

This construction manual illustrates the standards for construction & materials set forth in the Tenant's Lease. **These standards must be strictly adhered to** (unless exceeded by code)!! Any deficiencies noted by the Landlord must be promptly corrected by the Tenant's contractor at the contractor's expense.

**Keep this manual and the Landlord-approved Tenant Drawings accessible** and available at all times while construction personnel are working in the Premises. Failure to do so will result in a \$25 fine against the General Contractor for each occurrence.

Failure to return this manual upon completion of construction will result in a \$75 replacement charge against the General Contractor.

The Construction Manual is Divided into 6 Major Areas:

**01 - GENERAL**

**02 - WALL FRAMING**

**03 - STOREFRONT & INTERIOR**

**04 - ELECTRICAL**

**05 - PLUMBING & SPRINKLER**

**06 - H.V.A.C.**

**NOTE** UNLESS OTHERWISE SPECIFICALLY PERMITTED IN WRITING BY LANDLORD, ALL **ROOF PENETRATIONS ARE STRICTLY PROHIBITED.**

Replace all fire-proofing damaged or removed during construction



Obtain the Tenant Coordinator's inspection & approval PRIOR to enclosing any columns requiring spray-on fire-proofing



**DON'T** Attach the top track of any demising wall or interior wall or soffit framing to the roof-deck. Attach to joists, beams and girders only.

**DON'T** Drill or shoot into the structure - Use clamps, cleats or tie-wires.

Top track attached to studs nested between flutes of roof-deck.



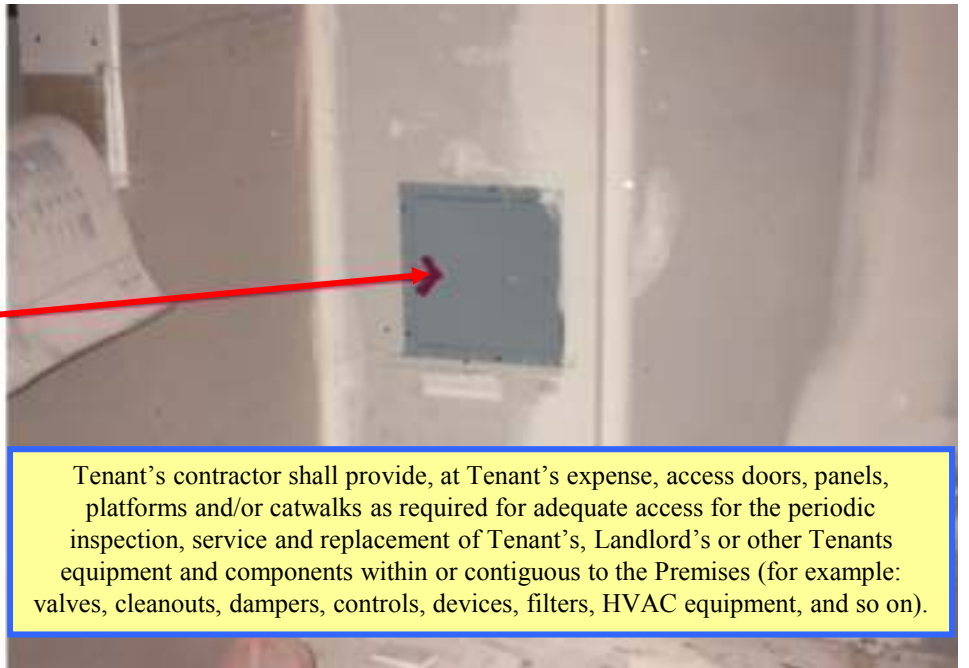
Cleats to hold studs from shifting.



DO NOT use wood blocking in plenum



Access doors shall be hinged or latched (nailed or screwed attachment is NOT permitted). Knockout panels, removable ceilings or wall sections shall be provided for removal or replacement of larger equipment.



Tenant's contractor shall provide, at Tenant's expense, access doors, panels, platforms and/or catwalks as required for adequate access for the periodic inspection, service and replacement of Tenant's, Landlord's or other Tenants equipment and components within or contiguous to the Premises (for example: valves, cleanouts, dampers, controls, devices, filters, HVAC equipment, and so on).

