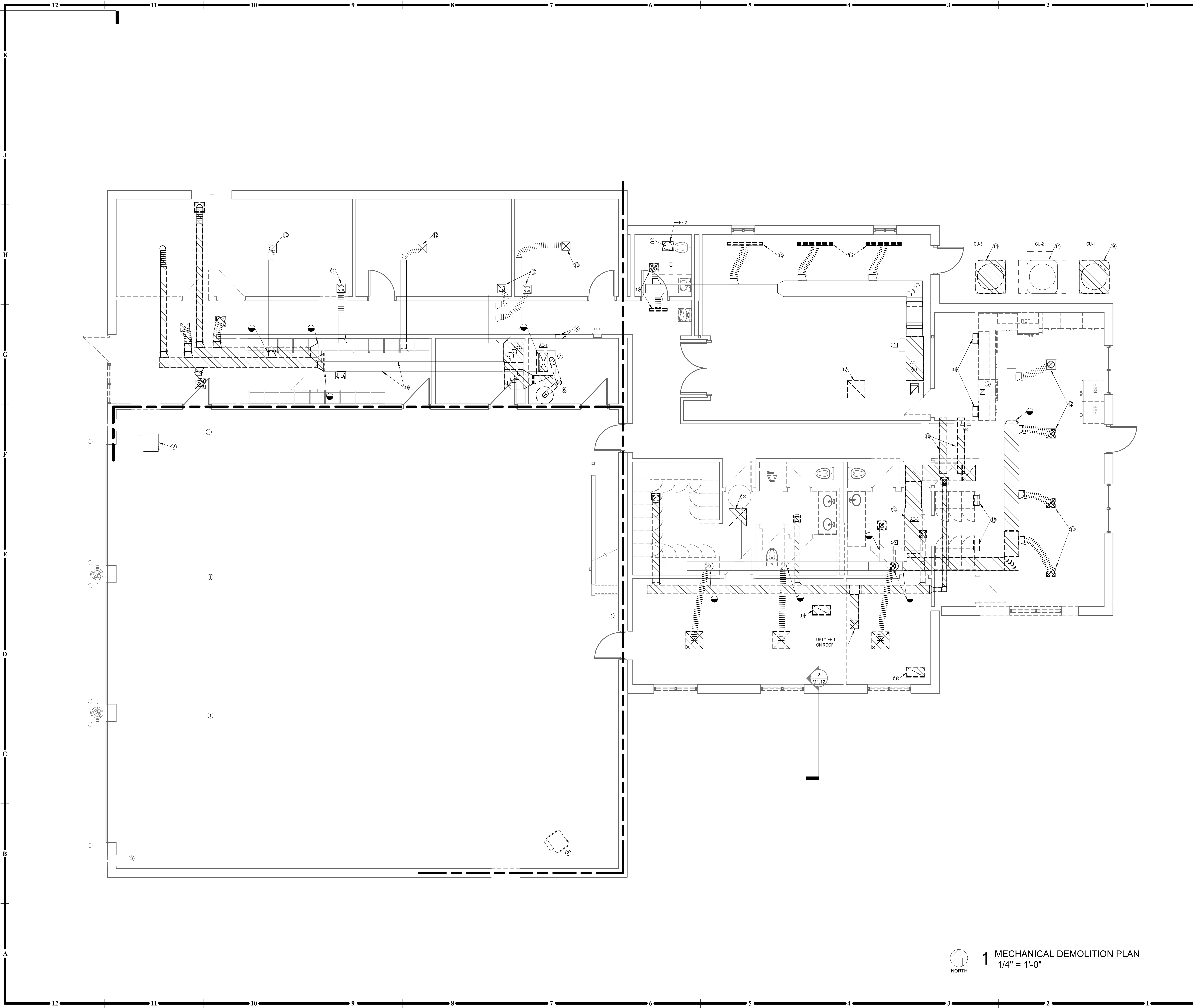


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GENERAL NOTES

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2. RECLAIM REFRIGERANT FROM REMOVED SYSTEMS AS REQUIRED.
3. RECYCLE/SALVAGE REMOVED AND REPLACED MATERIALS AND EQUIPMENT UNLESS NOTED OTHERWISE.
4. EXISTING CONDITIONS ARE BASED ON DRAWINGS. FIELD VERIFY ALL EXISTING CONDITIONS.

PLAN NOTES:

1. REMOVE VEHICLE EXHAUST SYSTEM IN ITS ENTIRETY INCLUDING FAN, DUCT, HOSE, RAILS AND SUPPORTS.
2. EXISTING UNIT HEATER TO REMAIN. ALTERNATE 5: REPLACE EXISTING UNIT HEATER. INSPECT EXISTING FLUES FOR DAMAGE. REPLACE EXISTING FLUES IF ANY RUST OR OTHER DAMAGE APPEARS.
3. INSPECT EXISTING FLUES FOR DAMAGE. REPLACE EXISTING FLUES IF ANY RUST OR OTHER DAMAGE APPEARS.
4. EXISTING EXHAUST TO BE REPLACED.
5. EXISTING HOOD TO BE REMOVED.
6. ONCE ASSOCIATED EQUIPMENT IS NO LONGER IN USE, REMOVE EXISTING FLUES IN THEIR ENTIRETY. COORDINATE PATCHING OPENINGS IN CEILING AND ROOF WITH GC.
7. AFTER INSTALLATION AND CONNECTION OF NEW OFFICE SYSTEM REMOVE EXISTING SPLIT SYSTEM IN ITS ENTIRETY INCLUDING PIPING, SUPPORTS AND ALL APPURTENANCES. COORDINATE PATCHING OF WALL AND CEILING PENETRATIONS WITH GC.
8. REMOVE TRANSFER GRILLS. COORDINATE PATCHING WALLS WITH ARCHITECTURAL.
9. AFTER INSTALLATION AND CONNECTION OF NEW OFFICE SYSTEM, REMOVE EXISTING SPLIT SYSTEM IN ITS ENTIRETY INCLUDING PIPING, PAD AND ALL APPURTENANCES. COORDINATE PATCHING OF WALL PENETRATIONS WITH GC.
10. EXISTING SPLIT SYSTEM IN LOFT TO BE REPLACED.
11. EXISTING CONDENSING UNIT TO BE REPLACED.
12. REPLACE EXISTING DIFFUSER.
13. AFTER INSTALLATION AND CONNECTION OF BOTH NEW RTUS AND DUCTWORK, REMOVE EXISTING SPLIT SYSTEM IN ITS ENTIRETY INCLUDING PIPING, CONTROLS AND ALL APPURTENANCES. COORDINATE PATCHING OF PENETRATIONS WITH GC.
14. AFTER INSTALLATION AND CONNECTION OF BOTH RTUS AND DUCTWORK, REMOVE EXISTING SPLIT SYSTEM IN ITS ENTIRETY INCLUDING PIPING, PAD AND ALL APPURTENANCES. COORDINATE PATCHING OF WALL PENETRATIONS WITH GC.
15. EXISTING DIFFUSER TO BE RELOCATED IN SHIFTED CEILING GRID.
16. EXISTING RETURN GRILL TO BE REMOVED.
17. EXISTING RETURN TO BE RELOCATED.
18. EXISTING TRANSFER DUCT MAY BE REMOVED WHERE EXPOSED DURING CONSTRUCTION.
19. EXISTING DUCTWORK MAY REMAIN TO BE REUSED ABOVE EXISTING CEILING THAT REMAINS. SEE NEW WORK.



DM1.11
 ISSUE DATE: 22 JANUARY, 2021
 HOEFER WYSOCKI #: 198161

1 MECHANICAL DEMOLITION PLAN
 1/4" = 1'-0"

LEGEND

MECHANICAL

CD	CONDENSATE DRAIN PIPING
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RDG	REFRIGERANT DISCHARGE GAS
XXXXXX	PIPING TO BE DEMOLISHED

MECHANICAL ABBREVIATIONS:

EA	EXHAUST AIR
FA	RELIEF AIR
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR

[Symbol]	SLOT DIFFUSER
[Symbol]	SPIN-IN WITH DAMPER IN NECK
[Symbol]	AIR FLOW DIRECTION
[Symbol]	RETURN GRILLE/DUCT
[Symbol]	SUPPLY DIFFUSER/DUCT. ARROWS INDICATE THROW DIRECTION, NO ARROWS = 4-WAY
[Symbol]	EXHAUST GRILLE/DUCT

[Symbol]	MVD	MANUAL VOLUME DAMPER
[Symbol]	BDD	BACKDRAFT DAMPER
[Symbol]	FD	FIRE DAMPER
[Symbol]	FSD	FIRE/SMOKE DAMPER
[Symbol]	AVD	AUTOMATIC VOLUME DAMPER
[Symbol]	SD	SMOKE DAMPER
[Symbol]	M	MOTORIZED DAMPER

[Symbol]	T	THERMOSTAT
[Symbol]	S	TEMPERATURE SENSOR
[Symbol]	H	HUMIDISTAT
[Symbol]	B	BALL VALVE
[Symbol]	G	GLOBE VALVE
[Symbol]	C	CHECK VALVE
[Symbol]	F	BUTTERFLY VALVE
[Symbol]	B	BALANCING VALVE
[Symbol]	T	TRIPLE DUTY/STOP-CHECK VALVE
[Symbol]	E	ELECTRICALLY ACTIVATED VALVE
[Symbol]	P	PRESSURE REDUCING VALVE
[Symbol]	R	PRESSURE RELIEF VALVE
[Symbol]	C	COOLING TOWER HAT/BALANCE VALVE
[Symbol]	T	TEMPERATURE INDICATOR
[Symbol]	P	PRESSURE INDICATOR
[Symbol]	P	PETE'S PLUG
[Symbol]	M	MANUAL AIR VENT
[Symbol]	E	ELBOW DOWN
[Symbol]	E	ELBOW UP
[Symbol]	F	FLEXIBLE PIPE CONNECTION
[Symbol]	S	SUCTION DIFFUSER
[Symbol]	S	STRAINER

