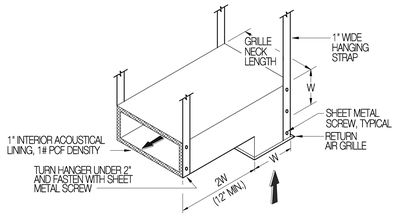
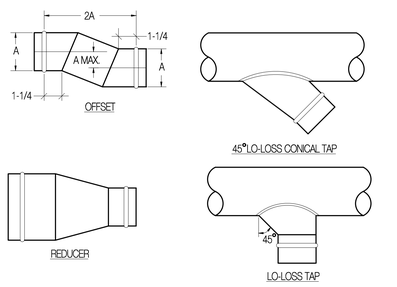
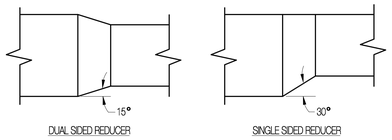
ALTERATION - ASI 4 - 2-25-2025



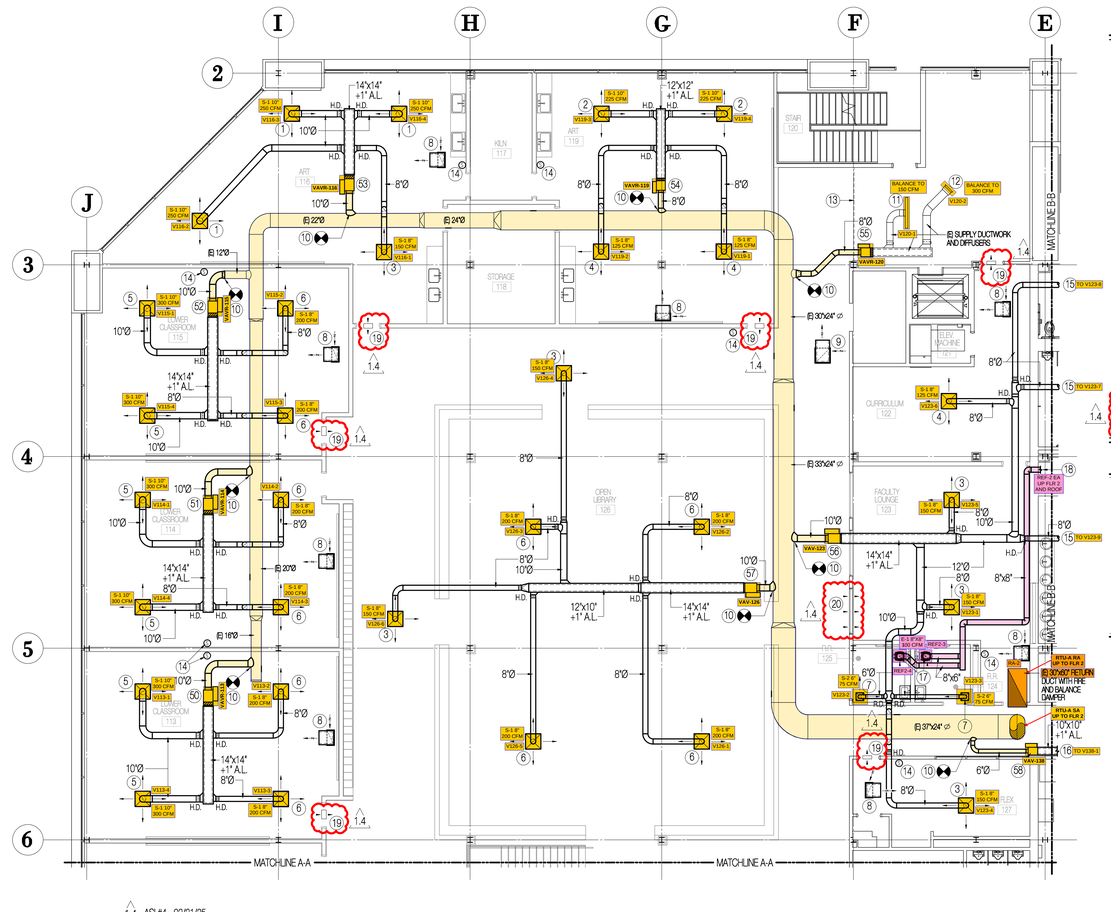
4 M100 SOUND BOOT DETAIL
SCALE: NONE



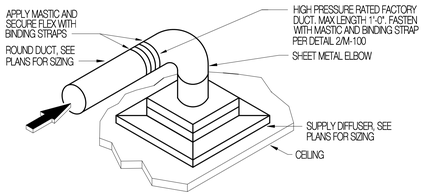
5 M100 ROUND DUCT FITTINGS
SCALE: NONE



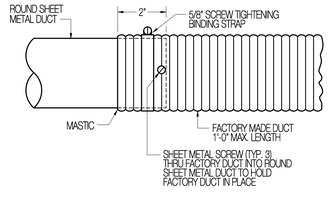
6 M100 RECTANGULAR DUCT FITTINGS
SCALE: NONE



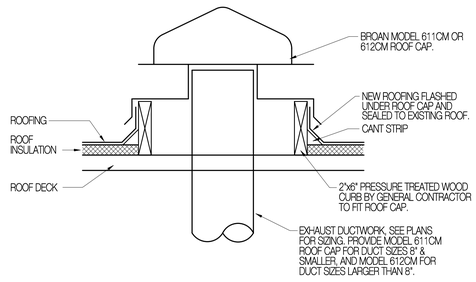
FIRST FLOOR HVAC REMODEL PLAN (AREA A)
SCALE 1/8" = 1'-0"



3 M100 DIFFUSER CONNECTION DETAIL
SCALE: NONE



2 M100 FACTORY DUCT DETAIL
SCALE: NONE



1 M100 EXHAUST ROOF CAP DETAIL
SCALE: NONE

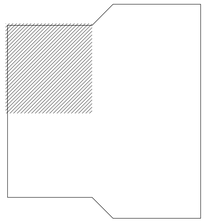
DRAWING NOTES

1. S-1 250 CFM, 10"Ø NK. S.A. DIFFUSER.
2. S-1 225 CFM, 10"Ø NK. S.A. DIFFUSER.
3. S-1 150 CFM, 8"Ø NK. S.A. DIFFUSER.
4. S-1 125 CFM, 8"Ø NK. S.A. DIFFUSER.
5. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
6. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
7. S-2 75 CFM, 6"Ø NK. S.A. DIFFUSER.
8. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
9. R-1 22"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
10. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
11. RE-BALANCE EXISTING DIFFUSER TO 150 CFM.
12. RE-BALANCE EXISTING DIFFUSER TO 300 CFM.
13. LINE OF NEW / EXISTING CEILING.
14. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
15. 8"Ø SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA B) SHEET M-101 FOR CONTINUATION.
16. 10"x10"+1" A.L. SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA B) SHEET M-101 FOR CONTINUATION.
17. E-1 100 CFM, 8"x8" NK. E.A. GRILLE WITH OPPOSED BLADE DAMPER.
18. 8"x8" EXHAUST DUCTWORK TO 14"x14" EXHAUST RISE IN WOMENS 139, SEE FIRST FLOOR HVAC PLAN (AREA B) SHEET M-101 FOR CONTINUATION.
19. 14"x18" TRANSFER AIR OPENING.
20. 80"x24" TRANSFER AIR OPENING ABOVE CEILING, REMOVE SHEETROCK FROM BOTH SIDES, FRAMING TO REMAIN.

EQUIPMENT NOTES

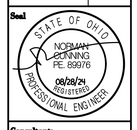
50	VAVR-113	VAV BOX W/ REHEAT	55	VAVR-120	VAV BOX W/ REHEAT
51	VAVR-114	VAV BOX W/ REHEAT	56	VAV-123	VAV BOX (COOLING ONLY)
52	VAVR-115	VAV BOX W/ REHEAT	57	VAV-126	VAV BOX (COOLING ONLY)
53	VAVR-116	VAV BOX W/ REHEAT	58	VAV-138	VAV BOX (COOLING ONLY)
54	VAVR-119	VAV BOX W/ REHEAT			

KEY PLAN



Revisions	Date
CONST. SET	11/15/24

Seal



Consultant:
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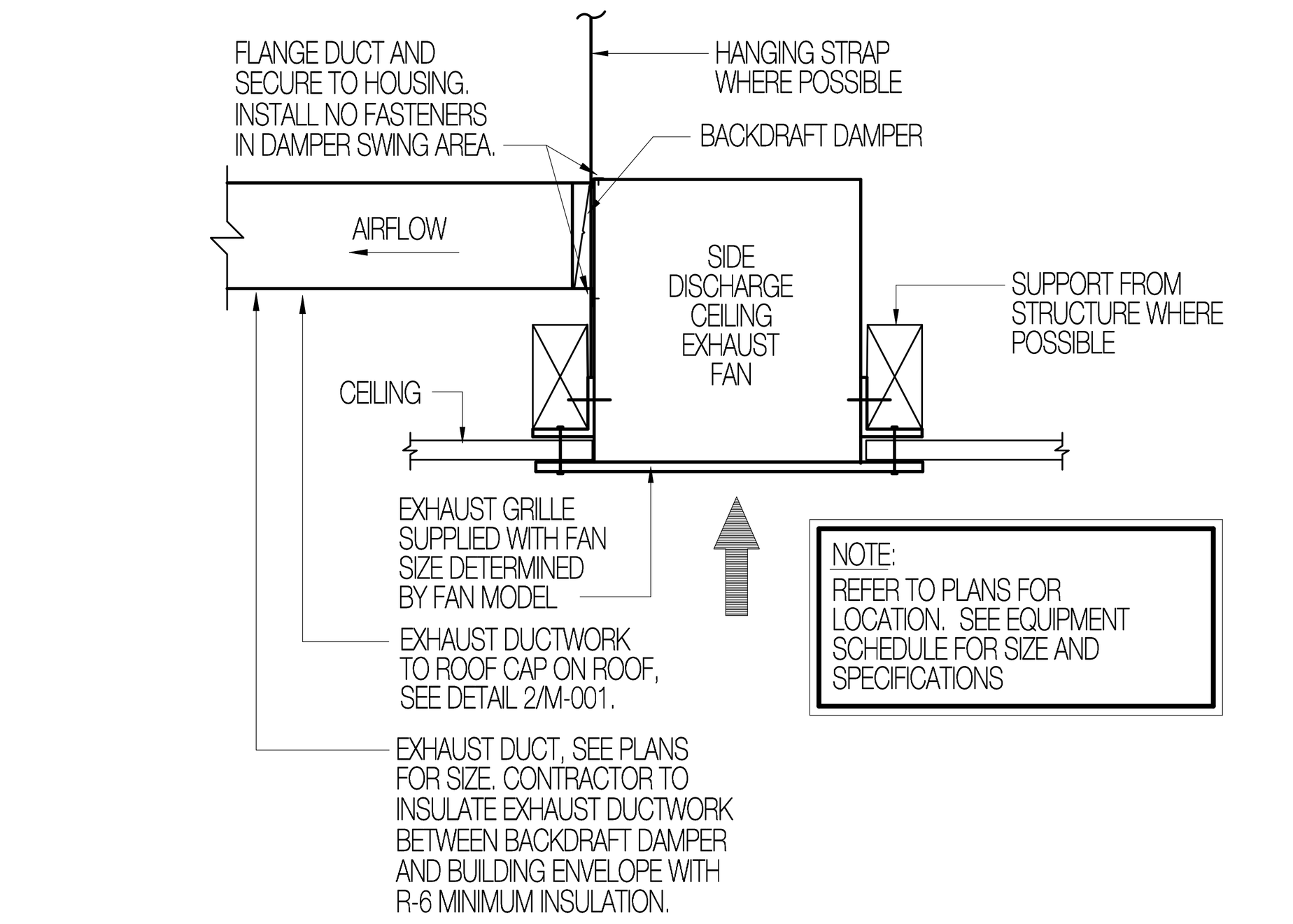
Project Name
CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

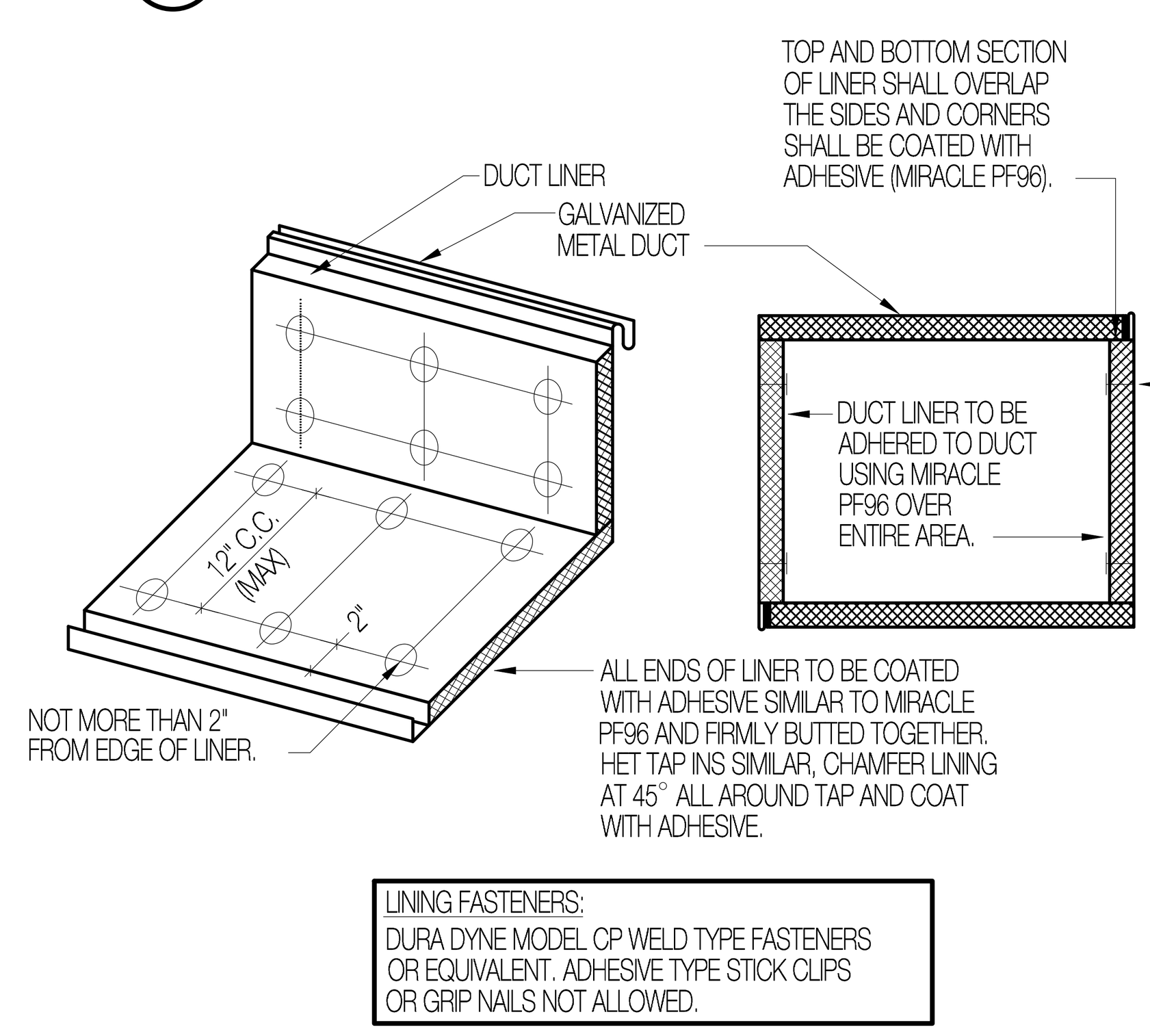
Drawing Title
FIRST FLOOR HVAC REMODEL PLAN (AREA A)

Sheet Number
M-100

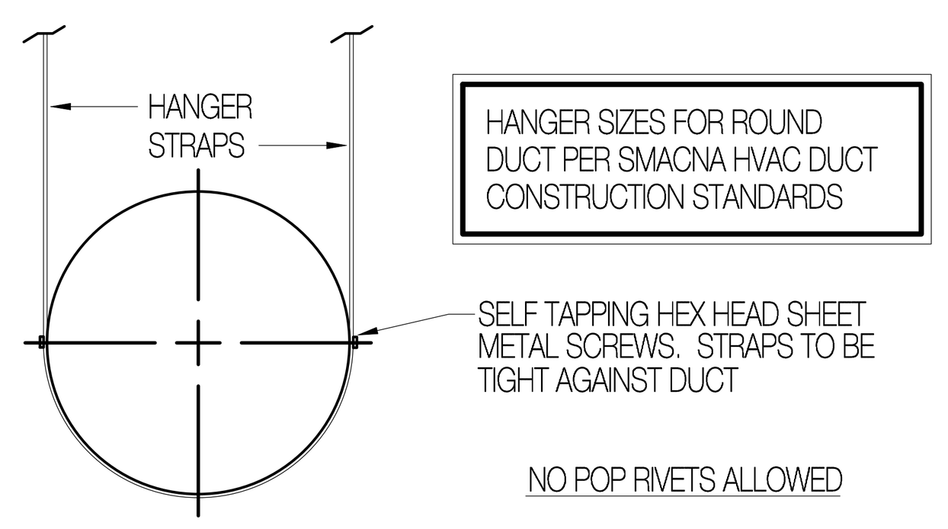
ADDITION - ASI 4 - 04-15-2025



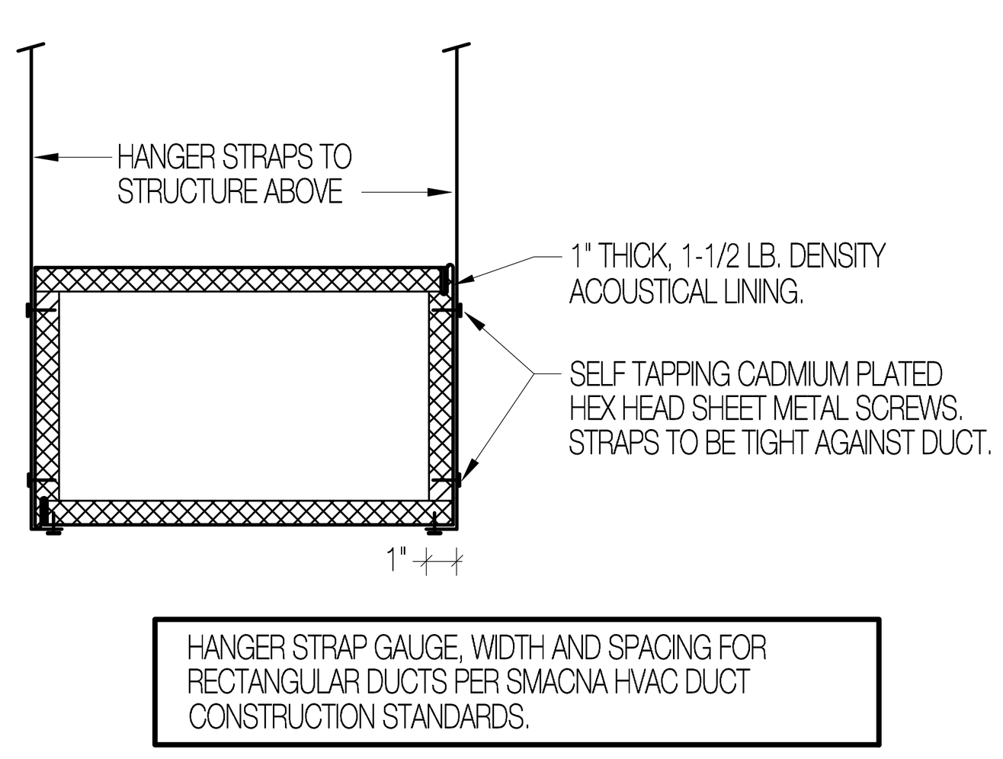
1 M101 **CEILING EXHAUST FAN DETAIL**
SCALE: NONE