The construction and finishes on the storefront will be carefully reviewed for quality of workmanship. Prior planning, careful layout and detailing of finishes must be of the highest standards. The next few pages are photos of conditions that will be unacceptable and, if encountered, will require re-work by the Tenant's contractor.

Incomplete metal allows public to see backing



Poor caulk joints and fillers



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Did not complete  
tile and grout



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Improper placement of mall tile



Metal closure not properly set



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Metal closer not properly installed



Poor workmanship on vertical caulk joint





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Metal does not line up on the vertical



Metal trim does not line up



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Metal trim does not line up



**DON'T** Attach any storefront or interior soffit construction to the roof deck. Building structure may be used for lateral bracing only

Verify storefront location to head and curb with Landlord's Tenant Coordinator BEFORE installation.



**DON'T** Weld, screw, drill or shoot into building structural steel (use clamps, tie-wire or bolts & washers between joist angle).

All MEP equipment, conduit and piping to be supported from structural steel. Clip, clamp OR cleat and install all thread and Unistrut supports as required.



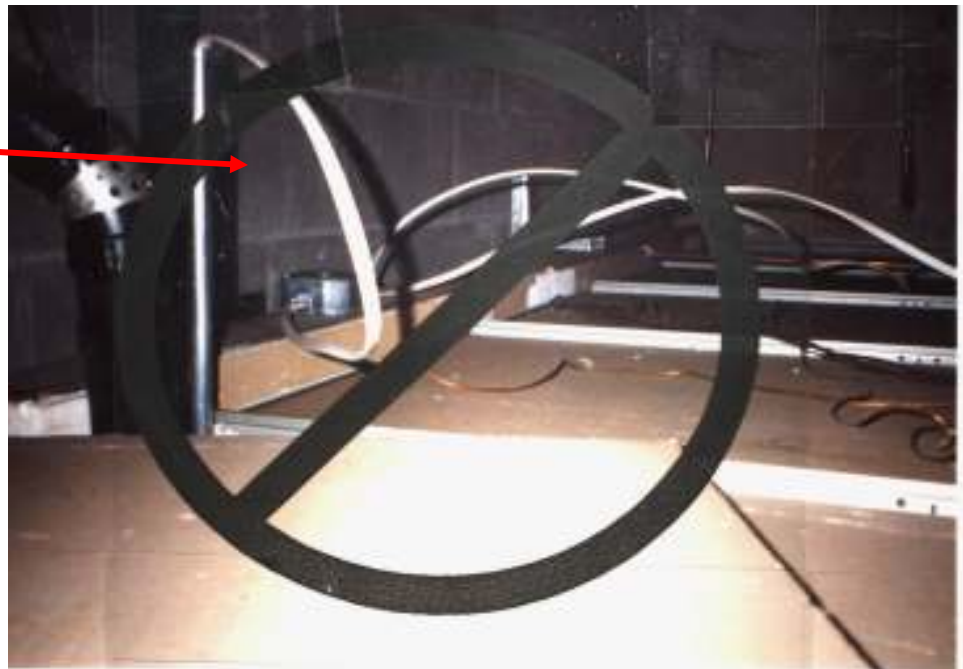
**DON'T** Install panels or MC Cable in demising walls. Outlet boxes, junction boxes and switches are permitted.

MC cable & factory whips are permitted for final connection from junction boxes to light fixtures or along a row of light fixtures on the same circuit. Max. length is 10' - cut excess conduit to avoid coiling. MC Cable is also permitted in interior partitions or horizontally (not vertically) between outlets in demising walls.

Only EMT is allowed in demising walls. Conduit must be properly clipped/supported to studs. Seal all penetrations to maintain fire-rating.



All wiring must be in conduit except (if allowed by code) for low voltage communication wire provided it is plenum rated.