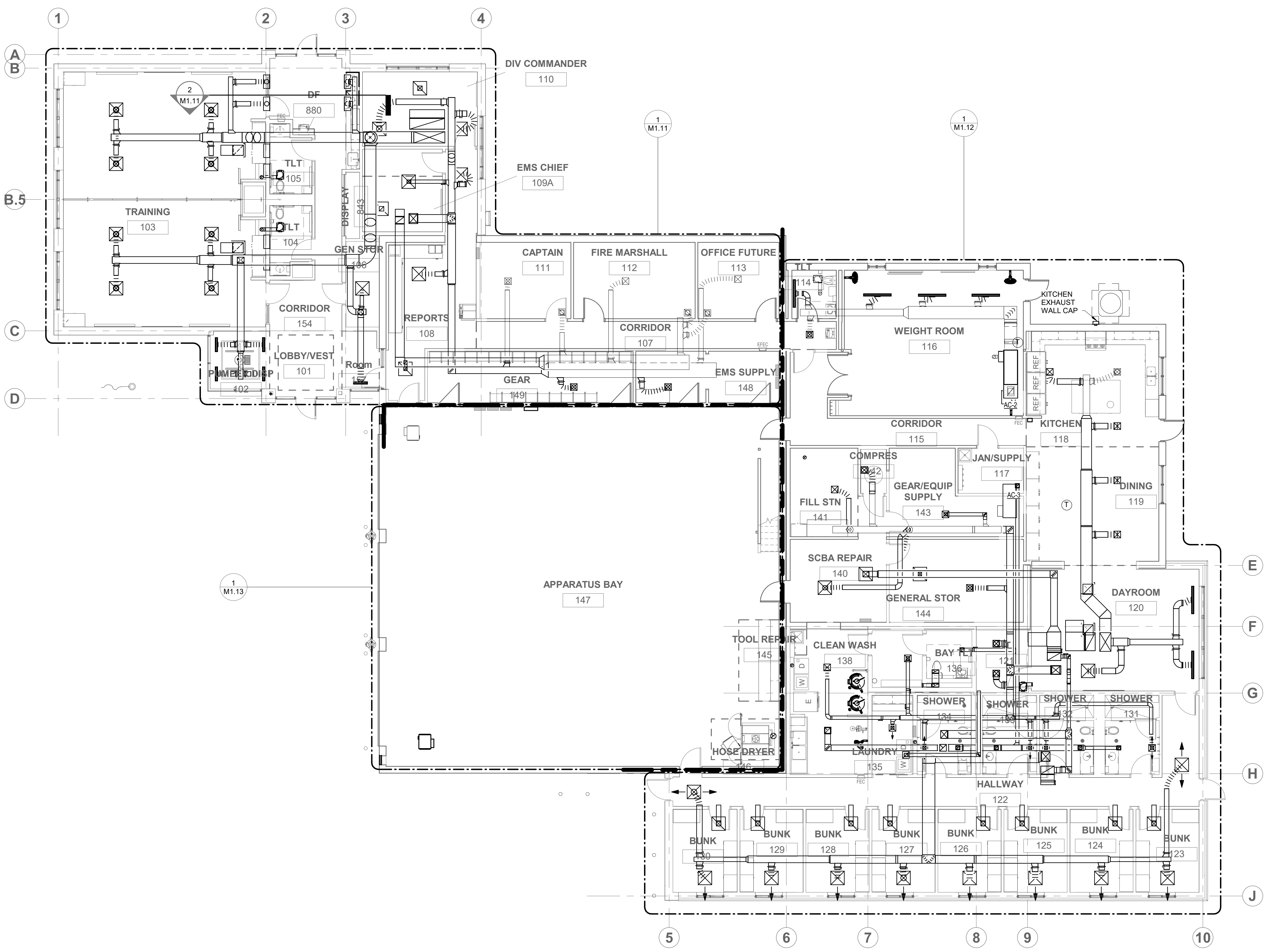
[Symbol]	VAV	EQUIPMENT TYPE
[Symbol]	4	EQUIPMENT ID
[Symbol]	C	TERMINAL DEVICE ID
[Symbol]	22x22	NECK SIZE
[Symbol]	+	DESIGN AIRFLOW (CFM)
[Symbol]	1	MECHANICAL NOTE
[Symbol]	○	CONNECT TO EXISTING
[Symbol]	○	LIMIT OF DEMOLITION
[Symbol]	~	CONTINUATION

INSTRUMENTATION

A.I.	ANALOG INPUT
A.O.	ANALOG OUTPUT
D.I.	DIGITAL INPUT
D.O.	DIGITAL OUTPUT
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
FIC	FLOW INDICATING CONTROLLER
H	HIGH
L	LOW
PAL	PRESSURE ALARM LOW
PDS	PRESSURE DIFFERENTIAL SWITCH
PI	PRESSURE INDICATOR
TE	TEMPERATURE ELEMENT
TI	TEMPERATURE INDICATOR
TIC	TEMPERATURE INDICATING CONTROLLER
TS	THERMOSTAT
T	TEMPERATURE
TT	TRANSMITTER/THERMOSTAT
VFD	VARIABLE FREQUENCY DRIVE
YA	EVENT (FAULT) ALARM
YC	EVENT (FAN/PUMP) CONTROLLER
YI	EVENT STATUS INDICATION
YZ	EVENT ACTUATOR
ZS	POSITION SWITCH
[Symbol]	INTERLOCK WIRING OR DEVICE

GENERAL ANNOTATION ABBREVIATIONS

MEP	MECHANICAL, ELECTRICAL, PLUMBING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE



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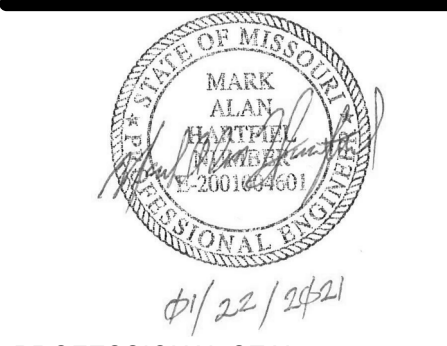
HOEFER WYSOCKI
 11460 Tomahawk Creek Parkway, Suite 400, Leawood, Kansas 66211
 P: 913.307.3700 F: 913.307.3710 www.hoeferwysocki.com

CONSTRUCTION DOCUMENTS

GLADSTONE FIRE STATION 2

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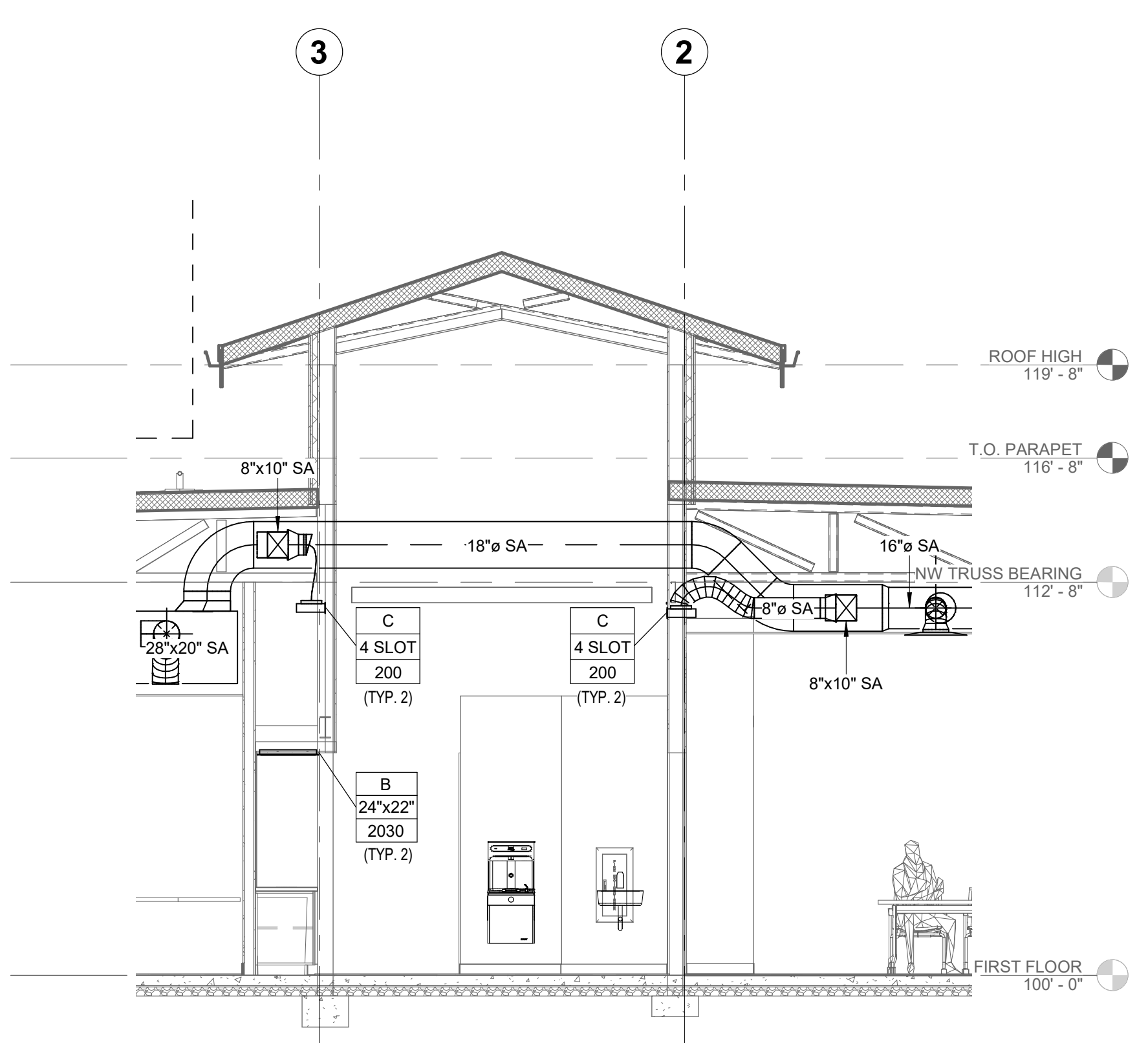
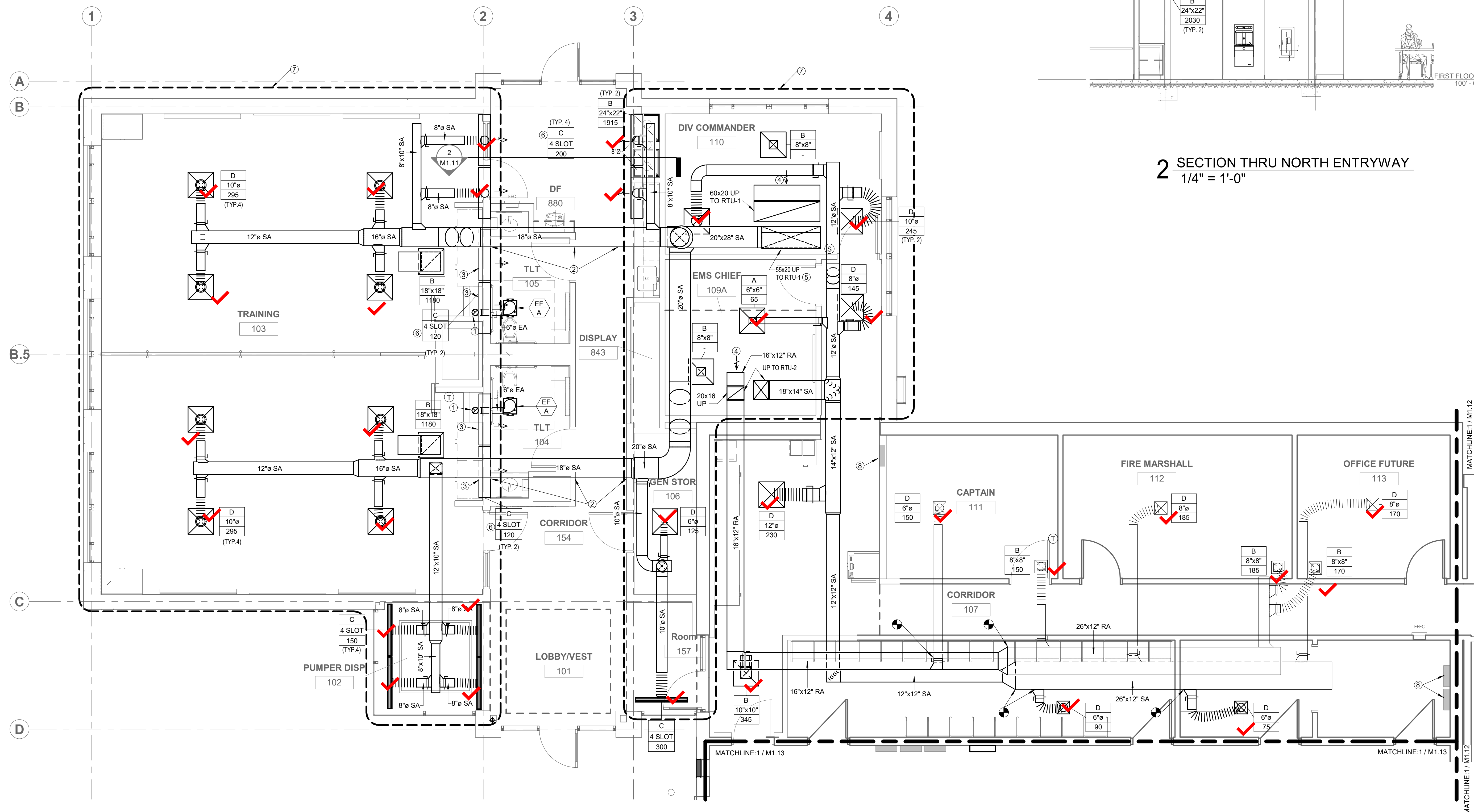