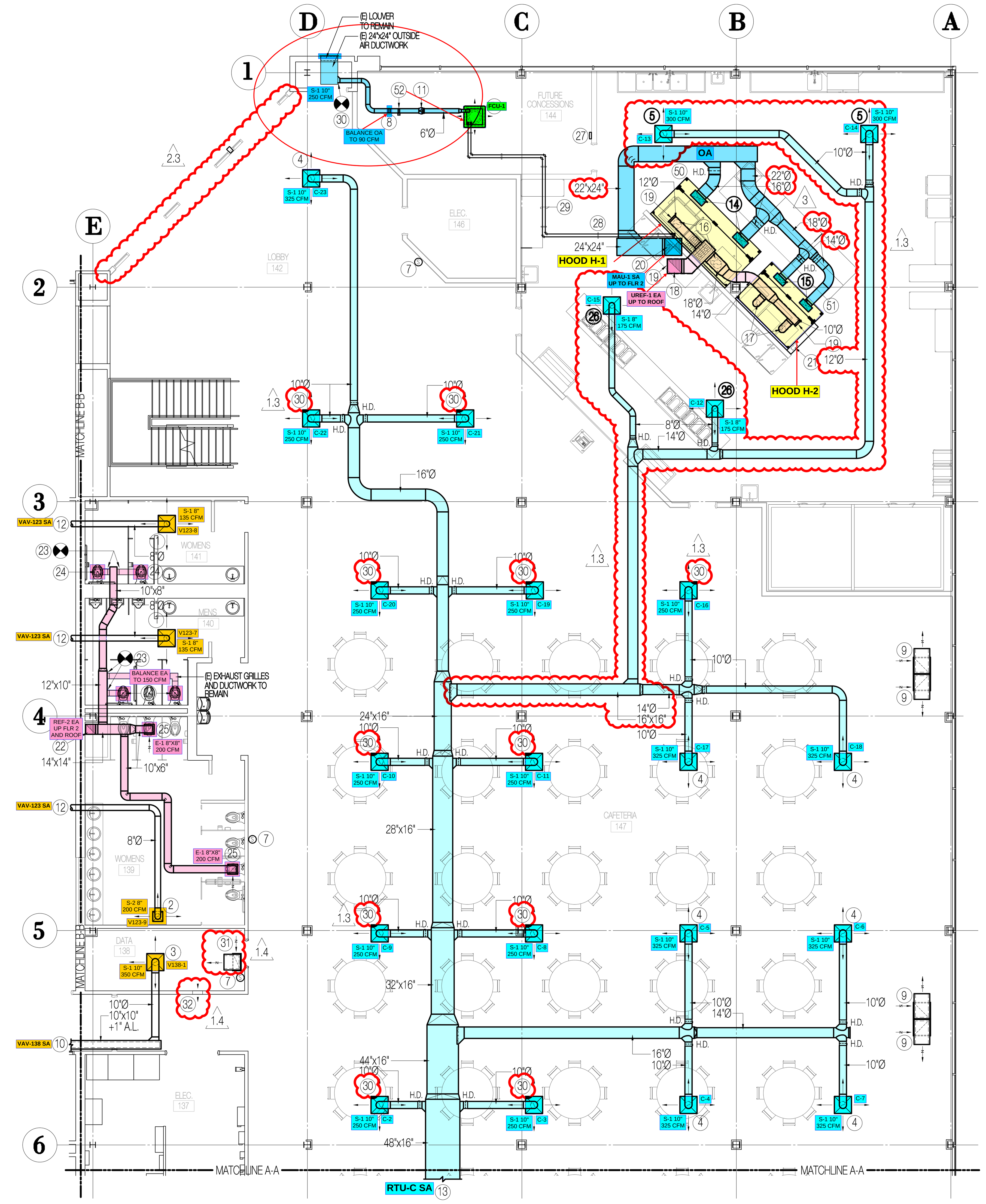
2 M101 **ACOUSTICAL LINER DETAIL**
SCALE: NONE



3 M101 **RND. DUCT HANGER DETAIL**
SCALE: NONE



4 M101 **RECT. DUCT HANGER DETAIL**
SCALE: NONE



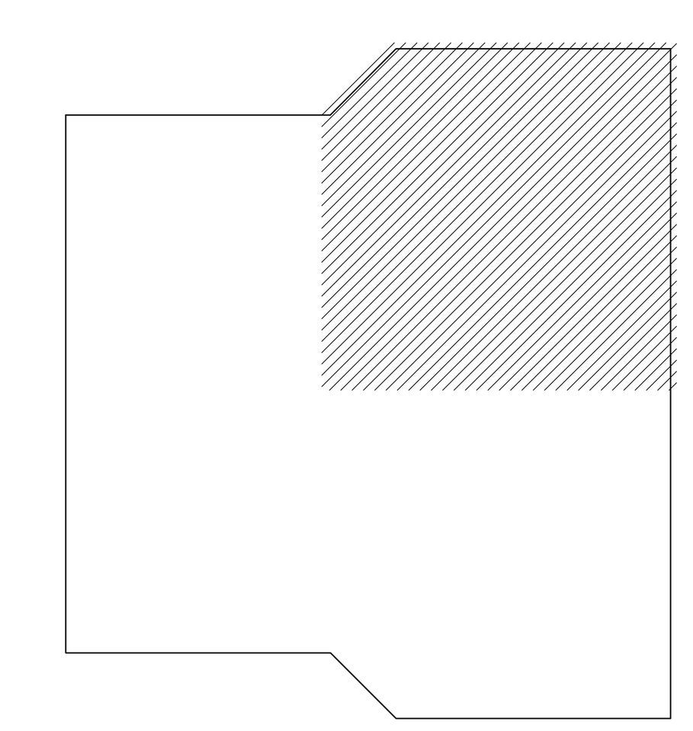
FIRST FLOOR HVAC REMODEL PLAN (AREA B)
SCALE 1/8" =1'-0"

DRAWING NOTES

1. S-1 135 CFM, 8"Ø NK. S.A. DIFFUSER.
2. S-2 200 CFM, 8"Ø NK. S.A. DIFFUSER.
3. S-1 350 CFM, 10"Ø NK. S.A. DIFFUSER.
4. S-1 325 CFM, 10"Ø NK. S.A. DIFFUSER.
5. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
6. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
7. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
8. BALANCE 6"Ø MANUAL OUTSIDE AIR DAMPER TO 90 CFM.
9. R-1 22"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
10. 10"x10"+1" A.L. SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA A) SHEET M-100 FOR CONTINUATION.
11. INLINE VENT FAN, SOLER AND PALAU MODEL TD-150, OR EQUAL. ENERGIZE VENT FAN WHEN FAN COIL UNIT IS RUNNING.
12. 8"Ø SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA A) SHEET M-100 FOR CONTINUATION.
13. 48"x16" SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA D) SHEET M-103 FOR CONTINUATION.
14. (HOOD H-1) 22"x10" SUPPLY DUCT DROP TO EXHAUST HOOD INLET COLLAR. CONNECT DUCTWORK AS REQUIRED BY HOOD MANUFACTURER. BALANCE EACH DUCT DROP TO 1,200 CFM.
15. (HOOD H-2) 18"x8" SUPPLY DUCT DROP TO EXHAUST HOOD INLET COLLAR. CONNECT DUCTWORK AS REQUIRED BY HOOD MANUFACTURER. BALANCE EACH DUCT DROP TO 900 CFM.
16. 12"Ø 16 GA. BLACK IRON EXHAUST DUCT DROP TO CONNECTION AT EXHAUST HOOD. CONNECT DUCTWORK TO HOOD PER MANUFACTURERS REQUIREMENTS. WRAP ALL BLACK IRON EXHAUST DUCTWORK BETWEEN EXHAUST HOOD AND BUILDING EXTERIOR WITH A MINIMUM OF 2 WRAPS OF 3M 5A OR EQUIVALENT FIRE WRAP. PROVIDE A MINIMUM OF 1 HOUR PROTECTION ON ALL GREASE DUCTWORK.
17. 10"Ø 16 GA. BLACK IRON EXHAUST DUCT DROP TO CONNECTION AT EXHAUST HOOD. CONNECT DUCTWORK TO HOOD PER MANUFACTURERS REQUIREMENTS. WRAP ALL BLACK IRON EXHAUST DUCTWORK BETWEEN EXHAUST HOOD AND BUILDING EXTERIOR WITH A MINIMUM OF 2 WRAPS OF 3M 5A OR EQUIVALENT FIRE WRAP. PROVIDE A MINIMUM OF 1 HOUR PROTECTION ON ALL GREASE DUCTWORK.
18. 22"x22" CONTINUOUSLY WELDED 16 GAUGE BLACK IRON DUCTWORK RISE TO SECOND FLOOR. SEE SECOND FLOOR HVAC PLAN (AREA B) SHEET M-105 FOR CONTINUATION. WRAP DUCTWORK WITH 3M 5A, OR EQUAL, FIRE WRAP.
19. CLEANOUT PLUG ON END OF GREASE DUCTWORK.
20. 26"x26" SUPPLY AIR DUCTWORK RISE TO SECOND FLOOR. SEE SECOND FLOOR HVAC PLAN (AREA B) SHEET M-105 FOR CONTINUATION.
21. HOOD, ROOFTOP EXHAUST FAN, AND DEDICATED OUTDOOR AIR SYSTEM CONTROLS IN CABINET ATTACHED TO END OF HOOD.
22. 14"x14" EXHAUST DUCTWORK RISE TO SECOND FLOOR, SEE SECOND FLOOR HVAC PLAN (AREA B) SHEET M-105 FOR CONTINUATION.
23. FIELD VERIFY EXACT LOCATION OF EXISTING EXHAUST DUCTWORK AND CONNECT NEW TO EXISTING. ROTATE GRILLES AND DUCTWORK AS REQUIRED TO CONNECT NEW TO EXISTING AND SEAL DUCTWORK AIR TIGHT.
24. REBALANCE EXISTING EXHAUST GRILLE TO 150 CFM.
25. E-1 200 CFM, 8"x8" NK. E.A. GRILLE WITH OPPOSED BLADE DAMPER.
26. S-1 175 CFM, 8"Ø NK. S.A. DIFFUSER. (1.3)
27. FAN COIL UNIT REMOTE SENSOR, MOUNT SENSOR AT 48" A.F.F. UTILIZING RECESSED WALL BOX. HARD WIRE SENSOR TO FAN COIL UNIT WITH COMPATIBLE CONTROL WIRING.
28. REFRIGERATION PIPING SUPPORT, SEE DETAIL 2/M-700.
29. 1/4" LIQUID AND 3/8" SUCTION PIPING FROM FAN COIL UNIT TO HEAT PUMP ON ROOF. SEE SECOND FLOOR HVAC PLAN (AREA B) SHEET M-105 FOR CONTINUATION.
30. S-1 250 CFM, 10"Ø NK. S.A. DIFFUSER. (1.3)
31. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100. (1.4)
32. 14"x18" TRANSFER AIR OPENING

EQUIPMENT NOTES

50. H 1A HOOD
51. H 1B HOOD
52. FCU 1 FAN COIL UNIT
53. CD 1 CONTROL DAMPER



KEY PLAN

1.3 ASI #3 - 02/03/25
1.4 ASI #4 - 02/21/25
2.3 ASI #2.3 - 04/08/25

Revisions	Date
CONST. SET	11/15/24

Seal: STATE OF OHIO — NORMAN CUNNING PE. 89976 — 08/28/24 — REGISTERED PROFESSIONAL ENGINEER

Consultant:
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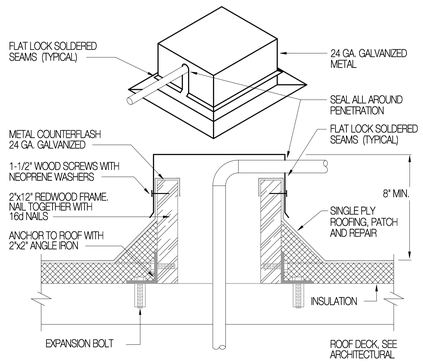
Project Name: CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number: 2424
Issue Date: 11/15/24

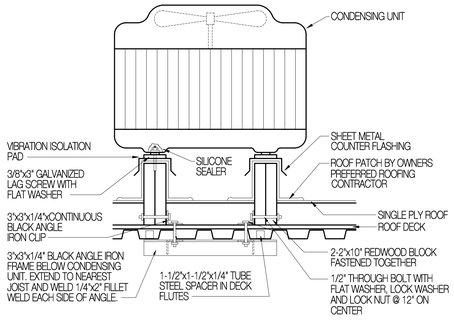
Drawing Title: FIRST FLOOR HVAC PLAN (AREA B)

Sheet Number: M-101

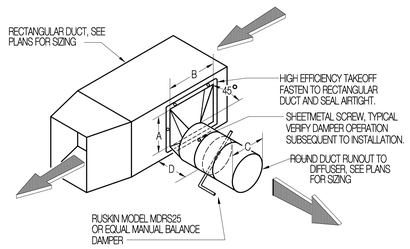
ALTERATION - ASI 4 - 2-25-2025



4 M102 PIPE PENETRATION DETAIL
SCALE: NONE

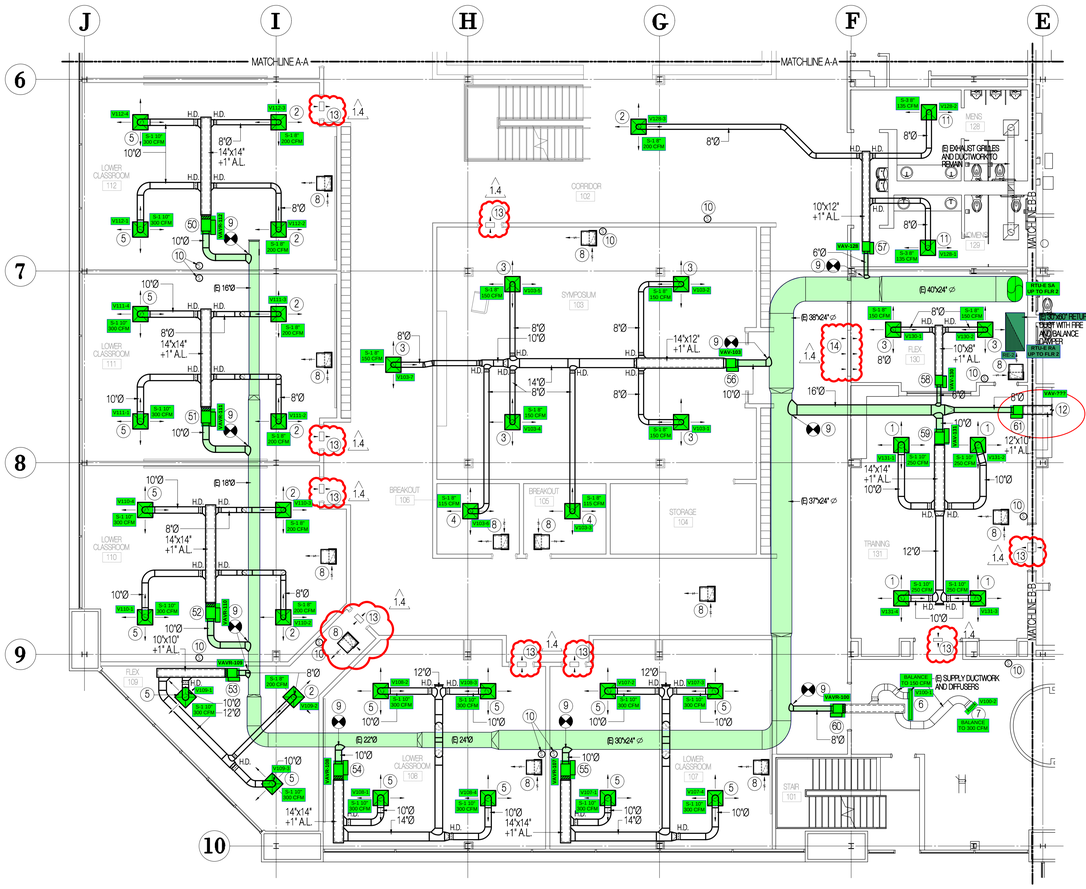


5 M102 ROOFTOP COND. UNIT MOUNTING DETAIL
SCALE: NONE



HET DIMENSIONS			
BRANCH SIZE (C)	THROAT DIM. A	THROAT DIM. B	MIN. AREA AxB
6"	8-1/4"	12"	3.5 X AREA OF C
8"	10-1/4"	14"	2.8 X AREA OF C
10"	12"	15"	2.3 X AREA OF C
12"	14"	17"	2.1 X AREA OF C
LENGTH D SHALL BE A MINIMUM OF 11"			

6 M102 ROUND DUCT RUNOUT DETAIL
SCALE: NONE



FIRST FLOOR HVAC REMODEL PLAN (AREA C)
SCALE 1/8" =1'-0"

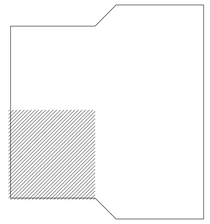
DRAWING NOTES

1. S-1 | 250 CFM, 10"Ø NK. S.A. DIFFUSER.
2. S-1 | 200 CFM, 8"Ø NK. S.A. DIFFUSER.
3. S-1 | 150 CFM, 8"Ø NK. S.A. DIFFUSER.
4. S-1 | 115 CFM, 8"Ø NK. S.A. DIFFUSER.
5. S-1 | 300 CFM, 10"Ø NK. S.A. DIFFUSER.
6. RE-BALANCE EXISTING DIFFUSER TO 150 CFM.
7. RE-BALANCE EXISTING DIFFUSER TO 300 CFM.
8. R-1 | 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
9. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
10. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
11. S-3 | 135 CFM, 8"Ø NK. S.A. DIFFUSER.
12. 12"x10"+1" A.L. SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA B) SHEET M-101FOR CONTINUATION.
13. 14"x18" TRANSFER AIR OPENING
14. 80"x24" TRANSFER AIR OPENING ABOVE CEILING, REMOVE SHEETROCK FROM BOTH SIDES, FRAMING TO REMAIN.

