Fraser Milner Casgrain LLP
77 King Street West, Suite 400
Toronto-Dominion Centre
Toronto, ON, Canada M5K 0A1

MAIN 416 863 4511
FAX 416 863 4592

FILED ELECTRONICALLY AND VIA COURIER

Helen T Newland
Helen.Newland@FMC-law.com
DIRECT 416-863-4471

September 12, 2011

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
PO Box 2319, 27th Floor
Toronto, ON
M4P 1E4

Dear Ms. Walli:

RE: Application by Canadian Distributed Antenna Systems Coalition ("CANDAS");
Board File No.: EB-2011-0120

We represent CANDAS in connection with its application to the Board regarding access to the power poles of licensed electricity distributors for the purpose of attaching wireless telecommunications equipment ("**Application**").

In accordance with Procedural Order No. 1, CANDAS is filing interrogatories in respect of the evidence of Ms. Mary Byrne filed by Toronto Hydro-Electric System Limited.

CANDAS will file two paper copies of the above-noted evidence as soon as possible.

Yours very truly,

(signed) H.T. Newland

HTN/ko

cc: Mr. George Vinyard
All Intervenors

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15 (Schedule B);

AND IN THE MATTER OF an Application by the **Canadian Distributed Antenna Systems Coalition** for certain orders under the *Ontario Energy Board Act, 1998.*

Interrogatories of CANDAS

to

Toronto Hydro-Electric System Limited

(Mary Byrne)

September 12, 2011

Interrogatory 1

Reference: The Affidavit of Mary Byrne Sworn September 2, 2011 ("Byrne) Byrne, para. 1

Topic: Attachment policies and standards

Questions:

(a) Provide copies of all written policies, standards and procedures pertaining to the attachment, on THESL distribution poles, of:

(i) antenna
(ii) equipment enclosures or boxes
(iii) fibre
(iv) banners
(v) streetlights
(vi) traffic lights
(vii) signage
(viii) banners
(ix) other

(b) Provide copies of all THESL attachment policies, as revised to reflect the adoption of THESL's "no wireless" policy.

(c) Describe, in detail, the technical and other information that THESL requires to be provided in support of an application for an attachment permit in the case of:

(i) A permit for the attachment of the non-fibre components of a wireless telecommunication pole installation (i.e., antenna and equipment enclosures)

(ii) A permit for the attachment of the fibre component of a wireless telecommunication pole installation

(iii) A permit for the attachment of the non-fibre components of a wireline telecommunication pole installation (i.e., the equipment enclosures)

(iv) A permit for the attachment of the fibre component of a wireline telecommunication pole installation

Interrogatory 2

Reference: Byrne, paras. 3 and 5

Topic: Types of poles owned by THESL

Questions:

(a) Provide a table that shows the breakdown, by pole type (i.e., cedar, various classes of concrete, steel, other), of the 140,000 THESL poles and the 40,000 THESI poles that are to be transferred to THESL, both referenced in paragraph 3.

(b) Do the statements on page 2, paragraph 5, pertain equally to the 40,000 THESI poles that are to be transferred to THESL?

(c) What is the average life span of a:

(i) Cedar pole
(ii) Steel pole
(iii) Concrete pole

Interrogatory 3

Reference: Byrne, paras. 3 and 5

Topic: Transfer of 40,000 secondary poles to THESL in 2012.

Questions:

(a) Does THESL provide services to THESI in connection with the maintenance and operation of THESI poles?

(b) Do the THESL-specific standards (as opposed to external standards such as ESA and CSA standards) that govern the construction, operation and maintenance of THESL distribution poles apply, *mutatis mutandi* to THESI poles?

(c) If the response to (b) is "no", describe how THESL standards differ from THESI standards in this regard.

Interrogatory 4

Reference: Byrne, para. 9 and generally

Questions:

(a) Describe, in detail, the current THESL standards, policies and procedures that pertain to the attachment, on THESL distribution poles, of:

(i) The equipment box components of a wireless telecommunication pole installation

(ii) The equipment box components of a wireline telecommunication pole installation

(iii) The fibre component of a wireless telecommunication pole installation

(iv) The fibre component of a wireline telecommunication pole installation

(b) Describe material changes in the past five years to the standards, policies and procedures that pertain to each of the above-referenced categories of equipment.

(c) Describe, in detail, the step-by-step process for processing applications for attachment permits in respect of each of the categories of equipment described in (a).

Interrogatory 5

Reference: Byrne, paras. 4 and 41-44

Topic: Accommodating variability among THESL's poles

Preamble: Ms. Byrne states that "the configuration, condition and congestion of the THESL poles today is highly varied." Ms. Byrne goes on to conclude that the variability of wireless and DAS equipment and attachment configurations creates safety concerns and causes other issues.

Questions:

(a) Is it THESL's position that the attachment of wireless equipment to THESL poles increases the level of congestion on THESL poles?

(b) Explain, in detail, how the attachment configuration of wireless telecommunication equipment differs from the attachment configuration of wireline telecommunication equipment, including the attachment of equipment enclosures (i.e., boxes) and fibre.

(c) Describe the training received by THESL employees and contractors, who perform work on distribution poles and lines, in respect of the different and various equipment configurations that they are likely to encounter on a THESL pole.

(d) Describe the material ways in which the training referred to in (c), differs in respect of a wireless telecommunication pole installation and a wireline telecommunication pole installation.

Interrogatory 6

Reference: Byrne, para. 4

Topic: Pole Variability and Application of Standards

Questions:

(a) Are the poles from each of the six former municipal electric distribution utilities subject to the same engineering and construction standards?

(b) If the response to (a) is "no", compare and contrast the various applicable legacy standards.

(c) In the event that a THESL standard conflicts with OR 22/04, CSA C22.3 No. 1, or Ontario OSHA, which standard applies?

(d) Does THESL attempt to reconcile conflicting standards in the field? If so, explain the process by which this is achieved and the time it takes to correct the conflict.

(e) Describe and explain how legacy variations in distribution equipment configurations etc. are managed *vis-à-vis* the THESL employees and contractors that work on THESL poles.

(f) Is it THESL's position that such legacy variations constitute a safety issue or concern?

Interrogatory 7

Reference: Byrne, para. 4

Topic: Documentation of pole condition and applicable standards for each pole.

Preamble: Ms. Byrne states that "the configuration, condition and congestion of the THESL Poles today is highly varied."

Questions:

(a) How are legacy variations (i.e., different distribution configurations and varying standards on poles) documented and tracked?

(b) What in THESL's view, is an acceptable level of congestion in respect of all "zones" on a pole.

(c) Describe the basis upon which THESL relies to determine when a pole exceeds acceptable levels of congestion.

(d) Provide a breakdown, in tabular form, for the THESL poles (140,000) and the THESI poles to be transferred to THESL (40,000), that shows how many poles are at capacity in terms of the acceptable level of congestion (described in (b)) and how many poles have capacity available to accommodate new attachments.

(e) How is the age and condition of poles tracked and managed to ensure that poles are replaced at the end of their useful life?

(f) If age, condition and congestion (loading) are not tracked on a pole by pole basis, explain how THESL decides when to replace a pole?

(g) Does THESL visually inspect each pole before a decision is taken to replace it? If so, how often are all 140,000 poles inspected?

Interrogatory 8

Reference: Byrne, paras. 6, 20, 32 and 49

Topic: Addition of cross-arms to poles

Questions:

(a) When adding new conductors, under what circumstances does THESL:

(i) Replace the existing pole with a new pole of larger diameter

(ii) Replace the existing pole with a new pole of the same diameter

(iii) Install the conductor on a cross-arm

(b) Are the current and forecast levels of applications for attachment permits taken into account when deciding:

(i) Whether to replace an existing pole with a new pole

(ii) The dimensions (i.e., height diameter) of new pole replacements

(c) If the response to (b) is "yes", explain how the demand for attachment space is taken into account in deciding when to replace a pole.

Interrogatory 9

Reference: Byrne, para. 6

Topic: Allocation of Space on Taller Poles

Questions:

(a) If a taller pole were to replace an existing pole, is there an objective standard or regulation (i.e., ESA, CSA, etc.) that "allocates" the additional height to the distribution zone?

