

A close-up photograph of a male worker in safety gear. He is wearing a white hard hat with a red headlamp, safety glasses, and yellow work gloves. He is looking down at a task, possibly inspecting a metal surface. The background is blurred, showing an industrial or construction site.

# WEST EDMONTON TRANSMISSION UPGRADE PROJECT UPDATE

December 2017

# PROJECT INFORMATION

In preparation for the next phase of the West Edmonton Transmission Upgrade Project, we are sending you this information to inform you of updates to the proposed above ground transmission project and ask for your feedback.

Since September 2016, we have discussed the project with over 850 stakeholders. We assessed the input we received from occupants, residents, homeowners and businesses through one on one consultations completed in person, at one of our open houses, or over the phone. As a result of discussions with stakeholders and other new information, we have refined our preliminary routes and incorporated additional routing options for consideration. These changes are outlined on the map included in this package.

In this project notice you will learn more about how the potential routes were refined and how stakeholder feedback and other new information was utilized to develop additional routing options. As we move forward, we remain committed to consulting with you about this project. Our goal is to continue to involve you and respond to your questions. Further details regarding the next steps in the consultation process are discussed later in this notice.

**Thank you to everyone who took the time to participate in the consultation process to date.**

## Project Background

This proposed project involves upgrading the transmission system in Edmonton. It will improve the reliability of the transmission system and reduce the risk of customer outages.

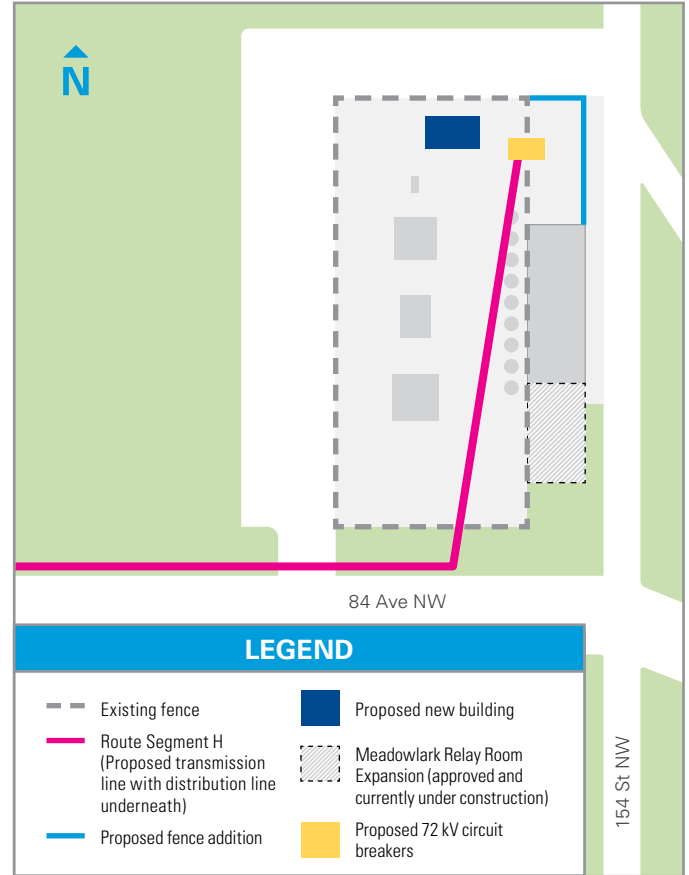
The proposed project includes:

- Constructing approximately 11 km of above-ground 72 kilovolt (kV) transmission line from the Poundmaker substation (18944 105 Avenue) to the Meadowlark substation (15404 84 Avenue).
- Adding two 72 kV circuit breakers and associated switches and equipment to the Meadowlark substation. This is a revision from the information included in the original project notice, which indicated that one circuit breaker was required.
- Adding one 240 kV/72 kV transformer, one 240 kV circuit breaker, one 72 kV circuit breaker and associated switches and equipment to the Poundmaker substation.
- Expanding the existing fences at both the Poundmaker and Meadowlark substations. This is a revision from the information included in the original project notice regarding the Meadowlark substation.

## Poundmaker Substation



## Meadowlark Substation



# TRANSMISSION LINE ROUTE LOCATION UPDATE

During the process of determining potential routes, we took the following factors into consideration in an effort to find routes with the lowest overall impact:

- Residential
- Environmental
- Electrical
- Cost
- Visual
- Special Constraints

We previously notified you of the routes we identified for the proposed transmission line. We proposed these route options because they generally follow existing linear disturbances such as roadways, designated Transportation/Utility Corridors, and existing distribution utility right-of-ways. When we refine routes or develop additional routes, we consider the factors listed above, any new information and consultation feedback.

