

3. TAKE ALL PRECAUTIONS NECESSARY TO PROTECT FROM DAMAGE ALL EXISTING UTILITIES AND EQUIPMENT THAT ARE TO REMAIN. ANY UTILITIES AND/OR EQUIPMENT DAMAGED BY THE CONTRACTOR MUST BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER, AND TO THE SATISFACTION OF THE BUILDING.
2. DIMENSIONS, LOCATIONS AND CONDITIONS SHOWN ARE APPROXIMATE. TAKE MEASUREMENTS IN THE FIELD, NOT FROM DIMENSIONS PROVIDED HEREIN. VERIFY ALL CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT. NOTIFY THE COR OF ANY DISCREPANCIES AND CHANGES IN WRITING.
3. TAKE ALL PRECAUTIONS NECESSARY TO MINIMIZE ANY DISTURBANCES TO THE CONTINUOUS OPERATION OF THE FACILITY.
4. ALL MATERIALS AND EQUIPMENT REMOVED UNDER THIS CONTRACT MUST BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE PROPERLY DISPOSED OF AWAY FROM THE AUTHORITY PROPERTY IN ACCORDANCE WITH APPLICABLE CODES AND ENVIRONMENTAL REGULATIONS, UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS OR IN THE SPECIFICATIONS.
5. PROVIDE A WRITTEN NOTICE TO THE COR, 2 WEEKS IN ADVANCE, FOR ANY SHUTDOWN/STARTUP REQUIREMENTS. COORDINATE SHUTDOWNS/STARTUPS TO MINIMIZE IMPACTS ON THE CONTINUOUS OPERATION OF THE FACILITY.
6. ALL EQUIPMENT AND MATERIALS MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS AND INSTRUCTIONS. COMPLY WITH THE MANUFACTURER'S STORAGE, HANDLING, AND RIGGING INSTRUCTIONS.
7. A HOT WORK PERMIT WILL NEED TO BE OBTAINED FROM THE FAA FIRE INSPECTORS 7 DAYS IN ADVANCE OF WORK BEING PERFORMED. PROVIDE FIREWATCH WHEN HOT WORK IS PERFORMED.

1. CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS BEFORE ANY WORK IS BEGUN.
2. ALL EXITS MUST BE KEPT READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES.
3. ALL WASTE AND DEBRIS MUST BE REMOVED IN APPROVED CONTAINERS ON A DAILY BASIS.
4. REMOVE ALL WASTE RUBBLE AND REFUSE FROM THE INTERIOR AND EXTERIOR OF BUILDING.
5. REMOVE DUCTWORK AS INDICATED ON DRAWING. EQUIPMENT, DIFFUSERS AND DUCTWORK NOT SHOWN ON PLANS ARE TO REMAIN, UNLESS OTHERWISE NOTED.
6. COORDINATE ALL WORK WITH OTHER TRADES. CONTRACTOR MUST VERIFY IN FIELD AND NOTIFY COR ANY AND ALL PIPING AND DUCTWORK THAT SERVES OTHER AHU SYSTEMS PRIOR TO REMOVAL.
7. REMOVE ALL EXISTING DUCTWORK, EQUIPMENT AS SHOWN ON THIS PLAN. PREPARE FOR RECONNECTION OF NEW DUCTWORK
8. PROVIDE TEMPORARY DUCT CAP ON SUPPLY, RETURN, EXHAUST AND TOILET EXHAUST DUCTS, TO AVOID DUST FROM ENTERING THE BASE BUILDING SYSTEM.
9. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN UNLESS OTHERWISE NOTED.
10. ALL PERIMETER HVAC ELEMENTS SUCH AS; RADIATORS, MAIN PIPING, AND CONTROLS MUST REMAIN UNLESS OTHERWISE INDICATED.
11. PROTECT PERIMETER HVAC APPARATUS WITH HEAVY WEIGHT PAPER, CARDBOARD OR MASONITE ON TOP AND FRONT BEFORE WORK IS BEGUN.
12. EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.

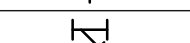
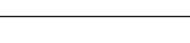
- COORDINATE THE WORK IN ALL SUBMITTALS FOR THE PURPOSE OF ENSURING THAT NO CONFLICTS EXIST AMONG THE INSTALLATIONS TO BE MADE INCLUDING THE MANUFACTURER'S REQUIRED ACCESS AND CLEARANCES FOR EQUIPMENT.
