

1 MECHANICAL - FIRST FLOOR PLAN
1/8" = 1'-0"

HVAC LEGEND	
(1)	DRAWING NOTE SYMBOL
26x16	NEW RECTANGULAR DUCTWORK AND SIZE
10"	NEW ROUND DUCTWORK AND SIZE
[Symbol]	BALANCING/VOLUME DAMPER
(T)	THERMOSTAT
(S)	REMOTE SENSOR
CD-1 240	NEW SUPPLY AIR DIFFUSER AND CFM
RG-1	NEW RETURN GRILLE
EG-3 300	NEW EXHAUST GRILLE AND CFM
[Symbol]	NEW EXHAUST FAN
[Symbol]	AIR FLOW DIRECTION
(SD)	SMOKE DETECTOR

HVAC DESIGN CONDITIONS	
COOLING: OUTDOOR = 92°FDB/74°FWB INDOOR = 72°FDB/50°RAH	HEATING: OUTDOOR = 1°FDB INDOOR = 70°FDB

- ### KEYED NOTES
- PROVIDE CEILING CASSETTE UNIT AND INSTALL IN CEILING LOCATION INDICATED. PROVIDE WIRED THERMOSTAT TO CONTROL. MOUNT THERMOSTAT AT 4' AFF. ROUTE CONDENSATE TO NEAREST FLOOR DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED. TERMINATE WITH AIR GAP. REFER TO PLUMBING PLAN FOR LOCATION OF FLOOR DRAIN. SEE DETAIL 4/M2.02.
 - PROVIDE NEW ROOFTOP UNIT AND CURB. ROUTE SUPPLY/RETURN DUCTS IN THROUGH EXTERIOR WALL. REFER TO HVAC PLAN FOR CONTINUATION. COORDINATE ROOFTOP UNIT LOCATION WITH STRUCTURE BELOW. PROVIDE NEW THERMOSTAT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR RTU OPERATION. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED.
 - EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
 - PROVIDE THERMOSTAT TIED TO REMOTE SENSOR. MOUNT THERMOSTAT ON WALL 4 FEET A.F.F.
 - REMOTE SENSOR AND MOUNT ON WALL 5 FEET A.F.F.
 - PROVIDE ELECTRIC CEILING HEATER AND INSTALL IN LAY-IN CEILING.
 - PROVIDE AIR DOOR / AIR CURTAIN AND MOUNT IN SOFFIT. MC TO WIRE LIMIT SWITCH TO AIR DOOR CONTROLS. AIR DOOR TO TURN ON WHEN DOOR IS OPEN AND LIMIT SWITCH IS ACTIVATED, AND REMAIN ON AFTER DOOR CLOSES UNTIL THE SET DELAY TIME EXPIRES (1 MINUTE, ADJUSTABLE).
 - RUN EXPOSED DUCTWORK TIGHT TO UNDERSIDE OF STRUCTURE.
 - DROP BOTTOM OF SUPPLY DUCTWORK TO JUST ABOVE LIGHT FIXTURES IN CEILING GRID. LEAVE AS MUCH ROOM ABOVE THE SUPPLY DUCT AS POSSIBLE. COORDINATE WITH E.C. FOR LIGHT FIXTURE DEPTH.
 - PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. RUN EXHAUST DUCTWORK INSIDE PATIO ROOF STRUCTURE. PROVIDE ACCESS PANELS AND CLEANOUTS AT ALL TURNS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - WALK IN COOLER OUTDOOR CONDENSING UNIT. UNIT PROVIDED BY WALK-IN COOLER CONTRACTOR. COORDINATE FINAL LOCATION WITH OWNER. ENSURE UNIT IS INSIDE SCREENED-IN FENCING.
 - ICE MACHINE CONDENSING UNIT. UNIT PROVIDED BY ICE MACHINE VENDOR. COORDINATE FINAL LOCATION WITH OWNER. ENSURE UNIT IS INSIDE SCREENED-IN FENCING.
 - PROVIDE AIR CURTAIN AND MOUNT OVER COMMISSARY DOOR. MC TO WIRE LIMIT SWITCH TO AIR CURTAIN CONTROLS. AIR CURTAIN TO TURN ON WHEN DOOR IS OPEN AND LIMIT SWITCH IS ACTIVATED, AND REMAIN ON AFTER DOOR CLOSES UNTIL THE SET DELAY TIME EXPIRES (1 MINUTE, ADJUSTABLE). HEAT TO BE ACTIVATED ON CALL FOR HEATING BY THE UNIT MOUNTED THERMOSTAT.
 - TYPE I HOOD WITH ANSUL FIRE SUPPRESSION SYSTEM FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD AT 80" A.F.F.. REFER TO CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
 - INSULATE ALL EXTERIOR DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL HAVE MINIMUM INSTALLED "R" VALUE OF 6.0. PROVIDE A SELF-ADHESIVE OUTDOOR JACKET FOR ALL EXPOSED DUCTWORK OUTSIDE. JACKET SHALL HAVE LAMINATED VAPOR BARRIER AND WATERPROOFING MEMBRANE CONSISTING OF A RUBBERIZED BITUMINOUS RESIN ON A CROSS LAMINATED POLYETHYLENE FILM COVERED WITH STUCCO-EMBOSSED ALUMINUM-FOIL FACING.
 - TYPE II HOOD FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD ABOVE EQUIPMENT IT SERVES AT A HEIGHT THAT DOES NOT PROHIBIT THE OPERATION OF THE EQUIPMENT. REFER TO CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION.
 - ALL EXPOSED SPIRAL DUCTWORK TO BE PAINT GRIP GALVANIZED TO ALLOW FOR FIELD PAINTING. ALL EXPOSED SPIRAL DUCTWORK SHALL BE DOUBLE WALL AND INSULATED GALVANIZED SPIRAL TO PREVENT SWEATING.
 - PROVIDE ELECTRIC RADIANT HEATER, WITH UNIT MOUNTED THERMOSTAT. HEATER SHALL BE MOUNTED FROM UNDERSIDE OF STRUCTURE. SET THERMOSTAT TO 60°F (ADJUSTABLE).
 - INTERNALLY LINE FIRST 10 FEET OF SUPPLY AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE, OR EQUIVALENT, 1 INCH THICK SPIRACOUS TIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
 - PROVIDE WALL MOUNTED DUCTLESS SPLIT SYSTEM AND INSTALL IN LOCATION INDICATED. ROUTE CONDENSATE TO NEAREST APPROVED RECEPTACLE. PROVIDE CONDENSATE PUMP AS REQUIRED. PROVIDE WIRED THERMOSTAT TO CONTROL DUCTLESS SPLIT SYSTEM. MOUNT THERMOSTAT AT 4' AFF.
 - PROVIDE HEAT PUMP AND LOCATE ON LEVEL 4" DEEP CONCRETE PAD BY G.C. TOP OF THE UNIT SHALL BE LEVEL. MAINTAIN UNIT MINIMUM REQUIRED SERVICE AND AIRFLOW CLEARANCE. ROUTE REFRIGERANT LIQUID AND SUCTION LINES BETWEEN HEAT PUMP AND DUCTLESS SPLIT SYSTEM AND SEAL WALL PENETRATIONS WEATHER-TIGHT. ROUTE AND SIZE LINES AND ACCESSORIES PER MANUFACTURER'S GUIDELINES. PROVIDE A FULLY CHARGED SYSTEM AND INSULATE ALL REFRIGERANT PIPING WITH ARMAFLEX INSULATION.
 - PROVIDE EXHAUST FAN FOR TYPE I HOOD AND INSTALL ON WALL MOUNT BRACKET. DISCHARGE OPENING SHALL BE NO LESS THAN 12" ABOVE GRADE. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES. DUCT SERVING TYPE II HOOD SHALL BE MADE OF ALUMINUM. JOINTS, SEAMS, AND PENETRATIONS SHALL BE SEALED TO PROVIDE A SMOOTH INNER SURFACE AND SHALL BE WATER TIGHT. HORIZONTAL DUCTWORK SERVING TYPE II HOOD SHALL BE SLOPED DOWN IN THE DIRECTION OF THE HOOD. SLOPE DUCT AT 1/8"/FT.
 - AS LOW AS POSSIBLE, TAKE SUPPLY AND RETURN DUCT IN THROUGH EXTERIOR WALL, INTO BUILT-OUT WALL. THEN TURN VERTICAL TO CEILING SPACE.
 - MOUNT RETURN GRILLE AS HIGH ON WALL AS POSSIBLE. PAINT GRILLE TO MATCH WALL COLOR.
 - PROVIDE INTAKE HOOD WALL LOUVER, EQUIVALENT TO GREENHECK GR5-15 RUSKIN ELF-375DX, AND MOUNT HIGH ON WALL ON 12" HIGH INSULATED ROOF CURB, COMPLETE WITH BIRDSCREEN. PROVIDE DUCTWORK PLENUM BOX BEHIND LOUVER AND SEAL WATER TIGHT.
 - PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. RUN EXHAUST DUCTWORK INSIDE PATIO ROOF STRUCTURE. PROVIDE ACCESS PANELS AND CLEANOUTS AT ALL TURNS. CONNECTION TO PIZZA OVEN IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - COORDINATE SUPPLY DIFFUSER LOCATIONS IN BAR AREA WITH G.C. PRIOR TO INSTALLATION.