## Routing Refinements

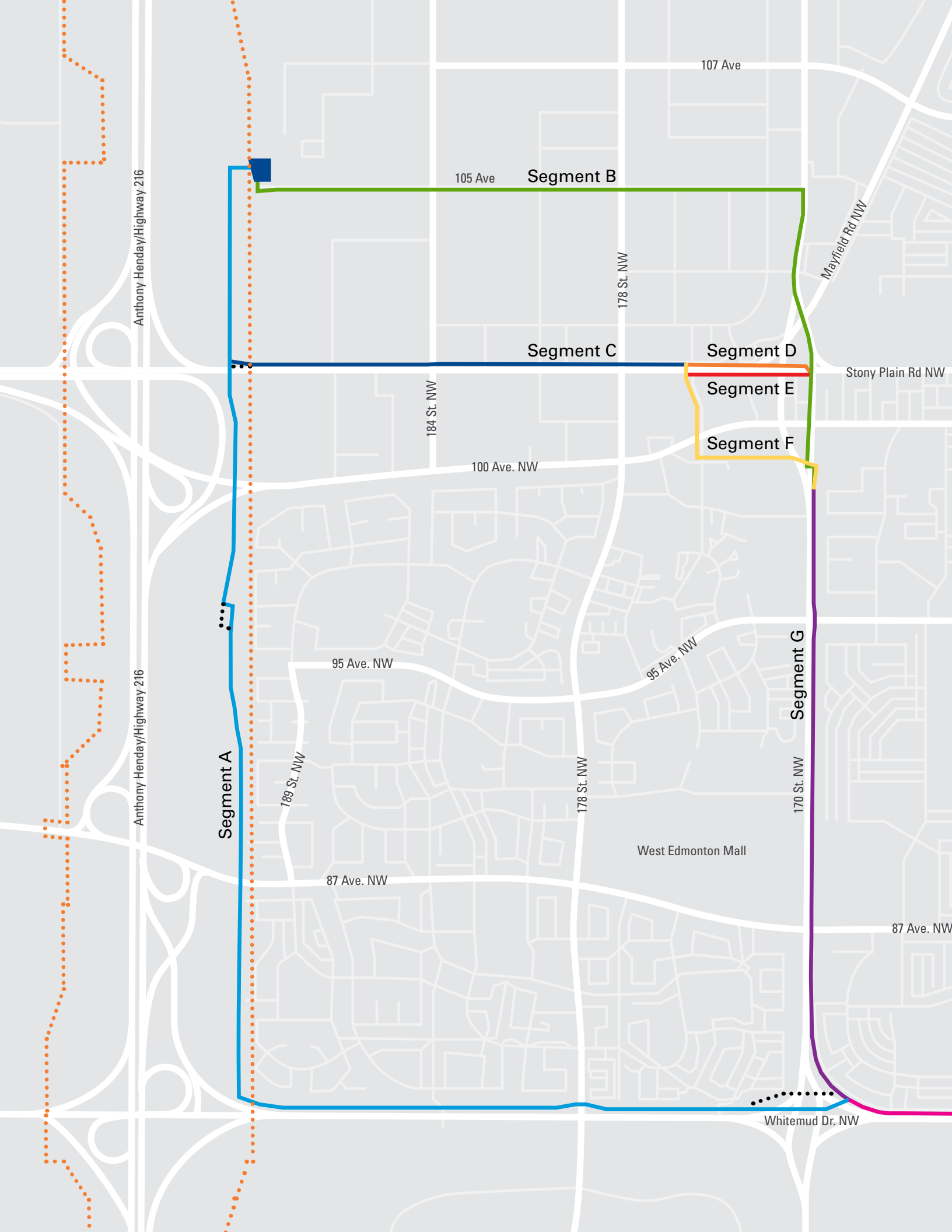
As outlined on the enclosed map, several refinements were made to the routes included in our notice from September 2016. These changes were made in response to stakeholder feedback and other new information. These refinements include alignment changes and proposing an above ground connection to the Meadowlark substation.

## Additional Routes under Consideration

Based on feedback received and additional routing assessments, we attempted to reduce potential project related impacts by adding several routing alternatives that we will be consulting on over the coming months. These additional routes are shown on the enclosed map.

## Additional Routing Information

Based on feedback collected at earlier stages of the project, cross section images were developed to help stakeholders visualize the project.



