GENERAL NOTES - DEMOLITION

A. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR AREAS IN WHICH THE CEILING IS REMAINING. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE EXISTING CEILING AS REQUIRED AND REINSTALLATION. TEMPORARILY SUPPORT LIGHTS, DIFFUSERS, CEILING ETC. REPLACE BROKEN CEILING TILES WITH NEW AT NO ADDITIONAL COST TO OWNER. FIELED VERIFY EXACT REQUIREMENTS.
B. ALL OUTAGES SHALL BE SCHEDULED THROUGH THE PROJECT REPRESENTATIVE FOR PROPER COORDINATION. A REQUEST FOR AN OUTAGE SHALL BE SUBMITTED IN WRITING A MINIMUM OF TWO WEEKS IN ADVANCE.
C. DURING SPRINKLER SYSTEM OUTAGES THE CONTRACTORS SHALL PROVIDE FIRE WATCH OF AREAS WITH OUTAGES.
D. ALL WALLS AND FLOOR SLABS SHALL BE REPAIRED TO MATCH EXISTING AND TO A LIKE NEW CONDITION. ALL RATED WALLS AND FLOOR SLABS SHALL BE PATCHED AND REPAIRED TO MAINTAIN RATING.
E. ALL EXISTING BUILDING FINISHES SHALL BE PROTECTED DURING THE DEMOLITION PHASE.
F. HEAVY DASHED LINES INDICATE ITEMS FOR REMOVAL (U.O.N) AND LIGHT SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
G. COORDINATE DISPOSAL OF ALL FIXTURES, DEVICES, ETC. (INDICATED FOR DEMOLITION) WITH THE OWNER.

GENERAL NOTES - MECHANICAL

1. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE GENERAL AND SPECIAL CONDITIONS, "GENERAL CONDITIONS - MECHANICAL" OF THE PROJECT SPECIFICATIONS AND TO ALL OTHER CONTRACT DOCUMENTS AS THEY APPLY TO THIS BRANCH OF WORK. ATTENTION IS ALSO DIRECTED TO ALL OTHER SECTIONS OF THE CONTRACT DOCUMENTS WHICH AFFECTS THE WORK AND WHICH ARE HEREBY MADE A PART OF THE WORK SPECIFIED.
2. ALL MANUFACTURERS, SUPPLIERS, FABRICATORS, CONTRACTORS, ETC. SUBMITTING PROPOSALS FOR ANY PART OF THE WORK, SERVICES, MATERIALS OR EQUIPMENT TO BE USED ON OR APPLIED TO THIS PROJECT ARE HEREBY DIRECTED TO FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS. IN CASE OF CONFLICTS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION AND FINAL DETERMINATION PRIOR TO THE BID.
3. THE WORK SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT, TRANSPORTATION, SUPPLIES, MATERIALS, APPURTENANCES AND SERVICES NECESSARY FOR THE SATISFACTORY INSTALLATION OF THE COMPLETE AND OPERATING SYSTEMS INDICATED OR SPECIFIED IN THE CONTRACT DOCUMENTS.
4. ANY MATERIALS, LABOR, EQUIPMENT OR SERVICES NOT MENTIONED SPECIFICALLY HEREIN WHICH MAY BE NECESSARY TO COMPLETE ANY PART OF THE SYSTEMS IN A SUBSTANTIAL MANNER, IN COMPLIANCE WITH THE REQUIREMENTS STATED, IMPLIED OR INTENDED IN THE PLANS AND SPECIFICATIONS, SHALL BE INCLUDED IN THE BID AS PART OF THE CONTRACT.
5. THE ENGINEER DOES NOT DEFINE THE SCOPE OF INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS AND VENDORS. ANY SHEET NUMBERING OR SPECIFICATION NUMBERING SYSTEM USED WHICH IDENTIFIES DISCIPLINES IS SOLELY FOR THE ENGINEER'S CONVENIENCE AND IS NOT INTENDED TO DEFINE A SUBCONTRACTOR'S SCOPE OF WORK. INFORMATION REGARDING INDIVIDUAL TRADES, SUBCONTRACTORS, MATERIAL SUPPLIERS AND VENDORS MAY BE DETAILED, DESCRIBED AND INDICATED AT DIFFERENT LOCATIONS THROUGHOUT THE CONTRACT DOCUMENTS. NO CONSIDERATION WILL BE GIVEN TO REQUESTS FOR CHANGE ORDERS FOR FAILURE TO OBTAIN AND REVIEW THE COMPLETE SET OF CONTRACT DOCUMENTS WHEN PREPARING BIDS, PRICES AND QUOTATIONS. UNLESS STATED OTHERWISE, THE SUBDIVISION AND ASSIGNMENT OF WORK UNDER THE VARIOUS SECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR HOLDING THE PRIME CONTRACT.
6. IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO CALL FOR A COMPLETE AND OPERATIONAL SYSTEM, INCLUDING ALL COMPONENTS, ACCESSORIES, FINISH WORK, ETC NECESSARY FOR TROUBLE FREE OPERATION; TESTED AND READY FOR OPERATION. ANYTHING THAT MAY BE REQUIRED, IMPLIED, OR INFERRED BY THE CONTRACT DOCUMENTS SHALL BE PROVIDED AND INCLUDED AS PART OF THE BID.
7. ALL CONTRACTORS AND VENDORS PROVIDING A BID FOR THIS PROJECT SHALL REVIEW THE PLANS AND SPECIFICATIONS AND DETERMINE ANY MODIFICATIONS AND/OR ADJUSTMENTS NECESSARY RELATIVE TO THE PROPOSED EQUIPMENT AND MATERIALS WITH SPECIFIC MANUFACTURER'S INSTALLATION REQUIREMENTS. INCLUDE IN THE BID ANY NECESSARY METHODS, FEATURES, OPTIONS, ACCESSORIES, ETC. NECESSARY TO INSTALL THE PROPOSED EQUIPMENT AND MATERIALS, REGARDLESS OF WHETHER USED AS BASIS OF DESIGN OR BEING OFFERED AS A SUBSTITUTION, IN ACCORDANCE WITH THE SPECIFIC MANUFACTURER'S INSTALLATION REQUIREMENTS, WHETHER SPECIFICALLY DETAILED OR NOT, WITHIN THE PLANS AND SPECIFICATIONS.
8. THE BIDDER/PROPOSER SHALL COMPLETELY REVIEW THE CONTRACT DOCUMENTS. ANY INTERPRETATION AS TO DESIGN INTENT OR SCOPE SHALL BE PROVIDED BY THE ENGINEER. SHOULD ANY INTERPRETATION BE REQUIRED, THE BIDDER/PROPOSER SHALL REQUEST A CLARIFICATION NOT LESS THAN TEN (10) DAYS PRIOR TO THE SUBMISSION OF THE BID SO THAT THE CONDITION MAY BE CLARIFIED BY ADDENDUM. IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY DEVELOPS; THE INTERPRETATION OF THE ENGINEER SHALL BE FINAL.
9. THE CONTRACTOR SHALL PROVIDE LAYOUT CONFIRMATION OF EQUIPMENT LOCATIONS TO VERIFY THAT ALL COMPONENTS WILL FIT IN THE PROPOSED SPACE AND HAVE ADEQUATE CLEARANCE FOR SERVICES. COORDINATE THE LOCATION OF DRAINS, CONNECTIONS, ETC. PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE RESPONSIBLE CONTRACTOR(S).
10. EQUIPMENT AND MATERIALS SUBSTITUTIONS OR DEVIATIONS SHALL COMPLY WITH "GENERAL PROVISIONS - MECHANICAL PART 6." ANY VENDOR WISHING TO OBTAIN AN EQUIPMENT SUBSTITUTION SHALL REQUEST A CLARIFICATION NOT LESS THAN TEN (10) DAYS PRIOR TO THE SUBMISSION OF THE PROPOSAL SO THAT IT MAY BE CONSIDERED AND POTENTIALLY INCLUDED BY ADDENDUM. REQUESTS MADE AFTER THIS PERIOD WILL BE REJECTED.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE REGARDLESS IF CONTRACTOR IS IGNORANT OF CODES, RULES, REGULATIONS, LAWS, ETC. THE CONTRACTOR SHALL ALSO BE VERSED IN ALL CODES, RULES, REGULATIONS, LAWS, ETC. PERTINENT TO THEIR PART OF THE WORK PRIOR TO SUBMISSION OF THE PROPOSAL.
12. ALL WARRANTIES SHALL BEGIN STARTING AT THE PROJECT'S SUBSTANTIAL COMPLETION DATE. ALL EQUIPMENT, MATERIAL AND LABOR WARRANTIES SHALL BE FURNISHED BY THE EQUIPMENT SUPPLIER/VENDOR.
13. DUCTWORK, PIPING AND EQUIPMENT SHALL BE KEPT CLEAN AT ALL TIMES. DUCTWORK STORED ON THE JOB SITE SHALL BE PLACED A MINIMUM OF 4" ABOVE THE FLOOR AND BE COMPLETELY COVERED IN PLASTIC. INSTALLED DUCTWORK SHALL BE PROTECTED WITH PLASTIC. DO NOT INSTALL THE DUCTWORK OR INSULATION (PIPE OR DUCT) IF THE BUILDING IS NOT "DRIED-IN". IF THIS IS REQUIRED, THE ENTIRE LENGTHS SHALL BE COVERED IN PLASTIC TO PROTECT. THE OWNER/ENGINEER SHALL PERIODICALLY INSPECT THAT THESE PROCEDURES ARE FOLLOWED. IF DEEMED UNACCEPTABLE, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN THE DUCT SYSTEM UTILIZING A NADCA CERTIFIED CONTRACTOR.
14. THE CONTRACTOR SHALL DETERMINE FROM THE CONTRACT DOCUMENTS, THE DATE OF COMPLETION FOR THE PROJECT AND INSURE THAT EQUIPMENT DELIVERY SCHEDULES CAN BE MET SO AS TO ALLOW THIS COMPLETION TO BE MET.
15. THROUGH COORDINATION WITH OTHER CONTRACTORS, VENDORS, AND SUPPLIERS ASSOCIATED WITH THIS PROJECT, THIS CONTRACTOR SHALL INSURE, 100% FUNCTIONAL, TESTED, INSPECTED AND APPROVED SYSTEMS. CLAIMS FOR ADDITIONAL COST OR CHANGE ORDERS WILL BE REJECTED.
16. PRIOR TO ORDERING ANY MATERIALS OR ROUGH-IN OF ANY KIND, THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL COORDINATION OF ALL ELECTRICAL REQUIREMENTS (I.E. VOLTAGE, PHASE, CIRCUIT BREAKER, WIRE SIZING, ETC.) WITH THE ELECTRICAL CONTRACTOR. THERE WILL BE NO CHANGE IN THE CONTRACT AMOUNT FOR ANY DISCREPANCIES.
17. ALL OFFSETS, TURNS, FITTINGS, TRIM, DETAIL, ETC., MAY NOT BE INDICATED, BUT SHALL BE PROVIDED AS REQUIRED. ADDITIONAL ALLOWANCES SHALL BE INCLUDED FOR SAME AT EACH PROPOSERS' DISCRETION.
18. DO NOT SCALE FROM DRAWINGS, PRINTING DISTORTS SCALE. WORK SHALL BE LAID OUT FROM CONTRACTOR GENERATED DIMENSIONED DRAWINGS.
19. THE CONTRACTOR SHALL ENSURE PROPER COORDINATION BETWEEN ALL TRADES SUCH THAT CONDUITS, PIPING, DUCTWORK, ETC, DOES NOT BLOCK ACCESS TO VALVES, EQUIPMENT, DUCT ACCESS DOORS, ETC. ITEMS THAT HAVE BEEN INSTALLED WHERE ACCESS IS COMPROMISED SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.
20. THESE DRAWINGS ARE ACCURATE TO THE BEST OF OUR KNOWLEDGE, HOWEVER LOCATIONS AND SIZES WERE TAKEN FROM DIFFERENT SOURCES AND ARE SUBJECT TO DEVIATION. THE CONTRACTOR SHALL ASSUME SOME DEVIATIONS AND INCLUDE OFFSETS, ADDITIONAL PIPING, ETC. AT THE TIME OF BID.
21. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR THEIR WORK. ALL CUTTING AND PATCHING SHALL MATCH ADJACENT SURFACES AND PERFORMED BY SKILLED WORKERS OF THE TRADE. REFER TO SPECIFICATION SECTION "SLEEVING, CUTTING, PATCHING, REPAIRING, ETC." AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
22. ALL SUPPORTS FOR EQUIPMENT, DEVICES OR FIXTURES SHALL BE UNIQUE, FROM THE BUILDING STRUCTURE. DO NOT SUPPORT WORK FROM OTHER TRADES, EQUIPMENT OR SUPPORTS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER AND CONSENT OF THE OTHER TRADE, IN WRITING.
23. PRIOR TO PURCHASE OR FABRICATION OF PIPING, THE CONTRACTOR SHALL COORDINATE INSTALLATION WITH ACTUAL CONDITIONS AND INSTALL ACCORDINGLY.
24. VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED AT NO ADDITIONAL COST UNDER THE ITEM WHETHER SHOWN OR NOT ON THE PLANS TO ALLOW ACCESS AND ADJUSTMENT.
25. THE CONTRACTOR SHALL VISIT THE SITE FOR EXACT LOCATIONS OF ALL WALL AND CEILING DEVICES. THIS SHALL INCLUDE PLUMBING FIXTURES, CEILING GRILLES AND DIFFUSERS, ETC.
26. CONTRACTOR SHALL CLEAN UP CONSTRUCTION DEBRIS AT ALL TIMES DURING CONSTRUCTION.

