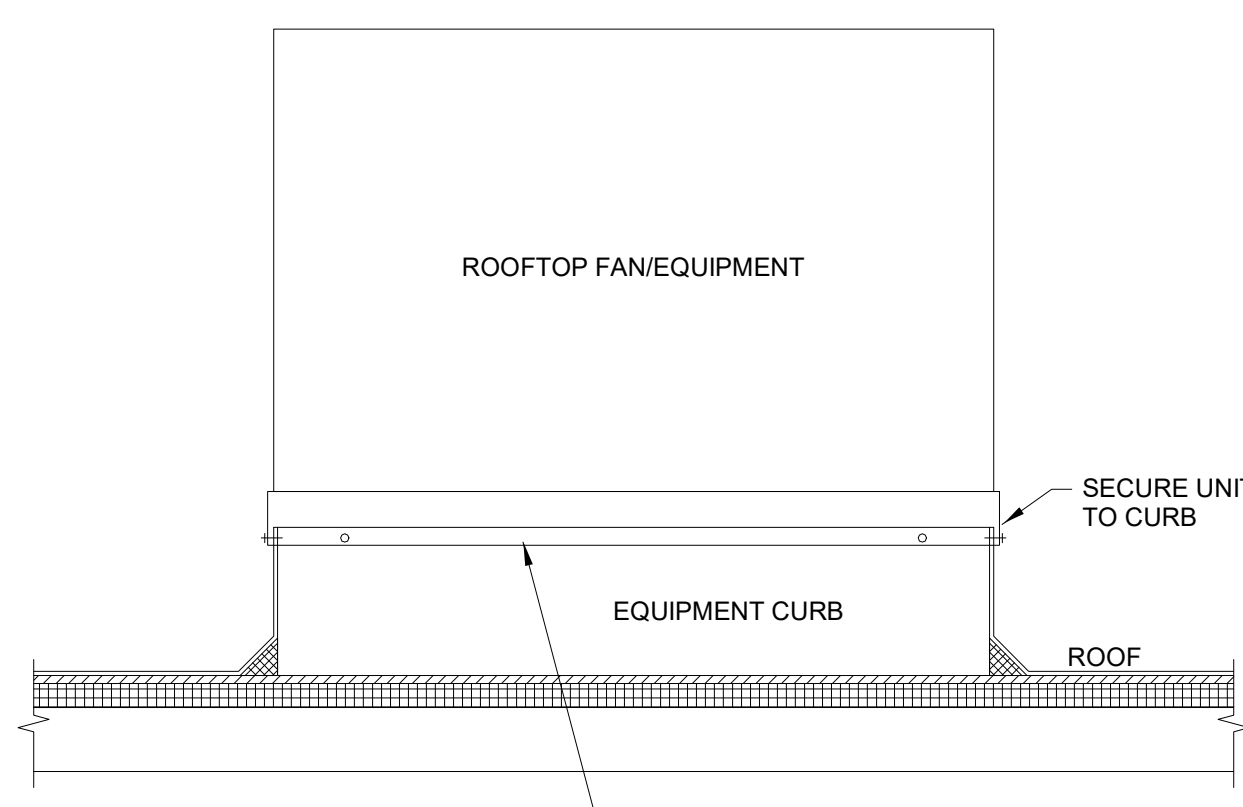


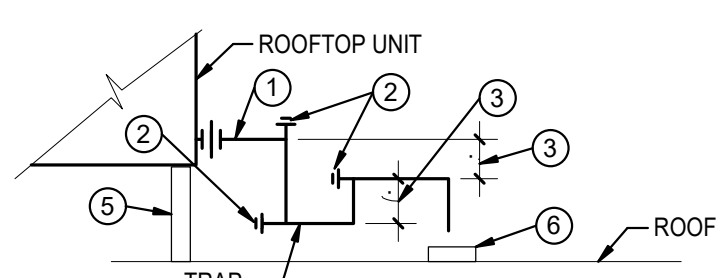


THIS UNIT ATTACHMENT DRAWING WAS CREATED TO SHOW ROOFTOP UNIT INSTALLATION COMPLIANCE FOR HIGH WIND (90 MPH, OBC, CHAPTER 16, FIGURE 1609) APPLICATIONS PER OMC 301.12 WIND RESISTANCE. MECHANICAL EQUIPMENT, APPLIANCES AND SUPPORTS THAT ARE EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH THE BUILDING CODE. EQUIPMENT ATTACHMENT INFORMATION IS BASED ON FEMA DOCUMENT "ATTACHMENT OF ROOFTOP EQUIPMENT IN HIGH-WIND REGIONS".



PROVIDE #14-1" LONG (STAINLESS STEEL OR ZINC COATED/ CORROSION-RESISTANT), SELF-DRILLING/PIERCING FASTENERS ON ALL SIDES WHEN SECURING ROOFTOP UNITS TO THEIR CURB. PROVIDE FASTENERS AT A MINIMUM OF 6" O.C. BETWEEN THE EQUIPMENT, TRANSITION PIECES (e.g. CURB ADAPTER), AND THE ROOF CURB.

