

1 HVAC FLOOR PLAN
M1.0 1/4" = 1'-0"

KEY NOTES:

- 1 REMOTE SMOKE DETECTOR TEST STATIONS FOR RTU-1, 2, & 3. TEST STATIONS TO BE MOUNTED ON THE MANAGER'S OFFICE WALL. SECURITY CONTRACTOR SHALL WIRE RTU FACTORY MOUNTED SMOKE DETECTORS TO SECURITY/FIRE ALARM PANEL. MECHANICAL CONTRACTOR SHALL PROVIDE TEST STATION AND WIRING BETWEEN COMPONENTS AS WELL AS WIRING TO SHUT DOWN THE AS-FAN UPON ACTIVATION OF THE SMOKE DETECTOR. G.C. TO TEST THE SMOKE DETECTOR FUNCTIONS WITH THE WAWA PROJECT MANAGER.
- 2 WALL MOUNTED SENSOR(S) FOR EACH MECHANICAL UNIT PER ROOFTOP UNIT SCHEDULE ON SHEET M3.0. G.C. SHALL INSTALL AND WIRE TO UNIT. BAS CONTRACTOR SHALL CONNECT TO MECHANICAL UNIT ONLY.
- 3 COORDINATE EXACT LOCATION OF EXHAUST FAN PENETRATION WITH ARCHITECTURAL ROOF PLAN. INSTALL GALVANIZED DUCT WORK DOWN FROM FAN, INTO CEILING/JOIST SPACE, AND CONNECT TO CEILING GRILLES.
- 4 REFER TO TYPICAL DUCT PLENUM DETAIL ON SHEET M3.0.
- 5 COORDINATE DUCT WITH STRUCTURE IN THIS LOCATION. COORDINATE TAKEOFF LOCATIONS WITH ANGELED WEB MEMBERS.
- 6 PROVIDE SURFACE MOUNT ADAPTER FRAME TO ALLOW ACCESS TO CEILING ABOVE THROUGH DIFFUSER OPENING. SEE AIR DEVICE SCHEDULE.
- 7 ROUTE DUCT UNDER STRUCTURAL MEMBERS AT THIS LOCATION.
- 8 DUCTWORK TO RUN WITHIN JOIST SPACING. MECHANICAL CONTRACTOR TO COORDINATE MECHANICAL WORK WITH ALL TRADES PRIOR TO INSTALLATION.
- 9 DUCT TAKEOFF WITH DAMPER FROM BOTTOM OF MAIN DUCT.
- 10 TRANSFER DUCT ASSEMBLY.
- 11 PROVIDE SEALED 20"x20" PLENUM BOX ASSEMBLY ABOVE TRANSFER GRILLES TO ALLOW FLEX TRANSFER DUCT CONNECTIONS.
- 12 GRILL OPEN TO ABOVE CEILING.
- 13 INSTALL EXHAUST FAN ABOVE CEILING PER DETAIL SHEET M3.0. FAN SHALL BE WIRED TO EMERGENCY SHUT-OFF SWITCH PROVIDED BY OTHERS. REFERENCE ARCHITECTURAL AND ELECTRICAL DRAWINGS.
- 14 MOUNT CENTER OF EXHAUST GRILLE AT 12" ABOVE FINISHED FLOOR. ROUTE DUCT SIZED AS SHOWN FROM GRILLE, UP IN WALL CAVITY TO ABOVE CEILING, THEN TO EXHAUST FAN AND OUT TO EXTERIOR WALL LOUVER. COORDINATE DUCT ROUTING WITH ALL OTHER TRADES.
- 15 12"x12" EXTERIOR WALL LOUVER MODEL EHH-6910 AS MANUFACTURED BY GREENHECK. INSTALL PER MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS. PROVIDE WITH BIRD SCREEN, 1-1/2" FLANGE, AND ALUMINUM MESH FINISH.
- 16 EMERGENCY SHUT-OFF SWITCH AND WALL PLACARD INDICATING VENTILATION SYSTEM EMERGENCY SHUT-OFF PROVIDED BY OTHERS REFERENCE ELECTRICAL AND ARCHITECTURAL DRAWINGS.

SHEET GENERAL NOTE:

A. MECHANICAL CONTRACTOR SHALL ADJUST ALL LINEAR SLOT DIFFUSERS TO A GENERALLY VERTICAL FLOW. ADJUSTMENT SHALL BE MADE SO AS TO AVOID AIRFLOWS ON SENSORS, REFRIGERATION CASES, OR OPEN FOOD REFRIGERATION EQUIPMENT.

HVAC LEGEND

SYMBOL	DESCRIPTION
	NEW RECTANGULAR OR ROUND DUCT
	FLEXIBLE DUCT
	SUPPLY AIR DUCTWORK UP THROUGH PLAN
	RETURN AIR DUCTWORK UP THROUGH PLAN
	EXHAUST AIR DUCTWORK UP THROUGH PLAN
	90° ELBOW WITH TURNING VANES
	MANUAL AIR VOLUME CONTROL DAMPER
	4 WAY SUPPLY DIFFUSER
	3 WAY SUPPLY DIFFUSER
	2 WAY OPPOSED SUPPLY DIFFUSER
	2 WAY CORNER SUPPLY DIFFUSER
	RETURN AIR DEVICE
	EXHAUST AIR DEVICE
	AIR CURTAIN
	LINEAR SLOT DIFFUSER WITH PLENUM
	COMBINATION TEMPERATURE/HUMIDITY SENSOR
	TEMPERATURE SENSOR
	CO2 SENSOR
	SWITCH
	TYPE MARK CFM
	MECHANICAL EQUIPMENT TAG RTU-10
	CONDENSATE PIPING
	ROOF MOUNTED EXHAUST FAN EF-X
	INLINE EXHAUST FAN EF-X
	PACKAGED ROOFTOP AIR CONDITIONER RTU-X

