

**REGISTRATION PURSUANT TO
PART X, ENVIRONMENTAL ASSESSMENT,
ENVIRONMENTAL ASSESSMENT ACT FOR
THE PROPOSED LINE EXTENSION FROM
BADGER TO GRAND FALLS-WINDSOR.**

NAME OF UNDERTAKING:

**Aliant Telecom High Density Fibre Route,
Badger to Grand Falls-Windsor.**

PROPONENT:

(i) Name of Corporate Body:

Newfoundland Power Inc.

(ii) Address:

83 West Street
Corner Brook, NF.
A2H 2Y6

(iii) Supt. Regional Engineering, Western Region:

Name: Ralph Mugford
Official Title: Supt. Regional Engineering, Western Region
Telephone No.: (709) 637-7802

(vi) Principal Contact Person for purposes of environmental assessment :

Name: Gordon Martin
Official Title: Engineering Technician
Telephone No.: (709) 695-4800
Fax No.: (709) 695-4805
Email: gmartin@newfoundlandpower.com

THE UNDERTAKING:

(i) Nature of the Undertaking:

Line extension for Aliant Telecom new aerial Fibre Optic cable between Badger and Grand Falls-Windsor. Newfoundland Power will complete all work required to install poles and Aliant Telecom will install fibre cable.

(ii) Purpose/Rationale/Need for the Undertaking:

This project consists of installing approximately 24 kilometres of aerial fibre cable between Badger and Grand Falls-Windsor. This initiative is required to reduce potential for catastrophic failure of the two High Density fibre routes (HDR1 & HDR2) along sections where the existing aerial and underground fibre routes run in the same corridor for approximately 13 kilometres between Badger and Grand Falls-Windsor. Loss of both fibres would result in the loss

of all off Island traffic from points East of Grand Falls-Windsor as well as local on Island traffic in the region. Project provides physical separation between the two routes.

DESCRIPTION OF THE UNDERTAKING:

(i) Geographical Location:

(a) Proposed Route

The fibre cable will be placed on a new pole line between Tom Joe Brook and Abitibi Consolidated Company in Grand Falls-Windsor to be located on Abitibi woods roads right-of-way. The entire route ***is located on*** the following: ***22.5km's (94%) of*** Abitibi woods roads right-of-way, Newfoundland and Labrador Hydro utility easements, Newfoundland Power utility easements and small sections of Crown Land. This is shown on the 1:50,000 mapping in Appendix A

(b) Alternate Route

The cable route, selected for this project, reflects the most expedient one that can accommodate a given number of considerations. The Newfoundland and Labrador Hydro utility easement, Newfoundland Power utility easement and Abitibi woods roads are established rights-of-ways that conveniently adheres to the national standards for this type of telecommunications system that states “the distance between two High Density routes must not be less than one kilometre”. The section between the Abitibi woods roads and the Exploits River was selected to satisfy the one-kilometre minimum separation requirement and to facilitate the access of that portion of the second high-density route that is already established on the abandoned railway bed on the northern side of the river. ***Approximately 22.5 km's (94%) will be located on the outer 5 meters of Abitibi existing right-of-way, this will significantly reduce the need for clearing of additional tree, and vegetation for a new right-of-way.***

(ii) Physical Features **Fibre Optic Line:**

Aliant Telecom will operate the proposed overhead fibre line from Tom Joe Brook to Abitibi Consolidated Company in Grand Falls-Windsor. The system consists of 10-15 meter high, single pole pressure treated (Chromated Copper Arsenate) wood structures with fibre optic cable mounted one metre from the top. A typical structure is shown in Appendix B. The average span will be

approximately 70m.

The cleared width of the right-of-way will be approximately 5.4m, 2.7m on either side of the centerline. The section from Abitibi Consolidated Company to Tom Joe Brook will be on the existing Abitibi woods roads right-of-way. The section across the Exploits River to the old railway bed will be on Crown Land.

(iii) Construction:

(a) Construction Schedule:

Construction will be carried out by contract forces, consisting of Aliant Telecom forces and Newfoundland Power forces over a 6 month period. This project is scheduled to begin with surveying and brush clearing in November and December 2002. Erection of the poles is to begin in December 2002 for a completion date of January 2003. Installation of fibre cable is to begin after all poles are installed for a completion date of spring 2003.

