



General Regulations

As an HDD operator your responsibilities are as follows:

- Be authorized to operate the equipment.
- Inspect your equipment to ensure safe operation.
- Complete the required Risk Assessments.
- Operate safely and watch out for others around you.

The employer's responsibilities include:

- Training on how to operate the HDD they are assigned.
- Knowing and applying manufacturer, industry and employer safe operating practices for the use of Horizontal Directional Drilling equipment.
- Have an understanding of regulatory responsibilities for the operation of Horizontal Directional Drilling equipment.
- Ensure operators are held accountable for the manner in which they were trained
- Make operators aware of the hazards associated with the operation of HDD equipment and how to protect themselves in hazardous situations.
- Evaluation of operator by a competent evaluator.

All Terrain Directional Drills



All Terrain Directional Drill's can steer, drill and back-ream in solid rock up to 650 feet. Certain models can steer, drill and back-ream in just about any type of soil—even solid rock—up to 1000 feet.

Site Planning

A Site Plan or Ground Disturbance is defined differently depending on whether powered mechanical equipment or hand equipment is being used to perform the ground disturbance.

The term “ground disturbance” has been adopted by industry to replace “excavation” since there are many activities other than excavation that disturb the ground. Some types of buried facilities, other than pipelines, may not have 30cm of cover, hence it would be prudent to consider any disturbance of the ground, regardless of depth, as a ground disturbance.

Safety is the most important issue during the undertaking of ground disturbance due to the extensive network of underground facilities buried at depths ranging from about 600 millimeters to about 4 meters.

Site planning consists of several pieces of information to be assessed and documented before the plan can move through the process of gaining approval.



Be sure to consider the following when drawing up your site plan.

- Ground conditions
- Underground utilities
- Overhead utilities
- Bore Plan (Crossing utilities)
- Size of product you're using (affects your bore plan)
- Boring rivers & creeks (you will need a geotechnical report)
- MSDS for all products to be used on the worksite
- Traffic control, surrounding areas
- Other equipment in the area (cars, trucks, machinery)

Personal Safety

Personal Protective Equipment (PPE)

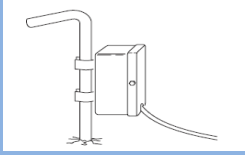
After the completion of your Hazard/Risk Assessment you will have a better understanding of the PPE required to ensure the job is completed safely.

Common PPE associated with Horizontal Directional Drilling worksites include but is not limited to the following:

- Hard Hat
- Electrical rated work boots 15 KWZ
- Gloves
- Safety Glasses
- Reflective Clothing
- Safety Cones
- Lighting
- Caution Tape



Electrical Strike Sensing System



Electrical Strike Systems come standard on most trenchless equipment. When used properly they alert the operator of the HDD that the drill pipe has come in contact with an electrical source. This information is relayed back to the HDD sensor and an alarm is sounded.

It is important to remember that the Electrical Strike Sensing System will only alert you when a line has been struck and will not alert the operator in advance.

Utility Markings

When you place a request into One Call the utility locates will be marked according to color schemes that correspond to the applicable utility that they are indicating in that location.

Red- Electrical power lines, conduits, ducts or lighting wires and cables
Yellow- Gas, oil, petroleum, steam or gas
Orange- Telephone, cable TV, communications, alarm companies
Blue- Water, irrigation, slurry lines or water pipes
Green- Sanitary sewer, storm sewers, culverts or drainage lines
Pink-Temporary survey markers



PRECAUTIONS & EMERGENCY PLANNING

Jobsites are classified according to underground hazards present.

IF WORKING	CLASSIFY WORKSITE AS
Within 10' (3 m) of a buried electric line	ELECTRIC
Within 10' (3 m) of a natural gas line	NATURAL GAS
In concrete, sand or granite which is capable of producing crystalline silica (quartz) dust	CRYSTALLINE SILICA (QUARTZ)
Within 10' (3 m) of any other hazard	OTHER

Electric Jobsite Precautions

In addition to using a directional drilling system with an electric strike system, use one or both of these methods.

1. Expose line by careful hand digging or soft excavation. Use beacon to track bore path.
2. Have service shut down while work is in progress. Have electric company test lines before returning them to service.

While working around electrical:

1. Expose
2. Shut down service if possible
3. Wear protective boots and gloves
4. Always use your Electric Strike System on your equipment and test the system to ensure its operation.

Emergency Procedure for a Utility Strike

“DO NOT MOVE”

1. Remain on drilling machine or mats and take the following actions. The order and degree of action will depend on the situation.
2. Warn people nearby that an electric strike has occurred.
3. Have someone contact electric company.
4. Reverse drilling direction and try to break contact. Do not touch drill pipe with hands or hand-held tools.
5. Press electric strike system status button.
6. If alarm sounds again, stay where you are and wait for electric company to shut off power.
7. If alarm does not sound and there is no other indication of a strike, wait at least one full minute before moving away from equipment. Utility might use automatic re-closers which will restart current flow. If alarm sounds again while waiting, stay where you are until electric company shuts off power.
8. If alarm does not sound but all lights in strike indicator are on, assume strike is continuing and stay where you are until electric company shuts off power.
9. Do not resume drilling or allow anyone into area until given permission by electric company.

HDD Visual Inspections

