*MAP SEGMENT FULLY WITHIN THE C1-WILD-200 FEATURE

C1-Wild-200

C1-Wild-101

Swan-Pelican Provincial Forest

C1-Eco-300

C1-Wild-100

C1-Hert-102

6

17

C1-S01

C1-Hert-200

N

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

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

Wildlife
- Birds and Habitat
- Mammals and Habitat

Ecosystem
- Species of Concern

Heritage
- Heritage, Archaeological
- Heritage, Cultural

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 212

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAPIESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

MAP NUMBER: 212

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Wild-100	Bird migration route identified by community	Site: 15 to 16	E-389871 N-5770447	E-395171 N-5765667	14N	7137 m

Potential Effects:

Change in bird migration route due to transmission line

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 : Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Eco-300	Species of Concern	Site: 5 to 6	E-386187 N-5773771	E-393457 N-5767213	14N	9791 m

Potential Effects:

Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

ESS Group : Cultural

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Hert-200	Plant Gathering Area	Site: 1 to 2	E-379494 N-5779807	E-396683 N-5764303	14N	23149 m

Potential Effects:

Potential for presence of important architectural heritage resources

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

ESS Group : Mammal and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Wild-200	Moose Sensitive Area	Site: 13 to 14	E-389782 N-5770528	E-395210 N-5765631	14N	7311 m

Potential Effects:

Potential disturbance to and loss of sensitive moose habitat

Specific Mitigation:

- Manitoba Hydro will not support development of designated motorized recreational trail use within areas described above if requested
- No shear blading to clear the ROW in the sensitive range Selective cutting methods to be used leaving low shrub and herb plant communities on the ROW
- Slash piles will be stockpiled every 200m-400m during clearing, adjacent to centerline trail, these piles will be placed on centerline trail post construction
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW
- Selective cutting to remove danger trees only on portions of the ROW to reduce line of site for hunters and predators and facilitate wildlife movement across the ROW
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible Available slash < 1 m in height will also be evenly distributed over the access trail to reduce the possibility of use be ATV traffic

MAP NUMBER: 212 cont'd

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Hert-102	Area of Heritage Resource Findings	Site: 17 to 18	E-394350 N-5766408	E-396683 N-5764303	14N	3142 m

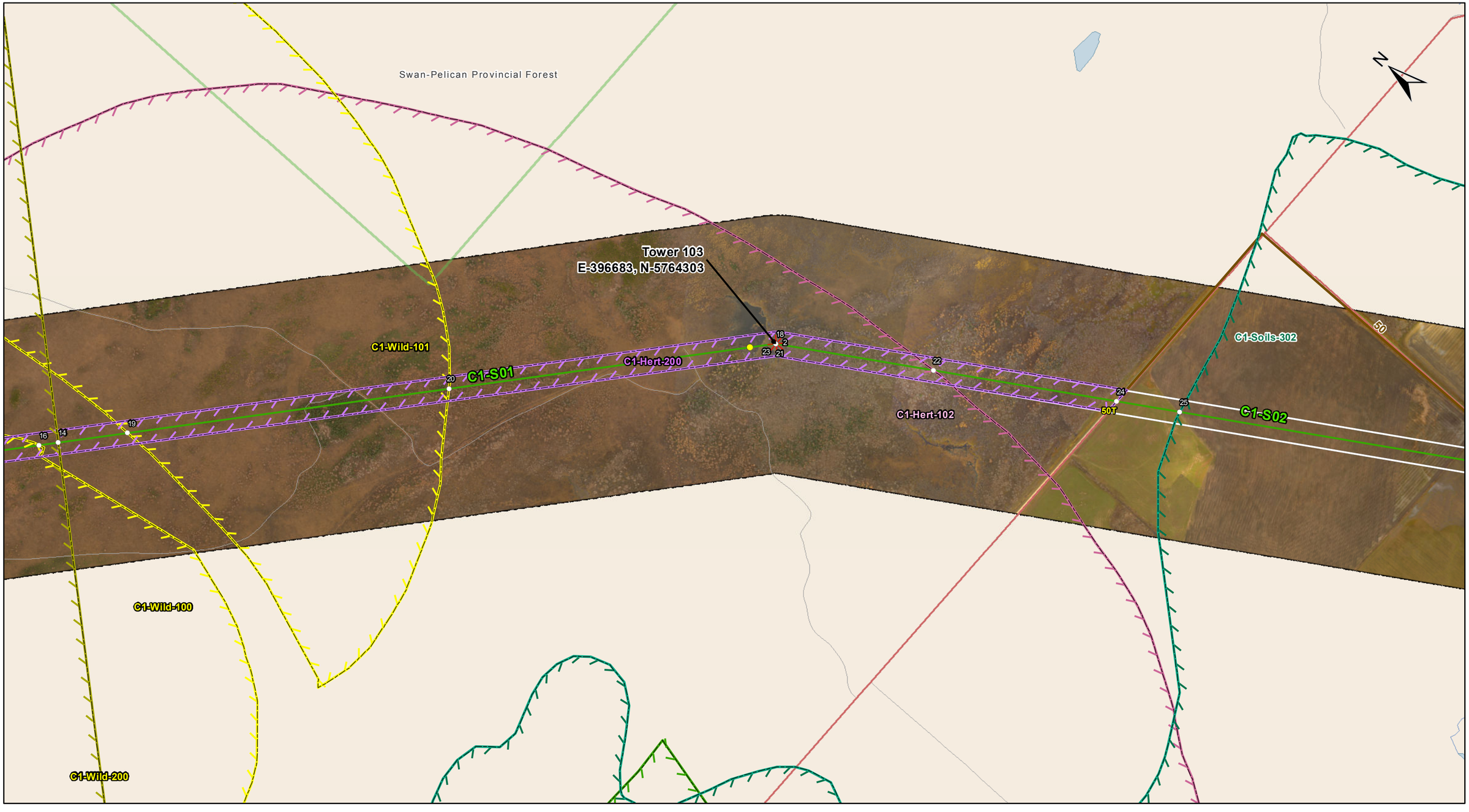
Potential Effects:

Loss of heritage resources due to inadvertent disturbance of sites

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

This page is intentionally left blank.



Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

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

Wildlife
- Birds and Habitat

Wildlife
- Birds and Habitat
- Mammals and Habitat

Ecosystem
- Species of Concern

Heritage
- Heritage, Archaeological
- Heritage, Cultural

Soils and Terrain
- Erosion

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 213

MAP NUMBER: 213

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Wild-100	Bird migration route identified by community	Site: 15 to 16	E-389871 N-5770447	E-395171 N-5765667	14N	7137 m
C1-S01	C1-Wild-101	Bird migration route identified by community	Site: 19 to 20	E-395352 N-5765503	E-396012 N-5764908	14N	888 m

Potential Effects:

Change in bird migration route due to transmission line

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 : Cultural

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Hert-200	Plant Gathering Area	Site: 1 to 2	E-379494 N-5779807	E-396683 N-5764303	14N	23149 m
C1-S02	C1-Hert-200	Plant Gathering Area	Site: 23 to 24	E-396683 N-5764303	E-397164 N-5763488	14N	946 m

Potential Effects:

Potential for presence of important architectural heritage resources

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

ESS Group : Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Soils-302	Water Erosion Risk	Site: 25 to 26	E-397253 N- 5763337	E- 398795 N- 5760724	14N	3034 m

Potential Effects:

Loss of topsoil due to wind erosion (eg creep, saltation, suspension) on disturbed surfaces

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 prior to start of work
- Avoid moist soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by hand or other 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

ESS Group : Mammal and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Wild-200	Moose Sensitive Area	Site: 13 to 14	E-389782 N-5770528	E-395210 N-5765631	14N	7311 m

Potential Effects:

Potential disturbance to and loss of sensitive moose habitat

Specific Mitigation:

- Manitoba Hydro will not support development of designated motorized recreational trail use within areas described above if requested
- No shear blading to clear the ROW in the sensitive range Selective cutting methods to be used leaving low shrub and herb plant communities on the ROW
- Slash piles will be stockpiled every 200m-400m during clearing, adjacent to centerline trail, these piles will be placed on centerline trail post construction
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW
- Selective cutting to remove danger trees only on portions of the ROW to reduce line of site for hunters and predators and facilitate wildlife movement across the ROW
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible Available slash < 1 m in height will also be evenly distributed over the access trail to reduce the possibility of use be ATV traffic

MAP NUMBER: 213 cont'd

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S01	C1-Hert-102	Site of Heritage Resource Findings	Site: 17 to 18	E-394350 N-5766408	E-396683 N-5764303	14N	3142 m

