

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 Enbridge Gas Inc. pursuant to Condition 4 from the Ontario Energy Board's Decision and Order dated April 1, 2020, and Section 101 of the *Ontario Energy Board Act, 1998* for authority to construct a work upon, under or over a highway, utility line or ditch in the County of Essex for the purposes of a natural gas pipeline in respect of which the Ontario Energy Board granted leave to construct in EB-2019-0172 to Enbridge Gas Inc.;

**INTERROGATORIES TO THE CORPORATION OF THE COUNTY OF ESSEX
("County of Essex") FROM ENBRIDGE GAS INC. ("Enbridge")**

The first group of questions are for the County of Essex witness Dr. Tape.

ENB-01

Interrogatories for Dr. Tape (Tab 3), no reference

- a) Please confirm the hoop stress calculation performed by Enbridge/Wood (Ex. B, Tab 1, Sched. 5, Appendix A and B) was performed correctly given the assumptions made.
- b) How many highway project designs has Dr. Tape completed and for whom and when were these projects completed?

ENB-02

Tape Affidavit, Tab 3, paragraph 5

- a) Please provide a copy of the retainer letter with the County of Essex and instructions in this matter including the loading information provided by the County of Essex for any analysis.
- b) Confirm the retainer letter does not include any reference to the decommissioning or abandonment of the existing Enbridge pipeline.
- c) Please confirm that the letters authored by Dr. Tape may be taken as if given under professional seal.

ENB-03

Tape Affidavit, Tab 3, paragraph 6

- a) How many pipeline projects have you been engaged in as a professional engineer in applying “standards” for construction?
- b) Prior to being retained by the County, have you ever reviewed or interpreted CAN/CSA Z662-15 or CAN/CSA Z662-19? If so, explain under what circumstances?

ENB-04

Tape Affidavit, Tab 3, paragraph 8, Tab 3, Exhibit B and Tab 3, Exhibit C, page 7 of 8

“Based upon our review and in the interest of shielding the County from liability while maintaining a consistent application of policy...”

- a) Explain how your “interest of shielding the County from liability” is consistent with your duty as an expert in this proceeding. Please note any differences in these duties.

ENB-05

Tape Affidavit, Tab 3, paragraph 9, and Exhibit C, Page 1, May 7, 2020 letter

“...we have undertaken a review of the Enbridge Pipeline vehicle loading analysis date May 1, 2020..”

- a) Please provide all calculations, memos (including Ms. Kalbol Memo of April 27, 2020) and reports referenced, relied upon and/or created during the vehicle loading analysis review referenced above. In particular, provide all stress analyses performed for the depth of 1.0 metres of cover.
- b) Please confirm the date on which this review was performed.

- c) Please identify the “we” being referred to in the quotation.
- d) What is the typical elevation difference between the edge of pavement and the area directly above the pipeline? Please state the source of this information.
- e) Please provide the source document that requires the shoulder be treated as part of the “travelled portion” of the roadway for interpretation of the TAC *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*.
- f) Please confirm the area beyond the shoulder is not in your opinion considered part of the “travelled portion”.

ENB-06

Tape Affidavit, Tab 3, Paragraph 10(d) and Exhibit C, Page 1, May 7, 2020 letter

“it is our understanding that the County [sic] Road 46 will experience road widening over the course of the pipelines [sic] life placing the proposed service within the driven path.”

- a) On what information are you relying for the statement that the road will experience widening. Please describe in detail the nature, timing and location of the “widening”. Provide reference documents where available.
- b) The County of Essex website includes a description, quoted below, and a link to the Capacity Expansion Program (see Attachment #2 or link). Did you review the Capacity Expansion Program?

“The County’s [Capacity Expansion Program](#) is an aggressive program of road projects planned over the next 20 years with a total value of \$380 million. Proposed projects in 2020 cost \$28,407,40, including \$605,000 for the Centralized Traffic Control System. “

<https://coe-pub.escribemeetings.com/filestream.ashx?DocumentId=13027>

- c) Confirm that the attachment referenced in b) shows early works for areas west of Manning Road commencing in 2024 to 2028 and Construction occurring in years 2034 to 2037.
- d) Confirm that the attachment referenced in b) shows no early works or construction for the remainder of County Road 46 prior to 2037.

