CONSTRUCTION STANDARD FOR: Air Taps on Ductile Iron, Cast Iron and PVC Water Mains 16" and Smaller

Effective: 1-22-08
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Supersedes: 6-21-07
Approved by: JGL

GENERAL

This standard governs installation of air taps on 16" and smaller water mains. It does not govern automatic air release and vacuum valves on any size of main unless otherwise stated within this Construction Standard.

AIR TAP SIZE

Install 1" air taps on 4" through 16" mains.

EXCAVATION

Excavations for 1" air taps shall be at least 3'-6" x 4'-6" and extend under and entirely around the main with a 6" clearance. Shore or slope the excavation per OSHA requirements.

TAP PROCEDURE

Pipe with polywrap shall be wrapped with 3 complete layers of polyethylene compatible adhesive tape at the tap location. Width of area wrapped with tape shall be wide enough to protect the polywrap from damage caused by the tapping machine (6" minimum width). Tap shall be made through the tape, polywrap, and piping. After tapping, repair any damage to tape and/or polywrap.

Taps on PVC mains shall utilize a service saddle per MUD 119.

INSTALLATION

Air taps shall be installed on all high points of water mains. A high point includes any point on the main which becomes the point of highest elevation when a valve is closed. Unless otherwise indicated on the project drawings, automatic air relief valves, as specified in MUD 119, shall be installed on 4" through 8" water mains per Fig. 1 and automatic/manual air tap assembly per Fig. 2 shall be installed on 10" through 16" water mains.

Note: Thread sealant shall be NSF 61 approved Teflon tape or pipe dope (Rectorseal #5). The NSF 61 designation (not just NSF) shall be shown on the container to be approved.

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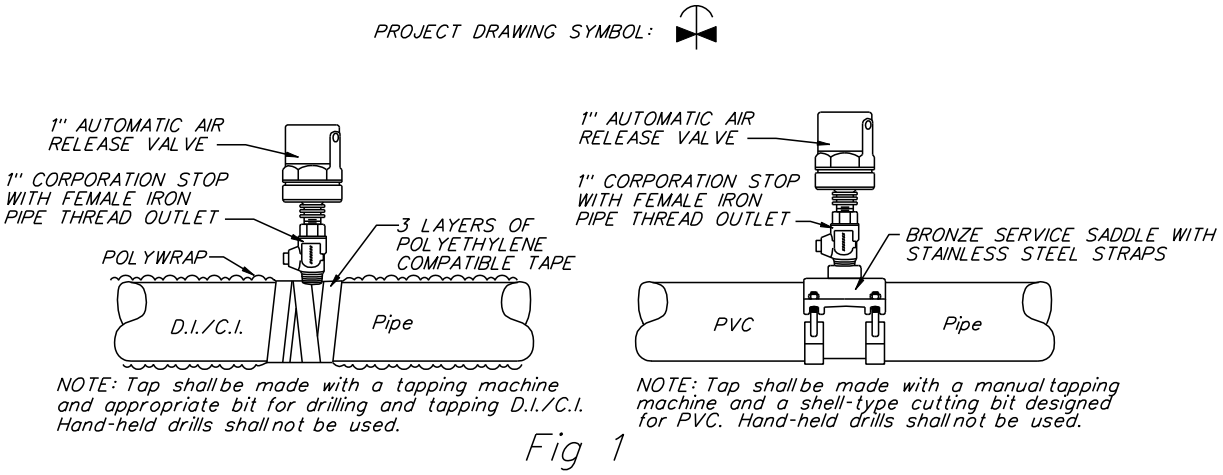

