

MINI SPLIT SYSTEM/AIR COOLED CONDENSING UNIT SCHEDULE

TAG	MANUF	MODEL	INDOOR UNIT				TAG	MODEL	OUTDOOR UNIT				NOTES	SERVES				
			COOLING CAP (BTUH)	POWER (V/PH/Hz)	HEATING CAP (BTUH)	HEATING CAP (MIN)			WTG (LBS)	CLG CAPACITY (BTUH)	POWER (V/PH/Hz)	MCA/MOP			SEER	LIQUID LINE EACH (IN)	SUCTION LINE EACH (IN)	WTG (LBS)
MS-1	DAIKIN	FTX18AXVJU	18,000	208-230/1/60	21,600	12,700	31	MS-1	RX18AXVJU	18,000	208-230/1/60	16.4/20	18.5	1/4"	1/2"	101	1	SEE PLAN
MS-2	DAIKIN	FFQ18Q2VJU	17,400	208-230/1/60	21,600	9,610	39	MS-2	RX18RMVJU9A	17,400	208-230/1/60	12.8/15	19.3	1/4"	1/2"	97	1	SEE PLAN

NOTES: 1. PROVIDE WIRELESS REMOTE CONTROLLER/WALL THERMOSTAT, LOW AMBIENT KIT, CONDENSATE PUMP, LIQUID LINE SET. VERIFY MODEL NUMBERS BASED ON UNIT SUBMITTALS BY MANUFACTURER. MOUNT OUTDOOR UNITS ON APPROVED ROOF RAILS.

EXHAUST FAN SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	CFM	ESP (IN WC)	FAN MOTOR DATA			WEIGHT (LBS)	NOTES	SERVES
						AMPS	VOLT	PH			
EF-1	BROAN	LP50100DC	CEILING	50	0.5	0.04	120	1	9.5	1	BATHROOMS

NOTES: 1. PROVIDE GRAVITY BACKDRAFT DAMPER, DISCHARGE TO OUTSIDE, SPEED CONTROLLER, WALL SWITCH.

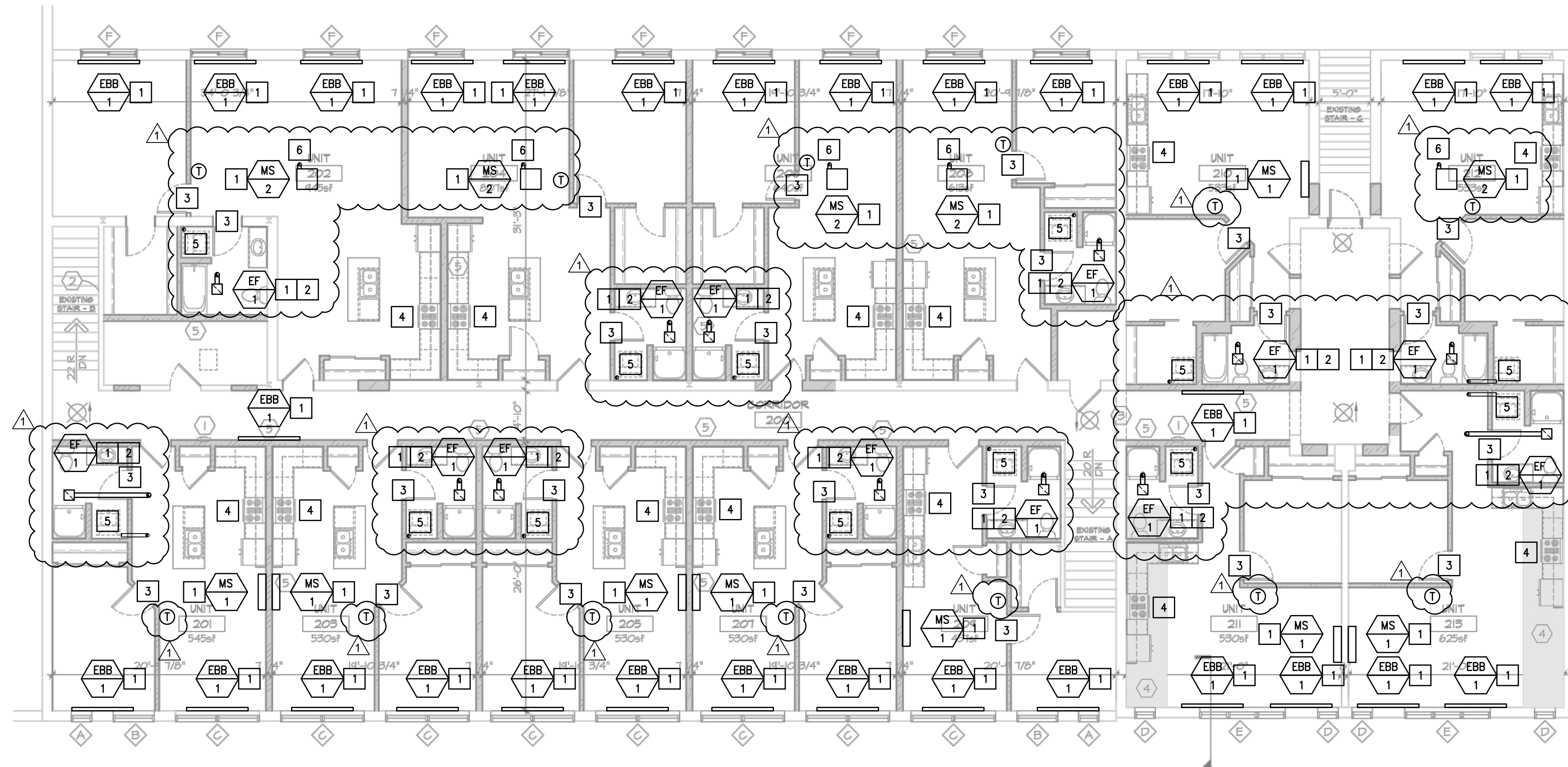
ELECTRICAL HEAT SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	KW	VOLT	PH	AMPS	SIZE	NOTES	SERVES
EBB-1	MARKEL	H3715-072	BASEBOARD	1.5	240	1	6.3	6"	1,2	SEE PLAN