PROFESSIONAL SEAL
MO.00
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1 MECHANICAL OVERALL FLOOR PLAN
 1/8" = 1'-0"

MECHANICAL OVERALL PLAN

2/18/2021 4:57:18 PM



2 SECTION THRU NORTH ENTRYWAY
1/4" = 1'-0"

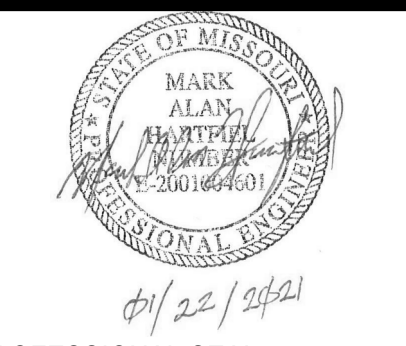
1 TRAINING & OFFICES
MECHANICAL FLOOR PLAN
1/4" = 1'-0"

GENERAL NOTES

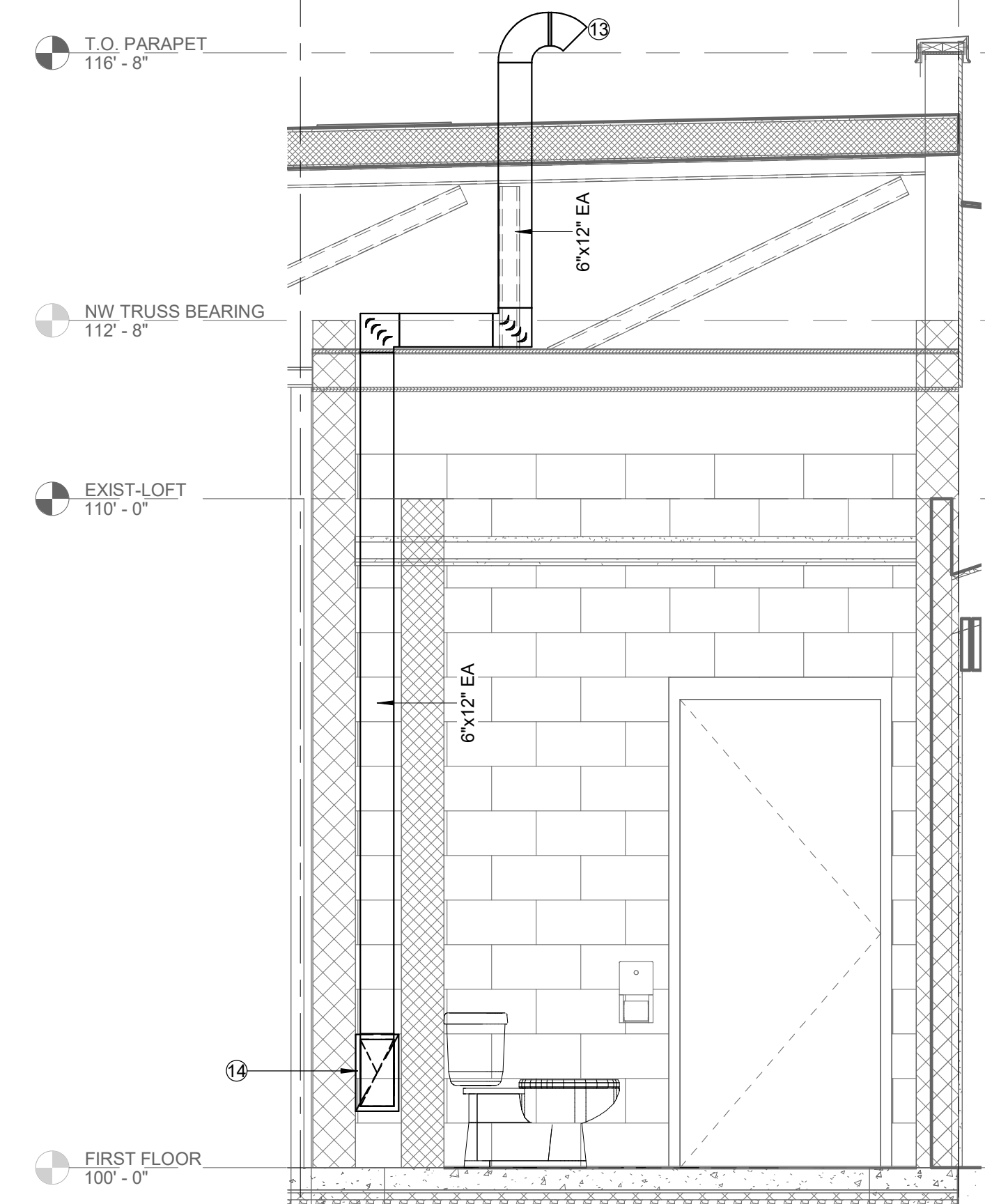
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PLAN NOTES:

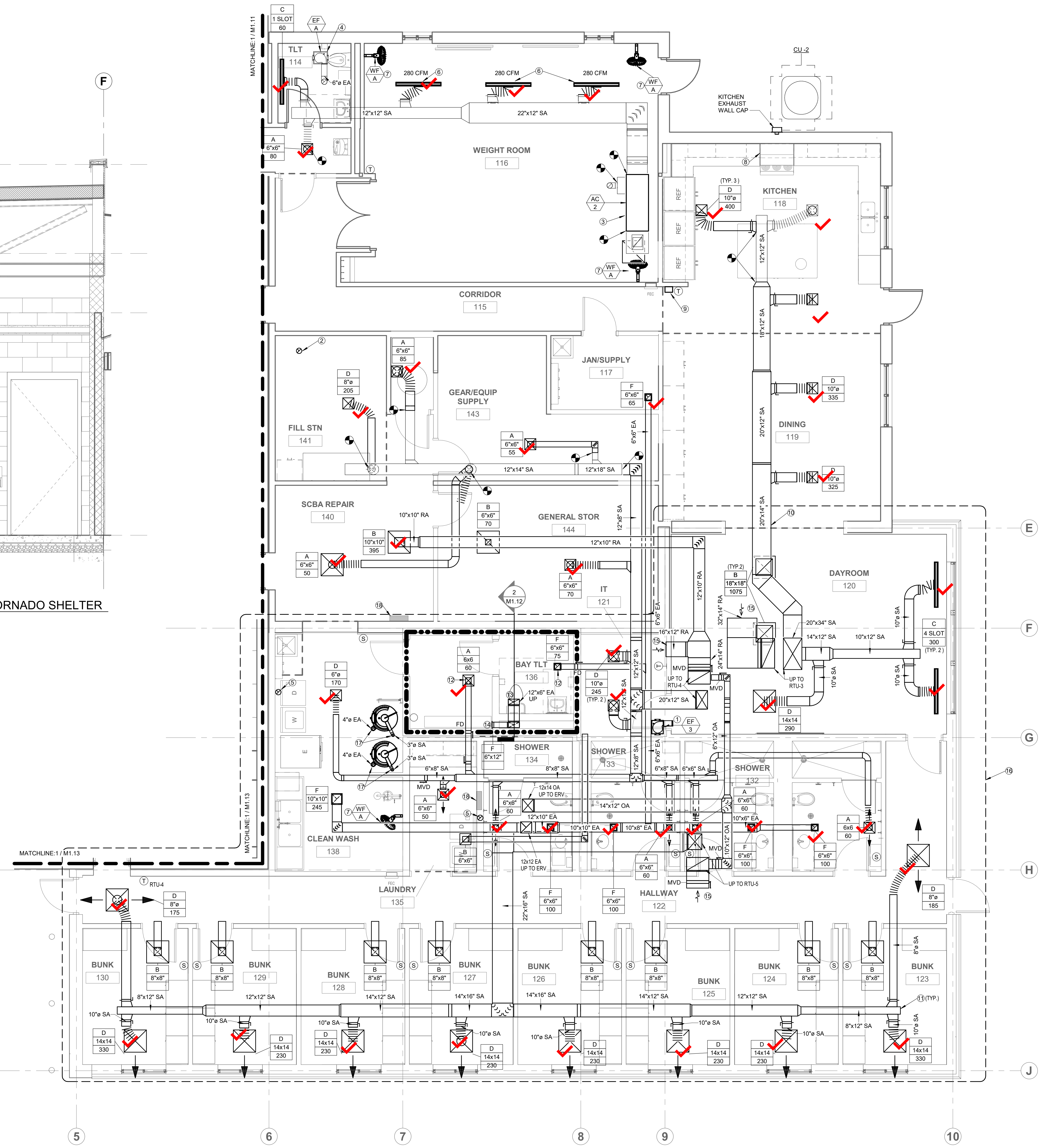
- DUCT THROUGH ADJACENT SOFFIT UP TO ROOF CAP ON CURB WITH OUTLET 24" ABOVE FINISHED ROOF. PAINT ROOF CAP TO MATCH ADJACENT PER ARCHITECT.
- SPIRAL OR EQUIVALENT FLAT OVAL EXPOSED DUCT. SUPPORT WITH CHANNEL FROM WALL TO WALL WITH NO HANGERS FROM THE CEILING WHERE EXPOSED. PAINT EXPOSED DUCT PER ARCHITECT.
- TRANSFER ABOVE THE CEILING.
- OPEN TO PLENUM. COVER OPENING WITH BIRD SCREEN.
- ADJUST HEIGHT OF CURB AS NEEDED TO OFFSET TO OPENING IN TRUSSES.
- LOCATE ABOVE SUSPENDED CEILING. COORDINATE ELEVATION WITH ARCHITECT.
- ALL ITEMS WITHIN PLENUM TO BE PLENUM RATED.
- ELECTRICAL PANELBOARD. DO NOT ROUTE DUCTWORK OVER DEDICATED PANEL SPACE.



