

November 2, 2018

BY RESS & COURIER

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

Dear Ms. Walli:

**Re: Union Gas Limited (“Union”)
Stratford Reinforcement Project
EB-2018-0306**

Enclosed please find two copies of Union’s application and pre-filed evidence for the above-noted project.

In the event that you have any questions on the above or would like to discuss in more detail, please do not hesitate to contact me.

Yours truly,

[original signed]

Mark Murray, J.D.
Manager, Regulatory Projects and Lands Acquisition
:sb
Attach.

cc: N. Marconi
Z. Crnojacki
Regulatory Library

ONTARIO ENERGY BOARD

IN THE MATTER OF The Ontario Energy Board Act, 1998,
S.O. 1998, c.15, Schedule B, and in particular, s.90 thereof;

AND IN THE MATTER OF an Application by Union Gas
Limited for an Order granting leave to construct a natural gas
pipeline in the Counties of Oxford and Perth.

UNION GAS LIMITED

1. Union Gas Limited (the “Applicant”) hereby applies to the Ontario Energy Board (the “OEB”), pursuant to Section 90 (1) of the Ontario Energy Board Act (the “Act”), for an Order granting leave to construct approximately 10.8 kilometers of NPS12 pipeline (“Proposed Pipeline”).
2. Attached hereto as Schedule “A” is a map showing the general location of the Proposed Pipeline and the Municipality which the Proposed Pipeline will pass.
3. The Applicant requests that this Application be dealt with in accordance with Section 34 of the Board’s Rules of Practice and Procedure for written hearings.
4. The Applicant now therefore applies to the OEB for an Order granting leave to construct the Proposed Pipeline as described above.

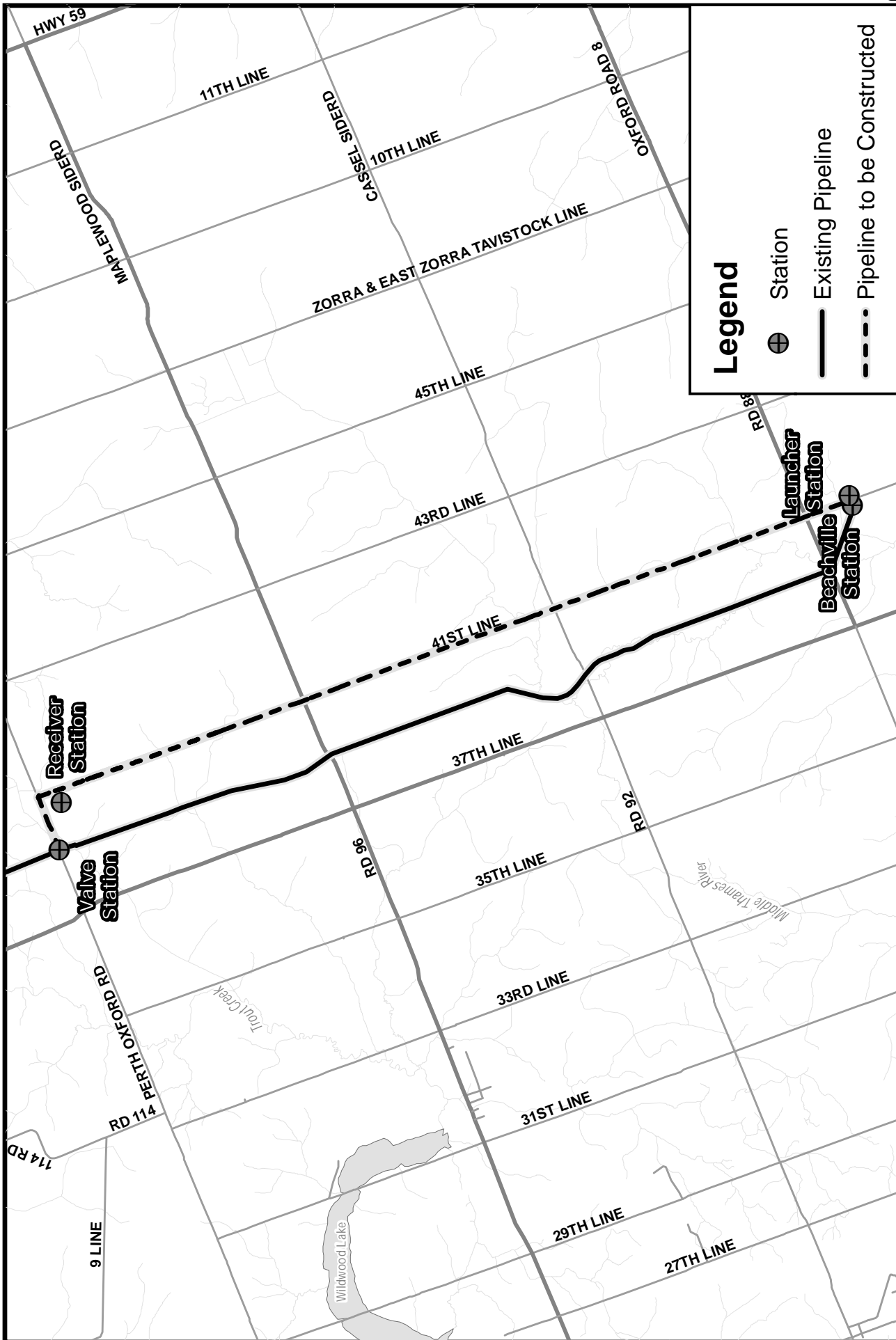
Dated at Municipality of Chatham-Kent this 2nd day of November, 2018.

[original signed by]

Per: Mark Murray, J.D.
Manager, Regulatory Projects & Lands
Acquisition
for Union Gas Limited

Comments respecting this Application should be directed to:

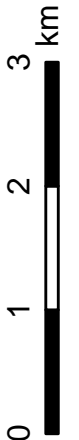
Mark Murray
Manager, Regulatory Projects & Lands Acquisition
Union Gas Limited
50 Keil Drive North
Chatham, Ontario
N7M 5M1
Telephone: 519-436-4601
Fax: 519-436-4641
Email: mmurray@uniongas.com



Legend

- Station
- Existing Pipeline
- Pipeline to be Constructed

Schedule A



Union Gas Limited, Stratford Reinforcement Project

Source base mapping: Land Information Ontario (MNR)

2018 STRATFORD REINFORCEMENT PROJECT

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PROJECT SUMMARY

1. Union Gas Limited ("Union"), pursuant to Section 90 of the Ontario Energy Board Act, requests approval from the Ontario Energy Board ("OEB") for Leave to Construct of approximately 10.8 kms of NPS 12 hydrocarbon ("natural gas") pipeline and ancillary facilities ("the Project" or "Proposed Pipeline" or "Proposed Facilities") in order to increase the capacity of Forest, Hensall and Goderich Transmission System serving the Northern portions of the Counties of Middlesex and Lambton and the Counties of Perth and Huron ("FHG Transmission System"). The Proposed Facilities will extend from the expanded Beachville Valve Site in the County of Oxford, along the public road allowance on 41st Line, to an existing transmission pipeline located west of the intersection of 41st Line and Perth Oxford Road in the Counties of Oxford and Perth. A map showing the Proposed Facilities can be found at Schedule 1.
2. Union's FHG Transmission System provides natural gas service in the Counties of Huron, Lambton, Perth, Bruce, and Middlesex. The Proposed Facilities are required to meet the increasing demands for natural gas starting in winter 2019. The FHG Transmission System is forecasted to be fully utilized with no excess capacity available as of winter 2019. The Project is required to increase the system capacity. In absence of the Project to increase capacity, Union will not be able to service additional customers.
3. The total Project cost of the Proposed Facilities is estimated to be \$28.5 million, including interest during construction ("IDC").
4. Union has received strong support for the Project. Letters of Support for the Project can be found

at Schedule 2.

5. An economic analysis has been completed in accordance with the recommendations of the Ontario Energy Board E.B.O. 134. The Project is economically justified.
6. Union expects the Project will meet the criteria for rate recovery during the deferred rebasing period through the use of the Board's Incremental Capital Module ("ICM") mechanism.
7. An Environmental Report ("ER") has been prepared for the Proposed Pipeline. There will be minimal environmental impacts related to the construction of the pipeline given Union's standard construction procedures, the mitigation measures recommended in the ER, and the fact that the majority of the pipeline will be located within road allowance.
8. To ensure area residents and other key stakeholders were made aware of the Project, Union implemented a consultation outreach plan. As part of this plan, Union held information sessions within the Project area. The primary purpose of these information sessions was to engage with and solicit input from landowners, tenants, and the general public with respect to the Proposed Facilities. Union has met with all directly affected landowners and has obtained the land rights required to complete the Project.
9. Union has worked with the Ministry of Energy ("MOE") to ensure that the affected Indigenous communities were consulted with respect to the Proposed Pipeline and that their concerns and issues have been identified and addressed.

10. Construction of the Proposed Facilities is scheduled to commence at the beginning of summer, 2019 to utilize the favourable summer construction weather and environmental windows. The proposed latest in-service date for the Project is November 2019. In order to adhere to such a schedule, OEB approval is requested by April 2019.

DESCRIPTION AND OPERATION OF THE EXISTING FOREST HENSALL GODERICH SYSTEM

11. A map showing the existing FHG Transmission System can be found at Schedule 3.
12. The FHG Transmission System serves an area north of the Dawn Parkway System including the communities of Stratford, North London, Forest, Hensall, Kerwood, Grand Bend, Goderich, Mitchell, Blyth, and Teeswater.

FACILITIES BUSINESS PLAN APPROACH

13. The Facilities Business Plan (“FBP”) is Union’s long standing and historic internal planning process used for the identification of reinforcement facilities required to support forecasted growth over a specific geographic area which has been accepted by the Board in previous applications.
14. The FBP is developed for a study area which provides an overall business case for the long range system expansion for the study area. A study area represents the geographic area for which a FBP will cover.

15. Union's franchise area has been divided into a number of specific FBP study areas based on operational areas, pipeline system configuration and geographical features. The FHG Transmission System FBP was updated in 2016. A map illustrating this FBP study area is found in Schedule 4.
16. In this case the FHG Transmission System FBP provides a complete analysis of the study area based on an 8-year customer forecast ("FBP forecast"). A summary of this forecast can be found at Schedule 5 of the pre-filed evidence and in the System Criteria Report.
17. Based on the FBP, future facilities, both new and reinforcement, can be identified, evaluated, optimized and scheduled to meet the future growth demands on the system.
18. The advantages of this FBP long range planning approach can be summarized as follows:
 - a) through the identification of future growth areas, Union can be more responsive to customer needs;
 - b) optimum, least cost facilities can be identified to service the growth; and
 - c) long-term security of supply to the overall system can be achieved.
19. The timing of the facilities is based on current customer attachments and load forecasts which determine the need for additional facilities. Union updates each FBP on an "as required basis" to monitor the development of the system and to determine if the plan should be modified in any way.

MARKET DEMAND

20. It is Union's objective to provide adequate capacity to serve both current customers and new customers being added to the system. A specific objective of the FHG Transmission System FBP is to maintain adequate system pressure and provide additional capacity for the area covered by the FBP to accommodate forecasted growth.
21. In recent years, areas served by the FHG Transmission System have experienced growth in the number of customers requesting natural gas service to their home or business. This growth includes new residential and commercial/industrial customers using natural gas as their primary energy source, existing residential homes converting from other fuels to natural gas, and commercial/industrial businesses converting to natural gas for their energy needs.
22. The FHG Transmission system is forecasted to be fully utilized with no excess capacity available as of winter 2019. In order to accommodate forecasted general service additions served by the FHG Transmission System, a project is required to increase the system capacity. In absence of the Project to increase capacity, Union will not be able to service additional general service customers and contract customers.
23. The Proposed Facilities will add approximately 16,400 m³/h capacity to the FHG Transmission System based upon the areas of proposed growth within the FBP. This capacity will meet the 8 year customer forecast as set out in Schedule 5.
24. Attached at Schedule 6 is a graph that shows the 9 year demand and capacity of the FHG

Transmission System. This graph shows that there will be no capacity available on the system before the winter of 2019/20.

25. As seen in Schedule 5, residential customers are forecasted to increase by 5,558 attachments between 2019 and 2026. Over this same period, commercial customers are forecasted to increase by 516 attachments and industrial customers are forecasted to increase by three attachments.
26. Union is requesting approval to build the Proposed Pipeline in 2019, in order to increase system capacity to meet demand for Winter 2019/2020 and beyond.

Demand Side Management (DSM)

27. Since the 1990s, Union has successfully implemented DSM initiatives under the Board's frameworks to help reduce natural gas consumption and thereby reduce the carbon footprint of natural gas consumers. Union has a suite of DSM offerings available for customers, as detailed in its 2015-2020 DSM Plan (EB-2015-0029) and further supported in Union's subsequent DSM submissions including its Mid-Term Review of the 2015-2020 DSM Framework for Natural Gas Distributors submission (EB-2017-0127).¹
28. Union's DSM programs include:
 - i. Resource acquisition programs that seek to achieve direct, measurable natural gas savings on a customer-by-customer basis;

¹ EB-2017-0127 Submission of Union Gas dated January 15, 2018

- ii. Low-income programming designed to address the specific needs of this customer segment to achieve energy savings;
 - iii. Custom offerings that seek to generate long-term and cost effective energy savings, including a mix of customer incentives, education and awareness for commercial and industrial customers across all segments; and,
 - iv. Market Transformation programs that seek to make a permanent change in the marketplace to increase market share for high-efficiency products or services.
29. The impact of Union's DSM activity for in-franchise customers is embedded in the Design Day requirement. The Design Day demands for the FHG System are based on the previous winter's actual daily measured volumes and as such take into account in-place DSM program impacts.
30. Any reduction in consumption as a result of DSM programs is not sufficient to offset load growth in the Market and the resulting need for system reinforcement on Design Day. Any change in Design Day demand resulting from DSM effort is expected to take significant time to materialize.

NEED FOR ADDITIONAL CAPACITY

31. It is necessary to increase the capacity of the FHG Transmission System in order to meet existing and forecasted loads during the Winter 2019/2020.
32. Attached at Schedule 7 is a document titled System Design Criteria for Reinforcement of the FHG Transmission System. This document:
- a) outlines the design methodology and process Union uses for reinforcement of system

laterals;

- b) provides a description of current FHG Transmission System facilities and system configuration; and
- c) outlines the alternatives considered and the rationale for choosing the preferred alternative.

33. Included in the System Design Criteria Report is a table showing the alternatives considered and the rationale for selecting the preferred alternative.

34. Using the FBP Forecast to predict the system demands, a computer simulation of the FHG Transmission System was performed. Without the Project, pressures at the extent of the system are expected to drop to 589kPag at Northern Cross and 23kPag at Teeswater on a design day during Winter 2019/2020. Both of these pressures are well below the required minimum inlet pressures at these locations. When the same simulation is run with the proposed project installed, pressures at these locations increase to 1501kPag and 1365kPag respectively. These significantly higher pressures at the extents of the system allow Union to guarantee supply to our customers throughout Winter 2019/2020 and beyond under routine system operation. Maps identifying the pressures at various points along the FHG Transmission System with and without the proposed project can be found in the System Design Criteria Report.

35. The system will be continuously monitored to determine when and what further future reinforcement will be needed to keep the system above the required minimum pressure to serve our customers.

PROPOSED FACILITIES

36. Union proposes to construct approximately 10.8 kms of NPS 12 pipeline with a MOP of 6160 kPag.
37. The Proposed Facilities are shown at Schedule 8 and include:
- a) the new NPS 12 pipeline extending from the Beachville Transmission Station to a new proposed valve site to tie-in into the existing NPS 8 Stratford Line on the south side of Perth-Oxford;
 - b) Launcher site located east of 41st Line Rd opposite of the existing Union Gas Beachville Transmission Line;
 - c) Receiver site located on the west side of 41st Line Rd along the new proposed NPS 12 pipeline.

DESIGN AND PIPE SPECIFICATIONS

38. The design and pipe specifications are outlined in Schedule 9. All the design specifications are in accordance with the *Ontario Regulations 210/01, Oil and Gas Pipeline Systems* under the *Technical Standards and Safety Act 2000*. This is the regulation governing the installation of pipelines in the Province of Ontario.
39. The Proposed Pipeline is within Class 1 locations and will be designed to meet or exceed the minimum requirements for Class 1 locations.
40. The NPS 12 pipe has an outside diameter of 323.9 millimetres and a minimum wall thickness of

6.0 millimetres. The pipe is to be manufactured by the electric resistance weld process and will have a minimum specified minimum yield strength of 290 MPa. The pipe will be manufactured to the *CSA Z245.1-14 Steel Line Pipe Standard for Pipeline Systems and Materials*.

41. The pipeline will be hydrostatically tested in accordance with the Ontario Regulation requirements.
42. The minimum depth of cover specified is 0.6 metres to the top of the pipe in general locations and 1.2 metres under roads. Additional depth will be provided to accommodate existing or planned underground facilities, or in specific areas in compliance with the applicable regulated standards.

CONSTRUCTION PROCEDURES AND SCHEDULE

43. Schedule 10 describes the general techniques and methods of construction that will be employed in the construction of the Proposed Pipeline. Details include such activities as clearing, stringing of pipe, trenching, welding, backfill, tile repair, and clean up. Union's construction procedures have been continually updated and refined in order to be responsive to landowner concerns and mitigate potential environmental effects related to pipeline construction.
44. No blasting is anticipated along the route. When the Project is constructed, Union's most up-to-date construction specifications will be followed.
45. Material is readily available for this Project and Union foresees no problem in obtaining a

contractor to complete the proposed construction.

46. Schedule 11 indicates the proposed schedule for 2019 construction. Construction of the Proposed Pipeline is scheduled to commence May 1, 2019, with the pipeline placed in service by November 1, 2019.

47. The ER will be provided to the construction contractor.

PROJECT COSTS

48. The total estimated cost of the Proposed Pipeline is \$28.5 million as shown in Schedule 12. This covers all costs related to material, construction and labour, environmental protection measures, land acquisitions, contingencies, overheads, and interest during construction.

ECONOMIC FEASIBILITY

49. Union has employed an economic feasibility test in accordance with the OEB's recommendations in the E.B.O. 134 report to assess the economics of the Project. Union's position is that the Project is in the public interest, and the tests set out in E.B.O. 134 are appropriate for purposes of evaluating the Project.

50. In the Kingsville decision EB-2018-0013 the Board agreed with Union's position that projects of this nature should be considered as transmission projects and use the economic tests outlined in E.B.O. 134.

51. The Proposed Facilities are a transmission project that increases the capacity of the FHG Transmission System to meet forecasted demand growth that arises from a variety of sources over a large geographic area of the Union Gas franchise. No specifically identified customer or customers are driving the Project. As the forecast incremental demand extends throughout the service area affected, the increased demand is available on a first come, first served basis.
52. To provide the Board with additional information, a standalone Discounted Cash Flow (“DCF”) analysis consistent with E.B.O. 134 has been completed.
53. Stage 1 consists of a DCF analysis specific to Union. All incremental cash inflows and outflows resulting from the Project are identified. The net present value (“NPV”) of the cash inflows is divided by the NPV of the cash outflows to arrive at a profitability index (“PI”). If the NPV of the cash inflows is equal to or greater than the outflows, the PI is equal to or greater than one and the Project is considered economic based on current approved rates.
54. If the Project NPV is less than \$0 or the PI is less than 1.0, a Stage 2 benefit/cost analysis may be undertaken in order to quantify benefits and costs accruing to Union’s customers as a result of the project. The NPV of quantified benefits to customers resulting from the project is discounted at a social discount rate and added to the project NPV from Stage 1 in order to calculate the direct net benefit of the project to Union’s customers. The project is considered to be in the public interest if the net benefit is greater than \$0.
55. The Stage 3 analysis considers other quantifiable benefits and costs related to the construction of

the proposed facilities that are not included in the Stage 2 analysis, and other non-quantifiable public interest consideration.

56. The DCF analysis of the Project can be found at Schedule 13. This schedule indicates that the proposed facilities have a Net Present Value (“NPV”) of negative \$20 million and a P.I. of 0.29.
57. A summary of the parameters used in the DCF analysis can be found at Schedule 14.
58. Incremental cash inflows are estimated based on the transmission portion (“transmission margin”) of the customers’ rates. All customers receiving firm service have transmission costs included in their rates. The transmission margin is this portion of their rates. The revenue calculation for the transmission margin can be found at Schedule 15.

Stage 2 – Benefit/Cost Analysis

59. A stage 2 analysis may be undertaken when the Stage 1 NPV is less than zero. The Stage 2 analysis considers the estimated energy cost savings that accrue directly to Union’s infranchise customers as a result of using natural gas instead of another fuel to meet their energy requirements. The difference in fuel cost is derived as [Weighted Average alternative fuel cost less Cost of Natural Gas] multiplied by energy use.
60. The Stage 2 NPV of energy cost savings are estimated to be in the range of approximately \$175 million over a period of 20 years to \$282 million over 40 years. A range is provided as the

outcome can vary depending upon the assumptions for alternative fuel mix, energy use, fuel prices, and term. The results and assumptions can be found in Schedule 16.

Stage 3 – Other Public Interest Considerations

61. There are a number of other public interest factors for consideration as a result of the addition of the Project. Some are quantifiable and others are not readily quantifiable. Quantifiable factors include the GDP, taxes and employment impacts. Other less quantifiable impacts include, but are not limited to, energy choice options and environmental benefits. These factors are detailed below.

Economic Benefits for Ontario

62. The construction of the Project will provide direct and indirect economic benefits to Ontario estimated at approximately \$33 million. Schedule 17 shows how this figure is derived. This figure is related only to the construction of the Project and does not include the similar direct and indirect economic benefits to Ontario when the gas customers invest and grow their operations.

Employment

63. The construction of this Project will result in additional direct and indirect employment. There will be additional employment of persons directly involved in the construction of the Project. In addition, there is a trickledown effect on employment. The Project is estimated to create approximately 415 jobs as referenced in Schedule 17.

Utility Taxes

64. A decision to proceed with this Project will result in Union paying taxes directly to various levels of government. These taxes include Ontario income taxes and municipal taxes paid by Union as a direct result of the Project and are included as costs in the Stage 1 analysis. These taxes are not true economic costs of the Project since they represent transfer payments within the economy that are available for redistribution by the federal, provincial and municipal governments. The net present value of Ontario income taxes and municipal taxes payable by Union related to the Project over the project life is approximately \$5 million with a further \$2 million paid to the Federal Government. These figures are further detailed in Schedule 17.

Employer Health Taxes

65. The additional employment that will result from the construction of the Project will generate additional employer health tax payments to aid in covering the cost of providing health services in Ontario.

Environmental Effects

66. Natural gas, because of its clean-burning properties, has an increasingly important role to play in reducing the environmental impacts of energy use. The use of natural gas either with or in place of other fossil fuels, in residential, commercial, industrial and transportation applications reduces the environmental impact in two key areas. First of all, processing is frequently more efficient, reducing total energy use. Secondly, natural gas pollutant release per unit of energy is less than other fossil fuels. Natural gas combustion produces virtually no sulphur dioxide – the most significant component of acid rain formation. Combustion of natural gas also emits significantly

lower amounts of reactive hydro carbons and nitrogen oxides – the key photochemical agents in the formation of urban smog.

Summary of Stages 1 to 3

67. The following table shows the NPV calculated for the 3-stage economic analysis completed for the Project.

Stage	NPV \$Millions
Stage 1	(\$20)
Stage 2	\$175 to \$282
Stage 3	\$33
Total	\$188 to \$295

68. Union therefore submits that this Project is economically feasible and in the public interest.

Rates and Rate Impacts

69. Union expects the Project will meet the criteria for rate recovery during the deferred rebasing period through the use of the Board's Incremental Capital Module ("ICM") mechanism. The ICM mechanism will form part of Union's 2019 Rates application.

LAND REQUIREMENTS

70. The Proposed Pipeline will be constructed within road allowance following Union's Franchise Agreements. A map showing the Proposed Pipeline location is provided at Schedule 8.

71. Union has obtained approximately 12 acres of Temporary Land Use (“TLU”) area along the route of the pipeline to facilitate construction of the Proposed Facilities.
72. Union has obtained options to purchase three new station sites in fee simple for this Project. The location of the fee simple lands is shown at Schedule 8.
73. A summary of the fee simple lands and TLU acquired for this Project are provided at Schedule 18.

ENVIRONMENTAL MATTERS

74. AECOM, on behalf of Union, has completed an ER to evaluate possible environmental and socio-economic effects of the Proposed Pipeline. The results of the ER indicate that the location of the Proposed Pipeline is environmentally acceptable. Mitigation measures to reduce the effects of construction are included in the ER.
75. Union believes that by following its standard construction practices and adhering to the mitigation measures proposed in the ER, construction of the Project will have negligible impacts on the environment. No significant environmental or cumulative effects are anticipated from development of the Proposed Pipeline. A copy of the ER can be found at Schedule 19.
76. The objectives of the Environmental Report were to:
 - a) document existing environmental features;
 - b) identify agency and public concerns;

- c) identify potential environmental impacts as a result of construction;
- d) present mitigation techniques to minimize environmental impacts; and
- e) Provide the pipeline contractor and company inspectors involved in the construction of the pipeline with general and site-specific guidelines for environmental protection that supplement Union's construction specifications.

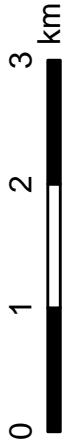
77. A copy of the ER was submitted to the Ontario Pipeline Coordination Committee ("OPCC") on September 7, 2018. A copy of the ER was also provided to the local Conservation Authority and local municipalities and indigenous communities. A summary of the comments received to date regarding the ER and Union's responses are provided in Schedule 20.
78. To solicit input from the general public with respect to the Project, a public information session was held. The session was used as a forum to identify the preferred pipeline route and provided the public an opportunity to review the details of the proposal and comment on the environmental information collected to date, as part of the ER process. The public information session was advertised in the local newspaper. The session was held on May 23, 2018, at the Embro-Zorra Community Centre (Embro). In addition to the May 2018 session, Union held an earlier public information in October, 2015 when the project was originally being contemplated. Attendees at both sessions asked general questions concerning the location of the facility and pipeline construction methods as well as questions concerning natural gas service from the pipeline. There were no major environmental concerns raised by the attendees.

79. Union also met on site with each road superintendent from the effected municipalities, to solicit input on the alignment of the Proposed Pipeline. Following these discussions, each road superintendent was in agreement with Union's proposal. Union will continue to work with road superintendents until the Project is completed.
80. During construction of the Proposed Pipeline, Union will implement an environmental inspection program. This program will ensure that the recommendations in the ER are followed. A company inspector will monitor pipeline construction activities and ensure that all activities comply with the mitigation measures found in the ER.
81. Union will obtain all required permit approvals, including any environmental permit approvals prior to the start of construction.