NOTES: 1. PROVIDE INTEGRAL THERMOSTAT.
2. COORDINATE WITH OTHER TRADES.

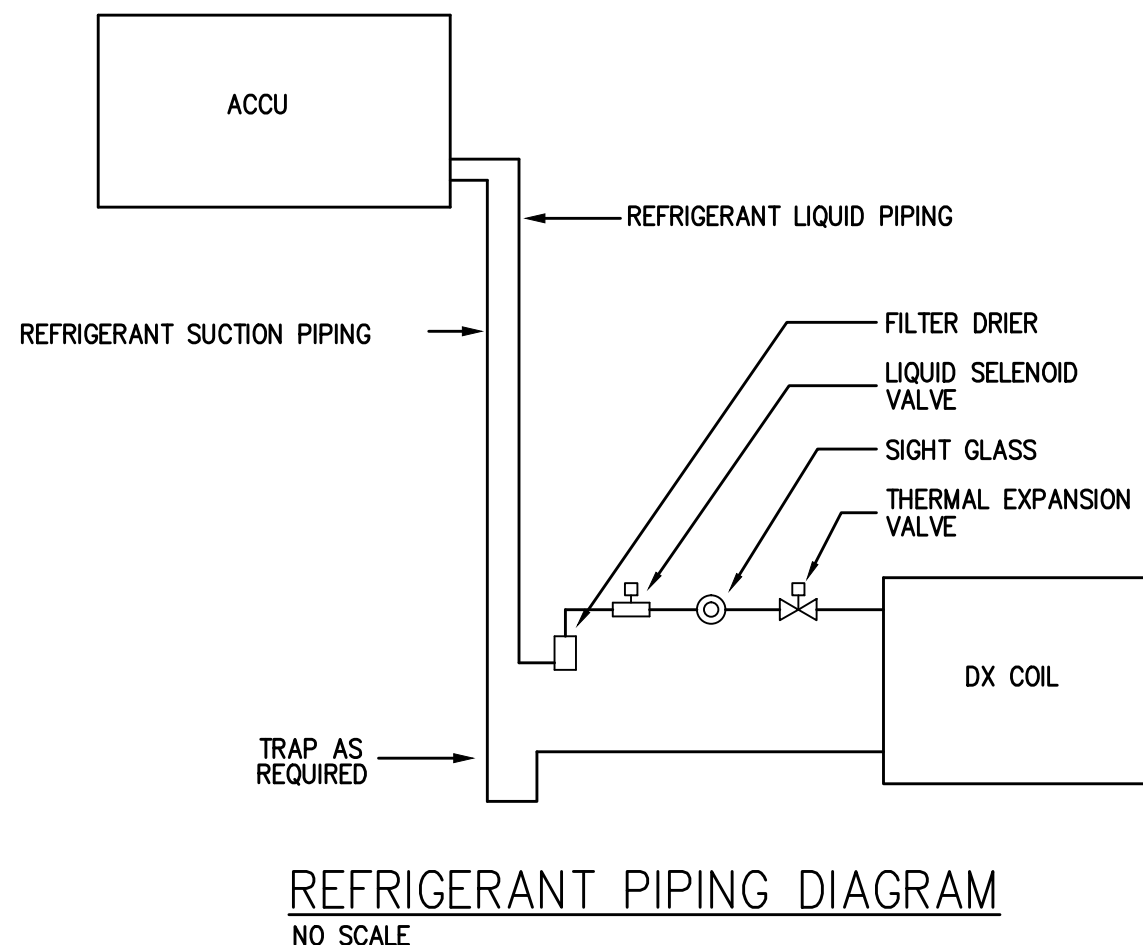
GENERAL NOTES

- ALL INTERNATIONAL CODES REFERENCED SHALL BE 2015 WITH WISCONSIN AMENDMENTS.
- VENTILATION SHALL CONFORM TO IMC.
- VENTING SHALL CONFORM TO IFGC.
- EQUIPMENT EFFICIENCIES AND PERFORMANCE OF DUCTWORK AND PIPING INSULATION SHALL CONFORM TO IECC.
- PLANS ARE SCHEMATIC IN NATURE. LAYOUT OF DUCTWORK IS BASED ON BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY ALL STRUCTURAL CONDITIONS FOR CEILING SPACE AND EXACT DUCTWORK ROUTING PRIOR TO FABRICATION.
- MOTORIZED DAMPER ON OUTSIDE AIR INTAKE SHALL BE POWER OPEN, SPRING CLOSE. MOTOR SHALL BE INTERLOCKED WITH EQUIPMENT "ON" CYCLE.
- INSTALL ALL MATERIAL & EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
- CONTRACTOR SHALL VERIFY EXACT LOCATION OF EQUIPMENT/DUCTWORK/PIPING AT JOBSITE.
- ALL WORK SHALL COMPLY WITH STATE & LOCAL CODES.
- ALL DUCTWORK SHALL BE INSTALLED PER SMACNA REQUIREMENTS.
- ALL DUCTWORK PENETRATIONS TO EXTERIOR SHALL BE SEALED WATERTIGHT.
- LOW VOLTAGE WIRING SHALL BE BY HVAC CONTRACTOR.
- STRUCTURAL CALCULATIONS FOR ROOF MOUNTED EQUIPMENT TO BE BY ARCHITECT. DEAD LOADS SHALL INCLUDE ACTUAL MATERIALS AND WEIGHT OF FIXED SERVICE EQUIPMENT (IBC 1606.1/IBC 1606.2).
- EVERY HEATING, VENTILATING AND AIR-CONDITIONING SYSTEM SHALL BE BALANCED UPON INSTALLATION. THE PERSON OR AGENCY RESPONSIBLE FOR BALANCING OF THE VENTILATING SYSTEM SHALL DOCUMENT IN WRITING THE AMOUNT OF OUTDOOR AIR BEING PROVIDED AND DISTRIBUTED FOR THE BUILDING OCCUPANTS, EXHAUSTS, AND ANY OTHER SPECIALTY VENTILATION. THE DOCUMENT SHALL BE RETAINED AT THE SITE AND SHALL BE MADE AVAILABLE TO THE MUNICIPALITY/STATE REPRESENTATIVE UPON REQUEST (MC/SPS 364.031(3)).
- CONTRACTORS NEED PRIOR APPROVAL FOR QUOTING ALTERNATIVE EQUIPMENT. ALTERNATIVE EQUIPMENT MAY REQUIRE OPTIONAL ACCESSORIES TO MATCH BASE BID EQUIPMENT. CONTRACTORS ARE RESPONSIBLE FOR FURNISHING ALL SUCH ITEMS.
- ROOMS WITHOUT RETURN AIR GRILLES OR TRANSFER GRILLES, SHALL HAVE DOORS UNDER CUT (U.C.) 1" BY GENERAL CONTRACTOR FOR RETURN AIR.
- ALL OPERATING MANUALS CONCERNING THE HVAC EQUIPMENT AND ITS MAINTENANCE SHALL BE PRESENTED TO THE OWNER AND SHALL BE MADE AVAILABLE TO A MUNICIPALITY/STATE REPRESENTATIVE UPON REQUEST (MC/SPS 364.031(3)).
