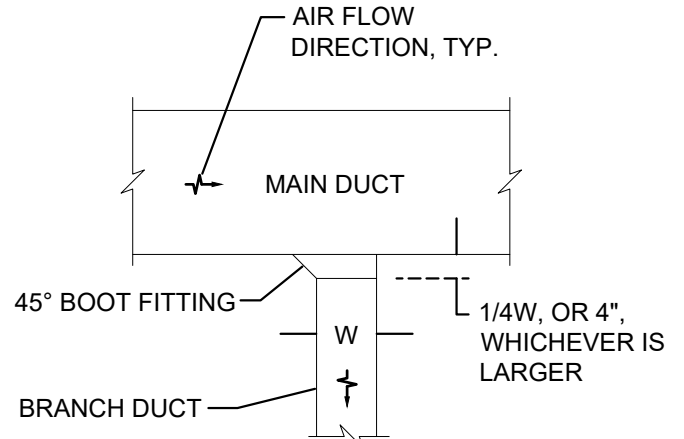
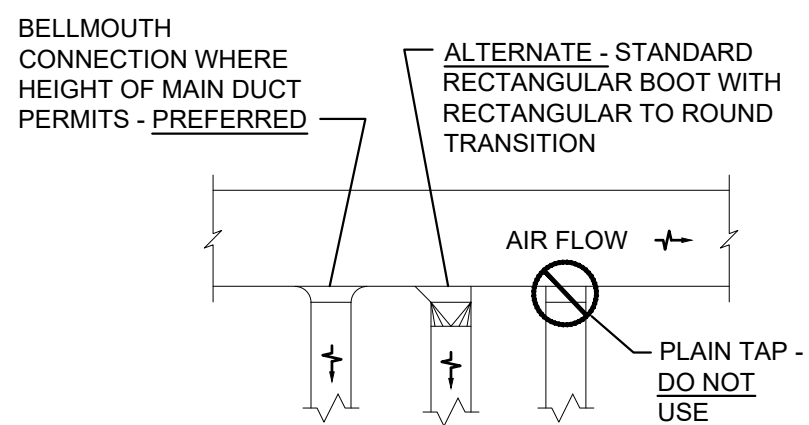


CONVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT FLOW AREA IS LESS THAN 25% OF MAIN DUCT AREA

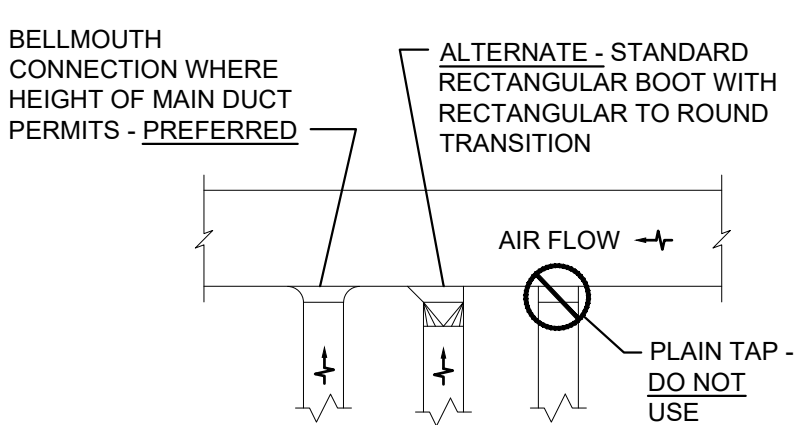


DIVERGING BRANCH DUCT TAKE-OFF WHERE BRANCH DUCT AREA IS LESS THAN 25% OF MAIN DUCT AREA

RECTANGULAR BRANCH DUCT CONNECTIONS TO RECTANGULAR DUCT



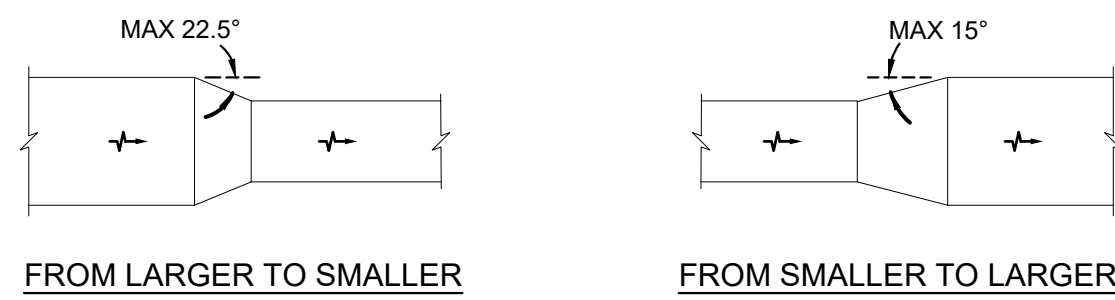
DIVERGING BRANCH FLOW



CONVERGING BRANCH FLOW

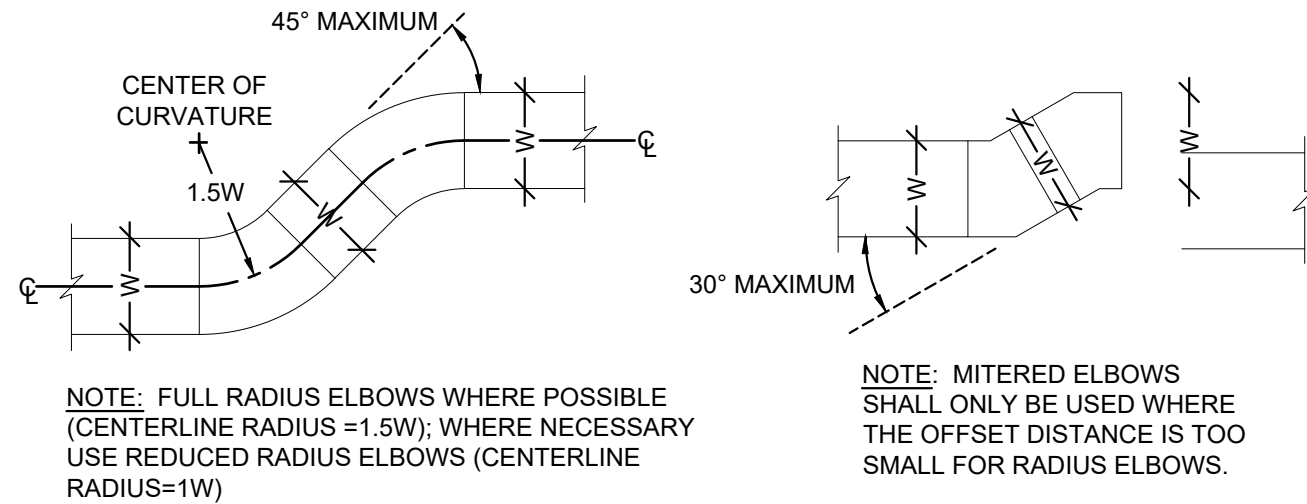
- NOTES:
1. ALTERNATE FITTINGS SHALL BE USED WHEN DUCT HEIGHT DOES NOT PERMIT THE USE OF THE PREFERRED FULL SIZE BELLMOUTH. NOTE THAT PLAIN TAPS MAY BE DEPICTED ON THE PLANS. IN SUCH CASES, PROVIDE THE ALTERNATE CONNECTION SHOWN HERE.
 2. THIS DETAIL APPLIES TO BRANCH RUNOUTS TO DIFFUSERS AS WELL AS SUB-MAIN BRANCH DUCT TAKEOFFS.
 3. FOR ALTERNATE RECTANGULAR CONNECTIONS, THE ROUND TO RECTANGULAR TRANSITION SHALL BE TO A SIZE EQUAL TO THE MAIN DUCT HEIGHT, AND A WIDTH AS REQUIRED TO MAINTAIN AN EQUAL OR GREATER FLOW AREA AS THE CONNECTING ROUND BRANCH DUCT.

