



## St. Vital Transmission Complex (G79L) Construction Environmental Protection Mapbook

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Version: Final 1.00

Date: August 3, 2021

NOTICE: Access routes are approximate. Please refer to Access Management Plan for latest approved access routes.







Document Owner:  
Licensing and Environmental Assessment Department  
Transmission Planning and Design Division  
Transmission Business Unit  
Manitoba Hydro

Version Final 1.00  
List of Revisions - G79L Construction Environmental Protection Plan Mapbook

Number	Nature of Revision	Map/Table #	Revised By	Date
Draft	Added ESS points, lines and polygons	Maps 1-26	Manitoba Hydro	20201030
Draft	Updated Crow Wing Trail	Maps 7-8	Manitoba Hydro	20201112
Draft	Added bird diverters	Maps 5, 6, 8, 9, 17, 18, 20, 22, 23, 25, 26	Manitoba Hydro	20201123
Draft	Moved G79L-Aqua-109A, G79L-Aqua-109B and G79L-Aqua-109C, G79L-Wild-106 and G79L-Wild-107 and G79L-Hert-108 to reroute (Map 19-22). Added Aqua ESS polygon for Rat River/ Coulee Des Nault Stream Crossing (Map 9). Revised map grids.	Maps 1-26	Manitoba Hydro	20210129
Draft	Updated mitigation for crow wing trail, forestry and heritage sites.	Maps 1-26	Manitoba Hydro	20210201
Draft	Created heritage polygons from points for G79L-Hert-100, G79L-Hert-102, G79L-Hert-105, G79L-Hert-109 and G79L-Hert-110. Retired heritage ESS points. Moved underground infrastructure legend label. Revised mitigation for bird diverters and heritage sites.	Maps 1-26	Manitoba Hydro	20210202
Draft	Retired G79L-Aqua-100. Updated ESS sites based on re-route at STR 40-44	Map 6	Manitoba Hydro	20210302
Draft	Changed "Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure".	Maps 1-26	Manitoba Hydro	20210422
Draft	Added G79L-Aqua-102A (Map 7). Updated Crow Wing Trail (G79L-RecUse-101).	Map 7	Manitoba Hydro	20210426
Draft	Updated heritage ESS sites and mitigation. Updated G79L-Wild-107 bird diverter to tower.	Map 2, 4, 5, 6, 8, 9, 18, 19, 20, 22, 25, 26	Manitoba Hydro	20210723
Draft	Extended G79L-Aqua-109 at Roseau River (Map 18). Added bolded text for MIT key #301.	Map 18, 25, 26	Manitoba Hydro	20210727
1.00	Updated mapbook "Draft" to "Final 1.00"	Maps 1-26	Manitoba Hydro	20210803

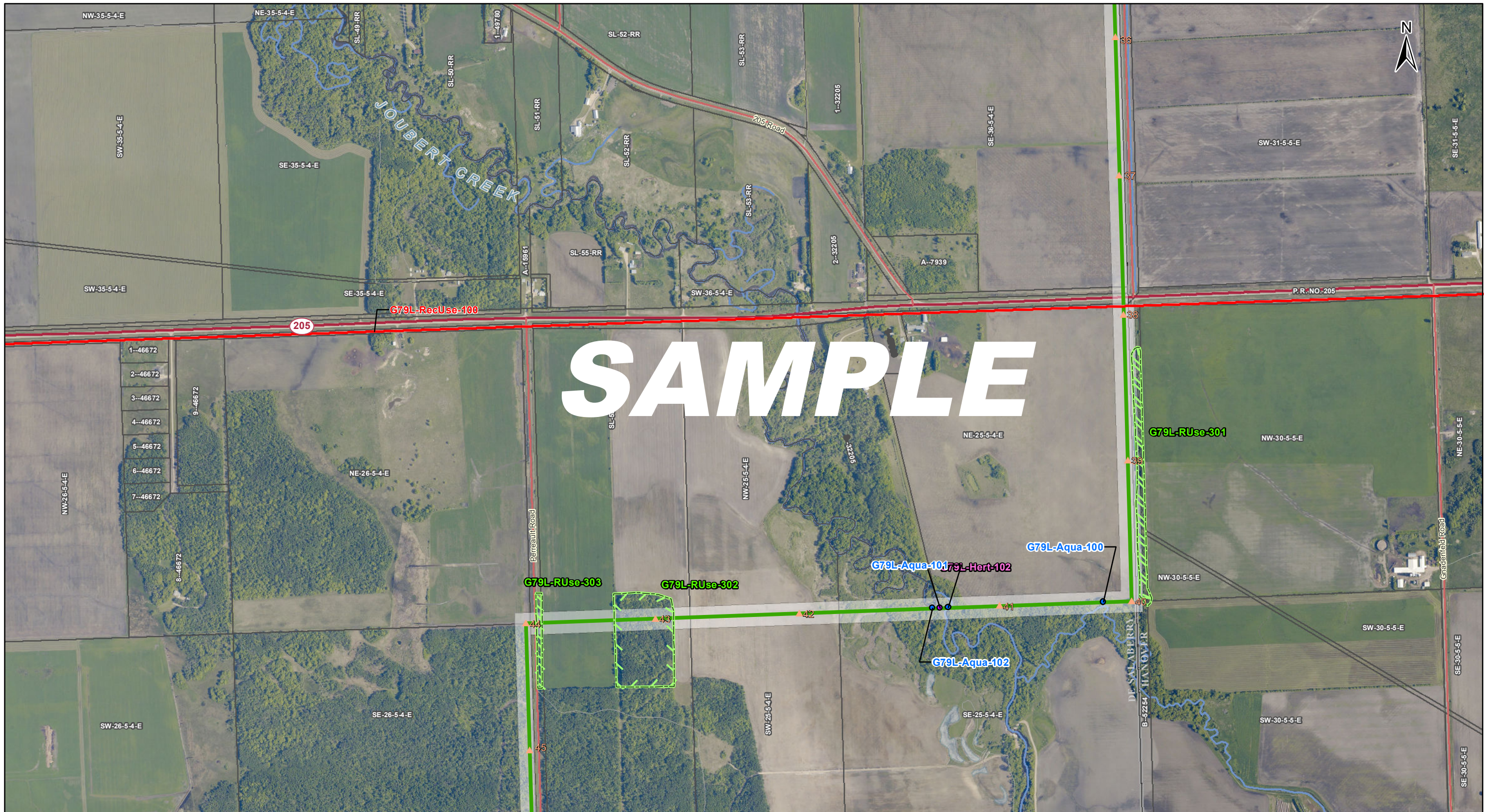




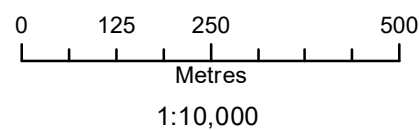


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Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
Date Created: December 18, 2020  
Version: Draft



**Land Base**

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

**Project Infrastructure**

- Tower Location
- Angle Tower Location
- Final Preferred Route
- Right of Way
- De Salaberry East Station
- Station Expansion

**ESS Features**

**Heritage**

- Archaeological

**Water**

- Water Crossing

**Rec Use**

- Trail

**Resource Use**

- Forestry

## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations

*Draft: For Discussion Purposes Only*



SAMPLE MITIGATION TABLE (See KEY below for additional Information)

ESS Group: Wetlands<sup>1</sup>

<sup>2</sup>  
*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
Aqua-301	Wetland	21 to 22	E-671537 N-5525458	E-671580 N-5525456	43

Potential Effects:<sup>4</sup>  
*Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat*

Specific Mitigation (ID #205):<sup>5</sup>

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during
- Identify and flag a 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods
- The application of herbicides is prohibited
- Maintain shrub and herbaceous vegetation to the extent possible

KEY to Sample Mitigation Table

- 1

ESS Group classification of Environmentally Sensitive Sites (ESS) which are shown on the map
- 2

Notation indicates the geometry type of the ESS feature
- 3

ESS location summary; includes the following fields:
  - ESS ID - Site specific ID assigned to each ESS according to naming convention (**See ESS naming convention table**)
  - ESS Name - Brief name/description of ESS
  - Site - identification numbers for the start and stop site points of ESS intersection with the ROW (lines and polygons only)
  - Easting/Northing - UTM Zone 14 coordinates of ESS location (for points only)
  - Start/Stop - UTM Zone 14 coordinates of the start/stop identification numbers listed in the “Location” field (lines and polygons only)
  - Distance – length of ESS feature in meters
- 4

Potential effects identified for ESS listed in the ESS Location Summary table
- 5