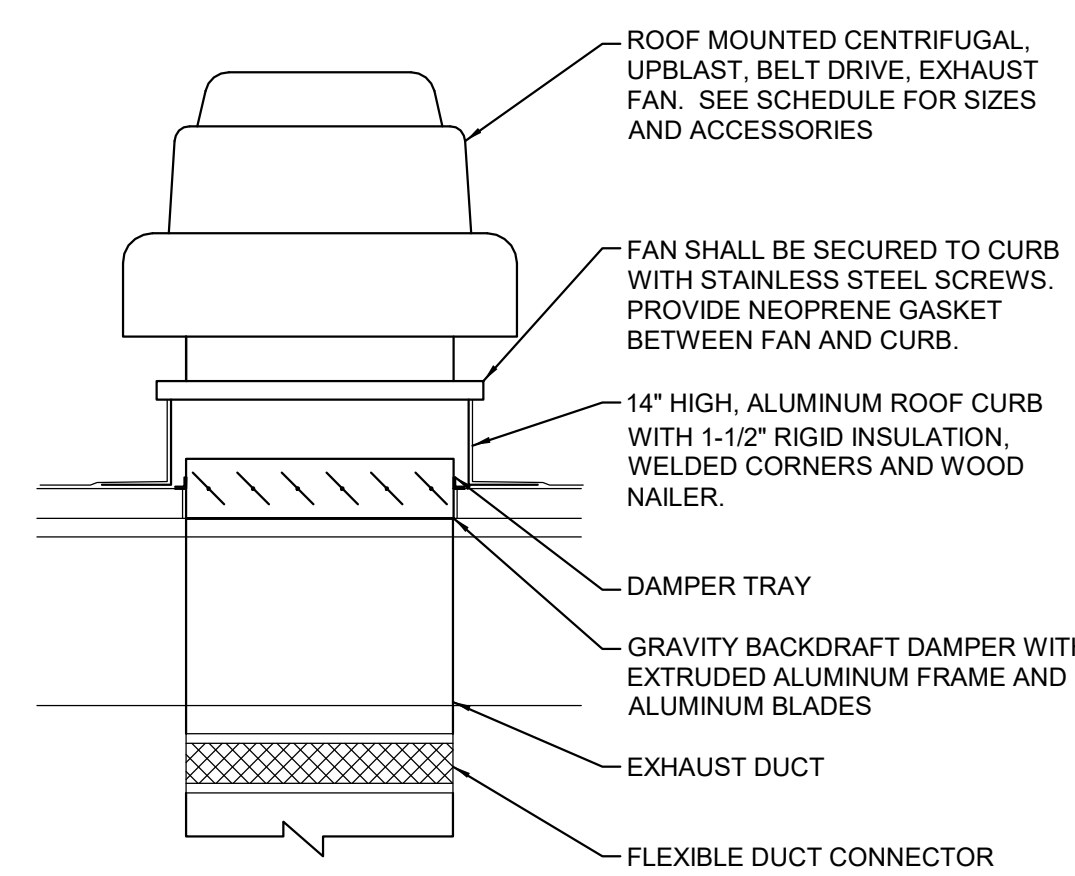
4 ROOFTOP EQUIPMENT SECUREMENT DETAIL
NTS