ROUND BRANCH DUCT CONNECTIONS TO RECTANGULAR MAIN DUCT



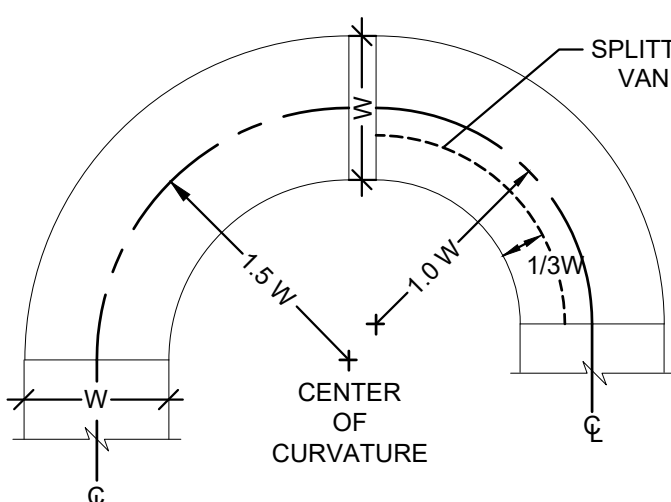
NOTE: CONCENTRIC TRANSITIONS SHOWN, HOWEVER ANGLE LIMITATIONS ALSO APPLY TO ECCENTRIC TRANSITIONS.

TRANSITIONS



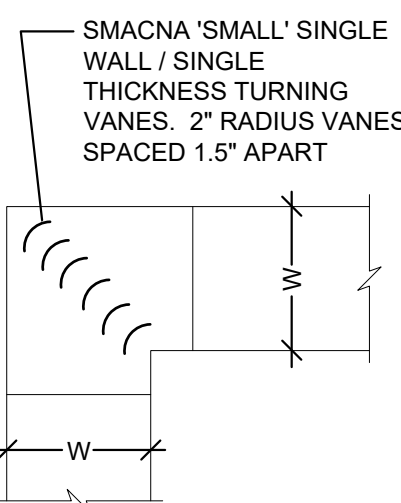
RADIUS ELBOW OFFSETS

MITERED ELBOW OFFSETS



- NOTES:
1. 90° ELBOW SHOWN, HOWEVER SIMILAR RADIUS CONSTRUCTION SHALL BE PROVIDED FOR ALL ANGLES.
 2. THIS DETAIL APPLIES TO RECTANGULAR RADIUS ELLS AND TO ROUND ELBOWS WITH DIAMETERS SMALLER THAN 13" DIA. ROUND ELBOWS 13" DIA. AND LARGER SHALL BE GORED TYPE, WITH NO LESS THAN FIVE (5) SEGMENTS (FOUR 22.5 DEG. CHANGES IN DIRECTION PER 90 DEG. ELL).
 3. CENTERLINE RADIUS MAY BE REDUCED TO 1W WHERE THE FULL 1.5W RADIUS ELL DOES NOT FIT, WITH THE PRIOR APPROVAL OF THE ENGINEER. IN SUCH CASES PROVIDE A SPLITTER VANE.
 4. ALSO PROVIDE SPLITTER VANES WHERE INDICATED ON THE PLANS.

RADIUS ELBOWS



- NOTES:
1. USE THIS DESIGN WHERE MITERED 90 ELLS ARE SHOWN ON PLANS OR IF SPACE CONDITIONS DO NOT PERMIT INSTALLATION OF 1.5W C-L RADIUS 90 DEG. ELLS. OR 1.0W C-L RADIUS 90 DEG. ELLS.
 2. PROVIDE TURNING VANES IN ALL MITERED DUCT ELBOWS, EXCEPT FOR TRANSFER DUCTS, AND GREASE EXHAUST DUCTS, AND SOLID MATERIAL-HANDLING DUCTS. VANES MAY NOT BE EXPLICITLY SHOWN ON THE PLANS FOR CLARITY PURPOSES ONLY.

