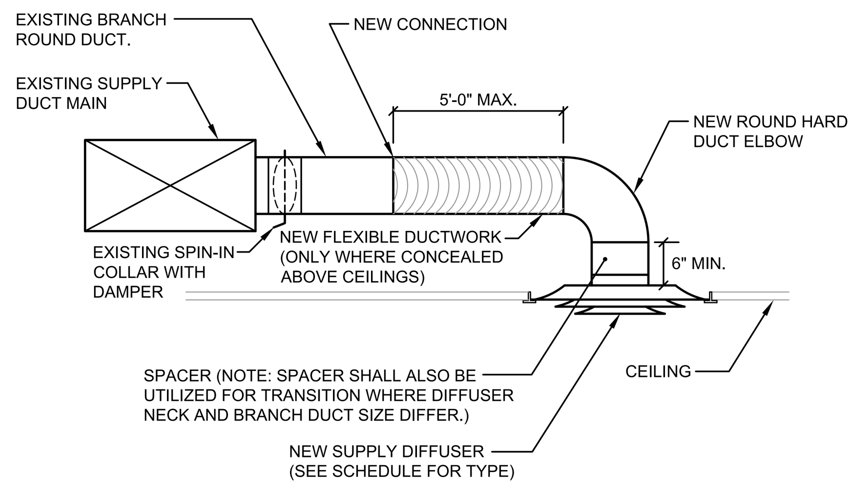
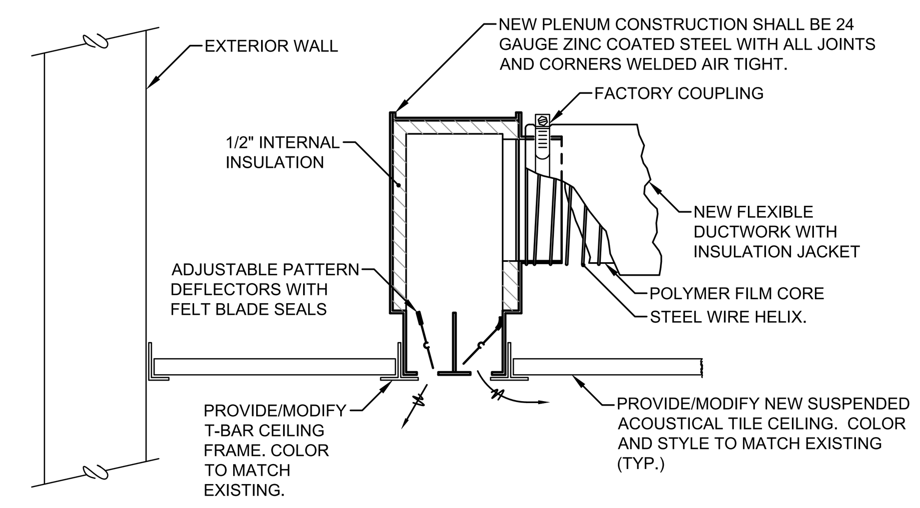


