POLE ATTACHMENT PERMIT SUBMISSION REQUIREMENTS

To ensure licensee attachments conform with the requirements of Ontario Regulation 22/04 including CSA Overhead Systems C22.3 No. 1 (latest version), Hydro Ottawa will require that submitted applications include all information in the following checklists.

Permit Submission checklist for Wireline Permits:

Note: This includes small cell wireline attachment permits that show the fibre connection to each small cell.

- ☐ Non-linear analysis report stamped by a Professional Engineer
- ☐ Construction drawings stamped by a Professional Engineer and with the correct Certificate of Approval stamp (see Appendix A for more information). Both stamps are required on each drawing sheet.
- ☐ Survey notes (including pictures if available) at the end of each non-linear analysis report, indicating which notes go with which pole

Permit Submission checklist for Wireless:

Note: This only refers to small-cell wireless attachment permits. Small cell wireless attachments must have a valid agreement and design approved prior to permit application.

- ☐ Non-linear analysis report stamped by a Professional Engineer (if a wireline permit will be submitted for the same small-cell project, a non-linear analysis does not need to be submitted for the wireless portion)
- ☐ Construction drawings stamped by a Professional Engineer and with the correct Certificate of Approval stamp (see notes section for more information). Both stamps are required on each drawing sheet.
- ☐ Wireless Attachment Construction Detail stamped by a Professional Engineer

The following guidelines outline what Hydro Ottawa checks during their permit review - it is recommended to follow these guidelines to expedite the permit review process.

What we are checking:

- ☐ Do the drawings and report match?
  - Scope of project (are all the poles in the drawings in the report, and vice versa)
  - Mounting heights
  - Pole heights
  - Pole classes
  - Pole nomenclature
  - Equipment attachments (transformers, streetlights, etc)

- ☐ Do the report inputs match our assets records?
  - Examples of assets: pole heights, classes, pole nomenclature, equipment attachments, conductor types
  - Conductor tensions
  - We recommend asking for this information prior to the permit submission to reduce corrections and resubmissions. This information can be requested by emailing *ss-permits@hydroottawa.com.*

- ☐ Does the proposed attachment meet the following requirements of CSA 22.3 No. 1, as well as conform with the following tables:
  - Table 2: Minimum vertical design clearances above ground or rails, ac
    Note: The location of wires or conductors (over land/alongside road, etc) must be correct as the vertical clearance will differ between scenarios.
  - Table 24: Minimum in-span vertical clearances between supply and communication conductors
  - Table 23: Minimum vertical separations at a joint-use structure

- ☐ Are the attachments located with the telecom corridor as specified in Hydro Ottawa Standards OLS0001 - Clearances for Communication Attachments (see appendix B).
  - This standard will be applied to new attachments only, and will not apply to overlashing on existing telecommunications lines. If a new attachment must be installed outside this corridor, ***please provide reasoning as to why it cannot go inside the corridor***.
  - As per HOL's standard, a maximum of three strands shall be allowed to attach to the pole. If there are already three strands attached, overlashing is allowed but must be coordinated with the owner of the strand.

- ☐ Is there make-ready work required?
  - Proposed anchors must be at least 1.5m from existing anchors in the same line angle from the pole and must be shown on the drawings. If this cannot be maintained, ***please provide reasoning*** for consideration.
  - Pole replacements will need to be reviewed by the design department, and premature replacement of the pole shall be paid for by the telecom as per the agreement with HOL.
  - The analysis must include the pole without additional make-ready work as well as with make-ready work to demonstrate that the pole will fail without it.

- ☐ Is there a safe limit of approach stamp included on the drawings for required poles:
    - As per the EUSR, this is recommended where an authorized worker is required to work within 3m of an energized piece of equipment, including a transformer, primary conductors, etc. See appendix C for more details.

- ☐ Do the drawings match the current field conditions and interfere with proposed work, existing equipment and Hydro Ottawa Operations?
    - Providing survey notes will reduce the likelihood of resubmission to occur for this reason.

- ☐ Does the proposed attachment threaten the health or safety of Hydro Ottawa employees, contractors, or other permitted occupants of the poles?
    - Example: Small cell wireless clearances and shutoff switch

<u>Other information that is being checked relating to pole attachments:</u>
Note: These may not necessarily be related to a specific permit but could affect permit approval.