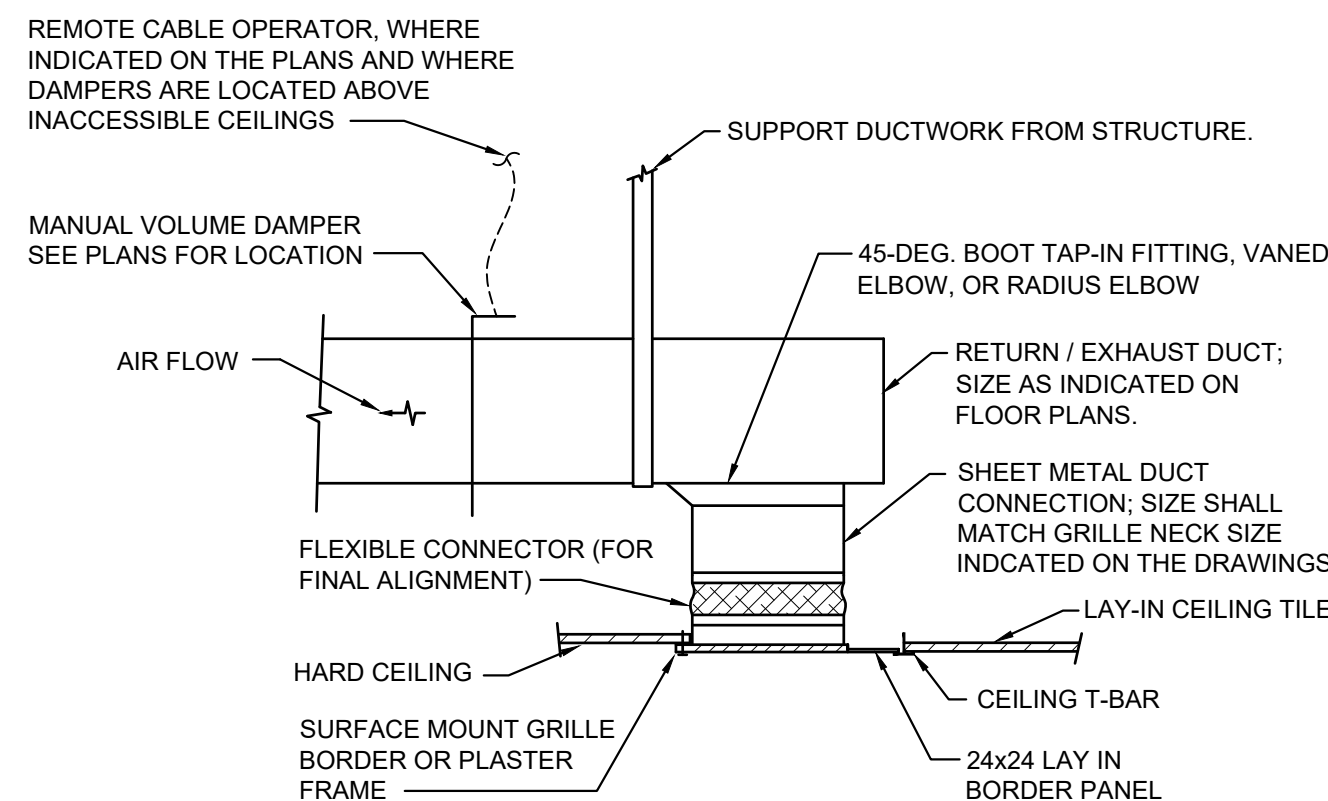
MITERED 90 DEG. ELBOW - RECTANGULAR DUCT

ELBOWS

NOTE: IN THE EVENT OF A CONFLICT BETWEEN THE PLAN REPRESENTATIONS AND THIS DETAIL, THIS DETAIL SHALL TAKE PRECEDENCE.

