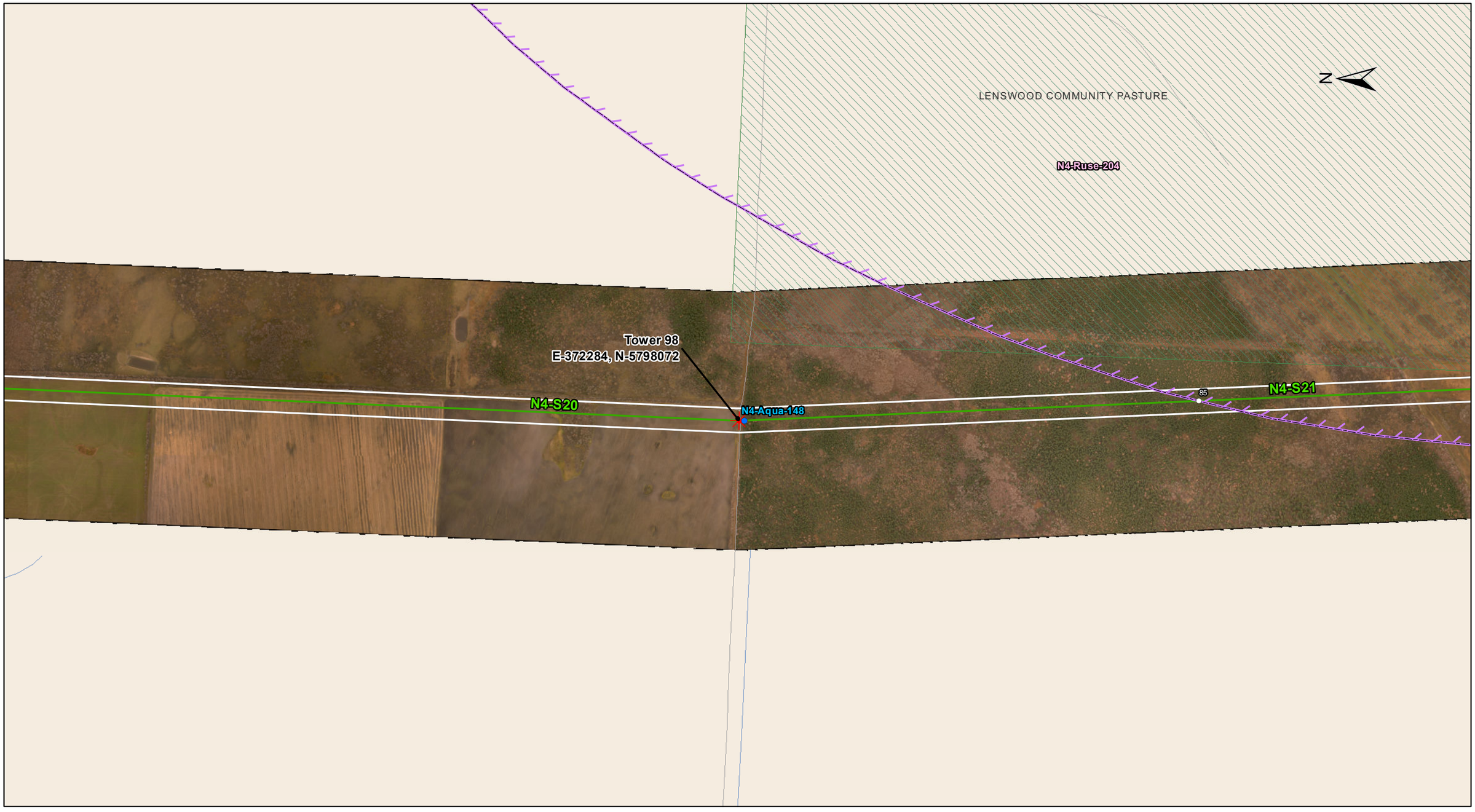
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S20	N4-Aqua-204	Aquifers Vulnerable to contamination	Site: 83 to 84	E-372545 N-5807818	E-372374 N-5801434	14N	6387m

Potential Effects:

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

Specific Mitigation:

- Marshalling 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.



Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: April 10, 2014
Version: Draft

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Metres

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Land Base
- Transmission Line
- Highway
- Major Road
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- Winter Road
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Project Infrastructure
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Points of Access*
- Proposed Access Point
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*Labels correspond to BPIII Access Management Database

ESS Features
Water
- Water Crossing

Resource Use
- Food/Medicinal

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

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Map 202

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N4-S21	N4-Aqua-148	Unnamed agricultural drain	372284	5798058	14N	N/A	N/A	Low	Marginal

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 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 work or fording from April 1 to June 30

ESS Group: Food/Medicinal

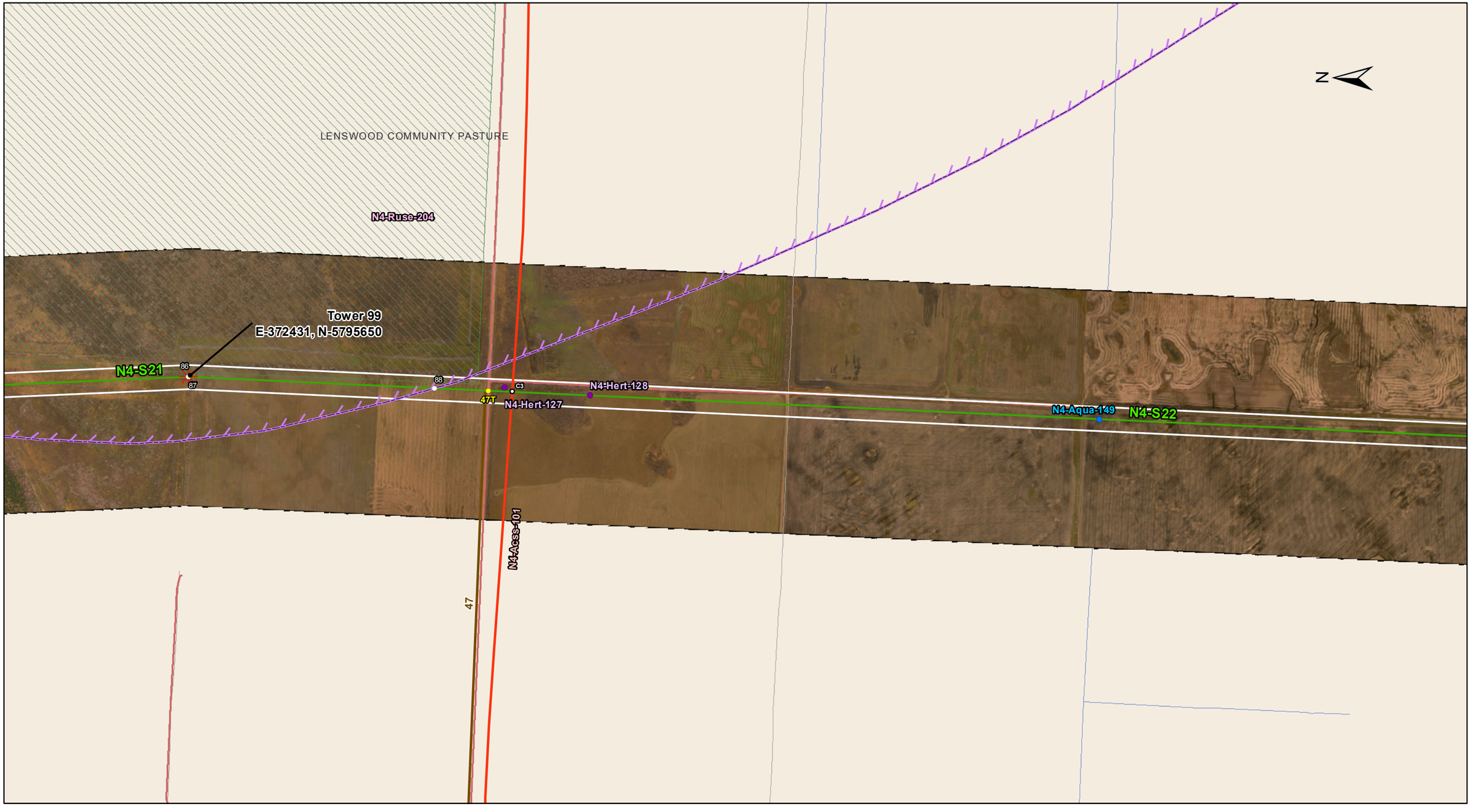
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S21	N4-Ruse-204	Plant Harvest	Site: 85 to 86	E-372360 N-5796820	E-372430 N-5795650	14N	1172m

Potential Effects:

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible



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ESS Features
Heritage
- Archaeological

Water
- Water Crossing

Access
- Intersection

Resource Use
- Food/Medicinal

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Map 203

ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N4-S22	N4-Hert-127	Trails	372417	5794787	14N
N4-S22	N4-Hert-128	Trails	372400	5794552	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
N4-S22	N4-Aqua-149	Unnamed agricultural drain	372359	5793158	14N	N/A	9m	Low	marginal