- ☐ Is there a valid agreement with Hydro Ottawa for the type of attachment being requested (wireline vs wireless)? If not, please contact: *ss-permits@hydroottawa.com*
- ☐ Does the applicant have any outstanding pole transfers?
- ☐ Does the applicant have any outstanding As-Built drawings?
    - **Note: As-builts are due no later than <u>180 days</u> after approval date - please send as-built packages to *ss-tranfers@hydroottawa.com***
- ☐ Does the applicant have any outstanding payments to Hydro Ottawa?
- ☐ Are there any construction related correspondence that would affect this permit?
    - Flagging this will help expedite the permit and reduce the amount of back and forth.

Appendix A: Certificate of Approval Stamp

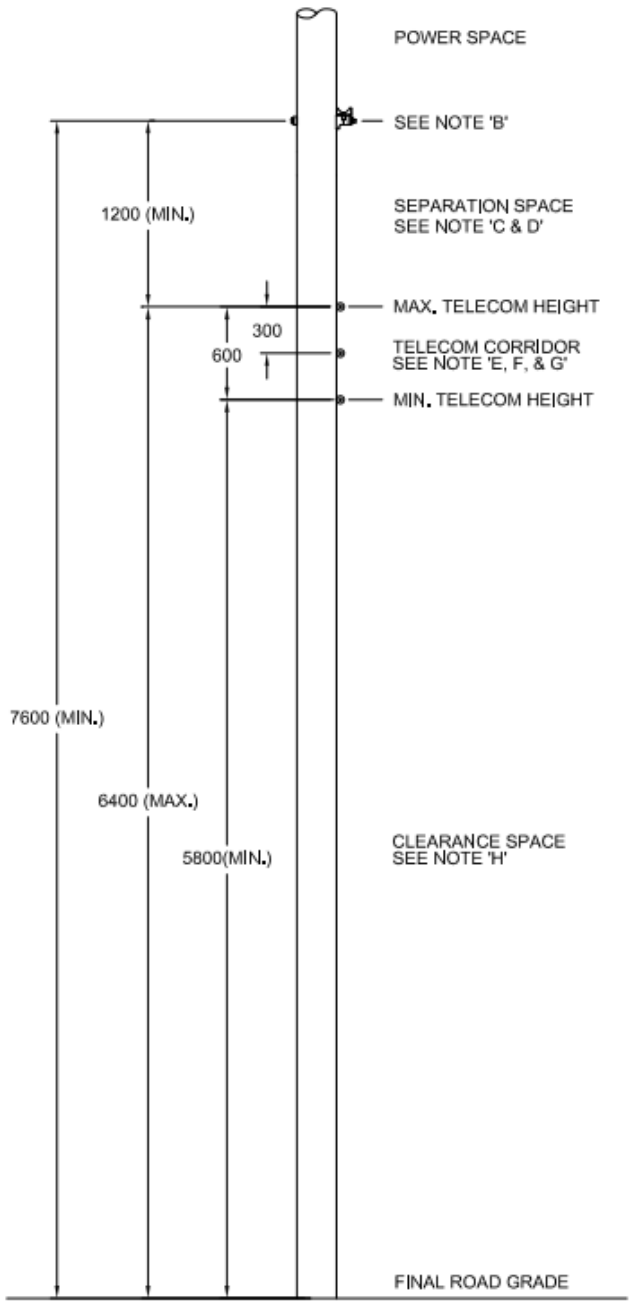
The following stamp must be affixed to every drawing sheet in a permit submission.

Certificate of Approval
The installation work covered by this document meets the safety requirements of Section 4 of Regulation 22/04

_____ _____
Name **Date**

_____
Signature & Professional Designation

Appendix B: OLS0001 - Clearances for Communications Attachments



NOTES:

A. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

B. LOWEST POWER EQUIPMENT POINT BEING SYSTEM NEUTRAL, SECONDARY CONDUCTOR, OR BOTTOM OF TRANSFORMER.

C. FOR NEW CONSTRUCTION ONLY. 'SEPARATION SPACE' MAY VARY ON EXISTING INSTALLATIONS TO A MINIMUM OF 1 METER.

D. FOR 'SEPARATION SPACE' FROM SUB-TRANSMISSION CIRCUITS, CONTACT HYDRO OTTAWA.

E. 600mm TELECOM CORRIDOR ALLOWS FOR MAXIMUM OF 3 PARALLEL, VERTICAL MOUNTED STRANDS 300mm APART. WHERE HYDRO OTTAWA PLACES TELECOM ATTACHMENTS ON HYDRO OTTAWA OWNED POLES, THE HIGHEST POSITION WITHIN THE TELECOM CORRIDOR SHALL BE USED WHEREVER POSSIBLE.