(b) Construction Activities:

The major construction activities with the fibre line include:

- a) Surveying;
- b) Pole installations;
- c) Clearing;
- d) Material handling;
- e) Framing of structures;
- f) Fibre stringing; and
- g) Clean up and rehabilitation.

(c) Potential Sources of Pollutants:

The potential sources of pollutants during the construction period are the siltation of streams and water bodies, and hydrocarbon leakage from construction equipment. **All equipment will be inspected routinely to ensure that no hydrocarbon (i.e. gasoline, diesel fuel and lubricating oil) leaks occur.** Appropriate buffer zones will be maintained and construction activities will include the use of silt screening and vegetation stabilization of any distributed

areas to prevent siltation of water bodies. Permits will be obtained from the Water Resources Division Of The Department of Environment and The Department Of Fisheries and Oceans Canada for all work near streams or rivers. The contractor will be responsible for restoring and cleaning up the route to a level that is acceptable to Newfoundland Power representatives, Aliant Telecom representatives and to all necessary government department officials.

(d) Potential Resources Conflicts:

A ground survey will be conducted to determine the location of structures in relation to water bodies and wetlands.

No Protected Water Supply Areas have been identified on this project.

One river crossing has been identified on this project as a scheduled Atlantic Salmon River, Exploits River, as identified on the enclosed 1:50,000 mapping. Pole placement will be approximately 20m from the edge of the river, so there will be no disturbance to water quality or salmon and trout. The aerial crossing of the Exploits River will be achieved by motorless watercraft. An application for authorization for works or undertakings affecting fish habitat has been forwarded to Department of Fisheries and Oceans Canada. There are a number of unscheduled waterways along the proposed route and no fording will be required during construction. Aerial crossings of these waterways will be achieved by utilizing existing Abitibi woods roads bridges.

Site restoration and clean up will include landscaping and site repair measures such as; filling, repairing and stabilizing ground

conditions before and after pole installations, reseeding or resodding areas which previously consisted of grass or sod, and repairing or replacing fences, road surfaces and other structures impacted during construction.

(e) Operation:

A new pole line will be constructed on the southern side of the existing Abitibi woods roads right-of-way from Abitibi Consolidated Company to a point approximately 22.5 kilometres west of Tom Joe Brook. From that point a new

pole line right-of-way will be required to cross aerially over the Exploits River and to access that portion of the second high density route that is already established on the abandoned railway bed on the northern side of the river. The right-of-way clearing for this route will be a maximum of 5.4m wide (2.7m each side of the pole line).

The fibre optic line will be comprised of permanent structures with a minimum operating life of 30 years.

(a) **Maintenance Activities:**

The fibre line will be built along Abitibi woods roads right-of-way and can therefore be easily inspected from the ground.

(b) **Potential Sources of Pollutants:**

Potential sources of pollutants will be limited to those that may result from the use of all-terrain vehicles along the line during routine maintenance. All equipment will be inspected routinely to minimize the probability of hydrocarbon (i.e. gasoline, diesel fuel, and lubricating oil) leaks occurring.

(c) **Potential Resources Conflicts:**

Aliant Telecom undertakes an Integrated Vegetation Management Program to manage vegetation within communication line rights-of-way. This program involves manual cutting of brush and the application of herbicides depending on the particular section of right-of-way to be managed. An Integrated Vegetation Management Plan requires follow up every five (5) to ten (10) years depending on the location in the province. All vegetation management activities are undertaken subject to approval from the Pesticide Control

Section, Department of Environment with adherence to the Pesticide Control Act and Associated regulations.

(iv) Occupations:

The occupations required to construct this undertaking are:

- a) Civil engineers;
- b) Electrical engineers;
- c) Engineering technicians;
- d) Land surveyors;
- e) Heavy equipment operators;
- f) Drillers and blasters;
- g) Line workers;
- h) Ground workers; and
- i) Labourers.

Approximately 3 crews of 4 people each will be working on the line for pole placements, using muskegs, excavators and ATV's.

(vi) **Approval of the undertaking:**

The following is a list of permits, approvals and authorizations which may be necessary for the proposed project:

- a) Undertaking approval from the **Environment Assessment** – issued by the Minister of the Department of Environment;
- b) Forest cutting permit – Forestry Division, Department of Forest Resources and Agri-Foods;
- c) Certificate of approval for all watercourse crossings – Water Resources Division, Department of Environment;
- d) Easement rights for pole line over Crown Land – Land Branch, Department of **Government Services and Lands**;
- e) Letters of Advice – Department of Fisheries and Oceans;
- f) Approval from Navigable Waters Protection Act;
- g) Approval from the Municipality;
- h) Approval from The Department Of Tourism,Culture and Recreation.