Mitigation measures identified for a specific site. The ID number indicates a specific combination of mitigation measures
- 6

Map on which ESS listed in the ESS Location Summary tables are illustrated

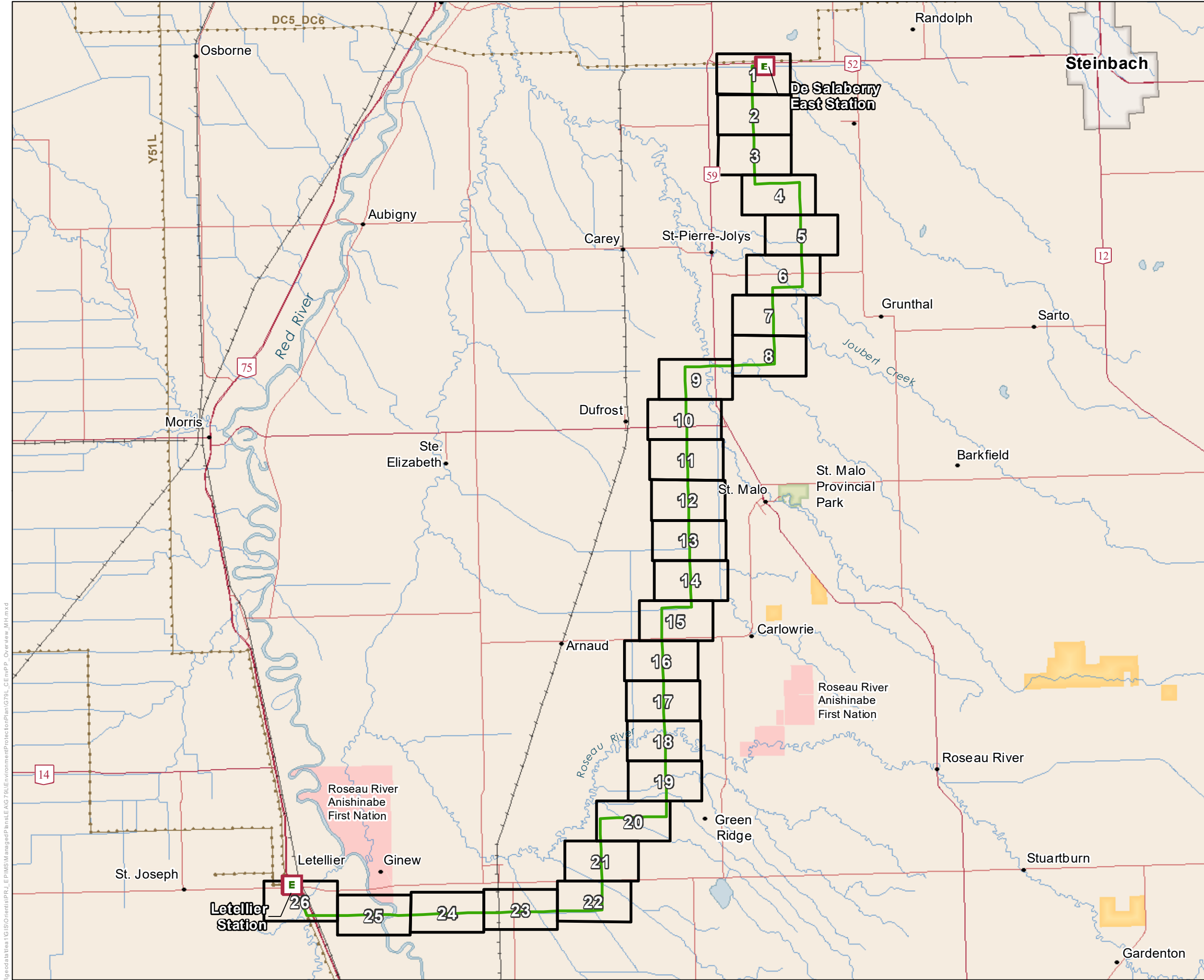
ESS NAMING CONVENTION

CATEGORY	GROUP (Number Series Representing Group)	ESS ID (Category-Group Number)
Access	Intersection (100)	RecUse-100
Ecosystem	Habitat (100)	Eco-100
	Research (200)	Eco-200
	Species of Concern (300)	Eco-300
	Invasive Species (400)	Eco-400
	Traditional Use (500)	Eco-500
Heritage	Archaeological (100)	Hert-100
	Cultural (200)	Hert-200
	Historic (300)	Hert-300
Land Use	Conservation (100)	LUse-100
	Crown Land Encumbrance (200)	LUse-200
	Recreation (300)	LUse-300
	Residential (400)	LUse-400
Resource Use	Agriculture (100)	RUse-100
	Food/Medicinal (200)	RUse-200
	Forestry (300)	RUse-300
	Hunting/Fishing (400)	RUse-400
	Trapping (500)	RUse-500
Soils and Terrain	Permafrost (100-200)	Soils-100
	Erosion (300)	Soils-300
	Terrain (400)	Soils-400
Water	Water Crossing (100)	Aqua-100
	Groundwater (200)	Aqua-200
	Wetlands (300)	Aqua-300
	Aquatic Invasive Species (400)	Aqua-400
Wildlife	Birds and Habitat (100)	Wild-100
	Mammal and Habitat (200)	Wild-200
	Reptiles/Amphibians and Habitat (300)	Wild-300
	Line of Sight Buffer (400)	Wild-400



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## St. Vital Transmission Complex



### Project Infrastructure

-  Electrical Station
-  Final Preferred Route










### Map Tile Index - 1:10,000

-  Map Series Tile

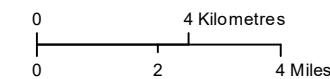
### Infrastructure

-  Existing 500kV Transmission Line
-  Existing 230kV Transmission Line

### Landbase

-  Community
-  Railway
-  Trans Canada
-  Provincial Highway
-  Provincial Road
-  City
-  First Nation Lands
-  Wildlife Management Area
-  Provincial Park

Coordinate System: UTM Zone 14N NAD83  
Data Source: MBHydro, ProvMB, NRCAN  
Date Created: August 3, 2021



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## Index of Map Series Environmental Protection Plan



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Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
Date Created: August 3, 2021  
Version: Final 1.00

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**Land Base**

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

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**Points of Access**

- Existing Gravel Road
- Existing Gravel/Dirt Road
- Field Access
- New Trail
- Restricted Access
- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



No specific mitigation measures for this map, page intentionally left blank







ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-100	Potential Archaeological Site Relict Channel	1 to 2	E-648357 N-5484936	E-648362 N-5484742	194

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

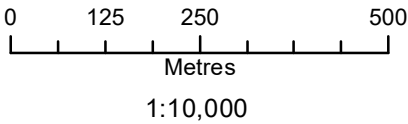
- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance



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**ESS Features**

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



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**ESS Features**

**Heritage**

- Archaeological

# St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-101	Potential Archaeological Site	3 to 4	E-650919 N-5480429	E-650960 N-5478914	1515

