# Town of Fairview Fire Station #2

1200 Stacy Road Fairview, Texas 75069

## HVAC SYSTEMS UPGRADES ISSUE FOR BIDDING AND CONSTRUCTION 11.03.2023

## PROJECT SHEET LIST

SHEET NO. SHEET NAME

23 - Mechanical

M1.01 DEMOLITION FLOOR PLANS - HVAC
 M2.01 FLOOR PLANS - HVAC
 M2.02 FLOOR PLANS - HVAC PIPING
 M6.01 SCHEDULES - MECHANICAL

26 - Electrical

E0.00 GENERAL NOTES & LEGEND - ELECTRICAL DEMOLITION FLOOR PLANS - ELECTRICAL

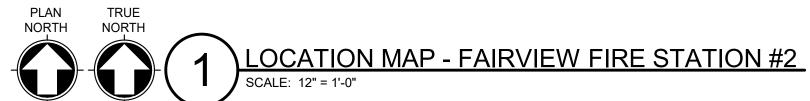
E2.01 FLOOR PLANS - ELECTRICAL

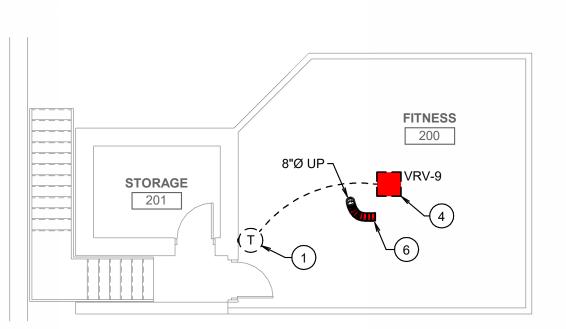
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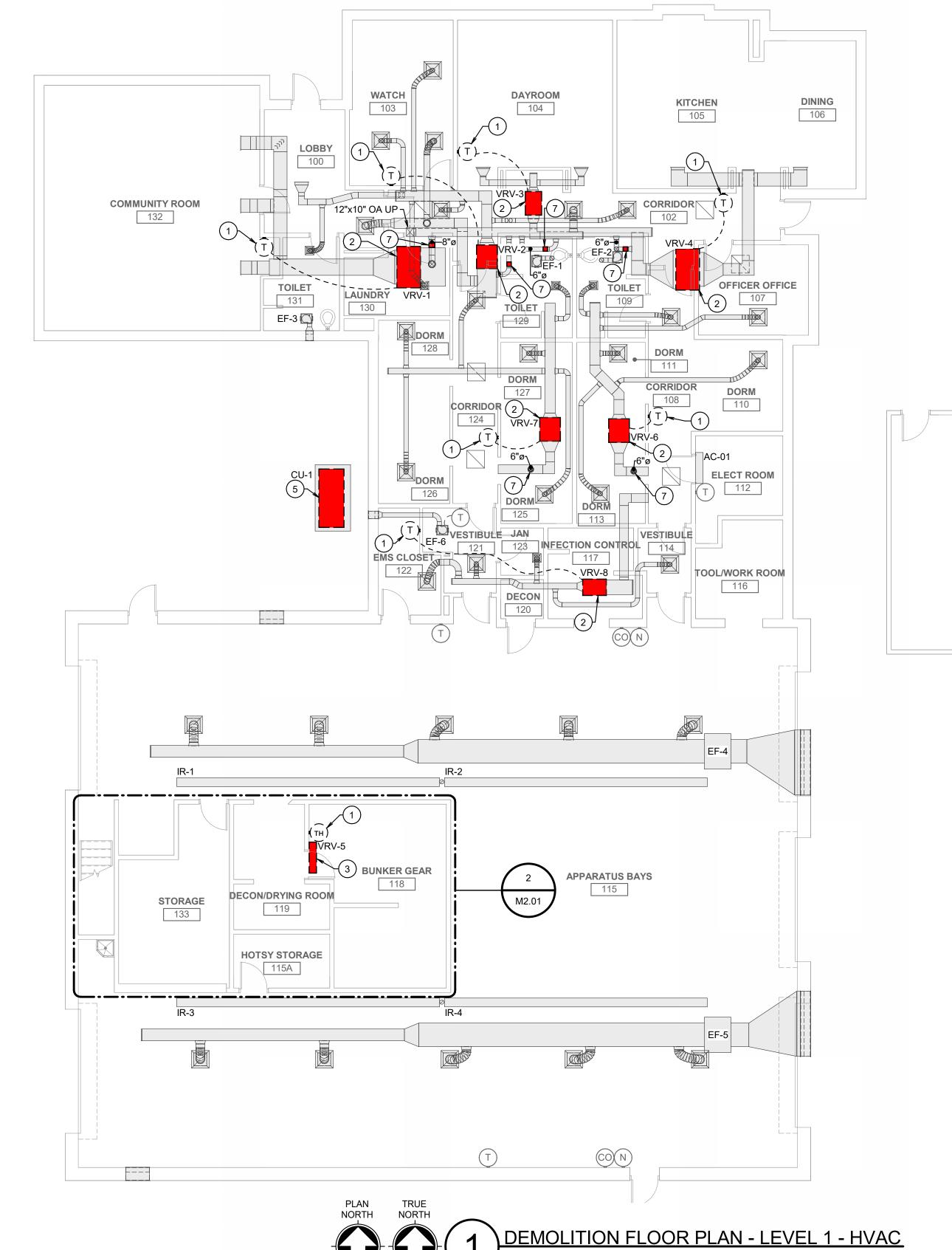








EMOLITION FLOOR PLAN - MEZZANINE - HVAC



#### **GENERAL MECHANICAL DEMOLITION NOTES:**

- 1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE NOT FROM "AS-BUILT" DRAWINGS BUT FROM ORIGINAL DRAWINGS. THIS INFORMATION IS INCLUDED FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO, AND EFFECT ON, THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
- 2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
- 3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL EFFECT OTHER SYSTEMS WITHIN THE LIMITS OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION; AND, THEREFORE, UTILITIES MUST REMAIN IN OPERATION AT ALL TIMES. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE OWNER.
- 4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OR EQUIPMENT, CONTRACTOR MUST VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
- 5. CONTRACTOR SHALL CONTACT CONTROLS SYSTEM INSTALLER BEFORE ANY DEMOLITION WORK IS STARTED TO ALLOW THEM TO TAG & IDENTIFY ITEMS TO REMAIN AND BE PROTECTED AND ITEMS TO BE REMOVED.
- 6. DO NOT ABANDON ANY ITEMS IN PLACE, REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED. WHERE ITEMS ARE REMOVED PATCH/REPLACE ROOF, WALLS, CEILING OR FLOOR, AS APPLICABLE, TO MATCH EXISTING FINISHES, WHERE NEW FINISHES ARE CALLED FOR PATCHING SHALL MATCH THE NEW FINISH.