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2 SECTION THRU TORNADO SHELTER
1/2" = 1'-0"



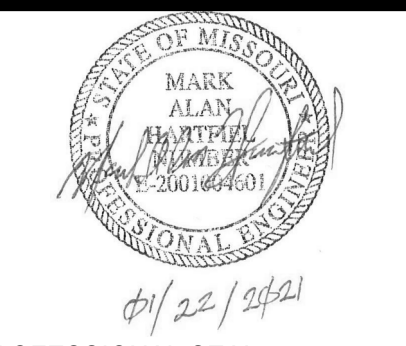
1 LIVING QUARTERS
MECHANICAL FLOOR PLAN
1/4" = 1'-0"

GENERAL NOTES

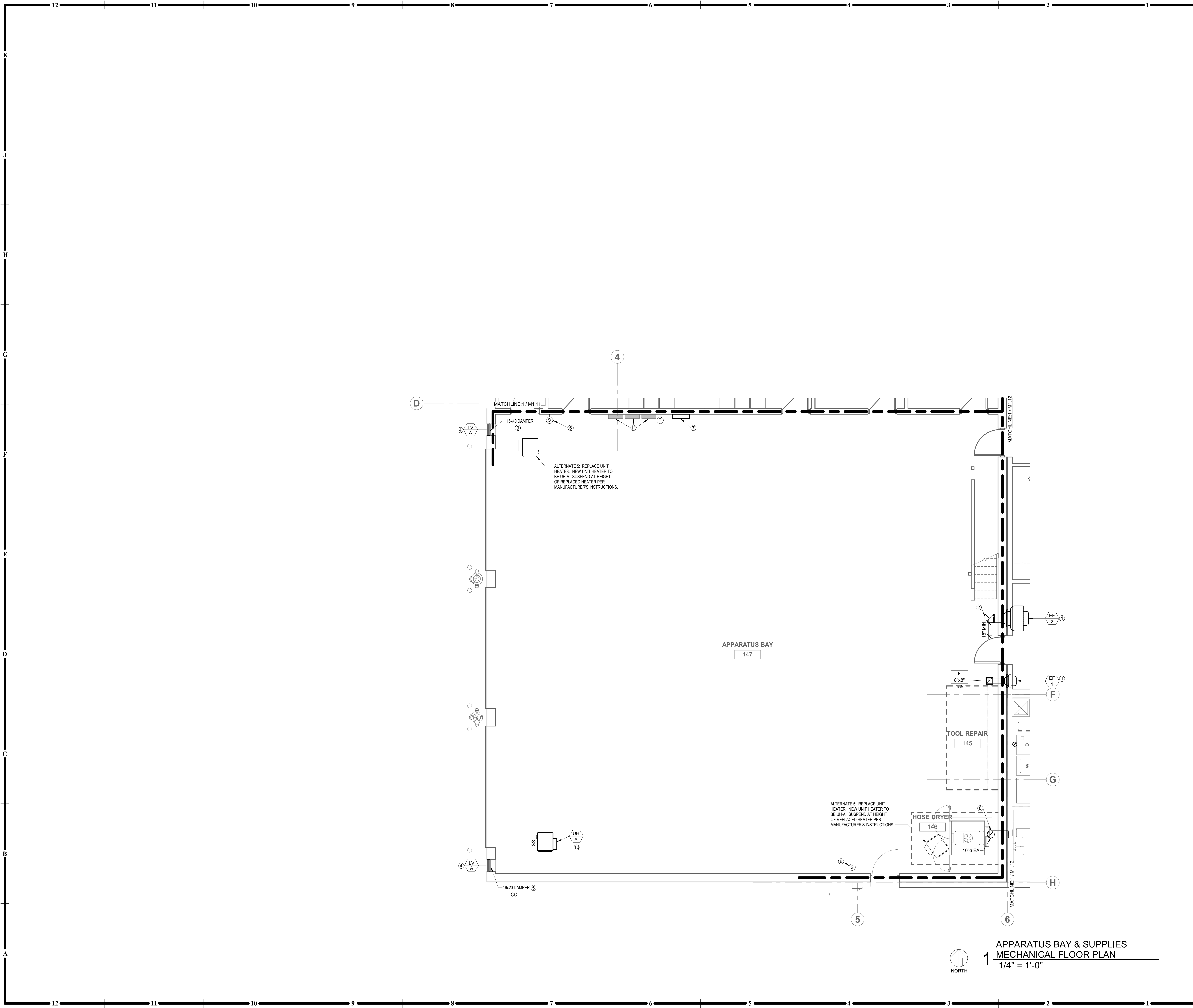
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PLAN NOTES:

- FAN TO DISCHARGE TO ADJACENT PLENUM COVER END OF DUCT WITH SCREEN.
- PROVIDE AND INSTALL SCBA COMPRESSOR AIR INTAKE PER COMPRESSOR MANUFACTURER. 2" PVC. SEE DETAIL 9M500. PAINT TO MATCH ADJACENT PER ARCHITECT.
- REPLACE EXISTING SPLIT SYSTEM IN THE LOFT.
- REPLACE EXISTING FAN DUCT TO NEW ROOF CAP.
- PROVIDE AND INSTALL DRYER BOX RECESSED IN WALL BY "DRYERBOX" OR EQUAL WITH FLEXIBLE CONNECTION TO DRYER AS SPECIFIED. EXTEND DRYER VENT THROUGH ROOF. SEE DETAIL 11M500.
- EXISTING DIFFUSER TO BE RELOCATED.
- PROVIDE AND INSTALL WALL FAN CENTERED AT 74" ABOVE FINISHED FLOOR PER MANUFACTURER'S INSTRUCTIONS. COORDINATE HEIGHT AND LOCATION WITH ARCHITECT.
- PROVIDE AND INSTALL KITCHEN HOOD. GREENHECK GRIS-2-36-R-5-A1 NFPA 101 COMPLIANT. WALL MOUNTED, 36" LONG WITH INTEGRAL 500CFM REAR DISCHARGE FAN AND GAS RANGE DISCONNECT. MOUNT HOOD 36" ABOVE COOK TOP. INCLUDE ADA CONTROL OPTION AND MOUNT AT AN ACCESSIBLE HEIGHT. COORDINATE CONTROL LOCATION WITH ARCHITECT. CONNECT GAS RANGE DISCONNECT PER MANUFACTURER.
- MANUAL PULL STATION FOR RANGE HOOD FIRE SUPPRESSION. PROVIDE WITH HOOD. INSTALLATION AND CONNECTION BY ELECTRICAL.
- ROUTE DUCT BELOW ADDITION ROOF AND OVER EXISTING WALL IN OVERBUILD.
- COORDINATE LOCATION OF DUCT WITH CEILING FAN SUPPORT.
- TORNADO SHELTER. CONNECTION TO DIFFUSERS AND GRILLS TO BE MADE WITH ELBOW A MINIMUM OF 30 LONG. CONSTRUCTED OF A MINIMUM 3/16" THICK STEEL PLATE. ANCHOR ELBOWS AS REQUIRED TO RESIST PENETRATION. COORDINATE WITH STRUCTURAL.
- RUN 6X12 FROM ROOF PENETRATION ABOVE TORNADO SHELTER LID. TURN DOWN INTO SHELTER WITH ELBOW CONSTRUCTED OF A MINIMUM 3/16" THICK STEEL PLATE FOR A MINIMUM OF 18" DOWN AND ACROSS LID. ANCHOR ELBOWS AS REQUIRED TO RESIST PENETRATION. COORDINATE WITH STRUCTURAL. PROVIDE AND INSTALL A FIRE DAMPER AT THE PENETRATION OF THE TORNADO SHELTER LID.
- REGISTER FOR TORNADO SHELTER TO BE MOUNTED WITH BOTTOM OF GRILLE 12" ABOVE FINISHED FLOOR. REGISTER TO BE NORMALLY CLOSED.
- OPEN TO PLENUM. COVER OPENING WITH BIRD SCREEN.
- ALL ITEMS WITHIN PLENUM TO BE PLENUM RATED.
- INSTALL WATER HEATER FLUE AND COMBUSTION AIR INTAKE THROUGH THE ROOF AND TERMINATE PER MANUFACTURER.
- ELECTRICAL PANELBOARD. DO NOT ROUTE DUCTWORK OVER DEDICATED PANEL SPACE.



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1 APPARATUS BAY & SUPPLIES
MECHANICAL FLOOR PLAN
1/4" = 1'-0"

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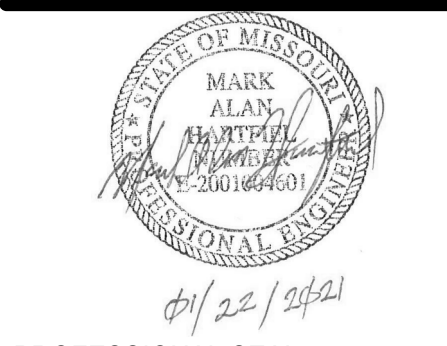
- WALL MOUNTED EXHAUST FAN. SEE DETAIL 6M500. INSTALL A MINIMUM OF 2" ABOVE ADJACENT ROOF. REUSE EXISTING PENETRATION WHERE APPLICABLE.
- DUCT DOWN TO 7'-0" ABOVE FINISHED FLOOR. COVER END WITH BIRD SCREEN.
- PROVIDE INTERLOCK TO OPEN DAMPER WHEN CONTROL INDICATES TO ENERGIZE EF-2.
- LOCATE LOUVER PER ARCHITECTURAL.
- HALF THE LOUVER TO REMAIN OPEN CONTINUOUSLY.
- CARBON MONOXIDE AND NITROUS OXIDE SENSOR, MACUROD CM-6 AND TS-6-ND OR EQUAL TIED TO EF-2 CONTROL.
- GARAGE FAN CONTROL, MACUROD DVP-120 OR EQUAL, INTERLOCKED WITH FAN EF-2. IN ADDITION, PROVIDE AND INSTALL COOLING THERMOSTAT WITH MANUAL ON/OFF SWITCH WIRED THROUGH ARMSTRONG RELAY PANEL TO ENERGIZE EF-2 FOR VENTILATION WHEN MANUALLY TURNED ON AND SPACE TEMPERATURE ABOVE SETPOINT AND A TIMER SWITCH TO ENERGIZE THE FAN FOR A PERIOD OF 15 MINUTES TO TWO HOURS.
- PROVIDE AND INSTALL DUCT VENTING HOSE DRYER PER MANUFACTURER. INCLUDE TRANSITION FROM CABINET TO 10" ALUMINUM DUCT. INCLUDE BACKDRAFT DAMPER AT CEILING LEVEL. DUCT THROUGH ROOF TO GOOSENECK. SEE DETAIL 11 M500.
- EXISTING FLUE MAY BE REUSED. VERIFY COMPLIANCE WITH UNIT HEATER MANUFACTURER'S INSTRUCTIONS.
- NEW UNIT HEATER SUSPEND AT HEIGHT OF OTHER UNIT HEATERS PER MANUFACTURER'S INSTRUCTIONS.
- ELECTRICAL PANELBOARD. DO NOT ROUTE DUCTWORK OVER DEDICATED PANEL SPACE.



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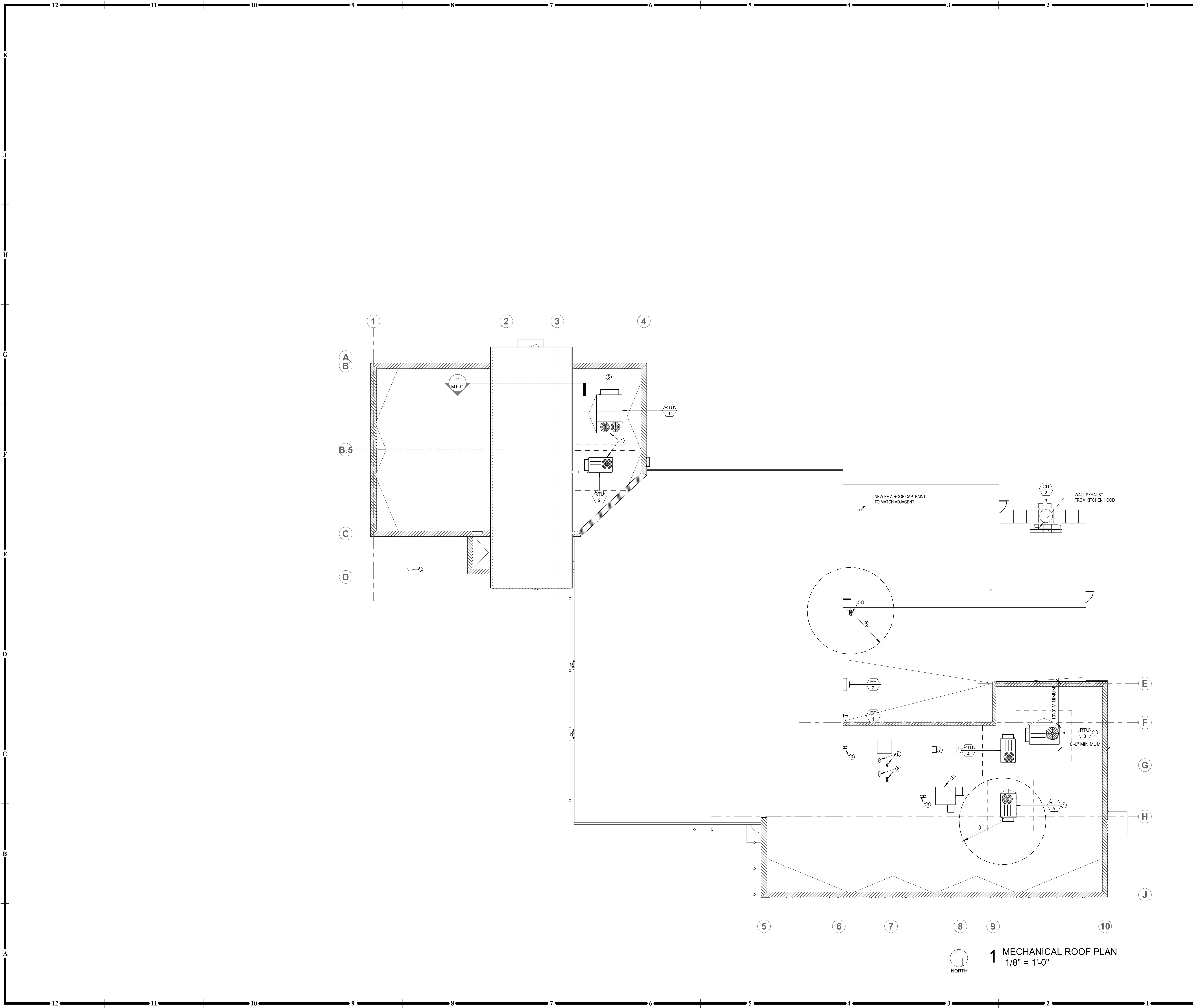
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1 MECHANICAL ROOF PLAN
 1/8" = 1'-0"