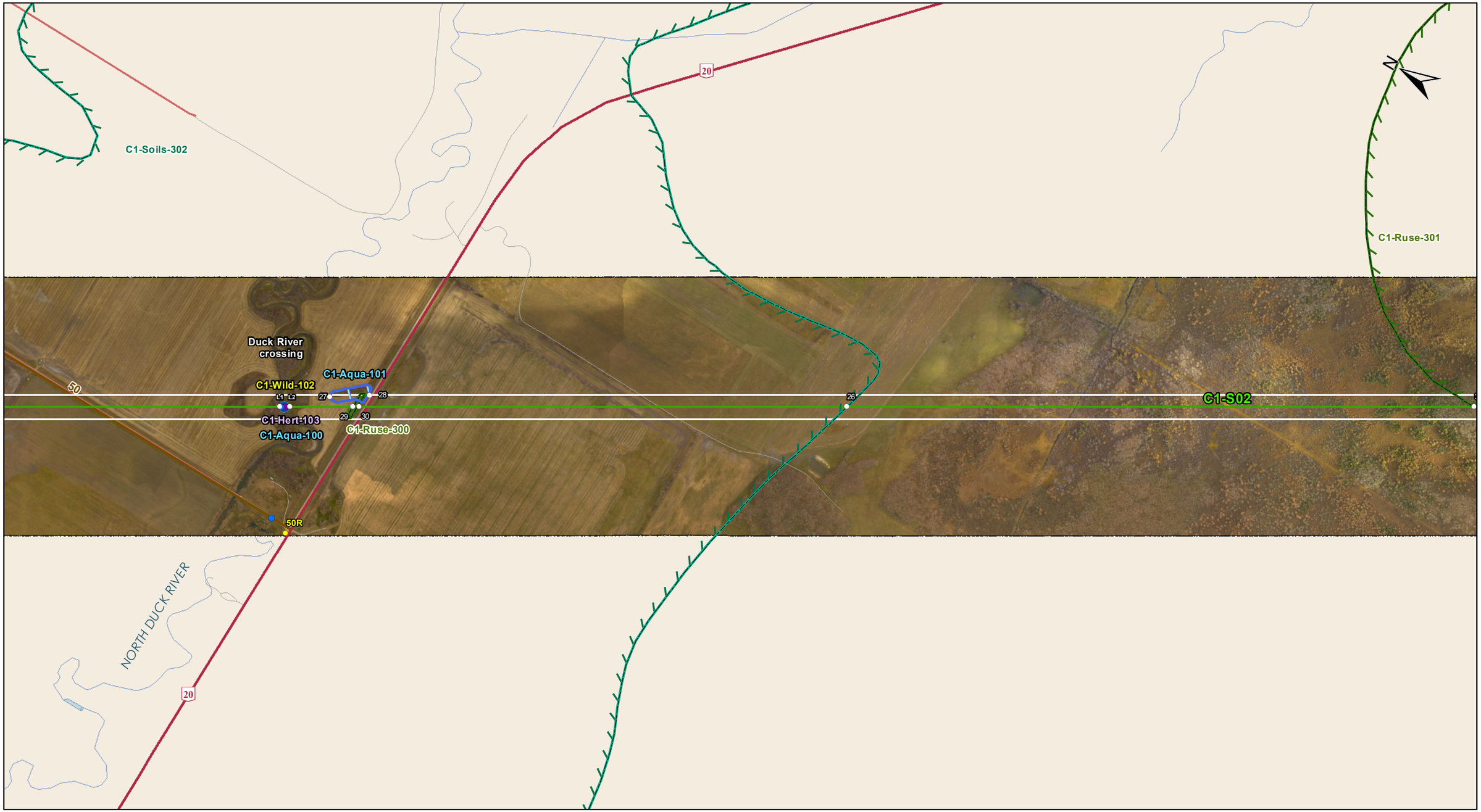
Potential Effects:

Loss of heritage resources due to inadvertent disturbance of sites

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

This page is intentionally left blank.



Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

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

Resource Use
- Forestry

Soils and Terrain
- Erosion

Water
- Water Crossing

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 214

MAP NUMBER: 214

ESS Group : Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Soils-302	Water Erosion Risk	Site: 25 to 26	E-397253 N- 5763337	E- 398795 N- 5760724	14N	3034 m

Potential Effects:

Loss of topsoil due to wind erosion (eg creep, saltation, suspension) on disturbed surfaces

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 prior to start of work
- Avoid moist soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by hand or other 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

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-102	North Duck River crossing; movement route for raptors and waterfowl	Site: L1 to L2	E-398012 N-5762051	E-398026 N-5762027	14N	28 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 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 : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
C1-S02	C1-Hert-103	North Duck River	398055	5761980	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
C1-S02	C1-Aqua-100	North Duck River	398014	5762047	14N	165 m	155 m	Important	High

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 work or fording from April 1 to June 30

MAP NUMBER: 214 cont'd

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S02	C1-Aqua-101	Unnamed stream	Site: 27 to 28	E-398077 N-5761939	E-398128 N-5761854	14N	N/A	N/A	N/A	N/A

Potential Effects:

Increased erosion and sedimentation, rutting of floodplains, loss of riparian vegetation

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 : Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-RUse-300	Shelterbelt	Site: 29 to 30	E-398113 N-5761880	E-398119 N-5761870	14N	12 m

