

X
X
X
X

20-107



LEGEND: (ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE USED)	
FFE	FINISHED FLOOR ELEVATION
AFF	ABOVE FINISHED FLOOR
TYP	TYPICAL
	TAGGED NOTE
AHU1	MECHANICAL EQUIPMENT DESIGNATOR
1M2.01	DETAIL CALLOUT
T	THERMOSTAT
Supply Air Duct (Turned Up/Down)	SUPPLY AIR DUCT (TURNED UP/DOWN)
Return or Air Exhaust Air Duct (Turned Up/Down)	RETURN OR AIR EXHAUST AIR DUCT (TURNED UP/DOWN)
Outside Air Duct (Turned Up/Down)	OUTSIDE AIR DUCT (TURNED UP/DOWN)
Motorized Damper	MOTORIZED DAMPER
Branch Take-Off with Balancing Damper	BRANCH TAKE-OFF WITH BALANCING DAMPER
Turning Vanes	TURNING VANES
SA	SUPPLY AIR DUCT (ONE LINE)
RA/EA	RETURN OR EXHAUST AIR DUCT (ONE LINE)
OA	OUTSIDE AIR DUCT (ONE LINE)
Supply Air Duct (Turned Up/Down)	SUPPLY AIR DUCT (TURNED UP/DOWN)
Return or Exhaust Air Duct (Turned Up/Down)	RETURN OR EXHAUST AIR DUCT (TURNED UP/DOWN)
Outside Air Duct (Turned Up/Down)	OUTSIDE AIR DUCT (TURNED UP/DOWN)
Duct Size Reduction	DUCT SIZE REDUCTION
Fire Damper	FIRE DAMPER
Motorized Damper	MOTORIZED DAMPER
Flexible Duct	FLEXIBLE DUCT
Supply Air Diffuser	SUPPLY AIR DIFFUSER
Return Grille	RETURN GRILLE
Exhaust Grille	EXHAUST GRILLE
CD	CONDENSATE DRAIN PIPING
Refrigerant Supply Piping	REFRIGERANT SUPPLY PIPING
Refrigerant Return Piping	REFRIGERANT RETURN PIPING
Piping Elbow (Turned Up/Down)	PIPING ELBOW (TURNED UP/DOWN)
Piping Tee (Turned Up/Down)	PIPING TEE (TURNED UP/DOWN)
Drain Connection	DRAIN CONNECTION

- GENERAL NOTES: (WHERE APPLICABLE)
1.

GENERAL NOTES, WHEREVER THEY ARE FOUND, APPLY TO ALL WORK IN THIS PROJECT, UNLESS OTHERWISE INDICATED. SHEET NOTES, UTILIZING NOTE SYMBOLS, APPLY ONLY TO THE SHEETS ON WHICH THEY ARE FOUND.
2.

DO NOT SCALE THESE DRAWINGS. DIMENSIONS SHALL BE TAKEN FROM ARCHITECTURAL DRAWINGS.
3.

CONTRACTOR SHALL VISIT THE JOB SITE AND BE FAMILIAR WITH ALL PROJECT CONDITIONS PRIOR TO FABRICATING DUCTWORK, EQUIPMENT, ETC. NO ALLOWANCES WILL BE MADE FOR CONTRACTOR'S UNFAMILIARITY WITH PROJECT CONDITIONS.
4.

DUCTWORK AND PIPING ROUTING SHOWN IS SCHEMATIC. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN ALL CLEARANCES AS ENCOUNTERED IN THE FIELD.
5.

HVAC LAYOUT IS BASED ON ARCHITECTURAL DRAWINGS AVAILABLE AT TIME OF DESIGN. AS STRUCTURAL OR OTHER FIELD CHANGES MAY OCCUR, CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY LOCATION OF ALL HVAC EQUIPMENT AND DUCTWORK BEFORE INSTALLATION. CONTRACTOR SHALL NOTIFY BUILDER OF ANY REQUIRED ALTERATIONS. EITHER CONTRACTOR OR OWNER SHALL TAKE RESPONSIBILITY FOR VERIFYING THE INTEGRITY OF THE CHANGES
6.