#### NOTES BY SYMBOL '

- 1 REMOVE THERMOSTAT OR COMBINATION THERMOSTAT AND HUMIDISTAT AS SHOWN.
- 2 REMOVE VRF INDOOR FAN COIL UNIT. REMOVE REFRIGERANT PIPING AND APPURTENANCES. FIELD VERIFY EXISTING SUPPLY AND RETURN AIR DUCT SIZES AND PREPARE EXISTING DUCTS AND CONDENSATE DRAIN PIPING FOR NEW CONNECTIONS TO REPLACEMENT FAN COIL UNIT. REMOVE A SEGMENT OF OUTSIDE AIR DUCTWORK SERVING INDOOR UNIT AS REQUIRED TO INSTALL A MOTORIZED CONTROL DAMPER.
- REMOVE WALL MOUNTED DUCTLESS VRF FAN COIL UNIT. REMOVE REFRIGERANT PIPING AND APPURTENANCES, AND PREPARE EXISTING CONDENSATE DRAIN PIPING FOR NEW CONNECTION.
- REMOVE CEILING MOUNTED DUCTLESS CASSETTE-TYPE VRF FAN COIL UNIT. REMOVE REFRIGERANT PIPING AND APPURTED. PREPARE EXISTING CONDENSATE DRAIN PIPING FOR NEW CONNECTION.
- TEMOVE VRF SYSTEM CONDENSING UNIT AND ALL VRF SYSTEM REFRIGERANT LIQUID AND SUCTION PIPING WITHIN THE BUILDING.
- 6 REMOVE FLEXIBLE OUTSIDE AIR DUCT AND PREPARE 8" OUTSIDE AIR DUCTWORK FOR NEW CONNECTION.
- 7 REMOVE A SEGMENT OF OUTSIDE AIR DUCTWORK AS REQUIRED TO ACCOMMODATE INSTALLATION OF A MOTORIZED CONTROL DAMPER.



**Consulting Engineers** 12222 Merit Dr Suite 400 Dallas, TX 75251 TX Firm #F-2176 (972) 788-4222 Project 23109-00



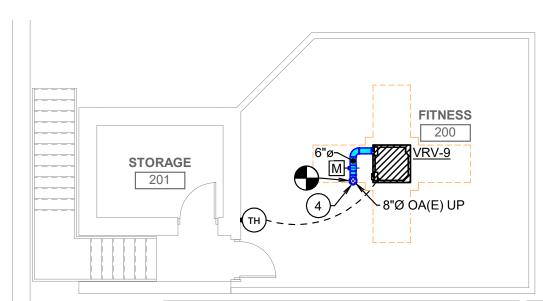
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DEMOLITION FLOOR PLANS - HVAC

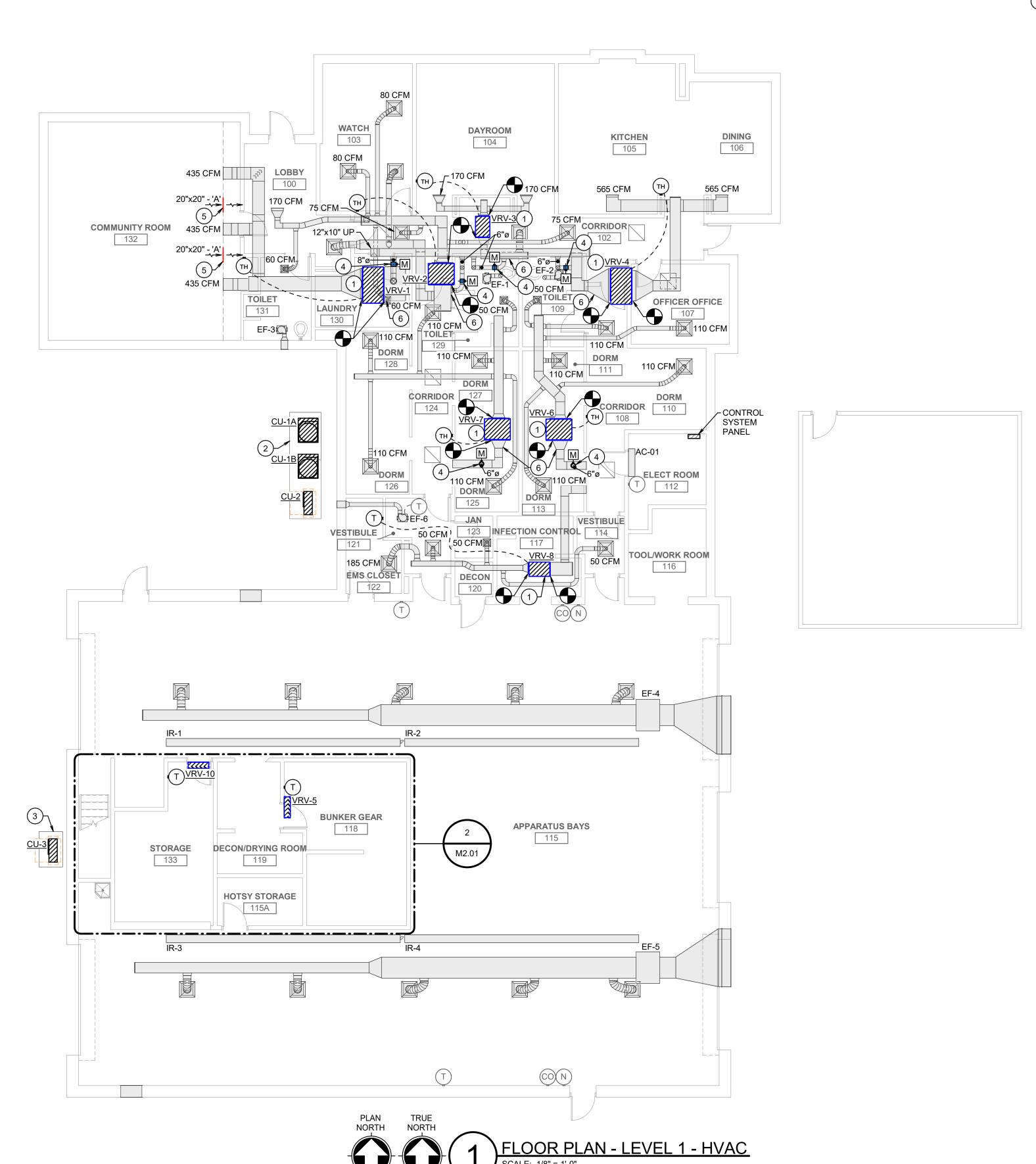
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SHEET NO.