(b) What is the height of the communications space on taller poles and how many attachments can taller poles hold? Please answer by reference to all available pole sizes and compositions and by reference to the standards and regulations listed above in (a).

(c) Could this additional space be used to increase the size of the communication space without violating any objective standards and regulations? If not, please describe how such standards and regulations would be violated.

(d) Does THESL have a current standard that would limit the expansion of the communications space instead of the distribution zone? Please specify by reference to THESL standards.

Interrogatory 10

Reference: Byrne, para. 6; Exhibit A, Figure 1

Topic: Typical poles

Questions:

(a) Exhibit A is a sketch of a "typical pole". Provide a similar sketch of the taller poles referred to in paragraph 6, including the dimensions of each "zone" on the pole, as defined or delineated in an objective standard. Identify each such objective standard.

Interrogatory 11

Reference: Byrne, para. 7

Preamble: In relation to safe limits of approach, Ms. Byrne states "safe limits of approach are defined and practiced on the overhead distribution system such that a zone of separation is required between high voltage equipment and any other attachments"

Questions:

(a) Does the attachment of antennas on the top of a distribution pole violate any applicable objective safety standards, requirements etc., including those that pertain to zones of separation?

(b) Would antennas installed at the pole top fall within the parameters of CSA22.3 No. 1 Section 5.10.2.2(c)? If no, please explain the reasons why not.

(c) Do the ESA and any other applicable standards require that the power space be used exclusively by the electricity distributor? If "no", do ESA standards require separations between supply conductors and other equipment attached to poles?

(d) Are there any pole top antennas, of any kind, currently attached to the top of THESL poles? If "yes", provide a list of each such antenna, the type of antenna (i.e. use – Wi-Fi, DAS, SCADA, etc.), its location, when it was installed and the owner thereto.

Interrogatory 12

Reference: Byrne, para. 8

Preamble: Ms. Byrne describes some of the distribution equipment attached to THESL poles, including transformers.

Questions:

(a) Describe the physical specifications of each such transformer (e.g. dimensions, weight, etc.) and the method and configuration of each such transformer.

(b) Does THESL employ bolts to attach transformers and other distribution equipment?

(c) Provide the combined weight and overall loading of: (i) a pole with three transformers; and (ii) a pole with DAS equipment and antenna system. Please answer (ii) by reference to the DAS drawings submitted by DAScom in respect of the DAScom Toronto DAS network.

Interrogatory 13

Reference: Byrne, para. 9

Preamble: In this paragraph Ms. Byrne addresses how "the various pieces of electrical distribution equipment can exert a substantial load on THESL Poles."

Questions:

(a) When performing structural analysis and wind loading calculations, what factors does THESL consider?

(b) If the results of the structural analysis are acceptable and the attachments comply with applicable standards, are there any other engineering or regulatory reasons why the attachment should not be permitted?

(c) Do certified professional engineers review all attachment applications received by THESL?

(d) What are the minimum education and training qualifications for THESL staff that review and, ultimately, approve or reject the attachment applications?

(e) Does THESL permit or has THESL ever permitted attachments (including cable and equipment) in the unusable space below the communications space? If "yes", describe any such attachments, attachment methods, location on the pole, owners of such attachments and the number of each type of attachment.

Interrogatory 14

Reference: Byrne, General

Topic: Redundant pole systems

Questions:

(a) Is it THESL's view that erecting new poles in a public right-of-way is a viable alternative to using existing utility poles for wireless attachments?

(b) If the response to (b) is "yes", explain the basis of this view.

Interrogatory 15

Reference: Byrne, para. 16

Topic: Non-communications attachments

Questions:

(a) Do non-communications attachments on power poles present physical impediments to pole workers accessing or climbing the poles?

(b) Are line crews trained to navigate around non-communication attachments?

(c) Explain how navigating around non-communications, non-distribution attachments ("NDAs") differs from navigating around communications NDAs?

(d) CCTV carriers install power supplies in the unused portion of the pole, the communication space and the separation space. Does THESL categorize these types of power supplies as communication or non-communications NDAs?

(e) Would splice enclosures installed by the ILEC's or CLEC's in the unused portion of the pole, in the communication space or in the separation space, be considered communication or non-communications NDAs?

(f) Provide a list of all non-wireline (i.e. fibre, cable or other) NDAs attached to THESL poles and, for each such NDA, describe:

    (i) The geographic location of each NDA

    (ii) The specific type of NDA attachment (e.g. surveillance camera, Wi-Fi antenna, battery unit, DAS antenna, etc.)

    (iii) The owner of each NDA

    (iv) The size, weight, dimensions and other physical specifications of each NDA

    (v) The attachment location of each NDA on the pole (distribution space, communication space, unusable space, etc.)

    (vi) The attachment method (e.g. through bolt, metal band, in-line (i.e. on-cable, etc.)

    (vii) The rates charged for each type of NDA

(g) Provide a list of all wireless attachments that are used in conjunction with electricity distribution such as SCADA antennas or other SCADA equipment, and, for each such attachment, describe:

(i) The geographic location of each wireless attachment

(ii) The specific type of wireless attachment

(iii) The owner of each wireless attachment

(iv) The size, weight, dimensions and other physical specifications of each wireless attachment

(v) The attachment location on the pole of each wireless attachment (distribution space, communication space, unusable space, etc.)

(vi) The attachment method (e.g. through bolt, metal band, in-line (i.e. on-cable, etc.)

(h) Does THESL publish standard terms and conditions pertaining to non-communication attachments ?

(i) Provide a *pro forma* copy of one attachment agreement in respect of non-communication attachments.

(j) Provide a copy of THESL's policies governing the attachment of non-communication equipment.

(k) Provide a copy of THESL's construction guidelines pertaining to non-communication attachments.

(l) Provide a copy of the *pro forma* permit application pertaining to non-communication equipment.

(m) Is any wireless equipment, including equipment associated with wireless attachments, currently attached outside the communications space on any THESL pole? If "yes", provide:

(i) The geographic location of each such wireless attachment

(ii) The specific type of such wireless attachment

(iii) The owner of each such wireless attachment

(iv) The size, weight, dimensions and other physical specifications of each such wireless attachment

(v) The attachment location on the pole of each such wireless attachment (distribution space, communication space, unusable space, etc.)

(vi) The attachment method (e.g. through bolt, metal band, in-line (i.e. on-cable, etc.)

Interrogatory 16

Reference: Byrne, paras. 19-20

Preamble: The reference states that: "**[**P**]**rior to 2009, THESL had a group of four dedicated employees who processed NDA applications" and "**[**W**]**hereas in 2007 and 2008, we received 103 and 418 attachment requests respectively, in 2009 we received 1135 requests."

Questions:

(a) What percentage of the annual increase in applications received the period 2007 to present were in respect of wireless attachments? What percentage were in respect of DAS?

(b) How many attachment applications were received annually, in the period 2007 to present, in respect of:

(i) NDAs

(ii) Other types of applications

(iii) Wireless attachments (please include a breakdown of different types of wireless attachments)

(iv) Wireline attachments

(c) Given the increase in applications for NDAs between 2007 and 2009, why did THESL wait until 2009 to begin to augment staffing in this area?

(d) What were the average times to process an attachment application, by type of attachment (i.e. wireless, wireline, etc.) in the period 2007 to present. Describe how these times have been calculated, including methodology and data collection methods.

(e) For each year in the period 2007 to present, provide the average time required to perform fieldwork (e.g. make ready work) to accommodate a permitted attachment.

(f) How does THESL prioritize the processing of attachment applications, e.g. first in-first out, by application type, by complexity of the application, by entity requesting attachment, etc.?

Interrogatory 17

Reference: Byrne, paras. 20-21

Topic: THESL staffing

Questions:

(a) Were any of the positions that have created in 2009 to handle telecommunications attachment requests permanent positions? Were any of the employees hired in 2009 part of THESL's permanent headcount?

(b) Were any of the positions mentioned in paragraph 21 positions for professional engineers?

(c) What qualifications did the interns have and what training did they receive from THESL?