ENB-07

Tape Affidavit, Tab 3, Paragraph 11

"I have reviewed and relied upon standards including CAN/CSA Z662-15 and CAN/CSA Z662-19 regarding Oil and Gas Pipeline Systems, the Transportation of Canada ("TAC") relating to the minimum depth of bury for pipelines, load analysis for buried pipes...."

Enbridge agrees that Clause 4, table 4.9 of CAN/CSA Z662-19 would be applicable to transmission pipeline depth of cover requirements when such version is in force, but Enbridge's proposed NPS 6 Windsor Line is a distribution pipeline and CAN/CSA Z662-19 is not yet adopted and in force.

- a) Please confirm that CAN/CSA Z662-19 has not yet been adopted by the Technical Standards and Safety Authority.
- b) Confirm that the "Transportation of Canada ("TAC")" refers to the Transportation Association of Canada.
- c) To which TAC Guidelines are you referring?
- d) Is the TAC a government regulatory authority having the authorization of law to set binding standards? Please provide such authorizing document.
- e) Explain in detail why Dr. Tape did not refer to Clause 12, table 12.2 of CAN/CSA Z662-15 for the applicable depth of cover requirements which for distribution pipelines is 0.6m in road right of way and under the travelled surface of the road.
- f) What is the difference between Clause 12, table 12.2 of CAN/CSA Z662-15 and CAN/CSA Z662-19?

ENB-08

Tape Affidavit, Tab 3, paragraph 12(b), (e), (f), (k)

- a) Please confirm the reference to "hook stress" is a reference to "hoop stress".
- b) Please confirm where you use the term "conservative" it refers to a situation where such loads are unexpected to arise.
- c) What are the differences between the two versions of the Z662 in the manner in which the calculation of hoop stresses is performed?
- d) Please confirm that paragraph (f) only applies to transmission pipelines.
- e) What analysis did you perform to determine the "hardship on Enbridge" when you prepared your letter? Please provide the analysis.

- f) Did you update your analysis in accordance with Exhibit B, Tab 1, Schedule 1, Attachment 2, page 1 which showed a distance from edge of pavement of 4.2 metres?
- g) If there is no road widening, do you agree that a proposed location of 4.2 metres from edge of pavement is not within the current shoulder of the road?

ENB-09

Tape Affidavit, Tab 3, Paragraph 14 and Tape Affidavit, Tab 3, Exhibit C, Page 5,

“failure to adhere to the TAC recommendations could result in the County being liable for failure to follow best practices. Such legal discussions should obviously be had with the County legal team; however failure to follow guidelines does create a situation of increased risk and liability.”

- a) Please list all Road Authorities within Ontario that have formally made compliance with TAC an absolute requirement and provide all documents that confirm such adoption by the Road Authority. Please provide confirmation that such adoption is in relation to project running longitudinally within the rights-of-way.
- b) Please provide the legal analysis or opinion or basis for concluding that the failure to follow the TAC Guidelines in respect of the depth of the pipeline exposes the County to liability for failing to follow best practices.

ENB-10

Tape Affidavit, Tab 3, paragraph 17(e), (i)

- a) Has Dr. Tape reviewed Enbridge’s backfill procedure?

ENB-11

Tape Affidavit, Tab 3, paragraph 21 (a), (g)

“As I had indicated before, the analysis of the Pipeline itself is not in question but rather the application of the TAC Guidelines as the County’s standard.”

- a) Please confirm that had the County of Essex not adopted the TAC Guidelines, that your opinion is the proposal by Enbridge would be acceptable. If not, please explain.
- b) Please provide the existing and assumed cross-section that you relied upon in making the statements referred to in paragraph (g).

ENB-12
Tape Affidavit, Tab 3, Exhibit C, Page 2

“Our assessment include a review of the documents and the TAC recommendations...”

- a) Are “recommendations” binding obligations of design that must in all cases be implemented by a professional engineer?
- b) Did you review any of Enbridge’s soil or geotechnical reports? If so, please identify which reports and any written analysis not already provided.

ENB-13
Tape Affidavit, Tab 3, Exhibit C, Page 3,

“...TAC’s guideline for Underground Utilities Installation (March 2013) states in the forward”

- a) Is the above document reference the “*Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*” published by the Transportation Association of Canada (“TAC”)?

