

Utility
Boring Requirements
As of October 2013

Minimum information to be included in Contract Plans

Bore path should be planned to allow sufficient room from other utilities or structures for workers to perform maintenance or operations on adjacent utilities. There shall be a 5' minimum horizontal separation between the proposed utility and City Sewers.

Locations of other utilities within or adjacent to the proposed bore path must be shown. Plans shall be submitted to affected utilities to confirm locations and depths.

Locate and show substructures such as manhole covers, valve box covers, meter boxes, telephone and cable television boxes, electrical transformers, conduit, or drop lines from utility poles, pavement patches, previous locator markers, cisterns, septic tanks, leach field piping, and sewer lateral cleanouts.

Specify sewers to be televised.

Identify and locate obstacles that may have an effect on the drilling operation such as landscaping, sidewalks, pads, patios, utilities, private sewer laterals, etc...

Locate the drill path to minimize restoration of streets and sidewalks. Show locations of all entrance and exit excavations.

Locate & show lines, power lines, chain link fences, and other sources which could affect boring equipment / instruments requiring calibration.

Show Public right-of-way widths and locations and additional private easements required.

Determine the need for traffic control and/or flagmen. Provide appropriate traffic control measures in accordance with the IDOT highway standards and include the provisions in the contract requirements along with the appropriate drawings.

Include pavement restoration details according to section 100 of the City of Danville code of ordinances. The code of ordinances may be found at www.cityofdanville.org. Specify the time allowed between work completion in each location and the final restoration.

A sample informational letter and door tag hanger shall be included in the plans for review.

A sample project sign shall be shown on the plans and sign location(s).

Construction Criteria to be included in the contract documents

Arrange and schedule the work to minimize inconvenience to homeowners and the traveling public.

Notify owners of subsurface utilities of impending work through the JULIE, the "One-Call" program. Mark out proposed work location prior to calling JULIE, the "One-Call" program, including the area where the boring machine will be anchored.

Erosion Control measures shall be specified to insure sediments do not enter the storm water system. Erosion control fence shall be required around excavations. Inlet filter bags shall be required. Stockpiling of materials on City right of way shall be prohibited.

Require utilities to locate all their facilities along and on either side of the proposed drill path including, but not limited to: buried electric cables, buried telephone cables, fiber optic communication cables, cable TV cables, water Lines, sewer Lines, forced main sewer lines, intrastate and/or Interstate gas, petroleum, or chemical pipelines.

Notify land owners that they need to locate their buried facilities when applicable via direct mailings and / or permitted hand fliers. Examples of private utilities include:

- Buried roof drain lines
- Buried customer owned gas and/or electric line(s)
- Sanitary/Septic system including drain tiles, leach fields, and tanks
- Portable water wells and private water line
- Sprinkling system piping
- Invisible fence cable

Project Sign: Erect and maintain a project sign with minimum dimensions of 3'x3' on each street where work is being performed stating the following as a minimum:

AN "NAME" PROJECT
PROJECT CONTACT "PERSON" AT
"PHONE NUMBER"

Field verify location of all utilities and substructures shown on the plans.

Sewer Televising: televise using a recording device all public sanitary and storm sewers in the project area prior to and after construction. Submit copies of the recording to the City Engineer with a plan view referencing the location of the sewer(s) relative to the recording.

A minimum of one foot shall be maintained between all utilities and 5 feet between City Sewers.

Determine and document the installed drill path, including its depth, and the location and depth of all substructures along the path.

Pot hole, hand dig, or vacuum excavate, all utility services directly along the path and within eighteen (18) inches of either side of proposed bore path.

- At a minimum, cover material should be removed down to below the planned bore depth plus back reaming, if applicable.
- Bore head and back reamer shall be observed entering and leaving pot hole to ensure foreign utility has not been damaged.
- Pot hole shall extend eighteen (18) inches either side of the locator's marks.

Under hard surfaces, such as roadways, where it is impractical to expose facilities, utilize other resources (such as records, permits, etc.) to determine depth of existing facilities.

- Uncover the facility, at a minimum, on each side of the hard surface before boring begins.
- Check water valve boxes to get an estimate depth of water lines.
- Check sewer manholes to get an estimated depth of sewer mains.

Locate and mark all sewer lines and laterals, and use test holes if necessary, along the drill path. Locate the location and depth of sewer lines by physically exposing the line. Methods to locate sewers include, but are not limited to:

1. Excavate sufficient depth below the proposed bore path to verify the sewer line is deep enough that it will not be damaged by the drill head and/or back reamer.
2. Access available outside or inside clean-outs and measure the depth of the sewer line lateral. Use of steel sewer tape or similar item and a pipe locator may assist in determining location of sewer lateral. Caution should be taken because a sewer lateral may not have consistent grade from the building entrance to the sewer line.
3. Obtain access to all buildings that do not have an outside clean-out and visually identify where the sewer exits the structure. Use locating tape or other devices to trace the lateral to the sewer main.
4. Determine the depth of the sewer main by determining the invert elevations in upstream and downstream manholes.
5. Sewer force mains must be physically located and exposed prior to boring.

If unable to locate sewers:

1. Do not use boring equipment or trenchless construction techniques for the installation of the proposed utility or
2. Use boring equipment only in areas where locations and depths of sewer lines have been determined to be safely outside the bore path or
3. Use a sewer listening device .
 - i. The monitoring location shall be away from traffic and equipment noise.

- ii. The monitoring equipment shall be continuously manned as the penetration noise may be detected for only a short duration.
- iii. There shall be a means of continuous communication between the monitor and the boring operator.
- iv. Boring shall be ceased immediately upon detection of any unusual noise.

Stop all boring operations if resistance or sudden movement of the boring equipment is encountered. Continue with boring operation only after the source of the resistance or sudden movement has been identified and/or eliminated.

Hang a door tag at each home or business where boring operations are conducted. The door tag shall advise the occupants of the home or business of the recent boring operation and alert them that a bore can enter a sewer line on some rare occasions and cause a sewer problem. The door tag shall contain the contact name and the contact phone number of the utility responsible for the boring operation. The door tag shall instruct the property owner to contact the utility prior to calling a sewer repair contractor.

Example Informational Letter

Dear Property Owner / Resident,

COMPANY will be using various boring techniques to install underground utilities adjacent to your property. Despite the precautions we take, on rare occasions a bore may puncture a sewer line, allowing one of our lines to be unknowingly installed inside the sewer line.

Please call COMPANY at NUMBER if you suspect that our utility may have been installed inside a sewer line. We will inspect the situation and make any necessary corrections to resolve the issue.

Thank you for your cooperation and support with this effort. Please contact us if you have any questions or would like additional information.

Sincerely,

Door Tag

A door tag, Boring Equipment Used on Nearby Utility, should be hung on doors in the area where a new utility was installed by directional boring to provide information to residence in the event they experience sewer problems following installation of the utility.

The door tag will provide resident with a Company phone number and contact name, to call if they experience a sewer problem. Resident is to call Company before calling a sewer repair contractor.