ABBREVIATIONS

ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
APD	AIR PRESSURE DROP
AVG	AVERAGE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BREAK HORSEPOWER
BTU	BRITISH THERMAL UNIT
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GAL	GALLON (-S)
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
GR	GRAINS
HD	HEAD
HP	H (-ORSEPOWER, -EAT PUMP)
ID	I (-DENTIFICATION, -NSIDE DIAMETER, -NSIDE DIMENSION)
kW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	BTU PER HOUR [THOUSANDS]
MCA	MINIMUM CIRCUIT AMPS
MFG	MANUFACTURER
MOCP	MAXIMUM OVERCURRENT PROTECTION [AMPS]
NC	NOISE CRITERIA **OR** NORMALLY CLOSED

ABBREVIATIONS (CONTINUED)

NO	NORMALLY OPEN **OR** NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DI (-AMETER, -MENSION)
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE [ELECTRICAL]
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, GAS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
RH	RELATIVE HUMIDITY [%]
RPM	REVOLUTIONS PER MINUTE
SD	SMOKE DAMPER
SP	STATIC PRESSURE
SQ FT	SQUARE FEET **OR** FOOT
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT (-AGE, -S)
VAR	VARI (-ABLE, -IES)
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FEQUENCY DRIVE
W	WATT (-AGE, -S)
WB	WET BULB
WPD	WATER PRESSURE DROP
ΔP	DIFFERENTIAL PRESSURE
ΔT	TEMPERATURE DIFFERENCE
℄	CENTERLINE

GENERAL SYMBOLS

(#)	TAGGED NOTE DESIGNATOR
1 / 1	REVISION TRIANGLE
ROOM NAME (SEE #)	ROOM TAG
XXX-X	EQUIPMENT TAG
	POINT OF CONNECTION / CONNECT TO EXISTING
	POINT OF DEMOLITION

HVAC LEGEND

	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE
	EXHAUST AIR DIFFUSER
	TRANSFER AIR GRILLE W/ SOUND ATTENUATING BOOT
	SIDEWALL DIFFUSER/GRILLE
TAG AIRFLOW	AIR DEVICE TAG (REGISTER, GRILLE, DIFFUSER,LOUVER)
##x##	RECTANGULAR DUCT
#ø	ROUND/SPIRAL DUCT
##/##	FLAT OVAL DUCT
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
EA	EXHAUST AIR DUCT
OA	OUTSIDE AIR DUCT
TA	TRANSFER AIR DUCT
CAE	COMBUSTION AIR EXHAUST DUCT
CAI	COMBUSTION AIR INTAKE DUCT
SA	SA AIR DUCT TURNING UP
SA	SA AIR DUCT TURNING DOWN
RA	RA AIR DUCT TURNING UP
RA	RA AIR DUCT TURNING DOWN
EA	EA AIR DUCT TURNING UP
EA	EA AIR DUCT TURNING DOWN
E(XXX)	EXISTING DUCT - (XXX) DENOTES SYSTEM
D(XXX)	DUCT TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
A(XXX)	DUCT TO BE ABANDONED IN PLACE - (XXX) DENOTES SYSTEM
	MITERED ELBOW WITH TURNING VANES
	FLEXIBLE DUCT
T	THERMOSTAT DDC
TP	THERMOSTAT PNEUMATIC
H	HUMIDITY SENSOR
C	CARBON DIOXIDE SENSOR
TC	TEMPERATURE & CARBON DIOXIDE SENSOR
VERT. HORIZ.	MANUAL BALANCING/VOLUME DAMPER
VERT. HORIZ.	MOTORIZED DAMPER

MECHANICAL PIPING LEGEND

—O—	PIPE ELBOW TURNING UP
—Ↄ—	PIPE ELBOW TURNING DOWN
—○—	PIPE TEE; CONNECTION ON TOP
—▽—	PIPE TEE; CONNECTION ON BOTTOM
—⊣	PIPE CAP
—CD—	CONDENSATE DRAIN
—CHWS/R—	CHILLED WATER SUPPLY/RETURN
—CWS/R—	CONDENSER WATER SUPPLY/RETURN
—DTS/R—	DUAL TEMP. WATER SUPPLY/RETURN
—GS/R—	GEOTHERMAL WATER SUPPLY/RETURN
—HPC—	HIGH PRESSURE STEAM CONDENSATE
—HPS(#)—	HIGH PRESSURE STEAM; (#) DENOTES PRESSURE
—HPS/R—	HEAT PUMP WATER SUPPLY/RETURN
—HRS/R—	HEAT RECOVERY SUPPLY/RETURN PIPING
—HWS/R—	HEATING WATER SUPPLY/RETURN
—LPC—	LOW PRESSURE STEAM CONDENSATE
—LPS(#)—	LOW PRESSURE STEAM; (#) DENOTES PRESSURE
—MPC—	MEDIUM PRESSURE STEAM RETURN
—MPS(#)—	MEDIUM PRESSURE STEAM; (#) DENOTES PRESSURE
—SVT—	STEAM VENT PIPING
-- D(XXX) --	PIPING TO BE DEMOLISHED - (XXX) DENOTES SYSTEM
—E(XXX)—	EXISTING PIPING - (XXX) DENOTES SYSTEM

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT

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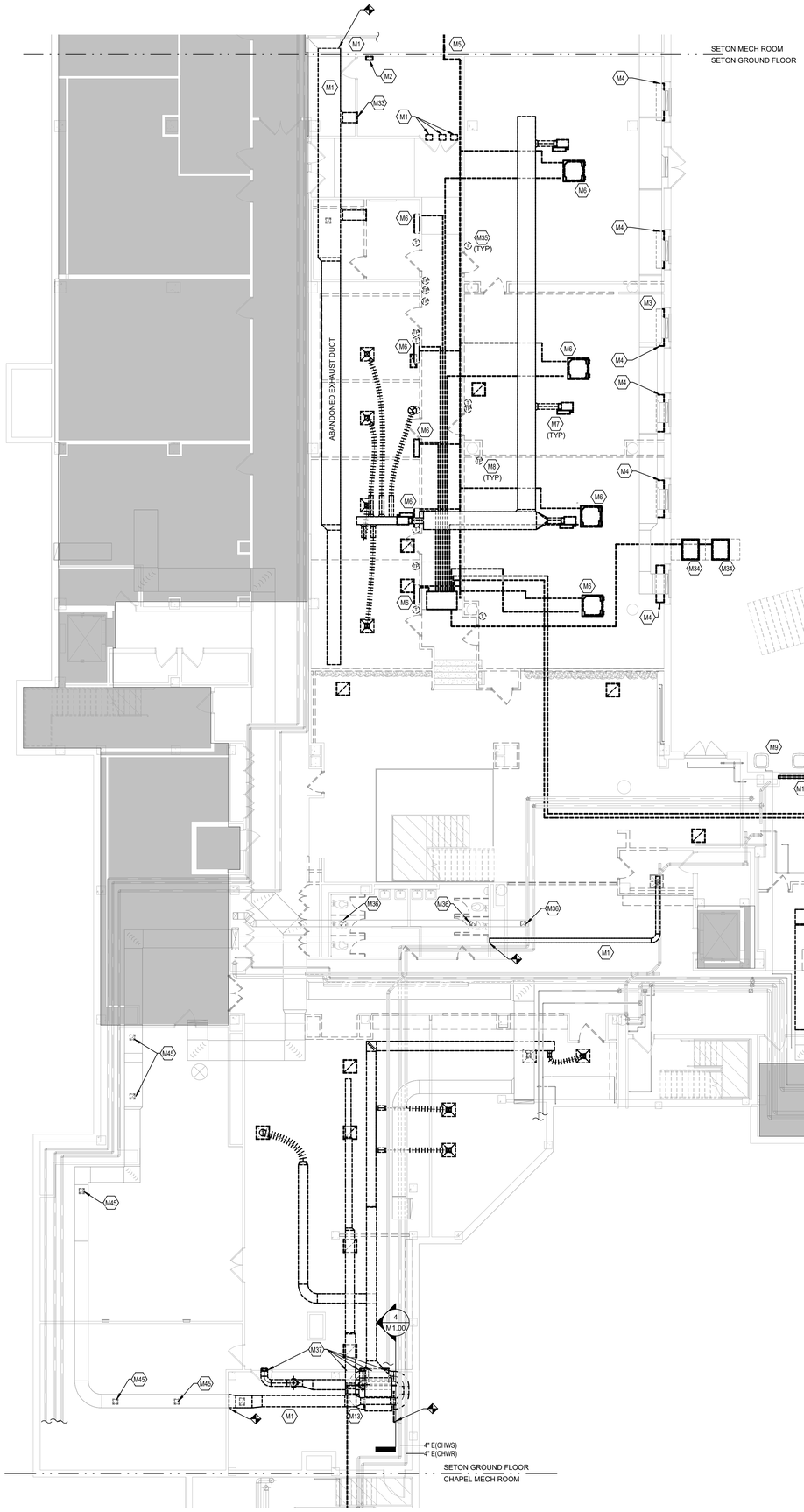
NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set

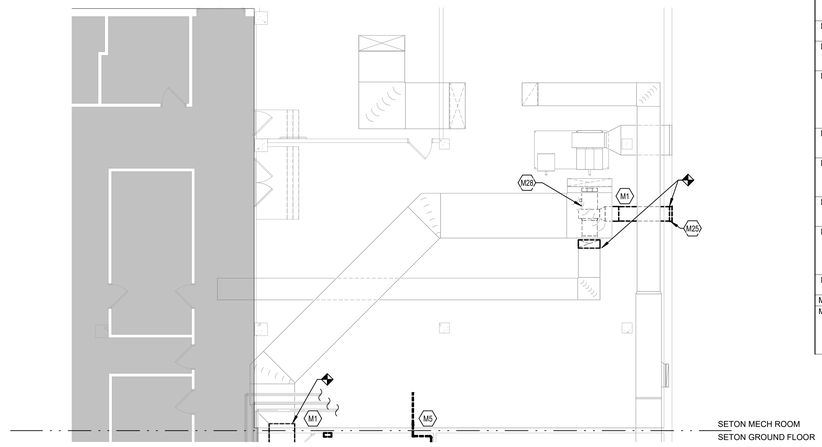
PROJECT NO. **24167.00**

DRAWING TITLE:
MECHANICAL
LEGEND

M0.00



1 M1.00 GROUND FLOOR MECHANICAL DEMOLITION
1/8" = 1'-0"



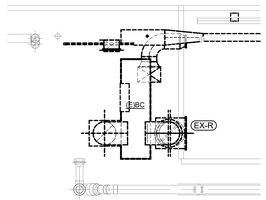
2 M1.00 GROUND FLOOR SETON MECH ROOM DEMOLITION
1/8" = 1'-0"

TAGGED NOTES (#)

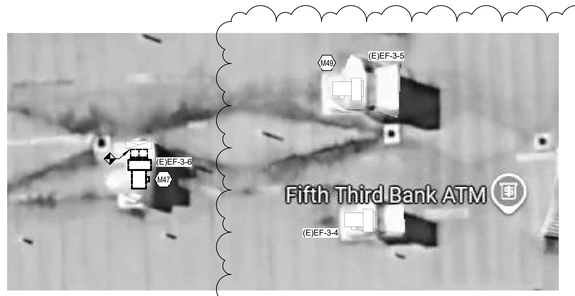
M1	REMOVE DUCTWORK, AIR DEVICES, HANGERS, AND ASSOCIATED ITEMS BACK TO POINT OF DEMOLITION. CAP AND INSULATE SUPPLY DUCTWORK AIRTIGHT. PATCH WALLS TO MATCH SURROUNDING FINISHES WHERE WALLS ARE TO REMAIN.
M2	REMOVE EXISTING VRF CONTROL PANEL AND WIRING. NEW CONTROL PANEL TO GO IN THIS SAME LOCATION.
M3	EXISTING RETURN DUCTWORK SHALL REMAIN AND BE PROTECTED FROM DAMAGE. THE RETURN DUCTWORK SERVES AN EXISITNG SYSTEM TO REMAIN.
M4	REMOVE EXISTNG UNIT VENTILATOR IN ITS ENTIRETY. REMOVE HOT, CHILLED WATER, AND CONDENSATE PIPING BACK TO MAIN IN TUNNEL BELOW. REMOVE CONTROL ITEMS BACK TO THEIR SOURCE. PROVIDE 4" INSULATED PANEL TO CAP LOUVER AIRTIGHT. REFER TO ARCHITECTURAL PLANS FOR PATCHING AND REPAIR OF SURFACE FINISHES.
M5	REMOVE CONDENSATE LINE IN ITS ENTIRETY. PATCH WALL OPENINGS TO MATCH SURROUNDING SURFACES. COORDINATE WITH ARCHITECTURAL PLANS.
M6	REMOVE VRF SYSTEM INCLUDING BUT NOT LIMITED TO: CASSETTES, WALL MOUNTED UNITS, CONDENSING UNIT, CONTROLS, REFRIGERANT PIPING, AND BRANCH CONDENSATE PIPING.
M7	REMOVE ABANDONED SYSTEM IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO: HANGERS, DUCTWORK, INSULATION, VAV BOXES, CONTROLS, AND AIR DEVICES.
M8	REMOVE PNEUMATIC THERMOSTATS THROUGHT THE PROJECT SCOPE OF WORK. REMOVE TUBING AS FAR BACK TO MAIN AS POSSIBLE AND PLUG AIRTIGHT. PNUEMATIC SYSTEM IS TO REMAIN FUNCTIONAL IN OTHER PARTS OF THE BUILDING.
M9	EXISTING CONDENSING UNITS AND REFRIGERANT PIPING TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
M10	LOUVER DOWN TO TUNNEL EXISTING TO REMAIN
M11	REMOVE FINTUBE HEATING UNDER WINDOWS AND BRANCH PIPING BACK TO MAIN LOCATED IN TUNNEL BELOW. CAP PIPE WATER TIGHT AND INSULATE. PATCH FLOOR AND WALLS TO MATCH SURROUNDING FINISHES. COORDINATE WITH ARCHITECUTRAL PLANS.