ENB-14
Tape Affidavit, Tab 3, Exhibit C, Page 3,

The Transportation Association of Canada website, url below, includes in respect of the guideline the following description:

“Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way is intended to assist various road authorities in establishing and administering reasonably uniform criteria for the accommodation of utilities crossing highway (and freeway) rights-of-way.” [Emphasis added]

<https://www.tac-atc.ca/en/publications/ptm-uuich-e>

- a) What investigation have you done to confirm the document applies to pipelines running longitudinally in a roadway rather than crossings? Please provide all correspondence with the TAC in this regard.
- b) In follow up to the learning of the County’s position, Enbridge engaged in the attached correspondence with the Chair of the Committee responsible for the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* which indicates a potential misinterpretation of the guideline by the County of Essex. (see Attachment #1, a true copy of an email exchange of Scott Walker). Has Dr. Tape or to the knowledge of Dr. Tape, has the County of Essex engaged in correspondence with the TAC in respect of its application of the *Guidelines for*

Underground Utility Installations Crossing Highway Rights-of-Way. If so, please provide.

- c) Please cite all references to longitudinal pipeline installations included in the TAC Guideline.
- d) Did you consider section 3.4.3 of the TAC Guideline which states “Care should be taken in utility installations to avoid disturbing existing highway or private drainage facilities.”? If so, please provide the documents including such consideration.
- e) Do you agree that in the TAC Guideline, Figure 4 and Table 1 show the depth of cover (Value C) for longitudinal design as 0.9 metres?

ENB-15

Tape Affidavit, Tab 3, Exhibit C, Page 3, and Tab 4 the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*

Note

Much of this document has been prepared based on *A Guide for Accommodating Utilities Within Highway Right-of-Way*, 2005, published by the American Association of State Highway and Transportation Officials, Washington, D.C.

Used by Permission.

- a) Did Dr. Tape review the above referenced document?
- b) Did Dr. Tape note in such review the removal of the references to longitudinal installation from the above referenced document in the TAC Guideline? If not, why not.

ENB-16

Tape Affidavit, Tab 3, Exhibit C, Page 4,

- a) Can you confirm that the Technical Standards and Safety Authority has not yet adopted CAN/CSA Z662-19?
- b) On what basis has Dr. Tape concluded that this pipeline is a “transmission line” subject to Table 4.9 and not a “distribution line”?
- c) Does Dr. Tape agree that if this pipeline is in fact a distribution line that Table 4.9 is not applicable?

ENB-17

Tape Affidavit, Exhibit D, Page 1 May 19, 2020 letter

- a) Please provide The National Cooperative Highway Research Program Report 309.
- b) Is the British Columbia Ministry of Transportation and Infrastructure Utility Policy Manual 2019, Version 1 binding upon Enbridge or other utilities in Ontario?
- c) On which prior occasions has the County of Essex relied upon the British Columbia Ministry of Transportation and Infrastructure Utility Policy Manual 2019, Version 1?

ENB-18

Tape Affidavit, Exhibit D, Page 3

“The County cannot be reasonably asked to justify every standard on a project by project basis otherwise no work within the ROW could effectively proceed.”

- a) What standards other than the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* has Enbridge requested be justified?

The following questions for the County of Essex are based upon the affidavit of Jane Mustac.

ENB-19

Affidavit of Jane Mustac, Tab 2

General – no specific reference

- a) Is it the County of Essex' position that Enbridge could agree to the Road User Agreement approved by the County of Essex without seeking approval of the Ontario Energy Board given condition 4 of the Board's Order in the Leave to Construct proceeding?
- b) Disturbed soils may be found during the installation process and the pipeline will be backfilled as per the recommendations in the geotechnical report and any unsuitable fills/soils encountered will be removed. Does the County have any concerns with the backfill process proposed by Enbridge? If so, please provide where those concerns have been identified.
- c) Is the County aware of any specific areas where significant quantities of disturbed material are present?
- d) Please confirm that minimizing the impact on agricultural lands and the natural heritage system is a high priority for the County of Essex as set out s.2.11 of the Official Plan.