FURNISH ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES, ASHRAE, SMACNA, NFPA, EPA, ETC.
7.

CONTRACTOR SHALL VERIFY ALL ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT PRIOR TO INSTALLATION.
8.

COORDINATE INSTALLATION AND LOCATIONS OF DUCTWORK AND PIPING WITH BUILDING STRUCTURE, PLUMBING PIPING, ELECTRICAL CONDIUT, LIGHTING, ETC. PRIOR TO PURCHASING OR INSTALLING EQUIPMENT AND MATERIALS.
9.

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL PROJECT CONDITIONS BEFORE FABRICATING AND INSTALLING ANY PIPING OR DUCTWORK.
10.

CONTRACTOR IS RESPONSIBLE FOR THE AIR BALANCE OF ALL SYSTEMS.
11.

ALL HVAC EQUIPMENT SHALL BE INSTALLED PER MANUFACTURE'S REQUIREMENTS AS SHOWN.
12.

DUCTWORK DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. DIMENSIONS SHALL BE INCREASED TO ACCOMODATE LINING THICKNESS. ALL DUCT DIMENSIONS SHOWN ARE NET INSIDE VALUES. DIMENSIONS MAY BE CHANGED SO LONG AS THE NET FREE FACE AREA IS MAINTAINED.
13.

ALL SQUARE ELBOWS SHALL HAVE TURNING VANES.
14.

CONTRACTOR SHALL PROVIDE AND INSTALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN SUCH A WAY AS TO BE INCONSPICUOUS AND FREE FROM ANY POSSIBLE CONDENSATION. INSULATE REFRIGERANT LINES ARMOUR-FLEX TYPE INSULATION.
15.

CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
16.

LOCATE THERMOSTATS AT 48" AFF (ABOVE FINISHED FLOOR), UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER EQUIPMENT, FURNITURE, AND DOOR SWINGS.

SHEET INDEX

SHEET NUMBER	SHEET TITLE
M0.01	General Information and Legend
M1.01	First Floor HVAC Plan
M1.02	Second Floor HVAC Plan
M2.01	Equipment Schedules and Details

