

# CONSTRUCTION STANDARDS FOR YARD LINES

(From Meter or Stub-Out to Outdoor Appliance)

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It is the responsibility of the homeowner to construct underground gas yard lines, which connect from the meter or stub-out to an outdoor appliance such as a pool heater, generator, grill, lantern, or fire-pit, according to HNG’s construction standards. After the line is inspected to ensure HNG’s construction standards have been satisfied, HNG will tie the yard line into the meter set (if required). The homeowner will remain responsible for maintenance of yard lines in the future.

**The homeowner may choose any contractor, who is qualified, to complete the construction of underground gas yard lines.**

## **Summary of HNG Construction Standards:**

- The trench must allow for a minimum cover of 18” and remain completely open for HNG to perform a full inspection.
- The line must be composed of Polyethylene pipe only (minimum of ¾” diameter) marked ASTM D2513.
- The line must have a continuous vinyl coated tracer wire (minimum of 14 gauge).
- All underground connections (i.e., couplings, elbows, tees, risers, etc.) must be fusion welded and installed by a contractor who is certified to complete fusion welds and is enrolled and participates in an active drug and alcohol testing program.
- No Compression or Mechanical Style risers and connections are allowed.
- All pipe and connections must be tested at 90 PSIG for 10 minutes and HNG must be provided an electronic chart documenting the test results.

An individual or contractor chosen by the homeowner may complete the following tasks without certifications or qualifications:

- Trenching for yard lines
- Laying pipe and locator wire for yard lines
- Filling in the trench and dressing the area for yard lines

**A detailed description of these construction standards is outlined on pages 2 and 3.**

HNG's construction standards for yard lines are as follows:

A) HNG must approve the system design and material selection prior to the start of construction. System design will be dependent on the planned outdoor appliances for this location and may require a meter upgrade and/or changes to the meter set.

B) The gas inlet for your outdoor appliance must be located a minimum of 5 feet away from any source of ignition, such as an electrical panel, socket or switch.

C) Yard Line Composition and Detail:

- The yard line must be installed at a minimum of 3 feet away from any underground electrical conduit, except where crossings occur. At a crossing, the underground electrical must cross at a 90 degree angle to the gas line.
- The yard line is to be installed in such a manner that the expansion and contraction of the pipe will not cause stress on the joints. This is accomplished by "Snaking" the pipe into the trench. "Snaking" means that the pipe is not laid in a straight line in the trench; instead, it is placed in a wiggly, curving, side to side manner, thus allowing sufficient length of pipe for expansion and contraction to occur without damage to the pipe. Snaking pipe along the bottom minimizes shear and tensile stress. The pipe is to be supported underneath. All backfill placed around the pipe shall be free of rock to prevent damage to the pipe during compaction.
- The entire yard line shall be composed of polyethylene plastic pipe (minimum of  $\frac{3}{4}$ ", preferably  $1\frac{1}{4}$ " ), and be marked with the designation ASTM D2513. Preferably, no joints or splices will be made in the yard line. If a joint is required, the only acceptable method that can be used is fusion welding; **No mechanical or compression connections are allowed.**
- To become certified to complete fusion welds, the operating personnel producing the welded joints must attend a class conducted by a trained instructor, where the physical properties and characteristics of plastic pipe are explained and fusion procedures reviewed. These sessions should be followed by "hands-on" instruction of socket, butt and saddle fusions. Welded joints must be graded by a trained inspector for stress tests and qualitative testing of strips cut from the joints.

**The following items will need to be provided to an HNG representative prior to inspection:**

- **A current valid Welding Certification issued by a training class approved by the Texas Railroad Commission, and**
- **Documented proof of enrollment in an approved drug and alcohol testing program in which they participate. The drug and alcohol testing program must be in compliance with PHMSA 49 CFR Part 199 and DOT 49 CFR Part 40.**

- A continuous vinyl coated tracer/locator wire (minimum 14 gauge) is to be installed along with the pipe. This wire should be looped above the ground at each end of the line so detection equipment can be connected. The locator wire shall be installed in one length; No connections/splices in the locator wire are allowed. Such tracer wire shall be checked for continuity and witnessed by HNG or its designee.
- The entire length of pipe including all pipe joints must be inspected by HNG personnel or its authorized representative before the trench is backfilled. The minimum cover is eighteen (18) inches.
- All materials must be chemically compatible with natural gas as well as resistant to any external chemical influence. Polyethylene (PE) pipe must be marked with the designation ASTM D2513, the manufacture's name or trademark, the nominal pipe size, the plastic pipe institute (PPI) plastic pipe designation code and the standard dimension ration (SDR) or wall thickness. All plastic fittings must be marked with the manufacturer's name or trademark, size and the symbol for the type of material.

D) A pressure chart, in electronic form, must be provided indicating that the pipe and all joints including risers used in the yard line have been pressure tested at 90 P.S.I.G. (but not more than 180 P.S.I.G.) for at least 10 minutes. The temperature of the plastic shall not be more than 100 degrees F. during the testing procedure.