- ### GENERAL NOTES
- THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONFLICT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.
 - ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST-CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL RUN PARALLEL AND/OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST-CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECT'S OPINION, SHALL BE REDONE AT THE CONTRACTOR'S EXPENSE.
 - ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.
 - PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.
 - OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.
 - WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
 - CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
 - CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.
 - COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.
 - COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.
 - EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.
 - ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.
 - PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES /WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8, SECTION 5142 AND OTHER RELATED REGULATIONS.
 - ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

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ISSUE DATE	
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PRELIMINARY PRICING REVIEW	05/25/2023
PRELIMINARY PRICING REVISION	

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MECHANICAL - 1ST
LEVEL FLR PLAN
M1.01

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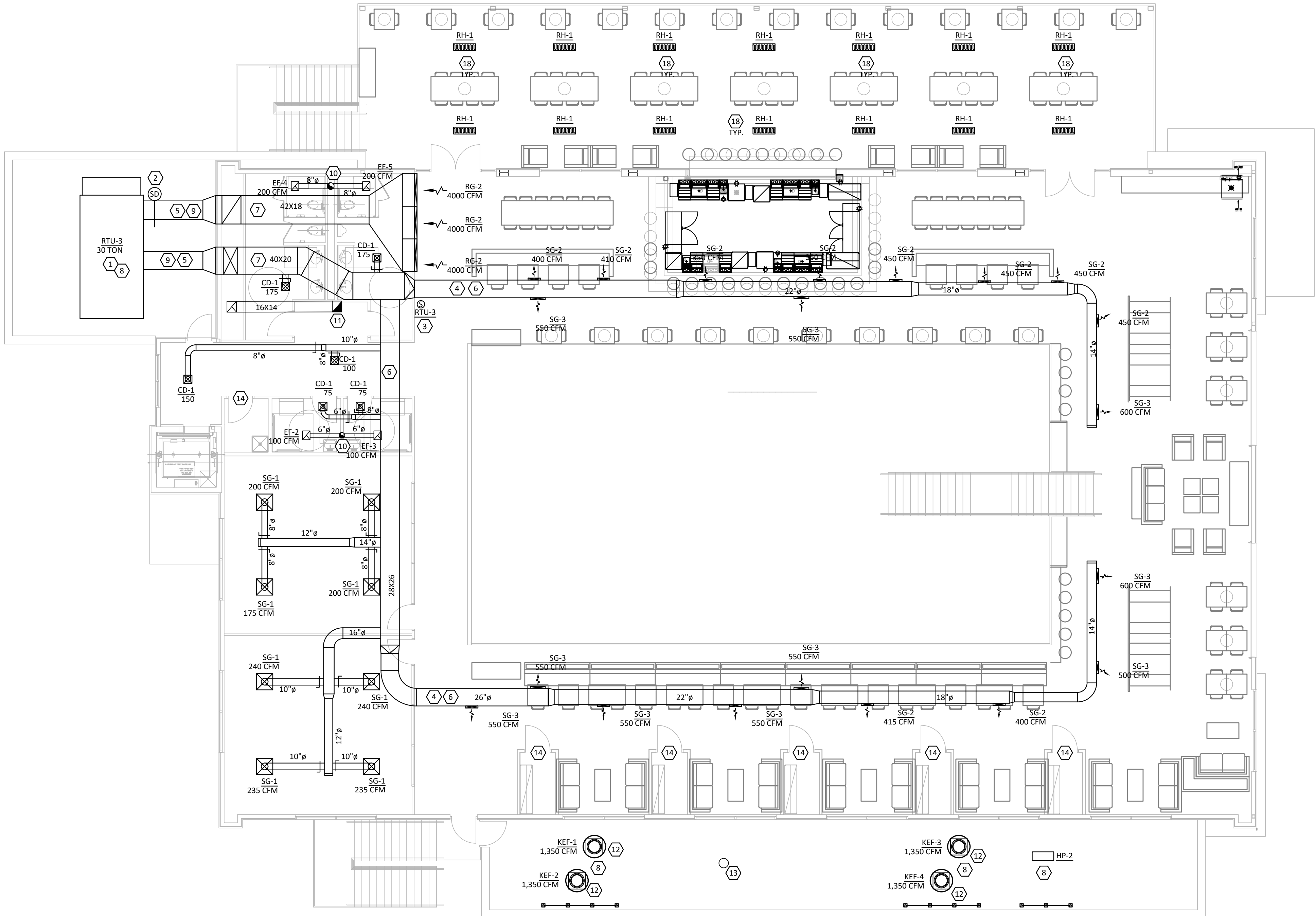
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MECHANICAL - 2ND STORY FLR PLAN
M1.02

