THE MUNICIPALITY OF
LAMBTON SHORES

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

REQUEST FOR TENDER

FOR

DECKER ROAD / DECKER CREEK

CULVERT REPLACEMENT

TENDER 2025-08

CLOSING DATE: **2:00 P.M., LOCAL TIME**
Thursday, November 20th, 2025

RETURN TO: MUNICIPALITY OF LAMBTON SHORES
PUBLIC WORKS DEPARTMENT
9577 PORT FRANKS ROAD
THEDFORD, ONTARIO

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

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AGREEMENT

THIS AGREEMENT, made in triplicate, as of this _____ day of _____, _____ between:

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

(hereinafter the “Corporation”)

- AND -

[Successful Contractor – Enter full legal name]

(hereinafter the “Contractor”)

WHEREAS:

1. The Corporation issued a tender dated **[enter date]** describing work and services to be performed and materials, products and labour to be supplied _____ (hereinafter, the “**Tender**”);

2. The Contractor submitted a response to the **Tender** to the Corporation dated **[enter date]** with respect to Contract **[enter contract number]** (hereinafter, the "**Response**");

3. The Corporation has selected the Contractor’s **Response** to provide as the case may be, the work and services to be performed and materials, products and labour to be supplied further described in the **Tender** and **Response** thereof and in accordance with the terms, conditions and specifications thereof (hereinafter, the **Works**”) and the parties wish to enter into this agreement to formalize their respective obligations.

NOW THEREFORE, the parties agree as follows:

1) THE CONTRACTOR Agrees:

   a) To complete the **Works** further described in the **Tender** and **Response** in accordance with the terms and conditions thereof for the total price stipulated in the **Response** (hereinafter, “**Contract Price**”), in Canadian dollars, inclusive of all applicable taxes.

   b) To execute and perform the whole **Works** with due expedition and in a thoroughly workmanlike manner, in strict conformity with the provisions of this Agreement, the **Tende**r and **Response** and terms and conditions thereof (including, where noted, the applicable Ontario Provincial Standards Specifications (OPSS) and OPSS General Conditions of Contract) and all other executed signed documents forming part of the **Tender** and **Response** as referred to therein (which are identified by the signature of the Contractor, and which form part of this Agreement), and thereafter to maintain the same as herein provided.

   c) To:

      (a) indemnify and hold harmless the Corporation and its employees, officers and agents (collectively, the “Indemnified Parties”) from and against any and all losses, liens, claims, demands, damages, actions, suits, proceedings, costs and expenses (including, without limitation, legal fees, adjuster fees, court costs) (hereinafter, “claims”) suffered or incurred by the Indemnified Parties arising or resulting, directly or indirectly:

i. from Contractor's, its employees(s), agent(s), representative(s)' or subcontractors' performance of the Works or any other action or failure of Contractor, its employee(s), agent(s) or representative(s) relating to the Works and performance of any services, tasks related thereto; and

ii. from injury and/or illness to Contractor, its employee(s), agent(s) or representative(s);

(b) allow the Corporation to defend, compromise or settle any matter that is subject to the above indemnity (the "Indemnified Claim") through its own legal counsel, third party adjusters, or other agents, and any such compromise or settlement by the Corporation shall be final and not subject to challenge by Contractor. Contractor shall immediately repay or reimburse the Corporation for all amounts paid in respect of such Indemnified Claim and all expenses incurred in connection therewith.

d) To, prior to commencing the Works and at any other time as requested by the Corporation, provide written evidence from the Ontario Workplace Safety and Insurance Board of compliance with workers' compensation legislation including payment of premiums due thereunder.

e) To provide the Corporation, before commencing any work under this Agreement, a true copy of a certificate of general liability insurance policy in the amount of no less than five million dollars ($5,000,000) per occurrence, and the maximum deductible applicable to the policy cannot exceed $50,000, duly executed by an insurance company licensed to operate in the Province of Ontario and acceptable to the Corporation, covering Contractor and the Corporation with respect to claims, demands, actions or proceedings for sums of money, damages, costs, penalties and losses and all liability which may be imposed by law arising or resulting from the Contractor's, its employee(s), agent(s), contractor(s), representative(s)' or subcontractors' performance of the Works. Such certificate shall detail:
   i) that the Corporation is an insured party under the policy;
   ii) the above mentioned coverage;
   iii) the commencement date of the policy, which shall be no later than the date of commencement of the **Works**;
   iv) the expiry date of the policy, which shall not expire prior to the Contractor's completion of the **Works**;
   v) that the **Works** is covered by such policy; and
   vi) indicating that if the policy is cancelled or amended in any manner, sixty (60) days written notice of such change or cancellation will be provided to Corporation at the attention of Clerk, 9577 Port Franks Road, Thedford, ON N0M 2N0.

   Contractor shall provide proof of such insurance upon executing this Agreement and at any other time as requested from time to time by the Corporation. Contractor shall pay all premiums owing for such insurance coverage and shall be responsible for any and all deductible amounts under the policy.

2) The Corporation agrees:

a) That should the **Works**, including all extras in connection therewith, be duly and properly executed as aforesaid, and if the Contractor shall carry out, perform, observe, fulfill, keep and abide by all the covenants, agreements, stipulations, provisos, terms and conditions of this Agreement (including, for greater certainty, the terms and conditions of the **Tender** and **Response**), the Corporation will pay the Contractor the **Contract Price** and for such extra work at the amount(s) stipulated in the **Tender** (which are to apply to all extras of the character specified in the schedule of rates forming part of **Tender**), such payment to be made subject to the statutory holdbacks, contractual *set offs*, the *Construction Act* and less liquidated damages mentioned in the OPSS General Conditions of Contract, upon estimates or certificates signed by the Corporation's engineer issued as required in the **Tender**, provided that no money shall

become due and/or payable under this Agreement unless and until an estimate or certificate therefore shall is signed by the Corporation's Engineer as herein provided, the possession of which is hereby made a condition precedent to the right of the Contractor to be paid or to maintain any action for such money or for any part thereof, and further provided that the Corporation shall not be liable or compelled to pay for any extras or additional work not specifically contemplated in this Agreement, except only in the manner and as provided for herein.

3) And it is understood and agreed between the parties hereto as follows:

a) If, in the opinion of the Corporation's engineer, the Contractor refuses or neglects to perform the **Works** or any part thereof in an orderly manner and without delay, the Corporation may cancel the Agreement on twenty-four (24) hours written notice to the Contractor. The Corporation shall have the full right and power at its discretion, to take possession any work remaining at the time of notice of cancellation and to have the work completed at its discretion. The Contractor shall be liable for all damages, expenditure and extra expenditure, and for all additional cost of the work which may be incurred by reason thereof, together with the penalties from the date fixed for the completion of the **Works**.

b) The Corporation shall not be liable or compelled to grant or issue any estimate or certificate for any work rejected or condemned by the Corporation's engineer or to pay any money therefore until the workmanship and quality is made good, to the written satisfaction of the Corporation's engineer, and it is hereby expressly provided that the granting of any estimate or certificates, or the payment of any monies thereunder, shall not be construed as an acceptance of any bad or defective work or material, to which the same relates, or as an admission of liability to pay any money in respect thereof, and shall not in any manner lessen the liability of the Contractor to replace such work or material.

c) No waiver of any provision of this Agreement is binding unless it is in writing and signed by the party entitled to grant the waiver. No failure to exercise, and no delay in exercising, any right or remedy under this Agreement will be deemed to be a waiver of that right or remedy. No waiver of any breach of any provision of this Agreement will be deemed to be a waiver of any subsequent breach of that provision.

d) Upon termination of this Agreement for any reason the Corporation may evaluate the Contractor's performance using the criteria and benchmarks stipulated in the document entitled ***Report Card Scoring Summary*** **and** attached hereto as Appendix "X." The Contractor will be provided a copy of the Corporation's evaluation. If the Contractor fails to achieve the minimum score set out in the ***Report Card Scoring Summary*** **the Contractor shall be disqualified from bidding on future work with the Corporation for the period noted therein**. Contractor agrees that the Corporation's evaluation of its performance is final and not subject to review and/or appeal under any circumstances.

e) The Corporation may assign this Agreement or any part thereof without the consent of the Contractor. Contractor may not assign this Agreement without the prior written consent of the Corporation or any of the Corporation's assigns.

f) This Agreement shall ensure to the benefit of and be binding upon the parties hereto, their respective successors, and such assigns that are permitted by this Agreement.

g) No amendment, supplement, restatement or termination of any provision of this Agreement is binding unless it is in writing and signed by each party to this Agreement.

h) The provisions of this Agreement (including, for greater certainty, the **Tender** and **Response** attached hereto and their respective terms and conditions) herein constitutes the entire agreement between Contractor and the Corporation with respect to the subject matter hereof and supersede all previous expectations, understandings, communications, representations and

agreements whether verbal or written between Contractor and the Corporation with respect to the subject matter hereof and may not be modified except by subsequent agreement in writing executed by the Corporation and Contractor.

i) This Agreement shall be governed by and interpreted in accordance with the laws of Ontario and, to the extent applicable, the federal laws of Canada applicable therein. Each of the parties irrevocably attorns to the exclusive jurisdiction of the courts of Ontario.

j) In this Agreement, the words “Persons”, “shall”, “may”, “herein”, “work”, “works”, “Contract”, “Contractor”, “Inspector”, “Engineer”, and words used in the singular number or the masculine gender, shall have the meaning and effect given to them in the OPSS General Conditions of Contract, if defined therein.

4) Any notice, request, payment or any communication required or permitted to be given under this Agreement by any party to the other shall be made in writing and shall be given, made or communicated, as the case may be, by courier, personal delivery, facsimile transmission, or regular mail using the following addresses:

The Corporation of the Municipality of Lambton Shores **9577 Port Franks Road** **Thedford, Ontario** **N0M 2N0** **Attention: Stephanie Troyer-Boyd - Clerk** **Phone: 519-243-1400** **Facsimile: 519-786-2135**	

Any notice or other communication related to this Agreement shall be deemed to have been given, made or delivered, as the case may be, at the time that the same is personally delivered, or, if given by electronic or facsimile transmission, on the day on which it is sent subject to confirmation of delivery, or, if sent by mail, on the 3rd day excluding Saturdays, Sundays, and statutory holidays in the Province of Ontario following the date on which it was mailed.

IN WITNESS WHEREOF the parties have executed this agreement on the date first written above.

The Corporation of the Municipality of Lambton Shores	Contractor
By:_____	By:_____
Mayor: Doug Cook	Print Name:
By: _____	I have the authority to bind the Corporation.
Clerk: Stephanie Troyer-Boyd	

MUNICIPALITY OF LAMBTON SHORES

INFORMATION FOR BIDDERS / GENERAL CONDITIONS

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THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

INFORMATION FOR TENDERERS / GENERAL CONDITIONS

Persons tendering are requested to fill in all blanks, and should any uncertainty arise as to the proper manner of doing so, the Infrastructure Manager will upon request, give the requisite information.

1. GENERAL

Sealed tenders for the Contract:

Contract 2025-08
DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

will be received up to **2:00:00 p.m**. local time:

Thursday, November 20, 2025

and will be opened publicly at 9577 Port Franks Road, Thedford, ON as soon as possible thereafter. All tenders shall be addressed to:

Municipality of Lambton Shores
Public Works Department
9577 Port Franks Road
Thedford, ON
Attn: Infrastructure Manager

and the tender shall be submitted in a sealed opaque envelope, clearly marked as to contents using the label provided herein.

2. BLANK FORM OF TENDER

All tenders must be completed in ink/toner on the blank Form of Tender attached hereto and shall give the price of each item of work proposed and be signed by the bidder with their business address.

3. DESIGNATED OFFICIAL

For the purpose of this contract, Alex Williams, CET, Infrastructure Manager, is the “Designated Official” and shall perform the following functions: releasing, recording, and receiving tenders; opening, recording and checking bids; answering queries of prospective bidders, and reviewing bids received. Questions must be in writing via email awilliams@lambtonshores.ca. Information provided verbally by Municipal Staff will not be binding on the Municipality.

All questions of a technical nature should be directed to Ken Graham, P.Eng., Black Creek Engineering Inc. Questions must be in writing via email blackcreekeng@gmail.com.com.

Questions posed and the responses provided, and/or Addendum issued, shall be forwarded to all Bidders. Addenda issued during the biding period are part of these tender documents.

Questions related to this project will be accepted up to the deadline of **1:00pm (local time) Tuesday, November 18, 2025.**

4. BIDDERS TO INVESTIGATE

The Bidders must satisfy themselves by personal examination of the exact location of the proposed work, and by such other means as they may prefer as to the actual site conditions, requirements of the work, and potential safety hazards. No allowance of any kind will be made for lack of description of the premises, site condition, or any other related issue.

The successful Bidder will be responsible for avoiding damages to existing utilities, buried or otherwise, and at their own expense shall investigate location of any such utilities

5. VARIATIONS IN TENDER QUANTITIES

Where the work has been divided into items, the Bidders shall tender a unit price for the different portions of the work in accordance with their estimate of cost. In the event of an increase or decrease in the quantity of any particular item of work the actual quantities executed may be paid for at the rate stated for that particular item of work in the Form of Tender, subject to the basis of payment laid down for each item in the Specifications, and in accordance with GC 8.01.02.

6. PROVISIONAL ITEMS

Items identified as provisional are included for the Municipality's consideration only. Where provisional items have been included in the form of tender, Contractors are requested to complete the form in accordance with their estimate of costs. At the Municipality's discretion provisional items may be incorporated into the contract for the work offered to the successful bidder at the price quoted in the form of tender. The prices quoted for any provisional item will be included in the Municipality's assessment of submitted tenders.

7. RESERVATIONS

a) General

The Municipality reserves the right to accept any tender in whole or in parts thereof judged most satisfactory, without liability on the part of the Municipality.

The Municipality reserves the right to reject any or all tenders for any reason including budget constraints. The lowest or any tender will not necessarily be awarded the Contract offered herein, and awarding a higher tender shall be at no liability to the Municipality of Lambton Shores or persons representing the Municipality of Lambton Shores.

Tenders which are incomplete conditional, obscure, contain additions not called for, erasures, alterations, and/or irregularities of any kind may be reject as informal.

b) Unbalanced Tenders

Each item in the Tender Form shall have a reasonable price relative to other items. Under no circumstances will an unbalanced tender be considered. The Corporation and the Clerk shall be the sole judge of such matters and should any tender be considered to be unbalanced, then the Corporation will reject the same.

c) Ability and Experience of Bidders

The Municipality reserves the right to consider ability, resources or other factors related to a Bidder’s qualifications when considering the award of any tender. Further, the Municipality reserves the right to consider the Bidder’s experience and safety record on all projects of a similar scope completed either for the Corporation, or any like entity, within the last three years. Any or all Bidders shall, at the request of the Municipality, furnish evidence satisfactory to the Corporation, of the Bidder’s experience in this class of work, and that the Bidder has sufficient capital and plant to enable it to execute and complete the same successfully within the allotted time stipulated herein.

d) Right to Deny Bidding on Future Requests for Service

The Municipality reserves the right to deny any successful bidder the right to respond to any future request for Quotation, Tender or Proposal in the event of poor performance. For greater clarity, the Municipality will monitor the performance of any successful bidder and shall provide written notice of any deficiencies of service. Should deficiencies be persistent or of a significant nature, in addition to the right to terminate the contract, the Municipality will advise the successful bidder that their poor performance has rendered them ineligible to compete for similar future requirements on any Municipality of Lambton Shores initiative.

e) Prices and Budgets

The Corporation of the Municipality of Lambton Shores has a strictly defined budget for the work described herein. The Municipality reserves the right to change the scope of the work to bring the tender price within the available budget limits. Further, the Municipality reserves the right to waive formalities and enter into negotiations with the low Bidder or any other bidder that it deems appropriate in order to bring the project to within any given budget limit. Should it be determined that changes in the scope of the work are of sufficient magnitude, the Municipality at its discretion may cancel the tender process and commence a new process in order to complete the project within the available budget constraints.

Changes to the scope of the work, be they: changes in scheduling, quantities, or the deletion of any part of the work shall not entitle the Contractor to any extra compensation. The Municipality shall not be responsible for any cost incurred by any bidder associated with preparing or submitting a tender for the work should the tender offered be rejected or the process cancelled.

8. LIMITATION OF LIABILITY

The Municipality of Lambton Shores enforces a strict code of ethics and attempts to always be fair in evaluating and awarding contracts resulting from any bidding process. By submitting a tender, quotation, or proposal bidders agree that the Municipality will not be held liable for any amount in excess of the amount required to prepare and submit a tender, quotation, or proposal in the event that the Municipality is found to have erred in any manner in the award of any contract.

9. WITHDRAWL OR ALTERATION OF A SUBMITTED TENDER

Any bidder who has already submitted a tender, may submit a further tender at any time prior to the official closing time previously stated. The last tender received shall supersede and invalidate all tender previously submitted by that bidder for the work described herein.

A bidder may withdraw their tender at any time up to the official closing time by submitting a letter bearing their signature and seal as enclosed in their tender to the Municipality. No telegram, facsimile, or telephone calls shall be considered. After the official closing time for the receiving of tenders, all tenders received shall be irrevocable.

10. HARMONIZED SALES TAX (H.S.T.)

Bidders shall NOT include the applicable H.S.T. in prices tendered for the work of this contract. The H.S.T. will be calculated on the total tender price on the sheet provided in the Form of Tender.

Under the H.S.T. the legal liability to pay the tax rests with the purchaser, with the tax amount being a percentage of the selling price. On its supply, the Contractor shall recover H.S.T. paid to suppliers by virtue of the input tax credit feature of the H.S.T. Thus, the H.S.T. paid by the Contractor to suppliers should not be an element of cost in calculating the contract selling price.

Any H.S.T. amount the Corporation becomes liable to pay and the Contractor liable to collect will be billed and paid as a separate amount in addition to certified contract payments. This allows traditional

industry payment application and certification procedures to continue. It also will facilitate administration and accounting for the H.S.T.

11. TENDER AND BONDING REQUIREMENTS

The tender must be legible and where applicable ALL ITEMS BE BID with the Unit Price for every item and other entries being fully clear.

A statement added to the Tender Form, or a covering letter must not restrict or qualify the tender.

Alterations to the Tender Forms provided by the Corporation will not be accepted.

The Form of Tender must be signed, in the spaces provided on the form, with the signature of the bidder or of an authorized official of the organization bidding. Further, the submitted Form of Tender shall be sealed or witnessed by another individual. If a joint tender is submitted, it must be signed and sealed/witnessed on behalf of each of the bidders and if the signing authority for each bidder is vested in an individual shall be signed separately on behalf of each bidder.

Tender Deposit

A deposit of 10% of the total tender bid price must accompany the tender. Failure to supply this deposit, as required, is cause for rejection of the tender. This deposit may be forfeited in certain circumstances as set out in these documents. The deposit shall be in the form of a certified cheque or bid bond made payable to the Corporation of the Municipality of Lambton Shores or a bid bond in favour of the Corporation of the Municipality of Lambton Shores. All deposits shall remain valid for at least sixty (60) days following the closing date of the Tender. Immediately after Tenders have been opened they will be referred to the Clerk for examination and report. As soon as the two lowest acceptable tenders have been determined by the Clerk, but in any case not longer than thirty (30) days after the tender opening, the Corporation will return the tender deposits submitted by all other Bidders except the two lowest. After the successful bidder and the Municipality have executed the contract, the tender deposits of the two lowest Bidders will be returned.