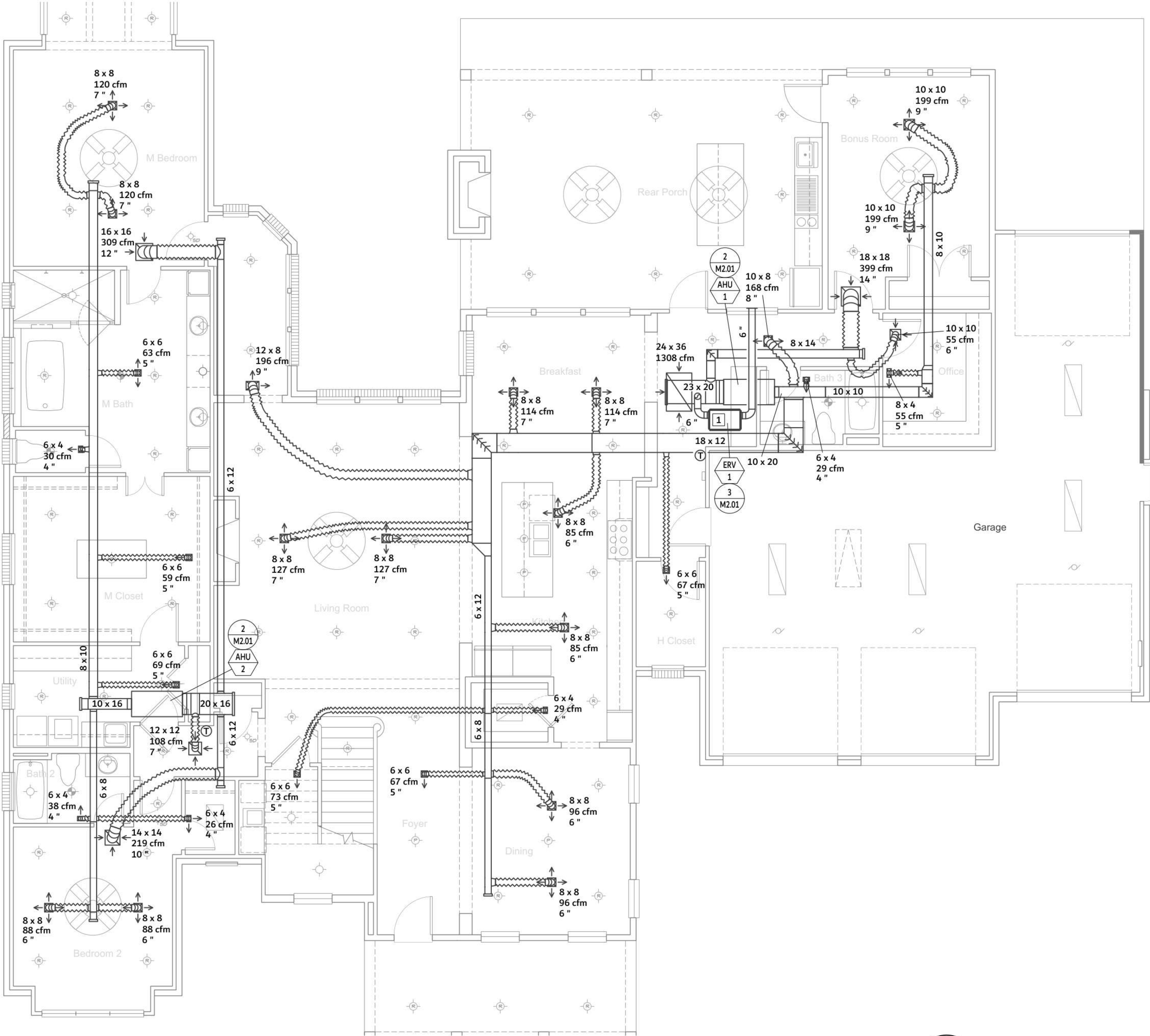


Certified

Revisions		Date
No.	Revision	
1	CD Set	08/21/20

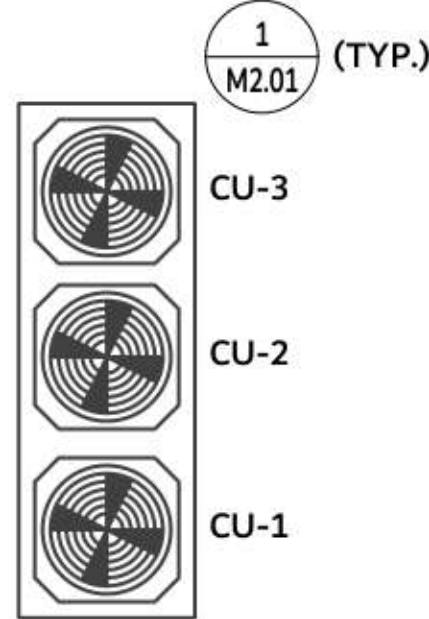
Drawn	
Check	SBP
Scale	as noted
Date	
Job No.	

Sheet



- GENERAL NOTES:**
1. FIELD COORDINATE LOCATIONS OF ALL GRILLES WITH OTHER TRADES PRIOR TO ROUGH-IN. ENSURE ALL PROPER CLEARANCES ARE MAINTAINED, PER APPLICABLE CODE.
 2. ALL DUCTS ARE DESIGNED PER ACCA MANUAL D, TO ENSURE THE LOAD REQUIREMENTS ARE MET, BASED ON ACCA MANUAL J CALCULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ZONE DAMPERS ARE INSTALLED APPROPRIATELY AND PROPERLY, TO ENSURE PROPER BALANCE OF SYSTEM.