2. SHOP DRAWINGS SUBMITTED MUST BE DRAWN TO SCALE, 3/8"=1'-0" AT A MINIMUM, AND MUST BE FULLY DIMENSIONED FROM ESTABLISHED BUILDING REFERENCE POINTS, SUCH AS COLUMNS, WALL, ETC.
3. PRIOR TO REMOVAL, MAKE AN ON-SITE FIELD INSPECTION WITH THE COR TO ACCURATELY IDENTIFY THE EQUIPMENT, DUCTWORK, PIPING, AND ASSOCIATED APPURTENANCES TO BE REMOVED AND TO REMAIN.
4. UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS, RUN DUCTS AND PIPING CONCEALED, AND CLEAR OF CEILING INSERTS. ALL DUCTWORK AND PIPING MUST BE INSTALLED AS CLOSE AS POSSIBLE TO UNDERSIDE OF BEAMS, SLAB AND JOISTS.
5. UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS, INSTALL THERMOSTATS 3 FEET 6 INCHES ABOVE FINISHED FLOOR.
6. UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS, SUPPORT ALL EQUIPMENT, PIPING AND DUCTWORK FROM BUILDING STRUCTURE STEEL.
7. AT THE COMPLETION OF THE INSTALLATION, PERFORM A COMPLETE OPERATIONAL TEST OF ALL INSTALLED EQUIPMENT/SYSTEM IN ACCORDANCE WITH THE CONTROL AND OPERATION REQUIREMENTS SHOWN ON THE CONTRACT DRAWINGS TO BE WITNESSED BY THE ENGINEER. ALL DEFECTS DISCLOSED BY THE OPERATIONAL TEST MUST BE RECTIFIED BY THE CONTRACTOR AND THE EQUIPMENT/SYSTEM RETESTED AT NO ADDITIONAL COST TO THE OWNER.
8. EXISTING DUCTWORK, PIPING, AND EQUIPMENT UNRELATED TO THE WORK OF THIS CONTRACT ARE NOT SHOWN FOR CLARITY.
9. REMOVAL OF HVAC EQUIPMENT MUST INCLUDE THE REMOVAL OF ASSOCIATED PIPING, DUCTWORK, SUPPORTS, INSULATION, AND CONTROL APPURTENANCES.
10. RESTORE ALL AREAS DISTURBED BY CONTRACTOR OPERATIONS, INCLUDING SIDEWALKS, CURBS, PAVEMENT, GRASS AND OTHER ADJACENT AREAS, TO EXISTING CONDITIONS.
11. PROJECT INCLUDES AN OPEN RETURN AIR PLENUM. ALL MATERIALS LOCATED IN THE PLENUM TO HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS, AS MEASURED BY THE ASTM E84 STANDARD TEST METHOD.

1. EXISTING AHU-9, 11 & 12 IN MER ROOM TO REMAIN OPERATIONAL DURING AHU-10 REPLACEMENT. CHWS&R AND HWS&R MAIN PIPING TO REMAIN, ONLY AHU-10 BRANCH PIPING TO BE REMOVED AND REPLACED. REPLACEMENT OF CHILLED WATER PUMP TO BE COMPLETED AFTER HOURS DURING WEEKEND WORK WHEN THE BUILDING IS NOT OCCUPIED. COORDINATE TIMING OF REPLACEMENT WITH COR SINCE EXISTING AHU-9, 11, & 12 WILL NOT BE OPERATIONAL DURING CHILLED WATER PUMP REPLACEMENT.
2. DURING AHU-10 REPLACEMENT, TEMPORARY RTU-10 TO BE DUCTED TO AHU-10 SUPPLY AND RETURN DUCT SHAFTS AND CONDITION/HEAT AHU-10 ATRIUM ZONE. INITIAL TRANSITION TO RTU-10 AND FINAL AHU-10 CONNECTION TO DUCT SHAFTS TO BE COMPLETED AFTER HOURS DURING WEEKEND WORK WHEN THE BUILDING IS NOT OCCUPIED. COORDINATE TIMING OF TRANSITIONS WITH COR. AHU-10 ZONE CONDITIONING/HEATING WILL NOT BE PROVIDED DURING TRANSITION.