APPROVAL OF THE UNDERTAKING:

SCHEDULE:

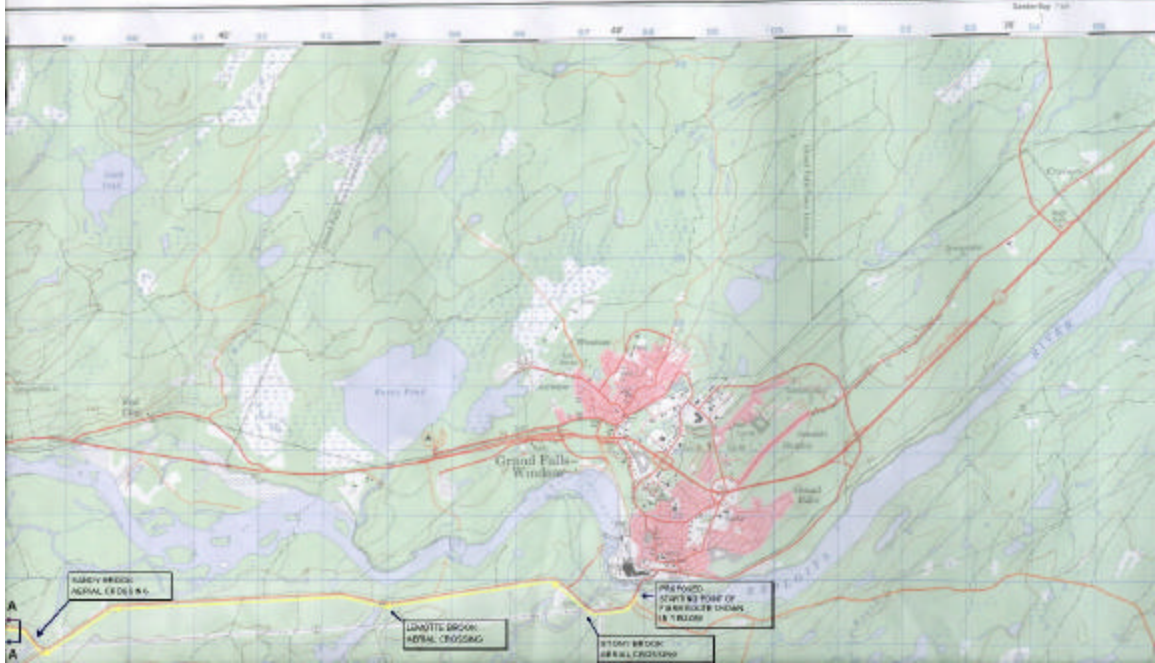
The proposed start date for this undertaking is November 30, 2002. See construction schedule section.