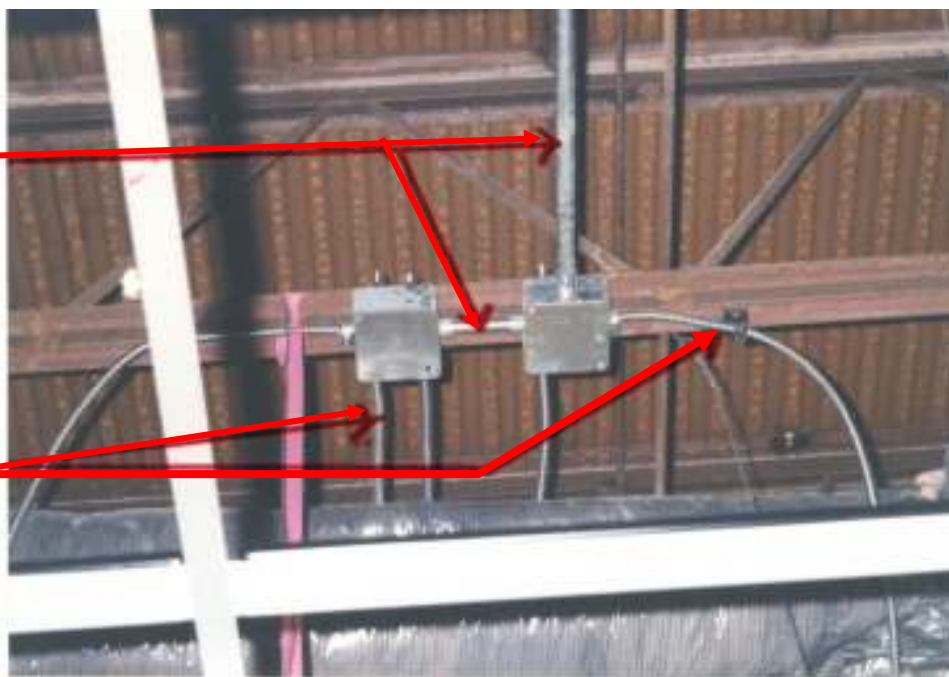


All HVAC control wire, fire detection and smoke control wire, energy management or security wire must be in conduit.

MC cable is allowed between outlets/switches in interior partitions but must be properly supported. NOTE: Only EMT is allowed in demising walls.

Use EMT between junction boxes and as home runs.

MC cable properly used and supported.



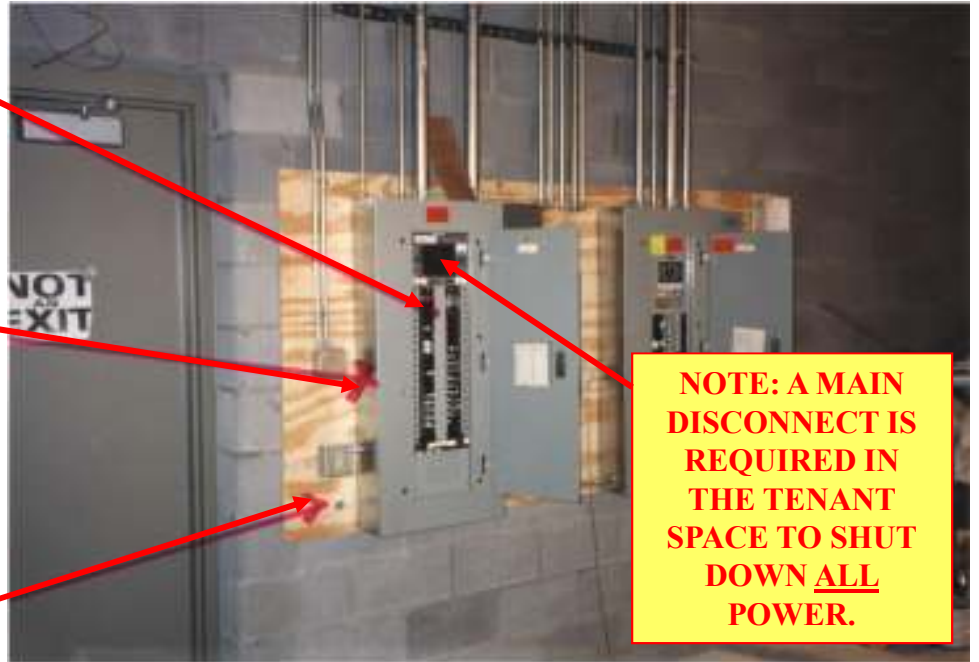
MC cable is allowed between outlets/switches in interior partitions but must be properly supported. NOTE: only EMT is allowed in demising walls.



