

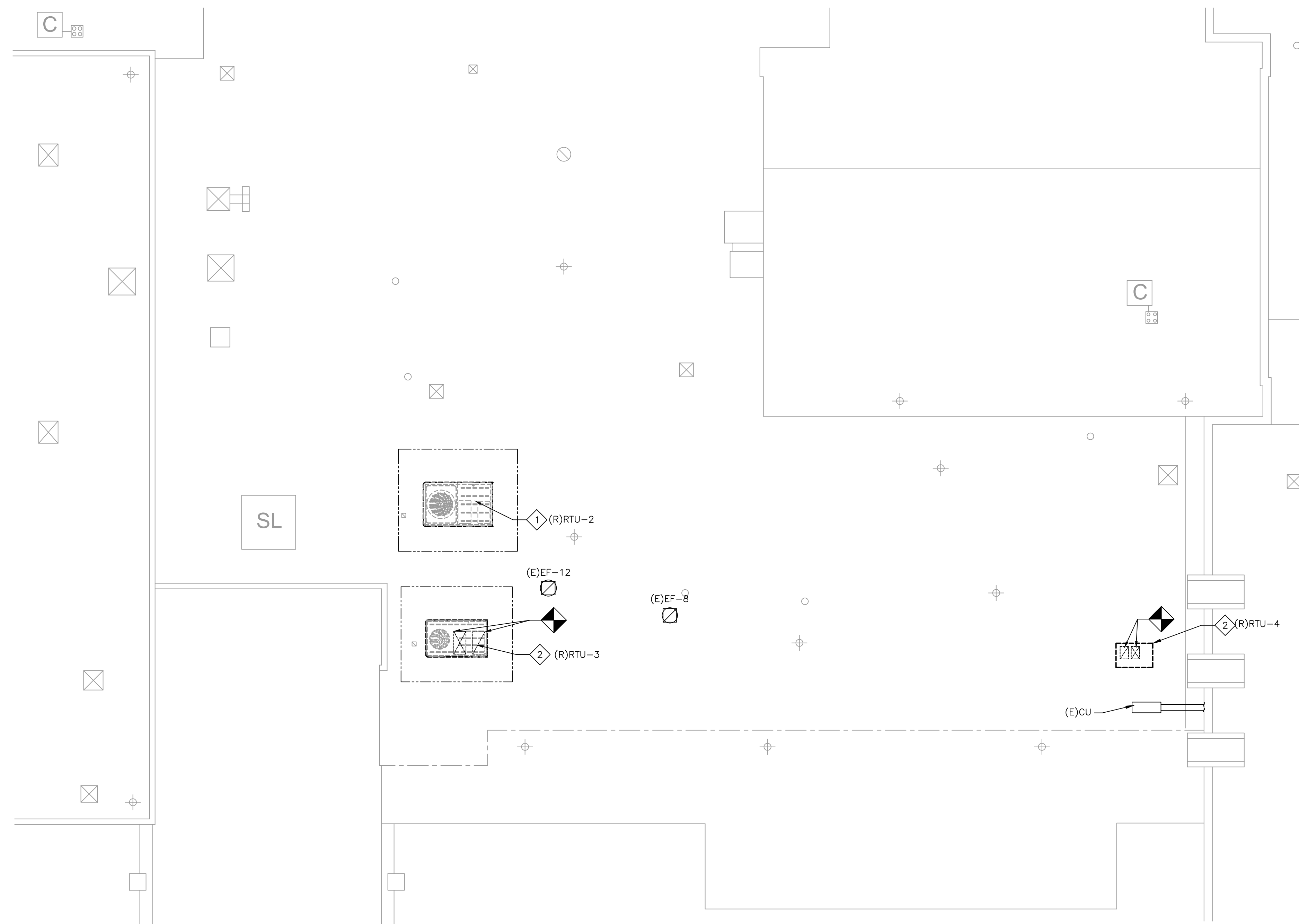
PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

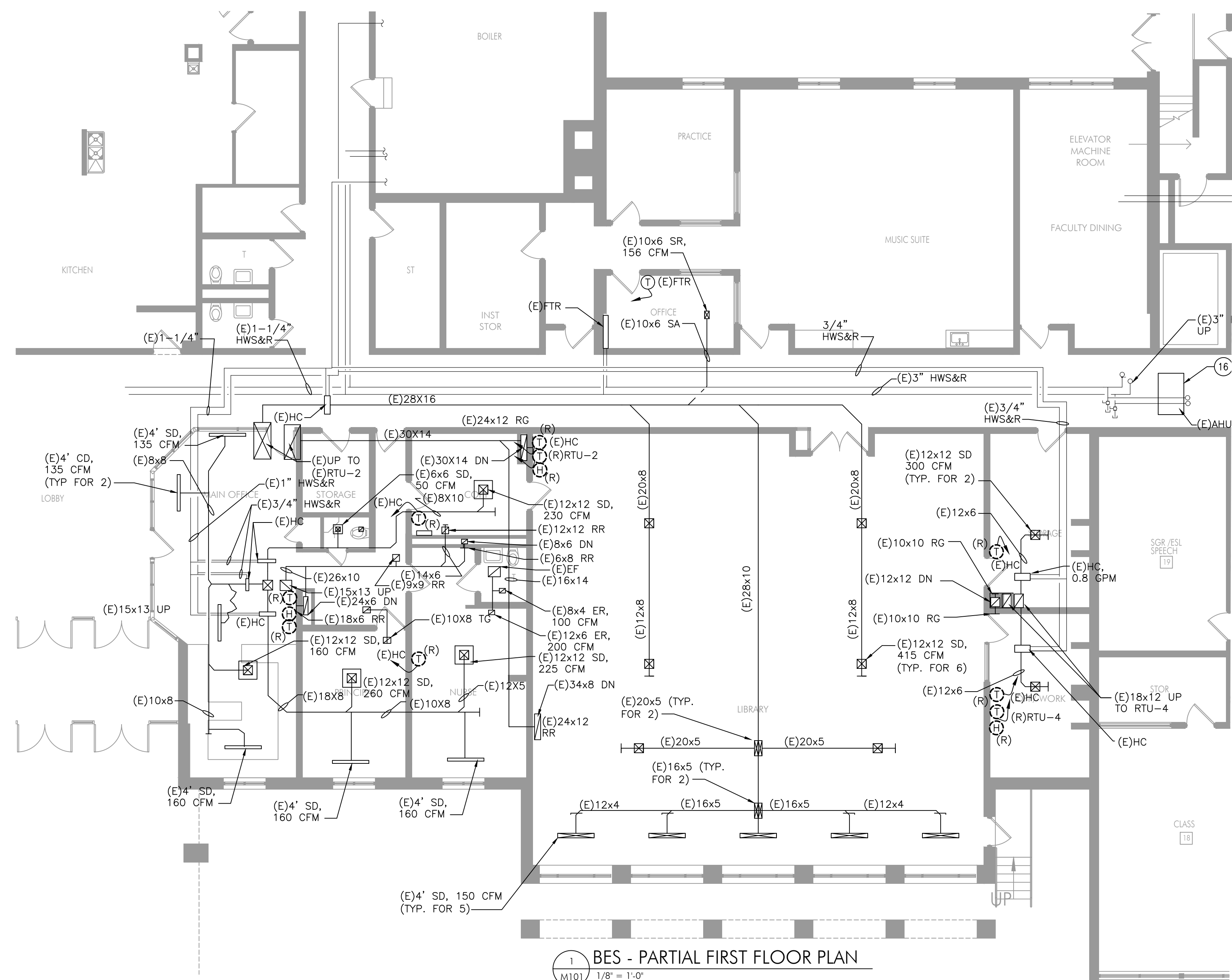
ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPFP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

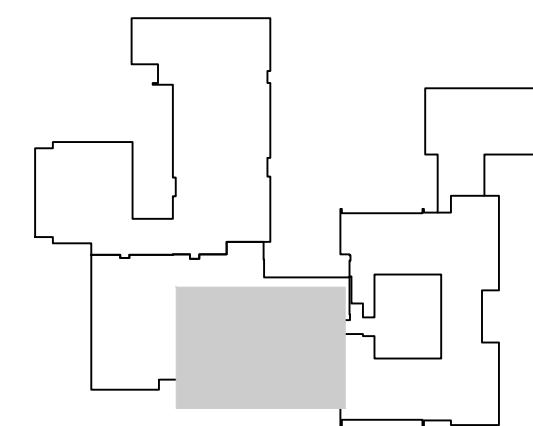
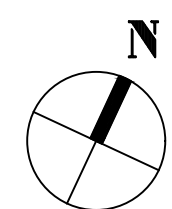
STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600



2 BES - PARTIAL DEMOLITION ROOF PLAN
M101 1/8" = 1'-0"



1 BES - PARTIAL FIRST FLOOR PLAN
M101 1/8" = 1'-0"



ISSUE HISTORY

[illegible]

SHEET TITLE

BES - MECHANICAL DEMO PLANS

DRAWING NUMBER

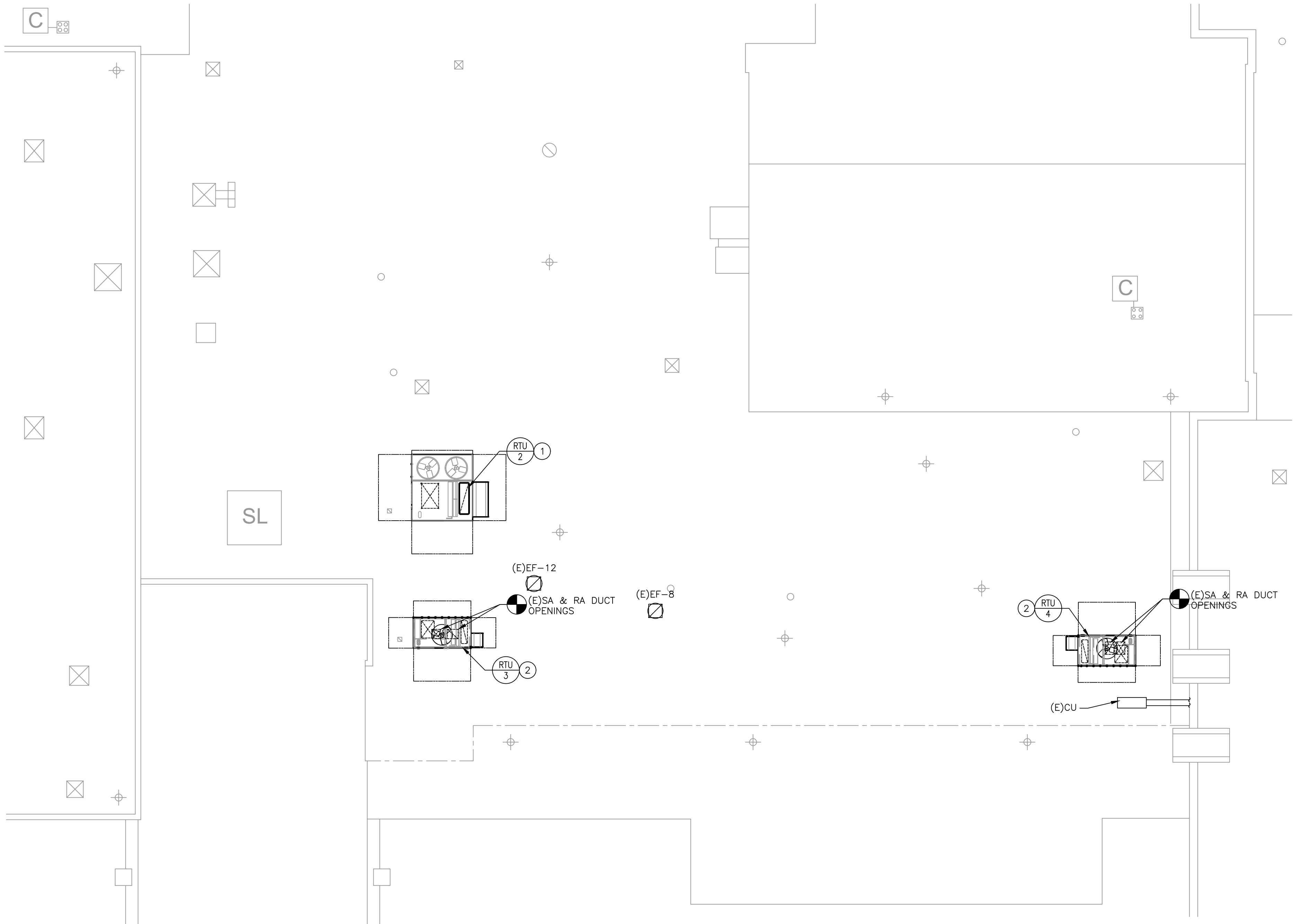
M101

NOTES:

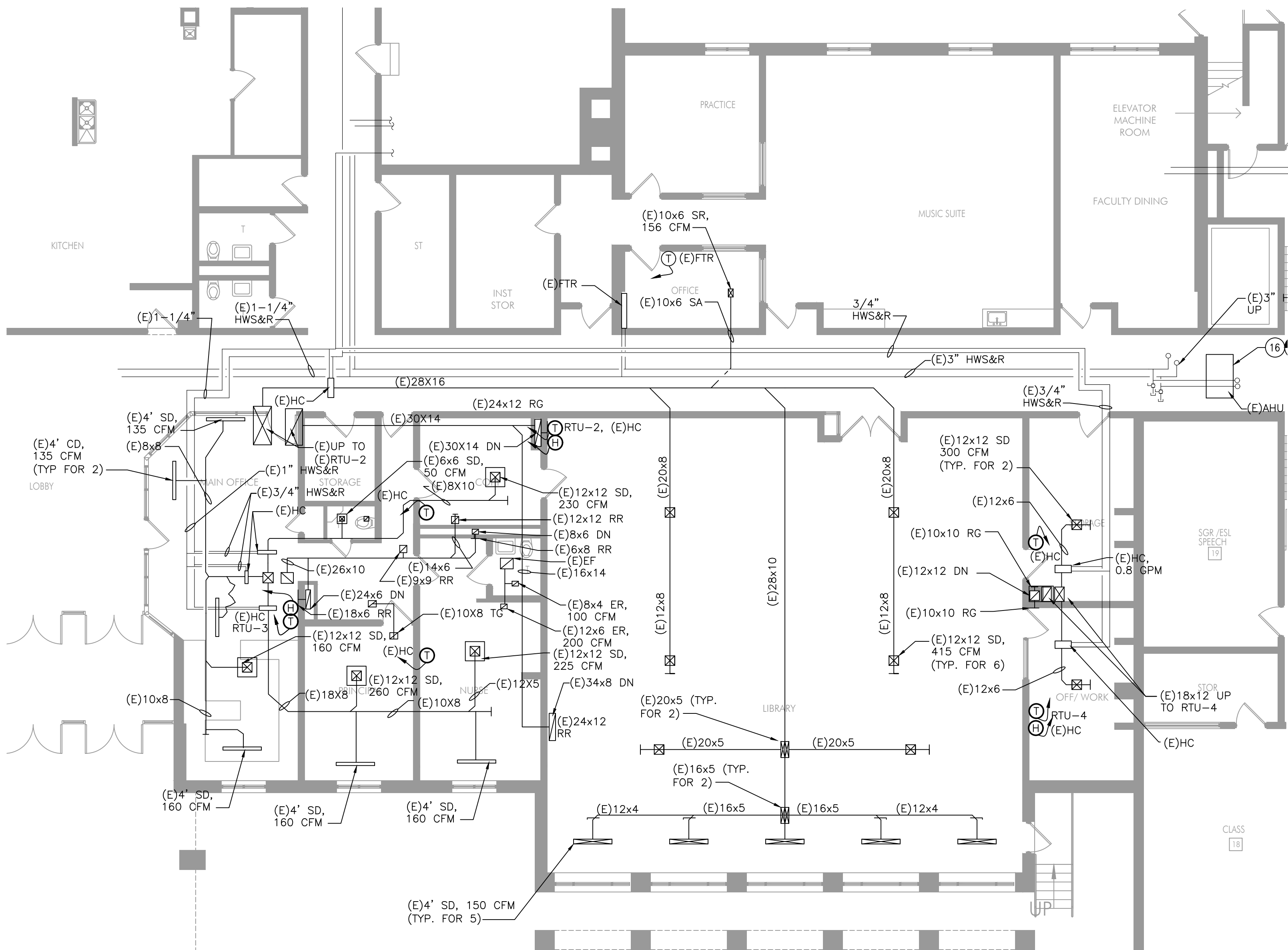
1. ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED.
2. REFER TO DRAWING M001 FOR GENERAL NOTES.

NEW WORK KEY NOTES:

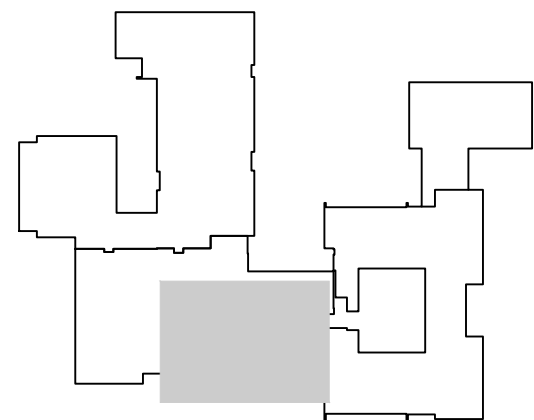
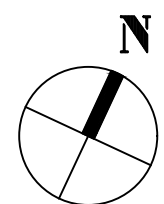
- 1 MOUNT CURB ADAPTOR ON EXISTING ROOF CURB.
- 2 PROVIDE SOLID BOTTOM CURB WITH FIELD CUT OPENINGS ON NEW SUPPORT STRUCTURE. PROVIDE NEW DUCT SLEEVES FROM EXISTING SUPPLY AND RETURN DUCTS UP TO NEW CURB.



2 BES - PARTIAL DEMOLITION ROOF PLAN
M102 1/8\"/>



1 BES - PARTIAL FIRST FLOOR PLAN
M102 1/8\"/>



ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

**BES -
MECHANICAL
NEW WORK PLANS**

DRAWING NUMBER

M102

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

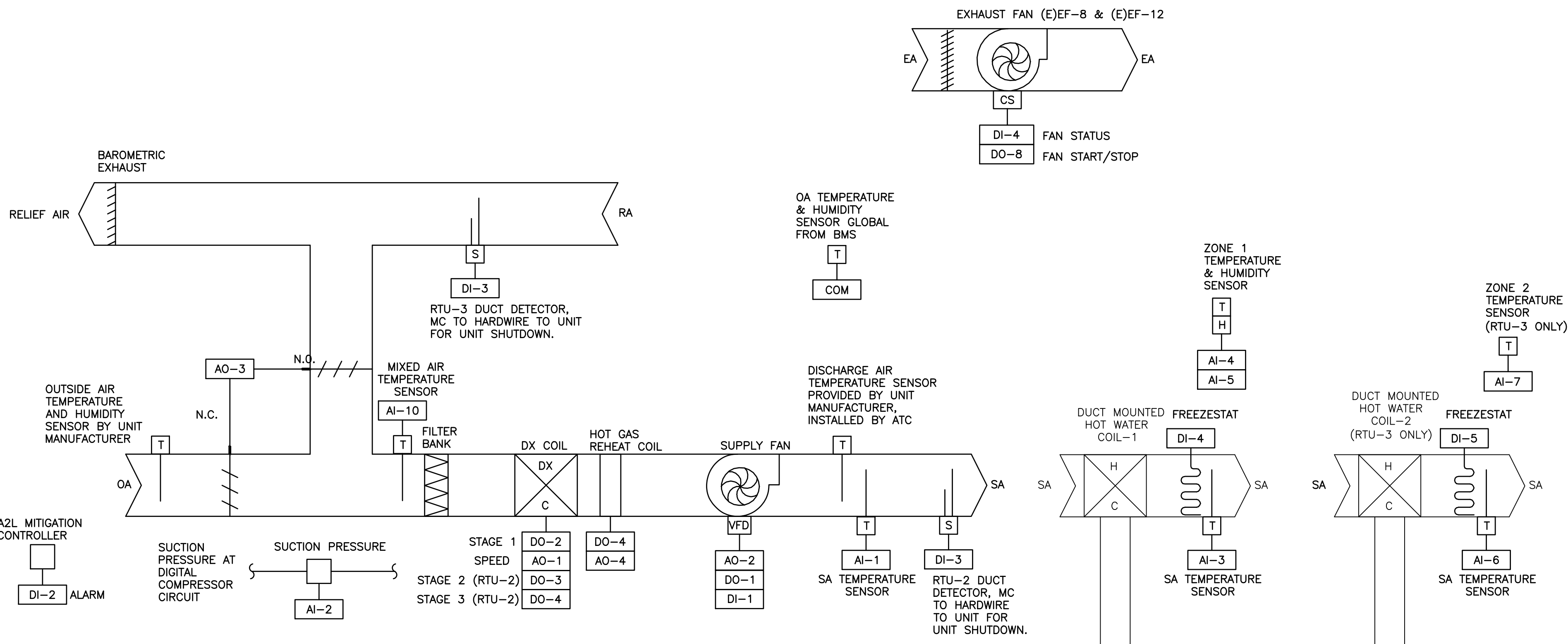
MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

PACKAGED ROOFTOP UNIT SCHEDULE																																					
UNIT TAG	AREA SERVED	MAX SUPPLY CFM	MINIMUM COOLING CFM	MINIMUM OA CFM	SUPPLY FAN					D/X COOLING @ 95 °F										HOT GAS REHEAT			ELECTRICAL CHARACTERISTICS					EER	MAXIMUM DIMENSIONS L x W x H	AIRFLOW ARRANGEMENT	OPERATING WEIGHT LBS.	BASIS OF DESIGN MANUFACTURER AND MODEL NO.					
					ESP IN. WC	TSP IN. WC	BHP	HP	FAN RPM	ENT AIR		LVG AIR		FACE VEL FPM	GROSS TOTAL MBH	GROSS SENSIBLE MBH	NET TOTAL MBH	NET SENSIBLE MBH	CONDENSER FAN MOTOR			COMPRESSOR	CAPACITY MBH	LVG AIR		VOLTS	PHASE						CYCLE	MCA	MOCP		
										DB °F	WB °F	DB °F	WB °F						NO.	H.P. EA.	FLA EA.			NO.	RLA EA.											DB °F	WB °F
RTU-2	LIBRARY	3,400	1,400	550	2.0	3.1	2.6	3	1897	78.2	63.9	52.7	51.7	233	116.4	93.3	109.0	85.8	2	1/3	2.8	2	17.9	13.8	70.1	71.9	59.4	208	3	60	52	70	12.9	111"x96"x51"	DOWNFLOW	2,000	AAON RNA-011
RTU-3	MAIN OFFICE	1,800	900	500	1.5	2.6	1.4	2	1720	79.6	65.9	54.3	54.0	360	62.6	58.1	48.8	44.3	1	1/3	2.8	1	17.9		39.8	75.0	61.9	208	3	60	33	50	12.0	83"x45"x51"	DOWNFLOW	1,100	AAON ROA-005
RTU-4	LIBRARY OFFICE WK/ROOM	550	550	50	0.9	1.1	0.2	1	1089	76.4	63.0	49.4	50.5	105	21.8	16.0	21.1	15.3	1	1/3	2.8	1	10.3		15.1	75.0	59.0	208	1	60	24	30	11.9	83"x45"x51"	DOWNFLOW	900	AAON ROA-002

1. PROVIDE ALL UNITS COMPLETE W/ FACTORY MOUNTED, NON-FUSED DISCONNECT SWITCH.
2. PROVIDE RTU-2 & 3 COMPLETE W/VARIABLE CAPACITY LEAD COMPRESSOR AND RTU-4 W/ 2-STAGE COMPRESSOR.
3. PROVIDE ALL UNITS COMPLETE W/ 0-100% OUTSIDE AIR COMPARATIVE ENTHALPY ECONOMIZER DAMPERS AND HOODS.
4. PROVIDE ALL UNITS COMPLETE W/SUPPLY FAN WITH VFD DRIVE & HIGH EFFICIENCY MOTOR.
5. PROVIDE ALL UNITS COMPLETE W/ HOT GAS REHEAT COIL WITH RH SENSOR.
6. PROVIDE ALL UNITS COMPLETE W/ 4" PLEATED MERV 13 FILTERS.
7. PROVIDE ALL UNITS COMPLETE W/ BLOWER PROVING SWITCH.

8. PROVIDE ALL UNITS COMPLETE W/ DIRTY FILTER SWITCH.
9. PROVIDE ALL UNITS COMPLETE W/ DISCHARGE AIR TEMPERATURE SENSOR.
10. PROVIDE ALL UNITS COMPLETE W/ VARIABLE SPEED CONDENSER FANS WITH HEAD PRESSURE CONTROL AND VFD.
11. PROVIDE ALL UNITS COMPLETE W/ TERMINAL STRIP CONTROL INTERFACE. REFER TO SPECIFICATION 237433 FOR ADDITIONAL REQUIREMENTS.
12. PROVIDE ALL UNITS COMPLETE W/ CONVENIENCE LIGHT AND CONVENIENCE OUTLET WIRED TO LINE SIDE OF DISCONNECT.
13. PROVIDE RTU-2 COMPLETE W/ CURB ADAPTOR FOR EXISTING ROOF CURB.
14. PROVIDE RTU-3 & 4 COMPLETE W/ 20" SOLID BOTTOM PLENUM CURB WITH FIELD CUT OPENINGS.
15. PROVIDE ALL UNITS COMPLETE W/ A SHORT CIRCUIT CURRENT RATING OF 35 KAIC.



RTU-2 & 3

NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE BUILDING WIDE COMMUNICATION CABLING (BUS) AND SHALL INTEGRATE ALL POINTS BACK TO SUPERVISORY CONTROLLER. MOUNT NEW CONTROLLER IN UNIT ENCLOSURE AND PROVIDE 120/24V TRANSFORMER FOR POWER. THE ATC CONTRACTOR SHALL INSTALL THE DISCHARGE AIR TEMPERATURE SENSOR FURNISHED BY THE UNIT MANUFACTURER. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR OCCUPANCY. THE OPERATOR WILL BE ABLE TO ADJUST THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. REFER TO SPECIFICATION 230993 FOR SEQUENCE OF OPERATION.

ROOFTOP UNIT POINTS LIST															
POINT TAG	POINT DESCRIPTION	INPUTS										OUTPUTS		REMARKS	
		SAFETY SHUT DOWN	STATUS	OCC OVERRIDE	PRESSURE	TEMPERATURE	HUMIDITY	SETPOINT	FEEDBACK	SPEED	CO2	START/STOP ON/OFF	DIGITAL		ANALOG
													DAMPER ACTUATOR		MODULATE SPEED
DI-1	SUPPLY FAN STATUS		X											X	1
DO-1	SUPPLY FAN ENABLE											X			1
DO-2	DX COOLING STAGE 1 ENABLE											X			1
DO-3	DX COOLING STAGE 2 ENABLE											X			1
DO-4	DX COOLING STAGE 3 ENABLE											X			1
AO-1	COMPRESSOR SPEED												X		1
DO-4	HOT GAS REHEAT ENABLE											X			1
AI-1	RTU SUPPLY AIR TEMPERATURE	X				X								X	
AO-2	SUPPLY FAN SPEED												X		1
AO-3	ECONOMIZER												X		1
AO-4	HOT GAS REHEAT RESET SIGNAL												X		1
COM	OUTSIDE AIR TEMPERATURE					X									
AI-2	SUCTION PRESSURE				X										1
COM	OUTSIDE AIR HUMIDITY						X								
AO-5	HEATING VALVE ZONE 1												X		
AO-6	HEATING VALVE ZONE 2												X		
AO-7	HEATING VALVE ZONE 3												X		
AI-3	ZONE 1 SA TEMPERATURE					X									
AI-4	ZONE 1 TEMPERATURE					X									
AI-5	ZONE 1 HUMIDITY						X								
AI-6	ZONE 2 SA TEMPERATURE					X									
AI-7	ZONE 2 TEMPERATURE					X									
AI-8	ZONE 3 TEMPERATURE					X									
AI-9	ZONE 3 SA TEMPERATURE					X									
AI-10	MIXED AIR TEMPERATURE					X									
DI-2	A2L ALARM													X	1
DI-3	SMOKE DETECTOR	X	X											X	
DI-4	FREEZE STAT	X	X		X									X	
DI-5	FREEZE STAT	X	X		X									X	
DI-6	FREEZE STAT	X	X		X									X	

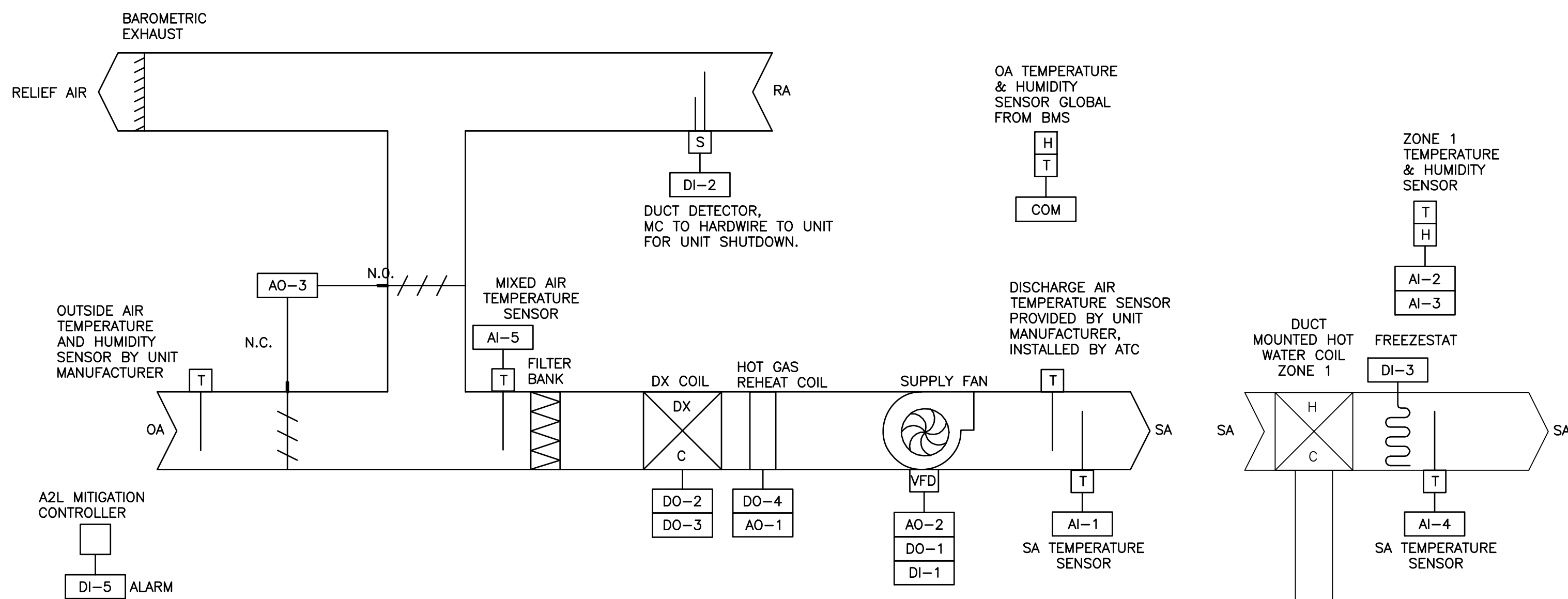
1. POINT PROVIDED ON RTU TERMINAL STRIP

2 RTU-2 & RTU-3 CONTROLS

M103/ NO SCALE

1 BES - SCHEDULES

M103/ NO SCALE



NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE BUILDING WIDE COMMUNICATION CABLING (BUS) AND SHALL INTEGRATE ALL POINTS BACK TO SUPERVISORY CONTROLLER. MOUNT NEW CONTROLLER IN UNIT ENCLOSURE AND PROVIDE 120/24V TRANSFORMER FOR POWER. THE ATC CONTRACTOR SHALL INSTALL THE DISCHARGE AIR TEMPERATURE SENSOR FURNISHED BY THE UNIT MANUFACTURER. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR OCCUPANCY. THE OPERATOR WILL BE ABLE TO ADJUST THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. REFER TO SPECIFICATION 230993 FOR SEQUENCE OF OPERATION.