M1.01







### **GENERAL MECHANICAL NOTES:**

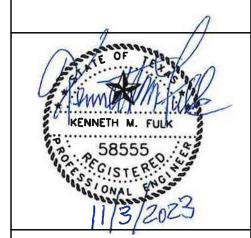
- 1. RECTANGULAR SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK LINER TO MEET ENERGY CODE (IECC 2021) REQUIREMENTS. ROUND SUPPLY/RETURN AIR DUCTWORK IS TO BE EXTERNALLY INSULATED WITH 2" THICK ACOUSTICAL AND THERMAL WRAP TO MEET THE LOCALLY ADOPTED VERSION OF IECC REQUIREMENTS. RECTANGULAR TRANSFER AIR DUCT SHALL BE LINED WITH 1" LINER ONLY. DUCTWORK SIZES SHOWN ARE NET INTERNAL AIR STREAM DIMENSIONS. SHEET METAL SIZES ARE TO BE INCREASED IN SIZE TO MAINTAIN THESE INTERNAL CLEAR DIMENSIONS. ROUND DUCTWORK IS TO BE EXTERNALLY WRAPPED. FLEXIBLE ROUND DUCT SHALL HAVE A MINIMUM R-VALUE OF 6.0.
- 2. BRANCH RUN-OUTS TO CEILING/COVE MOUNTED AIR DEVICES SHALL BE SAME SIZE AS NECK, UNLESS NOTED OTHERWISE. PROVIDE A TWIST-IN FLARED TAP WITH MANUAL VOLUME DAMPER AT MAIN DUCT TAP AND EXTENDED HANDLE AS SHOWN (REFER TO SPECIFICATIONS FOR DETAILS). EXTEND FLEXIBLE DUCTWORK A MAXIMUM OF 5'-0" FROM DIFFUSERS, INSTALL STRAIGHT AS POSSIBLE WITH LONG RADIUS BENDS WITH CLAMPS TO BE USED AT BOTH ENDS.
- 3. ALL DUCTWORK SHALL BE RUN CONCEALED ABOVE CEILINGS AS HIGH AS POSSIBLE & CONCEALED IN WALLS, CHASES, OR FURROUTS IN GENERAL LOCATIONS SHOWN, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH STRUCTURE, ARCHITECTURE, AND OTHER TRADES TO ENSURE CONFLICTS DO NOT OCCUR. ABOVE CEILING SPACE IS MINIMAL AND THE CEILINGS AND ROOF ARE VARIOUSLY SLOPED. CAUTION IS NECESSARY FOR PROPER INSTALLATION AND COORDINATION.
- 4. SEAL ALL LONGITUDINAL AND TRANSVERSE DUCT JOINTS TO PREVENT DUCT AIR LEAKAGE TO INCLUDE DUCT AND ACCESSORY PENETRATIONS. DO NOT SEAL CONTROL/FIRE DAMPER CONTROL ROD PENETRATIONS. SEAL CLASS "A"
- 5. BALANCE ALL EXISTING A/C UNIT SUPPLY AIR DEVICES TO CFM SHOWN. BALANCE OUTSIDE AIR INTAKES.

## NOTES BY SYMBOL 'O':

- 1 PROVIDE VRF FAN COIL UNIT AS SHOWN. FIELD VERIFY EXISTING SUPPLY AND RETURN AIR DUCT SIZES AND TRANSITION TO FAN COIL UNIT DUCT CONNECTION SIZES. PROVIDE FLEXIBLE DUCT ON SUPPLY AND RETURN CONNECTIONS.
- (2) EXTEND 6" THICK CONCRETE EQUIPMENT PAD AS SHOWN TO ACCOMMODATE INSTALLATION OF NEW CONDENSING UNITS. PROVIDE 4"X4" WELDED WIRE MESH REINFORCEMENT. AT CONNECTION TO EXISTING PAD, PROVIDE #3 REBAR IN 12" LENGTH AT 8" ON CENTER SPACING WITH 6" DEEP DRILLED PENETRATIONS.
- (3) PROVIDE 6" THICK CONCRETE EQUIPMENT PAD IN THE LOCATION SHOWN TO ACCOMMODATE INSTALLATION OF NEW CONDENSING UNIT. PROVIDE 4"X4"
  WELDED WIRE MESH REINFORCEMENT.
- PROVIDE MOTORIZED DAMPER IN OUTSIDE AIR DUCT. PROVIDE MINIMUM 6"x6" INSULATED ACCESS DOOR. EXTEND 24V CONTROL POWER TO DAMPER FROM INDOOR A/C UNIT.
- 5 INSTALL RETURN AIR GRILLE APPROX. 16'-0" A.F.F.. CONFIRM A CLEAR RETURN AIR PATH BACK TO A/C UNIT. REMOVE GYPSUM BOARD ABOVE CEILING AS
- 6) PROVIDE NEEDLEPOINT BIPOLAR IONIZATION UNIT IN RETURN AIR DUCTWORK.



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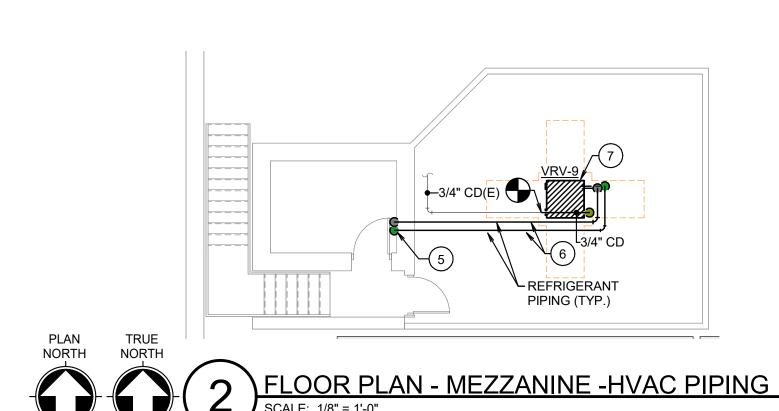
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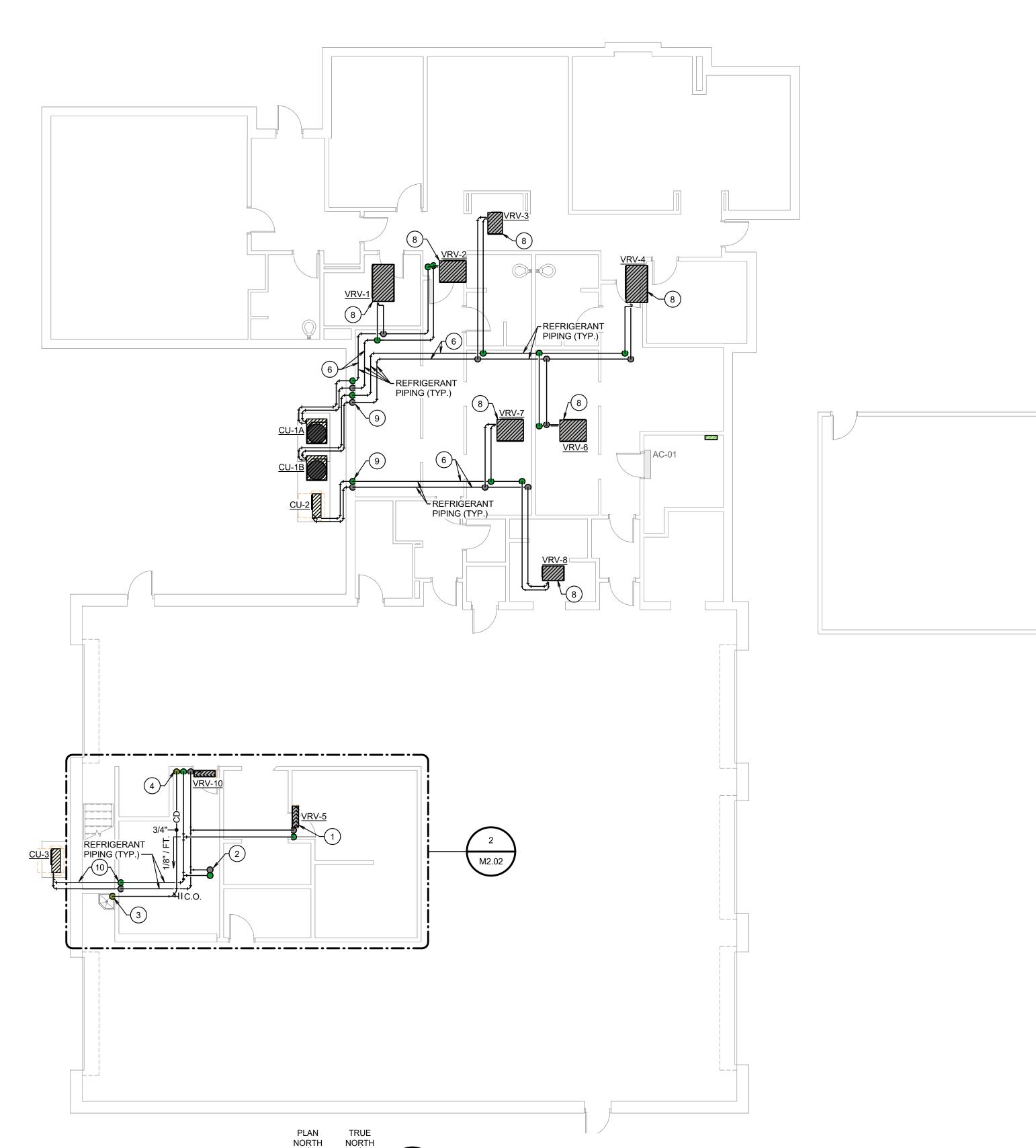


FLOOR PLANS - HVAC

DRAWN BY:BJC CHECKED BY: KF APPROVED BY: KF SHEET NO.