(d) Provide the date of hire for each position mentioned in paragraph 21, the duration of the associated contract and the respective functional roles.

(e) Did any CANDAS member, or any other attachment applicant, offer to provide resources, additional funding, or manpower to assist the existing staff to expedite Cogeco or DASCom attachment applications? If so, was this offer accepted by THESL? Why or why not?

(f) If THESL application fees do not cover the cost of hiring required additional resources, why does THESL not increase the application fee?

(g) If THESL relies on short term (4 month) co-op students and interns to perform the functions needed to process the applications, would it not be possible to train the carriers engineers and staff to perform the majority of the work that would have otherwise been done by interns and temporary contractors? If not, why not?

Interrogatory 18

Reference: Byrne, para. 22

Preamble: In discussing the "make ready" work, Ms. Byrne states that "conductors may need to be raised or lowered to increase the amount of space available for communications attachments."

Questions:

(a) If a pole is replaced with a new pole that has five additional feet of height, how much additional space beyond the two feet is available for communications NDAs?

Interrogatory 19

Reference: Byrne, para. 18

Preamble: The process described in paragraph 18 of Ms. Byrne's evidence is materially different from the process that is set forth in the Distribution Pole Attachment Agreement between DAScom and THESL dated August 1, 2009.

Questions:

(a) Explain the reasons why.

(b) Were DAScom and other legacy attachers notified of these changes in process? If so, when and how were such notifications made?

Interrogatory 20

Reference: Byrne, para. 22

Preamble: Ms. Byrne states "[If] make ready work requires excavation in the roadway (including sidewalks) for example, THESL must obtain a permit from the City of Toronto."

Questions:

(a) What kinds of "make ready" work require roadway excavation?

(b) Who is responsible for conduit and duct placement up to and on to the pole?

(c) In 2010 and 2011, how many third party attachments required "make ready" work that involved excavation and municipal permitting?

(d) Explain the effect of the size of the communications space as it relates to adjusting (raising or lowering) conductors.

(e) By raising or lowering conductors, does the size of the communications space change?

(i) If "yes", explain exactly how it changes.

(ii) If "yes", what is the range in the change of size (smallest/largest) and what is that range dependent upon (e.g. size of pole, amount of distribution equipment on the pole)?

Interrogatory 21

Reference: Byrne, paras. 23-24

Questions:

(a) Describe the "operational and safety burden" referenced in the following statement at paragraph 23: "THESL is therefore required to take on a considerable ongoing operational and safety burden related to NDAs."

(b) In respect of paragraph 24, please explain how the extra "layer of notification protocols" differs as between wireless and wireline attachers.

Interrogatory 22

Reference: Byrne, para. 25

Preamble: In this paragraph, Ms. Byrne discusses how "[I]n 2010 for example, the CSA adopted provision 7.1 in its standard regarding Overhead Systems. Pursuant to provision 7.1, the CSA provides that distributors should use a non-linear calculation methodology for pole analysis during the application process".

Questions:

(a) Did Cogeco submit fibre attachment applications to THESL in respect of the Toronto DAS Network, prior to the incorporation of provision 7.1 into the CSA standard? Were such applications grandfathered by THESL? If not, why not?

(b) CSA provision 7.1 allowed for the use of linear analysis during the period of transition. Did THESL, nevertheless, apply this new standard to applications in progress?

(c) Did THESL's application of CSA provision 7.1, to pending attachment applications despite the transition provisions, delay the processing of such application?

Interrogatory 23

Reference: Byrne, paras. 4, 18 and 26-28.

Preamble: The language in these paragraphs also appears in the THESL letter date August 13, 2010 and has been repeated several times throughout this proceeding.

Questions:

(a) Did Ms. Byrne author this language. If "no", who did?

(b) Paragraph 4, states that the THESL pole network is highly variable due to the acquisition of other LDCs. Paragraph 27 states that wireline attachments are largely uniform. Reconcile these two statements.

Interrogatory 24

Reference: Byrne, para. 28

Preamble: In discussing the CCTA decision, Ms. Byrne states, "[T]HESL has granted wireline attachers access to THESL Poles on the basis of those attachments fitting within the communications space on THESL Poles and assuming approximately 2.5 attachments per pole."

Questions:

(a) With respect to the photographs on slides 1 through 6 (attached):

(i) Confirm that the attachments depicted are CATV power supplies attached to THESL poles.

(ii) Identify the space or zone on the pole (eg. communications space, other) in which the equipment enclosures are installed?

(iii) Is it THESL's view that all equipment enclosures in the photographs are "uniform in design" and size?

(iv) If there are variations in the size of the equipment enclosure, list each size and provide its specifications.

(b) As compared to the wireless attachment applications that THESL reviewed and approved for installation in respect of the Toronto DAS Network, are DAScom attachments larger, smaller or approximately the same size as the equipment enclosures shown in the slides?

(c) If the equipment shown in the photograph is CATV equipment that is installed outside the communications space, explain the conditions under which THESL granted wireline access for these attachments.

(d) Is it THESL's position that the CCTA Decision pertains to CATV equipment?

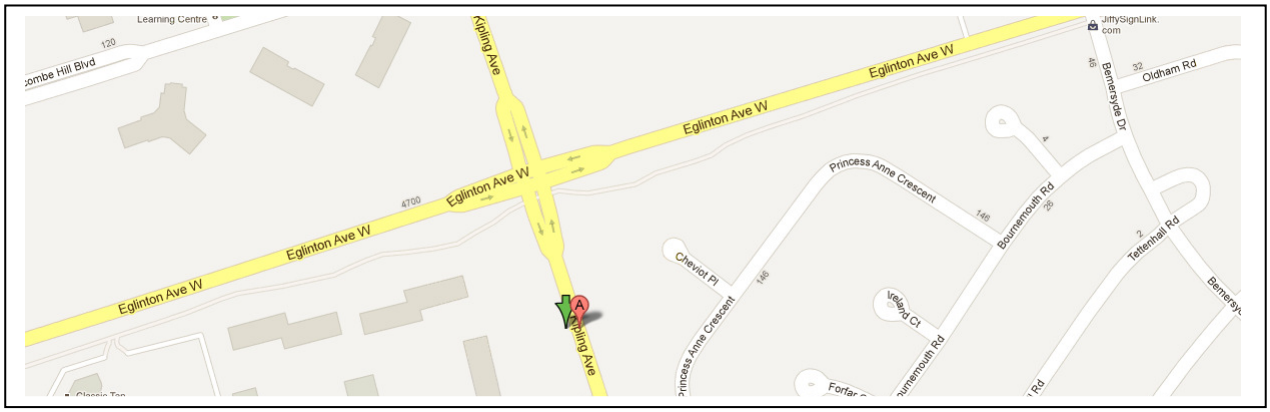
(e) Confirm that the DAS equipment configurations that were the subject of each of DAScom's attachment applications in respect of the Toronto DAS Network were virtually identical from application to application.

(f) Does THESL limit the number of attachers in the communications space? If "yes", what is the maximum permissible number of attachers?

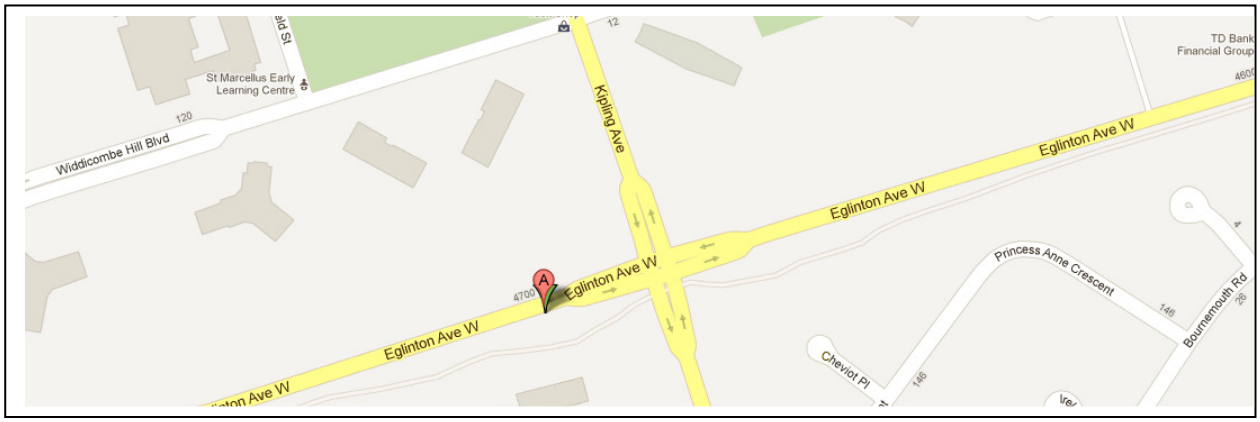
(g) If the response to (f) is "yes", explain the circumstances under which THESL would exercise its discretion to waive this constraint.