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CLIENT NAME
WAWA
260 WEST BALTIMORE PIKE
WAWA, PENNSYLVANIA 19063

PROJECT NAME
F85FB 2021.3
STORE #6301
VETERANS PKWY & ELIJAH G MILES PKWY,
HINESVILLE, GA

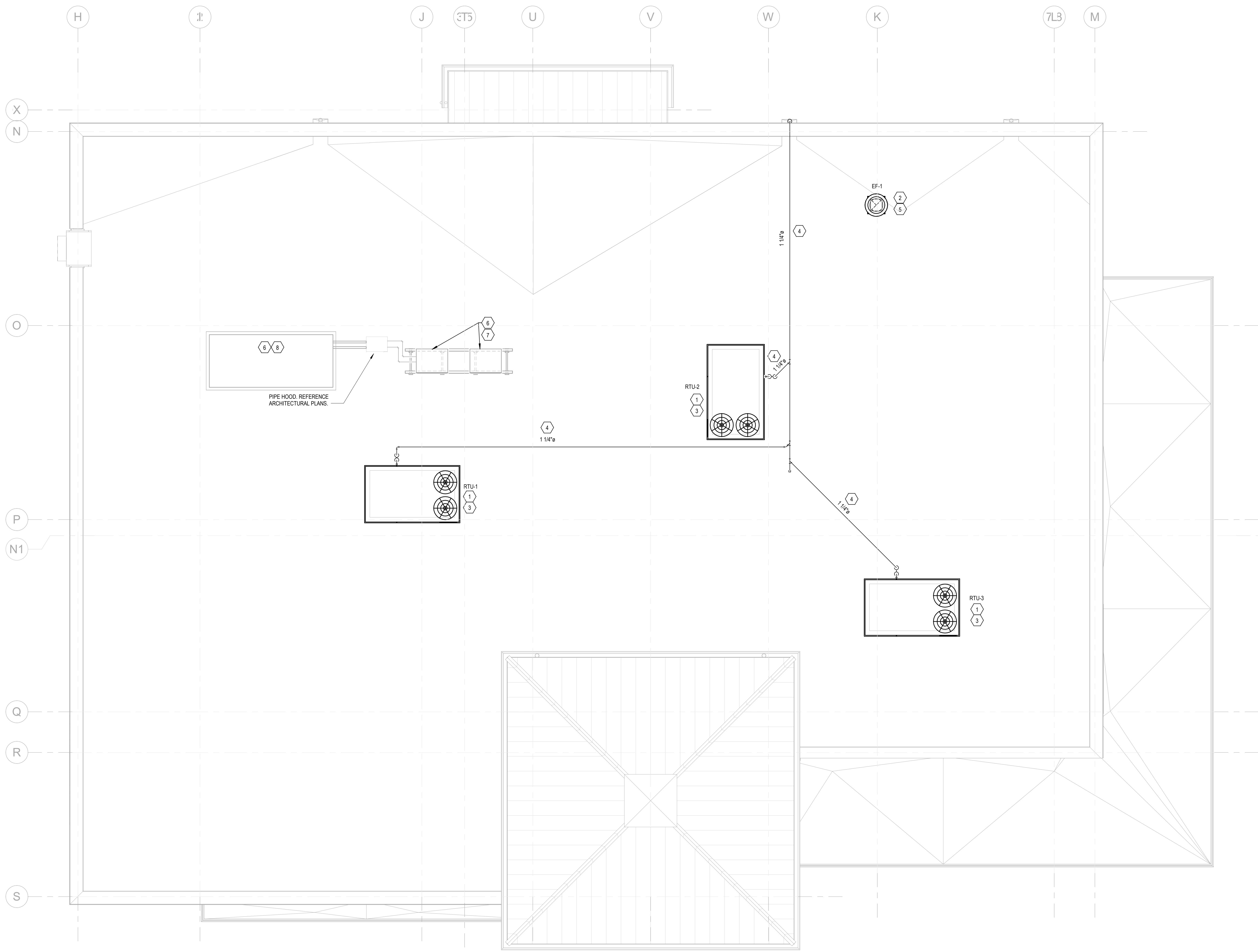
Revision Schedule

No.	Description	Date
1	PRE-BID SET	05/03/2023
1	PERMIT COMMENTS	11/01/2023
1	BID SET	12/01/2023
A	CONSTRUCTION SET	03/21/2024

PROJECT NO. 2203096	DATE 05-23-2023	DRAWN JSP	CHECKED ESD
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M1.0

HVAC FLOOR PLAN



1 HVAC ROOF PLAN
M2.0 1/4" = 1'-0"

KEY NOTES:

- 1 FACTORY INSTALLED SMOKE DETECTOR IN MAIN SUPPLY AND RETURN OF EACH ROOFTOP UNIT.
- 2 INSTALL ROOF MOUNTED EXHAUST FAN PER DETAIL ON SHEET M2.0. COORDINATE EXACT LOCATION OF FAN PENETRATION WITH ARCHITECTURAL ROOF PLAN. TRANSITION GALVANIZED DUCTWORK AS NECESSARY FROM FAN INTO CEILING/JOIST SPACE. SEE SHEET M2.0 FOR CONTINUATION.
- 3 PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL DUCTWORK AND MECHANICAL UNITS.
- 4 ROUTE SCH. 40 P.V.C. CONDENSATE DRAIN PIPING ALONG ROOF. SUPPORT PIPING PER DETAIL ON SHEET M2.0.
- 5 MAINTAIN A MINIMUM 10' CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND EXHAUST TERMINATIONS ON ROOF.
- 6 FOOD SERVICE REFRIGERATION EQUIPMENT PROVIDED BY OTHERS.
- 7 FOOD SERVICE REFRIGERATION EQUIPMENT MOUNTED ON PRE-ENGINEERED RACK. REFER TO "CONDENSING UNIT ROOFING SUPPORT DETAIL" ON ARCHITECTURAL SHEETS.
- 8 FOR SPECIFIC WIND LOADING REQUIREMENTS NOT TO EXCEED 140 MPH, SEE STRUCTURAL DRAWINGS.

SHEET GENERAL NOTE:

CONTRACTOR RESPONSIBLE FOR USING CURBS PLUS CLIPS ON ALL RTUS. CLIPS ARE DELIVERED TO SITE AS SEPARATE PACKAGE.