DIFFUSER INSTALLATION DETAIL

NO SCALE

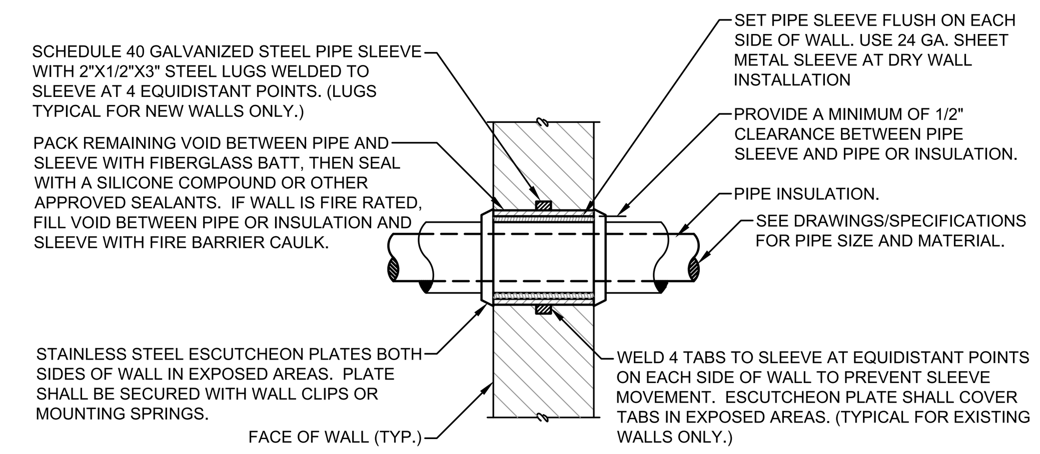


NOTES:
WHERE PATTERN DEFLECTOR ADJUSTMENT IS NOT SPECIFIED ON THE DRAWINGS, ADJUST AS FOLLOWS:

1. FOR DIFFUSERS CENTERED IN ROOM, ADJUST SO EQUAL NUMBER OF PATTERN DEFLECTORS DIRECT AIR ACROSS CEILING IN OPPOSITE DIRECTIONS.
2. FOR DIFFUSERS LOCATED NEAR AN INTERIOR WALL, ADJUST ALL PATTERN DEFLECTORS TO DIRECT AIR ACROSS CEILING AWAY FROM PARTITION.
3. FOR DIFFUSERS LOCATED NEAR AN OUTSIDE WALL/WINDOW, ADJUST SO EQUAL NUMBER OF PATTERN DEFLECTORS DIRECT AIR TOWARD FLOOR/WALL AND ACROSS CEILING AWAY FROM WALL.

LINEAR BOOT TYPE DIFFUSER DETAIL

NO SCALE

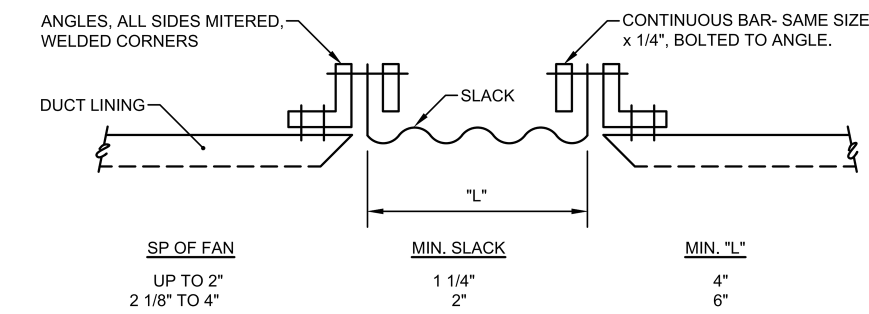


NOTES:
1. I.D. OF OF PIPE SLEEVE TO BE A MIN. OF 1/2" LARGER THAN O.D. OF PIPE OR INSULATION PASSING THROUGH WALL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR SLEEVES WITH OTHER TRADES AND/OR CONTRACTORS.
3. PIPE SLEEVES THRU SMOKE OR FIRE WALLS SHALL BE IN COMPLIANCE WITH NFPA-90A.