- KEY NOTES:**
1. RENEWAIRE MODEL BR130 ENERGY RECOVERY VENTILATOR. PROVIDE CONNECTIONS, AS REQUIRED, FOR PROPER INSTALLATION. COORDINATE WITH ALL OTHER TRADES PRIOR TO INSTALLATION. REFER TO DETAIL 3 ON SHEET M2.01 FOR ADDITIONAL INFORMATION.



First Floor HVAC Plan

1/4"=1'-0"



First Floor HVAC Plan

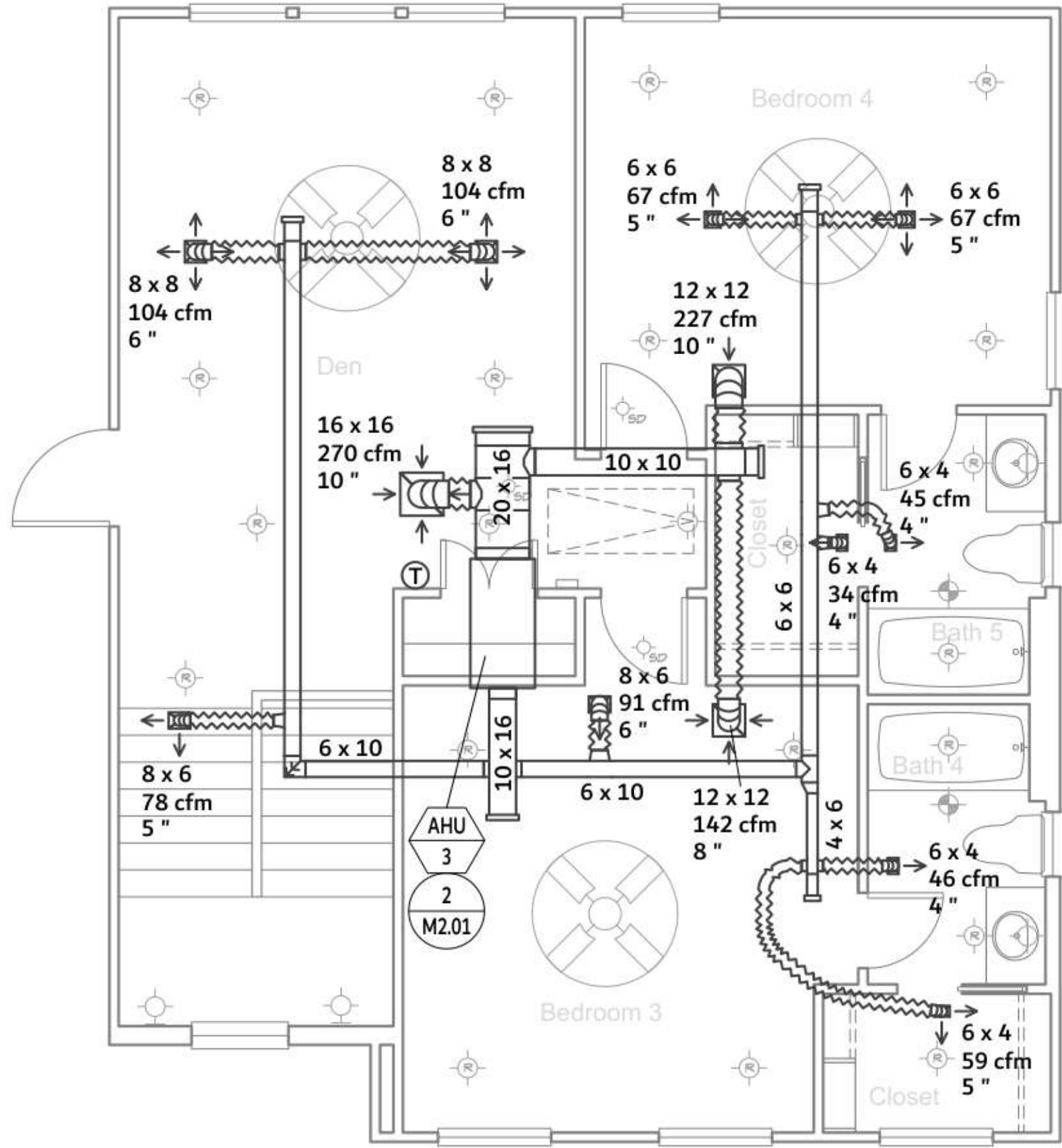
Revisions		Date
No.	Revision	
1	CD Set	08/21/20

Drawn	
Check	SBP
Scale	as noted
Date	
Job No.	