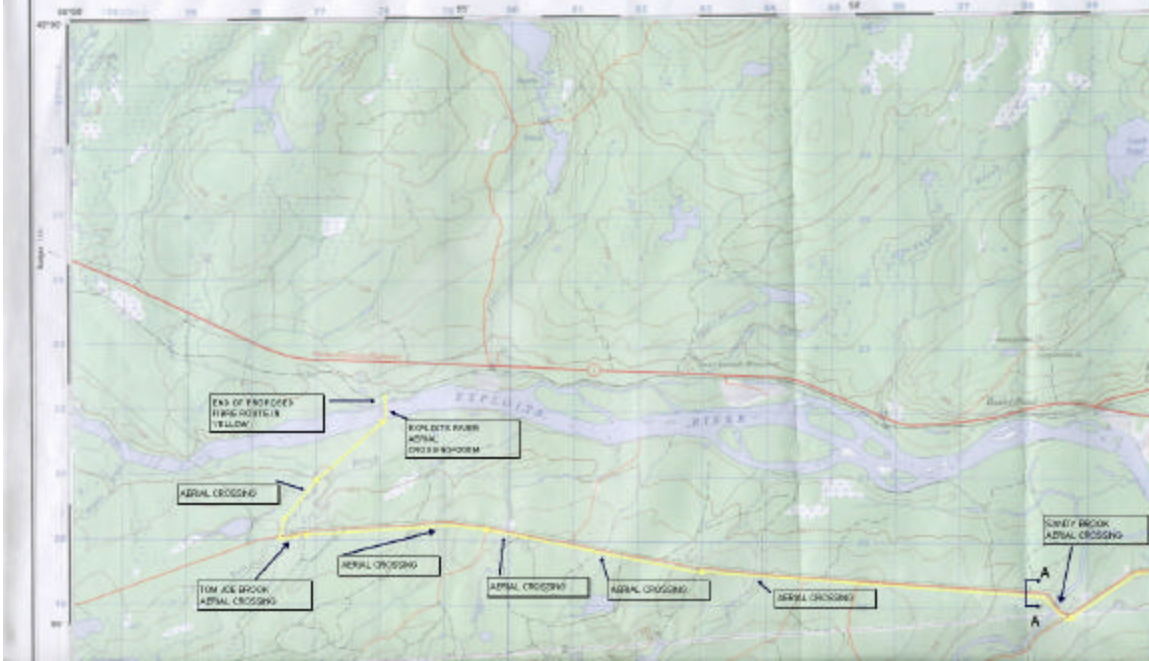
Date

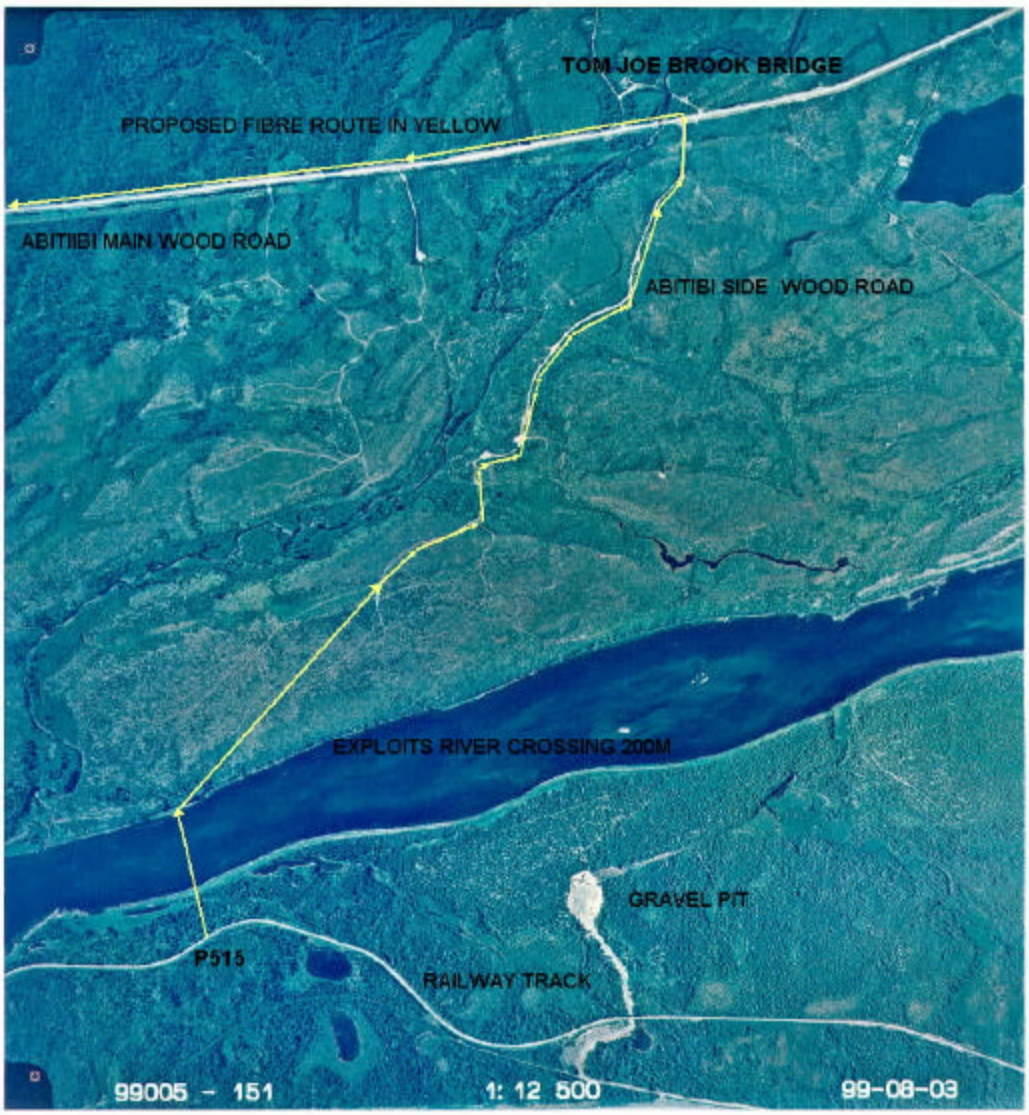
Supt. Regional Engineering

Appendix A

Proposed route from Badger to Grand Falls-Windsor in yellow, page 1.