Panel boards shall be 3-phase, 4-wire, solid neutral.

Cabinets shall be constructed of code gauge sheet steel with hinged steel door (no load centers).

Electrical devices, time-clocks, panels, cabinets, etc. shall be mounted on a firerated plywood backer-board or unistrut.



**NOTE: A MAIN DISCONNECT IS REQUIRED IN THE TENANT SPACE TO SHUT DOWN ALL POWER.**

Home runs shall be EMT.

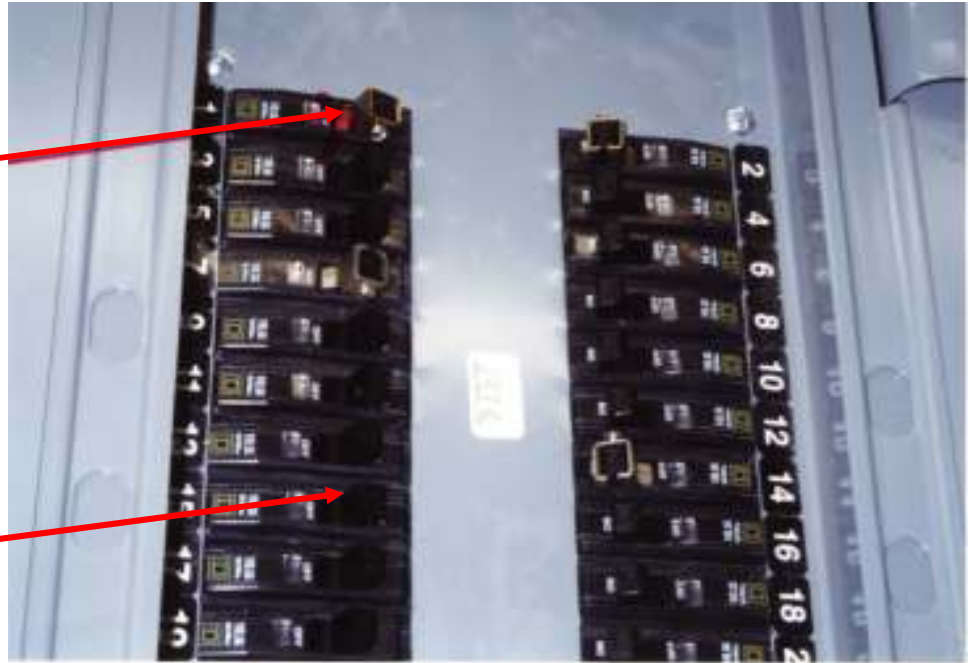
MC cable may be used up to a maximum length of 6' for final connection to ceiling mounted light fixtures, only.

MC Cable may not be eposed.