Sheet

- GENERAL NOTES:**
1. FIELD COORDINATE LOCATIONS OF ALL GRILLES WITH OTHER TRADES PRIOR TO ROUGH-IN. ENSURE ALL PROPER CLEARANCES ARE MAINTAINED, PER APPLICABLE CODE.
 2. ALL DUCTS ARE DESIGNED PER ACCA MANUAL D, TO ENSURE THE LOAD REQUIREMENTS ARE MET, BASED ON ACCA MANUAL J CALCULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ZONE DAMPERS ARE INSTALLED APPROPRIATELY AND PROPERLY, TO ENSURE PROPER BALANCE OF SYSTEM.

Certified



Second Floor HVAC Plan

1/4"=1'-0"

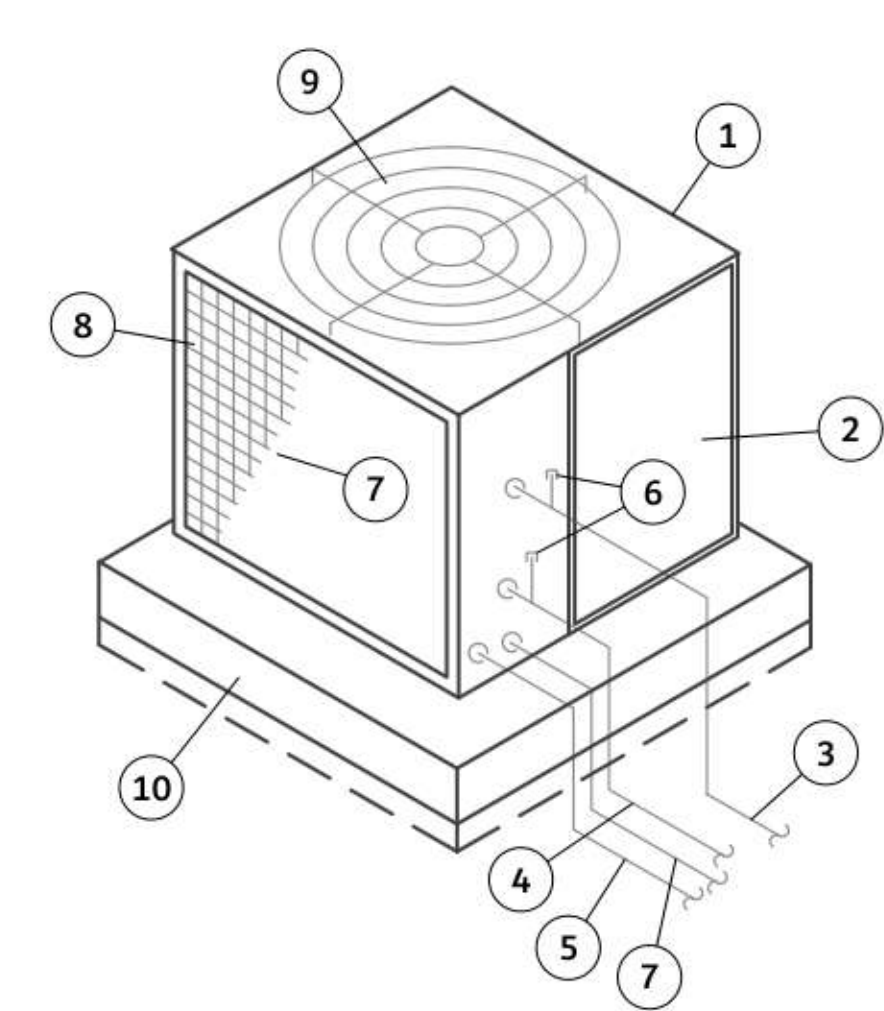


Second Floor HVAC Plan

Revisions		Date
No.	Revision	
1	CD Set	08/21/20

Drawn	
Check	SBP
Scale	as noted
Date	
Job No.	