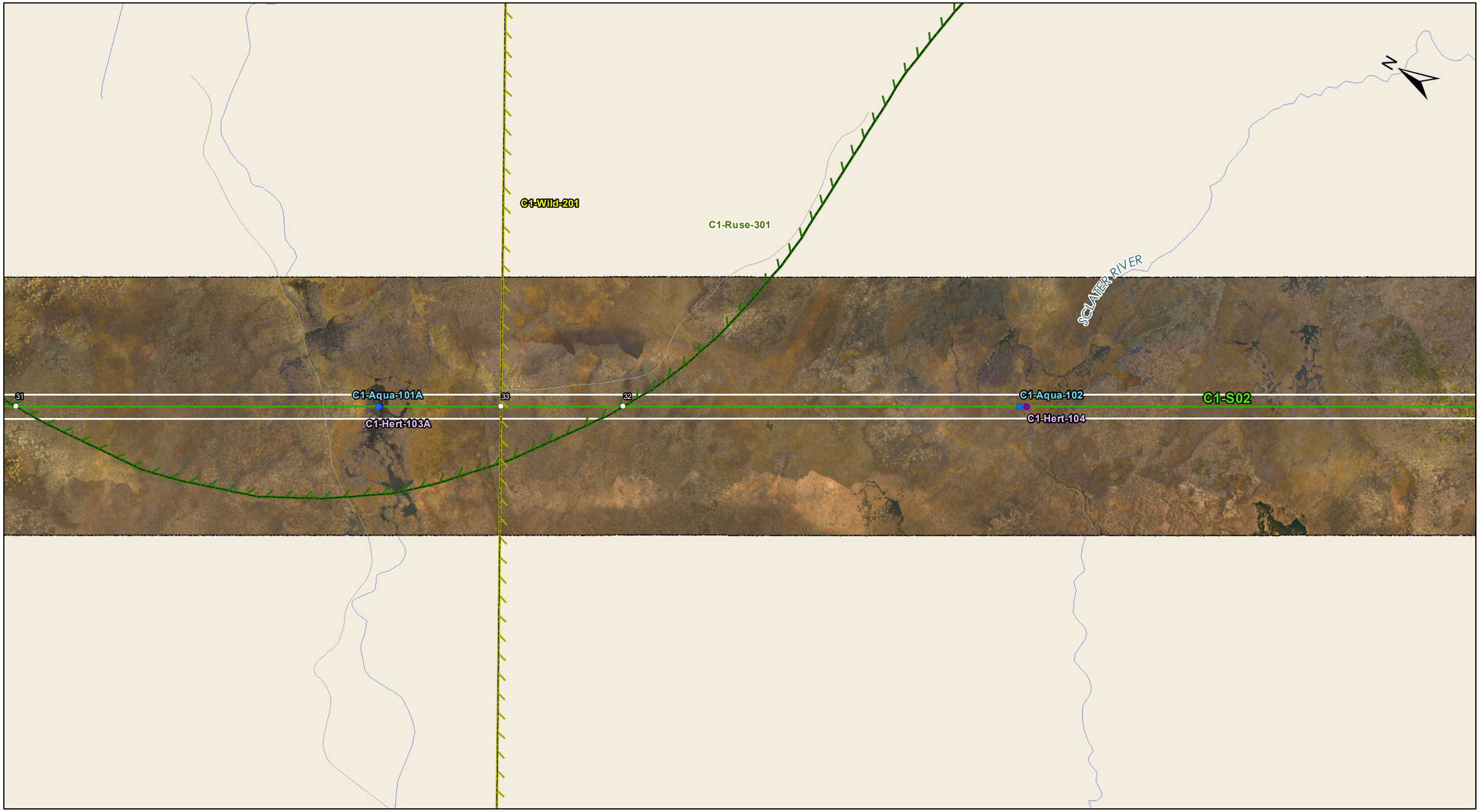
Potential Effects:

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
- Burn clearing debris during winter months only and ensure that all fires are extinguished prior to spring break-up; pile debris away from ROW edge
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Where applicable, ensure compensation agreement is in place 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

This page is intentionally left blank.



DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPPVARCMAPIESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- 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
- Mammals and Habitat

Resource Use
- Forestry

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 215

MAP NUMBER: 215

ESS Group : Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-RUse-301	Fuel wood collection area	Site: 31 to 32	E-399661 N-5759257	E-400499 N-5757836	14N	1650 m

Potential Effects:

Potential to disrupt access to fuel wood area

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Make fuel wood from ROW clearing available to local community where demand exists

ESS Group : Mammal and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-201	Moose Sensitive Area	Site: 33 to 34	E-400330 N-5758122	E-404691 N-5750733	14N	8580 m

Potential Effects:

Potential disturbance to and loss of sensitive moose habitat

Specific Mitigation:

- Manitoba Hydro will not support development of designated motorized recreational trail use within areas described above if requested
- In compliance with Licence clause 49 only tower locations, danger trees, and trees in excess of 17 m in height can be cleared along an 8 km stretch that is currently inaccessible Maintenance trails to be maintained to reduce line of sight for hunters and predators
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction. Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible. Available slash < 1 m in height will also be evenly distributed over the access trail to reduce the possibility of use be ATV traffic
- Potential measures to be implemented by MCWS include designating no hunting zones and restricting ATV traffic on ROW through regulation. No hunting will be allowed in the construction zone including a 300 m buffer around it for worker safety

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
C1-S02	C1-Hert-103A	Tributary of North Duck River	400162	5758403	14N
C1-S02	C1-Hert-104	Sclater River	401048	5756901	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
C1-S02	C1-Aqua-101A	Unnamed tributary of North Duck River	400162	5758403	14N	3m	3M	Important	Moderate
C1-S02	C1-Aqua-102	Sclater River	401046	5756909	14N	N/A	5m	Important	Moderate

Potential Effects:

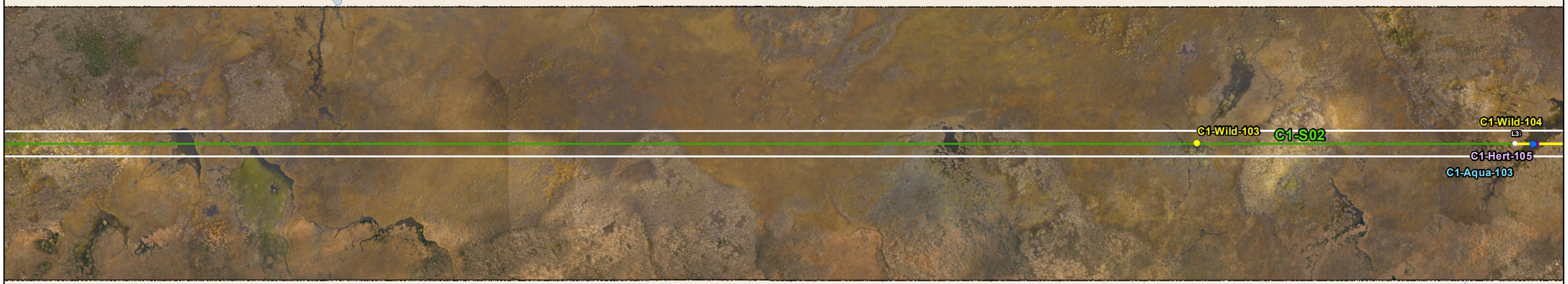
Habitat loss & contamination from structure foundations & installations; Increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbance & impeded fish movement; Rutting of floodplain

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 work or fording from April 1 to June 30

*MAP SHEET FULLY WITHIN THE C1-WILD-201 FEATURE

C1-Wild-201



DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

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

Wildlife
- Birds and Habitat

Wildlife
- Mammals and Habitat

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 216

MAP NUMBER: 216

ESS Group : Mammal and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-201	Moose Sensitive Area	Site: 33 to 34	E-400330 N-5758122	E-404691 N-5750733	14N	8580 m

Potential Effects:

Potential disturbance to and loss of sensitive moose habitat

Specific Mitigation:

- Manitoba Hydro will not support development of designated motorized recreational trail use within areas described above if requested
- In compliance with Licence clause 49 only tower locations, danger trees, and trees in excess of 17 m in height can be cleared along an 8 km stretch that is currently inaccessible Maintenance trails to be maintained to reduce line of sight for hunters and predators
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction. Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible. Available slash < 1 m in height will also be evenly distributed over the access trail to reduce the possibility of use be ATV traffic
- Potential measures to be implemented by MCWS include designating no hunting zones and restricting ATV traffic on ROW through regulation. No hunting will be allowed in the construction zone including a 300 m buffer around it for worker safety

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-103	Waterfowl sensitivity area	N/A	403212	5753240	14N	N/A
C1-S02	C1-Wild-104	Great blue heron feeding area	Site: L3 to L4	E-403626 N-5752537	E-403723 N-5752373	14N	190 m

Potential Effects:

Higher risk of wire collision, risk of wire collision is localize 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
C1-S02	C1-Aqua-103	Unnamed tributary of Sclater River	403650	5752497	14N	N/A	29m	Important	Moderate

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 work or fording from April 1 to June 30

ESS Group : Archaeological

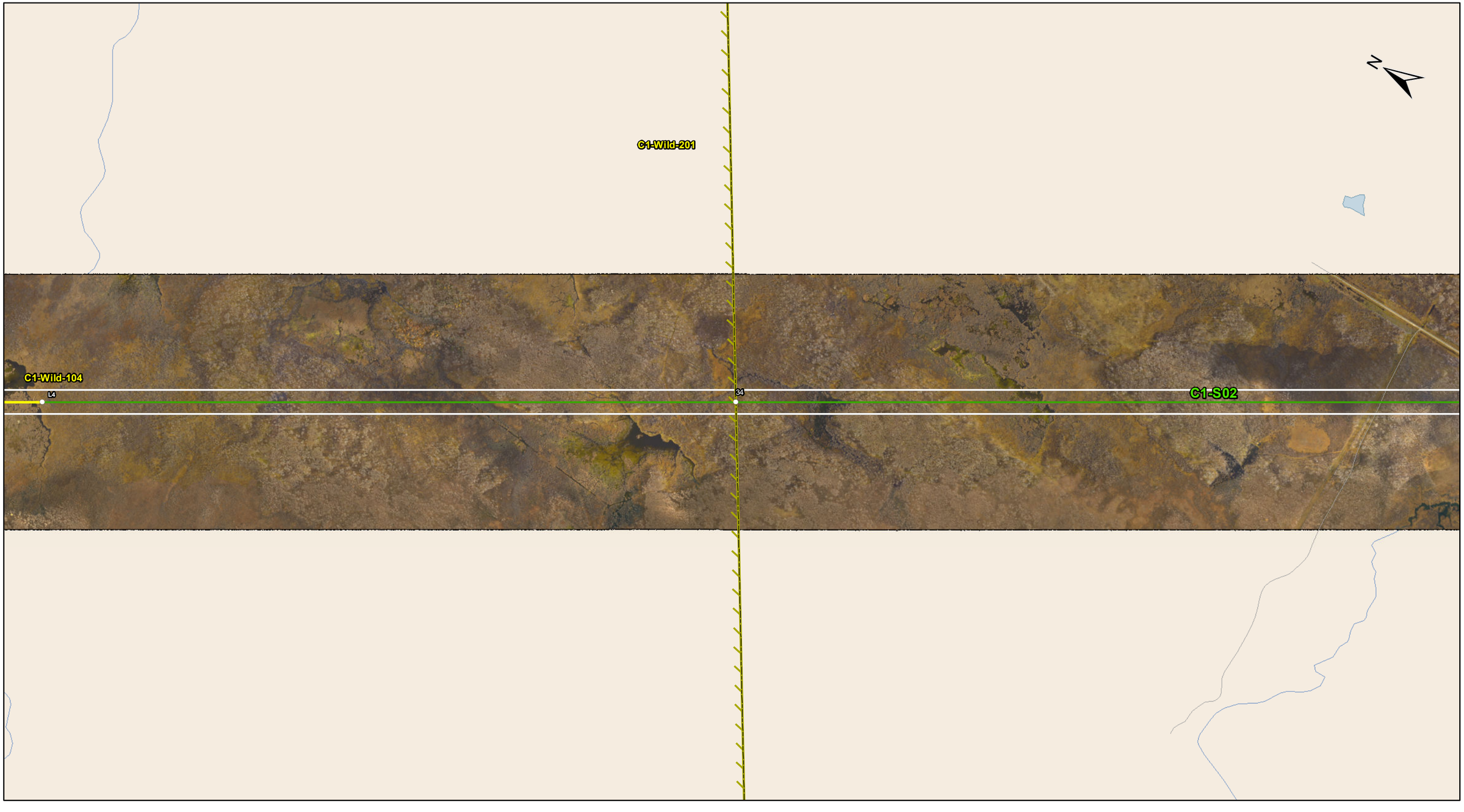
Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
C1-S02	C1-Hert-105	Unnamed tributary of Sclater River	403651	5752489	14N