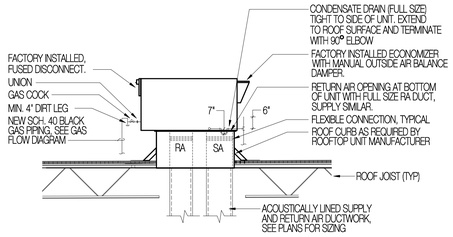
EQUIPMENT NOTES

50	VAV-112	VAV BOX W/ REHEAT	56	VAV-103	VAV BOX (COOLING ONLY)
51	VAV-111	VAV BOX W/ REHEAT	57	VAV-128	VAV BOX (COOLING ONLY)
52	VAV-110	VAV BOX W/ REHEAT	58	VAV-130	VAV BOX (COOLING ONLY)
53	VAV-109	VAV BOX W/ REHEAT	59	VAV-131	VAV BOX (COOLING ONLY)
54	VAV-108	VAV BOX W/ REHEAT	60	VAV-100	VAV BOX W/ REHEAT
55	VAV-107	VAV BOX W/ REHEAT			

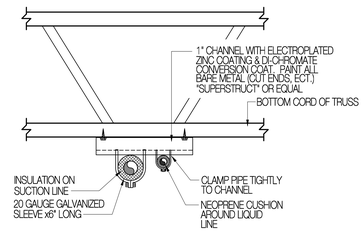
KEY PLAN



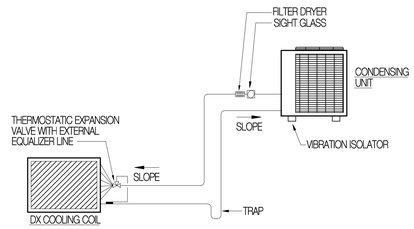
1.4 ASI #4 - 02/21/25



3 M102 RTU INSTALLATION DETAIL
SCALE: NONE



2 M102 REFRIGERANT PIPING SUPPORT FROM JOIST DETAIL
SCALE: NONE



NOTE:
THE CONTRACTOR ALONG WITH HIS EQUIPMENT SUPPLIER SHALL SUBMIT A COMPLETE REFRIGERATION PIPING SHOP DRAWING SHOWING SIZES, TRAPS, PITCHES, VALVES, FILTER/DRYER, SEPERATORS, SITE GLASSES, ETC. THE DRAWING SHALL BE BASED ON ACTUAL BUILDING CONDITIONS. TRAP AS REQUIRED TO ACCOMMODATE SUCTION LINE RISER.

1 M102 REFRIG. PIPING SCHEMATIC
SCALE: NONE

Revisions	Date
CONST. SET	11/15/24

Seal: STATE OF OHIO — NORMAN CONNING — PE: 89976 — 08/28/24 REGISTERED — PROFESSIONAL ENGINEER

Consultant:
Mechanical Consulting Engineers
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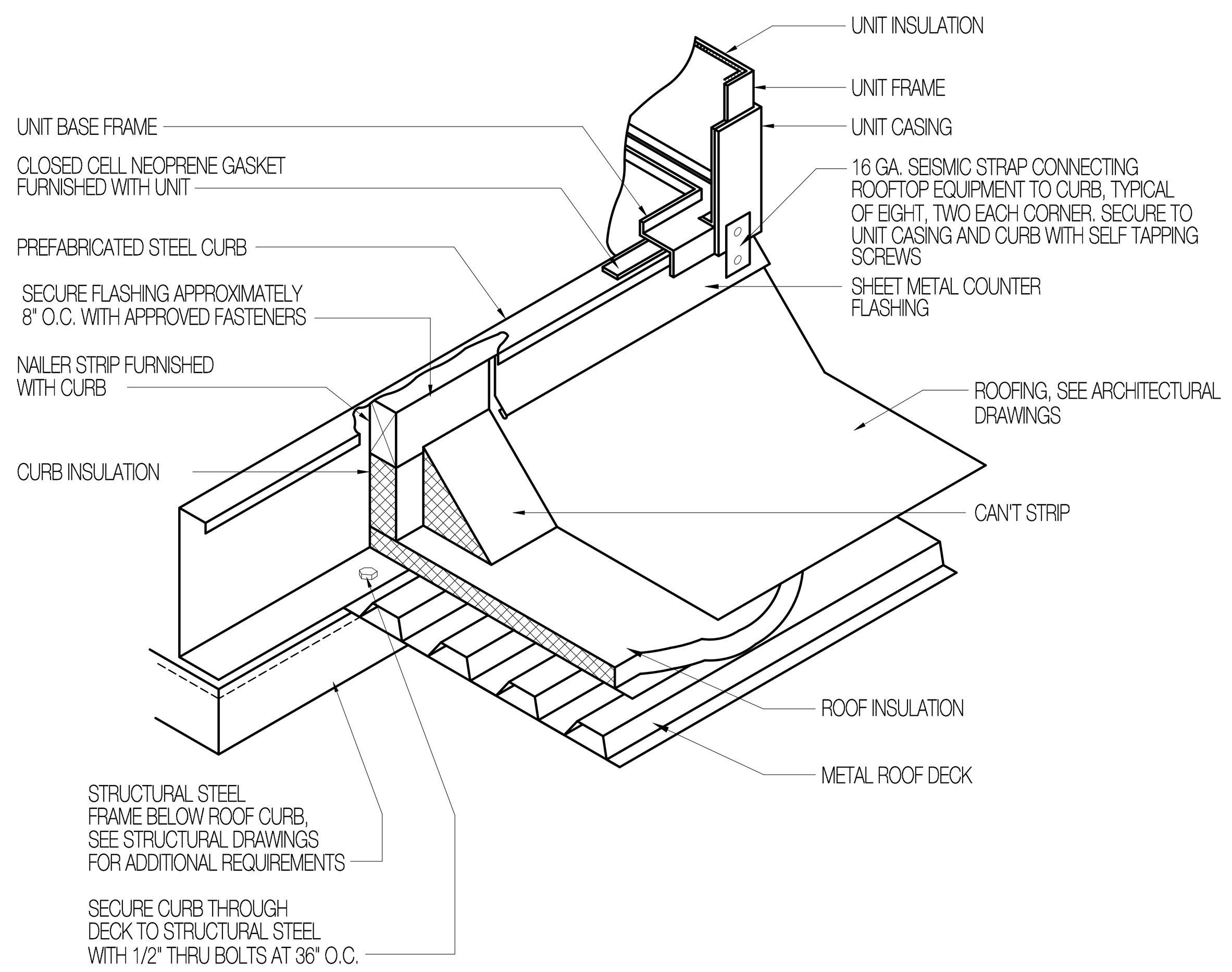
Project Name: CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

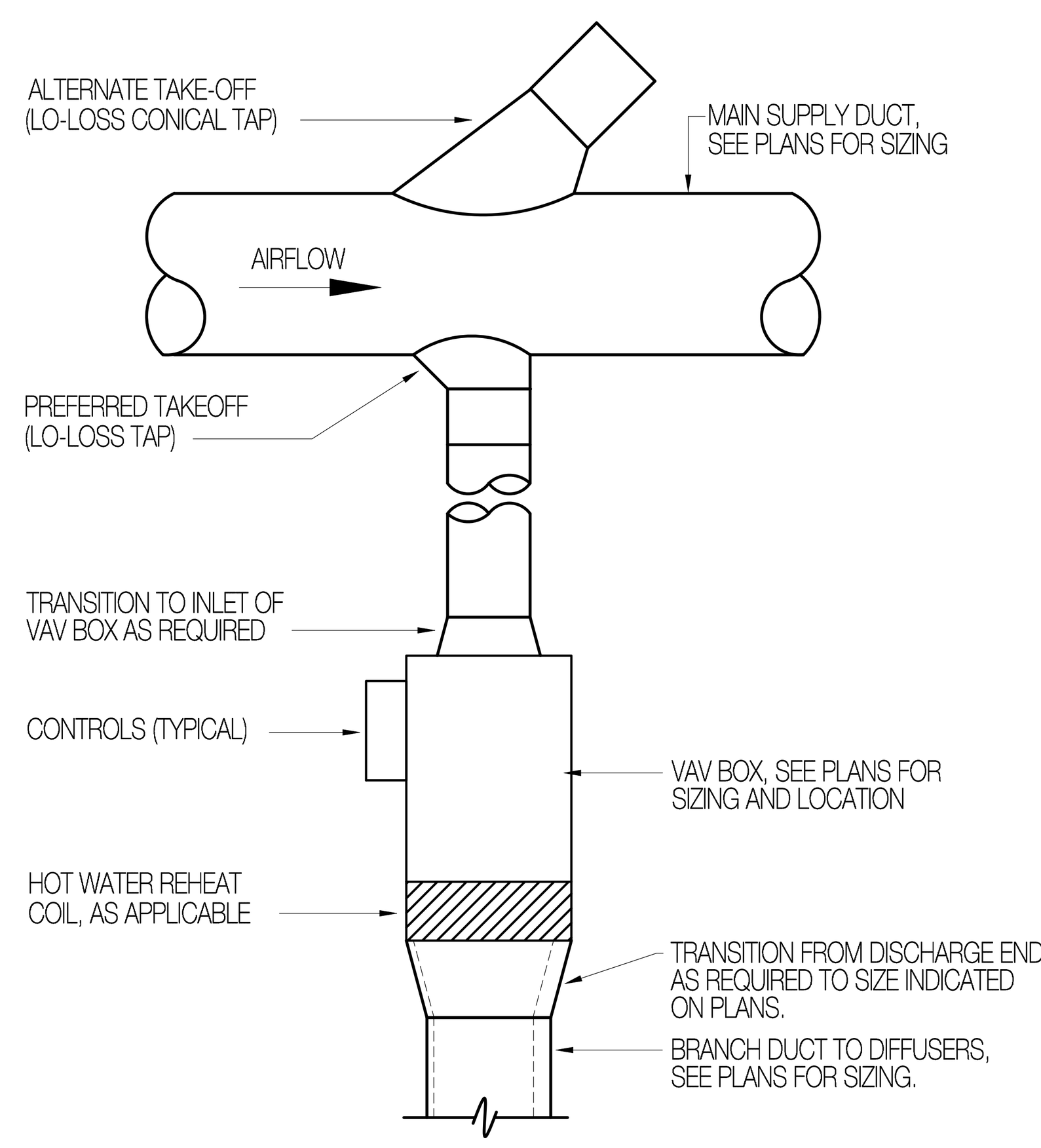
Drawing Title: FIRST FLOOR HVAC PLAN (AREA C)

Sheet Number: M-102

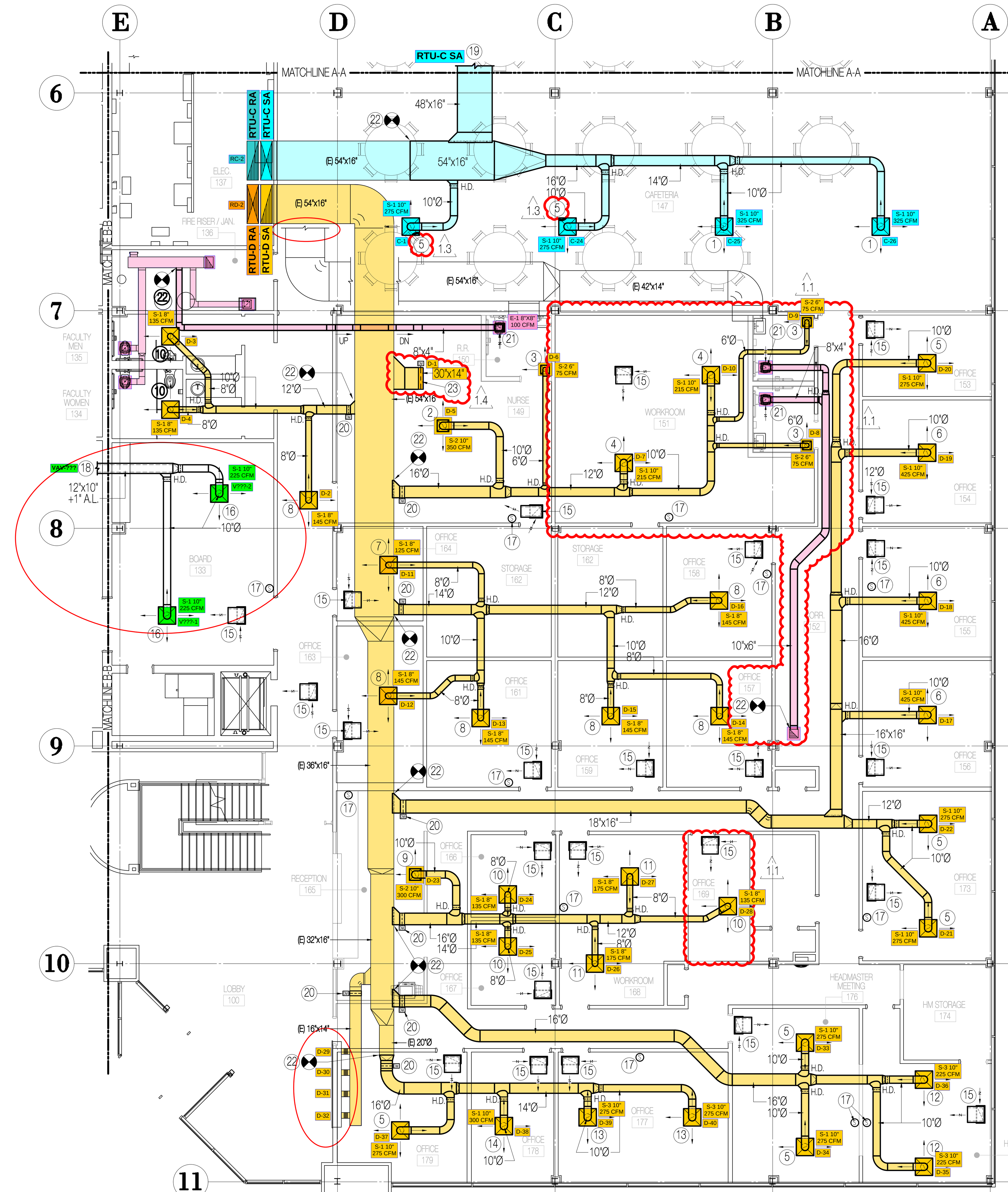
ALTERATION - ASI 4 - 2-25-2025



1 / M103 **ROOFTOP EQUIPMENT FLASHING DETAIL**
SCALE: NONE



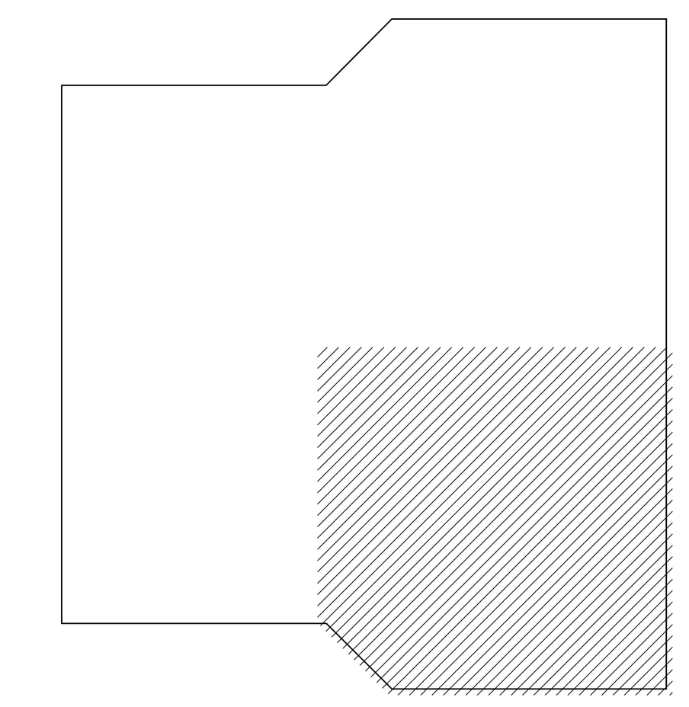
3 / M000 **TERMINAL BOX CONN. DETAIL**
SCALE: NONE



