

NATIONAL FUEL

PENNSYLVANIA CONTRACTOR EXCAVATION GUIDELINES

National Fuel provides this information as a quick reference to some of the contractors' responsibilities when worksites are near National Fuel (NFG) facilities. For more complete information regarding the responsibilities of contractors performing excavation and demolition obtain copies of state regulations from the **Pennsylvania One Call System by dialing 811.**

Contacting National Fuel:

In the event of an emergency involving an **accidental release of natural gas call our 24/7 emergency number at 1-800-444-3130** and; when police, fire, emergency medical or traffic control are necessary, also call **911**.

Responsibilities of an Excavator:

1. Give notification to the Pennsylvania One Call System (POCS) at **8-1-1** or **1-800-242-1776**, not less than three, nor more than ten working days in advance of beginning excavation or demolition work. Designating the dig site in white will aid in the timely marking of underground facilities. Pre-marking in white is required in some cases.
2. If work is to be performed at multiple sites or over a large area, take reasonable steps to work with facility owners so that they may locate their facilities at a time reasonably in advance of the actual start of excavation or demolition work for each phase of the work. After commencement of excavation or demolition work, the contractor shall be responsible for protecting and preserving the staking, marking or other designation until no longer required for proper and safe excavation or demolition work at or near the underground facility, or by calling for an additional relocation in the event that the previous markings have been compromised or eliminated.

NOTE: Any recall to the POCS for an additional relocation may require up to a 3 day waiting period if facility owners are not able to respond sooner.

3. Excavators shall exercise due care and take all reasonable steps necessary to avoid injury to, or otherwise interfere with, all lines where positions have been provided to the contractor. Within the tolerance zone, excavators must employ prudent techniques, including hand-dug test holes, to ascertain the precise location of facilities. If insufficient information is unavailable to precisely locate and mark facilities excavators shall use prudent techniques, including hand dug test holes to ascertain the precise location of such facilities before using powered equipment in the work area.

NOTE: Hand dug test holes and/or vacuum excavation is recommended to verify facility markings prior to commencement of construction projects.

4. Inform each operator employed by an excavator at a worksite of the information obtained from facility owners as follows:

Plan the excavation or demolition to avoid damage to or minimize interference with a facility owner's facilities in the construction area. Excavation or demolition work which requires temporary or permanent interruption of a facilities owner's service shall be coordinated with the affected facility owner in all cases.

After consulting with a facility owner, provide such support and mechanical protection for known facility owner's lines at the construction site during the excavation or demolition work, including during backfilling operations as may be reasonably necessary for the protection of such lines.

(See Reverse Side)

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Responsibilities of an Excavator (cont.):

5. Report immediately to the facility owner any break or leak on its lines, or any dent, gouge, groove or other damage to such lines or to their coating or cathodic protection, made or discovered in the course of the excavation or demolition work.
6. Alert immediately the occupants of premises as to any emergency that such person may create or discover at or near such premises.
7. If an excavator removes its equipment and vacates a worksite for more than two workdays, the excavator shall re-notify Pennsylvania One Call System unless other arrangements have been made directly with the facility owners involved within the worksite.

NFG General Requirements:

Scratches, dents, gouges, damage to protective coating, and pulled or bowed pipelines can result in a future pipeline rupture or leak, or a leak remote from the excavation site, and must be immediately reported to NFG.

A #12 locating wire is buried alongside most plastic pipe installations and is considered part of the marked facility. If the wire is damaged it must be reported to NFG.

Cables of various sizes are used as part of the cathodic protection systems of some steel gas lines. If a cable is damaged it must be reported to NFG.

NFG Support Requirements:

The contractor shall provide such support and mechanical protection in accordance with generally accepted engineering practices, including but not limited to shoring and bracing. The support shall be:

1. Equivalent to the previously existing support and shall protect the underground facility from freezing, traffic and other loads.
2. Maintained during excavation, backfilling and after backfilling is completed, if necessary.

NFG Backfill Requirement:

The backfill material around plastic and coated steel lines for a depth of at least 3" below the pipe and at least 6" on the sides and top, shall consist of either:

1. Clean dirt free of shale or sharp stones. Rounded stones shall be no larger than 1" in diameter.
2. Sand is the preferred material where washout is not likely.
3. Select granular fill that does not contain any sharp or crushed stone.

