

## MECHANICAL DESIGN STANDARDS BYU-I

### Steam

- Parallel steam pressure reducing station  
Preferred manufacture (1<sup>st</sup> Spence, 2<sup>nd</sup> Armstrong, 3<sup>rd</sup> Spirax sarco)
- Steam traps --- (preferred manufacture-1<sup>st</sup> Armstrong, 2<sup>nd</sup> Spirax sarco)  
Modulating pressure – Float and thermostatic trap  
Constant pressure – 30psi or more Inverted Bucket trap  
30psi or less Float and Thermostatic trap  
(Supplier Energy West Controls SLC 1-801-262-4477) for PRV's & Traps
- Steam and condensate piping in building accessible
- 3 piece ball valves (1<sup>st</sup> watts B6800) (2<sup>nd</sup> Nibco T595Y)
- Ball valves on steam and condensate lines 2" or smaller
- Bypass valves – globe valve
- Insulation for steam piping  
Metal jacketed over insulation
- Condensate return unit  
Steam driven non-electric pump  
1<sup>st</sup> Armstrong PT-300, 2<sup>nd</sup> Spirax Sarco PPEC
- Valves on wye strainers and discharge pipe needs to extend to the floor/ground
- Steam Main and Branch Line Drip leg length at least 1-1/2 times the diameter of the main, but never less than 10". Make the drip leg the same diameter as the main up to 4" pipe size and at least 1/2 of the diameter of the main above that, but never less than 4".

### Water Distribution and Drainage

- Valves on wye strainers and piped to drain
- Hose bib for custodial solution stations
- Pipe chase 36"
- 4 band no hub couplings on cast piping
- Aqua flow 1/4 turn angle stops
- Backflow preventor--  
Reduced pressure – watts (preferred manufacture)  
Double check valve – watts or ames (Fire system)

### Fixtures

- Auto faucets (Sloan is the Preferred Manufacture)
- Auto Flushers—closet and Urinal (Sloan side mount operator—EBV-89A-M)

### Installation practices

- Don't stack heat/ chilled water pumps
- Heat exchangers  
Unions for removal of tube bundle  
Make room in front of shell for removal
- Isolation valves to areas, wall hydrants, drinking fountain, etc...
- Piping with mechanical joints needs to be accessible
- Heating and chilled water pumps 1531 B & G close coupled foot mounted pump
- Steam Relief Valve need to be flanged/union for easy replacement
- Steam Pressure Reducing Station not to exceed 6 feet in height