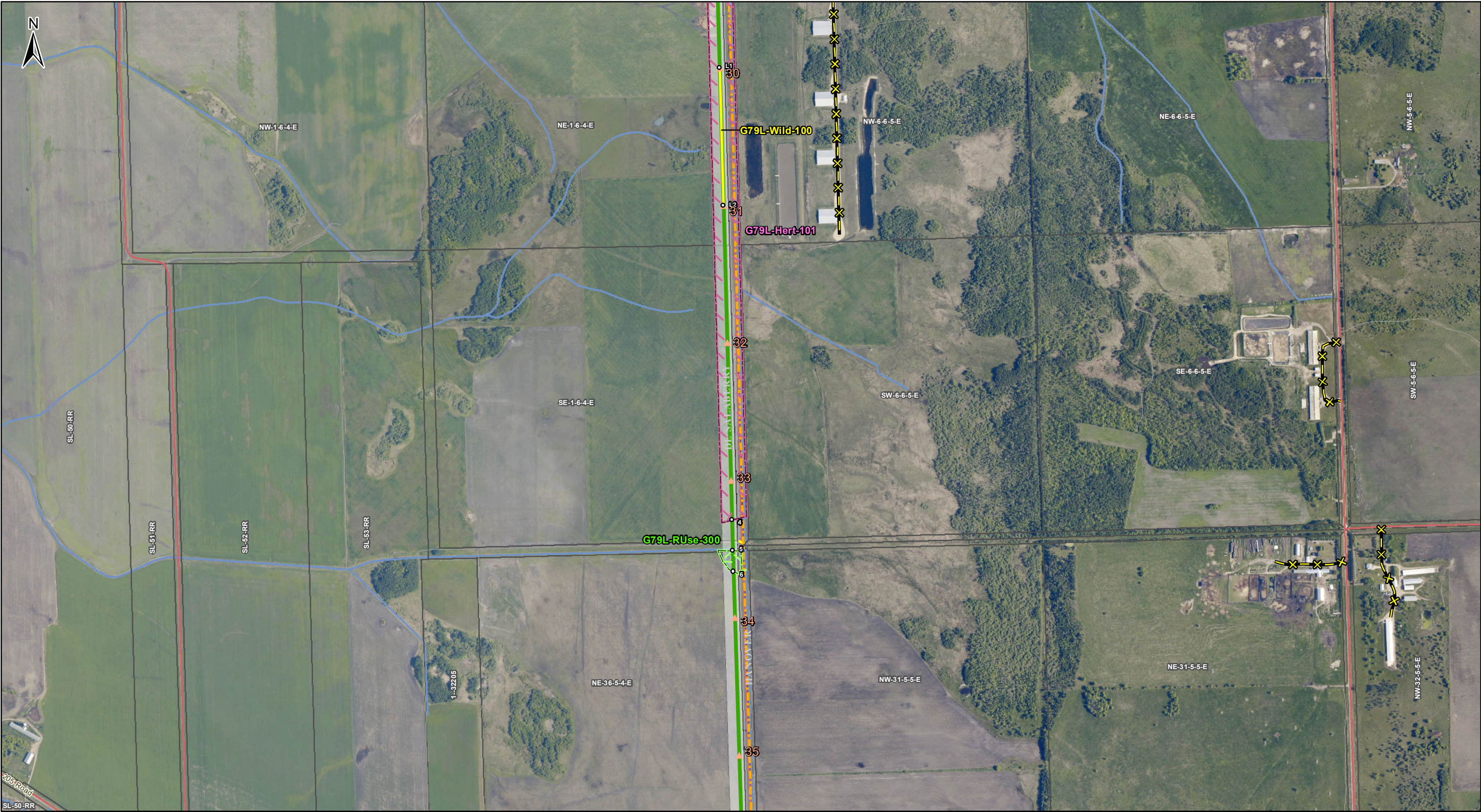
Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

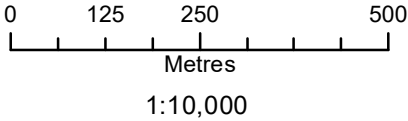
Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance





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**ESS Features**

- Wildlife**
  - Birds and Habitat
- Heritage**
  - Archaeological
- Resource Use**
  - Forestry

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-101	Potential Archaeological Site	3 to 4	E-650919 N-5480429	E-650960 N-5478914	1515

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-100	Wetlands/lagoons	L1 to L2	E-650927 N-5480137	E-650937 N-5479765	371

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Forestry

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-RUse-300	Shelterbelt	5 to 6	E-650962 N-5478832	E-650964 N-5478775	57

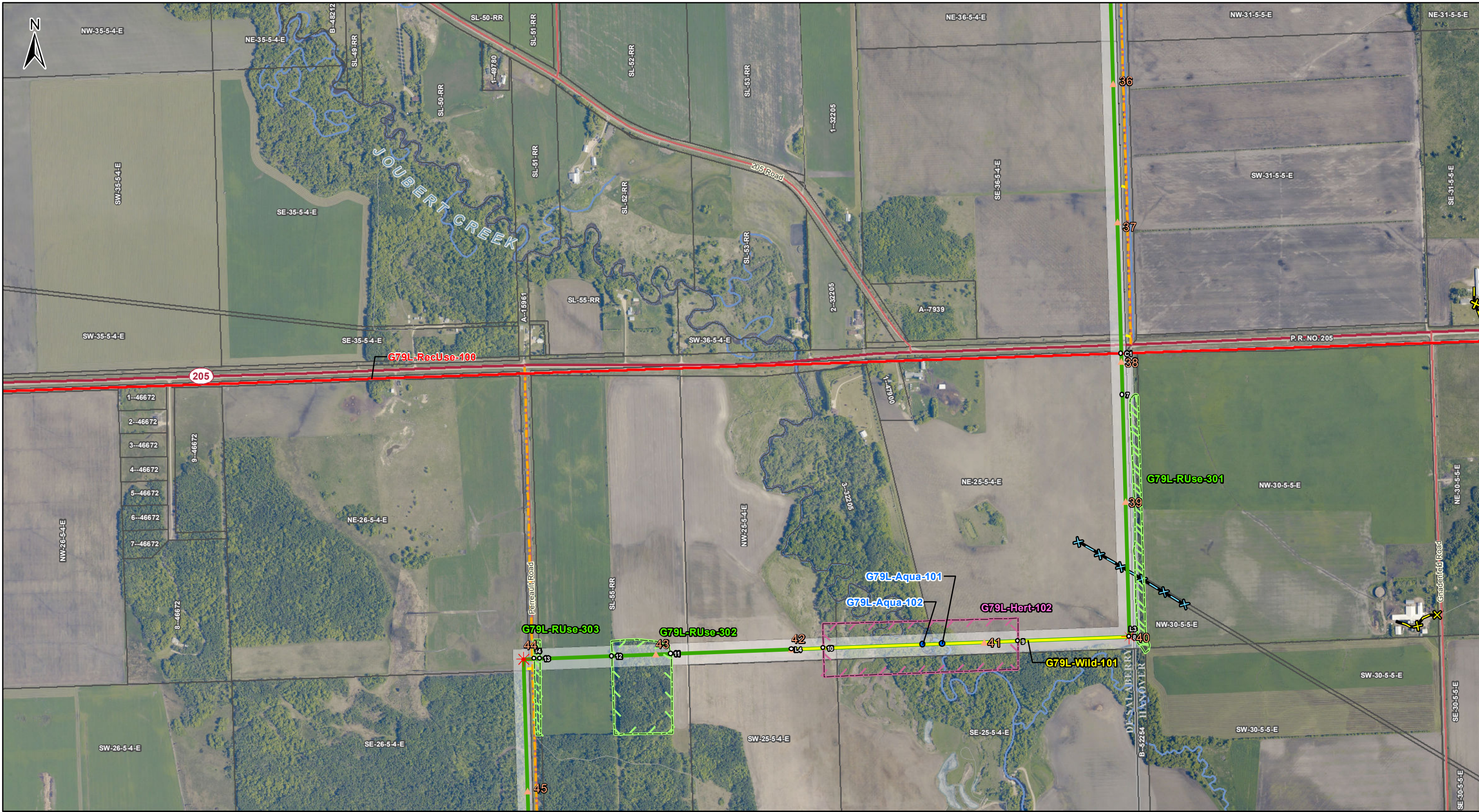
Potential Effects:

*Removal in area of ROW intersect*

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- No pushing debris into adjacent timber





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**Land Base**

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- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

**Water**

- Water Crossing

**Rec Use**

- Trail

**Wildlife**

- Birds and Habitat

**Heritage**

- Archaeological

**Resource Use**

- Forestry

# St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-102	Potential Archaeological Site	9 to 10	E-650732 N-5476398	E-650206 N-5476378	527

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-101	Joubert Creek crossing	L3 to L4	E-651034 N-5476409	E-650120 N-5476375	914

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Forestry

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-RUse-301	Shelterbelt	7 to 8	E-651015 N-5477065	E-651034 N-5476409	685
G79L-RUse-302	Woodlot	11 to 12	E-649792 N-5476363	E-649633 N-5476357	158
G79L-RUse-303	Shelterbelt	13 to 14	E-649439 N-5476350	E-649423 N-5476350	15

Potential Effects:

*Removal in area of ROW intersect*

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- No pushing debris into adjacent timber

ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-100	Snowmobile Trail PT29	C1	E-651012 N-5477177

Potential Effects:

*Potential interference with snowmobilers; safety issues*

Specific Mitigation (ID# 103):

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



ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-101	Joubert Creek	E-650528 - N-5476390
G79L-Aqua-102	Joubert Creek	E-650475 - N-5476388

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*

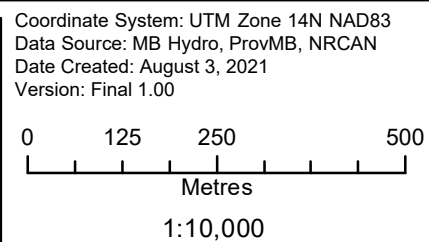
Specific Mitigation (ID# 64):























- 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



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- | Land Base  | Project Infrastructure   | Points of Access   |
|--|--|--|
|  Transmission Line      |  Tower Location               |  Existing Gravel Road             |
|  Highway                |  Angle Tower Location         |  Existing Gravel/Dirt Road        |
|  Major Road             |  Final Preferred Route        |  Field Access                     |
|  Local Road             |  Right of Way                 |  New Trail                        |
|  Railway (Operational)  |  Electrical Station/Expansion |  Restricted Access                |
|  Railway (Discontinued) |  |  Restricted - Livestock Operation |
|  First Nation           |  |  Underground Infrastructure       |
|  Provincial Forest      |  |  |
|  Parcel Fabric          |  |  |
|  Rural Municipality     |  |  |
- \* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure.

- ## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-101	Trans-Canada Trail	C2	E-649421 N-5475477

Potential Effects:

*Potential interference with pedestrian traffic; safety issues*

Specific Mitigation (ID# 113):

- Avoid surface damage to and obstruction of recreation route
- Post warning markers and signs at trail location
- Refer to clearing management plan for further instruction

ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-102A	Unnamed Drain	E-649448 - N-5474611

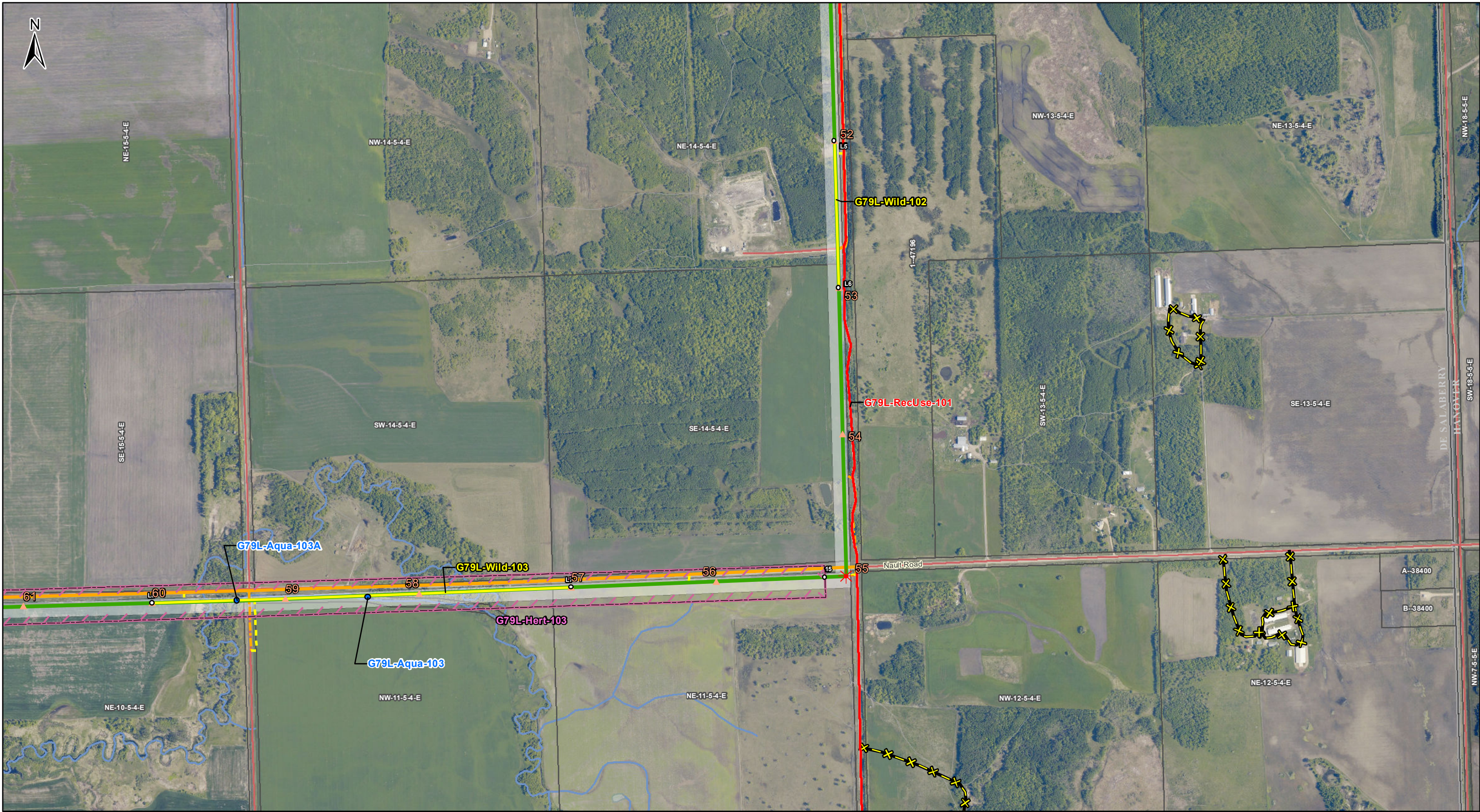
Potential Effects:

*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 (ID# 64):

- 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





Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
Date Created: August 3, 2021  
Version: Final 1.00

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**Land Base**

- Transmission Line
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**ESS Features**

**Water**

- Water Crossing

**Rec Use**

- Trail

**Wildlife**

- Birds and Habitat

**Heritage**

- Archaeological

## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-103	Potential Archaeological Site	15 to 16	E-649461 N-5472191	E-645463 N-5472063	3999

Potential Effects:

Higher potential for discovery of cultural and heritage resources in this area

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Birds and Habitat

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-102	Landfill area	L5 to L6	E-649487 N-5473372	E-649498 N-5472974	398
G79L-Wild-103	Coulee Des Nault Stream crossing	L7 to L8	E-648773 N-5472163	E-647639 N-5472121	1134

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Water Crossing

\*Features represented as points

ESS ID	ESS Name	Location
G79L-Aqua-103	Intermittent Stream	E-648223 - N-5472136
G79L-Aqua-103A	Intermittent Stream	E-647869 - N-5472127

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 (ID# 64):

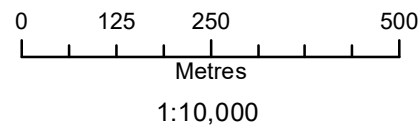
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based 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



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Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
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**Land Base**

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

**Project Infrastructure**

- Tower Location
- Angle Tower Location
- Final Preferred Route
- Right of Way
- Electrical Station/Expansion

**Points of Access**

- Existing Gravel Road
- Existing Gravel/Dirt Road
- Field Access
- New Trail
- Restricted Access
- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

**Rec Use**

- Trail

**Wildlife**

- Birds and Habitat

**Heritage**

- Archaeological

**Resource Use**

- Forestry
- Water
- Water Crossing

## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-103	Potential Archaeological Site	15 to 16	E-649461 N-5472191	E-645463 N-5472063	3999

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-104	Rat River/Coulee Des Nault Stream crossing	L9 to L10	E-646575 N-5472093	E-645804 N-5472072	771

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Forestry

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-RUse-304	Shelterbelt	17 to 18	E-646877 N-5472101	E-646770 N-5472098	107

Potential Effects:

*Removal in area of ROW intersect*

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- No pushing debris into adjacent timber

ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-103	Rat River designated canoe route	C4	E-646046 N-5472079

Potential Effects:

*Potential aesthetic concerns with presence with canoe traffic, disruption to operational activities*

Specific Mitigation (ID# 5):

- Where possible carry out construction activities during frozen ice conditions to avoid conflict with canoe route traffic
- If construction is to take place during the summer months post warning markers and signs upstream and downstream of the crossing

ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-102	Snowmobile Trail PT29	C3	E-646278 N-5472085

Potential Effects:

*Potential interference with snowmobilers; safety issues*

Specific Mitigation (ID# 103):

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



ESS Group: Water Crossing

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Aqua-104A	Rat River Crossing/Coulee Des Nault Stream	19 to 20	E-646654 N-5472095	E-645733 N-5472070	921

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 (ID# 64):

- 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



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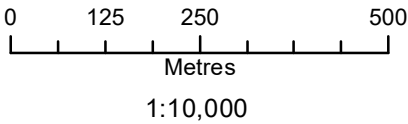


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**Land Base**

- Transmission Line
- Highway
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
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- Rural Municipality

**Project Infrastructure**

- Tower Location
- Angle Tower Location
- Final Preferred Route
- Right of Way
- Electrical Station/Expansion

**Points of Access**

- Existing Gravel Road
- Existing Gravel/Dirt Road
- Field Access
- New Trail
- Restricted Access
- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