TAGGED NOTES (#)

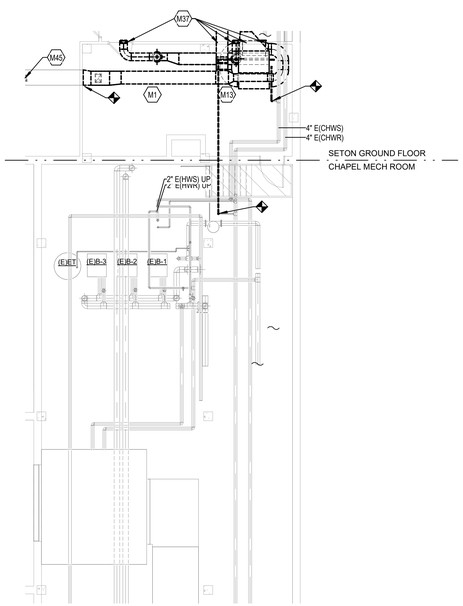
M12	REMOVE FAN, ASSOCIATED DUCTWORK, HANGERS, AND ASSOCIATED ITEMS BACK TO POINT OF DEMOLITION.
M13	REMOVE WATER SOURCE HEAT PUMP IN ITS ENTIRETY, INCLUDING ASSOCIATED DUCTWORK, CHILLED WATER PIPING, AND INSULATION. CAP AND INSULATEPIPING AT MAINS.
M25	REMOVE EXISITNG LOUVER. PROVIDE NEW LOUVER PER NEW WORK PLANS.
M28	REMOVE UTILITY SET EXHAUST FAN. REMOVE DUCTWORK BACK AS FAR AS ACCESSIBLE.
M33	PATCH WALL WHERE DUCTWORK AND AIR DEVICE ARE REMOVED. MATCH SURROUNDING FINISHES. COORDINATE WITH ARCHITECTURAL PLANS.
M34	REMOVE CONDENSING UNITS, REFRIGERANT PIPING, CONTROLS, DISCONNECT POWER, AND PATCH WALLS TO MATCH SURROUNDING FINISHES.
M35	REMOVE DDC THERMOSTATS, WIRING, AND WIRING SUPPORTS THROUGHT THE PROJECT SCOPE OF WORK. WHERE WALLS ARE TO REMAIN PATCH THE WALL TO MATCH SURROUNDING FINISHES. REFER TO ARCHITECTURAL PLANS
M36	REMOVE EXHAUST DUCT AND PROVIDE NEW IN NEW WORK PHASE. PROVIDE AIR BALANCE REPORT OF EXISITNG RESTROOM EXHAUST AIR PRIOR TO REMOVAL OF GRILLES.
M37	FILL AND PATCH WALL OPENINGS TO MATCH SURROUNDING FINISHES WHERE NOT USED IN NEW WORK. RETURN AIR DUCT IS LOW IN WALL.
M45	REMOVE AIR GRILLE AND CAP DUCT AIR TIGHT. PATCH AND PAINT CEILING TO MATCH EXISTING FINISH SURFACES.
M47	REMOVE EXISTING EXHAUST FAN, DISCONECT POWER AND USE WIRE FOR NEW WORK
M49	TAKE PRE-BALANCE OF EXISTING EXHAUST FAN SERVING RESTROOMS PRIOR TO STARTING NEW WORK. SUBMIT TO ENGINEER FOR REVIEW.



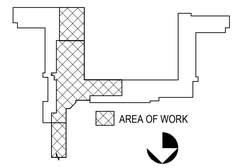
4 M1.00 SECTION A
1/4" = 1'-0"



5 M1.00 ROOF (LV6) MECHANICAL DEMOLITION PLAN
1/8" = 1'-0"



3 M1.00 GROUND FLOOR CHAPEL MECH ROOM DEMOLITION
1/8" = 1'-0"



KEY PLAN - GROUND FLOOR

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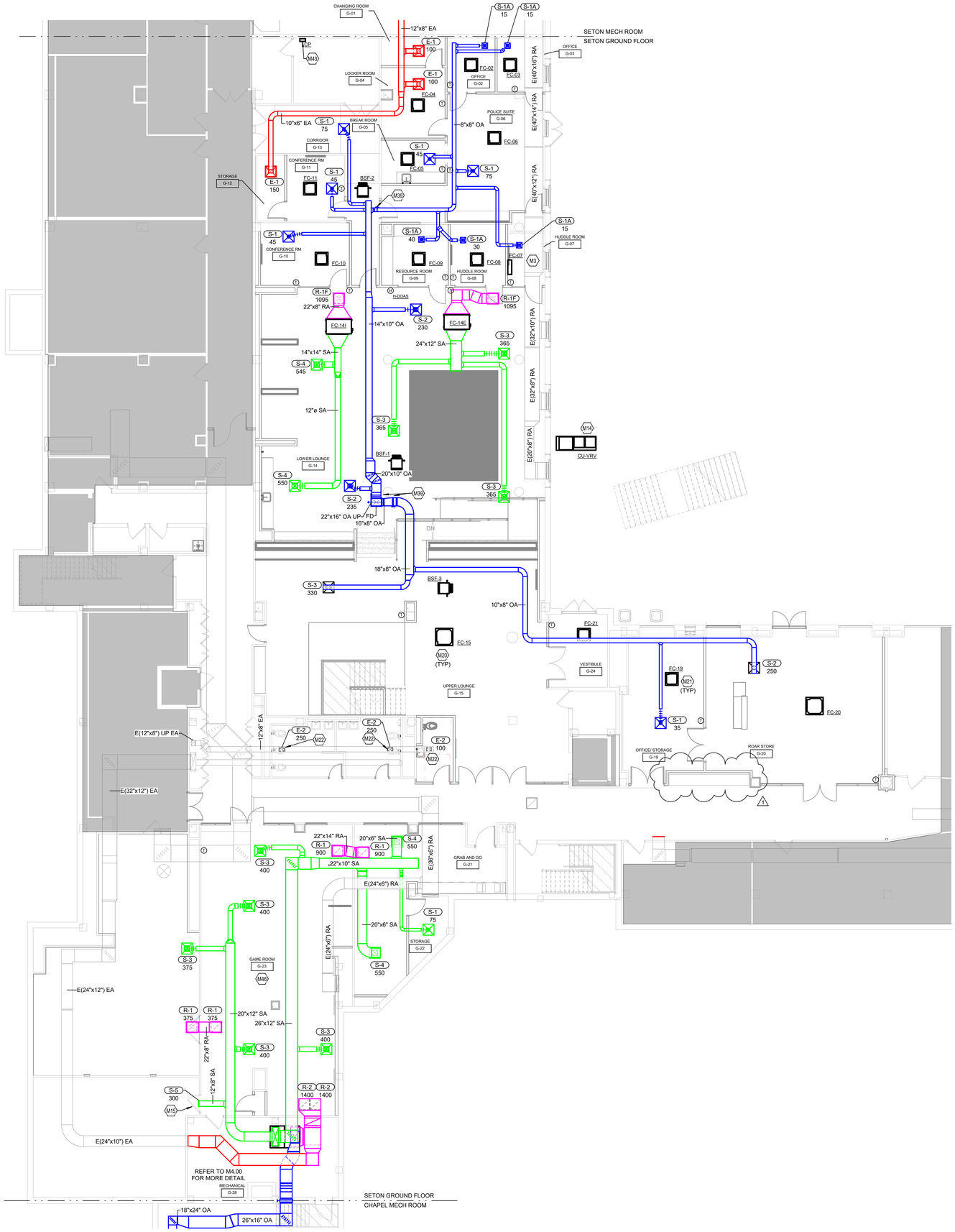
NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set
1	11/14/2025	ADDENDUM 03

PROJECT NO. **24167.00**

DRAWING TITLE:
GROUND FLOOR MECHANICAL DEMOLITION

M1.00



1 GROUND FLOOR MECHANICAL PHASE 2

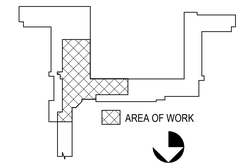
M2.00 1/8" = 1'-0"

TAGGED NOTES

M3	EXISTING RETURN DUCTWORK SHALL REMAIN AND BE PROTECTED FROM DAMAGE. THE RETURN DUCTWORK SERVES AN EXISITNG SYSTEM TO REMAIN.
M14	PROVIDE VRV CONDENSING UNIT. PROVIDE EQUIPMENT SUPPORTS PER SPECIFICATIONS. USE EXISTING MECHANICAL PAD AS ABLE. MODIFY MECHANICAL PAD AS NECESSARY. CONTRACTOR SHALL VERIFY SIZE ON SITE AND COORDINATE WITH EQUIPMENT PRIOR TO BID.
M15	LOUVERED DOOR IS EXISTING TO REMAIN. COORDINATE WITH ARCHITECTURAL PLANS.
M20	COORDINATE 3X3 CASSETTES TO BE CENTERED IN THE CEILING GRID SYSTEM.
M21	COORDINATE 2X2 CASSETTES TO BE LOCATED WITHIN THE CEILING GRID SYSTEM.
M22	PROVIDE EXHAUST GRILLE WITH BALANCING DAMPER ACCESSIBLE FROM FRONT OF GRILLE IN ROOM.
M39	PROVIDE MANUAL BALANCING DAMPER.
M43	PROVIDE VRV CONTROL PANEL IN THIS LOCATION.
M46	PROVIDE BUILDING PRESSURE SENSOR IN THIS ROOM. CONTRACTOR TO PROPOSE LOCATION FOR ENGINEER REVIEW.

R,G,D RUNOUT SCHEDULE

MARK	DUCT BRANCH SIZE
E-1	22"x22"
E-2	10"X8"
R-1	22"x22"
R-1F	22"x22"
R-2	22"x22"
S-1	6"Ø
S-1A	6"Ø
S-2	8"Ø
S-3	10"Ø
S-4	12"Ø
S-5	12"X8"



KEY PLAN - GROUND FLOOR

MSA DESIGN
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STATE OF OHIO
THOMAS ANDERSON
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SETON HALL IMPROVEMENTS

MOUNT ST. JOSEPH UNIVERSITY
5701 DELHI ROAD,
CINCINNATI OH 45233-1670

NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set
1	11/14/2025	ADDENDUM 03

PROJECT NO. **24167.00**

DRAWING TITLE:
GROUND FLOOR MECHANICAL AIR PLAN

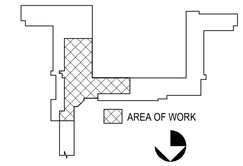
M2.00

1 M2.01 **FIRST FLOOR MECHANICAL PLAN PHASE 2**

1/8" = 1'-0"

TAGGED NOTES

M16	ROUTE REFRIGERANT PIPING UP IN NEW PIPING CHASE. REFER TO ARCHITECTURAL PLANS FOR COORDINATION.
M38	PROVIDE INSULATED DUCT ACCESS DOOR 18"X18" TO SERVICE FIRE DAMPER.