ROOFTOP UNIT POINTS LIST																
POINT TAG	POINT DESCRIPTION	INPUTS								OUTPUTS			REMARKS			
		SAFETY SHUT DOWN	DIGITAL				ANALOG				DIGITAL	ANALOG				
			STATUS	OCC OVERRIDE	PRESSURE	TEMPERATURE	HUMIDITY	SETPOINT	FEEDBACK	SPEED	CO2	START/STOP ON/OFF		DAMPER ACTUATOR	MODULATE SPEED	ALARM
DI-1	SUPPLY FAN STATUS		X											X	1	
DO-1	SUPPLY FAN ENABLE										X				1	
DO-2	DX COOLING STAGE 1 ENABLE										X				1	
DO-3	DX COOLING STAGE 2 ENABLE										X				1	
DO-4	HOT GAS REHEAT ENABLE										X				1	
AO-1	HOT GAS REHEAT RESET SIGNAL												X		1	
DI-2	RETURN AIR SMOKE DETECTOR	X	X											X		
AI-1	SUPPLY AIR TEMPERATURE	X			X									X		
AO-2	SUPPLY FAN SPEED											X			1	
AO-3	ECONOMIZER											X			1	
COM	OUTSIDE AIR TEMPERATURE				X											
COM	OUTSIDE AIR HUMIDITY					X										
DI-3	ZONE 1 FREEZESTAT	X			X									X		
AO-4	HEATING VALVE ZONE 1											X				
AI-2	ZONE 1 TEMPERATURE					X										
AI-3	ZONE 1 HUMIDITY					X										
AI-4	ZONE 1 SUPPLY AIR TEMPERATURE					X										
DI-4	ZONE 2 FREEZESTAT	X			X									X		
AO-5	HEATING VALVE ZONE 2											X				
AI-5	ZONE 2 TEMPERATURE					X										
AI-6	ZONE 2 SUPPLY AIR TEMPERATURE					X										
DI-5	A2L ALARM		X											X	1	

1. POINT PROVIDED ON RTU TERMINAL STRIP

3 RTU-4 CONTROLS

M103/ NO SCALE

ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

BES -
MECHANICAL
SCHEDULES &
CONTROLS

DRAWING NUMBER

M103

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPFP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

[illegible]

CHS - MECHANICAL DEMOLITION FLOOR PLANS

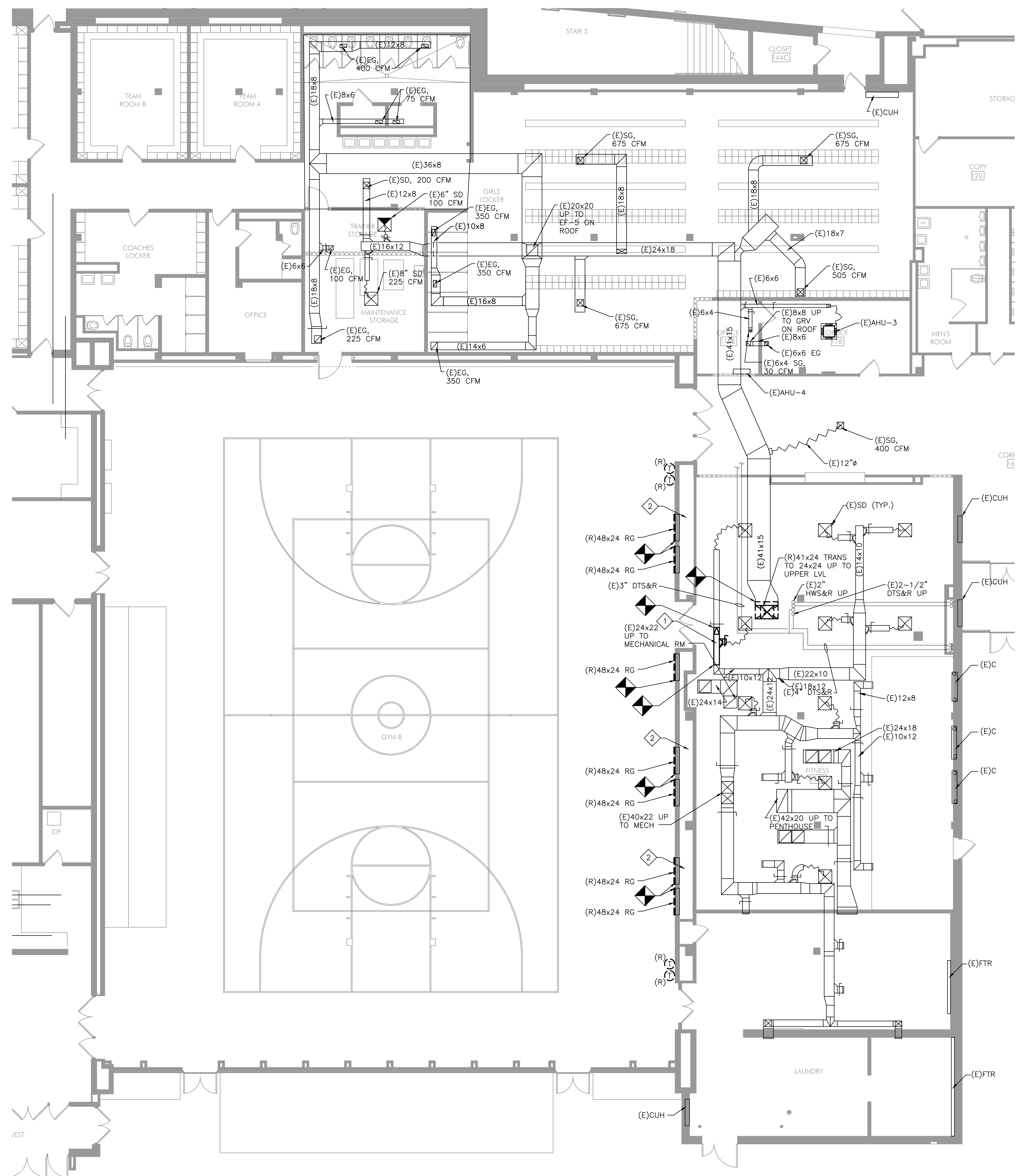
M201

1. REFER TO M001 FOR FURTHER GENERAL NOTES.

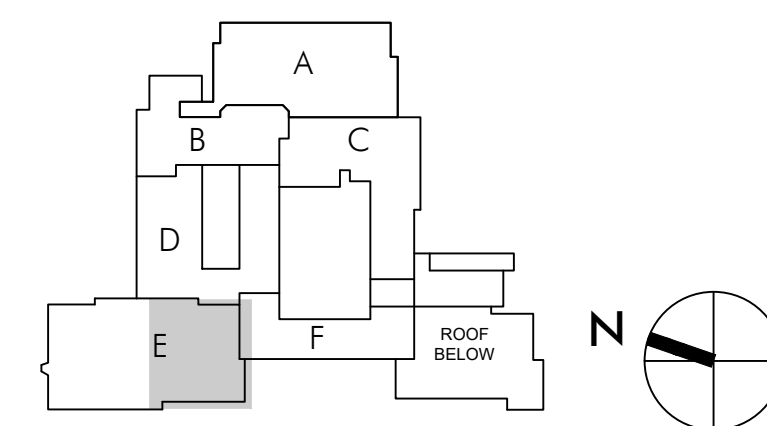
2. PROVIDE DUCT CLEANING OF ALL AHU-11
DUCTWORK AND ALL AHU-9, 10 & 11 RETURN
CHASES SHOWN ON THIS DWG & PER
SPECIFICATION 230130.

1 TEMPORARY REMOVE AND REINSTALL DUCTWORK AS REQUIRED FOR INSTALLATION OF NEW STEEL SUPPORTS ABOVE.

- 2 CLEAN DUST AND DEBRIS FROM ALL WALLS AND FLOORS OF RETURN CHASE. UTILIZE MECHANICAL AGITATION METHODOLOGY AS NOTED IN SPECIFICATION 230130.

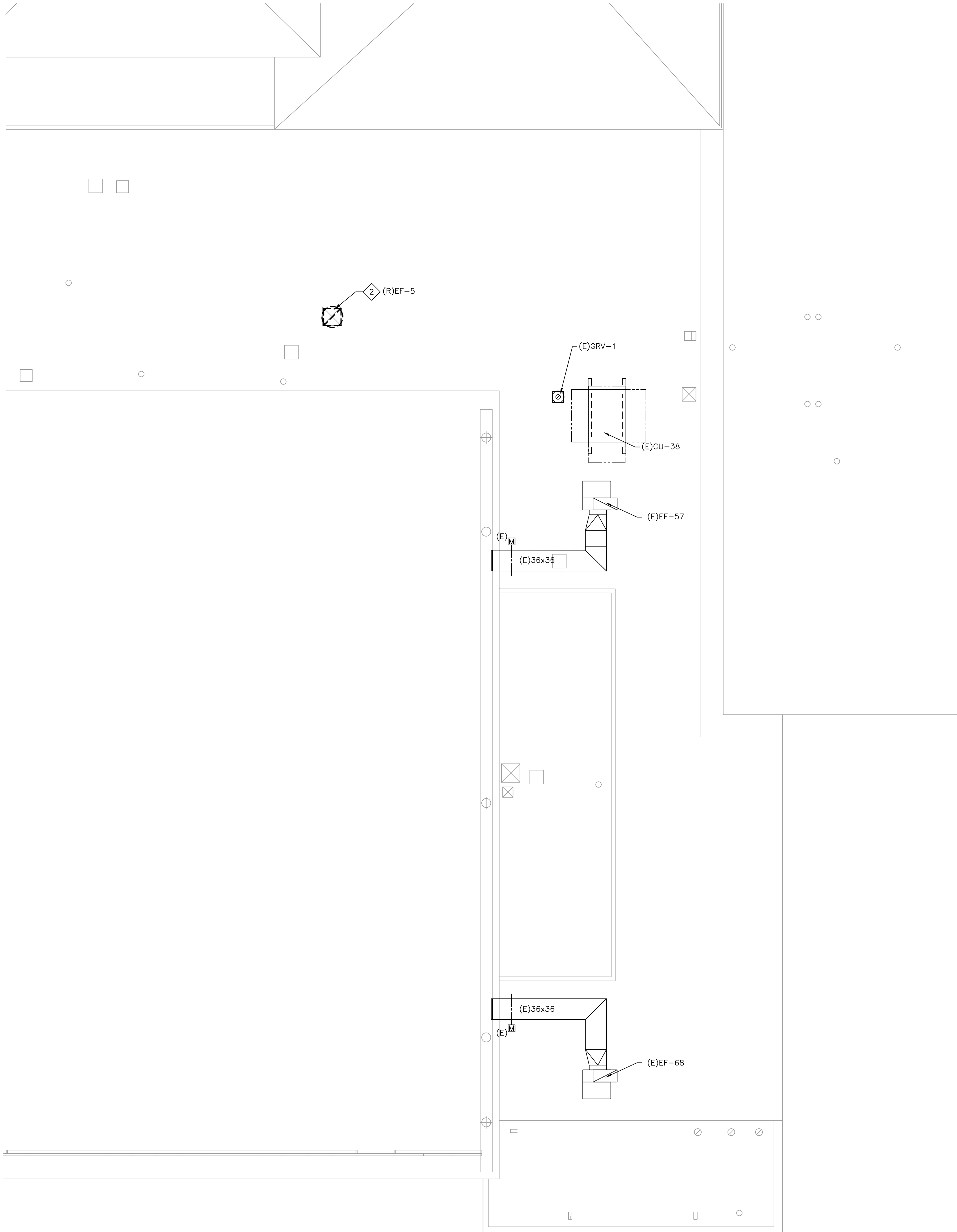


CHS - DEMO WORK 1ST FLOOR PLAN

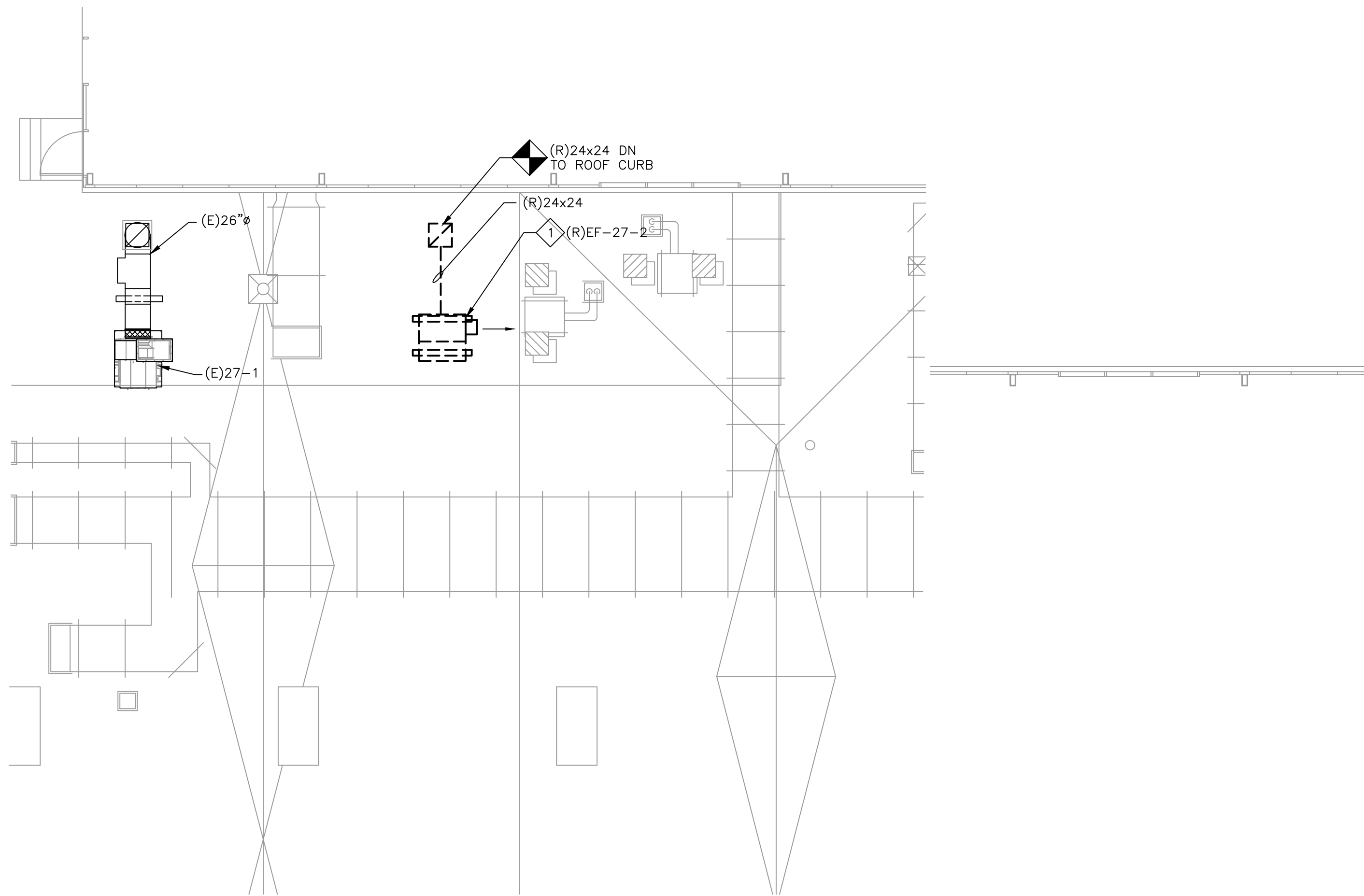


KEY PLAN

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1 CHS - DEMO WORK PARTIAL ROOF PLAN
M202 1/8" = 1'-0"



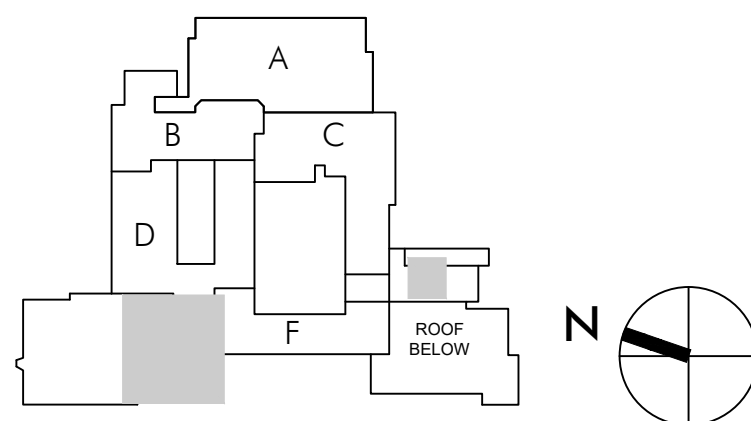
2 CHS - DEMO WORK PARTIAL ROOF PLAN
M202 1/8" = 1'-0"

GENERAL NOTES:

1. REFER TO M001 FOR FURTHER GENERAL NOTES.
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL ROOF PATCHING & FLASHING. ROOF FLASHING SHALL BE PERFORMED BY AN AUTHORIZED ROOFING CONTRACTOR FOR THE EXISTING FIRESTONE EPDM ROOF. ROOF IS CURRENTLY UNDER WARRANTY SO ALL NEW WORK TO THE ROOF SHALL BE CERTIFIED SO THE THE EXISTING ROOF WARRANTY REMAINS IN PLACE.

DEMOLITION KEY NOTES:

1. REMOVE UTILITY SET EXHAUST FAN AND ALL ASSOCIATED SUPPORTS, DUCTWORK TO LIMITS SHOWN, VFD AND CONTROLS. REFER TO ARCHITECTURAL DWGS FOR PATCHING OF THE ROOF.
2. REMOVE EXHAUST FAN IN ITS ENTIRETY, INCLUDING DAMPER, CURB ADAPTOR & CONTROLS. EXISTING ROOF CURB SHALL REMAIN. REUTILIZE EXISTING CURB FOR NEW EXHAUST FAN.



KEY PLAN

2027 Infrastructure
Bid Package 1 -
HVAC Renovations

Conestoga High School

HSA PROJECT # :26-016.01



PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

ISSUE HISTORY

A	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

CHS -
MECHANICAL
DEMOLITION ROOF
PLANS

DRAWING NUMBER

M202

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

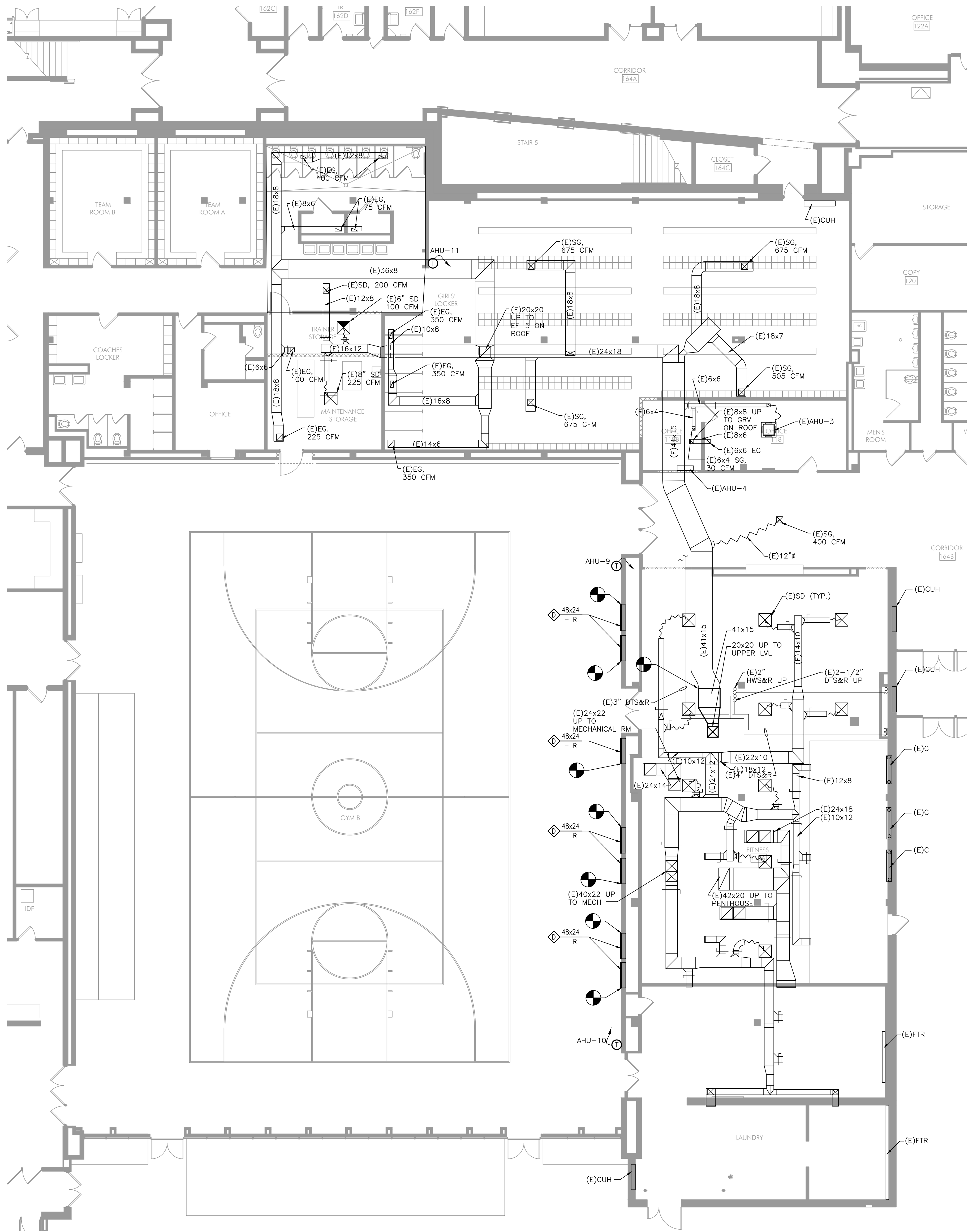
ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

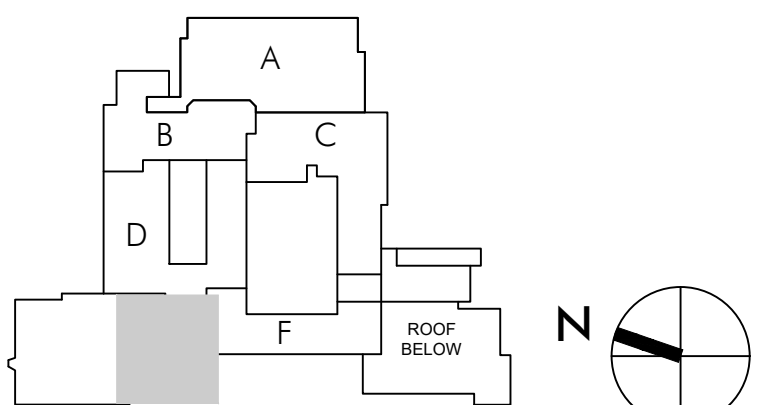
STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

GENERAL NOTES:

1. REFER TO M001 FOR FURTHER GENERAL NOTES.



1 CHS - NEW WORK 1ST FLOOR PLAN
M203 1/8" = 1'-0"



KEY PLAN

ISSUE HISTORY

A	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

**CHS -
MECHANICAL
NEW WORK
FLOOR PLANS**

DRAWING NUMBER

M203

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

GENERAL NOTES:

1. REFER TO M001 FOR FURTHER GENERAL NOTES.
2. REFER TO STRUCTURAL DRAWINGS FOR UNIT PLACEMENT ON STEEL DUNNAGE.
3. ROOF PROTECTION: EXTREME CARE SHALL BE TAKEN TO PROTECT THE ROOF FROM DAMAGE DURING INSTALLATION OF PRE-MANUFACTURED DUCTWORK. PROVIDE TEMPORARY MASONITE BOARD AND TARPS OVER ROOF SURFACE TO COLLECT DEBRIS AND PREVENT DAMAGE TO ROOF. SWEEP CLEAN ROOF DECK AND EMPTY TARPS AT THE END OF EACH WORKING DAY. REPAIR DAMAGE AT NO EXTRA COST TO OWNER.

NEW WORK KEY NOTES:

- 1 REFER TO DWG S-101 FOR STRUCTURAL SUPPORT REQUIREMENTS. GO TO ANCHOR AND FLASH CURB FURNISHED BY MC.
- 2 PROVIDE ALL NEW ROUND KITCHEN HOOD EXHAUST DUCT DUCT AS DOUBLE-WALL INTERNALLY INSULATED FACTORY FABRICATED GREASE DUCT SYSTEM, CAPTIVE-AIRE, MODEL 37 OR APPROVED EQUAL. PROVIDE ALL ASSOCIATED FACTORY SUPPLIED DUCT TRANSITIONS. PROVIDE FIRE-RATED ACCESS DOORS AT ALL LOCATIONS REQUIRED BY IMC 2021.
- 3 PROVIDE CAPTIVE-AIRE FACTORY FABRICATED ROUND TO SQUARE TRANSITION PIECE AND FIELD WELD TO EXISTING DUCT ABOVE ROOF CURB. REFER TO DETAIL 13/M501.
- 4 PROVIDE DUCT SUPPORTS PER DETAIL 12/M501.

ISSUE HISTORY

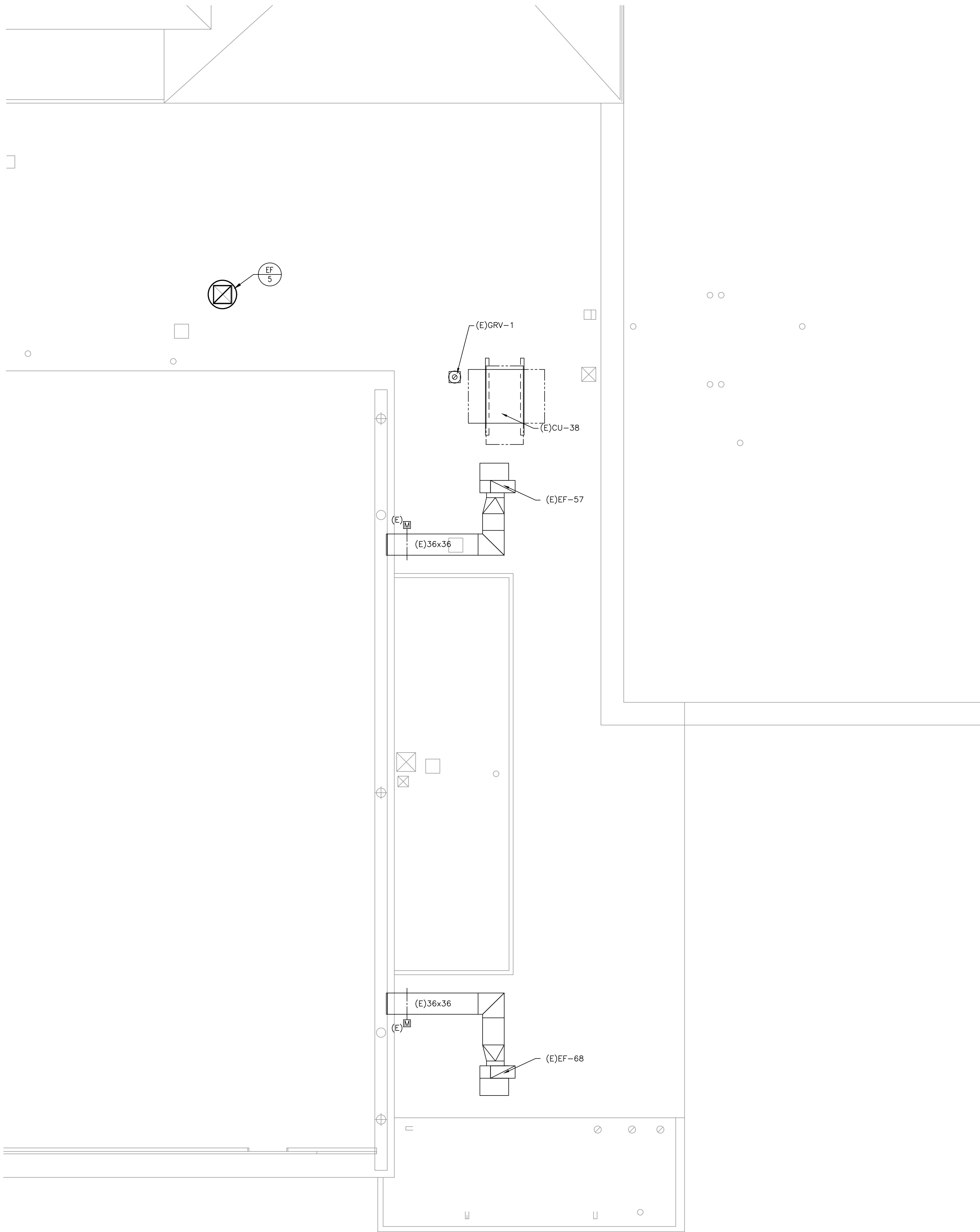
A	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

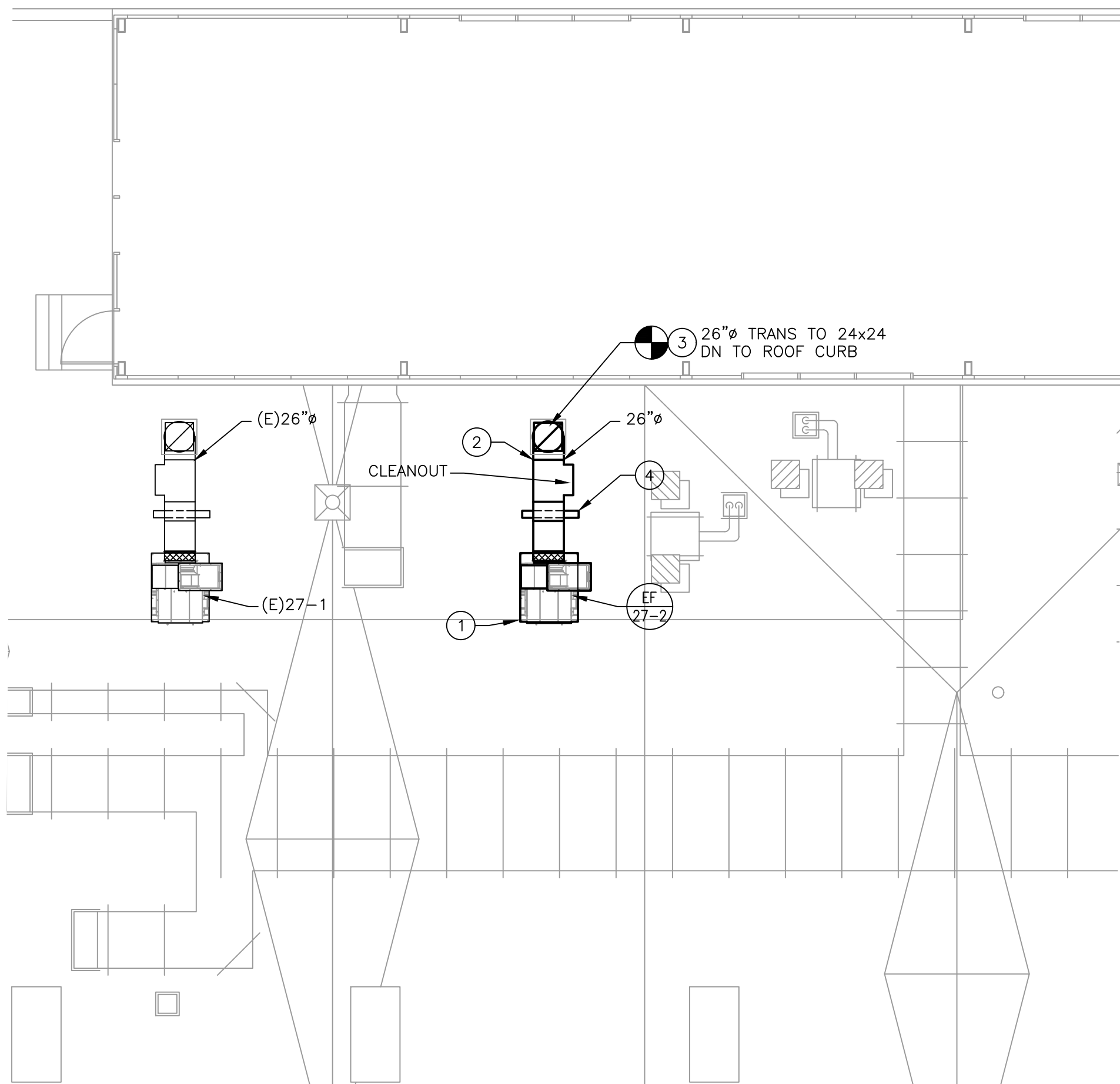
**CHS -
MECHANICAL
NEW WORK
ROOF PLANS**

DRAWING NUMBER

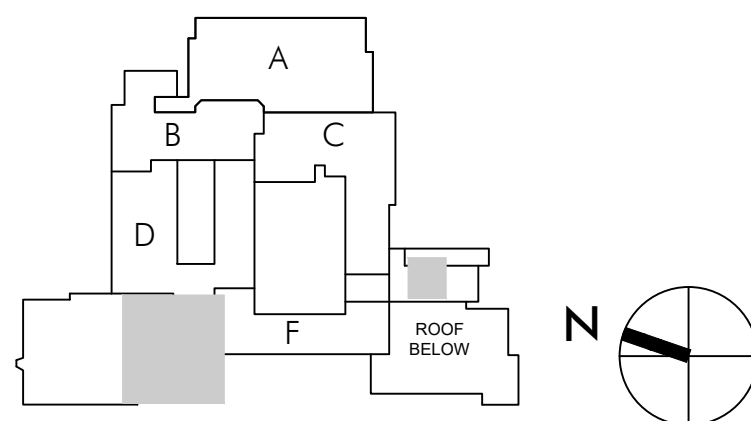
M204



1 CHS - DEMO WORK PARTIAL ROOF PLAN
M204 1/8" = 1'-0"



2 CHS - DEMO WORK PARTIAL ROOF PLAN
M204 1/8" = 1'-0"



KEY PLAN

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
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Blue Bell, PA 19422
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500 Fayette Street, Suite 100
Conshohocken, PA 19428
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GENERAL NOTES:

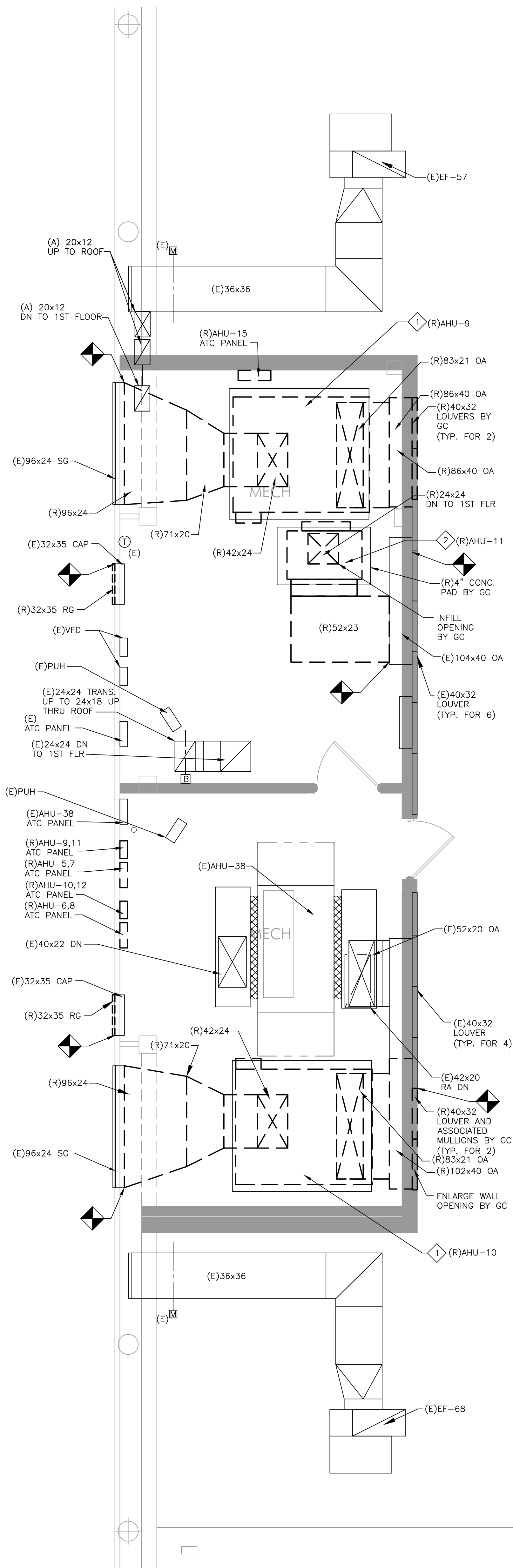
- REFER TO M001 FOR FURTHER GENERAL NOTES. GENERAL NOTE 23 SPECIFICALLY, FOR ADDITIONAL PIPING REQUIREMENTS.
- ALL WELDING FOR PIPING 2-1/2" AND LARGER SPECIFIED AND REQUIRED IN THIS PROJECT IS TO COMPLY WITH THE REQUIREMENTS THAT ARE INDICATED IN SPECIFICATION SECTION 230500 "COMMON WORK RESULTS FOR MECHANICAL."
- PROVIDE DUCT CLEANING OF ALL EXISTING AHU-11 & EF-5 DUCTWORK AND ALL AHU-9, 10 & 11 RETURN CHASES SHOWN ON DWG M201 & PER SPECIFICATION 230130.
- PROVIDE NEW ACCESS DOORS REQUIRED FOR DUCT CLEANING PER SPECIFICATION SECTION 230130-3.3-L.
- ALL NEW CONCRETE PADS BY GC. REFER TO STRUCTURAL DRAWING FOR REQUIREMENTS
- ALL REMOVED ATC VALVES SHALL BE TURNED OVER TO OWNER.