FIRST FLOOR HVAC REMODEL PLAN (AREA D)
SCALE 1/8" = 1'-0"

DRAWING NOTES

1. S-1 325 CFM, 10"Ø NK. S.A. DIFFUSER.
2. S-2 350 CFM, 10"Ø NK. S.A. DIFFUSER.
3. S-2 75 CFM, 6"Ø NK. S.A. DIFFUSER.
4. S-1 215 CFM, 10"Ø NK. S.A. DIFFUSER.
5. S-1 275 CFM, 10"Ø NK. S.A. DIFFUSER. (1.3)
6. S-1 425 CFM, 10"Ø NK. S.A. DIFFUSER.
7. S-1 125 CFM, 8"Ø NK. S.A. DIFFUSER.
8. S-1 145 CFM, 8"Ø NK. S.A. DIFFUSER.
9. S-2 300 CFM, 10"Ø NK. S.A. DIFFUSER.
10. S-1 135 CFM, 8"Ø NK. S.A. DIFFUSER.
11. S-1 175 CFM, 8"Ø NK. S.A. DIFFUSER.
12. S-3 225 CFM, 10"Ø NK. S.A. DIFFUSER.
13. S-3 275 CFM, 10"Ø NK. S.A. DIFFUSER.
14. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
15. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
16. S-1 225 CFM, 10"Ø NK. S.A. DIFFUSER.
17. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
18. 12"x10"+1" A.L. SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA C) SHEET M-102 FOR CONTINUATION.
19. 48"x16"+1" A.L. SUPPLY DUCTWORK, SEE FIRST FLOOR HVAC PLAN (AREA B) SHEET M-102 FOR CONTINUATION.
20. ZONE CONTROL DAMPER, SEE SHEET M-700 FOR ADDITIONAL INFORMATION.
21. E-1 100 CFM, 8"x8" NK. E.A. GRILLE WITH OPPOSED BLADE DAMPER.
22. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
23. 30"x14" BYPASS DUCT WITH DAMPER AND STATIC PRESSURE CONTROLLER SET TO OPEN DAMPER AT BETWEEN 0.3" AND 0.6" (ADJUSTABLE) (1.4)



KEY PLAN

1.1 ASI #1 - 12/10/24
1.3 ASI #3 - 02/03/25
1.4 ASI #4 - 02/21/25

Revisions	Date
CONST. SET	11/15/24

Seal: STATE OF OHIO — NORMAN CUNNING PE. 89976 — 08/28/24 REGISTERED — PROFESSIONAL ENGINEER

Consultant:
Mechanical Consulting Engineers
Cunning & Associates
4685 W. 11600 N. Tremonton, UT 84337
Email: norm@cunning-eng.com
Ph: (801) 726-5047

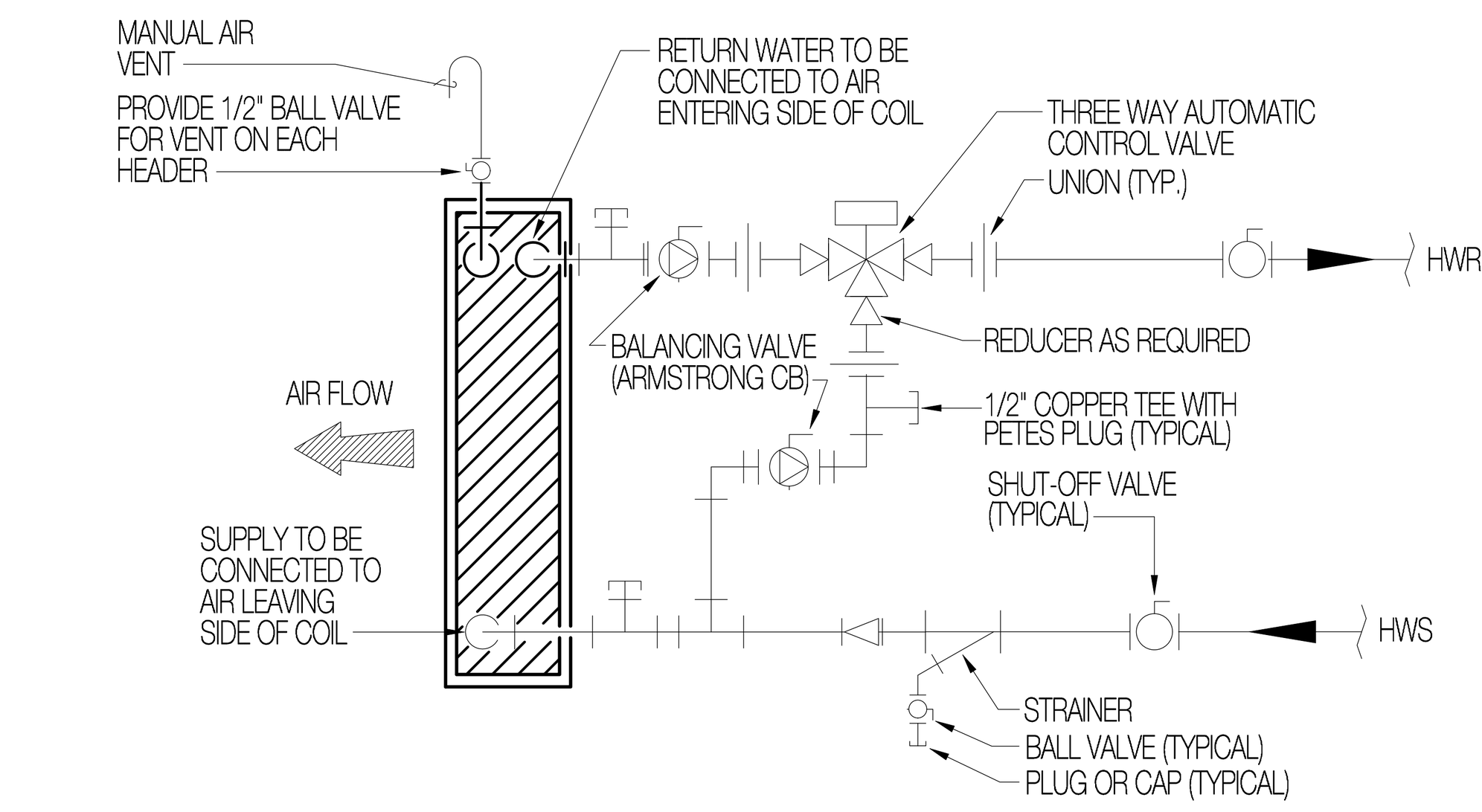
Project Name: CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

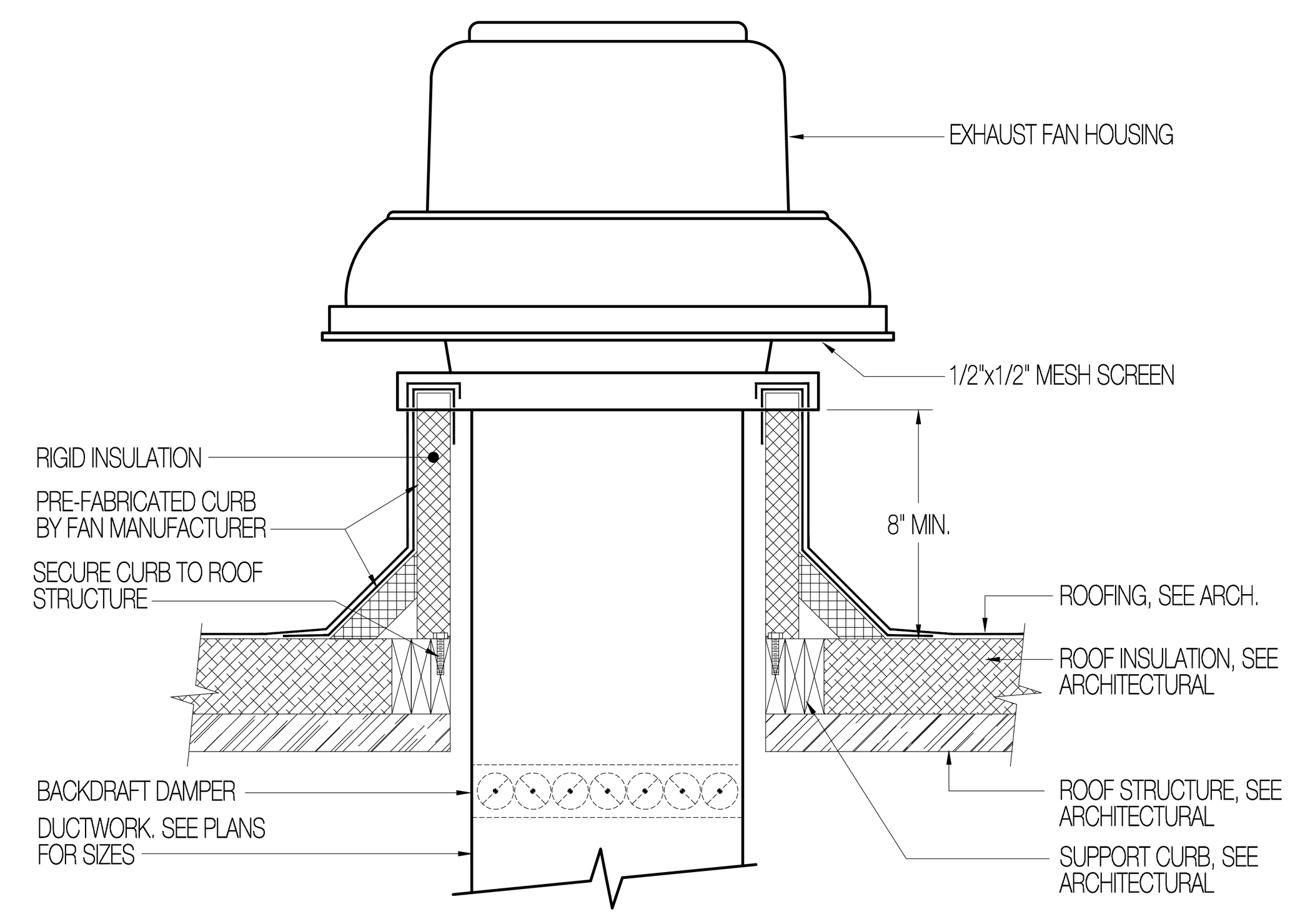
Drawing Title: FIRST FLOOR HVAC PLAN (AREA D)

Sheet Number: M-103

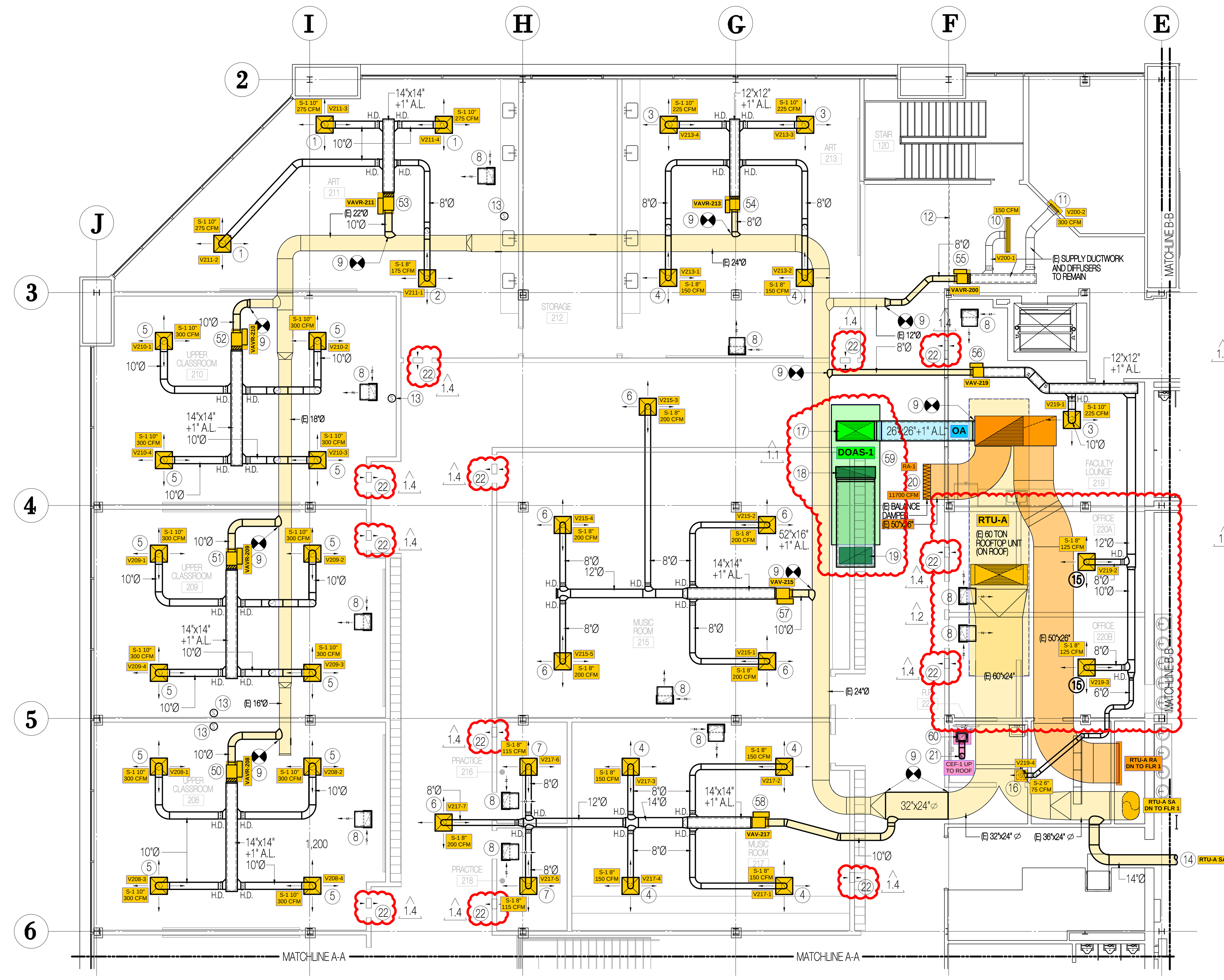
ALTERATION - ASI 4 - 2-25-2025



3 M104 **3-WAY HEAT COIL PIPING DETAIL**
SCALE: NONE



4 M104 **DOWNBLAST ROOFTOP EXHAUST FAN AND CURB DETAIL**
SCALE: NONE



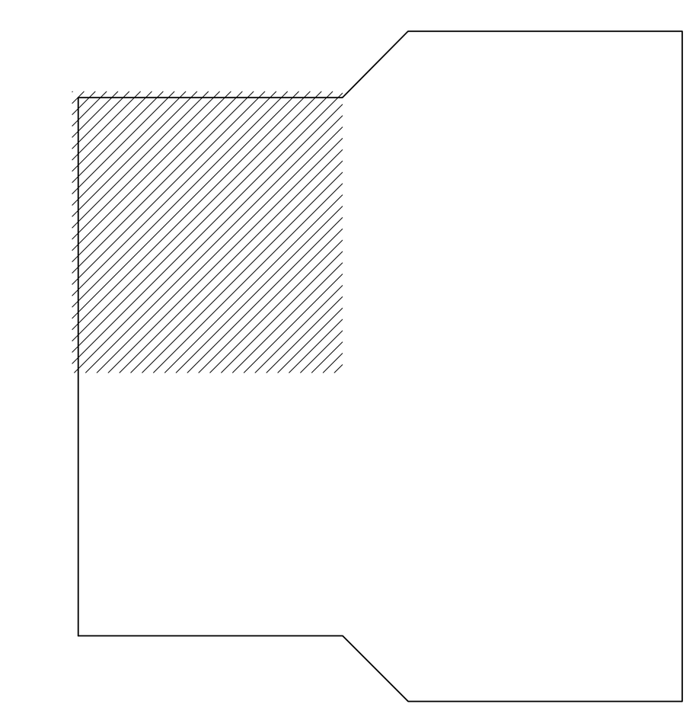
SECOND FLOOR HVAC REMODEL PLAN (AREA A)
SCALE 1/8"=1'-0"

DRAWING NOTES

1. S-1 275 CFM, 10"Ø NK. S.A. DIFFUSER.
2. S-1 175 CFM, 8"Ø NK. S.A. DIFFUSER.
3. S-1 225 CFM, 10"Ø NK. S.A. DIFFUSER.
4. S-1 150 CFM, 8"Ø NK. S.A. DIFFUSER.
5. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
6. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
7. S-1 115 CFM, 8"Ø NK. S.A. DIFFUSER.
8. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
9. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
10. RE-BALANCE EXISTING DIFFUSER TO 150 CFM.
11. RE-BALANCE EXISTING DIFFUSER TO 300 CFM.
12. LINE OF NEW / EXISTING CEILING.
13. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
14. 14"Ø SUPPLY DUCTWORK, SEE SECOND FLOOR HVAC PLAN (AREA B) SHEET M-105 FOR CONTINUATION.
15. S-1 125 CFM, 8"Ø NK. S.A. DIFFUSER. (1.2)
16. S-2 75 CFM, 6"Ø NK. S.A. DIFFUSER.
17. 26"x26"+1"A.L. SUPPLY AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO OUTLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
18. 52"x16"+1"A.L. RETURN AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO INLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
19. 46"x24" HOLE ON TOP OF DUCT.
20. RE-BALANCE EXISTING RETURN DAMPER TO 11,700 CFM.
21. 8"Ø EXHAUST DUCT RISE TO VENT CAP ON ROOF, SEE DETAIL 1/M-100 FOR ADDITIONAL INFORMATION.
22. 14"x18" TRANSFER AIR OPENING. (1.4)

