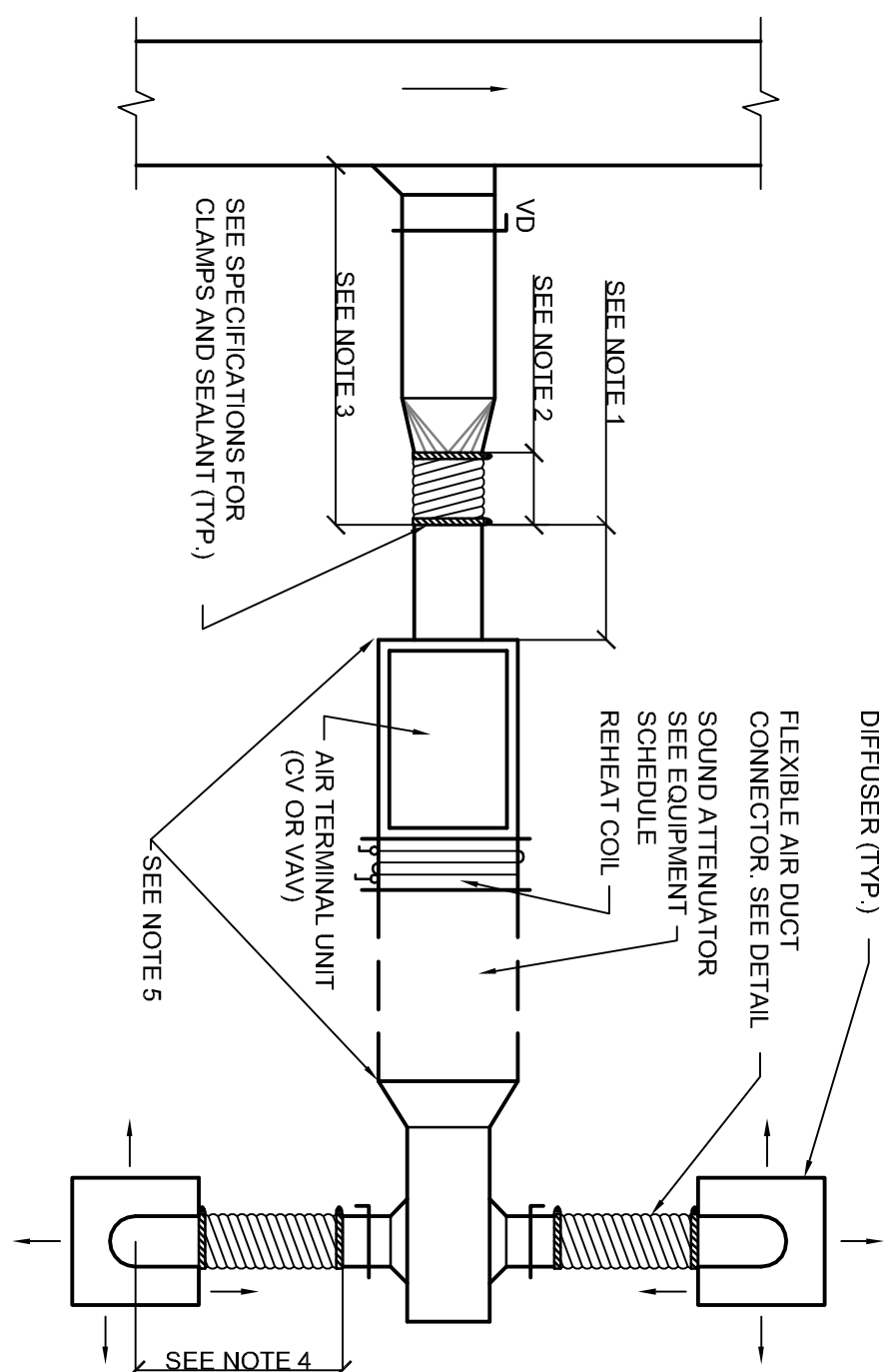
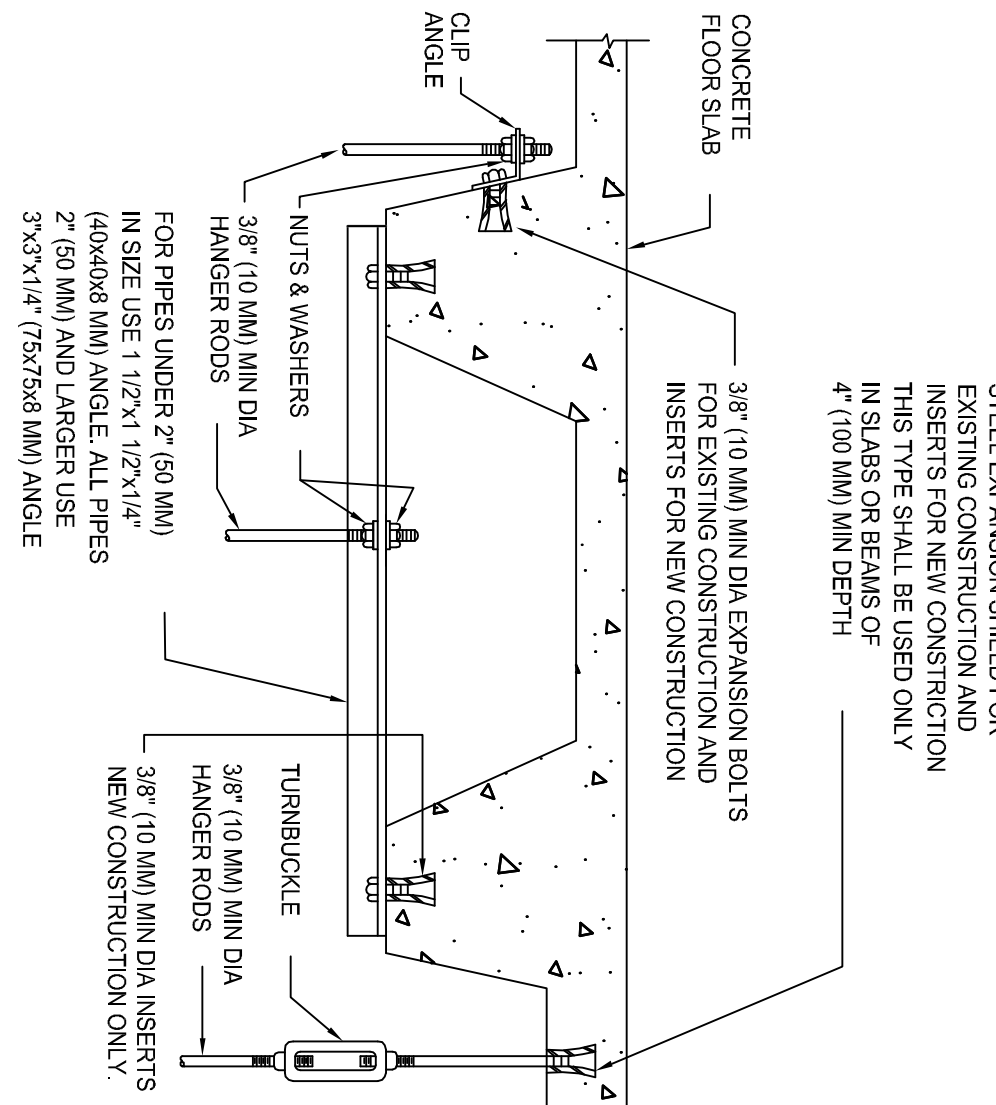