Agreement to Bond (Surety's Consent)

The tender must be accompanied by an Agreement to Bond, completed and executed by the Bidder's Surety. Failure to supply this document, as required, is cause for rejection of the tender. The Agreement to Bond and the Bidder's Surety shall be to the satisfaction of the Corporation. For clarity, copies of the documents stipulated under this section shall be acceptable provided that the original is delivered to the Municipality within forty-eight (48) hours of the stipulated closing of this request.

Contract Performance Bond

The successful Bidder shall at their expense furnish to the Corporation a Contract Performance Bond in the amount of 100% of the contract price. Bonding shall include and cover any guaranteed maintenance period requirements of the contract. The bond shall be furnished prior to the execution of the Contract and shall be approved by and acceptable to the Corporation.

Labour and Material Payment Bond

The successful Bidder shall at their expense furnish to the Corporation a Labour and Material Payment Bond in the amount of 100% of the contract price. The bond shall be furnished prior to the execution of the Contract and shall be approved by and acceptable to the Corporation.

12. STANDARD SPECIFICATIONS

This contract document references Ontario Provincial Standards for Roads and Municipal Services, OPSS Volumes 1, 2, 3, 4, 7 and 8. Copies of the specifications referenced are available for download, at https://www.library.mto.gov.on.ca/SydneyPLUS/TechPubs/Portal/tp/opsViews.aspx. It shall be the Bidder's responsibility to review the referenced specifications in their entirety.

13. GENERAL CONDITIONS OF CONTRACT

OPSS General Conditions of Contract (GC), Volume 7 for Municipal Contracts, shall form part of this contract except as amended where stated.

14. LIABILITY, AUTOMOBILE AND NON-OWNED AUTOMOBILE INSURANCE

The requirements for this item shall be as listed in GC 6.0 which covers the protection of the work, persons and property, indemnification, and all insurance requirements for this project. In addition to requirements stated in the preceding, the following shall apply:

a) The Municipality of Lambton Shores and Black Creek Engineering Inc. shall be named as an additional insured;

b) Without in any way limiting the liability of the Contractor under this contract, it shall be the responsibility of the Contractor to:

   i) Comply with the provisions of the Workplace Safety and Insurance Act of Ontario and to ensure that all his employees and all those of his sub-contractor's performing work under this contract are provided for thereunder. To the extent, if any, that such Act does not apply, the contractor and his sub-contractors shall maintain and keep in force during the term of the contract, Employer's Liability Insurance with the following limits:

any one employee .....$5,000,000.
any one accident .....$5,000,000.

c) Insurance stipulated in GC 6.03.04 "Aircraft and Watercraft Liability Insurance" and GC 6.03.05 "Property and Boiler Insurance" will not be required.

d) The Contractor shall purchase and maintain, with a reputable Canadian insurer, third party liability insurance acceptable to the Municipality throughout until, at the earliest, the end of the Contract insuring, without limitation, the Municipality and it's Consultant against any and all claims for personal injury and/or illness, damage property. Such insurance policy shall consist of a comprehensive policy of public liability and property damage insurance in an amount not less than $5,000,000 per occurrence and the maximum deductible applicable to the policy cannot exceed $50,000. Such insurance shall name the Municipality and Black Creek Engineering Inc. as an insured party there under and such insurance shall be extended to include the following endorsements: Contractual Liability and Cross Liability with a Severability of Interest Clause. Such insurance shall also state that coverage shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty days prior written notice by certified mail to the Municipality.

e) The Contractor shall deposit with the Corporation, before commencing any work under this contract a Certificate of Insurance duly executed by the insuring company, detailing the above mentioned coverage and the expiry date for all policies, confirming that the work of the contract is covered by all stipulated policies and stating that if the said policies are cancelled or changed in any manner, sixty (60) days written notice of such change or cancellation will be given to the Corporation of the Municipality of Lambton Shores, Clerk, 9577 Port Franks Road, Thedford, ON N0M 2N0.

15. WORKPLACE SAFETY AND INSURANCE

It shall be the obligation of the Contractor to comply with all requirements of the Workplace Safety and Insurance Board Act, as amended. The Contractor accordingly hereby certifies that all employees, officers, agents, and sub-contractors working on the project are covered under the act.

Prior to the execution of a contract, the successful bidder shall be required to furnish a copy of their WSIB clearance certificate and WSIB clearance certificates for all subcontractors to be utilized in the completion of the work. The WSIB clearance certificates shall demonstrate good standing and shall be updated prior to commencing the work and every 60 days in compliance with the act. Failure to supply or update this certificate as required is cause for termination of the contract.

16. OCCUPATIONAL HEALTH AND SAFETY ACT COMPLIANCE

The conditions stipulated in GC 7.01.07 -.09 shall be strictly enforced.

Both the Municipality of Lambton Shores and the successful Bidder have obligations under the Occupational Health and Safety Act (OHSA) to ensure that work sites are safe and that accidents are prevented. In submitting a tender in response to this request, all bidders acknowledge that if successful, they will be, and shall perform the duties of, the “Constructor” as defined under said act

Prior to the execution of the contract for work described herein, the successful Bidder shall provide a copy of their company’s safety policy manual. Further, at least seven (7) days prior to commencing the work the successful Bidder shall supply the Municipality with a copy of the “Notice of Project” as submitted to the Ontario Ministry of Labour. It shall be the responsibility of the successful contractor to develop a safe work plan for the project. Changes or amendments requested by the Municipality to ensure compliance with the OHSA shall be incorporated by the Contractor at no charge. The contractor shall be responsible for the ongoing safety and security of the job-site.

Depending on the size, duration, and nature of the contract a pre-construction meeting will be held to identify any possible health and safety concerns and address them before commencing the project. Site meetings, if requested by the Municipality or the Contractor, shall devote time to health and safety issues. It will be the shared responsibility of the Municipality and the Contractor to be in attendance or represented at all meetings. The Municipality maintains the right to conduct workplace inspections at its discretion. The contractor will be responsible for reacting immediately to any deficiency and correcting any potential health and safety risks. In the event of a serious or recurring problem, a notice of non-compliance will be issued. Disregard for any requirement of the Occupational Health and Safety Act (OHSA) could be cause for the issuance of a stop work order or even the termination of the contract.

17. WARRANTY

The Contractor shall warranty the work for one year in accordance with GC 7.16 “Warranty”.

Should the Contractor from any cause fail to address the defects and deficiencies identified by the Corporation, then the Corporation may do so and employ such other person or persons as the Engineer may deem proper to make such repairs or do such work, and the whole cost, charges and expenses so incurred may be deducted from any amounts due to the Contractor or may be collected otherwise by the Corporation from the Contractor. The decision of the Engineer shall be final as to the necessity of repairs of any work required to be done under the provisions of this clause or any other clause or clauses in the amounts expended therefore.

18. PAYMENTS AND HOLBACKS

Payment shall be made in accordance with the provisions of GC8.02 of the General Conditions of the Contract.

Section GC 8.02.03 “Advance Payments for Material”, is deleted.

Not excluding the provisions of the General Conditions of Contract, Section 8.02.03 “Certification and Payment”, The Contractor shall be entitled to receive monthly payments at the rate of ninety percent (90%) of the work done and materials in place, according to the estimate of the Engineer, less all stipulated forfeitures and deductions. These payments shall be made on monthly invoices (less deficiencies) submitted by the Contractor and shall not be construed as acceptance of the work.

Statutory Declaration re: Payment of Accounts

The Contractor shall submit with each monthly progress claim, except the first, a completed Statutory Declaration Re Payment of Accounts. Failure to comply with this requirement will delay payment to the Contractor until the declaration is received. A copy of the Statutory Declaration is included in the contract documents

Statutory Declaration re: Liens and Liabilities

A Statutory Declaration re: Liens and Liabilities shall be prepared by the Contractor and submitted with their final request for payment. A copy of this Statutory Declaration is included in the contract documents.

19. EXECUTION OF CONTRACT

The party to whom this contract is awarded will be required to execute the Agreement and furnish the required documents as listed duly executed within five (5) days, not including Sundays or legal holidays, from the date of mailing of notification from the Corporation to the bidder, according to the address given by him, that the contract is ready for signature.

i) Workplace Safety and Insurance Board WSIB Clearance Certificates for the successful bidder and all subcontractors
ii) Contract Performance and Material & Labour Payment Bonds;
iii) Satisfactory proof of Insurance as stipulated above;
iv) Copy of the Company’s safety policy manual; and,
v) Draft Traffic Protection Plan.

The works may commence once the appropriate agreements have been executed by both parties, subject to the receipt of all required approvals. Once work is commenced, it shall continue to completion without interruption or delays, except as required due to environmental conditions, or as approved in writing by the Engineer.

The Contractor shall inspect the contract site with the Engineer or his representative prior to commencement. The Contractor shall notify the Engineer or his representative of any extra work that may be required, any preparatory work not part of the work of this contract and any areas which the Contractor deems to be unprepared for the work of this contract, and in general inspect the contract site and agree that the site is prepared and the Contractor is satisfied with the condition of the site.

20. WORKING DAYS

Upon receiving the written authorization from the Contract Administrator to commence the work, the Contractor shall complete the work in its entirety as specified **within 20 working days**. Once the project has commenced, the Contractor shall complete the work in its entirety within the days allotted, excluding Saturdays, Sundays, and all Municipality staff and statutory holidays A working day consists of any day other than a Municipality holiday, statutory holiday, Saturday or Sunday.

Notwithstanding the requisite number of working days, the project shall be completed by **OCTOBER 31, 2026.**

The hours of operation for a working day will be 7am to 6pm Monday to Thursday unless approved by the contract administrator. Friday hours will be 7am to 5pm unless approved by the contract administrator or designated official.

The completion of the Contract shall include: the construction of the works, the performance of all specified quality assurance testing, the submission of the required documentation, and the performance of all stipulated remedial activities.

Requests for extension shall be completed in accordance with GC 3.06. The time of completion shall be extended in writing at any such time on such terms and for such period as shall be determined by the Engineer, and notwithstanding such extensions, time shall continue to be the essence of this contract. Should an extension be granted by the Corporation all bonds or other surety furnished to the Corporation by the Contractor shall be amended where necessary at the expense of the Contractor to provide coverage beyond the date of any extension of time granted, and the Contractor shall furnish the Corporation with evidence of such amendment of the bonds or other surety,

Any extension of time that may be granted to the successful Bidder shall be so granted and accepted without prejudice to any rights of the Corporation whatsoever under this contract, and all such rights shall continue in full force and effect after the time limited in this contract for the completion of the work and whenever in this contract power and authority is given to the Corporation or the Engineer or any person to take any action consequent upon the act, default, breach, neglect, delay, non-observance or non-performance by the Contractor in respect of the work or contract, or any portion thereof, such powers of authorities may be exercised from time to time and not only in the event of the happening of such contingencies before the time limited in this contract for the completion of the work but also in the event of the same happening after the time so limited in the case of the Contractor being permitted to proceed with the execution of the work under an extension in time granted by the Engineer.

21. LIQUIDATED DAMAGES

The Bidder is referred to section GC8.02.09 of the General Conditions (OPS) which specifies the conditions under the Liquidated Damages may become payable. In case all work called for under the contract is not finished or completed within the working days allotted, damages will be sustained by the Corporation. It is impractical and extremely difficult to ascertain and determine the actual damage which the Corporation will sustain in the event of and by reason of such delay and the parties hereto agree that the Contractor will pay to the Corporation the sum of one thousand ($1000) per day for liquidated damages for each additional working day required to finish the work. Bidders agree that this amount is an estimate of actual damage to the Corporation which will accrue during the period in excess of the prescribed date of completion.

The Corporation may deduct any amount under this paragraph from any monies that may be payable to the Contractor on any account whatsoever. The liquidated damages payable under this paragraph are in addition to and without prejudice to any other remedy, action, or other alternative that may be available to the Corporation.

22. SUB CONTRACTORS

Bidders will provide a complete list of all sub contractors who it proposes to employ in the completion of the work on the form provided. All sub contractors will be subject to the same Contractor Health & Safety policy previously described and must have a minimum of three (3) years related experience or have performed work directly for the Municipality of Lambton Shores and received a passing report card. The successful bidder will require the approval of the Municipality before replacing any of the listed sub contractors.

23. DESIGNATED SITE SUPERVISOR

The bidder shall indicate on the form provided the name of the experienced construction supervisor or the site superintendent that will be responsible for on-site supervision and completion of the contract. The designated Site Supervisor shall be on the site full time unless otherwise approved by the Municipality. The Municipality, at its discretion reserves the right to request the removal of the designated site supervisor. Should the Municipality request the removal of the designated site supervisor, the Contractor shall supply a suitable replacement at no expense to the Municipality.

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

CONTRACT 2025-08

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

FORM OF TENDER

Tender of _____

and _____

and _____

carrying on business under the firm name and style of

_____

_____

a company duly incorporated by the Province of Ontario hereinafter called the Bidder.

TO THE MAYOR AND COUNCILLORS OF THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES:

1. No person, firm or corporation other than the bidder has interest in this tender or in the proposed Contract for which this tender is made to which it relates.

2. This tender is made by the bidder without connection, knowledge, comparison of figures or arrangements with any other person or persons making a tender for the same work, and is in all respects fair and without collusion or fraud.

3. No member of Council, Corporation or any officer of the Corporation of the Municipality of Lambton Shores is, or shall become partner, stockholder, and surety or otherwise in or in the performance of the Contract, or in any portion of the profits thereof, or of any monies to be derived therefrom.

4. The bidder agrees that the tender is to continue open to acceptance for a period of sixty (60) days after closing date for the tender and that either Corporation may at any time within this period accept this tender whether any other tender has previously been accepted or not.

5. The bidder agrees that the tender is irrevocable after the official closing time and that if accepted by the Corporation will enter into an agreement to perform the work within 10 working days of receiving notification of the Municipality's award. In the event that the Bidder's tender is accepted and the bidder chooses not to enter in to an agreement with the Corporation; that the bid bond provided is subject to forfeiture; and further, that the Corporation may seek any other recourse that might be available under the law.

6. If this tender is accepted the bidder agrees to furnish a contract performance and labour & material payment bond as specified in the Information for Bidders and to execute the agreement and bond in duplicate within ten (10) working days after notification of acceptance of the tender by either Corporation.

7. If the tender is accepted the bidder agrees to complete the work within the period required by the Specifications attached hereto after being ordered to commence work. The work that may be ordered by the Engineer in strict conformity in all respects with the Specifications, General Conditions and Agreement and to accept payment in full thereof in the Unit Prices Bid.

The bidder has carefully examined the locality and site of the proposed works, as well as the Plans, Agreement, Information for Bidders, Form of Tender, Specifications and General Conditions relating thereto and Addendum/Addenda No. _____ to _____ inclusive, and acknowledges that they have obtained all the information necessary to enable the submission of a bona fide tender.

8. The bidder will agree to furnish all necessary plant, labour and materials and to construct in a good, substantial and workmanlike manner the works shown on the Contract Drawings and described in the Specifications, and to accept payment in full therefore at the Unit Prices listed on the Tender Sheets, all in accordance with the Contract Documents to the Satisfaction of the Engineer.

9. I/We enclose herewith a tender deposit in the amount and form shown below:

_____

_____

In the event of forfeiture of this tender deposit on account of withdrawal of this tender or failure to enter into a contract, the amount so forfeited is agreed and understood to represent liquidated damages and not a penalty.

_____ _____
Bidder's Signature Date

_____ _____
Bidder's Name (please print) Title

_____ _____
Witness's Signature Date

_____ _____
Witness's Name Title

_____ _____
Bidder's Address Postal Code

_____ _____
Bidder's Telephone Bidder's Fax

_____
Bidder's E-mail Address

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

CONTRACT 2025-08

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

FORM OF TENDER

SUMMARY SHEET

The tenderer hereby tenders and offers to enter into a Contract, being the Contract herein before referred to, to supply and do all or any part of the work which is set out or called for in this tender, on the terms and conditions and under the provisions set out or called for in this tender, for the Total Tender Price stated in the Summary Sheet, which price shall include Excise Tax, Rebate Tax, Patent Fees, Duty, Exchange, and all other charges except Harmonized Sales Tax for Tender 2025-08, DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT complete in every respect as specified:

Tender 2025-08 DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

TOTAL TENDER PRICE (Incl. H.S.T.) $_____

TOTAL TENDERED PRICE IN WRITING _____

_____DOLLARS.

_____ _____

Date Bidder's Signature

_____ _____

Date Witness

The aforesaid total tender price is made up as a sum of the prices included in the Schedule of Prices.

SCHEDULE OF LUMP SUM AND UNIT PRICES

Item	Description	Estimated Quantity	Unit	Unit Price	Amount
1	Mobilization / De-mobilization	1	L.S.		
2	Traffic Control - Road Closure	1	L.S.		
3	Clearing & Grubbing	1	L.S.		
4	De-watering of site including sediment & erosion control	1	L.S.		
5	Sawcut and remove existing asphalt	110	sq.m		
6	Remove existing structure including disposal	1	L.S.		
7	Support existing utilities	1	L.S.		
8	Supply and install 22.5m of 4420 x 3350mm precast concrete box culvert including, excavation & bedding	1	L.S.		
9	Supply and install new precast concrete end walls including excavation, base, drainage layer and tie-backs	1	L.S.		
10	Granular 'B' Backfill - Supplied & Delivered	940	tonne		
11	Structure Backfill - Placed and Compacted	620	cu.m		
12	Supply & place rip rap end treatment complete with geotextile	20	tonne		
13	Supply, place & compact Granular 'B2' road sub-base	90	tonne		
14	Supply, place & compact Granular 'A' road base & shouldering	50	tonne		
15	Mill asphalt lap joints (450mm x 50mm)	6	sq.m		
16	Supply, place & compact 100mm of HL4 hot-mix asphalt (2 lifts)	30	tonne		
17	Remove & dispose excess material including sampling & testing (provisional)	700	cu.m		
18	Restoration	1	L.S.		
19	Bonding	1	L.S.		
20	Contingency	1	Prov.		40,000
			Sub-Total		
			13% HST		
			Total Tender Price		

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

CONTRACT 2025-08

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

SUBCONTRACTOR/SUPPLIER LISTING

Bidders shall list all sub-contractors, suppliers, and consultants who they propose to use in the completion of this project

Sub-Contractor/Supplier List		
Company Name & Address	**Contact Person**	**Phone Number**

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

CONTRACT 2025-08

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

CONTRACTOR'S EXPERIENCE IN SIMILAR WORK

Bidders shall list their experience from projects completed of similar size and nature to this project

Contractor's Experience in Similar Work			
Year Completed	**Description of Project**	**For Whom Work Performed**	**Value**

THE CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

CONTRACT 2025-09

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

DESIGNATED SITE SUPERVISOR

The bidder shall indicate below the name of the experienced construction supervisor or the site superintendent that will be responsible for onsite supervision and completion of the contract. The designated Site Supervisor shall be on the site full time unless otherwise approved by the Municipality. The Municipality, at its discretion reserves the right to request the removal of the designated site supervisor. Should the Municipality request the removal of the designated site supervisor, the Contractor shall supply a suitable replacement at no expense to the Municipality.

The designated site supervisor for this contract shall be:

_____
Print Name

Please attach the resume of the designated site supervisor

MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

SPECIFICATIONS

MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK CULVERT REPLACEMENT

SUPPLEMENTAL GENERAL CONDITIONS

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MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

SUPPLEMENTAL GENERAL CONDITIONS

SGC.1 **SCOPE OF WORK**

This work includes the replacement of a corrugated steel pipe-arch culvert on Decker Road at Decker Creek, near the community of Thedford.

SGC.2 **AREA OF WORK**

The area of the work shall be within the Municipal owned road allowance or as directed by the Engineer.

SGC.3 **CONTRACT SPECIFICATION**

These specifications are intended to provide additional detailed information on specific items of the work. Bidders are advised that the Specifications and Contract site are to be examined together to determine the complete scope of the work to be performed.