INDIGENOUS CONSULTATION

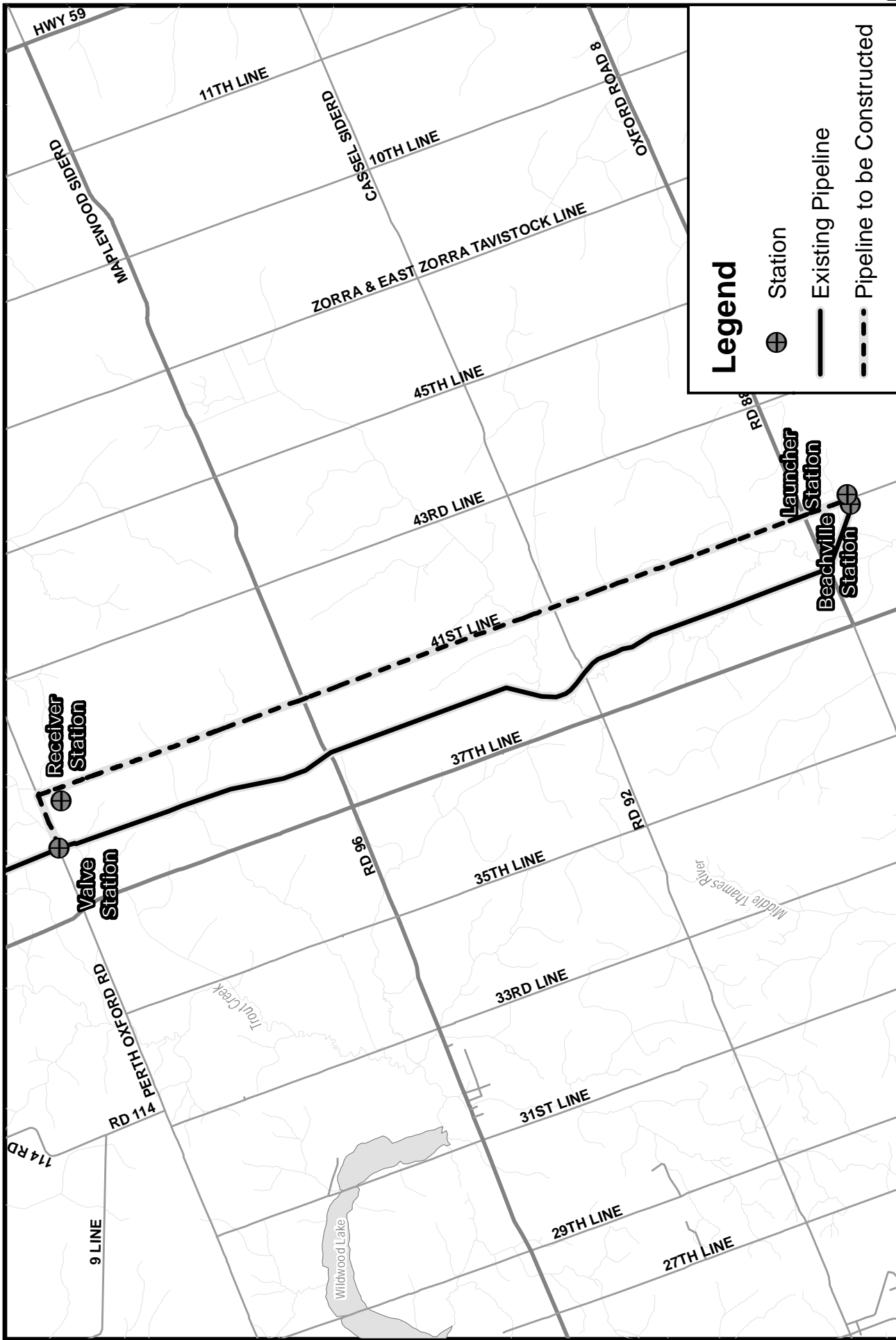
82. Union has an extensive database and knowledge of Indigenous and Métis Nation organizations in Ontario and consults with the Tribal organizations and the data bases of the Ontario Ministry of Natural Resource and Forestry, Ontario Ministry of Indigenous Affairs, as well as Indigenous Affairs and Northern Development Canada to ensure consultation is carried out with the most appropriate groups.
83. Union has signed a General Relationship Agreement with the Métis Nation of Ontario which describes Union's commitments to the Métis Nation when planning and constructing pipeline projects.

84. In the 7th Edition of the Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, the requirements for Indigenous and Métis consultation were enhanced.
85. As part of the OEB's requirement an Indigenous Consultation Report is required. This report includes:
- a letter from Union to the MOE, providing the MOE with a Project description and requesting the MOE identify any Indigenous communities who may be impacted by the Proposed Project;
 - a letter from the MOE to Union identifying which Indigenous communities will be impacted by the Project;
 - MOE's formal delegation to Union for the responsibility to conduct consultation activities.
86. Attached at Schedule 21 is a copy of Union's Indigenous Consultation Report for the Project. The Indigenous Consultation Report includes:
- A summary of all meetings with Indigenous communities;
 - A summary of the concerns that were identified by the Indigenous communities and how the concerns were addressed and/or accommodated; and
 - A complete record of all consultation activities.
87. Schedule 22 provides a copy of MOE's review and confirmation of adequacy of Union's Indigenous Consultation Report. This review will be filed as part of this application when it is received from MOE.



Union Gas Limited, Stratford Reinforcement Project

Source base mapping: Land Information Ontario (MNR)



Legend

- Station
- Existing Pipeline
- Pipeline to be Constructed



CITY of STRATFORD

Office of the Mayor

His Worship Dan Mathieson

City Hall, P. O. Box 818
Stratford, ON N5A 6W1
519-271-0250, ext. 234
dmathieson@stratford.ca
www.stratfordcanada.ca

June 5th, 2018

Via email: SJelich@uniongas.com

Attention: Mr. Steven Jelich
District Manager London/Sarnia
Union Gas Limited
109 Commissioners Road
P.O. Box 5353
London, Ontario N6A 4P1

Dear Mr. Jelich:

Re: Union Gas Stratford Reinforcement Project

On behalf of the City of Stratford, I am writing to indicate our support for the aforementioned Union Gas Stratford Reinforcement Project.

Home to the famous Stratford Festival and the world-class University of Waterloo Stratford School of Interaction Design and Business, the City of Stratford offers its 32,000 residents, tourists and businesses the best of all worlds. With over 250 acres of zoned serviced employment lands, a world class self-healing electrical grid and carrier grade IT infrastructure, Stratford's strategic location provides unparalleled advantages to our businesses, industry and residents and an improved natural gas infrastructure will further ensure the continued economic growth of our municipality.

The City of Stratford has been internationally recognized as an Intelligent Community, and its tradition of innovation and broadband connectivity has fostered the development of exciting partnerships benefiting both community and business. Recently designated by the Province as Ontario's official Autonomous Vehicle Innovation Network Demonstration Zone, the City will help position Ontario as a globally-recognized C/AV and infrastructure jurisdiction. The designation elevates not only Stratford, but the province as a whole. The needs of a potentially trillion-dollar autonomous vehicle industry are massive, and energy partnerships such as those proposed by Union Gas Stratford Transmission Reinforcement Project benefit both Stratford residents and its global industry.

In order for future growth in Stratford to be realized, sufficient natural gas infrastructure will be required. Expansion of service will be necessary in order to support future economic development in the region.

With this in mind, Stratford is strongly in support of this project and look forward to an ongoing positive relationship with Union Gas.

Sincerely,

A handwritten signature in black ink that reads "Dan Mathieson". The signature is written in a cursive, flowing style.

Dan Mathieson, Mayor

Councillors

*Brad Beatty ~ George Brown ~ Graham Bunting ~ Tom Clifford ~ Bonnie Henderson
Danielle Ingram ~ Frank Mark ~ Kerry McManus ~ Martin Ritsma ~ Kathy Vassilakos*



6 Wellington Street
Stratford, Ontario, Canada N5A 2L2
phone 519.305.5055
toll-free 844.812.5055

June 5, 2018

Attention: Mr. Steven Jelich
District Manager London/Sarnia
Union Gas Limited
109 Commissioners Road
P.O. Box 5353
London, Ontario N6A 4P1
Via email: SJelich@uniongas.com

RE: Union Gas Stratford Reinforcement Project

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On behalf of the City of Stratford, I am writing to indicate our support for the aforementioned Union Gas Stratford Reinforcement Project.

Home to the famous Stratford Festival, the world-class University of Waterloo Stratford School of Interaction Design and Business, the City of Stratford offers its 32,000 residents, tourists and businesses the best of all worlds. With over 250 acres of zoned serviced employment lands, a world class self-healing electrical grid and carrier grade IT infrastructure, Stratford's strategic location provides unparalleled advantages to our businesses, industry and residents and an improved natural gas infrastructure will further ensure the continued economic growth of our municipality.

The City of Stratford has been internationally recognized as an Intelligent Community, and its tradition of innovation and broadband connectivity has fostered the development of exciting partnerships benefiting both community and business. Recently designated by the Province as Ontario's official Autonomous Vehicle Innovation Network Demonstration Zone, the City will help position Ontario as a globally-recognized C/AV and infrastructure jurisdiction. The designation elevates not only Stratford, but the province as a whole. The needs of a potentially trillion-dollar autonomous vehicle industry are massive, and energy partnerships such as those proposed by Union Gas Stratford Transmission Reinforcement Project benefit both Stratford residents and its global industry.

In order for future growth in the City of Stratford to be realized, sufficient natural gas infrastructure will be required. Expansion of service will be necessary in order to support future economic development in the region.

With this in mind, Stratford is strongly in support of this project and look forward to an ongoing positive relationship with Union Gas.

Sincerely,

Joani Gerber
CEO

investStratford
Stratford Economic Enterprise Development Corporation



Municipality of Central Huron

P.O. Box 400, 23 Albert Street, Clinton, Ontario N0M 1L0

Telephone: 519-482-3997 Fax: 519-482-9183

Email: info@centralhuron.com

www.centralhuron.com

Filed: 2018-11-02

EB-2018-0306

Schedule 2

Page 4 of 8

July 3, 2018

Union Gas
PO Box 2001
Chatham, ON
N7M 5M1

**ATTENTION: MATTHEW JACKSON
MANAGER, STAKEHOLDER RELATIONS**

Dear Sir;

RE: STRATFORD REINFORCEMENT PROJECT

Please be advised that Council, at their June 18, 2018 regular meeting, passed Resolution No. 258-18 to support the proposed Union Gas project entitled the "Stratford Reinforcement Project". Many of our residents in the rural area have expressed their desire to have natural gas as their preferred heating source, but the cost of extending the gas line to their properties is too costly. This proposed project will bring a further line to the area and increase capacity for the equivalent of 13,500 new homes.

Yours truly,

Mayor James Ginn
Municipality of Central Huron
519-482-3997
JG/jz



THE MUNICIPALITY OF

LAMBTON SHORES

Filed: 2018-11-02

EB-2018-0306

Administration

7883 Amtelecom Parkway

Forest, ON N0N 1J0

T: 519-243-1400 / 1-866-943-1400

www.lambtonshores.ca

July 5, 2018

Attention: Mr. Steven Jelich
District Manager London/Sarnia
Union Gas Limited
109 Commissioners Road
P.O. Box 5353
London, Ontario N6A 4P1
Via email: SJelich@uniongas.com

RE: Union Gas Stratford Reinforcement Project

Dear Mr. Jelich:

On behalf of Lambton Shores, I am writing to indicate support for the Union Gas Stratford Reinforcement Project.

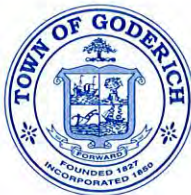
With growing urban communities that include Grand Bend and Forest, I understand that Lambton Shores is one of many municipalities that are served by this line. As development continues, our need for reliable natural gas infrastructure will also continue. Within the last year, Lambton Shores has benefitted from a Union Gas expansion project into the Ipperwash Area of our municipality. This project has been well received.

Accordingly, as CAO for the Municipality of Lambton Shores, I am pleased to offer this letter of support for your Stratford Reinforcement Project and I look forward to continuing our positive relationship with Union Gas.

Sincerely,

Kevin Williams
CAO
Municipality of Lambton Shores

Larry J. McCabe, B.A., A.M.C.T.
Chief Administrative Officer
(C.A.O.)



July 19, 2018

Attention: Mr. Steven Jelich
District Manager London/Sarnia
Union Gas Limited
109 Commissioners Road
P.O. Box 5353
London, Ontario N6A 4P1
Via email: SJelich@uniongas.com

RE: Union Gas Stratford Reinforcement Project

Dear Mr. Jelich:

On behalf of the Corporation of the Town of Goderich, I am writing to indicate our support for the aforementioned Union Gas Stratford Reinforcement Project.

The Town of Goderich is a Small Urban Municipality with a population of 8000 people, located on the easterly shore of Lake Huron. Many of our businesses and residents depend on Union Gas for their natural gas supply.

In order for future growth in the Town of Goderich to be realized, sufficient natural gas infrastructure will be required. Expansion of service will be necessary in order to support future economic development in the region.

With this in mind, the Town of Goderich is strongly in support of this project and look forward to an ongoing positive relationship with Union Gas.

Yours truly,

Larry J. McCabe
Chief Administrative Officer

LJM/af

Town Hall
57 West Street
Goderich, Ontario
Canada N7A 2K5

August 3rd, 2018

Attention: Mr. Steven Jelich
District Manager London/Sarnia
Union Gas Limited
109 Commissioners Road
P.O. Box 5353
London, Ontario N6A 4P1

Dear Mr. Jelich:

Re: Union Gas Stratford Reinforcement Project

On behalf of the Municipality of West Perth, I am writing to indicate our support for the Union Gas Stratford Reinforcement Project. On July 24th the West Perth Council formally supported the Stratford Reinforcement project by resolution.

West Perth's central location provides the perfect place for businesses, industry and residents to live, work and play. Located between Stratford and Goderich, our unique mix of rolling farmland, charming villages and vibrant towns makes us a popular destination for businesses and residents to call home.

To support our continued economic development, West Perth will require sufficient natural gas infrastructure that is affordable and reliable. Our existing residents and businesses will greatly benefit from this project. We are also in the process of developing the new Heron Business Park which will add 59 acres of industrial land to the current inventory of privately owned industrial development property. The Heron Business Park is expected to supply industrial land needs for West Perth for the next 20 – 25 years. Access to affordable natural gas energy will support this important economic development initiative.

Therefore, West Perth supports the Union Gas Stratford Reinforcement Project and the continuation of an ongoing positive relationship with Union Gas.

Sincerely,



Walter McKenzie, Mayor

August 15, 2018

Union Gas Ltd.
ATTN: Matthew Jackson

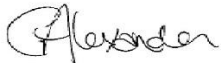
Dear Matthew:

RE: Union Gas Stratford Reinforcement Project

Please be advised that the Council of the Corporation of the Municipality of Bluewater at its meeting on August 13, 2018 passed the following resolution:

MOVED: Councillor Becker **SECONDED:** Councillor Roy
THAT Council supports the proposed Union Gas Stratford Reinforcement Project, which will add additional capacity to the Forest-Hensall-Goderich System; and Council is pleased to see that this project will bring additional capacity to Bluewater and area and ensure continued access to affordable and reliable natural gas to the region as these communities grow for years to come. CARRIED.

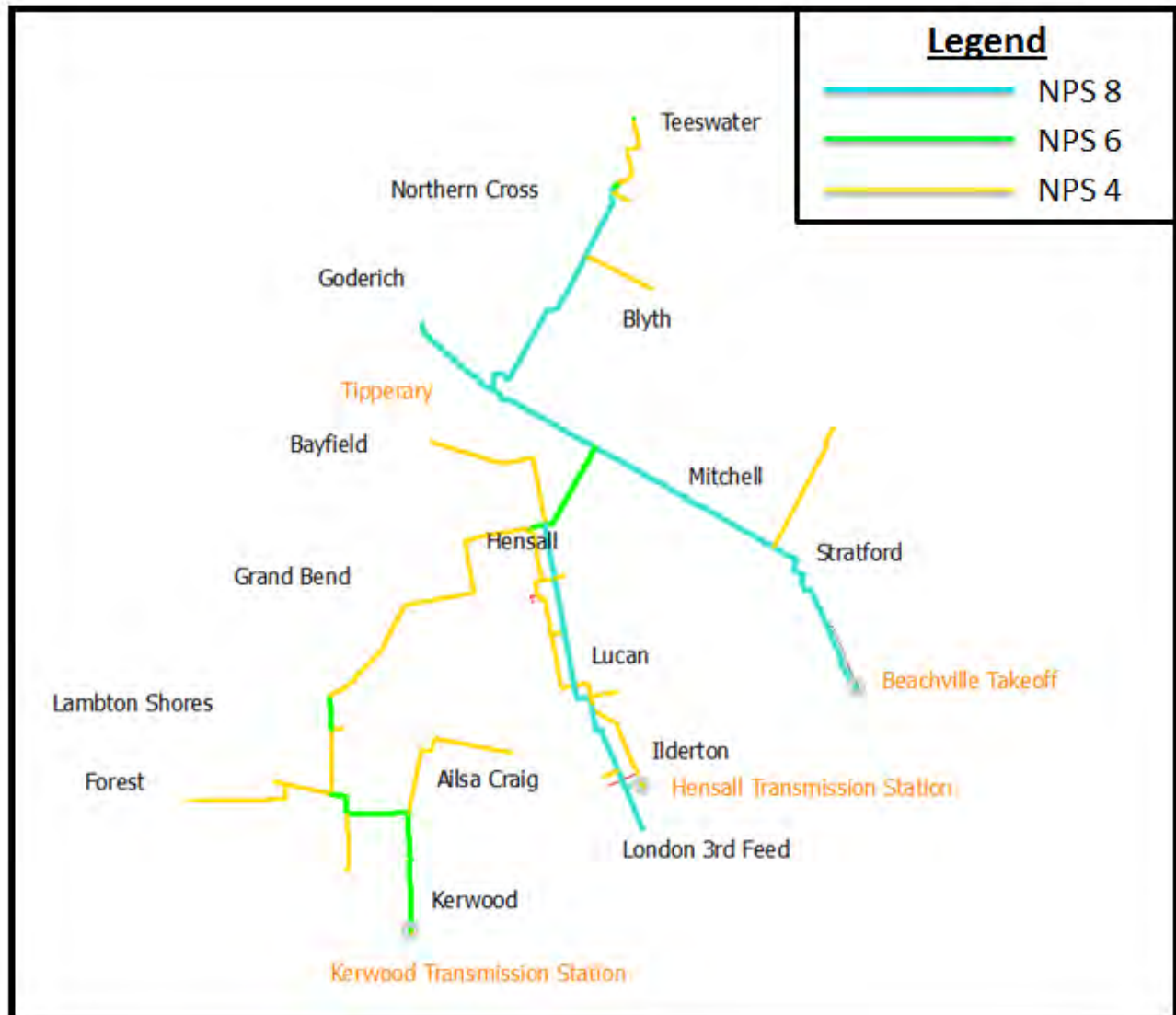
Sincerely,



Chandra Alexander
Clerk
Municipality of Bluewater

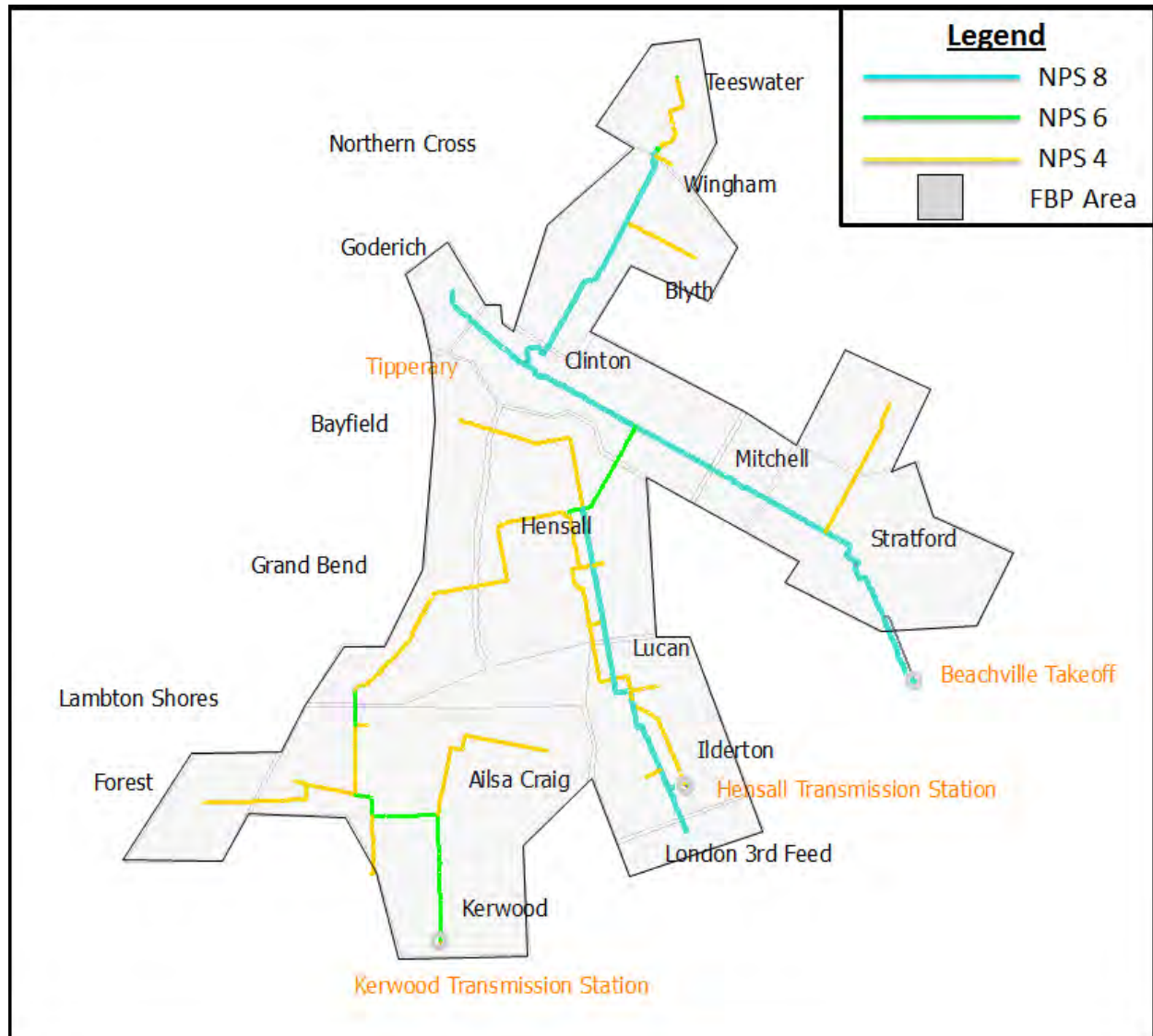
STRATFORD REINFORCEMENT PROJECT

Forest Hensall Goderich Transmission System



STRATFORD REINFORCEMENT PROJECT

FBP Area Map



STRATFORD REINFORCEMENT PROJECT

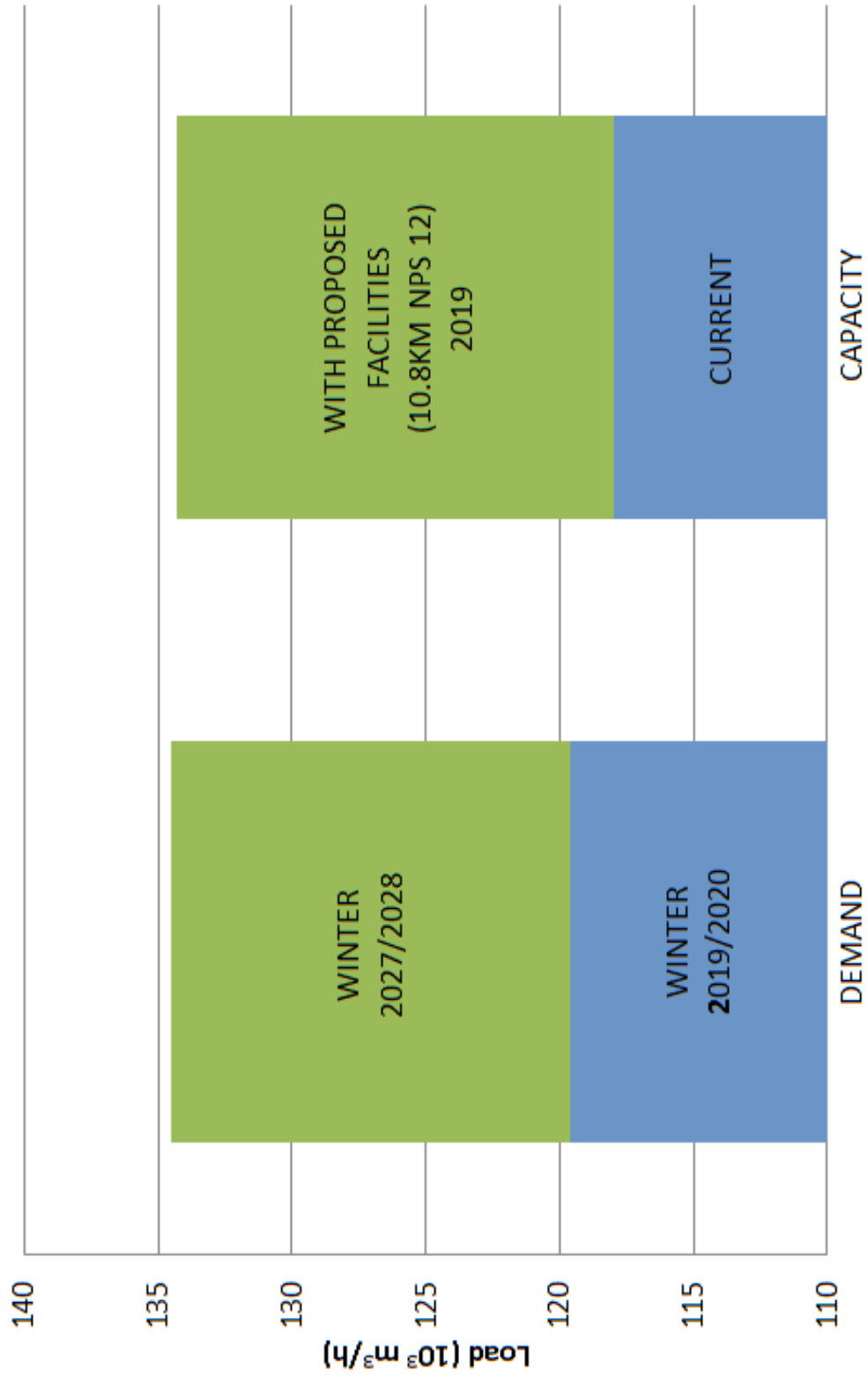
Forecasted attachments based on 8 year historical averages and known contract increases:

Year	Diversified Winter Loads (m ³ /hr)		
	Community Expansions	Generic General Service Growth	Commercial, Industrial & Contract Customers
2019	546	1478	73
2020	226	1478	0
2021	84	1478	73
2022	156	1478	305
2023	278	1478	73
2024	122	1478	0
2025	47	1478	378
2026	106	1478	0

Residential	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
New	5558	757	776	690	680	679	659	659	658
Commercial	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
Small	488	61	61	61	61	61	61	61	61
Large	28	4	3	4	3	4	3	4	3
Industrial	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
Small	0	0	0	0	0	0	0	0	0
Large	3	0	1	0	1	0	1	0	0

STRATFORD REINFORCEMENT PROJECT

9 Year Demand and Capacity of the FHG Transmission System



System Design Criteria for Reinforcement
on the
Forest, Hensall and Goderich Transmission System

Union Gas Ltd.