- e) If the County wanted a larger pipeline why did it not intervene in the leave to construct proceeding and argue for a larger pipeline?
- f) When did the County of Essex adopt the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*?
- g) What consultation was conducted with Enbridge and other utilities prior to the adoption of the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*?
- h) What research or correspondence has the County done to confirm the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* applies to situations of longitudinal pipelines within municipal rights-of-way?
- i) In the follow up to the learning of the County's position, Enbridge engaged in the attached correspondence with the Chair of the Committee responsible for the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* which indicates a potential misinterpretation of the Guideline by the County of Essex. (see Attachment #1, a true copy of an email exchange of Scott Walker). Has the County of Essex engaged in correspondence with the TAC in respect of its application of the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*. If so, please provide.

ENB-20

Affidavit of Jane Mustac, Tab 2, No Reference

Enbridge understands that the County of Essex has concerns with approval of a depth of 1.0 metre as it may potentially create an assumption of liability.

- a) Is the County of Essex relying upon a legal memo or opinion in its position that it may attract liability if it permits a depth of cover of 1.0 metre? If so, please provide.

ENB-21

Mustac Affidavit, Tab 2, Paragraph 6

The County has provided a partial review of certain elements of the Franchise Agreement. Enbridge understands that the County has identified certain areas of County Road 46 at Concession 8 east to Rochester Townline to be widened.

- a) Please provide a copy of the most recent engineering drawings for the County Road 46 road widening(s) referenced above.
- b) Please confirm that Enbridge has agreed to install the pipeline at greater than 6.0 metres from edge of pavement where widening has been confirmed as planned within the next 7 to 10 years on County Road 46 from Concession 8 to Rochester Townline which is west of Manning Road towards Windsor for approximately 6.2kms of the pipeline.
- c) Please provide any plans for the widening of County Road 46 showing the necessity (direct conflict) of moving or altering the existing NPS 10 pipeline?
- d) Can the County widen County Road by 14 metres to accommodate the additional lanes and shoulder width beyond the current edge of pavement without securing additional lands?
- e) Has the County procured or approved the procurement of all necessary land rights for the widening?
- f) Is the County of Essex aware that the Municipality of Chatham-Kent approved a location for the pipeline of approximately 2.5 metres from the edge of pavement along Port Road.

ENB-22

Mustac Affidavit, Tab 2, paragraph 7

“The transmission and distribution lines of Union Gas are located at various points throughout the County, including along County Road 46”

- a) Please confirm the location of the “transmission lines” along County Road 46.
- b) Please confirm the location of the “distribution lines” along County Road 46.
- c) What criteria is being used by the County of Essex to distinguish between “transmission lines” and “distribution lines”? Please provide the source documents.

ENB-23

Mustac Affidavit, Tab 2, paragraph 9

The consultation record that comprised the environmental report in EB-2019-0172, Exhibit C, Tab 6, Schedule 1 (PDF 200 to 205) included letters to the following County of Essex personnel dated February 1, 2019 addressed to:

- Bill King, Manager, Planning Services

- Peter Bziuk, Manager, Design and Construction Services
 - Mary Brennan, Director Counsel Services/Clerk
- a) Is it the County's position that it received none of these letters prior to May 2019?
 - b) Is it the County's position that neither it nor any of its Counsel saw the advertisements for the public information sessions posted in local papers?
 - c) Please provide the correspondence wherein the Essex County informed Stantec of the proposed widening of County Road 46.
 - d) Please provide the correspondence wherein the County of Essex informed Stantec of the need to comply with TAC *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way*.
 - e) Please provide the correspondence wherein the County of Essex informed Stantec that the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* would apply to longitudinal installations.

ENB-24

Mustac Affidavit, Tab 2, Paragraph 9 and Exhibit B, page 4 (highlighted)

In the May 2019 Minutes of meeting, it was noted that Mr. Maisonville expressed concern that County Road 46 would be expanded at some point over the next 20 years.