1. **WALLS:** DAMPERS SHOWN HORIZONTAL DAMPER INSTALLATION IS SINK AS FLOOR DAMPER UNMANUFACTURERS INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SETBACK AND PENETRATOR ANCHORS. PNE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
2. **GALVANIZED STEEL:** GAGE NOT LESS THAN CONNECTING DUCT FASTEN STEEL TO DAMPER FRAME, AND TO PENETRATOR ANCHORS.
3. **PENETRATOR ANCHORS:** GALVANIZED STEEL, NOT LESS THAN 1/2" X 1/2" X 1/2", 14 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OVERLAP ON ALL SIDES.
4. **BREKAWAY DUCT CONNECTOR:** CONTRACTORS OPTION OF TYPES SHOWN IN SCAHCO, (PDS FIG. 2-3) SEAL JOINTS.
5. **ACCESS PANELS:** SIZE AND LOCATION TO PERMIT SERVICING THE FIBER OPTIC LINK OR LINES.
6. **PROVIDE:** 14" TO 12" CLEARANCE ON HEIGHT AND WIDTH, 14" OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
7. **ALL DIVIDED ROOM BARRERS WHICH ARE IN POSSES:** SUCH AS THRU FLOOR FLOORS AND MECHANICAL ROOM FLOORS SHALL BE PROVIDED WITH 3" HIGH CONCRETE CURB AGAINST OPENING FOR DUCT.