- EXHAUST OUTLETS FOR ENVIRONMENTAL AIR SHALL BE NOT LESS THAN 3 FT FROM LOT LINES, NOT LESS THAN 3 FT FROM OPENINGS INTO THE BUILDINGS AND NOT LESS THAN 10 FT FROM MECHANICAL AIR INTAKES. THE DEFINITION OF "ENVIRONMENTAL AIR" IS DEFINED IN IMC CHAPTER 2 (MC 501.2.1 ITEM 3).
- DUCTWORK SHALL BE SEALED AT ALL JOINTS, TRANSVERSE AND LONGITUDINAL SEAMS AND CONNECTIONS IN DUCTWORK USING LISTED PRODUCTS AS REFERENCE IN THE CODE. THE REFERENCED DUCTWORK INCLUDES ALL SUPPLY, EXHAUST AND RETURN DUCTS (IECC 403.2.2/IECC 503.2.7/IMC 603.9).
- CONTAMINATED AIR (HEAT) MUST BE EXHAUSTED OUTSIDE OF THE BUILDING UNLESS JUSTIFICATION IS PROVIDED THAT DEMONSTRATES THE CONTAMINANT CAN BE ACCEPTABLY AND SIGNIFICANTLY REMOVED PRIOR TO REDISTRIBUTION WITHIN THE BUILDING (MC 401.6/SPS 364.040(6)/IMC 501.3).
- PROVIDE OUTSIDE AIR INTAKE OPENINGS FOR VENTILATION, DOORS AND OPENABLE WINDOWS AT LEAST 10 FT HORIZONTALLY FROM OUTLETS THAT EMIT PRODUCTS OF COMBUSTION AND EXHAUST VENTS, OR LOCATE THE INTAKE OPENINGS A MINIMUM OF 3 FT BELOW THE CONTAMINANT SOURCE (MC 401.4).
- JOIST NOTCHING, STUD CUTTING AND NOTCHING, AS WELL AS BORED HOLES IN WOOD FRAMING ASSOCIATED WITH THE INSTALLATION OF HVAC EQUIPMENT AND ITS DISTRIBUTION SYSTEM SHALL BE LIMITED AS DEFINED IN THIS CODE SECTION (MC 302.3/IFGC 302.3).
- HEATING SYSTEMS EQUIPMENT SIZING SHALL BE DESIGNED TO MAINTAIN A TEMPERATURE OF NOT LESS THAN THAT SHOWN IN SPS TABLE 364.0309 AT 3 FEET ABOVE THE FLOOR WITHIN THE OCCUPIED SPACE (MC 312.1/SPS 364.0302/IMC 309/SPS 364.0309(1)).
- PROVIDE NONMETALLIC DUCTS WHICH ARE CONSTRUCTED WITH CLASS 0 OR CLASS 1 DUCT MATERIALS AND WHICH COMPLY WITH UL 181 (MC 603.5).
- PROVIDE A MEANS TO COLLECT AND DISPOSE OF LIQUID COMBUSTION BY-PRODUCTS, OR COOLING BY-PRODUCTS ASSOCIATED WITH CONDENSING APPLIANCES AS REQUIRED BY CODE (MC 307.1/IFGC 307.1/SPS 364.0307).
- PROVIDE CLOTHES DRYER EXHAUST DUCTS SUCH THAT THEY MEET LISTED REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED TO, VERTICAL CLEANOUTS, REQUIRED METAL DUCTS, LIMITED DUCT LENGTHS, REQUIRED LABEL OR TAG ADDRESSING EQUIVALENT LENGTH OF THE EXHAUST DUCT LOCATED WITHIN 6 FT OF THE DUCT CONNECTION, MINIMUM DUCT SIZE, SHIELD PLATE INSTALLATION, AND 1/8" LENGTH LIMITATIONS INTO THE DUCT ON SCREWS OR RIVETS USED TO CONNECT DUCT SECTIONS. IN ADDITION, CLOTHES DRYER EXHAUST DUCTS SHALL BE INDEPENDENT OF ALL OTHER SYSTEMS AND SHALL CONVEY MOISTURE AND PRODUCTS OF COMBUSTION OUTSIDE THE BUILDING (MC 504/IFGC 613).
- SETBACK INTERIOR DUCT AND EQUIPMENT A MINIMUM OF 5' FROM EXTERIOR WINDOWS PER HISTORIC CODE.