KEYED NOTES

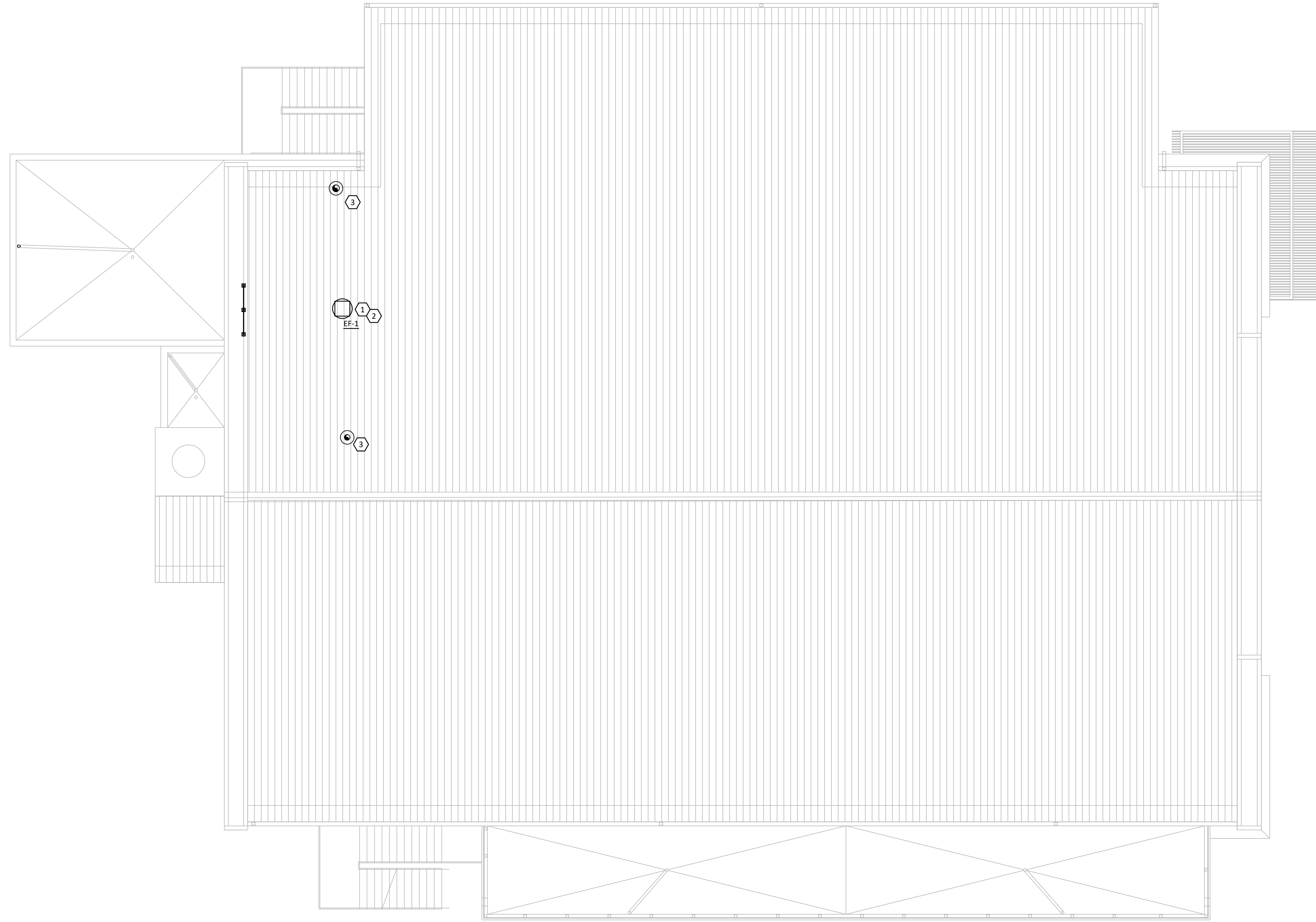
- PROVIDE NEW ROOFTOP UNIT AND CURB. ROUTE SUPPLY/RETURN DUCTS IN THROUGH EXTERIOR WALL. REFER TO HVAC PLAN FOR CONTINUATION. COORDINATE ROOFTOP UNIT LOCATION WITH STRUCTURE BELOW. PROVIDE NEW THERMOSTAT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR RTU OPERATION. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED.
- EC TO FURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE COMPATIBLE REMOTE ANNUNCIATOR/TEST SWITCH. MC TO INSTALL SMOKE DETECTOR IN RETURN DUCT, PRIOR TO ANY OUTDOOR AIR CONNECTIONS. MC TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. EC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
- REMOTE SENSOR AND MOUNT ON WALL 5 FEET A.F.F.
- RUN EXPOSED DUCTWORK TIGHT TO UNDERSIDE OF STRUCTURE.
- INSULATE ALL EXTERIOR DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL HAVE MINIMUM INSTALLED "R" VALUE OF 6.0. PROVIDE A SELF-ADHESIVE OUTDOOR JACKET FOR ALL EXPOSED DUCTWORK OUTSIDE. JACKET SHALL HAVE LAMINATED VAPOR BARRIER AND WATERPROOFING MEMBRANE CONSISTING OF A RUBBERIZED BITUMINOUS RESIN ON A CROSS LAMINATED POLYETHYLENE FILM COVERED WITH STUCCO-EMBOSSED ALUMINUM-FOIL FACING.
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- INTERNALLY LINE FIRST 10 FEET OF SUPPLY AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE, OR EQUIVALENT, 1 INCH THICK SPIRACOUSTIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
- GC TO PROVIDE 42" HIGH GUARD WHICH EXTENDS 30" MINIMUM BEYOND EACH END OF EQUIPMENT, IN ACCORDANCE WITH SECTIONS 304.11 OF LATEST EDITION OF IBC. MAINTAIN REQUIREMENTS FOR EQUIPMENT LOCATED WITHIN 10' OF BUILDING EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30" ABOVE THE FLOOR, ROOF, OR GRADE BELOW. ROOF GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21" DIAMETER SPHERE AND SHALL COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE IBC. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
- PROVIDE ANVIL INTERNATIONAL HAYDON H-BLOCK, OR EQUIVALENT, ROOFTOP DUCT SUPPORT SYSTEM, COMPLETE WITH MOUNTING PAD, FOR ALL EXTERIOR DUCTWORK. INSTALL DUCT SUPPORT IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
- PROVIDE NEW EXHAUST FAN CONTROLLED BY LIGHT SWITCH AND ROUTE EXHAUST DUCTWORK TO MANUFACTURER'S STANDARD VENT CAP THROUGH ROOF. MOUNT VENT CAP ON 12" HIGH INSULATED ROOF CURB. PAINT VENT CAP TO MATCH COLOR OF SHINGLES. REFER TO ROOF PLAN FOR CONTINUATION.
- ROUTE NEW EXHAUST DUCTWORK UP TO ROOFTOP EXHAUST FAN.
- HOOD EXHAUST FAN AND CURB FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. INSTALL EXHAUST FAN ON 20" HIGH INSULATED AND VENTILATED ROOF CURB. REFER TO CAPTIVE AIRE DRAWINGS FOR ADDITIONAL INFORMATION. MAINTAIN MINIMUM 40" DISCHARGE HEIGHT ABOVE ROOF, IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODE. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.
- PROVIDE PIZZA OVEN CHIMNEY. COORDINATE WITH PIZZA OVEN INSTALLER. DISCHARGE OPENING SHALL BE NO LESS THAN 40" ABOVE THE ROOF. MAINTAIN MINIMUM 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES. PROVIDE 16 GA. STEEL DUCT, WITH SEAMS WELDED LIQUID TIGHT, IN ACCORDANCE WITH SECTION 506.3 OF INTERNATIONAL MECHANICAL CODE AND SLOPE DUCT AT 1/4" / FT TOWARDS HOOD. PROVIDE CLEANOUT AT EVERY CHANGE OF DIRECTION, EVERY 20' HORIZONTALLY AND AS REQUIRED BY NFPA 96. PROVIDE 2 LAYERS OF 3M 615+ OR EQUIVALENT, FIRE BARRIER DUCT WRAP ON EXHAUST DUCT BETWEEN HOOD AND ROOF. AS AN OPTION TO UTILIZING 16 GA STEEL DUCT, PROVIDE:
- UNDERCUT DOORS AT SUPPLY CLOSETS BY 1".

GENERAL NOTES

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- PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE HEEL AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.
- OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM ANY EXHAUST AND PLUMBING VENT OUTLET.
- WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIFT LOCATION OR OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONFLICT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
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- ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.