Anthony Henday/Highway 216

Anthony Henday/Highway 216

Segment A

189 St. NW

95 Ave. NW

87 Ave. NW

184 St. NW

100 Ave. NW

105 Ave

Segment B

178 St. NW

Segment C

107 Ave

Segment D

Segment E

Segment F

Mayfield Rd NW

Stony Plain Rd NW

Segment G

178 St. NW

West Edmonton Mall

95 Ave. NW

170 St. NW

87 Ave. NW

Whitemud Dr. NW



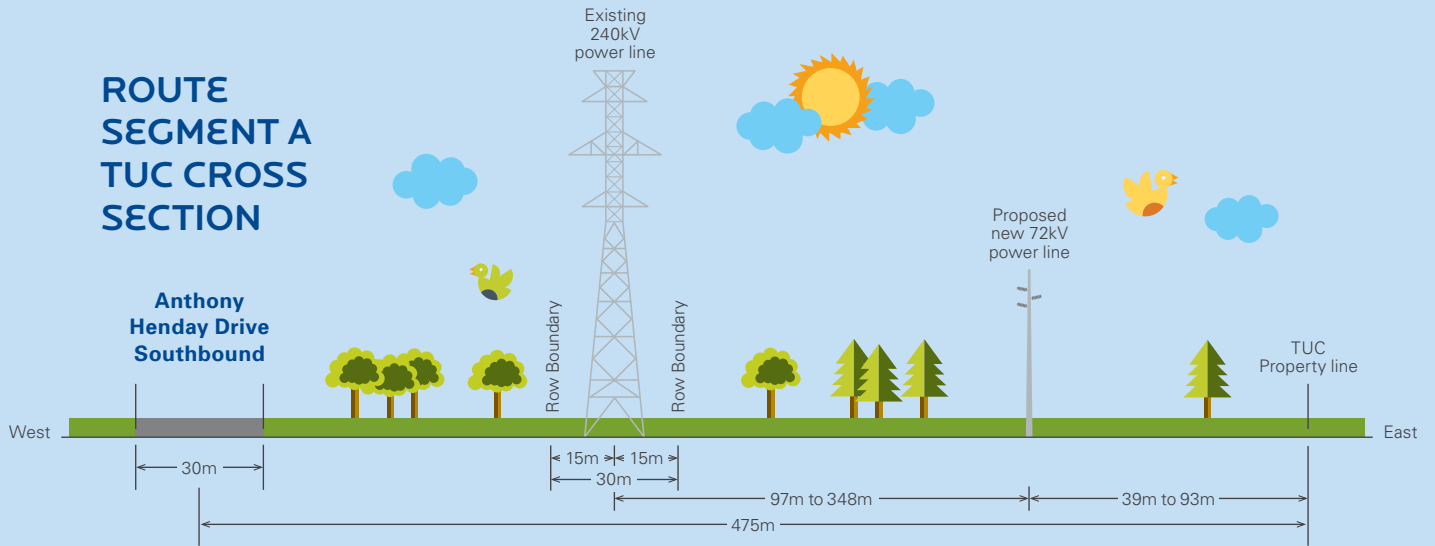
## LEGEND

- Poundmaker Substation
- Meadowlark Substation
- Route Segment A
- Route Segment B  
(Transmission line is proposed to be strung on one side of existing structures for a portion of this segment)
- Route Segment C
- Route Segment D
- Route Segment E
- Route Segment F
- Route Segment G
- Route Segment H  
(Proposed transmission line with distribution line underneath)
- TUC boundaries
- Rejected routing

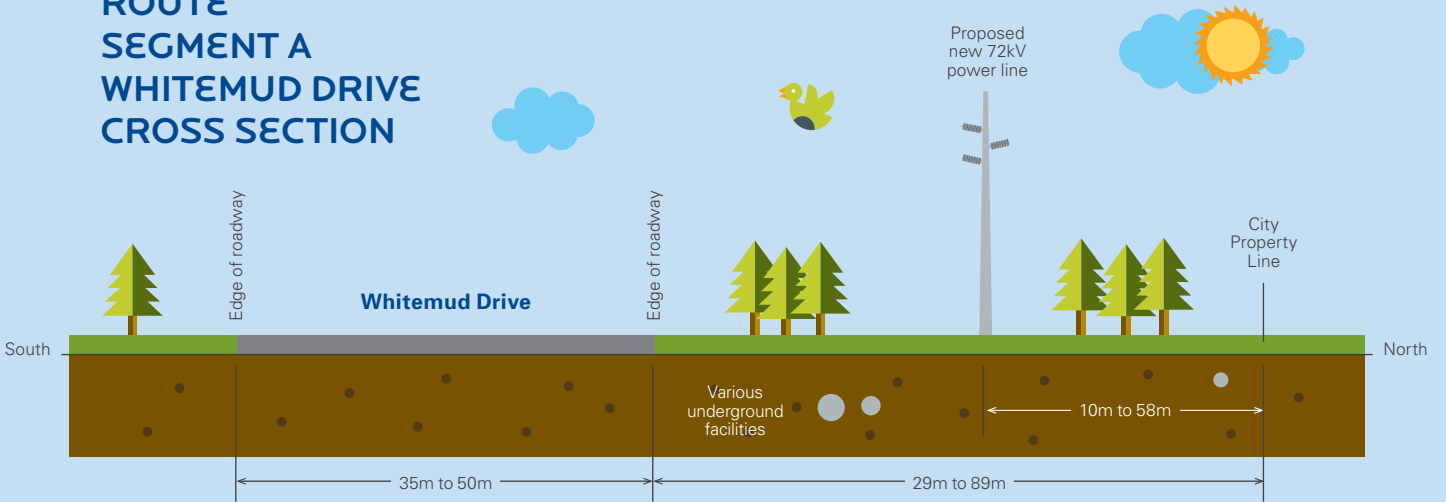
### What is a Transportation/Utility Corridor (TUC)?

The Government of Alberta established Restricted Development Areas (RDAs) in the mid-1970s, the lands in these areas were designated for TUC uses. As defined by the Government of Alberta the intended primary uses within TUCs are linear transportation and utility facilities, which includes power transmission lines.