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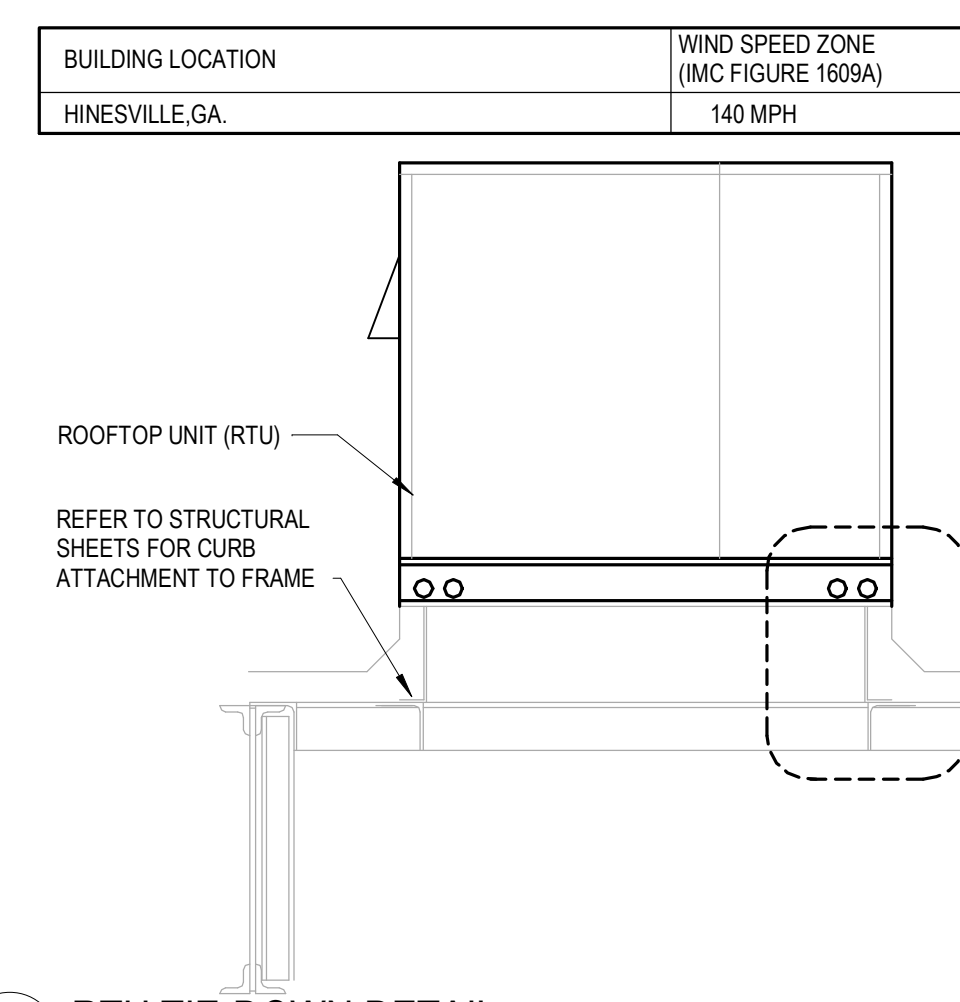
PROJECT NAME
F85FB V2021.3
STORE #6301
VETERANS PKWY & ELIJAH G MILES PKWY,
HINESVILLE, GA

SHEET TITLE
HVAC ROOF PLAN

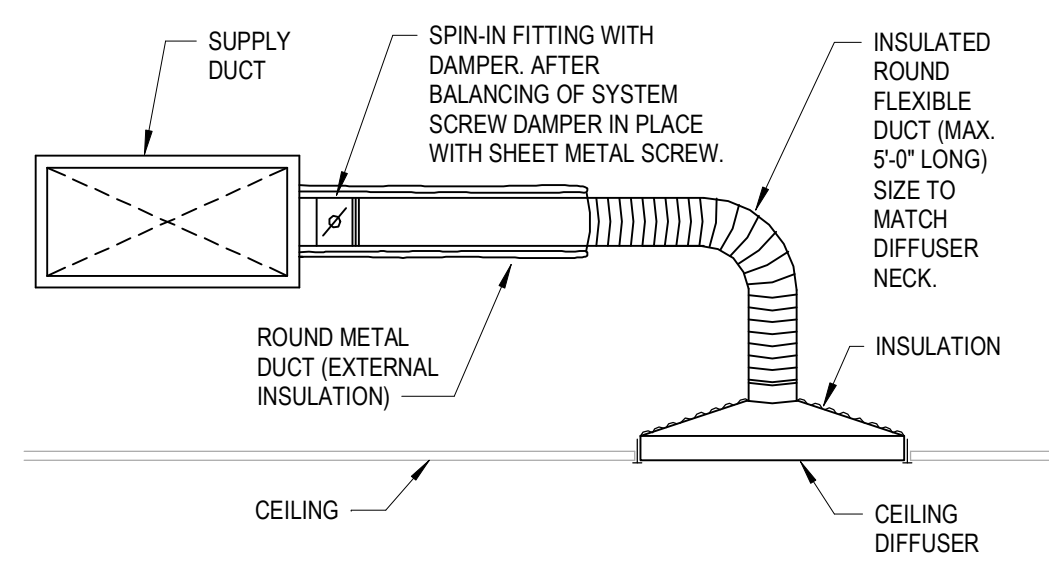
No.	Description	Date
1	PRE-BID SET	08/01/2023
2	BID SET	10/31/2023
3	CONSTRUCTION SET	12/01/2023
4	CONSTRUCTION SET	03/21/2024