SGC.4 **COMMENCEMENT AND COMPLETION OF WORK**

The Contractor may commence the work at their discretion within (5) working days upon receiving the written authorization to commence work from the Municipality of Lambton Shores.

The road shall not be closed to traffic, nor shall any in-water works be completed prior to July 15th, 2026.

The Contractor shall be liable to ensure that the contract is completed in its entirety within the working days specified below.

Allowable working days: 20

In addition, despite the number of working days noted above, the Municipality hereby stipulates that, the Contractor shall complete the contract in its entirety by: **October 31, 2026**

Upon commencement, work shall continue uninterrupted, without delay, at each structure until such time as each project within the contract is complete. Permission to suspend the work shall be requested in writing. Work shall not be suspended without the written authorization of the Engineer.

SGC.5 **PRECONSTRUCTION MEETING**

A preconstruction meeting shall be held at least ten (10) working days prior to the commencement of the work. At the preconstruction meeting the Contractor shall, as minimum, supply the following:

a) Construction schedule using the critical path method;
b) Listing of all equipment owned or rented to be used in the work, plus all backup equipment;
   i) List shall include make, model, year, and all other relevant info;
c) Detailed traffic protection plan(s);
d) A list of all Subcontractors and Suppliers;
e) Laboratory testing and analysis for all materials to be incorporated in the works, including:
   i) Job mix formulas;

ii) Results of all granular quality testing/gradation;
iii) Name of CCIL Certified Asphalt Laboratory;

f) Updated WSIB Clearance Certificates for the Contractor and all Sub-contractors;
g) A copy of the "Notice of Project" issued to the Ministry of Labour;
h) 24-hour Emergency contact information for the designated site supervisor, and their immediate supervisor(s)

If satisfied, with the content of the above, the Municipality will issue the Contractor with written approval to proceed. Work shall not commence without receiving the Municipality's written authorization.

SGC.6 MAINTENANCE OF TRAFFIC

The Contractor shall take every precaution to ensure the safety of their staff, motorists, and pedestrians and to minimize the inconvenience to the travelling public and local residents. The requirements for traffic control are outlined in the Special Provisions.

It will be the Contractors responsibility to provide the Municipality with a traffic protection plan as required by the Occupational Health and Safety Act (OHSA) prior to commencing the work. Signage and layout shall be in accordance with the Ontario Traffic Manual – Book 7, latest edition.

SGC.7 SUPERVISION

The Contractor shall ensure that a fully qualified construction superintendent is in full time attendance at the site to co-ordinate the work.

SGC.8 PRIVY

The contractor shall supply a proper water privy (as per MOL guidelines), equipped with a wash station, for the use of all labour engaged in the project. The Contractor shall ensure the privy is maintained for the duration of the project.

SGC.9 INSPECTION

The Contractor shall give timely notice requesting inspection if work is designated for special tests, inspections or approvals or by other authorities having jurisdiction.

The Contractor will not receive payment for any aspect of the work that cannot be inspected to the satisfaction of the Engineer.

SGC.10 INDEPENDENT TESTING AGENCIES

The Municipality for the purpose of inspecting and/or testing portions of the works may engage independent testing agencies.

Employment of testing agencies does not preclude or relax the responsibility of the Contractor to perform as specified.

If defects or deficiencies are revealed during inspection and/or testing, the Contractor shall correct defects and deficiencies as directed by the Engineer at no cost to the Municipality.

The Contractor will not receive payment for any aspect of the work that cannot be tested to the satisfaction of the Engineer. The Municipality has the right to retain an independent testing agency at the Contractor's expense.

SGC.11 **LAYOUT**

The Engineer will establish the basic horizontal and vertical control lines and levels for the works. The Contractor will preserve all survey reference points as set or established by the Engineer. Any errors entering into the works through the failure to notify the Engineer concerning lack of preservation of such survey reference points shall be made good at the Contractor's expense.

The Contractor will layout the works from the aforementioned basic control lines and levels and assume all responsibility for the correctness of such layout. The Contractor will supply, establish and maintain all additional survey points and other work lines and levels necessary for the performance of the works.

The Engineer may, at any time, check the Contractor's survey and layout work but this shall not relieve the Contractor of any of his responsibilities to carry out the works in accordance with the Contract.

SGC.12 **PROTECTION OF UTILITIES**

It shall be the Contractor's responsibility to maintain and protect all existing utilities and related plant throughout the work. The Contractor shall sustain in their places and protect from direct or indirect injury any and all water and gas mains, public or private sewers or drains, pipelines, conduits, subways, service pipes, sidewalks, curbs and all other structures or property in the vicinity of his work, whether above, on or below the surface or which appear within any excavation or tunnel.

It is the Contractor's responsibility to contact the affected utilities through Ontario One Call for information in regard to any and all existing overhead and underground utilities and structures in the vicinity of the work.

The costs of all actions taken to protect utilities and structures from damage and the costs of all repairs to make good any damages to utilities and structures and the costs of all claims arising from any damages shall be borne by the Contractor. The contractor will not be compensated for losses as a result of conflicts or repairs to utilities.

The utility locations shown on drawings (if any), are provided for reference only, are not warranted as being correct, and are meant only as a guide as to what the Contractor may expect to encounter during the execution of the works. Depths of underground utilities, if and where shown on the Contract Drawings, are indicative only and are not guaranteed by the Municipality. It shall be clearly understood that the Municipality of Lambton Shores does not ensure the accuracy of such records or information, and the Contractor shall not make any claim against the Municipality for damages or extra work caused or occasioned by his relying upon such records, reports or information, either as whole or in part, furnished by a civic department or commission, private company or individual.

On occasion during the course of performing the work, Utility Companies may be required to be on site to relocate their plant. The Contractor shall not make any claim against the Owner for delay due to their presence on the job site. The Contractor must coordinate certain items to be performed by the Utility Company.

SGC.13 **CLEANING OF SURFACES**

Where applicable, the Contractor shall provide air pressure as required by the Engineer for the removal of all loose, foreign and deleterious material from the area to be resurfaced. The cost of this work is to be included in the unit price for resurfacing under this Contract.

SGC.14 **JOINT PAINTING**

Where applicable, the provisions of section 310.07.03.03 of OPSS 310 with respect to joint painting with asphalt emulsion between courses will be specifically enforced on work of this Contract.

SGC.15 **AUTOMATIC SCREED CONTROLS ON ASPHALT SPREADERS**

The Contractor shall use pavers equipped with automatic screed controls of an approved type, for joint matching and for control of longitudinal grade and transverse slope.

i) single pavers shall conform as to longitudinal grade by an approved 40-foot floating beam.
ii) the automatic transverse slope control shall be set for the crossfall desired by the Engineer, and shall be capable of being operated from either side of the paver.

SGC.16 **SUBMITTALS**

The Contractor shall provide the Engineer with a copy of the product specification sheet for the binder emulsion before work commences.

SGC.17 **MEASUREMENT AND PAYMENT**

The Engineer shall be responsible for measurements of all items for payment. The Contractor shall provide, at his own expense, a qualified assistant to the Engineer to expedite the taking of these measurements in the field and to facilitate agreement on pay item quantities.

For detailed information on measurements for payments for each Tender Item see the measurement and payment clauses of the appropriate section.

SGC.18 **CLAIMS AND EXTRAS**

The Contractor is advised that all work defined as “extra work” outside the scope of the works described, must be approved in writing by the Engineer prior to commencement of any such work. All claims for extra work shall be made in writing to the Engineer within three (3) working days of the date of commencement of the works. No consideration will be given to claims submitted after the three-day period has expired, or claims not approved prior to commencement. Claims for extras shall be submitted on a time and material basis for the work proposed. The Contractor shall provide ample notification to the Engineer of the commencement of any extra work to allow time for the Engineer to have a representative present to inspect the work.

SGC.19 **ACCEPTANCE OF WORK**

The written notice of acceptance shall specify the date of commencement of the twelve (12) month Maintenance Period. The Contractor shall be responsible for any maintenance or corrective measures required as a result of faulty workmanship or materials during the Maintenance Period.

SGC.20 **CONTRACTORS RESPONSIBILITIES AND CONTROL OF WORK**

The Contractor shall be responsible for delineating the boundaries of any open excavation at the end of each working day with fencing and approved lighting and delineators. All excavations are to be backfilled unless approved by the Engineer or Site Inspector. No road may be closed without the authorization of the Municipality and provision of adequate detours.

The Contractor shall be responsible to maintain access to the adjoining properties open during the course of the work.

The Contractor will be responsible for damage that occurs on any haul routes or to adjoining properties. It will be the Contractor's responsibility to restore the damaged area or areas to their original condition at his own expense and to the satisfaction of the Road Authority.

The Contractor's attention is drawn to Paragraph GC7.01.04 referencing the Occupational Health and Safety Act.

Maintaining roadways Detour Paragraph GC7.06.07 is amended to read as follows: The cost of supplying all labour, equipment and material required to maintain in a satisfactory condition for traffic, a road through the work including any detours constructed in accordance with the contract or with the approval of the Municipality, shall be paid by the Contractor.

The Contractor must, at his own expense, and without further or other order, provide, erect, and maintain all requisite barriers, fences, flashing yellow lights or other proper protection; and must provide, keep and maintain such watchmen and lights, as may be necessary or as may be ordered by the Municipality in order to ensure safety to the public as well as to those engaged about the premises or works.

Should the Contractor neglect to carry out the above requirements, the Municipality is hereby authorized to place such watchmen, lights, barriers, etc. as are required, and charge the cost to the Contractor, without relieving the Contractor or any claims for damages or accident.

The Contractor must provide a sufficient number of warning notices, hazard markers, flashing yellow lights and barricades, which must be maintained in good order wherever any roadway, sidewalk or thoroughfare is torn up or dangerous, and so long as it remains unsafe or unfinished.

All signs, signals, pavement markings, and /or detours shall comply with the Ontario Traffic Manual, latest edition.

When any work is carried on at night, the Contractor must supply, at his own expense a sufficient number of electric or other approved and efficient lights, to enable the same to be done in a safe, efficient and satisfactory manner, and the Municipality shall have the power to order additional lights to be put on at the Contractor's expense if, in the opinion of the Municipality, they are, or may be required.

SGC.21 **PAYMENT OF WORKERS**

The Contractor shall adhere to the Ministry of Labour Fair Wage Policy for the "Provincial Zone".

SGC.22 **GARBAGE PICKUP**

The Contractor will be responsible for maintaining garbage and recycling collection service during the period of construction. If garbage and recycling service cannot be maintained through the work zone the Contractor shall make provisions to have garbage and recycling collected through the work zone. Garbage and recycling containers must be emptied and returned by the end of the day on garbage and recycling pick-up day. It is the Contractor's responsibility to ensure the boxes and cans are returned to where they came.

SGC.23 **DRAINAGE OF ADJACENT LANDS**

The Contractor shall conduct his operations such that the drainage of adjacent lands will not be blocked by materials from the excavation or stockpiled backfill. At the direction of the Engineer or his designate, the Contractor shall take immediate corrective action to alleviate any drainage problems caused by his operations.

SGC.24 **APPROVED EQUALS**

The Contractor may submit a written request to use alternate materials to the Engineer for approval. Any alteration from the specified materials will be subject to approval by the Municipality. The Contractor shall not make substitution without written approval from the engineer prior to receipt of material on site. The Contractor shall clearly state the reason for his request for a substitution and indicate clearly whether there is any additional cost, credit or no difference in tendered price as a result of the proposed alternative.

The Contractor shall be required to pay all costs for any geotechnical testing of materials which do not meet specifications. These costs will be deducted from the contractor's final payment certificate.

SGC.25 **CHANGE ORDERS**

The Contractor shall not proceed with any additions or deletions to the contract until he has been issued a Change Order. The Change Order must be signed by the Contractor, approved by the Municipality. Verbal changes by the designated site inspector will not be recognized for payment by the Municipality.

SGC.26 **DAMAGE TO AND REMOVAL OF TREES**

The Contractor shall be responsible for any damage to the existing trees. Care shall be taken to ensure that no trees are damaged. Permission in writing shall be obtained from the Municipality before any tree, branches or foliage are removed or destroyed.

Before pruning, topping, removal, etc., of a tree along the line of the work, the Contractor shall obtain the approval of the Municipality. Branches, trunks, roots, or stumps must be removed in such a way as to prevent any hazard to private or public property, overhead wires, other trees, or utilities.

Stumps that are to be removed shall be taken out through the use of mechanical grinders only.

All trees scheduled to remain in place shall be protected to the requirements of OPSS 801 (MUNI) and as detailed on OPSD 220.010.

No separate payment will be made for this work. Costs for this work shall be included in other tender items.

SGC.27 **OVERHEAD CONSTRUCTION**

No machinery shall be employed which, in the opinion of the Municipality, will unduly interfere with overhead wires and other overhead construction. The Contractor will obey by all safety regulations and any other requirements imposed by the owners of the overhead construction or wires.

SGC.28 **SUPPORT OF UTILITY POLES**

It may be necessary to support utility poles during construction of underground services. The supporting of these poles shall be done by the Contractor at his expense and to the satisfaction of the affected utility company and the Municipality.

SGC.29 **DUST CONTROL**

Where construction is planned in very close proximity to private homes, dust control will be imperative during all stages of construction. At no time can the Contractor permit dust to impinge on adjacent properties. The Contractor shall monitor the construction site over weekends and holidays to address dust concerns.

MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

SPECIAL PROVISIONS

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MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

SPECIAL PROVISIONS

SP.1 **GENERAL**

These Special Provisions shall apply and be part of the Contract and shall take precedence over all Plans, Specifications and General Conditions pertaining to the Contract. The Contractor shall provide all labour, equipment, materials and supervision necessary to complete the work as shown in the Plans and described in the Specifications.

The work shall be carried out in accordance with the appropriate Ontario Provincial Standard Specifications except as altered herein. The Municipality reserves the right to delete all or portions of the work. The work consists of culvert replacement including:

- Removals
- 22.5m of 4420 x 3350mm precast concrete box culvert
- Supply & placement of precast concrete block end walls
- Erosion protection
- Road restoration
- Restoration

Unless noted elsewhere in these documents, all materials shall become the property of the Contractor. All debris, materials from the removals not incorporated in the new work shall be removed from the site. The Contractor shall note that asphalt must be deposited at a licensed site and a copy of the licence shall be provided by the Contractor before the start of removals.

The Contractor shall take care during any operation to carry out mitigating measures to minimize erosion sedimentation and migration at the site.

The Contractor shall adhere to all requirements of the approvals issued for the proposed work. Although the Municipality of Lambton Shores is still awaiting a permit from the Ausable-Bayfield Conservation Authority for the project, the Municipality expects it may include the following conditions:

- That appropriate sediment and erosion control measures be implemented during construction, so as to prevent the migration of sediment off-site or into the watercourse:
- That any disturbed areas are to be seeded, mulched and stabilized against erosion which may necessitate the use of erosion control blanket on steeper slopes, to the satisfaction of the ABCA, until vegetation is established;
- That any surplus excavated materials not incorporated into the work as approved by the Ausable Bayfield Conservation Authority (ABCA), shall be removed from the work site to an area outside of the ABCA regulation limit;
- That work shall be performed in no/low flow conditions to minimize sediment movement and erosion and no sediment is to be released downstream of the work area;
- That work shall be halted if a forecast of significant rainfall is expected and not resume until water flows return to a no or low flow condition;
- That significant stockpiling of materials in the area of the work and in advance of construction shall generally not be permitted. Any stripped topsoil or salvaged materials to be incorporated into the works shall be stabilized against erosion and stockpiled outside of ABCA regulation limits.

Bidders should formulate their submission on this basis. The Municipality will advise the Contractor of the actual stipulations of the permit once it is received.

SP.2 LIST OF DRAWINGS

Decker Road / Decker Creek Culvert Replacement
Sheets: EC & PP

SP.3 ONTARIO PROVINCIAL STANDARDS

Standard Specifications of the Ontario Provincial Standard Specifications as listed within these Specifications or elsewhere referred to in these Contract Documents shall apply and shall form part of the Contract except that in this case, the Owner is the Municipality of Lambton Shores hence any reference in the above Forms to the Ministry of Transportation of Ontario shall mean the Municipality and reference to the Engineer shall mean the Engineer authorized by the Municipality of Lambton Shores to act on its behalf.

SP.4 ONTARIO PROVINCIAL STANDARD DRAWINGS

Standard Drawings of the Ontario Provincial Standard Drawings as listed within these Specifications or elsewhere referred to in these Contract Documents shall apply and shall form part of the Contract.

SP.5 TICKETS SUPPLIED BY CONTRACTOR

Tickets shall be supplied by the Contractor and the following information shall be printed on each ticket:

1) Truck and Trailer Number
2) Ticket Number
3) Gross Weight
4) Tare Weight
5) Net Weight
6) Time and Date of Transaction
7) Owner
8) Contract Number

SP.6 ACCESS TO PROPERTY

The Contractor shall ensure that access to properties is restored at the end of each day.

SP.7 LAYDOWN AREA

The Contractor shall be responsible for making arrangements for a lay-down area, if necessary. Upon the completion of the work, the lay-down area shall be restored and the Contractor shall provide written documentation to the Municipality of Lambton Shores from the landowner that the restoration is to their satisfaction.

SP.8 GEOTECHNICAL REPORT

A geotechnical investigation has been undertaken for this project and the bore hole profiles are shown on the drawings. A full copy of the report is included in Appendix A.

SP.9 HAUL ROUTE

The Contractor shall use Decker Road to/from Main Street (CR79) or Gordon Road for access to/egress from the site during construction.

SP.10 **PRIVATE LANDS**

The Contractor shall not enter upon or occupy with workers, tools, equipment or materials of any nature, any lands outside of the public streets and roadways and the right of way shown on the Plans, except after consent has been received by him from the proper parties, a certified copy of which shall have been furnished to the Municipality.

Any damage to private property as a result of the Contractor's operations shall be the responsibility of the Contractor and repair costs in connection therewith shall be chargeable to the Contractor.

When private land is used or damaged by the Contractor, the Municipality requires that the Contractor obtain and forward to the Municipality a form of release which releases the Municipality from all future claims and which is signed by the owner of the private land.

SP.11 **ITEM 1 - MOBILIZATION AND DEMOBILIZATION**

GENERAL

This item includes all expenses incurred by the Contractor for mobilization and demobilization at the jobsite of offices, stores, conveniences and other temporary facilities required to complete the work in a safe manner along with all required signs, barriers, lights and equipment in and around the work site, in accordance with these specifications. The Contractor shall also obtain all locates and comply with all requirements of any crossing agreements or permits issued for this project.

PAYMENT

Payment will be at the Contract Lump Sum Price and shall be compensation in full for all costs involved in mobilization and demobilization and all other costs incurred for construction signing and maintaining the construction site in a safe manner. The Lump Sum Price entered for this item shall not exceed ten percent (10%) of the Total Tender Price. Sixty percent (60%) of the price for mobilization and demobilization shall be considered as relating to mobilization and the balance to demobilization.

SP.12 **ITEM 2 - TRAFFIC CONTROL – ROAD CLOSURE**

GENERAL

Further to Section SGC. 6 of the Supplemental General Conditions, the Contractor shall provide all labour, materials and equipment for maintaining all necessary traffic control measures to ensure the protection of their workers and to minimize the inconvenience to the travelling public. All traffic control operations shall conform to OPSS 706 (MUNI).