3. TEMPORARY RTU-10 IS SIZED FOR ONE FLOOR TO BE UNDER CONSTRUCTION, NOT MULTIPLE FLOORS CONCURRENTLY. COORDINATE FLOOR PHASING REQUIREMENTS WITH COR.
4. RESTROOM EXHAUST FAN EF-6 REPLACEMENT TO OCCUR BEFORE OR AFTER AHU-10 REPLACEMENT. RTU-10 TEMPORARY DUCT ROUTING WILL CONFLICT WITH BOTH EF-6 AND AHU-10 REPLACEMENT CONCURRENTLY. COORDINATE EQUIPMENT REPLACEMENT PHASING WITH COR FOR FINAL APPROVAL.

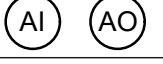
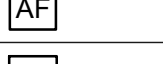
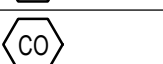
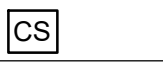
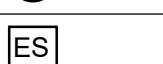
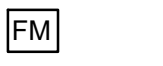
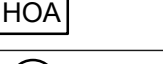
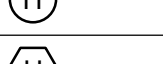
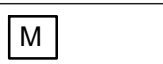
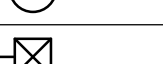
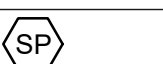
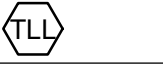
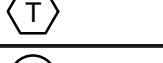
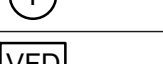
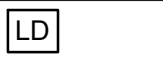
1. ALL DUCTWORK MUST BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" AND MUST HAVE A 4" WG PRESSURE CLASS RATING FOR UPSTREAM TERMINAL BOX AND 3"WG PRESSURE CLASS RATING FOR DOWNSTREAM TERMINAL BOX AND RETURN DUCTWORK.
2. LEAKAGE TESTS OF ALL EXISTING TO REMAIN AND NEW DUCTWORK MUST BE PERFORMED IN ACCORDANCE WITH SMACNA "HVAC AIR DUCT LEAKAGE TEST MANUAL". RECTANGULAR DUCTWORK MUST HAVE A LEAKAGE CLASS OF 24 AND MUST NOT EXCEED A LEAKAGE TEST OF 13 CFM PER 100 SQUARE FEET OF DUCT SURFACE.
3. DURING CONSTRUCTION, PROTECT ALL DUCTWORK OPENINGS TO PREVENT THE ENTRANCE OF DIRT, DUST, AND MOISTURE.
4. PROVIDE VOLUME DAMPERS ON ALL SUPPLY, RETURN AND EXHAUST DUCT BRANCHES EXCEPT UPSTREAM VAV BOXES.
5. ALL DUCTWORK SIZES SHOWN ON THE CONTRACT DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE INTERNAL ACOUSTICAL LINING IS REQUIRED, SHEET METAL DUCT SIZES MUST BE CORRESPONDINGLY INCREASED TO ACCOMMODATE THE LINER THICKNESS SO THAT NET CROSS SECTIONAL AREAS WILL NOT BE REDUCED.
6. DUCTWORK, 10FT FROM DOWNSTREAM TERMINAL BOXES AND 15FT FROM AIR CONDITIONING UNITS MUST BE ACOUSTICALLY LINED WITH 1" CLOSED CELL ELASTOMERIC LINER.
7. COORDINATE ALL DIFFUSERS, REGISTERS, AND GRILLES WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. FURNISH AND INSTALL MANUAL ADJUSTABLE VOLUME DAMPER WITH EXTENDED MOUNT AS SHOWN ON THE CONTRACT DRAWINGS, AND LOCKING QUADRANTS ON EACH BRANCH SERVING THE DIFFUSER. FOR INACCESSIBLE CEILING, USE MANUAL ADJUSTABLE VOLUME DAMPER OPERABLE THROUGH THE FACE OF THE DIFFUSER
8. PAINT INTERIOR OF ALL UNLINED DUCTWORK VISIBLE THROUGH A GRILLE OR DIFFUSER WITH FLAT BLACK PAINT.
9. ALL RETURN/SPILL AIR OPENINGS ABOVE CEILING MUST BE FURNISHED WITH A 1/2" WIRE MESH SCREEN.
10. FURNISH AND INSTALL FLEXIBLE CONNECTIONS ON MAIN DUCTWORK AT BUILDING EXPANSION JOINTS.
11. FURNISH AND INSTALL ACCESS DOORS IN THE DUCTWORK NEAR MOTORIZED DAMPERS, SMOKE DETECTORS, FIRE DAMPERS AND FIRE/SMOKE DAMPERS FOR ROUTINE INSPECTION AND MAINTENANCE.