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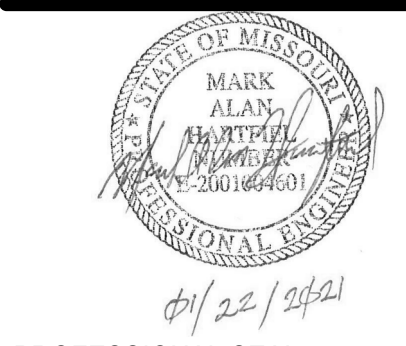
PLAN NOTES:

1. MOUNT ROOFTOP UNIT ON CURB WITH BOTTOM OF OUTSIDE AIR INTAKE A MINIMUM OF 24" ABOVE FINISHED ROOF. SEE DETAIL 10M500. MAINTAIN ALL REQUIRED CLEARANCES. ROUTE CONDENSATE TO GUTTER.
2. CURB MOUNT ERV PER DETAIL 10M500 WITH OUTLET AND INLET A MINIMUM OF 24" ABOVE FINISHED ROOF.
3. DRYER VENT. SEE DETAIL 11M500.
4. FILLING STATION AIR INTAKE. SEE 9M500. ORIENT AWAY FROM EXHAUST.
5. MAINTAIN 10'-0" CLEARANCE BETWEEN OUTSIDE AIR INTAKE AND ALL EXHAUST AND VENTS.
6. REFER TO A1.12 FOR FALL PROTECTION EXTENTS.
7. TORNADO SHELTER VENT. SEE DETAIL 11M500.
8. WATER HEATER FLUE AND COMBUSTION INTAKE THROUGH ROOF. INSTALL AND TERMINATE PER MANUFACTURER.

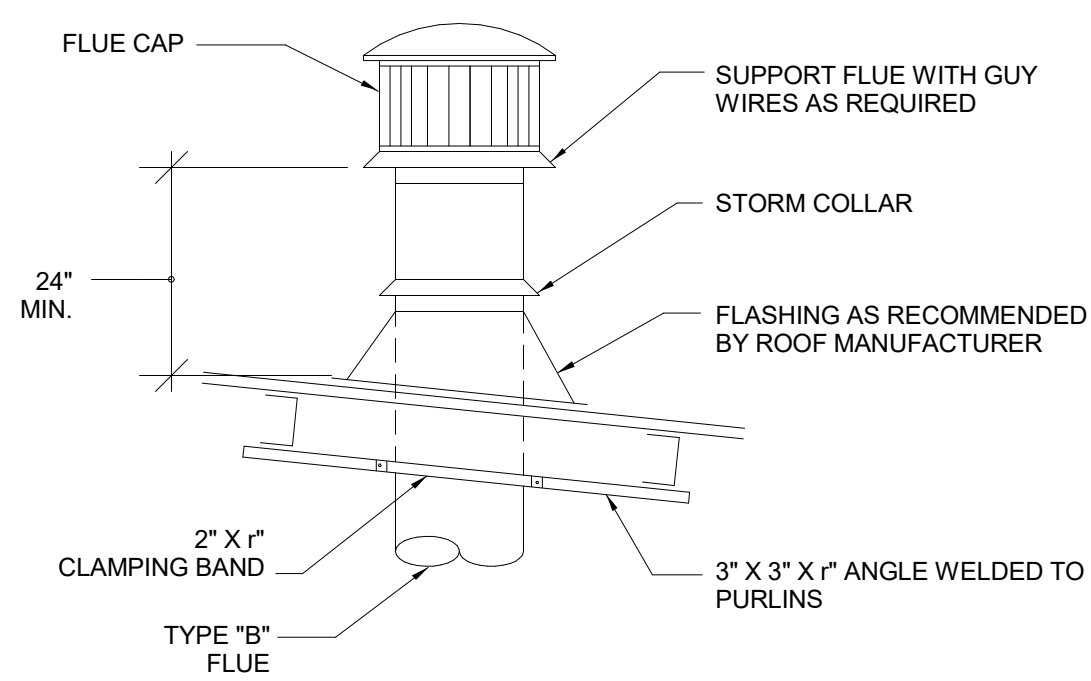
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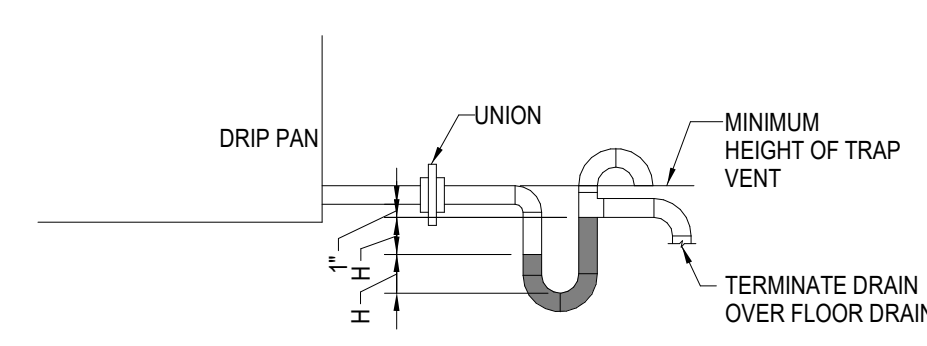
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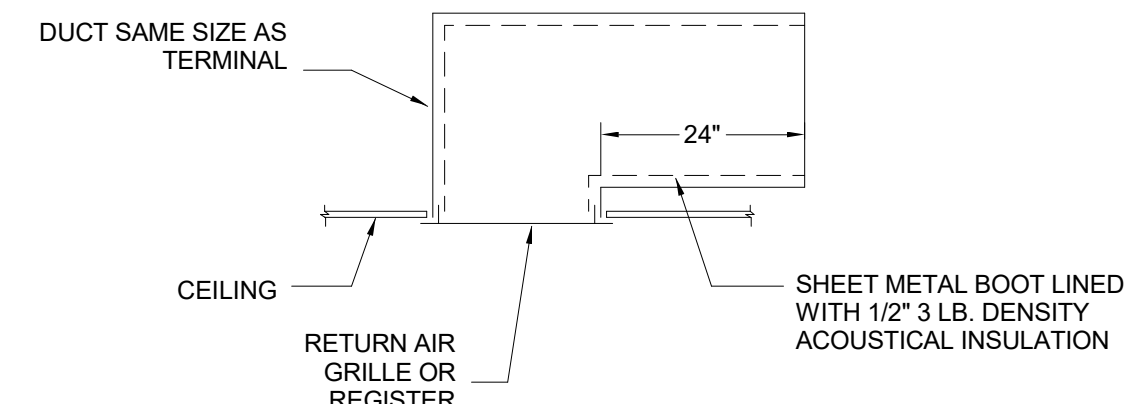
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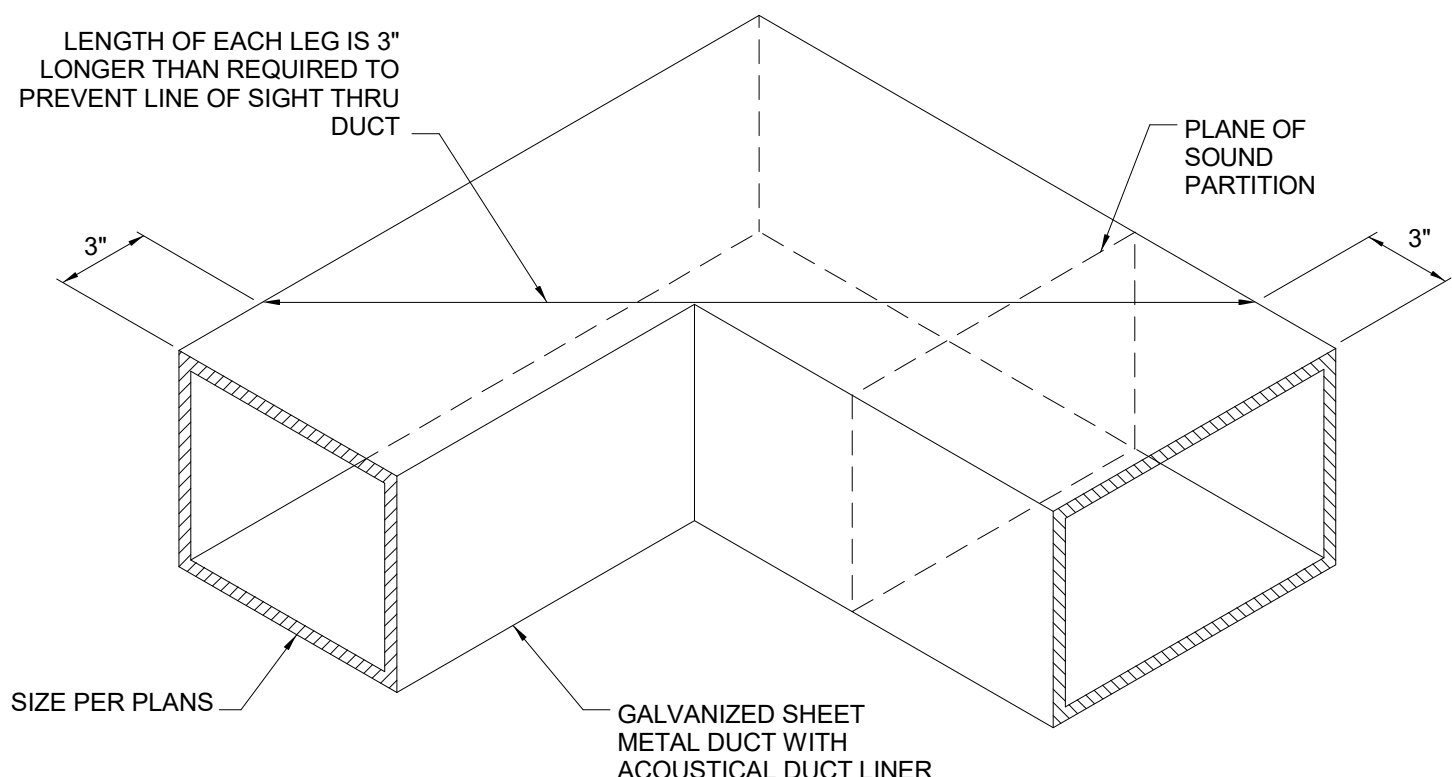
1 GAS VENT PIPE DETAIL
M500/ NTS



