



Minister of Municipal Affairs and Environment  
PO Box 8700  
St. John's, NL  
A1B 4J6  
Attention: Director of Environmental Assessment & Paul Carter

## Environmental Assessment Registration

Fibre Optic Line - Hampden to Sop's Arm  
Bell Canada  
Bell Project No. M43703



## ENVIRONMENTAL ASSESSMENT REGISTRATION

**NAME OF UNDERTAKING:** Fibre Optic Line Hampden to Sop's Arm  
(BellAliant Project No. M43703)

### PROPONENT:

- (i) Name of Corporate Body            **Bell Aliant**
  
- (ii) Address:                                **50 Allandale Road, St. John's A1C 5H6**
  
- (iii) Chief Executive Officer:
  - Name:            **Rob Power**
  - Official Title: **Senior Manager – Network Provisioning – NL**
  - Address:        **50 Allandale Road, St. John's A1C 5H6**
  - Telephone:     **(709)739-3964**
  
- (iv) Principal Contact for purposes of environmental assessment:
  - Name:            **Chelsea Cassell**
  - Official Title: **Implementation Manager**
  - Address:        **50 Allandale Road, St. John's A1C 5H6**
  - Telephone:     **(709)739-3186** email: **chelsea.cassell@bellaliant.ca**

### THE UNDERTAKING:

- (i) Name of the Undertaking:  
**Fibre Optic Line Hampden to Sop's Arm (BellAliant Project No. M43703)**
  
- (ii) Purpose/Rationale/Need for the Undertaking:  
**Project is required to upgrade and expand telecommunications infrastructure for the communities of Pollards Point, Sop's Arm and Jackson's Arm. The Environmental Assessment Review of the project has been requested because a section of the proposed telecommunications facility falls within 200 metres of the protected buffer zone of a scheduled salmon river, namely Doucer's Brook. (See attached 1:50,000 scale map showing area)**

### DESCRIPTION OF THE UNDERTAKING:

- (i) Geographical Location:
  - **The new pole line will be constructed within the highway right of way of Provincial Route 420. The pole line will be offset 15.5-18 metres from the**

highway centre line. The limits of the project extend from the intersection of Routes 420 and 421 (road to Hampden) to the community of Pollards Point.

- A large scale base map indicating the site location relative to existing communities and transportation facilities, and showing the proposed route of the proposed pole line is attached as Schedule “A”.

(ii) Physical Features:

- This project requires the construction of 39 kilometres of pole line that will support all dielectric self-supporting (ADSS) fibre optic cable.

The poles to be used will mainly be 30', Class 4, treated with chromate copper arsenate (CCA). In environmentally sensitive areas, untreated cedar and galvanized steel cribbing will be used.

The fibre optic cable being installed is an all dielectric and self-supporting (ADSS). It is clad in an inert polyethylene with an armaid dielectric central core strength member. Fibre optic technology transmits light signals and does not create any electromagnetic field. Cable diameter is 13.5mm.

- The major physical features of this project requires the placing of 543 non-joint use telecommunications poles and 39,000 metres of a dielectric self-supporting (ADSS) fibre optic cable.
- The size of the area to be affected by the undertaking consists of a non joint use pole line running a distance of 39,000 linear meters. The allowable utility easement is 3 metres.
- A conceptual drawing is attached as Schedule “B”
- The Provincial Route 420 Right of Way is routed mainly through mature boreal forest through and interspersed with sections of low shrub and small parcels of wetlands. It runs adjacent to several small ponds.

(iii) Construction:

1. **The scheduled construction extends from June 2018 to January 2019. To date 90% of the poles have been installed and approximately 70% of the fibre optic cable has been placed on the new poles. Remaining pole work and subsequent cable attachments will be completed by the end of January 2019. At locations in Pollard's Point and Sop's Arm new fibre optic cable will be attached to an existing Newfoundland & Labrador Hydro Joint Use Pole Line.**
- **The date of first physical construction related activity on site was June 21, 2018.**
  - **Potential sources of pollutants during construction would be oil or fuel leakage from the malfunctioning of mechanical equipment.**
  - **Potential causes of resource conflicts - the new pole line and supporting guy wires is adjacent to Newfoundland and Labrador Snowmobile Federation's trail. This issue has been resolved in concert with the Federation; Bell Aliant cleared 90 metres of new trail, routed away from the new pole line.**

(iv) Operation:

- **The new pole line and the attached fibre optic cable will provide state of the art telecommunications and broadband services for Pollard's Point, Sop's Arm and Jackson's Arm.**
- **The telecommunication facility is designed as a permanent structure.**

(v) Occupations:

- **The number of employees required for the construction and operation of the project is 25. The expected duration of employment is 6 months.**
- **Enumeration and breakdown of occupations:**
  - **Engineering and Design – 2 NOC# 2147**
  - **Backhoe Operators - 3 NOC# 7521**
  - **Supporting Laborers – 3 NOC# 7302**
  - **Linesmen – 3 NOC# 7245**

- **Supporting Laborer – 3 NOC# 7612**
  - **Fibre Optic cable splicers - 1 NOC# 7245**
  - **Splicer assistant - 1 NOC# 7612**
  - **Woodcutters for brush clearing – 6 NOC# 8422**
  - **Traffic control Flag-persons – 2 NOC# 7611**
  - **Safety & Construction Inspectors – 1 NOC# 2264**
- **Bell Aliant has contracted the project to BNR Distribution and Transmission.**
  - **All required personnel for the construction phase of the project is under the purview of BNR Distribution and Transmission.**
  - **Employment equity relative to age and gender.**  
**BNR Line Construction, project contractor, advises that it will follow the Employers Guide for Gender Diversity in Employment with regard to selecting employees with the matching skill sets required for project.**

**(vi) Project Related Documents:**

- **Bibliography of all project-related documents already generated by or for the proponent.**
  1. **Bell Aliant Scope of Project document, attached as Schedule “C”**
  2. **Preliminary applications to develop land**
  3. **Associated maps**
  4. **Application to Municipal Affairs & Environment Water Resources Management Division**
  5. **Application to Crown Lands**
- **The report on environmental work already performed by or for the proponent is included on the Permit Application for Development Activity in a Protected Public Water Supply Area, Country Cove Pond, for the community of Pollard’s Point. WRMD Permit No. PRO1007-2019. See attached map on Schedule “D”.**

**APPROVAL OF THE UNDERTAKING:**

**The main permits, licenses, approvals and other forms of authorization required for the undertaking, together with the names of the authorities responsible for issuing them:**

- **Permits for work within Department of Transportation and Works Right of Way issued by Dave Hurley, Sop’s Arm July 13<sup>th</sup> 2018.**
- **Commercial Cutting Permit issued to Chelsea Cassell at BellAliant for Western Region, District 16, Zone White Bay**

**Total volume to be harvested: Softwood = 10m3, Hardwood= 10m3**

**Permit issued 2018/06/27, expires 2018/12/31**

- Nalcor Power Line Permit Numbers 5039 & 3551**
- Municipal Affairs & Environment Water Resources Management Division,  
Carla Hayes - permit pending**
- Crown Lands, Jeffery Bannister – Application No. 154229**
- Permit to Develop Land from Service NL (Aaron Legge) – Permit No. 222652**

**SCHEDULE:**

**The project commenced on June 21<sup>st</sup>, 2018 as determined by the availability of all required materials.**

**FUNDING:**

**Funding for this project is comprised of a private - public venture between the BellAliant and the Federal Government, through the “Connect To Innovate” initiative.**