PIPE SLEEVE THRU INTERIOR WALL DETAIL

NO SCALE

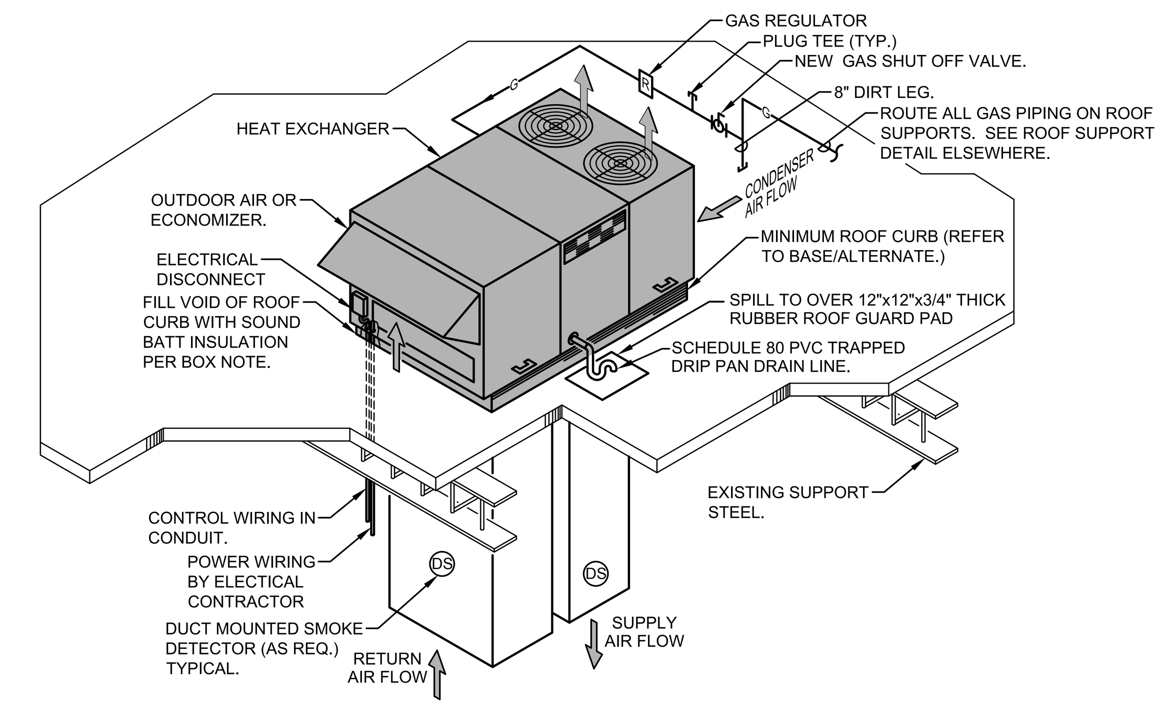
NOTE:
FLEXIBLE CONNECTION TO ISOLATE ALL DUCTS FROM ALL FANS AND FAN ENCLOSURES TO PREVENT TRANSMISSION OF VIBRATION TO DUCTWORK AND STRUCTURE.



SP OF FAN	MIN. SLACK	MIN. "L"
UP TO 2"	1 1/4"	4"
2 1/8" TO 4"	2"	6"

FLEXIBLE CONNECTION DETAIL

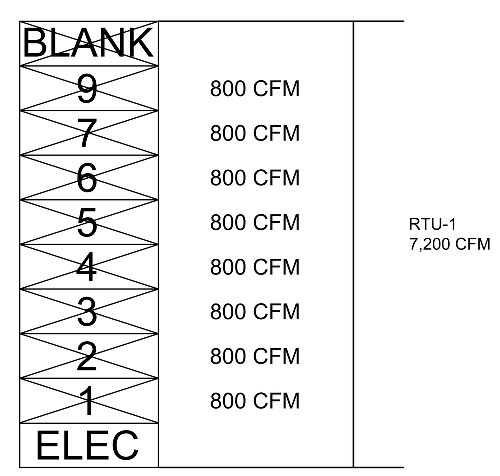
NO SCALE



ROOF CURB SOUND FILL NOTES:
FILL VOIDS OF EQUIPMENT ROOF CURBS WITH THE FOLLOWING MATERIALS STARTING AT BOTTOM:
1. 2 LAYERS OF 5/8" QUIET ROCK EZ-SNAP MOLD RESISTANT GYPSUM BOARD. STAGGER JOINTS BETWEEN LAYERS.
2. PROVIDE PECORA AC-20 FTR AT PERIMETER AND AT ALL JOINTS.
3. 1 LAYER OF 3" THICK ROCKWOOL SAFE N SOUND, SOUND ATTENUATION BATT INSULATION. WITH 3"SUPPORT SPACER SO INSULATION DOES NOT CRUSH.
4. 1 LAYER OF 5/8" QUIET ROCK EZ-SNAP MOLD RESISTANT GYPSUM BOARD.
5. 1 LAYER OF 3" THICK ROCKWOOL SAFE N SOUND, SOUND ATTENUATION BATT INSULATION, TO TOP OF CURB. WITH 3" SUPPORT SPACER SO INSULATION DOES NOT CRUSH. CUT-OUTS AROUND DUCTWORK, ETC. SHALL NOT EXCEED 1/4" LARGER THAN REQUIRED. FILL AND SEAL ALL JOINTS WITH ACOUSTICAL SEALANT/CAULK.