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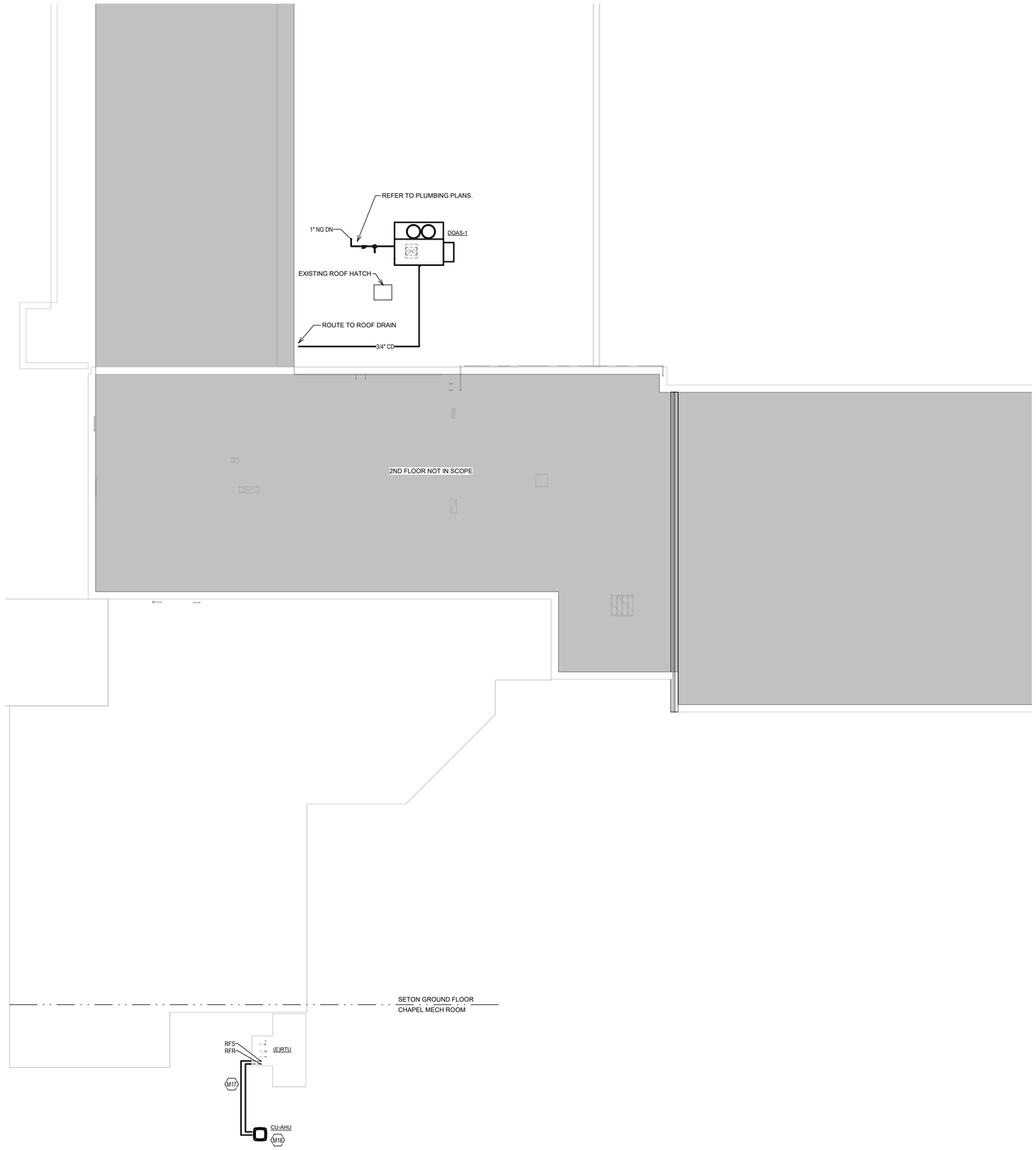
PROJECT NO. **24167.00**

DRAWING TITLE:
FIRST FLOOR
MECHANICAL PLAN

M2.01

10/24/2025 2:15:48 PM Autodesk Docs://24167.20 MSJ Seton Hall Improvements - Ground Floor/MEP OMSJ25-01 - MSJ Seton Hall - Ground Floor Renovation.rvt



ROOF MECHANICAL PLAN

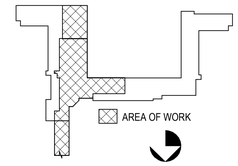
1 M2.02 1/8" = 1'-0"

ROOF (LV6) MECHANICAL PLAN

2 M2.02 1/8" = 1'-0"

TAGGED NOTES

M17	ROUTE REFRIGERANT PIPING UP IN EXISTING PIPING CHASE. PENETRATE EXISTING PIPING ROOF CURB AND SEAL AIR AND WATERTIGHT.
M18	PROVIDE AHU CONDENSING UNIT. PROVIDE BIG FOOT EQUIPMENT SUPPORTS 18" ABOVE ROOF.
M48	PROVIDE EXHAUST FAN FOR AHU-1 RELIEF AIR CONTROLLED BY BUILDING PRESSURE IN SPACE MADE AVAILABLE BY DEMO WORK. PROVIDE WITH VFD IN NEMA 3 ENCLOSURE. COORDINATE WITH ELECTRICAL CONTRACTOR.



KEY PLAN - GROUND FLOOR

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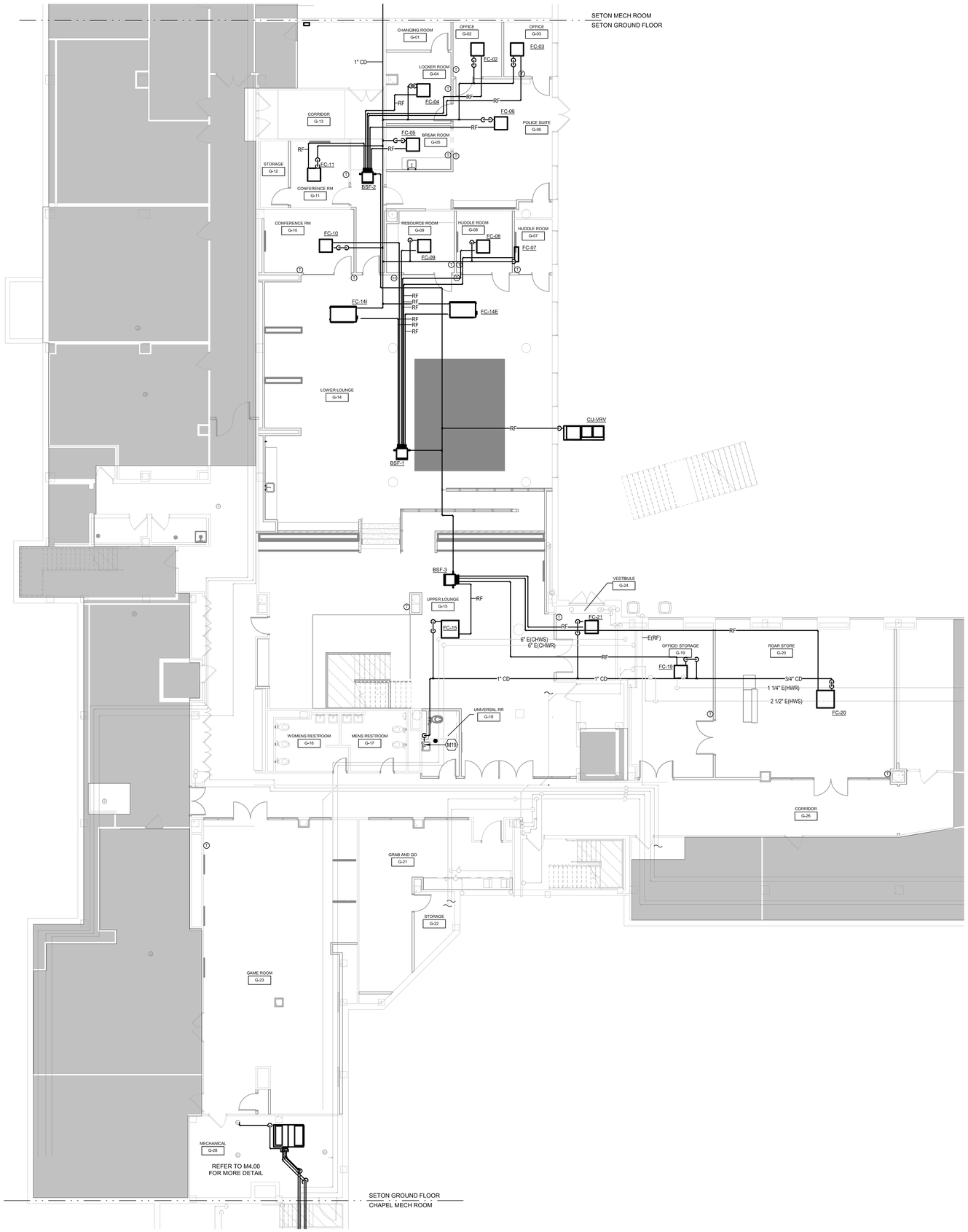
NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set
1	11/14/2025	ADDENDUM 03

PROJECT NO. **24167.00**

DRAWING TITLE:
ROOF MECAHNICAL PLAN

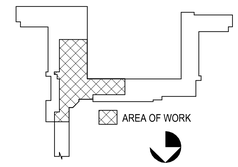
M2.02



1 M3.00 **GROUND FLOOR HYDRONIC PLAN**
1/8" = 1'-0"

TAGGED NOTES

M19	PIPE CONDENSATE TO HERE. CONNECT TO PIPE WYE PER PLUMBING DETAIL ON SHEET 300.



KEY PLAN - GROUND FLOOR

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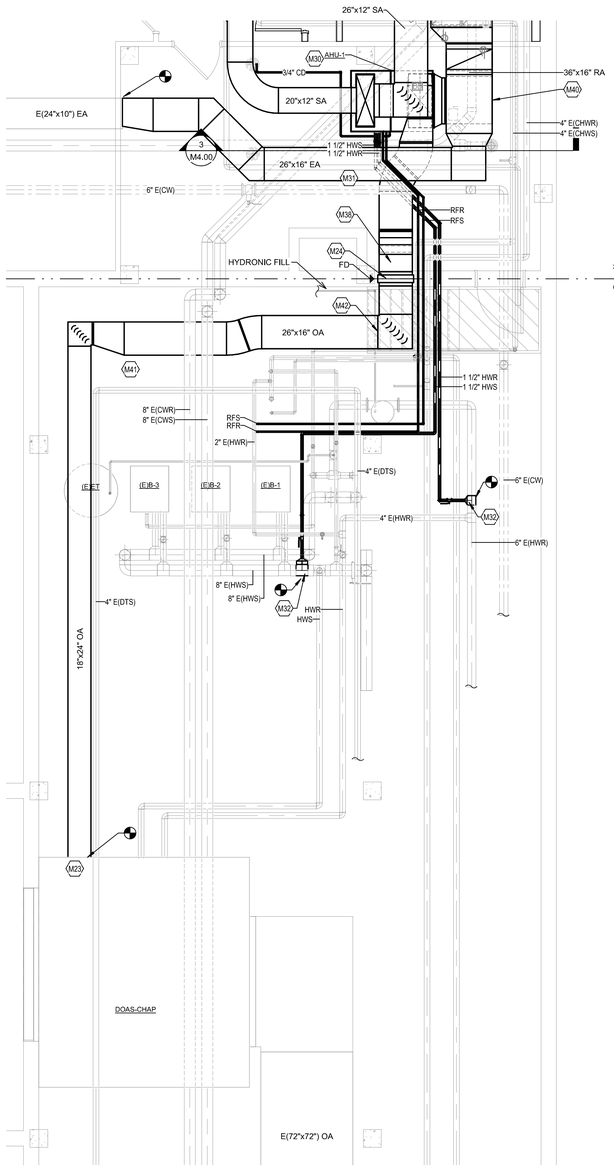
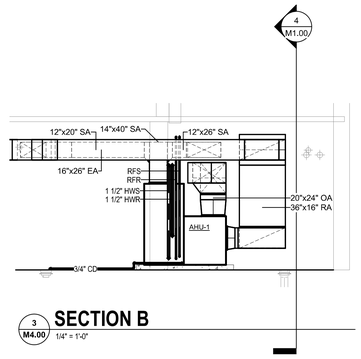
PROJECT NO. **24167.00**

DRAWING TITLE:
GROUND FLOOR MECHANICAL PIPING PLAN

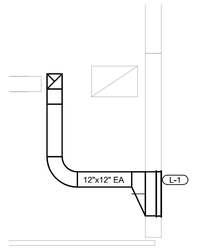
M3.00

TAGGED NOTES	(##)
M23	CONNECT OUTSIDE AIR DUCT WITH 45 DEG. TAP INTO THE OUTDOOR AIR PLENUM OF THE EXISTING DOAS.
M24	ROUTE DUCTWORK THROUGH BLOCK WALL AND PROVIDE STRUCTURAL LINTEL, AS NECESSARY.
M26	PROVIDE NEW LOUVER IN SPACE MADE AVAILABLE BY LOUVER REMOVAL. FIELD VERIFY DIMENSIONS PRIOR TO PURCHASING NEW LOUVER.
M27	ROUTE CONDENSATE FROM VRV SYSTEM TO FLOOR DRAIN IN MECHANICAL ROOM.
M29	ENSURE FAN IS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND THAT ALL CLEARANCES ARE MET. DO NOT INSTALL OVER TOP OF PIPES OR OTHER ITEMS THAT WOULD IMPEDE DIRECT ACCESS .
M30	PROVIDE AHU UNIT ON MECHANICAL PAD THAT EXTENDS A MINIMUM OF 6" BEYOND THE UNIT'S DIMENSIONS. COORDINATE WITH MANUFACTURER PRIOR TO FINAL SUBMITTAL TO PROVIDE ALL CLEARANCES AND ACCESS TO SERVICE ITEMS.
M31	COORDINATE UNIT SO THAT COILS CAN BE PULLED FROM THE ROOM SIDE OF THE UNIT. REFER TO AHU-1 SCHEMATIC AND CONTROL FOR MORE DETAILS AND ACCESSORIES.
M32	CONNECT HOT WATER BRANCH PIPING TO HOT WATER MAIN. FIELD VERIFY EXISTING PIPE SIZE. PROVIDE ISOLATION VALVE WHERE BRANCH CONNECTS TO MAIN.
M38	PROVIDE INSULATED DUCT ACCESS DOOR 18"X18" TO SERVICE FIRE DAMPER.
M40	PROVIDE INTERNAL ACOUSTICAL LINER ON RETURN DUCT. DUCTWORK SIZES ARE OPEN FREE AREA.
M41	ROUTE OUTDOOR AIR DUCTWORK TIGHT TO STRUCTURE WHERE POSSIBLE AND ALLOW FOR ROUTE AROUND PIPING. MINIMUM BOTTOM OF DUCT INSULATION HEIGHT IS 8' BUT SHOULD BE KEPT AS HIGH AS POSSIBLE.
M42	ENSURE DUCTWORK DOES NOT IMPEDE PATH OR HEAD HEIGHT AT STAIRS.