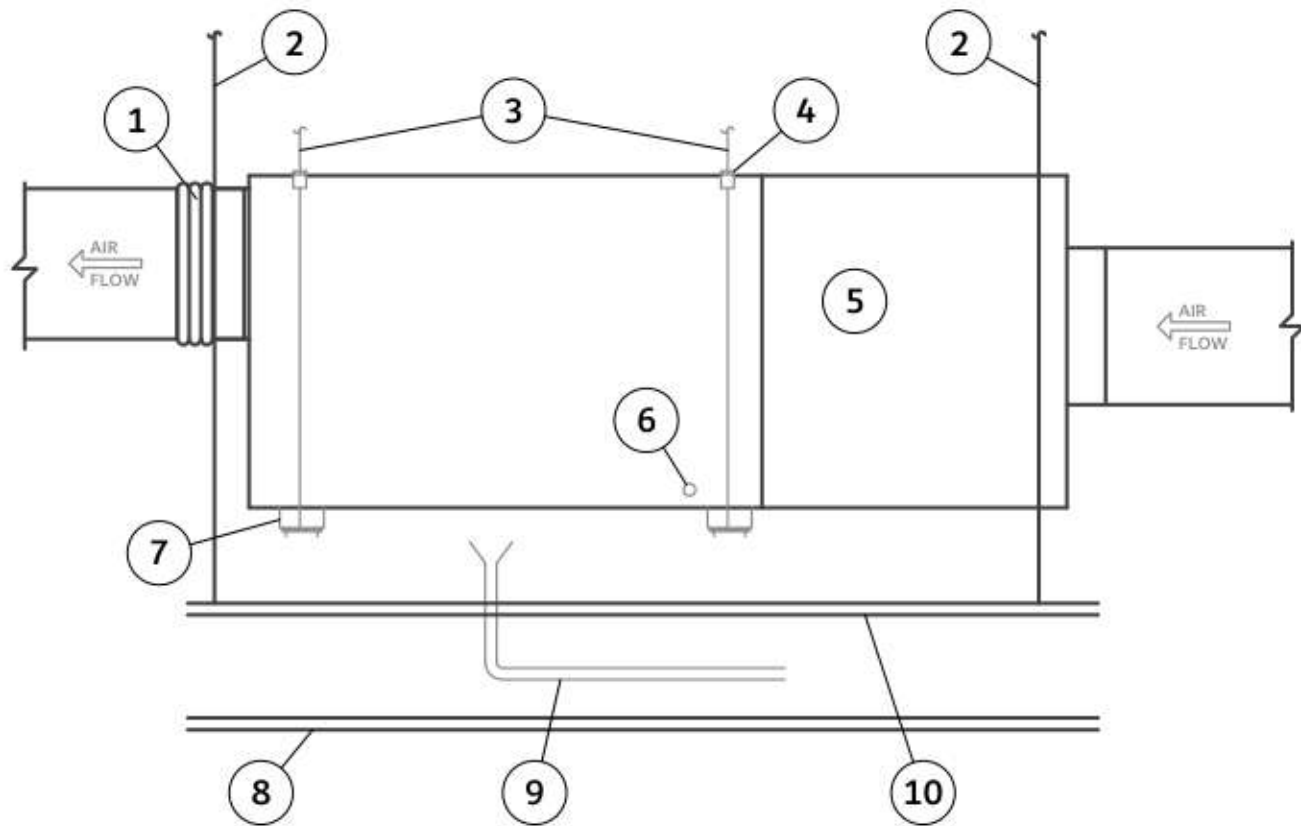
Sheet



KEY NOTES:

1. NEW CONDENSING UNIT.
2. COMPRESSOR ACCESS PANEL.
3. REFRIGERANT SUCTION LINE WITH INSULATION.
4. REFRIGERANT LIQUID LINE.
5. CONDUIT - POWER AND CONTROLS.
6. REFRIGERANT GAUGE CONNECTION.
7. CONDENSER COIL.
8. COIL GUARD.
9. FAN GUARD.
10. 6" THICK CONCRETE PAD.