M2.01





## **GENERAL HVAC PIPING NOTES:**

OTHER TRADES TO AVOID CONFLICTS.

1. ALL RUN-OUT PIPING SHALL BE ROUTED AS GENERALLY INDICATED AND BE THE FULL SIZE SHOWN UP TO THE POINT OF CONNECTION TO THE UNIT. REDUCE AS REQUIRED UNLESS NOTED OTHERWISE.

- SLOPE CONDENSATE DRAIN PIPING 1/8" PER FOOT TOWARD DRAIN. PROVIDE CLEANOUT AT MINIMUM OF EVERY 40'-0" ON CENTER AND AT ALL CHANGES IN
- 3. PIPING ABOVE CEILING SHALL BE ROUTED TIGHT TO STRUCTURE WITH ADEQUATE SPACE FOR INSULATION. COORDINATE WITH STRUCTURE, ARCHITECTURE, AND
- 4. ALL PIPING APPURTENANCES REQUIRING ACCESS SHALL BE INSTALLED SO THAT THEY ARE ACCESSIBLE.
- 5. ALL CONDENSATE DRAINS ARE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE.
- ROUTE REFRIGERANT PIPING AS SHOWN. SIZE AS PER VRF SYSTEM MANUFACTURER'S RECOMMENDATIONS. COORDINATE ROUTING WITH OTHER TRADES. REFER TO SPECIFICATION SECTION 23 23 01, VRF-VRV REFRIGERANT
- 7. THOROUGHLY FLUSH AND CLEAN ALL EXISTING CONDENSATE DRAIN LINES FROM NEW A/C UNITS TO POINT OF TERMINATION.

## NOTES BY SYMBOL '

- 3/4" PUMPED CONDENSATE TO WALL MOUNTED DUCTLESS AC UNIT. FIELD VERIFY, INTERCEPT, AND CONNECT NEW PUMPED CONDENSATE DRAIN PIPING TO EXISTING PUMPED CONDENSATE LINE.
- (2) REFRIGERANT PIPING UP TO MEZZANINE.
- 3) 3/4" PUMPED CONDENSATE DOWN TO SPILL INTO MOP BASIN WITH OPEN-SITE CONNECTION.
- (4) 3/4" PUMPED CONDENSATE DOWN TO WALL MOUNTED DUCTLESS AC UNIT.
- (5) REFRIGERANT PIPING DOWN TO LEVEL 1.
- (6) REFRIGERANT PIPING (TYPICAL).
- 7 3/4" PUMPED CONDENSATE TO CEILING MOUNTED CASSETTE-TYPE DUCTLESS AC UNIT. FIELD VERIFY, INTERCEPT, AND CONNECT NEW PUMPED CONDENSATE DRAIN PIPING TO EXISTING PUMPED CONDENSATE LINE.
- 8 3/4" CONDENSATE DRAIN WITH P-TRAP TO VRF INDOOR UNIT CONDENSATE DRAIN CONNECTION. FIELD VERIFY, INTERCEPT, AND CONNECT NEW CONDENSATE DRAIN PIPING TO EXISTING CONDENSATE DRAIN LINE. REFER TO
- 9 ROUTE REFRIGERANT LINES DOWN IN WALL TO 6" A.F.F.. REMOVE AND REPLACE INTERIOR DRYWALL TO ACCOMMODATE WORK AND PAINT TO MATCH EXISTING. PENETRATE EXTERIOR WALL AND SEAL WATER TIGHT.
- 10) ROUTE REFRIGERANT LINES DOWN IN WALL TO 6" A.F.F. AND EXTEND UNDER STAIR. PENETRATE EXTERIOR WALL AND SEAL WATER TIGHT.



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11.03.2023 ISSUES / REVISIONS

FLOOR PLANS - HVAC

DRAWN BY:BJC CHECKED BY: KF APPROVED BY: KF

SHEET NO.

M2.02

VRF IND	OOR UNIT SCHE	DULE									
DE	ESIGNATION	VRV-1	VRV-2	VRV-3	VRV-4	VRV-5	VRV-6	VRV-7	VRV-8	VRV-9	VRV-10
LO	OCATION	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	WALL MOUNTED	ABOVE CEILING	ABOVE CEILING	ABOVE CEILING	CEILING MOUNTED	WALL MOUNTED
AR	REA SERVED	COMMUNITY	LOBBY, WATCH, ENTRY	DAYROOM	KITCHEN, DINING	BUNKER GEAR	DORMS	DORMS	MISC.	FITNESS	STORAGE
	/PE	CEILING CONCEALED, DUCTED	CEILING CONCEALED, DUCTED	CEILING CONCEALED, DUCTED	CEILING CONCEALED, DUCTED	WALL MOUNTED, DUCTLESS	CEILING CONCEALED, DUCTED	CEILING CONCEALED, DUCTED	CEILING CONCEALED, DUCTED	CEILING CASSETTE	WALL MOUNTED, DUCTLESS
GENERAL MA	ANUFACTURER	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV
MC	ODEL	FXSQ48TBVJU	FXSQ18TBVJU	FXSQ12TBVJU	FXSQ36TBVJU	FXAQ12PVJU	FXSQ18TBVJU	FXSQ18TBVJU	FXSQ12TBVJU	FXFQ18TVJU	FXAQ12PVJU
DIN	MENSIONS (HxWxD IN)	10x56x32	10x40x32	10x22x32	10x56x32	12x32x10	10x40x32	10x40x32	10x22x32	10x34x34	12x32x10
	EIGHT (LB)	104	77	55	101	26	77	77	55	51	26
SU	JPPLY AIR, CFM	1,300	600	335	1130	290	600	600	335	740	290
FAN DATA OL	UTSIDE AIR, CFM	215	60	45	125	-	60	60	-	80	-
EX	XT. STATIC PRESSURE (IN. W.G.)	0.35	0.35	0.35	0.35	-	0.35	0.35	0.35	-	-
NC	OMINAL CAPACITY (BTU/HR)	48,000	18,000	12,000	36,000	12,000	18,000	18,000	12,000	18,000	12,000
COOLING SE	ENSIBLE CAPACITY (BTU/HR)	34,300	13,600	9,700	25,700	8,900	13,600	13,600	9,700	16,000	8,900
DATA EA	AT, °F (DB / WB)	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0
LA	AT, °F (DB / WB)	55.0 / 54.0	55.0 / 54.0	55.0 / 54.0	55.0 / 54.0	55.0 / 54.0	55.0/ 54.0	55.0 / 54.0	55.0 / 54.0	55.0 / 54.0	55.0 / 54.0
LIEATING NO	OMINAL CAPACITY (BTU/HR)	54,000	20,000	13,500	40,000	13,500	20,000	20,000	13,500	20,000	13,500
HEATING EA	AT, °F	70	70	70	70	70	70	70	70	70	70
LA	AT, °F	90	90	90	90	90	90	90	90	90	90
VC	OLTAGE / PHASE	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1	208 / 1
LECTRICAL MC	CA	2.8	1.6	0.8	2.5	0.4	1.6	1.6	0.8	0.6	0.4
MC	OCP	15	15	15	15	15	15	15	15	15	15
COMMENTS		1, 2, 3, 7	1, 2, 3, 7	1, 2, 3, 7	1, 2, 3, 7	5	1, 2, 3, 7	1, 2, 3, 7	1, 2, 3	4, 5, 6	5