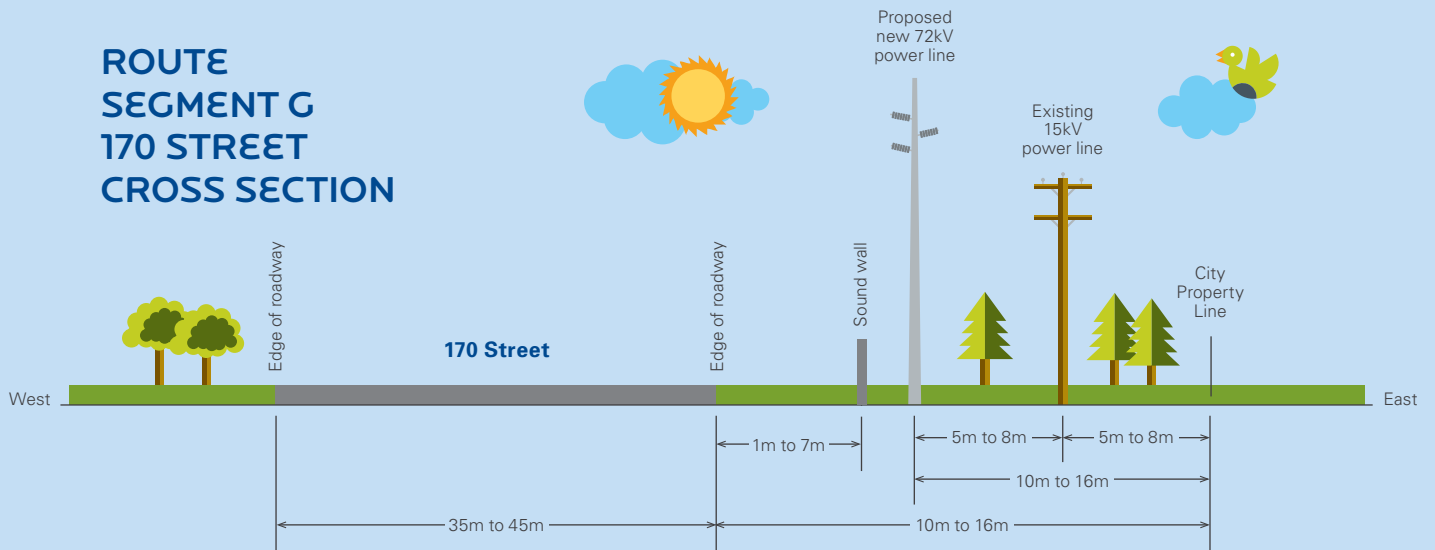
## ROUTE SEGMENT A TUC CROSS SECTION



## ROUTE SEGMENT A WHITEMUD DRIVE CROSS SECTION



## ROUTE SEGMENT G 170 STREET CROSS SECTION



\*Drawings are not to scale (NTS) and dimensions are approximate

## Future Routing Decisions

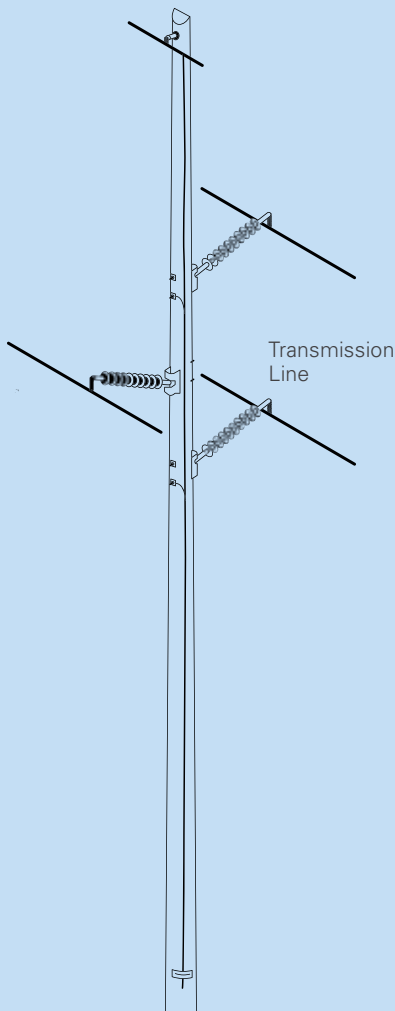
At this time, a preferred route has not been selected. After consulting on the routing refinements and new routing alternatives mentioned above, the project team will prepare a Facility Application to be filed in early 2018 with the Alberta Utilities Commission (AUC). This application will present a preferred route and any potential alternative routes identified by EPCOR. Following submission of the application, the public will continue to be able to provide feedback to both EPCOR and the AUC for consideration. If approved, the AUC will make the final decision on routing and one route will be approved for construction.