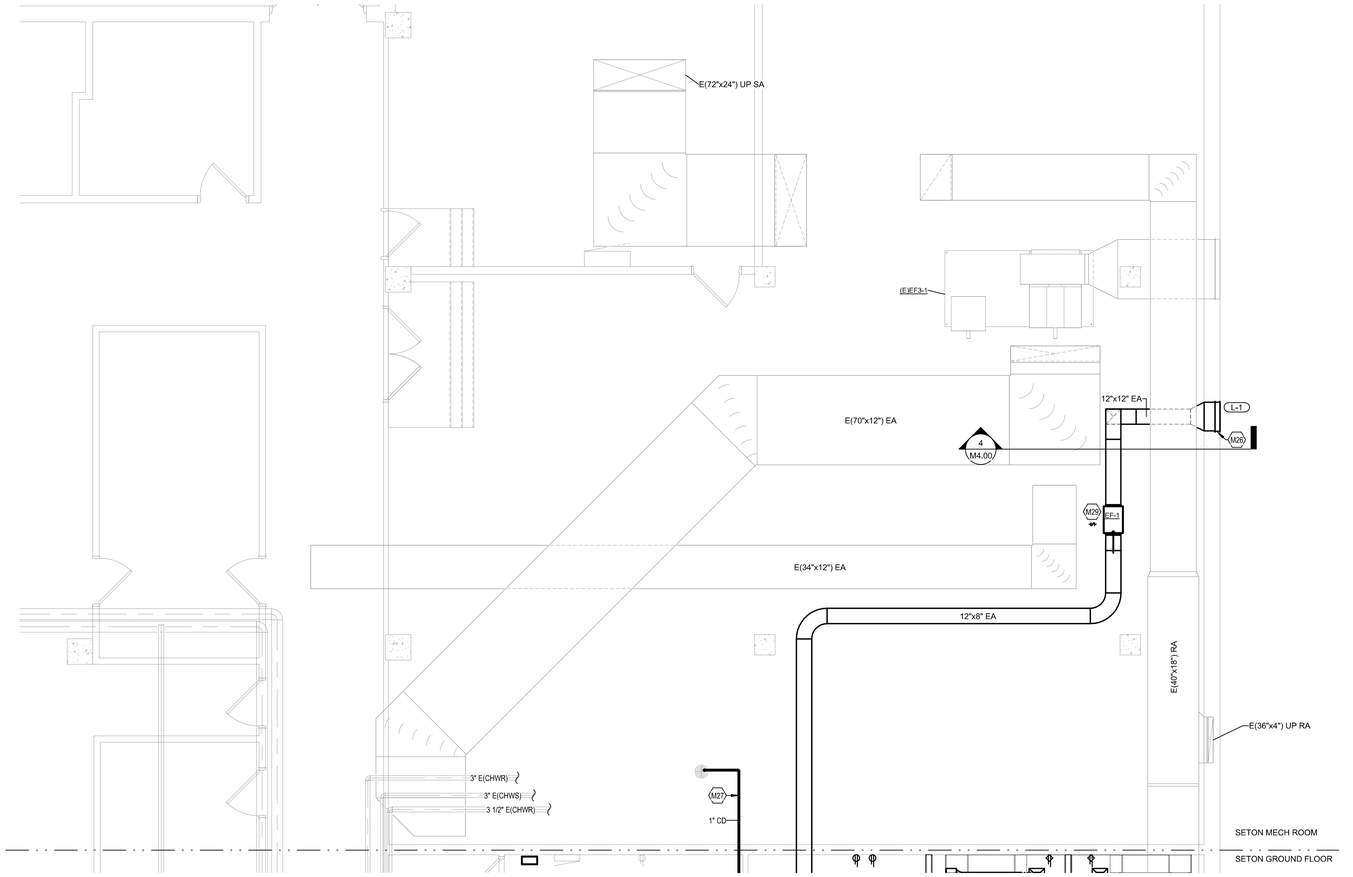




3 M4.00 **SECTION B**
1/4" = 1'-0"

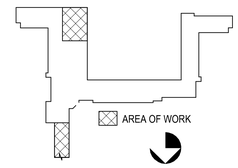


4 M4.00 **SECTION C**
1/4" = 1'-0"



1 M4.00 **ENLARGED CHAPEL MECHANICAL ROOM**
1/4" = 1'-0"

2 M4.00 **SETON HALL MECHANICAL ROOM**
1/4" = 1'-0"



KEY PLAN - GROUND FLOOR

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SETON HALL IMPROVEMENTS

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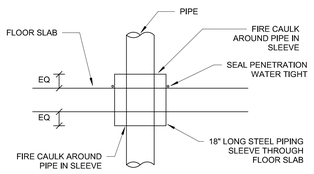
NO.	DATE	ISSUED / REVISION

PROJECT NO. **24167.00**

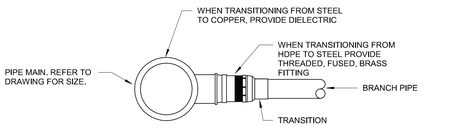
DRAWING TITLE:
MECHANICAL
ENLARGED VIEWS

M4.00



PIPE SLEEVE THROUGH FLOOR DETAIL

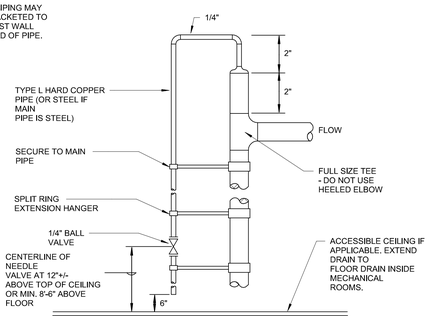
13 SCALE: NONE



* ALL COPPER PIPING SHALL BE INSULATED. EXTEND INSULATION BEYOND ALL METAL PIPING, FITTINGS, ETC.

HYDRONIC PIPING BRANCH DETAIL

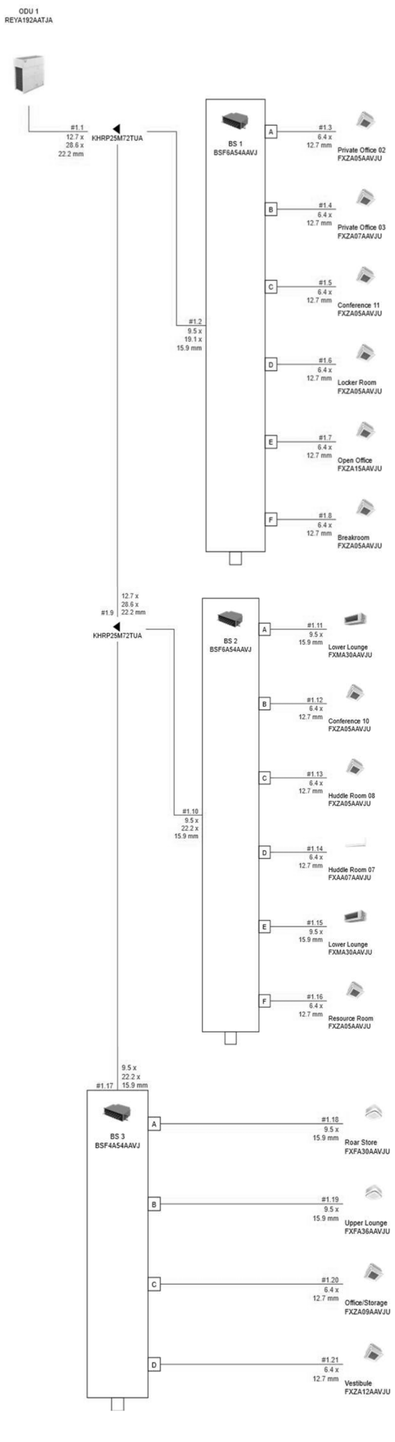
12 SCALE: NONE



MANUAL AIR VENT DETAIL - PIPES 3" AND SMALLER

11 SCALE: NONE

Piping ODU 1

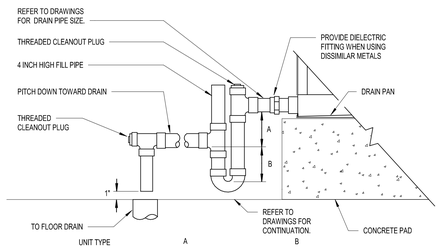


Warning: The Pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

ALL PIPING LENGTHS AND SIZES NEED TO BE VERIFIED BY THE CONTRACTOR AND MANUFACTURER. LENGTHS LISTED ARE NOT MEANT AS A TAKE OFF.

9 VRV SCHEMATIC

SCALE: NONE

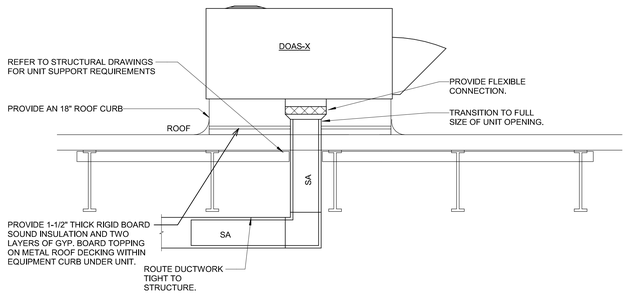


UNIT TYPE	A	B
BLOW THRU	1" MINIMUM	ZX
DRAW THRU	Z" PLUS X	X

WHERE X = STATIC PRESSURE IN P.AN. A & B ARE PER HVAC MANUFACTURERS RECOMMENDATIONS.