DEMOLITION KEY NOTES:

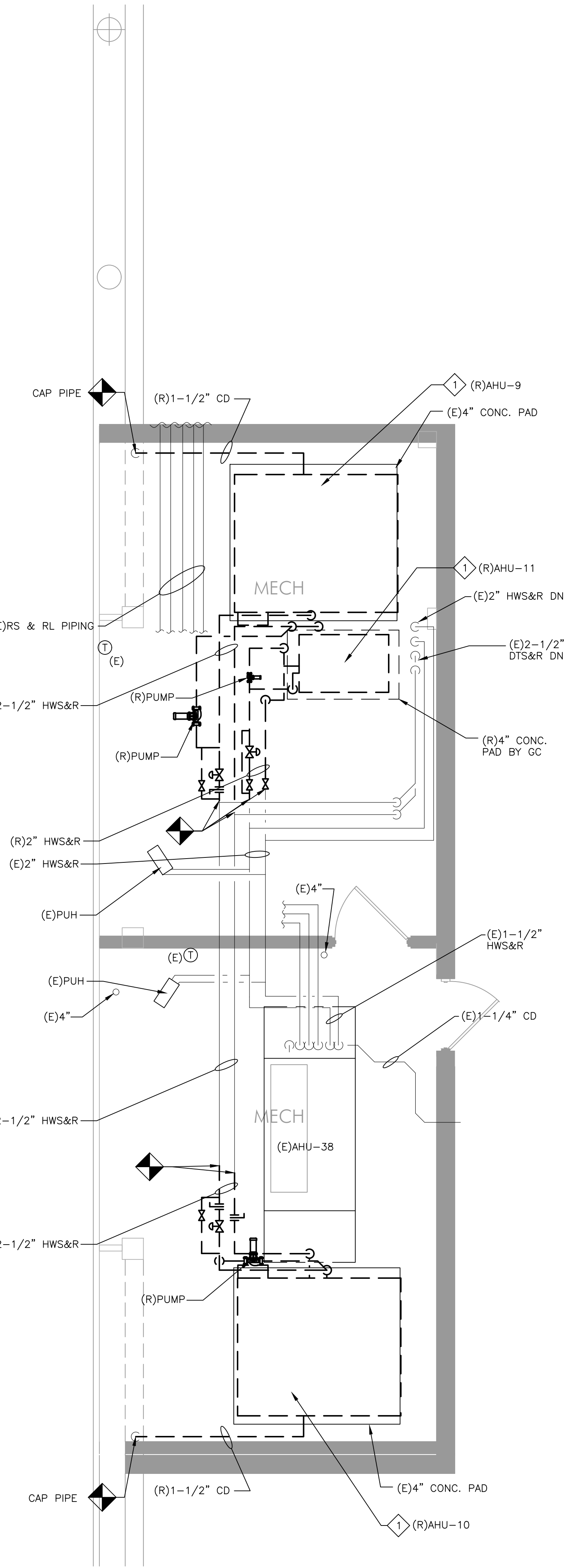
- REMOVE AIR HANDLING UNIT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ASSOCIATED HANGERS & SUPPORTS, DUCTWORK TO LIMITS SHOWN, HOT WATER SUPPLY AND RETURN PIPING, HOT WATER COIL PUMP, CONDENSATE PIPING AND CONTROLS. EXISTING 4" CONCRETE PADS TO REMAIN.
- REMOVE AIR HANDLING UNIT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ASSOCIATED HANGERS & SUPPORTS, DUCTWORK TO LIMITS SHOWN, HOT WATER SUPPLY AND RETURN PIPING, HOT WATER COIL PUMP, CONDENSATE PIPING AND CONTROLS. 4" CONCRETE PAD TO BE REMOVED BY GC.

NEW WORK KEY NOTES:

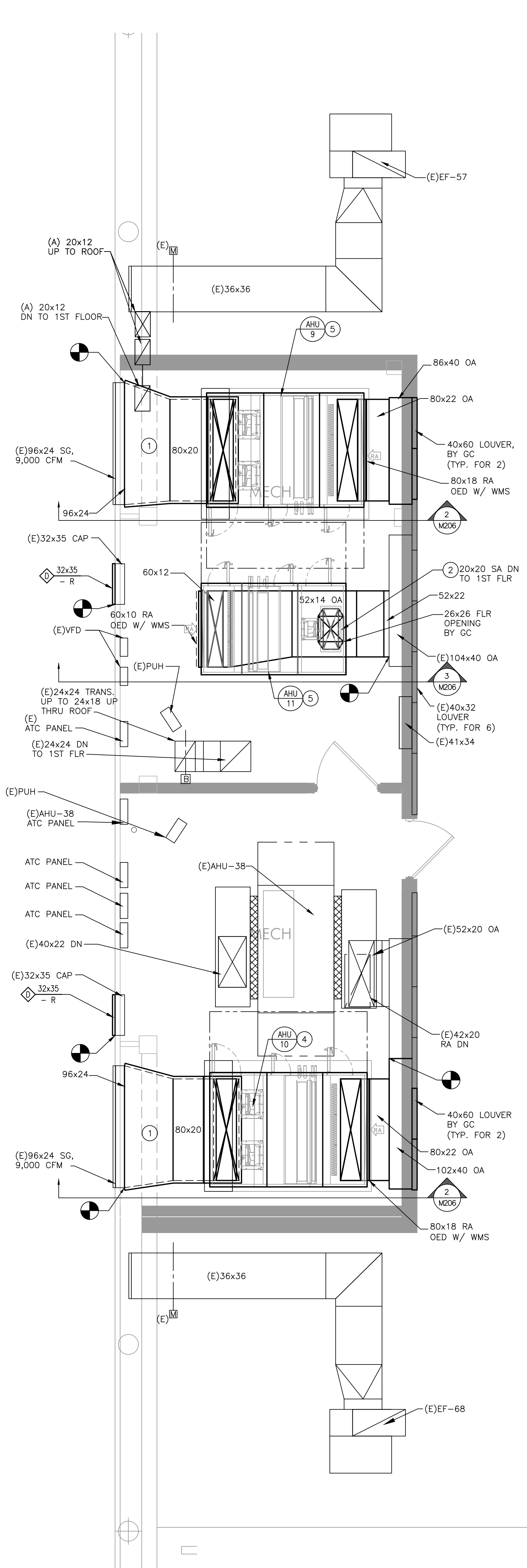
- PROVIDE ALL NEW AHU-9 & AHU-10 SUPPLY DUCTWORK WITH 2" THICK ACOUSTIC DUCT LINING.
- PROVIDE ALL NEW AHU-11 SUPPLY DUCTWORK WITH 1" THICK ACOUSTIC DUCT LINING.
- EXTEND 4" THICK CONCRETE PAD TO ACCOMMODATE NEW AHU. EXTEND PAD MINIMUM 4" BEYOND EDGE UNIT. REFER TO GENERAL NOTE 6.
- REFER TO DETAIL 2/DWG M503 FOR NEW COIL PIPING REQUIREMENTS. BALANCE ALL WATER FLOWS AND TOTAL SUPPLY, RETURN & OUTSIDE AIRFLOWS.
- REFER TO DETAIL 3/DWG M503 FOR NEW COIL PIPING REQUIREMENTS. BALANCE ALL WATER FLOWS AND TOTAL SUPPLY, RETURN & OUTSIDE AIRFLOWS.



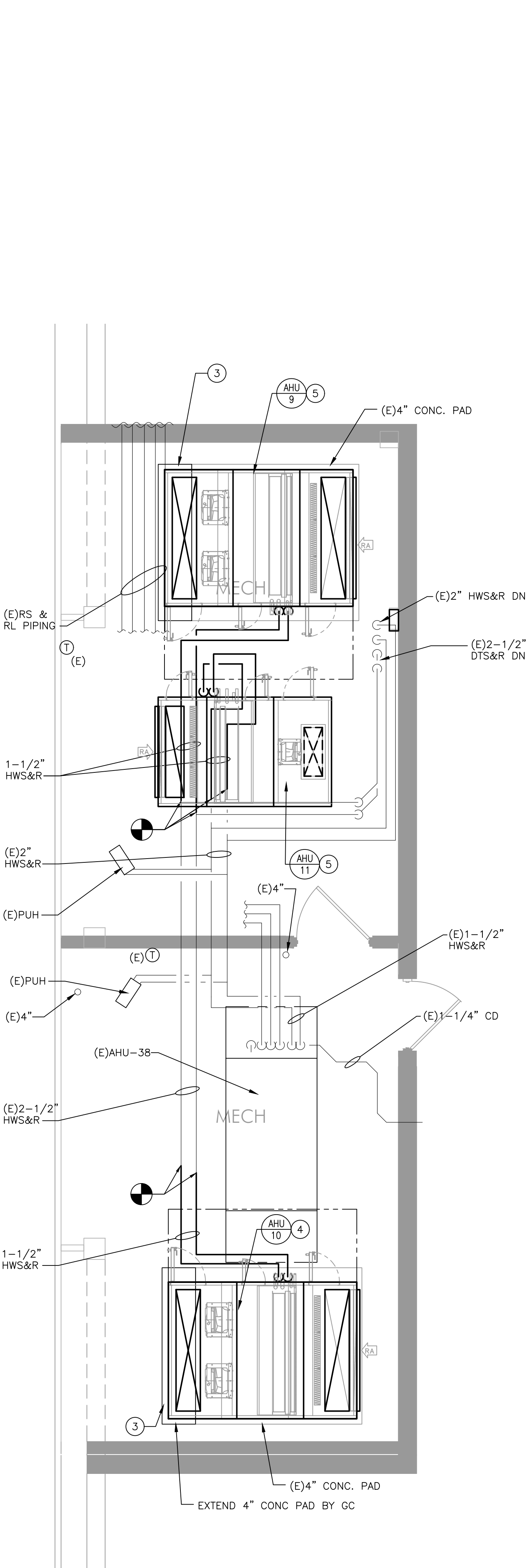
1 CHS - DUCT DEMO WORK MEZZANINE PLAN
M205 1/4" = 1'-0"



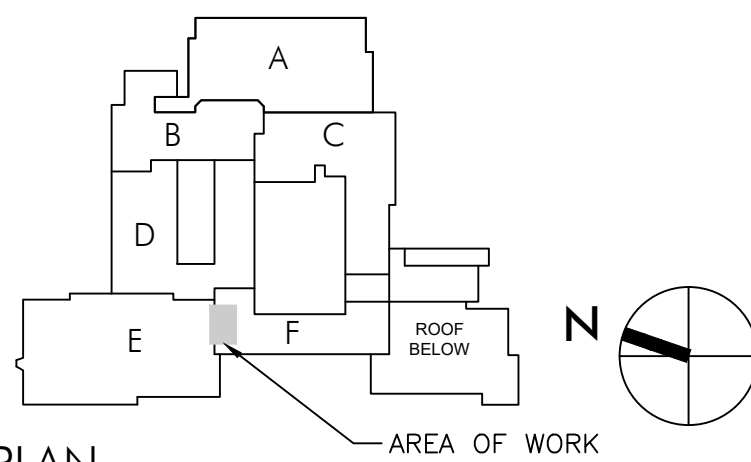
2 CHS - PIPING DEMO WORK MEZZANINE PLAN
M205 1/4" = 1'-0"



3 CHS - DUCT NEW WORK MEZZANINE PLAN
M205 1/4" = 1'-0"



4 CHS - PIPING NEW WORK MEZZANINE PLAN
M205 1/4" = 1'-0"



KEY PLAN

ISSUE HISTORY

Δ	DATE	ISSUED FOR
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SHEET TITLE

CHS -
MECHANICAL
MEZZANINE
FLOOR PLANS

DRAWING NUMBER

M205

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

AIR HANDLING UNIT SCHEDULE																																							
UNIT TAG	AREA SERVED	MAX SUPPLY CFM	MIN SUPPLY CFM	MIN OA CFM	30% ETHYLENE GLYCOL COOLING COIL (FOR FUTURE USE)										30% ETHYLENE GLYCOL WATER RE-HEAT COIL										SUPPLY FAN							ELECTRICAL CHARACTERISTICS					MAXIMUM UNIT DIMENSIONS LxWxH, IN	WEIGHT LBS.	BASIS OF DESIGN MANUFACTURER AND MODEL NO.
					COOLING CFM	FACE VELOCITY FT/MIN	ENT AIR		LVG AIR		ROWS	TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	WATER				AIR		ROWS	TOTAL CAPACITY MBH	WATER																	
							DB °F	WB °F	DB °F	WB °F				GPM	ENT °F	LVG °F	PD FT.	ENT °F	LVG °F			GPM	ENT °F	LVG °F	PD FT.														
							ESP IN. WC	TSP IN. WC	QTY.	BHP EA				HP EA	FAN RPM	VOLTS	PHASE	HZ	FLA			MOCP																	
AHU-9	GYM B	9,000	4,500	2,000	7,000	359	78.6	66.7	54.9	54.6	6	261.5	182.1	64.0	45	54.0	7.8	56.0	86.0	1	292.2	16.0	180	140	3.8	0.4	2.4	2	5.8	5.9	1850	208	3	60	27	40	124x90x49	3,250	ADAPTVAIR
AHU-10	GYM B	9,000	4,500	2,000	7,000	359	78.6	66.7	54.9	54.6	6	261.5	182.1	64.0	45	54.0	7.8	56.0	86.0	1	292.2	16.0	180	140	3.8	0.4	2.4	2	5.8	5.9	1850	208	3	60	27	40	124x90x49	3,250	ADAPTVAIR
AHU-11	GIRL'S LOCKER ROOM	2,775	2,775	1,375	2,775	317	82.0	68.0	54.9	54.6	6	116.6	82.7	25.7	45	55.0	6.6	40.0	97.3	2	172.2	13.8	180	153	0.8	1.5	3.4	1	5.8	5.9	2574	208	3	60	13.7	25	114x72x35	2,145	ADAPTVAIR

1. PROVIDE ALL UNITS W/ FACTORY MOUNTED, NON-FUSED DISCONNECT SWITCH.
2. PROVIDE ALL UNITS W/ FILTER MIXING BOX.
3. PROVIDE ALL UNITS W/ SINGLE-POINT POWER CONNECTION AND SUPPLY FANS WITH VFD DRIVE & HIGH EFFICIENCY MOTOR.
4. PROVIDE ALL UNITS W/ 4" PLEATED MERV 13 FILTERS.
5. PROVIDE ALL UNITS W/ BLOWER PROVING SWITCH.
6. PROVIDE ALL UNITS W/ DIRTY FILTER SWITCH.
7. PROVIDE AHU-9 & 10 WITH TOP SUPPLY AIR CONNECTION.
7. PROVIDE AHU-11 WITH BOTTOM SUPPLY AIR CONNECTION.
8. PROVIDE ALL UNITS WITH COOLING COIL FOR FUTURE USE.
9. PROVIDE ALL UNITS WITH SHIPPING SPLITS FOR MIXING BOX, COIL & FAN SECTIONS.

EXHAUST FAN SCHEDULE																
UNIT TAG	LOCATION	SERVICE	CFM	ESP IN. WC	FAN RPM	BHP (WATTS)	MOTOR HP (WATTS)	SONES (dBA)	DRIVE: DIRECT/ V-BELT	ELECTRICAL CHARACTERISTICS			MAXIMUM DIMENSIONS FAN L X W x H, IN.	WEIGHT LBS.	BASIS OF DESIGN MANUFACTURER AND MODEL NO.	REMARKS
										VOLTS	PHASE	CYCLE				
EF-5	ROOF	GIRL'S LOCKER	2,325	0.5	845	0.36	3/4	8.4	DIRECT	208	3	60	38"øx34	75	COOK 180C17D (VF2)	1

1. PROVIDE UNIT COMPLETE WITH CURB ADAPTOR W/ HINGED BASE & DAMPER TRAY, BACKDRAFT DAMPER, UNIT MOUNTED DISCONNECT SWITCH, MOTOR MOUNTED SPEED DIAL.

EXHAUST FAN INFORMATION

FAN UNIT NO	TAG	QTY	SERVICE	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	EF-27-2	1	KITCHEN HOOD EXHAUST	USB136DD-RM	CAPTIVEAIRE	7200	2.750	785	ODP,PREMIUM	10	5.3	3	460	12.9	1173 FPM	1560	31.8

CURB ASSEMBLIES

FAN UNIT NO	TAG	QTY	WEIGHT (LBS)	SIZE
1	EF-27-2	1	80	51"W x 62" L x 20" H

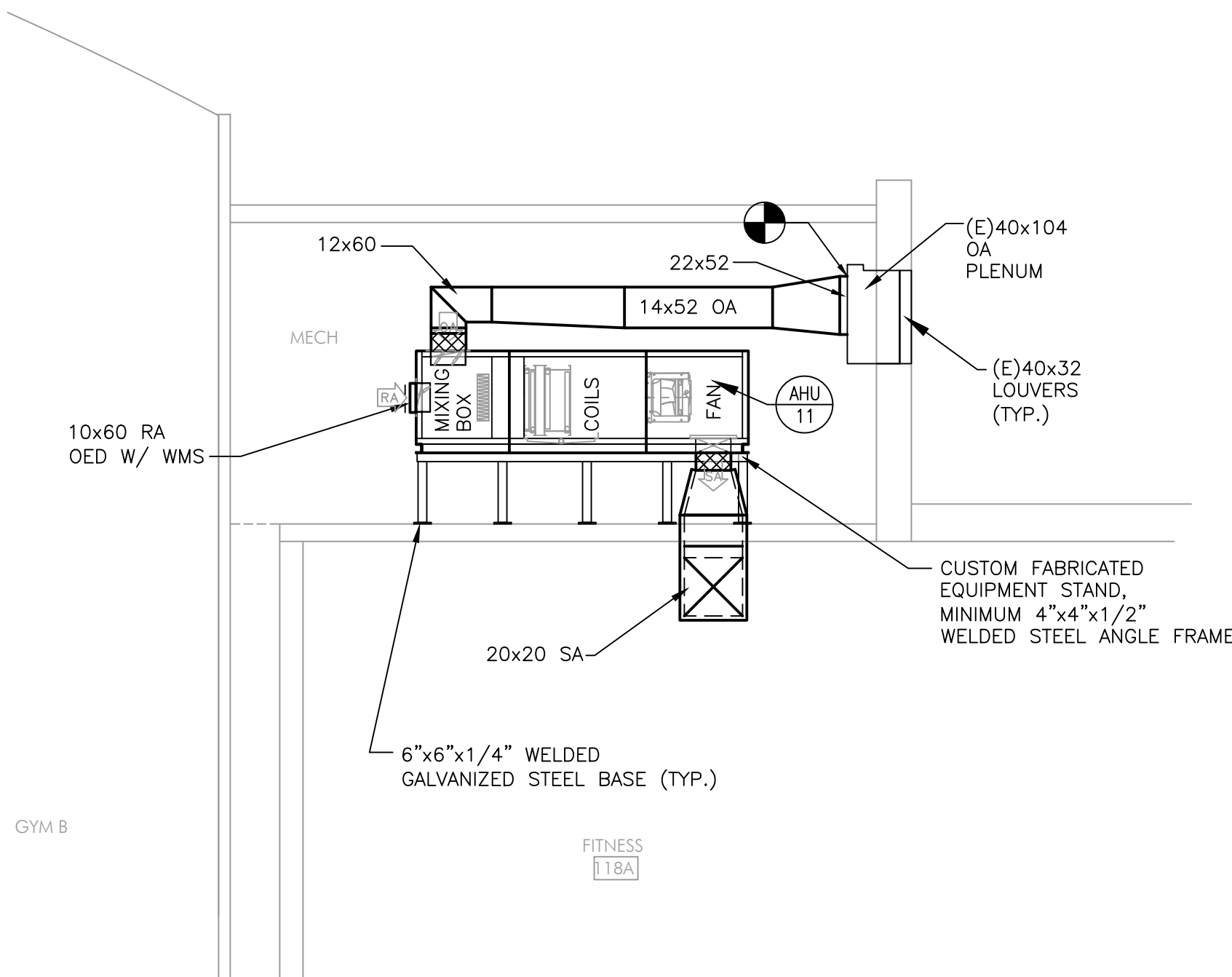
FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	EF-27-2	1	B136 - INLET SERVICE DUCT CONNECTION. USED TO CONNECT TO STANDARD 30" GREASE DUCT OR FIELD WELDED DUCT. INCLUDES (2) 7" RISERS BOLTED TO STANDARD INLET RISER
		1	UTILITY SET GREASE CUP
		1	B136 - 24" DISCHARGE EXTENSION
		1	BI - DISCHARGE ORIENTATION VERTICAL UPPER LEFT - CW INLET SIDE
		1	B136 - INLET CONNECTION STANDARD 30" FLANGED GREASE DUCT
		1	CURB MOUNTED SLED FOR USB1 36. USED TO MOUNT ON 62" L X 51" W CURB
		1	VAV PACKAGE W/ MANUAL CONTROL (VFD INCLUDED)
		1	LOAD REACTOR MOUNTED IN FAN
		1	LINE REACTOR MOUNTING BRACKET FOR DIRECT DRIVE FANS (UP TO 25 HP)
		1	VFD FACTORY MOUNTED AND WIRED IN EXHAUST FAN
		1	UTILITY SET - FAN SLED RESTRAINED SPRING VIBRATION ISOLATORS - B124 THRU B136 / EQUIVALENT SIZED UTILITY SET - INDOOR/OUTDOOR USE (SET OF 6)
		1	2 YEAR PARTS WARRANTY
		1	UL 762 RESTAURANT DUTY

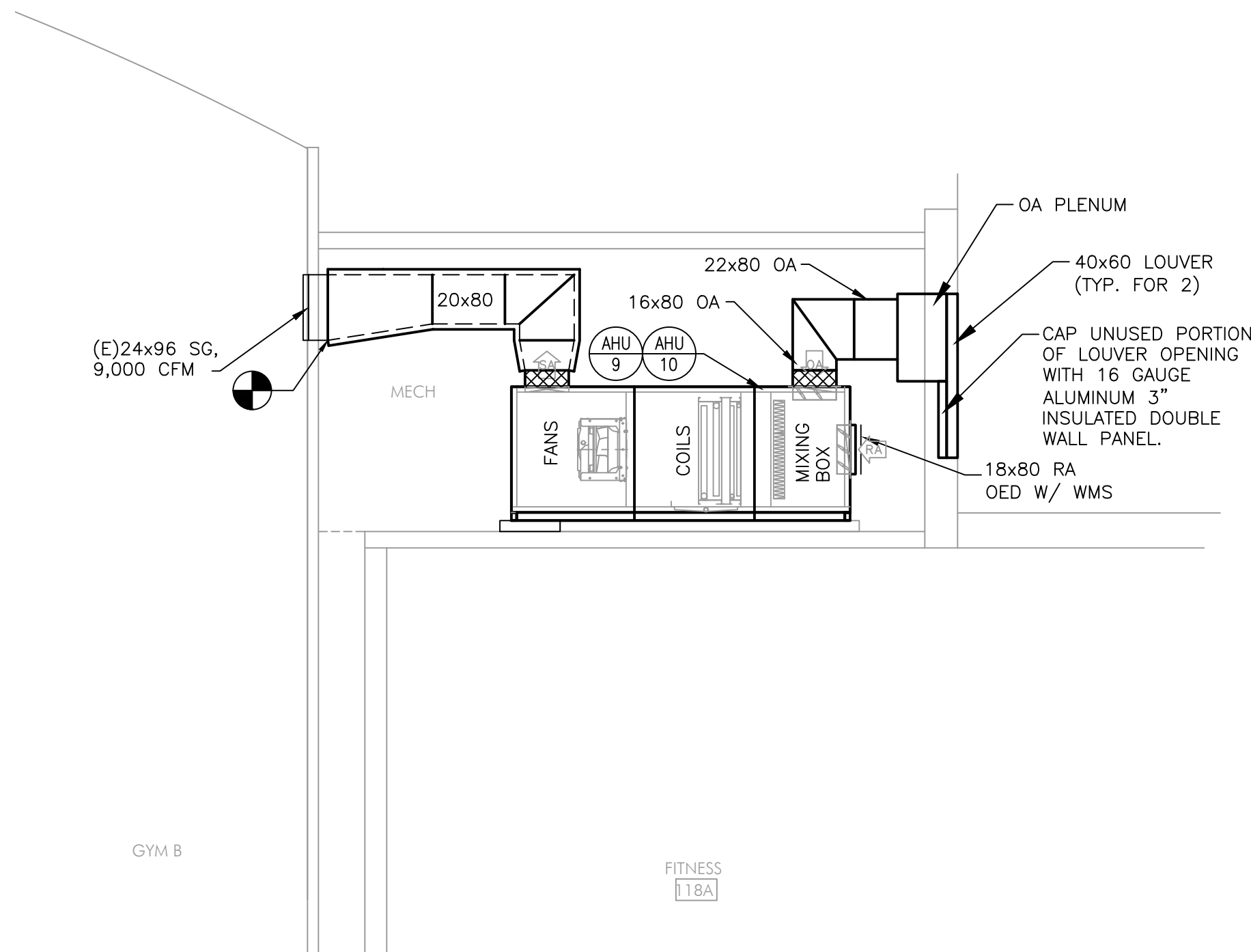
GRILLES, REGISTERS, & DIFFUSERS SCHEDULE							
TAG	STYLE	CFM	MOUNT	FACE	BASIS OF DESIGN MANUFACTURER & MODEL #	MAX IN	REMARKS
D	HEAVY DUTY FIXED FACE BAR GRILLE	VARIES	AS REQ'D	VARIES W/NECK SIZE	KRUEGER S480	28	1, 2

1. REFER TO PLANS FOR QUANTITIES, NECK SIZE, LENGTH, CFM, AND PATTERN.
2. FIELD VERIFY ALL EXISTING GRILLE SIZES PRIOR TO ORDERING..

CHS - MECHANICAL SCHEDULES



AHU-11 SECTION



AHU-9 & AHU-10 SECTION

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CHS - MECHANICAL SCHEDULES & DETAILS

DRAWING NUMBER

M206

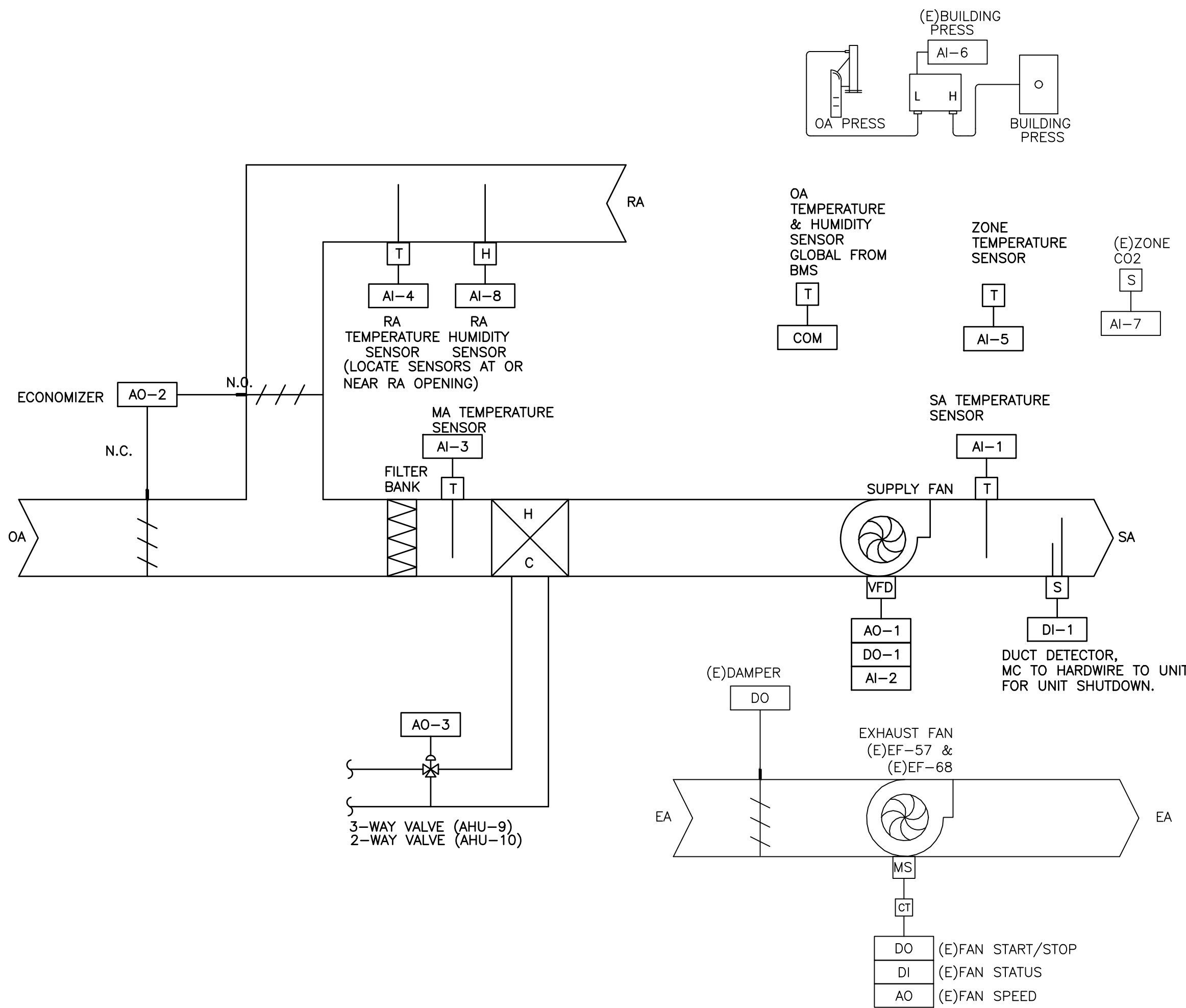
PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600



AHU-9 & 10

NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE BUILDING WIDE COMMUNICATION CABLE (BUS) AND SHALL INTEGRATE ALL POINTS BACK TO SUPERVISORY CONTROLLER. PROVIDE NEW CONTROLLER AND PROVIDE 120/24V TRANSFORMER FOR POWER. PROVIDE A WALL MOUNTED METAL PLATE TEMPERATURE SENSOR. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR OCCUPANCY. THE OPERATOR WILL BE ABLE TO ADJUST THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. REFER TO SPECIFICATION 230993 FOR SEQUENCE OF OPERATION.