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 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 work or fording from April 1 to June 30

ESS Group: Intersection

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
N4-S22	N4-Acss-101	C3	Snowmobile Trail	E-372405 N-5794764	14N

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation:

- Identify and flag prior to start of work
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

ESS Group: Food/Medicinal

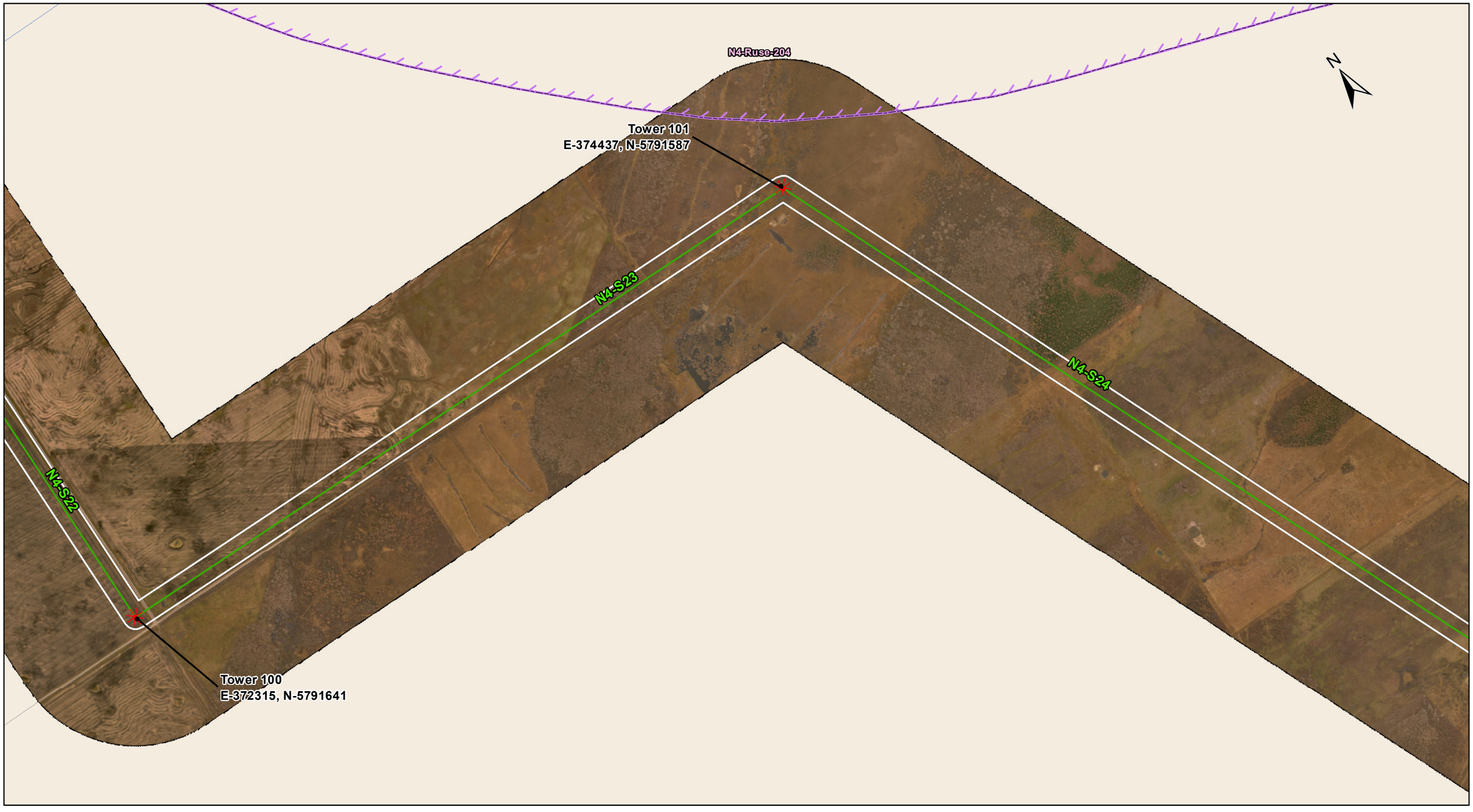
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N4-S21	N4-Ruse-204	Plant Harvest	Site: 85 to 86	E-372360 N-5796820	E-372430 N-5795650	14N	1172m
N4-S22	N4-Ruse-204	Plant Harvest	Site: 87 to 88	E-372430 N-5795650	E-372411 N-5794977	14N	672m

Potential Effects:

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible



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Resource Use
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Map 204

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