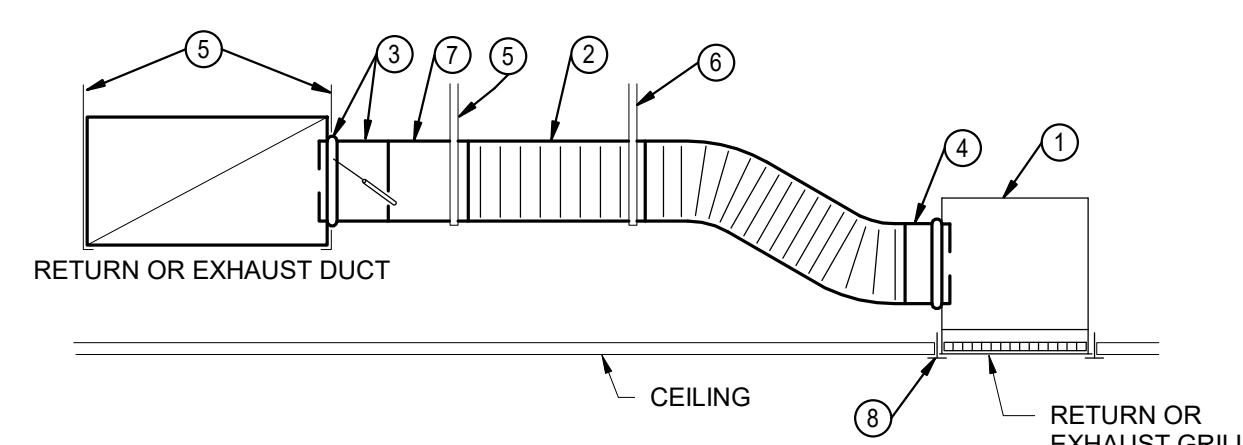
NOTES

- DRAIN PIPE SAME SIZE AS UNIT DRAIN PAN CONNECTION.
- TEE WITH CLEANOUT PLUG.
- 4" MINIMUM - CENTERLINE TO CENTERLINE.
- CENTERLINE DIMENSION NOT LESS THAN SUPPLY FAN T.S.P. (INCH W.G.) +2".
- UNIT ROOF CURB. VERIFY REQUIRED HEIGHT FOR DRAIN PIPE AND TRAP INSTALLATION. PROVIDE CURB OF ADEQUATE HEIGHT TO ATTAIN REQUIRED DIMENSION.
- SPLASH BLOCK.

5 ROOFTOP UNIT DRAIN PIPING
NTS



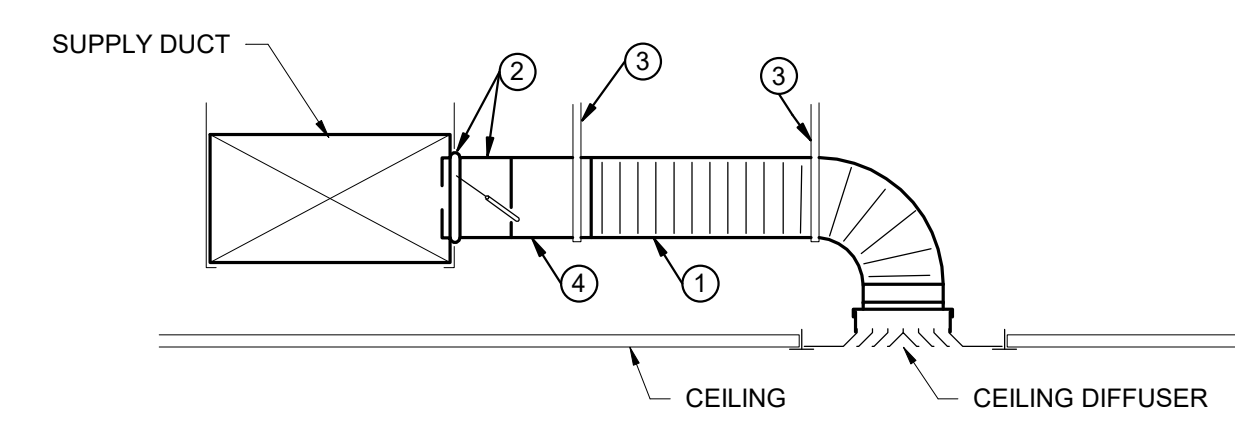
3 ROOF MOUNTED FAN
NTS



NOTES

- SHEET METAL PLENUM, FULL SIZE OF GRILLE NECK, MINIMUM 4" TALLER THAN DUCT RUNOUT SIZE. WITH SAME INTERNAL OR EXTERNAL INSULATION AS RETURN OR EXHAUST DUCT, CONNECT TO GRILLE.
- FLEXIBLE DUCT, SAME DIAMETER AS BRANCH DUCT. 7 FT. MAXIMUM TOTAL LENGTH PER AIR DEVICE. STRETCH FLEXIBLE DUCT TO AT LEAST 90% OF FULLY EXTENDED LENGTH.
- SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION. EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF REQUIRED FOR EXTERNALLY INSULATED DUCTWORK.
- SPIN-IN TAP FITTING, NO DAMPER.
- DUCT STRAP HANGER. ATTACH TO STRUCTURE.
- STRAP HANGER REQUIRED IF LENGTH OF FLEXIBLE DUCT IS LONGER THAN 4 FT.
- ROUND SHEET METAL BRANCH DUCT, SIZE AS INDICATED IN ADJACENT SCHEDULE UNLESS NOTED OTHERWISE ON PLANS.
- CEILING T-BAR SUPPORT (FOR LAY-IN APPLICATIONS). COORDINATE AND VERIFY T-BAR TYPE FOR COMPATIBILITY WITH GRILLE.

2 RETURN/EXHAUST GRILLE CONNECTION
NTS



NOTES

- INSULATED FLEXIBLE DUCT SAME DIAMETER AS BRANCH DUCT. 6 FT. MAXIMUM TOTAL LENGTH PER AIR DEVICE. STRETCH FLEXIBLE DUCT TO AT LEAST 90% OF FULLY EXTENDED LENGTH.
- SPIN-IN BRANCH TAP FITTING, STRAIGHT SIDE WITH MANUAL DAMPER. DAMPER SHAFT IN HORIZONTAL. INTEGRAL INSULATION GUARD SLEEVE REQUIRED FOR TAP FITTING TO MAIN DUCT WITH INTERNAL INSULATION. EXTENDED DAMPER SHAFT AND HANDLE WITH STAND-OFF TO ACCOMMODATE EXTERNAL INSULATION.
- DUCT STRAP HANGER. ATTACH TO STRUCTURE.
- ROUND SHEET METAL BRANCH DUCT, SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE.