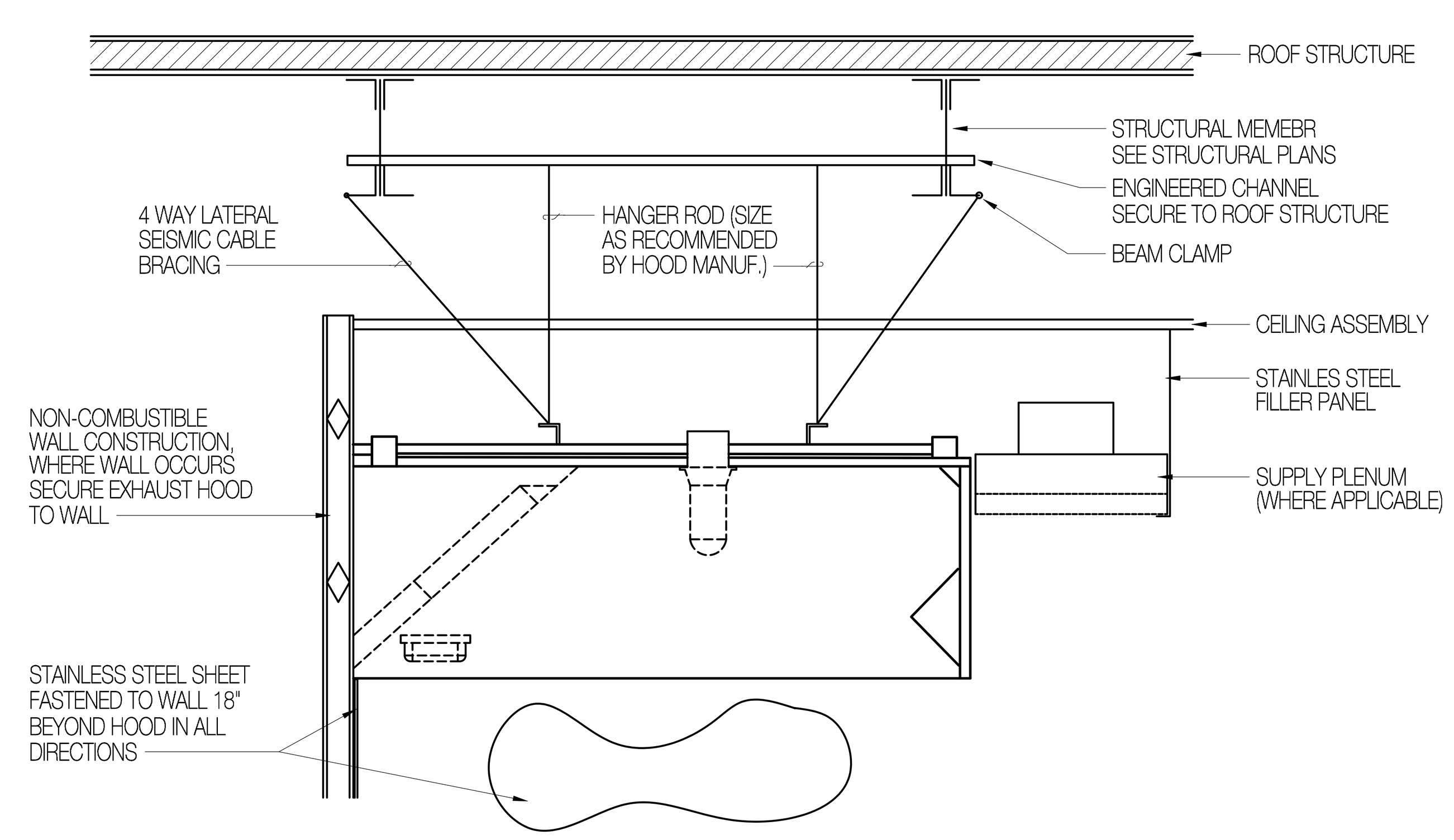
EQUIPMENT NOTES

No.	Tag	Description
50	VAVR 208	VAV BOX W/ REHEAT
51	VAVR 209	VAV BOX W/ REHEAT
52	VAVR 210	VAV BOX W/ REHEAT
53	VAVR 211	VAV BOX W/ REHEAT
54	VAVR 213	VAV BOX W/ REHEAT
55	VAVR 200	VAV BOX W/ REHEAT
56	VAV 219	VAV BOX (COOLING ONLY)
57	VAV 215	VAV BOX (COOLING ONLY)
58	VAV 217	VAV BOX (COOLING ONLY)
59	DOAS 1	DEDIC. OUTDOOR AIR SYSYTEM
60	CEF 1	CEILING EXHAUST FAN

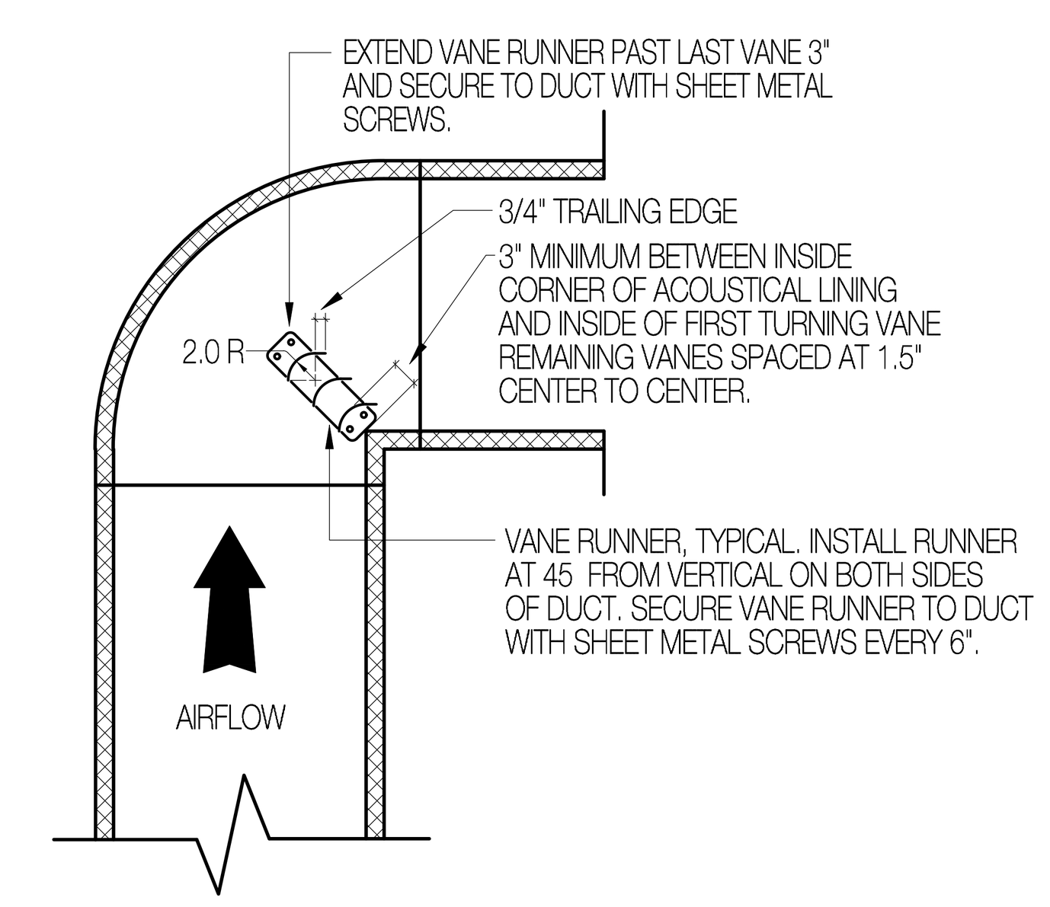


KEY PLAN

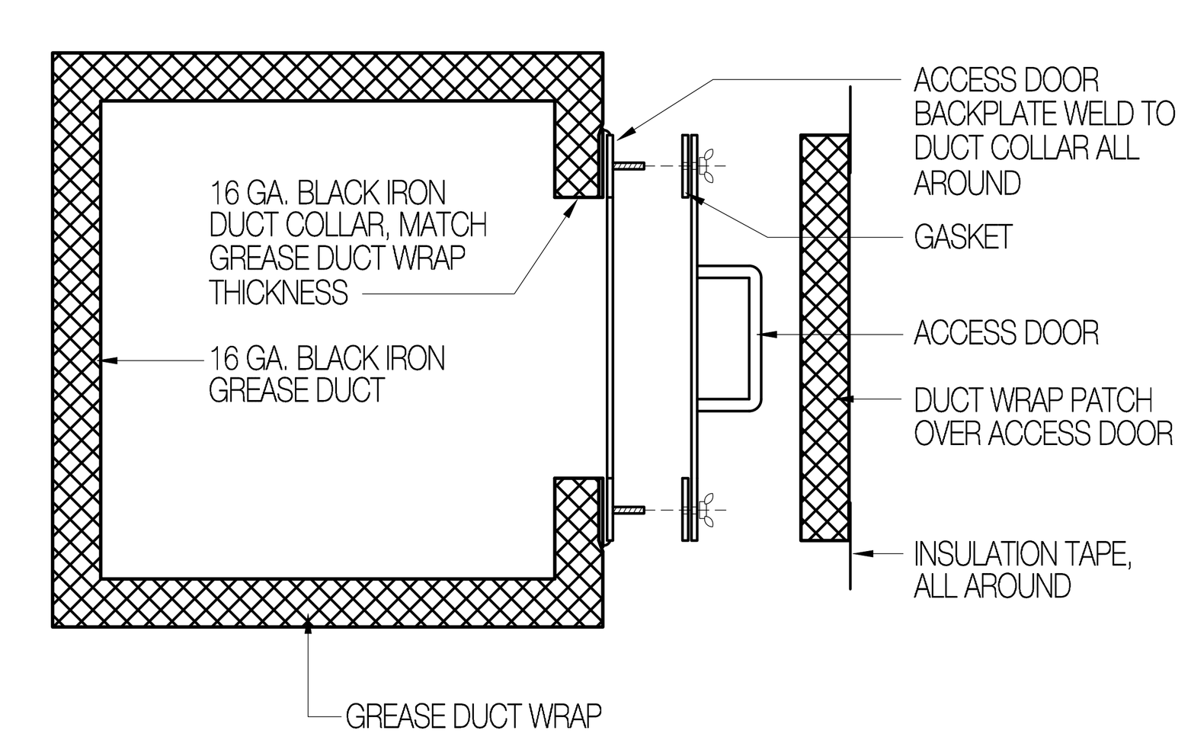
1.1 ASI #1 - 12/10/24
1.2 ASI #1 - 12/31/24
1.4 ASI #4 - 02/21/25



5 M104 **EXHAUST HOOD SUPPORT DETAIL**
SCALE: NONE



2 M104 **TURNING VANE DETAIL**
SCALE: NONE



THE ENTIRE DUCT ACCESS DOOR ASSEMBLY SHALL BE A U.L. LISTED

1 M104 **GREASE DUCT ACCESS DOOR**
SCALE: NONE

Revisions	Date
CONST. SET	11/15/24

Seal: STATE OF OHIO — NORMAN CUNNING PE. 89976 — 08/28/24 REGISTERED — PROFESSIONAL ENGINEER

Consultant:
Mechanical Consulting Engineers
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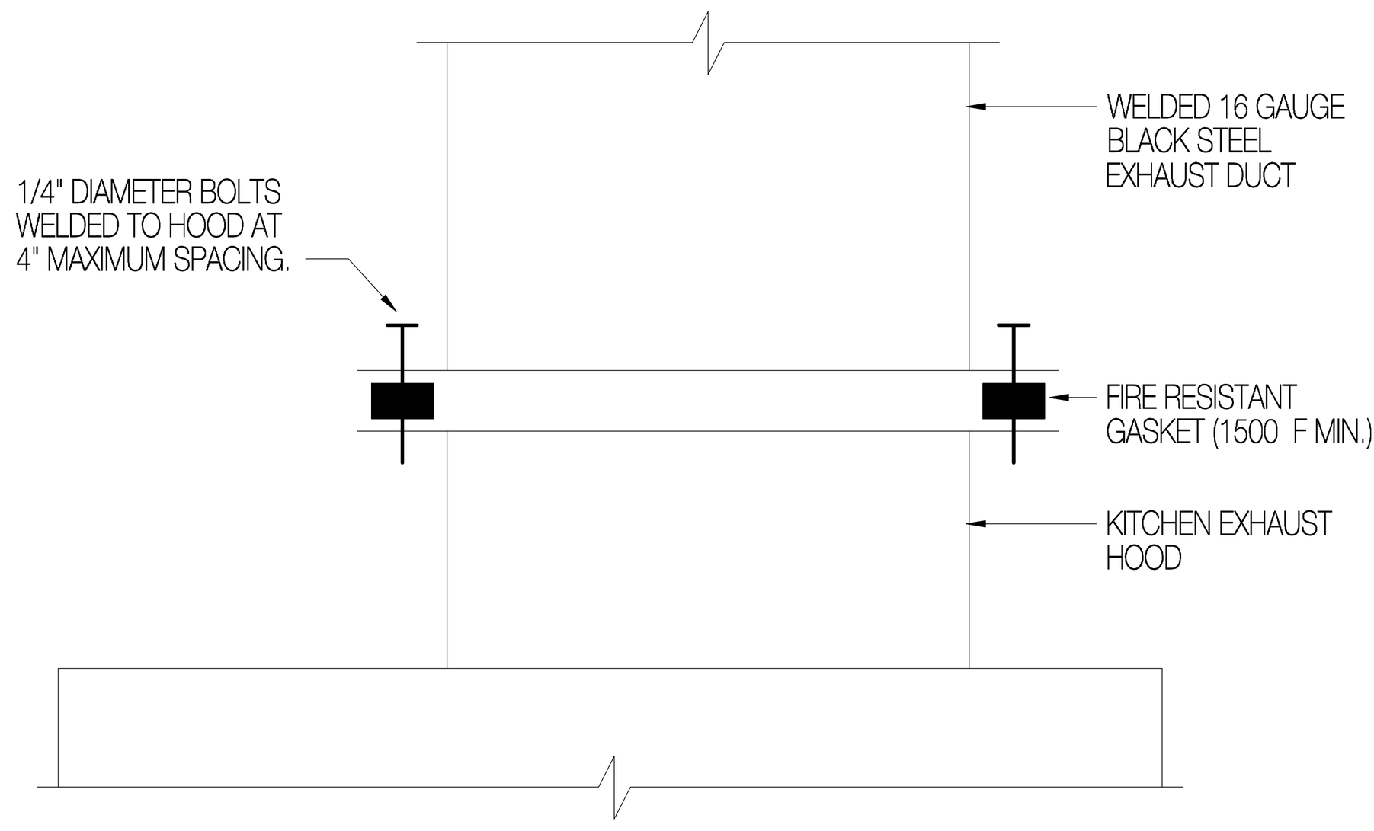
Project Name: CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

Drawing Title: SECOND FLOOR HVAC PLAN (AREA A)