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



DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- 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
Wildlife
- Birds and Habitat

Wildlife
- Mammals and Habitat

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 217

MAP NUMBER: 217

ESS Group : Mammal and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-201	Moose Sensitive Area	Site: 33 to 34	E-400330 N-5758122	E-404691 N-5750733	14N	8580 m

Potential Effects:

Potential disturbance to and loss of sensitive moose habitat

Specific Mitigation:

- Manitoba Hydro will not support development of designated motorized recreational trail use within areas described above if requested
- In compliance with Licence clause 49 only tower locations, danger trees, and trees in excess of 17 m in height can be cleared along an 8 km stretch that is currently inaccessible Maintenance trails to be maintained to reduce line of sight for hunters and predators
- Annual ground inspection of towers to occur late in winter season to avoid creating packed snow trails that facilitate predator use of the ROW
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction. Any culverts or road improvements will be removed and the first 100 m from of the trail dug up to the extent possible. Available slash < 1 m in height will also be evenly distributed over the access trail to reduce the possibility of use be ATV traffic
- Potential measures to be implemented by MCWS include designating no hunting zones and restricting ATV traffic on ROW through regulation. No hunting will be allowed in the construction zone including a 300 m buffer around it for worker safety

ESS Group : Birds and Habitat

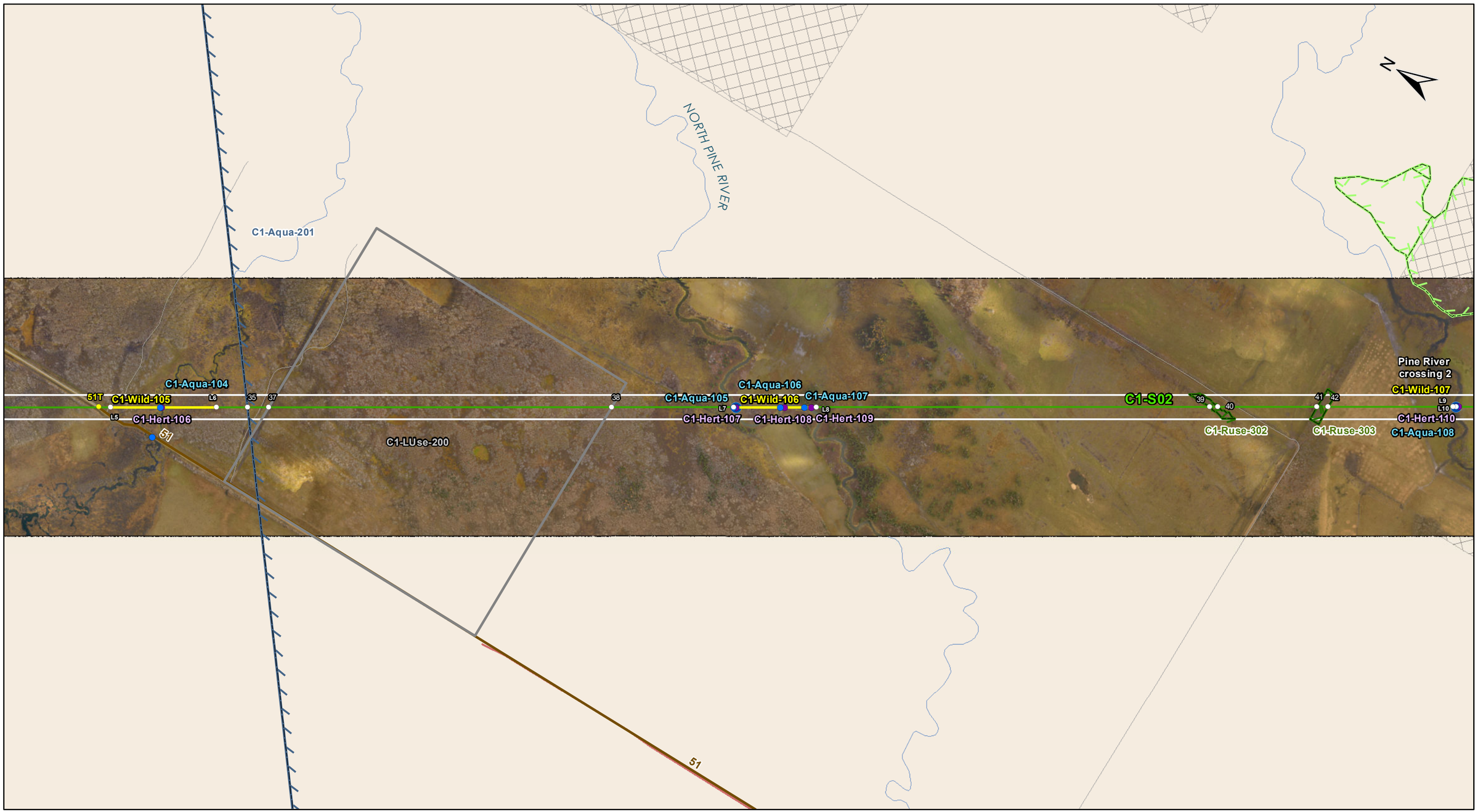
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-104	Great blue heron feeding area	Site: L3 to L4	E-403626 N-5752537	E-403723 N-5752373	14N	190 m

