

## PART 1 - GENERAL

### 1.01 Intent of Document

The information included in this section is intended to identify the **SPECIFIC ITEMS** required by Oklahoma State University in the design and construction of facilities on the campus. Items of "normal, code, industry or standard construction practice" are not included in this section.

***NOTE:*** Ordinarily, work covered in this standard will be accomplished by OSU personnel. This information is included only in the unlikely event that the work must be done by an outside contractor. Architect-Engineer must obtain approval from OSU Physical Plant Engineering and Utilities before including information from this standard in a project specification. Plans should indicate that this work will be performed by the Owner.

## PART 2 - MATERIALS

### 2.01 Pipe

All underground gas distribution and service mains shall be plastic, Driscopipe, meeting the specification of ASTM D2513. The pipe must have ASTM D2513 marked on it.

### 2.02 Risers

Plastic service lines shall terminate above ground using anodeless risers, which meet DOT specifications.

## PART 3 - INSTALLATION AND ACCEPTANCE

### 3.01 Qualifications

- A. Plastic pipe joining procedures must be qualified according to the requirements contained in 49 CFR 192.283.
- B. Personnel who make the joints must meet the requirements contained in 49 CFR 192.285 and must be qualified on the brand name of pipe used on the job. The contractor must provide documentation to show that requirements are met.
- C. All joints must be inspected by qualified individuals per 49 CFR 192.287 and contractor must provide documentation to show that inspections are performed and that individuals doing so are qualified.

- D. The Contractor must follow written joining procedures which meet the manufacturers' recommended joining procedures for the specific pipe and fitting used. Contractor is to submit to the Owner for approval a copy of the joining procedure to be used. Contractor is to have a copy of the approved joining procedure on the site during the joining process and is to notify Owner when the process is started.
- E. Failure to adhere to all requirements of this specification could result in a complete reinstallation by the contractor at the contractor's expense.