SECOND FLOOR HVAC PLAN

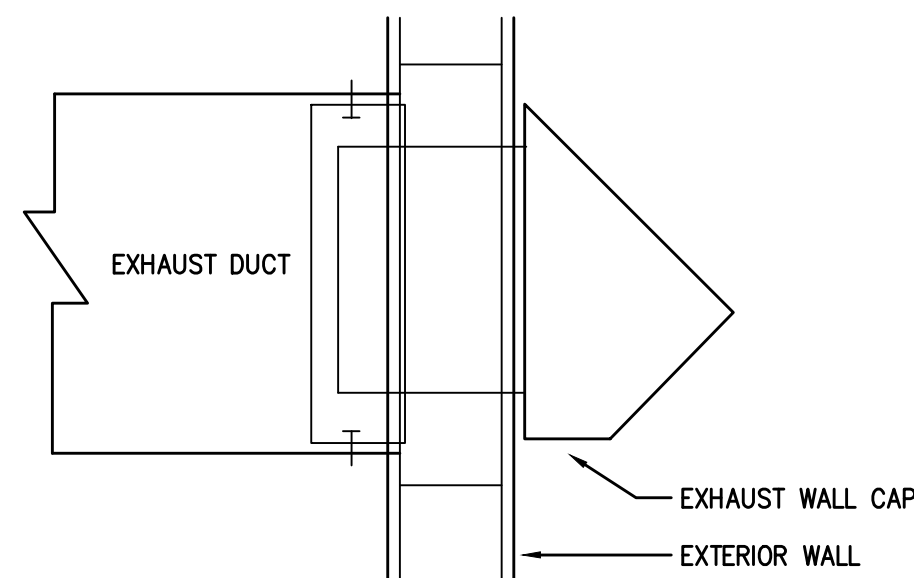
SCALE: 1/8"=1'-0"