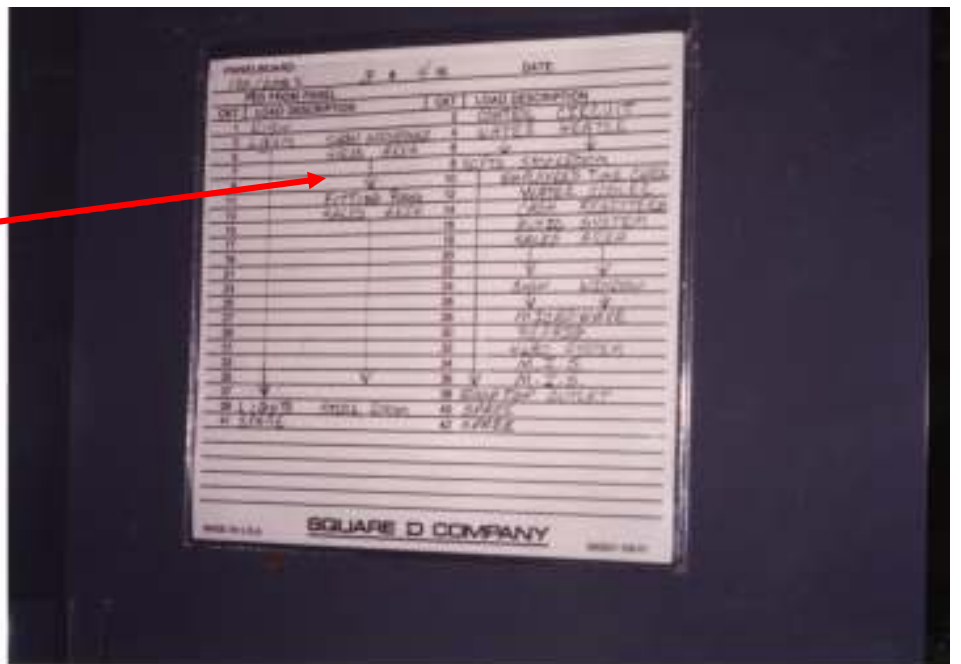


Lock-on devices shall be installed on emergency lighting, exit lighting, night lighting, fire detection & smoke control and all time clock circuits.

Branch circuit panels shall be of the bolted circuit breaker type.



Directory must be typed or neatly hand written





Time clocks must be installed to control signage, show window lighting, entry lighting, display cases, display window receptacles and, if applicable, menu boards.

Electrical contractor to set time clock as directed by Property Manager



ELECTRICAL CONTRACTOR SHALL STENCIL THE FOLLOWING ON THE TOP OF ANY FLOOR MOUNTED TRANSFORMER: "Don't place anything on this surfact"



**DON'T** Install plumbing in demising walls!!



Plumbing installed in demising walls will be removed and relocated at the contractor's expense.



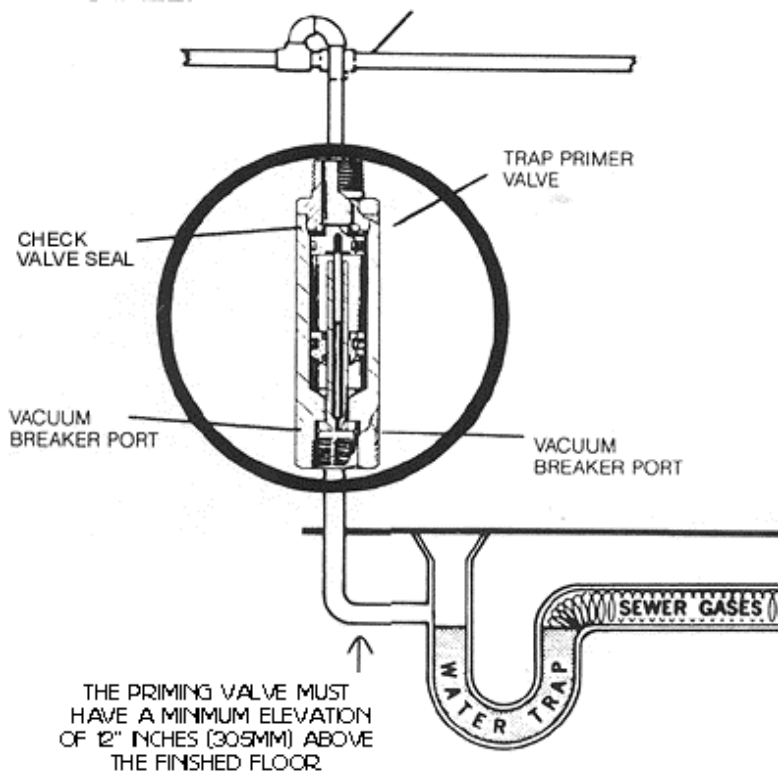


ATTACH SUPPORT HANGERS TO STRUCTURAL STEEL WITH BEAM CLAMPS AND ALL THREAD OR BEAM CLAMPS AND PIPE SUPPORTS.



Trap primers are required on all floor drains.