AHU POINTS LIST																
POINT TAG	POINT DESCRIPTION	SAFETY SHUT DOWN	INPUTS							OUTPUTS			REMARKS			
			DIGITAL			ANALOG				DIGITAL		ANALOG				
			STATUS	OCC OVERRIDE	PRESSURE	TEMPERATURE	HUMIDITY	SETPOINT	CO2	SPEED	START/STOP	ON/OFF		DAMPER ACTUATOR	MODULE	SPEED
AI-2	SUPPLY FAN SPEED STATUS									X					X	
DO-1	SUPPLY FAN ENABLE										X					
AI-1	SUPPLY AIR TEMPERATURE					X									X	
AO-1	SUPPLY FAN SPEED												X			
AO-2	ECONOMIZER											X				
AO-3	HOT WATER VALVE												X			
AI-3	MIXED AIR TEMPERATURE					X										
DI-1	SMOKE DETECTOR	X	X												X	
AI-4	RETURN AIR TEMPERATURE					X										
AI-5	ZONE TEMPERATURE					X									X	
COM	OUTSIDE AIR TEMPERATURE					X										
COM	OUTSIDE AIR HUMIDITY						X									
DO-2	(E)EF-57 ENABLE										X					
AO-4	(E)EF-57 SPEED												X			
DI-2	(E)EF-57 STATUS		X												X	
DO-3	(E)EF-68 ENABLE											X				
AO-5	(E)EF-68 SPEED													X		
DI-3	(E)EF-68 STATUS		X													X
AI-6	(E)BUILDING PRESSURE					X										
AI-7	(E)ZONE CO2								X							
AI-8	RETURN AIR HUMIDITY						X									

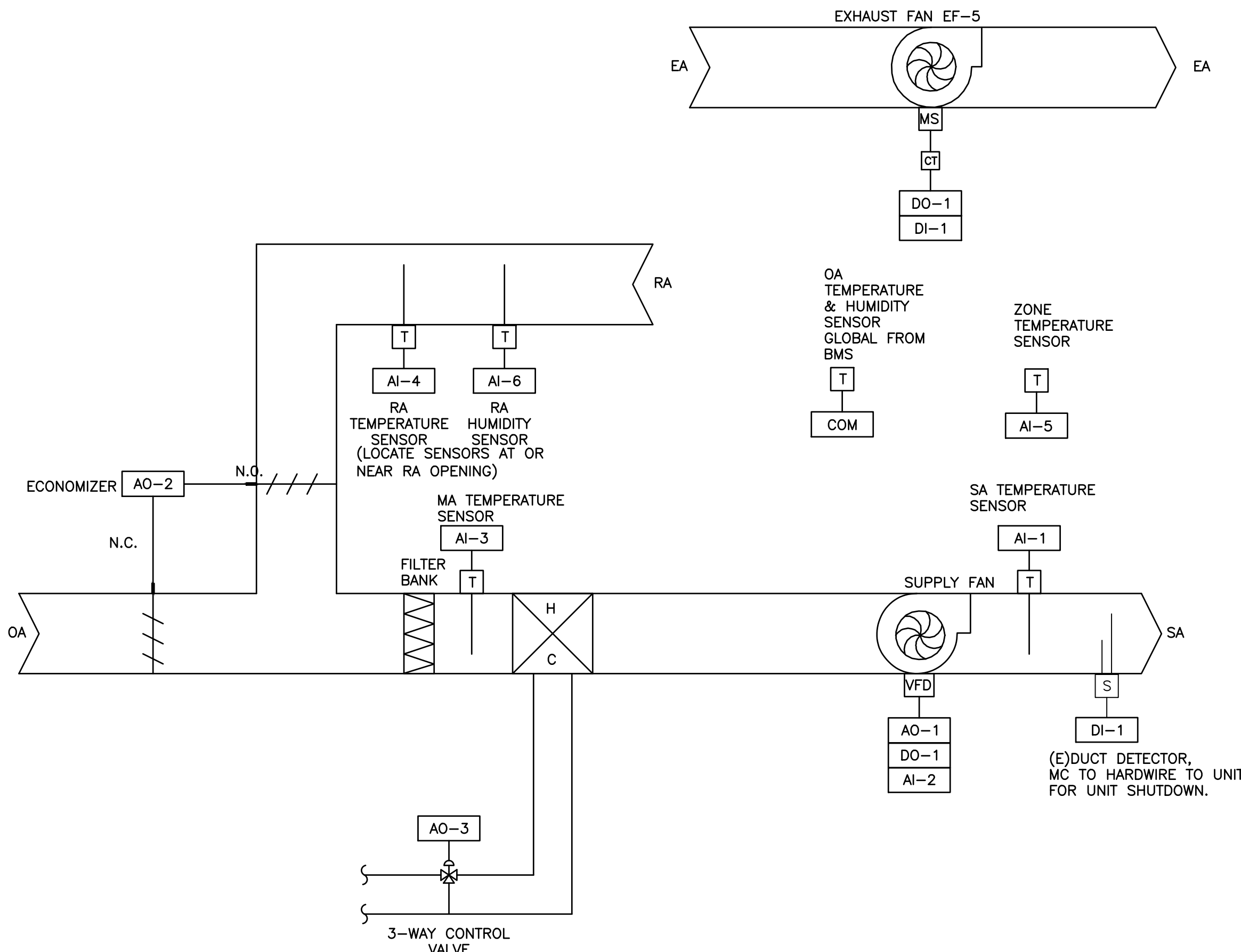
1 AHU-9 & AHU-10 CONTROLS

M207 NO SCALE

AHU POINTS LIST																
POINT TAG	POINT DESCRIPTION	INPUTS								OUTPUTS			REMARKS			
		SAFETY SHUT DOWN	DIGITAL				ANALOG			DIGITAL	ANALOG					
			STATUS	OCC OVERRIDE	PRESSURE	TEMPERATURE	HUMIDITY	SETPOINT	CO2	SPEED	START/STOP	ON/OFF		DAMPER ACTUATOR	MODULATE	SPEED
AI-2	SUPPLY FAN SPEED STATUS									X					X	
DO-1	SUPPLY FAN ENABLE										X					
AI-1	SUPPLY AIR TEMPERATURE					X									X	
AO-1	SUPPLY FAN SPEED												X			
AO-2	ECONOMIZER											X				
AO-3	HOT WATER VALVE												X			
AI-3	MIXED AIR TEMPERATURE					X										
DI-1	SUPPLY AIR SMOKE DETECTOR	X	X												X	
AI-4	RETURN AIR TEMPERATURE					X										
AI-5	ZONE TEMPERATURE					X									X	
COM	OUTSIDE AIR TEMPERATURE					X										
COM	OUTSIDE AIR HUMIDITY						X									
AI-6	RETURN AIR HUMIDITY						X								X	

2 AHU-11 CONTROLS

M207 NO SCALE



AHU-11

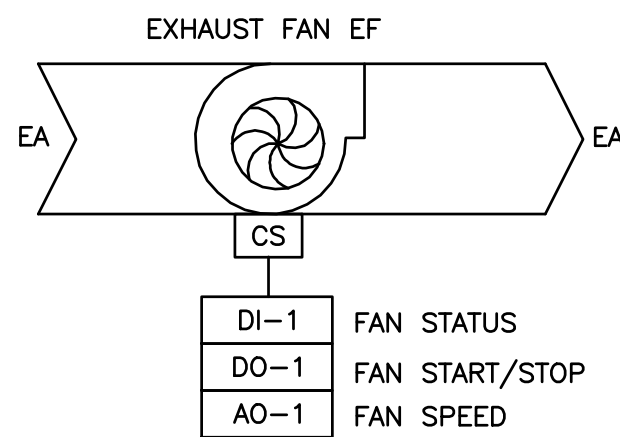
NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE BUILDING WIDE COMMUNICATION CABLE (BUS) AND SHALL INTEGRATE ALL POINTS BACK TO SUPERVISORY CONTROLLER. PROVIDE NEW CONTROLLER AND PROVIDE 120/24V TRANSFORMER FOR POWER. PROVIDE A WALL MOUNTED THERMOSTAT WITH LCD DISPLAY AND OCCUPANCY OVERRIDE IN CLEAR LOCKABLE PLASTIC ENCLOSURE. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR OCCUPANCY. THE OPERATOR WILL BE ABLE TO ADJUST THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. REFER TO SPECIFICATION 230993 FOR SEQUENCE OF OPERATION.

EXHAUST FAN POINTS LIST												
POINT TAG	POINT DESCRIPTION	INPUTS								OUTPUTS		
		DIGITAL				ANALOG				DIGITAL		ANALOG
		SAFETY SHUT DOWN	STATUS	OCC OVERRIDE	PRESSURE	TEMPERATURE	HUMIDITY	SETPOINT	POSITION	START/STOP	ON/OFF	DAMPER ACTUATOR
DI-1	EXHAUST FAN STATUS		X									
DO-1	EXHAUST FAN START/STOP									X		X

3 GENERAL EF CONTROLS

M207 NO SCALE

EF-27-2 POINTS LIST												
POINT TAG	POINT DESCRIPTION	INPUTS								OUTPUTS		
		DIGITAL				ANALOG				DIGITAL		FUNCTION
		SAFETY SHUT DOWN	STATUS	OCCUPANCY	HUMIDITY	TEMPERATURE	PRESSURE	SETPOINT	FEEDBACK	ON/OFF	SPEED	PRESSURE
DI-1	EF STATUS		X									
DO-1	EF START/STOP									X		
AO-1	EF SPEED										X	



4 EF-27-2 CONTROLS

M207 NO SCALE

ISSUE HISTORY

Δ	DATE	ISSUED FOR
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SHEET TITLE

**CHS -
MECHANICAL
CONTROLS**

DRAWING NUMBER

M207

DEMOLITION GENERAL NOTES:

1. REFER TO M0.1 FOR FURTHER GENERAL DEMOLITION NOTES.
2. TEMPORARILY REMOVE AND REINSTALL CEILING TILES AS REQUIRED FOR WORK ABOVE CEILINGS.
3. PROVIDE ALL ASSOCIATED HOT WATER SYSTEM ISOLATION, DRAINAGE AND RE-FILLING AS REQUIRED FOR WORK ON DRAWINGS AND SPECIFICATIONS. DO NOT ASSUME THAT THE ISOLATION VALVES SHOWN WILL HOLD.
4. ALL REMOVED ATC VALVES SHALL BE SALVAGED AND TURNED OVER TO THE OWNER.

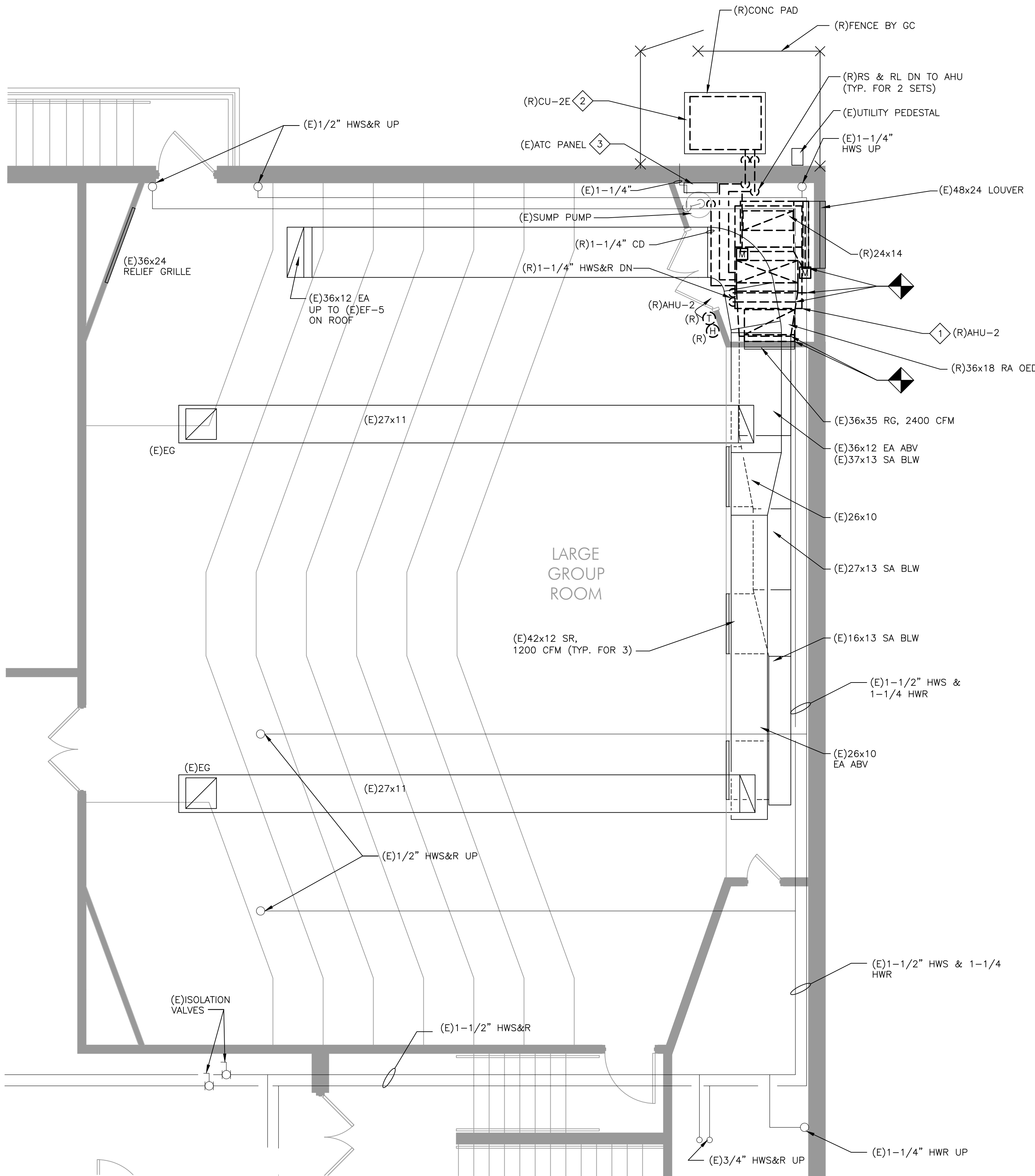
DEMOLITION KEY NOTES:

1. REMOVE SPLIT SYSTEM AIR HANDLING UNIT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ASSOCIATED HANGERS & SUPPORTS, DUCTWORK TO LIMITS SHOWN. HOT WATER SUPPLY AND RETURN PIPING, REFRIGERANT PIPING, CONDENSATE PIPING, CONDENSING UNIT AND CONTROLS.
2. REMOVE SPLIT SYSTEM CONDENSING UNIT AND ALL ASSOCIATED PIPING, CONCRETE PAD & CONTROLS. REFER TO ARCHITECTURAL DWGS FOR PATCHING OF WALL.
3. EXISTING ATC PANEL TO REMAIN AND REUTILIZE FOR NEW RTU-2E CONTROLS. RELOCATE (2) TWO EXISTING ATC CONDUIT AND WIRING TO ACCOMMODATE NEW DUCTWORK SHOWN ON NEW WORK PLANS.

NEW WORK KEY NOTES:

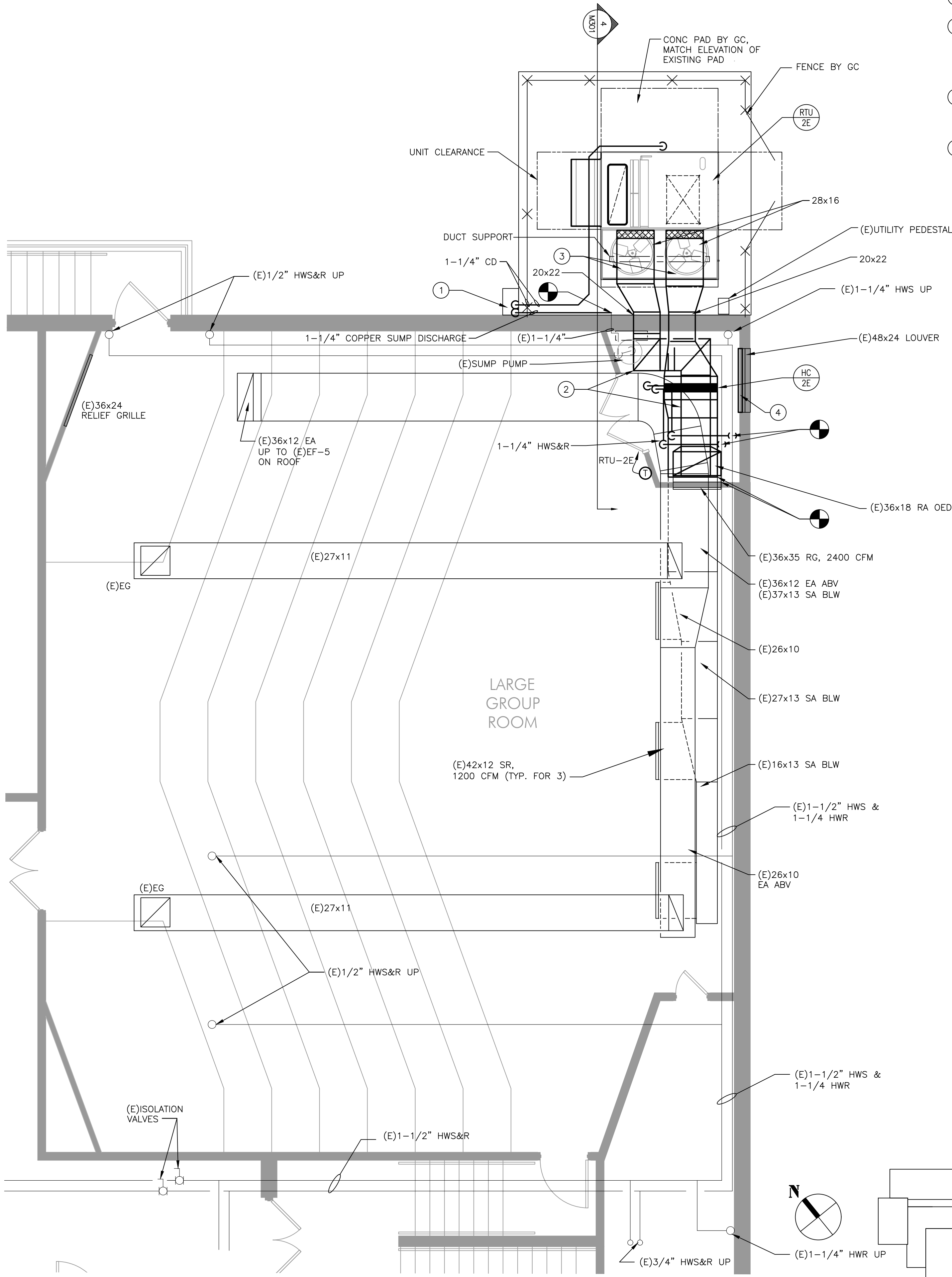
1. SPILL WITH ELBOW TURNDOWN ONTO CONCRETE SPLASH BLOCK.
2. ALL INTERIOR DUCTWORK SHALL BE INTERNALLY LINED WITH 1" THICK ACOUSTIC LINER.
3. PROVIDE ALL EXTERIOR DUCT AS SHEET METAL WITH PRE-MANUFACTURED TECHNA-DUC SYSTEM DUCT JACKET OVER ALL EXTERIOR DUCTWORK. FLASH AROUND ALL WALL PENETRATIONS. REFER TO SUPPORT DETAIL 9, DWG M502 AND WALL PENETRATION DETAIL 2, DWG M502.
4. CAP LOUVER OPENING WITH 16 GAUGE ALUMINUM 3" INSULATED DOUBLE WALL PANEL. REMOVE BIRDSCREEN. EXISTING LOUVER TO REMAIN.
5. BALANCE EXISTING UNIT TO AIRFLOWS INDICATED ON PLANS. PROVIDE BELT AND SHEAVE CHANGE AS NEEDED FOR BALANCING.

3 NEES - PARTIAL NEW WORK ROOF PLAN
M301 1/8" = 1'-0"



1 NEES - PARTIAL FIRST FLOOR DEMO PLAN
M301 1/4\"/>

4 NEES - MECHANICAL SECTION
M301 1/4\"/>



2 NEES - PARTIAL FIRST FLOOR NEW WORK PLAN
M301 1/4\"/>

ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

NEES -
MECHANICAL
PLANS

DRAWING NUMBER

M301

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPFP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

1. PROVIDE UNIT COMPLETE W/ FACTORY MOUNTED, NON-FUSED DISCONNECT SWITCH.	3. PROVIDE UNIT COMPLETE W/ 0-100% OUTSIDE AIR COMPARATIVE ENTHALPHY ECONOMIZER DAMPERS AND HOODS.	5. PROVIDE UNIT COMPLETE W/ HOT GAS REHEAT COIL WITH RH SENSOR.	8. PROVIDE UNIT COMPLETE W/ DIRTY FILTER SWITCH.	11. PROVIDE UNIT COMPLETE W/ TERMINAL STRIP CONTROL INTERFACE. REFER TO SPECIFICATION 237433 FOR ADDITIONAL REQUIREMENTS.	13. PROVIDE UNIT COMPLETE W/ MINIMUM 36" HIGH HORIZONTAL PLENUM DISCHARGE CURB.
2. PROVIDE UNIT COMPLETE W/ VARIABLE CAPACITY LEAD COMPRESSOR.	4. PROVIDE UNIT COMPLETE W/ SUPPLY FAN WITH VFD DRIVE & HIGH EFFICIENCY MOTOR.	6. PROVIDE UNIT COMPLETE W/ 4" PLEATED MERV 13 FILTERS.	9. PROVIDE UNIT COMPLETE W/ DISCHARGE AIR TEMPERATURE SENSOR.	12. PROVIDE UNIT COMPLETE W/ CONVENIENCE LIGHT AND CONVENIENCE OUTLET WIRED TO LINE SIDE OF DISCONNECT.	14. PROVIDE UNIT COMPLETE W/ A SHORT CIRCUIT CURRENT RATING OF 35 KAIC.

DUCT MOUNTED RE-HEAT COIL SCHEDULE															
UNIT TAG	AREA SERVED	CFM	AIR			MAX FACE VEL. FPM	CAPACITY BTU/HR	WATER				ROWS	FPI	COIL SIZE W x H, IN.	BASIS OF DESIGN MANUFACTURER AND MODEL NO.
			ENT 'F	LVG 'F	MAX PD IN. WC			GPM	ENT 'F	LVG 'F	MAX PD FT.				
HC-2E	LARGE GROUP ROOM	3,200	51.0	90.3	0.32	674	141,151	6.0	180	132	5.1	2	9	38x18	NORTEK 5WC-12-18x38x2-9-AL



NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE EXISTING 120/24V TRANSFORMER. THE NEW UNIT CONTROLLER SHALL BE PROVIDED WITH A 100 AMP 24VDC POWER SUPPLY. THE NEW UNIT CONTROLLER SHALL BE MOUNTED INSIDE THE UNIT ENCLOSURE AND PROVIDED 120/24V TRANSFORMER FOR POWER. THE A/C CONTRACTOR SHALL INSTALL THE DISCHARGE AIR TEMPERATURE SENSOR FURNISHED BY THE UNIT MANUFACTURER. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR THE UNIT. THE UNIT WILL BE ABLE TO STOP THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. REFER TO SPECIFICATION 230993 FOR SEQUENCE OF OPERATION.

1. POINT PROVIDED ON RTU TERMINAL STRIP

M302 NO SCALE

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

NEES - MECHANICAL SCHEDULES & CONTROLS

M302

DEMOLITION GENERAL NOTES:

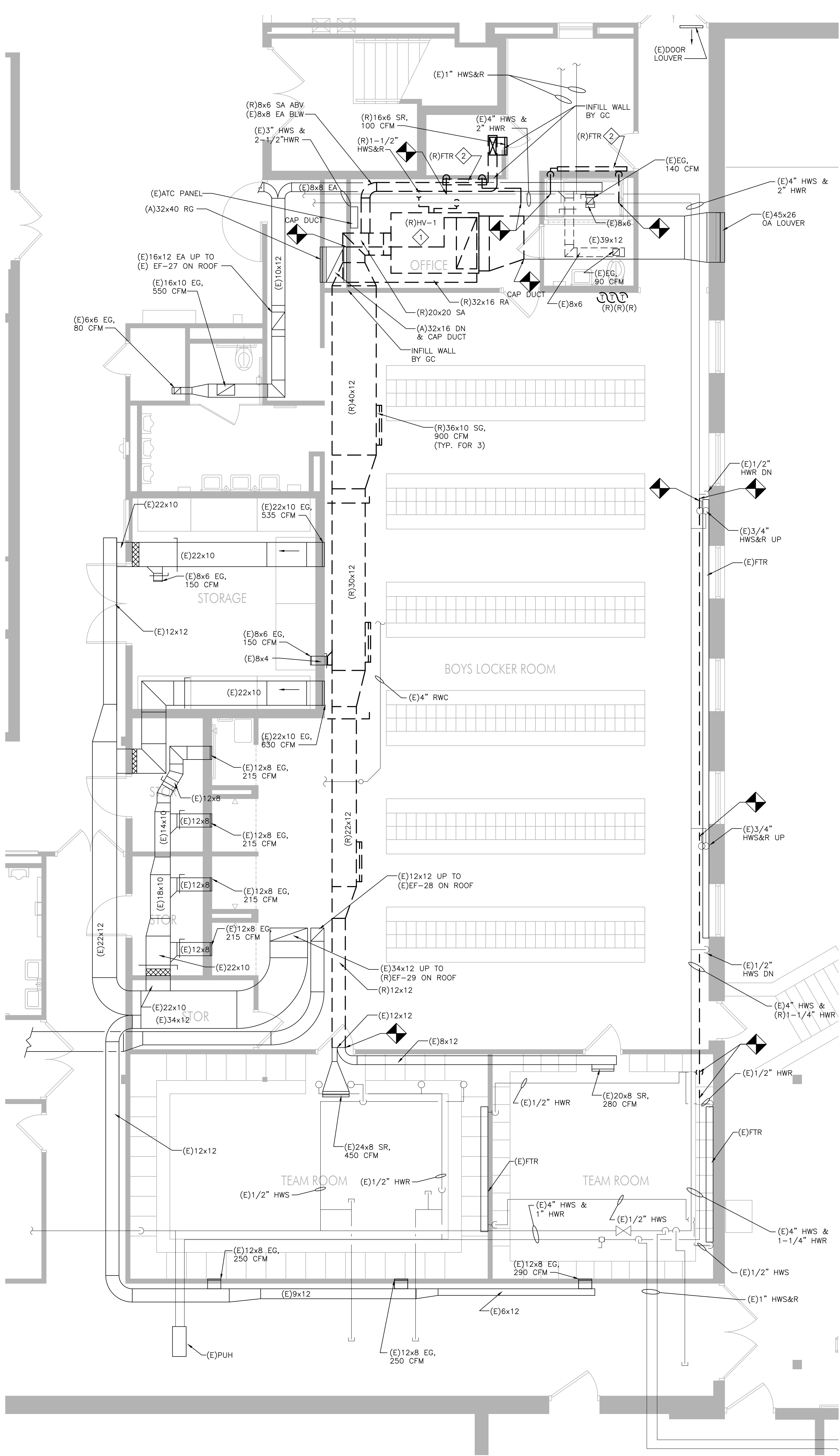
- REFER TO M001 FOR FURTHER GENERAL DEMOLITION NOTES.
- TEMPORARILY REMOVE AND REINSTALL CEILING TILES AND GRID AS REQUIRED FOR WORK ABOVE CEILINGS.
- PROVIDE ALL ASSOCIATED HOT WATER SYSTEM ISOLATION, DRAINAGE AND RE-FILLING AS REQUIRED FOR WORK ON DRAWINGS AND SPECIFICATIONS. DO NOT ASSUME THAT THE ISOLATION VALVES SHOWN WILL HOLD.
- ALL REMOVED ATC VALVES SHALL BE SALVAGED AND TURNED OVER TO THE OWNER.

NEW WORK KEY NOTES:

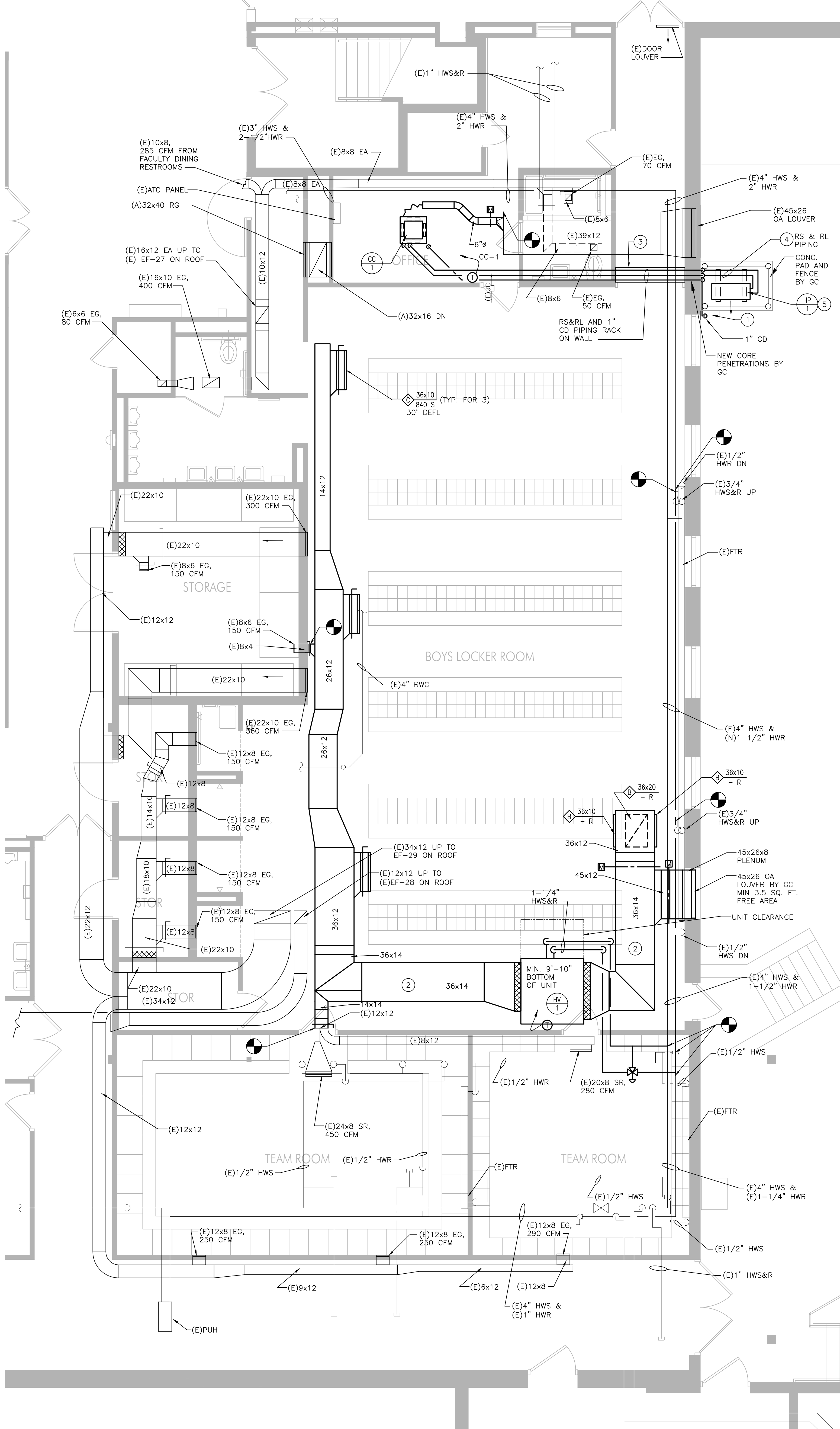
- REMOVE AIR HANDLING UNIT IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO UNIT, SUPPLY, AND OUTDOOR AIR DUCTWORK TO LIMITS SHOWN. HOT WATER SUPPLY & RETURN PIPING, INSULATION, CONTROLS AND THERMOSTAT HANGERS AND SUPPORTS. REFER TO ARCHITECTURAL DWGS FOR PATCHING OF WALL PENETRATIONS WHERE DUCTWORK HAS BEEN REMOVED.
- REMOVE FINNED TUBE RADIATION IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ALL ASSOCIATED HOT WATER PIPING TO LIMITS SHOWN. ENCLOSURES, HANGERS, SUPPORTS, AND CONTROLS. ABANDON PIPING IN WALL. REFER TO ARCHITECTURAL DRAWINGS FOR PATCHING AND PAINTING OF MASONRY WALL TO MATCH EXISTING BY GC.

NEW WORK KEY NOTES:

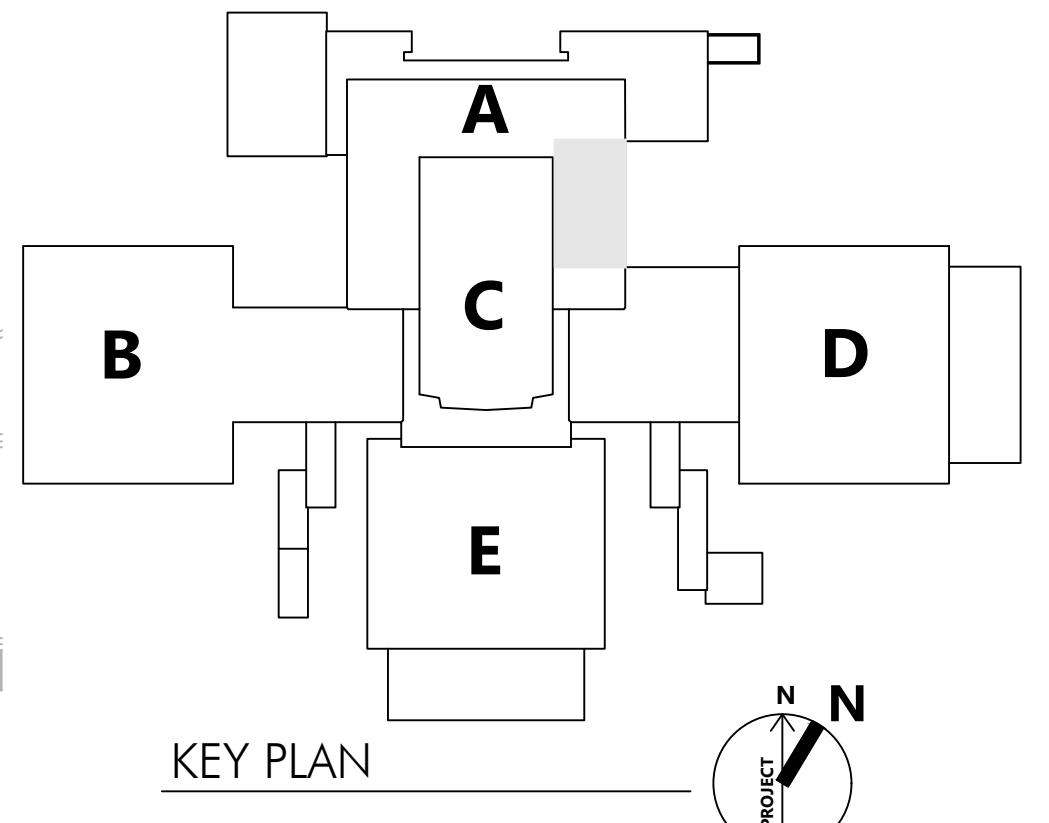
- RUN 1" CONDENSATE TO EXTERIOR, W/ ELBOW DN AND SPILL 4" ABOVE GRADE ONTO CONCRETE SPLASH BLOCK. MAKE PENETRATION THROUGH WALL WEATHER-TIGHT. CONNECT CONDENSATE PIPING TO UNIT.
- PROVIDE ALL EXPOSED DUCTWORK IN PAINTABLE GALVANNEAL SHEET METAL. DUCTWORK SHALL BE SHOP PRIMED AND FIELD PAINTED BY GC IN CUSTOM COLOR CHOSEN BY THE ARCHITECT. ALL DUCTWORK SHALL BE INTERNALLY LINED.
- PROVIDE ALL EXPOSED PIPING AND CONDUIT IN VERTICAL 3-SIDED 4" x 8" 16 GAUGE STEEL PIPE ENCLOSURE FOR FULL LENGTH OF SPACE. PIPE ENCLOSURE SHALL BE JG INNOVATIONS, INC. SOFTI-STEEL SYSTEM IN CUSTOM POWDER-COATED COLOR CHOSEN BY THE ARCHITECT. FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING.
- ALL EXPOSED REFRIGERANT PIPING SHALL BE COVERED WITH AIREX EFLEXGUARD PVC JACKET.
- REFER TO DETAIL 15, DWG M502 FOR HEAT PUMP MOUNTING REQUIREMENTS.