(h) Does THESL limit the size of the communications space to two feet? If “yes”, does this limitation pertain to all poles? Under what circumstances, if any, would THESL exercise its discretion to expand the defined communication space on a particular pole?

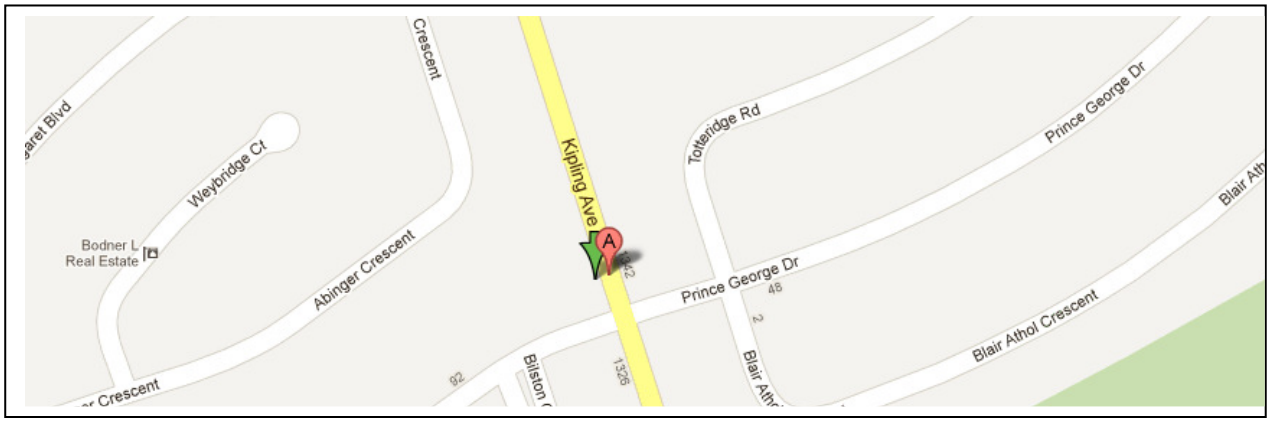
Date: **Sept 6, 2011**	Location: **Kipling & Eglinton** **(4th pole south of Eglinton on the west side)**
Pole No: **P1400 (Hydro)**	
GPS: **43.67604, -79.55051**	



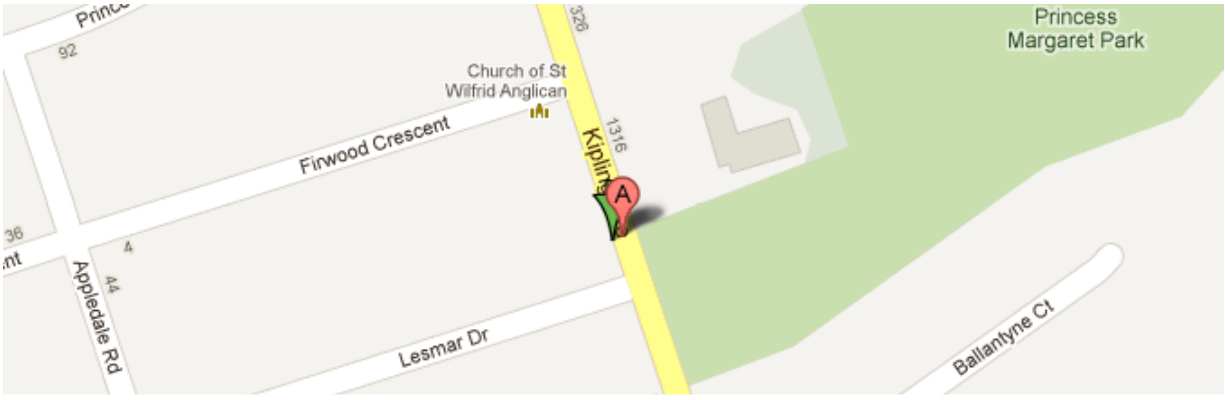
Date: **Sept 6, 2011**	Location: **Kipling & Eglinton** **(3th pole west of Kipling on south side)**
Pole No: **P4515 (Hydro)**	
GPS: **43.67690, -79.55197**	



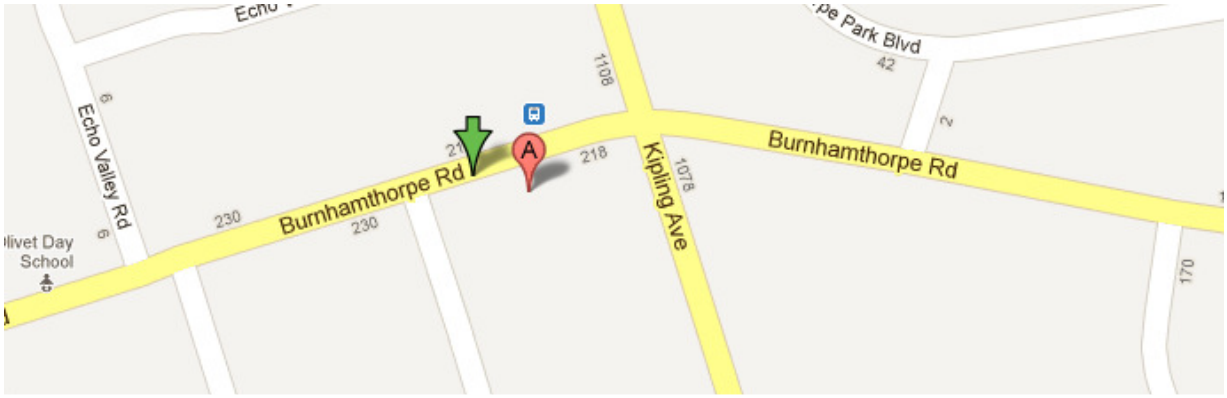
Date: **Sept 6, 2011**	Location: **Kipling & Prince George Dr** **(1st pole North of Prince George on west side)**
Pole No: **P1342 (Hydro)**	
GPS: **43.66784, -79.54687**	



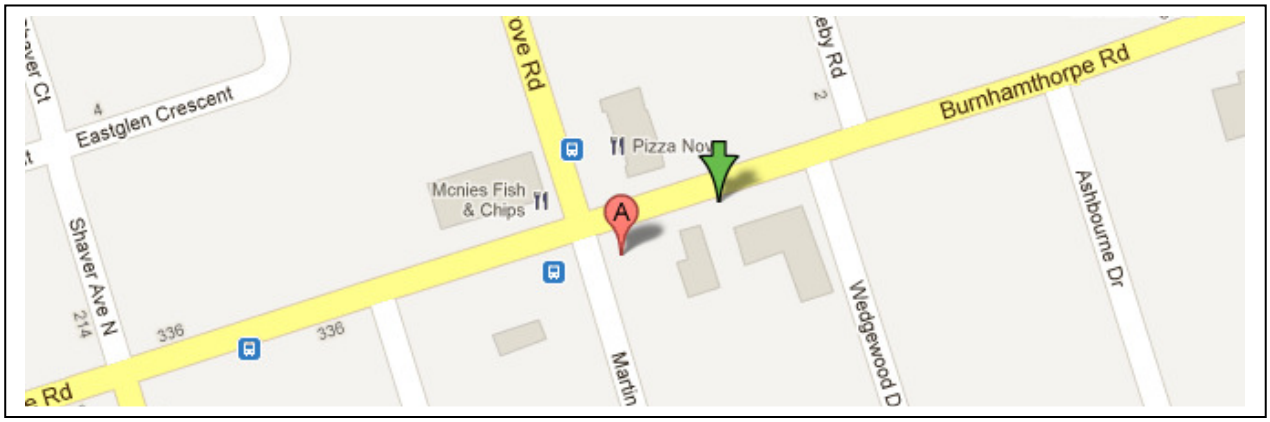
Date: **Sept 6, 2011**	Location: **Kipling & Lesmar Dr** **(1st pole North of Lesmar Dr on west side)**
Pole No: **P1316 (Hydro)**	
GPS: **43.66572, -79.54589**	