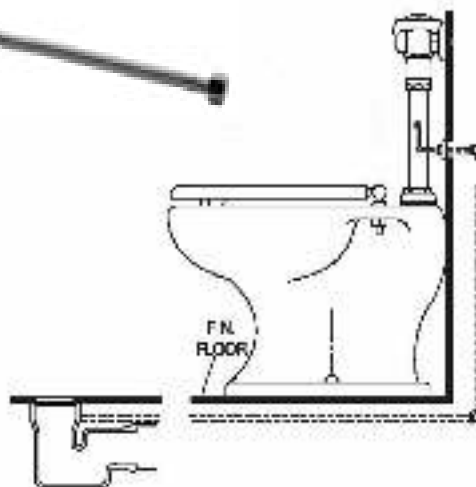
Pressure actuated



Sink Tailpiece



Flush Valve



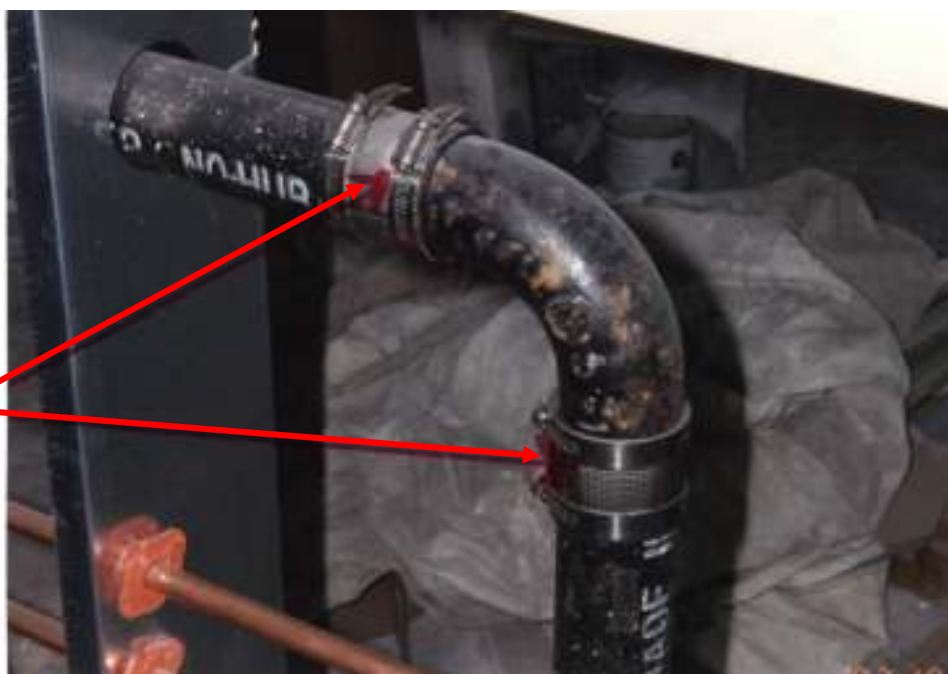
**DON'T** Use “no-hub” joints underground (use cast iron couplings).

Above ground sewer & vent piping may be service weight cast iron pipe with no-hub joints. No PVC above grade.

Bell & spigot  
sanitary piping.



Cast iron pipe with  
no-hub joints (above  
ground only).



Above ground water piping shall be type "L".

**Hazardous  
condition!!**

Insulate all above ground hot & cold water piping with a minimum of 1" thick fiberglass pipe insulation with a vapor barrier and plenum rated pre-molded fitting covers, or 1" thick closed cell plenum rated insulation.