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SCHEDULES

Schedule 1	Schematic of FHG Transmission System
Schedule 2	Summary of FBP Load Forecast
Schedule 3	Reinforcement Process Flow Chart
Schedule 4	Map of Pressures without the Project
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Schedule 6	Graph of Demand and Capacity
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1.0 DOCUMENT PURPOSE

This document sets out the guidelines, process and criteria used to review the need for reinforcement of the Forest, Hensall and Goderich Transmission System (“FHG Transmission System”), and to select the option that best meets the system demands.

The FHG Transmission System is the series of high pressure pipelines that transport gas from Union’s Dawn-Parkway Transmission Pipelines to several regions in the Forest, Hensall and Goderich areas. The regions served by the FHG Transmission System include Stratford, North London, Forest, Hensall, Kerwood, Grand Bend, Goderich, Mitchell, Blyth and Teeswater among others. A full schematic of the FHG Transmission System is attached to this report at **Schedule 1**.

The FHG Transmission System is forecasted to be fully utilized with no excess capacity available as of the winter of 2019/2020. In order to accommodate forecasted general service additions served on the FHG Transmission System, a project is required to increase the system capacity. In absence of a project to increase capacity, Union Gas will be unable to service additional general service and contract rate customers.

The process involves examining existing facilities, forecasting system demand, understanding system operating constraints, identifying a range of reinforcement alternatives and selecting the best alternative.

2.0 ASSESSMENT GUIDELINES

The process of developing a facilities reinforcement plan for the FHG Transmission System is summarized below.

1. Validate Model
2. Establish current and future system operating criteria
3. Forecast design day demands
4. Assess existing system demands and capacity
5. Identify alternative ways of creating additional capacity
6. Select the best alternative

2.1. Validate Model

The hydraulic model for the system in question is validated against actual flow conditions to ensure it properly reflects the current demands and system operation.

2.2. Establish Current and Future System Operating Criteria

The FHG Transmission System has a number of operating criteria to ensure the system can operate within its constraints:

- Maximum Operating Pressures (MOP) - by code, the pipeline cannot operate in excess of its MOP.
- Minimum Delivery Pressure - the pipeline must meet all required delivery pressures for the customers it services.
- Minimum Inlet Pressure - the pipeline must be able to maintain a minimum pressure requirement into downstream systems.
- Design Day Demands – For the FHG Transmission System, these are the firm customer demands throughout a very cold winter day, known as a design day.
- Design Day Demand Profile - Typically, customers consume natural gas at varying rates over a 24-hour period. Heat sensitive customers generally consume a higher volume of gas in the early morning and the late afternoon. Union uses unsteady state modelling techniques to simulate this consumption pattern for transmission pipelines and steady state modelling for distribution pipelines. Union is able to reflect the daily consumption pattern by developing profiles for each of its pipelines using historical data. In the case of the FHG Transmission System, these profiles exist both for the consumption patterns of customers supplied by the FHG Transmission System as well as for the supply pressures delivered by the Dawn-Parkway pipelines upstream of the FHG Transmission System.
- Weather - The majority of the customers served in the Union South Area are heat sensitive and their peak demand occurs on a very cold winter day. Union designs its facilities to meet the demands on a very cold day, defined to be the design day. In this case, the design day temperature is -25.1 degrees Celsius, which is equivalent to a 43.1 degree day (“DD”). The probability of a 43.1DD occurring is between 1% and 2%, thus reasonably ensuring Union’s customers can continue to be served during the coldest winters.

Changes in flow patterns, looping or compression changes on the Dawn-Parkway system impact the inlet pressures available to laterals off that system, which can result in differences between current operating criteria and future ones. Changes in consumption patterns within Stratford, North London, Forest, Hensall, Kerwood, Grand Bend, Goderich, Mitchell, Blyth

and Teeswater (“The Market”) can also impact the operating criteria. Large customers may require higher minimum delivery pressures, adding a constraint to the system.

2.3. Forecast Design Day Demand

The design day demand is the peak demand of the customers served by the delivery system. Future design day demands for a 20-year period are determined using the customer attachment forecast from the Facilities Business Plan (“FBP”).

The FBP is an internal planning tool used by Union for the identification of reinforcement facilities required to support forecasted growth over a specific geographic area. The FBP includes a year-by year customer attachment forecast of demands and their locations on the system. Based on this forecast, future design day demands are used to develop long term reinforcement plans. A summary of the FBP load forecast for regular rate load additions is attached to this report at **Schedule 2**.

Based on the FBP forecast, future facilities requirements for both new business and reinforcement can be identified and evaluated based on the Board’s E.B.O. 134 guidelines, optimized and scheduled to meet the future demands on the system.

2.4. Assess Existing Demands and Capacity

The existing system is reviewed to determine the ability of the pipelines to meet the demands of current customers. If forecasted demands are expected to exceed existing capacity within 2 to 3 years (the lead time required to assess, design, obtain approval and construct facilities if required) the process continues through the following steps.

2.5. Identify Alternatives

If the existing facilities do not have sufficient capacity to meet the future demands, then a wide range of alternatives are generated. These may include, but are not limited to:

- looping (reinforcing along the existing route) the existing pipeline;
- backfeeding (reinforcing through an entirely different route);
- upgrading the operating pressure of an existing pipeline;
- constructing new pressure regulating stations;
- modifying existing pressure of the regulating stations;
- joining two previously independent systems;
- obtaining supply from nearby non-Union pipelines and producers;

- installing compression;
- carrying out demand side management.

2.6. Select Best Alternative

The above alternatives are established during the early stages of a reinforcement plan. All alternatives are given preliminary review for feasibility, and promising ones are organized into a key alternatives list.

Each alternative on the key alternatives list is further evaluated in detail to make a final recommendation for reinforcement.

Criteria for selecting the best alternative include, but are not limited to:

- cost;
- construction feasibility;
- number of years of capacity created;
- reliability of supply;
- system integrity benefits;
- other benefits or shortcomings.

The resulting best alternative is carried forward for internal and external approvals. Attached to this report at **Schedule 3** is a visual representation of the process described above.

2.7. Summary

Although each situation brings its own unique characteristics, the above guidelines set out the principles to be used for assessing the need for reinforcement of the FHG Transmission System.

3.0 CURRENT APPLICATION

This section applies the assessment guidelines as discussed in Section 2.0 of the current OEB application for reinforcement of FHG Transmission System.

3.1. Facilities

The following section will describe the facilities of the FHG Transmission System, including the pipelines and delivery locations.

3.1.1. Transmission Pipelines

The FHG Transmission System is fed primarily by three transmission pipelines that facilitate the flow of gas from the Dawn-Parkway lines. The first is the Stratford Line (NPS 8) which operates at a MOP of 6160kPa and was installed in 1957. This pipeline transports gas from the Beachville Valve Site to the Stratford Gate Station, where the pressure is reduced. This gas is fed into an NPS 8 3450kPa MOP transmission pipeline, the Goderich Line, which supplies the downstream portion of the FHG Transmission System.

The second feed is supplied by Hensall Transmission Station. This NPS 8 transmission pipeline operates at a MOP of 3450kPa and was installed between 1999 and 2005. Hensall Transmission Station is fed directly by the Dawn-Parkway transmission pipelines.

The third feed is supplied by Kerwood Transmission Station. This NPS 6 transmission pipeline, the Forest Line, operates at a MOP of 3450kPa and was installed in 1985. Kerwood Transmission Station is also fed directly by the Dawn-Parkway transmission pipelines.

These three feeds supply customers throughout The Market.

3.1.2. Pressure Reducing Stations

At the Stratford Gate Station there are three pressure reductions. The first reduces to an outlet MOP of 3450kPa which supplies the same 3450kPa system fed by both the Hensall and Kerwood Transmission Stations. This NPS 8 transmission pipeline operates as one of the primary feeds into the 3450kPa section of the FHG Transmission System. The second pressure reduction is to an outlet MOP of 1900kPa that supplies a number of distribution stations within Stratford. The third pressure reduction is to an outlet MOP of 420kPa which feeds the area directly surrounding the Stratford Transmission Station. Both the 1900kPa and 420kPa pipelines are part of the Stratford distribution model.

3.1.3. Distribution Network

The FHG Transmission System feeds into numerous distribution systems, the largest of which is Stratford. The London North feed, south of the Hensall Transmission Station also accounts for a significant portion of the system loads.

3.2. Validate Model

The FHG Transmission System's hydraulic model was last validated based on actual flow conditions from February 20, 2015, which was a 38.2 DD, and accurately models the system.

3.3. Operating Criteria

The following section will describe the operating criteria of the FHG Transmission System.

3.3.1. Maximum Operating Pressure

The maximum operating pressure (MOP) of the NPS 8 Stratford Line and the proposed NPS 12 reinforcement is 6160kPa. These pipelines feed into a regulating station that supplies gas to the downstream system, which operates at a MOP of 3450kPa. The FHG Transmission System constraint resides in this 3450kPa MOP system, as listed below.

3.3.2. Minimum Delivery Pressure

The minimum delivery pressure on the FHG Transmission System is 485kPa, which is the minimum pressure required into Teeswater Gate Station. However, the system constraint is the 820kPa minimum inlet required at the Northern Cross customer station. This elevated minimum inlet pressure is due to a minimum delivery pressure of 700kPa required by Northern Cross to satisfy their customer and operational requirements. The FHG Transmission System Facilities Business Plan forecasts that Union will be unable to provide the 820kPa inlet pressure to Northern Cross on a design day during the winter of 2019/2020. A map of the expected pressures without the Project for Winter 2019/2020 is attached to this report at **Schedule 4**.

3.4. Identify Reinforcement Alternatives

Union considers a broad range of alternatives during the development of a reinforcement plan. These alternatives are investigated at varying levels of detail depending upon their feasibility. To determine the capacity provided by each alternative, Union uses an FBP

forecast to determine future load requirements. When evaluating the proposed project and the alternatives, Union considered the impact of all of these factors (the FBP forecast, community expansion forecast and identified contract expansions) before recommending the best alternative.

When evaluating the Stratford Reinforcement Project, it was determined that the selected design must provide a minimum of five years of forecasted growth on the FHG Transmission System. For the Stratford Reinforcement Project, this minimum was selected to ensure that Union is able to reliably serve forecasted demand for the foreseeable future while also providing enough capacity to support potential unforecasted commercial, industrial or contract growth without requiring additional facilities, which may compromise Union's ability to serve these unforecasted customers.

The following alternatives were identified and assessed for the proposed Stratford Reinforcement Project:

3.4.1. Install a Different Diameter Pipeline

Union reviewed whether a NPS 10 pipeline was adequate to serve the forecasted growth in The Market area. This option was deemed undersized due to the pressure drop that would result between the start and end points of this pipe. As a direct result, the NPS 10 would trigger the next phase of reinforcement along the Stratford Line one year earlier than the NPS 12 option due to the system constraint at Northern Cross. Looking towards the future, the next recommended reinforcement(s) of the FHG Transmission System is to continue the Stratford Reinforcement to the Stratford Gate Station. Once the future phase(s) of reinforcement have been completed, the NPS 10 would be grossly undersized when compared to the recommended NPS 12. When compared to installing NPS 12 from the Beachville Valve Site to the Stratford Gate Station, installing NPS 10 pipe would decrease the effective capacity on the pipeline by over 62%. Because installing NPS 10 limits Unions ability to grow our franchise area, advances the next phase of reinforcement and drastically reduces the future capacity of the Stratford Reinforcement, this option was rejected.

Union also reviewed whether a NPS 16 pipeline should be installed. The NPS 16 pipeline would provide approximately 8 years of growth on the FHG Transmission System, which is not a significant increase when compared to the proposed project. NPS 16 is too large to construct within road allowance and would require permanent easement the length of the pipeline. It was also determined that there is not sufficient proposed growth in The Market area to justify a NPS 16 pipeline. As a result, this option was also rejected.

3.4.2. Installing a Longer Reinforcement Project

Union reviewed a 15km reinforcement instead of the current proposed 10.8km reinforcement. This 15km option provided approximately 11 years of forecasted growth before the system could no longer maintain the minimum inlet pressures into Northern Cross as opposed to the 8 years provided by the 10.8km reinforcement. This longer reinforcement project will result in higher pressures into Stratford Gate Station and throughout the system; however the incremental capacity is not required at this time and would be underutilized in the short term. As a result, Union determined that the longer project is not required at this time.

Looking to the future, the continuation of the NPS12 reinforcement is recommended as a future reinforcement project for the FHG Transmission System as it will alleviate the NPS 8 bottleneck along the Stratford Line. The pressure and capacity increases brought on by this longer reinforcement are significant but only fully realized once the Stratford Reinforcement is continued to the Stratford Gate Station. As a result, this option was rejected for this phase of reinforcement and will be installed in the future when the growth on the system is adequate to justify the longer reinforcement.

3.4.3. Installing a Shorter Reinforcement Project

Union reviewed installing a 7.6 km reinforcement instead of the proposed 10.8km reinforcement. This 7.6km option provided approximately 4 years of forecasted growth, which does not meet the initial goal of providing 5 years of growth to the FHG Transmission System. As a result of its short life-span, this reinforcement would be unable to accommodate any significant load requests outside of the FBP forecast. Union also estimated this project at approximately \$20.5M. When comparing this alternative to the proposed project, the proposed project will provide approximately 50% more capacity for 20% more cost. Due to the inability to meet Union's minimum threshold for years of

growth, the inability to handle system growth beyond the forecast and high cost-per-meter, this option was rejected.

3.4.4. New lateral from the Dawn-Parkway Transmission Lines

Union reviewed building a new line from the existing Dawn-Parkway lines that would provide another feed into the FHG Transmission System. This new lateral would be significantly longer in length than the proposed option and would result in significantly higher costs. Therefore this option was eliminated.

3.4.5. Upgrading an Existing Pipeline

Union reviewed whether upgrading the MOP of an existing pipeline was a viable alternative. There is a modest portion of the FHG Transmission System that has been designed to 6160kpa but currently operates at 3450kPa. This NPS 8 section stretches from Hensall Transmission Station into the center of Lucan. Upgrading this section of the FHG Transmission System would only provide enough capacity to support 3 years of growth on the system, and does not provide any incremental capacity to support large commercial and industrial growth. As a result, Union would be unable to attach any large commercial and industrial customers until the next reinforcement project is completed on the FHG Transmission System. Due to the inability to meet the minimum 5 years of growth, this alternative was rejected.

3.4.6. Joining Two Previously Independent Transmission Systems

Union evaluated joining two previously independent transmission systems in the FHG Transmission System and the Owen Sound Transmission System through a connection in Teeswater. In order to join the Owen Sound Transmission System to the FHG Transmission System, over 15km of transmission pipeline would be required. Additionally, the closest section of the Owen Sound Transmission system operates at a MOP of 2960kPa, which is less than the 3450kPa MOP of the FHG Transmission System. This means that a pressure regulating station would be required to join the two systems resulting in increased pressure losses and costs. Third, the feed off of the Owen Sound Transmission System is a combination of NPS 4 and NPS 6 ST pipeline, which is not adequate to transport the necessary gas volumes without incurring significant pressure

losses. Finally, this connection would advance significant reinforcement in the Owen Sound Transmission System, which would substantially increase the cost of the project. For all these reasons, this option was deemed inadequate and eliminated as a viable alternative.

3.4.7. Obtaining Supply from Nearby Non-Union Pipelines

There are currently no nearby non-Union pipelines with a capacity large enough to accommodate the present needs and future growth of The Market. The production from most suppliers on the existing system is also not consistent enough to rely on while designing the gas distribution system. This alternative was therefore eliminated.

3.4.8. Reinforcing in a Different Location

Union reviewed various alternative reinforcement locations including:

- Reinforcing the NPS 8 3450kPa MOP pipeline from Hensall Transmission Station (the takeoff from the Dawn-Parkway system) heading North towards Lucan.
- Reinforcing the NPS 6 3450kPa MOP pipeline from Hensall to the connection to the NPS 8 3450kPa MOP Goderich Line between Clinton and Mitchell.
- Reinforcing the NPS 6 3450kPa MOP pipeline from the Kerwood Transmission Station.

None of these reinforcements would alleviate the largest system constraint, which is the NPS 8 Stratford Line. As a result, all three options were rejected as they required significantly more pipe in order to achieve the same system benefit as the proposed Stratford Reinforcement.

3.4.9. Installing Compression

The maintenance cost for a compressor is significantly higher than a new high pressure line due to its complex mechanical nature. This option was not pursued as the compressor and the associated annual maintenance costs far exceed the cost of the proposed pipeline project.

3.4.10. Geo-Targeted Demand Side Management

Union reviewed the alternative of implementing Demand Side Management (“DSM”) for customers in the Stratford, Forest, Hensall, Goderich and Teeswater areas in order to

reduce present and future loads on the system. Due to high commercial and contract growth in the area, it was found that implementing DSM would not offset enough load to allow Union to accommodate growth without installing the proposed Stratford Reinforcement project. As a result, this option was eliminated.

3.4.11. Selection of Best Alternative

Union proposes that the best alternative, of all considered, is to build 10.8km of NPS 12 with a MOP of 6160 kPa to supply gas to customers fed by the FHG Transmission System. This 10.8km high pressure reinforcement will reinforce the existing NPS 8 pipeline with a MOP of 6160kPa running from the Beachville Valve Site along 41st Line to Perth-Oxford Rd. This alternative will provide enough capacity to the FHG Transmission System to support approximately 8 years of FBP forecasted growth, with incremental facilities being required prior to the winter of 2027/2028.

A map of the expected pressures with the Project for Winter 2019/2020 is attached to this report at **Schedule 5**. Attached to this report at **Schedule 6** is a graph showing the demand and capacity of the FHG Transmission System with the proposed facilities in place.

A summary of the project alternatives is attached to this report at **Schedule 7**.

3.4.12. Summary

Union reviewed a number of alternatives including a different diameter pipeline, reinforcing the existing system in another location, installing compression, obtaining supply from natural gas producers and connecting existing distribution systems. The proposed project will best allow Union to meet the growing demands of The Market while also positioning Union for future expansion.

4.0 CONCLUSION

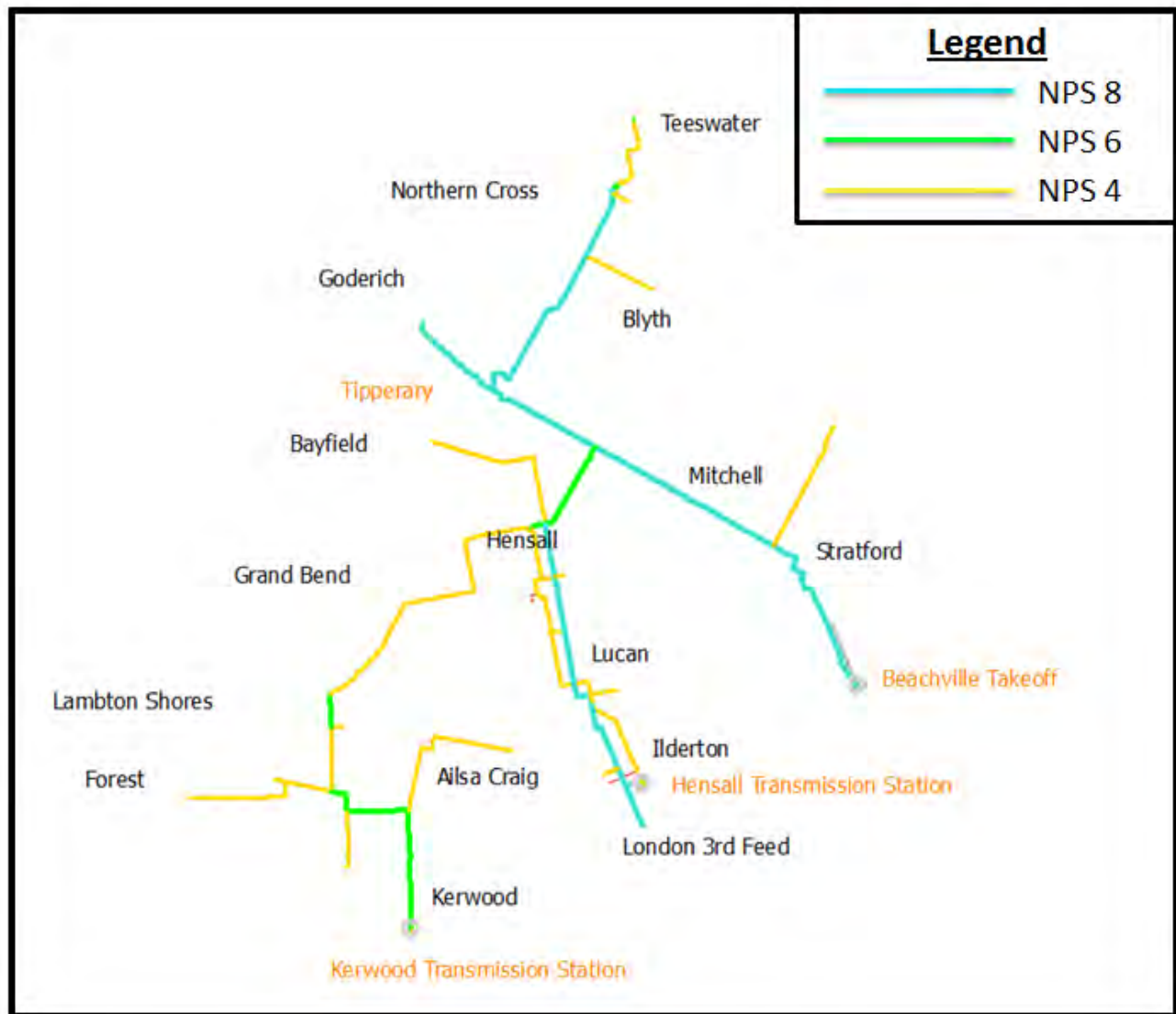
Union uses a number of criteria to review the need for reinforcement of the FHG Transmission System.

The process involves examining existing facilities, forecasting system demand, and understanding system operating criteria in order to identify a number of reinforcement alternatives. These alternatives are then investigated at varying levels of detail depending upon project feasibility including engineering, cost, and environmental considerations, and security of supply.

Through this process, Union has identified the most efficient project to provide The Market with higher pressures and more robust gas supplies in order to meet the growing demand across the The Market region. This project is to install a 10.8km NPS 12 6160kPa high pressure pipeline from the Beachville Valve Site heading north along 41st Line to Perth-Oxford Rd.

Schedule 1

Existing FHG Transmission System



Schedule 2

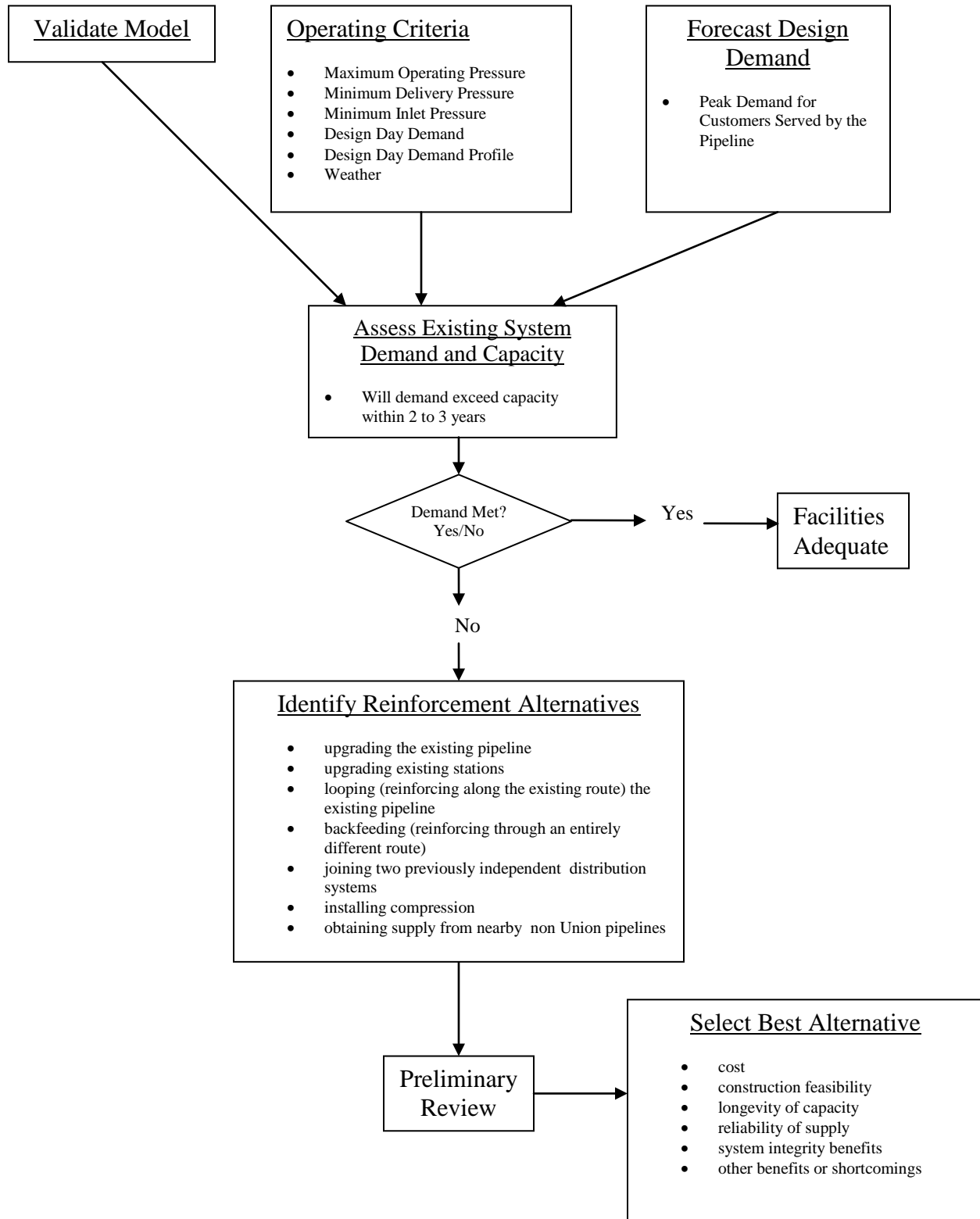
Forecasted attachments based on 8 year historical averages and known contract increases:

Year	Diversified Winter Loads (m ³ /hr)		
	Community Expansions	Generic General Service Growth	Commercial, Industrial & Contract Customers
2019	546	1478	73
2020	226	1478	0
2021	84	1478	73
2022	156	1478	305
2023	278	1478	73
2024	122	1478	0
2025	47	1478	378
2026	106	1478	0