PROJECT NO. 220096	DATE 08-29-2023	DRAWN JSP	CHECKED ESD
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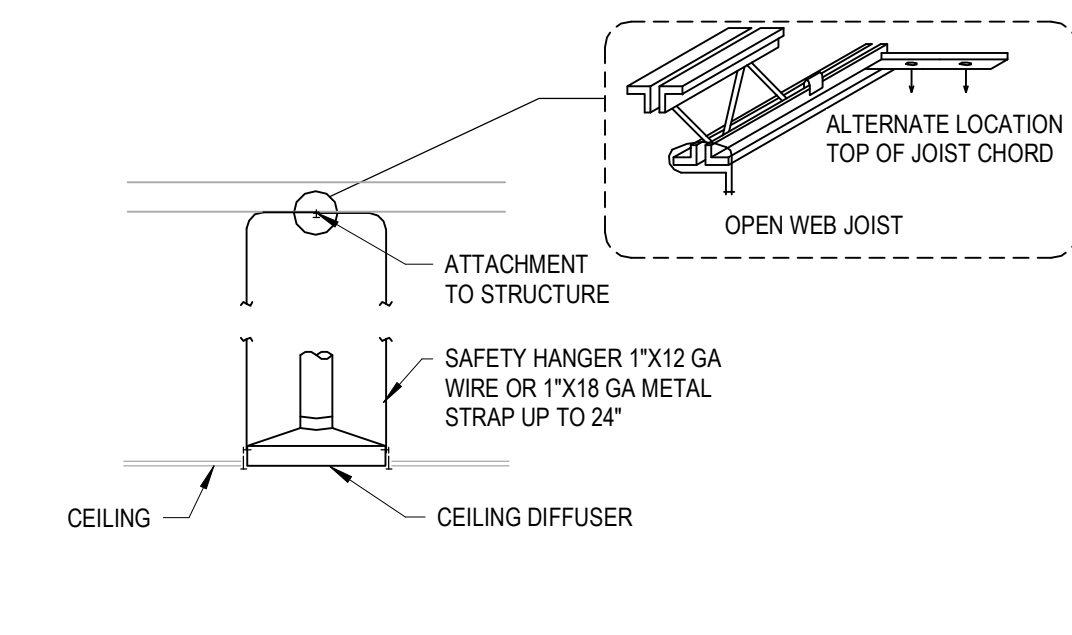
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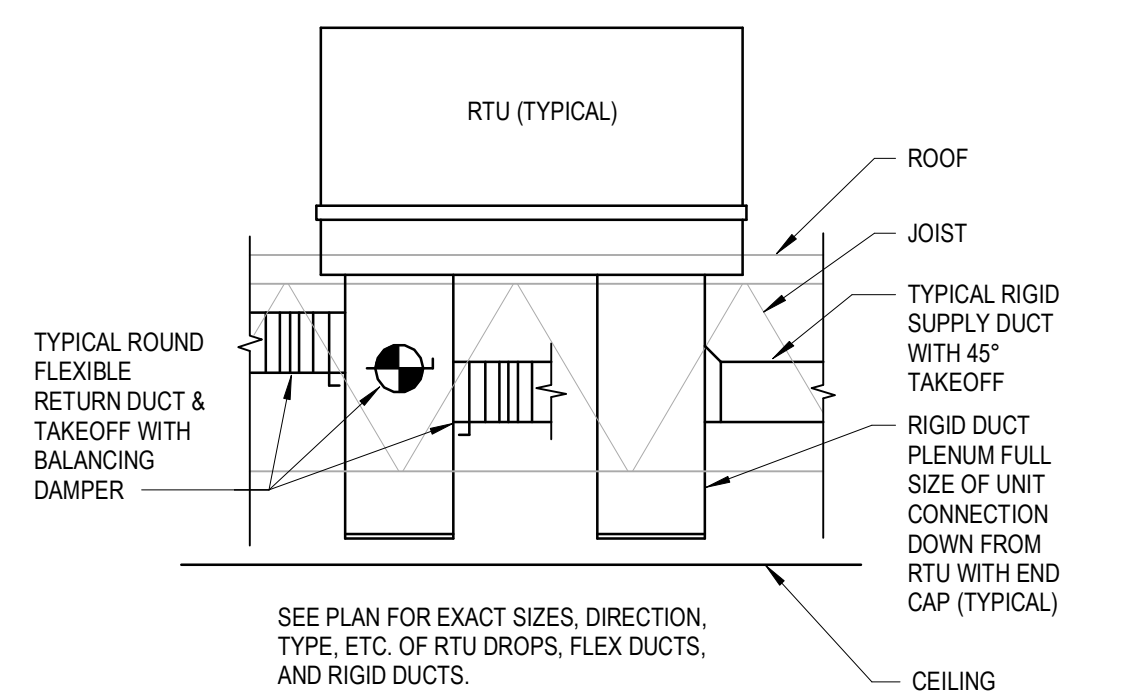
1 RTU TIE-DOWN DETAIL
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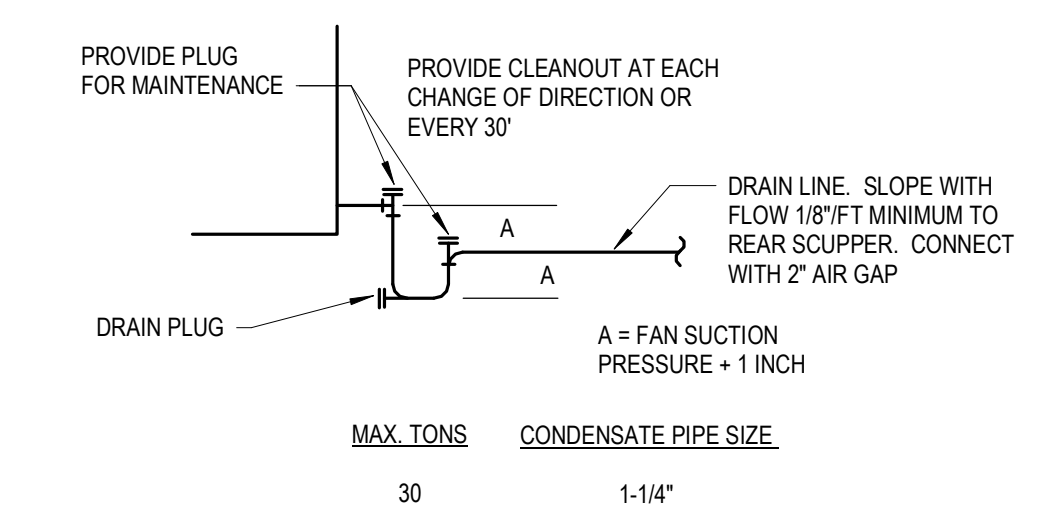
2 CEILING DIFFUSER RUNOUT DETAIL
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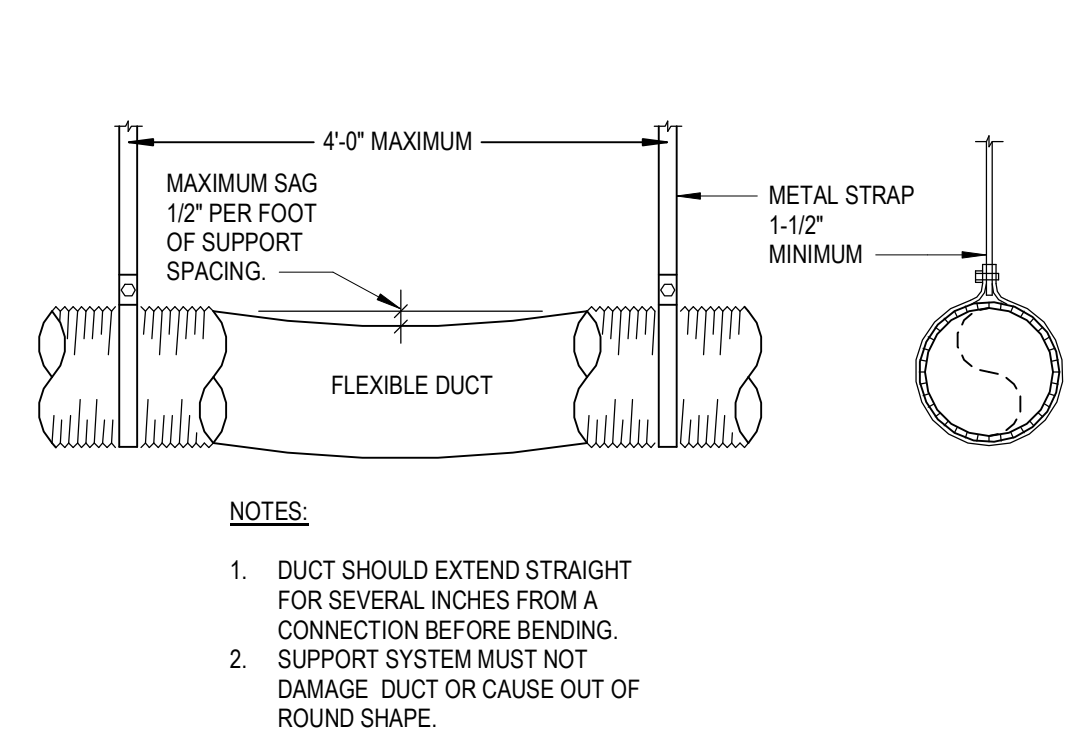
3 CEILING MOUNTED AIR DIFFUSER SUPPORT DETAIL
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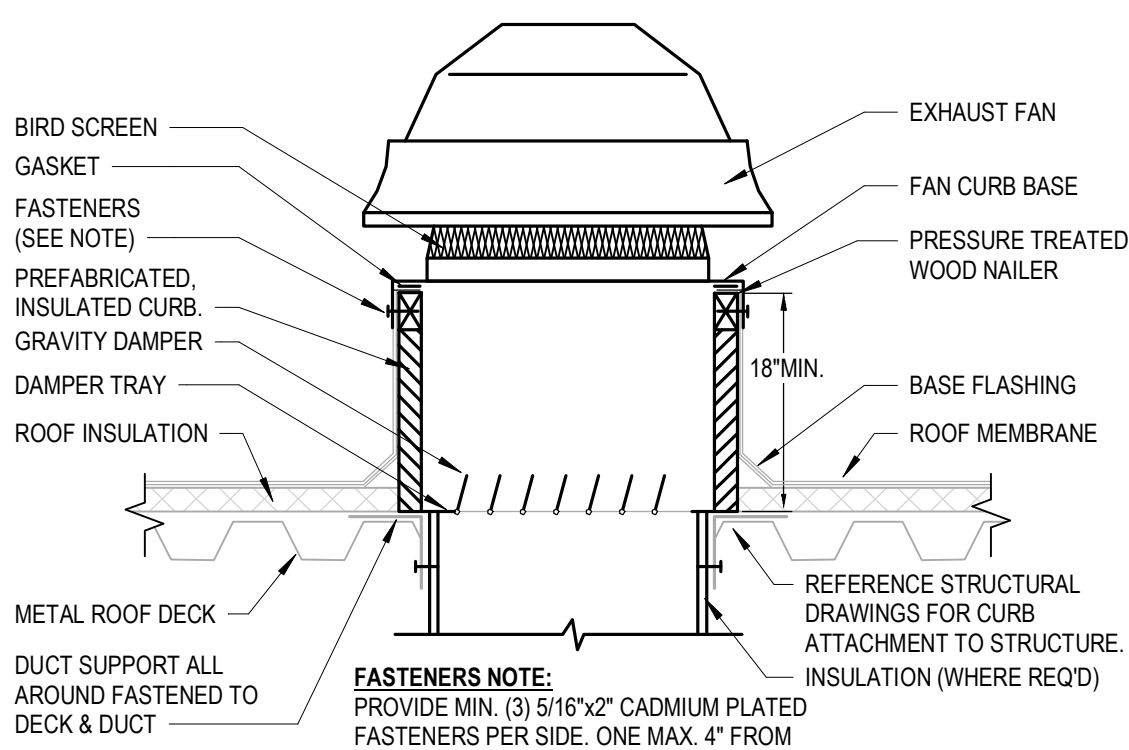
4 TYPICAL DUCT PLENUM DETAIL
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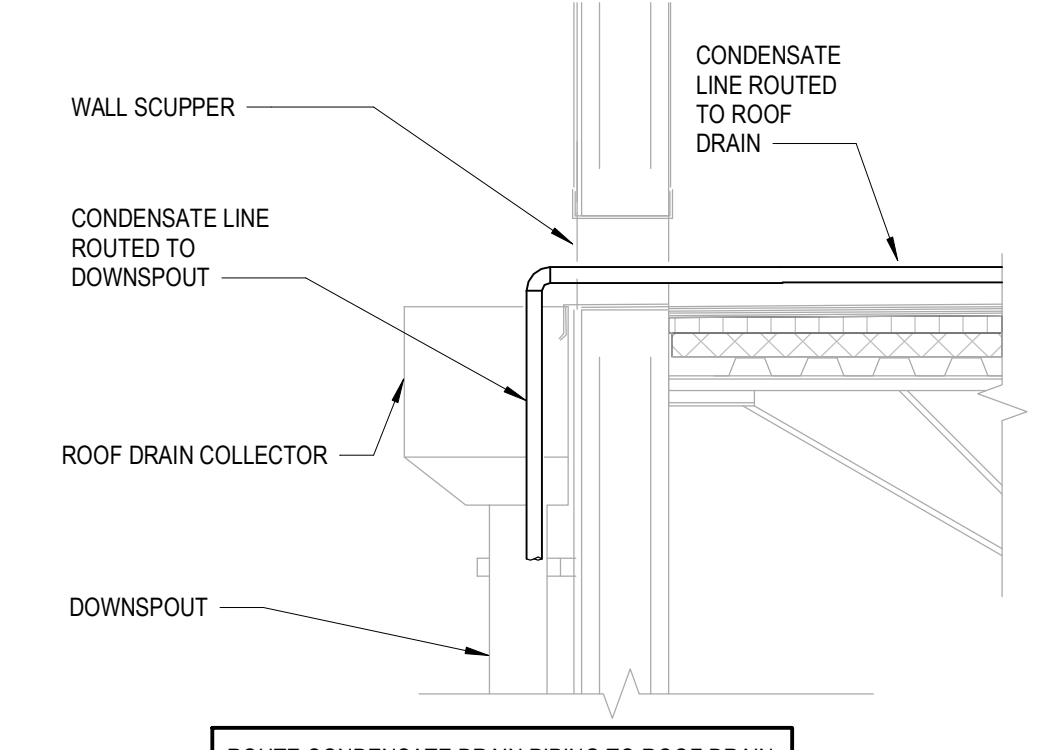
5 CONDENSATE DRAIN TRAP DETAIL
M3.0 NOT TO SCALE