1 DUCTWORK FITTING DETAILS

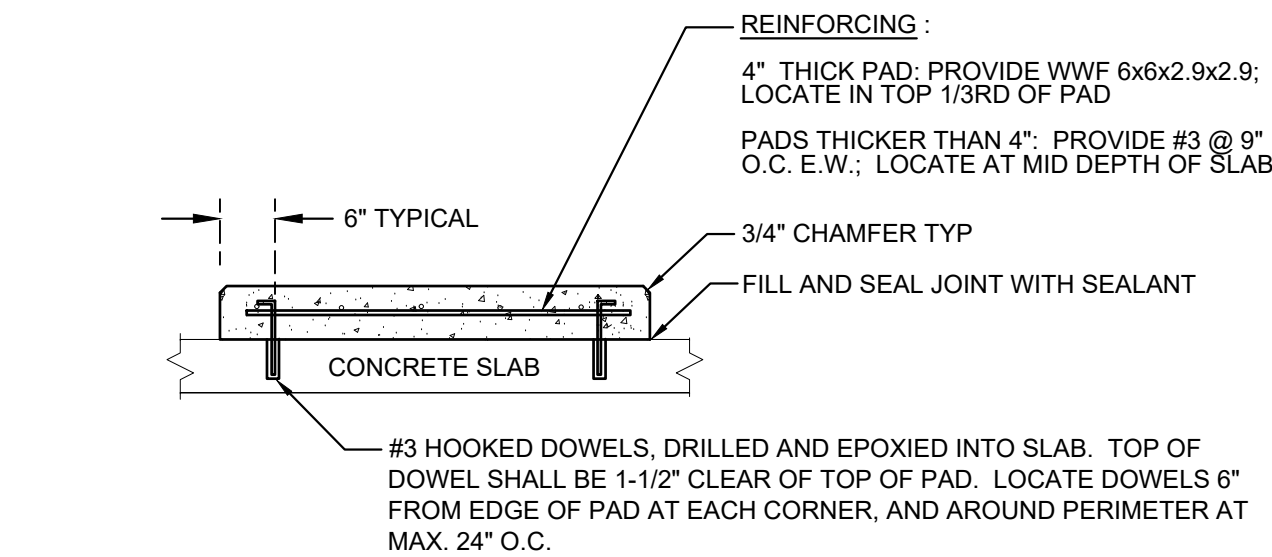
NOT TO SCALE



- NOTES:
1. REFER TO ARCHITECTURAL DOCUMENTS FOR CEILING TYPES.
 2. ALL SECURITY GRILLES SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