## Proposed Structure Type

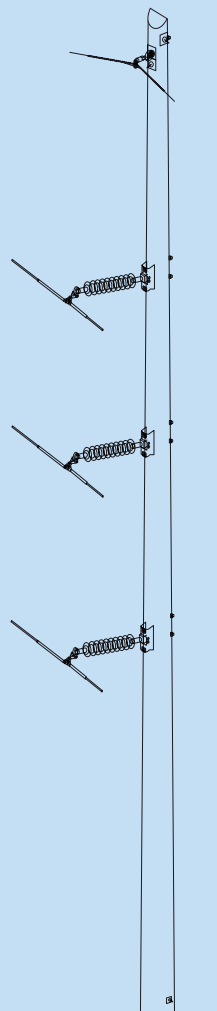
As shown below, the typical structures we are planning on using will be either wood or composite poles, ranging in height from approximately 18 to 26 metres. The poles will be single circuit, meaning they will have three wires strung across them and one overhead shield wire on top (refer to Structures A and B below). The diameter of the typical structures at the grounds surface will range between approximately 0.65 to 1.0 metres.

A portion of the proposed route follows an existing double-circuit distribution line, meaning they have two sets of three wires strung across them, one

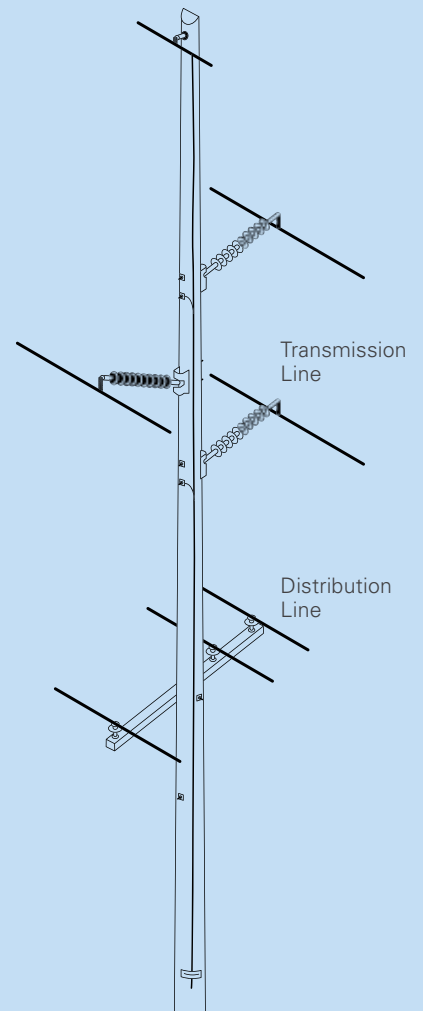
**STRUCTURE A**  
TRANSMISSION  
ONLY



**STRUCTURE B**  
TRANSMISSION  
ONLY



**STRUCTURE C**  
TRANSMISSION AND  
DISTRIBUTION



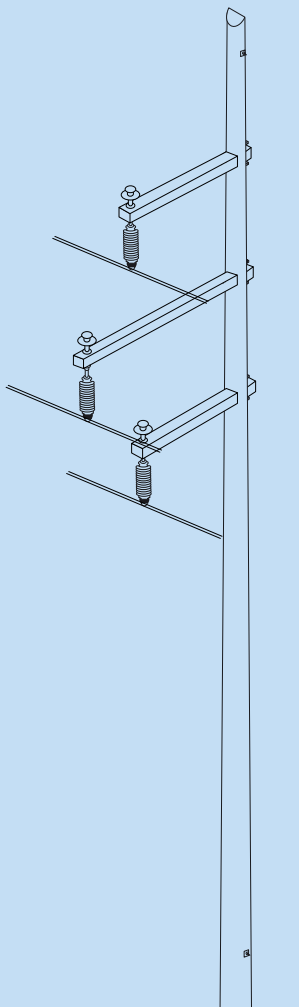
set on top of the other (shown as Route Segment H on the map). For this section, we propose to use the existing utility right-of-ways. This will involve removing and replacing some of the existing poles (approximately 14 metres tall) and installing new poles (as mentioned above ranging from 18 to 26 metres in height) that will have the new transmission line on top and one of the existing distribution circuits underneath (refer to Structure C above). One of the existing distribution circuits will be removed and relocated below ground.

A portion of Route Segment B (from the Poundmaker Substation to approximately 172 St

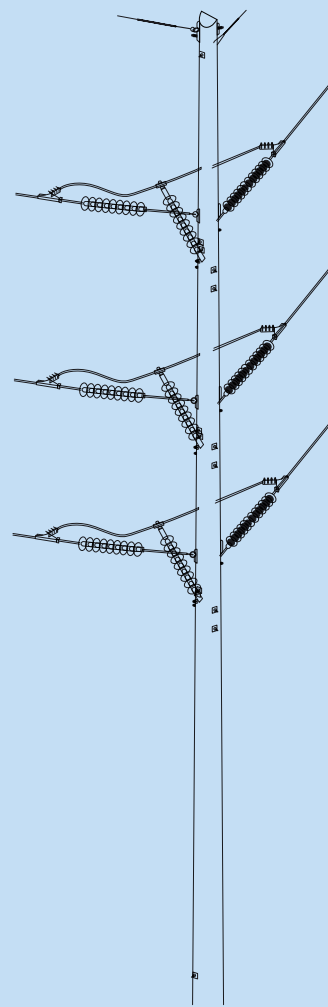
NW) follows an existing 240-kV transmission line that is only strung on one side of the structure. For this section, we propose to string the 72-kV transmission line on the unstrung side (refer to Structure D below).