Residential	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
New	5558	757	776	690	680	679	659	659	658
Commercial	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
Small	488	61	61	61	61	61	61	61	61
Large	28	4	3	4	3	4	3	4	3
Industrial	Total Attachments	2019	2020	2021	2022	2023	2024	2025	2026
Small	0	0	0	0	0	0	0	0	0
Large	3	0	1	0	1	0	1	0	0

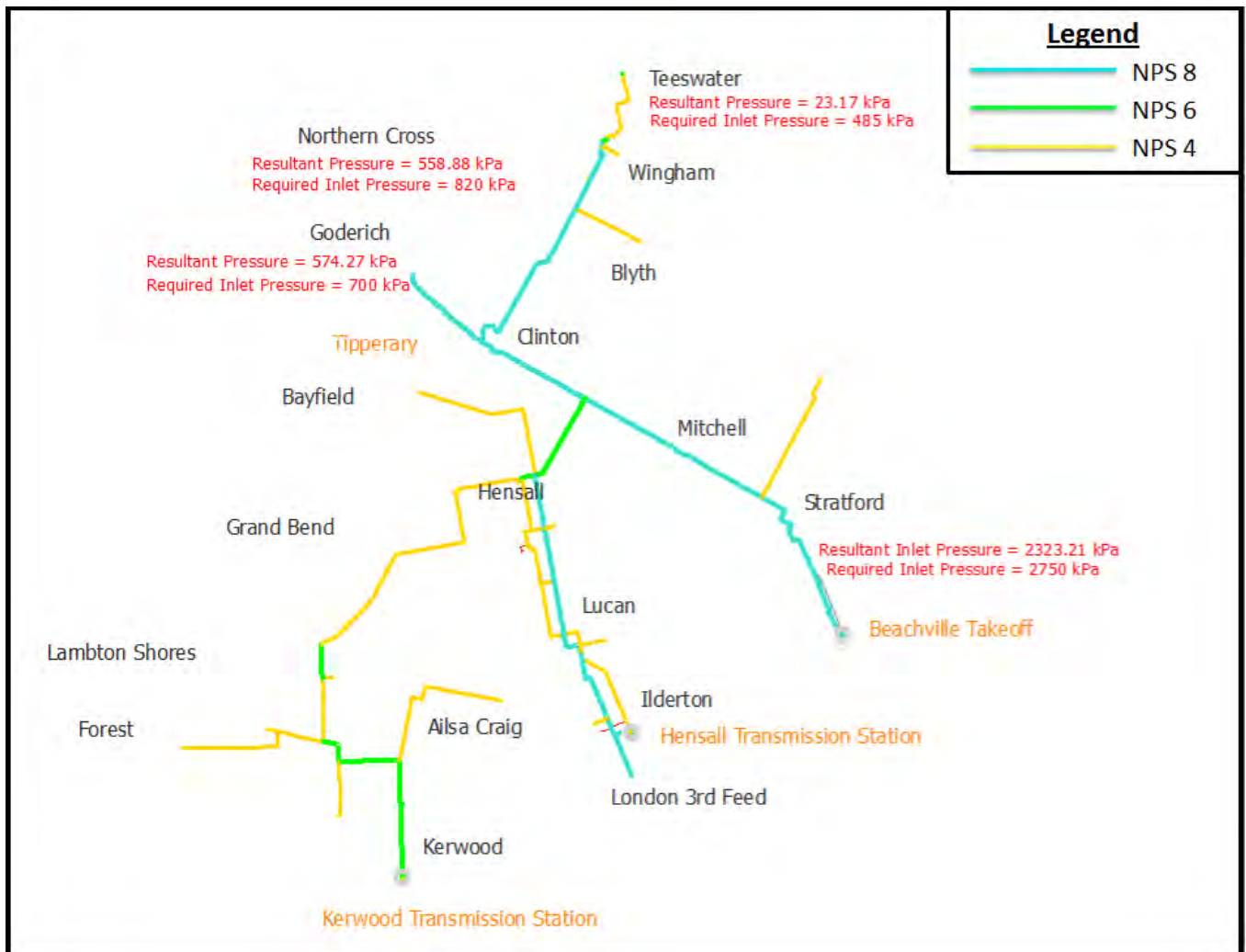
Schedule 3

Reinforcement Assessment Flow Chart



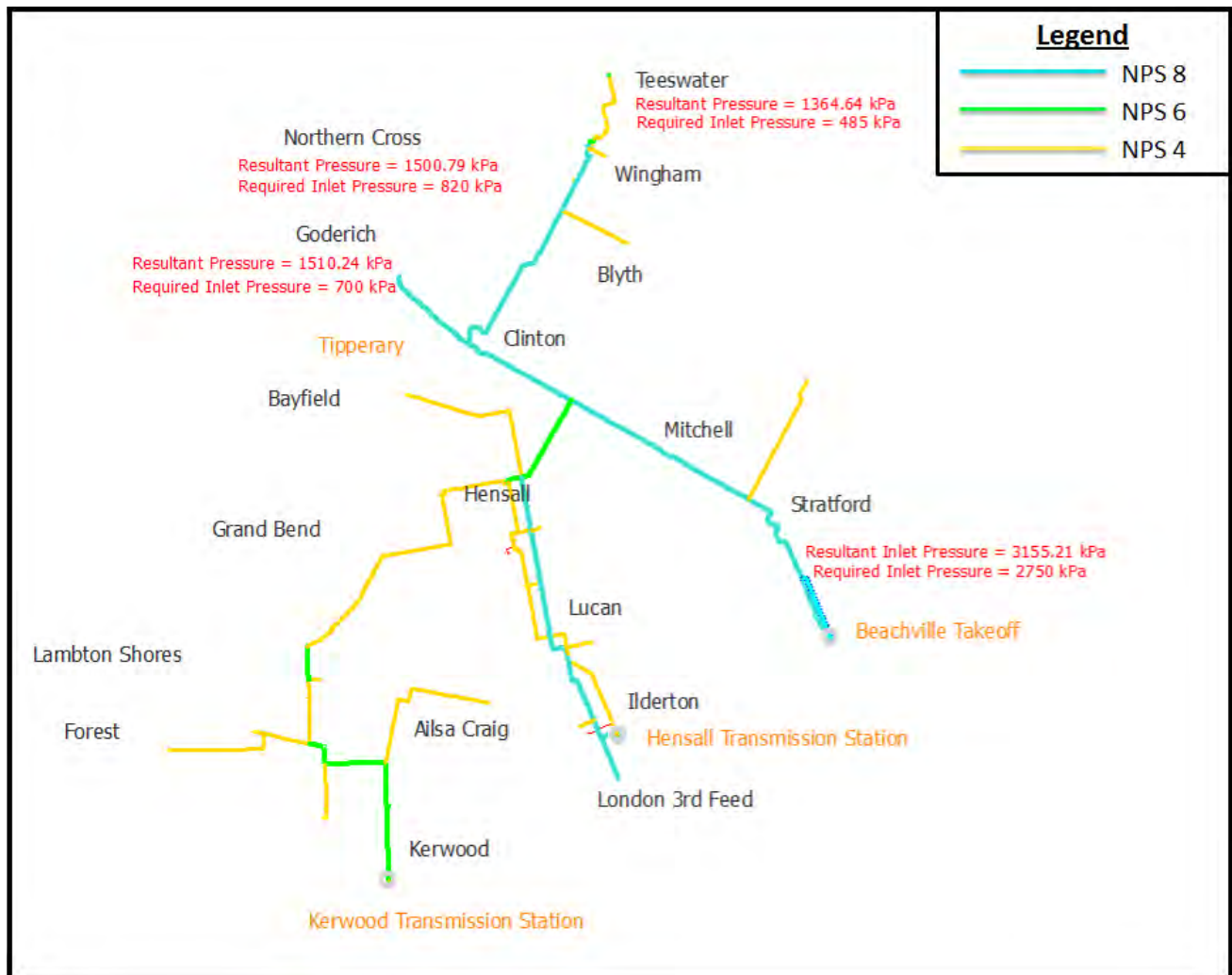
Schedule 4

Expected Pressures for Winter 2019/2020 without Stratford Reinforcement Project



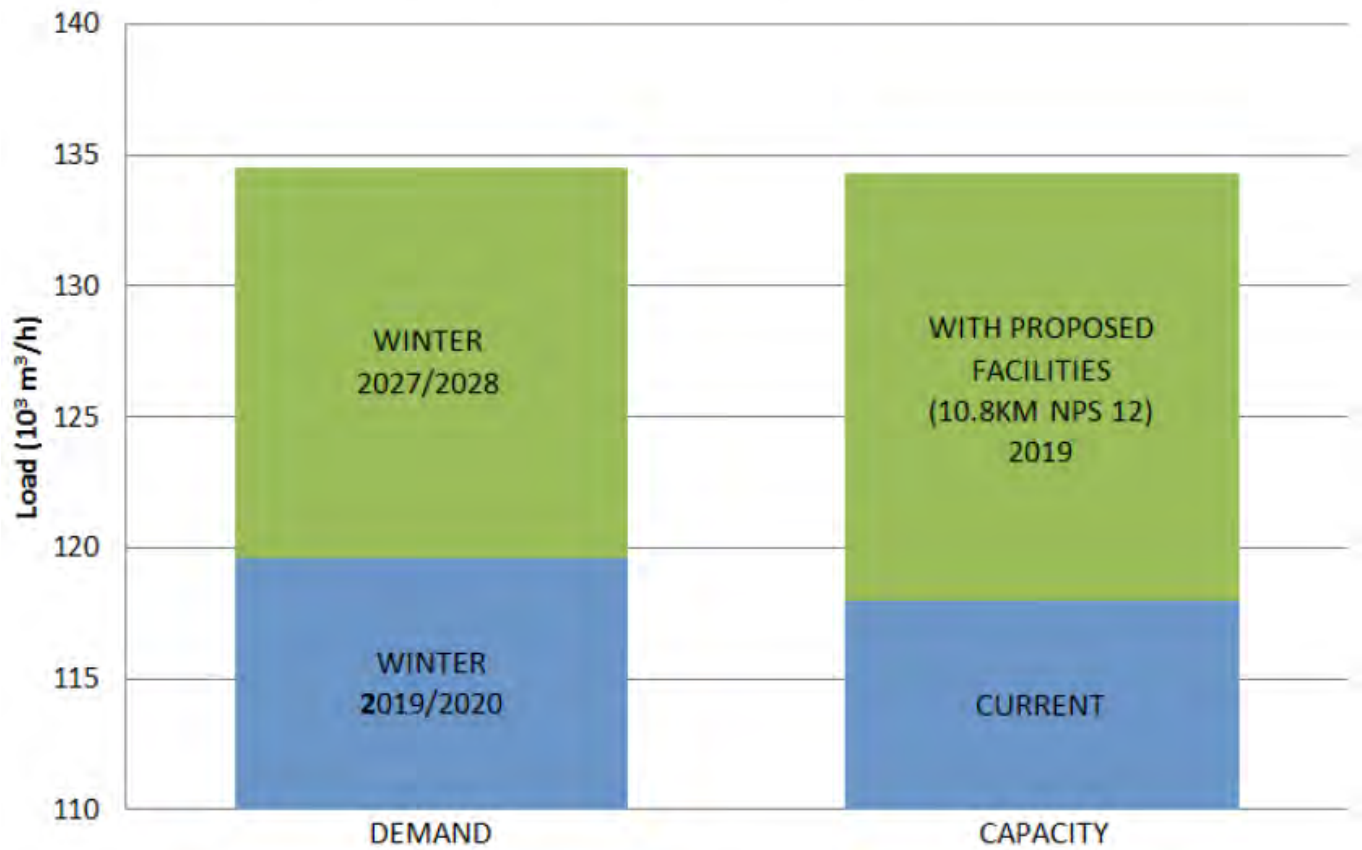
Schedule 5

Expected Pressures for Winter 2019/2020 with 10.8km Stratford Reinforcement Project



Schedule 6

9 Year Demand and Capacity of the FHG Transmission System



Schedule 7

Summary of Alternatives

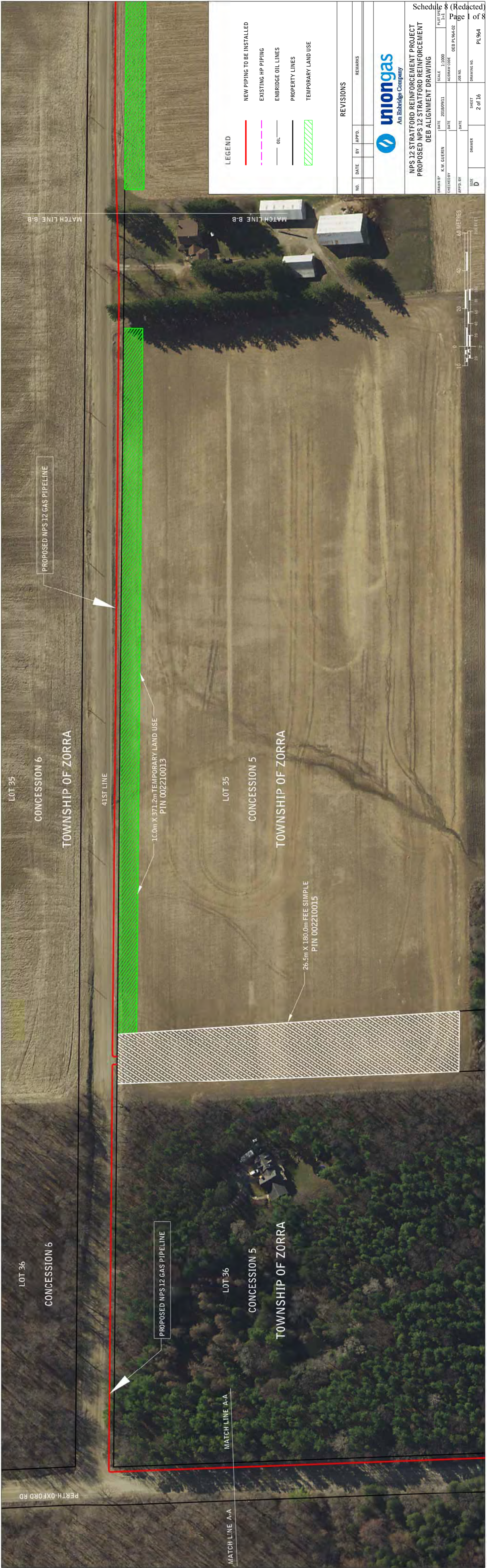
Alt #	Alternative Description	Future Facility Requirements (2020-2034)	Rationale
	Proposed Project Install 10.8km NPS 12 reinforcement from the Beachville Valve Site to Perth-Oxford Road.	Install 11.4km NPS 10 reinforcement along the NPS 8 Goderich Line from Hensall Rd in 2027 Install approximately 9.3km NPS 12 reinforcement along NPS 8 Stratford Line to Stratford Gate in 2034	10.8km NPS 12 provides sufficient years of growth to the FHG Transmission System without compromising the future capacity.
Alt 1	Install 10.8km NPS 10 reinforcement from the Beachville Valve Site to Perth-Oxford Road.	Install approximately 9.3km NPS 10 reinforcement along NPS 8 Stratford Line to Stratford Gate in 2026 Install 11.4km NPS 10 reinforcement along the NPS 8 Goderich Line from Hensall Rd in 2030	Provides 7 years of growth but significantly reduces the future capacity of the Stratford Line when compared to the NPS 12 option. Also does not adequately alleviate the constraint along the Stratford Line.
Alt 2	Install 10.8km NPS 16 reinforcement from the Beachville Valve Site to Perth-Oxford Road.	Install 11.4km NPS 10 reinforcement along the NPS 8 Goderich Line from Hensall Rd in 2027 Install approximately 9.3km NPS 16 reinforcement along NPS 8 Stratford Line to Stratford Gate in 2034	No significant increase in capacity when compared to the proposed project. Growth does not justify NPS 16 reinforcement. Pipeline would also require easement as NPS 16 is too large to construct within the road allowance.
Alt 3	Install 15km NPS 12 reinforcement from the Beachville Valve Site to Perth County Line 26.	Install 11.4km NPS 10 reinforcement along the NPS 8 Goderich Line from Hensall Rd in 2030	Insufficient growth to justify the longer project. Pipeline will be under-utilized until 2034. Stratford Reinforcement should be extended in the future to accommodate forecasted growth. Continuation of the Stratford Line Reinforcement would be required in 2037.
Alt 4	Install 7.6km NPS 12 reinforcement from the Beachville Valve Site to Road 96.	Install 7.5km NPS 12 reinforcement along the NPS 8 Stratford Line from Road 96 to Perth County Line 26 in 2024 Install 11.4km NPS 10 reinforcement along the NPS 8 Goderich Line from Hensall Rd in 2030	Project does not provide the minimum of 5 years of growth and cannot accommodate any contract or large commercial growth. This alternative also has a significantly higher cost-per-meter when compared to the proposed project.

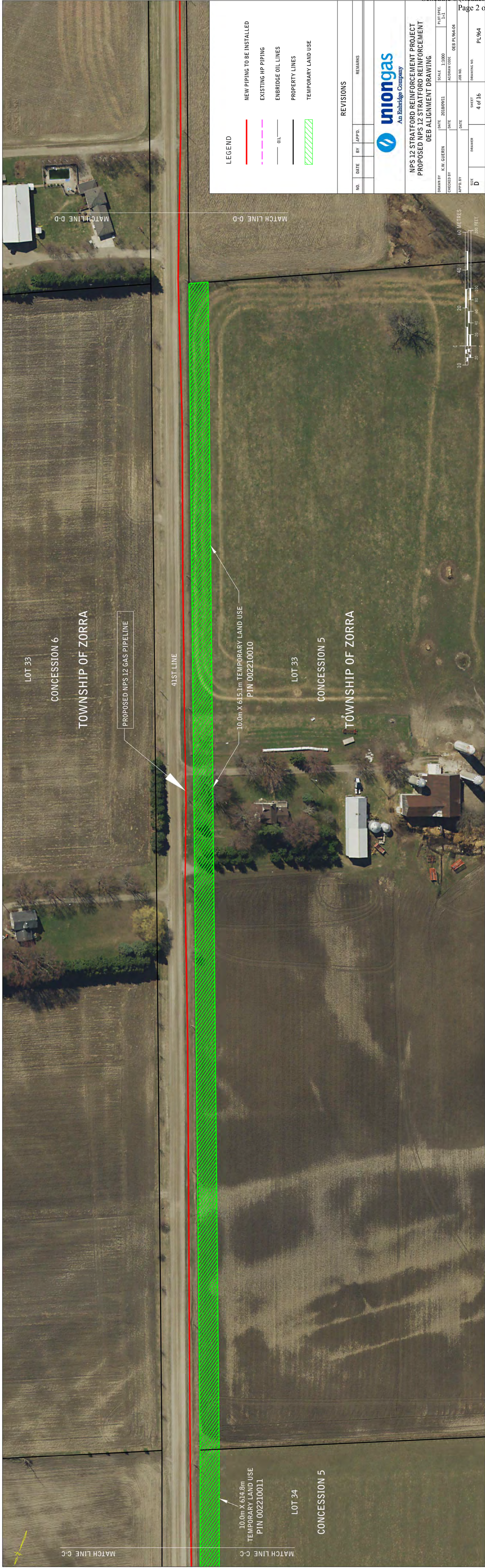
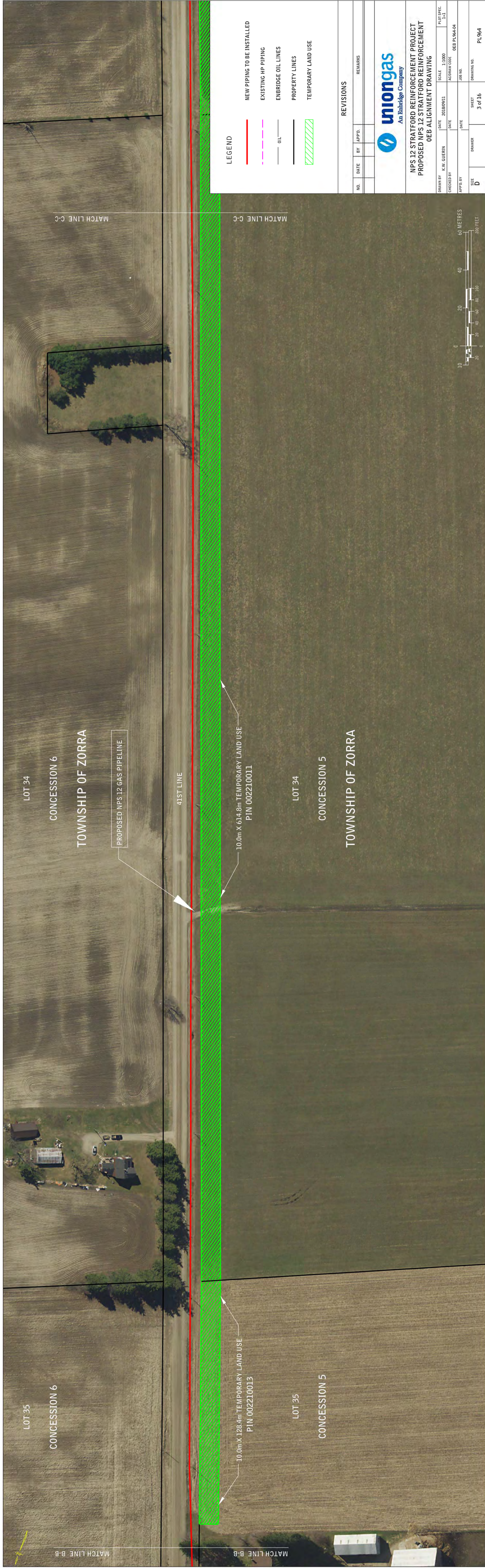
Alt 5	Upgrading the MOP of a portion of the FHG Transmission System	Install 10.8km NPS 12 reinforcement along NPS 8 Stratford Line from the Beachville Valve Site to Perth-Oxford Road in 2022 Install 11.4km NPS 10 reinforcement along NPS 8 Goderich Line from Hensall Rd in 2034	Project does not provide the minimum of 5 years of growth and cannot accommodate any contract or large commercial growth until a Stratford Line reinforcement is completed.
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Please note that all alternatives considered in the table above include a reinforcement in 2030 to the NPS 6 Forest Line which is largely unaffected by reinforcements to the rest of the FHG Transmission System. Future facility requirements are based on the current FBP forecast and are subject to change based on the location and volume of actualized growth

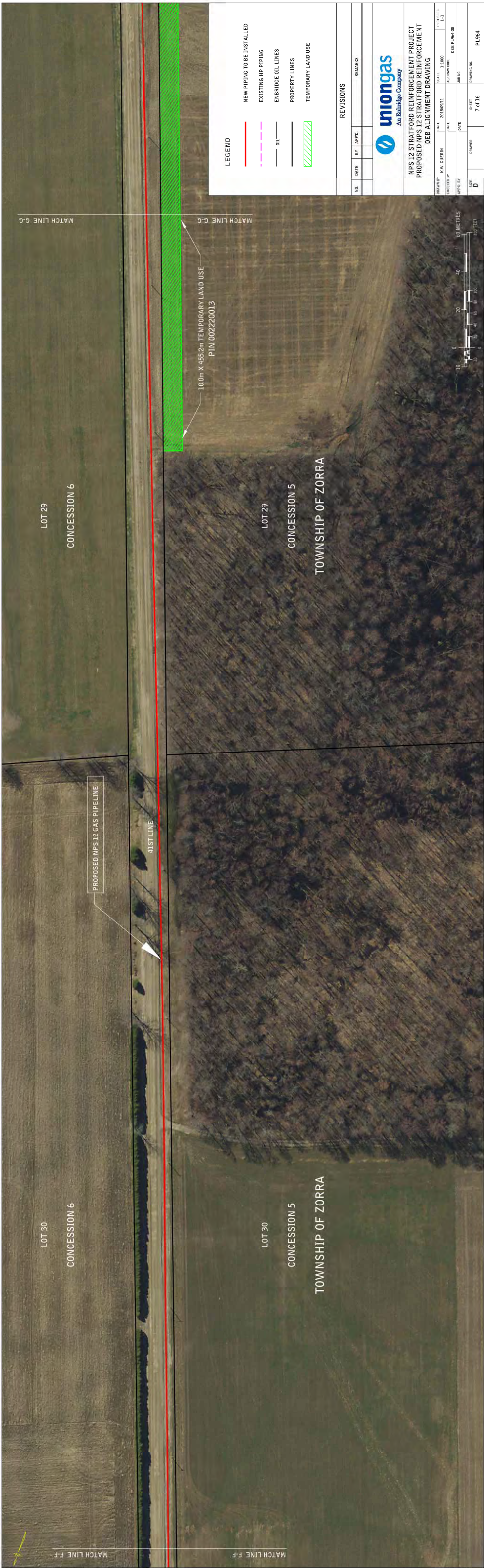
Other alternatives considered and rejected in early analysis

Alt #	Alternative Description	Rationale
Alt 6	Installing a new lateral from the Dawn-Parkway System	A new lateral would be significantly longer than the proposed project and would run a similar route to the Stratford Line.
Alt 7	Joining FHG Transmission System and the Owen Sound Transmission System	Joining the systems would involve a 15km+ pipeline extension and would bring in gas with a lower MOP. Would also advance reinforcement on the Owen Sound Transmission System.
Alt 8	Obtaining supply from non-union pipelines	No nearby pipelines with adequate, reliable capacity to serve the system demands.
Alt 9	Reinforcing in different locations	Would not alleviate the largest system constraint – the NPS 8 Stratford Line. Much longer reinforcements would be required.
Alt 10	Install compressor along Stratford Line	Maintenance and operating expenses would exceed the cost of the proposed project.
Alt 11	Geo-targeted demand side management	Would not offset enough load on the FHG Transmission System.