- a) Please confirm that Enbridge has located the pipeline at greater than 6.0 metres from the edge of pavement where there are existing plans for the expansion of County Road 46 between Concession 8 and Rochester Townline.
- b) Please confirm that widening of County road 46 is not included in the County of Essex Official Plan, section 2.8.1.1. If this cannot be confirmed, state the reason. A link to the Official Plan is provided below:
https://www.countyofessex.ca/en/county-government/resources/Documents/Essex_County_Official_PlanACCESSIBLE.pdf
- c) Please confirm that widening of County Road 46 is not included in the currently approved Transportation Master Plan 2005 for Essex County.
- d) Please provide the letter or email or other correspondence to Stantec or Enbridge wherein the County of Essex identified that compliance with the TAC *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* was applicable for road crossings and longitudinal pipeline installations and was applicable to any utility infrastructure within the County of Essex. If such cannot

be provided please state why it cannot. In particular, please identify where the County of Essex indicated that the depth of a crossing pipeline (figure 4, table 1) was to be used in respect of a longitudinal pipeline.

- e) Please confirm that the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* is not referenced in either the Official Plan or the Transportation Master Plan.

ENB-25

Mustac Affidavit, Tab 2, paragraph 13

- a) With respect to each of the permits identified at paragraph 13, which permits included loads in excess of those analyzed by Enbridge/Wood? Please provide copies of such permits.

ENB-26

Mustac Affidavit, Tab 2, paragraph 14

- a) In respect of the chart provided, expand the chart to add columns and identify for each segment of County Road 46 the year the widening is to take place and the source document authorizing such widening.
- b) Confirm, the Capacity Expansion Program (see Attachment #2 or link below) taken from the County of Essex website, dated October 2019, shows no planned widening activity for County Road 46, even preliminary work, east of Manning Road until at least 2037.

<https://coe-pub.escribemeetings.com/filestream.ashx?DocumentId=13027>

ENB-27

Mustac Affidavit, Tab 2, paragraph 19(c)

- a) Did the County of Essex issue permits to Enbridge, when requested by Enbridge, that would permit Enbridge the ability to complete preconstruction activities to expedite any portions of the project including daylighting of utilities, entrance permits or any other activities irrelevant to TAC guidelines, depth or abandonment issues? If so, please state when such permits were requested and issued.

ENB-28

Mustac Affidavit, Tab 2, paragraph 19(d)

- a) Please confirm related to the reference in paragraph 19 (d) that the County of Essex regularly issues permits for installation of infrastructure for Enbridge construction of natural gas pipelines throughout Essex County and does not reference any existing or new Road User Agreement in doing so.

ENB-29

Mustac Affidavit, Tab 2, paragraph 19(e)

- a) Please confirm related to the reference in paragraph 19(e) for the pipeline installed in 2017 in the County of Essex and Lakeshore the following:
- i. the diameter of the pipeline was NPS 16 and NPS 20
 - ii. the pipeline was a transmission pipeline;
 - iii. the number of metres of the pipeline that crossed County Roads;
 - iv. the number of metres of the pipeline that ran longitudinally in County Roads;
 - v. the express reference to the obligation to comply the TAC *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* in the permitting documents issued by the County for longitudinal pipeline installations.
 - vi. Provide a copy of the Road User Agreement for this project and any permit issued by the County for this project.

ENB-30

Mustac Affidavit, Tab 2, paragraph 19(e)

- a) Please confirm related to the reference in paragraph 19(e) for the pipeline installed in 2019 in Kingsville the following:
- i. the diameter of the pipeline was NPS 20;
 - ii. the pipeline was a transmission pipeline;
 - iii. the number of metres of the pipeline that crossed County Roads;
 - iv. the number of metres of the pipeline that ran longitudinally in County Roads;
 - v. the express reference to the obligation to comply the TAC *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* in the permitting documents issued by the County for longitudinal pipeline installations..
 - vi. Provide a copy of the Road User Agreement for this project and any permit issued by the County for this project.

ENB-31

Mustac Affidavit, Tab 2, paragraph (I)

- a) On what information is Ms. Mustac relying in making the statement the CSA/CAN Z662-15 is “outdated”.
- b) Please explain the difference in depth of cover for pipelines between the 2015 and the 2019 version of the CSA/CAN code for distribution lines?

- c) In the CSA/CAN code for the 2015 version, what is the depth of cover for a transmission pipeline? What is the depth of cover for a distribution pipeline?
- d) What classification is the Windsor Pipeline and on what basis did you confirm this?

ENB-32

Mustac Affidavit, Tab 2, Exhibit E, page 2

- a) Given that the County of Essex knew the depth was to be 1.0 metre in general, confirm that the County of Essex did not provide any formal comment in respect of the Environmental Report and did not provide any comment or participate formally in the leave to construct proceeding.