1 MECHANICAL - SECOND FLOOR PLAN
 1/4" = 1'-0"



- KEYED NOTES**
- GC TO PROVIDE 42" HIGH GUARD WHICH EXTENDS 30" MINIMUM BEYOND EACH END OF EQUIPMENT, IN ACCORDANCE WITH SECTIONS 304.11 OF LATEST EDITION OF IMC. MAINTAIN REQUIREMENTS FOR EQUIPMENT LOCATED WITHIN 10' OF BUILDING EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30" ABOVE THE FLOOR, ROOF, OR GRADE BELOW. ROOF GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21" DIAMETER SPHERE AND SHALL COMPLY WITH THE LOADING REQUIREMENTS FOR GUARDS SPECIFIED IN THE IBC. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - EXHAUST DUCT THROUGH ROOF. PROVIDE ROOF JACK, STORM COLLAR, AND ALL-WEATHER CAP. MAINTAIN 10' CLEARANCE FROM ANY OUTDOOR AIR INTAKES.
 - PROVIDE MANUFACTURER'S STANDARD VENT CAP. MOUNT VENT CAP ON 12" HIGH INSULATED ROOF CURB. PAINT VENT CAP TO MATCH COLOR OF SHINGLES.

① MECHANICAL - ROOF PLAN
1/4" = 1'-0"

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ALTERNATION AND/OR REVISIONS TO THIS DRAWING SHALL BE MADE BY THE PROJECT'S ARCHITECT AND SHALL BE INDICATED BY A CIRCLED NUMBER AND DATE.

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PRELIMINARY PRICING REVISION	05/25/2023

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PROJ MANAGER: JR

JOB NO. MRQ #12439

MECHANICAL - ROOF
PLAN

M1.03

EXHAUST FAN SCHEDULE

TAG	MANUFACTURER	MODEL	CFM	ESP	RPM	WATTS	ELECTRICAL					WEIGHT LBS	SONES	REMARKS
							VOLTAGE	PHASE	FLA	MCA	MOCOP			
EF-1	GREENHECK	CUE-140-VG	1,600	1.4	1,570	-	115	1	13	16.2	25	81	11.3	A,B,D
EF-2	GREENHECK	SP-A90-130-VG	100	0.57	960	12	115	1	0.29	0.4	15	12	2.5	A,B,D
EF-3	GREENHECK	SP-A90-130-VG	100	0.57	960	12	115	1	0.29	0.4	15	12	2.5	A,B,D
EF-4	GREENHECK	SP-B200	200	0.53	980	172	115	1	2.7	3.4	15	10	6.0	A,B,C,D
EF-5	GREENHECK	SP-B200	200	0.53	980	172	115	1	2.7	3.4	15	10	6.0	A,B,C,D

REMARKS:
A. DISCONNECT SWITCH.
B. HANGING RODS WITH SPRING VIBRATION ISOLATORS.
C. BACK DRAFT DAMPER.
D. EQUIVALENTS INCLUDE: GREENHECK, LOREN COOK, PENNBARRY.

ELECTRIC HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	AREA SERVED	CFM	KW	BTUH	ELECTRICAL					REMARKS
							VOLTAGE	PHASE	AMPS	MCA	MOCOP	
CH-1	QMARK	CD5F48	VESTIBULE	300	3	10,200	208	1	14.2	-	15	A

REMARKS:
A. PROVIDE COMPLETE UNIT WITH INTEGRAL THERMOSTAT, 120V RELAY, DISCONNECT SWITCH.

DUCTLESS SPLIT SYSTEM SCHEDULE

TAG	MANUFACTURER	MODEL	SUPPLY CFM	COOLING MBH			HEATING MBH			VOLTS/PH	FAN HP	FLA	MCA	MOCOP	WEIGHT LBS	REMARKS
				TOTAL	SENSIBLE	SEER	@5°F	HSPF								
CC-1	CARRIER	40MBCQ09--3	260-380	-	-	-	-	-	208/1	-	-	-	-	40.78	C	
HP-1	CARRIER	38MARBQ09AA3	-	9.0	-	20.5	10.2	10.8	208/1	-	8.8	15	15	74.1	A,B	
WU-2	CARRIER	40MAHBQ12XA3	176-382	-	-	-	-	-	208/1	-	-	0.32	-	22.9	C	
HP-2	CARRIER	38MARBQ12AA3	-	12.0	-	25.5	11.6	13.0	208/1	-	8.5	15	15	73.6	A,B	

REMARKS:
A. COOLING CAPACITY INDICATED IS AT 75°F DB, 45% RH AND 95°F OUTSIDE AIR CONDITIONS.
B. LOW AMBIENT COOLING TO -20°F, WITH ADVANCED WIND BAFFLE.
C. INDOOR UNIT POWERED OFF OUTDOOR UNIT.

Ventilation Schedule - Ohio Mechanical Code - 2017 - 403.3.1.1

ROOM #	ROOM NAME	Az	OCCUPANCY	Rp	Ra	Pz	Rpx Pz	Az x Ra	CFM	Eff	Voz=	CFM	OA	Voz /	Vou /	Vbz = Az x Ra + Rp x Pz	PEOPLE	AREA	OA	AIR	SA	Zp =	Vot =	
																								Category
[103]	Wine/Coffee	333	Bars, Cocktail Lounges	7.5	0.18	6	45	60	105	1.0	105	800	224	0.13	0.90	117								
[105]	Rest E	165	N/A	0	0	3	0	0	0	1.0	0	630	176	0.00	0.90	0								
[106]	Rest D	165	N/A	0	0	3	0	0	0	1.0	0	630	176	0.00	0.90	0								
[107]	Rest C	213	N/A	0	0	3	0	0	0	1.0	0	830	232	0.00	0.90	0								
[108]	Rest B	165	N/A	0	0	3	0	0	0	1.0	0	630	176	0.00	0.90	0								
[109]	Rest A	165	N/A	0	0	3	0	0	0	1.0	0	630	176	0.00	0.90	0								
[110]	Corridor	343	Corridor	0	0.06	2	0	21	21	1.0	21	600	168	0.03	0.90	23								
[111]	Commissary	875	Cafeteria/Fast Food	7.5	0.18	10	75	158	233	1.0	233	1500	420	0.16	0.90	258								
[116]	Storage	168	Storage Rooms	0	0.12	0	0	20	20	1.0	20	250	70	0.08	0.90	22								
	RTU-1	2592					33					378	7000	1820		420								
[101]	Host Stand & lobby	248	Main Entry Lobby	5	0.06	20	100	15	115	1.0	115	475	143	0.24	0.90	128								
[114]	Storage	247	Storage Rooms	0	0.12	0	0	30	30	1.0	30	250	75	0.12	0.90	33								
[115]	Cooler	191	N/A	0	0	0	0	0	0	1.0	0	0	0	0.00	0.90	0								
[119]	Office (b.)	85	N/A	5	0.06	1	5	5	10	1.0	10	0	0	0.00	0.90	11								
[120]	Corridor	326	Corridor	0	0.06	2	0	20	20	1.0	20	350	105	0.06	0.90	22								
[122]	Women	439	N/A	0	0	0	0	0	0	1.0	0	500	150	0.00	0.90	0								
[123]	Men	439	N/A	0	0	0	0	0	0	1.0	0	500	150	0.00	0.90	0								
[124]	Vest	81	Main Entry Lobby	5	0.06	2	10	5	15	1.0	15	175	53	0.08	0.90	17								
[125]	Vest	81	Main Entry Lobby	5	0.06	2	10	5	15	1.0	15	175	53	0.08	0.90	17								
[112]	Dinning Hall & stage (a.)	4780	Cafeteria/Fast Food	7.5	0.18	95	713	860	1573	1.0	1573	5475	1768	0.29	0.90	1748								
[126]	Bar	401	Bars, Cocktail Lounges	7.5	0.18	12	90	72	162	1.0	162	650	195	0.25	0.90	180								
[100]	Vest	166.5	Main Entry Lobby	5	0.06	2	10	10	20	1.0	20	250	75	0.08	0.90	22								
[127]	Ice Cream	246	Cafeteria/Fast Food	7.5	0.18	3	23	44	67	1.0	67	400	120	0.17	0.90	74								
	RTU-2	7731					139					2026	9200	2885		2251								
[204]	Private room	500	Multipurpose Assembly	5	0.06	10	50	30	80	1.0	80	950	285	0.08	0.90	89								
[205]	Private room	500	Multipurpose Assembly	5	0.06	10	50	30	80	1.0	80	775	233	0.10	0.90	89								
[208]	Elevator Lobby	228	Corridor	0	0.06	4	0	14	14	1.0	14	250	75	0.05	0.90	15								
[209]	Womens	207	N/A	0	0	0	0	0	0	1.0	0	175	53	0.00	0.90	0								
[210]	Mens	165	N/A	0	0	0	0	0	0	1.0	0	175	53	0.00	0.90	0								
[200]	Seating	7700	Cafeteria/Fast Food	7.5	0.18	120	900	1386	2286	1.0	2286	8975	2693	0.25	0.90	2540								
[121]	Bar	337	Bars, Cocktail Lounges	7.5	0.18	15	113	61	173	1.0	173	700	210	0.25	0.90	192								
	RTU-3	9637					159					2633	12000	3600		2925								
	Remarks	a.)	(112) Dining Hall receives and extra 125 CFM of outside air from RTU-1.																					
		b.)	(119) Office requires 11 CFM of outside air. Ceiling Cassette draws in 30 CFM through 4" duct to the outside through OSA punch out.																					