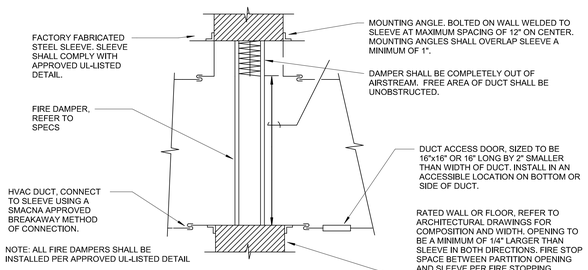
AIR HANDLING UNIT DRAIN TRAP DETAIL

8 SCALE: NONE



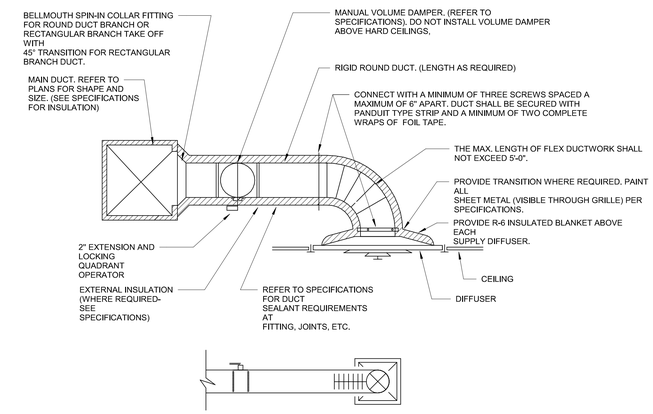
PACKAGED ROOFTOP UNIT ROOF DETAIL

7 SCALE: NONE



FIRE DAMPER DETAIL

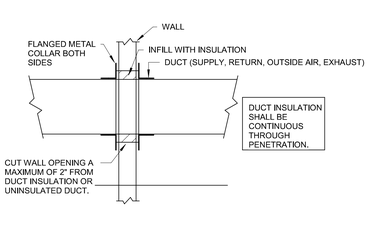
6 SCALE: NONE



PLAN VIEW REPRESENTATION

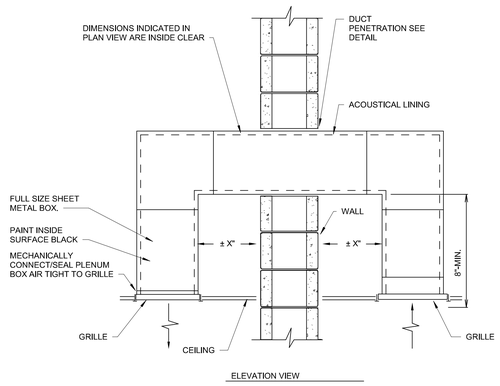
TYPICAL BRANCH DUCT DETAIL SUPPLY

5 SCALE: NONE



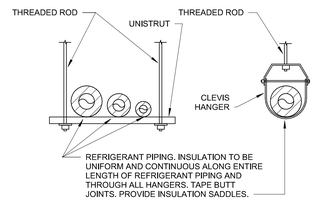
DUCT PENETRATION THROUGH NON-RATED WALL DETAIL

4 SCALE: NONE



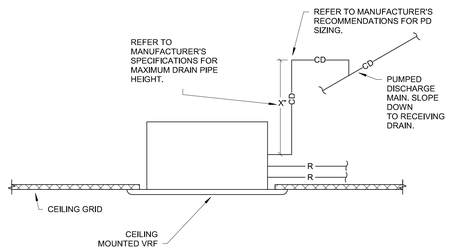
TRANSFER DUCT DETAIL

3 SCALE: NONE



REFRIGERANT PIPING INSULATION DETAIL

2 SCALE: NONE



VRF CASSETTE PIPING SCHEMATIC

1 SCALE: NONE

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SETON HALL IMPROVEMENTS

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PROJECT NO. **24167.00**

DRAWING TITLE:
MECHANICAL DETAILS

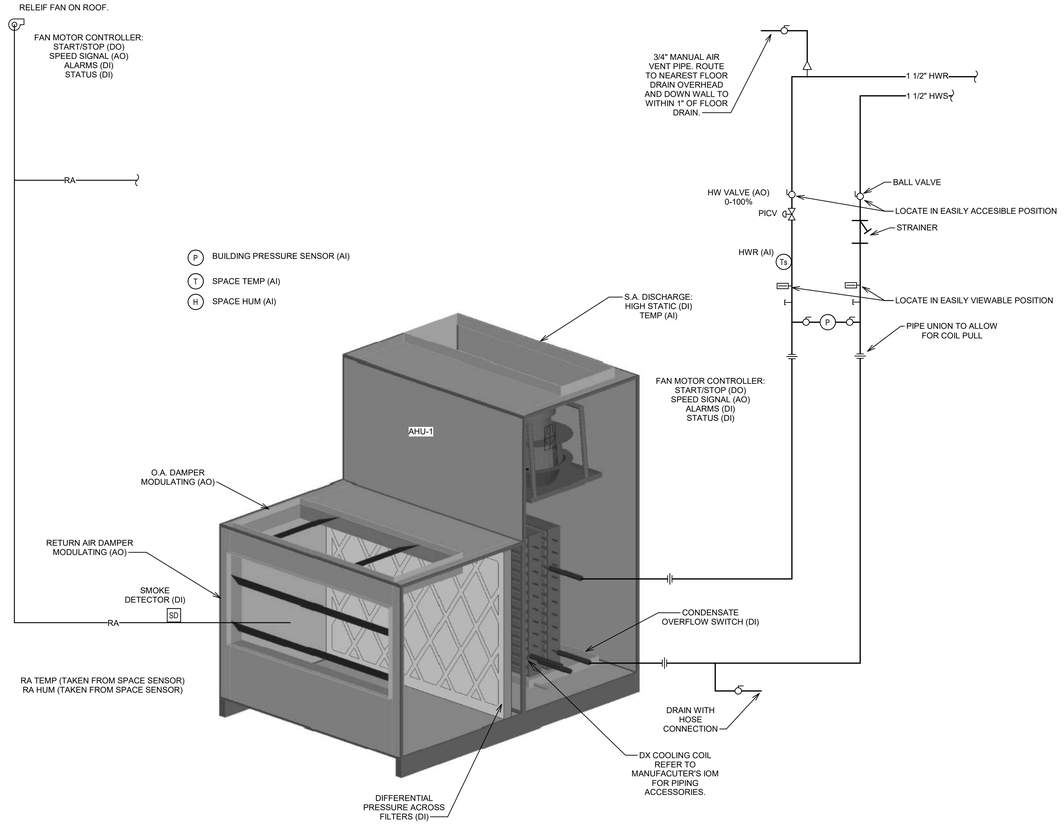
M5.00

10/24/2025 2:15:59 PM Autodesk Docs://24167.20 MSJ Seton Hall Improvements - Ground Floor/MEP OMSJ25-01 - MSJ Seton Hall - Ground Floor Renovation.rvt

Sequence of Operations: AIR SOURCE VRV SYSTEM

1. VRV CONTROL
   - A. The VRV manufacturer shall provide intelligent Touch Manager with BACnet server gateway for the system. The packaged controls system shall be capable of controlling all terminal units and condensing units. On a call for heating or cooling from the packaged unit controller the units shall stage on and modulate accordingly.
   - B. The manufacturer's packaged controls shall interface with the BAS and the TCC shall provide graphics of the VRV system to be viewed on the BAS. Provide floor plan with unit locations, setpoints, actual room temps.
   - C. **Space Set Points:**
     - a. Occupied Hours (adj. by owner): 7:00am – 9:00pm
     - b. Occupied Cooling - 72°F (adj.) and 60% (adj.) relative humidity
     - c. Occupied Heating - 70°F (adj.)
     - d. Unoccupied Cooling - 78°F (adj.)
     - e. Unoccupied Heating - 64°F (adj.)

3 VRV CONTROLS
M6.00 NOT TO SCALE



2 AHU-1 SHCEMATIC AND CONTROLS
M6.00 NOT TO SCALE

Sequence of Operations: AHU-1
Major Components as Follows:
Variable air volume supply fan, remote relief fan, DX coil, remote condensing unit, hot water coil, outside/economizer and return air damper.
Building Automation System Interface:
The system shall operate under the control of a local, microprocessor based DDC panel controller for complete integration of all unit functions including temperature control, scheduling, monitoring, unit safety proception, including compressor minimum run and minimum off times, and diagnostics. The DDC controller shall be provided by the factory. This system shall consist of all required temperature sensors, pressure sensors, controller and keypad/display operator interface. All MCVS and sensors shall be factory mounted, wired, and tested. If communication is lost between the network control panel and the outside air system controller, then the outside air system shall be placed into the occupied mode until communication is restored. The DDC controller shall have a built-in time schedule. The schedule shall be programmable from the unit keypad interface. The schedule shall be maintained in nonvolatile memory to ensure that it is not lost during a power failure. There shall be one start/stop per day and a separate holiday schedule. The controller shall accept up to sixteen holidays each with up to a 5-day duration. Each unit shall also have the ability to accept a time schedule via BAS network communications.
Unit controls:
- A. Head pressure control: the condenser head pressure will be monitored by the unit controller to maintain head pressure and the compressor operating envelope at all times to avoid high pressure trips on high load days. Condenser fans with ECM motors shall be provided as well as factory sensors to provide this protection.
- B. Compressor envelope control: the unit controller will continually monitor the suction and discharge pressure and temperature conditions during compressor operation. The unit will modulate the compressor, condenser, head pressure, and electronic expansion valve to maintain a safe compressor operating conditions to add reliability, an limit unit shut down during fringe operating conditions.

Fan Control:
The supply air fans are ECM with modulating control from 0-10v. The TCC shall individually optimize the required setpoints to obtain the design airflow in conjunction with the TAB Contractor and the Mechanical Engineer. In order to achieve energy savings the TCC shall determine the diffuser with the greatest duct static pressure and set the fan to run to meet the CFM at this diffuser +5%. Once this has been determined and the fan is set to run at an optimized speed the remaining diffusers shall be balanced.
Occupied Mode:
- A. Outside air damper shall open to scheduled minimum airflow and be proved via end switch.
- B. Return air damper shall open and be proved via end switch.
- C. Supply fan control: Will be a fixed speed while the building is in an occupied mode. Variable speed ECM motor shall be provided for balancing.
- D. Cooling Mode: The unit shall cycle the compressors per the factory control sequence to cool the supply air and maintain the space temperature setpoint.
- E. Heating Mode: The unit shall modulate the hot water coil valve to maintain space setpoint. The discharge air temperature should not exceed 90F (adj.).
- F. Dehumidification mode: If space humidity is 53% (adj.) or higher the unit will go into dehumidification mode. The DX cooling coil will modulate to maintain a leaving coil temperature of 52°F (adj.) and the hot water coil will modulate to maintain a leaving unit temperature to satisfy the space set point. The unit will remain this mode until the humidity level reaches 48% (adj.).

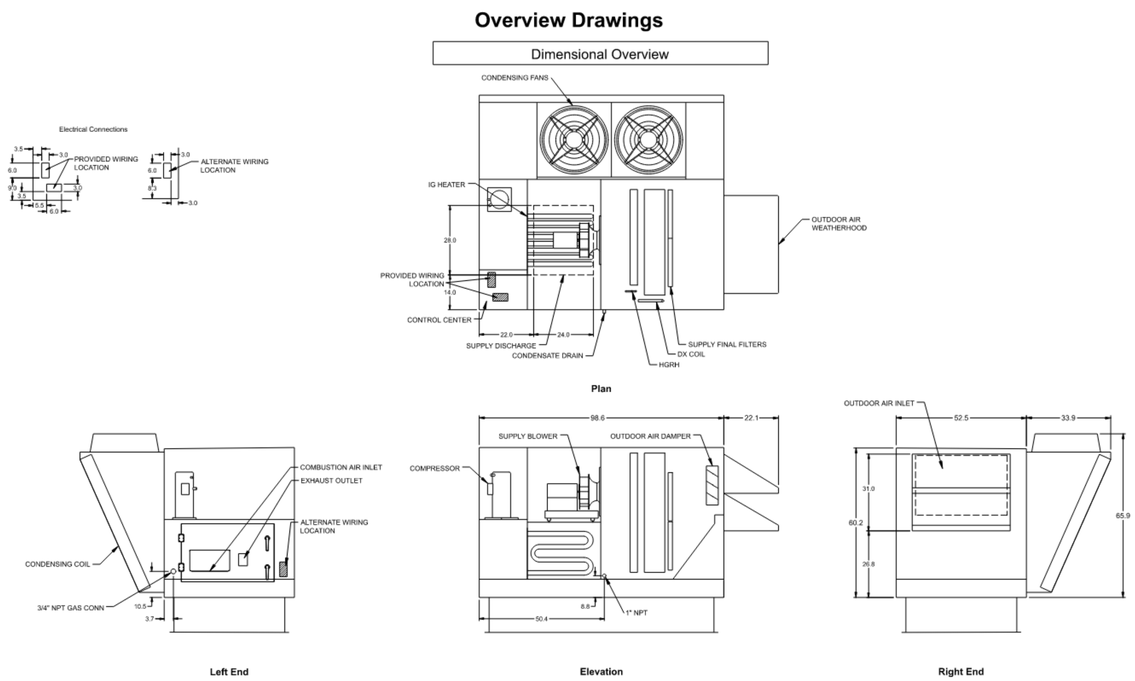
Economizer:
- A. When the outdoor air enthalpy (as calculated from temperature and relative humidity) is lower than space enthalpy (as calculated from temperature and relative humidity) the outdoor air and return air dampers shall modulate to maintain the space temperature setpoint.
- B. Relief Fan:
  - a. Locate the fan on the 5th floor roof.
  - b. The system includes a blower fan with VFD and backdraft damper.
  - c. The fan shall run to maintain building pressure setpoint(+0.03"(adj.).
  - d. Provide graphics on the BAS to include, floor plan, fan location, and points.

Unoccupied:
During unoccupied periods, the outside air dampers will close. The heating, cooling and supply fan will be off unless there is a call for heating or cooling at unoccupied setpoints.
Optimal Start:
The BAS shall monitor the scheduled occupied time, occupied space setpoints and space temperature to calculate when the optimal start occurs.
Morning Warm-Up Mode:
During optimal start, if the space temperature is below the occupied heating setpoint a morning warm-up mode shall be activated. When morning warm-up is initiated, the unit shall enable the heating and supply fan. When the space temperature reaches the occupied heating setpoint (adj.) the unit shall transition to the occupied mode.
Pre-Cool Mode:
During optimal start, if the space temperature is above the occupied cooling setpoint, pre-cool shall be activated. When pre-cool is initiated, the unit shall enable the fan and cooling. When the space temperature reaches occupied cooling setpoint (adj.) the unit shall transition to the occupied mode.
Unit Safeties:
Safeties shall include:
- A. Freeze protection: if the supply air temperature drops below 40F (adj.) for 300sec. (adj.) the unit shall shut off, the hot water valve shall fully open, and an alarm shall be sent to the BAS.
- B. Over pressurization control: a high limit static pressure sensor shall be located at the units supply air outlet. If the pressure in the supply duct exceeds 2" w.g. (adj.) in the supply air duct the fan shall be de-activated. Upon correction of the problem, the system shall be reset and unit shall return to normal operation.
- C. If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the fan shall be disabled and the compressors shall be de-energized.