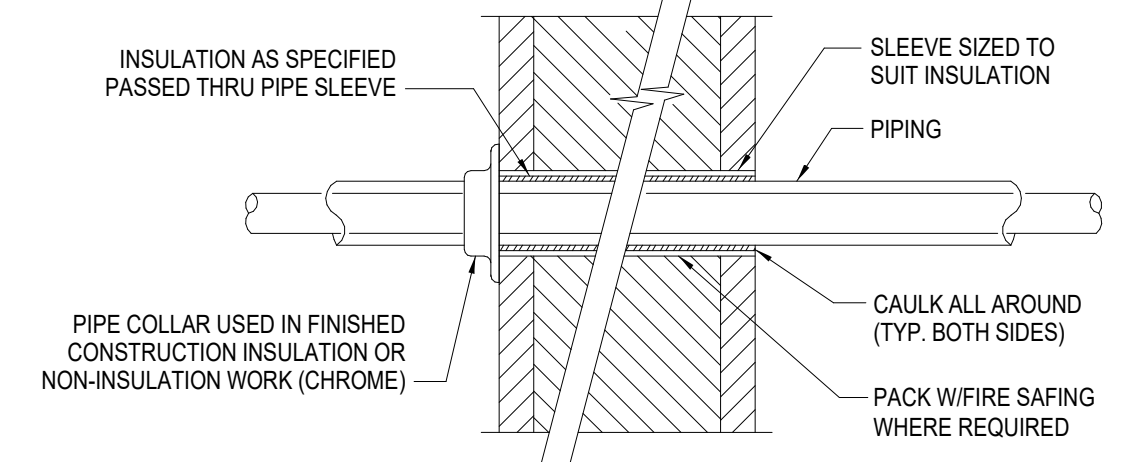
2 COIL TRAP DETAIL
M500/ NTS



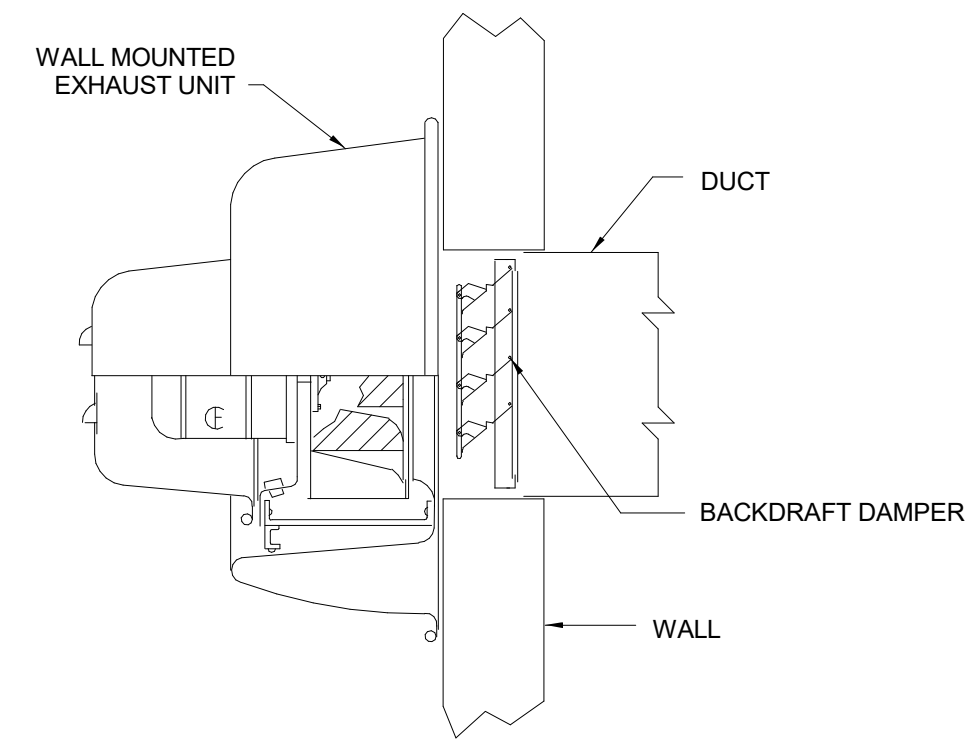
3 RETURN AIR BOOT DETAIL
M500/ NTS



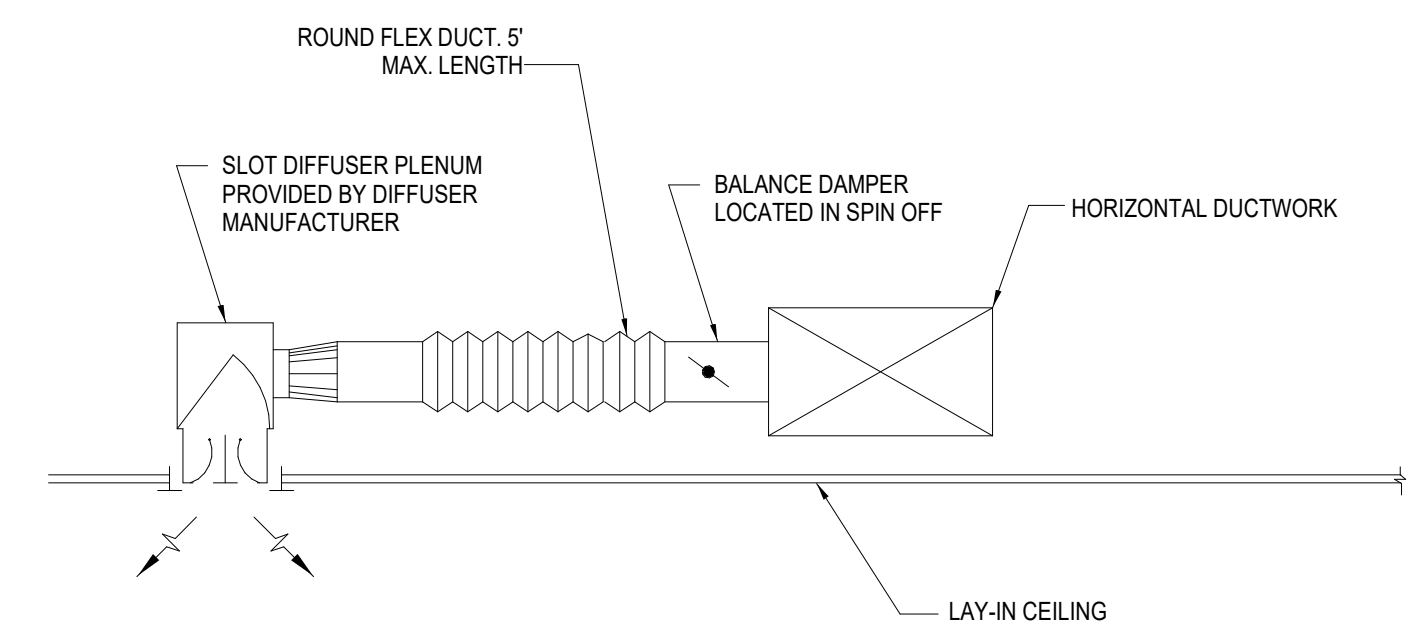
4 TRANSFER RETURN AIR BOOT DETAIL
M500/ NTS



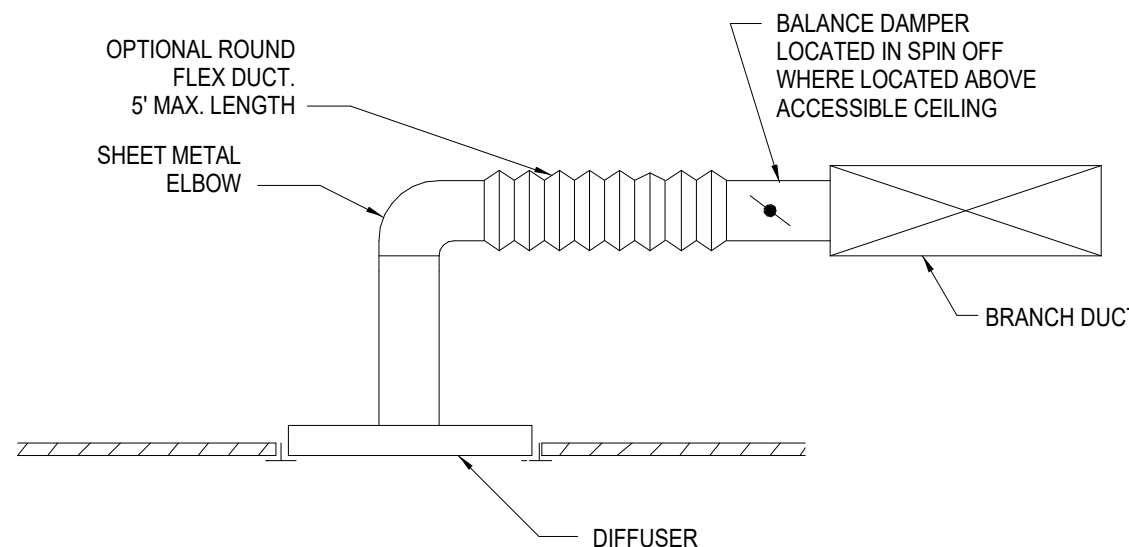
5 INTERIOR WALL PIPE PENETRATION DETAIL
M500/ NTS