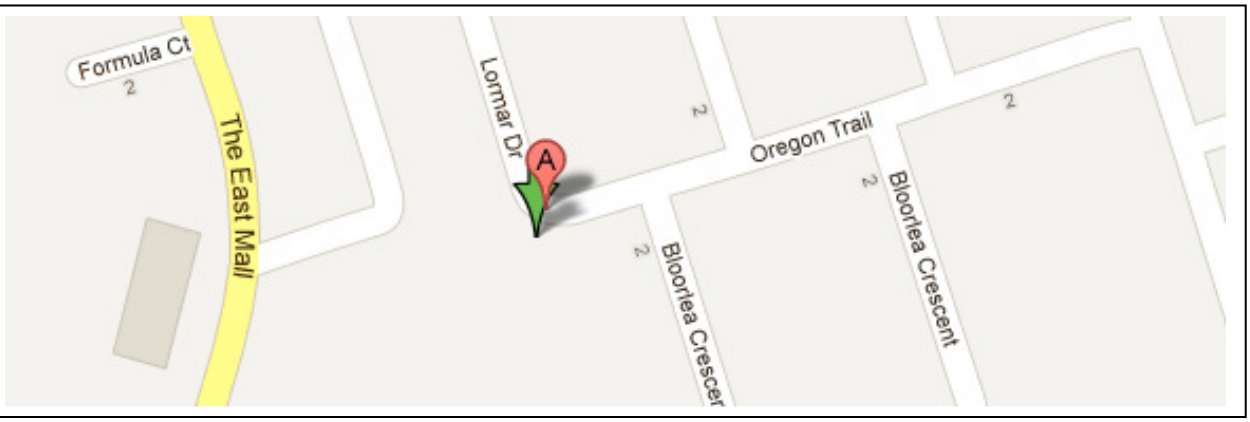
Date: **Sept 6, 2011**	Location: **Kipling & Burnhamthorpe Rd** **(3rd pole west of Kipling on south side)**
Pole No: **P220 (Hydro)**	
GPS: **43.65077, -79.54039**	



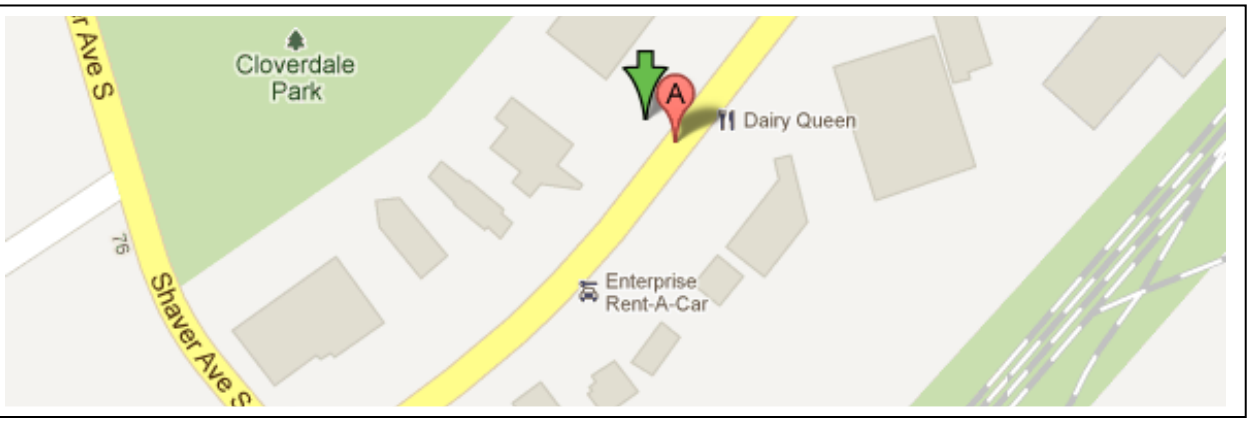
Date: **Sept 6, 2011**	Location: **Martin Grove Rd & Burnhamthorpe Rd** **(2nd pole east of Martin Grove on south side)**
Pole No: **P312 (Hydro)**	
GPS: **43.64892, -79.54817**	



Date: **Sept 6, 2011**	Location: **Oregan Trail & Lomar Dr** **(on south side of corner)**
Pole No: **P23 (Bell)**	
GPS: **43.63942, -79.55545**	

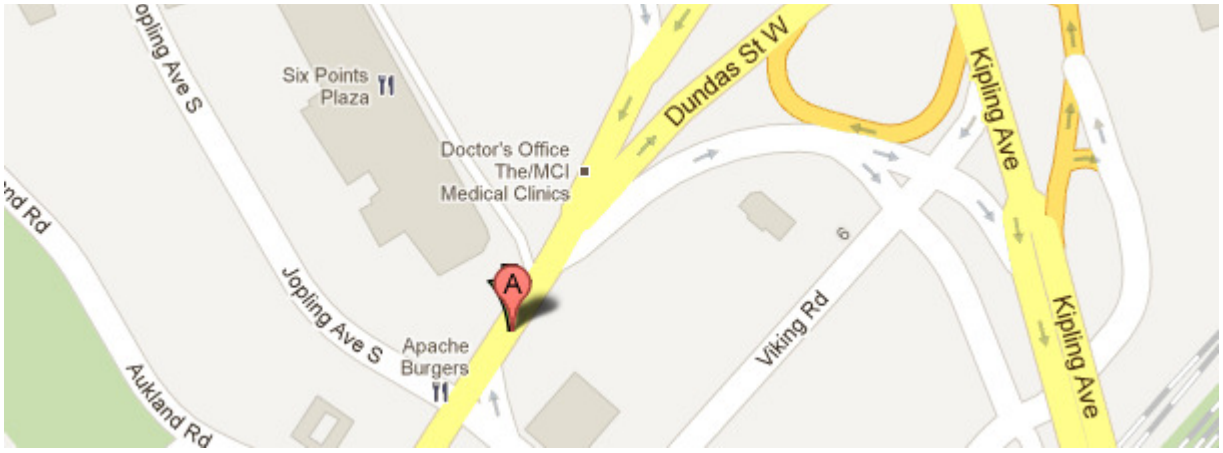


Date: **Sept 6, 2011**	Location: **5450 Dundas St West** **(west of 5450 Dundas St W on the north side)**
Pole No: **P5458 (Hydro)**	
GPS: **43.63354, -79.54290**	