ROOFTOP UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	NOMINAL TONNAGE	SUPPLY CFM	OA CFM	ESP IN. W.C.	COOLING BTUH		EER/IEER	STAGE	HTG IN BTUH	HTG OUT BTUH	ELECTRICAL					WEIGHT	REMARKS
							TOTAL	SENSIBLE					BHP	VOLTAGE	PHASE	MCA	MOCOP		
RTU-1	CARRIER	48LCE020A7M5-0R0A0	17.5	7,000	1625	1.07	198,860	155,790	11.2/16.8	2	310,000	251,000	7.56	208	3	92.8	100	2687	A,B,C,D,E,F,G
RTU-2	CARRIER	48LCE026A7M5-0R0A0	23.0	9,200	2885	1.10	272,620	202,950	10.11/16.1	2	310,000	251,000	12.77	208	3	141	175	2978	A,B,C,D,E,F,G
RTU-3	CARRIER	48V4TH31A1E5A8B3A1	30.0	12,000	3600	2.05	352,060	269,400	9.8/14.4	2	380,000	308,000	10.9	208	3	172	225	5110	A,B,C,D,F,G,H

REMARKS:
A. ALL HVAC EQUIPMENT TO BE FIELD LABELED TO IDENTIFY WHICH AREAS OF THE BUILDING THEY SERVE.
B. MERV 13 PLEATED FILTER.
C. DRY BULB ECONOMIZER WITH BAROMETRIC RELIEF.
D. SMOKE DETECTOR WITH REMOTE ANNUNCIATOR (BY EC).
E. CONCRETE PAD PROVIDED BY HVAC CONTRACTOR. SEE DETAIL 6/M2.04.
F. FACTORY OR FIELD INSTALLED, UNIT MOUNTED NON POWERED CONVENIENCE OUTLET.
G. FACTORY OR FIELD INSTALLED, UNIT MOUNTED NON FUSED DISCONNECT SWITCH.
H. RUN CONDENSATE TO NEAREST ROOF DRAIN. SEE DETAIL 5/M2.02.

AIR DEVICE SCHEDULE

TAG	MANUFACTURER	MODEL	FUNCTION	FACE SIZE	DUCT SIZE	BORDER TYPE	MATERIAL	FINISH	REMARKS
CD-1	PRICE	SPD	SUPPLY	12X12	-	LAY-IN	ALUMINUM	WHITE	A,B
CD-2	PRICE	AMCD	SUPPLY	24X24	-	LAY-IN	ALUMINUM	WHITE	A,B
CD-3	PRICE	SPD	SUPPLY	24X24	10"ø	LAY-IN	ALUMINUM	WHITE	C
SG-1	PRICE	620	SUPPLY	16X6	-	SURFACE MOUNT	ALUMINUM	WHITE	A,B
SG-2	PRICE	SDG	SUPPLY	18X8	-	SPIRAL DUCT MNT	ALUMINUM	PRIME COAT	C
SG-3	PRICE	SDG	SUPPLY	22X8	-	SPIRAL DUCT MNT	ALUMINUM	PRIME COAT	C
ER-1	PRICE	80	EXHAUST	12x8	-	LAY-IN	ALUMINUM	WHITE	B
RG-1	PRICE	630	RETURN	48X20	-	SURFACE MOUNT	ALUMINUM	PRIME COAT	B
RG-2	PRICE	81	RETURN	48X20	-	SURFACE MOUNT	ALUMINUM	PRIME COAT	B
RG-3	PRICE	80	RETURN	24X24	-	SURFACE MOUNT	ALUMINUM	WHITE	B
RG-4	PRICE	80	RETURN	40X24	-	SURFACE MOUNT	ALUMINUM	PRIME COAT	B

REMARKS:
A. PROVIDE VOLUME DAMPERS IN TAKEOFFS WHERE ACCESSIBLE. WHERE DAMPERS ARE NOT ACCESSIBLE, PROVIDE OPPOSED BLADE DAMPER AT DIFFUSER.
B. COORDINATE FRAME TYPE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
C. SCOOP DAMPER. SEE DETAIL 1/M2.02.