REFRIGERANT PIPING DIAGRAM
NO SCALE

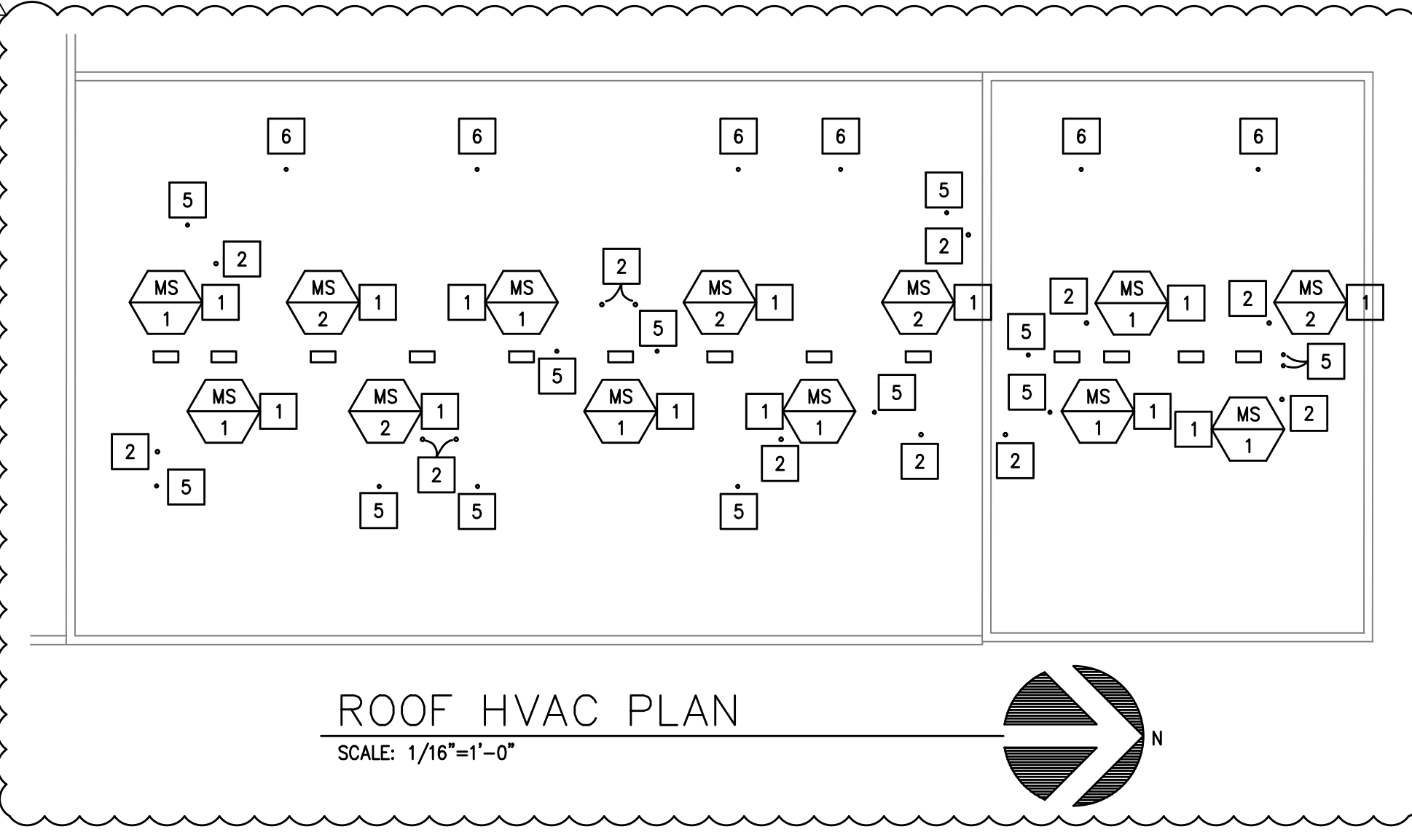
EXHAUST WALL CAP DETAIL

NO SCALE



ROOF HVAC PLAN

SCALE: 1/16"=1'-0"



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STAMP
LARRY GROSSER
E-33159
WALES, WI
PROFESSIONAL ENGINEER
06/01/2021
SHEET H1

PROJECT NUMBER
2150
DRAWN BY LG
CHECKED BY LG

REVISION
08.11.21 REVISIONS PER PLAN REVIEW

DATE
06.01.21

TITLE
HVAC PLAN, NOTES SCHEDULES, DETAILS

SHEET
H1 of 1

VENTILATION REQUIREMENTS

UNIT	AREA (SF)	0.04 x SF = OPENABLE AREA REQUIRED	NATURAL	MECHANICAL
201	545	(0.04) x 545 SF = 21.8 SF	YES	NO
202	945	(0.04) x 945 SF = 37.8 SF	NO	YES (4")
203	530	(0.04) x 530 SF = 21.2 SF	YES	NO
204	807	(0.04) x 807 SF = 32.3 SF	NO	YES (4")
205	530	(0.04) x 530 SF = 21.2 SF	YES	NO
206	640	(0.04) x 640 SF = 25.6 SF	NO	YES (4")
207	530	(0.04) x 530 SF = 21.2 SF	YES	NO
208	613	(0.04) x 613 SF = 24.5 SF	NO	YES (4")
209	457	(0.04) x 457 SF = 18.3 SF	YES	NO
210	533	(0.04) x 533 SF = 21.3 SF	YES	NO