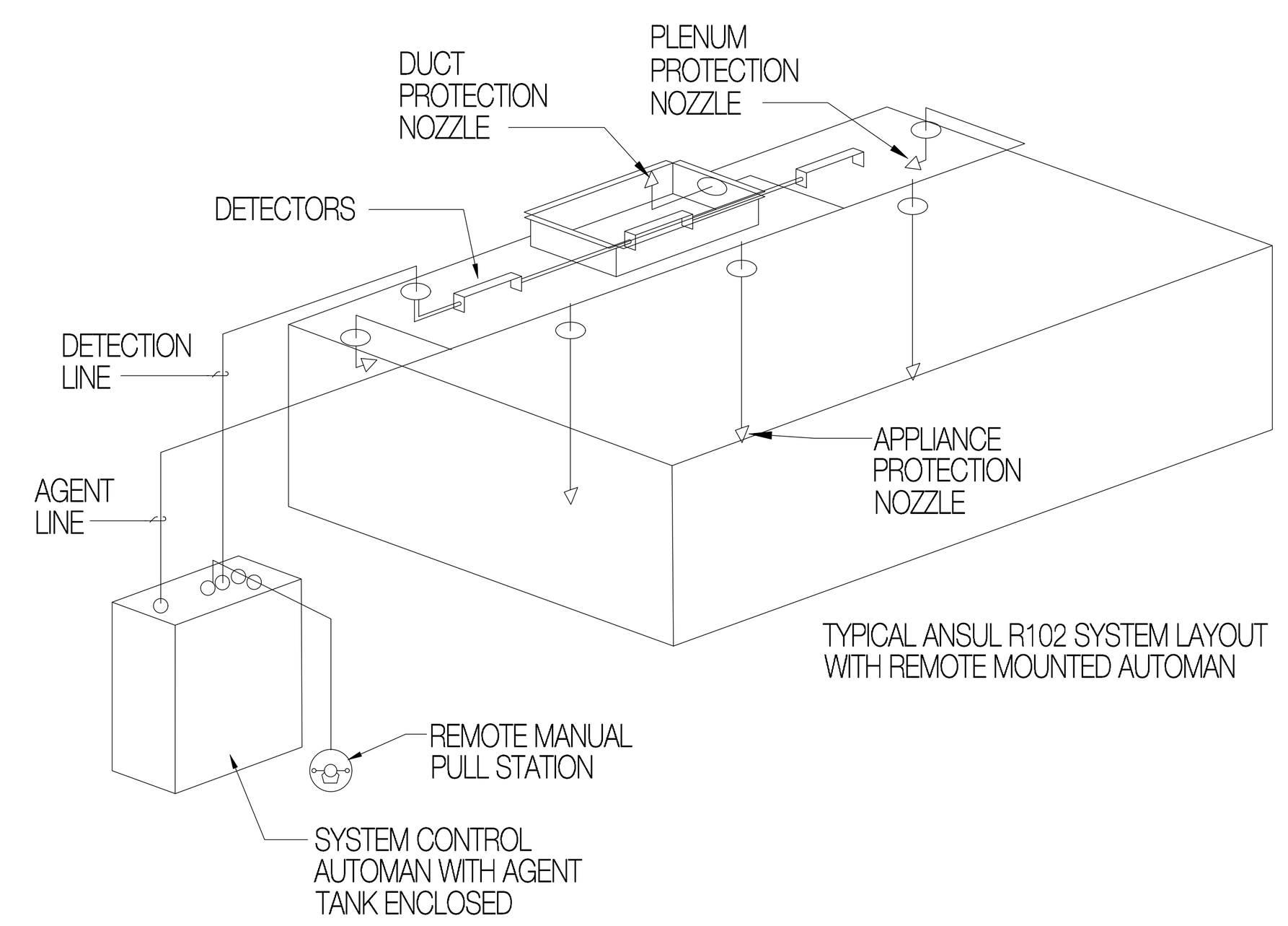
Sheet Number: M-104

ALTERATION - ASI 4 - 2-25-2025



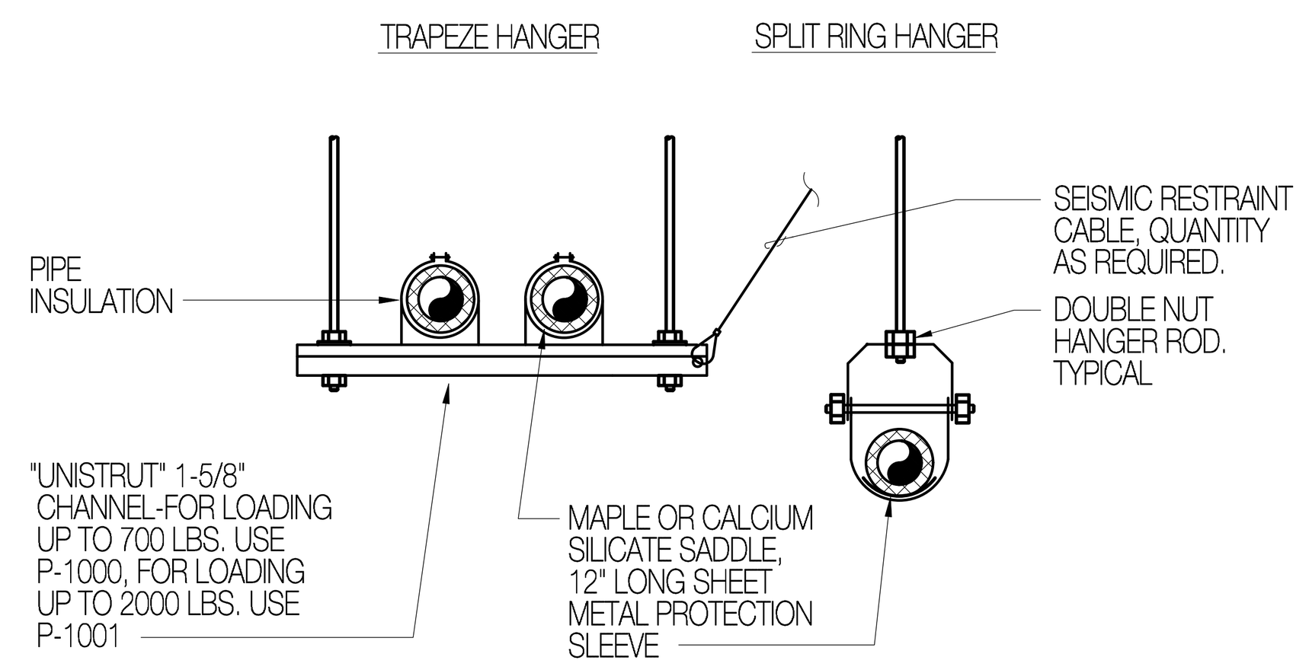
1/M105 EXHAUST HOOD DUCT CONNECTION DETAIL

SCALE: NONE



2/M105 ANSUL FIRE SUPPRESSION SYSTEM DETAIL

SCALE: NONE

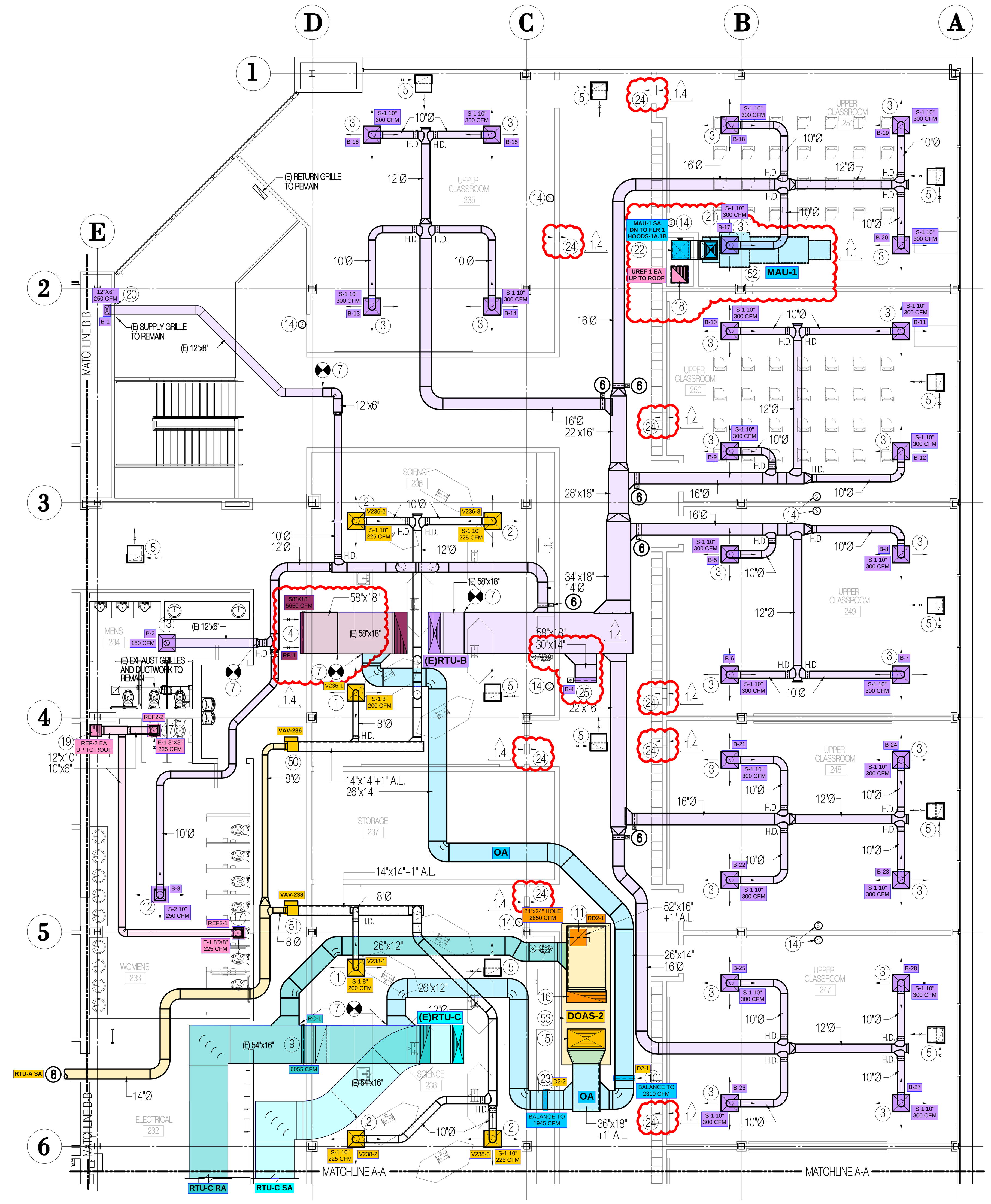


PIPE SIZE	MAX. SPACING	PIPE LOAD WEIGHT/FT. TOTAL	ROD SIZE
1" AND SMALLER	8	2.5/20	3/8"
1-1/4" - 2"	10	6/60	3/8"
2-1/2" - 4"	12	20/240	5/8"
5" - 8"	16	50/800	7/8"
10" - 14"	20	100/2000	7/8"

HANGERS SIZES AND SPACING ARE FOR SINGLE PIPES. HANGER ROD LOADING FOR TRAPEZE HANGERS SHALL NOT EXCEED THE TOTAL LOADING INDICATED. IF SMALLER ROD SIZE IS USED, DECREASE MAXIMUM SPACING SO THAT TOTAL LOADING IS NOT EXCEEDED.

3/M105 PIPE HANGER DETAIL

SCALE: NONE



SECOND FLOOR HVAC REMODEL PLAN (AREA B)

SCALE: 1/8" =1'-0"

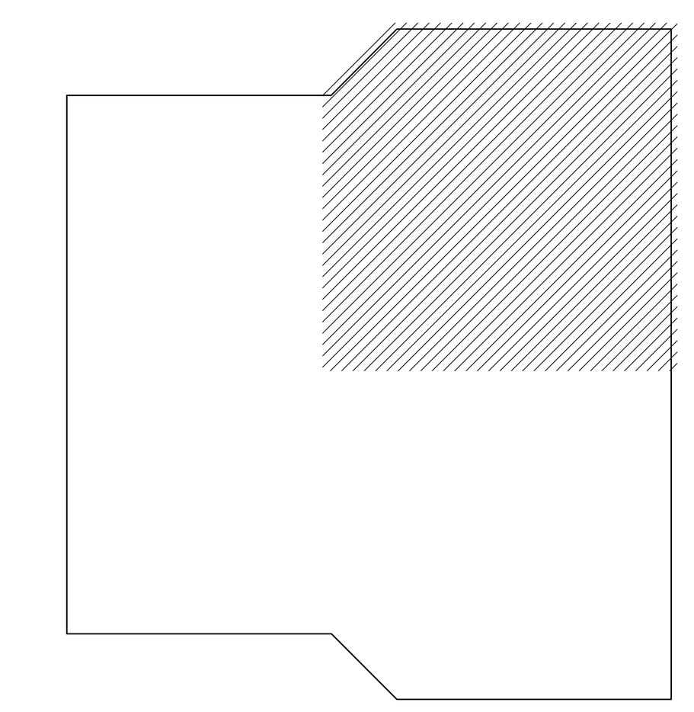
DRAWING NOTES

1. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
2. S-1 225 CFM, 10"Ø NK. S.A. DIFFUSER.
3. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
4. 58"x18" (FIELD VERIFY) BALANCE DAMPER IN RETURN AIR DUCTWORK, BALANCE DAMPER TO 5,650 CFM.
5. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
6. ZONE CONTROL DAMPER, SEE SHEET M-700 FOR ADDITIONAL INFORMATION.
7. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
8. 14"Ø SUPPLY DUCTWORK, SEE SECOND FLOOR HVAC PLAN (AREA A) SHEET M-104 FOR CONTINUATION.
9. 58"x18" (FIELD VERIFY) BALANCE DAMPER IN RETURN AIR DUCTWORK, BALANCE DAMPER TO 6,055 CFM.
10. BALANCE DOAS SUPPLY AIR DAMPER TO 2,310 CFM.
11. 24"x24" HOLE IN TOP OF DUCT WITH BALANCE DAMPER, ADJUST DAMPER TO 2,650 CFM.
12. S-2 250 CFM, 10"Ø NK. S.A. DIFFUSER.
13. RE-BALANCE EXISTING DIFFUSER TO 150 CFM.
14. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
15. 26"x26"+1"A.L. SUPPLY AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO OUTLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
16. 52"x16"+1"A.L. RETURN AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO INLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
17. E-1 225 CFM, 8"x8" NK. E.A. GRILLE WITH OPPOSED BLADE DAMPER.
18. 22"x22" CONTINUOUSLY WELDED 16 GAUGE BLACK IRON DUCTWORK RISE TO ROOFTOP EXHAUST FAN REF-1 ON ROOF, SEE DETAIL 1/M-106. WRAP DUCTWORK WITH 3M 5A, OR EQUAL, FIRE WRAP.
19. 16"x16" EXHAUST DUCTWORK RISE TO REF-2 ON ROOF, SEE DETAIL 4/M-104
20. RE-BALANCE EXISTING DIFFUSER TO 250 CFM.
21. 24"x24"+1"A.L. SUPPLY AIR DUCTWORK ON BOTTOM OF MAKEUP AIR UNIT. TRANSITION DUCTWORK TO OUTLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
22. 24"x24"+1"A.L. SUPPLY AIR DUCTWORK DROP DOWN CHASE. TERMINATE ACOUSTICAL LINING AFTER ELBOW AND 10'-0" OF STRAIGHT DUCT AND TRANSITION DUCT TO 24"x24". THE ENTIRE LENGTH OF THE SUPPLY DUCT FROM MAU OUTLET COLLAR TO TERMINATION AT THE HOOD INLET COLLARS SHALL BE INSULATED WITH R-9 DUCTWORK.
23. BALANCE DOAS SUPPLY AIR DAMPER TO 1,945 CFM.
24. 14"x18" TRANSFER AIR OPENING.
25. 30"x14" BYPASS DUCT WITH DAMPER AND STATIC PRESSURE CONTROLLER SET TO OPEN DAMPER AT BETWEEN 0.3" AND 0.6" (ADJUSTABLE)

1.4

EQUIPMENT NOTES

50	VAV 236	VAV BOX (COOLING ONLY)	
51	VAV 238	VAV BOX (COOLING ONLY)	
52	MAU 1	MAKEUP AIR UNIT	
53	DOAS 2	DEDICATED OUTDOOR AIR SYSTEM	



KEY PLAN

1.1 ASI #1 - 12/10/24

1.4 ASI #4 - 02/21/25

Revisions	Date
CONST. SET	11/15/24

Seal

STATE OF OHIO
NORMAN CUNNING
PE. 89976
08/28/24
REGISTERED
PROFESSIONAL ENGINEER

Consultant:
Mechanical Consulting Engineers
Cunning & Associates
4685 W. 11600 N. Tremonton, UT 84337
Email: norm@cunning-eng.com
Ph: (801) 726-5047

Project Name
CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

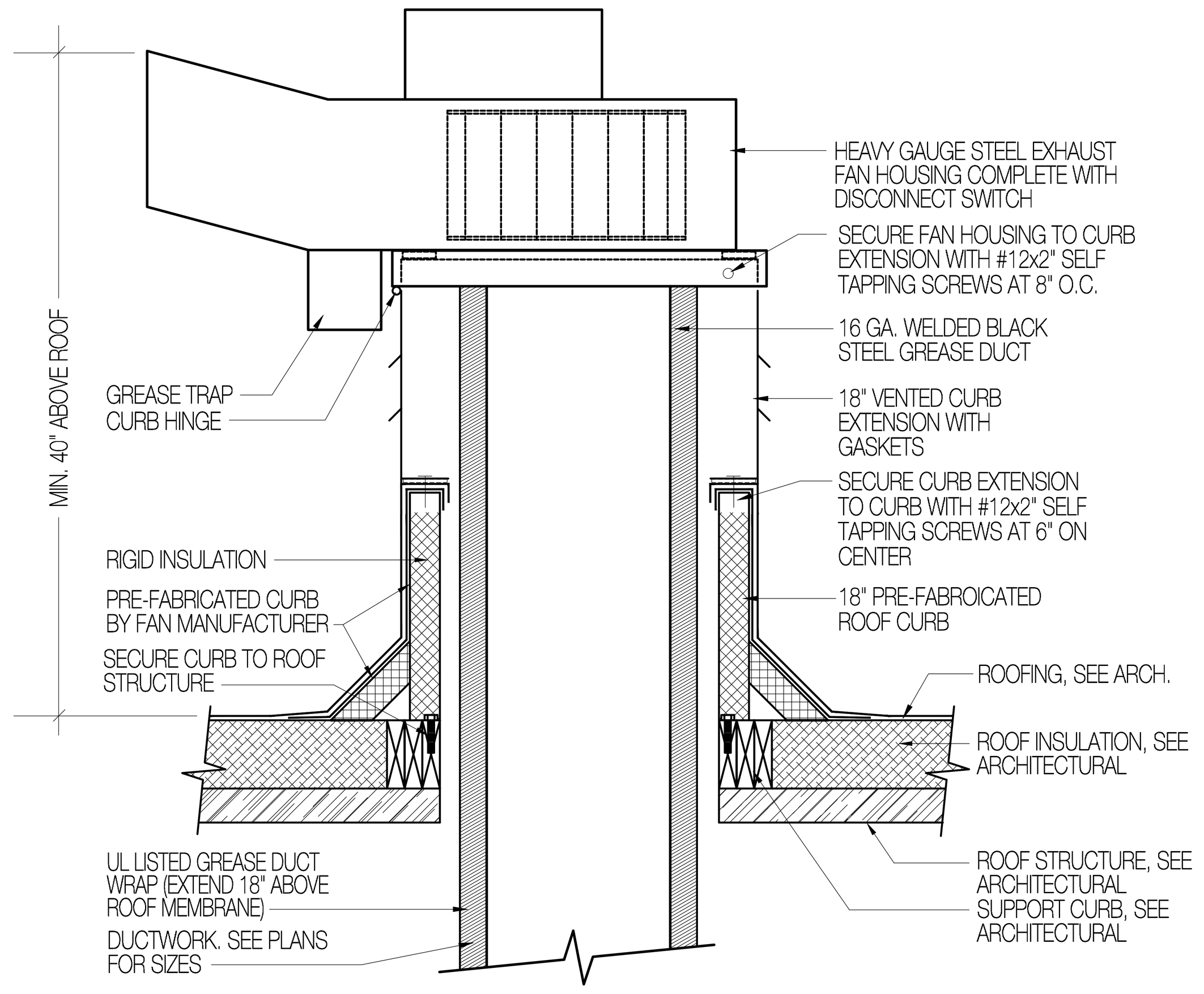
Project Number: 2424

Issue Date: 11/15/24

Drawing Title: SECOND FLOOR HVAC PLAN (AREA B)