Potential Effects:

Higher risk of wire collision, risk of wire collision is localize 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



Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

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

Ecosystem
- Habitat

Land Use
- Crown Land Encumbrance

Resource Use
- Forestry

Water
- Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 218

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAPIESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

MAP NUMBER: 218

ESS Group : Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Aqua-201	Artesian areas with uncertain water quality	Site: 35 to 36	E-406019 N-5748483	E-407884 N-5745322	14N	3670 m

Potential Effects:

Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; also, wetting the surficial environment (ground saturation)

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
C1-S02	C1-RUse-302	Shelterbelt	Site: 39 to 40	E-407350 N-5746228	E-407361 N-5746209	14N	22 m
C1-S02	C1-RUse-303	Shelterbelt	Site: 41 to 42	E-407497 N-5745977	E-407513 N-5745951	14N	30 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
- Burn clearing debris during winter months only and ensure that all fires are extinguished prior to spring break-up; pile debris away from ROW edge
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Where applicable, ensure compensation agreement is in place 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

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S02	C1-Aqua-104	Unnamed tributary	405898	5748687	14N	66	35	Marginal	Moderate
C1-S02	C1-Aqua-105	North Pine River	406691	5747344	14N	N/A	7m	Important	Moderate
C1-S02	C1-Aqua-106	North Pine River	406755	5747235	14N	N/A	7m	Important	Moderate
C1-S02	C1-Aqua-107	North Pine River	406789	5747177	14N	N/A	7m	Important	Moderate
C1-S02	C1-Aqua-108	South Pine River	407691	5745641	14N	7m	7m	Important	Moderate

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 work or fording from April 1 to June 30

ESS Group : Crown Land Encumbrance

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-LUse-200	Proximity to Campground	Site: 37 to 38	E-406048 N-5748434	E-406522 N-5747629	14N	934 m

Potential Effects:

Potential disruption to recreational use activities

Specific Mitigation:

- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
C1-S02	C1-Hert-106	North branch of North Pine River	405904	5748672	14N
C1-S02	C1-Hert-107	North Pine River	406698	5747323	14N
C1-S02	C1-Hert-108	North Pine River	406768	5747227	14N
C1-S02	C1-Hert-109	North Pine River	406811	5747130	14N
C1-S02	C1-Hert-110	South Pine River	407695	5745641	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
C1-S02	C1-Wild-105	Nearby great blue heron colony	Site: L5 to L6	E-405829 N-5748804	E-405976 N-5748555	14N	289 m
C1-S02	C1-Wild-107	South Pine River crossing	Site: L9 to L10	E-407686 N-5745657	E-407690 N-5745650	14N	8 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 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 : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Wild-106	North Pine River crossing	Site: L7 to L8	E-406691 N-5747344	E-406805 N-5747150	14N	225 m