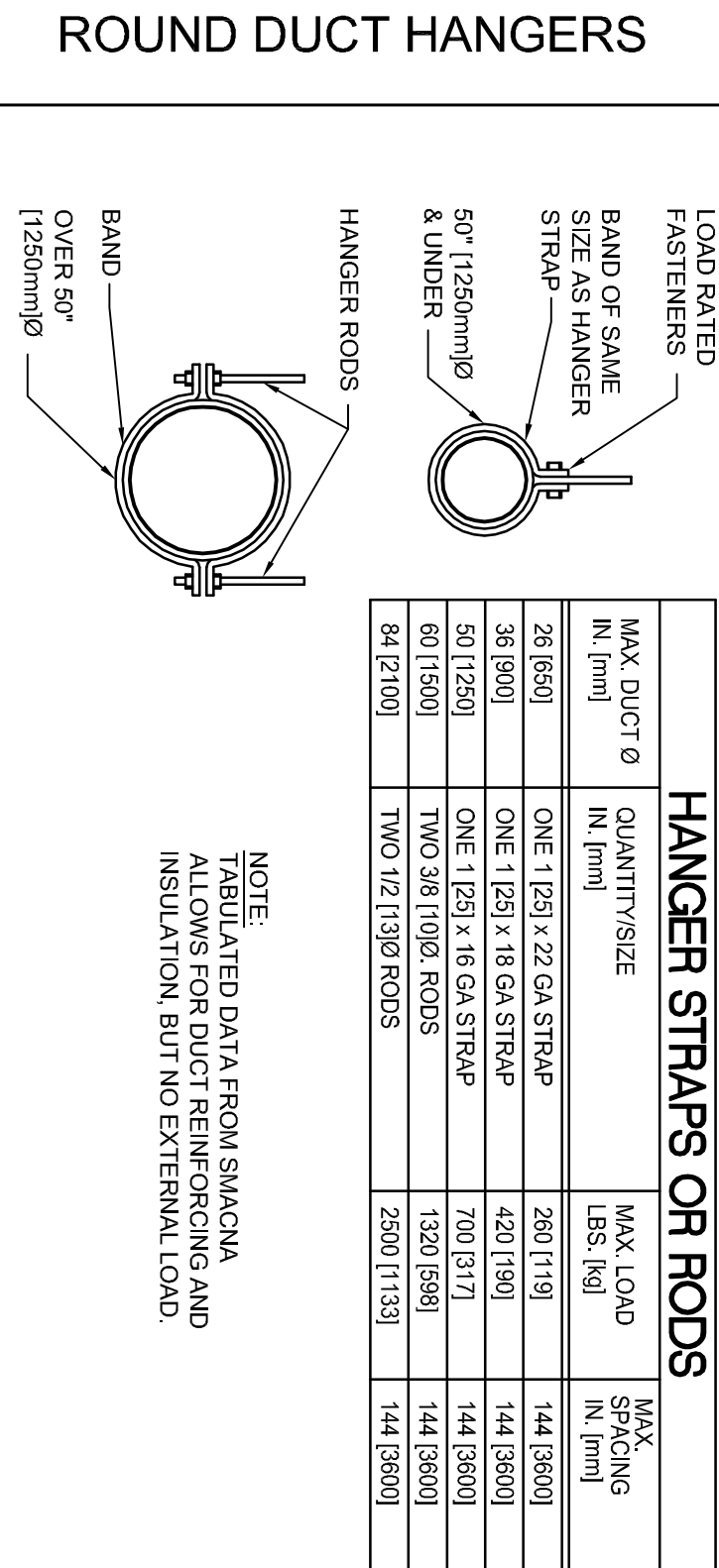
SECTION THROUGH TYPICAL FIRE DAMPER INSTALLATION