COMMENTS KEY:

I. PROVIDE MULTI-SPEED ECM FAN MOTOR.

2. PROVIDE FILTER ACCESS KIT SIMILAR TO ACCOMODATOR SHORT, ACG FOR ALL DUCTED UNITS. 3. PROVIDE INLINE TEE FLOAT SWITCH IN CONDENSATE DRAIN LINE EQUAL TO RECTORSEAL MODEL SS-1 TO SHUT DOWN UNIT UPON SENSING WATER.

4. PROVIDE OUTSIDE AIR CONNECTION.

5. PROVIDE MANUFACTURER INTEGRAL CONDENSATE PUMP AS REQUIRED.

6. PROVIDE TRIM OUT PANEL MODEL No. BYCQ125B-W1. 7. PROVIDE NEEDLEPOINT BIOPLOAR IONIZATION (NPBI) UNIT IN RETURN AIR DUCT EQUAL TO PLASMA AIR. EXTEND POWER TO NPBI FROM INDOOR UNIT.

GENERAL	DESIGNATION	CU-1A	CU-1B	CU-2	CU-3	
	LOCATION	CONDENSER YARD	CONDENSER YARD	CONDENSER YARD	OUTSIDE APPARATUS BAY	
	AREA SERVED	COMMUNITY, LOBBY	DAYROOM, KITCHEN, DORMS	DORMS, MISC	FITNESS, BUNKER GEAR, STORAG	
	WEIGHT, LBS	496	496	172	176	
	DIMENSIONS, IN (HxWxD)	66x37x31	66x37x31	39x37x13	39x37x13	
	CONFIGURATION	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	
	MANUFACTURER	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	DAIKIN VRV	
	MODEL	RXYQ72AATJA	RXYQ72AATJA	RXTQ36TBVJUA	RXTQ48TBVJUA	
COOLING DATA	RATED CAPACITY (BTU/HR)	69,000	69,000	34,200	45,500	
	AMBIENT AIR TEMPERATURE (°F)	95	95	95	95	
	EFFICIENCY RATING (IEER/EER/SEER2)	21.4 / 13 / -	21.4 / 13 / -	- / - / 15.3	- / - / 14.6	
HEATING DATA	RATED CAPACITY (BTU/HR)	77,000	77,000	22,700	30,200	
	AMBIENT AIR TEMPERATURE (°F)	17	17	17	17	
	EFFICIENCY RATING (COP AT 47°F) / HSPF2	3.5 / -	3.5 / -	- / 8.5	- / 8.3	
COMPRESSOR	COMPRESSOR TYPE	SCROLL	SCROLL	SCROLL	SCROLL	
DATA	COMPRESSOR QUANTITY	1	1	1	1	
ELECTRICAL	VOLTAGE / PHASE	208 / 3	208 / 3	208 / 1	208 / 1	
DATA	MCA	27.3	27.3	16.5	29.1	
	MOCP	30	30	20	35	
COMMENTS		1-5	1-5	1-5	1-5	

PROVIDE HAIL GUARD ON HEAT PUMP UNIT.

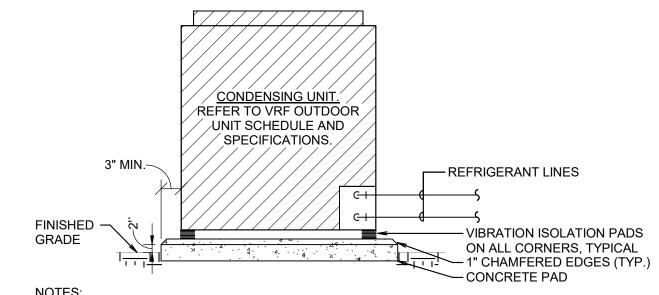
PROVIDE INVERTER DRIVEN COMPRESSOR. B. Y-FITTINGS PROVIDED BY MANUFACTURER AND SHALL BE USED AT ALL REFRIGERANT PIPING SPLITS.

REFRIGERANT PIPING SHALL BE SIZED BY THE MANUFACTURER.
 ALL SUCTION AND LIQUID LINES SHALL BE INSULATED WITH 3/4" ARMAFLEX INSULATION.

GRILLES REGISTERS AND DIFFUSERS												
GRILLES, REGISTERS, AND DIFFUSERS												
DESIGNATION TYPE	MOUNTING MATERIA	L FINISH	MAX. N.C. LEVEL	OPPOSED BLADE DAMPER	MANUFACTURER	MODEL						

A RETURN AIR GRILLE - SIDEWALL SURFACE STEEL WHITE

	HVAC PIPING LEGEND										
	RS	REFRIGERANT SUCTION									
	RL	REFRIGERANT LIQUID									
,	RG	REFRIGERANT GAS									
	CD	CONDENSATE DRAIN									
	<b></b>	FLOW IN DIRECTION OF ARROW									
	1/8" / FT.	SLOPE DOWN IN DIRECTION OF ARROW WITH SLOPE SHOWN									

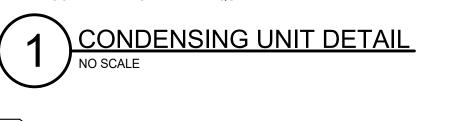


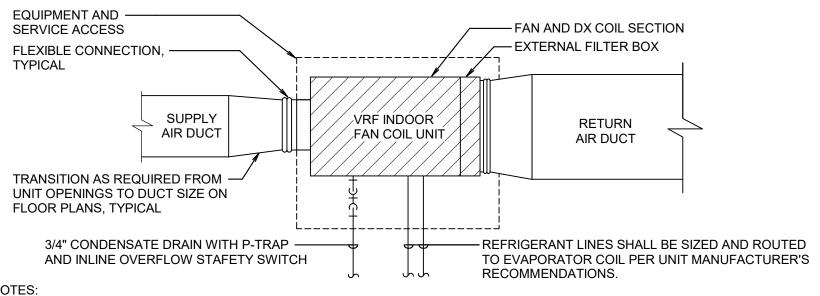
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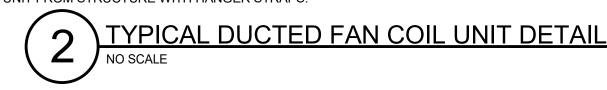
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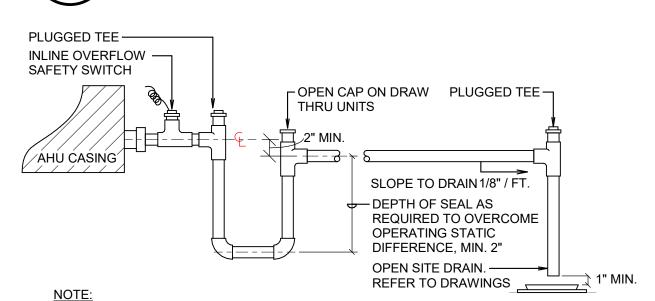
1. REFRIGERANT LINES SHALL BE SIZED AND PIPED FROM EVAPORATOR COIL AT INDOOR FAN COIL UNITS TO CONDENSING UNIT BASED ON MANUFACTURERS RECOMMENDATIONS. 2. ROUTE LINES IN EXTERIOR WALL, ON THE INTERIOR SIDE OF THE WALL INSULATION AND ABOVE CEILING ACCORDING TO JOB SITE CONDITIONS TO CONDENSING UNIT. 3. COMBINE CONDENSING UNITS ONTO ONE CONTINUOUS FORMED & POURED CONCRETE PAD WITH CHAMFERED EDGES WHERE POSSIBLE AND AS SHOWN. 4. CLEARANCES FROM UNITS TO WALLS AND SCREENED ENCLOSURES SHALL BE BASED ON THE MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS.