**CAPITAL COST:**

**The estimated capital cost for this project is \$1,400,000**

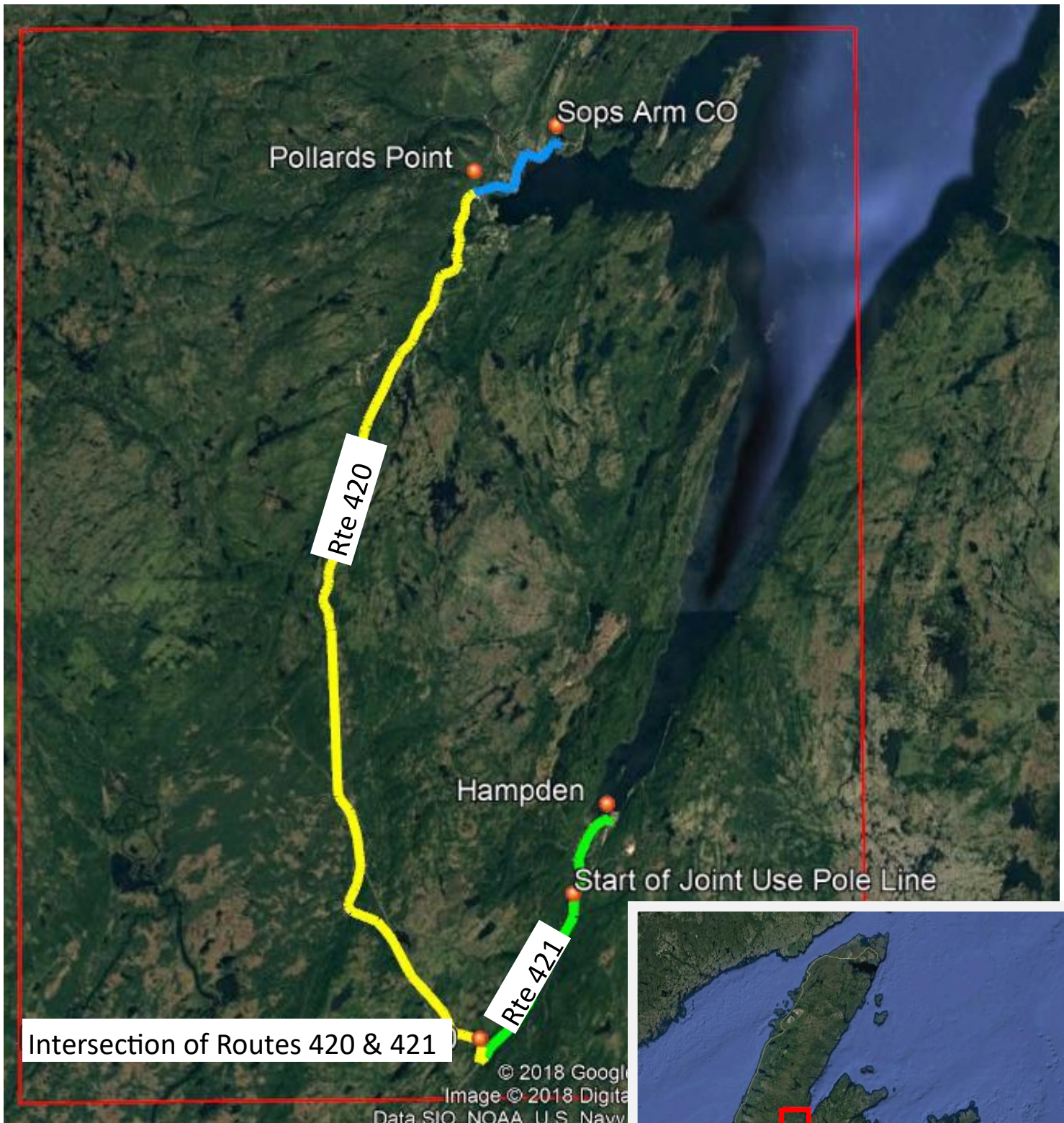
January 29, 2019

Date

Robert J. Power

Signature of Senior Manager – Network Provisioning

# SCHEDULE "A"



Intersection of Routes 420 & 421

Rte 420

Rte 421

Sops Arm CO

Pollards Point

Hampden

Start of Joint Use Pole Line

© 2018 Google  
Image © 2018 DigitalGlobe  
Data SIO, NOAA, U.S. Navy



**YELLOW**—New pole construction and new fibre optic cable

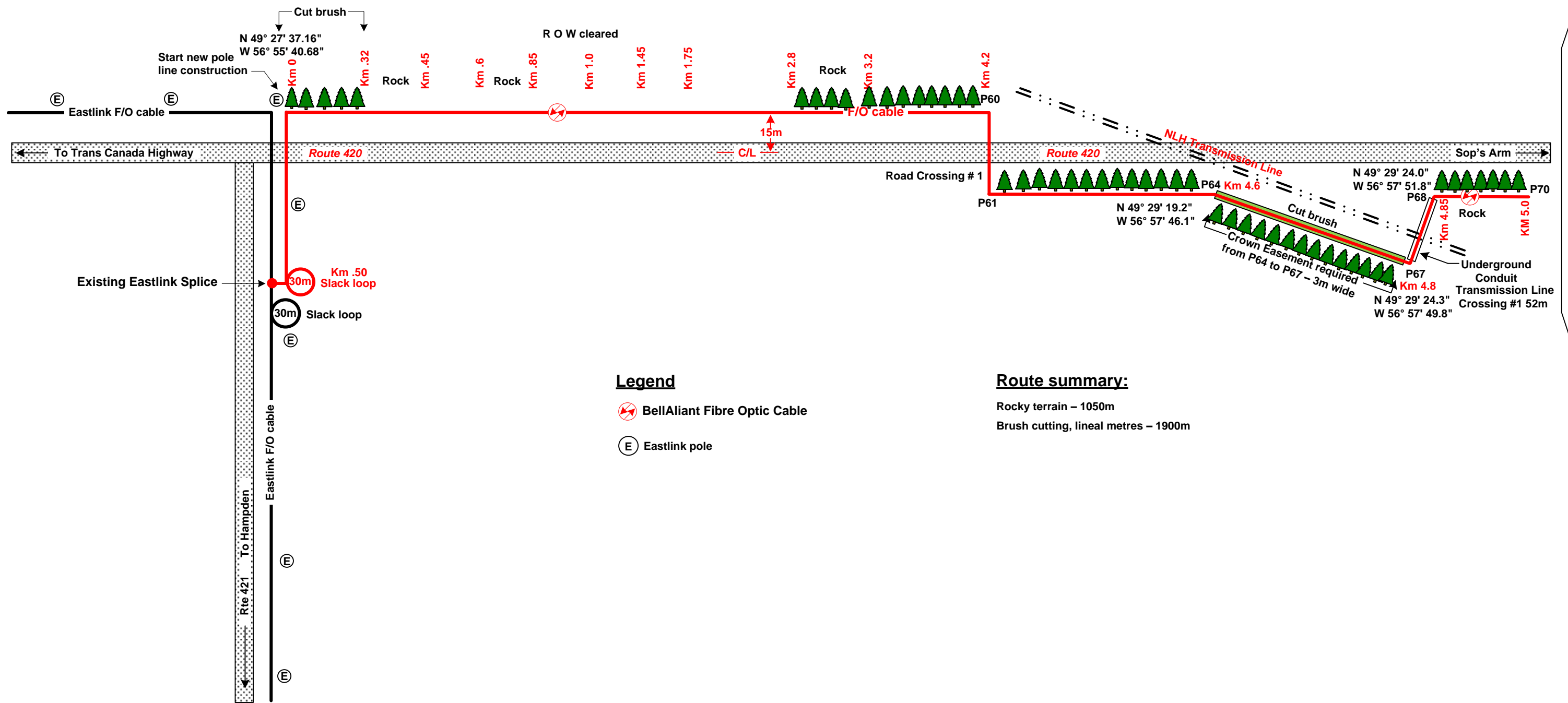
**BLUE**—New fibre optic cable on existing joint use pole line