EXECUTION

The Contractor shall be responsible for all traffic control measures in accordance with Book 7 - Ontario Traffic Manual. The Contractor shall be responsible for the development of a Traffic Control Plan. The Traffic Control Plan shall address:

- Worker Safety
- Motorist Safety
- Motorist Mobility

The successful bidder shall provide a sample of a typical traffic control plan prior to the execution of the Contract. The Contractor shall submit the detailed traffic control plan a minimum of two (2) weeks prior to the start of construction. The plan shall consider site-specific features such as driveway locations. It shall be the responsibility of the Contractor to monitor the traffic control devices on a daily basis and make all repairs or replacements required.

The Contractor may close Decker Road between Main Street (CR79) and Gordon Road to traffic, however, local access is to be maintained at all times. A full road closure is permissible at the culvert site to facilitate the proposed replacement. The Contractor shall provide and maintain all signage, lighting and barriers at the work site.

The Contractor shall be responsible for coordinating their traffic control as required to accommodate adjacent properties should they arise. The Contractor must keep adjacent properties aware of traffic control plans and advise them in advance of changes.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material required to supply, install and maintain work zone signage and work zone barricades. Payment of half of the lump sum price for this item shall be made with the first progress payment and the remainder shall be paid with the last progress payment.

SP.13 **ITEM 3 – CLEARING & GRUBBING**

GENERAL
The Contractor shall be responsible for providing all labour and equipment to clear trees and brush in the vicinity of the proposed structure and as noted on the plans. All clearing and grubbing shall conform to OPSS 201 (MUNI).

EXECUTION
The Contractor shall clear trees and brush to the limits shown on the plans and as marked in the field. Trees and brush shall be cut where so located within the final cross section of the structure and the stumps grubbed. All trees, brush, stumps and any other timber debris shall be disposed of off-site.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material required to clear and grub trees and brush, complete.

SP.14 **ITEM 4 – DE-WATERING & SEDIMENT CONTROL**

GENERAL
The Contractor shall provide all labour, materials and equipment to maintain all necessary site de-watering and sediment control. All site de-watering and sediment control shall conform to OPSS 517 (MUNI).

EXECUTION
The in-stream work shall be undertaken in times of low flow. The Contractor shall be responsible for control of the flow as well as erosion and sediment control during construction. The Contractor shall first construct a temporary water passage system such as OPSD 221.020 (pumping and piping) including a sandbag dam (OPSD 219.200) at the upstream end and a rock flow check dam (OPSD 219.211), complete with geotextile at the downstream end of the site. All water shall be discharged onto the upstream side of the rock flow check dam. The Contractor shall construct sediment control measures such as a silt curtain or straw bale barrier to prevent any migration of sediment into the stream. The water and sediment control measures shall be in place before any excavation is performed.

Prior to removal of the sediment control measures, the Contractor shall remove all collected sediment from the stream.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, material and equipment required to provide de-watering and sediment control, complete.

SP.15 **ITEM 5 – SAWCUT AND REMOVE EXISTING ASPHALT**

GENERAL
The Contractor shall provide all labour and equipment to excavate and remove the existing asphalt to the limits shown on the drawings or as directed by the Engineer. All work shall conform to OPSS 510 (MUNI).

EXECUTION
The work shall consist of removal of the existing asphalt in accordance with these specifications and in reasonably close conformity to the lines and grades as designated by the Engineer, including sawcutting at the limits of the removal.

Material shall be hauled and disposed of by the Contractor at an approved recycling depot.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material required to sawcut and remove asphalt to the limits required for the culvert replacement, complete.

SP.16 **ITEM 6 – REMOVE EXISTING STRUCTURE**

GENERAL
The Contractor shall provide all labour, materials and equipment for the removal of the existing corrugated steel pipe-arch structure. All demolition and removal shall conform to OPSS 510 (MUNI).

EXECUTION
The Contractor shall supply all labour and equipment to remove the existing corrugated steel pipe-arch structure, complete. All demolished materials shall be disposed of by the Contractor offsite.

Any/all granular materials deemed suitable for re-use by the Engineer shall be salvaged. Clay material deemed suitable for re-use by the Engineer shall also be salvaged

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour and equipment for the removal of the existing structure, complete.

SP.17 **ITEM 7 – SUPPORT EXISTING UTILITIES**

GENERAL
The Contractor shall be responsible for providing all labour and equipment to support and protect the existing Eastlink communications cable and Enbridge gas main through the proposed excavation. All work shall be in accordance with OPSS 491 (MUNI).

EXECUTION
The Contractor shall carefully support and protect the existing Eastlink communications cable and Enbridge gas main during the removal of the existing structure and the placement of the proposed new structure. During the backfilling operations, the granular backfill shall be placed and thoroughly compacted to provide support under the utility. This item shall include any hand digging required to provide enough slack in the cable to permit the installation of the new structure.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material required to support and protect the existing Eastlink communications cable and Enbridge gas main through the proposed excavation and place them over the proposed new structure, complete.

SP.18 **ITEM 8 – SUPPLY & INSTALL PRECAST CONCRETE BOX CULVERT**

GENERAL
The Contractor shall be responsible for the supply of all materials, labour and equipment to install the proposed precast concrete box culvert complete to the lines, grades and specifications as per the contract drawings. The work shall conform to OPSS 422 (MUNI).

MATERIAL
Precast box sections shall be designed as per OPSS 1821 and/or the Canadian Highway Bridge Design Code (current edition), as applicable. A cast-in-place structure will NOT be permissible.

The existing Decker Road / Decker Creek structure is on an approximately 5^{o} skew to the road. The proposed structure is to be constructed on an approximately 5^{o} skew to the road, however, skewed ends are not required.

Bedding material shall be 19mm clear stone.

Geotextile shall be Terrafix 270R or approved equal.

EXECUTION
The Contractor shall supply and install the proposed precast concrete box culverts complete. The Contractor shall submit engineered shop drawings to the Engineer for review within two weeks of the notification of the acceptance of his tender. In the event of a conflict between these specifications and those of the structural designer, the more stringent shall apply.

The Contractor shall excavate to the lines and grades shown on the drawings including a 300mm thick layer of 19mm clear stone base wrapped with geotextile. The Contractor shall take care during the structure excavation and dewatering operation to carry out mitigating measures to minimize erosion sedimentation and migration at the site.

The barrel of the structure shall be aligned on the travelled portion of the road allowance and shall be centred on the centreline of the channel, as shown on the drawings.

The joints between precast sections shall be wrapped with a minimum 600mm width of geotextile to prevent the migration of soil between the joints, or as per the manufacturer's instructions, whichever are more stringent.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material to supply and install the precast concrete box culverts, complete. The structure backfill will be paid under Items 10 & 11.

SP.19 **ITEM 9 – SUPPLY & INSTALL PRECAST CONCRETE ENDWALLS**

GENERAL
The Contractor shall be responsible for the supply of all materials, labour and equipment to install the proposed precast concrete end walls complete to the lines, grades and specifications as per the contract drawings.

MATERIALS
The drainage layer behind the end wall shall be 19mm clear stone or as specified by the wall designer. Any cavities within or between the block units shall be filled with 19mm clear stone.

Geotextile shall be Terrafix 270R or approved equal.

Wall tie-back materials shall be Stratagrid 350 or as specified by the wall designer.

Precast concrete block units shall have a minimum 28-day strength of 25 MPa and shall have an interlocking design between individual units. "Second pour" or "leftover" blocks will not be accepted.

EXECUTION
The Contractor shall supply and install the proposed precast concrete end walls complete including stone base, drainage layer behind the wall and tie-backs. The Contractor shall submit engineered shop drawings to the Engineer for review within two weeks of the notification of the acceptance of the box culvert shop drawings. In the event of a conflict between these specifications and those of the structural designer, the more stringent shall apply.

The placement of tie-backs shall be conducted in conjunction with the backfilling of the proposed precast box culvert.

While the contract drawings depict one particular wall system, the intent is to not preclude other designs.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, equipment and material required to supply & install precast concrete block endwalls, complete.

SP.20 **ITEMS 10 & 11 – BACKFILL STRUCTURE**

GENERAL
The Contractor shall supply all labour, materials and equipment to place and compact backfill around the proposed new structure. All work shall conform to OPSS 501 (MUNI) and 902 (MUNI).

MATERIALS
Trench backfill within the travelled portion of the road allowance shall be any salvaged granular deemed suitable for re-use by the Engineer, supplemented as required with Granular 'B' produced from naturally formed deposits of sand, gravel and cobbles, as per OPSS 902, 1001 & 1010 (MUNI).

Trench backfill outside of the travelled portion of the road allowance shall be select native material.

EXECUTION
The Contractor shall place and compact granular backfill around the proposed structure up to the underside of the road sub-base, as well as select native backfill as indicated on the plans.

All granular backfill shall be compacted to 98% of maximum dry density.

PAYMENT
Item 10 shall be for the supply and delivery to the site for material to supplement any salvaged granular deemed suitable by the Engineer for re-use as backfill. Measurement for Item 10 will be made in metric tonnes at the actual number of metric tonnes of Granular 'B' delivered to the site as determined by the Engineer from material weigh tickets.

Item 11 shall be for the placement, grading and compaction of backfill material, which may be either any salvaged granular deemed suitable by the Engineer for re-use as backfill, material provided under Item 10 or select salvaged material deemed suitable by the Engineer for re-use as backfill outside of the travelled portion of the road.

Payment for this item shall be for full compensation for all required labour, materials and equipment to place and compact backfill around the proposed new structure, complete.

SP.21 ITEM 12 – SUPPLY & INSTALL RIP RAP

GENERAL
The Contractor shall provide all labour, materials and equipment to place rip rap erosion protection. All work shall conform to OPSS 511 (MUNI).

MATERIALS
Rock for erosion protection shall be 100-200mm diameter rip rap stone. Under no circumstances shall broken concrete be used.

Geotextile underlay shall be Terrafix 270R or approved equal.

EXECUTION
The Contractor shall supply and place a 300mm thick layer of 100-200mm diameter rip rap at the culvert ends. The rip rap shall be placed in a neat and workman like manner.

A layer of geotextile shall be placed prior to installing rip rap.

PAYMENT
Measurement for the rip rap will be made in metric tonnes at the actual number of metric tonnes of rip rap delivered to the site as determined by the Engineer from material weigh tickets. Payment for this item shall be for full compensation for all labour, material and equipment required to place rip rap erosion protection including geotextile, complete.

SP.22 ITEMS 13 & 14 – ROAD BASE, SUB-BASE & SHOULDERING

GENERAL
The Contractor shall provide all labour, materials and equipment to place, grade and compact road base, sub-base and shouldering. All work shall conform to OPSS 314 (MUNI).

MATERIALS
Granular road sub-base material shall be Granular 'B' – Type II, produced from 100% crushed dolomite, as per OPSS 1001 & OPSS 1010 (MUNI).

Granular road base and shouldering material shall be Granular 'A', produced from 100% crushed dolomite, as per OPSS 1001 & OPSS 1010 (MUNI).

Testing to prove conformity to OPSS will be at the cost of the Contractor. Specific truck loads of material when delivered and observed on site to be substandard, based on the opinion of the Engineer, will be rejected and removed from the site immediately at no cost to the Municipality for the material, delivery or removal. When on site quality control testing finds that a large portion of the delivered material is substandard then the Engineer, in consultation with the Municipality, will determine what remedial action must be taken. The cost of the remedial action, the quality control testing and any additional testing will be paid for by the Contractor.

EXECUTION
The Contractor shall place, shape and compact the granular material across the entire width of the proposed road.

Before placing the granular sub-base, the Contractor must ensure that the alignment, grade, cross-section and drainage of the sub-grade course conforms to the requirements of the drawings and specifications and has been approved by the Engineer. All granular sub-base shall be placed in maximum 150mm lifts and compacted to 100% of maximum dry density of the granular sub-base. The cross fall shall be 3%. Before placing the sub-base course, the Contractor must ensure that all services and excavations to the road grade have been completed. In no case shall any sub-base of base course be placed on a frozen, muddy or unstable roadbed.

All granular base shall be compacted to 100% of maximum dry density. The Contractor must fine grade and compact the granular 'A' base immediately prior to the placement of the asphalt surface. The cross fall on roadways shall be 2% on the travelled portion and 6% on the shoulder portion.

The Contractor shall supply water, as required to achieve the required compaction.

PAYMENT
Measurement for road base, sub-base and shouldering shall be by the metric tonne. Daily weight tickets shall be available to the Engineer at the end of each day. Payment at the contract price for the above item shall be full compensation for all labour, material and equipment required to place, grade and compact the proposed road base, sub-base and shouldering, complete.

SP.23 **ITEM 15 – MILL ASPHALT LAP JOINT**

GENERAL
The Contractor shall provide all labour and equipment to cold plane the existing asphalt pavement to the limits shown on the drawings or as directed by the Engineer. All work shall conform to OPSS 510 (MUNI).

EXECUTION
The work shall consist of removal of asphaltic concrete pavement by cold planing in accordance with these specifications and in reasonably close conformity to the lines and grades as designated by the Engineer.

The existing asphalt shall be planed to a width of 450mm and a depth of 50mm.

The equipment for removing the asphaltic concrete pavement shall be capable of performing the work in a manner satisfactory to the Engineer. The machine shall be power-operated and self-propelled, and shall have sufficient power, traction and stability to remove a thickness of bituminous surface to a specified depth, and provide a uniform profile and cross slope. The machine shall be capable of accurately and automatically establishing profile grades (within 3mm) along each edge of the machine by referencing from the existing pavement by means of a ski or matching shoe, or from an independent grade line. The machine shall have an automatic system for controlling grade elevation and cross slope. The machine shall be equipped with a means to effectively control dust generated by the cutting operation.

Milled material shall be hauled and disposed of by the Contractor at an approved recycling depot.

PAYMENT
Payment at the contract price shall be full compensation for furnishing all labour materials, equipment, tools and incidentals for milling and disposal of asphaltic material to blend into existing, complete.

SP.24 **ITEM 16 – HOT-MIX ASPHALT**

GENERAL
The Contractor shall provide all labour, materials and equipment to place and compact hot-mix asphalt binder and surface course. All work shall conform to OPSS 310 (MUNI) and OPSS 1150 (MUNI).

MATERIALS
Binder and surface course shall be HL4 and have a minimum thickness of 100mm (2 lifts).

The physical requirements for the mixture shall be those specified for an AADT of 1000-5000.

EXECUTION
At the preconstruction meeting, the Contractor shall submit to the Engineer a mix design prepared by a laboratory, having the Canadian Council of Independent Laboratories Type “A” Certification,

for each asphaltic concrete type to be used on a project. Each mix design shall comply with OPSS 1150.04.01.02, be carried out during the calendar year in which the paving is done and be corroborated by a five point Marshall Mix test from the same laboratory. Hot-Mix Asphalt supplied to the project must comply with the requirements of the mix design, OPSS 1003 (MUNI), OPSS 1101(MUNI), OPSS 1150 (MUNI) and be placed according to OPSS 310 (MUNI).

The bituminous tack coat shall be an emulsified asphalt consisting of suitable paving asphalt dispersed in water, as per OPSS 1103 (MUNI). A solution of asphalt, cut and mixed with diesel fuel, or other petroleum products, shall not be used. The addition of polymers or other additives after the manufacture of an emulsified asphalt shall not be permitted.

Compaction of each course of pavement shall be not less than 95% of the laboratory density.

The Contractor shall be responsible for the protection and maintenance of the sub-grade, sub-base and base courses until final acceptance of the work or placing of asphaltic paving materials. Repair, filling of pot holes, re-grading, etc. as is required to make good any damage, will be at the Contractor's expense.

Some granular materials tend to retain moisture and the material may become too wet for proper acceptance as a base material. If this occurs, the Contractor shall be fully responsible for all costs of removing and replacing all granular material that, in the opinion of the Municipality, is too wet for use as road base material. Testing and costs for testing will be the responsibility of the Contractor.

The Contractor shall furnish and evenly apply a solid black bituminous tack coat to the total face of concrete gutters, manhole frames, catchbasin frames and all other surfaces against which new asphalt paving is to be placed. The cost of supplying the material and applying the tack coat shall be included in the unit price bid for asphalt paving. See O.P.S.S. Specification 310.07.02.02.

PAYMENT
Payment shall be at the Tendered unit price per metric tonne for the applicable mix and shall be full compensation for all labour, material and equipment required to place and compact the proposed hot mix asphalt, complete.

SP.25 **ITEM 17 – EXCESS MATERIAL**

GENERAL
The Contractor shall be responsible for the management of all soil associated with this project, including, but not limited to, excavation, handling, storage, transportation, tracking, placement, and disposal, whether it is reused on-site, removed off-site for re-use or disposal, or imported to the Project Area for use as fill.

EXECUTION
The Contractor shall retain a Qualified Person (QP) for the duration of the Project, to oversee all work associated with the excavation, storage, movement, transport, re-use, and disposal of excess soil in accordance with O.Reg. 406/19.

All excess soil produced on site, both contaminated soil and soil for reuse, must be documented within an Excess Soil Destination Assessment Report (ESDAR) required under O.Reg 406/19 prior to being removed from the site. The Contractor shall provide to the Contract Administrator an Excess Soil Destination Assessment Report (ESDAR), prepared by an environmental engineer who is a Qualified Person (QP) under O. Reg 409/19 and O. Reg. 153/04, with significant input from the Contractor, and include details of the receiving site and the OPSF 180-3 Property Owner's Release agreement(s).

The Contractor shall develop, implement, and apply a tracking system, in accordance with O.Reg.406/19 and the Soil Rules, to track each load of excess soil during its transportation and deposit at a reuse site, Class 1 soil management site, local waste transfer facility, or landfilling

site. Information contained within the tracking system should be available to the Contract Administrator upon request throughout the duration of the Project, and complete records shall be provided to the Contract Administrator upon conclusion of the Project.

The Contractor shall obtain and submit to the Contract Administrator at least twenty (20) business days prior to removing excess soil from the Project Area, written consent from the owners and/or operators of the receiving sites, including an acknowledgement of receipt of any applicable analytical results, in accordance with O.Reg. 406/19 and in a format acceptable to the Contract Administrator. Under no circumstances should excess soil leave the Project Area prior to receiving appropriate written consent from the owners and/or operators of the receiving sites.

For the purposes of bidding, it is to be assumed that the excess material meets Table 1 of the excess soil quality standards for all parameters except sodium adsorption ratio and electrical conductivity and shall be treated as salt-impacted excess soil. If the sampling determines otherwise, an alternate course of action will be negotiated at that time.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour and equipment to load, haul and dispose excess material not incorporated into the works that exceeds Table 1 limits, complete.

SP.26 **ITEM 18 – RESTORATION**

GENERAL
The Contractor shall provide all labour, materials and equipment to restore the site to the limits as specified herein.

MATERIALS
Topsoil is to be stripped, stockpiled and re-used in any areas to be disturbed.

Erosion control blanket shall be Terrafix Single Net S100, or approved equal.

EXECUTION
All grassed areas shall be restored with a minimum of 100mm of topsoil and shall be seeded complete with straw erosion control blanket.

On or before completion of the work, the Contractor shall remove all temporary buildings and structures, works, tools or machinery and shall remove all rubbish of all kinds from the entire construction area and shall leave the premises in a neat and tidy condition. Cleaning up to the satisfaction of the Engineer shall be a condition for final acceptance of the work. Should, in the opinion of the Engineer, the Contractor be negligent in his duties in cleaning up, the Municipality will take the necessary steps to perform such cleaning and shall charge the Contractor all costs thereof.

Select salvaged topsoil shall be worked into all disturbed and regraded areas at a minimum depth of 100 mm and shall be seeded. The seed shall consist of a mixture of creeping red fescue-55%, Kentucky blue grass-25%, and 20% perennial ryegrass. Fertilizer shall be 8-32-16, nitrogen, phosphorus and potassium. The application rates shall be 100 kg/Ha. for seed and 350kg/Ha. for fertilizer. All areas shall be restored to equal or better condition.

