

Last Update: July 1, 2009

A. O&M Considerations

1. To the extent possible, all mechanical equipment should be located within the Mechanical Equipment Room (MER).
2. We expect serviceability to be considered during the design. During one of the reviews, typically around 50%, we want to specifically discuss serviceability issues.
3. Equipment must be located so as to allow room for servicing and maintenance, including room to pull HVAC coils and heat exchanger tube bundles.
4. Adjoining pieces of equipment need to be separated by a minimum of 36".
5. Large motors, pumps, etc. shall have provisions for lifting hoists integral to the room construction. This is especially true for any submersed equipment, i.e. sump pumps.
6. Water Softener brine tank(s) must be located to allow salt to be delivered to the tank by pallet jack with an unobstructed path from MER entrance to brine tank.
7. Salt placed in the brine must be lifted no higher than 46" from the standing surface
8. MER must be accessible by a standard stair or elevator. Ship's ladders and steep stairs are NOT acceptable.

B. General Design Considerations

1. MER is to be well lighted using fluorescent lamps located in such a manner that equipment may be serviced without requiring addition portable lighting.
2. MER should not be adjacent to classrooms or offices if possible.
3. MER is to be thermally, vibrationally, and acoustically insulated from occupied areas. Mechanical room walls should be of 6" sand filled concrete block, double wythes of 4" concrete block, or, if of other construction, designed to meet STC 60.
4. Doors should meet STC 45.
5. Provide space to store two changes of air filters, lubricants, etc.
6. Provide thermostatic and CO monitor controlled ventilation.
7. Provide separate concrete housekeeping pads under each mechanical equipment item.

C. Mechanical Design Considerations

1. Floor drains are required for each cooling coil.
2. MER with oil or petroleum storage containers with a capacity of 55-gallons or greater, will have secondary containment with 110% capacity for each container, or provide containment for all containers with a capacity of 110% of the largest single container. Provide a means for manual drainage of secondary containment areas using a non-flapper type valve.
3. MER above the lowest floor shall be curbed or have condensation/drip pans and have all floor penetrations sleeved.
4. MER floor sleeves to be a minimum of 6" diameter extend 4" above the floor and have a water tight material (that may have to be fire stopping as well) to create a water tight compartment system.

*Comments:*

- C.1: *Do not let them drain cooling coil condensate across MER floor. When there is condensate drain piping that is not buried or running along the floor it must be insulated. Condensate is usually very cold and runs all summer and the pipes will sweat.*
- C.3: *We don't want condensate dripping through the MER floor.*