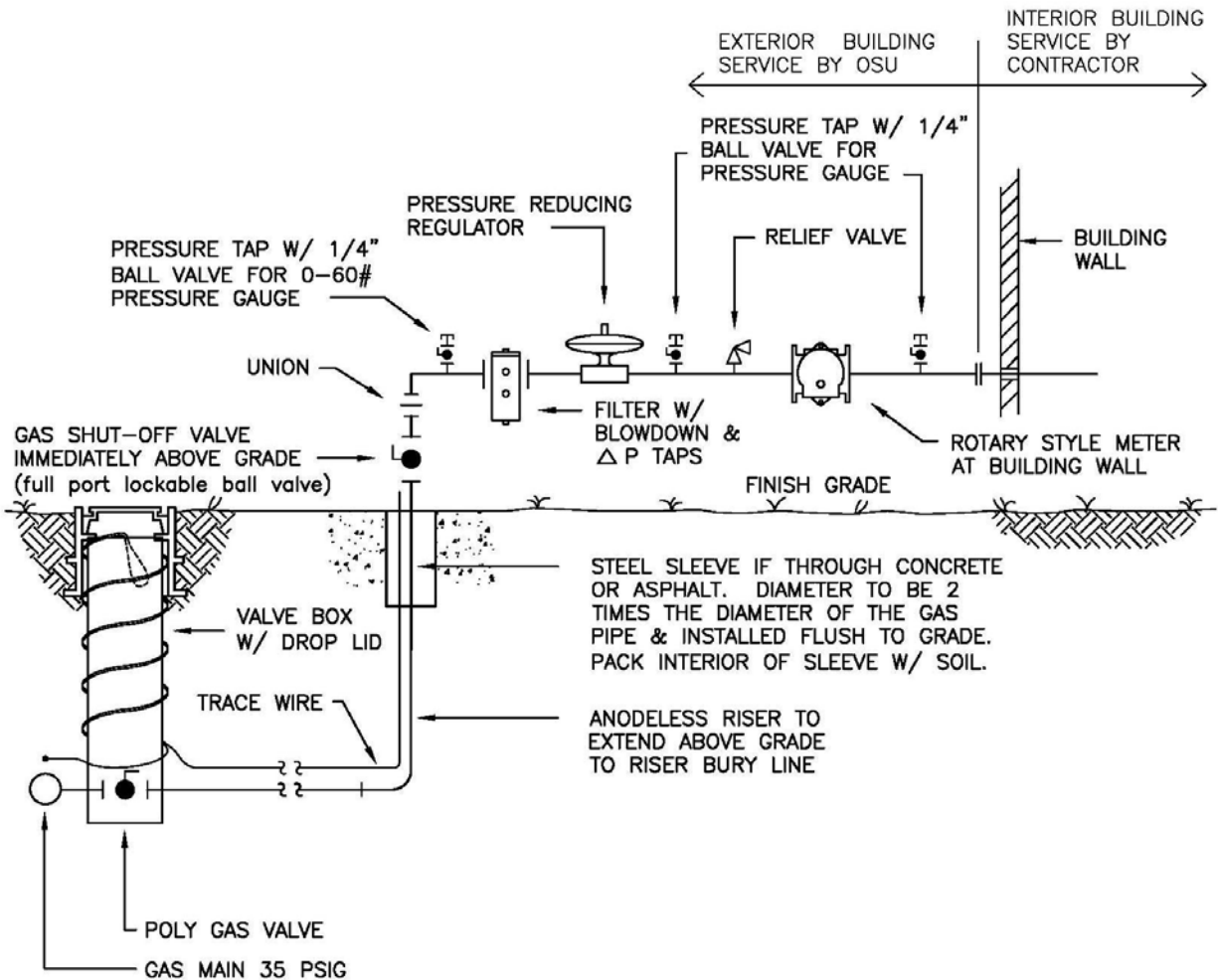
### 3.02 Installation Procedures

The following procedures are not intended to be all-inclusive, or exclusive of other procedures that the Architect may wish to incorporate into the project specifications. The Architect, however, is to assure that these procedures are included in the specifications, and are consistent with all other areas of the specifications.

- A. Install properly designed valves in a manner which will protect the plastic material. Protect the pipe from excessive torsional or shearing loads when the valve is operated. Protect from any secondary stresses, which might be induced through the valve or its enclosure.
- B. Plastic pipe must be installed in such a manner that expansion and contraction of the pipe will not cause pullout or separation of the joint.
- C. Repair or replace imperfections or damage before pipe is placed in service.
- D. Install all plastic mains a minimum of 24 in. below ground level. Where the pipe is installed in a vault or other below-grade enclosure, it must be completely encased in gas-tight metal pipe with fittings that are protected from corrosion. The plastic pipe installation must minimize shear and other stresses. Thermoplastic pipe (PE) for direct burial must have a minimum wall thickness of 0.090 in. Exception: Pipe with an outside diameter of 0.875 in. or less may have a minimum wall thickness of 0.062 in. A plastic main must have an electrically conductive wire (not in direct contact with the pipe) as a means of locating the pipe while it is underground.
- E. Test installed plastic pipe to a level of at least 55 psig.
- F. Ensure that pipe is continually supported along its entire length by properly tamped and compacted soil.
- G. If plastic pipe is placed where there has been digging and backfilling below the pipe, reinforce the pipe. To prevent any shear or other stress concentrations, use external stiffeners at connections to main, valves, meter risers, and other places where compression fittings might be used.

- H. Ensure adequate snaking in the pipe to prevent pullout due to thermal contraction.
  - I. Lay plastic pipe and backfill with material that does not contain any large or sharp rocks, glass or other objects which could cut or puncture the pipe. Where such conditions exist, suitable bedding and backfill must be provided.
  - J. Take care to prevent coal tar type coatings or petroleum base tape from contacting the plastic pipe.
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O.S.U. TO PROVIDE AND INSTALL ALL PIPE AND FITTINGS UP TO CONTRACTOR-PROVIDED TAP IMMEDIATELY OUTSIDE BUILDING WALL, INCLUDING THE REGULATOR, METER, AND PRESSURE TAP DOWNSTREAM OF METER.



NOTE: POLY GAS VALVES ARE QUARTER TURN OPEN/CLOSE

## GAS SERVICE ENTRANCE