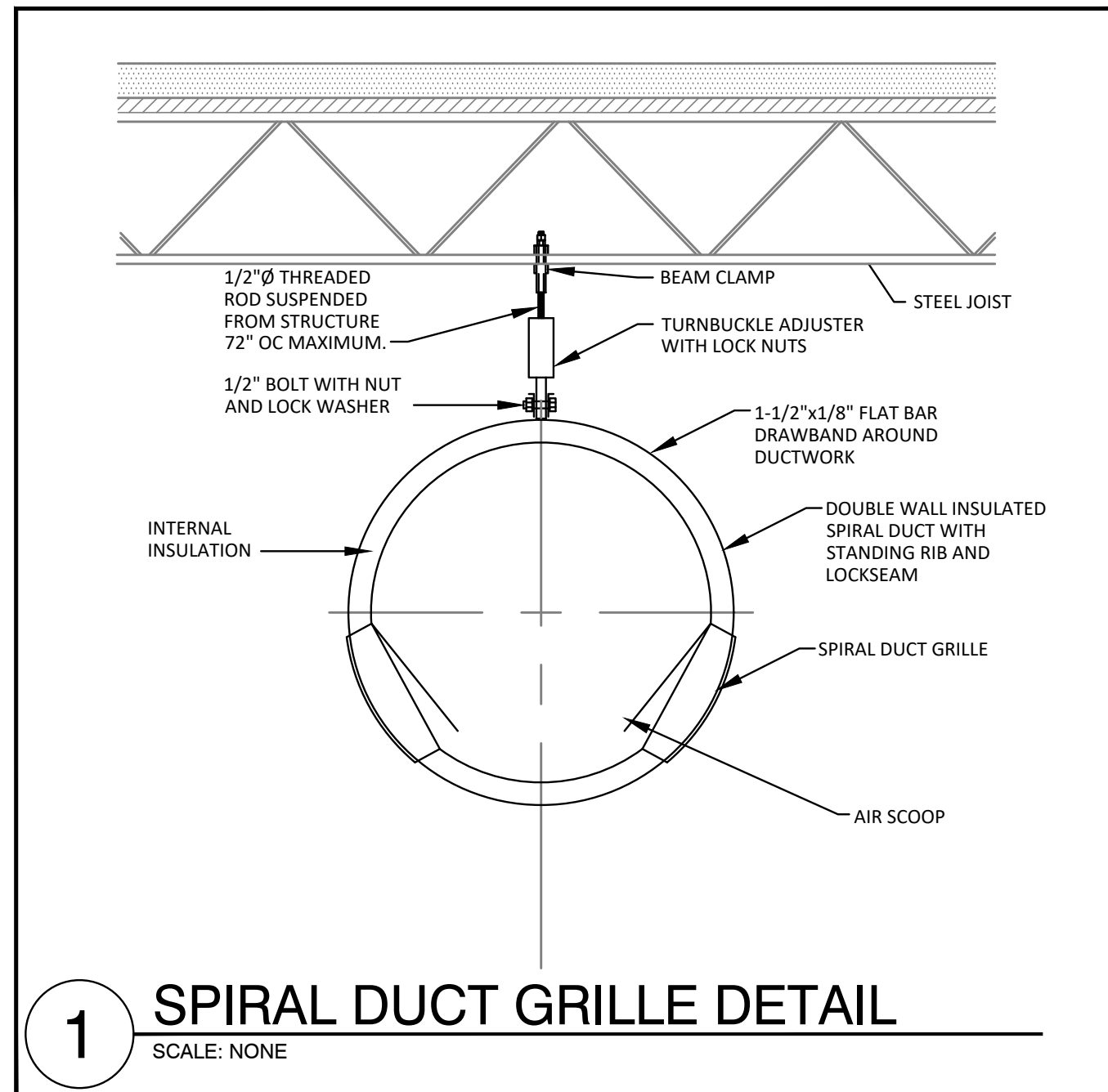
RADIANT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	AREA SERVED	# OF ELEMENTS	WATTS	BTUH	ELECTRICAL					REMARKS
							VOLTAGE	PHASE	AMPS	MCA	MOCOP	
RH-1	MODINE	MEL-3381-208	PATIOS	1	2,125	7,251	208	1	10.2	-	15	AB

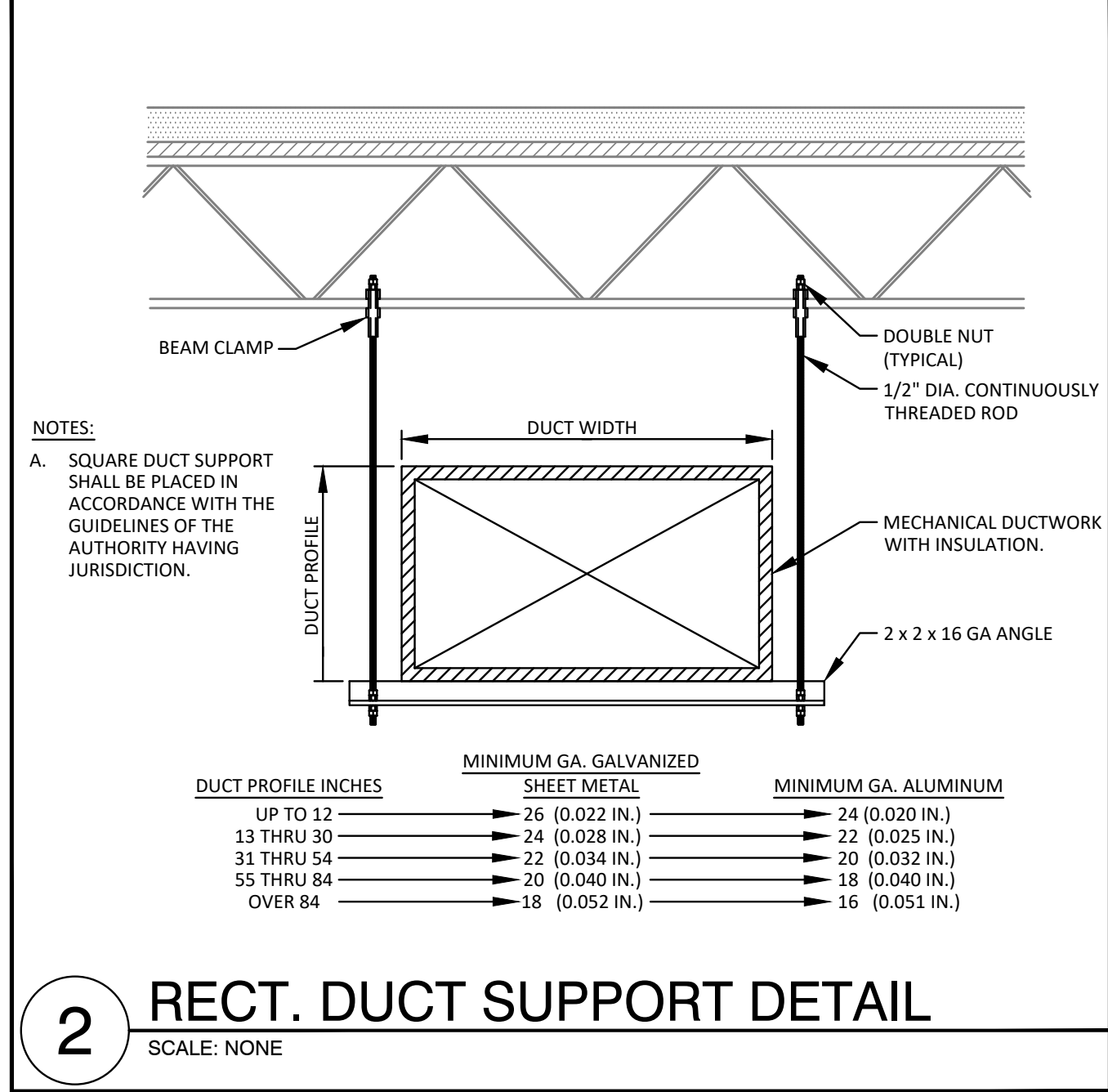
REMARKS:
A. PROVIDE COMPLETE UNIT WITH INTEGRAL THERMOSTAT, 120V RELAY, DISCONNECT SWITCH AND 2"