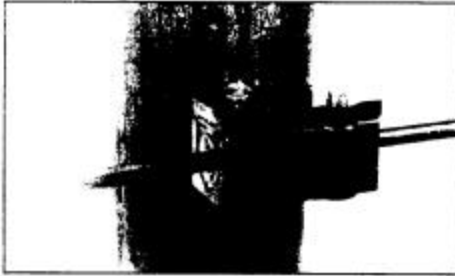
Appendix B
Typical Single Pole Structure

PREFORMED LINE PRODUCTS

FIBERLIGN Dielectric Support for ADSS

Section 5— Page 63

PATENTED



FIBERLIGN Dielectric Support installed

APPLICATION:

The FIBERLIGN Dielectric Support (FDS) system is designed to gently, but firmly, support All-Dielectric Self-Supporting (ADSS) cable. It is intended for tangent support installations (see "LINE ANGLES") on lines that feature relatively low voltages, short spans and modest mechanical loads. For higher voltages (where "track resistant" ADSS cables are required), longer spans and/or higher loads, use either the FIBERLIGN Dielectric MIDspan Support/Suspension (page 67) or the FIBERLIGN Dielectric Suspension (page 65).

MAXIMUM SPAN LENGTHS: The maximum recommended span length for the FDS is dependent upon the specific cable OD, initial cable tension, ice and wind loading district (NESC), and other factors. It is intended for application on relatively short spans where vertical cable loading does not exceed approximately 1,000# (worst case). In general, the approximate recommended maximum span lengths for the FDS are:

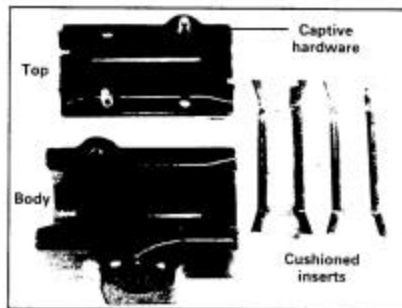
- 600' for < 1.00" OD cable (NESC - heavy).
- 300' for ≥ 1.00" OD cable (NESC - heavy).

When in doubt, consult PLP for specific span limitations.

MATERIAL: The body and top are made from a high-strength, engineered dielectric material. The cushioned inserts are made from a soft, pliable dielectric material that gently grips the ADSS cable. Two captured zinc plated bolts with washers secure the top to the body.

MOUNTING: The body threads onto standard 5/8" 11-UNC hot dipped galvanized thru-bolt and may be mounted either horizontally or vertically. For horizontal mounting to a wood pole (or other structures with thru-holes) a double arming bolt (completely

NOMENCLATURE



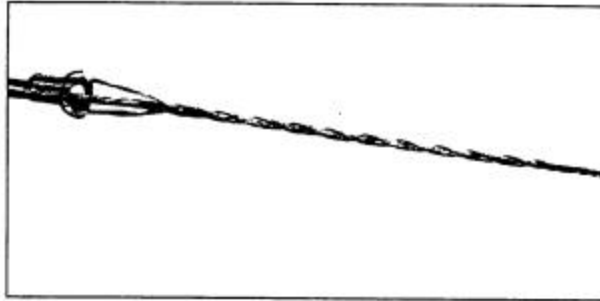
threaded—no head) is suggested instead of a fixed length machine bolt. This allows approximately 1-5/8" of bolt length to thread the body onto regardless of pole diameter.

For mounting to concrete or steel structures without thru-holes, use a 5/8" threaded stud of appropriate length or banding system with a mounting bracket and a 5/8" bolt (3" length).

LINE ANGLES: For most applications, the maximum line angle recommended is 20°; consult PLP® for exceptions that allow 30° angles. When angles exceed 20° (or 30°) a double dead-end arrangement is usually preferred. A special double FDS unit can be designed for certain applications; consult PLP for details.