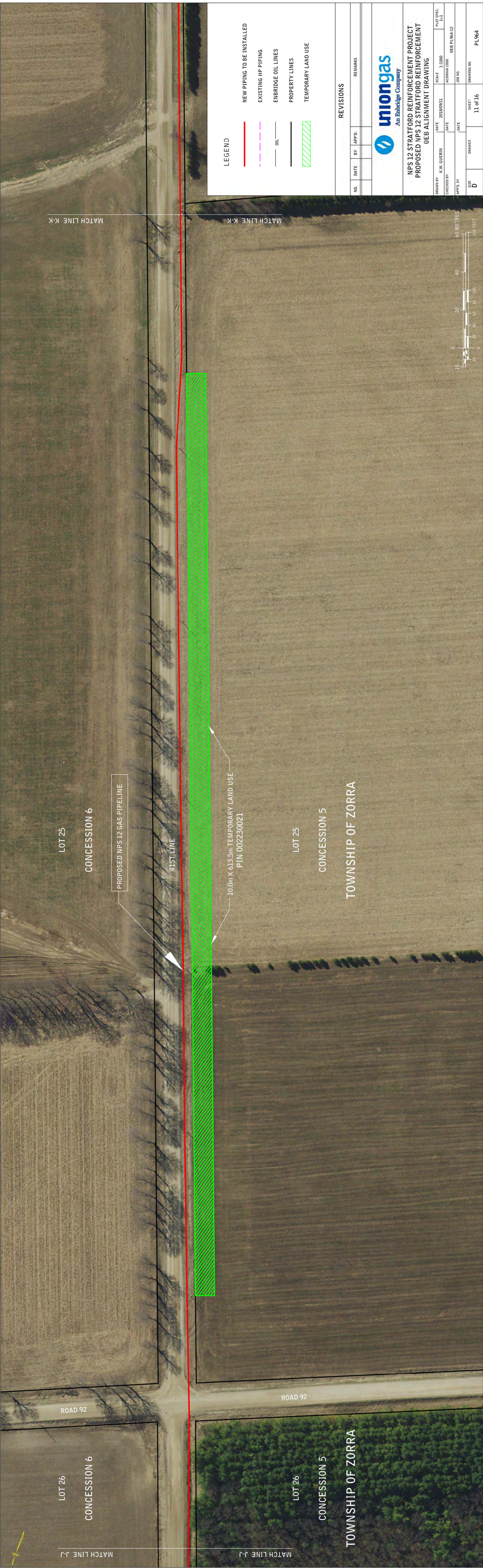




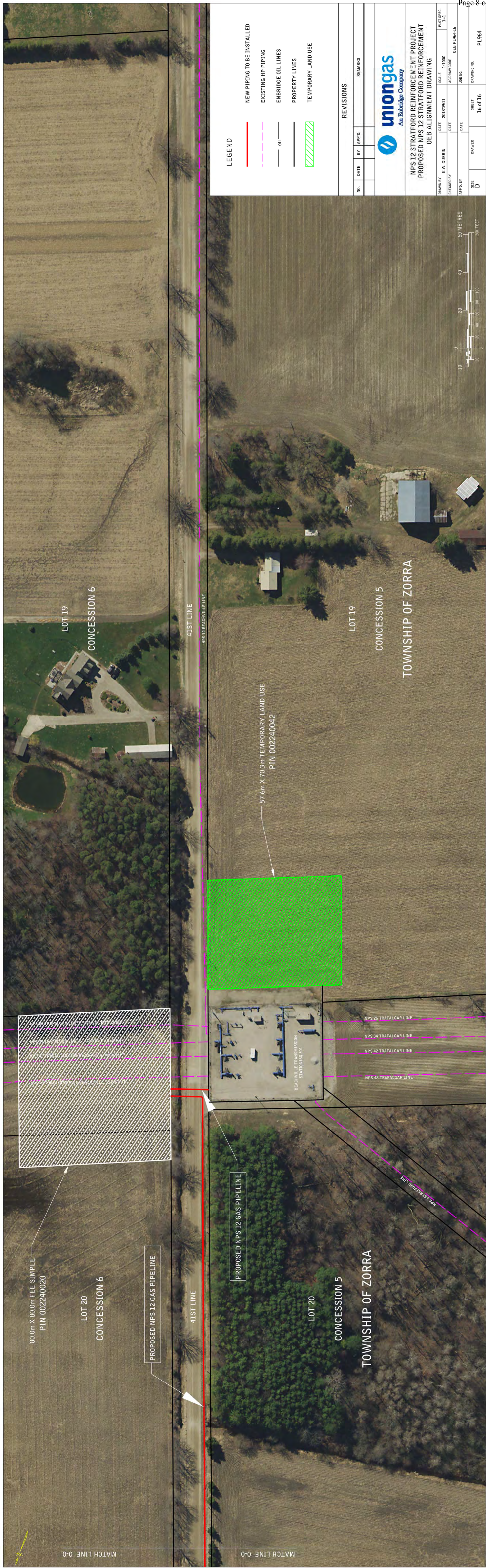












STRATFORD REINFORCEMENT PROJECT

DESIGN AND PIPE SPECIFICATIONS

Design Specifications: NPS 12

Class Location	-	Class 1
Design Class Location	-	Class 1 (minimum)
Design Factor	-	0.8
Location Factor (General)	-	1.0
Location Factor (Roads)	-	0.75
Maximum Design Pressure	-	6160 kPa
Maximum Operating Pressure	-	6160 kPa
Test Medium	-	Water
Test Pressure	-	Min: 8624 kPa; Max: 9240 kPa
Valves/Fittings	-	PN 100
Minimum Depth of Cover	-	0.6 m

Pipe Specifications:

Size	-	NPS-12
Outside Diameter	-	323.9 mm
Nominal Wall Thickness	-	6.0 mm (minimum)
Grade	-	290 MPa (minimum)
Type	-	Electric Resistance Weld
Description	-	C.S.A. Standard Z245.1(Latest Edition)
Category	-	Cat. I
Coating	-	Fusion Bond Epoxy
% SMYS	-	57.3% (based on above minimums)

GENERAL TECHNIQUES AND METHODS OF CONSTRUCTION

1. Pipeline construction is divided into several crews that create a mobile assembly line. Each crew performs a different function, with a finished product left behind when the last crew has completed its work.
2. Union Gas will provide its own inspection staff to ensure the contractor meets its contractual obligations.
3. Where possible, trees are cleared in the winter before construction to avoid avian nesting concerns. If the land cannot be accessed in the winter due to incomplete easement negotiations or other reason, an ornithologist will inspect the site and direct any avian mitigation needed. Logs are stacked at the side of the running line for landowner use, if requested.
4. The contractor's clearing crew braces and cuts all fences crossing the running line and installs any required temporary gates. This crew clears small brush and crops on the running line and temporary working areas.
5. The grading crew constructs approaches through road, and railway ditches to allow equipment onto the working side of the running line. This crew also builds roads through wet areas to allow heavy equipment operation. The grading crew strips a certain width of topsoil with bulldozers and graders so that it will not be mixed with the subsoil later removed from the trench. In hilly terrain, the grade is leveled to provide a stable working surface.
6. The contractor erects safety barricades around excavations adjacent to roads. Flagmen and signs are used for traffic control. The running line is fenced nightly at all access points.

7. The stringing crew then lays pipe on wooden skids on the working side of the running line adjacent to the proposed trench area. Wherever possible, the stringing trucks hauling the pipe travel down the centre of the proposed trench to minimize soil compaction effects.
8. The contractor, by use of a trenching machine or hoe excavator, will excavate a trench approximately 0.75 metre in width for the pipeline, depending on ground conditions at the time. Accesses across the running line including laneways are left unexcavated where requested by the landowner. All tile cut during trench excavation is flagged at the trench and running line limits to signify to the tile repair crew that a repair is required. All utilities that will be crossed or paralleled closely by the pipeline will be located prior to trenching.
9. Bedrock will be removed by mechanical methods such as excavators using a rock bucket or a “hoe ram”.
10. Concurrent to trenching, the contractor will have separate crews to install the pipe at road, railway and large watercourse crossings. This operation will be accomplished by either Jack and Bore (auger) or Horizontal Directional Drill (HDD). These are trenchless technology techniques that do not disrupt the surface features at the crossing site. Roads that cannot be crossed using the methods above will be open cut.
11. Next, the pipe between roads, accesses, laneways, and streams is welded into one continuous length. All welds are ultrasonically and/or radiographically inspected and then coated and lowered into the trench. After sections of pipe are lowered into the trench, subsoil is backfilled by a drag line, bulldozer or backhoe. If the excavated material contains too much rock for direct backfilling, it may be sifted to separate the fine parts from the rock. If such separation is not possible due to the consistency of the material or if a large quantity of rock remains, the unsuitable materials will be hauled away and sand brought in for backfilling.

12. The tie-in crew is responsible for the installation of pipe across accesses and laneways to minimize the length of time that these accesses are out of service to the landowner. The tie-in crew is also responsible for the pipeline installation at most river and stream crossings.
13. The pipe is filled with water and hydrostatically tested to prove its integrity. Cathodic protection is applied to the completed pipeline.
14. After the trench is backfilled, any cut cross-trench tile is repaired. Union undertakes that it is responsible for the tile repair resulting from construction and will stand good for the tile repairs at any further date after construction of the pipeline. Union retains the services of a tile consultant to determine if it is better to repair individual tiles crossing the trench or install a header system. .
15. The clean-up crew is the last crew on the property. On farmland, it prepares the subsoil on the stripped portion of the running line by subsoiling or deep chisel ploughing to break up compaction and picking all stones down to 100 millimetres in diameter. The trench line is crowned with enough subsoil to allow for trench settlement. Excess subsoil is removed to an acceptable location on the landowner's property or hauled to a disposal site. Topsoil is then replaced using a drag line or backhoe and small bulldozers to minimize compaction. The working side of the running line is then chisel ploughed and stone picked. The clean-up crew will also repair fences, pick up debris, replace sod in landscaped areas and reseed sensitive areas such as woodlots, ditch banks and stream crossings.
16. When the clean-up is completed, the landowner is asked by a Company representative to sign a clean-up acknowledgement form if satisfied with the clean-up. This form, when signed, allows release of payment for the clean-up to the contractor. This form in no way releases the Company from its obligation for tile repairs, compensation for damages and/or further clean-up as required due to erosion or subsidence directly related to

pipeline construction.

17. The pipe is filled with water and hydrostatically tested to prove its integrity. Cathodic protection is applied to the completed pipeline.
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2019 STRATFORD REINFORCEMENT PROJECT

PROJECT SCHEDULE

[illegible]

Stratford Reinforcement Project

Total Estimated Capital Costs

	Mainline	Stations	Total
Materials	\$2,478,000	\$519,000	\$2,997,000
Construction and Labour	\$19,176,000	\$2,444,000	\$21,620,000
Contingencies	\$3,179,000	\$444,000	\$3,623,000
Interest During Construction	\$261,000	\$39,000	\$300,000
Total Estimated Capital Costs –	\$25,094,000	\$3,446,000	\$28,540,000

Stratford Reinforcement Project
InService Date: Nov-01-2019

Project Year	(\$000's)	1	2	3	4	5	6	7	8	9	10
Cash Inflow											
Revenue	29		83	137	196	249	299	358	408	433	433
Expenses:											
O & M Expense	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Municipal Tax	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)
Income Tax	889	619	534	461	396	339	284	236	199	199	172
Net Cash Inflow	844	628	598	583	571	563	568	568	570	558	531
Cash Outflow											
Incremental Capital	27,933	607	-	-	-	-	-	-	-	-	-
Change in Working Capital	0	-	-	-	-	-	-	-	-	-	-
Cash Outflow	27,933	607	-	-	-	-	-	-	-	-	-
Cumulative Net Present Value											
Cash Inflow	823	1,404	1,929	2,416	2,869	3,293	3,700	4,087	4,447	4,773	4,773
Cash Outflow	27,933	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510
NPV By Year	(27,110)	(27,106)	(26,580)	(26,093)	(25,641)	(25,216)	(24,810)	(24,422)	(24,062)	(23,737)	(23,737)
Project NPV	-20,266										

Stratford Reinforcement Project
InService Date: Nov-01-2019

Project Year	(\$000's)	11	12	13	14	15	16	17	18	19	20
Cash Inflow											
Revenue		433	433	433	433	433	433	433	433	433	433
Expenses:											
O & M Expense		(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Municipal Tax		(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)
Income Tax		148	126	107	89	73	59	46	34	23	13
Net Cash Inflow		506	485	465	447	432	417	404	392	381	372
Cash Outflow											
Incremental Capital		-	-	-	-	-	-	-	-	-	-
Change in Working Capital		-	-	-	-	-	-	-	-	-	-
Cash Outflow		-	-	-	-	-	-	-	-	-	-
Cumulative Net Present Value											
Cash Inflow		5,068	5,336	5,580	5,803	6,008	6,196	6,369	6,528	6,675	6,811
Cash Outflow		28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510
NPV By Year		(23,442)	(23,174)	(22,929)	(22,706)	(22,502)	(22,314)	(22,141)	(21,982)	(21,834)	(21,698)

Project NPV

Profitability Index

[illegible]

Stratford Reinforcement Project
InService Date: Nov-01-2019

<u>Project Year</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>
<u>Cash Inflow</u>										
Revenue	433	433	433	433	433	433	433	433	433	433
Expenses:										
O & M Expense	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Municipal Tax	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)	(69)
Income Tax	4	(4)	(11)	(18)	(25)	(30)	(36)	(40)	(45)	(49)
Net Cash Inflow	363	355	347	340	334	328	323	318	314	310
<u>Cash Outflow</u>										
Incremental Capital	-	-	-	-	-	-	-	-	-	-
Change in Working Capital	-	-	-	-	-	-	-	-	-	-
Cash Outflow	-	-	-	-	-	-	-	-	-	-
<u>Cumulative Net Present Value</u>										
Cash Inflow	6,938	7,055	7,164	7,265	7,360	7,448	7,531	7,608	7,680	7,748
Cash Outflow	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510	28,510
NPV By Year	(21,572)	(21,455)	(21,346)	(21,244)	(21,150)	(21,062)	(20,979)	(20,902)	(20,829)	(20,762)

Project NPV

Profitability Index

By Year PI
Project PI

0.24 0.25 0.25 0.25 0.25 0.26 0.26 0.26 0.27 0.27 0.27

Project NPV

Profitability Index

By Year PI
Project PI

Stratford Reinforcement Project InService Date: Nov-01-2019 (Project Specific DCF Analysis) Stage 1 DCF - Listing of Key Input Parameters, Values and Assumptions (\$000'S)	
Discounting Assumptions Project Time Horizon Discount Rate	40 years commencing at facilities in-service date of 01 Nov 19 Incremental after-tax weighted average After Tax Cost of Capital of 5.28%
Key DCF Input Parameters, Values and Assumptions Net Cash Inflow: Incremental Revenue: Transmission portion of customer rates Operating and Maintenance Expense Incremental Tax Expenses: Municipal Tax Income Tax Rate CCA Rates: <div style="display: flex; justify-content: space-between;"> <div>CCA Classes:</div> <div>CCA Class</div> <div>CCA Rate</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Land Rights</div> <div>14.1</div> <div>5%</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Steel Mains</div> <div>49</div> <div>8%</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Valve Site</div> <div>8</div> <div>20%</div> </div>	0.17788 \$/ M3 / month applied to Contract Demand 0.01980 Transmission Margin \$ / M3 consumed applied to general service demands Estimated incremental cost Estimated incremental cost 26.50% Declining balance rates by CCA class:
Cash Outflow: Incremental Capital Costs Attributed Change in Working Capital	Refer to DCF Schedule 13 5.05% applied to O&M

Calculation of Revenue (Transmission Margins)

Stratford Reinforcement Project

InService Date: Nov-01-2019

Line	Project Year	1	2	3	4	5	6	7	8	9	10
Transmission costs are recovered from Contract rate classes based on Firm Contract Demand (CD) The deemed incremental revenue is based on the capacity created on the FHG system											
Contract Methodology: Total CD * 12 *Transmission Margin											
1	Transmission Margin \$/M3 / month					0.1779					
2	Contract Demand 10^3m^3/month	1	1	2	6	6	6	11	11	11	11
3	Transmission Margin	\$2	\$2	\$4	\$12	\$14	\$14	\$24	\$24	\$24	\$24
General Service Transmission Margin = Volumes * Transmission Margin											
4	Transmission Margin \$ / M3 consumed					0.01980					
5	Volume 10 ^3 M^3	1,358	4,092	6,753	9,314	11,863	14,390	16,895	19,399	20,650	20,650
6	Transmission Margin	\$27	\$81	\$134	\$184	\$235	\$285	\$334	\$384	\$409	\$409
7	Total Transmission Margin	\$29	\$83	\$137	\$196	\$249	\$299	\$358	\$408	\$433	\$433

Stage 2 (Customer Fuel Savings) Data for Owen Sound Reinforcement Assumptions

Line	(a)	(b)	(c)	(d)=(b)-(c)
	Fuel Prices	\$/m ³	Gas \$/m ³	Diff \$/m ³
1	Heating Oil	1.02	0.16	0.86
2	Number 6 Oil	0.37	0.16	0.22
3	Diesel	0.76	0.16	0.61
4	Propane	0.86	0.16	0.70
5	Electricity	1.02	0.16	0.87

Fuel Mix in the Event Gas is Not Available

	(e)	(f)=(d)*(e)
	General Service	
	Fuel Mix	Wt Ave Diff \$/ M ³
Heating Oil	20%	0.172
Number 6 Oil	-	-
Diesel	-	-
Propane	50%	0.350
Electricity	30%	0.261
Total %	100%	
Weighted Savings \$/m ³		0.783

Gas and alternative fuel prices are the average posted prices for the 12 month period ending December 2017

Calculation for Stage 2 Incremental Energy Demand

12		Estimated Energy Demand with Pipeline Built
13	Equals	Potential annual energy demand (for Stage 2 calculations)
14	Times	Weighted Average Savings per M3
15	Equals	Annual Fuel Savings: Natural Gas Vs Alt Fuels

Discount Rate for Net Present Values 4.0%

Length of Term for Fuel Savings

Stage 2 estimated based on 20 years and 40 years

Present Value of Customer Fuel Savings

For conservatism, the NPV is assessed over 20 years with sensitivity at 40 years

Figures in \$ Millions	20 Years	40 Years
General Service Fuel Savings	175	282

NPV Fuel Savings Range from \$175 Mil over 20 yrs to \$282 Mil over 40 yrs

Stratford Reinforcement Project
Economic Benefits from Infrastructure Spending
Figures in \$ Millions

Line No	Description	Capex Spend Out of Country	Capex Spend within Ontario	Capex Spend within Canada Excluding Ontario	Capex Total (d)= sum (a-c)	
1	Proposed Facilities	(a) \$ 0.3	(b) \$ 24.8	(c) \$ 3.4	\$ 28.5	
2						
3	% of Total Spend	1%	87%	12%	100%	Line 1 /Total Line 1 Col (d)
4						
5	GDP					
6	GDP Factor		1.14			
7	GDP Impact \$ Millions		\$ 28			Line 1 * Line 6
8						
9	Employment (Jobs)					
10	Jobs Factor		16.7			
11	Jobs Created		415			Line 1 * Line 10
12						
13	Taxes Paid by Union Gas					
14	Property Tax		\$ 2			Source: NPV DCF
15	Provincial Income Tax		\$ 3			Source: NPV DCF
16	Total Provincial Taxes		\$ 5			
17	Federal Income Tax		\$ 2			Source: NPV DCF
18	Total Taxes Paid		<u>\$ 7</u>			
19						
20	Total Value to Ontario					
21	GDP Impact \$ Millions		\$ 28			Line 7
22	Total Provincial Taxes		\$ 5			Line 16
23	NPV Total Value to Ontario		<u>\$ 33</u>			

STRATFORD REINFORCEMENT 2019

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE Dimensions (Metres) W x L Hectares			TEMPORARY EASEMENT Dimensions (Metres) W x L Hectares			MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
ST1	53274-0014		PT LOT 4 CONCESSION 9 DOWNIE GORE AS IN R351274 ; S/T R82273 PERTH S				15.2 x 40 0.150			
Perth-Oxford Road										
ST2	00221-0015		PT LT 36 CON 5 WEST ZORRA; PT RDAL BTN LT 35 AND LT 36 CON 5 WEST ZORRA AS IN 376364; S/T A16033; ZORRA	30 x 50 0.15 26.5 x 180 0.52			10 x 20 0.020			
ST3	00221-0013		E1/2 LT 35 CON 5 WEST ZORRA; ZORRA				10 x 371.2 0.370 10 x 128.4 0.130			
ST4	00221-0011		PT LT 34 CON 5 WEST ZORRA AS IN 387064; S/T A12565; ZORRA				10 x 614.8 0.620			
ST5	00221-0010		PT LT 33 CON 5 WEST ZORRA AS IN 406669; ZORRA				10 x 615.1 0.620			
ST7	00221-0006		PT LT 31 CON 5 WEST ZORRA AS IN 388040 EXCEPT PT 10, 41R1418; ZORRA				10 x 570 0.570			
ROAD 96										
ST9	00222-0013		E1/2 LT 29 CON 5 WEST ZORRA; ZORRA				10 x 455.2 0.460			
ST11	00222-0006		E1/2 LT 27 CON 5 WEST ZORRA; ZORRA				10 x 613.5 0.610			

STRATFORD REINFORCEMENT 2019

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	FEE Dimensions (Metres)			TEMPORARY EASEMENT Dimensions (Metres)			MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
ROAD 92										
ST13	00223-0021	THE TRUSTEES OF ST. ANDREWS UNITED CHURCH 436951 43rd Line Embro ON N0J 1J0 Robert Lupton	PT LT 25 CON 5 WEST ZORRA AS IN 262421 EXCEPT PT 16, 17 & 18 41R1711; S/T 269511, A21292, WZ11473, WZ13121; ZORRA				10 x 486.7	0.500		
ROAD 88										
ST19	00224-0045	UNION GAS LIMITED 50 Keil Dr. N Chatham ON N7M 5M1	PT LT 19-20 CON 5 WEST ZORRA PT 1 & 2, 41R6473; S/T 381675; S/T 294014; ZORRA							
ST20	00224-0042	FARAMACK FARMS LTD. MACKAY, GORDON MAXWELL MACKAY, JOANNE GALE 436308 43rd Line Embro ON N0J 1J0	PT LT 19 CON 5 WEST ZORRA AS IN 396318 EXCEPT PT 1, 41R5085; T/W 381675; ZORRA				57.5 x 70.3	0.400		
ST21	00224-0020	SHINESS HOLSTEINS LIMITED c/o Dan Matheson 884241 88 Road Embro ON N0J 1J0	PT LT 20 CON 6 WEST ZORRA AS IN 382990; S/T A11435 AS AMENDED BY PL683; S/T 223682, 342300, 392366, 392367, 394061, A12575, A20173; ZORRA SUBJECT TO AN EASEMENT AS IN CO129694	80 x 80	0.63	5	382.7	0.190		

Environmental Report

FILED SEPARATELY AS EVIDENCE DUE TO FILE SIZE

Reference # & Date	Initial Contact Details			Response Details	
	Comment Format, To/From	Subject Line	Comment / Question / Request	Action / Response	Who Responded / Date / Format / UG copied
OPCC_CT_001 20180928	Email from: Stephanie Churchill Planning Technician Hydro One Networks Inc. (HONI) 16 Graham Street Woodstock, ON N4S 6J6 519-537-7172 x2236 stephanie.churchill@hydroone.com To: AECOM	Union Gas Limited - Stratford Reinforcement Project	HONI confirmed that they require pre-engineered locates be obtained to determine if Hydro One plant is within proximity of the Project. HONI noted that consultation with local staff would be required to identify and developed plans to mitigate impacts to their infrastructure.	AECOM confirmed that Union Gas are in ongoing discussions with local and regional HONI contacts to develop construction plans that are acceptable and avoid impacts to HONI infrastructure, where possible.	Mark van der Woerd / 2018-11-01 / Letter / Yes
OPCC_CT_002 20181005	Letter From: Laura Hamulecki lhamulecki@oxfordcounty.ca on behalf of David Simpson Director of Public Works Oxford County 21 Reeve Street, P.O. Box 1614 Woodstock, ON N4S 7Y3 To: AECOM	Oxford County Comments re: Stratford Reinforcement Project by Union Gas Ltd Class EA	Oxford County provided a letter detailing their comments regarding the Stratford Reinforcement Project Environmental Report. They had no concerns regarding water or wastewater. They requested that the transmission main be placed at a depth of 4 to 5 metres below existing asphalt of roadways for a distance of 15 m from centreline. They also noted that the proponent will be required to obtain municipal consent from Oxford County prior to construction.	AECOM prepared a letter to Oxford County on behalf of Union Gas thanking them for their comments and noted that they had no concerns regarding water or wastewater. The letter also provided the language regarding the transmission depth within the ER, including the specific section of the ER where it is written.	Mark van der Woerd / 2018-10-25 / Letter / Yes
OPCC_CT_003 20181026	Letter from: Dan Minkin Heritage Planner Ministry of Tourism, Culture and Sport 401 Bay Street, Suite 1700 Toronto, ON M7A 0A7 416-314-7147 Dan.Minkin@ontario.ca To: AECOM	Stratford Reinforcement Phase 1 Project - MTCS Comments	MTCS noted that the ER indicated that additional Stage 2 archaeological survey work would be completed during the 2018 field season, and were unsure why the results of the fieldwork were not included in the ER.	AECOM confirmed that the results of the Stage 2 Archeological Assessment were considered when the ER was finalized and the fieldwork results indicated that no additional fieldwork/reporting is required.	Mark van der Woerd / 2018-11-01 / Letter / Yes

From: Stephanie.Churchill@HydroOne.com [mailto:Stephanie.Churchill@HydroOne.com]

Sent: September-28-18 1:33 PM

To: Van der Woerd, Mark

Cc: Stephanie.Churchill@HydroOne.com

Subject: FW: Union Gas Limited - Stratford Reinforcement Project

Hi Mark – I see you are on Jessalyn's out of office. Please see below.

Thank you,
Stephanie

Stephanie Churchill

Planning Technician
Woodstock Field Business Center
Distribution Lines Work Management

Hydro One Networks Inc.

16 Graham Street
Woodstock ON | N4S 6J6

Phone: 519-537-7172 x 2236

CISCO: 85372236

Email: stephanie.churchill@hydroone.com

www.HydroOne.com

From: CHURCHILL Stephanie

Sent: Friday, September 28, 2018 11:22 AM

To: Jessalyn.beaney@aecom.com

Cc: CHURCHILL Stephanie

Subject: FW: Union Gas Limited - Stratford Reinforcement Project

Hi Jessalyn – Please obtain pre-engineered locates to determine if Hydro One plant is within proximity to the proposed project.

If it is found, please contact at westernfbcplanning@hydroone.com for a further assessment if our plant will impact your project and vice versa.