1. REFER TO MECHANICAL FLOOR PLANS FOR EQUIPMENT LOCATIONS, SIZES, TYPES, ETC. AND CONTINUATION OF ALL DUCTWORK, PIPING AND GENERAL NOTES. 2. SUSPEND A/C UNIT FROM STRUCTURE WITH HANGER STRAPS.

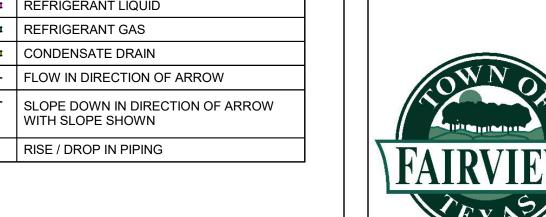




NOTE:
DRAIN LINE SHALL BE THE SAME SIZE OR LARGER THAN THE CONNECTION ON THE FCU. NO LINE SMALLER THAN 3/4" SHALL BE ALLOWED.

(3) TYPICAL AHU/FCU CONDENSATE DRAIN TRAP DETAIL
NO SCALE

**HVAC LEGEND** SUPPLY DUCT RISE / DROP OUTSIDE AIR DUCT RISE / DROP **Consulting Engineers** RETURN DUCT RISE / DROP 12222 Merit Dr TX Firm #F-2176 Suite 400 (972) 788-4222 Dallas, TX 75251 Project 23109-00 EXHAUST/RELIEF AIR DUCT RISE / DROP → → AIR FLOW IN DIRECTION OF ARROW RISE / DROP IN DUCT MANUAL DAMPER MOTORIZED DAMPER FIRE DAMPER SMOKE DAMPER FIRE-SMOKE DAMPER THERMOSTAT / TEMPERATURE SENSOR HUMIDITY SENSOR CARBON DIOXIDE SENSOR CARBON MONOXIDE SENSOR SPACE PRESSURIZATION SENSOR COMBINATION TEMPERATURE, HUMIDITY, & ISSUES / REVISIONS CARBON DIOXIDE SENSOR COMBINATION TEMPERATURE & CARBON DIOXIDE SENSOR DUCT SMOKE DETECTOR WALL SWITCH WITH PUSH BUTTON WALL TIMER SWITCH CONNECT TO EXISTING EXISTING WORK TO REMAIN EXISTING WORK TO BE REMOVED NEW WORK (COLOR VARIES PER SYSTEM) NEW EQUIPMENT





11.03.2023

SCHEDULES -MECHANICAL

DRAWN BY:BJC CHECKED BY: KF APPROVED BY: KF

SHEET NO.

M6.01

#### **GENERAL POWER NOTES:**

- 1. ALL WORK SHALL COMPLY WITH APPLICABLE NATIONAL, STATE AND LOCAL CODES, RULES, REGULATIONS AND REQUIREMENTS OF THE SERVICE UTILITY COMPANY.
- 2. ALL WORK SHALL COMPLY WITH THE BUILDING OWNER'S CONSTRUCTION GUIDELINES.
- 3. ALL CONDUCTORS SHALL BE #12 AWG UNLESS NOTED OTHERWISE.
- 4. ALL 120V RUNS LONGER THAN 60' SHALL BE #10 AWG UNLESS NOTED OTHERWISE ON
- 5. ALL CONDUCTORS SHALL BE COPPER (#10 AND SMALLER SHALL BE SOLID).
- 6. WHERE CONDUCTOR SIZES ARE NOTED ON DRAWINGS, THAT CONDUCTOR SIZE SHALL BE THROUGH THE ENTIRE RUN UNLESS NOTED OTHERWISE. 7. PANELBOARD DIRECTORIES SHALL BE COMPLETELY FILLED OUT TO ACCURATELY
- 8. REFER TO MECHANICAL FLOOR PLANS FOR WALL MOUNTED THERMOSTAT, SENSOR
- PANEL SCHEDULES TO REFLECT FINAL BUILDING CONDITIONS.

- 1. THE INFORMATION ON THE DEMOLITION DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR WILL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A BID TO DETERMINE THE AMOUNT OF WORK THAT WILL BE REQUIRED. CONTRACTOR SHALL EXAMINE THE EXISTING BUILDING AND GENERALLY VERIFY THE LOCATION OF ALL EXISTING WORK AND BECOME INFORMED AS TO THE RELATION TO AND EFFECT ON THE WORK REQUIRED BEFORE SUBMITTING A BID. SUBMISSION OF A BID WILL CONSTITUTE EVIDENCE THAT THE CONTRACTOR HAS INSPECTED THE SITE OF THE PROPOSED WORK.
- 2. EXISTING MPE ITEMS TO BE REMOVED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED BY THE DESIGNATED OWNER'S REPRESENTATIVE.
- SHALL VERIFY WITH THE OWNER IF THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. ANY REQUIRED OUTAGES MUST BE COORDINATED WITH THE
- VERIFY THE ORIGIN AND TERMINATION OF THOSE SYSTEMS AND CONFIRM THAT THE ITEMS BEING REMOVED DO NOT SERVE ANY ITEMS THAT ARE TO REMAIN (INCLUDING THOSE IN AREAS OUTSIDE THE CONTRACT LIMITS).
- EQUIPMENT TO BE REMOVED.

POWER	R LE	GEN	1[

IDENTIFY EACH CIRCUIT (EXISTING AND NEW CIRCUITS) IN ALL PANELS WITHIN SCOPE OF WORK. DIRECTORIES SHALL BE TYPEWRITTEN.

AND ALL OTHER CONTROL DEVICE LOCATIONS. PROVIDE FLUSH, GALVANIZED STEEL, WALL MOUNTED JUCTION BOX WITH 3/4" EMT CONDUIT AND NYLON PULL-STRING TO 4" ABOVE ACCESSIBLE CEILING FOR EACH DEVICE.

9. ELECTRIC CONNECTIONS TO PANELBOARDS SHALL BE MADE ONLY WHEN PANELBOARD HAS BEEN DE-ENERGIZED.

10. ELECTRICAL CONTRACTOR SHALL X-RAY SLAB PRIOR TO ANY CORE-DRILLING. 11. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ALL MOTOR STARTERS AND CONTROL PANEL LOCATIONS.