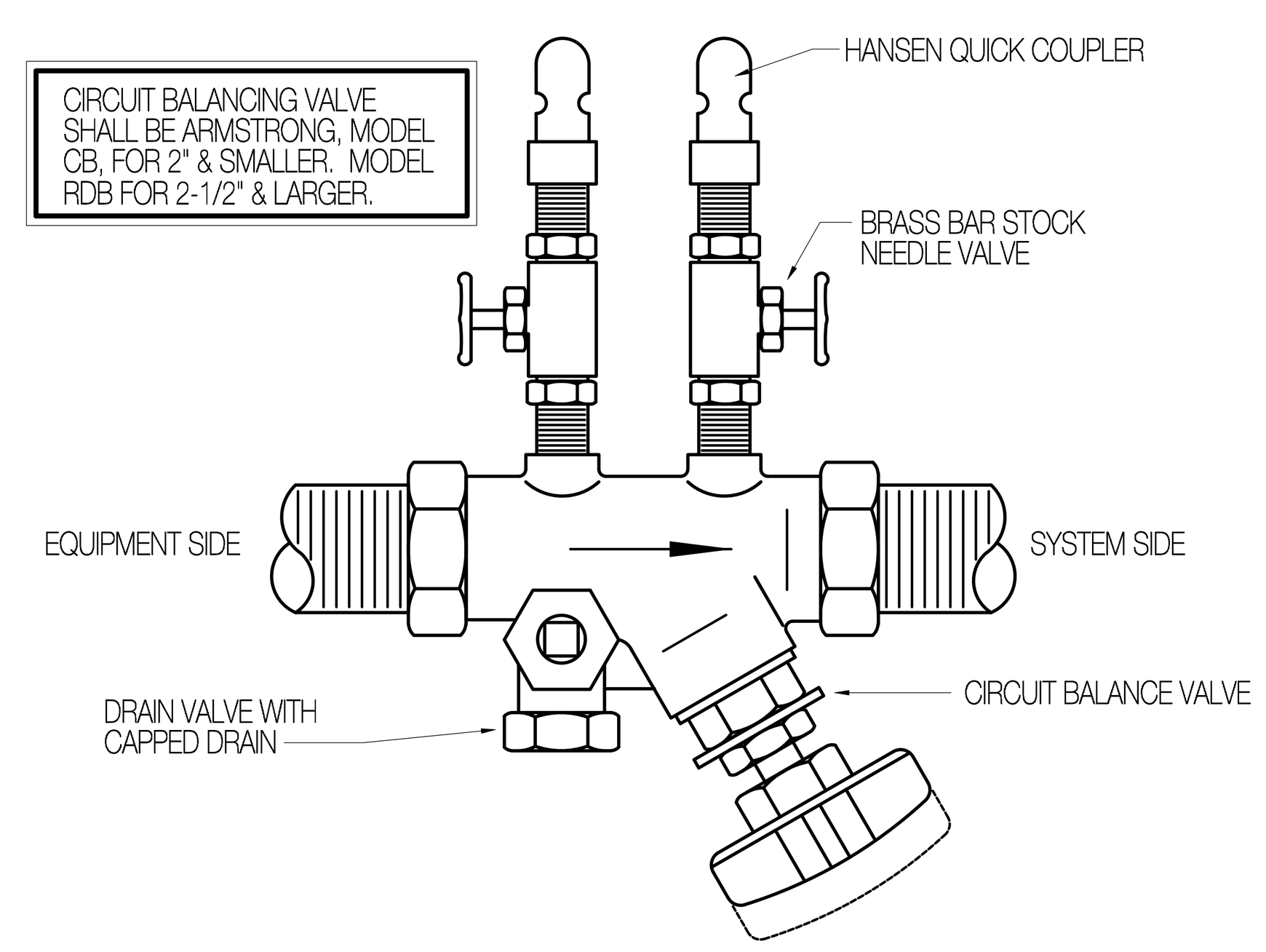
Sheet Number: M-105

ALTERATION - ASI 4 - 2-25-2025



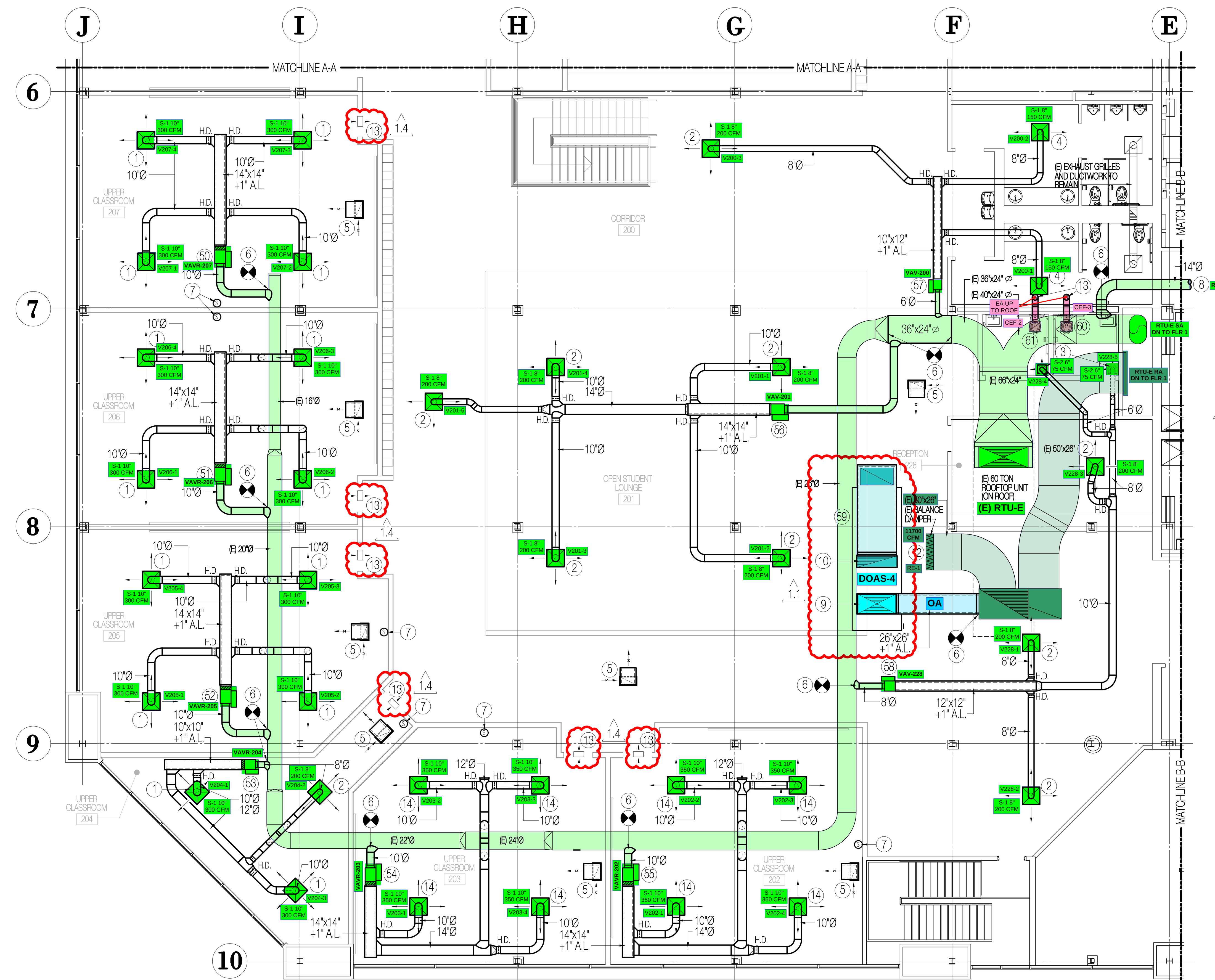
1 / M106 **KITCHEN ROOFTOP EXHAUST FAN AND CURB DETAIL**

SCALE: NONE



2 / M106 **CIRCUIT BALANCE VALVE DETAIL**

SCALE: NONE



SECOND FLOOR HVAC REMODEL PLAN (AREA C)

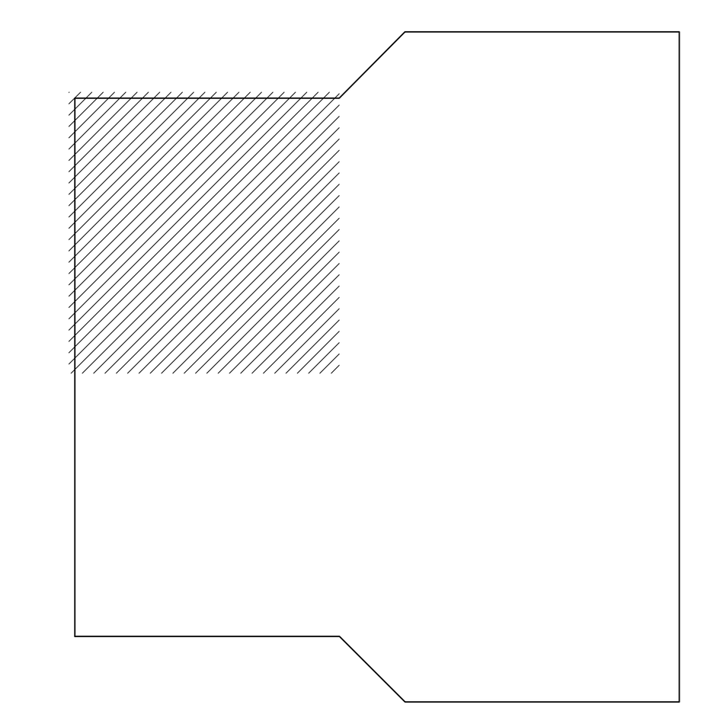
SCALE 1/8" =1'-0"

DRAWING NOTES

1. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
2. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
3. S-2 75 CFM, 6"Ø NK. S.A. DIFFUSER.
4. S-1 150 CFM, 8"Ø NK. S.A. DIFFUSER.
5. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
6. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
7. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
8. 14"Ø SUPPLY DUCTWORK, SEE SECOND FLOOR HVAC PLAN (AREA D) SHEET M-107 FOR CONTINUATION.
9. 26"x26"+1"A.L. SUPPLY AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO OUTLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
10. 52"x16"+1"A.L. RETURN AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO INLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
11. 46"x24" HOLE ON TOP OF DUCT.
12. RE-BALANCE EXISTING RETURN DAMPER TO 11,700 CFM.
13. 8"Ø EXHAUST DUCT RISE TO VENT CAP ON ROOF, SEE DETAIL 1/M-100 FOR ADDITIONAL INFORMATION.
14. S-1 350 CFM, 10"Ø NK. S.A. DIFFUSER.
15. 14"x18" TRANSFER AIR OPENING. (1.4)

EQUIPMENT NOTES

No.	Tag	Description	No.	Tag	Description
50	VAVR 207	VAV BOX W/ REHEAT	56	VAV 201	VAV BOX (COOLING ONLY)
51	VAVR 206	VAV BOX W/ REHEAT	57	VAV 200	VAV BOX (COOLING ONLY)
52	VAVR 205	VAV BOX W/ REHEAT	58	VAV 228	VAV BOX (COOLING ONLY)
53	VAVR 204	VAV BOX W/ REHEAT	59	DOAS 3	DEDIC. OUTDOOR AIR SYSYTEM
54	VAVR 203	VAV BOX W/ REHEAT	60	CEF 2	CEILING EXHAUST FAN
55	VAVR 202	VAV BOX W/ REHEAT	61	CEF 3	CEILING EXHAUST FAN



KEY PLAN

1.1 ASI #1 - 12/10/24

1.4 ASI #4 - 02/21/25

Revisions	Date
CONST. SET	11/15/24

Seal: STATE OF OHIO — NORMAN CUNNING PE. 89976 — 08/28/24 REGISTERED — PROFESSIONAL ENGINEER

Consultant:
Mechanical Consulting Engineers
Cunning & Associates
4685 W. 11600 N. Tremonton, UT 84337
Email: norm@cunning-eng.com
Ph: (801) 726-5047

Project Name: CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number: 2424

Issue Date: 11/15/24

Drawing Title: SECOND FLOOR HVAC PLAN (AREA C)

Sheet Number: M-106

ALTERATION - ASI 4 - 2-25-2025

CLEATECH LLC
Critical Laboratory Solutions

☎ 888-216-8033
☎ 714-754-6668

Ductless Exhaust Hoods-Portable Fume Hoods

Price: RFQ
Product Code: 1100-2-C
Manufacturer: CLEATECH LLC
Made in: U.S.A

Lead-time Usually ship in 2-3 week
Description: Portable Ductless Exhaust Hoods are negative-pressure turnkey hoods ventilate and purifies fumes, excellent choice for laboratories. These hoods creates the negative air pressure that pulls contaminated air up and away from the operator's breathing zone. The air is directed into the filter chamber which houses various filter media (HEPA / Carbon) dependent on the type of particulate / vapor is generated.

Ductless exhaust hoods are available in width of 24", 32" models feature 1250 CFM impeller blower. Fan filter housing and work surface are constructed from corrosion resistant polypropylene. Walls are available in choice of clear Abrasion Resistant Polycarbonate or Static dissipative PVC. Static-dissipative surfaces minimize the risk of ESD electrostatic discharge under the hood. Polycarbonate AR offers abrasion and chemical resistance along with the same properties as regular Polycarbonate material.

Standard Features:

- Overall Dimensions: 24" W x 18.5" D x 29.25" H
- Work Area Dimensions: 23.5" W x 17.75" D x 17" H
- ¼" Thick Static-Dissipative PVC Walls and Shield. Static-dissipative PVC has a slight grey tint and is chemically resistant to most common corrosive agents. SD PVC eliminates static charges and keeps the dry box clean since it does not attract particles from the air. Surface resistivity of 106 – 108 ohms per square. Provides for ESD control without the need for ionization
- ¼" Polypropylene Work Surface and Fan Filter Housing. Polypropylene is highly resistant to corrosive agents.
- Fume hoods can be positioned on nearly any bench.
- Two hinged access shields that increase airspeed by restricting the air flow.

Standard Options:

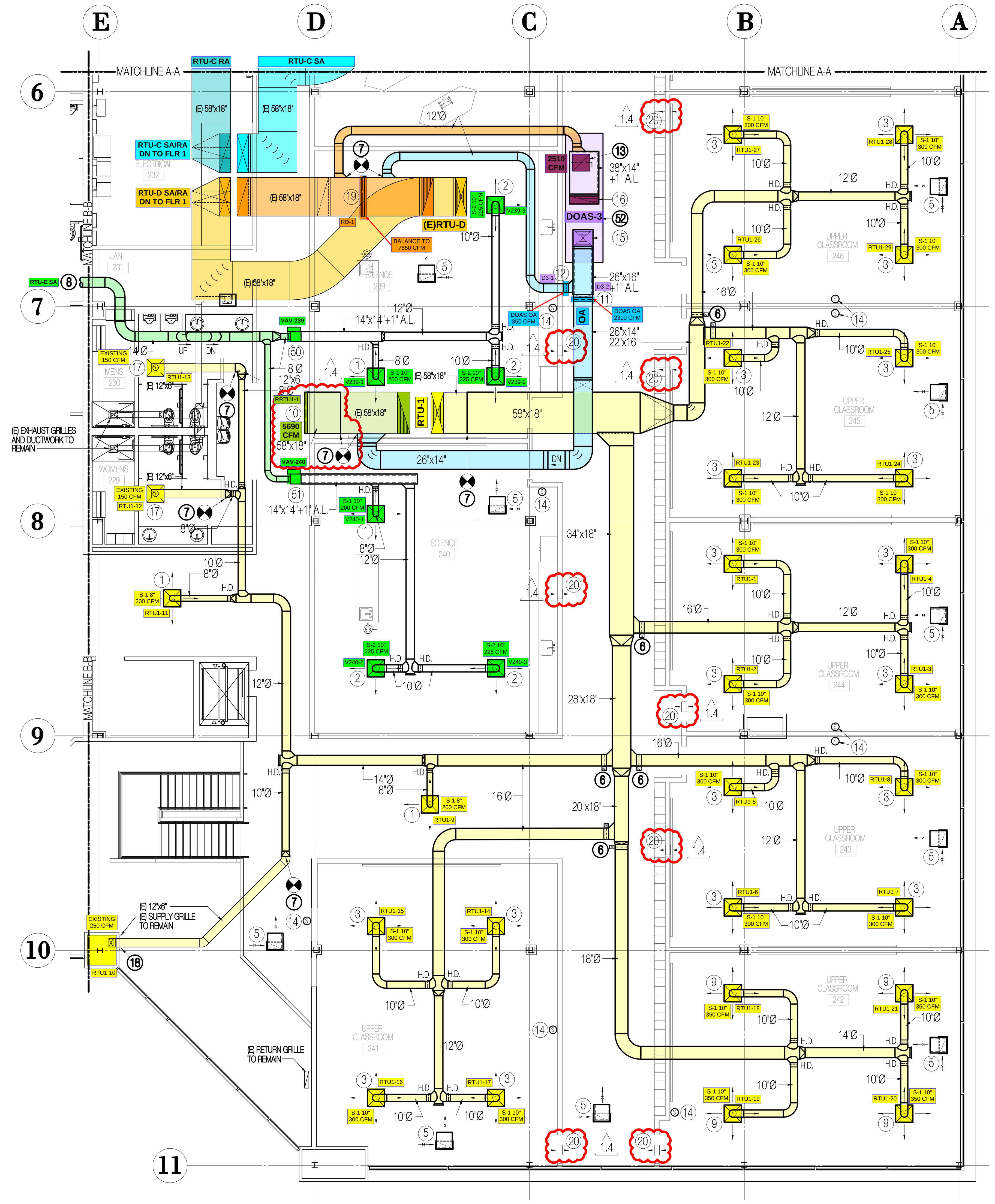
- Activated charcoal carbon filter to remove common organic fumes
- Airflow alarm monitor mounted on the side wall.
- Touchscreen airflow alarm monitor mounted on the side wall.
- Epoxy powder coated steel stand with caster (including two locking). Available in 30" and 35" height with an optional upgrade to leveling mounts.
- Choice of HEPA or ULPA filter. HEPA filters are 99.97% efficient at removing 0.3μm or larger particles. ULPA filters that are 99.997% efficient at removing 0.12μm or larger particles.