**GREEN**—Existing Eastlink fibre optic cable



# SCHEDULE "B"

## Fibre Optic Cable Hampden - Sop's Arm



See Page 2

**Legend**

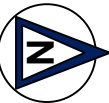
- BellAliant Fibre Optic Cable
- Eastlink pole

**Route summary:**

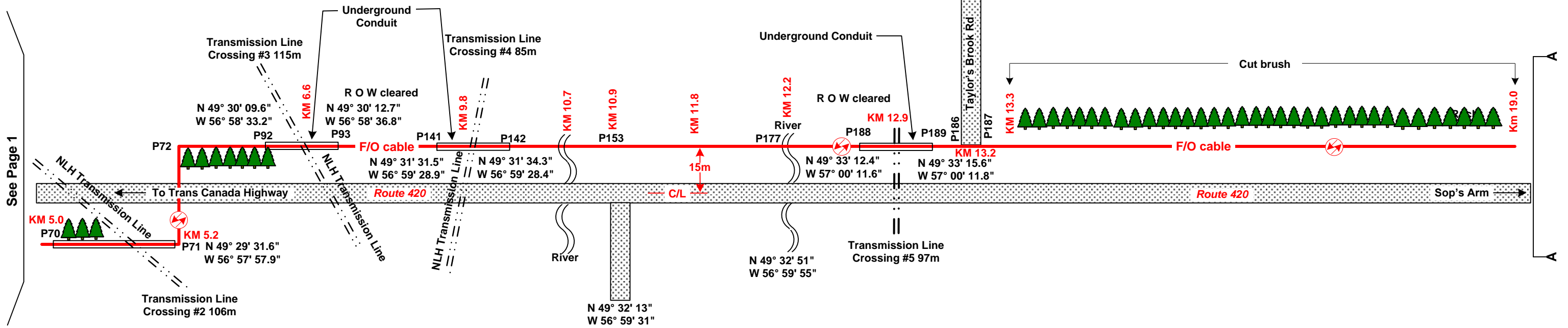
Rocky terrain – 1050m  
 Brush cutting, lineal metres – 1900m