12. FLEX DUCTS MUST NOT EXCEED 6 FEET IN LENGTH
13. ALL EXISTING MEDIUM PRESSURE AND LOW PRESSURE DUCTWORK THAT IS TO BE REUSED MUST BE CLEANED. EXISTING DUCTWORK WITH INTERNAL ACOUSTICAL LINING MUST BE COATED WITH FOSTERS ANTI-MICROBIAL COATING, WHILE THE EXISTING SYSTEM IS BEING REFINISHED.

[illegible]

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405					
FACILITY					
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT					
MECHANICAL GENERAL NOTES AND SHEET INDEX					
REVIEWED BY		SUBMITTED BY		DATE	APPROVED BY
					MICHAEL ROSELLI
DESIGN: TC		ISSUED BY:		DATE: 09/06/2024 JCN:	
DRAWN: CM		FACILITY SERVICES & ENGINEERING DIVISION		DRAWING NO.	
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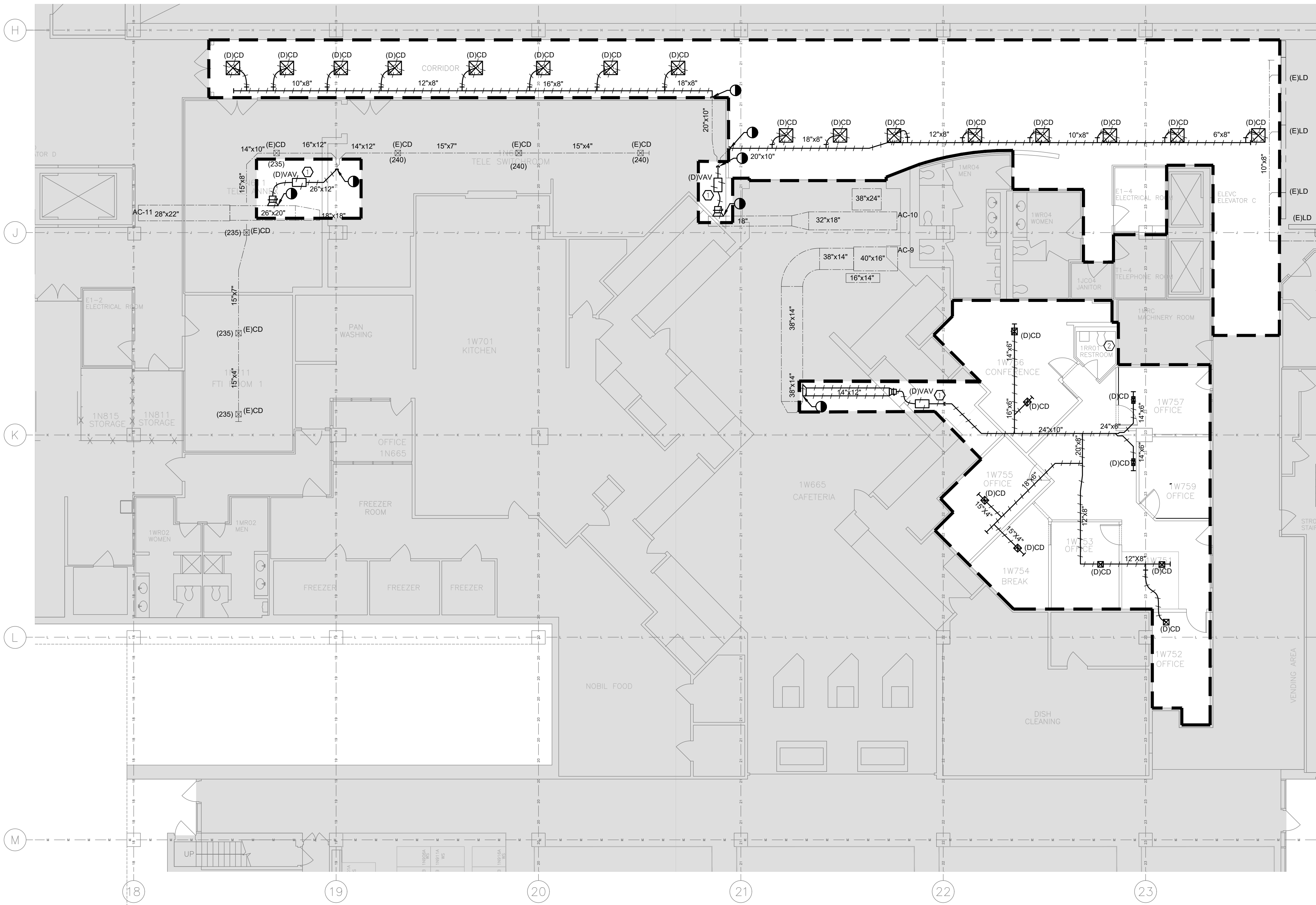
MECHANICAL SYMBOLS LIST	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	AIRFLOW ARROW
	FLOW ARROW
	CONNECT TO EXISTING
	END OF DEMOLITION
	PIPE CAPPED
	PIPE DROP
	PIPE RISE
	PIPE TEE DOWN
	PIPE REDUCER
	PIPE UNION
	PIPE GUIDES OR SLEEVES
	PIPE ANCHOR
	FLEXIBLE PIPE CONNECTION
	GENERAL SERVICE VALVE (SEE SPECIFICATIONS FOR VALVE TYPE PER APPLICATION)
	CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)
	MANUAL BALANCING VALVE