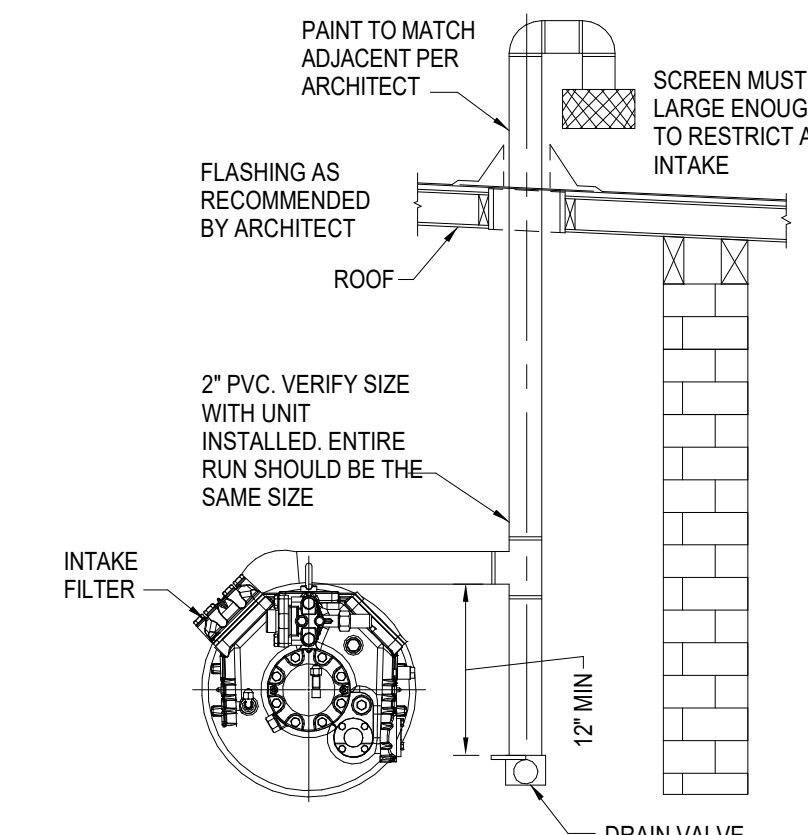
6 WALL EXHAUST FAN DTL
M500/ NTS



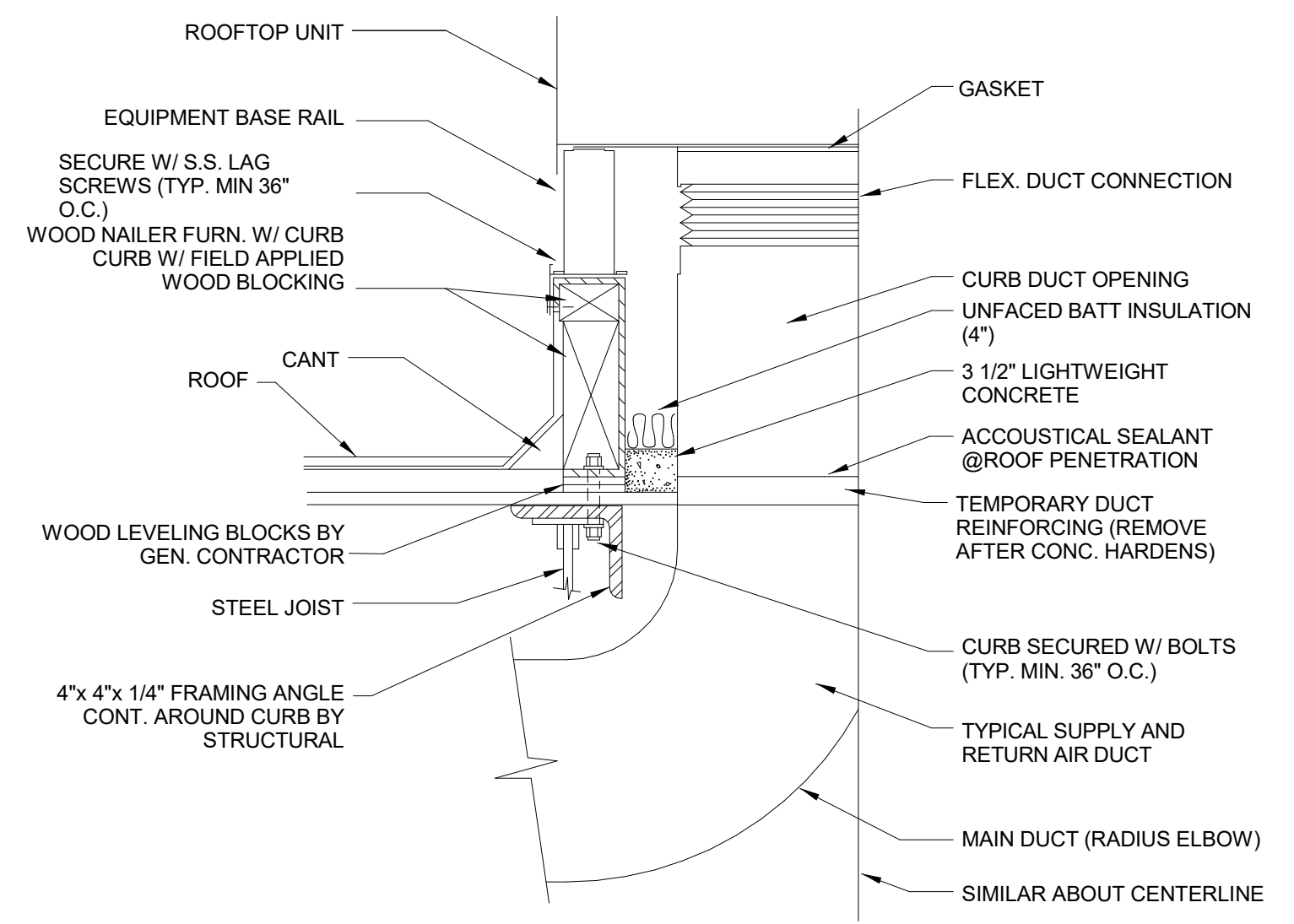
7 SLOT DIFFUSER DETAIL
M500/ NTS



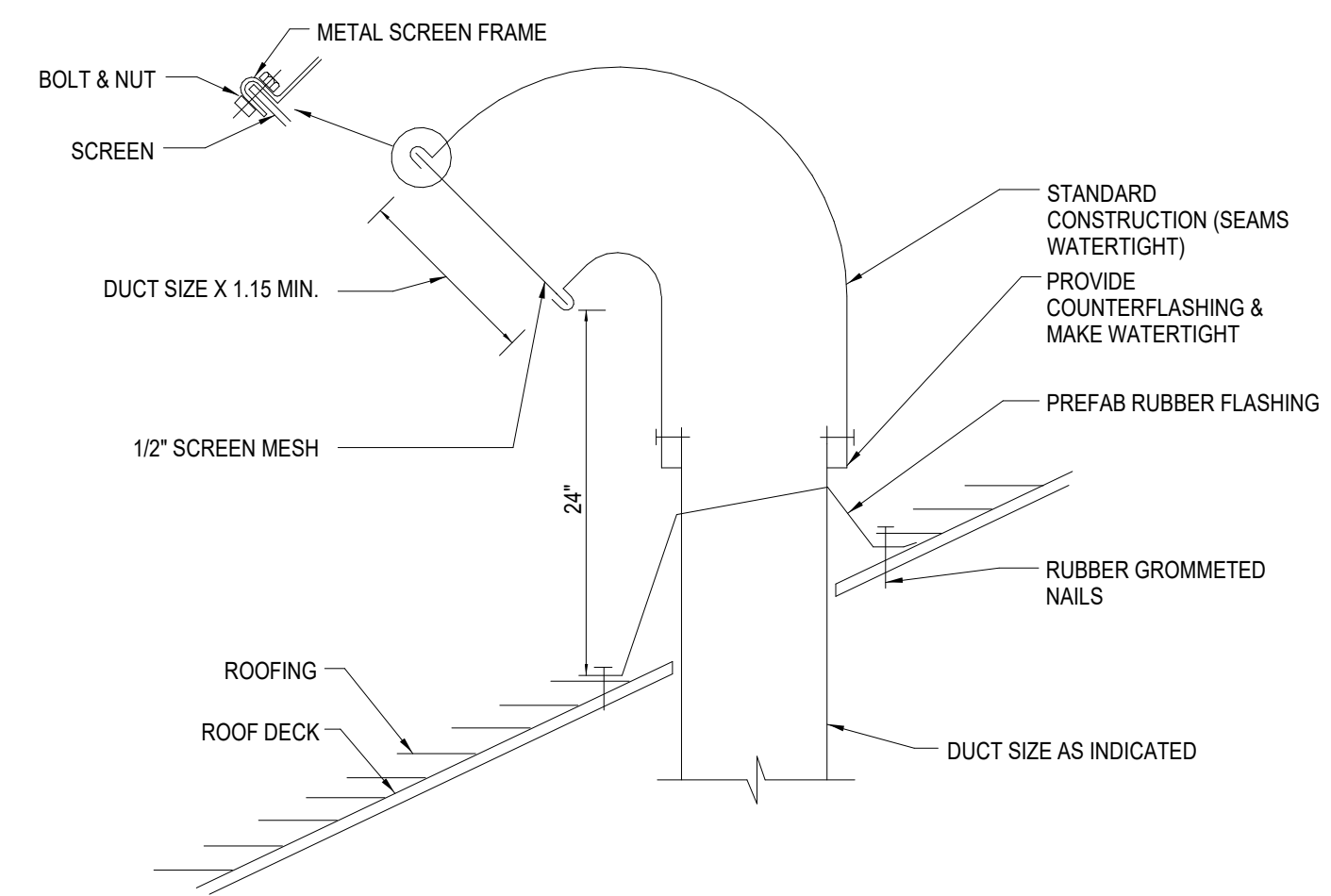
8 CEILING DIFFUSER DETAIL
M500/ NTS



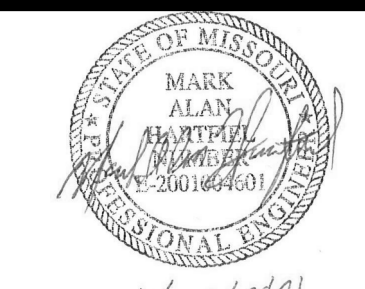
9 COMPRESSOR AIR INTAKE DETAIL
M500/ NTS



10 ROOF CURB & DUCT ISOLATION
M500/ NTS



11 VENT THRU ROOF DETAIL
M500/ NTS



PROFESSIONAL SEAL

M500
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BUILDING AIR BALANCE SCHEDULE

TAG	SUPPLY AIR CFM	OUTSIDE AIR CFM	PERCENT OUTSIDE AIR	EXHAUST AIR CFM	E/A/OA	RETURN AIR CFM	PRESSURIZATION AIR CFM
BUILDING							
RTU-1	4185	355	8%		NOT REQUIRED	3830	
EF-A				150			
RTU-2	1600	195	12%		NOT REQUIRED	1405	
AC-2		150					
EF-2				75			
RTU-3	2750	600	22%		NOT REQUIRED	2150	
HOOD				500			
RTU-4	1475	320				1155	
RTU-5	2400	550	23%			1850	
EF-5				785			
BUILDING TOTAL		2170		1510			660
BAY							
LV		2305					
EF-1				155			
EF-3				2150			
BAY TOTAL		2305		2305			0

VENTILATION CALCULATION SCHEDULE

ROOM NAME	AREA (SQ.FT.)	OCCUPANT LOAD	AREA RATE (CFM/SQ.FT.)	PEOPLE RATE (CFM/PERSON)	OA REQUIRED (CFM)	PRESSURIZATION OA	DESIGN OUTDOOR AIRFLOW (CFM)	EXHAUST RATE	REQUIRED EXHAUST AIRFLOW (CFM)	DESIGN EXHAUST AIRFLOW (CFM)
103 Training	1133	48	0.06	5	308					
104 Toilet	51	0	0	0	0			70 / WC	70	75
105 Toilet	51	0	0	0	0			70 / WC	70	75
154 Corridor	689	0	0.06	0	41					
RTU-1 Total	1925				349	250	355			150
107 Corridor	279	0	0.06	0	17					
108 Reports	242	3	0.06	5	30					
109 EMS Chief	145	1	0.06	5	14					
110 DIV Commander	187	6	0.06	5	41					
111 Captain	151	1	0.06	5	15					
112 Fire Marshall	202	1	0.06	5	19					
114 Office Future	135	1	0.06	5	13					
148 EMS Supply	160	0	0.12	0	19					
149 Gear	227	0	0.12	0	27					
RTU-2 Total	1728	13			194	50	195			0
115 Toilet	47	0	0	0	0			70 / WC	70	75
115 Corridor	217	0	0.06	0	13					
116 Weight Room	566	6	0.06	20	147					
117 Jan/Supply	64	0	0	0	0			1 / SF	64	65
AC-2 Total	894				160	190	190			140
118 Kitchen	330	3	0.12	7.5	62			0.7 / SF	231	500
119 Dining	337	8	0.18	7.5	121					
120 Dayroom	456	16	0.06	5	107					
RTU-3 Total	1123				290	600	600			500
121 IT	71	0	0	0	0					
131 Shower	94	0	0	0	0			50 / WC + 20 / SH	70	100
132 Shower	94	0	0	0	0			50 / WC + 20 / SH	70	100
133 Shower	94	0	0	0	0			50 / WC + 20 / SH	70	100
134 Shower	95	0	0	0	0			50 / WC + 20 / SH	70	100
135 Laundry	72	0	0	0	0					
135 Bay Toilet	124	0	0	0	0			50 / WC	50	75
138 Decon	228	0	0	0	0			1 / SF	228	245
139 Jan Sink	17	0	0	0	0			1 / SF	17	
140 SCBA Repair	197	0	0	0	0					
141 Fill Station	131	0	0	0	0					
142 Compres	31	0	0	0	0					
143 Gear/Equip Supply	188	0	0.12	0	23					
144 General Storage	242	0	0.12	0	29					
RTU-4 Total	1678				52	320	320		575	720
122 Hallway	397	0	0	0	0					
123 Bunk	114	1	0.06	5	12					
124 Bunk	114	1	0.06	5	12					
125 Bunk	114	1	0.06	5	12					
126 Bunk	114	1	0.06	5	12					
127 Bunk	114	1	0.06	5	12					
128 Bunk	114	1	0.06	5	12					
129 Bunk	114	1	0.06	5	12					
130 Bunk	116	1	0.06	5	12					
RTU-5 Total	1311				95	550	550			0
Building Total							2210			1510
147 Apparatus Bay	2938	0	0	0	0			0.75 / SF	2204	2205

