



CITY OF DANA POINT

COMMUNITY DEVELOPMENT, BUILDING AND SAFETY

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B028 - UG GAS

2019 CALIFORNIA CODES
CODE CYCLE

01/02/2020
EFFECTIVE DATE

UNDERGROUND GAS PIPING

METALLIC PIPE

Per the 2019 California Plumbing Code Section 1210.1, as amended by the City of Dana Point, ferrous (metallic) gas pipe is not permitted to be installed underground unless a soils analysis is provided to show that soils conditions will not be damaging to the piping materials. In lieu of a soils report, ferrous gas pipe in exterior locations shall be protected against corrosion in an approved manner. The City of Dana Point currently approves the following method:

1. Approved factory applied coatings and wrapped with not less than 2 layers of minimum 10 mil wrapping, **and**
2. All non-factory applied coated pipe nipples and metallic gas fittings shall be protected from corrosion by applying an approved primer and then wrapping the fittings with not less than 4 layers of minimum 10 mil wrapping.

Other methods may be approved by the Building Official on an individual basis. Submit a "Request for Modification" form for review and approval.

All horizontal piping shall have at least 18-inches of earth cover or equivalent protection per section 1210.1.1. of the 2019 CPC, where external damage is not likely, the cover shall be a minimum of 12". Where a minimum of 12" cannot be provided, the pipe shall be installed in conduit or bridged (shielded). Risers shall be protected from corrosion by applying an approved primer and then wrapping the riser with not less than 4 layers of minimum 10 mil wrapping to a point at least 6-inches above grade.

PVC AND PE PLASTIC PIPE:

Per the 2019 California Plumbing Code Section 1210.1.7 PVC & PE Plastic pipe installed underground in exterior locations shall have at least 18-inches of earth cover or other equivalent protection. Metallic Risers shall be approved and shall be protected from corrosion by applying an approved primer and then wrapping the riser with **not less than 4 layers of minimum 10 mil wrapping** to a point at least 6-inches above grade. When a riser connects underground to PVC or PE plastic pipe, the underground horizontal metallic portion of the riser shall extend at least 30-inches before connecting to the plastic pipe by means of an approved transition fitting or adapter. Per section 1211.1. An electrically continuous, corrosion resistant tracer wire, **14 AWG minimum** or tracer tape shall be buried with the plastic pipe to facilitate locating. One end shall terminate above ground at the building wall or riser.

GAS PIPING INSTALLED UNDER BUILDINGS:

Per the 2019 California Plumbing Code Section 1210.1.6, no gas piping shall be installed in or on the ground under any buildings unless encased in an approved conduit, designed to withstand the superimposed loads. The City of Dana Point defines the term "buildings" to include structures such as porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances.

- The conduit shall extend into a normally usable and accessible portion of the building and at a point where the conduit terminates in the building, the space between the conduit and the gas piping shall be sealed to prevent the entrance of any gas leakage.

- Where the end sealing is of a type that will retain the full pressure of the pipe, the conduit shall be designed for the same pressure as the pipe.
- The conduit shall extend at least 4 inches outside the building, be vented above grade to the outside, and be installed so as to prevent the entrance of water and insects.

PRESSURE TEST

A pressure test, provided by applicant, is required per the 2019 CPC, section 1213.3 Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss due to leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure. The City of Dana Point currently allows, in lieu of the above test device, a minimum 10-PSI test for 15 minutes, with no drop in pressure. Pressure test is required to be performed with gauges with 1/10 pound increments and a pressure range not to exceed 15 pounds.

NEVER COVER OR CONCEAL PIPING UNTIL INSPECTED AND APPROVED.

Section 1203.0. For correct pipe sizing, please provide the distance(s) to the appliance(s) until pressure test has been approved. A gas shut-off valve is required outside of and within 3-feet of all gas appliances, and within 6-feet of ranges and laundry dryers.

PLASTIC PIPE

1208.6.5 Plastic Pipe, Tubing, and Fittings.

Plastic pipe, tubing, and fittings shall be used outside underground only and shall conform with ASTM D 2513, *Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings*. Pipe to be used shall be marked "gas" and "ASTM D 2513." [NFPA54: 5.6.4.1] Anodeless risers shall comply with the following: [NFPA54: 5.6.4.3] **1208.6.7** Factory-assembled anodeless risers shall be recommended by the manufacturer for the gas used and shall be leak-tested by the manufacturer in accordance with written procedures.

1208.6.7 Service head adapters and field assembled anodeless risers incorporating service head adapters shall be recommended by the manufacturer for the gas used by the manufacturer and shall be design-certified to meet the requirements of Category I of ASTM D 2513, *Factory Assembled Anodeless Riser and Transition Fitting on Polyethylene (PE) Fuel Gas Distribution Systems* and the code of Federal Regulations, Title 49, Part 192.281(e). The manufacturer shall provide the user with qualified installation instructions as prescribed by the code of Federal Regulations, Title 49, Part 192.283(b).