	AUTOMATIC BALANCING VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	RELIEF VALVE
	DRAIN VALVE WITH THREADED HOSE CONNECTION
	REDUCED PRESSURE BACKFLOW PREVENTER
	PRESSURE GAUGE WITH STOPCOCK
	STRAINER WITH BLOW DOWN VALVE
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	TEMPERATURE/PRESSURE TEST PLUG (PETE'S PLUG)
	CLEAN OUT
	FLOW METER
	THERMOMETER
	PITCH DOWN IN DIRECTION OF ARROW

MECHANICAL SYMBOLS LIST CONT.			
NOTE: NOT ALL SYMBOLS MAY BE USED.			
SYMBOL	DESCRIPTION		
	SUPPLY DIFFUSER		
	TAG - TYPE		
	AIRFLOW (CFM) TAG EXAMPLE: CD-A (100)		
	RETURN/EXHAUST GRILLE		
	TAG - TYPE		
	AIRFLOW (CFM) TAG EXAMPLE: CG-A (100)		
	DAMPERS/DUCT ACCESSORIES BDD: BACKDRAFT DAMPER FSD: FIRE/SMOKE DAMPER FD: FIRE DAMPER MD: MOTORIZED DAMPER SD: SMOKE DAMPER		
	VD: VOLUME DAMPER		
	SUPPLY AND OUTDOOR AIR		
	RECTANGULAR DUCT ELBOW UP		
	ROUND DUCT ELBOW UP		
	RETURN, RELIEF, AND EXHAUST AIR		
	RECTANGULAR DUCT ELBOW UP		
	ROUND DUCT ELBOW UP		
	SUPPLY AND OUTDOOR AIR		
	RECTANGULAR DUCT ELBOW DOWN		
	ROUND DUCT ELBOW DOWN		
	RETURN, RELIEF, AND EXHAUST AIR		
	RECTANGULAR DUCT ELBOW DOWN		
	ROUND DUCT ELBOW DOWN		
	NEW DUCTWORK		
	EXISTING DUCTWORK		
	DEMOLITION DUCTWORK		
	NEW PIPING		