1 CEILING DIFFUSER DUCT CONNECTION
NTS

DUCT SYSTEM	SHAPE	PRESS CLASS W.G.	MATERIAL	LINER			INSULATION			NOTES	
				THK.	TYPE	D	THK.	TYPE	D		JACKET
CONCEALED SUPPLY	RND/RECT	-1/2"	GS	-	-	-	1.5"	IFD	-	FFJ	7
CONCEALED RETURN	RND/RECT	-1/2"	GS	-	-	-	1.5"	IFD	-	FFJ	
CONCEALED RETURN IN PLENUMS	RND/RECT	-1/2"	GS	-	-	-	-	-	-	-	
CONCEALED SUPPLY AIR DEVICE RUNOUT	RND	+1"	IFD	-	-	-	1.5"	IFD	-	FFJ	1
EXHAUST	RND/RECT	-1"	GS	-	-	-	-	-	-	-	
EXPOSED SUPPLY & RETURN	RND/RECT	-1/2"	GS	-	-	-	-	-	-	-	

MARK	BASIS OF DESIGN		SUPPLY FAN		COOLING		HEATING SECTION		ENTERING AIR		ELECTRICAL		OPERATING WEIGHT (LBS)	NOTES						
	MANUFACTURER	MODEL NO.	TONS	CFM	OA CFM	ESP (W/C)	TOTAL COOL (MBH)	SENS COOL (MBH)	INPUT (MBH)	OUTPUT (MBH)	FUEL	DRY BULB (°F)			WET BULB (°F)	AMBIENT AIR (°F)	REHEAT	VOLT/PH	MCA	MOCP
RTU-1	TRANE	YSK090	7.5	2,700	200	1.0"	96	70	120	98	NG	80	67	95	YES	480/3	22	25	1200	1-6-8-10
RTU-2	TRANE	YSK180	15	5,250	1,000	1.0"	184	136	250	203	NG	80	67	95	YES	480/3	43	50	2600	1-10
RTU-3	TRANE	YSK180	15	5,250	1,000	1.0"	184	136	250	203	NG	80	67	95	YES	480/3	43	50	2600	1-10
RTU-4	TRANE	13YC	4	1,600	250	1.0"	48	39	115	92	NG	80	67	95	YES	208/1	34	50	550	1-6-8-11
RTU-5	TRANE	13YC	5	2,000	375	1.0"	60	43	115	92	NG	80	67	95	YES	208/1	38	60	675	1-6-8-11
RTU-6	TRANE	13YC	3	1,200	130	1.0"	36	28	60	49	NG	80	67	95	YES	208/1	29	35	650	1-6-8-10
RTU-7	TRANE	13YC	5	2,000	450	1.0"	60	43	115	92	NG	80	67	95	YES	208/1	38	60	675	1-6-8-10

PACKAGED ROOFTOP AIR HANDLING UNIT SCHEDULE

GENERAL NOTES:
A. STAGES: COOLING (3); HEATING (2)
B. HEATING CAPACITY BASED ON 50 DBB DEG F E.A.T.
C. COORDINATE ACTUAL ROOFTOP UNIT NUMBER WITH OWNER.

NOTES:
1. PROVIDE THROUGH-THE-CURB AND THROUGH-THE-BASE UTILITY CONNECTIONS.
2. PROVIDE #4" HIGH ROOF CURBS.
3. UNIT SHIPS WITH 2" THROWAWAY FILTERS.
4. PROVIDE SINGLE POINT POWER CONNECTION.
5. PROVIDE UNIT DISCONNECT.
6. PROVIDE RETURN AIR SMOKE DETECTOR.
7. PROVIDE ECONOMIZER W/ ENTHALPY CONTROLS AND BAROMETRIC RELIEF.
8. PROVIDE COIL GUARD/HAIL GUARDS.
9. POWERED EXHAUST.
10. HOT GAS REHEAT.
11. MINIMUM MERV 13 WITH PRE-FILTER.

PLAN MARK	INDOOR UNIT						OUTDOOR UNIT						NOTES
	BASIS OF DESIGN		CFM	VIPH	NOM. COOLING CAPACITY (MBH)	NOM. HEATING CAPACITY (MBH)	BASIS OF DESIGN		ELECTRIC		MCA	MOCP	
	MFR	MODEL					MFR	MODEL	VIPH	MCA			
AC-1	MITSUBISHI	MSY-GS24NA	410	208-230/1	31.4	22.4							1,2,4
CU-1							MITSUBISHI	MUY-GS24NA	208-230/1	18	20		1,3
AC-2	MITSUBISHI	MSY-GS24NA	410	208-230/1	31.4	22.4							1,2,4
CU-2							MITSUBISHI	MUY-GS24NA	208-230/1	18	20		1,3
AC-3	MITSUBISHI	MSY-GS24NA	410	208-230/1	31.4	22.4							1,2,4
CU-3							MITSUBISHI	MUY-GS24NA	208-230/1	18	20		1,3
AC-4	MITSUBISHI	MSY-GS24NA	410	208-230/1	31.4	22.4							1,2,4
CU-4							MITSUBISHI	MUY-GS24NA	208-230/1	18	20		1,3

GENERAL NOTES:
A. INDOOR UNIT COOLING CAPACITY BASED ON 80°F DB, 67°F WB E.A.T., OUTDOOR UNIT COOLING CAPACITY BASED ON 95°F AMBIENT TEMPERATURE.
B. INDOOR UNIT AIRFLOW QUANTITIES BASED ON MEDIUM FAN SPEED SETTING.