X SUPPLY, RETURN AND EXHAUST AND GRILLE CONNECTION DETAIL

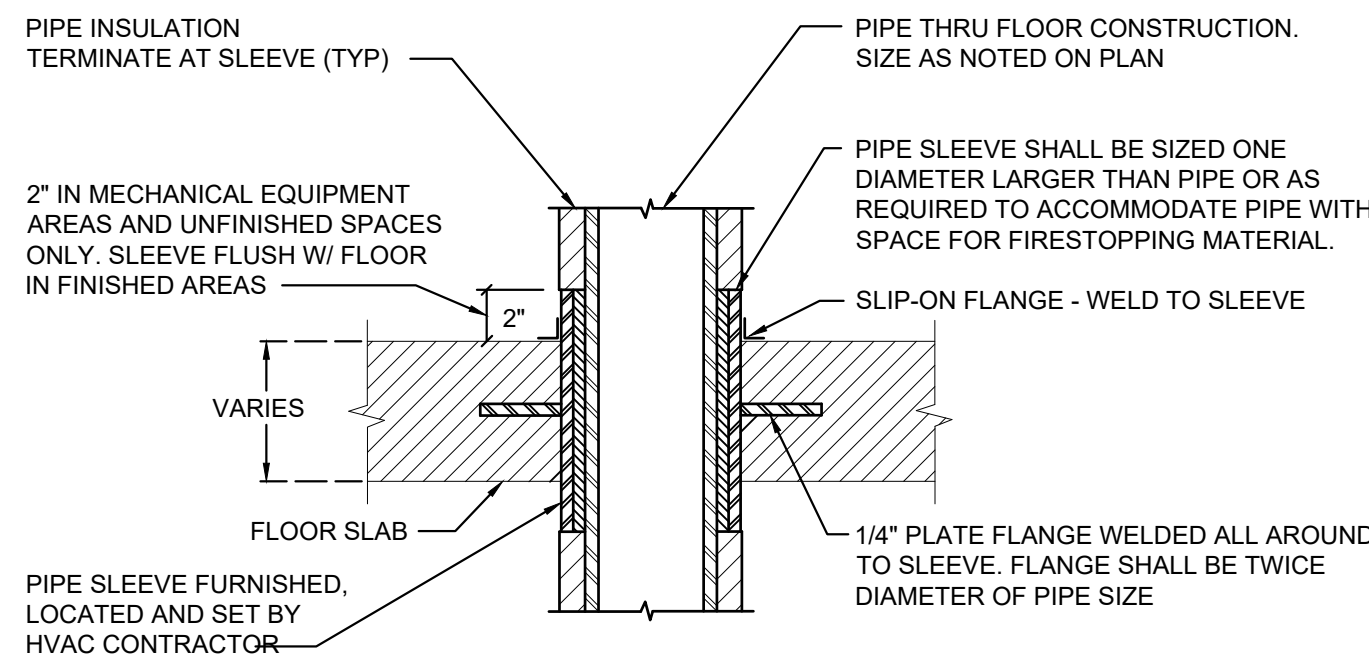
NOT TO SCALE



- NOTES:
1. BASE SLAB PREPARATION: CLEAN SLAB AND SCARIFY PRIOR TO POURING PAD.
 2. CONCRETE MIX: MIN 4,000 PSI, 28-DAY COMPRESSIVE STRENGTH.
 3. CURING: CURE FOR 7 DAYS BY EITHER COVERING WITH BURLAP & KEEPING CONTINUOUSLY WET, OR BY COVERING WITH 6 MIL. VISQUEEN AND TAPING ALL JOINTS AND TAPING VISQUEEN TO BASE SLAB.
 4. PAD SHALL BE AT LEAST 6" LARGER THAN THE EQUIPMENT ON ALL EXPOSED SIDES.
 5. PAD SHALL BE 4" THICK UNLESS NOTED OTHERWISE.
 6. DOWELS SHALL BE INSTALLED PER THE MANUFACTURER'S REQUIREMENTS.

