



FRONTIER

UTILITY LOCATING SERVICES INC.

PUBLIC VS. PRIVATE

Whose line is it anyway? There is a lot of confusion about the ownership, and the responsibility to locate various utility lines, especially on private property. Public utility companies will locate on private property, but only up until the dissemination point, or point of service. Often this is a meter, a valve, or a junction box. Beyond this point, the line is considered privately owned and must be located by a private locate contractor such as Frontier. Remember, it is your responsibility to contact ALL public utility owners prior to excavation. It is the law.

UTILITY LINE LOCATING

Using state-of-the-art electromagnetic pipe and cable locating equipment, Frontier is able to trace the path of buried metallic utility lines, including power, telecom, cable TV, gas, water and more.

Located lines are marked with temporary marking paint, flags, stakes, or other markers to indicate their horizontal position on the ground surface.

Various signal application types are available, including conductive, inductive clamp, and induction, and all of our equipment incorporates multiple frequencies to suit the conditions of the line and the site.

SONDING

A sonde is a small, waterproof radio transmitter designed to be inserted into non-conductive lines. Using fiberglass pushrods or other means to propel the sonde through the line, the location of the sonde is determined using a standard pipe and cable receiver on the ground surface.

STAKE & SWEEP

Frontier has developed a proprietary "Stake & Sweep" procedure designed to thoroughly scan a work area for subsurface utility lines, and mark them clearly prior to an excavation project. This service is often used on pipeline and transmission projects.

The process begins with a comprehensive examination of the site in conjunction with any available records. We look for any visible signs of utilities, both subsurface and aerial, taking note of all possible connection points to apply signals.

The process continues with the location of all known utilities using standard pipe and cable locate equipment.

Once the "knowns" are located, an exhaustive sweep for active and

passive radio signals is performed in a complex grid to locate any unknown or unseen conductive lines buried beneath the surface.



Finally, all lines, including aerial hazards, are mapped onto a detailed plan and delivered to the client.

GROUND PENETRATING RADAR

Ground Penetrating Radar (GPR) is another tool in our arsenal to help us find subsurface features, both conductive and non-conductive. It works like the radar used to track airplanes, only our antennae are pointed into the ground. Radar signals are broadcast into the ground, and bounce off various features. The resulting echo is read by a processor, and a visual representation of the subsurface world is displayed on a monitor for interpretation. This is a very useful tool in dry, sandy soils, but can be somewhat limited in saturated clay. GPR is useful not only to identify buried utility lines, but can also be used to locate buried oil drums, underground storage tanks, abandoned foundations and even soil changes and depths.



CONCRETE SCANNING

Concrete scanning is necessary before cutting or coring. Specialized Ground Penetrating Radar designed specifically for concrete scanning can help you drill or cut without worry. Our equipment can identify embedded features such as utility lines, rebar, tension cables, and even air pockets. We use GPR for all interior work to ensure the integrity and safety of the project.

ELECTROMAGNETIC SURVEYING

Electromagnetic scanning of a site using EM31, EM61 or similar equipment can map geologic variations, ground water contaminants, or any subsurface features associated with changes in ground conductivity. With effective depth of exploration of approximately 6 meters, this equipment is ideal for geotechnical and environmental site characterization.

BOREHOLE CLEARANCES

Subsurface soil investigations for geotechnical engineering or environmental assessments present the potential risk of drilling through a buried utility line. Frontier can add a level of security and safety to such projects by locating lines in and near the target area. Further, we will scan each individual borehole with a 360 degree scan for active and passive signals.

WIDE AREA SCANNING

Similar to our Borehole scanning service, Frontier will scan your entire excavation area for active and passive signals. Whether you are test-pitting, trenching, excavating a foundation or building a parking lot, Frontier can give you the peace of mind to dig with confidence, knowing that we have taken every precaution to detect what is in the ground below your site.

GROUND DISTURBANCE MANAGEMENT

Navigating the complex world of ground disturbance regulations and requirements can be a daunting task. Each jurisdiction has specific procedures that need to be adhered to. Frontier has many years of experience managing ground disturbance projects, dealing with One Call centres, public utility owners for clearances, and data management and delivery.

S.U.E. / S.U.M. PROJECTS

Subsurface Utility Engineering and Subsurface Utility Mapping are fast becoming standard practice for pre-engineering of complex projects. Frontier can provide full S.U.E./S.U.M services for large scale pre-engineering projects to aid design and efficiencies prior to construction.

CONTRACT LOCATES

Frontier provides contract locating services for public utilities, from peak shaving & over-flow to full contract services. Call us to find out how we can help you achieve higher efficiencies.

GROUND-FAULT LOCATING

Why replace damaged cables? With the use of high frequency R.F. transmission and step-potential measurement, Frontier can accurately locate sheath-faults and ground-faults in your buried electrical lines, allowing you to repair the line rather than replace it, saving time and money!



MANAGED SERVICES

- Geodetic Surveying
- Hydro-Vac Excavation
- Traffic Control Services
- Confined Space Entry



Soil-Mat has worked with Frontier for many years & would definitely recommend them to all of our clients & colleagues. They are professional, accurate, reliable & a pleasure to work with.

--Shelly Thomson, Operations Manager, Soil-Mat Engineers

A FEW OF OUR CLIENTS

- Aecom
- Aecon
- AMEC
- ASI Group
- Banister Pipelines
- Black & McDonald
- Capital Paving
- CH2M Hill
- Coffey Geo-Technics
- Conestoga Rovers & Associates
- Demik Construction
- Dillon Consulting
- Dufferin Construction
- E. S. Fox Constructors
- Enbridge Pipelines
- Exp. Services
- Gamsby & Mannerow
- Golder Associates
- Ground Force Environmental
- H. B. White Canada Corporation
- Hamilton Health Sciences
- Hamilton Port Authority
- Henkels and McCoy
- IBI Group
- Hamilton International Airport
- Kodiak Environmental
- Link Line
- McMaster Innovation Park
- Merlo Electric
- MTE Consultants
- New Alliance
- NPL Canada
- Peto McCallum
- Pinchin Environmental
- Plains Midstream LLC
- Premier Environmental
- Price Plumbing
- Rankin Construction
- Regional Municipality of Halton
- RioCan
- Ron Lee Construction
- Seegmiller
- Sexton McKay
- Stantec Consulting
- Summit Construction
- Super Sucker Services
- Terraprobe
- Tervita
- Toronto Region Conservation Authority
- Toronto Transit Commission (TTC)
- Town of Oakville
- Union Gas
- Walsh Construction
- Warplane Heritage Museum
- Worley Parsons
- WSP Canada
- XCG Consultants



Frontier did a significant amount work for us in Ontario extremely successfully and provide a complete solution for locating and surveying. They come with the highest recommendations.

--Georges Guerette, Enbridge Pipelines

"Over the past 10+ years I have been completely satisfied with your work and your company's performance. After numerous locates, I have successfully excavated at numerous sites. The information received from the locates, has been beneficial to our safety performance.

In a nut shell, the locates have been very helpful. The locates have great info and are easy to read. Safe excavating by using these locates will help send us home to our families at the end of the work day."

--Sandy Buchanan
Site Superintendent
Ironworker Supervisor
Aecon Industrial



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