NOTES:
1. INDOOR UNIT POWERED FROM OUTDOOR UNIT. WIRING AND DISCONNECTS BY EC.
2. PROVIDE WITH WALL MOUNTED WIRELESS TEMPERATURE CONTROLLER.
3. PROVIDE WITH COMPOSITE EQUIPMENT MOUNTING PAD.
4. PROVIDE INTEGRAL CONDENSATE PUMP.

PLAN MARK	TYPE	BASIS OF DESIGN		DIMENSIONS		NOTES	
		MANUF.	MODEL	LENGTH	HEIGHT		
EWH-1	WALL HEATER	MARKEL	3450 SERIES	4	208/1 19.2	15" 24" 4.13"	1,2
EWH-2	WALL HEATER	MARKEL	3450 SERIES	4	208/1 19.2	15" 24" 4.13"	1,2

NOTES:
1. INTEGRAL THERMOSTAT.
2. PROVIDE SEMI-RECESS WALL MOUNT KIT AND TAMPER PROOF COVER.

PLAN MARK	TYPE	BASIS OF DESIGN		CFM	ESP (W/C)	WHEEL SIZE	DRIVE	MAX SONES	ELECTRICAL		NOTES
		MANUF.	MODEL						HP	VOLT	
EF-1	CABINET FAN	GREENHECK	SP-A90	90	0.625	---	DIRECT	---	24.1 W	120 V	1,2,3,5
EF-2	CENTRIF. DOWNBLAST	GREENHECK	G-095	250	0.625	---	DIRECT	---	1.6 W	120 V	1,2,3,4
EF-3	CABINET FAN	GREENHECK	SP-A130	130	0.25	---	DIRECT	---	24.2 W	120 V	1,2,5
EF-4	CABINET FAN	GREENHECK	SP-A90	90	0.625	---	DIRECT	---	24.1 W	120 V	1,2,3
EF-5	CABINET FAN	GREENHECK	SP-A90	90	0.625	---	DIRECT	---	24.1 W	120 V	1,2,3

NOTES:
1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER AND NON-FUSED DISCONNECT SWITCH.
2. PROVIDE SOLID STATE SPEED CONTROLLER.
3. FAN TO BE OPERATED BY WALL SWITCH (PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR).
4. PROVIDE 14" ROOF CURB.
5. PROVIDE REVERSE ACTING THERMOSTAT. FAN TO ENERGIZE WHEN ROOM TEMPERATURE REACHES 80° F (ADJUSTABLE).

PLAN MARK	DESCRIPTION	BASIS OF DESIGN		MOUNTING	FINISH	MATERIAL	ACCESSORIES	NOTES
		MANUF.	MODEL					
A1	SQUARE FACE CEILING DIFFUSER, 24x24 FACE	TITUS	TMS			STEEL	-	
B1	EGGGRATE RETURN GRILLE	TITUS	50F			STEEL	-	
B2	EGGGRATE RETURN GRILLE	TITUS	50F			STEEL	OPP. BLADE DMFR.	

GENERAL NOTES:
A. LAY-IN AIR DEVICES SHALL BE DESIGNED TO INSTALL INTO A 24"x24" OR 24"x48" ACT CEILING SYSTEM
B. ACCEPTABLE ALTERNATE MANUFACTURERS: PRICE, KREIGER AND TUTTLE & BAILEY
C. PROVIDE AUXILIARY MOUNTING FRAME FOR DEVICES INSTALLED WITHIN GYPSUM, PLASTER, TILE OR OTHER SIMILAR SURFACE
D. UNLESS OTHERWISE DESIGNATED ON PLANS, SUPPLY DIFFUSERS SHALL BE 4-WAY DIRECTIONAL DISCHARGE.

NOTES:
1. -

PLAN MARK	BASIS OF DESIGN		NOTES
	MANUFACTURER	MODEL NO.	
GV-1	GREENHECK	GRSR-8	1,2,3

NOTES:
1. PROVIDE GRAVITY BACKDRAFT DAMPER.
2. PROVIDE 14" HIGH ROOF CURB.
3. LOCATE A MINIMUM 10'-0" FROM ALL OUTSIDE AIR INTAKES.