Package Info:

- Package Type: Crate
- Package Dimensions: 30" W x 24" D x 40" H
- Approximate Gross Weight: 110 lbs.

Cleatech LLC. www.cleatech.com, Phone: 1-(714) 745-6668, FAX: 1-(714) 740-5058 , Email:Info@cleatech.com

FUME HOOD CUTSHEET



SECOND FLOOR HVAC REMODEL PLAN (AREA D)

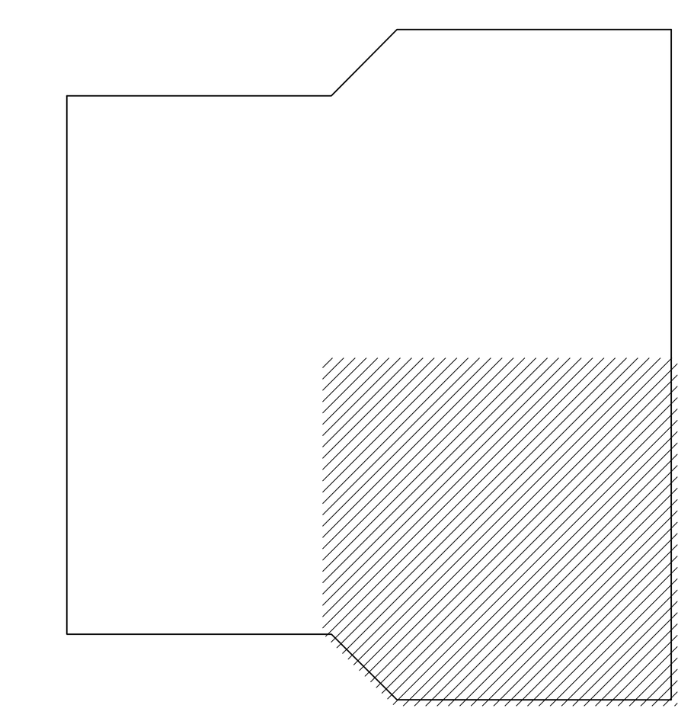
SCALE 1/8" =1'-0"

DRAWING NOTES

1. S-1 200 CFM, 8"Ø NK. S.A. DIFFUSER.
2. S-2 225 CFM, 10"Ø NK. S.A. DIFFUSER.
3. S-1 300 CFM, 10"Ø NK. S.A. DIFFUSER.
4. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
5. R-1 10"x22" NK. R.A. GRILLE WITH SOUND BOOT, SEE DETAIL 4/M-100.
6. ZONE CONTROL DAMPER, SEE SHEET M-700 FOR ADDITIONAL INFORMATION.
7. FIELD VERIFY EXACT LOCATION OF EXISTING DUCTWORK AND CONNECT NEW TO EXISTING, SEAL NEW CONNECTIONS AIR TIGHT.
8. 14"Ø SUPPLY DUCTWORK, SEE SECOND FLOOR HVAC PLAN (AREA C) SHEET M-106 FOR CONTINUATION.
9. S-1 350 CFM, 10"Ø NK. S.A. DIFFUSER.
10. 58"x18" (FIELD VERIFY) BALANCE DAMPER IN RETURN AIR DUCTWORK, BALANCE DAMPER TO 5,690 CFM.
11. BALANCE DOAS SUPPLY AIR DAMPER TO 2,310 CFM.
12. BALANCE DOAS SUPPLY AIR DAMPER TO 350 CFM.
13. 24"x24" HOLE IN TOP OF DUCT WITH BALANCE DAMPER, ADJUST DAMPER TO 2,510 CFM.
14. PROVIDE AND INSTALL NEW SENSOR, MOUNT SENSOR AT 48" A.F.F.
15. 26"x16"+1"A.L. SUPPLY AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO OUTLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
16. 38"x14"+1"A.L. RETURN AIR DUCTWORK ON BOTTOM OF ROOFTOP UNIT. TRANSITION DUCTWORK TO INLET COLLAR SIZE AND CONNECT WITH FLEXIBLE CONNECTION PER DETAIL 3/M-102.
17. RE-BALANCE EXISTING DIFFUSER TO 150 CFM.
18. RE-BALANCE EXISTING DIFFUSER TO 250 CFM.
19. 58"x18" (FIELD VERIFY) BALANCE DAMPER IN RETURN AIR DUCTWORK, BALANCE DAMPER TO 7,650 CFM.
20. 14"x18" TRANSFER AIR OPENING. (1.4)

EQUIPMENT NOTES

50	VAV 239	VAV BOX (COOLING ONLY)
51	VAV 240	VAV BOX (COOLING ONLY)
52	DOAS 3	DEDICATED OUTDOOR AIR SYSTEM

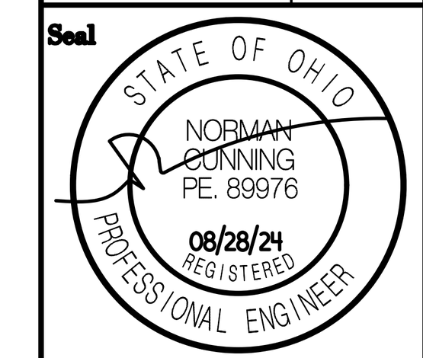


KEY PLAN

1.4 ASI #4 - 02/21/25

Revisions	Date
CONST. SET	11/15/24

Seal



Consultant:
Mechanical Consulting Engineers
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Email: norm@cunning-eng.com
Ph: (801) 726-5047

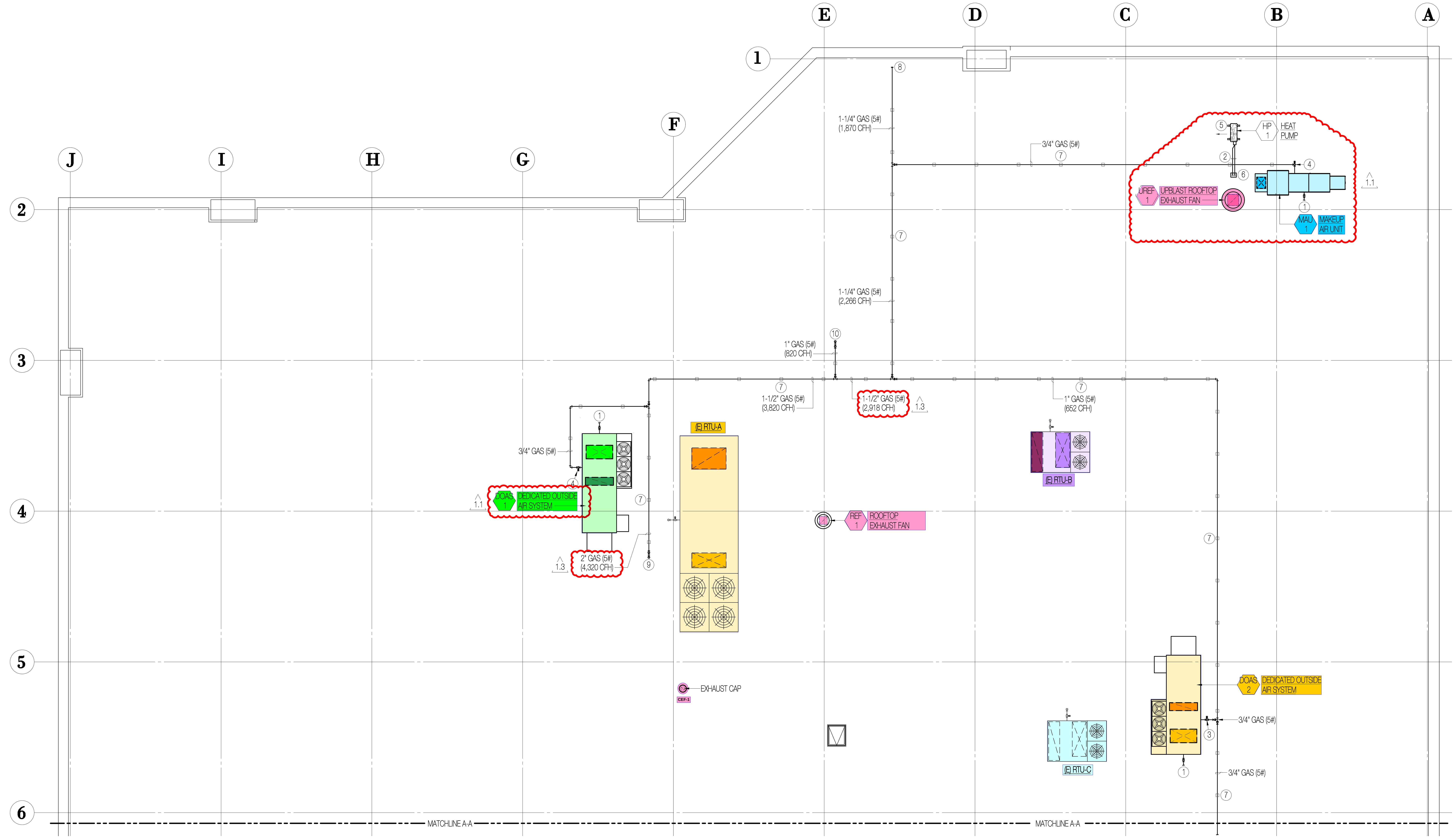
Project Name
CINCINNATI CLASSICAL ACADEMY
10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

Drawing Title
SECOND FLOOR HVAC PLAN (AREA D)

Sheet Number
M-107

ALTERATION - ASI 4 - 2-25-2025



HVAC / PLUMBING ROOF PLAN (AREA A)

SCALE 1/8" =1'-0"

1.1 ASI #1 - 12/10/24

1.3 ASI #3 - 02/03/25

DRAWING NOTES

1. LINE SIZE COPPER CONDENSATE DRAIN PIPING, EXTEND TO ROOF SURFACE PER DETAIL 8/M-500.
2. MIRO MODEL 2.5-CS PIPE SUPPORT TYPICAL.
3. GAS PIPING CONNECTION TO APPLIANCE, SEE GAS FLOW DIAGRAM SHEET P-500 FOR ADDITIONAL INFORMATION. CONNECT EACH APPLIANCE TO BRANCH WITH 6" DIRT LEG, GAS PRESSURE REGULATOR AND CORRUGATED STAINLESS STEEL TUBE FLEXIBLE CONNECTION.
4. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS PIPING SERVING EXISTING ROOFTOP UNIT. CONNECT NEW GAS PIPING TO EXISTING RISER, BEFORE REGULATOR AND SHUTOFF, AND EXTEND AS INDICATED. SEE GAS FLOW DIAGRAM SHEET P-600 FOR ADDITIONAL INFORMATION.
5. EQUIPMENT SUPPORT, SEE DETAIL 10/M-500.
6. WEATHERPROOF PIPING PENETRATION BOX, SEE DETAIL 11/M-500.
7. MIRO MODEL 3-R-2, OR EQUAL PIPE SUPPORT, TYPICAL OF ALL.
8. CAPPED 1-1/4" (5#) GAS PIPING FOR FUTURE EXPANSION.
9. 2" GAS (4,320 CFH) PIPING DROP, SEAL PIPING PENETRATION DROP WATER TIGHT SIMILAR TO DETAIL 3/P-400. SEE SECOND FLOOR PLUMBING REMODEL PLAN (AREA B) SHEET P-105 FOR CONTINUATION. (3)
10. 1" GAS (820 CFH) PIPING DROP, SEAL PIPING PENETRATION DROP WATER TIGHT SIMILAR TO DETAIL 3/P-400. SEE SECOND FLOOR PLUMBING REMODEL PLAN (AREA B) SHEET P-105 FOR CONTINUATION.

Revisions	Date
CONST. SET	11/15/24

Seal

STATE OF OHIO NORMAN CUNNING PE. 89976 08/28/24 REGISTERED PROFESSIONAL ENGINEER

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Project Name: CINCINNATI CLASSICAL ACADEMY 10200 ANDERSON WAY CINCINNATI OH. 45242

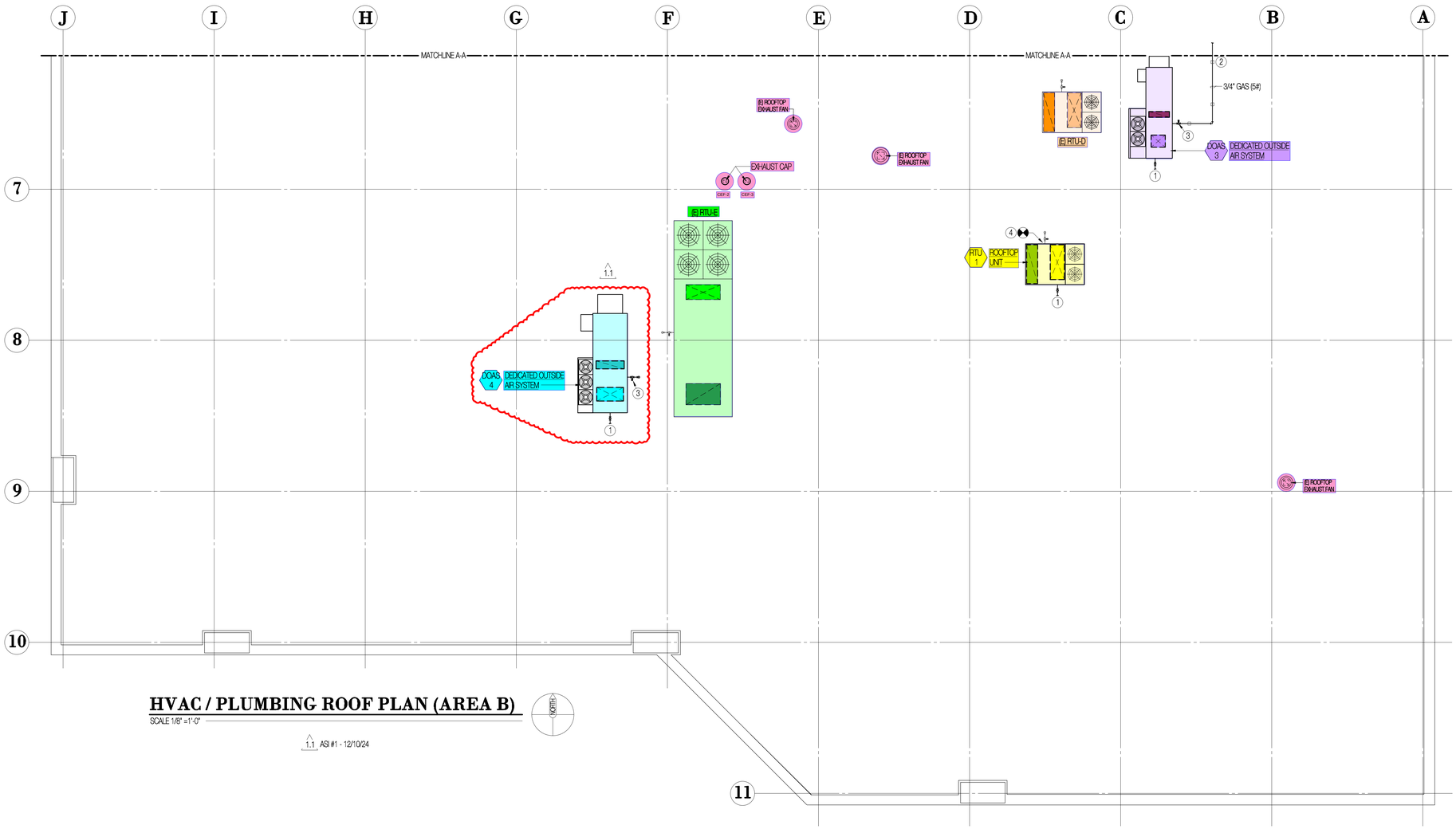
Project Number: 2424

Issue Date: 11/15/24

Drawing Title: HVAC / PLUMB. ROOF PLAN (AREA A)

Sheet Number: HP 100

ALTERATION - ASI 4 - 2-25-2025



HVAC / PLUMBING ROOF PLAN (AREA B)

SCALE 1/8" =1'-0"

1.1 ASI #1 - 12/10/24

DRAWING NOTES

1. LINE SIZE COPPER CONDENSATE DRAIN PIPING, EXTEND TO ROOF SURFACE PER DETAIL 8/M-500.
2. MIRO MODEL 3-R-2, OR EQUAL PIPE SUPPORT, TYPICAL OF ALL.
3. GAS PIPING CONNECTION TO APPLIANCE, SEE GAS FLOW DIAGRAM SHEET P-600 FOR ADDITIONAL INFORMATION. CONNECT EACH APPLIANCE TO BRANCH WITH 6" DIRT LEG, GAS PRESSURE REGULATOR AND CORRUGATED STAINLESS STEEL TUBE FLEXIBLE CONNECTION.
4. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING GAS PIPING AND CONNECT TO NEW ROOFTOP UNIT. SEE GAS FLOW DIAGRAM SHEET P-600 FOR ADDITIONAL INFORMATION.

Revisions	Date
CONST. SET	11/15/24

Seal

STATE OF OHIO
NORMAN CONNING
PE: 89597S
08/28/24
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10200 ANDERSON WAY
CINCINNATI OH. 45242

Project Number	Issue Date
2424	11/15/24

Drawing Title
HVAC / PLUMB. ROOF PLAN (AREA B)

Sheet Number
HP 101