The erosion control blanket shall be installed and secured as per the manufacturer's recommendations.

PAYMENT
Payment at the contract price for the above item shall be full compensation for all labour, material and equipment required to restore the site including topsoil, seeding and erosion control blanket, complete.

SP.27 **ITEM 19 - BONDS**

The Item shall cover the Contractor's cost of furnishing the Corporation with a 100% Performance Bond as well as a 100% Labour & Materials Payment Bond. The Performance Bond shall include a maintenance clause for 100% of the Tender price extending for a twelve (12) month period from the date of release of final payment to the Contractor.

SP.28 **ITEM 20 - CONTINGENCY**

Under this Item, an estimated allowance is set up to cover expenditures required during the execution of the Contract, which do not fall logically within any of the items listed in the Form of Tender. Work authorized by the Engineer and carried out under this Item will be paid for at a price negotiated between the Engineer and the Contractor. If a satisfactory price cannot be negotiated, payment will be made on a time and material basis in accordance with the provisions of the General Conditions of Contract. Payment will be made only for work authorized by the Engineer and completed in accordance with the instructions of the Engineer. The Contractor shall not be entitled to payment of the contingency allowance except for additional work carried out by him in accordance with the contract and as directed by the Municipality and only to the extent of such additional work.

STATUTORY DECLARATION
RE: PAYMENT OF ACCOUNTS

DOMINION OF CANADA

PROVINCE OF ONTARIO

IN THE MATTER of a contract, known as

Contract _____
Contract No.

entered into between Municipality of Lambton Shores

and _____
Contractor

on _____ 20_____
month, day year

for the construction of --_____

_____

all in the County of Lambton, Ontario.

TO WIT:

I _____ of _____ in the
Name Company
Province of _____ do solemnly declare:

1. That I am _____ of the
(President, Secretary, Treasurer, Partner etc)
Contractor named in the Contract above mentioned and as such have personal knowledge of the facts hereunder declared.

2. That all workers employed by the said Contractor in the performance of the said Contract have been paid in full, not less frequently than semi-monthly and up to and including the pay day immediately preceding the date of this declaration.

3. That the said Contractor has complied with the terms of the Construction Lien Act 1983 and any amendments thereto, with the requirements of statutes and regulations of the Province of Ontario relating to the payment of fair wages and with the requirements of the said Contract relating to the payment of wages.

4. That with the exception of the disputed accounts set forth in paragraph 5 hereof and amounts held back and payments deferred by written agreement, all liabilities * incurred by the said Contractor arising out of work performed up to_____20___**, as set forth in the Monthly Estimate relating to Payment Certificate No.__** have been discharged.

NOTE:
* Including payments due to all staff, sub-contractor, suppliers, Worker's Compensation Board, insurance companies.
** Except as required by paragraphs 2 and 3 hereof, it is not necessary for the Contractor to declare in respect of accounts relating to the work set forth in the latest Monthly Estimate but only in respect of work set forth in the Monthly Estimate immediately preceding the latest one.

5. That the following is a complete list of disputed accounts:
(NOTE: This table is not intended for listing unpaid accounts that are not in dispute).

Name of Creditor	Service Provided	Total Claim	Amount In Dispute	Amount Paid

(if there are no disputed accounts enter "NONE" above)

6. That the said Contractor has obtained from all sub-contractors who have ordered any preselected equipment relating to this Contract statutory declarations to the effect that such sub-contractors have paid all suppliers from whom they have ordered preselected equipment in accordance with the provisions of the clause titled "Payment to Suppliers of Preselected Equipment" of the Information for Bidders.

AND I MAKE THIS SOLEMN DECLARATION conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of "The Canada Evidence Act".

DECLARED before me at the _____

of _____

in the County of _____

this day of _____, 20____

A Commissioner etc., or Notary Public

NOTE:

In the Contractor's own interest he should complete this declaration carefully and correctly. Mistakes or omissions will probably result in delayed payment. The declaration is to be submitted to the Owner in duplicate together with each monthly progress claim (except the first one for the Contract) and must be signed by an authorized signing officer of the Contractor. Declarations signed by others will not be acceptable.

STATUTORY DECLARATION
RE: LIENS AND LIABILITIES

DOMINION OF CANADA

PROVINCE OF ONTARIO

IN THE MATTER of a contract, known as

Contract _____
Contract No.
entered into between Municipality of Lambton Shores
and _____
Contractor
on _____, 20___
month, day year

for the construction of _____

_____

all in the County of Lambton, Ontario.

TO WIT:

I _____ of _____ in the
Name Company

Province of_____ do solemnly declare:

1. That I am_____ of the
(President, Secretary, Treasurer, Partner etc)
Contractor named in the Contract above mentioned and as such have personal knowledge of the facts hereunder declared.

   Contractor named in the Contract above mentioned and as such have personal knowledge of the facts hereunder declared.

2. That all persons who have performed any work or service upon or in respect of, or placed or furnished any material or things to be used in connection with the above contract, have been fully paid or their claims have been settled in respect of such work, service, materials or things and there are no liens, garnishees, attachments or claims relating thereto.

3. That all sub-contractors who were engaged in or in any manner associated with the performance of any part of the above contract have been fully paid or their claims have been settled in respect thereof except to the extent that monies (not exceeding in any instance 15% of the value of the work performed by the sub-contractor) have been held back by written agreement with any such sub-contractors.

4. That all sub-contractors who were engaged in or in any manner associated with the performance of any part of the above contract have discharged all liabilities which they incurred in respect thereof.

5. That all claims for damage to property or injury to persons of which the above named Contractor has received notice have been fully paid or settled.

6. That the above named Contractor has not had any notice of any ground for a claim (other than those covered by paragraph 5 above) connected with this contract by a third party and for which a claim might be made and I believe that no such claim will be made.

AND I MAKE THIS SOLEMN DECLARATION conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of "The Canada Evidence Act".

DECLARED before me at the _____

of _____

in the County of _____

this day of _____, 20___

A Commissioner etc., or Notary Public

INSTRUCTIONS

1. This declaration must be sworn before a commissioner for Oaths, Notary Public or Justice of the Peace.

   The person making the oath signs at the right and the person before whom the oath is made signs on the left of the brackets.

2. The Owner will require two signed copies or alternatively the original and one photocopy of this declaration to be submitted with the Certificate of Completion.

CONTRACT RELEASE

DOMINION OF CANADA

PROVINCE OF ONTARIO

IN THE MATTER of a contract, known as

Contract _____
Contract No.
entered into between Municipality of Lambton Shores
and _____
Contractor
on _____, 20___
month, day year

for the construction of _____

_____

all in the County of Lambton, Ontario.

KNOW ALL MEN BY THESE PRESENTS that

I _____ of _____ in the
Name Company

Province of_____,

for and in consideration of other good and valuable consideration paid by the Owner, have remised, released and forever discharged, and by these presents do for myself/ourselves, my/our heirs, executors, administrators and assigns or successors and assigns, as the case may be, remise, release and forever discharge the Owner, its successors and assigns, of and from all manner of action and actions, cause and causes of action, suits, debts, dues, sums of money, claims and demands whatsoever at law or in equity which I/We ever had or now have, or which I/We or my/our heirs, executors, administrators or assigns or successors and assigns, as the case may be, hereafter can, shall or may have any reason of the above-mentioned Contract, save and except any claim which I/We have arising out of;

1) the retention by the Owner of the maintenance holdback of the Contract price;

2) any sum retained by the Owner against the cost of uncompleted work;

3) _____
(if none, state "none")

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals.

SIGNED, SEALED AND DELIVERED

_____
Signature

Witness or Company Seal

_____
Date

MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

APPENDIX 'A'

GEOTECHNICAL REPORT

MUNICIPALITY OF LAMBTON SHORES

DECKER ROAD / DECKER CREEK
CULVERT REPLACEMENT

APPENDIX 'B'

ENBRIDGE GAS SUPPORT REQUIREMENTS

Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard

STANDARD

2024-01-31
ST-1E-30A8-8E30.1.2.1
Enbridge Inc.

Table of Contents

Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard

1 Introduction

This document is intended for anyone involved in planning or carrying out work in the vicinity of Enbridge Gas Distribution and Storage's (GDS) network. It summarizes the requirements to be followed and specifies the technical requirements aimed at protecting GDS's facilities, and by extension, ensuring public and worker safety.

Within this document, "third party" refers to an individual or organization that is not employed by, or performing work under, contract to GDS. These requirements are applicable to work done by individuals such as homeowners, landowners, other utility companies, excavators, constructors, and contractors.

Third parties must follow the regulations and legislation applicable to their work in addition to these requirements. It is understood that all legal provisions applicable to work carried out around natural gas facilities take precedence over this document.

The terms "gas lines", "gas pipelines", and "mains" used throughout this document apply equally to natural gas mains and service lines, as well as any other component of GDS's natural gas systems found on public or private land.

All work in the vicinity of gas facilities must adhere to the requirements set forth in this document. Work includes, but is not limited to, any ground disturbance in the vicinity of facilities or equipment crossing. Ground disturbance includes, but is not limited to, activities associated with excavation, directional drilling, blasting, piling, compaction, boring, ploughing, grading, backfilling, and hand digging.

A locate of the facilities must be requested at least five business days prior to beginning any work. Locates are required before ground disturbance takes place.

2 Terms and Definitions

The following is a list of terms found in this document and their definitions.

applicant: The owner of the proposed work.

blaster: The person or persons responsible for setting the charges and performing the blast.

blasting, surface: An operation involving the excavation of rock foundations for various types of structures, grade construction for highways or railroads, or canals (trenches) for water supply or collection purposes.

blasting, tunnel: Operations involving the piercing of below-ground (generally horizontal) opening in rock.

compaction: Any vibration-generating operation that will result in a potential increase of the density of soils or controlled backfill materials. The means to increase the density may be static or dynamic.

constructor: A person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by himself or by more than one employer (as defined by Occupational Health & Safety Act).

contractor or excavator: Any individual, partnership, corporation, public agency, or other entity that intends to dig, bore, trench, grade, excavate, hammer into, or break ground with mechanical equipment or explosives in the vicinity of a gas pipeline or related facility.

EGI: Enbridge Gas Inc.

facility: Any Enbridge Gas Distribution, Transmission, Storage pipeline, main, service, regulator station or storage facility and its related components.

Gas Distribution and Storage (GDS): Enbridge Gas Distribution and Storage, Gazifère Inc., Niagara Gas Transmissions Limited, 2193914 Canada Limited.

ground disturbance: Any work, operation, or activity on or under the existing surface resulting in a disturbance or displacement of the soil or ground cover. Ground disturbance can include, but is not limited to: activities associated with excavation, directional drilling, blasting, piling, compaction, boring, ploughing, grading, backfilling, and hand digging.

hand dig: To excavate using either a shovel with a wooden or fiberglass handle, or using hydro vacuum excavation equipment. The use of picks, bars, stakes, or other earth piercing devices are not considered hand digging.

independent engineering consultant: A professional engineer who is registered with the provincial or state professional engineering association and a holder of a certificate of authorization (C of A).

locate service provider: Any entity that performs locates under the terms of a locate service agreement.

pile: Any vertical or slightly slanted structural member introduced or constructed in the soil in order to transmit loads and forces from the superstructure to the subsoil; the structural member can also be used as a component of a retaining wall system.

pile driving: The placement of piles carried out by gravity hammer, vibratory hammer, auger, pressing, screwing, or any combinations of the above methods.

positive identification: Visually locating (daylighting, exposing, digging test holes to determine) the location, depth, and size of a below-grade facility by using either vacuum excavating or hand digging. This includes elevation or alignment changes that can alter the depth or direction of the pipe (e.g., 45° and 90° elbows, fittings, plugs, weldolets, flanges, branch piping, known abandoned facilities, etc.).

pre-Engineering review: A process by which third parties can request a pre-engineering review for any potential conflict analysis.

professional engineer: An engineer registered and licensed with the provincial professional engineering association in the jurisdiction in which the engineer is practicing.

rural: All areas outside urban areas.

temporary support: The support of gas pipelines before or during an excavation to protect the pipeline from its own weight and to minimize deflection stresses.

third party: An individual or organization that is not employed by or performing work under contract to GDS (e.g., homeowners, other utility companies, contractor, excavators, constructors, etc.).

urban: An area with a population of at least 1,000 and a density of 400 or more people per square kilometer.

vital pipeline: A subset of pipelines that are critical to the safe and reliable operation of the natural gas system. Damages to vital mains could result in significant negative impact to public and worker safety or significant customer outages. This subset of mains consists of CER-regulated (Canada Energy Regulator) pipelines, transmission pipelines, and select distribution pipelines.

3 General Requirements

3.1 CER-Regulated Pipelines and Vital Pipelines

The CER regulates natural gas, oil, and commodity pipelines that extend beyond provincial, territorial, or national boundaries. All work in the prescribed area (within 30 m [100 ft] from each side of the CER-regulated pipeline) must be reviewed by the applicable CER-regulated operating company prior to commencing. This review is a regulatory requirement of the CER.

Mains are designated as vital pipelines by GDS. These include, but are not limited to, any pipeline NPS 16 or larger, transmission pipelines, CER-regulated pipelines, all pipelines operated by Storage and Transmission Operations (STO), and select distribution pipelines. The designation of a vital pipeline may change at the discretion of GDS. Vital Pipelines will be identified through locates. In these requirements, special considerations for CER-regulated pipelines and vital pipelines will be highlighted.

All work within 5 m (16 ft) from either side of lines operated by STO must be approved by GDS prior to commencing. For all other vital pipelines, all ground disturbance work within 3 m (10 ft) from either side of the vital pipeline must be approved by GDS prior to commencing. Approval by GDS may include specific conditions that third parties must follow. GDS may require representation on site for any ground disturbance work within the vicinity of vital pipelines and CER-regulated pipelines.

3.2 When Observation Is Required

A GDS representative is required to be on site to ensure the excavation or third-party activity is being safely completed near a pipeline when:

- Excavation with mechanical equipment will occur within 5 m (16 ft) of CER-regulated pipelines and all lines operated by STO.
- Excavation with mechanical equipment may take place within 3 m (10 ft) of vital pipelines and pipeline segments.
  Once the pipeline is exposed, mechanical excavation is then permitted up to 1 m (3.3 ft) from the pipeline.
- It is anticipated that blasting will take place within 30 m (100 ft) of any pipeline.
- Any other situations which requires observation, as deemed necessary by EGI.

3.3 Safe Excavation

Mechanical excavation is not permitted within 5 m (16 ft) of CER-regulated pipelines and 3 m (10 ft) of vital pipelines, unless verified visually. After the exact location of the main is verified visually, mechanical excavation is allowed up to 1.0 m (3.3 ft) from the pipeline. Within 1 m (3.3 ft) of the CER-regulated or vital pipeline, only hand digging or hydro-excavation is allowed.

Mechanical excavation may not begin within 3 m (10 ft) of the pipe until:

- The pipe has been exposed by the excavator, under the supervision of GDS, by hand at the point of crossing, or the pipeline company has located the pipe and confirmed that it is at least 0.6 m deeper than the proposed excavation.
- The excavation is parallel, or the pipe has been exposed by handto confirm the location of the pipe.

For all non-vital pipelines, mechanical excavation is not allowed within 1 m (3.3 ft) of the locate marks of the pipeline, until the exact location of the pipeline has been visually verified. The excavator must expose the pipeline by hand digging or hydro-excavation. Once the pipeline is exposed, mechanical excavation is then permitted up to 0.3 m (1 ft) from the pipeline. Within 0.3 m (1 ft) of any pipeline, only hand digging or hydro-excavation is permitted.

Only handheld compaction equipment may be used within 1 m (3.3 ft) of the sides or top of all gas pipelines. When ground conditions make hand excavation impractical (e.g., frost), the pipeline company may permit excavation to within 1 m (3.3 ft) of the pipeline if the pipeline company considers it safe to do so and directly supervises the excavation.

Spoil from excavation must not be piled on the pipeline or its easement.

3.4 Minimum Cover Requirements

Table 3-1: Minimum Cover Requirements on page 8 defines mains and services cover requirements. In all cases where the depth of cover requirements cannot be met, contact GDS to review depth of the cover requirements.

Table 3-1: Minimum Cover Requirements

Pipeline	Location	Minum Cover m (ft)
Mains	Under traveled surfaces (roads), road crossings	1.2 m (4 ft)
	Right-of-ways	1 m (3.3 ft)
	Highways	1.5 m (5 ft)
	Water crossings, and below drainage and irrigation ditches	1.2 m (4 ft)
Services	Private property	0.5 m (1.6 ft)
	Road crossings	0.9 m (2.9 ft)

3.5 Points of Thrust

Additional precautions may need to be taken when working in the vicinity of points of thrust. Points of thrust occur at pipeline fittings such as elbows (45° or 90°), end caps, weld tees, reducers, closed valves, and reduced port valves. If a point of thrust is identified through the locate process, GDS may require additional time to review the proposed work area. In the event that the excavation involves exposing a point of thrust or exposing an area near a point of thrust, GDS may provide written specific instructions that are to be followed. Failure to follow these instructions can result in significant harm to persons, property, or the environment.

3.6 Repair of Damaged Pipe and Pipe Coating

In all cases where the pipeline or the pipeline coating is damaged by construction activities, GDS must be contacted immediately and the excavation left open until GDS personnel have made the necessary repairs.

3.7 Encroachment

Permanent awnings and roof structures are prohibited above GDS's facilities within public rights-of-way or GDS's rights-of-way. GDS will not accept responsibility for any damages resulting from maintenance or operation of its facilities to encroaching structures within the public or GDS rights-of-way. Examples of encroaching structures include: bus shelters, street benches, and garbage bins.

GDS requires approval for all permanent structures to be built within 7 m (22.9 ft) of GDS's vital pipelines. This requirement is in place to allow GDS sufficient access and working space should an inspection or repair be needed.

3.8 Tree Planting

When planting trees, the gas pipeline in and near the area of excavation must be located to ensure enough clearance is maintained between the pipeline and the tree.

For all vital pipelines (including CER and transmission pipelines), trees or large shrubs must maintain a horizontal clearance between the edge of the root ball or open bottom container to the adjacent edge of the existing pipelines of not less than 3.0 m (10 ft), or as specified in any applicable easement agreement.

For all other pipelines, a minimum horizontal clearance of 1.2 m (4 ft) is recommended between the edge of the root ball or open bottom container and adjacent edge of the existing gas pipeline.

In cases where the recommended clearance cannot be achieved, GDS may specify the installation of a root deflector.

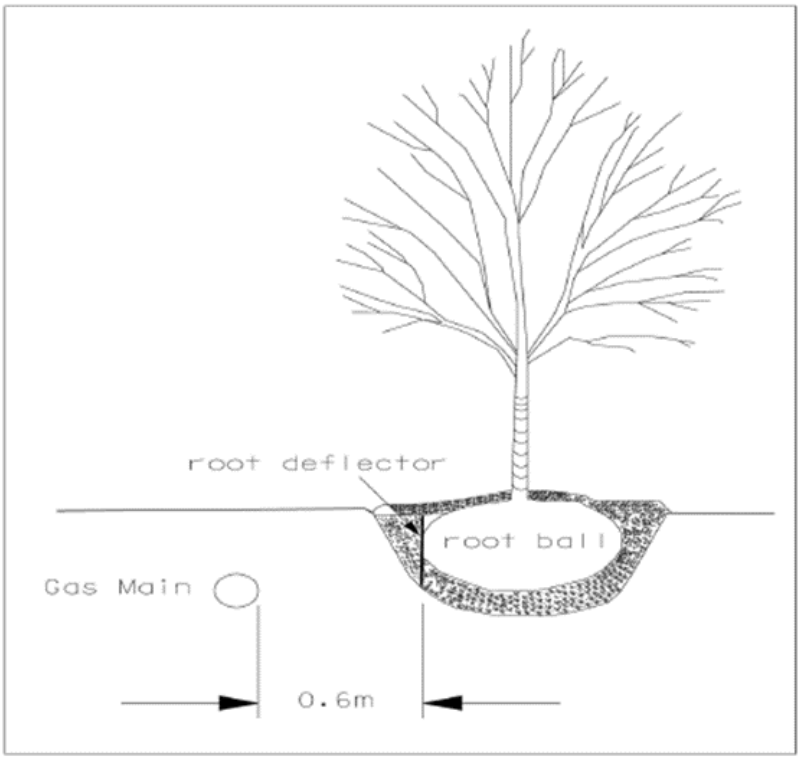
3.8.1 Root Deflectors

A root deflector is a physical barrier placed between tree roots and pipelines to prevent damage to the pipelines. A root deflector can be made from 1/4 in thick rigid plastic, fiberglass, or other non-degradable material. The root deflector is intended to prevent the root tips from attaching to the gas main.