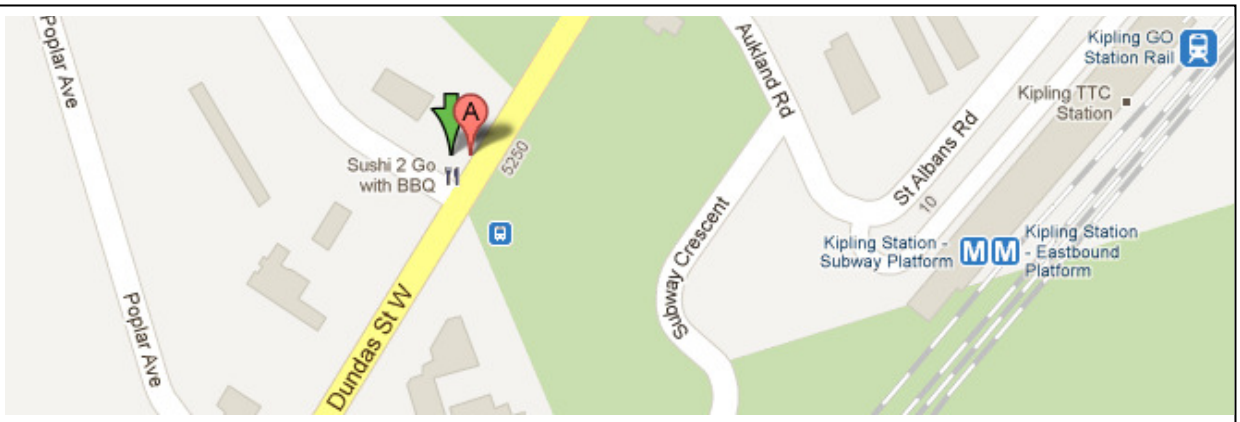


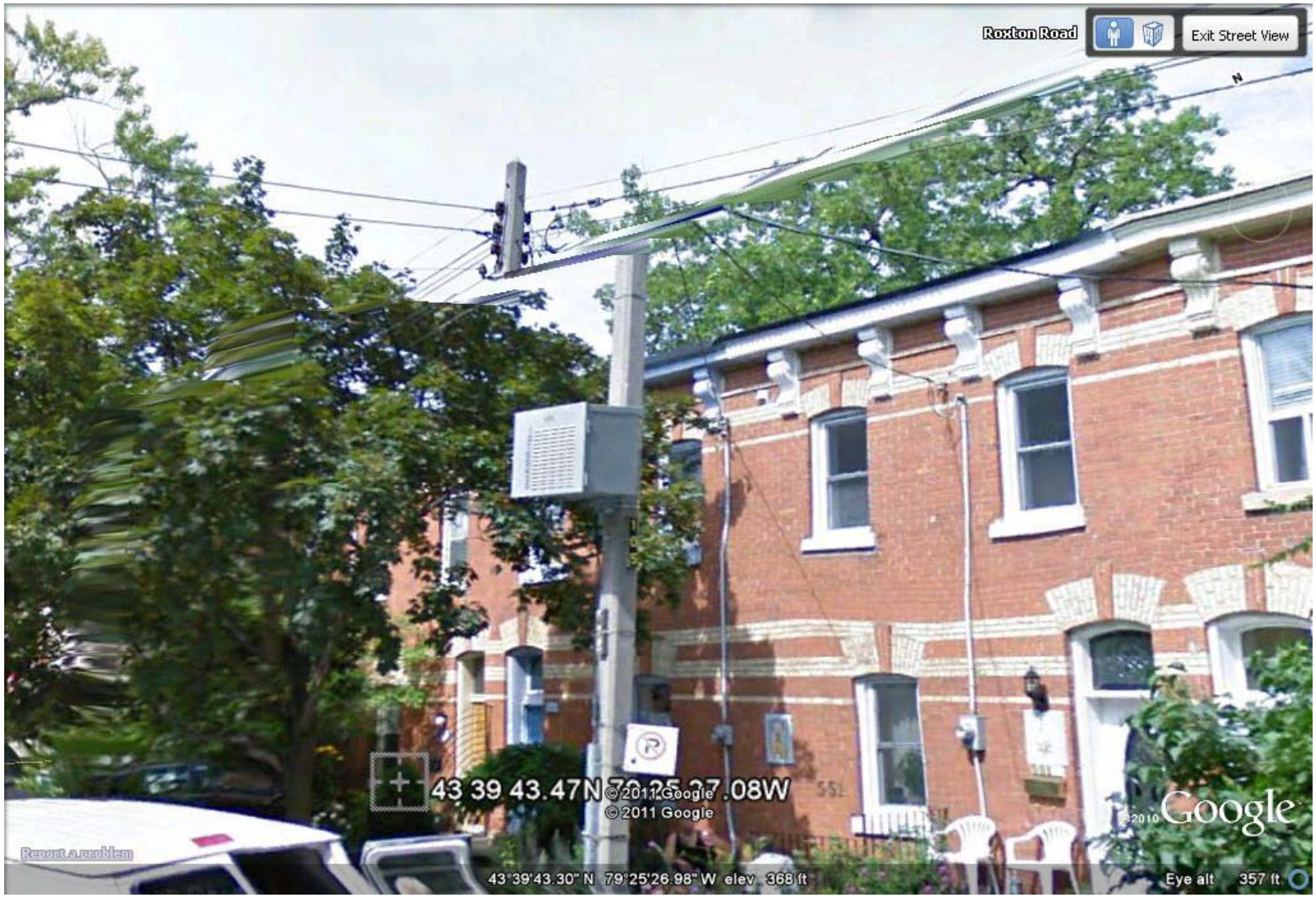
Date: **Sept 6, 2011**	Location: **5450 Dundas St West** **(east of 5450 Dundas St W on the north side)**
Pole No: **P5454 (Hydro)**	
GPS: **43.63401, -79.54246**	

Date: **Sept 6, 2011**	Location: **Dundas St West & Jopling Ave S** **(east of 5236 Dundas St W on the north side)**
Pole No: **P5230 (Hydro)**	
GPS: **43.63927, -79.53729**	

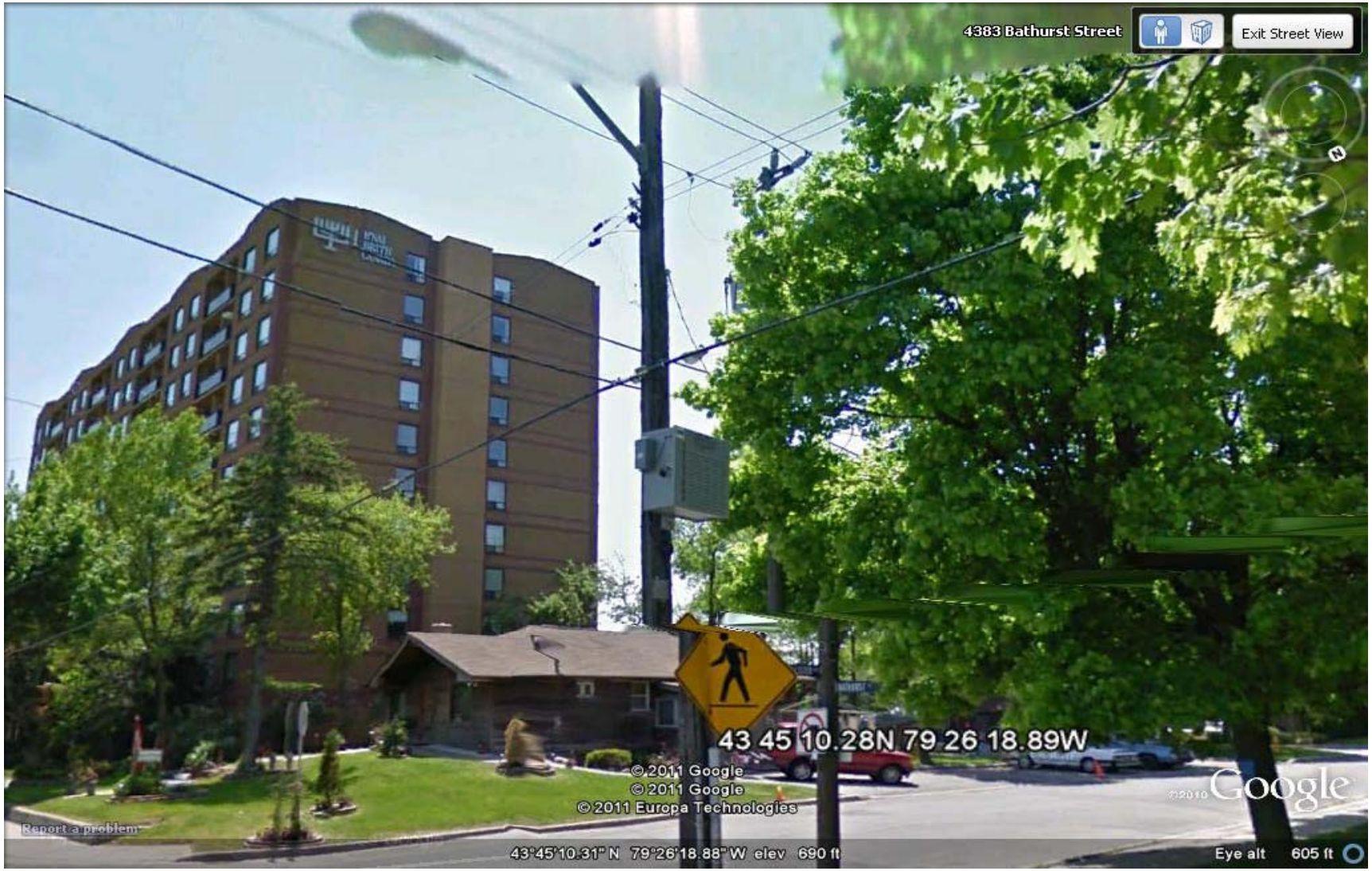


Date: **Sept 6, 2011**	Location: **Dundas St West & Acorn Ave** **(1st pole east of Acorn Ave on the north side)**
Pole No: **P5280 (Hydro)**	
GPS: **43.63755, -79.53903**	