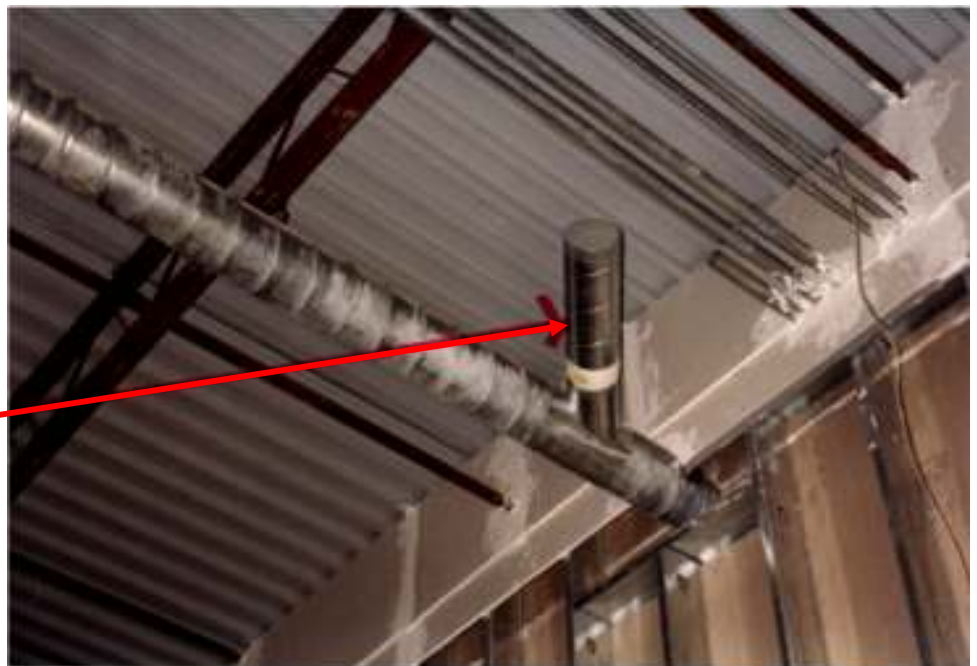
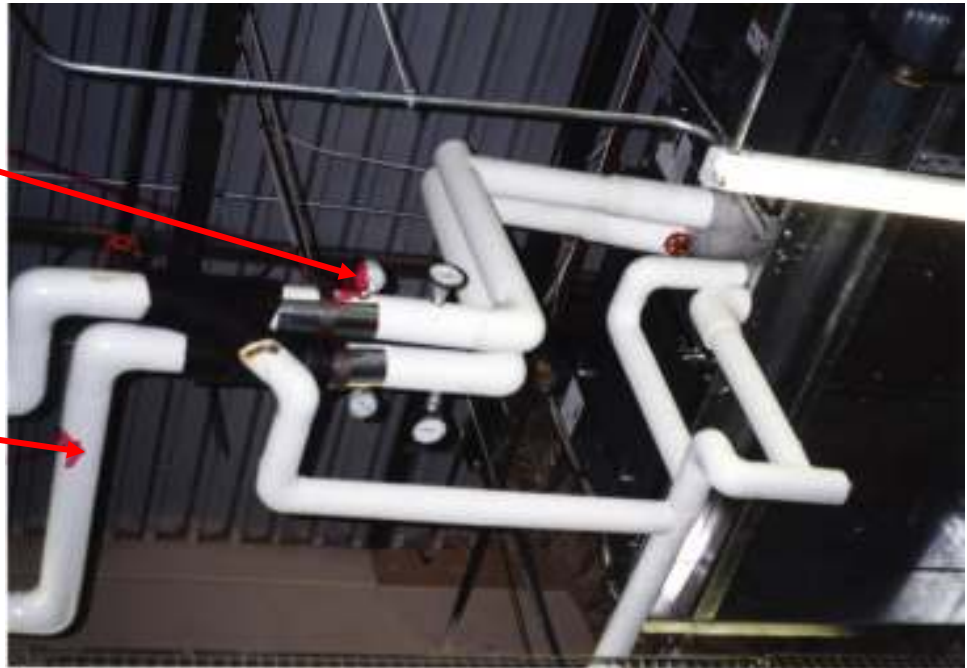
Type "K" copper piping is **not** permitted above ground. Approved for use below ground without joints.



AIR HANDLING UNIT PIPING

Turn all gauges & meters downward so that they can be easily read from the ground.

Insulate all piping with a minimum of 1" thick plenum-rated closed cell or fiberglass (w/vapor barrier and pre-molded fittings).



Where Landlord has provided a central toilet exhaust system, Contractor shall connect to same.

**DON'T** Drill, weld, shoot or screw into the structure - Use clamps, threaded rod w/washers & nuts, etc. or span joists with angle/unistrut.

ATTACH SUPPORT HANGERS TO STRUCTURAL STEEL WITH BEAM CLAMPS, CLIPS OR CLEATS AND SUPPORT DUCT WITH STRAP OR ALL THREAD AND UNISTRUT.





Flexible ductwork is only permitted for the final VERTICAL connection to diffusers.

MAXIMUM length of flexible duct shall not exceed 5'



Correct installation of flexible duct.



Length exceeds 5;  
Duct runs horizontal rather than vertical.  
Improperly supported.

Flexible connections must be installed on all ductwork connections to air moving equipment, including rooftop units, air handling units, VAV boxes and exhaust fans.

Flexible connection



All return -air grilles in ceiling to be metal (not plastic).