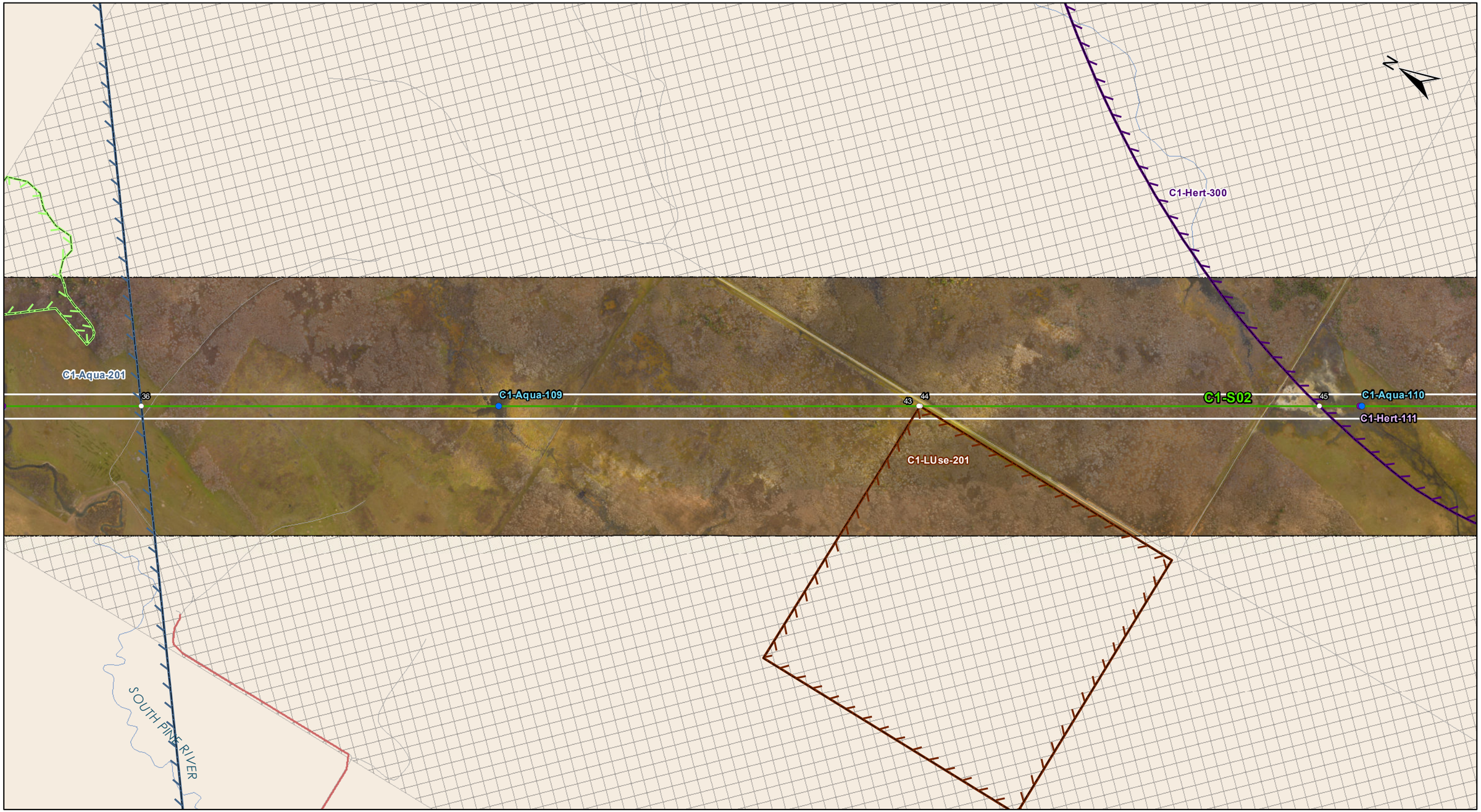
Potential Effects:

Higher risk of wire collision, Disturbance during breeding and nesting, Risk of wire collision is localized to the right-of-way while construction disturbance can effect colonies up to 1000 meters away

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

This page is intentionally left blank.



DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\1114440054_BPIII_EPP\ARCMAP\ESS_C1\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: December 03, 2013

0 125 250 500
Metres

1:10,000

Land Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- 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
- **Ecosystem**: Habitat
- **Heritage**: Heritage, Historic
- **Land Use**: Residential
- **Water**: Groundwater

Bipole III Transmission Project
Construction Environmental Protection Plan
Construction Section C1
Environmentally Sensitive Site Locations

Map 219

MAP NUMBER: 219

ESS Group : Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Aqua-201	Artesian areas with uncertain water quality	Site: 35 to 36	E-406019 N-5748483	E-407884 N-5745322	14N	3670 m

Potential Effects:

Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; also, wetting the surficial environment (ground saturation)

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 : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S02	C1-Aqua-109	Unnamed Pond	408377	5744487	14N	N/A	N/A	N/A	Low

Potential Effects:

Habitat loss & contamination from structure foundations & installations; Increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation

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 : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S02	C1-Aqua-110	Unnamed tributary of Garland River	409568	5742468	14N	N/A	N/A	Marginal	Moderate

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 work or fording from April 1 to June 30

ESS Group : Crown Land Encumbrance/Residential

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-LUse-201	Proximity to a cottage	Site: 43 to 44	E-408958 N-5743503	E-408959 N-5743500	14N	3 m

Potential Effects:

Potential disruption to recreational use activities

Specific Mitigation:

- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety

MAP NUMBER: 219 cont'd

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Location	Easting	Northing	UTM Zone
C1-S02	C1-Hert-111	Duck River	Central 1	409565	409565	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 : Historic

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S02	C1-Hert-300	Historic Coal Mine identified by community	Site: 45 to 46	E-409510 N-5742567	E-410446 N-5740980	14N	1843 m

Potential Effects:

Potential loss of 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
- 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

This page is intentionally left blank.