2 TYPICAL HOUSEKEEPING PAD DETAIL

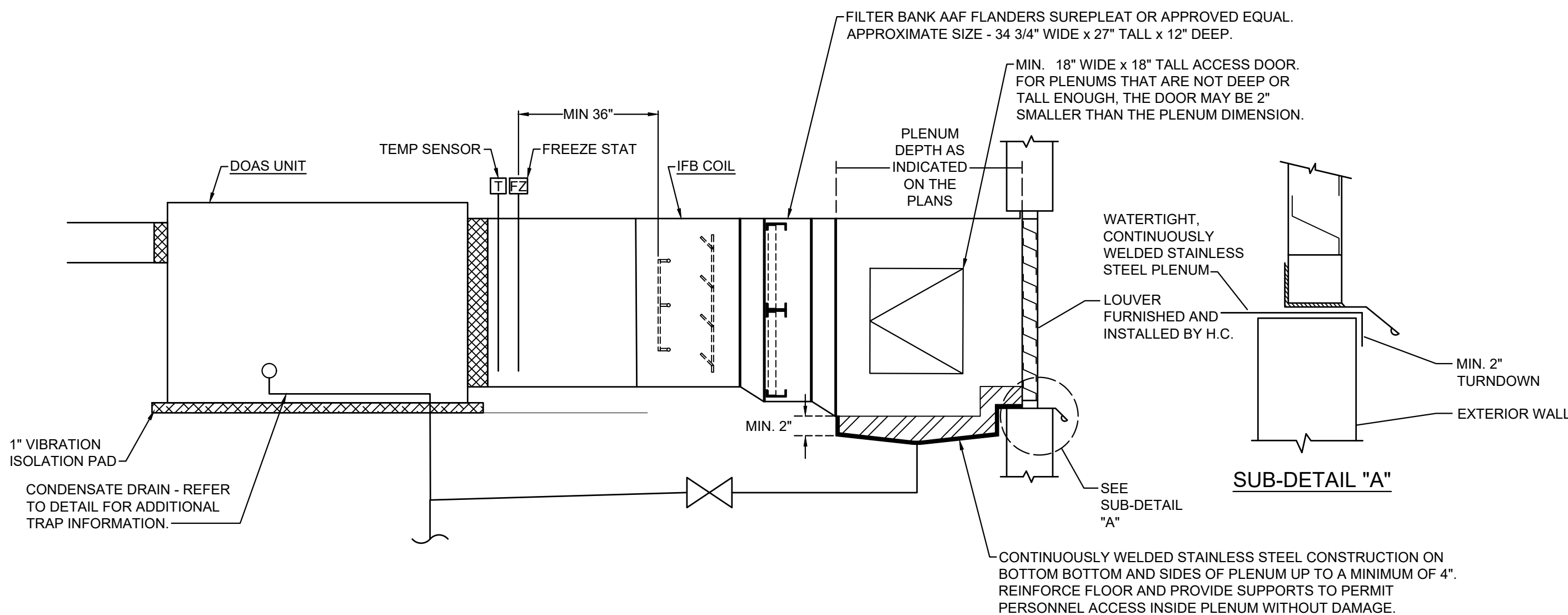
NOT TO SCALE



NOTE: COMPLY WITH UL FIRESTOP REQUIREMENTS WHERE APPLICABLE.