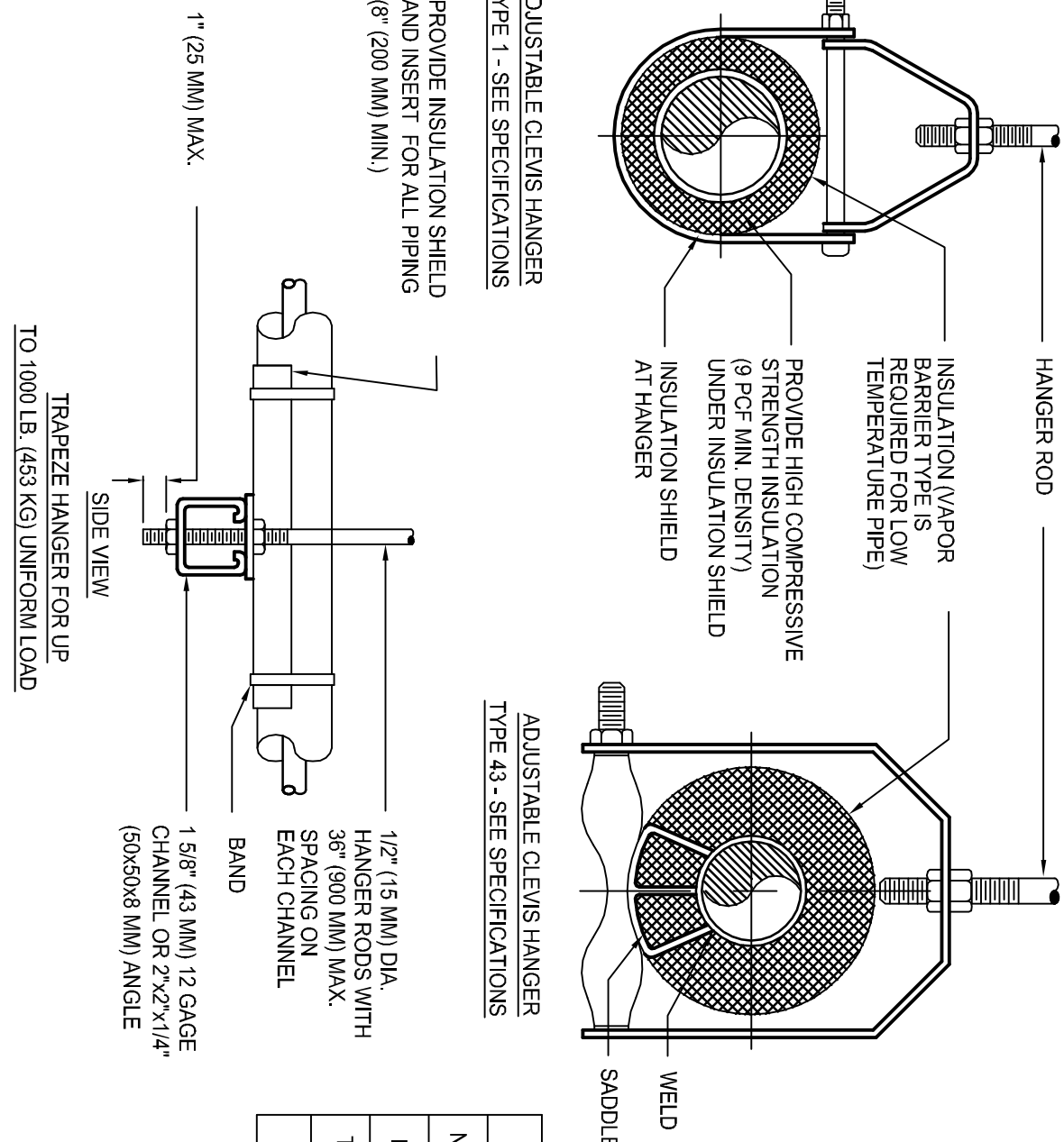
- NOTE:
1. RIGID STRAIGHT TERMINAL UNIT INLET LENGTH SHALL BE A MINIMUM OF 3 TIMES THE DIAMETER OF THE INLET
2. A FLEXIBLE AIR DUCT CONNECTOR IS NOT AN ALTERNATIVE FOR NETTLO TO THIS BOX BUT ALLOWED
3. AIRMIND DUCT SERVING AN INDIVIDUAL BOX MAY BE THE SAME SIZE AS THE AIRMIND DUCT SERVING ANOTHER BOX, BUT THE TOTAL LENGTH OF THE BOX SHOWN DOES NOT EXCEED 6 FEET 3 INCHES. FOR LONGER LENGTHS, THE AIRMIND DUCT SHALL BE SIZED TO MAINTAIN THE DESIGN AIR FLOW RATE AT THE BOX. THE DESIGN AIR FLOW RATE SHALL BE 1.0 CFM/BOX AT 27.0 INCHES STATIC PRESSURE (RATED OR BELOW 27.0 INCHES STATIC PRESSURE)
4. FLEXIBLE AIR DUCT CONNECTORS, WHEN USED FROM A TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER, SHALL NOT EXCEED 50' (15m) MIN. USE RIGID ELBOWS FOR CHANGES OF DIRECTION. NETTLO SHALL MAINTAIN 45°
5. CONNECTION ARRANGEMENTS MAY VARY BY MANUFACTURER. PROVIDE INSULATION VAPOR BARRIER FOR CONNECTING DUCT SECTIONS.



