



# WELCOME

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# ALTALINK

# OPEN HOUSE

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**PROVOST TO EDGERTON AND  
NILREM TO VERMILION (PENV)  
TRANSMISSION DEVELOPMENT**

We're starting to develop this proposed project  
and we want your input.





# Who is AltaLink?

**Our transmission lines transport the power you use every day.**

AltaLink's transmission system efficiently delivers electricity to 85 per cent of Albertans. Dedicated to meeting the growing need for electricity, AltaLink connects Albertans to renewable, reliable and low-cost power.

With a commitment to community and environment, AltaLink is ensuring the transmission system will support Albertans' quality of life for years to come.

**Learn more at [www.altalink.ca](http://www.altalink.ca)**





# Project details

AltaLink's portion of the proposed PENV Transmission Development includes two separate developments:

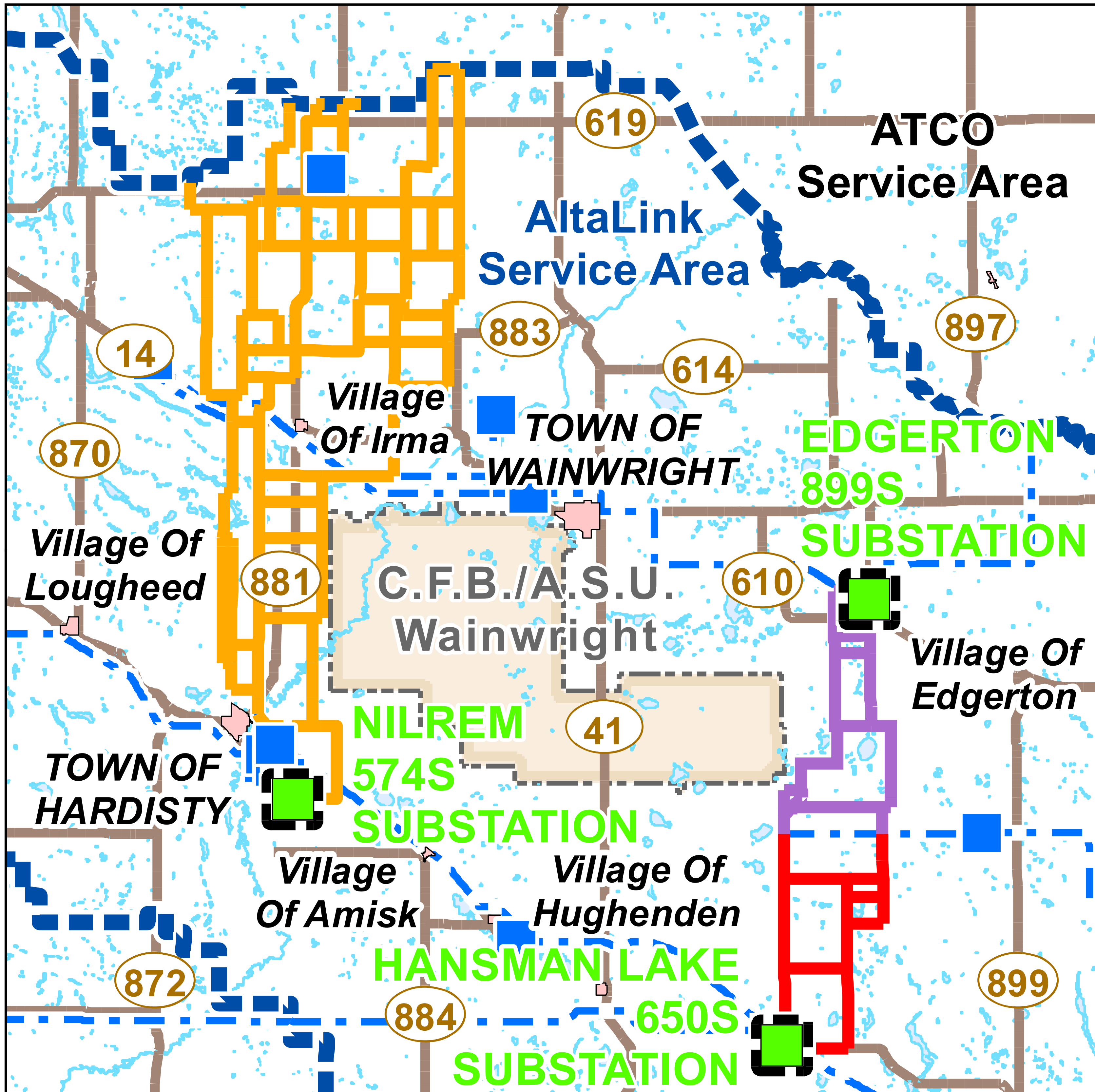
## Provost to Edgerton

- Approximately 45-60 kilometres of new 240 kilovolt (kV) transmission line from the Hansman Lake Substation located west of the Town of Provost to the Edgerton Substation located north of the Village of Edgerton
- Modifications at the existing Hansman Lake and Edgerton substations