Thank you,
Stephanie

Stephanie Churchill

Planning Technician
Woodstock Field Business Center
Distribution Lines Work Management

Hydro One Networks Inc.
16 Graham Street
Woodstock ON | N4S 6J6

Phone: 519-537-7172 x 2236

CISCO: 85372236

Email: stephanie.churchill@hydroone.com

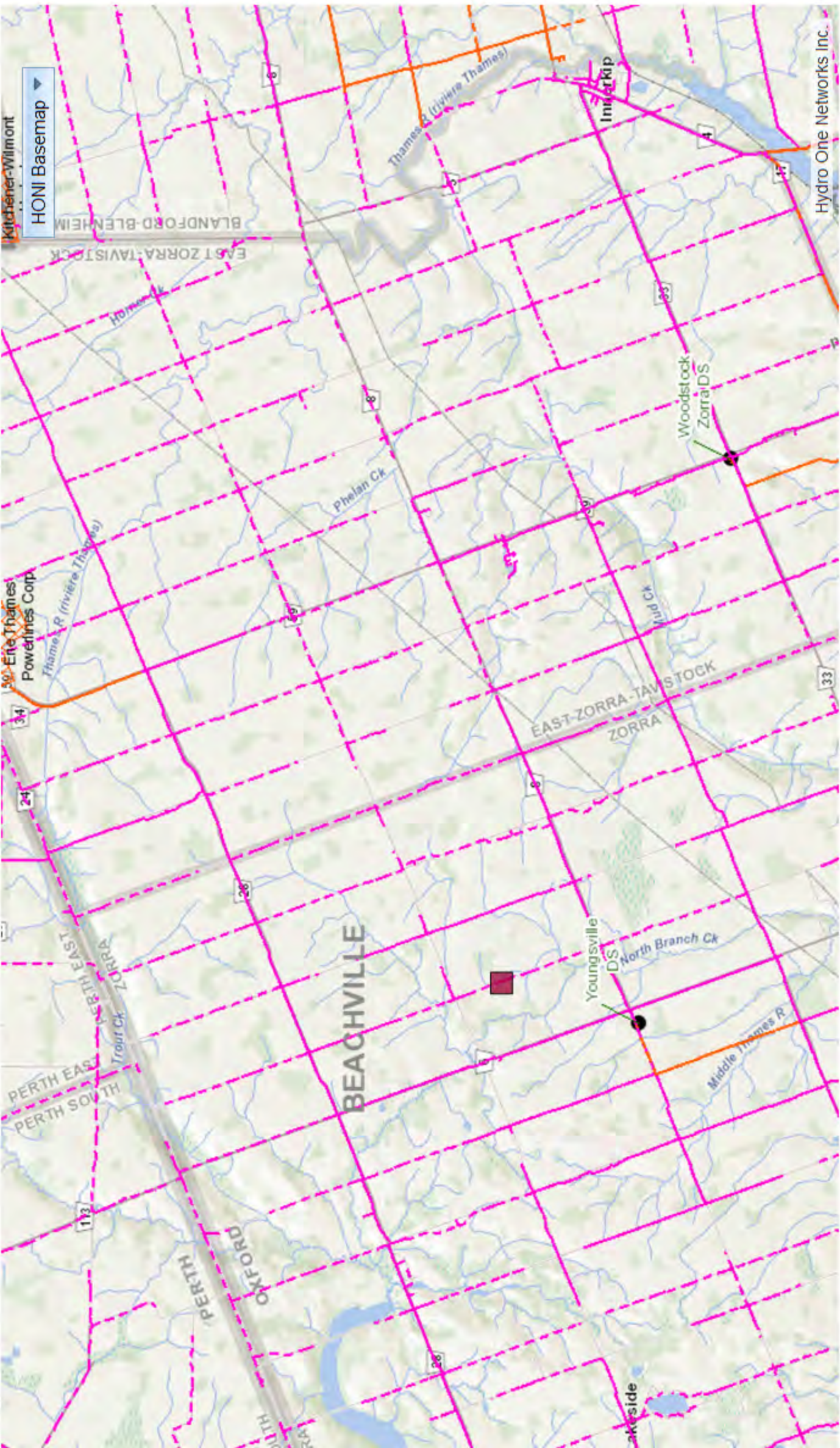
www.HydroOne.com

Filed: 2018-11-02

EB-2018-0306

Schedule 20

Page 3 of 15



Target Layer :
Select a Layer



Layers

Legend

Three Phase Primary
Submarine, 44 kV

Three Phase Primary
Underground, 44 kV

PrimaryOverhead_Dx

Single Phase Primary
Overhead, 2.4/4.16 kV

Two Phase Primary
Overhead, 2.4/4.16 kV

Three Phase Primary
Overhead DR, 2.4/4.16 kV

Single Phase Primary
Overhead, 4.8/8.32 kV

Two Phase Primary
Overhead, 4.8/8.32 kV

Three Phase Primary
Overhead DR, 4.8/8.32 kV

Single Phase Primary

Find Feature

Locate Point

Buffer

Find Address



Legend

- Beachville Take-Off
- Existing Pipeline
- Highway
- Major Road
- Local Street
- Watercourse
- Waterbody
- Wooded Area
- Geographic Lot Fabric
- Municipal Boundary, Lower
- Project Study Area



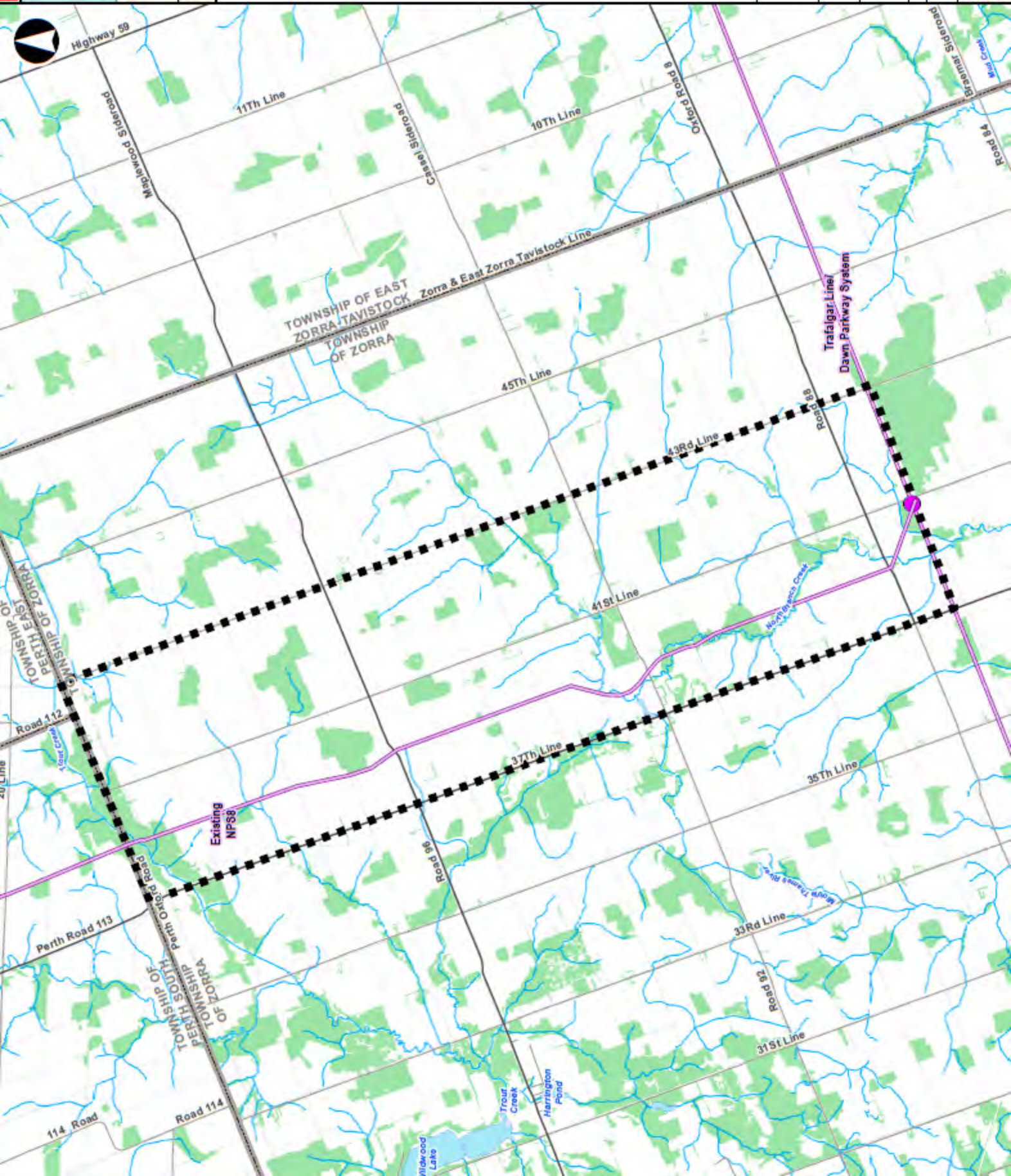
Union Gas Limited
Stratford Reinforcement Project

Project Study Area

May, 2018	1:45,000	Source: O.G. 17N
P: 60437567	Figure 1	Figure 1



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From: Laura Hamulecki <lhamulecki@oxfordcounty.ca>

Sent: Friday, October 5, 2018 3:43:33 PM

To: Beaney, Jessalyn

Subject: Oxford County Comments re: Stratford Reinforcement Project by Union Gas Ltd Class EA

Good Afternoon Jessalyn,

In response to your letter dated September 7, 2018, please find the attached comments on behalf of Oxford County related to the Stratford Reinforcement Project and Environmental Report.

Kind Regards,

LAURA HAMULECKI | Administrative Assistant, Public Works

OXFORD COUNTY | 21 Reeve St., PO Box 1614, Woodstock, ON, N4S 7Y3

WWW.OXFORDCOUNTY.CA | T 519.539.9800 / 1-800-755-0394, ext 3110



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 Think about our environment. Print only if necessary.

October 5, 2018

Sent via email: jessalyn.oke@aecom.com

Jessalyn Beaney
Deputy Project Manager, AECOM
201-45 Goderich Road
Hamilton, ON L8E 4W8

Re: Oxford County Comments on Union Gas Limited Stratford Reinforcement Project

Dear Ms. Beaney:

Oxford County staff are in receipt of your letter dated September 7th, 2018 regarding the proposed expansion of Union Gas' natural gas transmission system in Oxford County. As summarized below, County staff have considered any potential environmental and socio-economic effects that may result from the project.

The proposed location is not within the vicinity of any of the County's water or wastewater infrastructure, nor is it within any municipal wellhead protection areas. As a result, we have no concerns with this project from a water or wastewater perspective.

With respect to depth of the proposed transmission main at road crossings (4 to 5 metres below the existing asphalt), staff requested that this depth should be maintained a minimum of 15 metres from centerline of the road right-of-way to account for future road widening.

Accordingly, the County had previously requested that such design commitments be fully documented in the Class Environmental Assessment Study Report and complied with during the implementation phase. Unfortunately, it does not appear that this request has been documented as a commitment in the Environmental Report for the project. The County again is requesting that the provision be fully documented as a formal Union Gas commitment in the ER before its finalization.

Prior to construction, the proponent will be also required to obtain municipal consent from Oxford County for the proposed undertakings. Should have any questions or require any further information, please feel free to contact me via email at dsimpson@oxfordcounty.ca.

Sincerely,



David Simpson, P.Eng., PMP
Director of Public Works

From: Minkin, Dan (MTCS) [mailto:Dan.Minkin@ontario.ca]
Sent: October-26-18 6:11 PM
To: Van der Woerd, Mark
Subject: Stratford Reinforcement Phase 1 Project - MTCS Comments

Good afternoon,
Please see attached.

Dan Minkin

Heritage Planner

Ministry of Tourism, Culture and Sport

Culture Division | Programs and Services Branch | Heritage Program Unit

401 Bay Street, Suite 1700

Toronto, Ontario M7A 0A7

Tel. 416.314.7147 | Fax. 416.314.7175

**Ministry of Tourism,
Culture and Sport**

Heritage Planning Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416 314 7147
Fax: 416 212 1802

**Ministère du Tourisme,
de la Culture et du Sport**

Unité des programmes patrimoine
Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél: 416 314 7147
Téléc: 416 212 1802

Filed: 2018-11-02

EB-2018-0306

Schedule 20

Page 1 of 15



October 26, 2018 (EMAIL ONLY)

Mark van der Woerd
AECOM
45 Goderich Road
Hamilton, ON L8E 4W8
E: mark.vanderwoerd@aecom.com

RE: MTCS file #: 0003815
Proponent: Union Gas
Subject: Notice of Study Completion
Stratford Reinforcement Phase 1 Project
Location: Township of Zorra, Oxford County, Ontario

Dear Mr. van der Woerd:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with the Notice of Completion for your project. MTCS's interest in this project relates to its mandate of conserving Ontario's cultural heritage. We have reviewed the Environmental Report for this project and offer the following comments.

The Report indicates that additional Stage 2 archaeological survey work would be completed during the 2018 field season. Given the submission of the report at the end of the summer of this year, it is unclear why the results of this fieldwork were not reported in the Report. Incorporating the results of archaeological fieldwork into the evaluation of alternatives and the undertaking of mitigation measures is an important part of the consideration of cultural factors in any environmental assessment process.

Thank you for consulting MTCS on this project. Please continue to do so through the EA process, and contact me for any questions or clarification.

Sincerely,

Dan Minkin
Heritage Planner
dan.minkin@ontario.ca

November 1, 2018

Ms. Stephanie Churchill
Planning Technician
Woodstock Field Business Centre
Distribution Lines Work Management
Hydro One Networks Inc.
16 Graham Street
Woodstock ON | N4S 6J6

Dear Ms. Churchill:

Regarding: Union Gas Limited - Stratford Reinforcement Project

Thank you for your email confirming Hydro One Networks Inc. (HONI) interest in the Stratford Reinforcement Project. As requested in your email, Union Gas has contacted HONI representatives and has been working with Roman Dorfman and Kevin Kew to identify any potential impacts the projects may have on your infrastructure.

Union Gas has been made aware that HONI distribution lines are located within the vicinity of the Project. From conversations with your distribution team, it appears that two poles (Pole CVD WMM and Pole CDW H2C) are located within close proximity to planned Horizontal Directional Drills. Union Gas has been working with the distribution team to ensure impacts to these poles are avoided and will arrange for construction support (e.g. pole support), if required. Union Gas will also ensure that utility locates are completed prior to any work commencing.

If you have any additional questions about the project or would like to discuss our response in more detail, please do not hesitate to contact me using the contact information provided below.

Sincerely,



Mark van der Woerd
Senior Environmental Planner
E: mark.vanderwoerd@aecom.com
P: (289) 439-9803

cc: Ahmed Al-Amry, Union Gas
Tony Vadjla, Union Gas
Jessalyn Oke, AECOM

November 1, 2018

Dan Minkin
Heritage Planner
Ministry of Tourism, Culture and Sport
401 Bay Street, Suite 1700
Toronto, ON
M7A 0A7

Dear Ms. Churchill:

Regarding: MTCS file #: 0003815
Proponent: Union Gas
Subject: Notice of Study Completion
Stratford Reinforcement Phase 1 Project
Location: Township of Zorra, Oxford County, Ontario

Thank you for your letter and for confirming the Ministry of Tourism, Culture and Sport (MTCS)'s interest in the Stratford Reinforcement Project (the Project).

As you noted, the Environmental Report indicated that the additional Stage 2 archaeological survey work would be completed within the 2018 field season. This fieldwork is complete and the results were considered when finalizing the Environmental Report. No archaeological sites or materials were identified on the additional land assessed and the recommendation will be that no further archaeology is required.

The Stage 2 archaeological assessment report that details the assessment methods and results is being finalized and will be submitted to the MTCS for review/approval in November, 2018.

Sincerely,



Mark van der Woerd
Senior Environmental Planner
E: mark.vanderwoerd@aecom.com
P: (289) 439-9803

cc: Ahmed Al-Amry, Union Gas
Tony Vadjia, Union Gas
Jessalyn Oke, AECOM

November 1, 2018

Mr. David Simpson, P. Eng., PMP
Director of Public Works
Oxford County
21 Reeve Street, P.O. Box 1614
Woodstock, ON N4S 7Y3

Dear Mr. Simpson:

Regarding: Oxford County Comments on Stratford Reinforcement Project by Union Gas Limited Environmental Report

Thank you for taking the time to review the Stratford Reinforcement Project Environmental Report (ER) and providing comments on behalf of Oxford County.

In your letter dated October 5, 2018, we have noted that Oxford County has no concerns regarding the potential for the project to impact the County's water and wastewater infrastructure. With regard to potential transportation impacts, we acknowledge your request that the depth of the pipeline be located at least 4-5 metres below grade at main road crossings for at least 15 metres from centerline of the road right-of-way. This mitigation measure has been integrated into the ER and can be reviewed in the table below (taken from page 87 of the ER within Table 6-12). We have highlighted the language provided for your reference in yellow.

Potential Effect	Proposed Mitigation Measures	Net Effects
Restricted property access	<ul style="list-style-type: none"> Sufficient notice will be provided to landowners to address any concerns and mitigate any potential issues like noise, dust, access and general safety during construction. Access to adjacent properties should be maintained at all times, where feasible. All work should be confined to the road ROW. If additional work area is required, temporary working space must be acquired through discussions with landowners. Pipeline crossing of Oxford County roads will be 4 m to 5 m below existing asphalt and will be maintained a minimum of 15 m from the centreline of the Oxford County road ROW to account for future road widening and/or drainage improvements. Construction activities will be co-ordinated with adjacent land users, such as other utility providers. Mitigation measures listed under "Increased construction traffic volumes" shall be implemented to avoid interference of the construction traffic with the access to the properties. 	<ul style="list-style-type: none"> Effects due to restricted property access are anticipated to be minimal with the implementation of mitigation measures. – <i>Low likelihood of occurrence and limited magnitude as a result.</i>

We hope that the above addresses your comment. If you have any additional questions about the project or would like to discuss our response in more detail, please do not hesitate to contact me using the contact information provided below.

Sincerely,



Mark van der Woerd
Senior Environmental Planner
E: mark.vanderwoerd@aecom.com
P: (289) 439-9803

cc: Ahmed Al-Amry, Union Gas
Tony Vadlja, Union Gas
Jessalyn Oke, AECOM

Indigenous Consultation Report

Union Gas Stratford project

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Indigenous Consultation Report

Stratford Project

1. Project Description

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System.

The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps. (Schedule 4-A)

A preferred route for the proposed pipeline has been determined and can be found in the Environmental Report which was sent to Shereen Smithanik at the Ministry of Energy ("MOE") on September 7, 2018 as part of the Ontario Pipeline Coordinating Committee review for this project.

2. First Nation and Métis Communities Consulted

Consistent with the 7th Edition of the Ontario Energy Board's *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 2016* Union Gas was delegated the procedural aspects of the consultation from the MOE. A copy of the Union Gas letter informing the MOE of the project is attached as Schedule 4-B. The following communities were listed by the MOE in the delegation letter (see Schedule 4-C):

Aamjiwnaang First Nation	Chief Joanne Rogers Sharilyn Johnson, Environment Coordinator
Bkejwanong (Wapole Island First Nation)	Chief Dan Miskokomon Dr. Dean Jacobs, Consultation Manager
Chippewas of the Thames First Nation	Chief Myeengun Henry Chief Leslie White-Eye (former) Kelly Riley, Acting Lands & Environment Director Fallon Burch, Consultations Coordinator Rochelle Smith, A/Consultation Coordinator
Chippewas of Kettle and Stony Point First Nation	Chief Thomas Bressette Valerie George
HDI	Hazel Hill, HDI Director Leanna Hill, Environmental Project Manager Carl Hill, Environment Officer
Oneida Nation of the Thames	Chief Randall Phillips Brandon Doxtator, Councillor Jenelle Cornelius, Environment Technologist Justin Doxtator, Councillor and Assistant to the Chief

Six Nations of the Grand River	Chief Ava Hill Joanne Thomas, Consultation Supervisor
--------------------------------	--

3. Consultation Activities

Aamjiwnaang First Nation				
Date	Activity	Issues raises	Outcome	Doc Location
Sept 23/15	Email sent to Chief Christopher Plain and Sharilyn Johnson	Letter sent to confirm the project and requested consultation or further follow up required.		Pg. 20
Apr 9/18	Email notification of project sent to Chief Rogers and Sharilyn Johnson	Email notified community of the project and letter provided details on the project and touch upon it being first started in 2015.	No response received	Pg. 21
May 1/18	Letter sent via email to Chief Rogers and Sharilyn Johnson	Letter advising of the Information sessions that would be held on the project.	No response received	Pg. 23
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 27
July 25/18	Ken McCorkle telephone call with Jessalyn from AECOM	Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.		
July 25/18	Email to Sharilyn Johnson	Confirmed with Aecom that Aamjiwnaang First Nations has monitors in the field for the Archeology study Follow up email to Sharilyn to confirm if any further information on the project was require. Provided information in the email about the project initially starting in 2015 and that a current Archeology assessment was underway. Provided information that construction would not start until 2019 and that it was within the road right of way. Stated that at any time they have any questions or concerns, to reach out to Union Gas and Ken.	Ken to follow up with Sharilyn Johnson	Pg. 28
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle	Letter and Environmental Report were sent to the Chief for their review.		Pg. 29
Bkejwanong (Walpole Island) First Nation				
Date	Activity	Issues raises	Outcome	Doc Location
Sept 23/15	Letter sent to Chief Miskokoman and Dr. Dean Jacobs	Letter sent to confirm the project and requested consultation or further follow up required.		Pg. 30
Apr 9/18	Email notification of project sent to Chief Miskokoman, Dr. Jacobs and Janet Macbeth	Email notified community of the project and letter provided details on the project and touch upon it being	No response received	Pg. 31

May 1/18	Letter sent via email to Dr. Jacobs and Janet Macbeth	first started in 2015. Letter advising of the Information sessions that would be held on the project.	No response received	Pg. 33
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 38
July 12/18	Telephone call with Dr. Jacobs	Spoke with Dr. Jacobs about the project and he had no concerns at this time. If he has any questions or concerns, he will reach out to Ken McCorkle.		
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle	Letter and Environmental Report were sent to the Chief for their review.		Pg. 39
Chippewas of the Kettle and Stony Point First Nation				
Date	Activity	Issues raises	Outcome	Doc Location
Sept 23/15	Letter sent to Chief Bressette and Lorrane George	Letter sent to confirm the project and requested consultation or further follow up required.		Pg. 40
Apr 9/18	Email notification of project sent to Chief Thomas Bressette and Valerie George	Email notified community of the project and letter provided details on the project and touch upon it being first started in 2015.	No response received	Pg. 41
May 1/18	Letter sent via email to Chief Thomas Bressette and Valerie George	Letter advising of the Information sessions that would be held on the project.		Pg. 43
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 47
July 20/18	Telephone call and email to Valerie George	Reviewed the project details and discussed project being within road allowance and reinforcing the existing system. Discussed and acknowledged that Kettle and Stony Point	Email sent July 24 with 2015 information provided.	Pg. 48

		First Nations had monitors on site and agreement was in place. Email provided copies of information that was sent in 2015. Agreed that if more information or further follow up was required up to give Ken McCorkle a call and arrangements can be made to meet again Letter and Environmental Report were sent to the Chief for their review.			
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle			Pg. 48	
Chippewa of the Thames First Nation					
Date	Activity	Issues raises	Outcome	Doc Location	
Sept 23/15	Email sent to Chief White-Eye and Rolanda Elijah	Letter sent to confirm the project and requested consultation or further follow up required.		Pg. 49	
Apr 9/18	Email notification of project sent to Chief Henry, Kelly Riley and Emma Young	Email notified community of the project and letter provided details on the project and touch upon it being first started in 2015.	Email response from Emma Young advising that the information had been passed onto Rochelle Smith, Consultation Coordinator	Pg. 50	
May 1/18	Letter sent via email to Chief Henry and Roland Elijah	Letter advising of the Information sessions that would be held on the project.		Pg. 52	
May 8/18	Email from Rochelle Smith, Consultation Coordinator	Following up on discussion regarding an April meet, Rochelle provided dates in May to discuss Stratford Reinforcement Project.	Ken agreed to May 18 for meeting.	Pg. 58	
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 59	
May 18/18	Meeting on May 18, 2018 with Emma Young, Environmental officer and Rochelle Smith, consultation officer	Handed out copies of the Stratford project maps and went over project details Community had monitor on the project in 2015 and as it is being reactivated, they asked to have a monitor on site. Question as to why project started in 2015 and then was cancelled. Explained that it was a resource and timing issues for Union Gas.			