TYPICAL METHOD OF SECURING HANGER RODS IN CONCRETE SLABS AND BEAMS



ROUND DUCT HANGERS

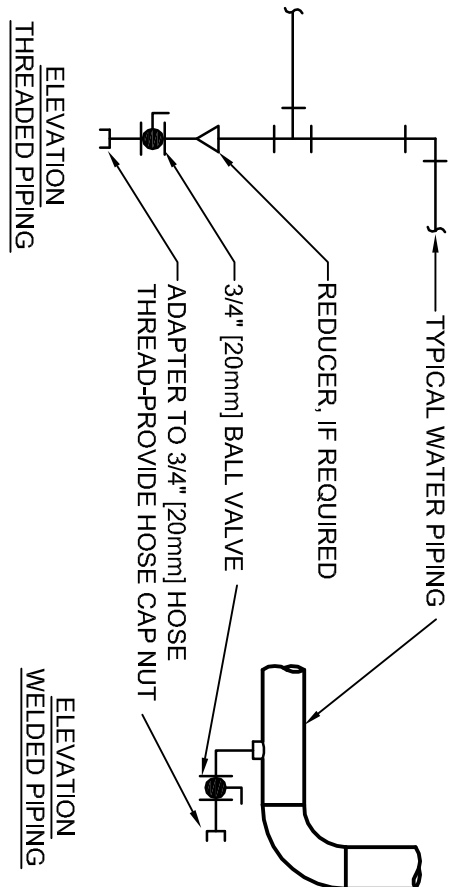
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NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

TYPICAL PIPE HANGERS

DUCT CONNECTIONS (AIR TERMINAL UNITS)

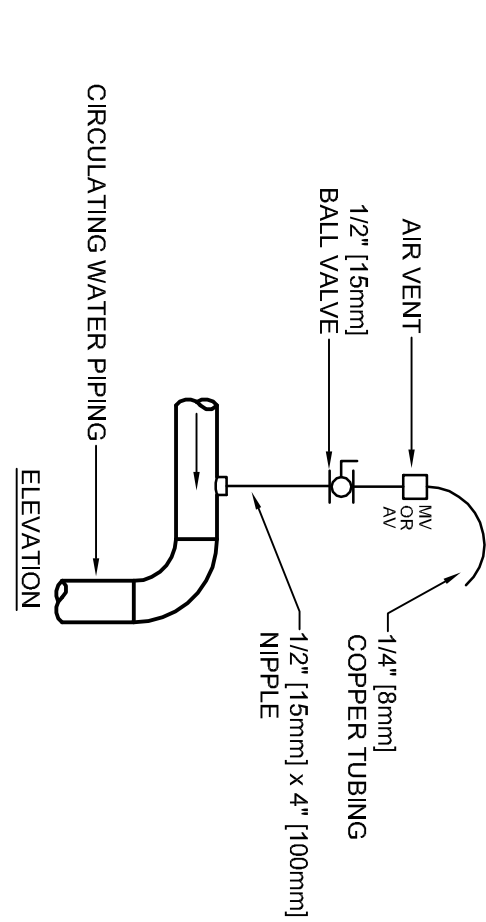
TYPICAL CHILLED AND HOT WATER PIPING DRAIN VALVE CONNECTIONS



NOTES:

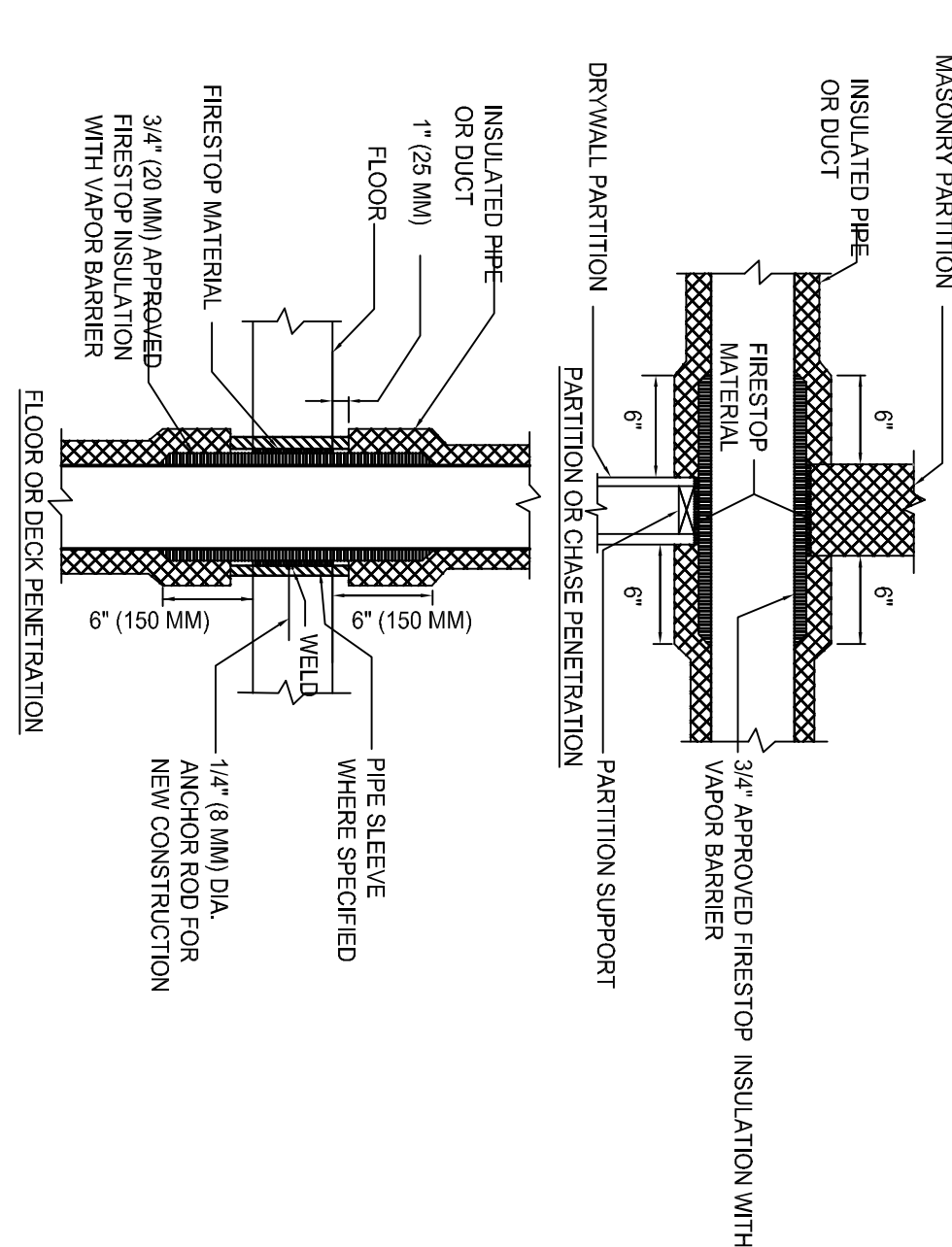
1. DRAIN ALL LOW POINTS AS INDICATED ABOVE.
2. WHERE SCALE POCKETS ARE SHOWN ON PIPE RISER DIAGRAMS AND/OR PLANS LOCATE DRAIN AT BOTTOM OF SCALE POCKET.