# St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations

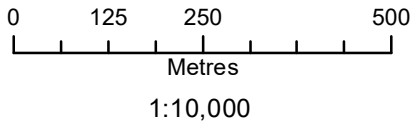


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**ESS Features**

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**

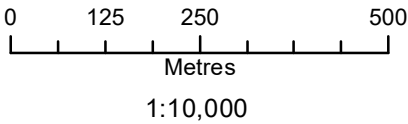


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**ESS Features**

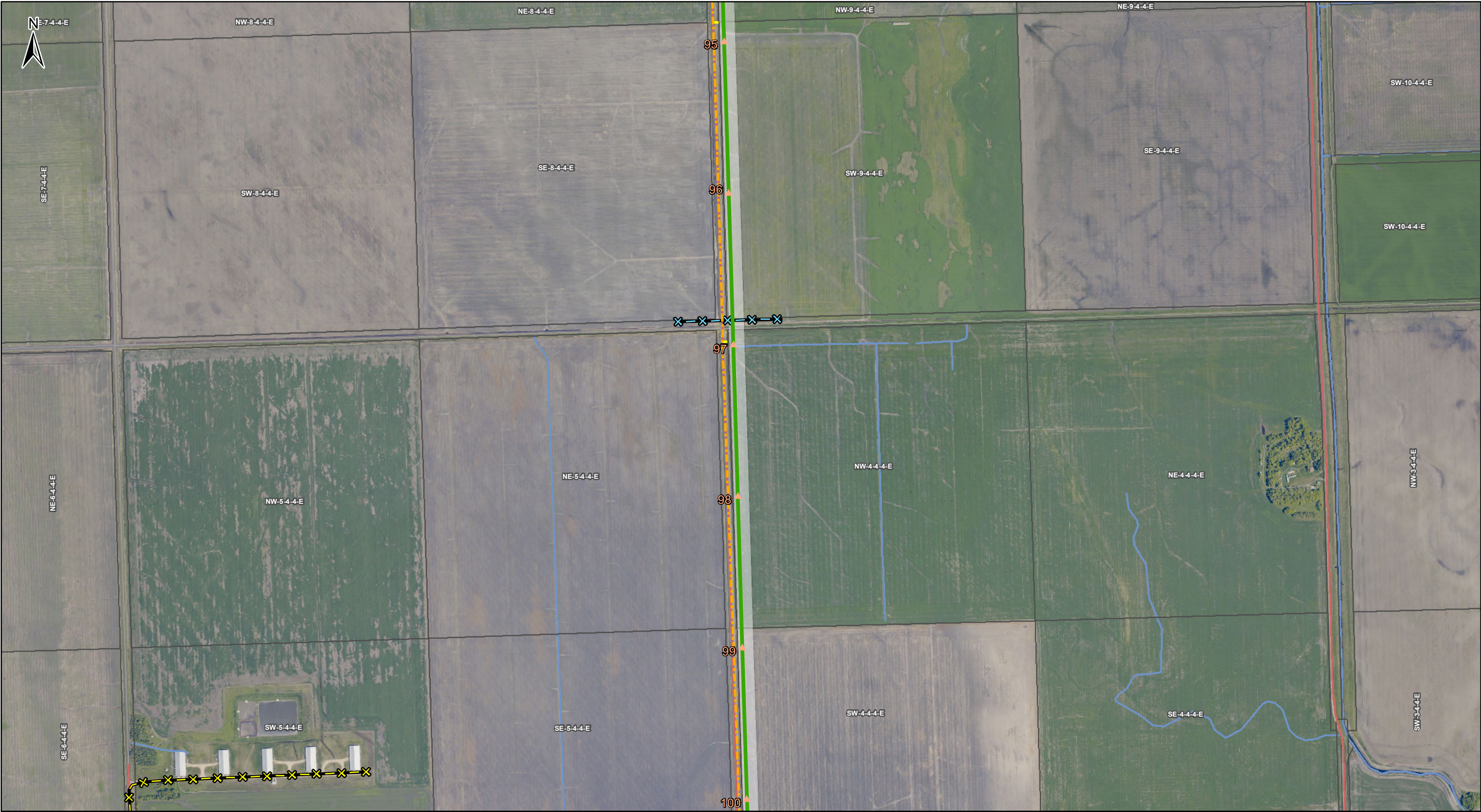
# St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



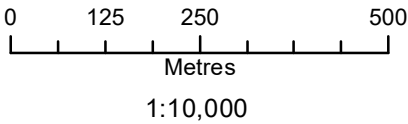
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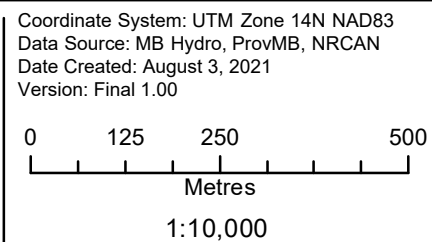
**ESS Features**























**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



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- | Land Base  | Project Infrastructure   | Points of Access   |
|--|--|--|
|  Transmission Line      |  Tower Location               |  Existing Gravel Road             |
|  Highway                |  Angle Tower Location         |  Existing Gravel/Dirt Road        |
|  Major Road             |  Final Preferred Route        |  Field Access                     |
|  Local Road             |  Right of Way                 |  New Trail                        |
|  Railway (Operational)  |  Electrical Station/Expansion |  Restricted Access                |
|  Railway (Discontinued) |  |  Restricted - Livestock Operation |
|  First Nation           |  |  Underground Infrastructure       |
|  Provincial Forest      |  |  |
|  Parcel Fabric          |  |  |
|  Rural Municipality     |  |  |
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- ## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-102	Snowmobile Trail PT29	C5	E-645012 N-5458946
G79L-RecUse-102	Snowmobile Trail PT29	C6	E-643379 N-5458892
G79L-RecUse-102	Snowmobile Trail PT29	C7	E-643373 N-5458891

Potential Effects:

*Potential interference with snowmobilers; safety issues*

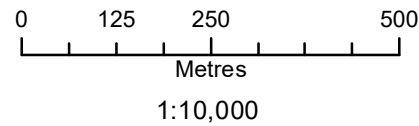
Specific Mitigation (ID# 103):

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





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**Land Base**

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**Project Infrastructure**

- Tower Location
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- Final Preferred Route
- Right of Way
- Electrical Station/Expansion

**Points of Access**

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- Field Access
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- Underground Infrastructure

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**ESS Features**

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



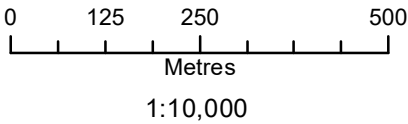
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  - Underground Infrastructure
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- ESS Features**
- Wildlife**
- Birds and Habitat

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-105	Roseau River crossing	L11 to L12	E-643541 N-5452878	E-643587 N-5451558	1320