## Nilrem to Vermilion

- Approximately 65-85 kilometres of new 240 kV transmission line from the Nilrem Substation located southeast of the Town of Hardisty to north of the Village of Irma where it will connect to a new line being planned by ATCO Electric
- Modifications at the existing Nilrem Substation

# Project details



## LEGEND

- |  |  |                            |               |
|--|--|----------------------------|---------------|
| Potential Substation Upgrade                                     | Potential Route Option - Provost to Edgerton Component - Stage 2 | Existing Transmission Line | Military Base |
| Existing Substation  | Potential Route Option - Nilrem to Vermillion Component          | Service Area Boundary      | Urban Area    |
| Potential Route Option - Provost to Edgerton Component - Stage 1 |  | Road                       | Water Body    |

# Building to meet demand

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This project involves building 240 kV transmission lines. To meet the existing electricity need in the area, the lines will initially be energized at 138 kV, although they will be built so that the voltage can be increased to 240 kV as electricity demand in the area increases.

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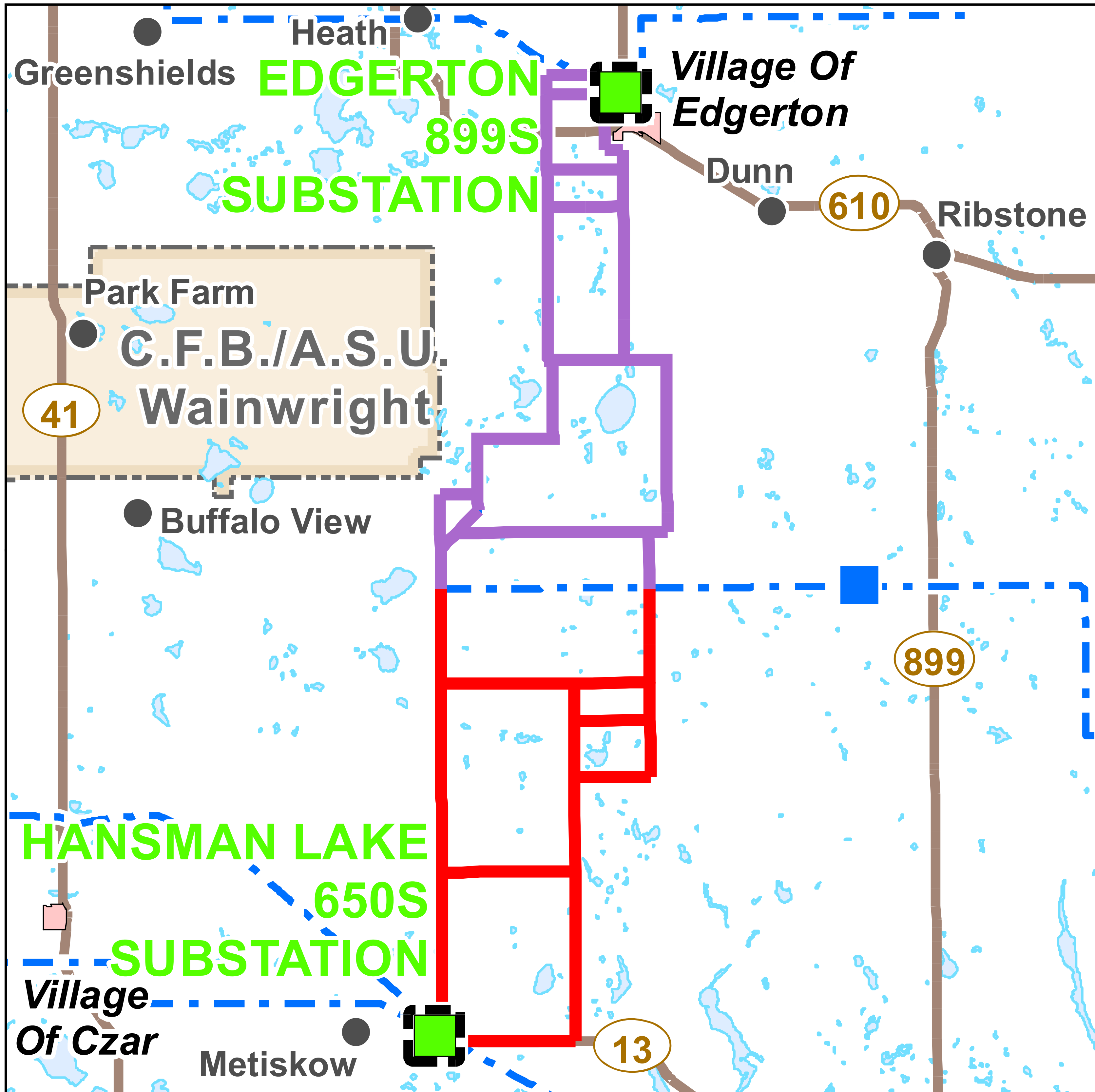
Additional system upgrades, such as substation modifications, may be required to upgrade the lines to 240 KV.