Typically, root deflectors are straight barriers or encircle the tree. If installed as a straight barrier, the root deflector should be installed at a minimum 0.6 m (2 ft) from the pipeline on the tree-side of the pipeline. Also, it should extend parallel to the pipeline in both directions for 1.2 m (4 ft) measured from the centre of the tree trunk.

Root deflectors usually have a collar to keep the top of the deflector at ground level, and extend down to the bottom of the root-ball as shown in Figure 1: Example of a Root Deflector.

Figure 3-1: Example of a Root Deflector



3.9 Sewer and Drain Cleaning

Prior to sewer clearing activity using mechanical cutting or high pressure jetting equipment, the third party should call into Ontario One Call at 1-800-400-2255 for a

cross bore sewer safety inspection. An EGI employee or contractor will attempt to attend the site within two hours to complete the inspection.

4 Minimum Clearance from Other Structures

The following clearances must be maintained between the circumference of the gas pipeline and other underground structures:

Table 4-1: Minimum Clearance Between Gas Pipelines (Less than NPS 16) and Other Underground Structures

Direction	Minimum Clearance m (ft)
Horizontal	0.6 m (2 ft)
Vertical	0.3 m (1 ft)

Table 4-2: Minimum Clearance Between CER-regulated Pipelines and Vital Pipelines and Other Underground Structures

Direction	Minimum Clearance m (ft)
Horizontal	1 m (3.3 ft)
Vertical	0.6 m (2 ft)

Additional clearance or mitigation may be required for installations (such as transit systems or power transformers) that will introduce DC stray current interference or AC fault hazards.

Note

For all pipelines (including vital pipelines), when drilling parallel to the pipeline, a minimum horizontal clearance measured from the edge of the pipeline to the edge of the final bore hole of 1 m (3.3 ft) is required.

5 Pipeline Location Verification

5.1 Surface Road Work

Surface road work applies to ground disturbance on travelled roadways related to the removal of hard-surfaces only. For any ground disturbance work, locates must be obtained prior to commencing and the excavator must ensure accuracy of the locate by reviewing the locate paperwork with the physical locate markings. Surface road work can be completed without the requirement to positively identify EGI pipelines, provided no mechanical equipment will be used within 1 m (3.3 ft) horizontally of the located pipelines. If mechanical excavation is required within 1 m (3.3 ft) of the locate during any surface road work or work that will take place deeper than removal of the hard surface, the excavator must follow rules outlined in 5.2 Subgrade Road Work on page 11 for positive identification requirements.

5.2 Subgrade Road Work

Subgrade road work is any road work exceeding the depth required for removal of the hard surface that enters the sub-surface. The boundary area for the pipeline is the distance that is identified off the locate marks of the pipeline and applicable boundary areas are highlighted in Table 5-1: Boundary Areas on page 11.

Table 5-1: Boundary Areas

Pipeline	Boundary Area
Vital pipelines (≥ NPS 24)	3 m (10 ft)
Vital pipelines (< NPS 24)	2 m (6 ft)
Non-vital pipelines (all sizes)	1 m (3 ft)

Note

Work within the boundary areas must comply with the positive identification requirements set in Table 8-2: Pipeline Location Verification Requirements for Vital Pipelines on page 21 and Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines on page 21.

If these guidelines cannot be complied with, the excavator must submit a variance request work package. No variance will be provided for work within 1 m (3.3 ft) of any pipeline. The variance work package must include, at a minimum, the following information:

- Pre-Engineering design.
- Location of EGI facilities with respect to proposed excavation area (vertical and horizontal offsets).
- Location of proposed excavation area (vertical and horizontal offsets off permanent landmarks).
- Pipeline protection plan.

If a variance is requested, the excavator must also provide a physical barrier (e.g., silt fence), which would denote the boundary of the pipeline, where possible.

8.2 Drilling Parallel to Pipelines on page 20 and Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines on page 21 indicate GDS's minimum requirements for the verification of the pipeline location based on the nature of the work. The frequency and location of test holes may change at the discretion of GDS. Additional test holes may be required to sufficiently confirm the location of the pipeline (e.g., regulator stations).

Note

Non-mechanical equipment must be used when working within 1 m (3.3 ft) of any pipeline. If mechanical equipment is required for use around non-vitals, the pipeline must be positively identified using hand tools or hydro-excavation. Once the non-vital pipeline location has been visually identified through positive identification requirements listed in the 8.2 Drilling Parallel to Pipelines on page 20 and Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines on page 21, mechanical equipment can be used up to 0.3 m (1 ft) of the non-vital pipeline and 1 m (3.3 ft) of a vital pipeline.

When using hydro-vacuum excavation as an alternative to hand digging, see 9 Hydro-Excavation on page 24 for safe operating practices.

6 Operation of Heavy Equipment

6.1 General

Additional precautions are necessary when equipment in excess of the weights listed in Table 5: Vehicle Load Restrictions is operated in the vicinity of buried facilities where no pavement exists or where grading operations are taking place.

Table 6-1: Vehicle Load Restrictions

Pipe Material	Weight/Axle Maximum Allowable Load kg (lb)
Plastic	7,000 kg (15,400 lb)
Steel	10,000 kg (22,046 lb)

Prior to any crossing, the location of the gas main must first be staked out by a GDS representative.

The excavator is responsible for confirming the location and depth of the main. Test hole spacing must not exceed 50 m (160 ft).

6.2 Equipment Moving Across the Pipeline

Crossing locations for heavy equipment must be kept to a minimum.

The crossing locations must be determined by GDS after reviewing:

- The nature of the construction operation.
- The types and number of equipment involved.
- The line and depth of the existing gas main.

The use of equipment is contingent upon the review by GDS. Once the crossing locations have been established, heavy equipment is restricted to crossing at these locations only. It is the responsibility of the third party to inform their personnel of the crossing location restrictions.

Pipelines may require additional protection at crossing locations by constructing berms or installing steel plates over the pipeline.

Unless expressly allowed by the temporary crossing consent, equipment that crosses pipelines must be subject to the following conditions:

- The numbers of crossings back and forth must be kept to a minimum.
- Equipment must not remain stationary on top of a pipeline.
- Equipment must not cross with loaded side boom or other unbalanced loads.
- Equipment must cross perpendicular (not parallel) to the pipeline. The crossing angle for installations must be within 45° to 90° (with preference for as close to perpendicular as possible).
- Equipment must operate at slow speeds when crossing a pipeline in order to minimize loading impact.
- Existing cover over a pipeline must not be reduced; any loss of cover (e.g., due to rutting) must be promptly restored prior to crossing.
- Vibratory compaction equipment must not operate within 1.2 m (4 ft) of a pipeline.

6.3 Equipment Moving Along the Pipeline

Heavy equipment can be operated parallel to existing pipelines provided that a minimum offset of both:

- 1 m (3.3 ft) is maintained on pipeline sizes less than NPS 16.
- 2 m (6.6 ft) on pipeline sizes NPS 16 and larger, unless otherwise directed by GDS.

Only lightweight, rubber-tired equipment may be operated directly over the existing gas pipelines, unless a minimum pipe cover of twice the pipe diameter or 1 m (3.3 ft) (whichever is greater) can be verified. The use of all other equipment is contingent upon review and approval by GDS.

Unless expressly allowed by the temporary crossing consent, equipment moving along pipelines is subject to the following conditions:

- Equipment must operate at slow speeds when moving along a pipeline.
- Existing cover over a pipeline must not be reduced; any loss of cover (e.g., due to rutting) must be promptly restored prior to moving along the pipeline.
- Vibratory compaction equipment must not operate within 1.2 m (4 ft) of a pipeline.

Note

When crossing perpendicular to a pipeline that is smaller than NPS 16 (excluding vital pipelines), the vertical clearance outlined in Table 4-1: Minimum Clearance Between Gas Pipelines (Less than NPS 16) and Other Underground Structures on page 10 may be used as long as all positive identification requirements are also followed.

Note

When crossing perpendicular to a pipeline that is NPS 16 or larger, or crossing any CER-regulated pipelines or vital pipelines, a minimum vertical clearance of 1 m (3.3 ft) is required; 8 Horizontal Directional Drilling on page 19.

7 Support of Gas Pipelines

7.1 General

The support requirements specified in this section are the minimum requirements. GDS must be notified regarding the support of any gas main. GDS has complete discretion in the approval of any support system. Additionally, if a pipeline is to be exposed for longer than one month, approval must be sought from GDS and work must follow the requirements outlined in 3 General Requirements on page 6. Third parties must not depart from these support requirements unless a professional engineer working for or on behalf of the third party has designed an alternative method. Any alternative method must be comparable to these specifications and be, in the opinion of the professional engineer, consistent with good engineering practices. The alternative specification must be documented, approved by a professional engineer and provided to GDS for review prior to the commencement of work. The third party is responsible for the adequate support of the buried gas pipelines exposed during excavation according to this section.

Prior to any crossing, the location of the gas main must first be staked out by a GDS representative.

7.2 Support of Gas Pipelines Perpendicular to Excavation

Temporary support refers to the support of gas pipelines prior to or at the time of excavation to protect the pipeline from deflection due to its own weight while it is exposed. Temporary support must remain in place until the backfill material underneath the pipeline is compacted adequately to restore support of the pipeline.

Before trenching beneath a main or service, temporary support must be erected for pipelines if the unsupported span of pipe in the trench exceeds the length indicated in Table 7-1: Maximum Span without Support Beam on page 15.

Note

For pipelines larger than NPS 16, GDS must be contacted. Contact information can be found in the 12 Contact Information on page 31.

When temporary support is required, Table 7-2: Support Beam Sizes and Maximum Span Between Beam Supports on page 15 indicates the required beam for a given span. The beam must be a continuous length grade No. 1 Spruce-Pine-Fir (S-P-F) or equivalent. For spans exceeding 4.5 m (15 ft), a continuous length timber

beam may not be available. In that case, steel I-beams (or equivalents) can be used as the support beam. Steel beam selection must be certified by a professional engineer and submitted to GDS for review.

Table 7-1: Maximum Span without Support Beam

Pipe Size (NPS)	Steel m (ft)	PE (polyethylene) m (ft)
1/2	2 m (6.6 ft)	1 m (3.3 ft)
3/4 to 1-1/4	2.5 m (8.2 ft)	1.25 m (4.1 ft)
2	3 m (10 ft)	1.5 m (5 ft)
3 to 4	4.5 m (15 ft)	1.75 m (6 ft)
6	6 m (20 ft)	2 m (7 ft)
8	7 m (23 ft)	2 m (7ft)
10	8.5 m (28 ft)	-
12	10 m (33 ft)	-
16	11.5 m (38 ft)	-

Table 7-2: Support Beam Sizes and Maximum Span Between Beam Supports

	Steel	Plastic	
Pipe Size (NPS)	≤ 4.5 m	≤ 2 m	≤ 4.5 m
1/2 to 2	4 × 6	4 × 6	6 × 8
3 to 6	-	6 × 6	8 × 8

Note

In all cases where the support beam size requirements cannot be met, GDS must be contacted to review support beam requirements.

The beam must be placed above the pipe with the ends of the beam resting on firm undisturbed soil. The beam must not bear directly on the gas pipeline. The pipe must be supported from the beam with rope, canvas sling, or equivalent in a manner that will prevent damage to the pipe and coating and eliminate sag. The spacing between the ropes must not exceed 1 m (3.3 ft); see Figure 7-1: Support of Gas Pipelines Crossing Excavations on page 17.

Backfill material underneath the exposed pipeline must be compacted to a minimum of 95% compaction. Sand padding must be placed to a level 150 mm (6 in) below and above the main. For additional details, see 10 Backfilling on page 25.

Perform compaction with the loose lift height not exceeding 200 mm (8 in) or one-quarter of the trench width, whichever is less. Injecting water into the backfill beneath the pipe is not an acceptable method of compaction.

All temporary support on pipelines must be removed before backfilling. Adequate support must remain in place until the backfill material has restored support.

7.3 Support of Pipelines Parallel to Excavation

Two cases exist for pipelines parallel to an excavation:

- Trench < 1.2 m deep
- Trench > 1.2 m deep

In either instance, the pipeline must not be exposed unless it is necessary to provide direct support.

Trench wall support may not be required for excavations provided the pipeline meets all of the following criteria:

- Depth is less than 1.2 m (4 ft).
- the pipeline is at least 0.6 m (2 ft) from the edge of the excavation or outside the 45° line projected upward from the trench bottom; see Figure 7-3: Influence Lines for Gas Pipelines Adjacent to Excavations on page 19.
- Soil is stable (type 1 or 2, see Table 15-1: Soil Types on page 33)

If the pipe does not meet these requirements and the soil is soft clay or sand (soil types 3 and 4), then the excavation must be suitably shored to prevent movement of the pipe. The shoring must remain in place until the backfill material has restored support.

Trench wall support is required for excavations if any one of the following conditions exist:

- Depth is ≥ 1.2 m (4 ft).
- The pipeline is closer to the edge of the excavation than the minimum allowed distance indicated Table 7-3: Minimum Allowed Distance from Main to Excavation on page 16.
- Depth is < 1.2 m (4 ft) and the soil is unstable (type 3 or 4, see Table 15-1: Soil Types on page 33).

Note

Adequate support must remain in place until the backfill material has restored support.

Minimum distances from the edge of the trench to the pipeline in which the excavation influences pipelines are shown in Table 7-3: Minimum Allowed Distance from Main to Excavation on page 16. The pipeline must be supported if these minimum distances cannot be met.

Table 7-3: Minimum Allowed Distance from Main to Excavation

Trench Depth (m)	Soil[a] Type 1 and 2	Soil[a] Type 3 and 4
1.2 m (3.9 ft)	0.9 m (3 ft)	0.9 m (3 ft)
1.5 m (4.9 ft)	0.9 m (3 ft)	0.9 m (3 ft)
1.8 m (5.9 ft)	0.9 m (3 ft)	0.9 m (3 ft)
2.1 m (6.9 ft)	0.9 m (3 ft)	0.9 m (3 ft)
2.4 m (7.9 ft)	0.9 m (3 ft)	0.9 m (3 ft)
2.7 m (8.9 ft)	0.9 m (3 ft)	1 m (3.3 ft)
3 m (9.8 ft)	0.9 m (3 ft)	1.5 m (4.9 ft)
3.3 m (10.8 ft)	0.9 m (3 ft)	1.8 m (5.9 ft)
3.6 m (11.8 ft)	0.9 m (3 ft)	2.2 m (7.2 ft)
3.9 m (12.8 ft)	0.9 m (3 ft)	2.5 m (8.2 ft)
4.2 m (13.8 ft)	0.9 m (3 ft)	3 m (9.8 ft)
4.5 m (14.8 ft)	1 m (3.3 ft)	3.4 m (11.2 ft)

Trench Depth (m)	Soil[a] Type 1 and 2	Soil[a] Type 3 and 4
4.8 m (15.7 ft)	1.5 m (4.9 ft)	3.8 m (12.5 ft)
5.1 m (16.7 ft)	2 m (6.6 ft)	4.1 m (13.5 ft)
5.4 m (17.7 ft)	2.5 m (8.2 ft)	4.6 m (15.1 ft)
5.7 m (18.7 ft)	3 m (9.8 ft)	5 m (16.4 ft)
6 m (19.7 ft)	3.4 m (11.2 ft)	5.5 m (18 ft)

a. As defined in the Occupational Health and Safety Act.

For pipelines where the trench bottom is below the water table, the trench must be suitably shored as per the trench wall support requirements.

Any pipeline that is exposed for a length greater than indicated in Table 7-1: Maximum Span without Support Beam on page 15 requires a field assessment.

For steel and polyethylene pipelines within the minimum distances given in Table 7-3: Minimum Allowed Distance from Main to Excavation on page 16, support must remain in place until backfill material restores support.