1 PARTIAL LOWER LEVEL DEMO PLANS
M401 1/4" = 1'-0"



2 PARTIAL LOWER LEVEL NEW WORK PLANS
M402 1/4" = 1'-0"



ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

VFMS - MECHANICAL
FLOOR PLANS

DRAWING NUMBER

M401

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

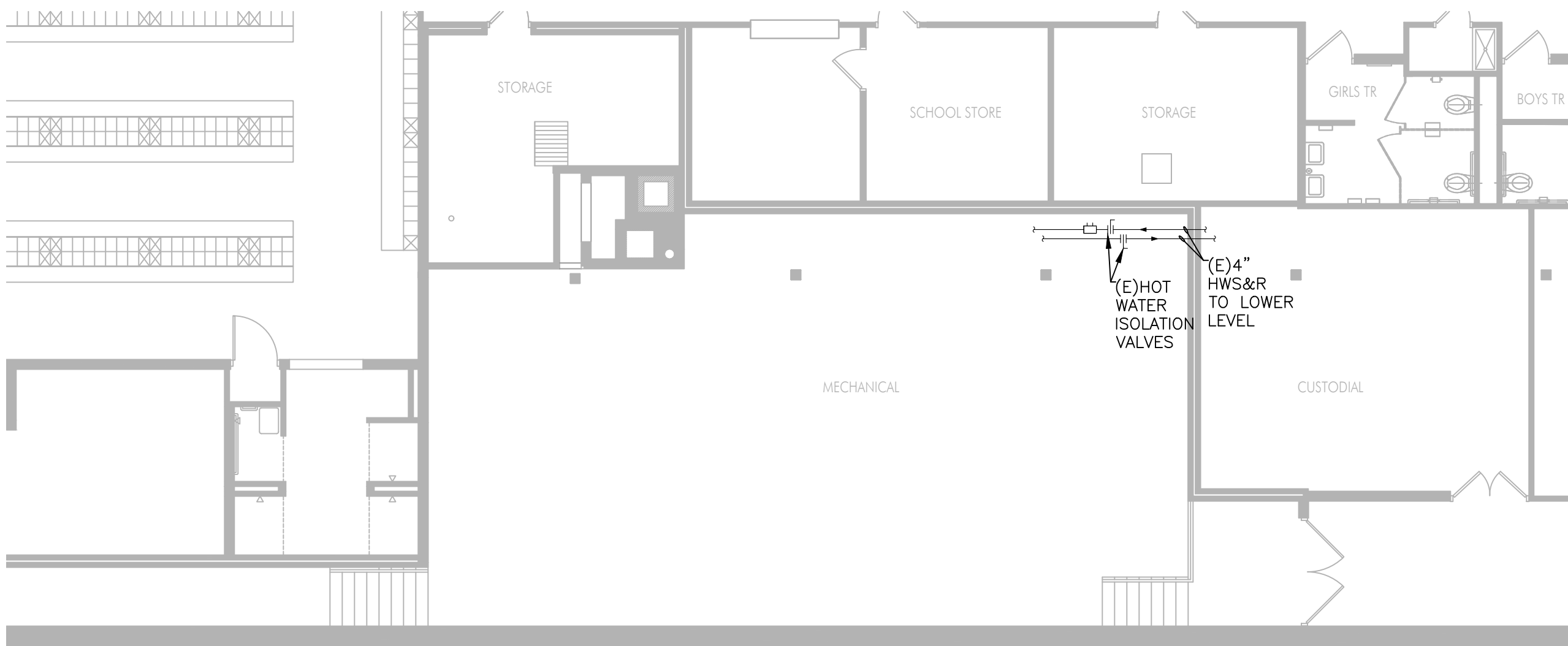
ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

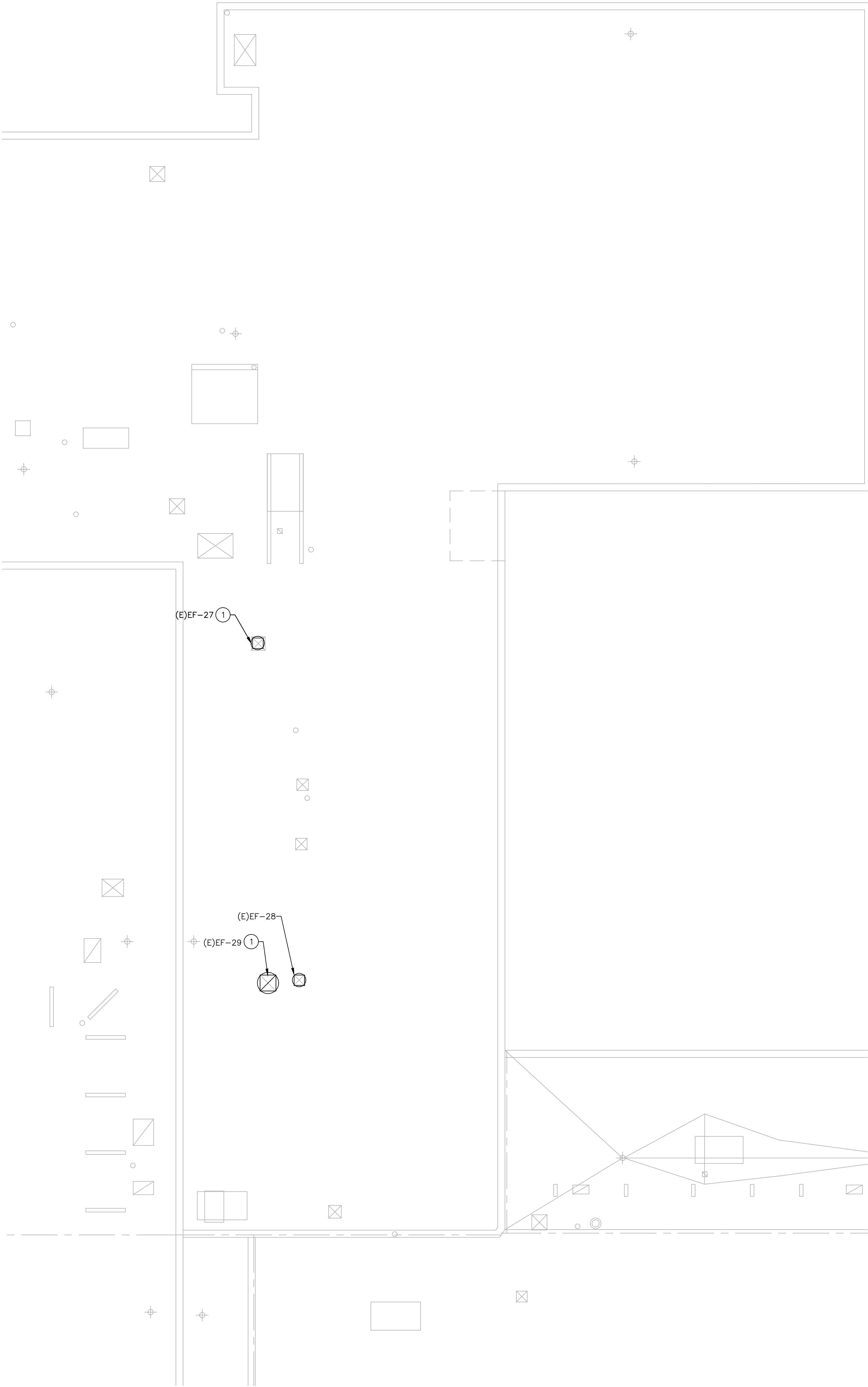
STRUCTURAL
A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

NEW WORK KEY NOTES:

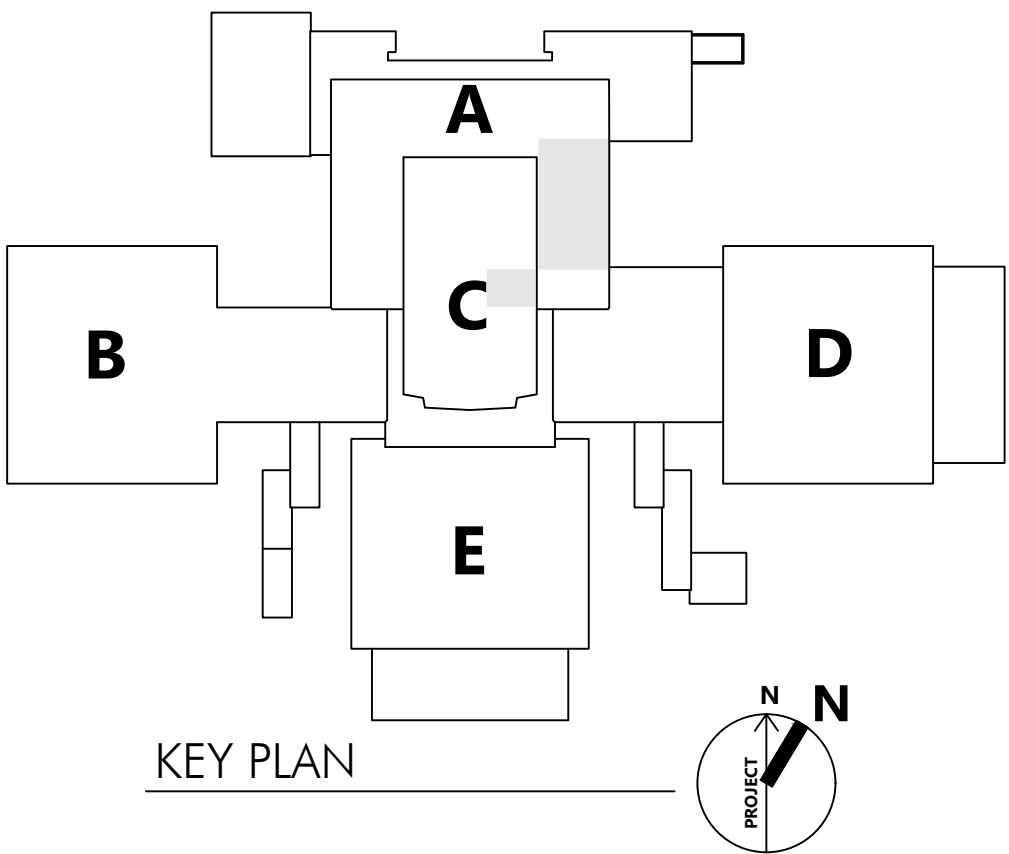
- ① BALANCE EXISTING UNIT AND ASSOCIATED EXHAUST AIR TERMINALS TO AIRFLOWS INDICATED ON FLOOR PLANS. PROVIDE BELT AND SHEAVE CHANGE AS NEEDED FOR BALANCING.



1 BOILER ROOM PLANS
M402 1/8" = 1'-0"



2 NEW WORK ROOF PLANS
M402 1/8" = 1'-0"



ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

**VFMS - MECHANICAL
ROOF AND BOILER
ROOM PLANS**

DRAWING NUMBER

M402

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
(610) 240-1900

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

MEPP ENGINEER
Schiller and Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
(215) 886-8947

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A.W. Lookup Structural Engineers
500 Fayette Street, Suite 100
Conshohocken, PA 19428
(610) 825-2600

ISSUE HISTORY

Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

VFMS - MECHANICAL
SCHEDULES AND
CONTROLS

DRAWING NUMBER

M403

GRILLES, REGISTERS, & DIFFUSERS SCHEDULE							
TAG	STYLE	CFM	MOUNT	FACE	BASIS OF DESIGN MANUFACTURER & MODEL #	MAX IN	REMARKS
B	FIXED FACE BAR GRILLE	VARIABLES	AS REQ'D	VARIABLES W/NECK SIZE	KRUEGER S80	25	1
C	SUPPLY GRILLE	VARIABLES	AS REQ'D	VARIABLES W/NECK SIZE	KRUEGER 880	25	1, 2

- REFER TO PLANS FOR QUANTITIES, NECK SIZE, LENGTH, CFM, AND PATTERN.
- PROVIDE 22.5° DEFLECTION IN HORIZONTAL AND VERTICAL DIRECTIONS UNLESS OTHERWISE NOTED.

HEAT PUMP UNIT SCHEDULE																					
UNIT TAG	TONS	COOLING CAPACITY BTUH	HEATING CAPACITY BTUH	COMPRESSOR			CONDENSER FAN MOTOR			ELECTRICAL CHARACTERISTICS				MAX. AMBIENT TEMP. °F	SEER2 (EER)	HSPF2 (COP)	MAXIMUM DIMENSIONS, IN. LxWxH	MAXIMUM SOUND PRESSURE LEVEL dB(A)	OPERATING WEIGHT LBS	BASIS OF DESIGN MANUFACTURER AND MODEL NO.	
				QTY.	H.P. EA.	RLA	QTY.	KW EA.	FLA EA.	VOLTS	PHASE	CYCLE	MCA								MOCP
HP-1	1.0	12,000	13,500	1	—	—	1	—	—	208	1	60	14.6	15	115	19.5	9.0	29x13x22	50	63	DAIKEN RX12AVJU9

- UNITS TO BE PROVIDED WITH NON-FUSED, UNIT MOUNTED DISCONNECT SWITCH BY THE EC.

CEILING CASSETTE UNIT SCHEDULE														
UNIT TAG	AREA SERVED	TOTAL SUPPLY CFM AT MEDIUM SPEED	MINIMUM OA CFM	TOTAL COOLING BTU/HR	TOTAL HEATING 47 °F AMBIENT BTU/HR	TOTAL HEATING 17 °F AMBIENT BTU/HR	ELECTRICAL CHARACTERISTICS				MAXIMUM DIMENSIONS, IN. LxWxH	MAXIMUM WEIGHT LBS.	BASIS OF DESIGN MANUFACTURER & MODEL NO.	SERVED BY
							VOLTS	PHASE	CYCLE	MCA				
CC-1	COACHES OFFICE	353	30	10,800	13,500	8,000	208	1	60	0.3	23x23x12	36	DAIKEN FFA12AVJU9	HP-1

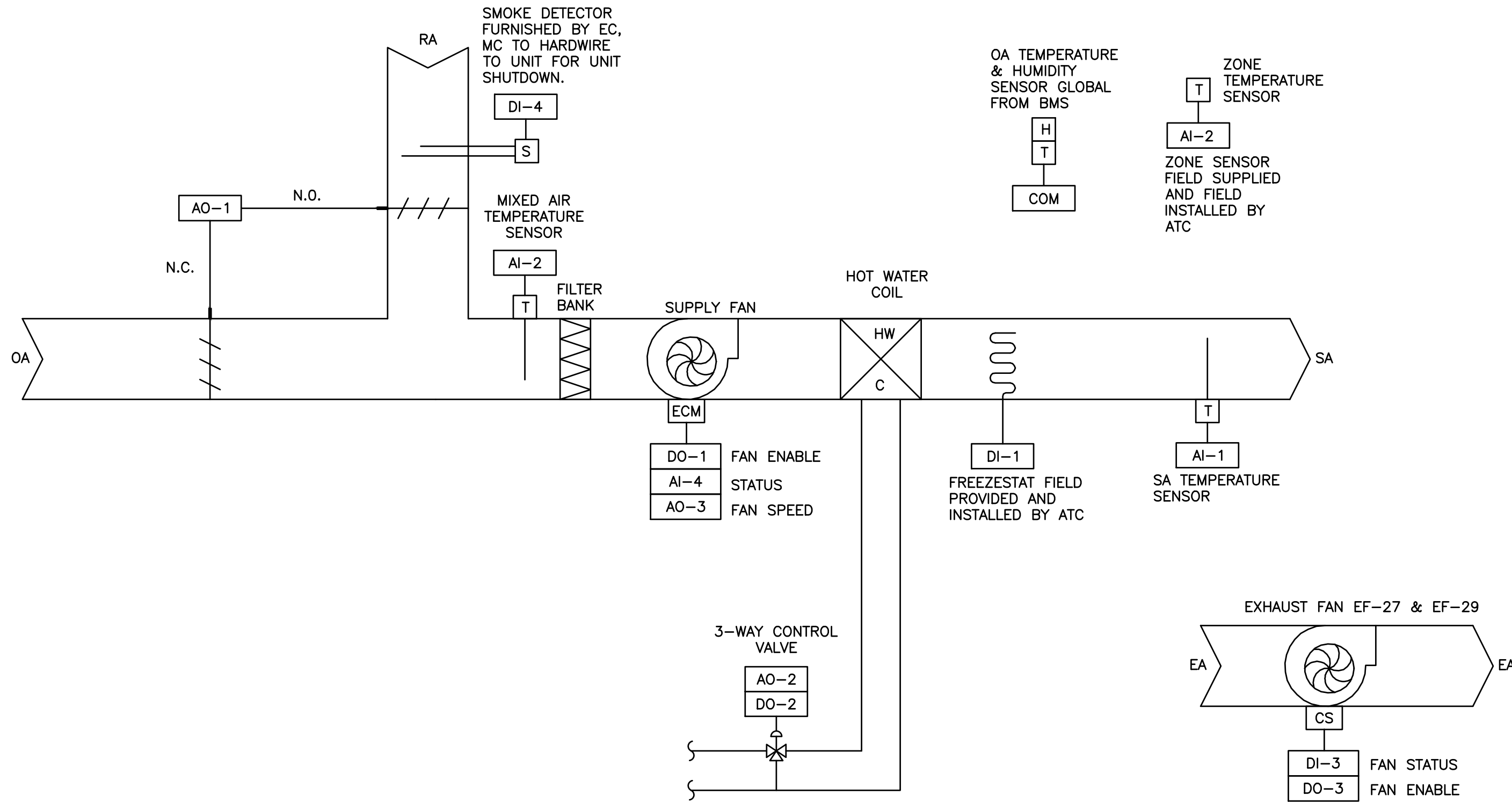
- PROVIDE UNIT COMPLETE W/ WALL MOUNTED HARD-WIRED THERMOSTAT.
- PROVIDE UNIT COMPLETE W/ FRESH AIR INTAKE KIT.
- ALL REFRIGERANT PIPING TO BE SIZED BY UNIT MANUFACTURER.

AIR HANDLING UNIT SCHEDULE																											
UNIT TAG	AREA SERVED	MAX SUPPLY CFM	MIN SUPPLY CFM	MIN OA CFM	HOT WATER COIL				SUPPLY FAN							ELECTRICAL CHARACTERISTICS						MAXIMUM UNIT DIMENSIONS LxWxH, IN	WEIGHT LBS.	BASIS OF DESIGN MANUFACTURER AND MODEL NO.			
					AIR		ROWS	TOTAL CAPACITY MBH	WATER				PD FT.	ESP IN. WC	TSP IN. WC	QTY.	BHP EA	HP EA	FAN RPM	VOLTS	PHASE				HZ	FLA	MOCP
					ENT °F	LVG °F			GPM	ENT °F	LVG °F																
HV-1	BOYS LOCKER RM	3,400	3,400	1,600	43.0	81.0	1	147.2	9	180	146.4	1.2	1.3	1.8	1	2.2	3	2147	208	3	60	8	15	57x61x28	900	AAON H3-CRB-8-0-0000-11H	

- PROVIDE UNIT W/ FACTORY MOUNTED, NON-FUSED DISCONNECT SWITCH.
- PROVIDE UNIT W/ EC MOTOR.
- PROVIDE UNIT W/ 2" PLEATED MERV 8 FILTERS.
- PROVIDE ALL UNITS W/ BLOWER PROVING SWITCH.
- PROVIDE ALL UNITS W/ DIRTY FILTER SWITCH.
- PROVIDE TERMINAL STRIP CONTROL INTERFACE.

MECHANICAL SCHEDULES

1
M403
NO SCALE



HV-1:

NEW CONTROL REQUIREMENTS SHALL INCLUDE THE PLACEMENT OF A NEW UNIT CONTROLLER WITH I/O EXPANSION INSIDE THE UNIT CONTROLLER CABINET FOR CONTROL OF UNIT VIA MANUFACTURER PROVIDED TERMINAL STRIP. THIS UNIT SHALL BE CONNECTED TO THE BUILDING WIDE COMMUNICATION CABLE (BUS) AND SHALL INTEGRATE ALL POINTS BACK TO SUPERVISORY CONTROLLER. MOUNT NEW CONTROLLER IN UNIT ENCLOSURE AND PROVIDE 120/24V TRANSFORMER FOR POWER. PROVIDE DUCT MOUNTED PRESSURE SENSORS FOR FULL UNIT CONTROL. PROVIDE COMPLETE INDIVIDUAL UNIT SCHEDULING FUNCTION THROUGH BUILDING SUPERVISORY CONTROLLER. THE BAS WILL EARLY START THE UNIT TO ACHIEVE SPACE TEMPERATURE SETPOINT FOR OCCUPANCY. THE OPERATOR WILL BE ABLE TO ADJUST THE UNIT START/STOP USING THE OPERATOR'S WORKSTATION. PROVIDE A WALL MOUNTED THERMOSTAT WITH LCD DISPLAY AND OCCUPANCY OVERRIDE IN CLEAR LOCKABLE PLASTIC ENCLOSURE.

H&V UNIT POINTS LIST															
POINT TAG	POINT DESCRIPTION	INPUTS						OUTPUTS				FUNCTION		REMARKS	
		SAFETY SHUT DOWN	DIGITAL		ANALOG			DIGITAL	ANALOG	VALVE ACTUATOR OPEN/CLOSE	ALARM	ALARM			
			STATUS	OCCUPANCY	HUMIDITY	TEMPERATURE	HUMIDITY	SETPOINT	FEEDBACK				ON/OFF		OPEN/CLOSED
DI-1	FREEZE/STAT	X	X										X		
AI-1	SUPPLY AIR TEMPERATURE					X									
AO-1	OA/RA DAMPER												X		
COM	OCCUPANCY OVERRIDE			X											
COM	SETPOINT ADJUSTMENT						X								
AI-2	ZONE TEMPERATURE						X						X		
DO-1	FAN ENABLE								X						1
AI-4	FAN STATUS								X				X		1
AO-2	HOT WATER HEATING VALVE											X			
DO-2	HOT WATER ENABLE								X						
COM	OUTDOOR AIR TEMPERATURE					X									
COM	OUTDOOR AIR HUMIDITY						X								
COM	OCCUPANCY			X											
DI-3	EF STATUS		X										X		
DO-3	EF START/STOP								X						
DI-4	RETURN AIR SMOKE DETECTOR	X	X										X		
AI-3	SUPPLY AIR TEMPERATURE					X									
AO-3	FAN SPEED										X				1