F. TELECOM ATTACHMENT HEIGHT FOR ACROSS OR ALONGSIDE ALL PUBLIC ROADS, PUBLIC LANDS OR PUBLIC PLACES ACCESSIBLE TO VEHICLES OR MACHINERY. FOR ATTACHMENT HEIGHT ABOVE RAILWAY OR FREEWAYS, CONTACT HYDRO OTTAWA.

G. TELECOM ATTACHMENT HEIGHT ALLOWS FOR MAXIMUM 1.1m SAG IN TELECOM STRANDS.

H. MINIMUM TELECOM ATTACHMENT HEIGHT MAY VARY WHEN ADDING STRAND(S) TO EXISTING JOINT USE STRUCTURES OR OVERLASHING TO EXISTING TELECOM PLANT PROVIDING MINIMUM CLEARANCES COMPLY WITH CSA STANDARDS.

REVISIONS	PREP	CHKD	APPD
REV: 1 DATE: 2009-05-11 CHANGE: REVISED NOTES AND TITLE	CM	RW	CSM
REV: 2 DATE: 2012-06-27 CHANGE: ADDED NOTE 'H'	WS	RW	CSM
REV: 3 DATE: 2017-05-29 CHANGE: REVISED NOTE 'E'	EV	RW/ MW	BDH

HydroOttawa
WWW.HYDROOTTAWA.COM

PREP: G. MOLNAR
CHKD: C. MORAN
APPD: C. MALONE P. Eng.
DATE: 2008-01-06
SCALE: N.T.S. @ ANSI A

TITLE
ENGINEERING SPECIFICATION
CLEARANCES
FOR
COMMUNICATIONS ATTACHMENTS
CONSTRUCTION DETAIL

NO: OLS0001

1 OF 1

REV: 3

Appendix C - Safe Limits of Approach

129 Safe Limits of Approach Rev 01/19

The limits specified in the following table are the minimum requirements. To obtain the safest work environment, ***workers*** must maintain maximum clearance and use equipment and procedures adequate to protect against electrical shock or burns.

Limits of Approach
Maintain Maximum Clearances and Install Barriers Where Practical

	Personnel Zones			Mobile Work Equipment		
Voltages	**OHSA Minimum**	**Authorized Worker**	**Restricted Zone**	**OHSA**	**Non-Insulated Boom**	**Certified Insulated Aerial Device**
750 V to 15 kV	> 3.0 m (10 ft.)	> 0.9 m (3 ft.)	0.9 m to 0.3 m (3 ft. to 1 ft.)	> 3.0 m (10 ft.)	> 0.9 m (3 ft.)	> 0.3 m (1 ft.)
> 15 kV to 35 kV			0.9 m to 0.45 m (3 ft. to 1.5 ft.)			> 0.45 m (1.5 ft.)
> 35 kV to 50 kV		> 1.2 m (4 ft.)	1.2 m to 0.6 m (4 ft. to 2 ft.)		> 1.2 m (4 ft.)	
> 50 kV to 150 kV		> 1.5 m (5 ft.)	1.5 m to 0.9 m (5 ft. to 3 ft.)		> 2.4 m (8 ft.)	> 0.9 m (3 ft.)
> 150 kV to 250 kV	> 4.5 m (15 ft.)	> 2.1 m (7 ft.)	2.1 m to 1.2 m (7 ft. to 4 ft.)	> 4.5 m (15 ft.)	> 3.0 m (10 ft.)	> 1.2 m (4 ft.)
> 250 kV to 550 kV	> 6.0 m (20 ft.)	> 3.7 m (12 ft.)	3.7 m to 2.75 m (12 ft. to 9 ft.)	> 6.0 m (20 ft.)	> 4.6 m (15 ft.)	> 2.75 m (9 ft.)
SYMBOLS ≤ less than or equal to > greater than < less than				cranes, power shovels back-hoes, mech. brush cutter	RDB, aerial ladder, work platform, uncertified aerial device	certified and tested by ***certified laboratory***

Taken from the Electrical Utility Safety Rules book, 2019 Edition