

Mechanical Equipment Rooms

This design guideline is written to the designer of record (DOR). This guideline is written to document UA standards of work, assist the designers in ensuring UA standards are incorporated into the contract documents and provide a resource to facilitate the design process. It is the designer of record's responsibility to coordinate the criteria set forth in design guideline and in conjunction with the manufacturer requirements and use the most stringent standard.

Equipment Location & Maintenance

To the extent possible, all mechanical equipment should be located within the Mechanical Equipment Room (MER).

We expect serviceability to be considered during the design. All mechanical equipment has to be located so as to allow room for servicing and maintenance, including room to pull HVAC coils and heat exchanger tube bundles. Adjoining pieces of equipment need to be separated by a minimum of 36".

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.

Mechanical Rooms

MER must be accessible by a standard stair or elevator. Ship's ladders and steep stairs are NOT acceptable.

MER is to be well lighted using fluorescent lamps located in such a manner that equipment may be serviced without requiring addition portable lighting.

MER should not be adjacent to classrooms or offices if possible. In all cases, the designer is to consider the control of vibrations and low frequency sounds emanating from mechanical rooms.

MER are to be insulated from occupied areas to prevent transition of heat, sound and vibration. Mechanical room walls should be designed to meet Sound Transmission Coefficient (STC) 60. Doors should meet STC 45.

Provide space to store two changes of air filters, lubricants, etc. Provide thermostatic and CO monitor controlled ventilation.

Provide separate concrete housekeeping pads under each mechanical equipment item.

Condensate Drainage

Floor drains are required for each cooling coil. Do not 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.

Oil or Petroleum Storage

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

Floors

MER above the lowest floor shall be curbed or have condensation/drip pans and have all floor penetrations sleeved to 2" above the floor with appropriate fire stopping. We don't want condensate dripping through the MER floor.

All MER finished floors above occupied space shall be Dexotex or approved equal. MER not over occupied space shall be epoxy.

Floor Sleeves

ER floor sleeves to be a minimum of 6" diameter extend 4" above the floor and have a water tight membrane to create a water tight compartment system.

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