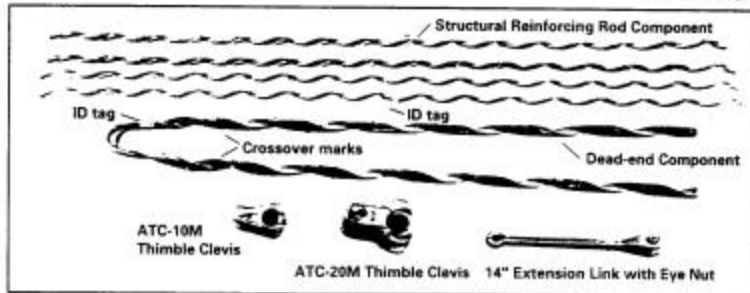
SLIP LOADS: The cushioned inserts are designed to gently grip the cable while providing significant slip strength without causing cable jacket damage. Specific performance will depend upon the specific cable O.D. and design.





FIBERLIGN Dielectric
Dead-end
installed

Nomenclature



GENERAL INFORMATION

The FIBERLIGN Dielectric Dead-end product line has been designed to securely, but gently, terminate All Dielectric Self-Supporting (ADSS) aerial fiber optic cable. A two component design consisting of appropriate size and length of Structural Reinforcing Rods and dead-end component is required to transfer axial tensile loads and distribute radial compressive forces through the plastic jacket and onto the internal strength members without damaging the fragile plastic jacket or internal optical fibers.

APPLICATION & PRODUCT SELECTION:

Specific dead-end design and performance depends upon a number of factors such as cable brand and design, strength member construction, jacket type, tension load requirements, temperature and environmental operating conditions, and so on. Due to these factors, three types of dead-ends are offered:

- Limited Tension Dielectric Dead-ends
- Medium Tension Dielectric Dead-ends
- High Tension Dielectric Dead-ends

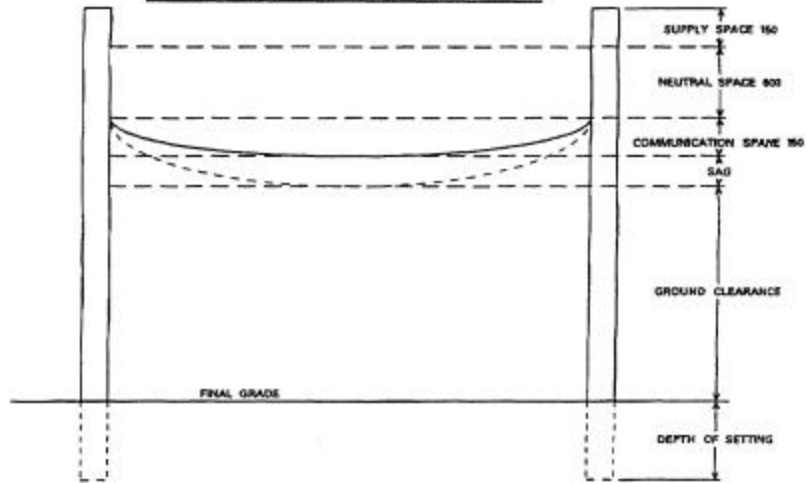
LIMITED TENSION DEAD-ENDS: Intended for relatively low tension application usually associated with short span construction. They are not cable or line design specific but are designed to fit broad diameter ranges. Holding performance will vary by specific cable brand and operating conditions, therefore no specific holding strength rating is possible.

In general, Limited Tension Dead-ends are intended for use with these conditions and limitations:

- Low Tensions, approximately:
 - 1,000# maximum initial (stringing/nominal axial/long-term) tension
 - 2,500# maximum loaded (working/loaded axial/short-term) tension
- Short spans:
 - 300' - 600' typical maximum spans depending upon cable OD and tensions
- Low strength cables
- "Standard" jackets
- Most cable brands
- No excessive operating conditions, cable motion or high temperatures

Clearance Standards CSA

TYPICAL POLE SPACE FOR SERVICE POLES



1. SUPPLY SPACE: 0.15M
2. NEUTRAL SPACE: 0.9M
3. COMMUNICATIONS SPACE: 0.15M
4. SAG: DEPENDS ON SPAN LENGTH AND WEIGHT OF CABLE TO BE SUPPLIED BY TELCO
5. GROUND CLEARANCE:
6. DEPTH OF POLE SETTING:

PoleLineDesignDetail