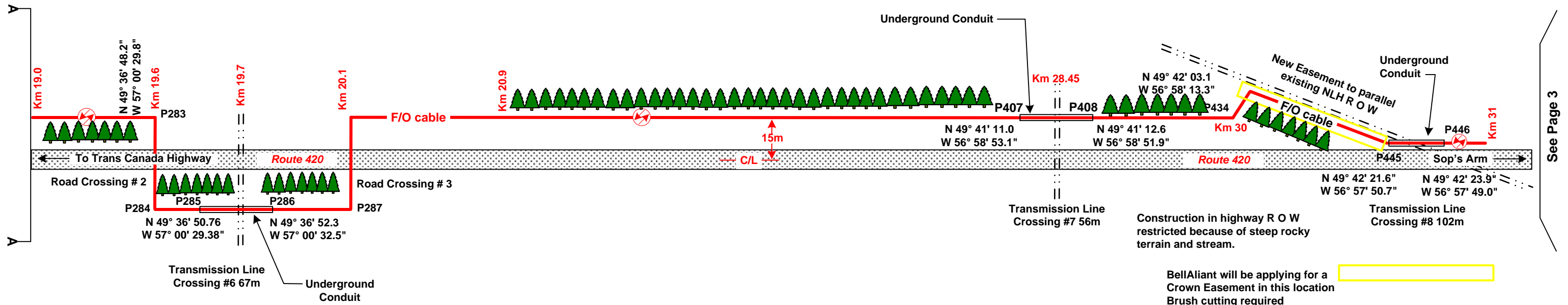
# Fibre Optic Cable Hampden - Sop's Arm



"Not to Scale"



Underground Conduit



**Legend**

BellAliant Fibre Optic Cable

**Route summary:**

Rocky terrain – 1250m  
Brush cutting, lineal metres – 18,400m

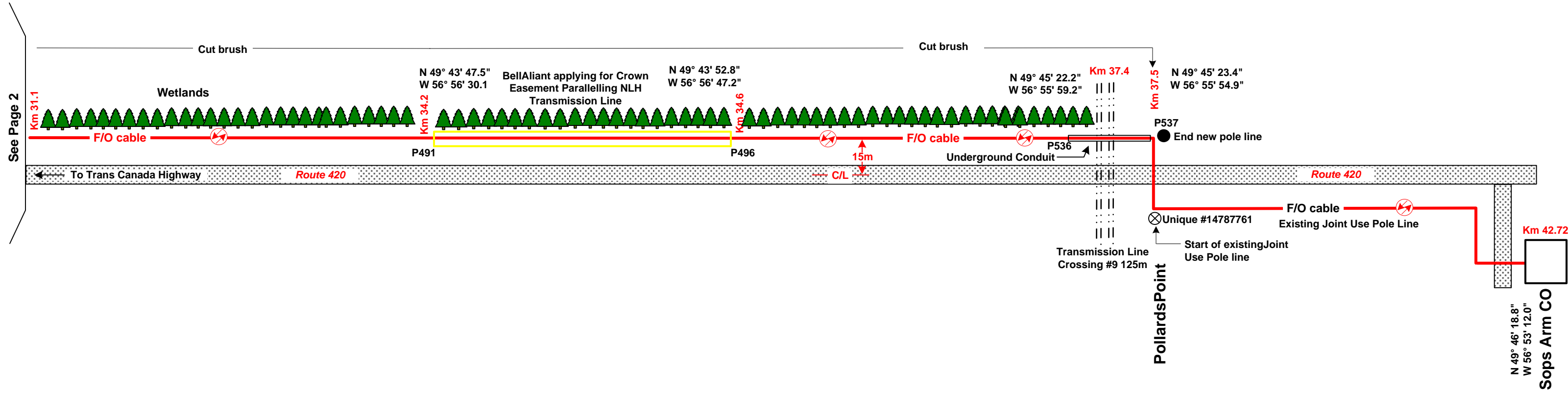
See Page 1

See Page 3

# Fibre Optic Cable Hampden - Sop's Arm



"Not to Scale"



See Page 2

### Legend

 BellAliant Fibre Optic Cable

### Route summary:

Rocky terrain – 250m  
 Brush cutting, lineal metres – 7300m

# SCHEDULE "C"

## Scope Of Work

### New Pole Line construction along Route 420 to Pollard's Point from intersection of Route 421 to Hampden. Project No M42227

#### PROPOSED PROJECT

This project proposes the construction of approximately 39 kilometers of pole line within the existing Right Of Way of Provincial Route 420. The pole line will support a new fibre optic cable from an existing Eastlink Facility near the intersection of Route 421 near Hampden to the Municipality of Pollard's Point. The project also calls for installation of 7 kilometers of fibre optic cable on an existing joint use pole line from Pollard's Point to Bell's Switching Centre at Sop's Arm.

There are 8 locations along this route where Nalcor transmission lines will be crossed; this will require the construction of underground conduit structures to facilitate the cable installation.

The effective distance for pole line construction from road centre line will be dictated by the Department of Transportation and Works. Recent past builds allowed a C/L offset of 15.5 metres. Approximately 535 pole structures will be required for this project.

The project-related activities during the construction and operation and maintenance phases will not require the construction of any building or tower, or the decommissioning of any existing towers and ancillary buildings.