PRELIMINARY
NOT FOR
CONSTRUCTION

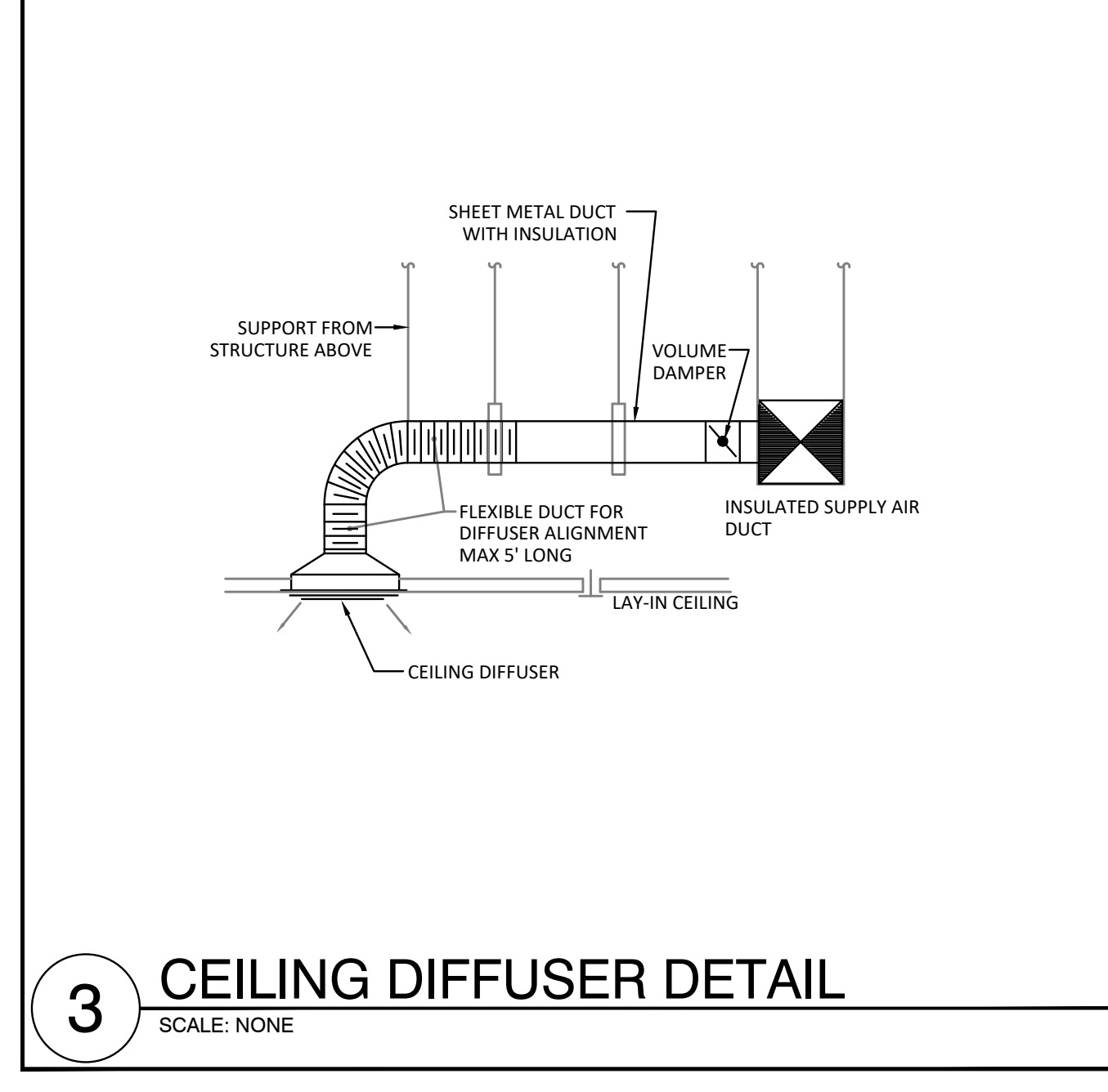
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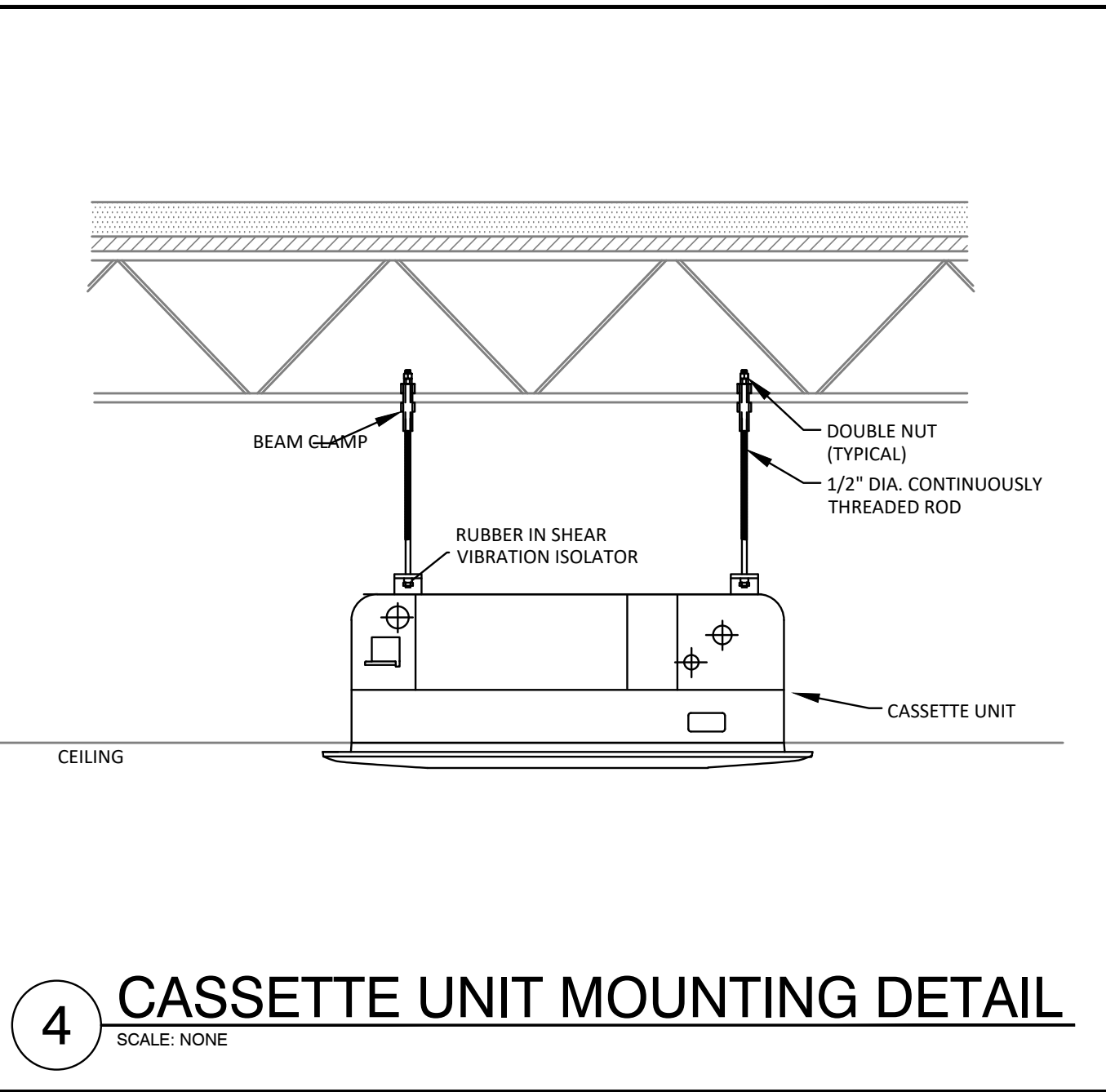
1 SPIRAL DUCT GRILLE DETAIL
SCALE: NONE