MULTI-ZONE ROOFTOP UNIT INSTALLATION DETAIL

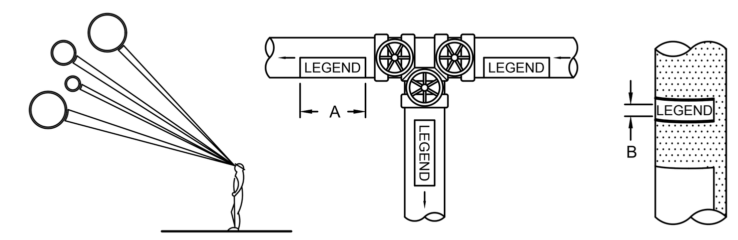
NO SCALE



NOTES:
1. RTU MANUFACTURER TO VERIFY AND COORDINATE ZONE DIMENSIONS WITH EXISTING DUCTWORK BELOW ROOF PRIOR TO FABRICATION.
2. PROVIDE DUCT EXTENSIONS FOR TALLER CURB, FLEX. CONNECTION, AND NEW VOLUME DAMPERS FOR EACH ZONE AS REQUIRED TO BALANCE THE AIR QUANTITIES TO THE SCHEDULED FLOW RATES.

CME MULT-ZONE ROOFTOP ZONE DAMPER SCHEMATIC (RTU-1)

NO SCALE



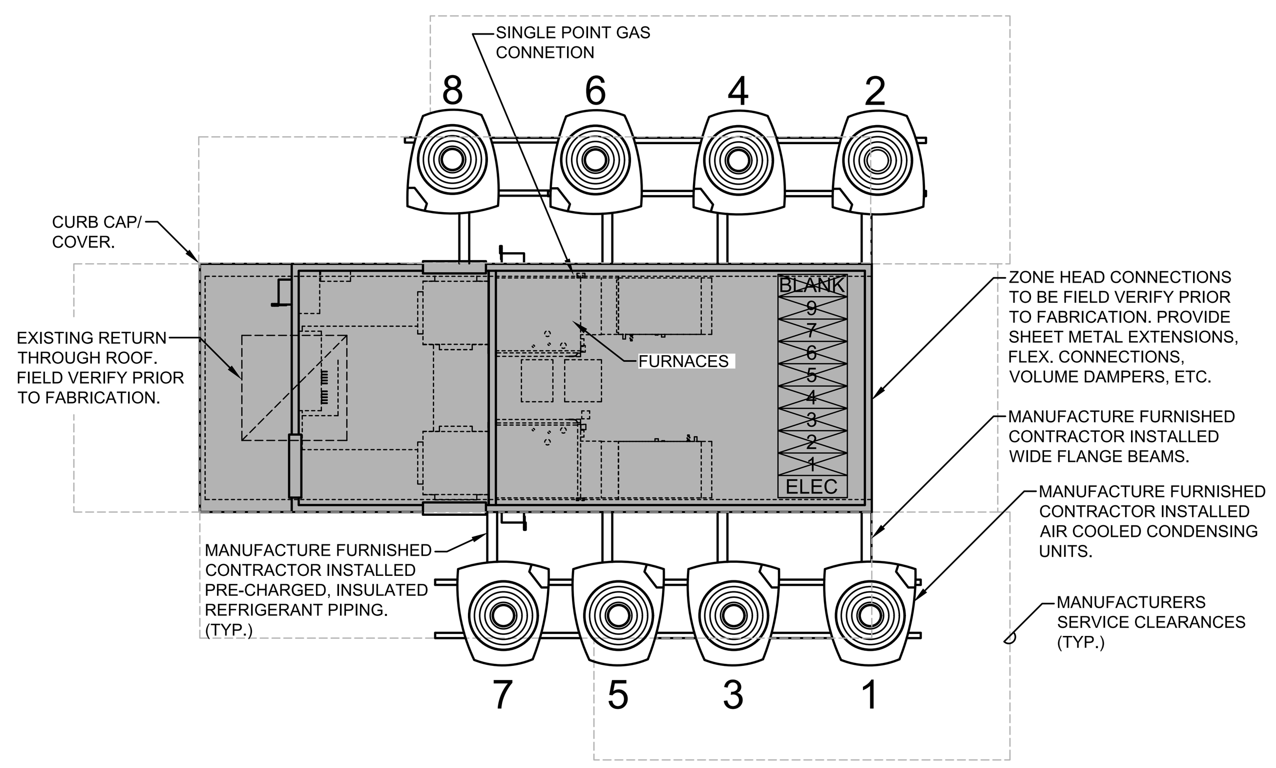
NOTE:
IDENTIFICATION MARKERS OR STRIPS TO BE PLACED ON ALL EXPOSED COVERED AND UNCOVERED PIPES AT 50'-0" INTERVALS, ADJACENT TO ALL VALVES OR BRANCHES, AND AT BOTH SIDES OF WALL/FLOOR PENETRATIONS. ARROWS OF SAME COLOR AS IDENTIFICATION MARKERS SHALL ALSO BE PLACED ON PIPES POINTING AWAY FROM MARKER INDICATING DIRECTION OF FLOW.