The images shown below (Structures E, F, and G) represent examples of the non-typical structures that we may be required to use at certain locations along the transmission line, including where the line turns corners, has to span larger distances, or cross existing transmission lines. Non-typical structures may be wood, composite, or steel, ranging in height from approximately 18 to 34 metres.

**STRUCTURE D**  
EXISTING STRUCTURE,  
SINGLE SIDE STRUNG



**STRUCTURE E**  
SINGLE POLE VERTICAL  
DEAD END





The diameter of the non-typical structures at the ground surface will range between approximately 1.0 to 1.5 metres.

### Transmission Lines and Substations

Transmission lines are like highways, moving high-voltage electricity from generating stations to distribution points (called substations) where the high-voltage electricity gets stepped down to lower voltages.

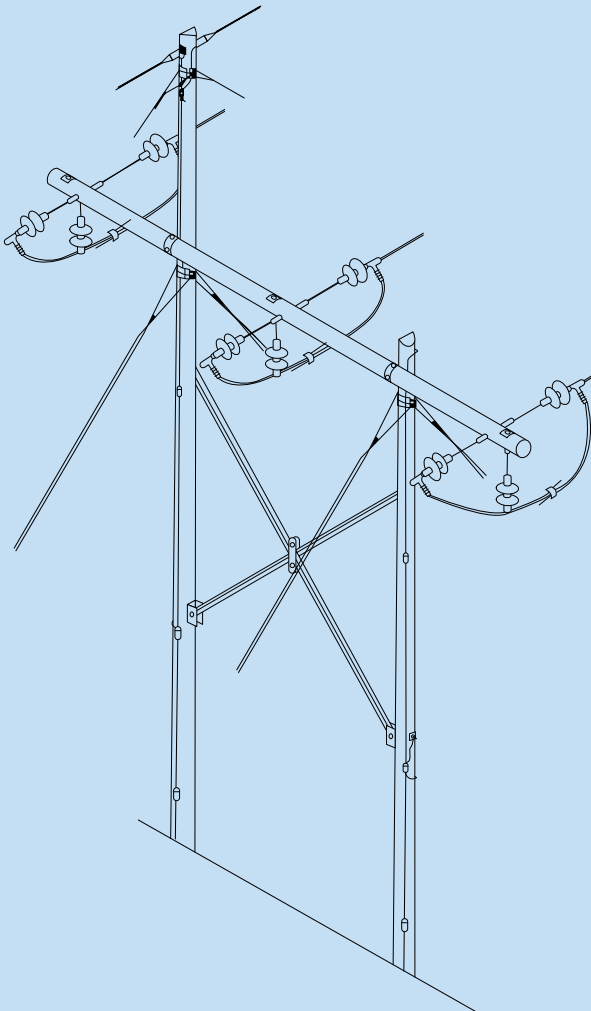
### Distribution Lines

Once voltages are stepped down at a substation, the electricity travels along distribution wires. These lines are the ones that leave a substation and make their way to our homes or businesses.

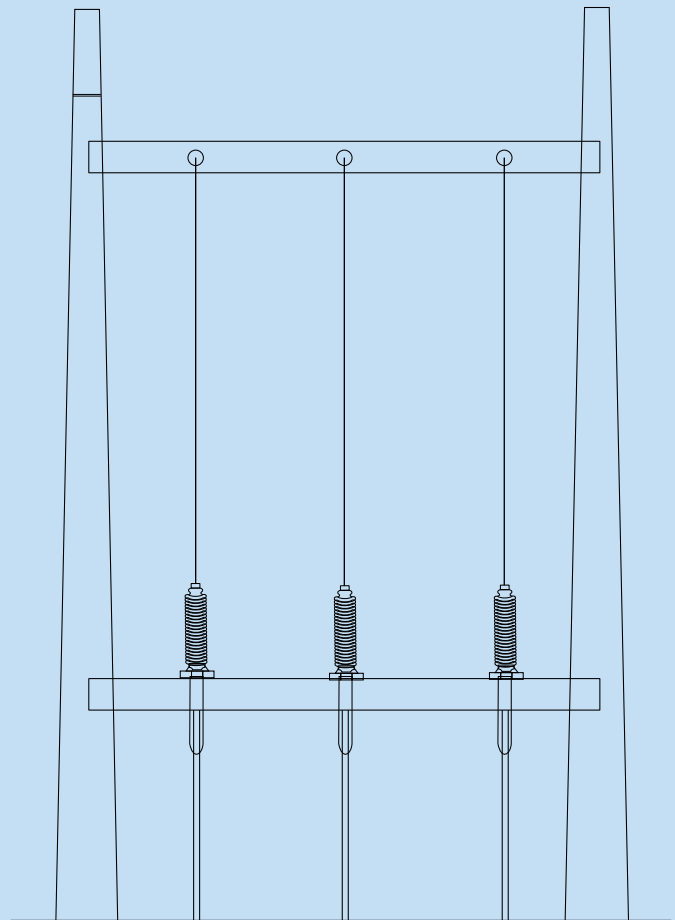
### Consultation Update

Throughout our discussions with stakeholders, various concerns and questions were brought forward. The following section outlines some of the more frequent feedback communicated by stakeholders, as well as how we have addressed or how we will address the concern.