#### PROPOSED MATERIALS

The main raw materials being used during the construction phase of this project include:

- Fibre Optic Cable – the fibre optic cable to be installed is an all dielectric self-supporting (ADSS) cable. It is clad in an inert Polyethylene material with aramid dielectric central core strength members. Fibre optic technology transmits light signals and does not create any electromagnetic field.
- Poles – The poles are treated with Chromate Copper Arsenate - Polymer Additive (CCA-PA), the industry standard for utility pole preservative. CCA-PA is an oxide formulation of CCA Type C. It is a mixture of stable metallic oxides which, on contact with wood fibres, forms insoluble precipitates in the wood cells. Once these precipitates become fixed in the wood, they do not migrate or evaporate. The treated poles are highly leach resistant.
  - All poles located within 30 m of a water body, a watercourse or a wetland will be non-treated cedar poles as per Bell's Environmental Procedure - ENV 009.
  - The poles used will generally be 30' class 4, although additional heights of 35 and 40 feet may be required to allow for terrain variations and/or road crossings.
  - Average pole spans will be 70 meters.
- Guy Wires and Anchors – Where pole angles are necessary, anchors and guy wires will be installed to counter balance the angle tangents. Guy wires are typically 3/8" galvanized steel messenger.

Three types of anchors are generally used contingent on soil conditions:

- Screw anchors: double helix screw anchors are made from galvanized steel, they are 19 mm in diameter and 3 m in length, used in firm soil and augured directly into the ground.
- Plate anchors: 30 cm squared galvanized steel plate used in loose soil, and installed using an excavation and back-filling method.
- Rock anchors: the rock is drilled and a galvanized steel, self-expanding anchor is inserted into the rock hole.

All associated electronic equipment will be installed within existing Bell structures and will not require any physical construction or modification. The new Fibre Optic Network will be integrated into Bell's existing infrastructures located in Main Brook and existing facilities adjacent to the St Anthony Airport.

### **POLE INSTALLATION**

- Under normal soil conditions, pole augers will be used, creating a hole slightly larger than the diameter of the pole.
- In locations where soil conditions are not conducive for effective auger use, a backhoe will be used to excavate a larger pit to a depth of about 1.8 m. The pole will be erected using the boom of the auger or backhoe and the hole will be backfilled using the excavated material. The surplus material from the excavation will be spread around the surrounding area to allow the natural vegetation to return to its original state. Stockpiled soil/sediments will be placed more than 30 m from water bodies where practicable, and will be covered with tarps to prevent soil and sediments from entering the surface water. Furthermore, where required, silt fences or equivalent will be installed to limit sediment transport into water bodies.
- Where poles are to be installed in rock conditions, a rock drill will be used to create a hole in the rock to a depth of about 1.8 m. The poles will be placed in the holes and backfilled with crushed rock. Surplus rock will be dispersed away from any other soil or water body.
- Where poles are to be installed in wetland conditions (i.e., swamp, marsh, bog and fen) they will be installed using a backhoe to excavate the soil. The pole will be erected in the hole and stabilized with a galvanized steel crib (2.4 m in diameter and 1 m high) will be installed around the base of the pole, and backfilled with pit run gravel or crushed rock. Cedar poles will be used in accordance with Bell's Corporate Procedure ENV 009.

Where required, the standard procedures set out by the Provincial Department of Environment will be followed as mitigation measures to avoid effects on fish and fish habitat. Again, where practicable, poles will not be installed in the water or below any water mark.

### **CABLE INSTALLATION**

The actual installation of cables on poles will be accomplished by feeding the cable out from reels mounted on trucks. The cable is tensioned to design standards and attached to the poles.

### **CONSTRUCTION SUPPORT ACTIVITIES**

In addition to the primary construction activities, there are several activities that will occur in support of the Project. This includes portable energy requirements, water, refuelling, transport of workers and equipment along the corridors, waste disposal and transport of aggregate material to the Project.

During construction, it will be necessary to operate electrical equipment and some machinery. Portable gas/diesel generators will be used to power the tools and equipment in these remote locations.

For the transportation trucks and non-electric small hand-held equipment used during construction activities, gas/diesel will be used as a fuel source. The equipment and trucks will be refuelled in designated areas away from watercourses.

There is a minimal requirement for water for this construction project. Water will be required for the workers' needs, and possibly for drilling holes for the new poles.

No new access roads will be constructed as a part of this Project

As noted previously, excavation of an approximate 1.8-m deep hole will be required to install the poles in loose soil or rock. The surplus material from the excavation will be spread around the surrounding area and natural vegetation will be allowed to grow resulting in the site returning to its original state. The poles set in swamp areas will be erected in the hole and a galvanized steel crib (2.4 m in diameter and 1 m high) will be installed around the base of the pole and backfilled with pit run gravel or crushed rock.

The contractors installing the cable will be responsible for the implementation of appropriate procedures to manage waste generated during construction activities. Other than removed trees and plant material during site preparation, there will be minimal waste material generated as a result of the construction or the decommissioning activities. Soils removed during excavation will be reused for backfilling and the excess soil will be properly disposed of off-site.