211	530	(0.04) x 530 SF = 21.2 SF	YES	NO
212	985	(0.04) x 985 SF = 39.4 SF	NO	YES (4")
213	625	(0.04) x 625 SF = 25.0 SF	YES	NO

NOTES: 1. PROVIDE OPENABLE WINDOW AREAS PER ABOVE, OR PROVIDE 4" OUTSIDE AIR INTAKE MOTORIZED DAMPER AND DUCT THROUGH ROOF.

PLAN NOTES:

- VERIFY LOCATION OF EQUIPMENT IN FIELD.
- VERIFY SIZE AND ROUTING OF DUCTWORK IN FIELD. VENT UP THRU ROOF WITH CURB, FLASHING, RAIN CAP. DISCHARGE SHALL BE MINIMUM 10' FROM INTAKES, OPENABLE DOORS/WINDOWS, LOT LINES.
- UNDERCUT DOOR 1", TYPICAL.
- RECYCLATING RANGE HOOD BY OTHERS.
- PROVIDE 4" DRYER VENTING UP THRU ROOF WITH CURB, FLASHING, RAIN CAP. TOTAL EQUIVALENT DRYER VENT LENGTH SHALL NOT EXCEED 25' UNLESS DRYER LISTING ALLOWS GREATER. DISCHARGE SHALL BE MINIMUM 10' FROM INTAKES, OPENABLE DOORS/WINDOWS, LOT LINES.
- PROVIDE 4" OUTSIDE AIR INTAKE DUCT UP THROUGH ROOF WITH MOTORIZED DAMPER, CURB, FLASHING, RAIN CAP. INTAKE SHALL BE MINIMUM 10' FROM VENTS, EXHAUSTS, LOT LINES.

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