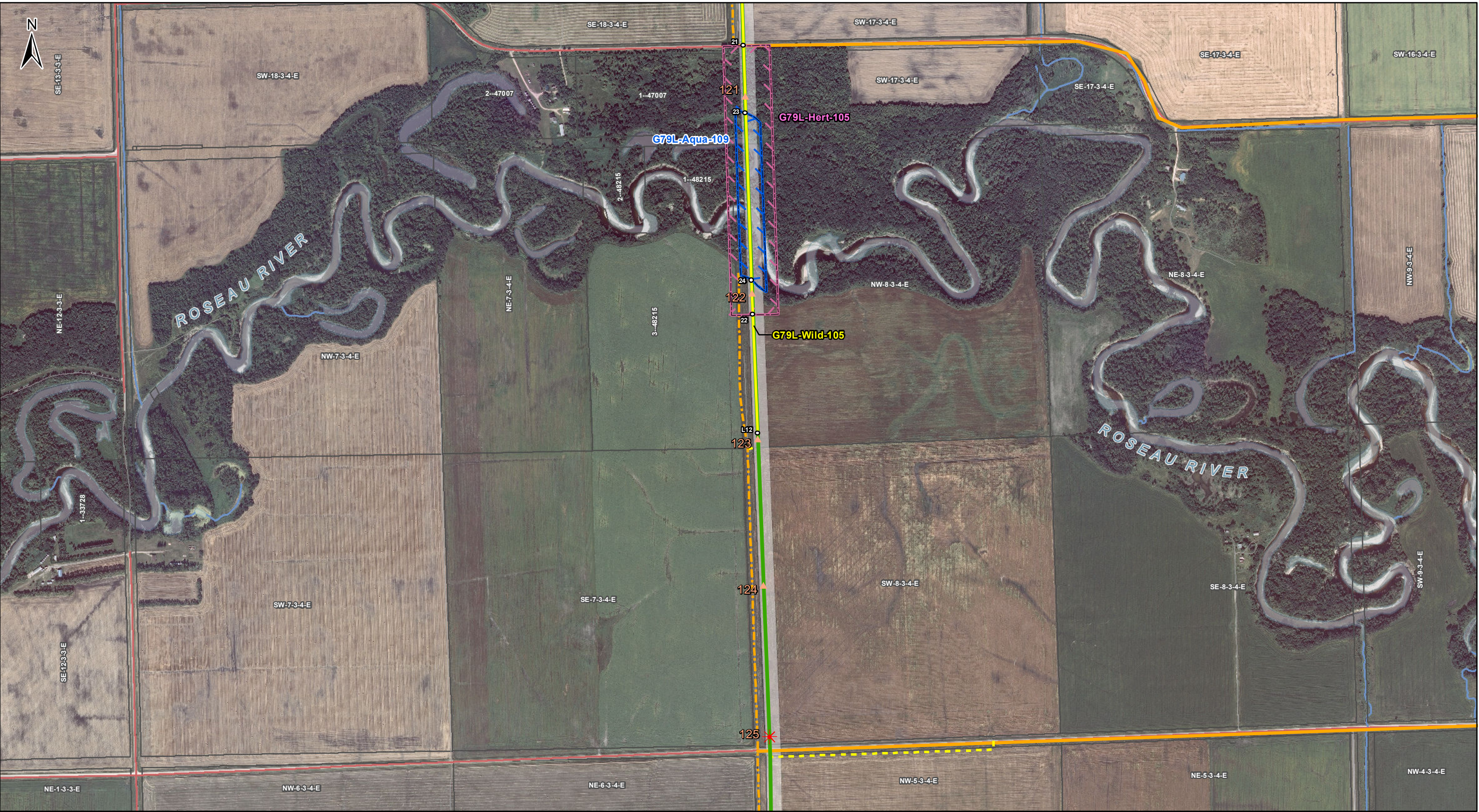
Potential Effects:

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

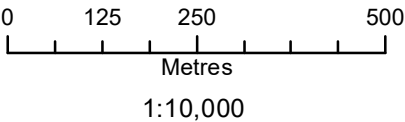
Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans





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- Land Base**
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  - Railway (Operational)
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- Project Infrastructure**
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- Points of Access**
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- ESS Features**
- Wildlife**
- Birds and Habitat
- Heritage**
- Archaeological
- Water**
- Water Crossing

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-105	Potential Archaeological Site Roseau River and Oxbow	21 to 22	E-643549 N-5452608	E-643574 N-5451879	729

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 301):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- The contractor must provide written notification to Manitoba Hydro Environmental Officer one week prior to any excavation (tower foundation installation, geotechnical investigations, etc) within the ESS, so that arrangements can be made for a project archeologist to be onsite.
- **The project archeologist is required to be onsite during excavation**, to inspect all excavated material and be provided with satisfactory time and cooperation from the contractor to complete this requirement.
- All contractors must anticipate this work and plan activities and schedules accordingly

ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-105	Roseau River crossing	L11 to L12	E-643541 N-5452878	E-643587 N-5451558	1320

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Water Crossing

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Aqua-109	Roseau River	23 to 24	E-643554 N-5452426	E-643571 N-5451974	440

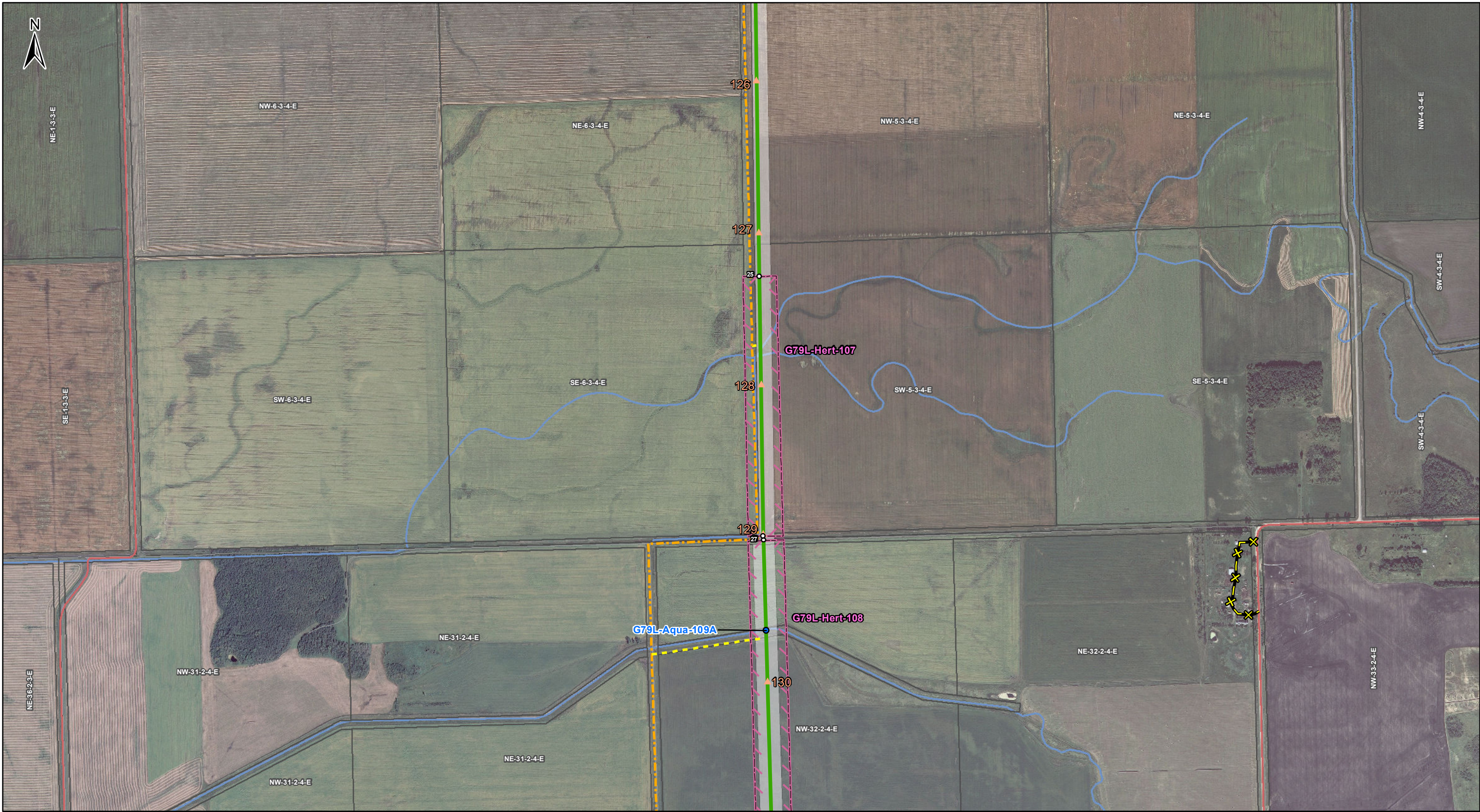
Potential Effects:

*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*

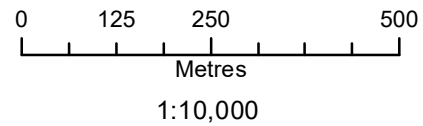
Specific Mitigation (ID# 64):

- 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





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**Land Base**

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- Rural Municipality

**Project Infrastructure**

- Tower Location
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- Final Preferred Route
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**Points of Access**

- Existing Gravel Road
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**ESS Features**

- Water**
- Water Crossing
- Heritage**
- Archaeological

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-107	Potential Archaeological Site	25 to 26	E-643634 N-5449794	E-643645 N-5449090	703
G79L-Hert-108	Potential Archaeological Site	27 to 28	E-643645 N-5449079	E-643668 N-5448268	810

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-109A	Casson Drain	E-643652 - N-5448835

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 (ID# 64):

- 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
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- 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



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| <b>Land Base</b> <ul style="list-style-type: none"><li>Transmission Line</li><li>Highway</li><li>Major Road</li><li>Local Road</li><li>Railway (Operational)</li><li>Railway (Discontinued)</li><li>First Nation</li><li>Provincial Forest</li><li>Parcel Fabric</li><li>Rural Municipality</li></ul> | <b>Project Infrastructure</b> <ul style="list-style-type: none"><li>Tower Location</li><li>Angle Tower Location</li><li>Final Preferred Route</li><li>Right of Way</li><li>Electrical Station/Expansion</li></ul> | <b>Points of Access</b> <ul style="list-style-type: none"><li>Existing Gravel Road</li><li>Existing Gravel/Dirt Road</li><li>Field Access</li><li>New Trail</li><li>Restricted Access</li><li>Restricted - Livestock Operation</li><li>Underground Infrastructure</li></ul> <p><small>* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure</small></p> |
|---|---|---|