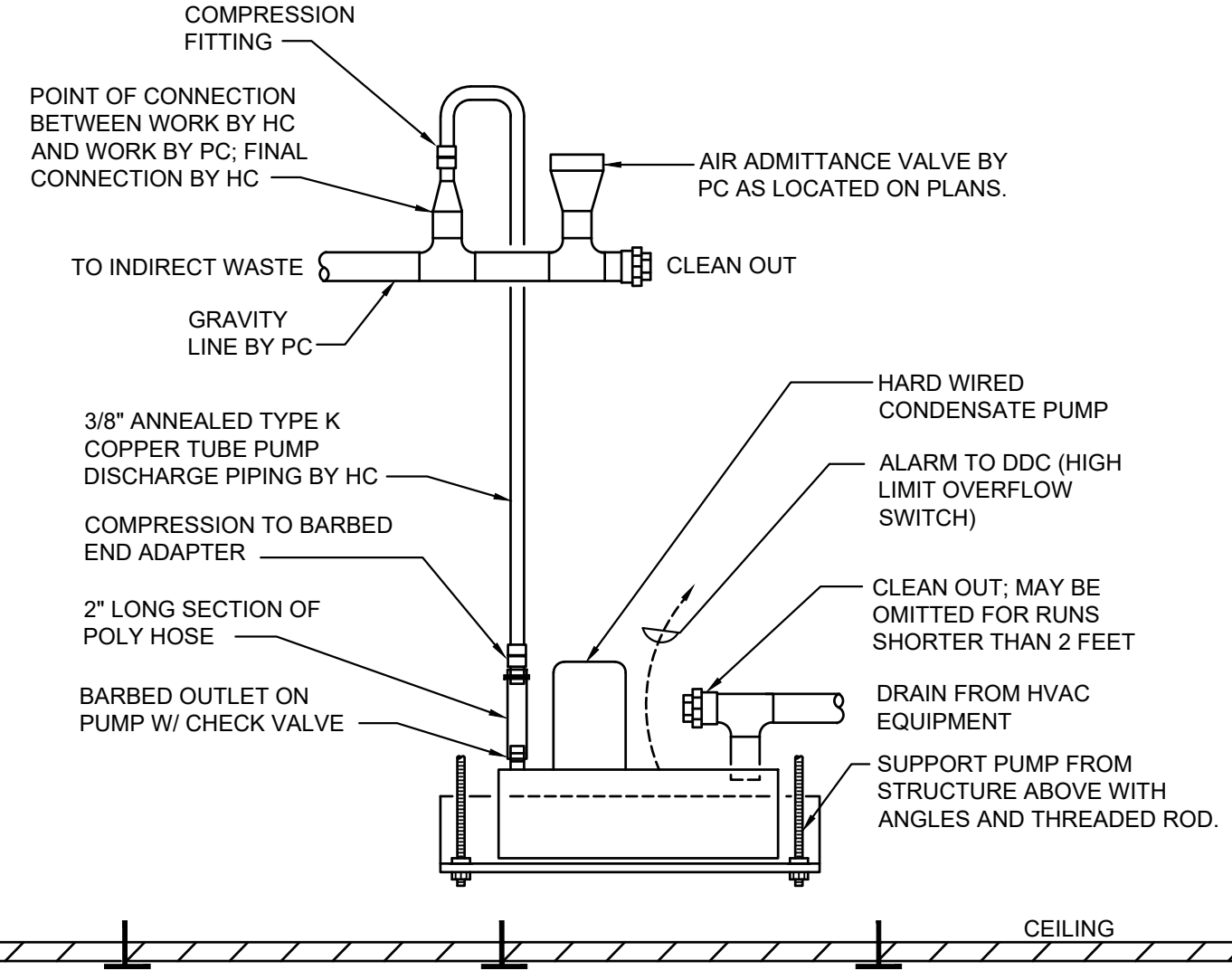
4 PIPE FLOOR SLEEVE DETAIL

NOT TO SCALE



X DOAS EQUIPMENT AND OUTDOOR AIR CONNECTION DETAIL

NOT TO SCALE



3 AC CONDENSATE PUMP DETAIL

NOT TO SCALE

RECORD REVISIONS			
PROFESSIONAL'S SIGNATURE DATE			
UpStreet ARCHITECTS, INC. 541 PHILADELPHIA ST. INDIANA, PA 15701 911 MENOHER BLVD. JOHNSTOWN, PA 15905			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
D.G.S. PROJECT No. C-0588-0015 PHASE 1			
LOYSVILLE YOUTH DEVELOPMENT CENTER- RENOVATIONS TO ZIMMERMAN-BINGAMAN (ZB) COTTAGE DEPARTMENT OF HUMAN SERVICES LOYSVILLE, TYRONE TOWNSHIP, PERRY COUNTY, PA			
DETAILS - MECHANICAL			
VERIFY SCALE BAR IS ONE (1) INCH LONG ON ORIGINAL DRAWING: 0 1 IF BAR IS NOT ONE (1) INCH LONG, ADJUST SCALE ACCORDINGLY	CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS. VARIANCE FROM CONTRACT DOCUMENTS NOT PERMITTED WITHOUT PROFESSIONAL & BUREAU OF CONSTRUCTION APPROVAL.	DRAWN BY W. MINAHAN CHECKED BY T. HOVAN	SHEET No. M-602
		DATE 27 JUNE 2023 SCALE AS NOTED	