HVAC DESIGN CRITERIA	
GENERAL DESIGN INFORMATION	OUTDOOR DESIGN INFORMATION
BUILDING LOCATION: VANDALIA, OHIO	SUMMER DRY BULB: 90.3°F (ASHRAE 0.4%) SUMMER WET BULB: 73.6°F (ASHRAE 0.4%) WINTER DRY BULB: 0.6°F (ASHRAE 99.6%)
INDOOR DESIGN INFORMATION	APPLICABLE CODES
INDOOR SUMMER DRY BULB: 75°F INDOOR SUMMER RH%: 60% MAX. INDOOR WINTER DRY BULB: 70°F INDOOR WINTER RH%: AMBIENT	MECHANICAL: OHIO MECHANICAL CODE 2024 PLUMBING: OHIO PLUMBING CODE 2024 ENERGY: ASHRAE 91.1-2019 VENTILATION: ASHRAE 62.1-2019

VENTILATION SCHEDULE										
ROOM NUMBER	ROOM NAME	OCCUPANCY TYPE	AREA (SF)	OCCUPANT DENSITY (#/1000SF)	PEOPLE AIR RATE (CFM/PERSON)	AREA AIR RATE (CFM/SF)	NUMBER OF PEOPLE	MINIMUM OA AIRFLOW (CFM)		
100	EXIST WAREHOUSE		186777							
100-A	LOBBY/RECEPTION	MAIN ENTRY LOBBY	579	10	5	0.06	6	65		
100-B	OFFICE	OFFICE	135	5	5	0.06	1	13		
100-C	OFFICE	OFFICE	135	5	5	0.06	1	13		
100-D	CORRIDOR	CORRIDOR	288	0	0	0.06	0	17		
100-E	CONFERENCE ROOM	CONFERENCE	538	50	5	0.06	27	167		
100-F	EXISTING BREAK ROOM	BREAK ROOM	425	50	5	0.12	22	161		
100-G	EXISTING MENS RESTROOM		179							
100-H	EXISTING WOMENS RESTROOM		179							
100-J	NOF ROOM		158							
100-K	OFFICE	OFFICE	158	5	5	0.06	1	14		
100-L	OPEN OFFICE	OFFICE	5029	5	5	0.06	26	432		
120-A	OPEN OFFICE	OFFICE	896	5	5	0.06	5	79		
120-B	OFFICE	OFFICE	120	5	5	0.06	1	12		
120-C	OFFICE	OFFICE	120	5	5	0.06	1	12		
120-D	OFFICE	OFFICE	120	5	5	0.06	1	12		
120-E	IT ROOM		57							
120-F	CONFERENCE ROOM	CONFERENCE	164	5	5	0.06	1	15		
120-G	BREAK AREA	BREAK ROOM	129	50	5	0.12	7	51		
120-H	SHARED CORRIDOR	CORRIDOR	295	0	0	0.06	0	12		
120-J	UNISEX RESTROOM		70							
120-K	UNISEX RESTROOM		70							
120-L	BACK SHOP	MANUFACTURING (NON HAZ-MAT)	7969	7	10	0.18	56	1994		
120-M	LASER STAMP ROOM	MANUFACTURING (NON HAZ-MAT)	862	7	10	0.18	7	232		
120-N	METROLOGY ROOM	MANUFACTURING (NON HAZ-MAT)	1406	7	10	0.18	10	353		
120-P	IDF ROOM		120							
120-Q	COMPRESSOR ROOM		60							
120-R	HAZ-MAT STORAGE	MANUFACTURING	487	7	10	0.18	4	128		
130	IDF ROOM		100							
140-A	MENS RESTROOM		206							
140-B	WOMENS RESTROOM		206							
140-C	IDF ROOM		144							
			208132					3782		

Vandalia Warehouse

Sierra Nevada Corporation

251 N. Dixie Drive
Vandalia, Ohio
45377

ISSUANCES

No.	Description	Date
BID/PERMIT		11/08/2024

Drawn By: KDB

Checked By: DST

Client No.:

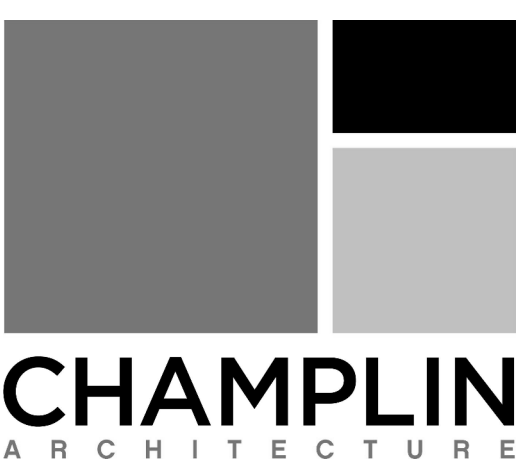
818

Project No.:

7480

HVAC SCHEDULES

H0.2



10 S Patterson Blvd
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THINK CREATE REALIZE



Vandalia Warehouse

Sierra Nevada Corporation

251 N. Dixie Drive
Vandalia, Ohio
45377

ISSUANCES

No.	Description	Date
BID/PERMIT		11/28/2024

Drawn By

KDB

Checked By

DST

Client No.