- ESS Features**
- Water**
  - Water Crossing
- Wildlife**
  - Birds and Habitat
- Heritage**
  - Archaeological

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Archaeological

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-108	Potential Archaeological Site	27 to 28	E-643645 N-5449079	E-643668 N-5448268	810

Potential Effects:

*Higher potential for discovery of cultural and heritage resources in this area*

Specific Mitigation (ID# 302):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance

ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-106	Stewart Drain crossing	L13 to L14	E-641316 N-5447450	E-640896 N-5447439	419

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-109B	Stewart Drain	E-641219 - N-5447448

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 (ID# 64):

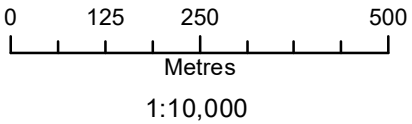
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- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing



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Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
Date Created: August 3, 2021  
Version: Final 1.00



- Land Base**
- Transmission Line
  - Highway
  - Major Road
  - Local Road
  - Railway (Operational)
  - Railway (Discontinued)
  - First Nation
  - Provincial Forest
  - Parcel Fabric
  - Rural Municipality

- Project Infrastructure**
- Tower Location
  - Angle Tower Location
  - Final Preferred Route
  - Right of Way
  - Electrical Station/Expansion

- Points of Access**
- Existing Gravel Road
  - Existing Gravel/Dirt Road
  - Field Access
  - New Trail
  - Restricted Access
  - Restricted - Livestock Operation
  - Underground Infrastructure
- \* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

- ESS Features**
- Rec Use**
- Trail

**St. Vital Transmission Complex**  
**Construction Environmental Protection Plan**  
**Environmentally Sensitive Site Locations**



ESS Group: Intersection

*\*Features represented as lines*

ESS ID	ESS Name	Site	Location
G79L-RecUse-104	Snowmobile Trail	C8	E-640151 N-5444080

Potential Effects:

*Potential interference with snowmobilers; safety issues*

Specific Mitigation (ID# 103):

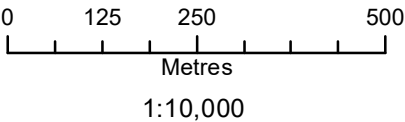
- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of recreation route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address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



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**Land Base**

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**Points of Access**

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**ESS Features**

- Water**
  - Water Crossing
- Wildlife**
  - Birds and Habitat

**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



ESS Group: Birds and Habitat

*\*Features represented as polygons*

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-107	Harlow Drain crossing	L15 to L16	E-640155 N-5443938	E-640165 N-5443628	310

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-109C	Harlow Drain	E-640157 - N-5443869

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 (ID# 64):

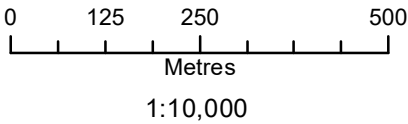
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based 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



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- Land Base**
- Transmission Line
  - Highway
  - Major Road
  - Local Road
  - Railway (Operational)
  - Railway (Discontinued)
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  - Rural Municipality

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  - Angle Tower Location
  - Final Preferred Route
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  - Underground Infrastructure
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- ESS Features**
- Water**
- Water Crossing
- Wildlife**
- Birds and Habitat
- Resource Use**
- Forestry

# St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Birds and Habitat

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-108	Main Drain crossing	L17 to L18	E-636660 N-5442316	E-636252 N-5442305	408

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Forestry

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-RUse-305	Shelterbelt	29 to 30	E-636513 N-5442312	E-636394 N-5442309	118

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- No pushing debris into adjacent timber

ESS Group: Water Crossing

\*Features represented as points

ESS ID	ESS Name	Location
G79L-Aqua-109D	Main Drain	E-636578 - N-5442314

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 (ID# 64):

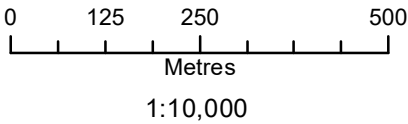
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based 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



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**Land Base**

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

**Project Infrastructure**

- Tower Location
- Angle Tower Location
- Final Preferred Route
- Right of Way
- Electrical Station/Expansion

**Points of Access**

- Existing Gravel Road
- Existing Gravel/Dirt Road
- Field Access
- New Trail
- Restricted Access
- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

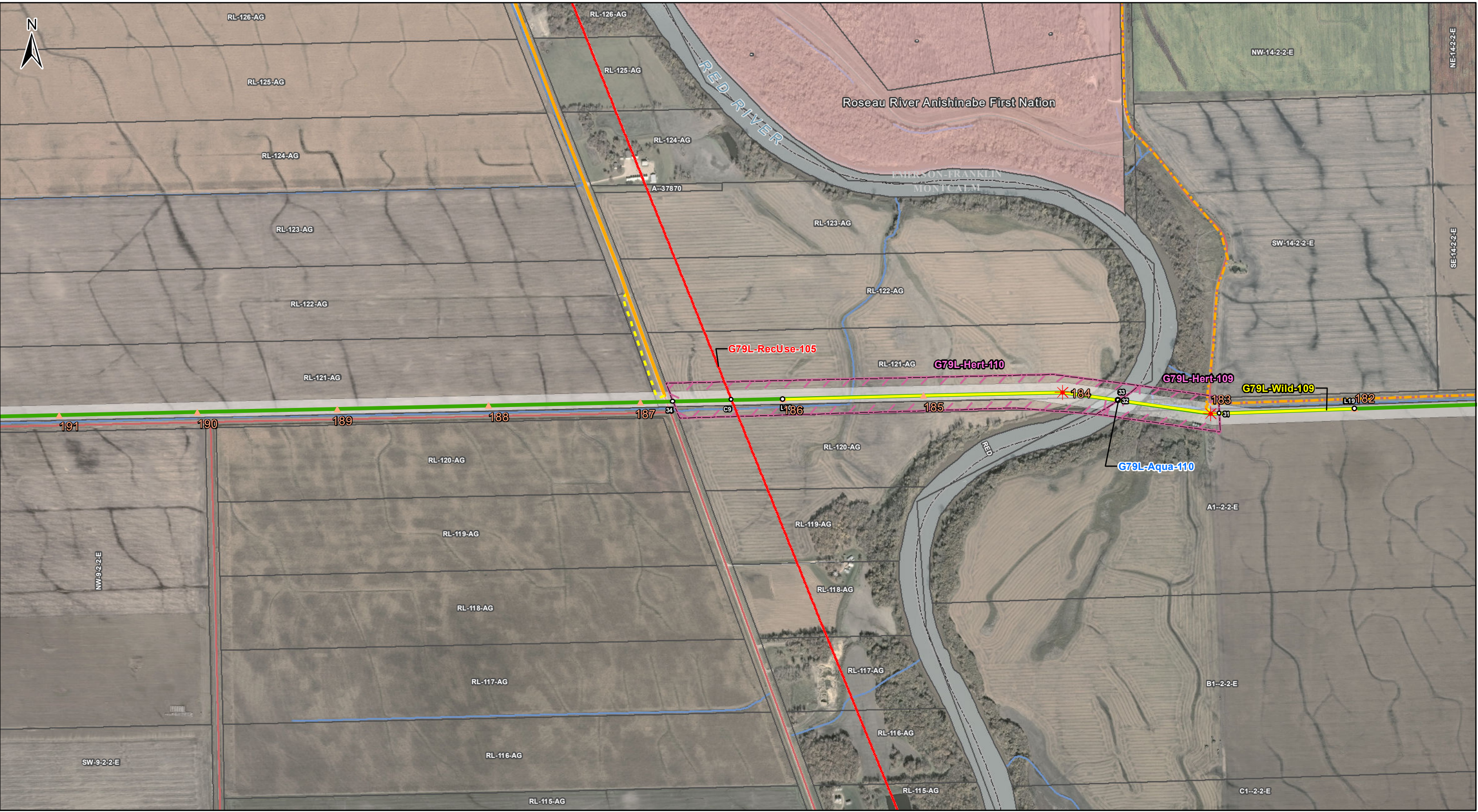
**St. Vital Transmission Complex  
Construction Environmental Protection Plan  
Environmentally Sensitive Site Locations**