12. THE CONTRACTOR SHALL UPDATE ROOM NAMES AND ROOM NUMBERS ON FINAL

#### **GENERAL DEMOLITION NOTES:**

- 3. COORDINATE DEMOLITION WORK WITH THE BUILDING MAINTENANCE PERSONNEL AND OTHER TRADES PERFORMING WORK IN THE BUILDING PRIOR TO THE REMOVAL OF ANY ITEMS OF EQUIPMENT OR SYSTEMS THAT WILL AFFECT OTHER SYSTEMS WITHIN THE LIMIT OF NEW CONSTRUCTION OR OTHER AREAS OF THE BUILDING. CONTRACTOR
- 4. PRIOR TO THE REMOVAL OF ANY MPE ITEMS OF EQUIPMENT, CONTRACTOR MUST
- 5. DO NOT ABANDON ANY ITEMS IN PLACE. REMOVE ALL COMPONENTS ASSOCIATED WITH EACH ITEM CALLED OUT TO BE REMOVED.
- 6. REMOVE ELECTRICAL CONNECTIONS TO EXISTING MECHANICAL AND PLUMBING EQUIPMENT BEING REMOVED. REFER TO MECHANICAL AND PLUMBING PLANS FOR

	RACEWAY IN WALL OR ABOVE CEILING
	RACEWAY IN OR BELOW FLOOR
B-4	HOMERUN : LETTER(S) DENOTES PANEL NAME NUMBER DENOTES CIRCUIT NUMBER
Α	DENOTES DEVICE MOUNTED ABOVE COUNTER
WP	DENOTES WEATHERPROOF DEVICE
GFI	DENOTES GROUND FAULT INTERRUPTING DEVICE
$\Phi \Phi \Phi$	DUPLEX RECEPTACLE - WALL / FLOOR / CEILING MOUNTED
###	QUADRAPLEX RECEPTACLE - WALL / FLOOR / CEILING MOUNTED
	ISOLATED GROUND DUPLEX RECEPTACLE
	ISOLATED GROUND QUADRUPLEX RECEPTACLE
$\mathbf{\Phi}$	PLUG LOAD CONTROLLED DUPLEX - HALF CONTROLLED / FULLY CONTROLLED
• •	PLUG LOAD CONTROLLED QUADRAPLEX - HALF CONTROLLED / FULLY CONTROLLED
Ф	SIMPLEX RECEPTACLE
$\bigcirc$	SINGLE PHASE, 3 WIRE GROUNDED RECEPTACLE (NUMBER INDICATES AMPERAGE RATING)
9	SPECIAL RECEPTACLE (NUMBER DENOTES AMPERAGE RATING)
$\Diamond$	USB RECEPTACLE
$\Leftrightarrow \Leftrightarrow$	USB COMBO RECEPTACLE - DUPLEX / QUADRUPLEX
<b>*</b>	ISOLATED GROUND USB COMBO RECEPTACLE - DUPLEX / QUADRUPLEX
	PLUG LOAD CONTROLLED USB COMBO - HALF CONTROLLED / FULLY CONTROLLED
•	POKE-THRU DEVICE
$\Phi$ $\Phi$ $\Phi$	JUNCTION BOX - WALL / FLOOR / CEILING MOUNTED
	POWER/DATA SURFACE RACEWAY
P	POWER/DATA POWER POLE
	CONTROL DEVICE
	PLUG LOAD CONTROL DEVICE
<u>©</u>	OCCUPANCY SENSOR
RC	ROOM CONTROLLER
¥	MOTOR STARTER
Ч	DISCONNECT SWITCH
Д	DISCONNECT SWITCH - FUSED
ή	VARIABLE FREQUENCY DRIVE (VFD)
	A WP GFI  O O O O O O O O O O O O O O O O O O

NOT ALL SYMBOLS USED

480V PANELBOARD

208V PANELBOARD

---- EXISTING WORK TO BE REMOVED

DISTRIBUTION PANELBOARD

DRY-TYPE TRANSFORMER

EXISTING WORK TO REMAIN

		PAN	IEL:	MA													
Location: ELEC ROOM 112						Volts: 120/208 Wye						<b>A.I.C. Rating:</b> 22,000 A.I.C.					
	Supply From: MDP  Mounting: SURFACE							Phases:		•			ıs Type:				
								Wires:	4				Rating		Α		
			closure:					Sections:				ao		00.0			
		LIN	Josui e.	INLIVIA	l		•	ections.	'								
СКТ	REM	Load Name	BKR	Poles	Wire Size		Δ	ı	В		<u> </u>	Wire Size	Poles	BKR	Load Name	REM	СКТ
1		011.0	25	_	0#0 #400 0/4"0	3027	3278										2
3	2	CU-3	35	2	2#8, #10G, 3/4"C			3027	3278			3#10, #10G, 3/4"C	3	30	CU-1A	2	4
5										3278	3278						6
7	2	CU-1B	30	3	3#10, #10G, 3/4"C	3278	43					2#10, #10G, 3/4"C	2	15	VRV-10	2	8
9								3278	43			, ,					10
11	2	CU-2	20	2	2#10, #10G, 3/4"C					1500	360	2#12, #10G, 3/4"C	1		RECEPTACLE		12
13						1500	300					2#12, #12G, 3/4"C	1		BAS PANEL		14
15		Spare	20	1				0	0	_	_		1		Spare		16
17		Spare	20	1						0	0		1		Spare		18
19		Spare	20	1		0	0						1		Spare		20
21		Space		1									1		Space		22
23 25		Space		1									1		Space		24 26
27		Space		1	<u></u>								1		Space		28
29		Space Space		1	<del></del>								1		Space Space		30
23		Орасе		'	Total Load:	11 42	26 VA	9.62	6 VA		7 VA		<u>'</u>		Орасе		30
					Total Amps:		8 A	81.8 A			1 A	_					
					Total Amps.			01.	.071	70.							
Load	Class	ification			Connected Load	Demar	nd Facto	r	Estimat	ed Dema	nd		F	Panel T	otals		
Rece	ptacle				660 VA	100	0.00%		6	60 VA							
HVAC			28,808 VA	108.53%		31,267 VA				Total Conn. Load: 29,468 VA							
												Tot	al Est. [	Deman	d: 31,927 VA		
												Total	l Conn.	Curren	t: 81.8 A		
												Total Est. D	emand	Curren	t: 88.6 A		
Gene	eral No	tes:						ı									

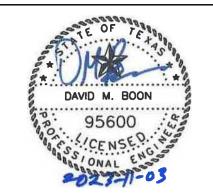
A. PROVIDE FEED-THROUGH LUGS FOR FUTURE EXPANSION.

B. PROVIDE FULL SIZED PHASE, NEUTRAL AND GROUND BUSSES. C. PROVIDE AN UPDATED TYPEWRITTEN PANEL SCHEDULE THAT IS COMPLETELY FILLED OUT TO ACCURATELY IDENTIFY EACH NEW AND EXISTING CIRCUITS SERVED FROM THIS PANEL.

Remarks:
1. PROVIDE GFCI CIRCUIT BREAKER.