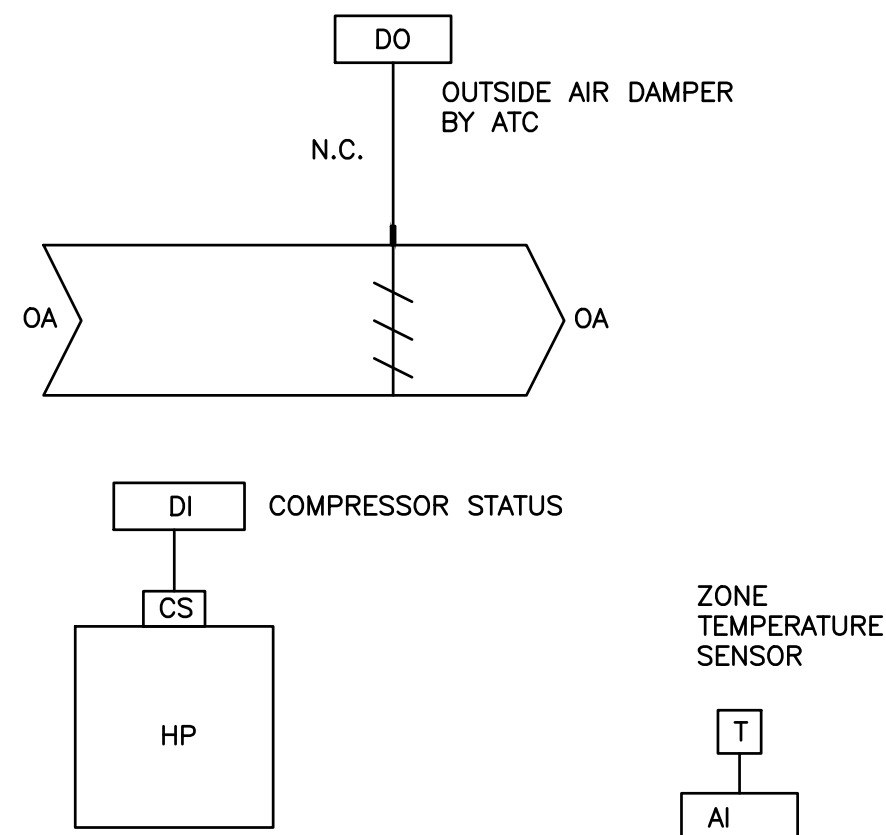
- TERMINAL FOUND ON UNIT TERMINAL STRIP

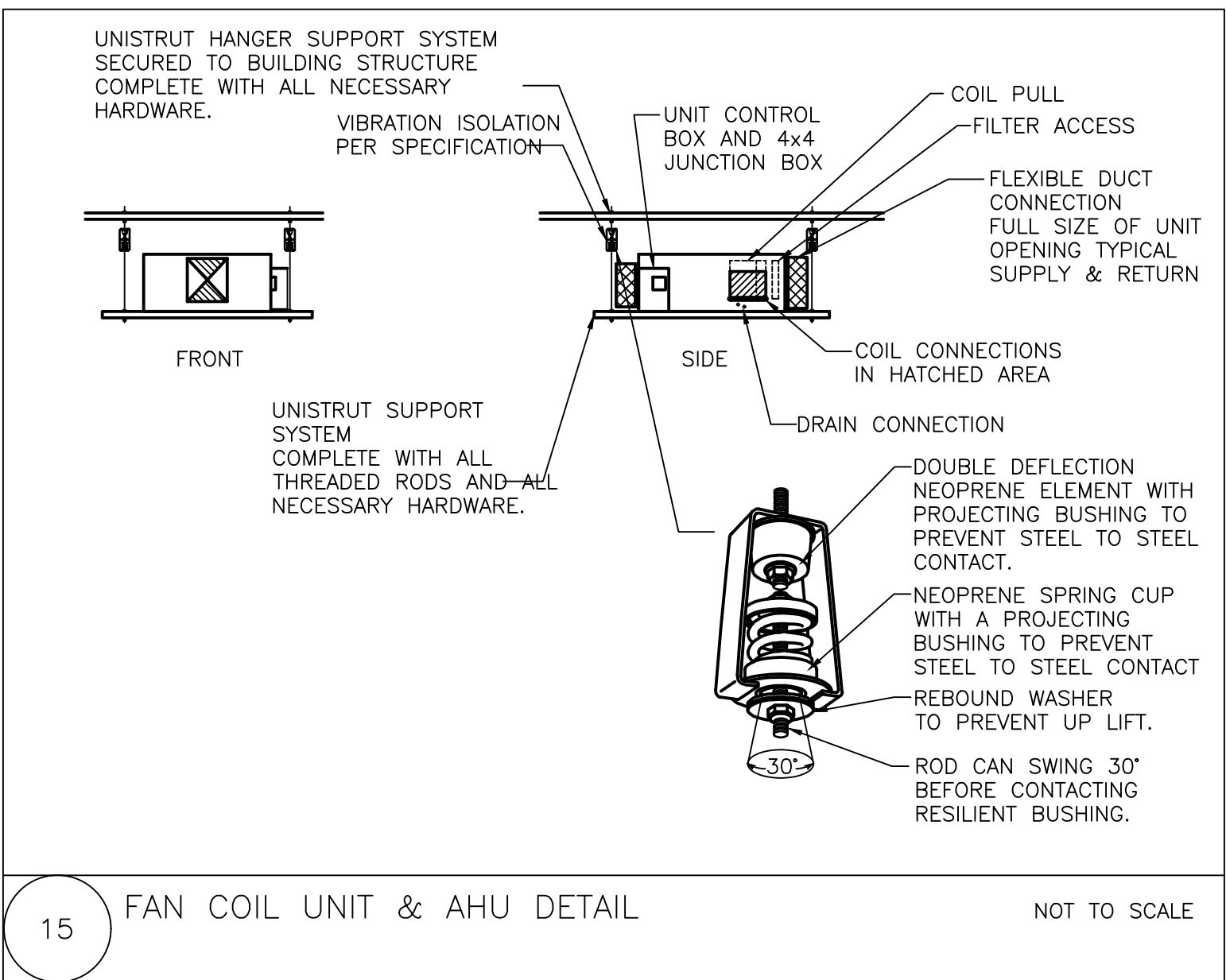
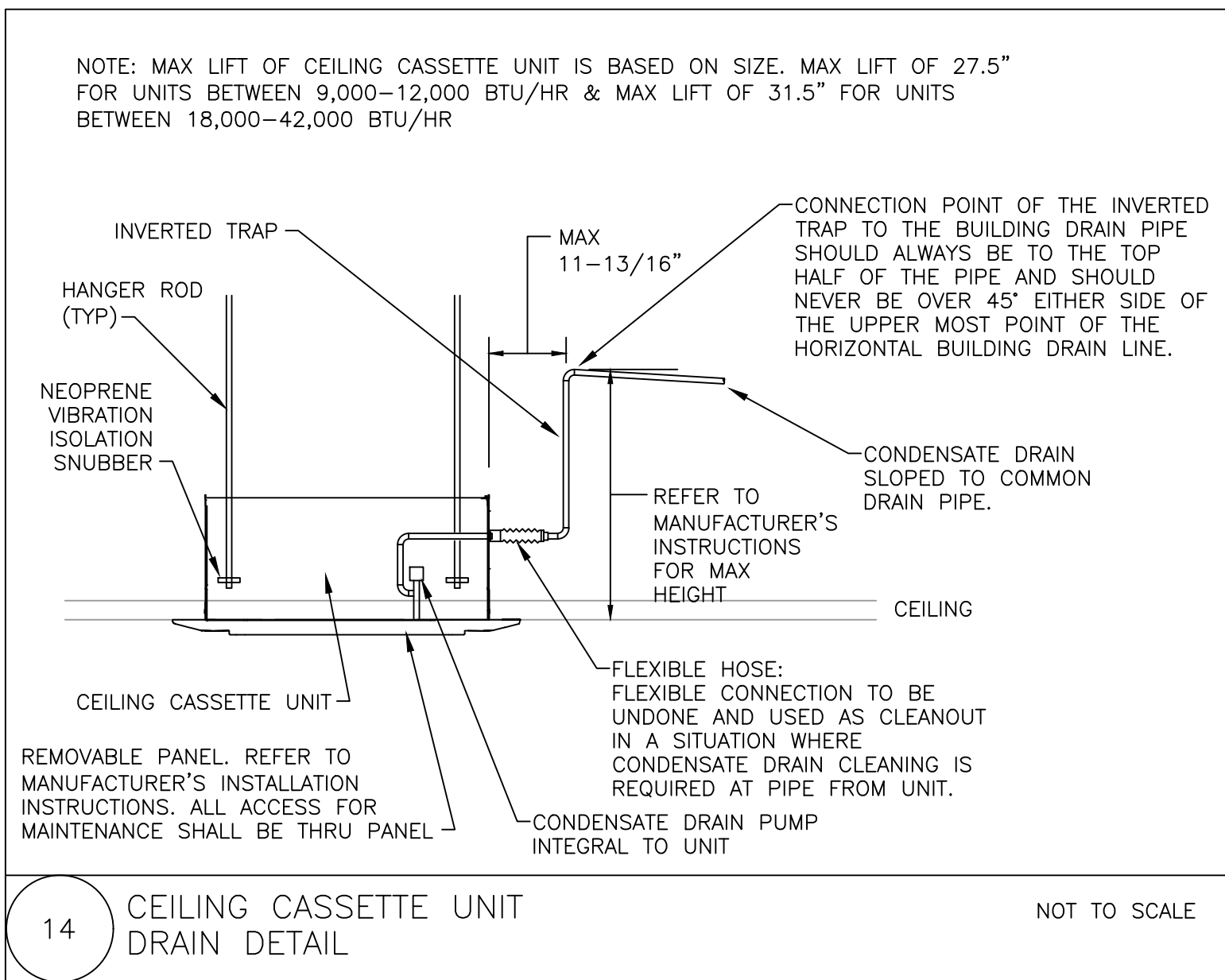
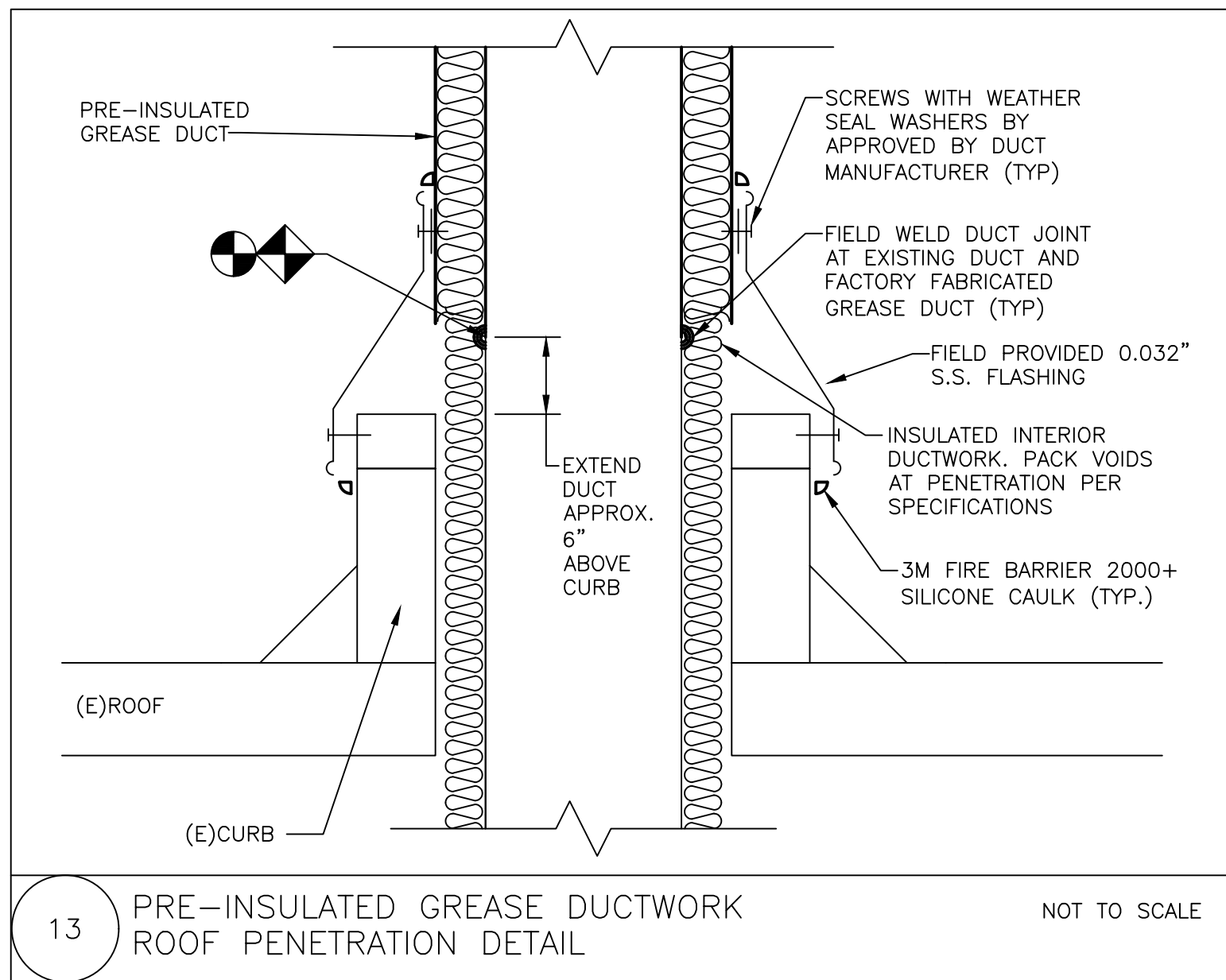
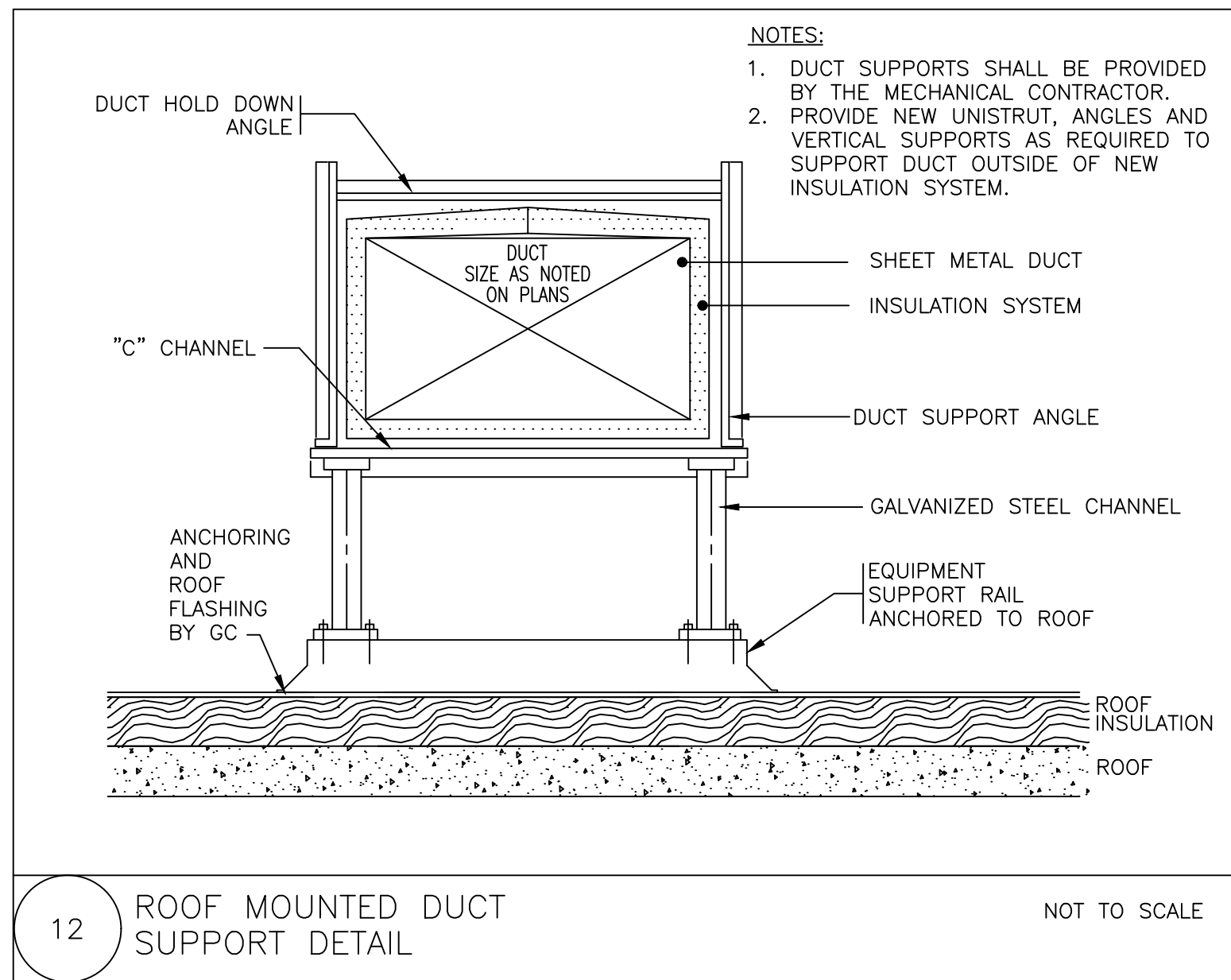
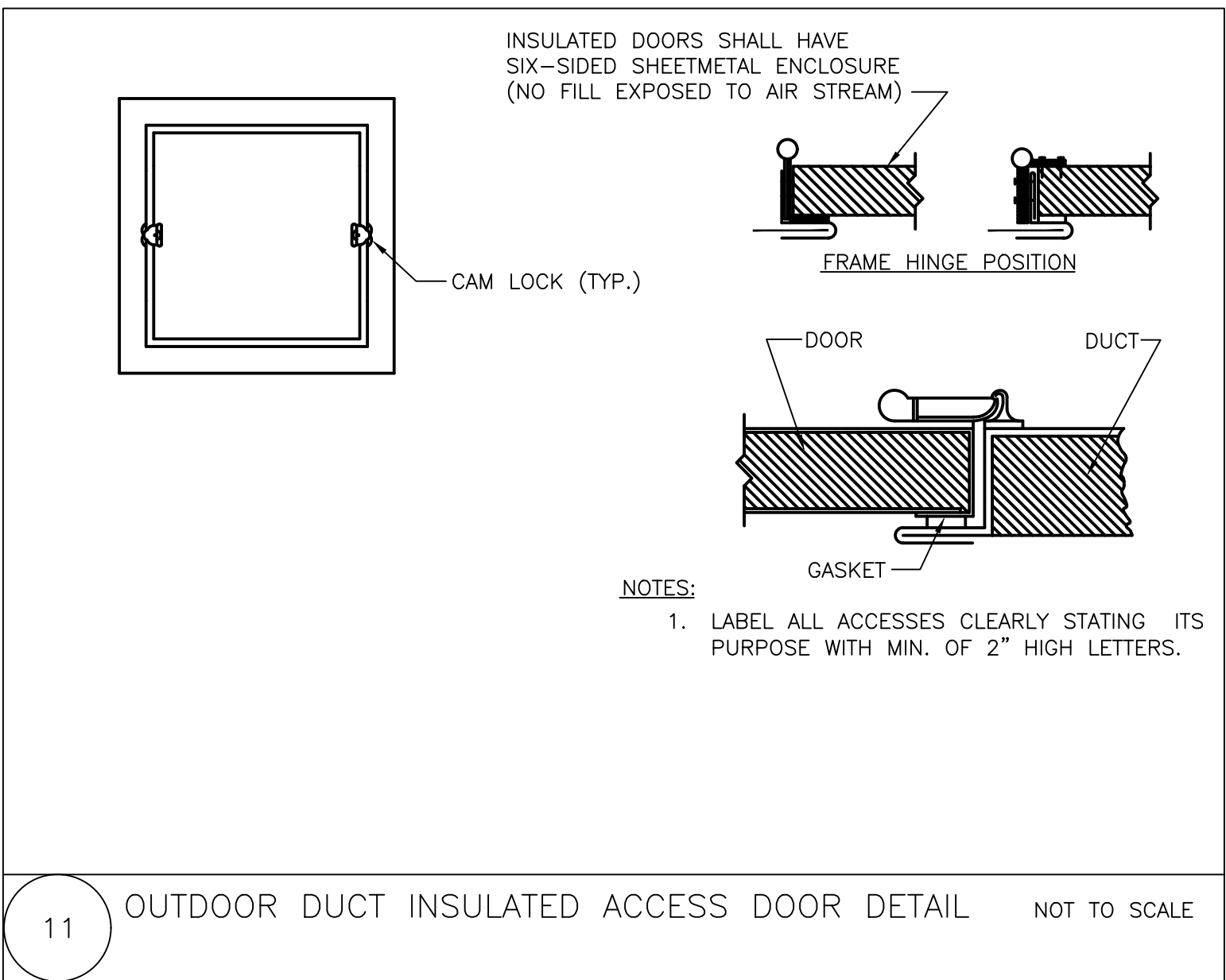
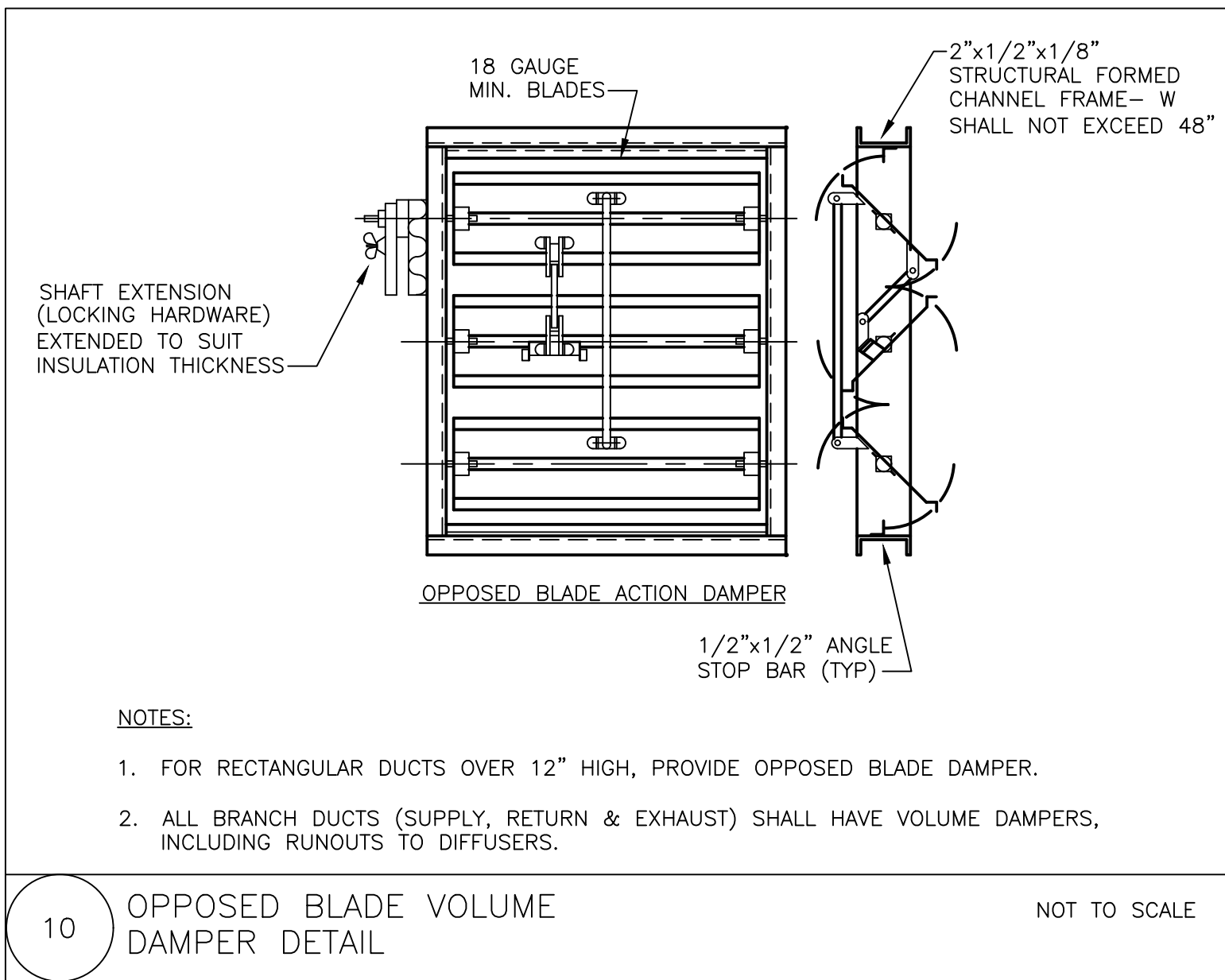
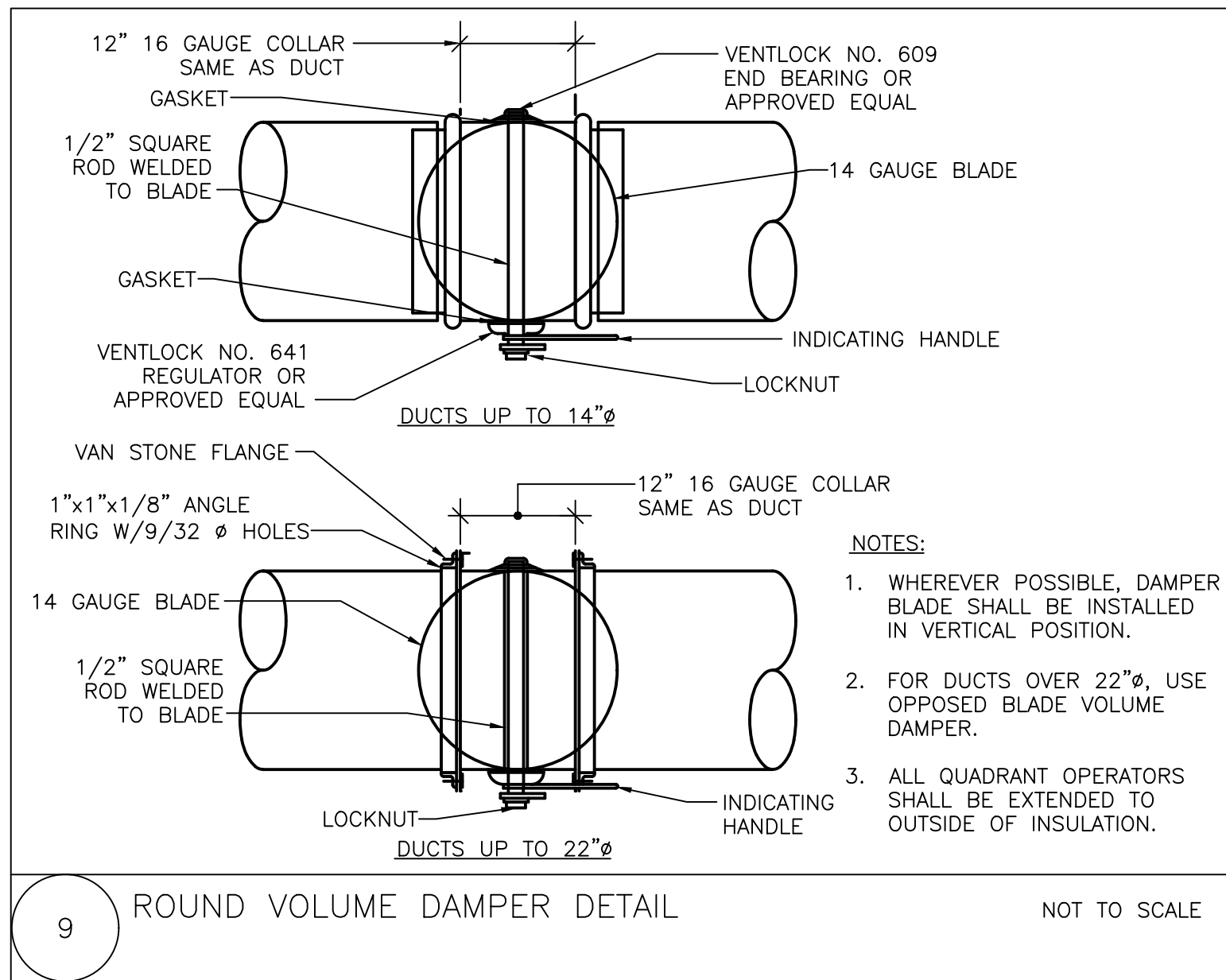
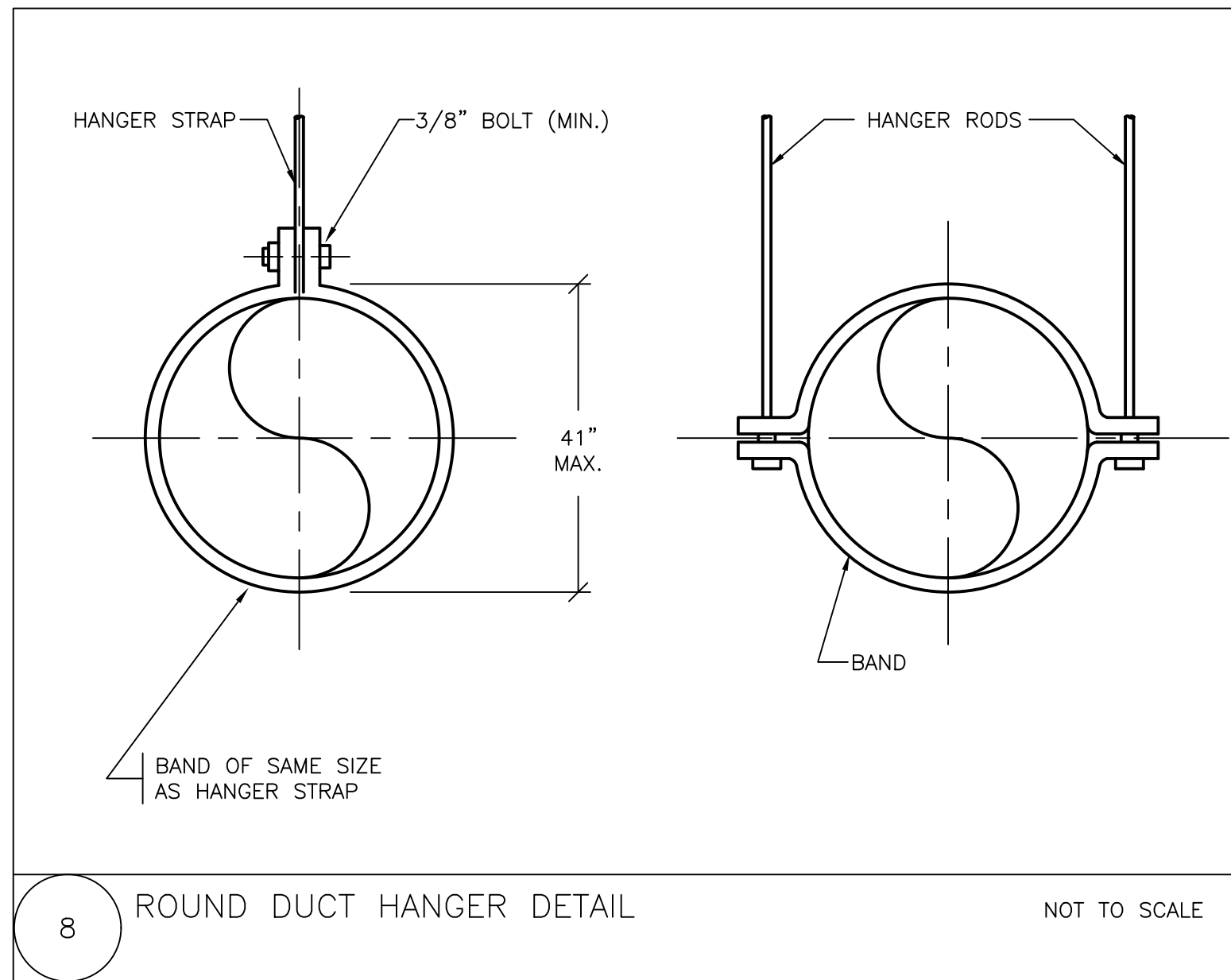
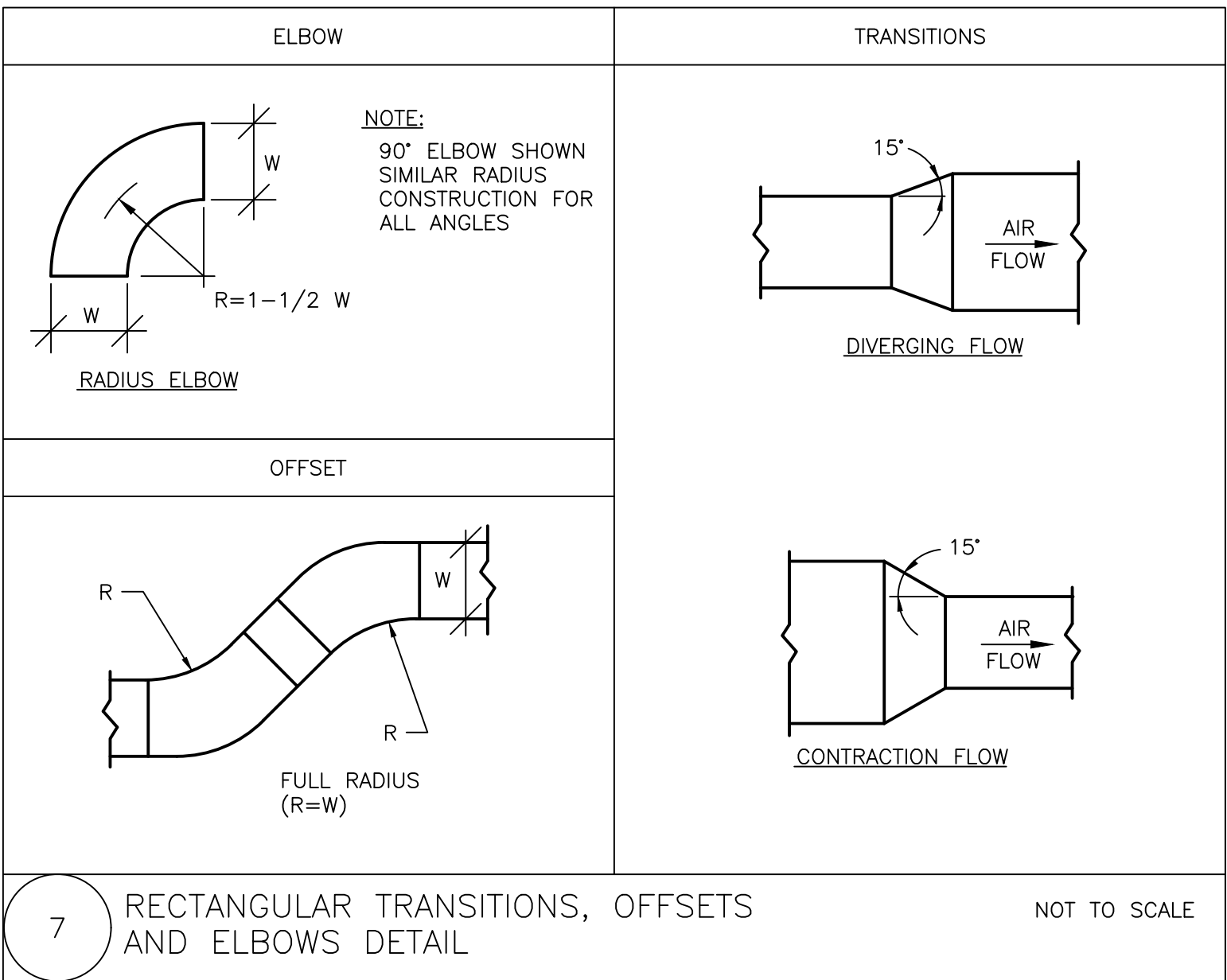
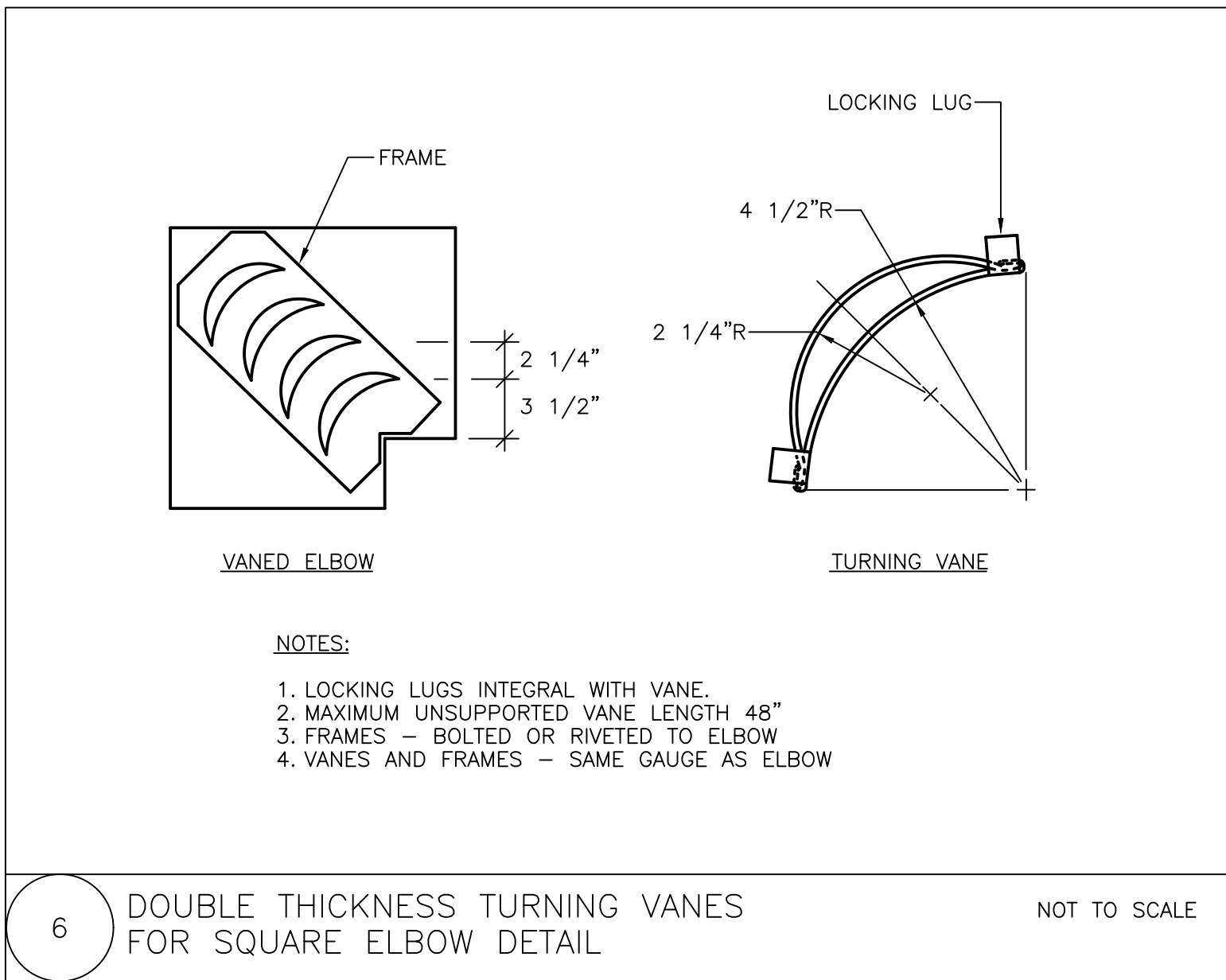
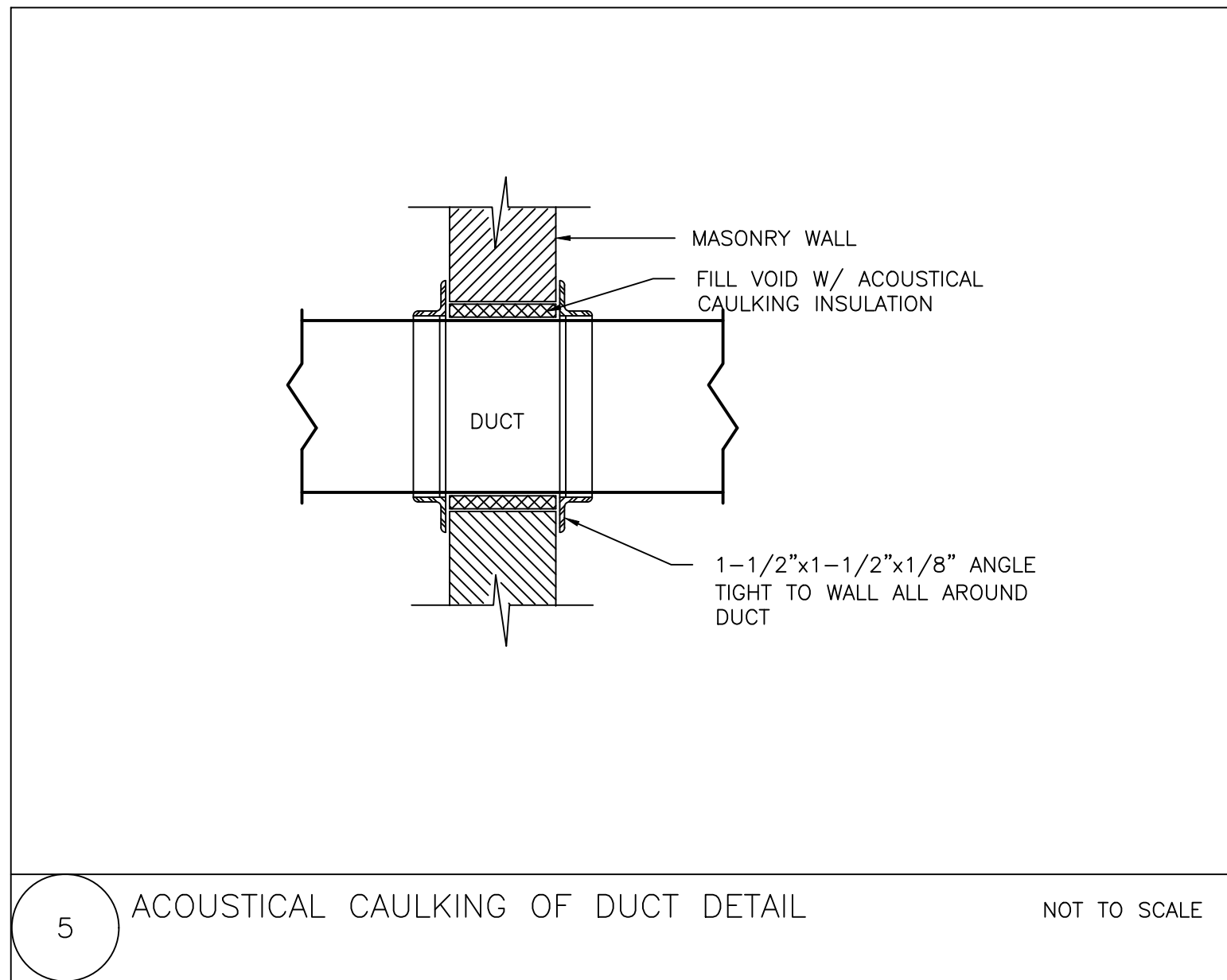
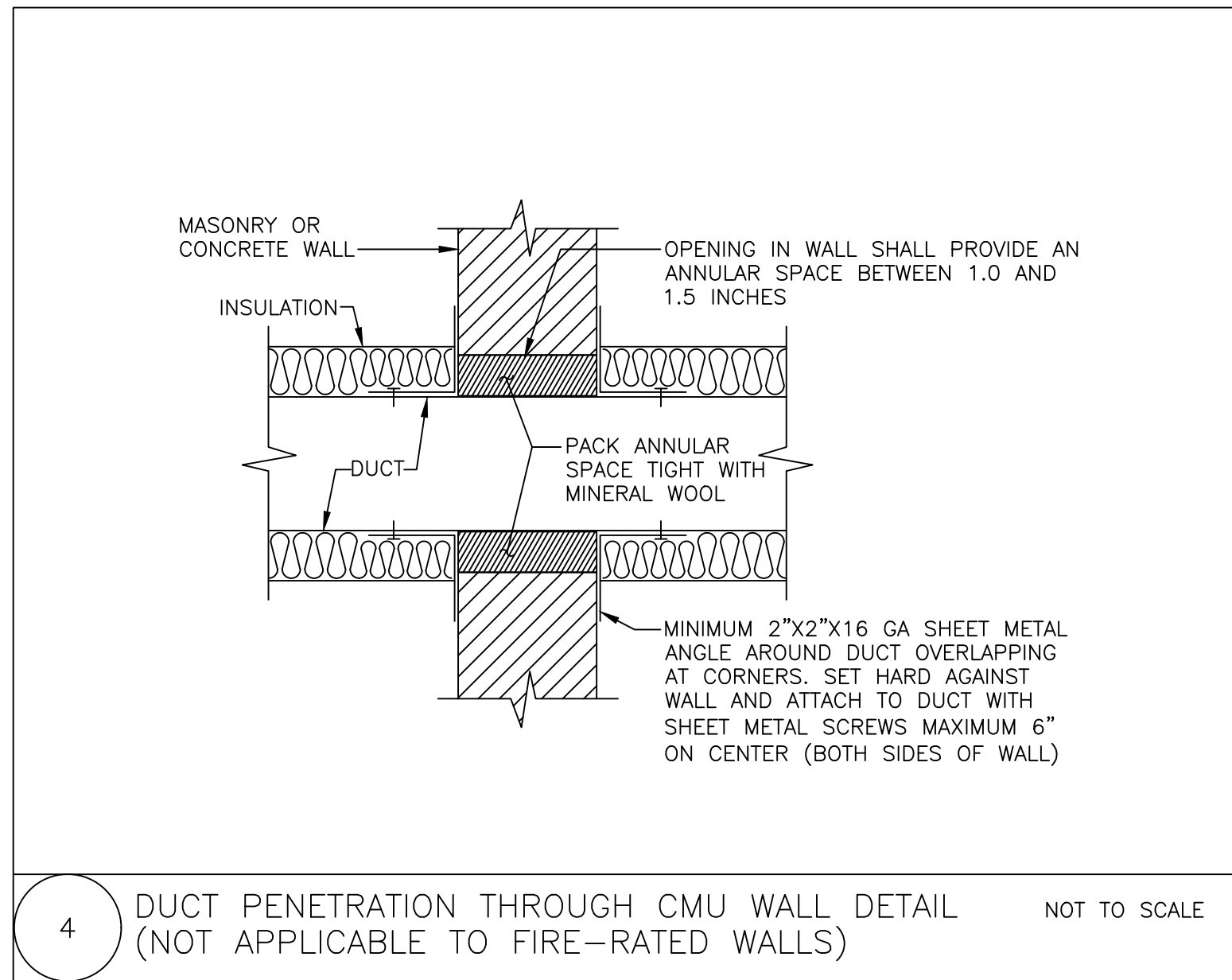
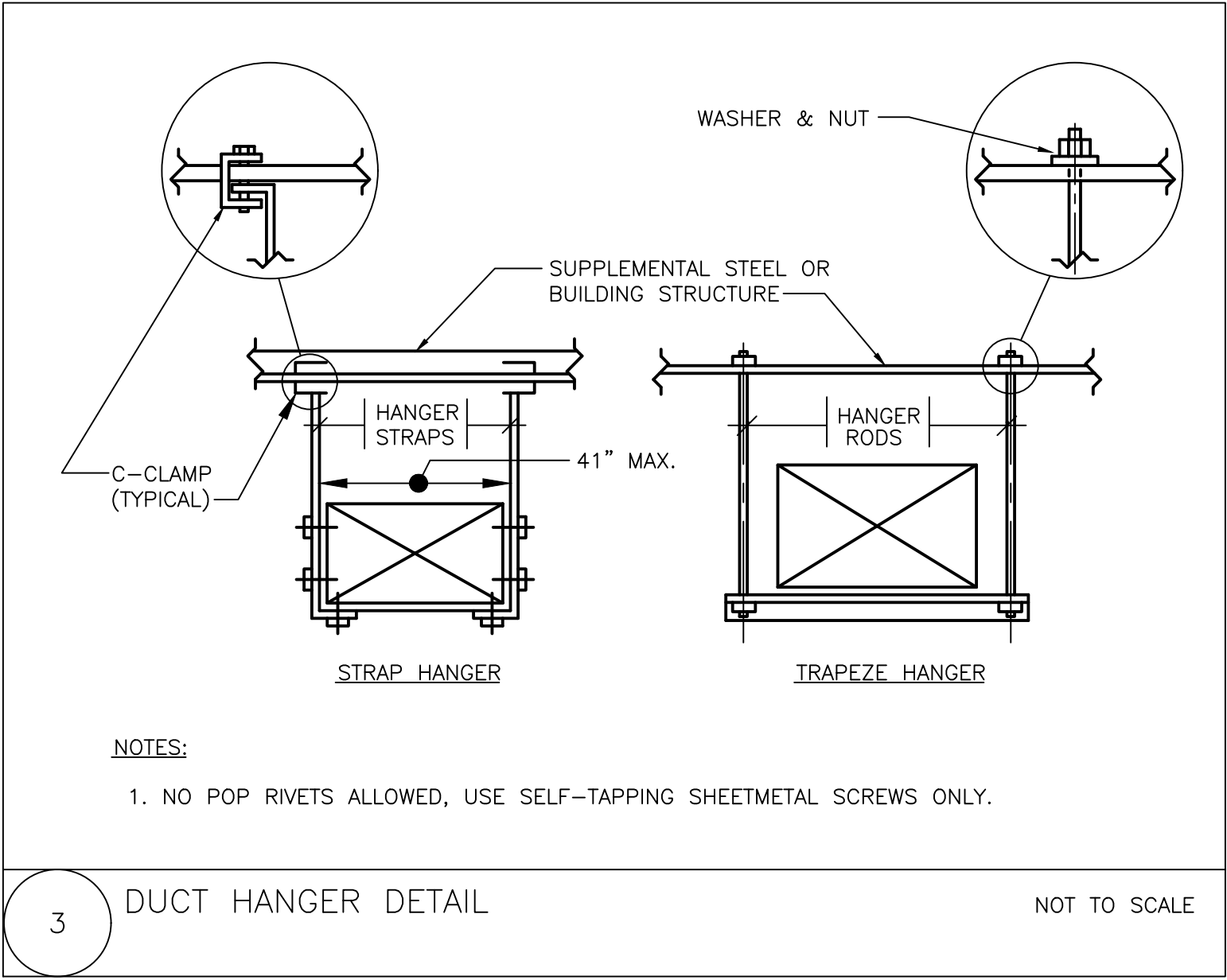
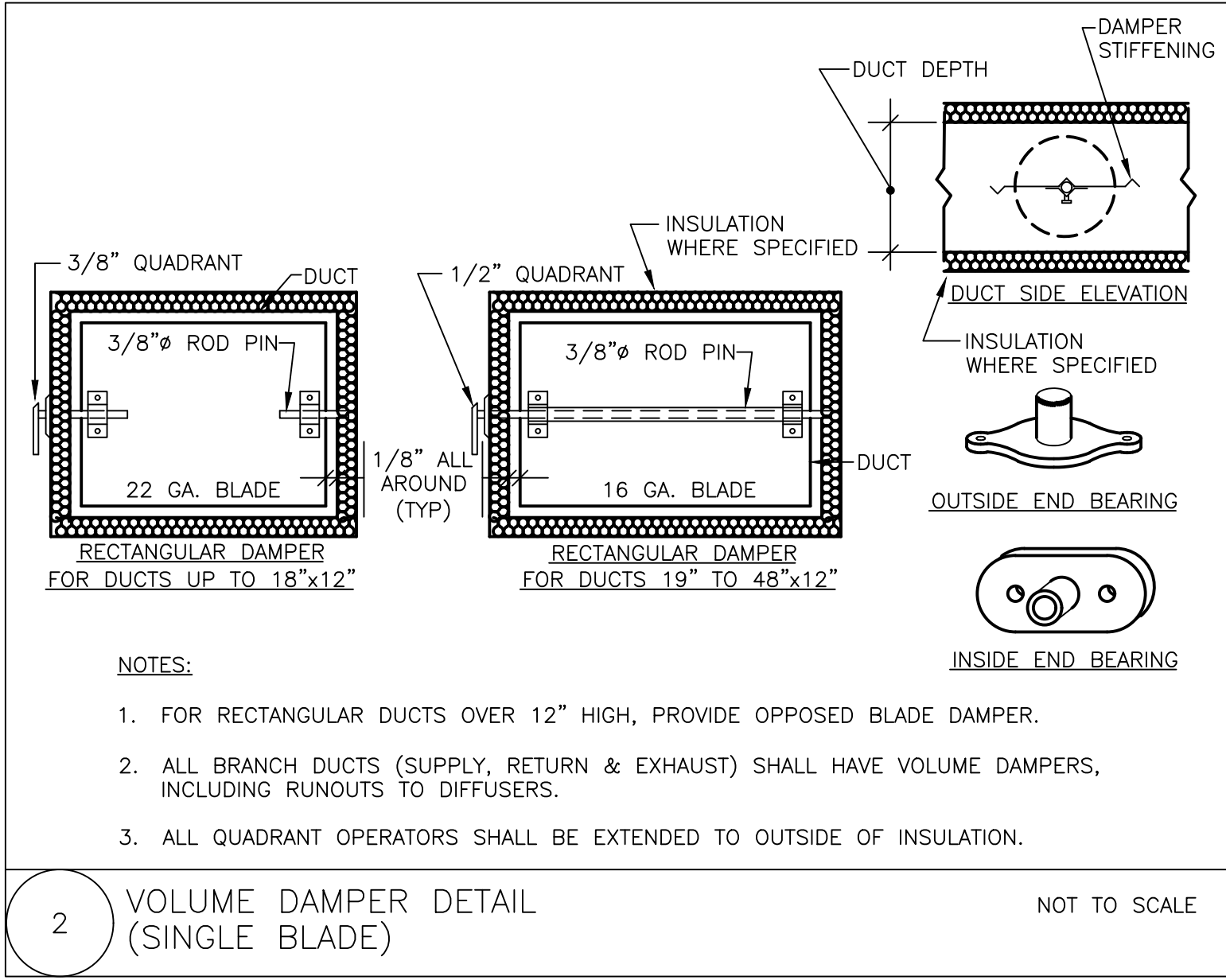
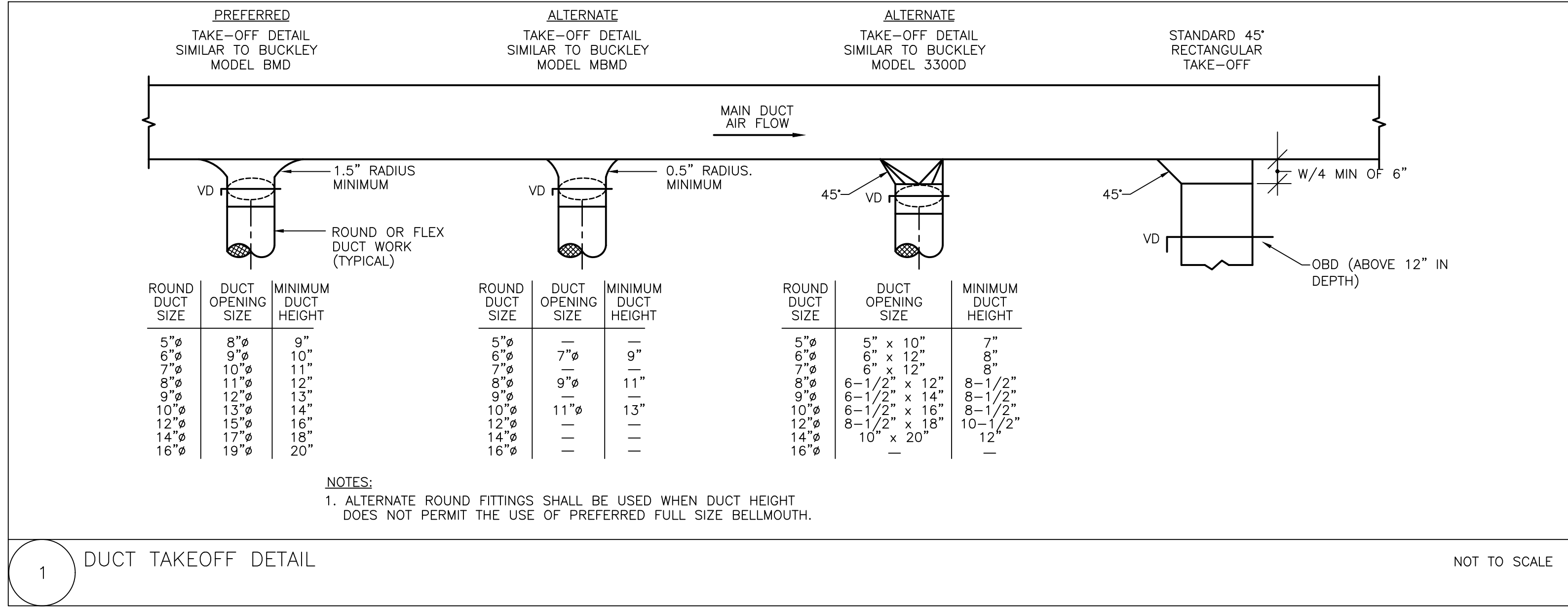
HV-1 CONTROLS