Fig 1

** Revised drawing

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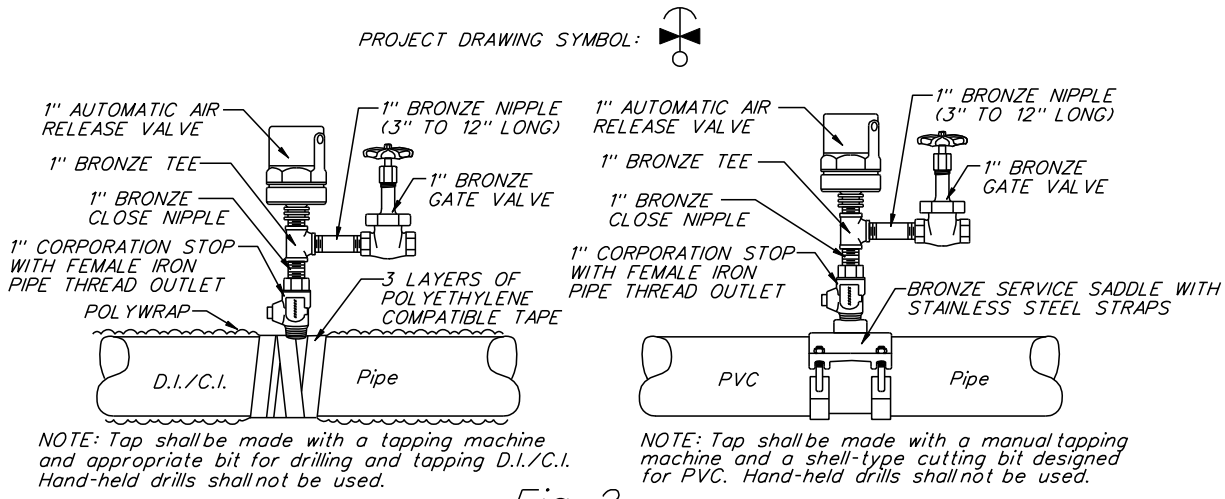

Fig 2

NOTE:

1. The bottom of the main shall be above the top of the vault floor.
2. If an air tap is installed with a gate valve, pipe the air tap toward the valve.
3. Do not locate air tap closer than 14" from pipe end or 12" from valve.
4. See M.U.D. 119 for acceptable corporations, saddles, gate valves and air release valves.

Air taps shall be installed in 48" vaults. When an air tap and a valve occupy the same vault, install a 48" pre-cast vault for 4" through 14" valves and a 60" pre-cast vault for 16" valves. When two air taps and a valve, regardless of size, occupy the same vault, install a 60" vault.

BUTTERFLY VALVE AIR TAPS

When installing an air tap adjacent to a butterfly valve, extend the piping into the vault over the valve operator. (See Fig 3). Size the pipe pass so the vault will not rest on the pipe.

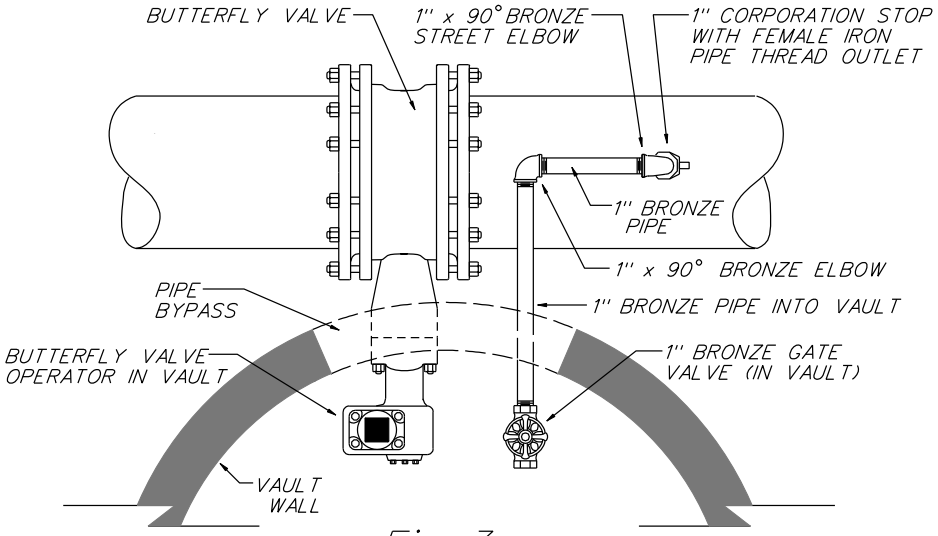

Fig 3

** Revised drawing

AIR TAP HYDRANTS

When convenient or if called for on the project drawings, use a fire hydrant as an air tap. On 6", 8", and 12" mains, install a typical hydrant branch. Where indicated on project drawings, air taps on 16" mains shall be Type 8 hydrants per Construction Standard 3.0.1.