**STRUCTURE F**  
TWO POLE DOUBLE  
DEAD END



**STRUCTURE G**  
SUBSTATION GANTRY  
STRUCTURE



*Structure G is proposed at the Meadowlark Substation. A similar structure is also proposed at the Poundmaker Substation.*

### Environmental Considerations

Stakeholders told us it is important to minimize potential impacts to the environment. In addition to refinements made to previously proposed routing to avoid or reduce potential impacts, additional routing was also developed that collectively considered potential environmental impacts. This included limiting disturbance to existing vegetation and natural areas, focusing on disturbed/developed areas (transportation corridors, industrial areas) and placing routing near other existing developments. Environmental impacts will be assessed as part of our Facility Application to the AUC.

### Visual Impacts

In order to reduce the potential visual impacts associated with the project, where possible, existing linear disturbances (roads, transmission/distribution lines) were followed or overbuilt and routing in residential and recreational areas was minimized to reduce the potential visual impacts associated with the project.

In determining routing options, we strive to be separated from residences while minimizing impacts to existing and planned underground utilities and infrastructure. For example, along Whitemud Drive, a major transportation corridor, proposed routing has been located as far from residences to the north as possible while still complying with separation requirements from the roadway and other subsurface utilities.

### Construction Impacts

We understand that construction impacts can be challenging; however, they are generally short term in nature and our construction staff will work as quickly and safely as possible to minimize any potential inconvenience. All proposed work spaces for the project will be safe and secure and construction activities will comply with the City of Edmonton bylaws. These include occupational health and safety requirements, as well as EPCOR's internal health, safety and environment program. It

is anticipated that work will be generally undertaken between 7:30 a.m. and 5 p.m. and it will comply with the City of Edmonton's Community Standards bylaw for noise control. You can expect to see activity that is typical to construction, including company or contractor vehicles and equipment in your neighbourhood. If approvals are granted, we anticipate that outages will be required in certain areas throughout construction. If a planned service power interruption is required in your area, we will notify you in advance.

If the AUC approves the facility application, we will provide you with more detailed information regarding potential construction impacts prior to any work starting.

### Noise

We do not anticipate an increased level of noise as a result of the proposed project and its operation. As part of the AUC's requirements, a Noise Impact Assessment (NIA) will be completed and submitted with the Facility Application to ensure that the proposed project will not exceed permissible sound levels (PSL).

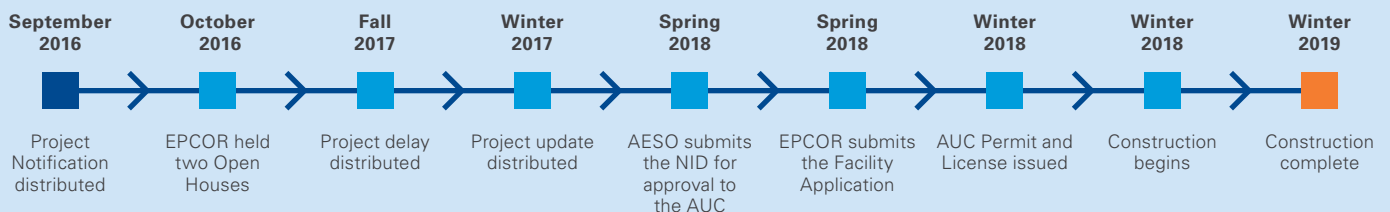
### The location of Route A in the TUC

We worked with Alberta Transportation, Alberta Infrastructure, and other stakeholders in the area to find a potential route that addresses numerous interests along the TUC. These interests include a location that would minimize impacts to residences, reduce potential environmental impacts, and consider proximity to existing and planned infrastructure within the TUC.

### Underground Routing Alternatives

The costs associated with installing underground transmission facilities are considerably more expensive than overhead. As a result, when evaluating potential routes and route refinements, EPCOR generally only considers underground transmission lines when there is not a viable above ground option.

## REVISED PROJECT TIMELINE



## The Regulatory Process

The AESO is responsible for determining the proposed transmission development, which involves adding the transmission line and the equipment at the Meadowlark and Poundmaker substations. The AESO will submit a Needs Identification Document (NID) with the AUC in spring, 2018 in support of this project.

The project team is preparing a Facility Application to be filed in spring 2018 with the AUC. Feedback we receive from stakeholders regarding the project will be incorporated as part of the Facility Application.