2. PROVIDE CIRCUIT BREAKER AND WIRE PER EQUIPMENT MANUFACTURER'S SPECIFICATIONS.

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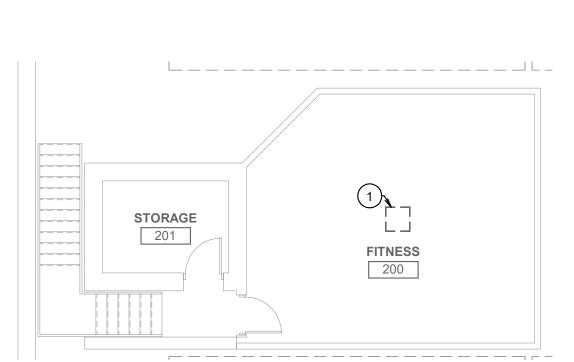


GENERAL NOTES & LEGEND -ELECTRICAL

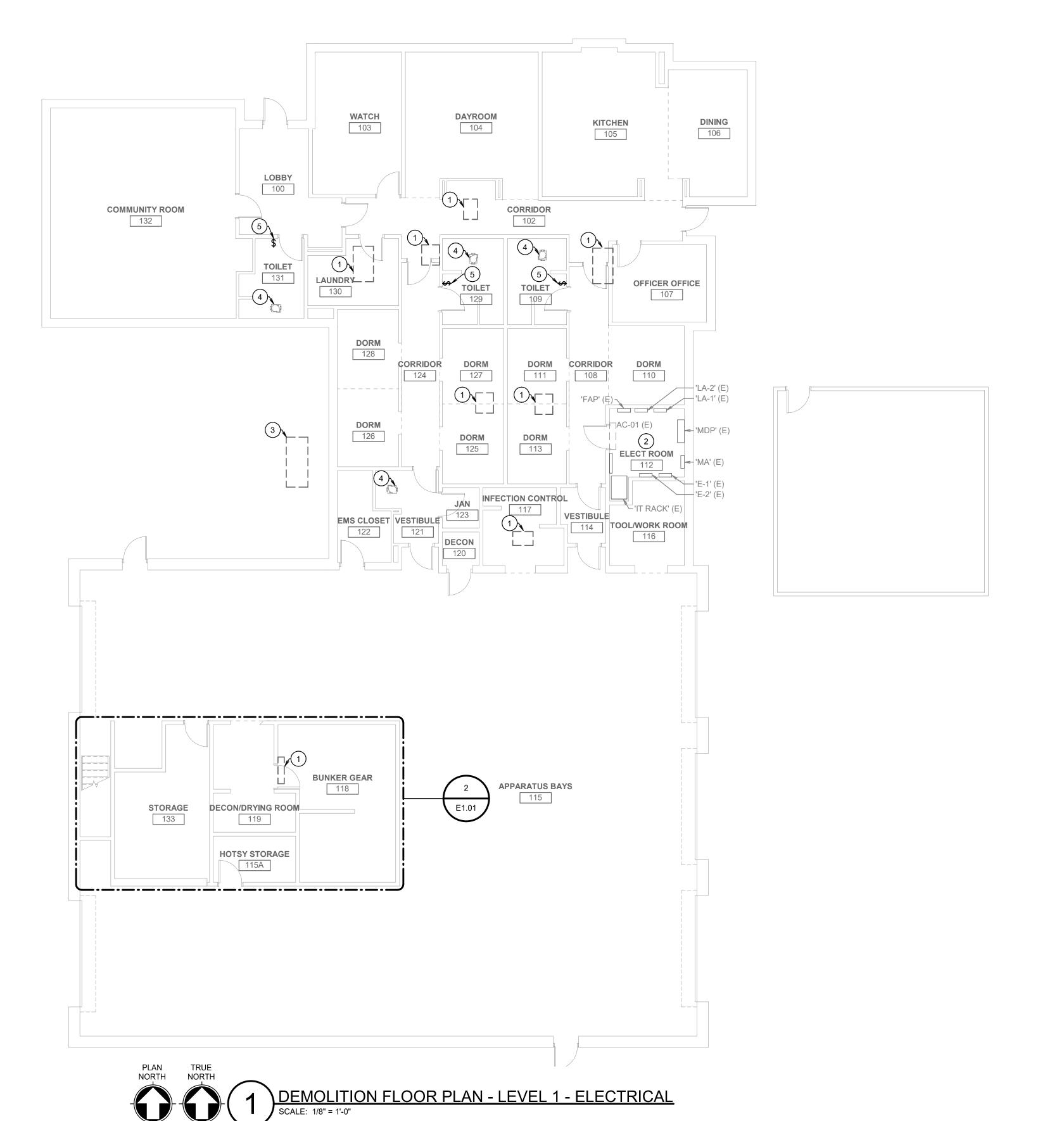
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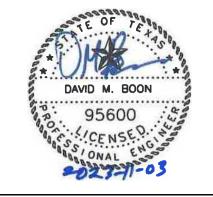
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DEMOLITION FLOOR PLAN - MEZZANINE - ELECTRICAL



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NOTES BY SYMBOL 'O':

(4) EXISTING EXHAUST FAN TO REMAIN.

2 ALL EXISTING EQUIPMENT IN ROOM IS TO REMAIN.

1) EXISTING VRF INDOOR FAN COIL UNIT TO BE REMOVED. REMOVE EXISTING DISCONNECT SWITCH. EXISTING CIRCUIT TO REMAIN FOR REUSE.

5 REMOVE EXISTING SWITCH SERVING THE EXISTING TOILET EXHAUST FAN.

3 EXISTING CONDENSING UNIT TO BE REMOVED. REMOVE EXISTING DISCONNECT SWITCH AND CIRCUIT BACK TO SOURCE.



DEMOLITION FLOOR PLANS - ELECTRICAL

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## **GENERAL SHEET NOTES:**

NOTES BY SYMBOL 'O':

1) PROVIDE 30A/2P/NF DISCONNECT SWITCH. EXTEND EXISTING CIRCUIT RETAINED FOR REUSE TO NEW VRF UNIT.

2 NEW ELECTRICAL PANEL PROVIDED UNDER THE CONCURRENT GENERATOR UPGRADE PROJECT. PANEL IS TO BE UTILIZED FOR THE NEW HVAC LOADS AS

PROVIDE NEW TIMER WALL SWITCH TO SERVE THE EXISTING TOILET EXHAUST FAN. TIMER WALL SWITCH SHALL BE HUBBELL DT5060, OR APPROVED EQUAL. DEVICE COLOR SHALL MATCH EXISTING SWITCH SERVING THE TOILET LIGHTS. IF THE EXISTING SWITCH SERVES BOTH THE FAN AND LIGHTS IN THE ROOM,

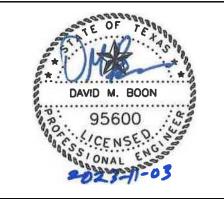
CONTRACTOR SHALL PROVIDE A SEPARATE SWITCH DEDICATED TO SERVE THE LIGHTS. CHANNEL WALL AS NECESSARY FOR NEW DEVICE INSTALLATION. PATCH AND REPAIR WALL TO MATCH SURROUNDING FINISH.

PROVIDE DUAL TECHNOLOGY INFRARED AND MOTION SENSING OCCUPANCY SENSOR INTERLOCKED WITH INDOOR AC UNIT AND ITS ASSOCIATED OUTSIDE AIR MOTORIZED CONTROL DAMPER.

5 LOCATE BAS PANEL ABOVE RELOCATED EQUIPMENT UNDER THE CONCURRENT GENERATOR PROJECT. COORDINATE EXACT LOCATION PRIOR TO INSTALLATION.

- ALL DISCONNECT SWITCHES SHALL BE RATED FOR 208V. ALL EXTERIOR DISCONNECT SWITCHES SHALL BE IN NEMA 3R ENCLOSURE.
- SERVICE RECEPTACLES SHALL BE PROVIDED SO ALL HVAC EQUIPMENT IS WITHIN 25-FEET OF AN OUTLET PER NEC 210.63. ALL EXTERIOR RECEPTACLES SHALL BE GFCI WEATHER-RESISTANT WITH WHILE-IN-USE COVER.





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