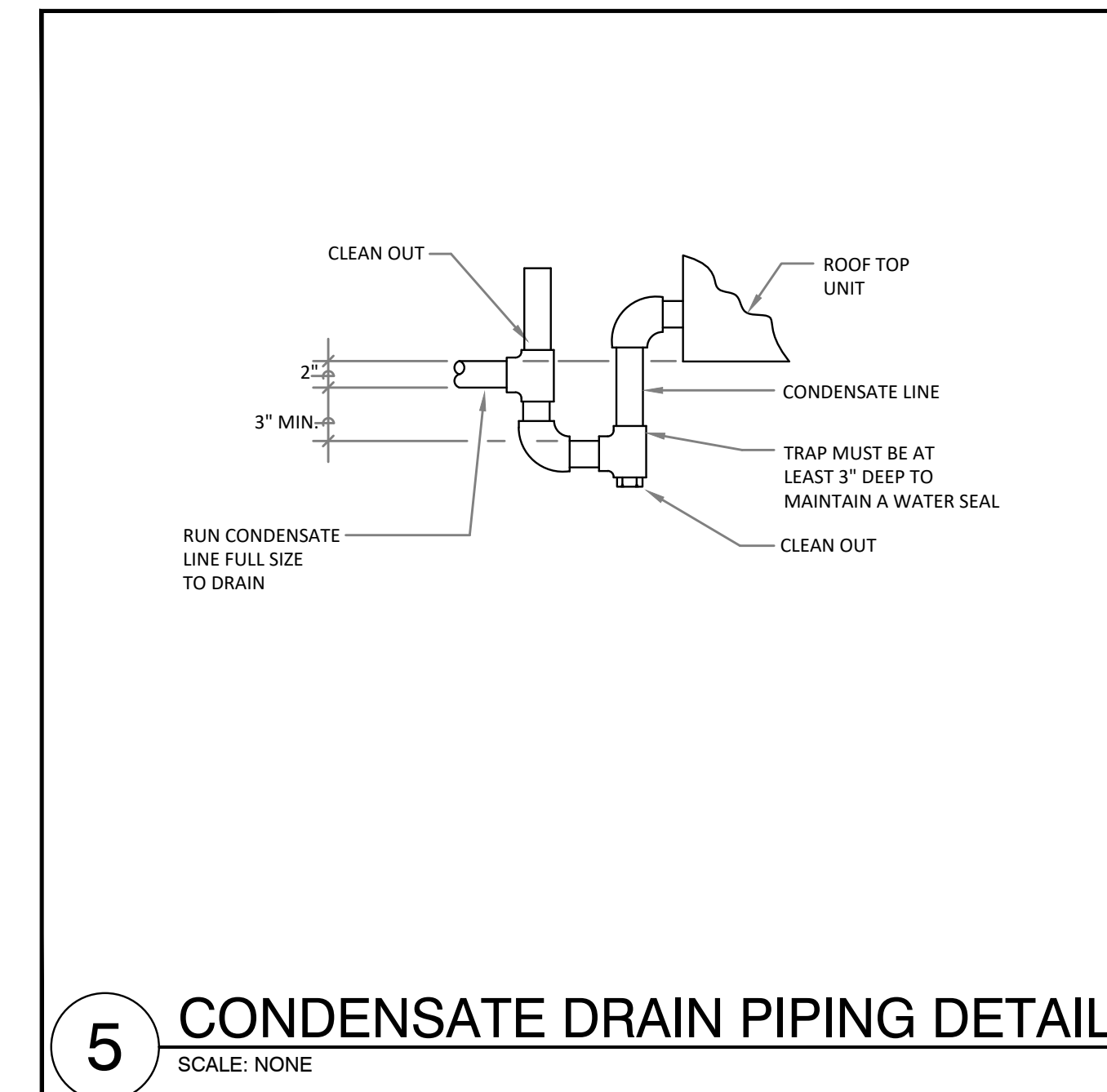
2 RECT. DUCT SUPPORT DETAIL
SCALE: NONE



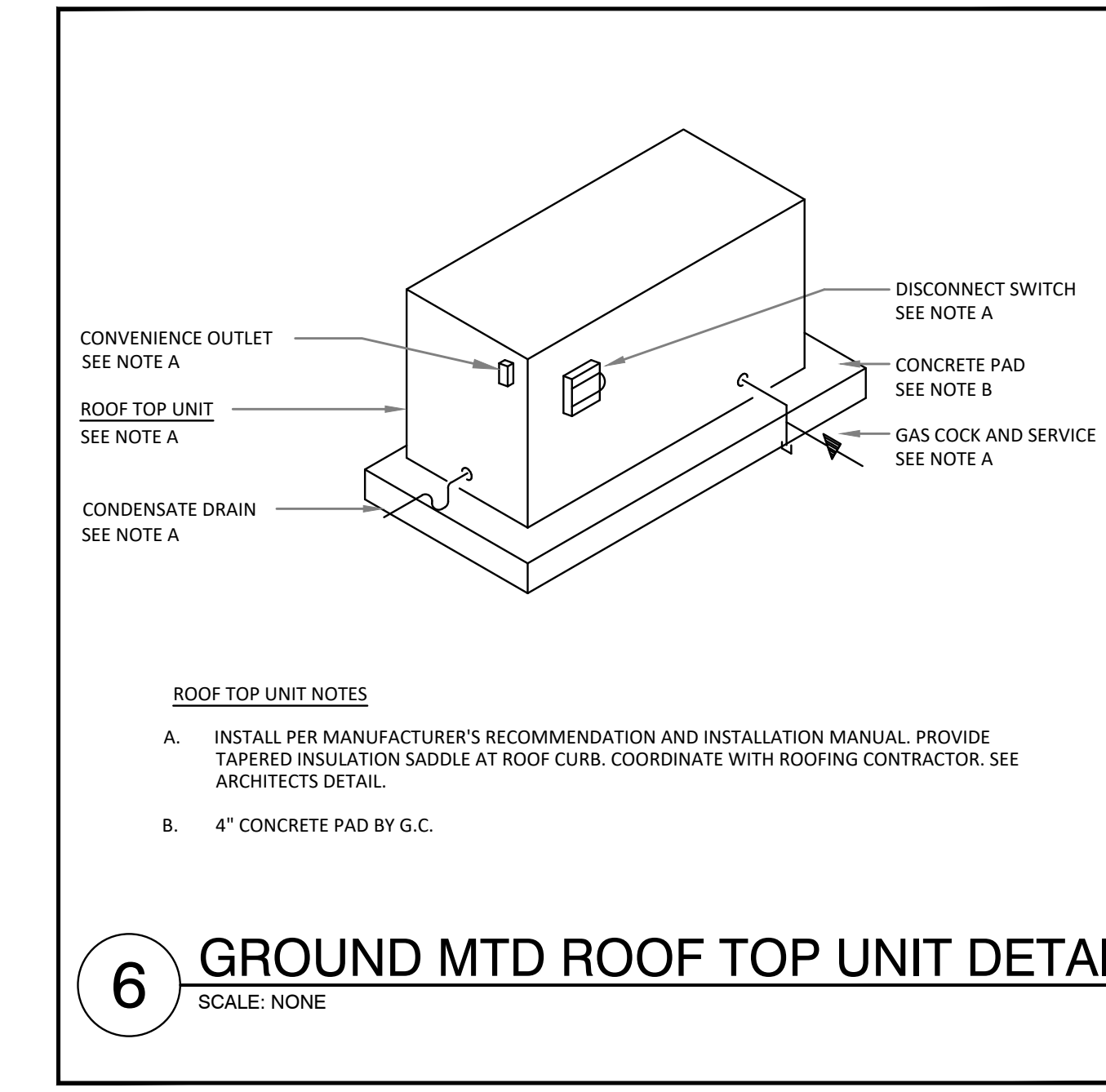
3 CEILING DIFFUSER DETAIL
SCALE: NONE



4 CASSETTE UNIT MOUNTING DETAIL
SCALE: NONE



5 CONDENSATE DRAIN PIPING DETAIL
SCALE: NONE



6 GROUND MTD ROOF TOP UNIT DETAIL
SCALE: NONE

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45011

ISSUE DATE	REVISION
02/20/2023	PRELIMINARY PRICING REVIEW
05/25/2023	PRELIMINARY PRICING REVISION

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MECH - DETAILS
M2.02