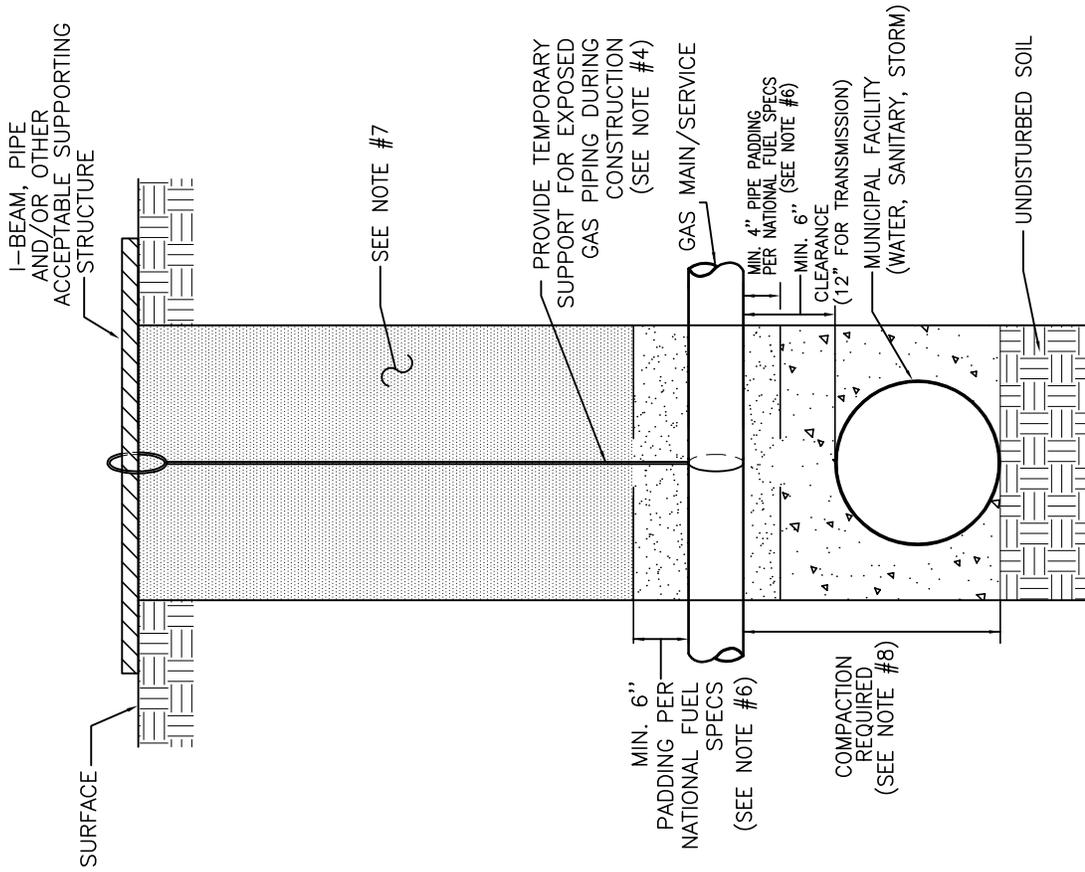
Backfill material beyond 6" of the pipe shall be free of logs, cinders, stumps, skids, brush or rocks larger than 12".

Backfill beneath and around any underground facility shall be properly compacted in accordance with generally accepted engineering practices.

Heavy loads and excessive forces shall not be imposed on any exposed underground facility at any time during backfilling operations.