Figure 7-1: Support of Gas Pipelines Crossing Excavations

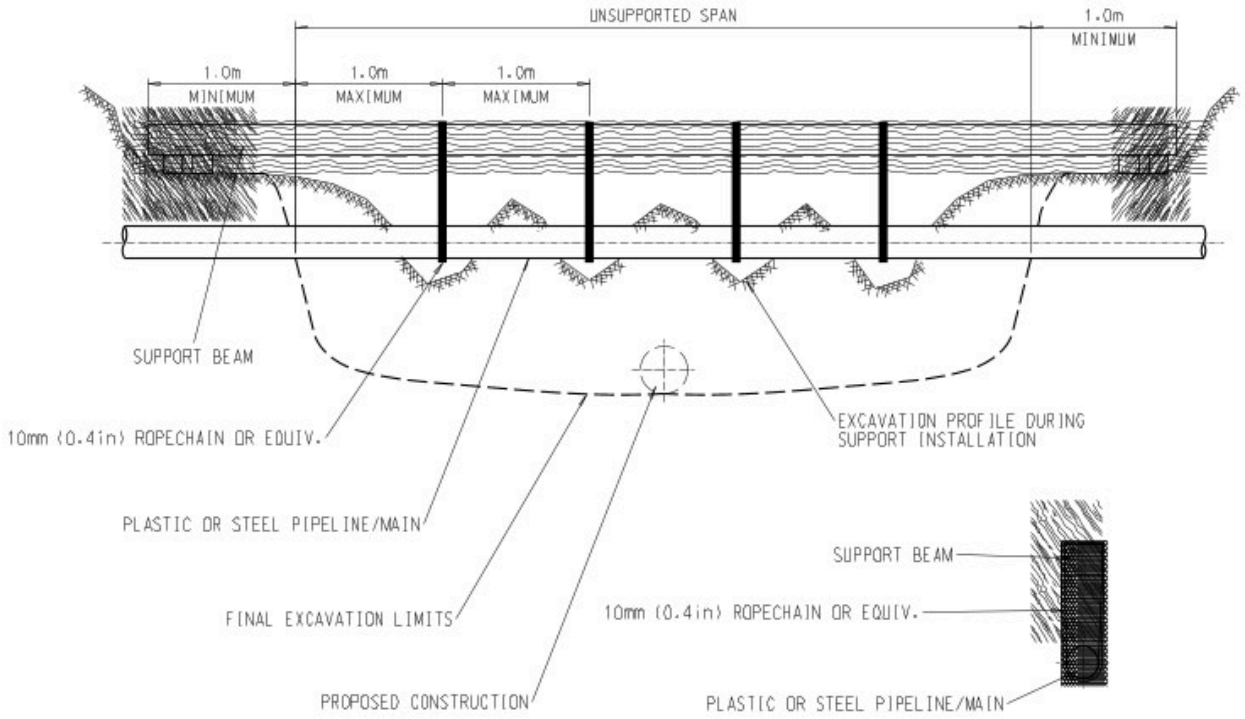
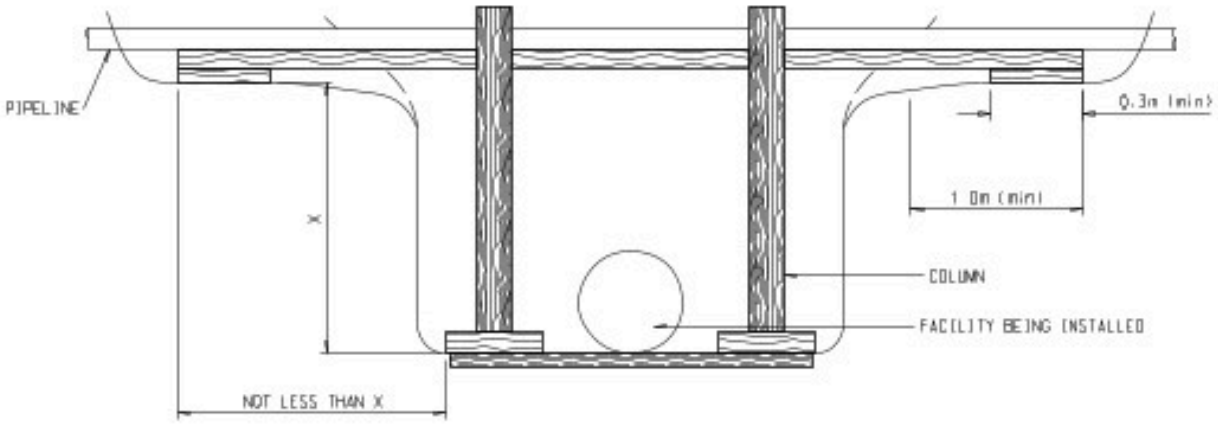


Figure 7-2: Typical Temporary Supports for Pipelines Crossing the Trench – Span Exceeds 4.5 m



NOTES:
1. LAMINATED 4X6 TIMBER BEAM REQUIRED BENEATH ALL NPS 1/2 - NPS 2.
2. LAMINATED 6X6 TIMBER BEAM REQUIRED BENEATH ALL NPS 3 - NPS 6.
3. LAMINATED 8X8 TIMBER BEAM REQUIRED BENEATH ALL NPS 8 - NPS 12.
4. COLUMN SIZE SHALL MATCH LAMINATED TIMBER BEAM REQUIREMENT.
5. COLUMN TO BE SPACED AS SPECIFIED BY PIPELINES AND STATIONS OPERATIONS ENGINEERING.
6. PLASTIC PIPE AND COATING ON STEEL PIPE TO BE PROTECTED FROM SUPPORTS AND STRAPPINGS WITH A PIECE OF RUBBER TIRE OR EQUIVALENT.
7. PLASTIC PIPE MUST BE SUITABLY STRAPPED O PREVENT MOVEMENT OFF THE BEAM.
8. ADDITIONAL SUPPORTS WILL BE REQUIRED AT MECHANICAL COUPLINGS OR VALVES.

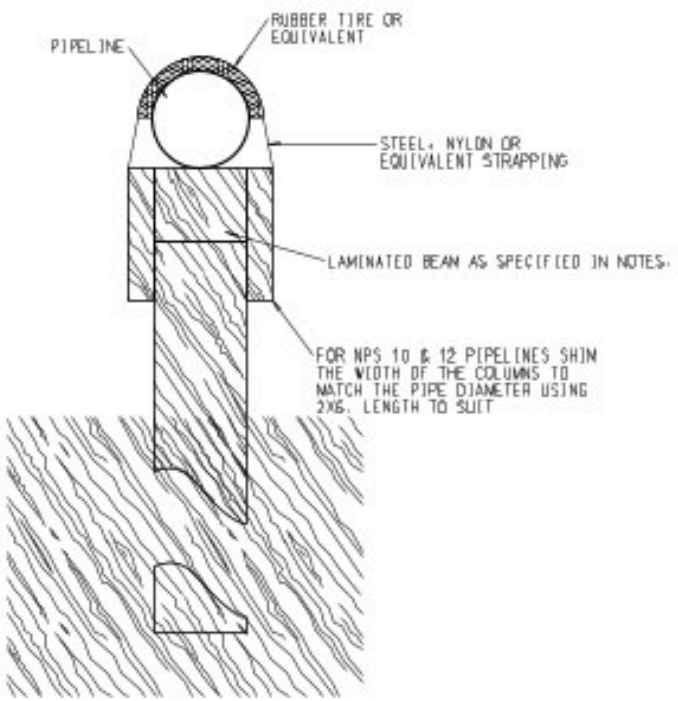
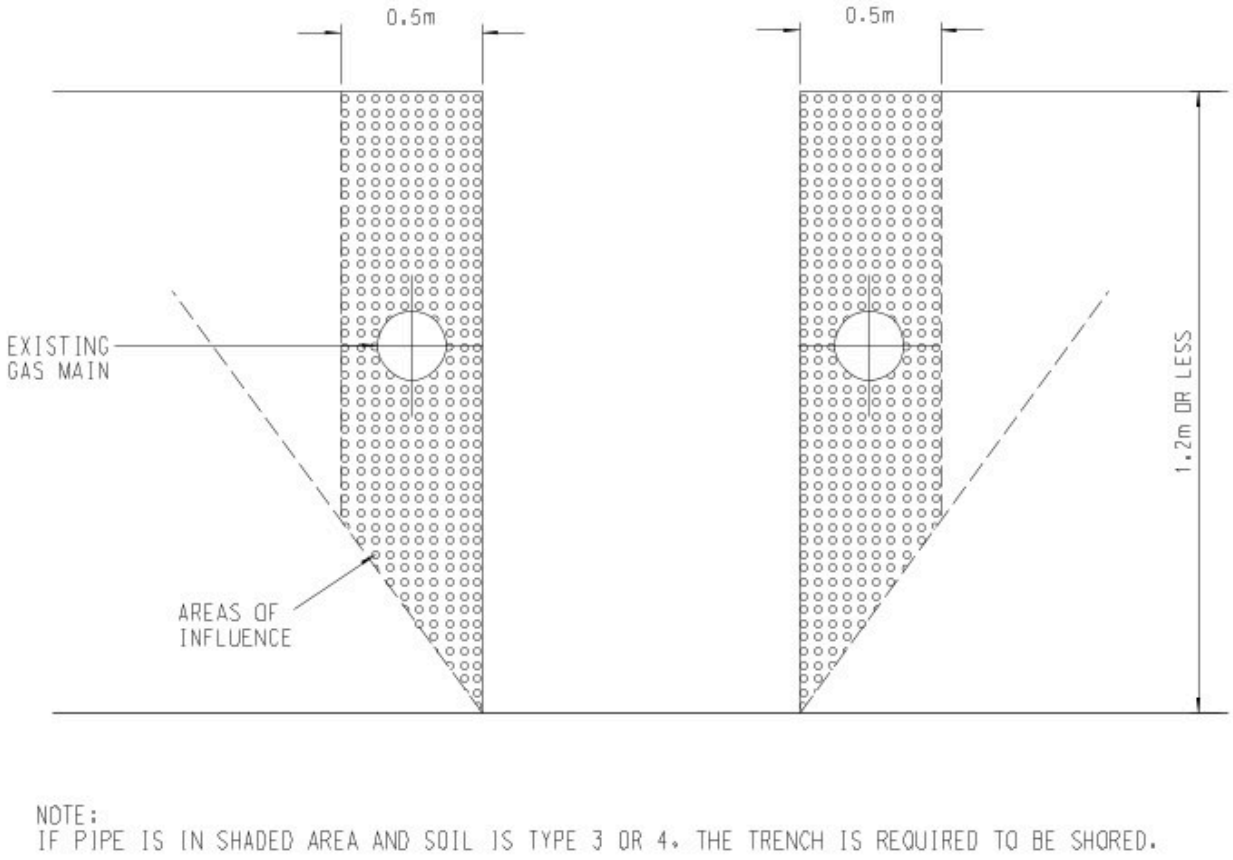


Figure 7-3: Influence Lines for Gas Pipelines Adjacent to Excavations



8 Horizontal Directional Drilling

8.1 General

Horizontal directional drilling (HDD) or directional boring is a steerable trenchless method of installing underground facilities. Trenchless technology is used where utilities being crossed are positively identified to confirm location.

For installations using any other type of drilling or augering equipment in the vicinity of gas facilities, GDS must be contacted.

In all cases, positive identification holes are required to visually verify the drill head's location (including depth) relative to the measurement of the tracking equipment. For positive identification hole requirements, see Figure 8-2: Pipeline Location Verification and Clearance Requirements for HDD for crossing all pipelines (including Vital Pipelines) on page 24. For pipeline location verification and clearance requirements for all horizontal directional drilling see Table 8-1: Pipeline Location Verification and Clearance Requirements for HDD for all Pipelines (including Vital Pipelines) on page 20.

If these guidelines cannot be complied with, a variance request work package must be submitted. No variance will be provided for work within 1 m (3.3 ft) of any pipeline. The variance work package must include, at a minimum, the following information:

- Pre-Engineering design.
- Location of EGI facilities with respect to proposed installation area (vertical and horizontal offsets).
- Location of proposed installation area (vertical and horizontal offsets off permanent landmarks).
- Pipeline protection plan.

If a variance is requested, a physical barrier (e.g., silt fence) must also be provided, which would denote the boundary of the pipeline, where possible.

Table 8-1: Pipeline Location Verification and Clearance Requirements for HDD for all Pipelines (including Vital Pipelines)

Location of Work Relative to Pipeline[a]	Required Verification of Pipe Location by Hand Digging or Hydro-Excavation
Crossing below pipeline (HDD)	All sides of pipeline (including below pipeline) exposed to 1.0 m (3.3 ft) from the pipeline's sidewalls. Additional positive identification hole at 2.0 m to 4.0 m (6.6 ft to 13.1 ft) prior to the daylight hole at the crossing, to verify depth and trajectory of drill head and backreamer.
Crossing above pipeline (HDD)	Top of pipeline and all sides exposed to 1.0 m (3.3 ft) or 1.0 m (3.3 ft) below the proposed installation. Additional positive identification hole at 2.0 m to 4.0 m (6.6 ft to 13.1 ft) prior to the positive identification hole at the crossing, to verify depth and trajectory of drill head and backreamer.

a. See Figure 8-2: Pipeline Location Verification and Clearance Requirements for HDD for crossing all pipelines (including Vital Pipelines) on page 24.

8.2 Drilling Parallel to Pipelines

When the proposed route is parallel to a natural gas pipeline at a perpendicular distance of 3 m (10 ft) or less, positive identification must be performed at intervals

of no more than 10 m (33 ft) along the drilling path so that the precise location of the drilling head and backreamers (if any) can be verified visually. These excavations must be sufficiently wide to see the entire width of the drilling head, backreamers, and structures from entry point to exit point.

Note

The location of the pipeline must be visually confirmed as per the requirements set out in Table 8-2: Pipeline Location Verification Requirements for Vital Pipelines on page 21 and Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines on page 21.

Note

For all pipelines (including vital pipelines), when drilling parallel to the pipeline, a minimum horizontal clearance of 1 m (3.3 ft) is required.

Table 8-2: Pipeline Location Verification Requirements for Vital Pipelines

Location of Work Relative to Pipeline[a]	Required Verification of Pipe Location by Hand Digging or Hydro-excavation
Work parallel to pipe, within 1 m (3.3 ft)	Spacing of test holes must not exceed 4.5 m (15 ft)
Work parallel to pipe, between 1 m (3.3 ft) and boundary area of pipeline based on size	Spacing of test holes must not exceed 4.5 m (15 ft)[b]
Crossing below pipeline (open excavation)	Top and sides of pipeline, and 0.6 m (2 ft) below the pipeline
Crossing above pipeline (open excavation)	Top and sides of pipeline, or 0.6 m (2 ft) below the proposed installation

a. Test holes must expose top and sides of pipeline

b. For work parallel to pipe, between 1 m (3.3 ft) and boundary area of pipeline based on size, for rural applications, test holes must be completed for any change in direction of the pipeline every 23 m (75 ft).

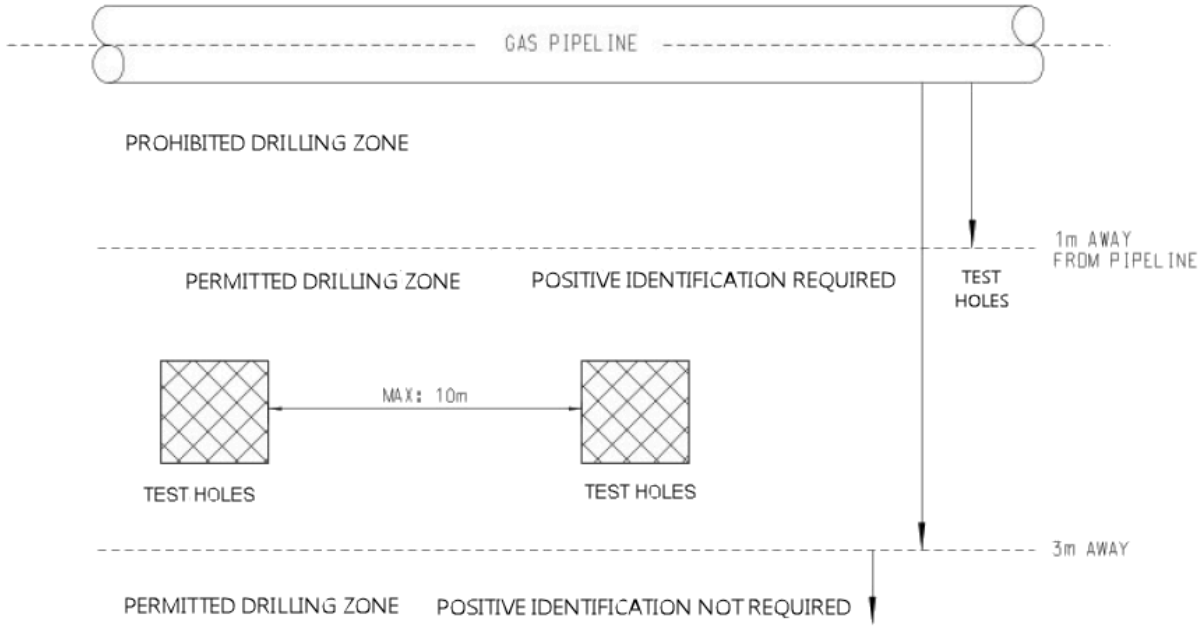
Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines

Location of Work Relative to Pipeline	Required Verification of Pipe location by hand digging or hydro-excavation
Work parallel to pipe, inside of boundary area (1 m [3.3 ft])	Spacing of test holes must not exceed 4.5 m (15 ft)
Crossing below pipeline (open excavation)	For less than NPS 12: Top of pipeline and all sides of the pipeline, or 0.3 m (1 ft) below the pipeline For NPS 12 and larger: Top of pipeline and all sides of the pipeline, or 0.6 m (2 ft) below the pipeline
Crossing above pipeline (open excavation)	For less than NPS 12: Top of pipeline and all sides of the pipeline,or 0.3 m (1 ft) below the proposed installation For NPS 12 and larger: Top of pipeline and all sides of the pipeline, or 0.6 m (2 ft) below the proposed installation

No drilling installation may be performed within a distance of 1 m (3.3 ft) or less from either side of the pipeline. This buffer zone must be clearly designated and

marked off around the work area. This prohibited zone may be widened in some cases.

Figure 8-1: Drilling Parallel to Pipelines



8.3 Drilling Across Pipelines

When the proposed drill path crosses a GDS pipeline, the pipeline must be exposed to the desired depth of the crossing to ensure that the natural gas pipeline is not affected and that the required clearance is maintained during all drilling operations. All minimum clearances must be measured from the outer edge of the drill, including backreamers (if any), to the outer circumference of the pipeline.

To ensure that the directional drilling operation will not result in damage to the pipeline, the following positive identification hole requirements must be followed:

- A positive identification hole must be created that is sufficiently wide enough to see the drill head and backreamer entering the excavation at a minimum of 1 m (3.3 ft) before crossing the pipeline. See Figure 8-2: Pipeline Location Verification and Clearance Requirements for HDD for crossing all pipelines (including Vital Pipelines) on page 24 positive identification hole 1.
- A second positive identification hole must be created prior to reaching the pipeline such that the precise location of the drill head and backreamer (if any) can be verified visually. The positive identification hole must be sufficiently wide to measure the depth and trajectory of the drill head and backreamer.

See Figure 8-2: Pipeline Location Verification and Clearance Requirements for HDD for crossing all pipelines (including Vital Pipelines) on page 24 positive identification hole 2.

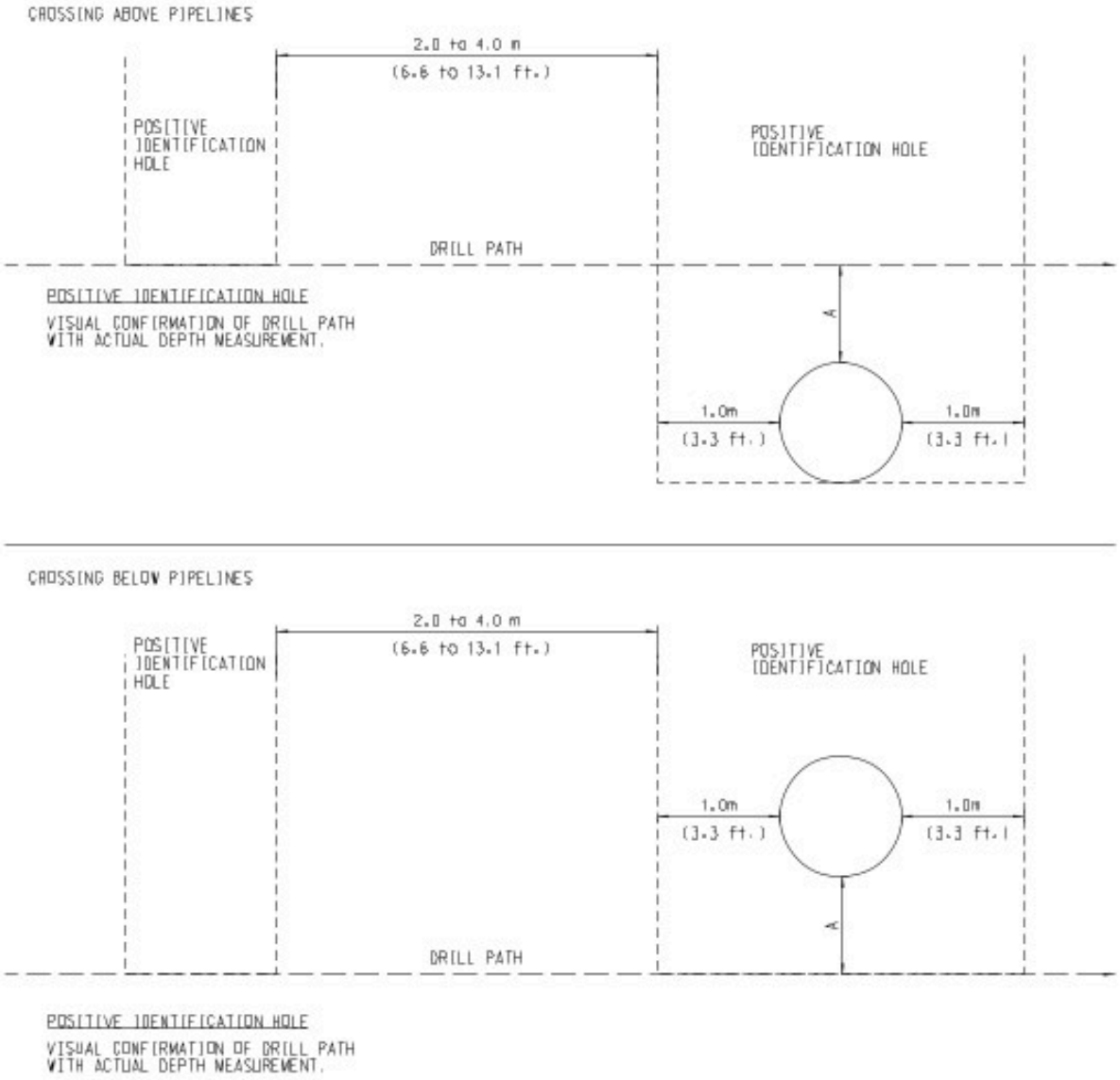
When drilling across pipelines that are smaller than NPS 16 (excluding vital pipelines), the vertical clearance, measured from the edge of the pipeline to the edge of the final bore hole, may follow the vertical clearance outlined in Table 4-1: Minimum Clearance Between Gas Pipelines (Less than NPS 16) and Other Underground Structures on page 10 as long as all positive identification requirements are also followed.