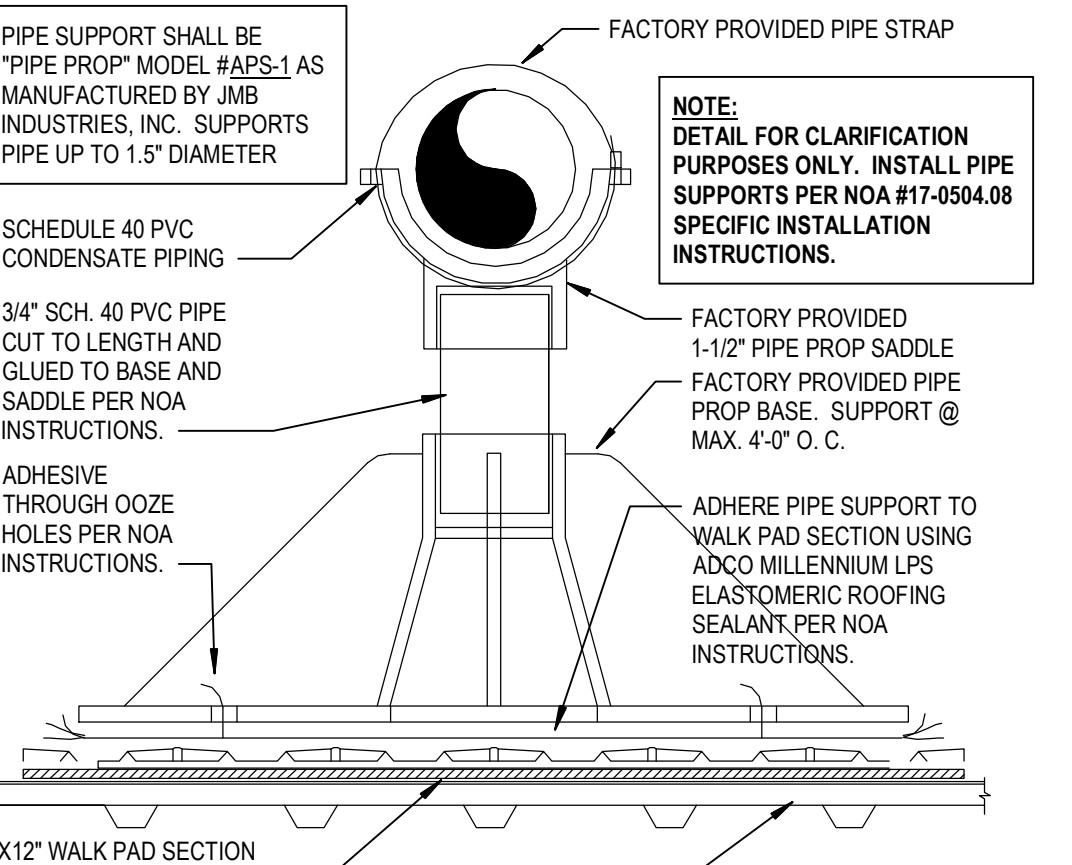
6 FLEX DUCT SUPPORT DETAIL
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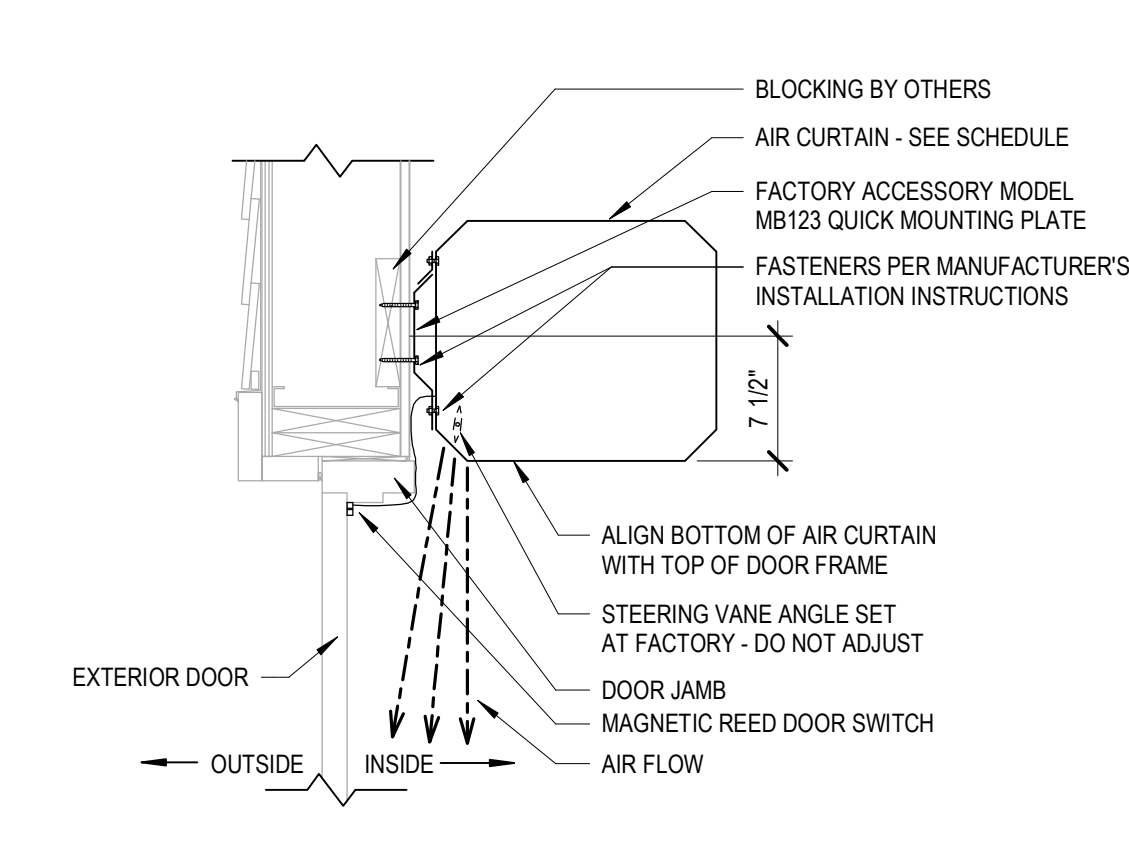
7 ROOF FAN MOUNTING DETAIL
M3.0 NOT TO SCALE