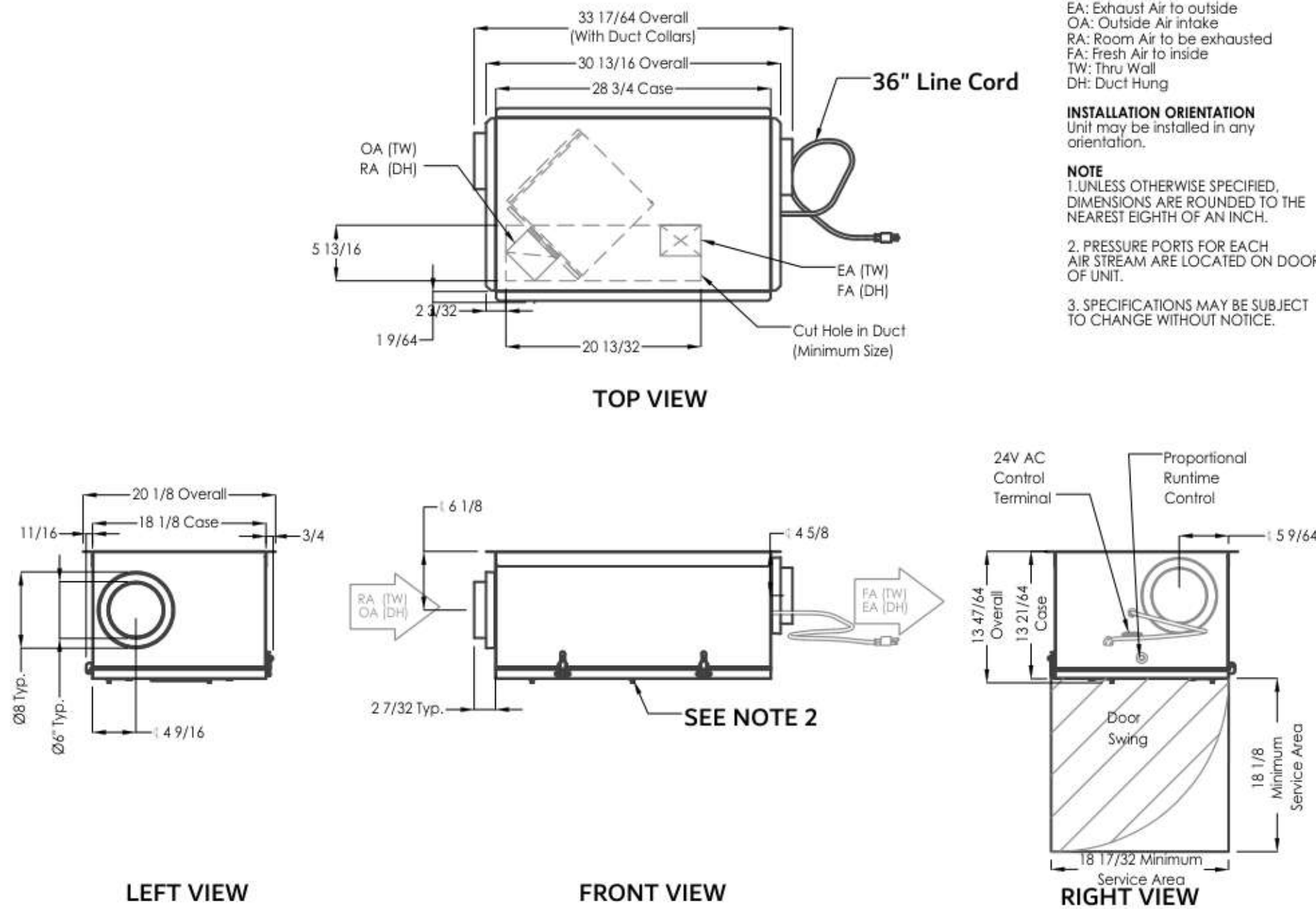
1 CONDENSING UNIT DETAIL
N.T.S.