These upgrades are not included as part of this project. The Alberta Electric System Operator (AESO) will determine when this is needed and will direct AltaLink to prepare a separate project application for any work that is required at that time.

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# Provost to Edgerton



## LEGEND

- |                              |                                  |                            |               |
|------------------------------|----------------------------------|----------------------------|---------------|
| Potential Substation Upgrade | Potential Route Option - Stage 1 | Existing Transmission Line | Military Base |
| Existing Substation          | Potential Route Option - Stage 2 | Hamlet or Locality         | Urban Area    |
|                              |                                  | Road                       | Water Body    |

# Provost to Edgerton

## *A staged approach*

### STAGE 1

Automatically built if project is approved

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#### Transmission line

The first portion of the transmission line, which is shown in red on the map, will be built from the Hansman Lake Substation to an existing transmission line (called 749AL).

The new line will connect to the existing 749AL using an airbreak.

To accommodate construction of the new line, modifications to some existing lines in the area may be required. These modifications will be determined after further engineering.

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#### Substation requirements

The existing Hansman Lake Substation is located in SE-1-40-5-W4, approximately 20 kilometres northwest of the Town of Provost.

We need to install up to four new circuit breakers and make some modifications to the connection points of the existing transmission lines connected to the substation. No modifications to the existing fence line are required.





# Provost to Edgerton

## *A staged approach*

### **STAGE 2**

Built when generation and need milestones are met

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#### **Transmission line**

The second portion of the line, which is shown in purple on the map, will be built from the existing 749AL transmission line to the Edgerton Substation.

The construction of this portion of the line will be determined by the Alberta Electric System Operator (AESO) when generation and need milestones are met.

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#### **Substation requirements**

The existing Edgerton Substation is located in NE-2-44-4-W4 and SE-11-44-4-W4, approximately one kilometer north of the Village of Edgerton.