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- Land Base**
- Transmission Line
  - Highway
  - Major Road
  - Local Road
  - Railway (Operational)
  - Railway (Discontinued)
  - First Nation
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- ESS Features**
- Water**
- Water Crossing
- Rec Use**
- Trail
- Wildlife**
- Birds and Habitat
- Heritage**
- Archaeological

## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-109	Potential Archaeological Site Red River	31 to 32	E-629040 N-5442102	E-628767 N-5442137	276
G79L-Hert-110	Potential Archaeological Site Red River	33 to 34	E-628767 N-5442137	E-627559 N-5442134	1209

Potential Effects:

Higher potential for discovery of cultural and heritage resources in this area

Specific Mitigation (ID# 301):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- The contractor must provide written notification to Manitoba Hydro Environmental Officer one week prior to any excavation (tower foundation installation, geotechnical investigations, etc) within the ESS, so that arrangements can be made for a project archeologist to be onsite.
- **The project archeologist is required to be onsite during excavation**, to inspect all excavated material and be provided with satisfactory time and cooperation from the contractor to complete this requirement.
- All contractors must anticipate this work and plan activities and schedules accordingly

ESS Group: Birds and Habitat

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-109	Red River crossing	L19 to L20	E-629407 N-5442114	E-627857 N-5442141	1554

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Intersection

\*Features represented as lines

ESS ID	ESS Name	Site	Location
G79L-RecUse-105	Snowmobile Trail	C9	E-627718 N-5442138

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation (ID# 103):

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

ESS Group: Water Crossing

\*Features represented as points

ESS ID	ESS Name	Location
G79L-Aqua-110	Red River	E-628767 - N-5442137

Potential Effects:

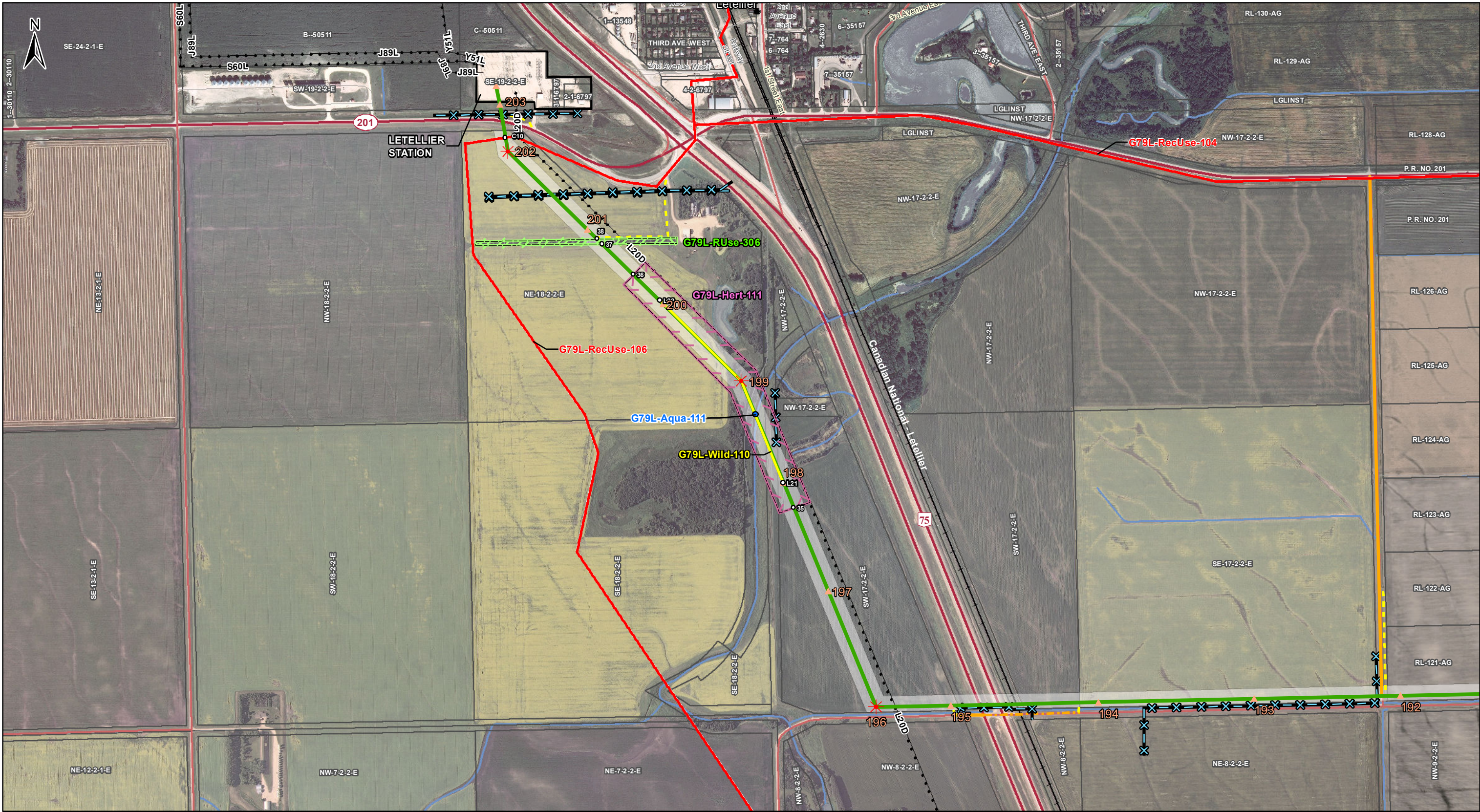
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

Specific Mitigation (ID# 64):

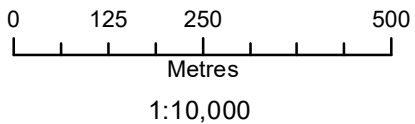
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based 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



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**Land Base**

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

**Project Infrastructure**

- Tower Location
- Angle Tower Location
- Final Preferred Route
- Right of Way
- Electrical Station/Expansion

**Points of Access**

- Existing Gravel Road
- Existing Gravel/Dirt Road
- Field Access
- New Trail
- Restricted Access
- Restricted - Livestock Operation
- Underground Infrastructure

\* Underground infrastructure locations are approximate and incomplete. Contractors are responsible for any damage to underground infrastructure

**ESS Features**

**Water**

- Water Crossing

**Rec Use**

- Trail

**Wildlife**

- Birds and Habitat

**Heritage**

- Archaeological

**Resource Use**

- Forestry

## St. Vital Transmission Complex Construction Environmental Protection Plan Environmentally Sensitive Site Locations



ESS Group: Archaeological

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Hert-111	Potential Archaeological Site	35 to 36	E-623877 N-5442597	E-623443 N-5443228	781

Potential Effects:

Higher potential for discovery of cultural and heritage resources in this area

Specific Mitigation (ID# 301):

- Carry out construction activities using methods that minimize surface damage, rutting and erosion. Construction matting may be required to protect the area from rutting and exposure to soil
- In the event of a discovery, stop work in the area and contact the Project Archeologist immediately. Refer to Cultural and Heritage Resources Protection Plan for further guidance
- The contractor must provide written notification to Manitoba Hydro Environmental Officer one week prior to any excavation (tower foundation installation, geotechnical investigations, etc) within the ESS, so that arrangements can be made for a project archeologist to be onsite.
- **The project archeologist is required to be onsite during excavation**, to inspect all excavated material and be provided with satisfactory time and cooperation from the contractor to complete this requirement.
- All contractors must anticipate this work and plan activities and schedules accordingly

ESS Group: Birds and Habitat

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-Wild-110	Riviere aux Marais Draing crossing	L21 to L22	E-623849 N-5442665	E-623515 N-5443160	608

Potential Effects:

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

Specific Mitigation (ID# 28):

- Bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Forestry

\*Features represented as polygons

ESS ID	ESS Name	Site	Start	Stop	Distance (m)
G79L-RUse-306	Shelterbelt	37 to 38	E-623358 N-5443312	E-623346 N-5443324	18

Potential Effects:

Removal in area of ROW intersect

Specific Mitigation (ID# 505):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- No pushing debris into adjacent timber

ESS Group: Intersection

\*Features represented as lines

ESS ID	ESS Name	Site	Location
G79L-RecUse-106	Snowmobile Trail PT42	C10	E-623097 N-5443600

Potential Effects:

Potential interference with snowmobilers; safety issues

Specific Mitigation (ID# 103):

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



ESS Group: Water Crossing

*\*Features represented as points*

ESS ID	ESS Name	Location
G79L-Aqua-111	Riviere aux Marais Drain	E-623773 - N-5442849

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 (ID# 64):

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
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