CONTROL SYSTEM POINT LIST - CONSTANT VOLUME SYSTEMS

REQUIRED?	DESCRIPTION	POINT TYPE	DEVICE	NOTES
R	Supply fan start/stop	DO	Connect to starter	
O	Supply fan status	DI	Connect to unit	
O	Supply air temperature	AI	Duct temperature sensor (probe or averaging at designer's discretion)	
O	Outdoor air temperature	AI	Temperature sensor at outdoor air intake	
O	Mixed air temperature	AI	Averaging temperature sensor	
O	Return air temperature	AI	Duct temperature sensor	
R	Cooling signal	AO	Compressor	
A	Heating signal	AO	Gas heating	
R	Space temperature	AI	Room temperature sensor	
A	Occupancy sensor (if applicable)	DI	Occupancy sensor	
A	Space temperature set point adjustment	AI	Unit thermostat adjustment	

NOTES:
 The points listed that are required to implement the basic sequences of control have an "R" in the "Required" column; points that apply only if included by the designer for some applications have an "A" in this column; points included as optional monitoring points only have an "O" in this column; alarms are included for these points, but they are not used for sequences of operation.

CONTROL SYSTEM POINT LIST - SINGLE ZONE VAV RTU

REQUIRED?	DESCRIPTION	POINT TYPE	DEVICE	NOTES
R	Supply fan start/stop	DO	Connect to VFD Run	
R	Supply fan speed	AO	Connect to VFD Speed	
O	Supply fan status	DI	Connect to VFD Status	
R	Supply air temperature	AI	Duct temperature sensor (probe or averaging at designer's discretion)	
R	Outdoor/return air damper	AO	Modulating actuators	
R	Outdoor air temperature	AI	Temperature sensor at outdoor air intake	
O	Mixed air temperature	AI	Averaging temperature sensor	
O	Return air temperature	AI	Duct temperature sensor	
R	Cooling signal	AO	Variable-capacity compressor	
A	Heating signal	AO	Staged gas heating	
R	Space temperature	AI	Room temperature sensor	
A	Occupancy sensor (if applicable)	DI	Occupancy sensor	
A	Space temperature set point adjustment	AI	Unit thermostat adjustment	

NOTES:
 The points listed that are required to implement the basic sequences of control have an "R" in the "Required" column; points that apply only if included by the designer for some applications have an "A" in this column; points included as optional monitoring points only have an "O" in this column; alarms are included for these points, but they are not used for sequences of operation.

ENERGY RECOVERY VENTILATOR SCHEDULE

PLAN MARK	MANUFACTURER	MODEL NUMBER	OUTSIDE AIR FAN			EXHAUST AIR FAN			COOLING PERFORMANCE				HEATING PERFORMANCE				FILTER	UNIT ELECTRICAL	NOTES						
			AIRFLOW (CFM)	E.S.P. (IN. W.C.)	ESTIMATED MOTOR POWER / FAN	AIRFLOW (CFM)	E.S.P. (IN. W.C.)	ESTIMATED MOTOR POWER / FAN	DB	WB	DB	WB	DB	WB	DB	WB				DB	WB	DB	WB		
ERV	COOK	ERV-1500	870	0.50	1/4 HP	785	0.50	1/3 HP	95.8	75.6	76.6	65.3	79.8	66.0	-3.9	68.4	51.6	55.8	45.5	8	208/3	17.37	21.71	25	1,2,3,4

REMARKS:
 1. PROVIDE UNIT WITH VIBRATION ISOLATION.
 2. UNIT SHALL INCLUDE CONTROLLER, DISCONNECT SWITCH, FROST CONTROL, DIRTY FILTER SENSORS, FILTER ON BOTH EXHAUST AND OUTDOOR AIR.
 3. PROVIDE CURB WITH VERTICAL SUPPLY OUTLET AND EXHAUST INLET.
 4. PROVIDE HINGED ACCESS DOORS, BACKDRAFT DAMPERS ON INTAKE AND EXHAUST, AND EXHAUST HOOD.

LOUVER SCHEDULE

TAG	SERVES	MANUFACTURER	MODEL	INTAKE OR EXHAUST	AIRFLOW (CFM)	MAXIMUM VELOCITY (FPM)	SIZE WIDTH x HEIGHT (INCHES)	MAXIMUM STATIC PRESSURE DROP (IN. W.G.)	NOTES
LV-A	APPARATUS BAY	GREENHECK	ESD-403	INTAKE	1153	750	16x40	0.1	1,2,3

NOTES:
 1. STATIONARY, DRAINABLE BLADE LOUVER.
 2. INCLUDE MOTORIZED DAMPER INSIDE LOUVER. SEE PLAN NOTES FOR SIZE.
 3. COLOR TO BE SELECTED BY ARCHITECT TO MATCH ADJACENT FINISH.
 4. INCLUDE BACKDRAFT DAMPER INSIDE LOUVER.

PACKAGED ROOFTOP UNITS (RTU)

TAG	MANUFACTURER	MODEL	FAN			COOLING				HEATING				ELECTRICAL				WEIGHT (POUNDS)	NOTES				
			AIRFLOW (CFM)	OA	HP	TEMPERATURE (°F)		CAPACITY (MBTU/H)		EFFICIENCY		TEMPERATURE (°F)		CAPACITY (MBTU/H)		MINIMUM AFUE	VOLTAGE / PHASE			MCA	MOP		
						ENTERING AIR	AMBIENT	TOTAL	SENSIBLE	EER	IEER	EAT	LAT	INPUT	OUTPUT								
RTU-1	TRANE	YHC	4185	355	3.00	1.00	77.4	84.9	105.0	138.7	97.5	12.1	19.3	62.9	100.3	250	192.2	80.0	208/3	63	90	2655	1,2,3,4,5,6,7,8,9
RTU-2	TRANE	YHC	1600	195	1.00	0.75	79.5	85.5	105.0	47.5	35.3	13.0	17.0	55.2	103.8	130	75.3	80.0	208/3	33	45	999	1,2,3,4,5,6,7
RTU-3	TRANE	YHC	2750	600	2.75	0.50	80.3	86.9	105.0	90.4	58.9	12.5	14.7	52.9	98.0	200	134.6	80.0	208/3	42	50	1300	1,2,3,4,5,6,7,8,9
RTU-4	TRANE	YHC	1475	320	1.00	0.75	77.5	84.7	105.0	48.0	36.1	13.0	17.5	56.4	98.6	80	67.7	80.0	208/3	30	40	976	1,2,3,4,6,7
RTU-5	TRANE	YHC	2400	550	2.75	0.75	77.7	84.0	105.0	71.3	51.6	12.6	15.0	63.6	105.0	150	95.0	80.0	208/3	42	50	1291	1,2,3,4,5,6,7,8,9

NOTES:
 1. INCLUDE DRY-BULB ECONOMIZER TO OPERATE BETWEEN 45° AND 65°F WITH BAROMETRIC RELIEF AND FAULT DETECTION AND DIAGNOSTICS.
 2. INCLUDE CLOGGED FILTER SENSOR AND PROVISIONS FOR MERV 13 FILTRATION.
 3. INCLUDE HAIL GUARD.
 4. INCLUDE ROOF CURB. HEIGHT TO ELEVATE BOTTOM OF OUTDOOR AIR INTAKE A MINIMUM OF 24" ABOVE ADJACENT FINISHED ROOF.
 5. SINGLE ZONE VARIABLE AIR VOLUME UNIT.
 6. INCLUDE THROUGH THE BASE ELECTRICAL AND DISCONNECT.
 7. INCLUDE HINGED ACCESS DOORS.
 8. INCLUDE DUCT SMOKE DETECTOR IN RETURN TO SHUT DOWN THE UNIT WHEN SMOKE DETECTED.
 9. INCLUDE A MINIMUM OF TWO STAGES OF COOLING.

FAN SCHEDULE

TAG	MANUFACTURER	MODEL	AIRFLOW (CFM)	ESTIMATED E.S.P. (IN W.G.)	ESTIMATED POWER	ELECTRICAL VOLTAGE / PHASE	RPM	WEIGHT (LBS)	MAXIMUM SOUND LEVEL	FAN CONTROL	NOTES
EF-A	COOK	GC-146	75	0.25	34 WATTS	120	1	900	16	2.0 SONES	ROOM LIGHT SWITCH
EF-1	COOK	ACWD 70W17DEC	155	0.25	33 WATTS	120	1	1925	14	5.0 SONES	CONTINUOUS OPERATION
EF-2	COOK	ACWD 150W13D	2150	0.25	1/3 HP	120	1	1300	57	16 SONES	CO, NO2, COOLING T-STAT
EF-3	COOK	GC-146	75	0.25	34 WATTS	120	1	900	16	2.0 SONES	THERMOSTAT
WF-A	MARLEY	LCHWD24	6,800	-	1/3 HP	120	1	-	47	-	TIMER SWITCH

NOTES:
 1. INCLUDE ALUMINUM GRILL, VIBRATION ISOLATION, PLUG DISCONNECT, BACKDRAFT DAMPER AND ROOF CAP.
 2. INCLUDE FAN SPEED CONTROL AND BACKDRAFT DAMPER.
 3. INCLUDE FAN SPEED CONTROLLER AND MOTORIZED DAMPER.
 4. INCLUDE ALUMINUM GRILL, VIBRATION ISOLATION, PLUG DISCONNECT AND BACKDRAFT DAMPER.
 5. INCLUDE BACKDRAFT DAMPER IN CURB PER DETAIL AND FAN SPEED CONTROLLER.
 6. INCLUDE DISCONNECT AND KEYPAD CONTROL.
 7. FAN TO BE DESIGNED FOR WASH-DOWN ENVIRONMENT MEETING UL 507 SPRAY TEST.

SPLIT SYSTEM SCHEDULE

TAG	MANUFACTURER	MODEL	AIR HANDLER				GAS HEAT				ELECTRICAL				WEIGHT (LB)	TAG	MANUFACTURER	MODEL	CONDENSING UNIT				WEIGHT (LBS)	NOTES
			AIRFLOW (CFM)	ESTIMATED ESP (IN.W.G.)	ESTIMATED MOTOR HP	LAT °F	INPUT MBTU/H	OUTPUT MBTU/H	MINIMUM AFUE	VOLTAGE / PHASE	MCA	MOCP	COOLING CAPACITY (MBTU/H) AT 100 °F AMBIENT	TOTAL (SENSIBLE) EDB EWB					MINIMUM SEER	VOLTAGE / PHASE	MCA	MOCP		
AC-2	TRANE	4TXC	975	0.75																				