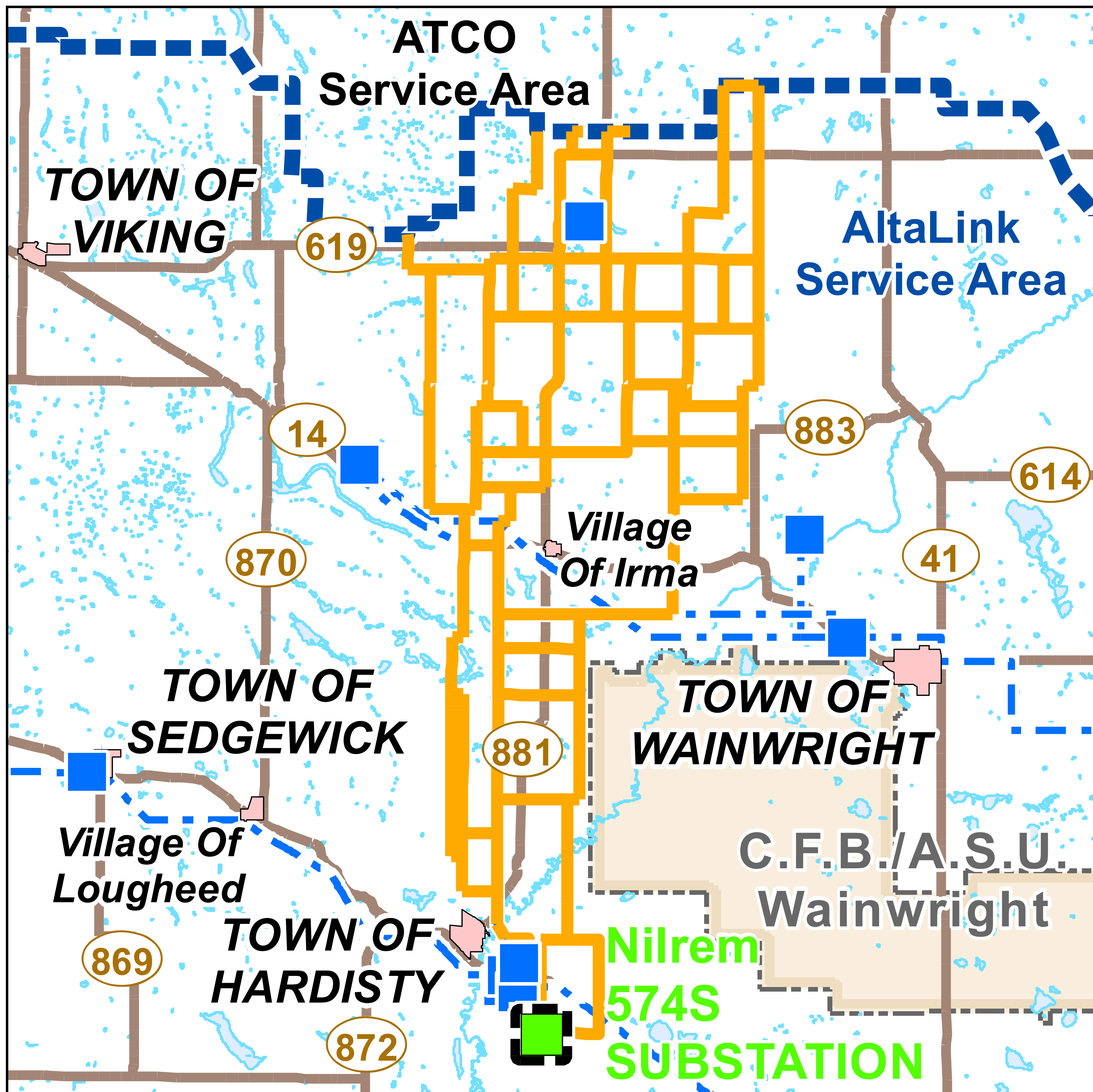
To accommodate the connection of line built as part of Stage 2, we need to add one new 138 kV circuit breaker.

We also need to acquire new land to expand the substation fence line approximately 15-20 metres to the west.





# Nilrem to Vermilion



## LEGEND

- |                              |                            |               |
|------------------------------|----------------------------|---------------|
| Potential Substation Upgrade | Existing Transmission Line | Military Base |
| Existing Substation          | Service Area Boundary      | Urban Area    |
| Potential Route Option       | Road                       | Water Body    |



# Nilrem to Vermilion

## Transmission line

We are proposing to build approximately 65-85 kilometres of new transmission line connecting the Nilrem Substation, located southeast of the Town of Hardisty, to a new ATCO Electric line, located north of the Village of Irma.

