

SAFE EXCAVATING AROUND BURIED UTILITIES



Damage Prevention Department

ONTARIO REGIONAL COMMON GROUND ALLIANCE

ORCGA Mission

- To enhance public safety and utility infrastructure reliability through a unified approach to effective and efficient damage prevention.

ORCGA Vision

- The vision of ORCGA is to be recognized as leading Ontario to be the safest jurisdiction with the most reliable infrastructure in North America.



Working Together for a Safer Ontario
Visit www.orcga.com



Duty of employer

Municipalities are putting more focus on hiring safe and prudent contractors

What is Bill C-45?

Bill C-45 is federal legislation that amended the Canadian Criminal Code and became law on March 31, 2004. The Bill established new legal duties for workplace health and safety, and imposed serious penalties for violations that result in injuries or death. The Bill provided new rules for attributing criminal liability to organizations, including corporations, the representatives and those who direct the work of others.

MUNICIPAL STRATEGIES

- In Toronto, if a municipal contractor has more than three utility damages they are off the bidders list for one year.
- In Kingston, all contractors bidding on municipal jobs must attend a one day safety orientation.
- Many municipalities are now sending a bill for emergency services responding to line strikes as a result of imprudent excavation.



WHAT DOES A VALID LOCATED CONSIST OF?



Flags / Paint



**Locate
Sketch**



Within Expiry Limit

TYPICAL LOCATE FORM

Primary Locate Sheet: top

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Primary Locate Sheet		2017260859-511704	
Phone: 519-439-0763 Fax: 866-692-0209 Toll Free: 866-692-0208		Request #:	
Locating For: <input type="checkbox"/> CATV <input type="checkbox"/> Water <input type="checkbox"/> Traffic <input type="checkbox"/> Sewer <input type="checkbox"/> Street Lighting <input type="checkbox"/> Hydro <input type="checkbox"/> Telephone <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Fibre <input type="checkbox"/> Private		Revised Excavation Date: 3 Jul 17	Excavation Date: 3 Jul 17
Requested by: TANNER LEGGATE		Company: BIRNAM EXCAVATING LTD	Request Type: CONTRACTOR
Phone: 5198283449		Fax: 5198283459	Email: locates@birnam.ca
Appt Date:	Received Date: 26-Jun-17	Locate Address: WELLINGTON ST	
Type of Work: SEWER	Contractor Type:	City: MIDDLESEX CENTRE	
Callers Remarks: CORLOT=U PLEASE MARK FROM PROPERTY LINE TO PROPERTY LINE FROM VICTORIA TO MARTIN STREET.519 652-NOL			
Gas Mark: <input checked="" type="checkbox"/>	Telecom Mark: <input type="checkbox"/>	Hydro Mark: <input type="checkbox"/>	Water Mark: <input type="checkbox"/>
Sewer Mark: <input type="checkbox"/>	Street Lighting Mark: <input type="checkbox"/>	CATV Mark: <input type="checkbox"/>	Traffic Signal Mark: <input type="checkbox"/>
Other Mark: <input type="checkbox"/>			
LOCATED AREA: EXCVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.			
Records Reference: <input checked="" type="checkbox"/> LAC MULTI-VIEWER <input type="checkbox"/> UTILITY OWNER MAPPING		<input type="checkbox"/> Third Party Notification: _____	
Let & Long: Depth of Excavation (in Meters): Field Notes: Other: DPT Remarks:		Apply Sticker Here if Required	
Excavator shall notify and receive a clearance from Regional contacts prior to excavation for the following: Gas: <input type="checkbox"/> Valve <input checked="" type="checkbox"/> End Thrust <input type="checkbox"/> Vital Main Telephone: <input type="checkbox"/> High Priority Cables <input type="checkbox"/> Central Office Vicinity		Material Type: Gas: <input type="checkbox"/> Cast Iron <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Copper Telephone: <input type="checkbox"/> Cable <input type="checkbox"/> Conduit Hydro: <input type="checkbox"/> Direct Buried <input type="checkbox"/> Duct Water: <input type="checkbox"/>	
Method of Field Marking: <input checked="" type="checkbox"/> Paint <input type="checkbox"/> Stakes <input checked="" type="checkbox"/> Flags <input type="checkbox"/> Offset Stakes <input type="checkbox"/> Chalk <input type="checkbox"/> Other (Gas-Yellow, Hydro-Red, CATV/Telephone-Orange, Water-Blue, Sewer-Green)			
Caution: Locates provided are valid for a limited time frame. See Disclaimer for the specific locate validity period as identified by specific Utility Owner. For all locate requests including remarks contact Ontario One. Call 1-800-400-2255.			
Caution: The markings may disappear or be misplaced. This is based on information given at the time. Any changes to location or nature of work require a new locate. The EXCAVATOR must not work outside the indicated Located Area without a further locate by the company. Privately owned facilities may be present in Locate Area, check with property owner.			
Documents given to be used with this locate:		Located by:	Accepted By:

Locate request number

Utilities to be located

Description of work area

The top section of cover page lists information of company requesting the locate as well as the address and excavation date.

TYPICAL LOCATE FORM

Primary Locate Sheet :
bottom

Gas	Telecom	Hydro	Water	Sewer	Street Lighting	CATV	Traffic Signal	Other	
Mark	Clear	Mark	Clear	Mark	Clear	Mark	Clear	Mark	Clear
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.									
Records Reference: <input checked="" type="checkbox"/> LAC MULTI-VIEWER <input type="checkbox"/> UTILITY OWNER MAPPING			<input type="checkbox"/> Third Party Notification: _____						
Lat & Long: Depth of Excavation (in Meters): Field Notes: Other:			Apply Sticker Here if Required						
DPT Remarks:									
Excavator shall notify and receive a clearance from Regional contacts prior to excavation for the following: Gas: <input type="checkbox"/> Valve <input checked="" type="checkbox"/> End Thrust <input type="checkbox"/> Vital Main Telephone: <input type="checkbox"/> High Priority Cables <input type="checkbox"/> Central Office Vicinity			Material Type: Gas: <input type="checkbox"/> Cast Iron <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Copper Telephone: <input type="checkbox"/> Cable <input type="checkbox"/> Conduit Hydro: <input type="checkbox"/> Direct Buried <input type="checkbox"/> Duct Water: <input type="checkbox"/>						
Method of Field Marking: <input checked="" type="checkbox"/> Paint <input type="checkbox"/> Stakes <input checked="" type="checkbox"/> Flags <input type="checkbox"/> Offset Stakes <input type="checkbox"/> Chalk <input type="checkbox"/> Other (Gas-Yellow, Hydro-Red, CATV/Telephone-Orange, Water-Blue, Sewer-Green)									
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Caution: The markings may disappear or be misplaced. This is based on information given at the time. Any changes to location or nature of work require a new locate. The EXCAVATOR must not work outside the indicated Located Area without a further locate by the company. Privately owned facilities may be present in Locate Area, check with property owner.									
Documents given to be used with this locate: <input type="checkbox"/> NEB Excavation/Construction Booklet <input checked="" type="checkbox"/> Gas Excavation Guidelines <input type="checkbox"/> Hydro Electric Excavation Guidelines <input type="checkbox"/> Bell Guidelines for Excavation			Located by: G-TEL I.D. Number: 847 Date and Time: 29-Jun-2017 8:13 am			Accepted By: _____ Print: _____ <input checked="" type="checkbox"/> Mark and Fax <input type="checkbox"/> Left on Site <input checked="" type="checkbox"/> Mark and Email <input type="checkbox"/> Mailbox			
A copy of the Primary Locate Sheet and the Auxiliary Locate Sheet must be on site and in the hands of the machine operator during work operations. Should sketch and markings not coincide, a new locate must be obtained.									
This form revised February 2015 LAC									

Important information for Third Party Observation or Priority Cables being present.

Damage Prevention Technician (DPT) remark section.

DPT info and locate completion date. Locate is good for 60 days from this date.

Important information about the locate form.

STICKERED LOCATES

Conflict sticker

IMPORTANT NOTICE TO EXCAVATORS

A conflict has been identified within your located area. Do NOT proceed with any excavation until this matter is cleared with an Enbridge Gas Inc. representative.

Vital mains/CER pipelines Line valves Points of thrust Pile driving/blasting

Proposed installations: Gas mains Gas services MWO#: _____

Addresses: _____

From: _____ To: _____

Contact the Enbridge Gas Inc. Damage Prevention Department Immediately Tel: 1-866-922-3622

CAUTION: This locate is for ENBRIDGE GAS INC. ONLY and is NOT a locate for ENBRIDGE PIPELINES or ENBRIDGE GAS STORAGE

IS_F_200.2106

Revised Sticker

ATTENTION

'ENBRIDGE LOCATE HAS BEEN REVISED'

PREVIOUSLY RECEIVED COPIES ARE NULL & VOID

THIS LOCATE IS VALID FOR 60 DAYS FROM THE ORIGINAL COMPLETION DATE _____

Alternate Locate Agreement (ALA)



UNDERSTAND AND ADHERE TO THE CSA Z247 AND TSSA ACT

What are my regulatory obligations as an excavator?