SIZE OF LEGEND LETTERS		
OUTSIDE DIAMETER OF PIPE OR COVERING	LENGTH OF COLOR FIELD A	SIZE OF LETTERS B
3/4" TO 1 1/4"	8"	1/2"
1 1/2" TO 2"	8"	3/4"
2" 1/2" TO 6"	12"	1 1/4"
8" TO 10"	24"	2 1/2"
OVER 10"	32"	3 1/2"

SERVICE	BACKGROUND OR COLOR BAND	IDENTIFICATION MARKER
CONDENSATE	YELLOW	BLACK ON YELLOW
HOT WATER HEATING SUPPLY	GREEN	WHITE ON GREEN
HOT WATER HEATING RETURN	GREEN	WHITE ON GREEN
REFRIGERANT SUCTION	GREEN	WHITE ON GREEN
REFRIGERANT LIQUID	GREEN	WHITE ON GREEN
REFRIGERANT HOT GAS	GREEN	WHITE ON GREEN
NATURAL GAS	YELLOW	BLACK ON YELLOW
NATURAL GAS VENT	YELLOW	BLACK ON YELLOW

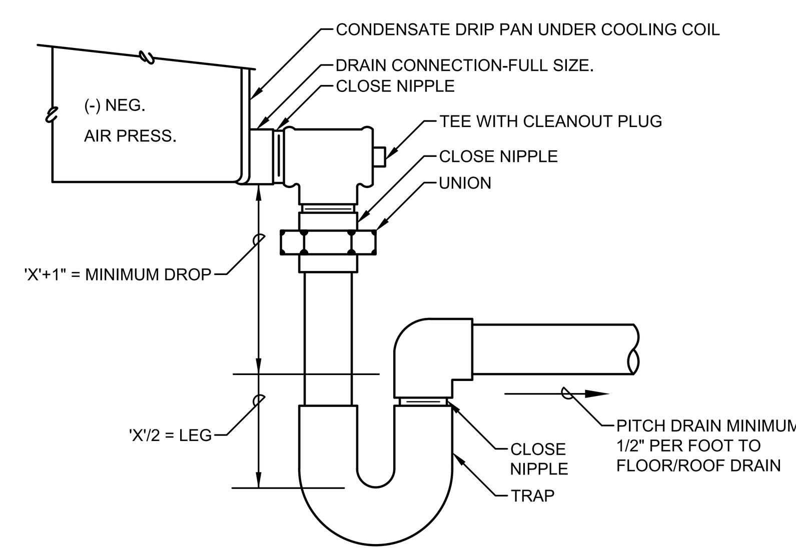
TYPICAL PIPE IDENTIFICATION MARKERS

NO SCALE



CME MULT-ZONE ROOFTOP UNIT

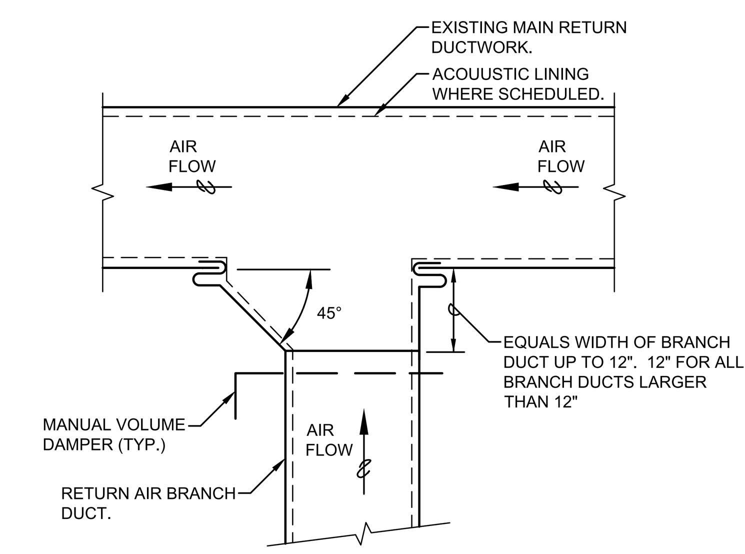
NO SCALE



NOTES:
1. "X" = SUCTION PRESSURE AT FAN INLET (NEGATIVE INTERNAL S.P.)
2. FOR ROOFTOP UNITS, SPILL DRAIN TO OVER 12"x12"x3/4" THICK RUBBER ROOF GUARD PAD.

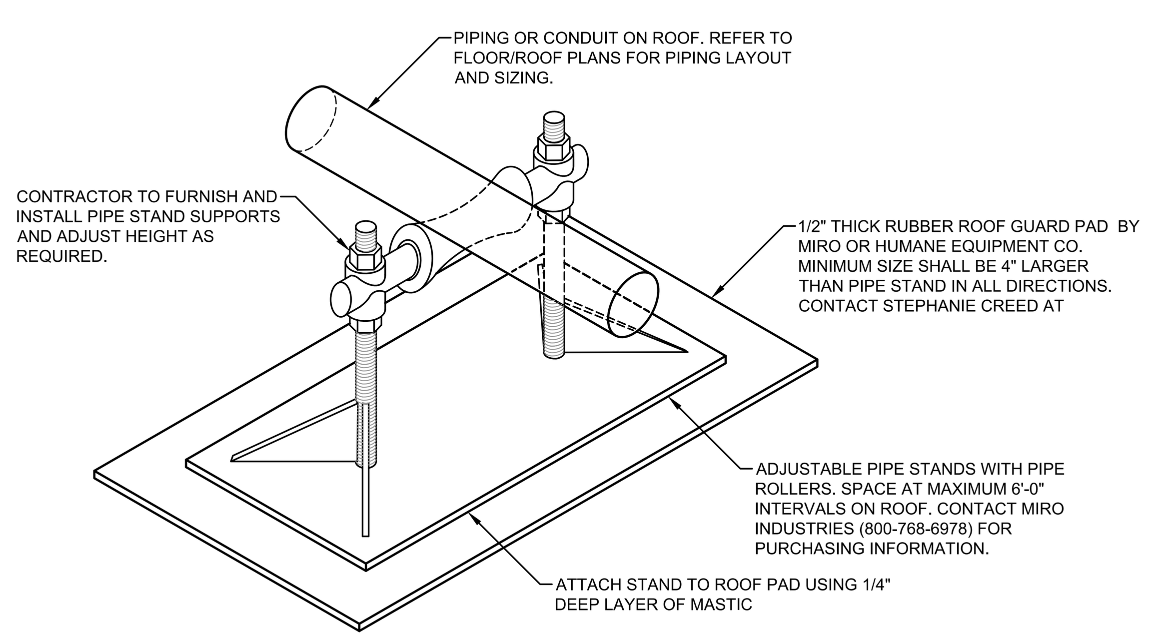
DRAW-THRU COOLING COIL DRIP PAN DRAIN DETAIL