Filter Status:
A differential air pressure sensor shall be installed across the filter banks. When the differential pressure exceeds 1.0"wg (adj.), then an alarm shall be generated at the BAS indicating filter changing is necessary. Set exact alarm setting per the filter manufacturer's recommendations.
Space Set Points:
Occupied Hours (adj. by owner): 7:00am – 9:00pm
Occupied Cooling - 72°F (adj.) and 50% (adj.) relative humidity
Occupied Heating - 70°F (adj.)
Unoccupied Cooling - 78°F (adj.)
Unoccupied Heating - 64°F (adj.)
Points List:
Provide protocol implementation conformance statement (PICS) for factory installed controllers. Submittals shall include point name, BACnet name, BACnet object ID and description. The controller shall be factory programmed with a minimum of the following points listed and shown:
- A. Alarms
  1. High supply duct static alarm
  2. Condensate drain pan alarm
  3. Compressor command
  4. Refrigerant circuit pressure alarm
  5. Dirty filter alarm
  6. Fan status does not match command

Sequence of Operations: EXHAUST FAN
1. EF CONTROL
   - A. The system includes an ECM inline fan and backdraft damper.
   - B. The exhaust fan shall run continuously.
   - C. Points:
     - a. Fan start/stop (DO)
     - b. Fan status (DI)
     - c. Fan speed (AO)
   - D. Alarm if the fan status does not match the command status.
   - E. Provide graphics on the BAS to include, floor plan, fan location, and points.

4 EF CONTROLS
M6.00 NOT TO SCALE



Sequence of Operations: DOAS-1
Major Components as Follows:
Supply fan, DX coil, Nat. gas heater, outside air damper.
Building Automation System Interface:
The system shall operate under the control of a local, microprocessor based DDC panel controller for complete integration of all unit functions including temperature control, scheduling, monitoring, unit safety proception, including compressor minimum run and minimum off times, and diagnostics. The DDC controller shall be provided by the factory. This system shall consist of all required temperature sensors, pressure sensors, controller and keypad/display operator interface. All MCVS and sensors shall be factory mounted, wired, and tested. If communication is lost between the network control panel and the outside air system controller, then the outside air system shall be placed into the occupied mode until communication is restored.
The DDC controller shall have a built-in time schedule. The schedule shall be programmable from the nit keypad interface. The schedule shall be maintained in nonvolatile memory to insure that it is not lost during a power failure. There shall be one start/stop per day and a separate holiday schedule. The controller shall accept up to sixteen holidays each with up to a 5-day duration. Each unit shall also have the ability to accept a time schedule via BAS network communications.
Unit controls:
- A. Head pressure control: the condenser head pressure will be monitored by the unit controller to maintain head pressure and the compressor operating envelope at all times to avoid high pressure trips on high load days. Condenser fans with ECM motors shall be provided as well as factory sensors to provide this protection.
- B. Compressor envelope control: the unit controller will continually monitor the suction and discharge pressure and temperature conditions during compressor operation. The unit will modulate the compressor, condenser, head pressure, and electronic expansion valve to maintain a safe compressor operating conditions to add reliability, an limit unit shut down during fringe operating conditions.

Fan Control:
The supply air fan shall be controlled through the factory mounted variable frequency drive (VFD) provided by the manufacturer. The TCC shall individually optimize the required setpoints to obtain the design airflow in conjunction with the TAB Contractor and the Mechanical Engineer. In order to achieve energy savings the TCC shall determine the diffuser with the greatest duct static pressure and set the fan to run to meet the CFM at this diffuser +5%. Once this has been determined and the fan is set to run at an optimized speed the remaining diffusers shall be balanced.
Occupied Mode:
- A. Outside air damper shall fully open and be proved via end switch.
- B. Supply fan control: Will be a fixed speed while the building is in an occupied mode.
- C. Cooling DX coil.
  1. The unit shall cool outdoor air to 55F (adj.) and re-heat with refrigerant hot gas back to 68F (adj.).
  2. The cooling shall be locked out when the outside air is <55F (adj.).
- D. Nat. Gas Heat
  1. The unit shall heat outdoor air to 70F (adj.).
  2. The heating will be locked out when the outside air is >65F (adj.).
- E. Dehumidification mode: If space humidity is 60% or higher the unit will go into dehumidification mode. The DX cooling coil will modulate to maintain a leaving coil temperature of 52°F (adj.) and the hot gas re-heat coil will modulate to maintain a leaving unit temperature of 68°F (adj.). The unit will remain this mode until the humidity level reaches 55%.

Unoccupied:
During unoccupied periods, the outside air dampers will close, the heating and cooling shall be off, and the supply fan will be off.
Unit Safeties:
Safeties shall include:
- A. Freeze protection: if the supply air temperature drops below 40F (adj.) for 300sec. (adj.) the unit shall shut off and send an alarm to the BAS.
- B. Over pressurization control: a high limit static pressure sensor shall be located at the DOAS-1 supply air outlet. If the pressure in the supply duct exceeds 2" w.g. (adj.) in the supply air duct the fan shall be de-activated. Upon correction of the problem, the system shall be reset and unit shall return to normal operation.
- C. If the condensate level reaches the trip point, a condensate overflow diagnostic shall annunciate at the BAS. To prevent the condensate drain pan from overflowing and causing water damage to the building the fan shall be disabled and the compressors shall be de-energized.

Filter Status:
A differential air pressure sensor shall be installed across the outside air filter banks. When the differential pressure exceeds 1.0"wg (adj.), then an alarm shall be generated at the BAS indicating filter changing is necessary. Set exact alarm setting per the filter manufacturer's recommendations.
Space Set Points:
Occupied Cooling - 68°F (adj.) and 60% (adj.) relative humidity
Occupied Heating - 70°F (adj.)
Unoccupied: Off
Points List:
Provide protocol implementation conformance statement (PICS) for factory installed controllers. Submittals shall include point name, BACnet name, BACnet object ID and description. The controller shall be factory programmed with a minimum of the following points:
- A. Read/ Write Points
  - a. Controlling Temperature Set Pt (read/write)
  - b. Controlling DewPoint Set Pt (read/write)
  - c. Dehumidification Set Pt (read/write)
  - d. Outside RH from BAS (read/write)
  - e. Outside Air Temperature from BAS (read/write)
  - f. Supply Fan CFM Set Pt (read/write)
  - g. Supply duct pressure set point (read/write)
  - h. Unit start/stop command (read/write)
  - i. Reset alarms command (read/write)
  - j. Unoccupied mode command (read/write)
  - k. BMS purge mode command (read/write)
- B. Read Only Points
  - a. Space air temperature
  - b. Supply air temperature
  - c. Coil leaving air temperature
  - d. Outside air damper status
  - e. Hot gas reheat control loop
  - f. Supply fan speed (%speed)
  - g. Space duct static pressure
  - h. OA filter pressure drop (inWC)
  - i. Supply duct pressure (inWC)
  - j. Unit ON/OFF status indicator
  - k. Supply fan proving ON/OFF status
  - l. Global Alarm indication
  - m. Emergency shutdown
- C. Alarms
  - a. High supply duct static alarm
  - b. Condensate drain pan alarm
  - c. Compressor command
  - d. Refrigerant circuit pressure alarm
  - e. Outside air dirty filter alarm

1 DOAS-1 SCHEMATIC AND CONTROLS
M6.00 NOT TO SCALE

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NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set
1	11/14/2025	ADDENDUM 03

PROJECT NO. **24167.00**

DRAWING TITLE:
MECHANICAL SCHEMATICS AND CONTROLS

M6.00

DOAS OUTSIDE AIR CALCULATIONS

ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	SA TO ROOM (CFM)	ACTUAL OA (CFM)
2	PRIVATE OFFICE	OFFICE SPACE	90	1	0.06	5	1	10	100%	15	15
3	PRIVATE OFFICE	OFFICE SPACE	90	1	0.06	5	1	10	100%	15	15
5	BREAK	BREAK ROOM	105	5	0.12	5	1	39	100%	45	45
6	OPEN OFFICE	OFFICE SPACE	485	7	0.06	5	1	64	100%	75	75
7	HUDDLE ROOM	CONFERNECE/MEETING	60	2	0.06	5	1	14	100%	15	15
8	HUDDLE ROOM	CONFERNECE/MEETING	100	4	0.06	5	1	26	100%	30	30
9	RESOURCE ROOM	CONFERNECE/MEETING	140	5	0.06	5	1	33	100%	40	40
10	CONFERENCE	CONFERNECE/MEETING	180	6	0.06	5	1	41	100%	45	45
11	CONFERENCE	CONFERNECE/MEETING	125	5	0.06	5	1	33	100%	45	45
13	CORRIDOR	CORRIDORS	330	0	0.06	5	1	20	100%	75	75
14	LOWER LOUNGE	MULTIPURPOSE ASSEMBLY	2335	60	0.06	5	1	440	100%	465	465
15	UPPER LOUNGE	MULTIPURPOSE ASSEMBLY	1855	40	0.06	5	1	311	100%	330	330
19	OFFICE/STORAGE	OFFICE SPACE	370	2	0.06	5	1	31	100%	35	35
20	ROAR STORE	SALES	965	14	0.12	7.5	1	224	100%	250	250

AHU OUTSIDE AIR CALCULATIONS

ROOM #	NAME	ASHRAE 62.1 SPACE TYPE	AREA (SF.)	PEOPLE	CFM/SF.	CFM/PERSON	Ez	OA REQUIRED (CFM)	SYSTEM % OA	SA TO ROOM (CFM)	ACTUAL OA (CFM)
21	GRAB AND GO	COFEE STATIION	475	4	0.12	5	0.8	96	20%	1100	220
22	STORAGE	OCCUPIABLE STORAGE	80	1	0.06	5	0.8	12	20%	75	15
23	GAME ROOM	MULTIPURPOSE ASSEMBLY	1355	35	0.06	5	0.8	320	20%	1600	320
	ARCHIVES	OCCUPIABLE STORAGE	1021	1	0.06	5	0.8	83	20%	425	85
	POLICE STORAGE	OCCUPIABLE STORAGE	630	1	0.06	5	0.8	54	20%	300	60

HEAT RECOVERY UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT	REFRIGERANT TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY	EER	ELECTRICAL						REMARKS
			LENGTH	WIDTH	HEIGHT						VOLTAGE	PHASE	HZ	MCA	MOP	SCCR	
CU-VRV	DAIKIN	REYA192AATJA	69	30	65	972	R-32	176	139	NA	208	3	60	64	80	5	ALL

REMARKS:
1. PROVIDE WITH R-32 REFRIGERANT. SIZE LINES PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
2. PROVIDE BASE MOUNTING RAILS WITH MECHANICAL PAD.
3. PROVIDE DAIKIN INTELLIGENT ITOUCH MANAGER.
4. MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUMES.
5. SUBSTITUTE MANUFACTURERS SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT.
6. CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PIPING DIMENSIONS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIRECT COSTS ASSOCIATED WITH ANY DEVIATION RESULTING FROM CHANGES IN DESIGN.
8. THE EQUIPMENT PERFORMANCE TO MEET OR EXCEED IECC 2021.
9. PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

VRV INDOOR UNIT SCHEDULE

MARK	LOCATION	MANUFACTURER	MODEL	TYPE	DIMENSIONS (IN.)			WEIGHT (LBS)	COOLING CAPCACITY (MBH)	HEATING CAPACITY (MBH)	dBa	ELECTRICAL						REMARKS
					LENGTH	WIDTH	HEIGHT					VOLTAGE	PHASE	HZ	MCA	MOP		
FC-02	PRIVATE OFFICE	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-03	PRIVATE OFFICE	DAIKIN	FXZA07AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	6.48	8.53	32	208	1	60	0.3	15		ALL
FC-04	LOCKER ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-05	BREAK ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-06	OPEN OFFICE	DAIKIN	FXZA15AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	36	12.80	17.06	37	208	1	60	0.4	15		ALL
FC-07	HUDDLE ROOM	DAIKIN	FXAA07AAVJU	WALL MOUNTED	33.8	9.8	11.6	27	6.30	8.50	34	208	1	60	0.3	15		ALL
FC-08	HUDDLE ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-09	RESOURCE ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-10	CONFERENCE ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-11	CONFERENCE ROOM	DAIKIN	FXZA05AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	4.95	6.48	32	208	1	60	0.3	15		ALL
FC-14E	LOWER LOUNGE A	DAIKIN	FXMA30AAVJU	DUCTED CONCEALED UNIT	31.5	55.1	9.6	101	25.92	34.00	30	208	1	60	3.0	15		ALL
FC-14I	LOWER LOUNGE B	DAIKIN	FXMA30AAVJU	DUCTED CONCEALED UNIT	31.5	55.1	9.6	101	25.92	34.00	30	208	1	60	3.0	15		ALL
FC-15	UPPER LOUNGE	DAIKIN	FXFA36AAVJU	3X3 CEILING CASSETTE	33.1	33.1	11.3	58	31.05	40.00	44	208	1	60	1.6	15		ALL
FC-19	OFFICE/STORAGE	DAIKIN	FXZA09AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	35	8.02	10.57	33	208	1	60	0.3	15		ALL
FC-20	ROAR STORE	DAIKIN	FXFA30AAVJU	3X3 CEILING CASSETTE	33.1	33.1	11.3	58	25.92	34.00	44	208	1	60	1.0	15		ALL
FC-21	VESTIBULE	DAIKIN	FXZA12AAVJU	2X2 CEILING CASSETTE	22.6	22.6	10.2	36	10.24	13.64	34	208	1	60	0.4	15		ALL