2
M403
NO SCALE

CC-1/HP-1 CONTROLS

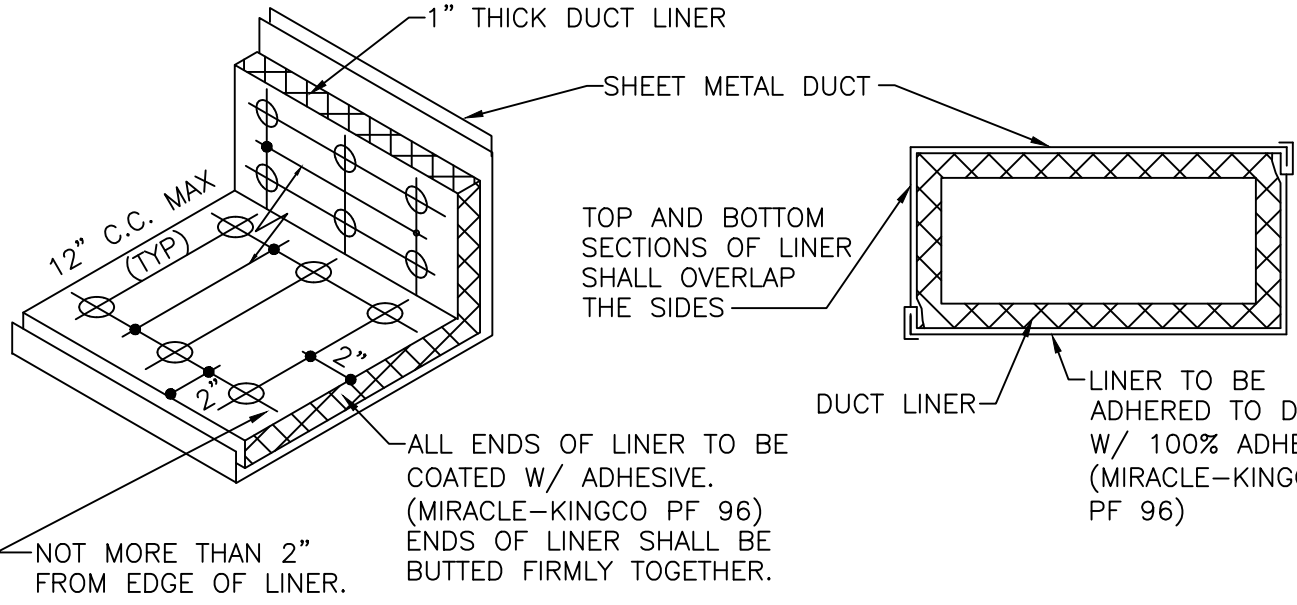
3
M403
NO SCALE





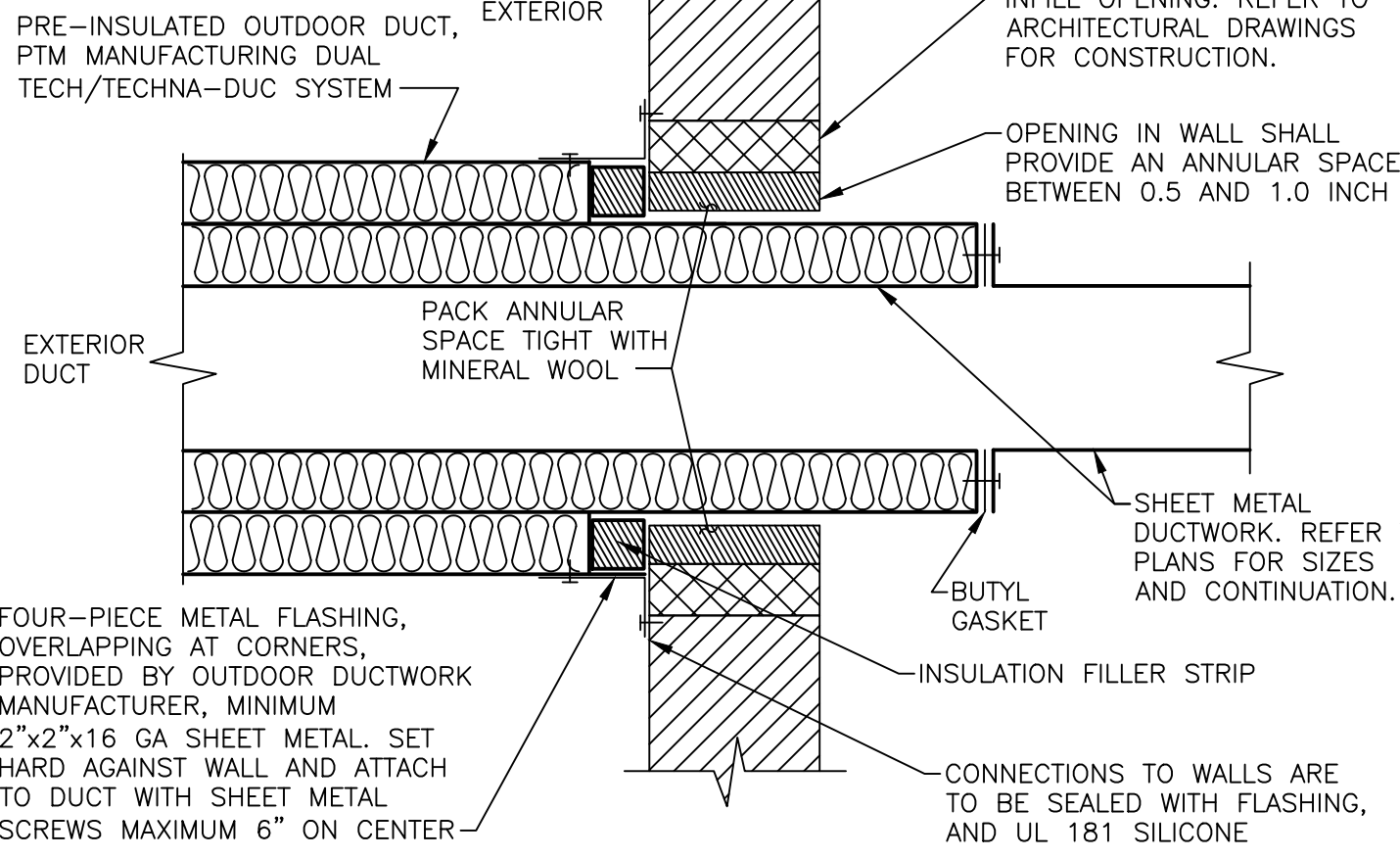
METAL FASTENERS:
OMARK INSUL-PINS,
DURO DYNE FASTENERS
OR GRIPNAILS.

GRIP NAILS SHALL BE INSTALLED BY
"GRIP NAIL HAMMER" OR BY
AUTOMATIC FASTENER EQUIPMENT.



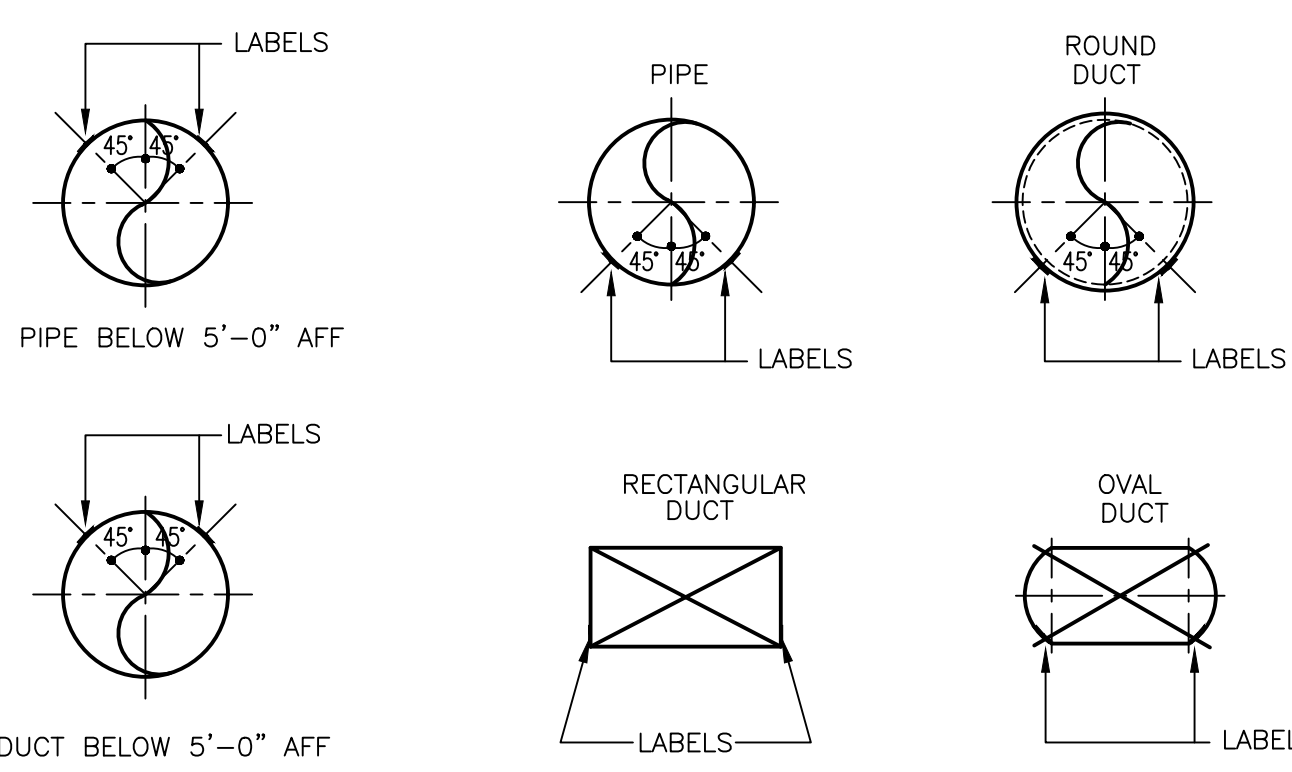
1 DUCT LINER INSTALLATION DETAIL

NOT TO SCALE



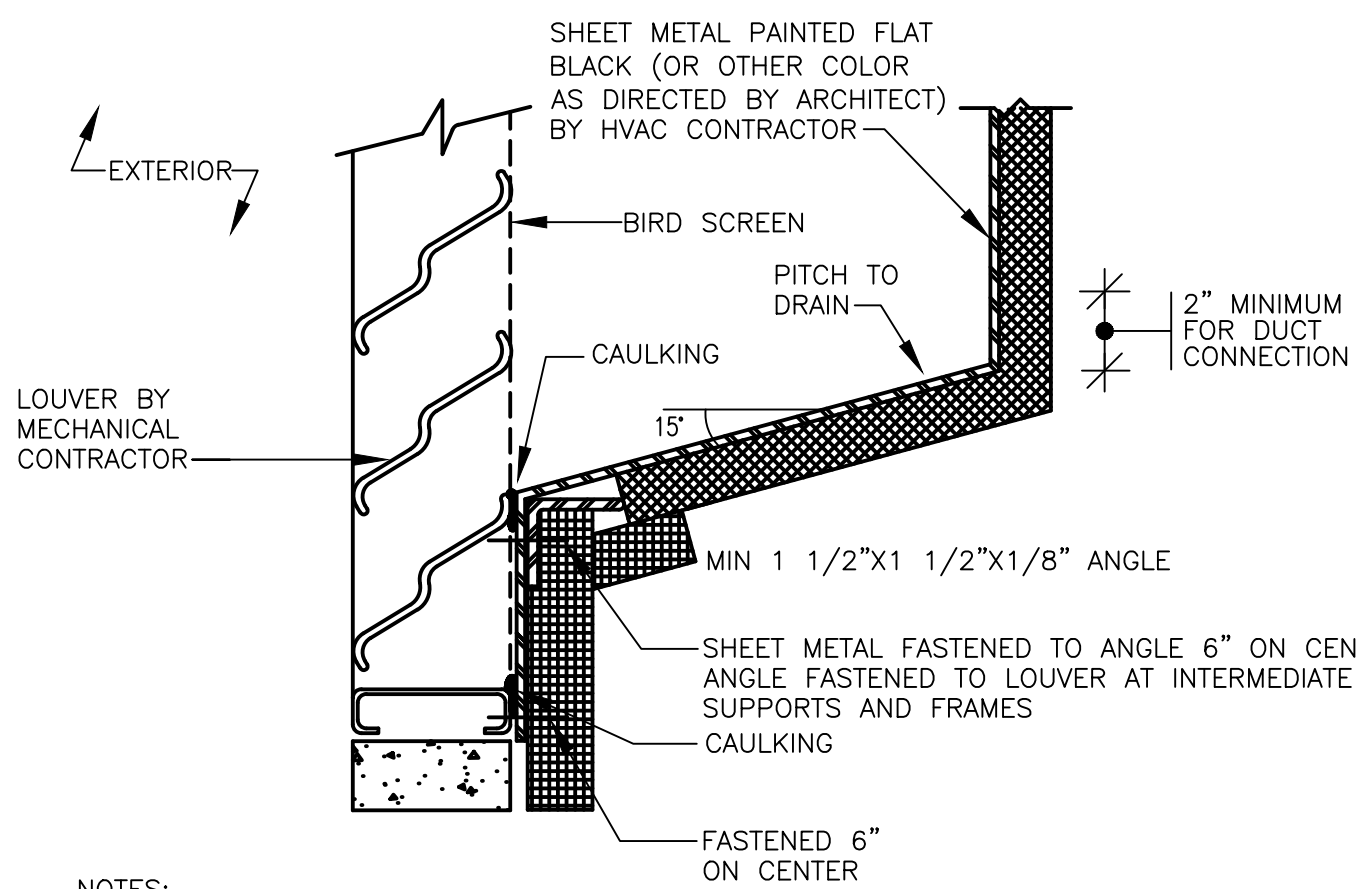
2 PRE-INSULATED OUTDOOR DUCTWORK
WALL PENETRATION DETAIL

NOT TO SCALE



3 DUCT AND PIPE IDENTIFICATION
LABELING DETAIL

NOT TO SCALE

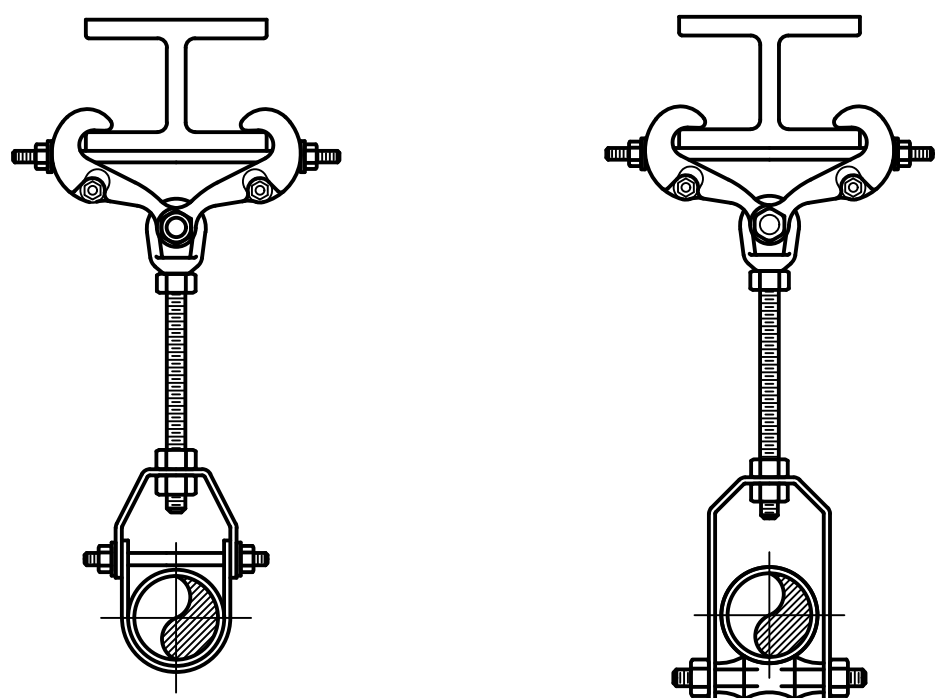


NOTES:

1. SUPPORT PLENUM FROM FLOOR OR STRUCTURE ABOVE W/GALVANIZED STEEL ANGLES AND CHANNELS.

4 LOUVER CONNECTION DETAIL

NOT TO SCALE

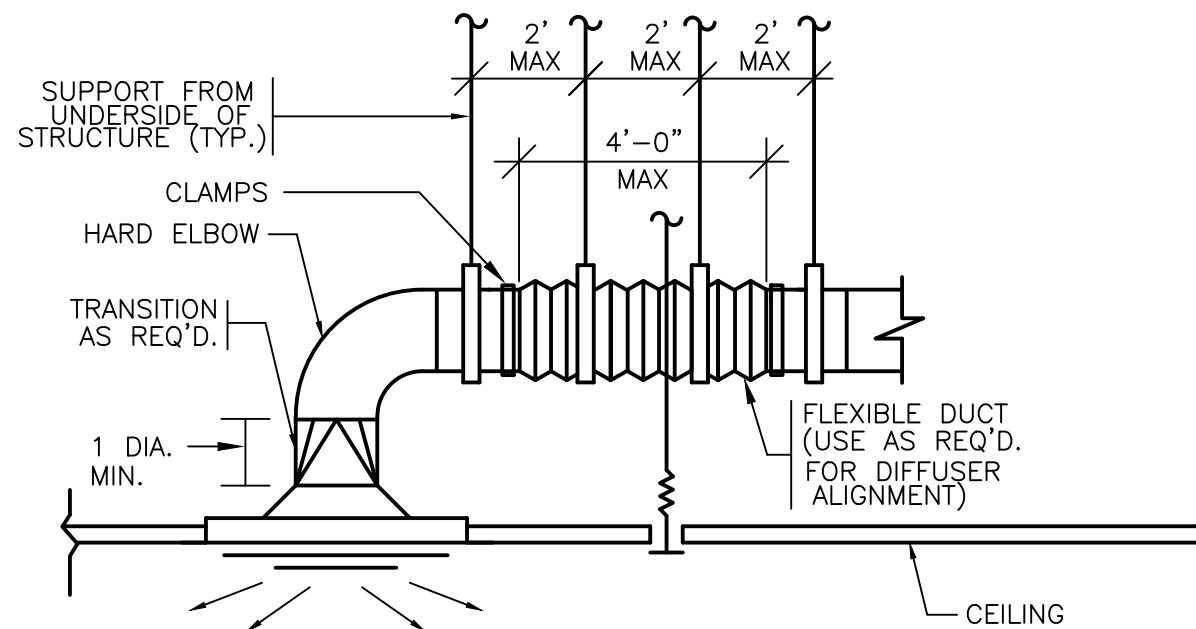


NOTES:

1. SIZE HANGER CLAMP TO ADEQUATELY SUPPORT LOAD.
2. IF USING INSULATED PIPE, SIZE HANGER PROPERLY AND USE INSULATION SHIELDS FOR COLD LINES AND PROTECTION SADDLES FOR HOT LINES.