NOTES

1. PRIOR TO ANY EXCAVATION WORK, DAMAGE PREVENTION LAWS REQUIRE PERSONS TO MAKE CONTACT WITH THE APPROPRIATE ONE-CALL SYSTEM BY CALLING 811 OR IN NEW YORK 1-800-962-7962/ IN PENNSYLVANIA 1-800-242-1776.
2. IF A NATURAL GAS FACILITY IS DAMAGED, RESULTING IN A RELEASE OF NATURAL GAS, IMMEDIATELY CALL 911 AND THE NATIONAL FUEL EMERGENCY NUMBER 1-800-444-3130.
3. IF A NATURAL GAS LINE IS SCRATCHED, GOUGED, DENTED, PULLED, OR BOWED DURING EXCAVATION WORK OR THE PROTECTIVE COATING IS DAMAGED, IMMEDIATELY CALL THE NATIONAL FUEL EMERGENCY NUMBER 1-800-444-3130 SO THAT WE CAN INVESTIGATE AND REPAIR ANY DAMAGE THAT COULD AFFECT PUBLIC SAFETY. SEEMINGLY INCONSEQUENTIAL DAMAGE CAN HAVE A MAJOR IMPACT AND CAN POTENTIALLY RESULT IN A FUTURE PIPELINE FAILURE.
4. NATIONAL FUEL REQUIRES THAT EXCAVATORS SUPPORT OUR FACILITIES IF EXPOSED DURING CONSTRUCTION. THE EXCAVATOR SHALL PROVIDE SUCH SUPPORT IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES. SUPPORT MUST BE MAINTAINED THROUGHOUT CONSTRUCTION AND BACKFILL OPERATIONS. THE SUPPORT SYSTEM SHALL PROTECT THE GAS FACILITIES FROM SETTLEMENT, TRAFFIC AND HEAVY LOADS OR FORCES. CONTACT NATIONAL FUEL FOR SUPPORT RECOMMENDATIONS AND INSPECTION WHERE GAS PIPING WILL BE EXPOSED FOR A LENGTH OF 15 OR GREATER, OR WHENEVER A COUPLING OR FITTING IS EXPOSED.
5. UNDERGROUND UTILITIES AND OTHER STRUCTURES PLACED NEAR NATIONAL FUEL FACILITIES MUST MAINTAIN A MINIMUM CLEARANCE OF 12" FOR TRANSMISSION PIPELINES AND 6" FOR DISTRIBUTION MAINS AND SERVICES. ANY METALLIC STRUCTURE PLACED NEAR STEEL PIPELINES REQUIRES THE INSTALLATION OF AN ELECTRIC TEST STATION.
6. BACKFILL MATERIAL AROUND NATIONAL FUEL GAS FACILITIES SHALL BE CLEAN DIRT, FREE OF SHALE OR SHARP STONES. ROUND STONES SHALL BE NO LARGER THAN 1" IN DIAMETER. ACCEPTABLE BACKFILL MATERIALS ARE:
 - A. SAND (SAND IS THE PREFERRED MATERIAL WHERE WASHOUT IS NOT LIKELY).
 - B. STONE "SCREENINGS" (LIMESTONE) ALL PASSING:
 - 100% PASSING THE NO.40 SIEVE
 - 70% PASSING THE NO.200 SIEVE
 - C. GRAVEL (A MODIFIED SIDEWALK MIX) OF A 50/50 BLEND OF NO.1A ROUND GRAVEL AND SAND.
 - D. NO.1A ROUND GRAVEL.
7. FILL MATERIAL BEYOND THE SELECT BACKFILL SHALL BE FREE OF LOGS, CINDERS, STUMPS, SKIDS, BRUSH OR ROCKS LARGER THAN 12 INCHES.
8. BACKFILL MATERIAL BENEATH AND AROUND ANY UNDERGROUND GAS FACILITY SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES.
9. HEAVY LOADS AND EXCESSIVE FORCES SHALL NOT BE IMPOSED ON GAS FACILITIES AT ANY TIME DURING CONSTRUCTION OR BACKFILLING OPERATIONS.
10. #10 OR #12 LOCATING WIRE IS BURIED ALONG SIDE MOST PLASTIC GAS MAINS AND SERVICES. HEAVIER CABLES (PART OF CATHODIC PROTECTION SYSTEMS) MAY ALSO BE FOUND NEAR SOME STEEL PIPE FACILITIES. IF ANY WIRE OR CABLE IS DAMAGED IT MUST BE IMMEDIATELY REPORTED TO NATIONAL FUEL.



TYPICAL GAS LINE CROSSING OPEN TRENCH DETAIL

NOT TO SCALE

		TYPICAL GAS LINE CROSSING OPEN TRENCH DETAIL
ENGINEERING 6363 MAIN STREET WILLIAMSVILLE, NY 14221	DRAWN BY: T. NUGENT DATE: 1/5/12	CHECKED BY: M. PARKER APPROVED BY: K. HOUSE REVISION: GASLINECROSSINGDETAIL.DWG
		DRAWING NUMBER: _____ SHEET NO.: 1 OF 1