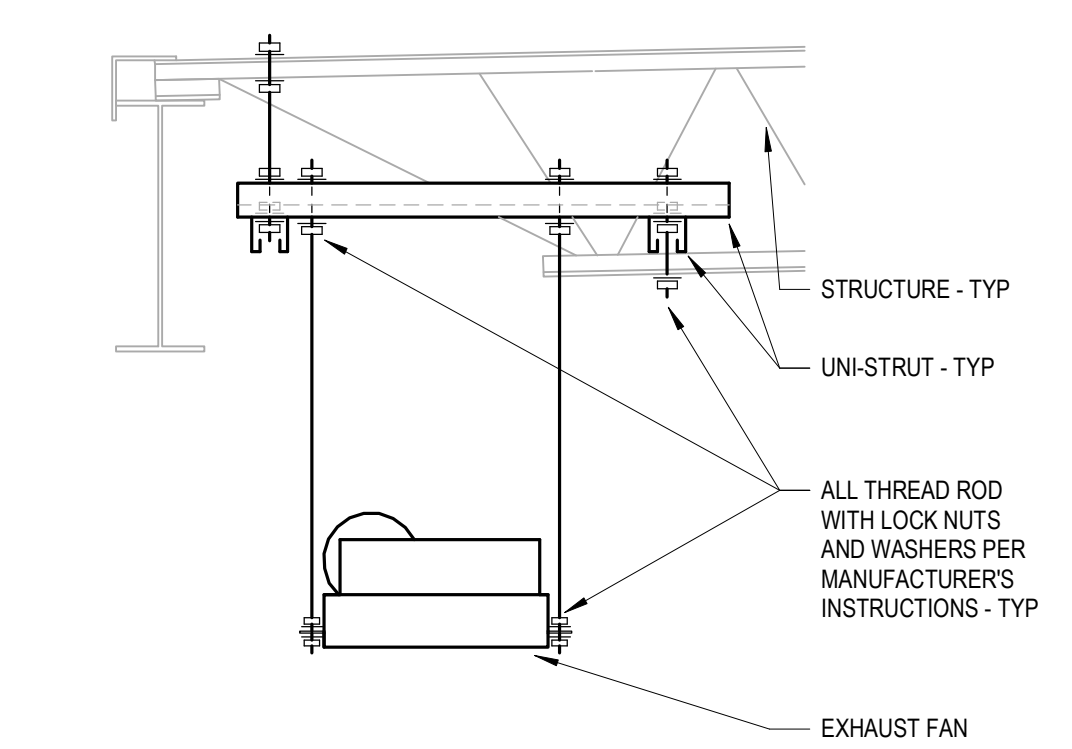
8 CONDENSATION TERMINATION DETAIL
M3.0 NOT TO SCALE