ENB-33

Mustac Affidavit, Tab 2, Exhibit I

- a) Given Enbridge's statements that Essex County had concerns about Municipal Consent and that Enbridge only intended to remove the section of the existing pipeline west of Manning Road, why did the County of Essex not participate in the leave to construct proceeding?

ENB-34

Mustac Affidavit, Tab 2, Exhibit J

- a) Confirm that first written mention of a Road User Agreement is in the communications in this Exhibit J – on or about December 10, 2019.
- b) Confirm the date the first draft of the Road User Agreement was delivered.

ENB-35

Mustac Affidavit, Tab 2, Exhibit M

Please confirm why in respect of the Decommissioning and Removal of Existing Union Gas line that the County Engineer had "sole and absolute discretion" rather than reasonable discretion consistent with the terms of the 1957 Franchise Agreement.

ENB-36

Mustac Affidavit, Tab 2, Exhibit N

- a) Confirm this is the first written reference to the TAC Guidelines for Underground Utility Installations in correspondence between the County of Essex and Enbridge.
- b) Is this reference to the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* or another guideline?

- c) Does Figure 4, Table 1, and Column C of the *Guidelines for Underground Utility Installations Crossing Highway Rights-of-Way* indicate that the depth of cover for longitudinal pipelines is 1.0 m?

Attachment 1

From: Garde, Ty <ty.garde@woodplc.com>
Sent: Wednesday, August 5, 2020 10:22 AM
To: Blair Warnock <Blair.Warnock@enbridge.com>
Subject: [External] FW: TAC Guideline Intent and Usage

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Scott forwarded his correspondence with the TAC lead author. You will see that he is in agreement with Scott interpretation of the use of the document. Notably, he agrees with Scott's statement that document is for crossings, not parallel alignments.

Ty

From: Scott Walker <Scott.M.Walker@enbridge.com>
Sent: Thursday, May 14, 2020 8:34 AM
To: Garde, Ty <ty.garde@woodplc.com>
Subject: FW: TAC Guideline Intent and Usage

Sorry Ty, I just wanted to make sure Lawrence was ok with us using his opinion in our response to Essex but I just got off the phone with him and he is fine with us using it.

Their committee has agreed to get together to discuss whether changes need to made to this document in the future to clarify its use.

Thanks,

Scott Walker

Manager Engineering - Pipeline Design
Core Projects

—

ENBRIDGE
TEL: 519-436-4600(5003418) | CELL: 519-365-2729
50 Keil Drive North Box 2001, Chatham, N7M 5M1
enbridge.com
Safety. Integrity. Respect.

From: Lawrence Arcand <lawrence.arcand@t2ue.com>
Sent: Wednesday, May 13, 2020 11:59 AM
To: Scott Walker <Scott.M.Walker@enbridge.com>; 'juan.barrera@ibigroup.com'

<juan.barrera@ibigroup.com>; Scott, Christopher <Christopher.Scott@york.ca>; Murphy, Steve <Steve.Murphy@york.ca>; Tony DiMarino <tony.dimarino@t2ue.com>

Subject: [External] RE: TAC Guideline Intent and Usage

EXTERNAL: PLEASE PROCEED WITH CAUTION.

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Scott

Thanks for reaching out to us regarding the application of this document. As discussed you assessment listed below regarding the intent of the document is correct. I have attached a copy for everyone's reference. Look particularly at the Figure 4, which I have also cut and pasted to the bottom of this e-mail for ease.

I am including some additional people on this correspondence for input and to assist.

- Juan Barrera – Vice Chair PUMS
- Christopher Scott – Secretary PUMS
- Steve Murphy – Former Co-Chair and current active member PUMS
- Tony DiFabio – Member PUMS and MTO Team Lead - Provincial Highway Corridor Management Section

Gentlemen. It appears as though Essex County is using our document and may be misinterpreting the content relative to this situation. I know when written it was intended, as per the title, to be relevant for crossings and not parallel lines. Figure 4 may however open the door to this misinterpretation.

I have a couple suggestions – long term and short term.