DRAIN VALVE AND AIR VENT CONNECTIONS (HYDRONIC SYSTEMS)



NOTES:
1. VENT ALL HIGH POINTS INDICATED ABOVE.
2. IF AUTOMATIC AIR VENTS ARE USED, PIPE DISCHARGE TO DRAIN

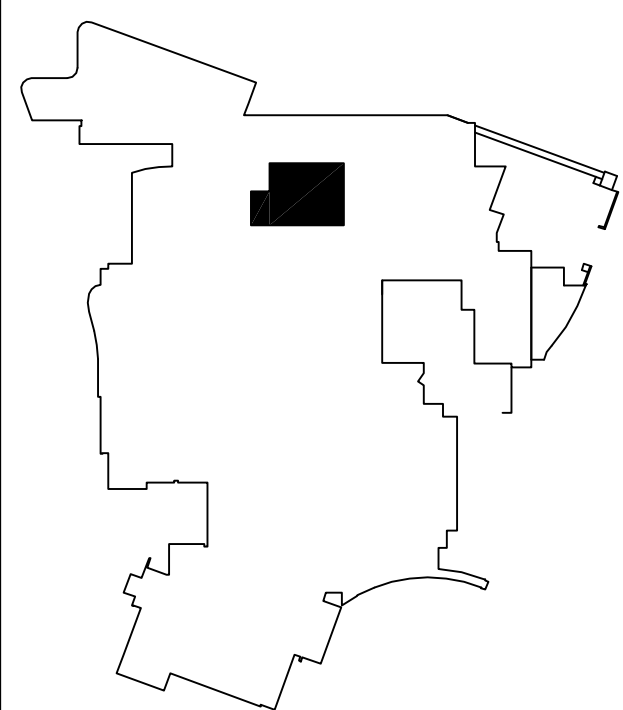
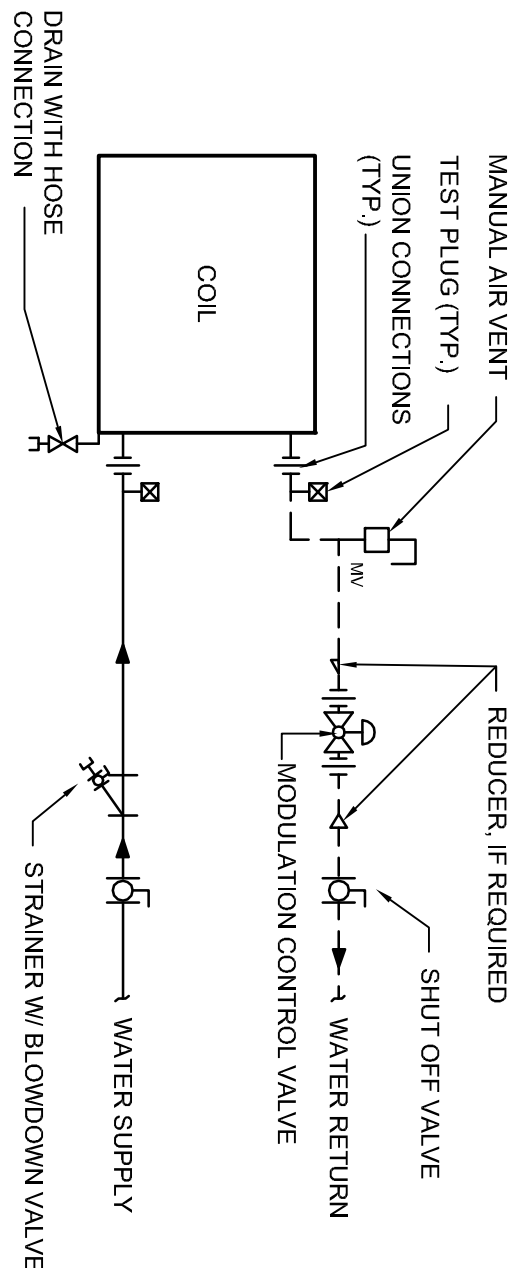
PIPE/DUCT PENETRATION OF FIRE/SMOKE BARRIERS



NOTE:

1. APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101. REFER TO SPECIFICATIONS SECTION 07270, FIRE STOPPING SYSTEMS.

TERMINAL UNIT WATER COILS - PIPING CONNECTIONS



100% CD

FULLY SPRINKLERED

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ARCHITECT/ENGINEERS

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