It is not anticipated that any toxic or hazardous material (other than gasoline and diesel) will be used or that any hazardous by-products will be generated as a result of this Project. In the event that such hazardous material/by-products are identified, regulated waste disposal guidelines will be followed as appropriate. It should be noted that Bell has a corporate *Hazardous Material Recovery Program* (HMRP) in place to collect/manage hazardous materials generated by the company operations. The materials collected through the HMRP that cannot be reused or recycled are disposed of in a secure manner by specialized companies. The Bell *Hazardous Materials Management* procedure (ENV 018) outlines different types of hazardous waste produced through company operations and summarizes the collection program in place for their proper management.

Finally, it should be noted that all disturbed areas along the construction site corridor will be returned to their original state subject to inspection and approval by the appropriate authorities. All residual material generated during construction activities will be disposed of off-site in accordance with regulatory requirements.

SITE PREPARATION ACTIVITIES

### **SITE PREPARATION ACTIVITIES**

The Department of Works Services and Transportation advises the Highway Right of Way limit for Provincial Route 420 is established at 40 metres. At present, random measurements indicate the Right of Way is cleared approximately 13 metres from center line on both sides of the road. Bell's proposed pole line will be constructed beyond this limit, actual distance from center line will be dictated by Transportation and Works. In forested sections, Bell will be required to clear approximately 27000 lineal metres of brush along the Right of Way parallel to the road corridor.

Tree clearing, grubbing and stripping in the corridor along which the cable will be installed may require the use of hand-held tools, heavy machinery, power tools and equipment.

Trees will be removed using mechanical harvesters and/or chain saws and moved to accessible locations. All tree removal within 30 m of a water body will be completed manually.

Operations during construction will be conducted in a manner that complies with the *Forest Fire Prevention Act* (FFPA R.S.O. 1990, CHAPTER F.24) and all wood will be managed in a way that minimizes the chances of creating an immediate or long-term fire management hazard. Furthermore, special caution will be exercised to protect tree species that are federally and provincially recognized and/or protected. Transportation of equipment and workers to and from the site will also be involved and construction trailers may be brought to the site.

OPERATION AND MAINTENANCE

It is anticipated that with ongoing maintenance and repair, the fibre optic cable and infrastructure could continue to operate indefinitely. However, the main activity during the life of the Project is annual testing, maintenance and repair activities. Bell plans to perform yearly tests and inspection on its fibre optic cable network.

Damage and deterioration to the poles will occur and therefore necessitate replacement.

- Broken poles and deteriorated poles will be replaced with similar types.
- Damage to fibre optic cable other than catastrophic failure will be repaired using the "section cut" method, which avoids any service interruptions. This method involves placing a new section of cable between two existing splice points. Bell will lay a new cable beside the existing one and use the "section cut" procedure.

DECOMMISSIONING PHASE

It is anticipated that with ongoing maintenance and repair, the fibre optic cable and infrastructure could continue to operate indefinitely. However, assuming that the life of the project is 40 years, at the end of that time it would be decommissioned. Decommissioning activities would be similar to construction and installation activities. The cable, poles, and anchors would be removed and safely disposed of. The decommissioning activities would meet the requirements of all applicable legislation/requirements current at the time of decommissioning.

Notably, treated wood poles that are removed from the network after replacement or dismantling projects will be managed in accordance with Environment Canada's Industrial

Treated Wood Users Guidance Document (Environment Canada, 2004). Because these poles contain wood preservatives that can be harmful to human health or the environment if used improperly, Bell prohibits leaving poles in place or providing them to third parties. Bell's Environmental Procedure "*Management of Used Treated Wood Poles*" (ENV-005) lists the steps to follow in order to properly manage treated wood poles removed from the network (included in Appendix C). The management of treated wood includes:

- Retrieve all poles removed from the network;
- Reuse the poles to the extent practicable;  
Where reuse is not practicable, recycle all poles that can be recycled;
- Recover or dispose of pole butts in accordance with regulatory requirements; and
- Comply with all regulatory requirements governing the transportation, storage and disposal of treated wood waste.