818

Project No.

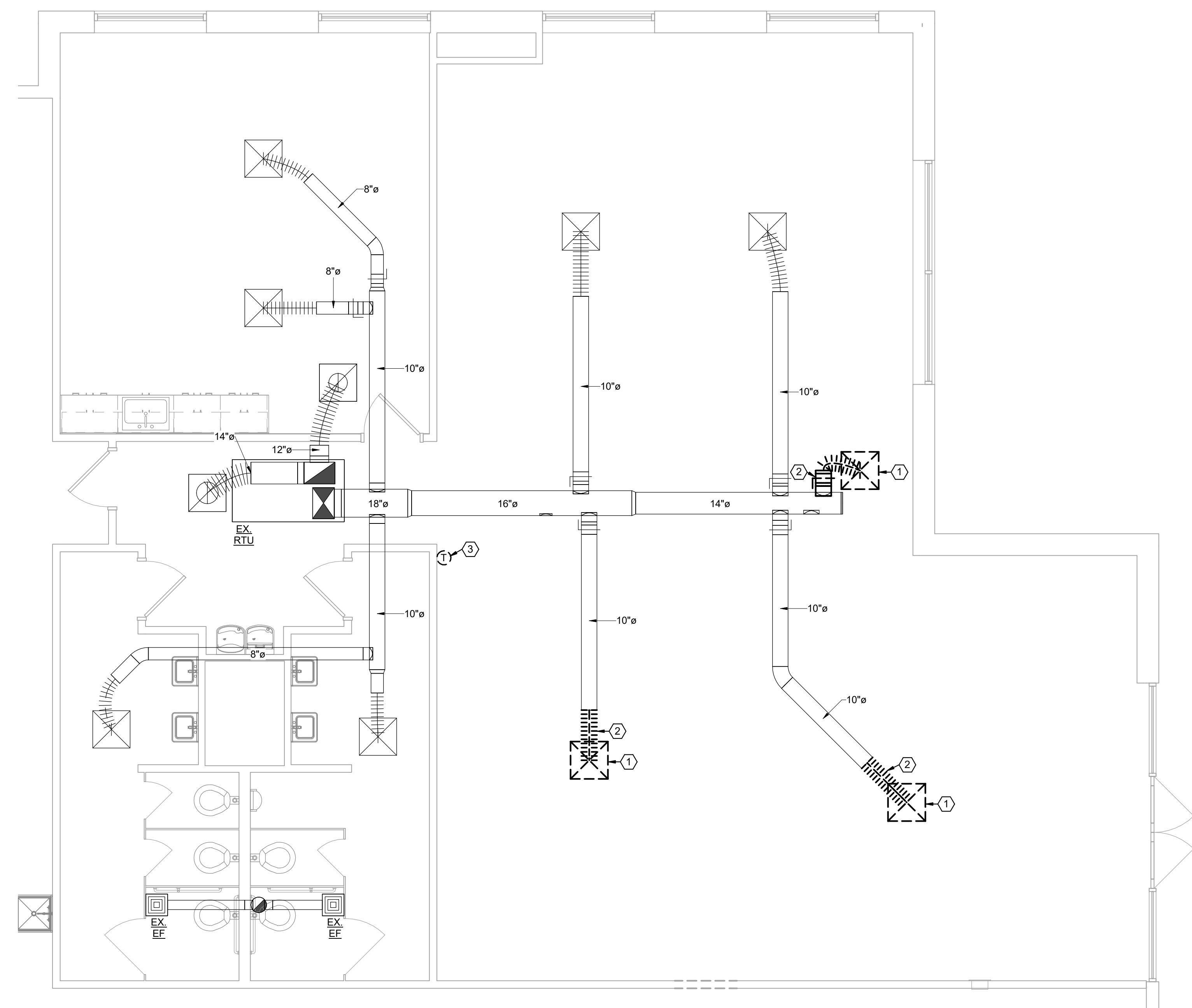
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ENLARGED HVAC
FLOOR PLANS

