Underground natural gas systems that use steel, cast iron, ductile iron, copper, or aluminum tubing or piping are subject to external corrosion. External corrosion can slowly turn what was once a safe, pressure-tested, leak-proof, natural-gas piping system into a leaking, life- and property-threatening hazard.

All piping beyond the outlet of the natural gas meter comes under the jurisdiction of the Uniform Construction Code. Underground piping systems and their protection from corrosion is addressed under Section 404.11 of the Fuel Gas Subcode and Section G2415.11.2 of the One- and Two-Family Dwelling Subcode, as applicable; however, the code provisions are not very specific on how corrosion protection is provided. Rather, the code simply states that the piping be protected in an approved manner.

This bulletin provides the methods to protect underground natural gas piping systems either through cathodic protection methods or the use of alternative materials, such as plastic pipe or tubing. Therefore, the Department of Community Affairs is recommending that the attached details be followed to ensure adequate corrosion protection is provided to underground piping systems.
SLEEVE OR WRAP STEEL PIPE WITH ALL WEATHER TAPE THRU WALL. ANNULAR SPACE IN WALL SEALED.

MAIN BUILDING

TIE INTO FUEL LINE ABOVE GROUND. (GALVANIZED OR PAINTED PIPE)

VALVE

INSULATED UNION (GALVANIZED OR PAINTED)

BLACK STEEL PIPE WRAPPED TO INSULATED UNION

12" MIN. COATED BLACK STEEL PIPE

3 LB. MAGNESIUM ANODE W/PREPACKAGED BACKFILL OF 75% GYPSUM
20% BENTONITE
5% SODIUM SULPHATE

NOTE:

PERSONNEL QUALIFIED TO ENGAGE IN THE PRACTICE OF CORROSION CONTROL SHOULD BE CONSULTED DURING ALL PHASES OF UNDERGROUND STEEL SERVICE DESIGN AND INSTALLATION TO ENSURE EFFECTIVE CORROSION CONTROL HAS BEEN ACHIEVED. TO BE EFFECTIVE, ALL CATHODIC PROTECTION SYSTEMS REQUIRE FOLLOW UP INSPECTIONS AND POSSIBLE MAINTENANCE.

SLEEVE OR WRAP STEEL PIPE WITH ALL WEATHER TAPE THRU WALL. ANNULAR SPACE IN WALL SEALED.

MAIN BUILDING

TIE INTO FUEL LINE ABOVE GROUND. (GALVANIZED OR PAINTED PIPE)

VALVE

STEEL PREFAB W/TRANSITION FITTING

LOCATING WIRE SHOULD NOT BE ATTACHED TO STEEL SLEEVE

YELLOW INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR NOT LESS THAN 18 AWG

END PROTECTOR BUSHING AND MOISTURE SEAL PLACED AROUND PLASTIC TUBING AND STEEL SLEEVE

NOTE:

PLASTIC PIPE DESIGNED FOR USE WITH NATURAL GAS AND COMPATIBLE FITTINGS CAN ONLY BE USED OUTSIDE UNDERGROUND.