5 PIPE HANGER AND PIPE ROLLER DETAIL

NOT TO SCALE

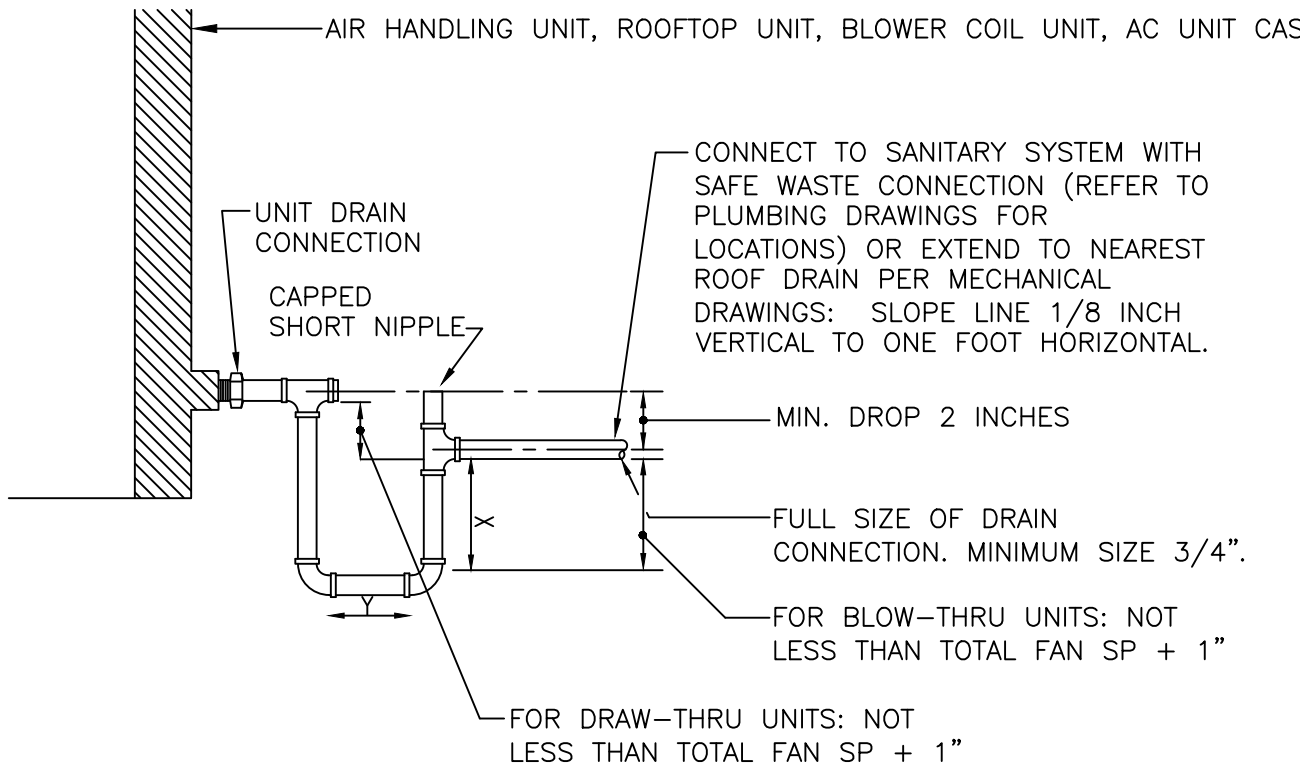


NOTES:

- ① MAXIMUM SAG 1/2" PER FOOT.

6 SUPPLY DIFFUSER CONNECTION DETAIL

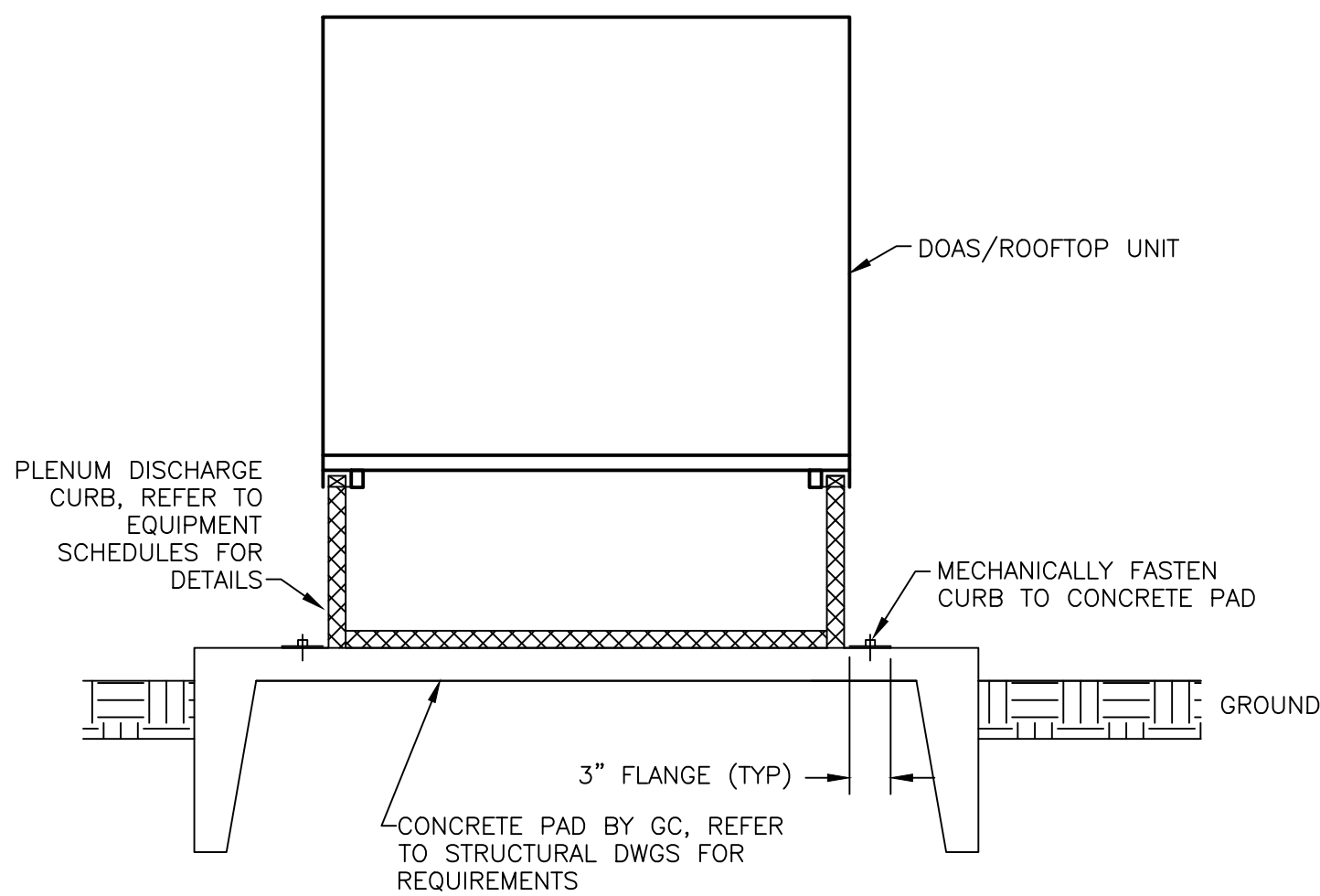
NOT TO SCALE



NOTE: 2X+Y SHALL EQUAL TOTAL FAN SP+2" (MINIMUM)

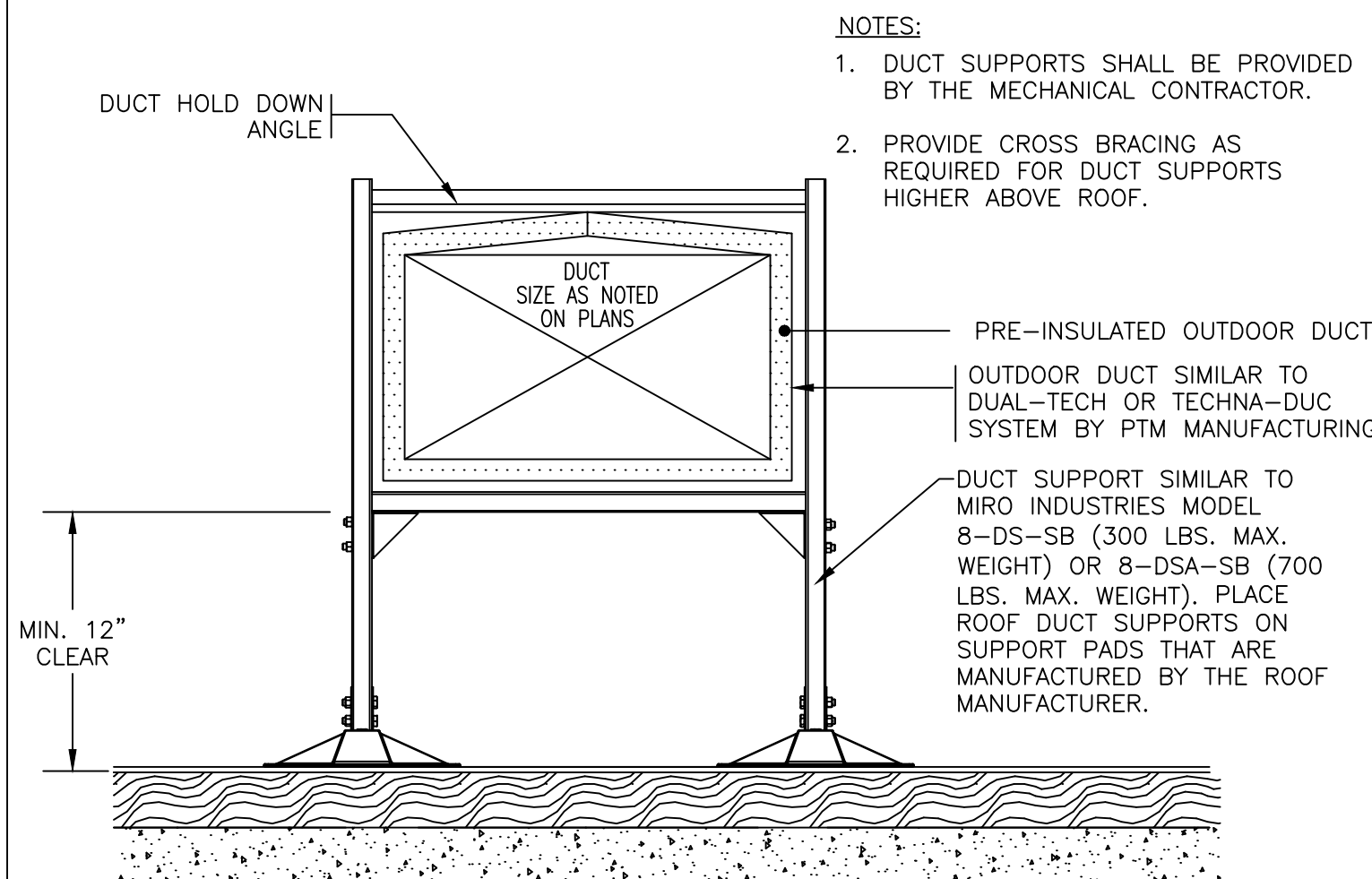
7 TYPICAL AIR HANDLING UNIT/BLOWER COIL/
AC UNIT CASING DRAIN DETAIL

NOT TO SCALE



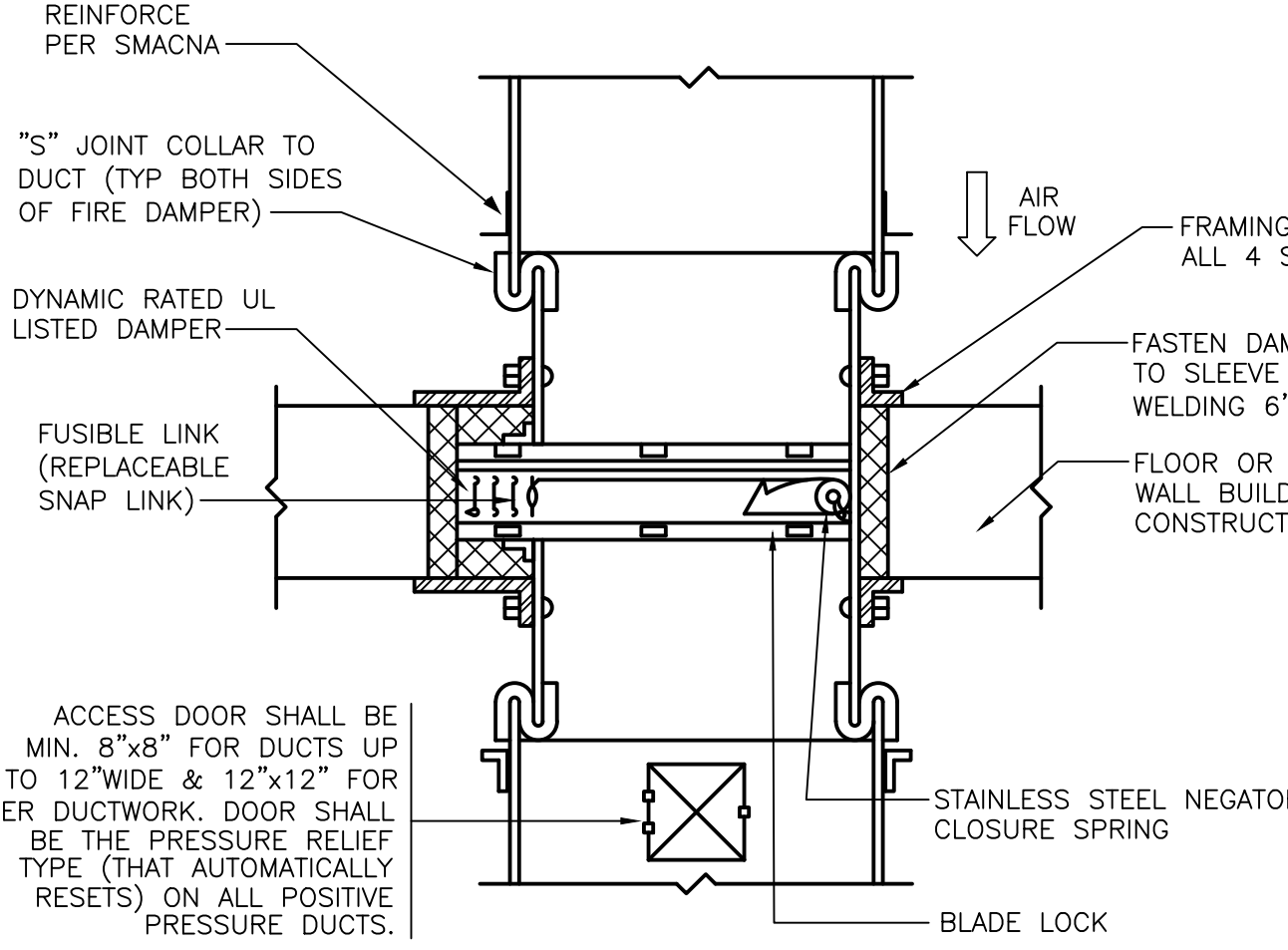
8 GROUND MOUNTED ROOFTOP UNIT
AND DOAS UNIT SUPPORT DETAIL

NOT TO SCALE



9 GRADE MOUNTED DUCT SUPPORT DETAIL

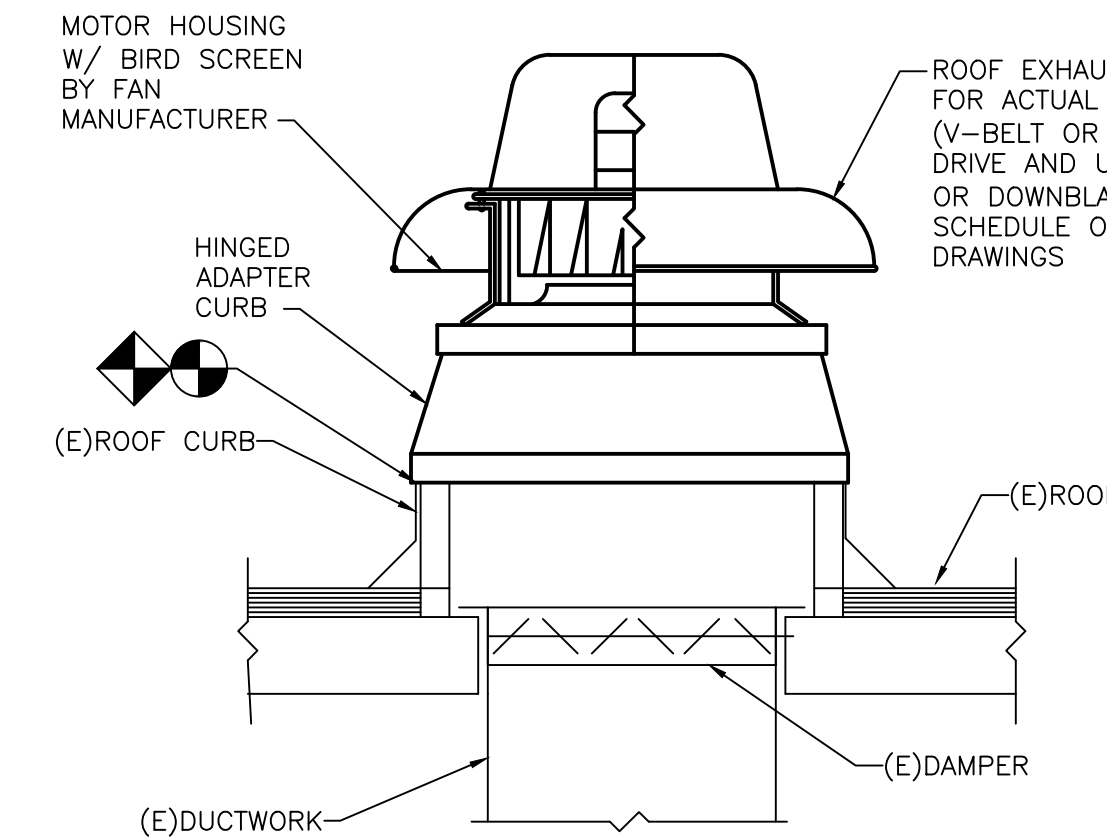
NOT TO SCALE



NOTE: FIRE DAMPER INSTALLATION TO MEET "UL" REQUIREMENTS.

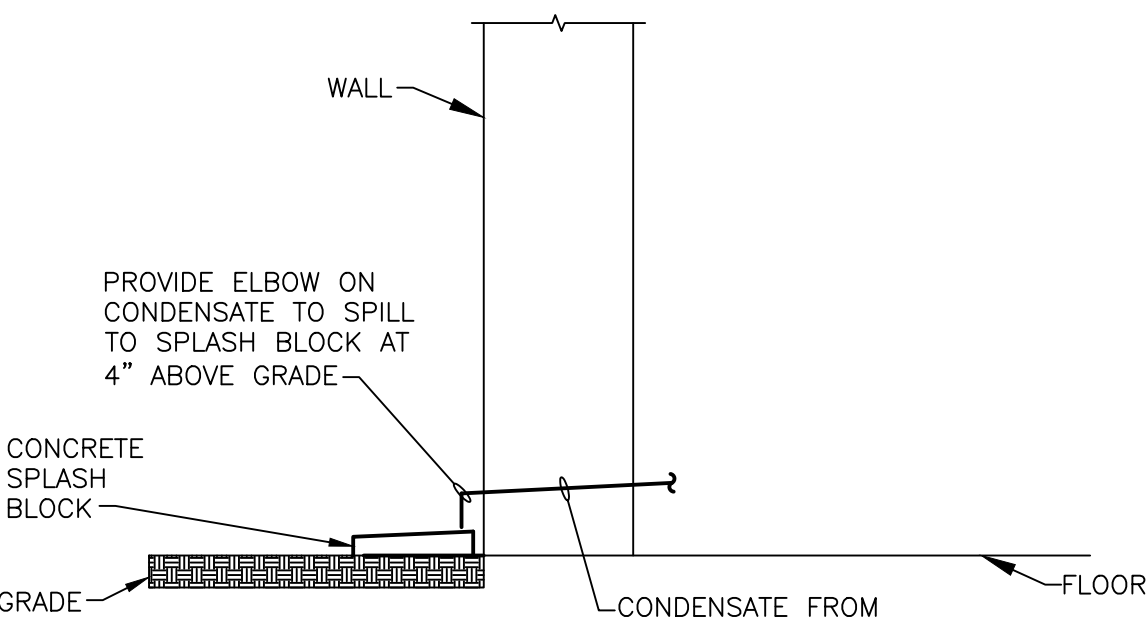
12 FIRE DAMPER WITH BLADES OUTSIDE
THE AIRSTREAM DETAIL

NOT TO SCALE



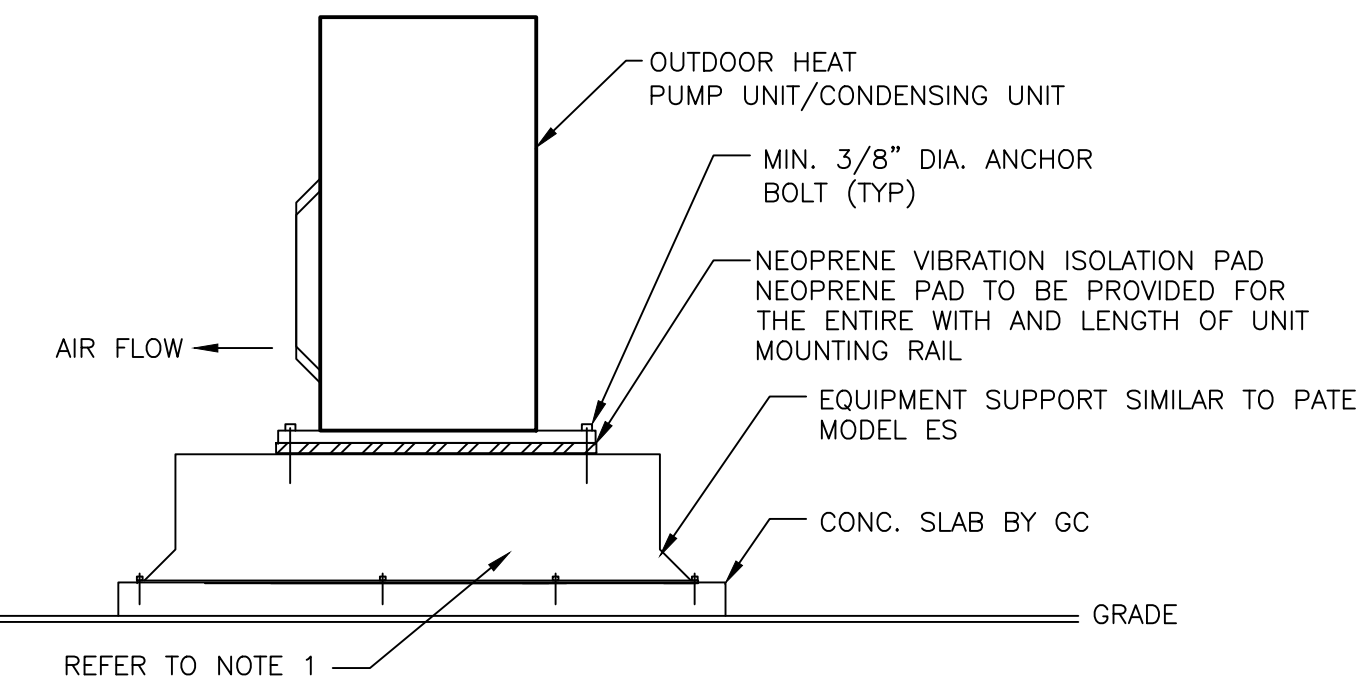
13 ROOF EXHAUST FAN ADAPTER CURB DETAIL
(DOWNBLAST TYPE)

NOT TO SCALE



14 CONDENSATE
SPILL TO GRADE DETAIL

NOT TO SCALE



15 GROUND MOUNTED HEAT PUMP/CONDENSING UNIT
SUPPORT DETAIL

NOT TO SCALE

PROJECT TEAM

CLIENT
Tredyffrin/Easttown School District
940 West Valley Road, Suite 1700
Wayne, PA 19047
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636 Skippack Pike, Suite 200
Blue Bell, PA 19422
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ISSUE HISTORY

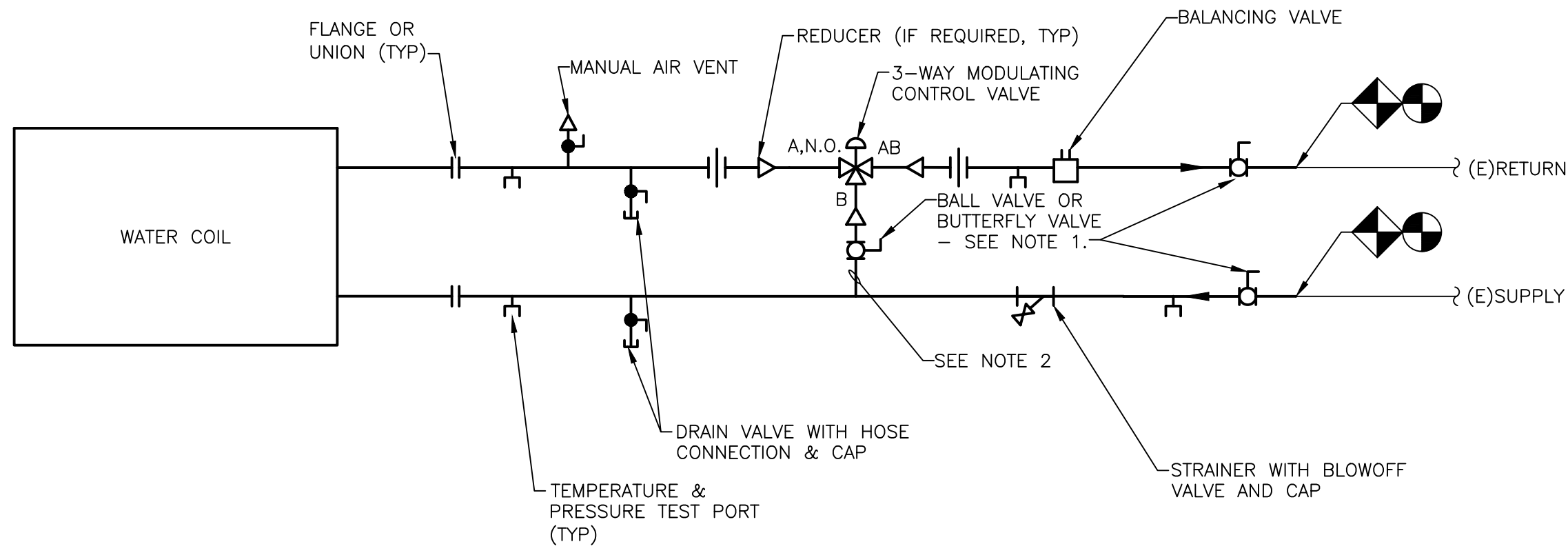
Δ	DATE	ISSUED FOR
	09/23/2026	BID ISSUE

SHEET TITLE

MECHANICAL
DETAILS

DRAWING NUMBER

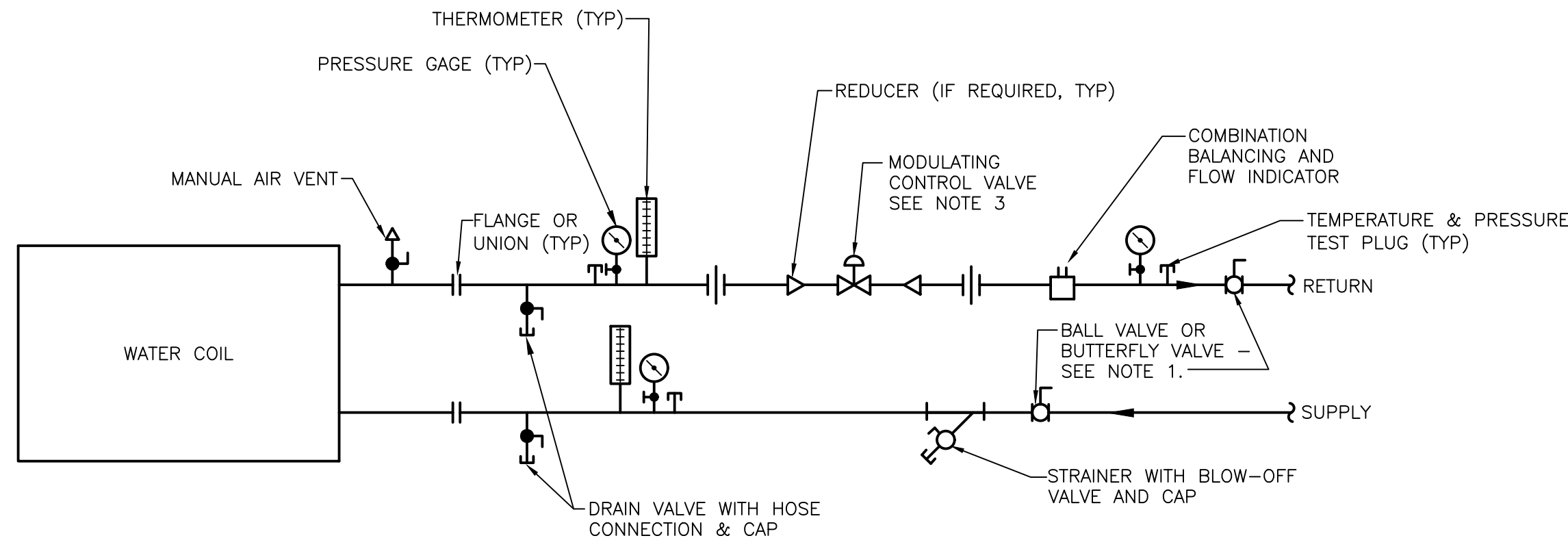
M503



- NOTE:
1. USE BALL VALVES ON PIPE SIZES 2" AND SMALLER. USE BUTTERFLY VALVES ON PIPE SIZES 2-1/2" AND LARGER.
 2. BYPASS LINE TO BE SAME SIZE AS SUPPLY AND RETURN PIPING TO COIL. BYPASS LINES THE SAME SIZE AS THE CONTROL VALVE INLET ARE NOT ACCEPTABLE.
 3. PROVIDE ALL UNITS COMPLETE WITH BELL & GOSSETT MCY VALVE KIT INCLUDING MODEL UBY COMBINATIONS STRAINER & MODEL MC COMBINATION CIRCUIT SETTER. COIL KITS SHALL BE PROVIDED SEPARATELY FROM AND IN ADDITION TO THE ISOLATION VALVES IN NOTE 1 ABOVE.

1 DUCT MOUNTED WATER COIL PIPING DETAIL - NEES (3-WAY CONTROL VALVE)

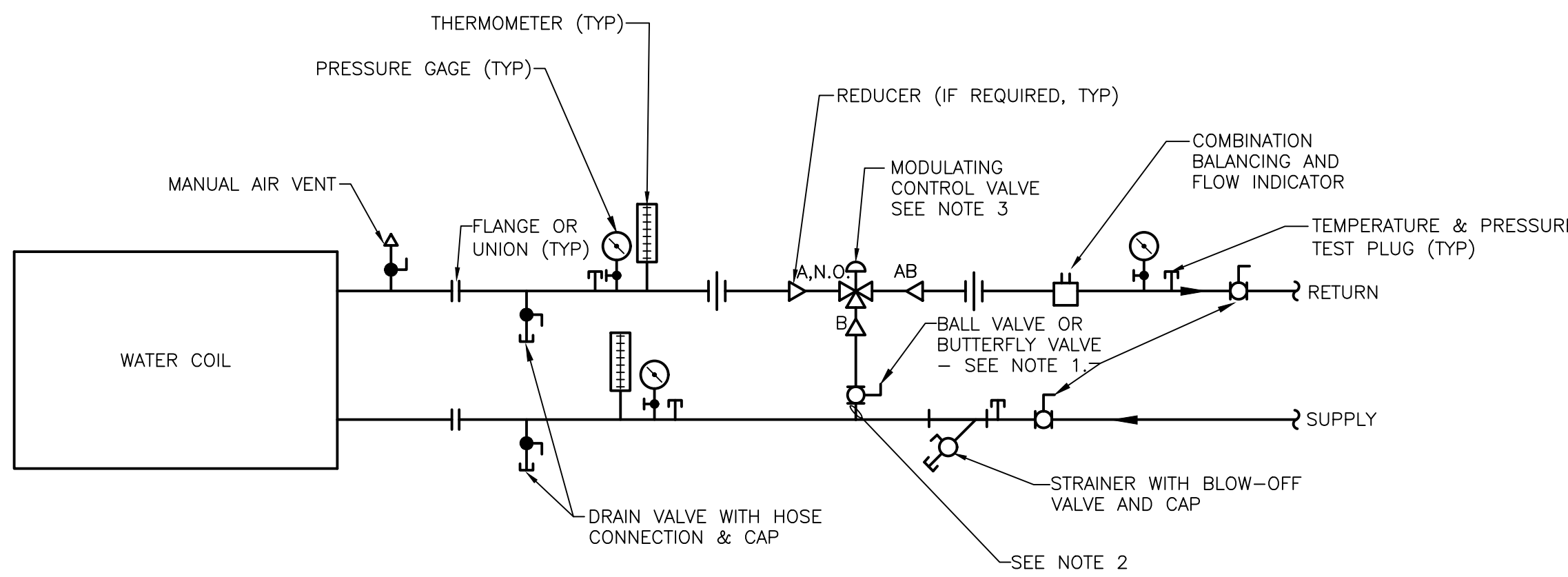
NOT TO SCALE



- NOTES:
1. USE BALL VALVES ON PIPE SIZES 2" AND SMALLER. USE BUTTERFLY VALVES ON PIPE SIZES 2-1/2" AND LARGER.
 2. PROVIDE ALL UNITS COMPLETE WITH BELL & GOSSETT MCY VALVE KIT INCLUDING MODEL UBY COMBINATIONS STRAINER & MODEL MC COMBINATION CIRCUIT SETTER. COIL KITS SHALL BE PROVIDED SEPARATELY FROM AND IN ADDITION TO THE ISOLATION VALVES IN NOTE 1 ABOVE.

2 AHU COIL PIPING DETAIL - CHS (AHU-10) (2-WAY CONTROL VALVE)

NOT TO SCALE



- NOTE:
1. USE BALL VALVES ON PIPE SIZES 2" AND SMALLER. USE BUTTERFLY VALVES ON PIPE SIZES 2-1/2" AND LARGER.
 2. BYPASS LINE TO BE SAME SIZE AS SUPPLY AND RETURN PIPING TO COIL. BYPASS LINES THE SAME SIZE AS THE CONTROL VALVE INLET ARE NOT ACCEPTABLE.
 3. PROVIDE ALL UNITS COMPLETE WITH BELL & GOSSETT MCY VALVE KIT INCLUDING MODEL UBY COMBINATIONS STRAINER & MODEL MC COMBINATION CIRCUIT SETTER. COIL KITS SHALL BE PROVIDED SEPARATELY FROM AND IN ADDITION TO THE ISOLATION VALVES IN NOTE 1 ABOVE.

3 AHU COIL PIPING DETAIL - VFMS(HV-1) & CHS(AHU-9 & AHU-11) (3-WAY CONTROL VALVE)

NOT TO SCALE