9 CONDENSATE PIPE ROOF SUPPORT DETAIL
M3.0 NOT TO SCALE



10 AIR CURTAIN INSTALLATION DETAIL
M3.0 NOT TO SCALE



11 INLINE FAN MOUNTING DETAIL
M3.0 NOT TO SCALE

HVAC GENERAL NOTES

- ALL MECHANICAL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE - MECHANICAL, SMACNA, UL, LOCAL CODES, MANUFACTURER'S RECOMMENDATIONS, AND ALL AUTHORITIES HAVING JURISDICTION. CONTRACTOR TO VISIT SITE AND VERIFY ALL CLEARANCES BEFORE FABRICATION OF DUCTWORK AND PROVIDE ADDITIONAL OFFSET AND/OR CHANGES IN DUCT SIZES TO MEET FIELD CONDITIONS AND COORDINATE WITH ELECTRICAL, PLUMBING AND FIRE PROTECTION SUBCONTRACTOR BEFORE ANY CONSTRUCTION WORK.
- SUPPLY AIR, RETURN AIR, OUTSIDE AIR AND EXHAUST AIR DUCTWORK SHALL BE SHEET METAL CONSTRUCTION. DUCT SHALL BE INSTALLED SECURELY SUPPORTED, HUNG OR SUSPENDED FROM THE STRUCTURE. JOINTS SHALL BE SEALED WITH 3\"/>

HVAC ROOFTOP UNIT SCHEDULE

MARK	AREA SERVED	NOMINAL TONS	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	E.S.P. (IN.)	HP	CONTROL STAGES	VOLTAGE	PHASE	MCA	MOPC	WEIGHT (LBS. ONLY)	COOLING CAPACITY				BASIS OF DESIGN					
													TOTAL COOLING (BTU/H)	SENSIBLE COOLING (BTU/H)	EER (EER)	MANUFACTURER PRODUCT LINE	MODEL	NOTES				
RTU-1	CORE	8.5	3400	500	0.5	3.75	22.5	1	208 V	3	70	70	1357	98.1	75.4	75.5	63.9	95/79	11.0 (14.6)	LENNOX ENLIGHT	LCT1024HE	1-20
RTU-2	DELI	12.5	5000	500	0.5	3.75	N/A	N/A	208 V	3	64	80	1342	146.1	136	75.2	62.5	95/79	11.0 (14.6)	LENNOX ENLIGHT	LCT1504HE	2-20
RTU-3	RETAIL	7.5	3000	300	0.5	3.75	22.5	1	208 V	3	70	70	1350	91.8	68.7	76.1	63.5	95/79	12.5 (15.7)	LENNOX ENLIGHT	LCT0924HE	2-20

- NOTES:
- PROVIDE CO2 SENSOR FOR INTERLINK WITH BUILDING AUTOMATION SYSTEM.
 - PROVIDE LENNOX HUMIDITROL HOT GAS REHEAT OPTION.
 - PROVIDE REMOTE WALL MOUNTED COMBINATION TEMPERATURE/HUMIDITY SENSOR MODEL 21W06.
 - REFER TO CONTROL SYSTEM NOTES FOR CONTROL COMPONENTS REQUIREMENTS.
 - PROVIDE 5-MINUTE ANTI-SHORT CYCLE TIMER.
 - PROVIDE THRU THE BASE ELECTRICAL AND SINGLE POINT CONNECTION.
 - PROVIDE WITH FACTORY 2\"/>