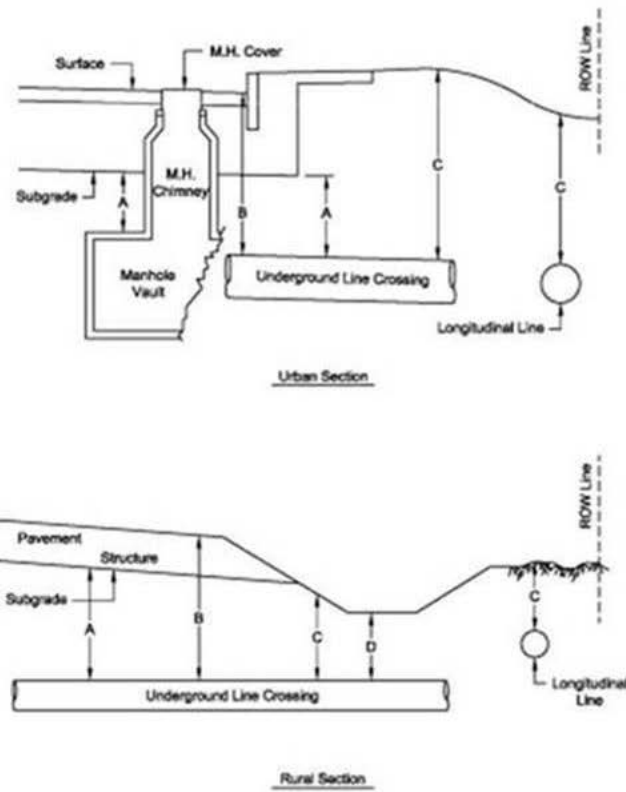
Long Term – I suggest that we add to the agenda of the next meeting to bring this topic up and review whether we need to publish and update or some clarification to this document.

Short Term – Tony, I know that you were part of the original group back in 2013 that pulled this document together. I wonder if it would help to get a clarification regarding MTO's use of and interpretation of this document so that some clarification may be provided in this situation. Read the details and let me know your thoughts, we can set up a call to discuss if necessary.

I would value your input and feedback to this situation.

Thanks,
Lawrence

FIGURE 4 – Minimum Cover DEPTH for Underground Installations



**TABLE 1 -- Minimum Cover DEPTH FOR Underground Installations
 Crossing Highways (and Freeways)**

Utility Facility Type		A	B	C	D
		Below pavement structure (subgrade) mm	Below pavement surface mm	Below ground elevation mm	Below ditch line elevation mm
High Pressure Gas or Liquid Petroleum Pipelines (> 680 kPa)	unencased existant	450	1 200	900	900
	unencased new	450 or ½Ø	1 500	1 000	1 200
	encased existant	300	1 000	750	750
	encased new	450 or ½Ø	1 200	900	1 200
Medium and Low Pressure Gas or Liquid Petroleum Pipelines (< 680 kPa)	unencased existant	450	1 000	600	750
	unencased new	450 or ½Ø	1 200	600 750 plastic	900
	encased existant	300	1 000	600	750
	encased new	450 or ½Ø	1 200	600	900
Water and Sewer Pipes	existant	450	1 200	1 000	1 000
	new	450 or ½Ø	1 800	1 500	1 200
Electric Power	existant	300	1 000	750	750

Lawrence Arcand, P.Eng, PE

President
 T2 Utility Engineers

330 Taunton Road East | Unit C-04 | Whitby ON L1R 0H4

Direct: 289 638 2192 | Cell: 905 424 1959

Lawrence.Arcand@T2ue.com | www.T2ue.com | [LinkedIn](#)

This email and its attachments may contain confidential and/or privileged information for the sole use of the intended recipient(s). All electronically supplied data must be checked against an applicable hardcopy version which shall be the only document which T Utility Engineers warrants accuracy. If you are not the intended recipient, any use, distribution or copying of the information contained in this email and its attachments is strictly prohibited. If you have received this email in error, please email the sender by replying to this message and immediately delete and destroy any copies of this email and any attachments. The views or opinions expressed are the author's own and may not reflect the views or opinions of T2 Utility Engineers.

