

Modify subsection .02.B “Shutoff Valves” in Section 23 05 01 per the following (deletions are shown struck through and additions are double underlined). Remainder of section is unchanged.

## 23 05 01 Mechanical General Requirements

### .02 Valves

#### B. Shutoff Valves

1. General: Install positive shut-off valves throughout the distribution piping system to facilitate shutdown and draining of smallest segment as practical for repairs while keeping the rest of the system operational.
2. Locations: ~~Shutoff valves shall be installed at:~~ Refer to location requirements in Section 23 21 00 HYDRONIC PIPING AND PUMPS, .01 General Requirements and Design Intent.
  - a. ~~All locations required by the current building Mechanical Code.~~
  - b. ~~Each piece of central or terminal equipment. All valves shall be installed such that valve remains in service without shutting down system when downstream piping or equipment is removed for service, alterations or repairs. Provide arrangement of unions or flanges and removable sections of pipe at final equipment connections to allow easy dismantling and pulling of associated equipment past remaining pipe assemblies without cutting pipe or breaking sweat or press-joint fitting connections.~~
  - c. ~~Secondary / tertiary loops off of primary/secondary piping systems.~~
  - d. ~~Pipe mains at points exiting mechanical rooms, located accessibly within the mechanical room.~~
  - e. ~~Any pipes at points exiting the building or running under slab or underground, located accessibly within the building interior.~~
  - f. ~~Base of each riser~~
  - g. ~~Each horizontal branch takeoff of each riser~~
  - h. ~~Each branch takeoff serving groups of multiple terminals arranged to create hydronic modules to achieve strategically divided sections that can be isolated for service, modifications, and troubleshooting while the rest of system can remain in service.~~
  - i. ~~Main or branch strainers or filters (on entering and leaving sides to allow for pulling screen).~~

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- ~~j.—Any thermal control zone, (i.e. perimeter finned tube zones controlled by exterior orientation).~~
- ~~k.—Any 3 valve bypass around devices as required maintaining continuous flow for critical applications while servicing device.~~
- ~~l.—Tees for future connections. Review with OPP—in some cases valves might be unnecessary and/or undesirable.~~
- ~~m.—Pipe expansion compensating devices that would otherwise require extraordinary effort for system shutdown and drainage to be able to service or replace. Review with OPP.~~

**END of revision**

**Update Commentary:**

Section was updated primarily for the following reasons:

- 1) *This list of locations for shutoff valves is being moved to the Hydronic System general design requirements.*