REMARKS:
1. PROVIDE DIGITAL WALL MOUNTED THERMOSTAT TO CONTROL UNIT. REFER TO PLANS FOR THERMOSTAT LOCATIONS.
2. INTEGRATE CONTROL OF VRV INDOOR UNITS TO THE INTELLIGENT ITOUCH MANAGER AND INTEGRATE WITH EXISITNG BAS VIA BACNET.
3. CONTACTOR SHALL COORDINATE LOCATION TO MAINTAIN MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES.
4. COORDINATE CEILING CASSETTES WITH CEILING GRID CONTRACTOR PRIOR TO INSTALLATION. 2X2 CEILING CASSETTES SHALL BE ALIGNED WITH CEILING GRID AND 3X3 CASSETTES SHALL BE CENTERED IN THE CENTER OF 4 2X2 TILES.
5. UNIT SHALL HAVE INTEGRAL CONDENSATE PUMP WITH MINIMUM 18" RISE.
6. PROVIDE REFRIGERANT PIPING AND ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
7. PROVIDE CONDENSATE PUMP WITH UNIT.

VRV BRANCH SELECTOR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT (LBS)	NUMBER OF BRANCHES	ELECTRICAL						REMARKS
			LENGTH	WIDTH	HEIGHT			VOLTAGE	PHASE	HZ	MCA	MOP		
BSF-1	DAIKIN	BSF6A54AAVJ	33.4	27.7	9.5	99	6	208	1	60	1.9	15		ALL
BSF-2	DAIKIN	BSF6A54AAVJ	33.4	27.7	9.5	99	6	208	1	60	1.9	15		ALL
BSF-3	DAIKIN	BSF4A54AAVJU	19.3	27.7	9.5	73	4	208	1	60	1.2	15		ALL

REMARKS:
1. REFER TO PIPING SCHEMATICS FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL COORDINATE TO ENSURE MANUFACTURER'S RECOMMENDED CLEARANCES ARE MAINTAINED.

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT (LBS)	SUPPLY FAN					REFRIGERANT TYPE	COOLING PERFORMANCE										HOT GAS REHEAT		GAS HEAT						ELECTRICAL DATA				REMARKS
			LENGTH	WIDTH	HEIGHT		OUTSIDE AIRFLOW (CFM)	ESP (in. wg)	MOTOR TYPE	FAN QTY	HP (PER FAN)		COOLING STAGES	TOTAL (MBH)	SENSIBLE (MBH)	ENTERING COIL TEMPERATURE		LEAVING COIL TEMPERATURE		FACE VELOCITY (FPM)	APD (in. wg.)	COIL ROWS	FINS/IN	EER	CAPACITY (MBH)	COIL LAT DB	EAT (F)	LAT (F)	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	HEATING STAGES	GAS PRESSURE (IN. WG)	VOLTS / HZ / PH	MCA	MOPD	SCCR	
																EAT DB	EAT WB	DB (F)	WB (F)																	
DOAS-1	VALENT	VX-112-10I-G-E2	120.7	86.4	65.9	2190	1500	1.5	PLENUM, DIRECT DRIVE	1	0.66	R-454B	INVERTER SCROLL	118.2	68.6	95.0	75.0	49.4	49.1	127	0.068	4	14	11.8	53.9	84.6	5.0	94.9	200	162	16:1	6"-14"	208/60/3	54.7	60	10	ALL

REMARKS:
1. REFER TO DRAWINGS FOR CONFIGURATON.
2. UNITS ARE PROVIDED WITH SINGLE POINT POWER CONNECTION AND UNIT POWERED GFI OUTLET.
3. SUPPLY AND EXHAUST FANS SHALL HAVE VIBRATION ISOLATORS.
4. STAINLESS STEEL HEAT EXCHANGE TUBES
5. ALL FANS TO BE SUPPLIED WITH MOTOR SHAFT GROUNDING RINGS AND FACTORY WIRED VFDs
6. PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

AIR HANDLING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT (LBS)	OUTDOOR AIR (CFM)	SUPPLY FAN					REFRIGERANT TYPE	COOLING PERFORMANCE										HOT WATER COIL									ELECTRICAL DATA				REMARKS
			LENGTH	WIDTH	HEIGHT			AIRFLOW (CFM)	ESP (in. wg)	MOTOR TYPE	FAN QTY	HP (PER FAN)		COOLING STAGES	TOTAL (MBH)	SENSIBLE (MBH)	ENTERING COIL TEMPERATURE		LEAVING COIL TEMPERATURE		FACE VELOCITY (FPM)	APD (in. wg.)	COIL ROWS	FINS/IN	CAPACITY (MBH)	EAT DB (F)	LAT DB (F)	EWT (F)	LWT (F)	FLOW RATE (GPM)	PRESSURE DROP (FT WG)	ROWS	FPI	FACE VELOCITY (FT./MIN)	VOLTS / HZ / PH	MCA	MOPD	SCCR	
																	EAT DB	EAT WB	DB (F)	WB (F)																		
AHU-1	DAIKIN	BCVE041	64	47.5	65.5	461	700	3500	2.0	ECM DIRECT	2	2.77	R-32	TWO-STAGE TANDEM	118.5	92.5	78.5	65.0	50.3	49.9	436.4	0.63	6	12	135297	55.8	91.2	160	140	13.8	1.96	1	12	436.4	208/60/3	26	35	5	ALL

REMARKS:
1. REFER TO DRAWINGS FOR CONFIGURATON.

CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	DIMENSIONS (IN.)			WEIGHT	REFRIGERANT TYPE	COOLING CAPACITY (MBH)	HEATING CAPACITY	EER	ELECTRICAL						REMARKS
			LENGTH	WIDTH	HEIGHT						VOLTAGE	PHASE	HZ	MCA	MOP	SCCR	
CU-AHU	DAIKIN	DC6TE12030	36	36	42	394	R-32	118	NA	11.4	208	3	60	46	60	10	ALL

REMARKS:
1. PROVIDE WITH R-32 REFRIGERANT. SIZE LINES PER MANUFACTURER'S INSTRUCTIONS. SUBMIT DETAILED PIPING SCHEMATIC WITH SHOP DRAWINGS.
2. PROVIDE BASE MOUNTING RAILS.
3. MANUFACTURERS SUBMITTAL MUST INCLUDE REFRIGERANT PIPING DIAGRAM WITH PIPING DIAGRAM WITH PIPE DIAMETERS, LENGTHS, AND REFRIGERANT VOLUMES.
4. SUBSTITUTE MANUFACTURERS SHALL BE RESPONSIBLE FOR ADDITIONAL PIPING AND REFRIGERANT.
5. THE EQUIPMENT PERFORMANCE TO MEET OR EXCEED IECC 2021.
6. PROVIDE UNITS WITH FACTORY SUPPLIED REFRIGERANT LEAK DETECTION PER ASHRAE 15 AND 34.

EXHAUST FAN SCHEDULE

MARK	MANUFACTURER	MODEL #	TYPE	SERVICE	AIRFLOW (CFM)	E.S.P.	DRIVE	ELECTRICAL DATA						dBa	REMARKS
								VOLTAGE	PHASE	HZ	MCA	MOP	SCCR		
EF-1	GREENHECK	SQ-7-VG	DIRECT DRIVE INLINE FAN	LOCKERS	700	0.25	DIRECT-ECM	115	1	60	8.2	15	5	61	1-5
EF-RELIEF	GREENHECK	USF-18	UNIVERSAL SINGLE WIDTH BLOWER	GAME ROOM RELEIF	3500	1.343	DIRECT VFD	208	60	60	13.25	20	5	68	1, 2, 6, 7

REMARKS:
1. PROVIDE WITH BACKDRAFT DAMPER.
2. PREAPPROVED MANUFACTURERS: GREENHECK, COOK, TWIN CITY.
3. PROVIDE HOA VARI-GREEN CONTROLLER OR APPROVED EQUIVALENT.
4. MOUNT FROM STRUCTURE ABOVE. PROVIDE VIBRATION ISOLATION.
5. FANS CONNECTED LOAD IS 3642 CFM, BALANCE FAN TO 3500 CFM.
6. BASE MOUNTED ON EXISITNG ROOF MECHANICAL CURB.
7. PROVIDE WITH MOTOR SHAFT GROUNDING RINGS. PROVIDE WITH VARIABLE FREQUENCY DRIVE AND NEMA 3R ENCLOSURE.

REGISTERS, GRILLES, AND DIFFUSERS

MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE	DUCT INLET SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	NOISE CRITERIA	THROW PATTERN	REMARKS
E-1	PRICE	535	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"X24"	22"x22"	10"X6"	225	0.05	25	NA	1, 2, 4
E-2	PRICE	635	ALUMINUM LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	12"X10"	10"X8"	10"X8"	225	0.05	25	NA	1, 2, 4
R-1	PRICE	535	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"X24"	22"x22"	REFER TO PLANS	1200	0.05	25	NA	1, 2, 4, 5
R-1F	PRICE	535FF	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE, FILTER FRAME	24"X24"	22"x22"	REFER TO PLANS	1200	0.05	25	NA	1, 2, 4, 5, 6
R-2	PRICE	80	STEEL LOUVERED WITH 45 DEG. DEFLECTION AND 1/2" BLADE	24"X24"	22"x22"	REFER TO PLANS	1500	0.05	25	NA	1. 2 5
S-1	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"X24"	6"Ø	6"Ø	100	0.05	25	4-WAY	1-3
S-1A	PRICE	SPD	SQUARE PLAQUE DIFFUSER	12"X12"	6"Ø	6"Ø	100	0.05	25	4-WAY	1-3
S-2	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"X24"	8"Ø	8"Ø	225	0.05	25	4-WAY	1-3
S-3	PRICE	SPD	SQUARE PLAQUE DIFFUSER	24"X24"	10"Ø	10"Ø	430	0.05	25	4-WAY	1-3
S-4	PRICE	SCD	SQUARE PLAQUE DIFFUSER	24"X24"	12"Ø	12"Ø	600	0.05	25	4-WAY	1-3
S-5	PRICE	510Z	STEEL LOUVERED DIFFUSER	14"X10"	12"X8"	12"X8"	450	0.05	25	1-WAY	1-3

REMARKS:
1. REFER TO ARCHITECTURAL DRAWINGS TO MATCH COLOR SELECTION OF SURROUNDING SURFACE.
2. CONTRACTOR TO COORDINATE MOUNTING TYPE WITH PLANS AND ARCHITECTURAL REFLECTED CEILING PLANS.
3. PROVIDE INSULATED BLANKET ON TOP OF SUPPLY DIFFUSERS.
4. INSTALL LOUVERED GRILLES WITH LINE OF SIGHT TOWARDS CLOSEST WALL SO AS TO AVOID SEEING INTO THE DUCTWORK FROM THE SPACE.
5. PAINT INSIDE OF RETURN DUCTS BLACK WITHIN LINE OF SIGHT.
6. PROVIDE WITH FILTER FRAME, 1/4 TURN LATCH AND HINGE.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL #	SERVICE	DEPTH (IN)	MAX CFM	WIDTH (IN)	HEIGHT (IN)	FREE AREA (SF)	VELOCITY (FPM)	APD (IN. WG.)	REMARKS
L-1	GREENHECK	EHH	EXHAUST	4	1185	24	36	2.37	500	0.05	ALL

REMARKS:
1. ALL LOUVERS SHALL BE EXTRUDED ALUMINUM WITH ANODIZED FINISH, CHANNEL FRAME WITH CONCEALED MULLIONS UNLESS NOTED OTHERWISE.
2. COLOR TO BE SELECTED BY ARCHITECT.
3. PROVIDE WITH BIRDSCREEN.
4. LOUVER DIMENSIONS TAKEN FROM EXISTING DRAWINGS. CONTRACTOR SHALL FIELD VERIFY ON SITE PRIOR TO PURCHASE.

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NO.	DATE	ISSUED / REVISION
	10/24/25	CD Set
1	11/14/2025	ADDENDUM 03

PROJECT NO. **24167.00**

DRAWING TITLE:
MECHANICAL SCHEDULES

M7.00