When drilling across pipelines that are NPS 16 or larger, or crossing any CER-regulated pipelines or vital pipelines, a minimum vertical clearance, measured from the edge of the pipeline to the edge of the final bore hole, of 1 m (3.3 ft.) is required.

Note

The location of the pipeline must be visually confirmed as per the requirements set out in Table 8-2: Pipeline Location Verification Requirements for Vital Pipelines on page 21 and Table 8-3: Pipeline Location Verification Requirements for All Other Pipelines on page 21. For specified minimum clearances, see 4 Minimum Clearance from Other Structures on page 10.

Figure 8-2: Pipeline Location Verification and Clearance Requirements for HDD for crossing all pipelines (including Vital Pipelines)



9 Hydro-Excavation

9.1 General

Hydro-excavation, also known as hydrovac, is the non-destructive process in which pressurized water is utilized as a method of excavation through loosening and suction of soil, rocks, and other earth materials. Hydro-excavation machines are an alternative to hand digging to locate and expose pipelines.

9.2 Hydro-Excavation Requirements

The following requirements must be met at all times when excavating with hydro-excavation technology:

- Spinning tip nozzles must be used for hydrovac excavations with water pressures that must not exceed the maximum water pressure of 17,236 kPa (2,500 psi) during excavation. Pressure measures must be permanently monitored using a calibrated device mounted on either the hydro-excavation machine (truck and pump), or the wand when using a spinning tip nozzle.
- The wand must never remain motionless during excavation. The wand must never point to the plant at any time.
- A distance of 20 cm (8 in) between the end of the pressure wand nozzle and the plant or subsoil must be maintained. The nozzle must never be inserted into the subsoil while excavating above the plant.
- Hydro-excavation equipment and nozzles must have been specifically designed for use above buried gas lines or other reasonably expected underground gas plants.
- A device capable of stopping the excavation on demand must be installed, such as an approved automatic electronic shut-off or valve on the wand.
- If heated water is used during excavation, the temperature and pressure of the water must not exceed 100 °F (38 °C) and 17,250 kPa (2,500 psi), respectively.
- The excavator must contact the gas utility if any damage to a gas plant occurs while using hydro-excavation technology or any other method of excavation.

10 Backfilling

The gas pipeline must be inspected by GDS for damages before backfilling the excavation. It is the third party's responsibility to ensure that the gas pipeline is not undermined or endangered in any way. If any damage occurs, GDS must be contacted immediately.

The following principles must be followed:

- The backfill does not harm the pipe or coating throughout the installation process and while in service.
- The use of native material (especially with respect to anode installation) and minimize haul out must be maximized.
- A reliable and stable installation must be created and the use of dams included when appropriate.

The Company permits the use of any compacting device that:

- Will compact backfill sufficiently to eliminate any settlement of the pipe or ground surface.
- Will not cause any deformation or damage to the pipe or coating.
- Will not cause any damage to any adjacent building, structure or utility.
- Will not cause any damage to any tree, shrub, tended lawn, or ground cover.

When backfilling where the finished grade has not been established, sufficient soil must be placed over the trench to allow for settlement.

Backfilling must be done in such a manner as to prevent any rocks from being placed at or near the surface of the pipe. Native excavated material must be used

as backfill unless otherwise directed by GDS. Where native material is unsuitable, 150 mm (6 in) of approved earth or sand padding must be placed over the pipe for protection, to a minimum depth of 300 mm (12 in). Each layer must be compacted thoroughly by manual tamping. Topsoil must not be used for backfilling.

Aggregate backfill must be replaced in 200 mm (8 in) layers. Each layer must be thoroughly compacted by pneumatic tampers or an equivalent method acceptable to GDS to ensure no settlement. The final layer must be smoothed down with a grader (or a rake for small scale projects) and must be tamped flush or slightly higher than the surrounding ground surface in order to prevent ponding of water and accommodate any future soil subsidence over the trench line.

Backfilling a flooded trench is not allowed. The third party is responsible for the removal of water from the trench, before backfilling. If backfilling on a slope, the backfill must first be placed from the bottom of the slope, then the filling should continue by building upwards. This prevents large voids in the backfill that can occur when the backfill is dumped from the top of a slope.

Backfill and compaction within road allowances must be completed in accordance with the local governing authority.

Unshrinkable fill or other engineered backfill material must be installed only when requested by the municipalities, local governing authority, or as directed by GDS. The approved unshrinkable fill must be batched at a ready-mix plant with a specified maximum compressive strength of 0.7 MPa at 28 days and minimum slump of 150 mm (6 in). After curing, it must be excavatable using hand tools and must meet any governing agency requirements. The pipe and valve assemblies must be sand padded before placement of unshrinkable fill. The third party must ensure that placement of the unshrinkable fill does not displace sand padding or directly contact the pipeline.

If the bulk backfill material contains rocks, stones, or frozen material, pipelines must be padded with padding material to a minimum depth of 150 mm (6 in) over the pipe and fittings. If the location requires the backfill material to be tamped, the padding material must also be tamped.

The final covering of gas pipelines must adhere to municipal requirements.

11 Blasting and Pile Driving

11.1 General

Blasting and pile driving activities in the vicinity of GDS facilities require prior approval by GDS. The Blasting and Pile Driving Form, provided by GDS, must be submitted by the owner of the proposed work for all blasting and pile-driving operations. The request must be submitted a minimum of four weeks prior to the beginning work to allow sufficient time for review.

11.2 Blasting

Before any blasting operation in the vicinity of a gas pipeline can occur, the hazards to the GDS facility must be evaluated. Responsibility for the design of the blast and any resultant damage is borne entirely by the party using the explosives.

A recognized independent blasting consultant must be retained at the applicant's expense to perform an evaluation of the blast design. The independent blasting consultant must be an independent engineering consultant specialized in blasting. A copy of the stamped consultant's validation report must be submitted to GDS for review if blasting is to occur within 30 m (100 ft) of GDS facilities.

If in the opinion of GDS or an independent blasting consultant, blasting cannot be carried out without affecting the facility's integrity, alternatives must be considered, including the replacement or relocation of the affected facility at the applicant's expense. In these situations, additional time must be allowed to obtain the necessary permits and to complete the necessary construction work. In the event a third party is affected as a result of the blasting operations, all expenses associated therewith incurred by GDS must also be at the applicant's expense.

Ontario: The third party must comply with the Ontario Provincial Standard Specification (OPSS 120 – General Specification for the Use of Explosives) in addition to GDS's blasting requirements.

Quebec: The third party must comply with Quebec's Acts regarding explosives (CQLR c E-22 and CQLR c E-22, r 1) and Safety Code (CQLR c S-2.1, r 4), in addition to GDS's blasting requirements.

11.2.1 Surface and Tunnel Blasting Application Process

For subsurface blasting application requirements, refer to the Surface Blasting section of the Blasting and Pile Driving Form.

For tunnel blasting application requirements, refer to the Surface Blasting section of the Blasting and Pile Driving Form in addition to the Tunnel Blasting section.

To assist with the preparation of the form, locates must be requested to determine the location of the facilities.

11.2.2 Guidelines for Blasting

The information provided in this section is not to be construed as an exhaustive list of performance specifications, but rather a guide for conducting blasting in the vicinity of GDS's facilities. The third party is responsible for ensuring that all blasting work is performed in a good and workmanlike manner in accordance with all applicable laws, codes, by-laws, and regulations.

The third party will be held liable for and indemnify GDS in relation to any and all damage directly or indirectly caused or arising as a result of blasting operations carried out by the applicant, its employees, contractors, or those for whom the applicant is responsible by law. Prior to blasting operations, a site meeting must be arranged with an authorized representative of the applicant and a GDS representative to confirm the location of GDS's facilities and details of the proposed blast.

GDS's pipelines must not be excavated prior to blasting. If excavation is unavoidable, then the pipeline must be properly supported according to GDS's requirements as stated in 7 Support of Gas Pipelines on page 14.

The third party must take suitable precautions to protect the exposed pipeline from fly-rock .

Explosives must be of a type that cannot propagate between holes or be desensitized due to compression pressures. Explosives must not be left in the drill hole overnight.

If a surface blast islocated less than 10 m (33 ft) from pipeline; creates its first blast hole at a depth equal to the top of the pipeline; andthe depth of subsequent blast holes exceeds one half of the horizontal distance to the closest portion of the pipeline, then the required independent blasting consultant's report must specifically address the impact of these conditions. This is not applicable for tunnel blasting operations. The blasting consultant is responsible for the monitoring of blasting vibrations with a portable seismograph capable of transmitting data instantaneously (e.g., via email or cellular) to the required reviewer in the vicinity of GDS's facilities is mandatory to confirm that predicted vibration levels are respected. On a daily basis, a copy of the seismographic report must be provided to GDS.

Peak particle velocity (PPV) must be limited to 50 mm/s (2 in/s) and maximum amplitude must be limited to 0.15 mm (0.006 in).

11.2.3 Post Blasting

A leak survey must be completed at the end of each day of blasting. Upon completion of daily blasting operations and within 30 days after the final blasting, GDS will conduct a leak survey of the pipeline at the third party's expense. Leak surveys will also be completed at the end of each day of blasting. Damage that has resulted from the blasting will be repaired at the third party's expense. A summary of all blasting operations including blasting logs, vibration control, seismograph reports, and other pertinent information must be provided to GDS by the third party daily and at the completion of blasting operations.

11.3 Pile Driving

General pile installation or compaction activities in the vicinity of GDS's facilities must be evaluated by GDS prior to beginning. Any resultant damage as a result of these activities will be borne entirely by the third party undertaking the proposed work.

If in the opinion of GDS, the particular pile installation or compaction operation cannot be carried out without affecting the pipeline or facility integrity, the following must be considered:

- Risk analysis or mitigation program for the proposed operation.
- Alternative construction methods.
- Relocation or replacement of the facility.

All costs incurred will be covered by the third party undertaking the proposed work and final approval for the work will be granted by GDS.

Piles installed using an auger must satisfy the locating and clearance requirements listed in 5 Pipeline Location Verification on page 10 and 4 Minimum Clearance from Other Structures on page 10, respectively. GDS must provide approval for the installation of piles within 3 m (10 ft) of a vital pipeline.

The third party is responsible for all costs related to customer interruption as well as costs incurred because of work delays. In the event a third party is affected as a result of the pile installation or compaction operations, all expenses associated therewith incurred by GDS will be passed to the third party.

11.3.1 Pile Driving Application Process

The application to pile drive or do compaction work must be sent to GDS via the Blasting and Pile Driving Form.

This work must be completed under the supervisor of qualified personnel. Vibration results must be provided to GDS on a daily basis.

11.3.2 Pile Installation and Compaction Work

The information provided in this section is not to be construed as an exhaustive list of performance specifications, but rather a guide for conducting pile installation and compaction work in the vicinity of GDS's facilities. The third party is responsible for ensuring that all pile installation and compaction work is performed in accordance with all applicable laws, codes, by-laws, and regulations.

Operations must not be permitted within a standoff distance of 3.0 m (10 ft) from the pipeline or other natural gas facility, unless approved by GDS.

Prior to pile installation or compaction work, a site meeting with an authorized representative of the third party and a GDS representative (for the Damage Prevention contact, see 12 Contact Information on page 31) must be arranged by the third party, to confirm the location of GDS's facilities and the details of the proposed work.

It is recommended that during the design phase, pile installation or compaction work drawings be sent to Markups for review (see 12 Contact Information on page 31).

The pipeline should not be excavated prior to the piling or compaction operation. If excavation of the pipeline is necessary, then it must be properly supported in accordance with 7 Support of Gas Pipelines on page 14.

The following situations require the opinion of an independent professional engineer:

- Compaction of soils or backfill rated at 10,000 ft-lbs (13,600 Nm) or higher at a stand-off distance of 6 m (20 ft) or less from the pipeline.
- Pile driving at a stand-off distance of 10 m (33 ft) or less from the pipeline facility.
- High-energy dynamic compaction for the rehabilitation of soils at a stand-off distance of 30 m (100 ft) or less from the pipeline.

- Type 4 soil as defined in Article 226 of the Occupational Health and Safety Act and Regulations for Construction Projects (see Table 15-1: Soil Types on page 33).

For these situations, the appropriate number of seismographs to monitor vibrations is mandatory. The seismographs must be portable with the capability of transmitting data instantaneously (e.g., via email or cellular). This control will confirm the intensity of the vibrations generated by the pile installation or compaction work as projected. Furthermore, reports of recorded intensities must be provided on a regular basis or at the request of GDS.

The peak particle velocity (PPV) measured on the pipeline, or at the closest point of the related structure with respect to the work, must not exceed 50 mm/s (2 in/s). Furthermore, the maximum displacement for the vertical or horizontal component corresponding to the above stated vibration intensity must not exceed 50 mm (2 in) at any given length of the pipeline in question.

If the PPV or displacement limit is surpassed, all operations must stop notwithstanding any delays or costs incurred by the third party or owner of the proposed work. GDS requires that the cause of these higher vibrations or displacements be investigated. GDS may arrange for a leak survey to be conducted. GDS Engineering must approve resumption of operations. Should a situation with low energy compaction operations with a soil cover of less than 1.5 m (5 ft) above the pipeline at a stand-off distance of 3 m (10 ft) or less from a pipeline be encountered, GDS may require the opinion of an independent engineering consultant.

In addition, if a Type 3 soil (see Table 15-1: Soil Types on page 33) is present on site, GDS may require the opinion of an independent engineering consultant.

The use of an auger may be required in order to avoid the use of piles.

All operations must comply with the Provincial Occupational Health and Safety Act and Regulations for Construction Projects, other applicable laws and regulations, as well as all applicable GDS specifications, standards, and guidelines.

11.3.3 Post Pile Driving Process

The third party must send GDS the items that follow within five business days of the completion of the pile installation via pile driving or compaction operations:

- A summary of all operations.
- Pile driving and compaction logs.
- Vibration control records.
- Seismograph records.

On completion of each day’s work, and approximately 30 days after all work is completed, GDS will arrange to conduct a leak survey of the facility. If damage to GDS’s facilities is found, it will be repaired by the third party. An invoice will be sent to the third party responsible for the work.

12 Contact Information

Location	Contact
Enbridge Gas Inc 500 Consumers Road North York, ON M2J 1P8	Markups: Mark-Ups@enbridge.com Ontario One Call Locates: 1-800-400-2255 Damage Prevention: 1-866-922-3622 Emergency: 1-866-763-5427 and 1-877-969-0999
Enbridge Gas Inc Storage and Transmission Operations Locates (Dawn) 3332 Bentpath Line P.O. Box 1180 Dresden, ON N0P 1M0	Ontario One Call Locates: 1 (800) 400-2255 Locates: 1-800-265-5260 ext 5102236 Stacey.Smith@enbridge.com Locates: 1-800-265-5260 ext 5102184 Janice.Langstaff@enbridge.com
Enbridge Gas Inc Storage and Transmission Operations Locates (Tecumseh) 3501 Tecumseh Road, Mooretown, Ontario N0N 1M0	Field Operations: 519-312-0176 jay.moore@enbridge.com Field Operations: 519-862- 6004 jason.japp@enbridge.com Tecumseh Control Room: 519-862-6012 Emergency: 1-800-255-1431
Gazifère 706 Boulevard Greber Gatineau, QC J8V 3P8	Locates: 1-800-663-9228 Planning Dept.: 1-819-776-8804 Emergency: 1-819-771- 8321, press 1

Note

The website www.clickbeforeyoudig.com gives access to the damage prevention centres in Canada, and allows locate requests to be made for each province.

13 References

- IS_F_172 Blasting and Pile Driving Form

14 Document Governance

For document control and maintenance purposes, the following tables capture important information related to this document.

Control and Maintenance

Category	Value
Owned By	Pipeline Engineering
Review Interval	Every three years
MOC-Related	No

Revision History

Table 14-1: January 2024 Release

Release Date	Version	Project Number	RFC Number	Prepared By	Approved By
2024-01-31	1.2.1	n/a	5399	Derek Brecht, Engineer Pipeline Engineering	Todd Piercey, Manager, Pipeline Engineering
Doc ID		**Scope**	**Document & Section**		**Summary of Changes**
ST-1E-30A8-8E30		GDS	Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard		Revised Figure 8-1.

Table 14-2: September 2021 Release

Release Date	Version	Project Number	RFC Number	Prepared By	Approved By
2021-09-29	1.1.1	n/a	4983	Hooman Zahedi, Supervisor, Pipeline Engineering	Todd Piercey, Manager, Pipeline Engineering
Doc ID		**Scope**	**Document & Section**		**Summary of Changes**
ST-1E-30A8-8E30		GDS	Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard		Corrected typo in 11.2 Blasting

Table 14-3: June 2021 Release

Release Date	Version	Project Number	RFC Number	Prepared By	Approved By
2021-06-30	1.1.0	n/a	4922	Hooman Zahedi, Supervisor, Pipeline Engineering	Todd Piercey, Manager, Pipeline Engineering
Doc ID		**Scope**	**Document & Section**		**Summary of Changes**
ST-1E-30A8-8E30		GDS	Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard		Revise tree clearance restrictions in section 3.8.

Table 14-4: April 2021 Release

Release Date	Version	Project Number	RFC Number	Prepared By	Approved By
2021-04-28	1.0.0	6513-20	None	Emily Varga, EIT I, Pipeline Engineering	Todd Piercey, Manager Pipeline Engineering

Doc ID	Scope	Document & Section	Summary of Changes
ST-1E-30A8-8E30	GDS	Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard	Initial version.

15 Soil Types

Table 15-1: Soil Types

Type	Definition
Type 1	• Hard, very dense, and only able to be penetrated with difficulty by a small sharp object. • Low natural moisture content and a high degree of internal strength. • No signs of water seepage. • Can be excavated only by mechanical equipment.
Type 2	• Very stiff, dense, and can be penetrated with moderate difficulty by a small sharp object. • Low to medium natural moisture content and a medium degree of internal strength. • Damp appearance after it is excavated.
Type 3	• Stiff-to-firm and compact-to-loose in consistency or is previously-excavated soil. • Exhibits signs of surface cracking. • Exhibits signs of water seepage. • If dry, may run easily into a well-defined conical pile. • Low degree of internal strength.
Type 4	• Soft to very soft and very loose in consistency, very sensitive, and upon disturbance is significantly reduced in natural strength. • Runs easily or flows, unless it is completely supported before excavating procedures. • Almost no internal strength. • Wet or muddy. • Exerts substantial fluid pressure on its supporting system.