From: Scott Walker <Scott.M.Walker@enbridge.com>

Sent: Wednesday, May 13, 2020 10:59 AM

To: Lawrence Arcand <lawrence.arcand@t2ue.com>

Subject: TAC Guideline Intent and Usage

Lawrence, thanks again for your insight into this document as discussion with the Chair of The Committee that owns this document is helpful in assessment of our design of a current job along County Road 46 in Essex.

As discussed, this pertains to a 60km job in which approximately 29km is in road allowance along this county road. We are proposing to replace an old NPS 10 pipeline with a new NPS 6 pipeline. We have proposed a depth for this pipeline at 1m which is in excess of the required .6m required for a distribution pipeline in the CSA Z662 standard which we are required to meet for installation. As requested by the County we have also done a stress analysis that demonstrates that the pipe could be driven over by the most largest loads allowed on this road by a significant margin. At this time the county's position is that they can not approve something contrary to what is in the TAC guidelines without accepting full liability on any future issues.

Where I was hoping you could provide us with clarity is around the intent and usage of the TAC document. Our position is that this document is;

1. A document that collects practices from across Canada to guide users on potential requirements for utilities that are crossing highway right of ways (as the title suggests).
2. A guideline to help direct users with respect to potential content they may want to include in their own specifications and requirements documents.
3. That this document was created by subject matter experts in the field with a specific focus on the utilities crossing a highway with little specific discussion around pipes that are paralleling the roadway for many kilometers. Our assumption is that had longitudinal installations been an item that was intended to be incorporated into this document the results and expectations may have been different than the current content of this document.

Your comments with respect to the intent and usage of this document would be helpful and most appreciated.

Thanks,

Scott Walker

Manager Engineering - Pipeline Design
Core Projects

ENBRIDGE

TEL: 519-436-4600(5003418) | CELL: 519-365-2729
50 Keil Drive North Box 2001, Chatham, N7M 5M1
enbridge.com

Safety. Integrity. Respect.

This message is the property of John Wood Group PLC and/or its subsidiaries and/or affiliates and is intended only for the named recipient(s). Its contents (including any attachments) may be confidential, legally privileged or otherwise protected from disclosure by law. Unauthorized use, copying, distribution or disclosure of any of it may be unlawful and is strictly prohibited. We assume no responsibility to persons other than the intended named recipient(s) and do not accept liability for any errors or omissions which are a result of email transmission. If you have received this message in error, please notify us immediately by reply email to the sender and confirm that the original message and any attachments and copies have been destroyed and deleted from your system.

If you do not wish to receive future unsolicited commercial electronic messages from us, please forward this email to: unsubscribe@woodplc.com and include "Unsubscribe" in the subject line. If applicable, you will continue to receive invoices, project communications and similar factual, non-commercial electronic communications.

Please click <http://www.woodplc.com/email-disclaimer> for notices and company information in relation to emails originating in the UK, Italy or France.

As a recipient of an email from a John Wood Group Plc company, your contact information will be on our systems and we may hold other personal data about you such as identification information, CVs, financial information and information contained in correspondence. For more information on our privacy practices and your data protection rights, please see our privacy notice at <https://www.woodplc.com/policies/privacy-notice>

Attachment 2

CAPACITY EXPANSION PROGRAM THE COUNTY OF ESSEX (2020-2037)

Legend		
Early Works		Construction Start
● 2020	— 2020	- - - 2020
● 2021	— 2021	- - - 2021
● 2022	— 2022	- - - 2022
● 2023	— 2023	- - - 2023
● 2024-2028	— 2024-2028	- - - 2024-2028
● 2029-2033	— 2029-2033	- - - 2029-2033
● 2034-2037	— 2034-2037	- - - 2034-2037

Early Works include Environmental Assessments, Detailed Design, Property Aquisition, Utility Relocations.
Note: Point Locations labelled with C is start of Construction.

Legend		
Municipal Projects		
▲ 2020	— 2020	
▲ 2021	— 2021	

Municipal Projects include County Connecting Link Improvments, Drainage Works, CWATS Paving Shoulders.

INSET 1: BANWELL DIVERSION & LESPERANCE/WESTLAKE



INSET 2: COUNTY RD 19



This map was produced by the County of Essex GIS Department and is intended for illustrative purposes only. Every attempt has been made to ensure the accuracy of the information, however errors may occur. Any omissions or errors can be reported by calling 519-776-6441 ext. 1391, October 2019

