



# Horizontal Directional Drilling Near Natural Gas Pipelines

Horizontal directional drilling (HDD) or directional boring is a steerable trenchless method of installing underground facilities.

In all cases, positive identification holes are required to visually verify the Enbridge Gas (or associated affiliates within Ontario or Quebec) pipeline and the drill head's location (including depth) relative to the measurement of the tracking equipment.

Positive identification holes should be made by hand digging or hydro-excavation.

Requirements can vary for horizontal directional drilling depending on if the drilling path is parallel to, crossing above or crossing below an Enbridge Gas pipeline.

## Drilling parallel to pipelines

When drilling parallel to an Enbridge Gas pipeline (including vital pipelines), a minimum horizontal clearance of 1 m (3.3 ft) is required.

Positive identification holes of the drill path must be performed at intervals of no more than 10 m (33 ft) to visually verify the entire width of the drill head and backreamers (if any) when drilling between 1 m and 3 m away from the pipeline (i.e., the "buffer zone").

Positive identification holes of the Enbridge Gas pipeline must be performed at intervals of no more than 4.5 m (15 ft) and at any change in direction of the pipeline every 23 m (75 ft) with the entire width of the pipeline being visually verified when drilling between 1 m and 3 m away from the the Enbridge Gas pipeline.

## Drilling across pipelines

A positive identification hole must be created that is sufficiently wide to see the entire drill head and backreamer (if any) entering the excavation at a minimum 1 m (3.3 ft) before crossing the Enbridge Gas pipeline.

A second positive identification hole must be created prior to reaching the Enbridge Gas 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 (if any).

When drilling across Enbridge Gas pipelines that are smaller than NPS 16 in diameter a minimum vertical clearance, measured from the edge of the pipeline to the edge of the final bore hole, of 0.3 m (1.0 ft) is required.

When drilling across Enbridge Gas pipelines that are NPS 16 or larger in diameter, CER regulated and/or designated as vital, 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.

## Crossing below a pipeline

All sides of the Enbridge Gas pipeline (including below pipeline) must be exposed to 1.0 m (3.3 ft) from the pipeline's sidewalls.

An additional positive identification hole at 2.0 m to 4.0 m (6.6 ft to 13.1 ft) prior to the pipeline daylight hole at the crossing is required to verify depth and trajectory of drill head and backreamer (if any).

## Crossing above a pipeline

The top and all sides of the Enbridge Gas pipeline must be exposed to 1.0 m (3.3 ft) or 1.0 m (3.3 ft) below the proposed installation.

An 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 is required to verify depth and trajectory of drill head and backreamer (if any).

If any of the requirements for horizontal directional drilling in the vicinity of Enbridge Gas pipelines 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 Enbridge Gas pipeline.

For more detailed information on the above, please review the Enbridge Gas [Third-Party Requirements in the Vicinity of Natural Gas Facilities Standard](#) which is also available from the [Enbridge Gas "Working near vital natural gas pipelines" webpage](#).