NO SCALE



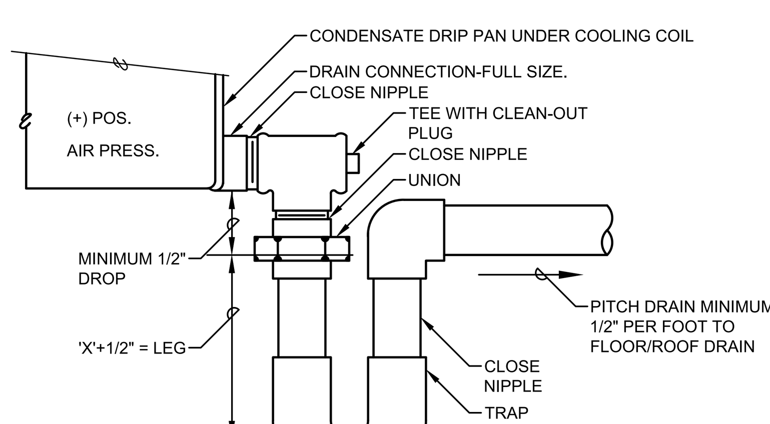
TYP. RETURN BRANCH DUCT TAKE-OFF

NO SCALE



ADJUSTABLE PIPING OR CONDUIT (UP TO 6" DIA.) ROOF SUPPORT DETAIL

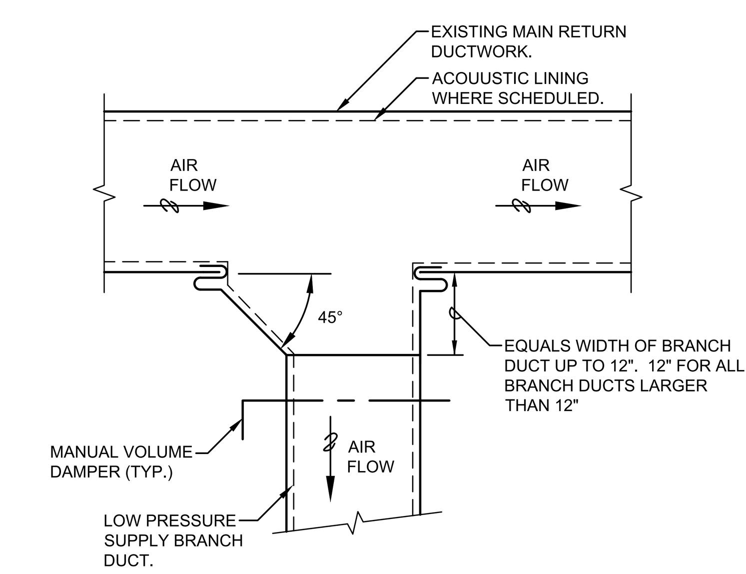
NO SCALE



NOTES:
1. "X" = DISCHARGE PRESSURE OF FAN (POSITIVE INTERNAL S.P.)

BLOW-THRU COOLING COIL DRIP PAN DRAIN DETAIL

NO SCALE



TYP. SUPPLY BRANCH DUCT TAKE-OFF

NO SCALE

OWNER REVIEW
NOT FOR CONSTRUCTION
09-18-2025

Revisions:
ISSUED FOR BID —

Consultants:

CS2 DESIGNGROUP LLC
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Elk Grove, IL 60007
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Fax: 847-981-1885
www.cs2designgroup.com

HVAC DETAILS

2025 HVAC UPGRADES
Murphy Elementary School, 220 Greenwood Dr, Round Lake Park, IL 60073
Round Lake Middle School, 2000 N Lotus Dr, Round Lake Heights, IL 60073
ROUND LAKE CUSD 116
510 N. CEDAR LAKE ROAD
ROUND LAKE, IL 60073

Issue Date: 18 SEP 2025
Drawn By: CS2
Job Number: 886-S-1

HV3.1

FILE: F:\886-S-1\HV\886S1 HV3.1.DWG SAVED BY: MCASTRO DATE: 9/18/2025 TIME: 12:06 PM