## Environment Assessment Exemption Notes

A project may be exempted from an environmental assessment if it:

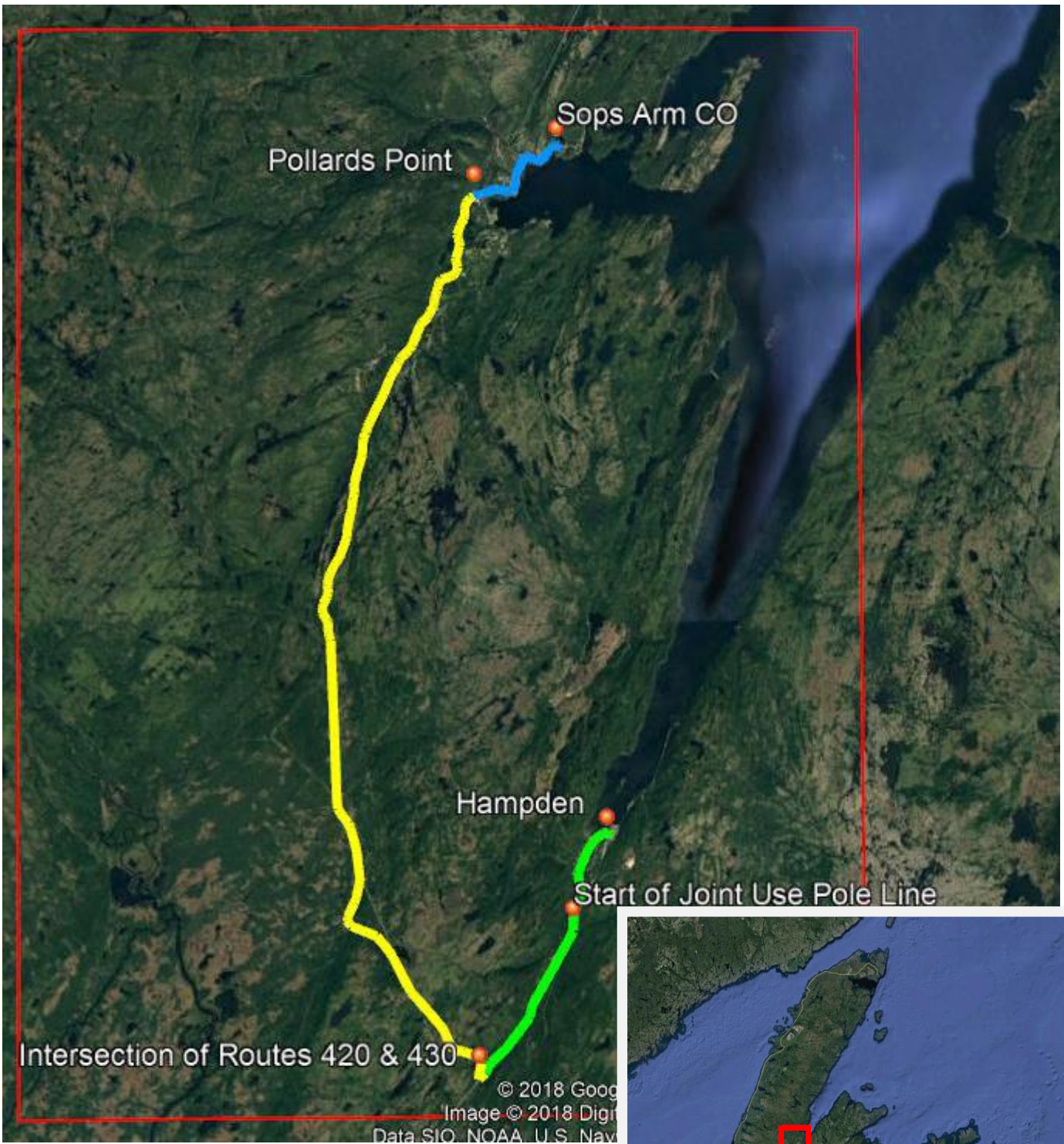
- is described on the [Exclusion List Regulations](#) as a project likely to have insignificant environmental effects
- is to be carried out in response to a national emergency for which temporary special measures are being taken under the [Emergencies Act](#)
- is to be carried out in response to an emergency and the project is in the interest of preventing damage to property or the environment or is in the interest of public health or safety

### [Exclusion List Regulations, 2007](#)

**These Regulations specify projects involving physical works with insignificant environmental effects that are exempt from environmental assessment under the *Canadian Environmental Assessment Act***

**32.** The proposed expansion or modification of a telecommunication line or an electrical power line, other than an international electrical power line, if the project

- (a) results in a line that is no more than 10% longer than it is on the day on which these Regulations come into force or, if the line did not exist on that day, on the day of completion of its original construction;
- (b) is to be carried out alongside a road, a railway line, an electrical power line, a telecommunication line or any other linear physical work;
- (c) does not involve the placement in a water body of the supporting structures for the telecommunication line or electrical power line; and
- (d) does not involve the likely release of a polluting substance into a water body.



- YELLOW**—New pole construction and new fibre optic cable
- BLUE**—New fibre optic cable on existing joint use pole line
- GREEN**—Existing Eastlink fibre optic cable



SCHEDULE "D"