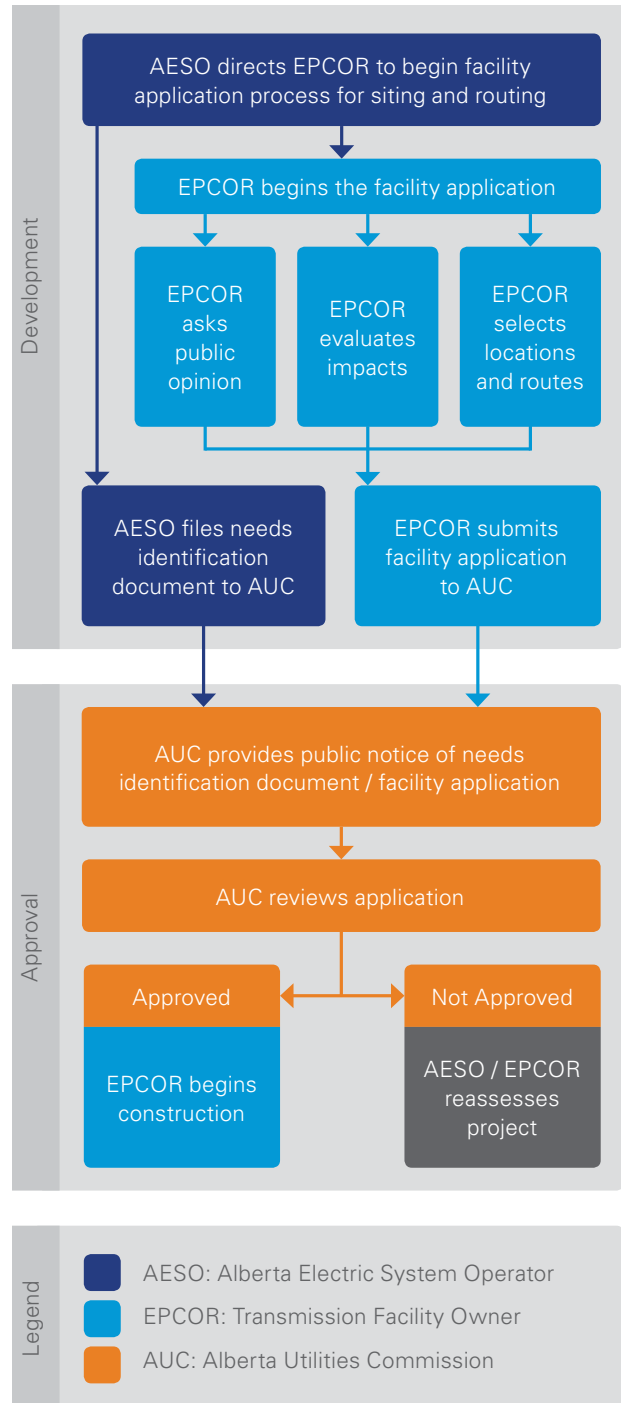
The AUC must approve the Needs Identification Document and the Facility Application before upgrades to the transmission system can begin. The final decision on routing will be made by the AUC and, although more than one route may be proposed by EPCOR, the AUC will approve one route. No construction can begin until all required approvals are in place. For more information on the regulatory process, including links to the AESO and AUC websites please visit our website at [www.epcor.com/consultation](http://www.epcor.com/consultation). We have also enclosed the AESO'S Updated Need Overview and the AUC's brochure entitled Public Involvement in a Proposed Utility Development for more information about how you can participate in the regulatory process.

### More about the Alberta Electric System Operator (AESO)

The AESO is an independent, not-for-profit organization responsible for the safe, reliable, and economic planning and operation of the provincial transmission grid. For more information about why this project is needed, please refer to the AESO's Need Overview Update included with this package, or visit [www.aeso.ca](http://www.aeso.ca). If you have any questions or concerns about the need for this project you may contact the AESO directly or you can make concerns known to an EPCOR representative who will communicate them to the AESO on your behalf. This process may include disclosure of your personal information to the AESO.

### More about the Alberta Utilities Commission (AUC)

The AUC is an independent, quasi-judicial agency of the province of Alberta. The AUC is responsible to ensure that the delivery of Alberta's utility service takes place in the public interest. The AUC



must approve this project before upgrades to the system can begin. For more information about how you can participate in the process, please visit the AUC website.

[www.auc.ab.ca/AUCPublicInvolvement](http://www.auc.ab.ca/AUCPublicInvolvement)

# CONTACT US

As we move forward, we are committed to consulting with you. We will continue to involve you in the process, address your concerns and to respond to your questions. Your feedback regarding this project is important to us and will be directly incorporated into the Facility Application that we will file with the AUC.

If you have any questions or would like to provide input on the project, please contact us:

**780-412-4040**

**[consultation@epcor.com](mailto:consultation@epcor.com)**

**[www.epcor.com/consultation](http://www.epcor.com/consultation)**

For more information about the need for this project please contact:

**Alberta Electric System Operator (AESO)**

**1-888-866-2959**

**[Stakeholder.relations@aeso.ca](mailto:Stakeholder.relations@aeso.ca)**

**[powerinalberta.com](http://powerinalberta.com)**

For more information about the regulatory process please contact:

**Alberta Utilities Commission (AUC)**

**780-427-4903 (for toll-free access, dial 310-0000 before the 10 digit number)**

**[auc.ab.ca](http://auc.ab.ca)**



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