HVAC EXHAUST FAN SCHEDULE

MARK	CFM	EXT. STATIC PRESSURE	FAN TYPE	DRIVE TYPE	SONES	HP	FAN RPM	VOLTAGE	PHASE	MANUFACTURER	MODEL	NOTES
EF-1	800 CFM	0.250 in-wg	DOWNBLOW	DIRECT	5.3	1/4	883	120 V	1	GREENHECK	G-120	1.2
EF-2	80 CFM	0.125 in-wg	INLINE	DIRECT	0.3	21 WATTS	584	120 V	1	GREENHECK	CSP-B10	3

- NOTES:
- NO SUBSTITUTIONS PERMITTED.
 - PROVIDE WITH FACTORY DISCONNECT, FACTORY WIRED SOLID STATE SPEED CONTROLLER, 18\"/>

HVAC AIR DEVICE SCHEDULE

TYPE MARK	MANUFACTURER	MODEL	SERVICE	DESCRIPTION	MOUNTING TYPE	MATERIAL	NECK SIZE	FACE SIZE	NOTES
CD-1	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	LAY-IN	ALUMINUM	18\"/>		

- NOTES:
- FOR LAY-IN CEILING PROVIDE WITH 18\"/>

HVAC AIR CURTAIN SCHEDULE

MARK	AREA SERVED	MANUFACTURER	MODEL	NOZZLE CFM	HP	VOLTAGE	PHASE	MOUNTING HEIGHT	NOTES
AC-1	STAGING	POWERED AIRE	BCE-148	2155 CFM	0.5	120 V	1	7'-2"	1-4
AC-2	DELIVERY VESTIBULE	POWERED AIRE	BCE-148	2155 CFM	0.5	120 V	1	7'-2"	1-4

- NOTES:
- NO SUBSTITUTIONS PERMITTED.
 - MOUNT INSIDE BUILDING ABOVE DOOR AT 7'-2\"/>

RTU-1, 2, & 3 TEST AND BALANCE NOTES

- TEST AND BALANCE CONTRACTOR TO OBTAIN INITIAL BALANCE OF COOLING CFM FOR RTU USING FAN SHEAVE ADJUSTMENT TO WITHIN +/- 5% SCHEDULED COOLING CFM. PROODGY CONTROLLER MAY BE USED FOR FINAL 5% TO OBTAIN SCHEDULED COOLING CFM.
- SET MINIMUM OUTSIDE AIR DAMPER POSITION FOR COOLING AND VERIFY OUTSIDE AIR CFM PER RTU SCHEDULE.
- NOT USED.
- NOT USED.
- USING PROODGY CONTROLLER, VERIFY HEATING CFM EQUALS COOLING CFM.
- ALL PROODGY CONTROLLER SETTINGS OTHER THAN THOSE MENTIONED ABOVE SHALL REMAIN AS THEIR DEFAULT VALUE AS SET FROM THE FACTORY.
- VERIFY POSITIVE BUILDING PRESSURE.

AIR BALANCE SCHEDULE

SYSTEM	CFM
RTU-1	+500
RTU-2	+500
RTU-3	+300
EF-1	-800
BUILDING POSITIVE PRESSURE	+500

RTU-1, 2, & 3 SEQUENCE OF OPERATION

- SUPPLY AIR BLOWER SPEED UNIT HAS FOLLOWING SUPPLY AIR BLOWER SPEED SETTINGS THAT PERTAIN TO THIS INSTALLATION:
- COOLING AIR BLOWER SPEED
 - HEATING AIR BLOWER SPEED
- COOLING MODE
- Y1 DEMAND: COMPRESSOR 1 OPERATES AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.
 - Y2 DEMAND: ALL COMPRESSORS OPERATE AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.
- DEHUMIDIFICATION MODE
- IF THE UNIT RECEIVES A CALL FOR DEHUMIDIFICATION, ECONOMIZER FREE COOLING IS LOCKED OUT (ON UNITS EQUIPPED WITH ECONOMIZER).
 - CALL FOR DEHUMIDIFICATION, NO Y1, Y2 DEMAND: 1ST STAGE COMPRESSOR OPERATES, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED, AND THE REHEAT VALVE IS ENERGIZED.
 - Y1 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED AND THE REHEAT VALVE IS ENERGIZED.
 - Y2 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED, AND THE REHEAT VALVE IS DE-ENERGIZED.
- HEATING MODE (ELECTRIC HEAT)
- Y1 DEMAND: 1ST STAGE ELECTRIC HEAT IS ENERGIZED AND THE SUPPLY AIR BLOWER OPERATES AT HEATING SPEED.
 - Y2 DEMAND: 2ND STAGE ELECTRIC HEAT IS ENERGIZED AND THE SUPPLY AIR BLOWER OPERATES AT HEATING SPEED.
- MODULATING OUTDOOR AIR DAMPER
- THE MINIMUM DAMPER POSITION FOR 'OCCUPIED HIGH BLOWER' IS ADJUSTED DURING UNIT SETUP TO PROVIDE MINIMUM FRESH AIR REQUIREMENTS PER RTU SCHEDULE.
 - WHEN SUPPLY AIR BLOWER IS OFF, THE OUTDOOR AIR DAMPER IS CLOSED.
 - WHEN UNIT IS IN OCCUPIED MODE AND SUPPLY AIR BLOWER IS OPERATING, THE OUTDOOR AIR DAMPER IS AT MINIMUM 'HIGH BLOWER' POSITION.

LENNOX SETUP PARAMETERS - GEORGIA STORES [R]

- UNIT ID CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):
- BACNET CONFIGURATION: GO TO SETTINGS-GENERAL-CONFIGURATION ID1 POSITION 3 SET TO 'P'
 - NETWORK CONFIGURATION: GO TO SETUP-NETWORK INTEGRATION, SET TO BACNET CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR; CO2, TEMP & HUMIDITY (PER UNIT, AS NEEDED).
- INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):
- PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS
 - PARAMETER 106 DEHUMID SETPOINT: 50 THIS IS A CENTERED SET POINT (+/-)
 - PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE
 - PARAMETER 110 CO2 DAMPER MAX OPEN %: 50
 - PARAMETER 118 CO2 START OPEN PPM: 1200
 - PARAMETER 119 CO2 FULL OPEN PPM: 1500
 - PARAMETER 137 CO2 HEAT SET POINT: 68 (BACK UP)
 - PARAMETER 138 CO2 COOLING SET POINT: 72 (BACK UP)
 - PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS
- CFM VALUES / MSV/FAN SPEEDS (AIR BALANCER TO DEFINE / AS APPLICABLE):
- HEAT CFM VALUE: PER THE HVAC SCHEDULE
 - HIGH COOL CFM VALUE: PER THE HVAC SCHEDULE
 - LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE
 - VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE

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