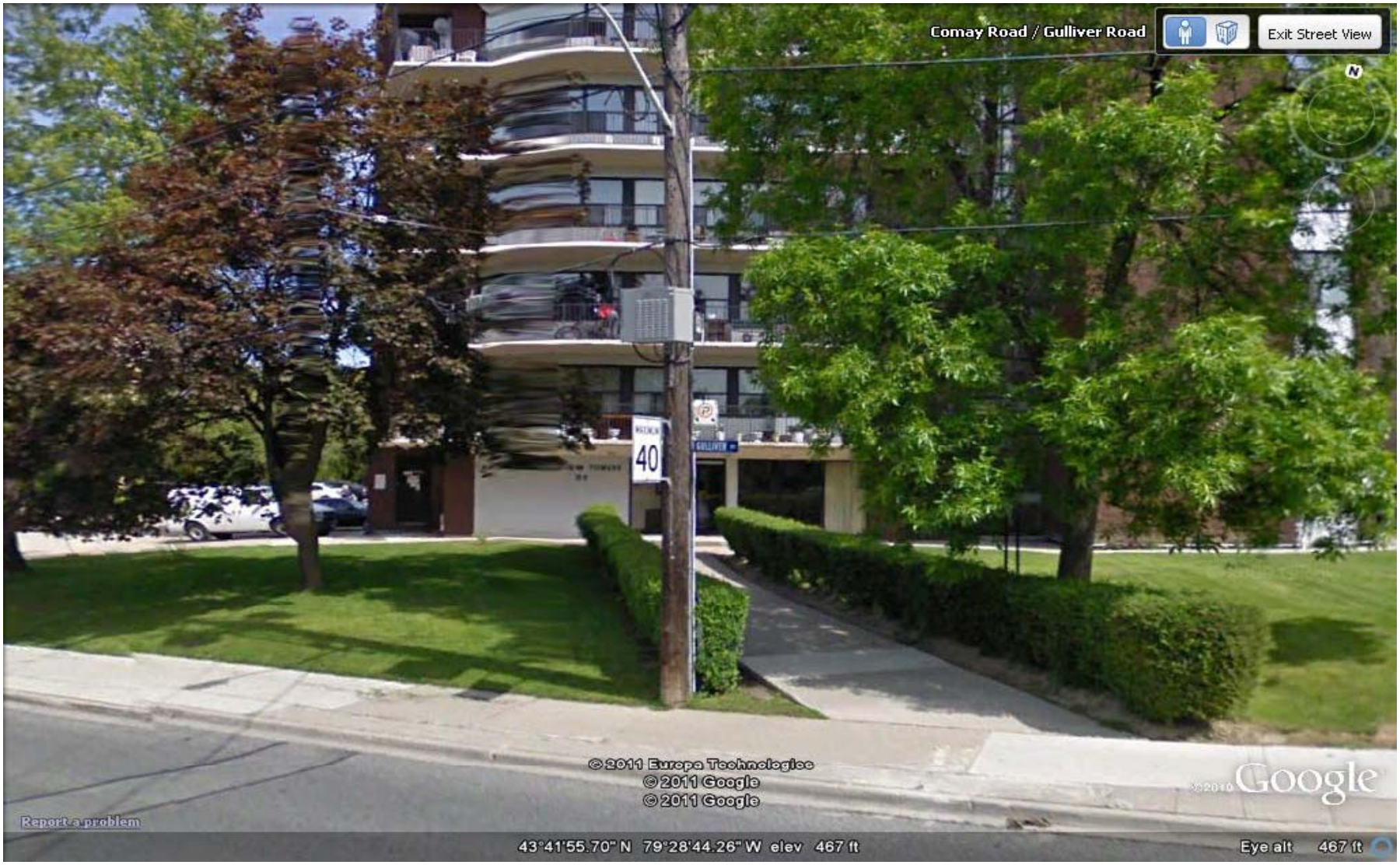


551 Roxton Road

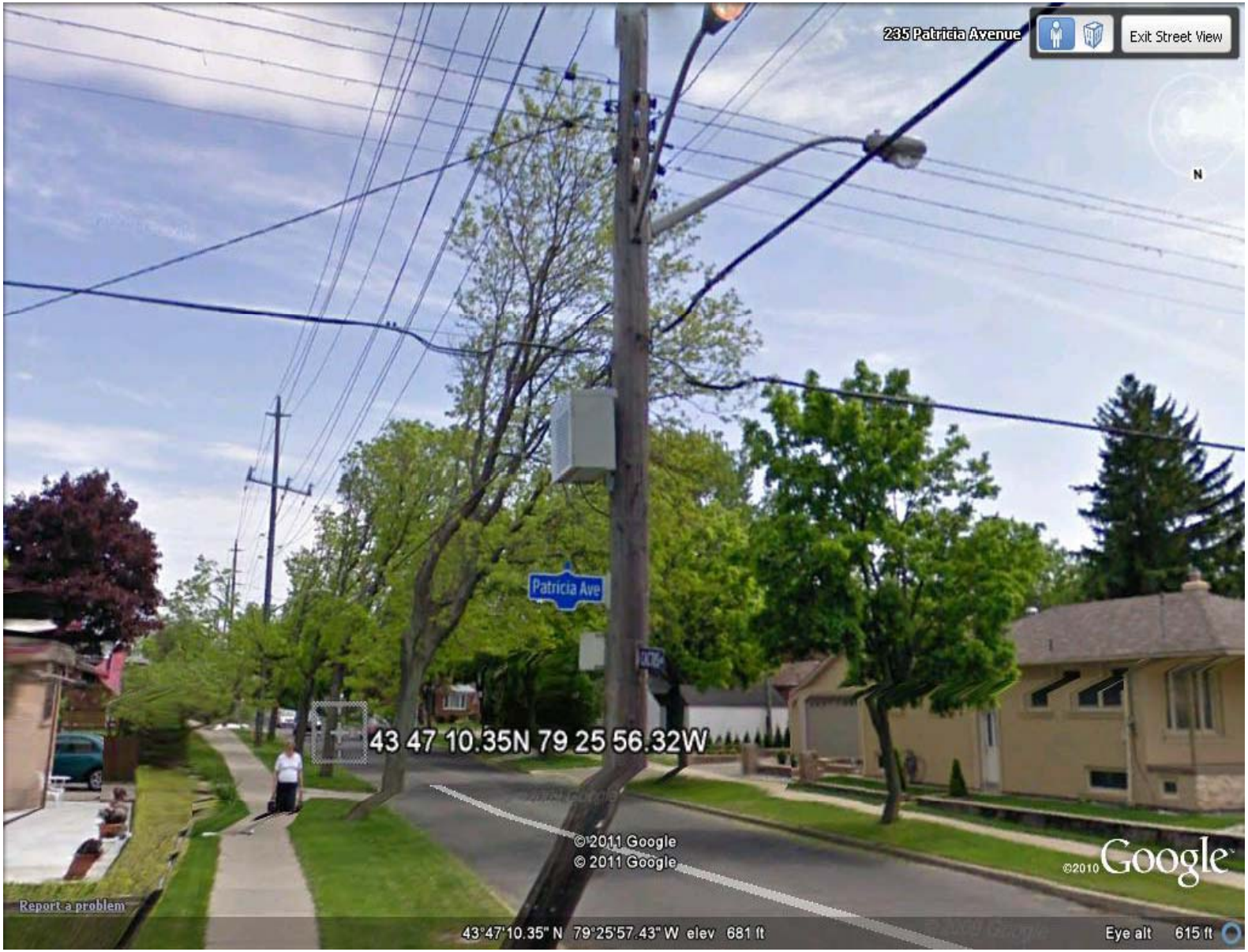


4383 Bathurst Street

Bathurst and Haddington



44 Gulliver Road



Patricia and Cactus

111 Gulliver Road

30 Cummer Ave

Interrogatory 25

Reference: Byrne, para. 29

Topic: THESL's application fees for processing wireless attachments

Preamble: "THESL has historically charged a $95 application charge to recover its costs of processing those applications"

Questions:

(a) Is this application fee established or approved by the OEB?