KEY NOTES:

1. FLEXIBLE CONNCTION (TYP.).
2. SUSPENDING RODS, TO SECURE PLATFORM.
3. SUSPENDING RODS, CONNECT TO BUILDING STRUCTURE (TYP.).
4. VIBRATION ISOLATORS, (TYP. OF 4).
5. ACCESS PANEL.
6. UNIT DRAIN.
7. FULL-WIDTH SUPPORTING CHANNEL (TYP.).
8. CEILING.
9. CONDENSATE DRAIN, TERMINATE AT NEAREST DRAIN POINT, OR EXTERIOR OF BUILDING.
10. SUSPENDED ACCESS PLATFORM, WHERE REQUIRED.

2 UNIT MOUNTING DETAIL - HORIZONTAL
N.T.S.



ABBREVIATIONS
EA: Exhaust Air to outside
OA: Outside Air Intake
RA: Room Air to be exhausted
FA: Fresh Air to inside
TW: Thru Wall
DH: Duct Hung

INSTALLATION ORIENTATION
Unit may be installed in any orientation.

NOTE
1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE ROUNDED TO THE NEAREST EIGHTH OF AN INCH.
2. PRESSURE PORTS FOR EACH AIR STREAM ARE LOCATED ON DOOR OF UNIT.
3. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.

3 ERV DETAIL
N.T.S.

ERV Schedule

Unit No.	Manufacturer	Model No.	CFM	S.P.	HP	Volts	Input Watts	FLA
ERV-1	RenewAire	BR130	94	0.50	0.1	120	121 @ 124 CFM	1.3

Outdoor Unit Equipment Schedule

Unit No.	Manufacturer	Model No.	Tonnage	SEER	EER	HSPF	Capacity		Stages	MCA/MOP	RLA/LRA	Weight	Line Sizes
							Total	Sensible					
CU-1	Ruud	RP1542AJ1NA	3.5 ton(s)	15.00	12.50	9.00	39,673	29,423	Single	19/31	18.6/109	257 lbs.	3/8, 7/8
CU-2	Ruud	RP1518BJ1NA	1.5 ton(s)	16.00	13.00	9.00	17,445	12,573	Single	12/20	9/48	152 lbs.	3/8, 3/4
CU-3	Ruud	RP1518BJ1NA	1.5 ton(s)	16.00	13.00	9.00	17,445	12,573	Single	12/20	9/48	152 lbs.	3/8, 3/4

Air Handling Unit Equipment Schedule

Unit No.	Manufacturer	Model No.	Refrigerant	Location	CFM	S.P.	Fan		Electric Heater				Dimension (H x W x D)	Weight (lbs)	
							HP	FLA	Model No.	kW		MCA/MOP			
										208V	230V/240V	208V			230V/240V
AHU-1	Ruud	RH1T4821STANJA	R-410A	attic	1,597	0.60	3/4	3.8	RXBH-1724A18J	17.0 kW	12.8 kW	83/90	90/100	50-1/2 x 21 x 21-11/16	128 lbs.
AHU-2	Ruud	RH1T2417STANAA	R-410A	attic	623	0.60	1/3	1.6	RXBH-1424?07	5.4 kW	7.2 kW	35/35	40/40	42-1/2 x 17-1/2 x 21-11/16	92 lbs.
AHU-3	Ruud	RH1T2417STANAA	R-410A	attic	620	0.60	1/3	1.6	RXBH-1424?05	3.6 kW	4.8 kW	26/30	29/30	42-1/2 x 17-1/2 x 21-11/16	92 lbs.

Certified

Revisions	No.	Revision	Date	CD Set
	1		08/21/20	

Drawn	
Check	SBP
Scale	as noted
Date	
Job No.	

Sheet