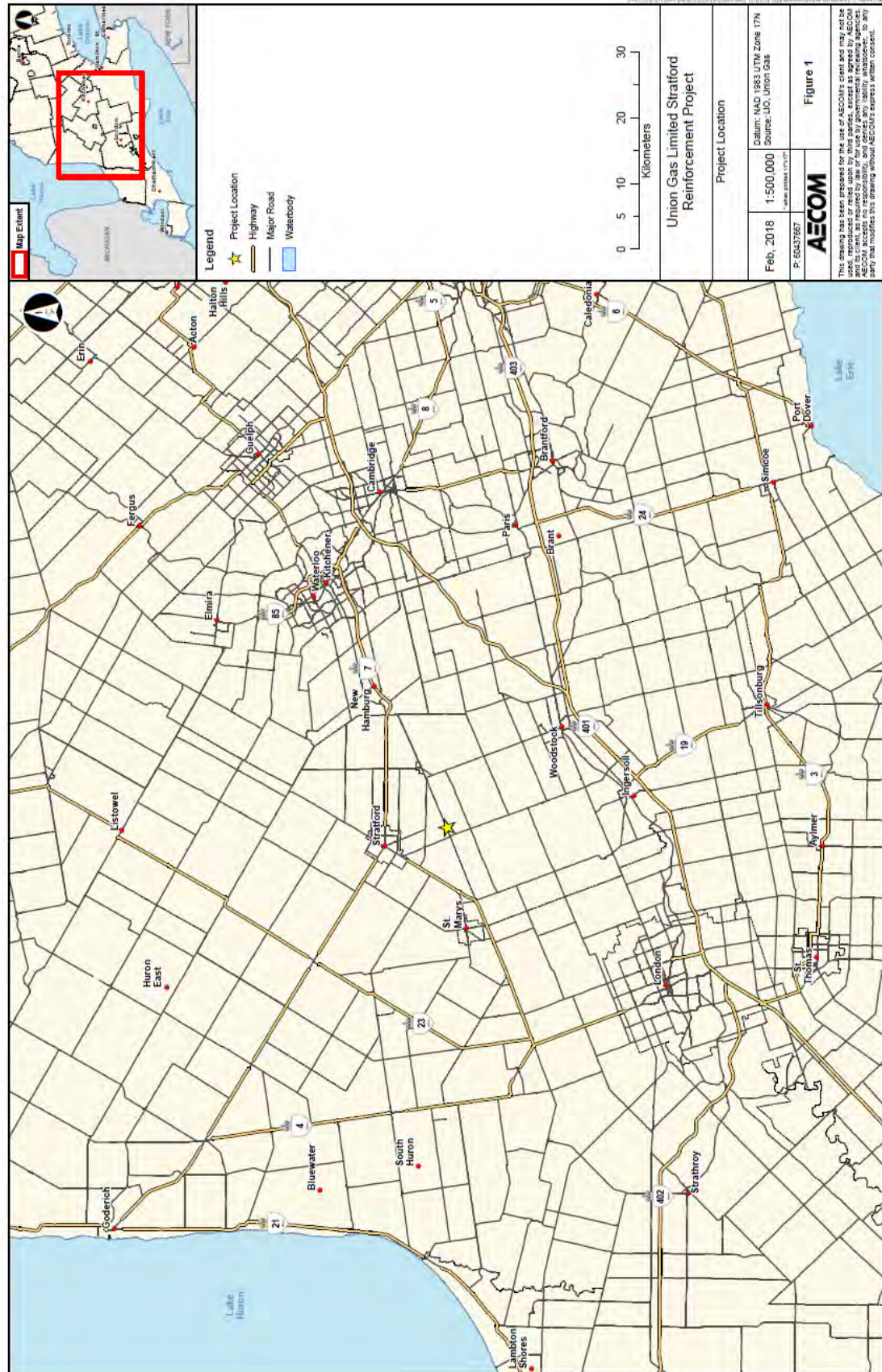
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle	Rochelle and Emma had no concerns with project. Letter and Environmental Report were sent to the Chief for their review.		Pg. 60
HDI				
Date	Activity	Issues raises	Outcome	Doc Location
Apr 9/18	Email notification of project sent to Hazel Hill and Leanna Hill	Email notified community of the project and letter provided details on the project and touch upon it being first started in 2015.		Pg. 61
Apr 12/18	Meeting with: Leanna Hill, Environ Manager Carl Hill, Environ officer Ken McCorkle	Ken McCorkle went over the map of the project and discussed the details. HDI asked questions about the length, need and commencement of project Asked when they could get a copy of EA. Ken advised he would send as soon as complete. As all work is within road allowance, there are no major issues at this time. They advised they will reach out if any further questions or concerns.		
May 1/18	Letter sent via email to Hazel Hill and Leanna Hill	Letter advising of the Information sessions that would be held on the project.		Pg. 63
May 9/18	Spoke with Leanna Hill	Leanna advised that if she requires any further information on this project, she will follow up with Ken McCorkle.		
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 65
Sept 7/18	Environmental Report sent to HDI and Hazel Hill from Ken McCorkle	Letter and Environmental Report were sent to HDI and Hazel Hill for their review.		Pg. 66
Oneida Nation of the Thames				
Date	Activity	Issues raises	Outcome	Doc Location
Apr 9/18	Email notification of project sent to Chief Randall Phillips and Brandon Duxtator	Email notified community of the project and letter provided details on the project and touch upon it being		Pg. 68

May 1/18	Letter sent via email to Chief Randall Phillips and Brandon Duxtator	first started in 2015. Letter advising of the Information sessions that would be held on the project.		Pg. 70
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their review and signature if they would like to be involved in the field study.	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 74
May 31/18	Meeting with Jenelle Cornelius, Environment Technologist Justin Doxatotor Councillor and Assistant to the Chief	Discussed route and they were happy that there would be minimal disruption to the environment Discussed how the project had begun in 2015 however was put on hold. With it being re-started, we would provide opportunity for monitors. Agreed liked to have someone there to monitor and will follow up with Aecom They will take the information back to the chief and discuss and would reach out to Ken McCorkle with any questions or concerns. Offered copy of EA and at any time, Ken is available for questions.		
Aug 2/18	Email to Jenelle Cornelius	Email advised that the EA was not yet complete and we would ensure it was forwarded to her once complete.	No response required.	Pg. 75
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle	Letter and Environmental Report were sent to the Chief for their review.		Pg. 75
Six Nations of the Grand River				
Apr 9/18	Email notification of project sent to Chief Ava Hill	Email notified community of the project and letter provided details on the project and touch upon it being first started in 2015.		Pg. 76
May 1/18	Letter sent via email to Chief Hill, Joanne Thomas, and Arleen Maracle	Letter advising of the Information sessions that would be held on the project.		Pg. 78
May 17/18	Email from Jessalyn at AECOM	Email from Jessalyn provided details on the project and advised that AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. Email contained a copy of the Monitor Agreement for their	Follow up email on May 29 as a reminder to the May 17 email.	Schedule D Pg. 84

Aug 2/18	Telephone call and email follow up with Joanne Thomas, Consultation Supervisor.	review and signature if they would like to be involved in the field study. Spoke with Joanne Thomas. Reviewed the project details and discussed project being within road allowance and reinforcing the existing system. Discussed and acknowledged that Six Nations had monitors on site and agreement was in place. Email provided copies of the notification letter sent to Chief Ava Hill, the signed Monitor agreement, map of the project and an email about monitors on site.	Agreed in conversation that if any follow up was necessary, Joanne would reach out to Ken.	Pg. 85
Sept 7/18	Environmental Report sent to Chief from Ken McCorkle	Letter and Environmental Report were sent to the Chief for their review.		Pg. 86

4. Supporting Documentation

Schedule A – Stratford Project map



Schedule B - Letter to Ministry of Energy notifying of Stratford*An Enbridge Company*

February 26, 2018

Ms. Shereen Smithanik
Senior Policy Advisor
Indigenous Energy Policy
Ministry of Energy
77 Grenville Street, 6th Floor
Toronto, ON M7A 2C1

Dear Ms. Smithanik:

Regarding: Union Gas Stratford Reinforcement Project – Project Summary Report for the
Ministry of Energy

1. Introduction

This Project Summary Report (PSR) has been prepared to provide the Ministry of Energy (MOE) with an overview of the Stratford Reinforcement Project (the Project) in order to confirm the Indigenous communities that may have an interest in the Project. In 2015, Union Gas Limited (Union Gas) initiated preparation of an Environmental Report in accordance with the requirements of the 6th Edition of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (OEB Environmental Guidelines). Union Gas plans to finalize the Environmental Report in the Summer of 2018 and to reach out to potentially affected communities to notify them of the restart of the Project.

The following Indigenous communities were identified by Union Gas as having an interest in the Project and were contacted in 2015:

- Métis Nation of Ontario;
- Chippewa of the Thames First Nation;
- Kettle and Stony Point First Nations;
- Aamjiwnaang First Nation;
- Walpole Island First Nation; and
- Caldwell First Nation.

In 2016 the OEB issued the 7th Edition of the Environmental Guidelines. The 6th Edition did not contain the enhancements of the 7th Edition around the obligations for the Crown's Duty to Consult process. To address these requirements, Union Gas is initiating the Duty to Consult process with the MOE by confirming the list of Indigenous Communities that may have an interest in the Project. Union Gas will continue to work with the Indigenous Communities contacted in 2015 and listed above, and will work with any new communities as identified by the MOE moving forward.

1.1 Project Overview

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new

P.O. Box 2001, 50 Keil Drive North, Chatham, ON, N7M 5M1 www.uniongas.com

12-inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8-inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

The following co-ordinated define the proposed start and end points of the Project:

	Latitude	Longitude
Start Point	43.201224	-80.9087123139259
End Point (Option A)	43.259098	-80.9342574041912
End Point (Option B)	43.284593	-80.9558386695369

2. Regulatory Requirements and Approvals

As outlined in Section 90 of the *Ontario Energy Board Act (OEB Act)*, any proponent planning to construct a hydrocarbon line within Ontario must apply to the OEB for approval to proceed prior to construction (*S.O. 1998 c. 15 Sch B*). As part of the Leave-to-Construct application for the Project, an Environmental Report will be prepared in accordance with the OEB Environmental Guidelines (2016). The application and Environmental Report will be submitted to the OEB in mid-2018. Construction of the Project is planned to begin in the Spring of 2019 with an in service date of late 2019.

Other permits and authorizations for the Project will be determined and may be necessary at the Federal, Provincial and Municipal levels.

3. Environmental Planning Process

The environmental planning process for the Project was initiated in 2015 by Union Gas, with support provided by AECOM Canada Ltd. (AECOM) environmental specialists. The following provides a general overview of the environmental planning process for the Project:

- **Complete an Environmental Report:**
 - Phase I – Inventory and Review of Existing Environmental and Socio-economic Features;
 - Phase II – Evaluation of Alternatives and Selection of Preliminary Preferred Pipeline Route; and
 - Phase III – Evaluation of Potential Environmental and Socio-economic Impacts Associated with Preferred Pipeline Route.
- **Complete all necessary studies and assessments:**
 - A qualified biologist will undertake species-specific surveys to determine if any species at risk may be impacted by the Project and will develop a mitigation plan, if required.
 - Previously completed studies include:

- Stage 1 and 2 Archaeological Assessments were conducted in 2015 by a licensed archaeologist in accordance with the Ministry of Tourism, Culture and Sport (MTCS) guidelines.
 - A heritage specialist reviewed the potential for cultural heritage landscapes and built heritage resources. The Heritage Impact Assessment identified 13 structures (i.e., barns and residential) as having some cultural heritage value or interest.
- Obtain all necessary environmental permits and approvals
 - Union Gas will work with all relevant governing agencies (e.g., Ministry of Natural Resources and Forestry, Conservation Authority, etc.) to obtain any permit and/or approval should it be necessary.

4. Consultation

Public consultation is an important part of the environmental planning process and will include discussions with the public, municipalities, and the Indigenous communities as identified by MOE.

The following Indigenous communities were contacted by Union Gas in 2015 during the development of the Environmental Report

- Chippewa of the Thames First Nation;
- Kettle and Stony Point First Nations;
- Aamjiwnaang First Nation;
- Walpole Island First Nation; and
- Caldwell First Nation.

The communities received notices and letters inviting them to participate in the environmental planning process for the Project, including a public meeting that was held on October 29, 2015. It is unknown whether any First Nations or Métis attended the meeting. Of the 10 attendees who opted to sign-in at the registration table, no one identified their Organization as an Indigenous community.

Union Gas will notify Indigenous communities and interested stakeholders of the Project and plans to file an application in the Summer of 2018 and continue consultation throughout the life of the Project.

5. Project Activities

Following Union Gas' standard construction practices, the new pipeline will be installed in the municipal right-of-way. Union's standard construction practices include clearing vegetation, grading the site, excavating the trench, installing the welded pipeline in the trench, testing the pipeline, and restoring the area to as close to original condition. Operation of the Project is anticipated to begin in late 2019. Inspection of the pipeline will be undertaken to maintain the pipeline throughout its operational life.

6. Summary and Conclusion

The purpose of this report is to provide the MOE with information regarding the Project and confirm the list of Indigenous communities that may be interested in providing feedback during the Project planning process. The Environmental Report will document the field work and data collection that has been undertaken to determine the potential effects of this Project during the construction, and operation phases. Mitigation measures to manage these potential effects will be identified and will include proposed monitoring and contingency plans that will be implemented to minimize effects. Additional field investigations will be undertaken where necessary to obtain permits and authorizations for the Project.

Should you have any questions, concerns or require additional information, you may contact the undersigned.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, Indigenous Affairs
Union Gas
P.O. Box 2001
50 Keil Drive North
Chatham, Ont. N7M 5M1
Phone: 519-365-0584
Email: kmccorkle@uniongas.com

Schedule C - Letter of Delegation of Authority to Union Gas

Ontario
Toronto ON M7A 2C1

Tel: (416) 314-2599

1^{er} étage
Toronto ON M7A 2C1

Tél: (416) 314-2599



Indigenous Energy Policy

VIA EMAIL

April 3, 2018

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Limited
50 Keil Drive North
Chatham, ON N7M 5M1

Re: Stratford Natural Gas Project

Dear Mr. McCorkle:

Thank you for your email dated February 16, 2018, notifying the Ministry of Energy of Union Gas Limited's (Union Gas) intention to apply for Leave to Construct for the Stratford Pipeline Project and requesting clarification on Duty to Consult requirements.

I understand that Union Gas is proposing a 10 kilometer natural gas pipeline, 12 inches in diameter, in the Township of Zorra in Oxford County.

The Ministry has reviewed the information provided relative to its current understanding of the interests of First Nation and Métis communities in the area and has determined that it may have the potential to affect First Nation and Métis communities who hold or claim Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982.

As you are aware, the Government of Ontario (the "Crown") has a constitutional duty to consult and accommodate First Nation and Métis communities when Crown project approvals may lead to an appreciable adverse impact on established or asserted Aboriginal or treaty rights. While the legal duty to consult falls on the Crown, the Crown may delegate the day-to-day, procedural aspects of consultation to project proponents. The Ministry of the Energy is delegating the procedural aspects of consultation to Union Gas through this letter.

Based on the Crown's preliminary assessment of First Nation and Métis community rights and project impacts, the following Aboriginal communities should be consulted on

the basis that they have or may have constitutionally protected Aboriginal or treaty rights that may be adversely affected by the Project:

Community	Mailing Address
Aamjiwnaang First Nation	978 Tashmoo Avenue Sarnia ON N7T 7H5
Bkejwanong Territory (Walpole Island First Nation)	117 Tahgahoning Road, R.R #3 Wallaceburg, ON N8A 4K9
Chippewas of the Thames First Nation	RR 1 Muncey ON N0L 1Y0
Chippewas of Kettle and Stony Point First Nation	6247 Indian Lane Kettle and Stony Point First Nation, ON N0N 1J0
Oneida Nation of the Thames	2212 Elm Avenue Southwold, ON N0L 2G0
Six Nations of the Grand River	P.O Box 5000 Ohsweken, ON N0A 1M0
Haudenosaunee Confederacy Chiefs Council [Please send copy to: Haudenosaunee Development Institute]	P.O Box 714 Ohsweken, ON N0A 1M0

This rights-based consultation list is based on information that is subject to change. First Nation and Métis communities may make new rights assertions at any time, and other developments (e.g. the discovery of Aboriginal archaeological sites) can occur that may require additional First Nation and/or Métis communities to be notified and/or consulted. If you become aware of potential rights impacts on communities that are not listed above at any stage of the consultation and approval process, kindly bring this to the attention of the Ministry with any supporting information regarding the claim. The Ministry will then assess whether it is necessary to include the community on the rights-based consultation list above.

The Ministry relies on consultation conducted by proponents when it assesses the Crown's obligations and directs proponents during the regulatory process. Union Gas' responsibilities for procedural aspects of consultation include:

- Providing the First Nation and Métis communities with timely notice of the project for the purposes of considering possible impacts on their Aboriginal and/or treaty rights;
- Providing First Nation and Métis communities with information about the project including anticipated impacts, and information on project timelines;

- Following up with First Nation and Métis communities to ensure they have received project information and that they are aware of the opportunity to express comments and concerns about the project;
- Explaining the regulatory and approval processes that apply to the project;
- Gathering information about how the project may adversely impact the relevant Aboriginal and/or treaty rights (for example, hunting, fishing) or sites of cultural significance (for example, burial grounds, archaeological sites);
- Considering the comments and concerns raised by First Nation and Métis communities and providing responses;
- Where appropriate, discussing accommodation, including mitigation or other measures to address potential adverse impacts on Aboriginal and/or treaty rights;
- Where appropriate, developing and discussing with the Crown appropriate accommodation measures;
- Taking reasonable steps to foster positive relationships with the First Nation and Métis communities;
- Bearing the reasonable costs associated with these procedural aspects of consultation; and
- Maintaining records of activities in relation to carrying out the delegated procedural aspects of consultation and providing information to the Ministry.

If you have any questions about this letter or require any additional information please contact Shannon McCabe at 416-212-6704 or shannon.mccabe@ontario.ca.

Sincerely,



Emma Sharkey
A/Manager
Indigenous Energy Policy

C: Ontario Pipeline Coordinating Committee (OPCC)

Schedule D – Monitor Agreement template

Project Name: _____ (the "Project")

Union Gas Limited ("Union"), _____ and AECOM Canada Ltd ("AECOM") (the "Parties") agree that Union will provide capacity funding for a Monitor in the amount of \$45 per hour, subject to the following conditions:

1. The Monitor selected by _____ has appropriate qualifications for the work required, for example, training in environmental or archaeological monitoring and experience or ability to work with Aboriginal communities to help bridge Aboriginal perspectives with western science, as reasonably determined by _____. Upon request by Union or _____ the applicable Monitor shall promptly provide written evidence of such Monitor's qualifications to Union which evidence shall include a current copy of such Monitor's resume.
2. The Monitor will observe AECOM's environmental and/or archaeological work but will not negatively impact AECOM's work or progress. The Parties agree that the Monitor will attend on site and follow the reasonable instructions of AECOM. Union will provide the name and contact information for the coordinating person for AECOM. Notwithstanding anything herein, the Parties acknowledge and agree that, due to the _____'s and Monitor's status as an independent monitor, AECOM does not have responsibility for or control of _____ or the Monitor and AECOM shall have no liability for any acts or omissions of _____ or the Monitor.
3. The Parties agree that AECOM will notify the Monitor, or through _____ as duly appointed coordinator, of the site meeting locations and times.
4. The Parties agree that the Monitor is an independent monitor and is not an employee, contractor or sub-contractor of any Project Company or AECOM and that _____ will be responsible for its health and safety policies, practices and procedures including supplying the Monitor with personal protective equipment, such as a hard hat, safety boots, safety glasses and a safety vest.
5. Union agrees that the Monitor will be reimbursed for reasonable mileage and meals in accordance with the Canada Treasury Board guidelines, over and above the hourly rate noted above, to a combined maximum of \$125.00 per day
6. _____ will invoice AECOM based on each Monitor's time, fees, reasonable mileage and meal expenses incurred, and nature of work performed, on the Project. AECOM will then invoice Union Gas based on _____'s invoice. All invoice totals relating to the Monitor's work on the Project should be addressed directly to Union Gas, and the Project should also be noted in the text of the invoice. Invoices should be submitted electronically to individuals as Union may direct. Upon receipt of the invoiced amount from Union, AECOM will make the corresponding payment to _____. For greater certainty, the Parties agree that AECOM shall have no liability to pay

any _____ invoice or for the Monitor's fees and expenses incurred, unless and until AECOM is in receipt of the corresponding payment from Union.

If this letter agreement accurately reflects your understanding of the terms of our agreement and you agree, as we do, please execute this letter agreement where indicated below and return a copy thereof to the undersigned. The Parties agree this letter agreement will terminate at the discretion of Union upon written notice to both _____ and AECOM. Union shall pay any amount incurred and unpaid by Union at the date of termination.

Project Company Representative Signature

Date

_____ Representative Signature

Date

AECOM Representative Signature

Date

Correspondence - Aamjiwnaang First Nation

McCorkle, Ken

From: McCorkle, Ken
Sent: September-23-15 3:25 PM
To: Chief Christopher Plain (CPlain@Aamjiwnaang.ca); 'Sharilyn Johnston'
Subject: Stratford Reinforcement
Attachments: PL964 Stratford Reinforcement General Location Map.pdf

In 2016, Union Gas is planning to increase the capacity of the natural gas transmission system in the Stratford area. The existing Stratford Line is at capacity and a reinforcement (named the Stratford Reinforcement Phase I), is required to support current and future growth.

This project will involve construction of a 12-inch diameter natural gas transmission pipeline starting at the Perth-Oxford Road and travelling south along 41st Line to the Beachville Transmission Site. The pipeline will run along existing road allowances. Please see the attached map for the proposed pipeline route.

An integral part of this project is an Environmental Assessment that will be conducted by an independent third party Aecom.

Consultation with affected landowners, First Nations, the Métis Nation of Ontario, government agencies and others will be carried out by Union Gas.




A follow-up letter will be sent to you regarding the start of the Environmental Assessment process. The final Environmental Report will be included in an application to the Ontario Energy Board (OEB) whose approval is required before this project can proceed.

If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle

Manager, First Nations and Métis Affairs
 Union Gas Ltd.
 Phone: 519-436-4600 Ext.5002243
 Cell: 519-365-0584

From: Ken McCorkle Sent: Mon 09/04/2018 9:31 AM
To: Chief Rogers; Sharilyn Johnston
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham
Subject: Stratford Natural Gas Project

 Message  image.pdf (490 KB)  MAP_Combined.pdf (3 MB)

Hello Chief Rogers & Sharilyn:

Please find attached a letter and map referencing the Stratford Natural Gas project that was started in 2015, delayed, and now has been reactivated.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.

Phone: 519-436-4600 Ext. 5002243

Cell: 519-365-0584

Toll Free: 877-293-6215

Fax: 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



Chief Joanne Rogers
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON N7T 7H5

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Rogers,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We began consulting with your community on this proposed project in 2015 and we look forward to continuing consultation process with you. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Chief Joanne Rogers
Aamjiwnaang First Nation
978 Tashmoo Ave.
Sarnia, Ontario N7T 7H5

Dear Chief Joanne Rogers:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7K5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Sharilyn Johnston
Environmental Coordinator
Aamjiwnaang First Nation
978 Tashmoo Ave.
Sarnia, Ontario N7T 7H5

Dear Sharilyn Johnston:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23,

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

A handwritten signature in black ink, appearing to read "Jessalyn Oke".

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

From: Oke, Jessalyn
Sent: Thursday, May 17, 2018 1:30 PM
To: 'SJohnston@aamjiwnaang.ca'; 'chief@aamjiwnaang.ca'
Cc: 'Ken McCorkle'; 'Tony Vadlja'
Subject: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com>
To: SJohnston@aamjiwnaang.ca; chief@aamjiwnaang.ca
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Sent: Tue 29/05/2018 2:40 PM

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beaney
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Ken McCorkle
To: Sharilyn Johnston
Cc: Lauren Whitvham
Subject: FW: Stratford Natural Gas Project

Sent: Wed 25/07/2018 3:19 PM

Message image.pdf (490 KB) MAP_Combined.pdf (3 MB)

Hello Sharilyn:

I just wanted to follow up and confirm if you require anything further regarding this project. It has been over two years ago that Union started this and then it was delayed until now. Thank you for having a monitor out in the field during the Arch study in 2015 and also for the current study underway. We last spoke of this project in February but I just wanted to follow up to see if you had any concerns. Construction will not start until 2019 and it is a distribution project in road right of way. If at any time you want to speak regarding this please do not hesitate to contact me.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584
Toll Free: 877-293-6215
Fax: 519-436-5392
Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



September 7, 2018

Chris Plain
Chief
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON N7T 7H5

Dear Chief Chris Plain:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario*, 7th Edition, 2016.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext. 5002243

Correspondence - Bkejawnong (Walpole Island) First Nation**McCorkle, Ken**

From: McCorkle, Ken
Sent: September-23-15 3:20 PM
To: 'dan.miskokomon@wifn.org'; 'dean.jacobs@wifn.org'
Subject: Stratford Reinforcement
Attachments: PL964 Statford Reinforcement General Location Map.pdf

In 2016, Union Gas is planning to increase the capacity of the natural gas transmission system in the Stratford area. The existing Stratford Line is at capacity and a reinforcement (named the Stratford Reinforcement Phase I), is required to support current and future growth.

This project will involve construction of a 12-inch diameter natural gas transmission pipeline starting at the Perth-Oxford Road and travelling south along 41st Line to the Beachville Transmission Site. The pipeline will run along existing road allowances. Please see the attached map for the proposed pipeline route.

An integral part of this project is an Environmental Assessment that will be conducted by an independent third party Aecom.

Consultation with affected landowners, First Nations, the Métis Nation of Ontario, government agencies and others will be carried out by Union Gas.

A follow-up letter will be sent to you regarding the start of the Environmental Assessment process. The final Environmental Report will be included in an application to the Ontario Energy Board (OEB) whose approval is required before this project can proceed.

If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle

Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: Ken McCorkle
To: dan.miskokomon@wifn.org; Dean Jacobs; Janet Macbeth
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham
Subject: Stratford Natural Gas Project

Sent: Mon 09/04/2018 9:57 AM

Message image.pdf (492 KB) MAP_Combined.pdf (3 MB)

Hello Chief Miskokomon, Dr. Jacobs & Janet:
Please find attached a letter and map referencing the Stratford Natural Gas project that was started in 2015, delayed, and now has been reactivated.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.

Phone: 519-436-4600 Ext.5002243

Cell: 519-365-0584

Toll Free: 877-293-6215

Fax: 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



Chief Dan Miskokomon
Bkejwanong Territory (Walpole Island First Nation)
117 Tahgahoning Road, RR#3
Wallaceburg, ON N8A4K9

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Miskokomon,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We began consulting with your community on this proposed project in 2015 and we look forward to continuing consultation process with you. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Chief Dan Miskokomon
Walpole Island First Nation
117 Tahgahoning Road, RR # 3
Wallaceburg, Ontario N8A 4K9

Dear Chief Dan Miskokomon:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-385-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Dean Jacobs
Consultation Manager
Walpole Island First Nation
117 Tahgahoning Road, RR # 3
Wallaceburg, Ontario N8A 4K9

Dear Dean Jacobs:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

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PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 2, 2018

Janet Macbeth
Consultation Coordinator
Walpole Island First Nation
117 Tahgahoning Road, RR # 3
Wallaceburg, Ontario N8A 4K9

Dear Janet Macbeth:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23,

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited

2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

Encl: Stratford Reinforcement Project - Information Session Notice

From: Oke, Jessalyn
Sent: Thursday, May 17, 2018 1:31 PM
To: 'Janet.macbeth@wifn.org'; 'dan.miskokomon@wifn.org'
Cc: 'Ken McCorkle'; 'Tony Vadlja'
Subject: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com>
 To: Janet.macbeth@wifn.org; dan.miskokomon@wifn.org
 Cc: Ken McCorkle; Tony Vadjla
 Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Sent: Tue 29/05/2018 2:41 PM

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beane
 Senior Environmental Planner
 D +1-905-390-2012
 C +1-905-317-1938
jessalyn.oke@aecom.com



September 7, 2018

Dan Miskokomon
 Chief
 Walpole Island First Nation
 117 Tahgahoning Road, RR# 3
 Wallaceburg, ON N8A 4K9

Dear Chief Dan Miskokomon:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
 Manager, Indigenous Affairs
 Union Gas Limited
 Email: kmccorkle@uniongas.com
 Phone: 519-436-4600 Ext 5002243

Correspondence - Chippewas of Kettle and Stony Point

McCorkle, Ken

From: McCorkle, Ken
Sent: September-23-15 3:26 PM
To: 'Thomas.bressette@kettlepoint.org'; 'lorraine.george@kettlepoint.org'
Subject: Stratford Reinforcement
Attachments: PL964 Statford Reinforcement General Location Map.pdf

In 2016, Union Gas is planning to increase the capacity of the natural gas transmission system in the Stratford area. The existing Stratford Line is at capacity and a reinforcement (named the Stratford Reinforcement Phase I), is required to support current and future growth.

This project will involve construction of a 12-inch diameter natural gas transmission pipeline starting at the Perth-Oxford Road and travelling south along 41st Line to the Beachville Transmission Site. The pipeline will run along existing road allowances. Please see the attached map for the proposed pipeline route.

An integral part of this project is an Environmental Assessment that will be conducted by an independent third party Aecom.

Consultation with affected landowners, First Nations, the Métis Nation of Ontario, government agencies and others will be carried out by Union Gas.

A follow-up letter will be sent to you regarding the start of the Environmental Assessment process. The final Environmental Report will be included in an application to the Ontario Energy Board (OEB) whose approval is required before this project can proceed.

If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle

Manager, First Nations and Métis Affairs
 Union Gas Ltd.
 Phone: 519-436-4600 Ext.5002243
 Cell: 519-365-0584

From: Ken McCorkle
To: Thomas Bressette; Valerie George
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham
Subject: Stratford Natural Gas Project

Sent: Mon 09/04/2018 9:51 AM

Message image.pdf (491 KB) MAP_Combined.pdf (3 MB)

Hello Chief Bressette & Valerie:

Please find attached a letter and map referencing the Stratford Natural Gas project that was started in 2015, delayed, and now has been reactivated.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.