- Section 9 of Ontario Regulation 210/01 states, “no person shall dig, bore, trench, grade, excavate or break ground with mechanical equipment or explosives without first ascertaining from the licence holder the location of any pipeline that may be interfered with.”
- Section 10 of Ontario Regulation 210/01 states, “No person shall interfere with or damage any pipeline without authority to do so.”
- Generally, this means that for an Ontarian to engage in “ground disturbance” activities like digging, boring, trenching, or excavating, the person should obtain a “locate form” from a locator. The person engaging in ground disturbance will be asked to provide information describing the location where the work will take place, the expected time when the work will begin, the scope of the work, the nature of the work, the expected duration and depth of excavation, the name, address and telephone number of the Excavator and the name of the Excavator’s site representative.

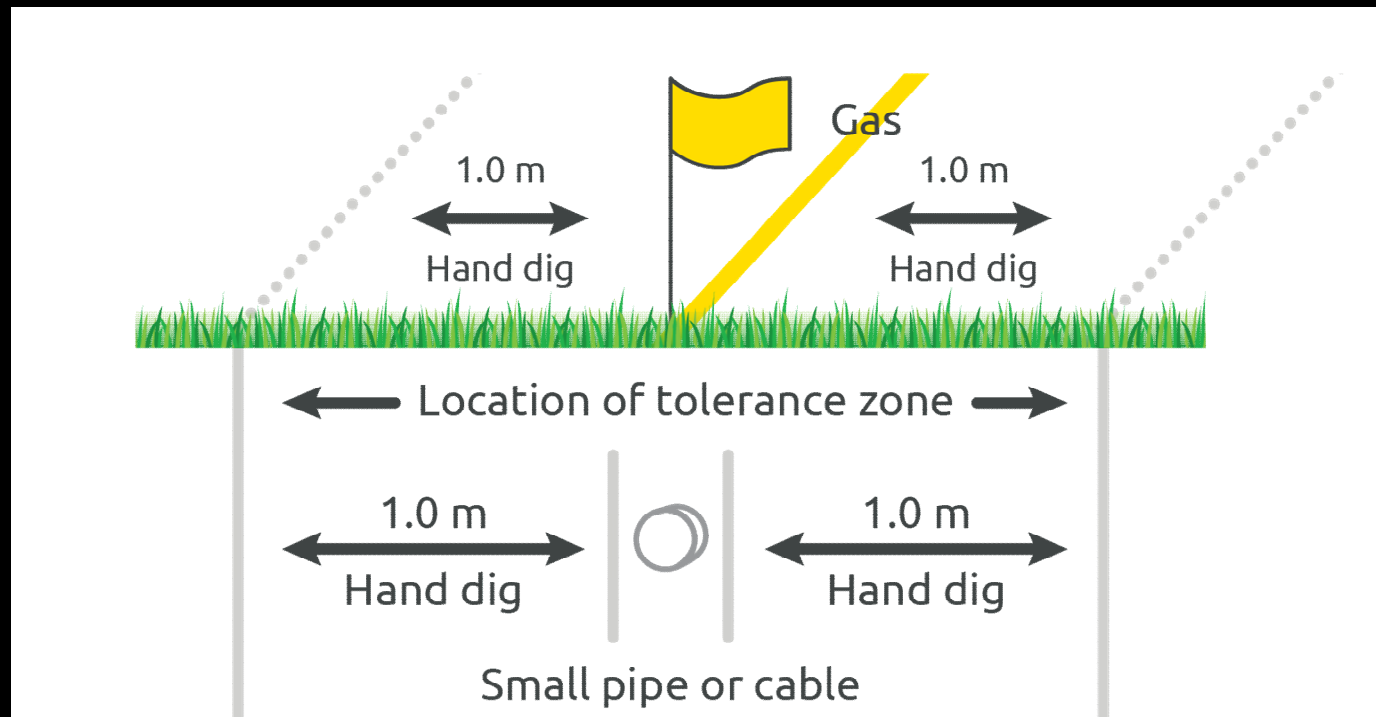


Safety Compliance FAQs

Visit <https://www.tssa.org/en/fuels/excavation-faqs.aspx>

LOCATE BOUNDARIES AND ACCURACY

- Located area
- One meter on either side of paint marks or flags for non-vital pipelines