(b) If "no", are there any reasons why THESL could not unilaterally vary (i.e., increase or decrease) this fee?

(c) How/where is the revenue received in the form of attachment application fees reflected in THESL's cost of service rate application?

Interrogatory 26

Reference: Byrne, para. 32

Preamble: In discussing the number of wireline attachment requests received by THESL, Ms. Byrne states as follows: "[A]ccordingly, and assuming an approximately even distribution of Cogeco's wireless-supporting applications as between 2009 and 2010, the more accurate number of stand-alone wireline requests that THESL received for those years was 734 and 662 respectively."

Questions:

(a) Do the 734 and 662 figures include Cogeco attachment applications only? If "yes", of these, how many were applications that were resubmitted following initial rejection by THESL?

(b) Describe the differences, if any, between how THESL processes attachment applications for the fibre components of wireline telecommunication installations and the fibre component of wireless telecommunication installations.

(c) Describe the differences, if any, between how THESL processes attachment applications for the fibre component of DAS installations and how it processes applications for the fibre component of other telecommunication networks.

Interrogatory 27

Reference: Byrne, para. 34

Preamble: Ms. Byrne states, "[T]he major distinction signified by the term "wireless" (as compared to wireline) is that the equipment being supported is not composed primarily of cable which must run contiguously between poles in order to function."

Questions:

(a) Is it THESL's position that the attachment of the wireline components of a wireless network is mandated by the CCTA Decision in the same manner as the attachment of the wireline component of a wireline network? If the response is "no", explain why not.

(b) Is it THESL's position that the wireline connection required to support DAS networks is materially different than the wireline connection required to support CATV components? If "yes", explain the reasons why.

Interrogatory 28

Reference: Byrne, paras. 34-35

Preamble: Ms. Byrne describes wireless attachments as “mini-systems” that include “power supply cabinets or boxes, cable to connect the cabinet to the antenna, cable to feed back into the communications network and possibly a meter for electricity service.”

Questions:

(a) Confirm that, with the exception of the cable connection between the cabinet and the antennae, CATV networks also require the components enumerated above?

Interrogatory 29

Reference: Byrne, para. 36

Preamble: Ms. Byrnes states that "from THESL's experience, all wireless attachments also have a 'wired' component as they require power supplies…".

Questions:

(a) How many different entities have submitted wireless attachment applications since 2009?

(i) Provide a list of all these entities, including THESL's affiliates and subsidiaries.

(ii) Provide an example of each type of attachment in respect of which THESL received an application (whether approved or not) in the period 2009 to the present.

(b) Do any THESL affiliates own or operate wireless equipment that is currently attached on a THESL pole?

(c) If "yes", list these entities by name and identify the type of attachments and number of each type of attachment attached to each THESL pole.

(d) Do THESL affiliates who own or operate wireless equipment on THESL poles do so in accordance with pole attachment agreements?

(e) Provide a copy of the Pole Attachment Agreement between THESL and Cogeco in respect of its "One Zone" internet service offering.

(f) Does THESL's "no wireless" policy pertain to the wireless attachments of Cogeco / One Zone and the TTC? If "yes", is it THESL's intention to decline to renew the applicable pole attachment agreement upon the expiration thereof? If "no", explain why not.

Interrogatory 30

Reference: Byrne, para. 37

Preamble: "Wireless attachments also require THESL to feed a power supply, at a lower voltage, off the pole itself."

Questions:

(a) Does the variability of wireline attachment configurations (including the non-fibre components of such configurations) require a case-by-case consideration by THESL?

(b) Is it more or less time consuming for THESL to deliver power to a meter on an LDC pole or to a location off the pole?

(c) Would it consume less THESL time and resources to deliver power to a wireless attachment on an existing power pole, or to a wireless attachment on a nearby non-THESL owned pole?

(d) Can distribution service be delivered from a transformer on one pole to equipment on an adjacent pole using secondary overhead cable? If "no", please reference the CSA or ESA standard (or any other) that prohibits this method of delivery.

(e) Which wireline attachments, other than DAS attachments, require THESL to a power supply?

Interrogatory 31

Reference: Byrne, para. 40

Preamble: "Wireless attachments create unique issues that affect the safety, adequacy, reliability and quality of electricity service."

Questions:

(a) What issues arise for wireless attachments that do not also arise for all other forms of NDAs or other equipment routinely installed on power poles?

Interrogatory 32

Reference: Byrne, para. 41

Preamble: In this section, Ms. Byrne discusses the "non-uniform nature" and the "case by case demand" of wireless attachments.

Questions:

(a) Which, if any, of the following types of attachments – traffic signals, streetlights, signs, banners, transformers and distribution equipment – are evaluated on a pole by pole or case by case basis?

Interrogatory 33

Reference: Byrne, para. 43

Topic: Make ready work associated with wireline attachments

Questions:

(a) Is a greater amount of "make ready" work required in respect of poles with wireless attachments than is required in respect of wireline attachments placed in the communications space?

Interrogatory 34

Reference: Byrne, paras. 44-45

Topic: Pole clutter

Questions:

(a) How does THESL define “pole clutter”?

(b) What type of attachments comprise “pole clutter”?

Responses:

Interrogatory 35

Reference: Byrne, para. 44

Topic: THESL workers and "pole clutter"

Preamble: "Once a wireless attachment is in place on a THESL Pole, the size and quantity of equipment may make it very difficult if not "impossible for THESL workers to climb the THESL Pole safely."

Questions:

(a) In carrying out their duties, what percentage of the time do THESL workers or THESL contractors climb THESL poles as opposed to working from a bucket or boom truck?

(b) What is preferable from a safety perspective: climbing a pole or performing maintenance and other line work from a bucket or boom truck?

(c) Do power pole line workers shut off primary and secondary power when working in the energized zone?

Interrogatory 36

Reference: Byrne, para. 45

Topic: Wireless attachment loads

Preamble: "THESL poles were not designed or installed with bearing the additional load of wireless attachments in mind."

Questions:

(a) Provide the engineering analysis that demonstrates that the combined vertical and lateral loads of three transformers is less than the vertical and lateral load of the wireless attachments that were installed by DAScom in respect of the Toronto DAS Network.

(b) Do the Toronto DAS Network nodes installed on THESL poles comply with the standards issued by the pole manufacturer?

(c) Provide the basis for the statement that "THESL poles were not designed or installed to support wireless attachments", including documentation from the pole manufacturer.

(d) Explain how the load of wireless attachments attached to a pole is different from the load of any other equipment attached to a THESL pole.

Interrogatory 37

Reference: Byrne, para. 46

Preamble: "antennas and other equipment could fall onto energized electric facilities"

Questions:

(a) How many reported instances of antennas falling on energized electric facilities have been reported in Canada? In the U.S.?

Interrogatory 38

Reference: Byrne, para. 46

Questions:

(a) Describe how the grounding of an antenna system represents an additional engineering complication that could put THESL line workers at risk.

Interrogatory 39

Reference: Byrne, paras. 47-50

Topic: THESL's Staffing Concerns with Hosting Wireless

Questions:

(a) Would an increase in the wireless attachment application fee assist THESL in the timely processing of these types of applications?