Phone: 519-436-4600 Ext.5002243

Cell; 519-365-0584

Toll Free: 877-293-6215

Fax; 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



Chief Thomas Bressette
Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane
Kettle and Stony Point First Nation, ON N0N 1J0

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Bressette,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We began consulting with your community on this proposed project in 2015 and we look forward to continuing consultation process with you. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Chief Thomas Bressette
Kettle and Stony Point First Nations
6247 Indian Lane RR # 2
Forest, Ontario N0N 1J0

Dear Chief Thomas Bressette:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
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- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Lorraine George
Consultation Manager
Kettle and Stony Point First Nations
6247 Indian Lane RR # 2
Forest, Ontario N0N 1J0

Dear Lorraine George:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

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PO Box 2001, 50 Neil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-385-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

Message 2018-05-15-UG Kettle Stony Point Monitor Agreements-60437667.pdf (69 KB)

From: Oke, Jessalyn [<mailto:Jessalyn.Oke@aecom.com>]
Sent: May-17-18 1:29 PM
To: valerie.george@kettlepoint.org; Thomas.bressette@kettlepoint.org
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,
Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com> Sent: Tue 29/05/2018 2:40 PM
To: valerie.george@kettlepoint.org; Thomas.bressette@kettlepoint.org
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beane
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Ken McCorkle
To: Valerie George
Cc: Lauren Whitwham
Subject: Stratford Project

Sent: Tue 24/07/2018 9:15 AM

Message image.pdf (421 KB) image.pdf (476 KB) image.pdf (454 KB)

Hello Valerie:

I trust this finds you well!

As per our recent phone call on Friday (July 20th) I have enclosed the original material from the consultation for this project before it was delayed until 2018. I also want to thank you for your current participation in the project with your monitor. If you have any questions regarding this material/project or your monitor in the field please do not hesitate to contact me. Union is looking forward to continuing the dialogue and interactions with your nation on a number of fronts.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs

Union Gas Ltd.

Phone: 519-436-4600 Ext.5002243

Cell: 519-365-0584

Toll Free: 877-293-6215

Fax: 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



September 7, 2018

Thomas Bressette
Chief

Kettle and Stony Point First Nations
6247 Indian Lane RR # 2
Forest, ON N0N 1J0

Dear Chief Thomas Bressette:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext.5002243

Correspondence - Chippewas of the Thames First Nation

McCorkle, Ken

From: McCorkle, Ken
Sent: September-23-15 3:33 PM
To: 'white-eye@cottfn.com'; 'Rolanda Elijah'
Subject: Stratford Reinforcement
Attachments: PL964 Statford Reinforcement General Location Map.pdf

In 2016, Union Gas is planning to increase the capacity of the natural gas transmission system in the Stratford area. The existing Stratford Line is at capacity and a reinforcement (named the Stratford Reinforcement Phase I), is required to support current and future growth.

This project will involve construction of a 12-inch diameter natural gas transmission pipeline starting at the Perth-Oxford Road and travelling south along 41st Line to the Beachville Transmission Site. The pipeline will run along existing road allowances. Please see the attached map for the proposed pipeline route.

An integral part of this project is an Environmental Assessment that will be conducted by an independent third party Aecom.

Consultation with affected landowners, First Nations, the Métis Nation of Ontario, government agencies and others will be carried out by Union Gas.

A follow-up letter will be sent to you regarding the start of the Environmental Assessment process. The final Environmental Report will be included in an application to the Ontario Energy Board (OEB) whose approval is required before this project can proceed.

If you have any questions regarding this project, feel free to call or email me.

Ken McCorkle

Manager, First Nations and Métis Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584

From: Ken McCorkle
To: myeengun@cottfn.com; Kelly Riley; Emma Young
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham
Subject: Stratford Natural Gas Project
Message image.pdf (489 KB) MAP_Combined.pdf (3 MB)

Hello Chief Henry, Kelly & Emma:
Please find attached a letter and map referencing the Stratford Natural Gas project that was started in 2015, delayed, and now has been reactivated.

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell: 519-365-0584
Toll Free: 877-293-6215
Fax: 519-436-5392
Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



Chief Myeengun Henry
Chippewas of the Thames First Nation
320 Chippewa Road
Muncey, ON N0L 1Y0

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Henry,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We began consulting with your community on this proposed project in 2015 and we look forward to continuing consultation process with you. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584

From: Emma Young <eyoung@cottfn.com> Sent: Mon 09/04/2018 1:08 PM
To: Ken McCorkle; Myeengun Henry; Kelly Riley
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham; Rochelle Smith
Subject: [External] RE: Stratford Natural Gas Project

Hi Ken,

Thank you for the project information. I have forwarded it on to our Consultation Coordinator Rochelle Smith.

All the best,
Emma



Emma Young
Sr. Environment Officer, Chippewas of the Thames First Nation
320 Chippewa Rd Muncey, ON N0L 1Y0 | 519-289-5555 ext. 254 | www.cottfn.com

This email or documents accompanying this email contain information belonging to the Chippewas of the Thames First Nation. Which may be confidential and/or legally privileged. The information is intended only for the addressed recipients(s). If you are not an intended recipient, you are hereby notified that any disclosure, copying, distribution, or the taking of any action in reliance on the contents of this email. Is strictly prohibited. If you have received this email in error, please advise my office and delete it from your system.



May 1, 2018

Chief Myeengun Henry
Chippewa of the Thames First Nation
320 Chippewa Rd
Muncey, Ontario N0L 1Y0

Dear Chief Myeengun Henry:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 2, 2018

Kelly Riley
Treaty Researcher
Chippewa of the Thames First Nation
321 Chippewa Rd
Muncey, Ontario N0L 1Y1

Dear Kelly Riley:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

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PO Box 2001, 50 Reil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited

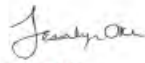
2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584



Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Rolanda Elijah
Consultation Manager
Chippewa of the Thames First Nation
320 Chippewa Rd
Muncey, Ontario N0L 1Y0

Dear Rolanda Elijah:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

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PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



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If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

A handwritten signature in black ink, appearing to read "Jessalyn Oke".

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

From: Rochelle Smith [<mailto:rsmith@cottfn.com>]

[Next](#)

[Last](#)

Sent: May-08-18 3:11 PM

To: Ken McCorkle

Cc: Emma Young

Subject: [External] Meeting

Good afternoon Ken,

I hope all is well, I know we had discussed to meet in late April but our schedules became busy fairly fast. I appreciate you understanding and hope the opportunity to discuss Union Gas's projects is still available..

Emma and I would be please to meet with you Thursday, May 17th, 2018 or Friday, May 18th, 2018. Projects we had in mind to discuss were;

- The Stratford Reinforcement Project
- Kingsville Transmission Reinforcement Project
- Sarnia Airport Storage Pool Ltd Partnership

As well, I have spoken with Jo Boyer, Antler River Guardians Liaison, and she has confirmed the receipt of Union Gas' commitment to bettering our youth's involvement in environment.

Please let me know which day works best, or perhaps suggest a few dates that works for you.

Kind regards,
Rochelle Smith



Rochelle Smith

Consultation Coordinator, Chippewas of the Thames First Nation

From: Oke, Jessalyn
Sent: Thursday, May 17, 2018 1:27 PM
To: relijah@cottfn.com; myeengun@cottfn.com
Cc: Ken McCorkle; Tony Vadlja
Subject: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

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If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com> Sent: Tue 29/05/2018 2:40 PM
To: relijah@cottfn.com; myeengun@cottfn.com
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beaney
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com



September 7, 2018

Myeengun Henry
Chief
Chippewa of the Thames First Nation
320 Chippewa Road
Muncey, ON N0L 1Y0

Dear Chief Myeengun Henry:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

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If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext. 5002243

Correspondence - HDI

From: Ken McCorkle
To: Hazel Hill; Leanna Hill
Cc: McCabe, Shannon (ENERGY); Lauren Whitwham
Subject: Stratford Natural Gas Project
Sent: Mon 09/04/2018 9:47 AM

Message image.pdf (480 KB) MAP_Combined.pdf (3 MB)

Hello Hazel , Leanna & Wayne:
Please find attached a letter and map referencing the Stratford Natural Gas project that was started in 2015, delayed, and now has been reactivated.

Miigwetch,
Ken

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Ltd.
Phone: 519-436-4600 Ext.5002243
Cell; 519-365-0584
Toll Free: 877-293-6215
Fax; 519-436-5392
Email: kmccorkle@uniongas.com
We can't change the past, but we can influence our future



Haudenosaunee Development Institute
P.O. Box 714
Ohsweken, Ontario
N0A 1M0

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Haudenosaunee Development Institute,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Haudenosaunee Confederacy Chiefs Council
16 Sunrise Court, Suite 600 P.O. Box 714
Ohsweken, Ontario N0A 1M0

Dear Sir or Madam:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

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- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

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PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



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If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

From: Oke, Jessalyn
Sent: Thursday, May 17, 2018 1:46 PM
To: 'hdi2@bellnet.ca'; 'hill.leanna.s@gmail.com'
Cc: 'Ken McCorkle'; 'Tony Vadija'
Subject: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com>

Sent: Tue 29/05/2018 2:41 PM

To: hdi2@bellnet.ca; hill.leanna.s@gmail.com

Cc: Ken McCorkle; Tony Vadija

Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beaney
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com



September 7, 2018

Haudenosaunee Confederacy Chiefs Council
16 Sunrise Court, Suite 600, P.O. Box 714
Ohsweken, ON N0A 1M0

Dear Sir/Madam:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext. 5002243



September 7, 2018

Hazel Hill
Director
Haudenosaunee Development Institute
16 Sunrise Court, Suite 600, P.O. Box 714
Ohsweken, ON N0A 1M0

Dear Ms. Hill:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

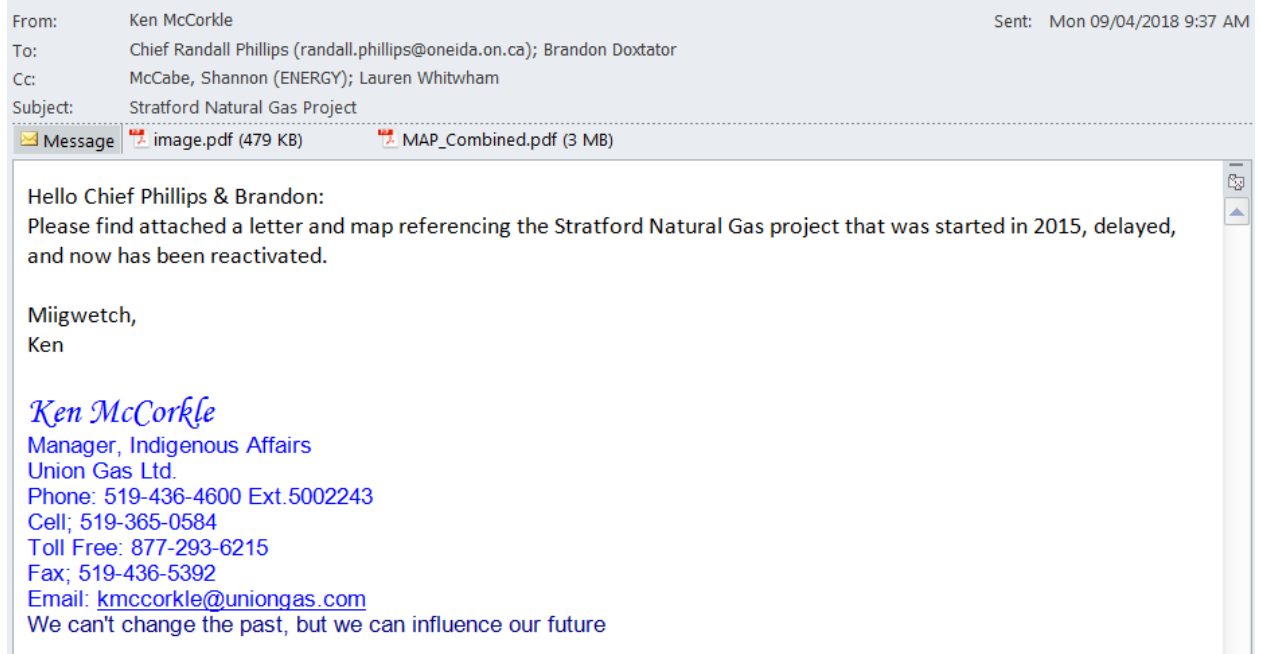
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The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext. 5002243

Correspondence - Oneida Nation of the Thames





Chief Randall Phillips
Oneida Nation of the Thames
2212 Elm Avenue
Southwold, ON N0L 2G0

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Phillips,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Chief Randall Philips
Onieda Nation of the Thames
2210 Elm Ave
Southwold, Ontario N0L 2G0

Dear Chief Randall Philips:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 80 Reil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 2, 2018

Brandon Duxtator
Councillor
Onieda Nation of the Thames
2210 Elm Ave
Southwold, Ontario N0L 2G0

Dear Brandon Duxtator:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23,

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited

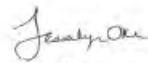
2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584



Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

From: Oke, Jessalyn
Sent: Thursday, May 17, 2018 1:41 PM
To: 'Randall.phillips@oneida.on.ca'; 'Brandon.doxlator@oneida.on.ca'
Cc: 'Ken McCorkle'; 'Tony Vadlja'
Subject: Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
 Senior Environmental Planner
 D +1-905-390-2012
 C +1-905-317-1938
jessalyn.oke@aecom.com

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com>
 To: Randall.phillips@oneida.on.ca; Brandon.doxlator@oneida.on.ca; Jenelle Cornelius
 Cc: Ken McCorkle; Tony Vadlja
 Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Sent: Tue 29/05/2018 2:43 PM

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project.

I understand that Ken McCorkle is meeting with the Chief on Thursday. If you are interested in providing a monitor or have questions about the surveys or Project prior to the meeting or resulting from the meeting, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beane
 Senior Environmental Planner
 D +1-905-390-2012
 C +1-905-317-1938
jessalyn.oke@aecom.com

From: Ken McCorkle
 To: Jenelle Cornelius
 Cc:
 Subject: EA for the Stratford report!

Sent: Thu 02/08/2018 9:22 AM

Hello Jenelle:

I am just following up from our meeting with you and Justin on May 31/18 regarding the EA report that you requested. I just spoke with our contractor and they are in the finishing stages of writing the report. Upon completion, in a couple of weeks, I will forward you this material as requested. Could you please forward to Justin as I do not have his email address? If you have any further questions please do not hesitate to contact me.

Miigwetch,
 Ken

Ken McCorkle

Manager, Indigenous Affairs
 Union Gas Ltd.

Phone: 519-436-4600 Ext.5002243

Cell: 519-365-0584

Toll Free: 877-293-6215

Fax: 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



September 7, 2018

Randall Philips
 Chief
 Onieda Nation of the Thames
 2210 Elm Avenue
 Southwold, ON N0L 2G0

Dear Chief Randall Philips:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

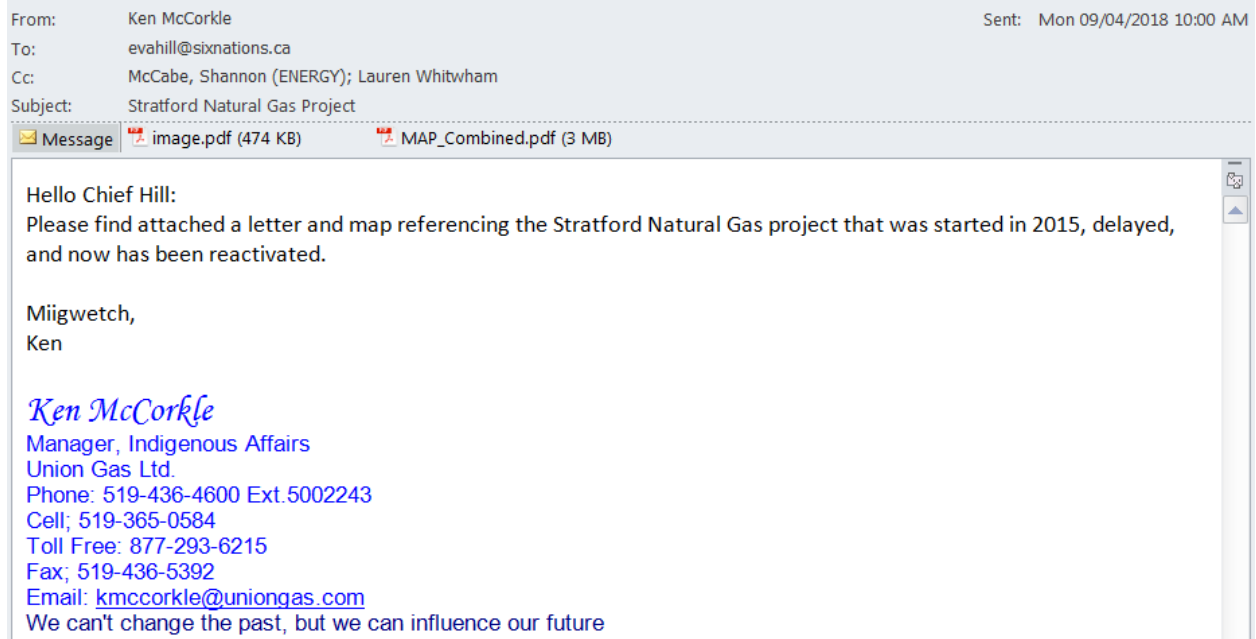
An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

Ken McCorkle
 Manager, Indigenous Affairs
 Union Gas Limited
 Email: kmccorkle@uniongas.com
 Phone: 519-436-4600 Ext.5002243

Correspondence – Six Nations of the Grand River First Nation





Chief Ava Hill
Six Nations of the Grand River
P.O. Box 5000
Ohsweken, ON N0A 1M0

April 5, 2018

Re: Union Gas Stratford Reinforcement Project

Dear Chief Hill,

Union Gas Limited has been bringing clean, reliable, and affordable natural gas service for more than a century to over 400 communities across Ontario.

Union Gas is proposing to expand its natural gas transmission system within the Township of Zorra, Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project would involve the construction of a new 12 inch diameter steel natural gas transmission pipeline. The proposed pipeline would be located in municipal road allowance and parallel to Union Gas' existing 8 inch diameter steel natural gas transmission pipeline currently in use. The location of the Project in southern Ontario is shown on the attached maps.

We would like to consult with your community on this proposed project. We are interested in your community's feedback, including any suggestions or proposals on mitigating, avoiding or accommodating any potential impacts to Aboriginal or treaty rights.

Union Gas has been delegated the procedural aspects for consultation by the Ministry of Energy on behalf of Ontario. Ministry officials are also available should you wish to contact them directly with any questions or concerns. Please contact:

Shannon McCabe
Policy Advisor
Ministry of Energy
416-212-6704
Shannon.mccabe@ontario.ca

We would like to set up a meeting to discuss the project with you and provide you with an opportunity to express any questions or concerns you have. Please feel free to contact me at kmccorkle@uniongas.com or 519-365-0584 so we can set up a time to meet.

Miigwetch,

Ken McCorkle
Manager, Indigenous Affairs
kmccorkle@uniongas.com
519-365-0584



May 1, 2018

Chief Ava Hill
Six Nations of the Grand River
PO Box 5000
Ohsweken, Ontario N0A 1M0

Dear Chief Ava Hill:

Regarding: **Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update**

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

AECOM Canada Ltd. (AECOM) has been retained by Union Gas to continue with the preparations of an Environmental Report (ER) to assess the potential environmental and socio-economic effects that may result from the Project and outline plans to avoid and/or mitigate any effects, where possible. Examples of potential environmental considerations that will be assessed in the ER include, but are not limited to:

- Existing land uses, local residents and businesses;
- Groundwater, wells and agricultural drains/tiles;
- Soils, bedrock geology and extractive resources;
- Designated natural areas, woodlots, wetlands and other vegetation (e.g. hedgerows);
- Wildlife and wildlife habitat;
- Watercourses, aquatic species and habitat;
- Species at Risk; and
- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23, 2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from

PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Arleen Maracle
Community Liaison Coordinator
Six Nations of the Grand River
2498 Chiefswood Road PO Box 5000
Ohsweken, Ontario N0A 1M0

Dear Arleen Maracle:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

This proposed route was initially presented as the Preliminary Preferred Pipeline route and discussed with stakeholders and Indigenous communities in 2015. An information session was held on October 29, 2015. The enclosed notice invites you to attend an information session for a project update and includes a map that identifies the proposed location of the Project.

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- Archaeology and cultural heritage.

The ER will be prepared in a manner consistent with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (2016) and will be used as part of the Leave-to-Construction application that will be submitted to the OEB in the Summer of 2018.

A key part of the planning process involves engaging Indigenous communities that may have an interest in the Project. Through an invitation to attend an information session planned May 23,

PO Box 2001, 80 Reil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012



May 1, 2018

Joanne Thomas
Consultation Supervisor
Six Nations of the Grand River
2498 Chiefswood Road PO Box 5000
Ohsweken, Ontario N0A 1M0

Dear Joanne Thomas:

Regarding: Stratford Reinforcement Project by Union Gas Limited and Invitation to
Information Session to Provide a Project Update

Union Gas is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra. Construction of the Project is planned to begin in the Spring of 2019 and be complete by the Fall of 2019.

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PO Box 2001, 50 Keil Drive North, Chatham, Ontario N7M5M1 www.uniongas.com
Union Gas Limited



2018 at the Embro-Zorra Community Centre Large Hall (355644 35th Line Embro, Ontario) from 5:30 p.m. to 8 p.m., you are invited to participate in the planning of this Project. Specifically, we are seeking confirmation of your interest to participate in background environmental fieldwork and information that may affect construction and operation of the proposed pipeline, including background environmental and socio-economic information. If you plan to provide a response, it would be appreciated if you could provide it by June 6, 2018.

If you have any questions about the project or the environmental planning process, please do not hesitate to contact me using the contact information provided below.

Sincerely,

Ken McCorkle

Ken McCorkle
Manager, First Nations and Métis Affairs
Union Gas Ltd.
Email: kmccorkle@uniongas.com
Phone: 519-365-0584

Jessalyn Oke
Senior Environmental Planner
AECOM
Email: jessalyn.oke@aecom.com
Phone: (905) 390-2012

Message 2018-05-15-UG Six Nations Monitor Agreements-60437667.pdf (69 KB)

From: Oke, Jessalyn [<mailto:Jessalyn.Oke@aecom.com>]
Sent: May-17-18 1:43 PM
To: evahill@sixnations.ca; dlaforme@sixnations.ca
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] Union Gas Stratford Reinforcement Project - Liaison Participation

Good afternoon,

Union Gas Limited (Union Gas) is proposing to expand its natural gas transmission system in Oxford County, to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System. The Project will involve the construction of approximately 11 km 12-inch diameter steel natural gas pipeline. A Project Letter and invitation to an information session was mailed to your attention on May 2, 2018.

AECOM Canada Ltd. has been retained by Union Gas to undertake environmental and archaeology field investigations in the Summer of 2018. If your community is interested in providing a liaison to monitor Project-related field investigations, please review and return a signed copy of the attached Monitor Agreement, and identify the individual we can coordinate upcoming investigations with.

If you have any questions about the Project, planned field investigations or the Monitor Agreement, please do not hesitate to contact me or Ken McCorkle of Union Gas:

Jessalyn Oke	Ken McCorkle
Senior Environmental Planner	Manager, First Nations and Métis Affairs
AECOM	Union Gas Ltd.
Email: jessalyn.oke@aecom.com	Email: kmccorkle@uniongas.com
Phone: (905) 390-2012	Phone: 519-365-0584

We would be pleased to have your community participate and look forward to hearing back from you,

Jessalyn Oke
Senior Environmental Planner
D +1-905-390-2012

From: Oke, Jessalyn <Jessalyn.Oke@aecom.com>
To: evahill@sixnations.ca; dlaforme@sixnations.ca
Cc: Ken McCorkle; Tony Vadlja
Subject: [External] RE: Union Gas Stratford Reinforcement Project - Liaison Participation

Sent: Tue 29/05/2018 2:41 PM

Good afternoon,

In discussion with Ken McCorkle of Union Gas, we wanted to ensure that you received the email below regarding involvement of a monitor from your community during the environmental surveys for the Stratford Reinforcement Project. If you are interested in providing a monitor or have questions about the surveys or Project, the Project Team would be happy to discuss with you and can be reached either at the phone numbers listed below or via email.

Jessalyn Beaney
Senior Environmental Planner
D +1-905-390-2012
C +1-905-317-1938
jessalyn.oke@aecom.com

From: Ken McCorkle
To: jthomas@sixnations.ca
Cc: rm1.miller@hotmail.com; dlaforme@sixnations.ca
Subject: Union Gas Stratford Project
Sent: Thu 02/08/2018 2:12 PM

Message: Six Nations of the Grand River Notification.pdf (200 KB) [External] RE: Agreement for monitors - Union Gas Stratford (49 KB)
 Monitoring Agreement - Union Gas Reinforcement - Jul10-18.pdf (595 KB) Zorra Township - 2019 Stratford Reinforcement Alignment.pdf (358 KB)

Hello Joanne:

It was great to speak with you this afternoon!

I am following up with you to confirm if there is any more information or any questions you have regarding this project? Per our discussion I have forwarded the attached information for you. For your information the project is all in road allowance and is reinforcing the existing system in place as per our discussion. Union appreciates your participation in this project with your monitoring program which I have enclosed the agreement made between the two parties. If at any time if you would like any more follow up please do not hesitate to contact me. Again it was a pleasure to speak with you,

Miigwetch,
Ken

Ken McCorkle

Manager, Indigenous Affairs
Union Gas Ltd.

Phone: 519-436-4600 Ext.5002243

Cell: 519-365-0584

Toll Free: 877-293-6215

Fax: 519-436-5392

Email: kmccorkle@uniongas.com

We can't change the past, but we can influence our future



September 7, 2018

Ava Hill
Chief
Six Nations of the Grand River
1695 Chiefswood Rd, PO Box 5000
Ohsweken, ON N0A 1M0

Dear Chief Ava Hill:

Regarding: Union Gas Limited – Stratford Reinforcement Project

Union Gas is proposing to expand its natural gas transmission system in Oxford County to ensure the continued reliable delivery of natural gas and help meet future supply needs of the Forest Hensall Goderich System, which serves the northern portions of the counties of Lambton and Middlesex and the counties of Perth and Huron. The Project will involve the construction of a new 11 km 12-inch diameter steel natural gas pipeline located within the public road right-of-way of 41st Line from south of Oxford Road 88 to Perth-Oxford Road within the Township of Zorra.

An Environmental Report (ER) for this Project has been completed by AECOM Canada Ltd. (AECOM) on behalf of Union Gas and a copy is available for your review on the enclosed USB drive. This ER assesses the potential environmental and socio-economic effects that may result from the Project and documents the various mitigation measures that will be implemented by Union Gas during pipeline construction to reduce the potential impacts.

The ER was prepared in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition, 2016*.

If you have any questions or to request a hard copy of the ER, please contact the undersigned.

A handwritten signature in black ink, appearing to read "K. McCorkle".

Ken McCorkle
Manager, Indigenous Affairs
Union Gas Limited
Email: kmccorkle@uniongas.com
Phone: 519-436-4600 Ext. 5002243

MOE's Review and Confirmation

TO BE FILED AT A LATER DATE