LOCATE BOUNDARIES AND ACCURACY

- No mechanical excavation is permitted within **3 m (10')** of vital pipelines unless verified visually. Enbridge representative must also be onsite during excavation
- For Canada Energy Regulator (CER) pipelines, all work within 30 m (100') of the pipeline must be reviewed and have a permit issued. No mechanical excavation is permitted within **5 m (16')**.

Once the pipeline has been visually verified, mechanical equipment is allowed up to:

- Non-vital pipelines – **0.3 m (1')**
- Vital pipelines **1.0 m (3.3')**, an Enbridge Third-Party Inspector must be on site.
- CER-regulated pipelines **1.0 m (3.3')**, an Enbridge Third-Party Inspector must be on site.

Note: for Storage & Transmission Operations pipelines, all work within 5 m (16') from either side of lines operated by STO must be approved prior to commencing.



THIRD-PARTY REQUIREMENTS

- Mechanical equipment cannot be used within the **boundary limits** to expose the **utility line**.
- Always refer to the Enbridge Gas Inc. Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard for additional information.

EGI Third-Party Requirements

Visit www.enbridgegas.com/excavatesafely and click under “Resources”



CONTRACTOR SAFETY PORTAL



Residential Business & Industrial Storage & Transportation Sustainability

Smell Gas? Keep Your Meter Clear Carbon Monoxide Safety Blocked Sewer and Cross Bore Safety Digging Safety ▾ Appliance Safety Tips

[Home](#) / [Safety](#)

Digging Safety for Contractors

[How to request a locate](#) [How to dig safely](#) [Colour codes](#) [Guidelines for safe digging](#) [What to do if a gas line is hit](#)

Never assume it's safe to excavate

Did you know that 41 percent of damages to underground infrastructure are due to unsafe excavation? Whether it's a small landscaping job or a major construction project, hitting an underground utility can delay your project and put your crew, company and community at serious risk. You could also be accountable for costly repairs and even face serious penalties or charges.

It's your responsibility to request a locate from Ontario One Call before you dig—it's free and it's the law. Respect the marks and dig safely.

[Request a locate](#)



[BACK TO TOP](#)

EGI Contractor Safety Portal

Visit www.enbridgegas.com/excavatesafely



Do not assume depth

EXPOSED AN UNKNOWN FACILITY?

Unidentified and abandoned distribution lines

- Never assume the line is an abandoned utility line
- Call Enbridge Gas 1-866-763-5427 to verify
- Unknown facility could be:
 - An abandoned gas line
 - A newly installed gas line
 - An unmarked live gas line
 - Other non-gas facilities



PIPELINE DAMAGE CONSEQUENCES



Damaging property from a leak, fire or explosion.



Seriously hurting yourself or coworkers.



Incurring expensive legal and repair costs, serious penalties and charges.



Losing productivity by bringing your project to a stop.



Jeopardizing future contracts and your reputation.



Interrupting natural gas service to the neighbourhood.



Causing harm to the environment.

WHEN A GAS PIPELINE EMERGENCY OCCURS

- Should an emergency arise, DO NOT attempt to control the release of natural gas
- Do not bury the escaping gas

Remember

Natural gas is an asphyxiate **and displaces** the air around it.

The right mix of gas to air with a spark or static discharge can cause the gas to ignite.

PROCEDURE WHEN DAMAGE OCCURS RELEASE OF GAS

- If natural gas is escaping from the damaged pipeline:
 - Shut off vehicles or equipment
 - Remove or extinguish all ignition sources
 - Barricade the area keeping the public and workers away
 - Do not attempt to control escaping gas
- Public safety is your #1 priority
- Call 911 first and then call Enbridge Gas Emergency



Call Enbridge Gas Emergency

1-866-763-5427

BACKFILLING AN EXPOSED GAS LINE

Backfilling Trenches

Need to provide firm support under utility lines.

- The trench must be backfilled with clean fill or granular material free of material that can damage utility lines.

Coverage over and around the pipe must be with shading material. This includes the following:

- Native clay
- Fines and screenings
- Sand





**Click
Before
You Dig.com**

Q&A