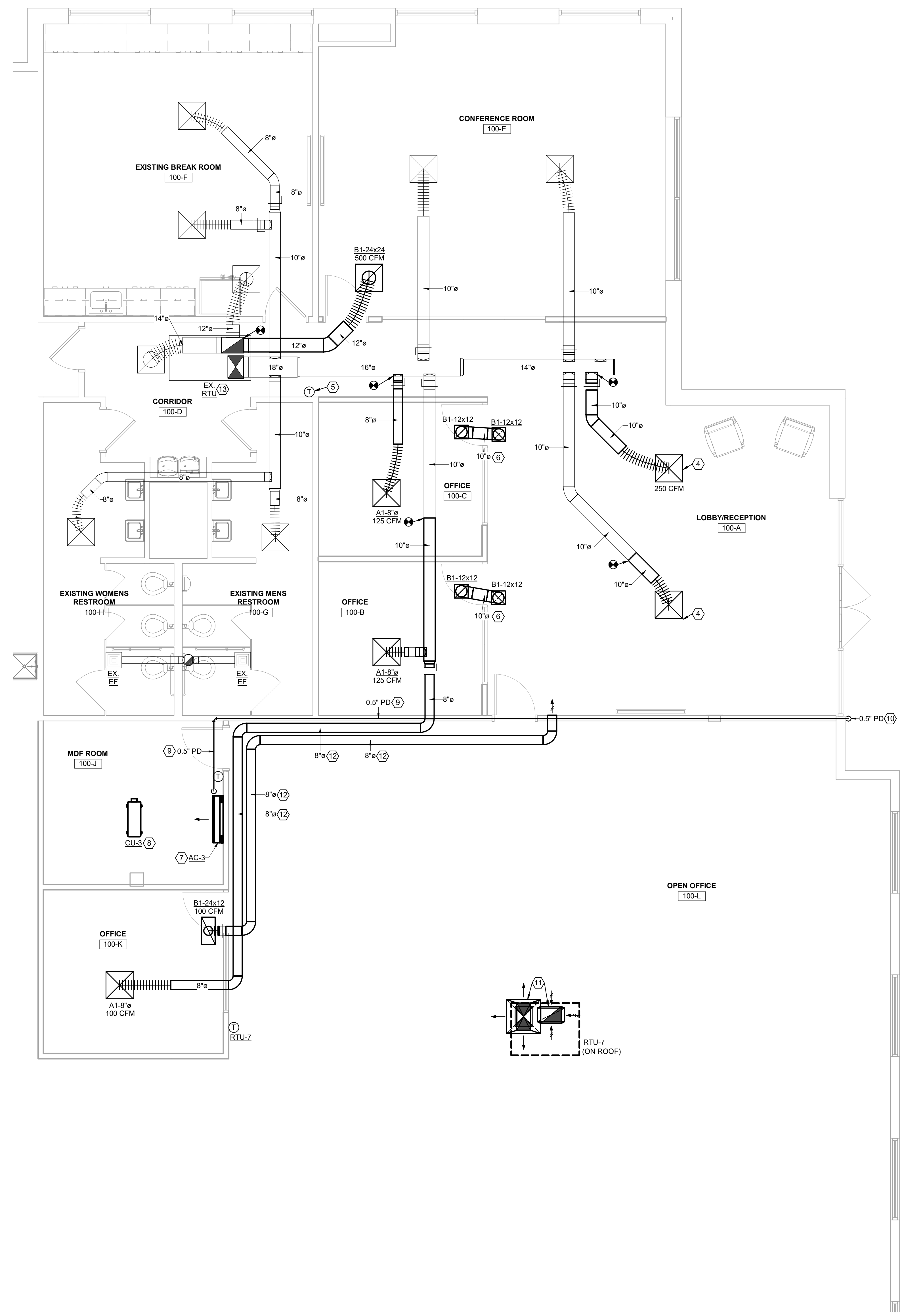
H1.2

GENERAL NOTES

- A. EXISTING DUCTWORK, AIR DEVICES, AND EQUIPMENT TO REMAIN, UNLESS OTHERWISE NOTED.
 - B. SEE STRUCTURAL DRAWINGS FOR DUCTWORK SUPPORT.
- ### DRAWING NOTES
1. EXISTING AIR DEVICE TO BE REMOVED AND SALVAGED FOR RELOCATION.
 2. EXISTING DUCTWORK TO BE REMOVED TO POINT INDICATED ON PLAN.
 3. EXISTING THERMOSTAT TO BE REMOVED AND SALVAGED FOR RELOCATION.
 4. RELOCATED AIR DEVICE.
 5. RELOCATED THERMOSTAT.
 6. NEW RETURN AIR TRANSFER DUCT.
 7. NEW WALL MOUNT CASSETTE. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
 8. NEW CONDENSING UNIT. MOUNT ABOVE CEILING. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
 9. ROUTE PUMP DISCHARGE PIPING ABOVE CEILING.
 10. PUMP DISCHARGE PIPING TO BE ROUTED DOWN EXTERIOR WALL AND DISCHARGE ONTO GRADE. PROVIDE SPLASH BLOCK.
 11. 24x12 SUPPLY DUCT AND 24x12 RETURN DUCT TO DROP DOWN FROM ROOFTOP UNIT AND TERMINATE (10'-0" AFF) WITH CONCENTRIC (SUPPLY AND RETURN) AIR DEVICE FOR OPEN CEILING. PROVIDE DUCTWORK TRANSITION(S) AT ROOF PENETRATION. COORDINATE DUCTWORK SUPPORT WITH STRUCTURAL.
 12. SUPPORT DUCTWORK FROM WALL (TYPICAL).
 13. BALANCE EXISTING ROOF TOP UNIT TO 450 CFM OF OUTSIDE AIR.



① ENLARGED HVAC PLAN - DEMOLITION
1/4" = 1'-0"



② ENLARGED HVAC PLAN - NEW WORK
1/4" = 1'-0"

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