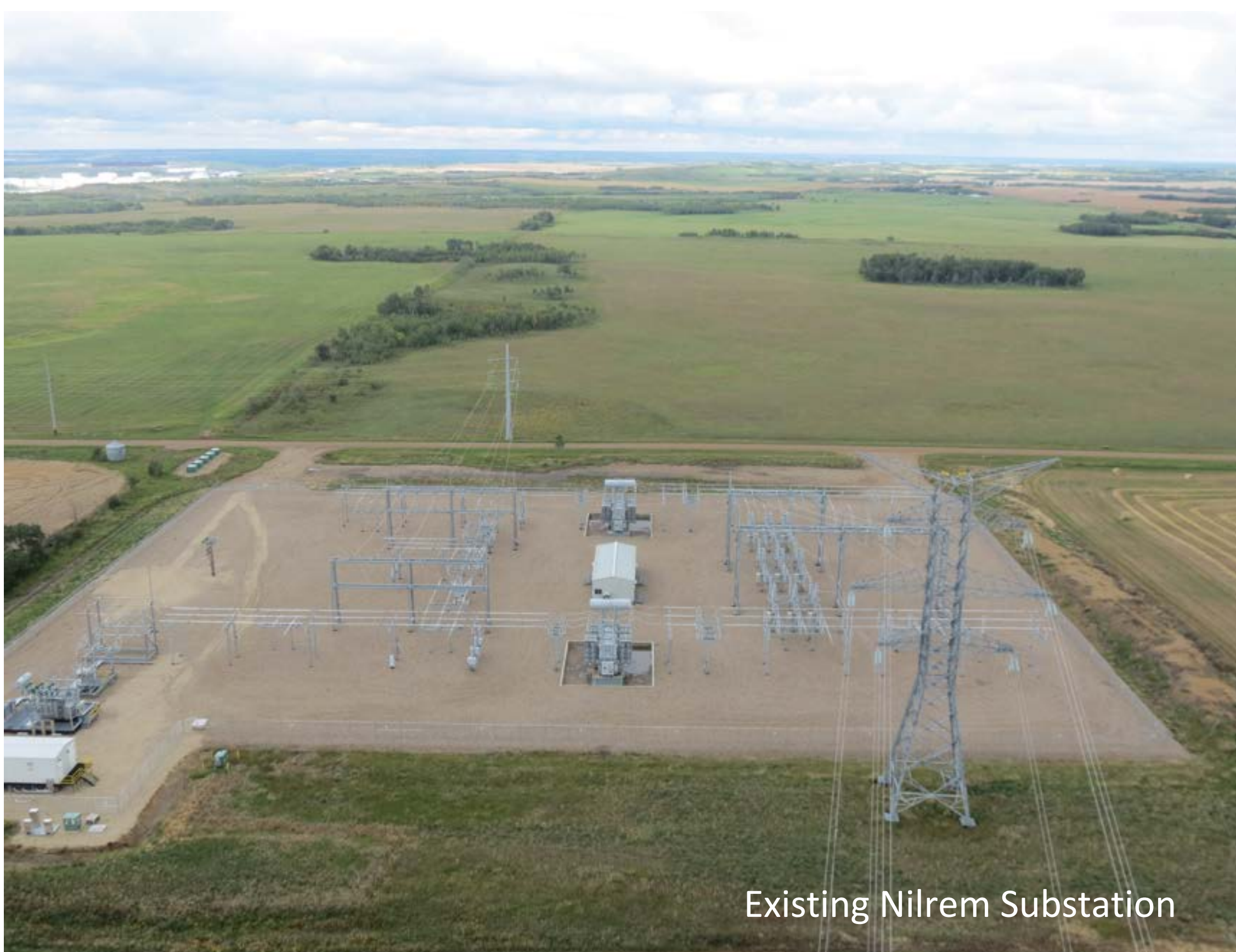
To accommodate construction of the new line, modifications to some existing lines in the area may be required. These modifications will be determined after further engineering.

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## Substation requirements

The existing Nilrem Substation is located in NE-9-42-9-W4, approximately seven kilometres southeast of the Town of Hardisty.

We need to add up to two new circuit breakers and make some modifications to the connection points of the existing transmission lines connected to this substation. No modifications to the existing fence line are required.



Existing Nilrem Substation



A typical 138 kV circuit breaker



# Route selection

**AltaLink takes several factors into consideration in an effort to find a route with low overall environmental, social and economic effects.**

In addition to stakeholder input we also consider agricultural, residential, environmental, visual and other potential impacts as well as cost.

AltaLink has identified multiple potential route options for the project which take these impacts into consideration. Please let us know what other factors are important to you so we can consider these factors when refining route options.







# Structure types

There are two potential structure types that we are proposing for this project that we would like to get your feedback on.

Please note: All dimensions are approximate and subject to change with detailed engineering. For example, most of the structures do not require guy wires; however, a structure at an angle, turn or dead-end may need a guy wire.

SINGLE CIRCUIT MONOPOLE		
	Structure height	25-35 m
	Right-of-way width	<b>When on private property:</b> 20-22 m <b>When in road allowance:</b> 11-12 m from the edge of the road allowance
	Distance between structures	120-200 m
	Can be placed in road allowance*	Yes
	Can be placed on private property	Yes

SINGLE CIRCUIT H-FRAME		
	Structure height	25-35 m
	Right-of-way width	<b>When on private property:</b> 34 m <b>When straddling the road allowance edge:</b> 17-20 m
	Distance between structures	180-275 m
	Can be placed in road allowance*	Yes, partially
	Can be placed on private property	Yes

*\*Structures that can be placed in road allowance may be completely within road allowance or straddling the road allowance boundary, depending on the specific location and circumstances. Structures in road allowance may also require some right-of-way on private land for maintenance purposes.*



# Ongoing survey work

## Environmental surveys

From now through spring and summer 2020, AltaLink will be conducting seasonal environmental surveys along the potential routes. The surveys are conducted by helicopter or on the ground.

Ground based surveys on private land will only occur after landowner permission is received.

When conducting all surveys we work to minimize disruption to residences, area users, livestock and wildlife.

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## Geotechnical surveys

AltaLink will be conducting geotechnical drilling to perform soil investigation at various locations within the project area as required.

Where these activities require access to private property, an AltaLink representative will be in contact with you to request that access.



# Access trails and construction workspace

## Access trails

Access trails are required in areas where access may be limited for a number of reasons, including steep terrain, wetlands or lack of access directly to the right-of-way.

Typically, an access trail is approximately eight metres wide, but this width may vary depending on the terrain.

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## Construction workspace

Workspace, in addition to the transmission line right-of-way, is required for the safe construction of the transmission line. The requirements for this workspace vary depending on the location of the transmission line:

- **Private property:** 10 metres on either side of the right-of-way
- **Road allowance:** additional 10 metres beyond the right-of-way (on private property)
- **For stringing behind corner structures:** areas up to 120 metres long

*AltaLink will consult with all affected landowners regarding potential access trails and construction workspace.*



# Compensation

AltaLink is committed to providing fair and responsible compensation to landowners. There are three general types of compensation:

## Right-of-way agreement

Where a route approved by the Alberta Utilities Commission (AUC) crosses private land, AltaLink must acquire land rights from landowners to maintain and operate the transmission line

- AltaLink pays fair market value
  - Landowner retains full ownership of the property
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## Annual Structure Payments (ASP)

An ASP is paid to landowners who have transmission structures on their property

- Landowners are compensated for crop loss, weed control and adverse effects (tangible and intangible)
  - ASPs are reviewed every five years to ensure that compensation is fair and reasonable
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## Other compensation

Landowners may be eligible for other payments such as:

- General disturbance
- Construction damages
- Entry fee:
  - \$500 per acre up to a maximum of \$5,000
  - \$250 minimum for anything less than half an acre
- Temporary workspace: full market value per acre



# Anticipated project schedule

## *Provost to Edgerton*

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**Notify and consult with stakeholders**

September 2019 to May 2020

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**File application with the Alberta Utilities Commission**

June 2020

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**Start construction if project is approved**

Stage 1: July 2021

Stage 2: based on generation and need milestones

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**Complete construction**

Stage 1: June 2022

Stage 2: based on generation and need milestones

The Alberta Electric System Operator (AESO) will continue to monitor generation developments and the need for electricity in the area and will direct AltaLink when it is time to proceed with the construction of Stage 2.

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*Although we attempt to follow the anticipated project schedule, it is subject to change. We will continue to provide you with updated schedule information if required as the project progresses.*



# Anticipated project schedule

## *Nilrem to Vermilion*

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**Notify and consult with stakeholders**

September 2019 to May 2020

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**File application with the Alberta Utilities Commission**

June 2020

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**Start construction if project is approved**

July 2021

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**Complete construction**

June 2022

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*Although we attempt to follow the anticipated project schedule, it is subject to change. We will continue to provide you with updated schedule information if required as the project progresses.*



# Environment

**An Environmental Evaluation will be completed for the project using desktop and field survey data as well as input gathered during consultation with provincial and federal regulators, landowners and the public.**

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This information is used to assist in route development and to identify the proposed route with the lowest environmental impact.

Potential effects from project impacts are identified, so that mitigations can be developed to minimize or eliminate these effects.

**Information within the Environmental Evaluation typically includes:**

- wildlife and vegetation inventories
  - avian collision risk assessments
  - wetland and watercourse assessments
  - threatened and endangered species identification
  - terrain and soil evaluations
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# EMF

**AltaLink recognizes that people have concerns about exposure to Electric and Magnetic Fields (EMF) and we take those concerns very seriously.**

Everyone in our society is exposed to EMF from many sources, including:

- power lines and other electrical facilities
- electrical appliances in your home
- building wiring

National and international organizations such as Health Canada and the World Health Organization have been conducting and reviewing research about EMF for more than 40 years. Based on this research, these organizations have not recommended the general public take steps to limit their everyday exposure to EMF from high voltage transmission lines.

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## **Will there be TV/radio or wireless internet interference?**

Based on our experience, there will be no impact on cable or satellite TV or wireless internet.