	EXISTING PIPING		
	DEMOLITION PIPING		
	NEW MECHANICAL EQUIPMENT (WITH CLEARANCE SHOWN)		
	EXISTING MECHANICAL EQUIPMENT		
	DEMOLISHED MECHANICAL EQUIPMENT		
	GENERIC FAN		
	GENERIC PUMP		
	ACCESS DOOR		
	TERMINAL BOXES		
	VAV TERMINAL BOX (NO REHEAT)		
	VAV TERMINAL BOX (WITH REHEAT)		
<table><tr><td>VAV</td></tr><tr><td>4-2-1</td></tr></table>	VAV	4-2-1	VAV TERMINAL TAG AHU - FLOOR - BOX ID
VAV			
4-2-1			

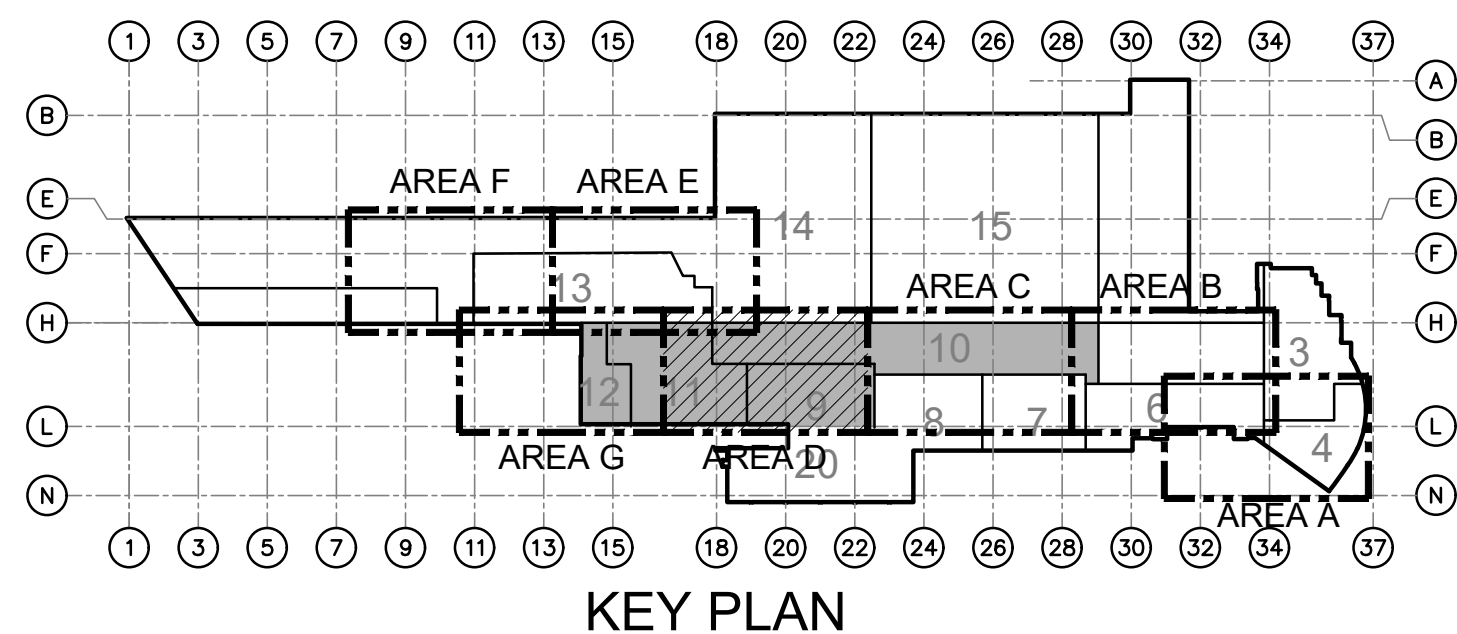
CONTROLS SYMBOLS LIST	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	ANALOG INPUT / ANALOG OUTPUT
	AIR FLOW MEASURING DEVICE
	AIR SWITCH
	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
	CURRENT SENSOR
	DIFFERENTIAL PRESSURE TRANSMITTER
	DIGITAL INPUT / DIGITAL OUTPUT
	DUCT MOUNTED SMOKE DETECTOR
	END SWITCH
	AIRFLOW MEASURING DEVICE
	HAND-OFF-AUTO SWITCH
	HUMIDITY SENSOR
	HUMIDITY TRANSMITTER
	METER
	MOTORIZED ACTUATOR
	PH TRANSMITTER
	PRESSURE SWITCH
	RELAY
	STARTER
	STATIC PRESSURE TRANSMITTER
	TEMPERATURE LOW LIMIT SENSOR
	TEMPERATURE TRANSMITTER
	THERMOSTAT WITH ADJUSTABLE CONTROL
	VARIABLE FREQUENCY DRIVE
	WATER FLOW SWITCH
	WATER LEAK DETECTOR

MECHANICAL ABBREVIATIONS	
NOTE: NOT ALL ABBREVIATIONS MAY BE USED.	
ABBREVIATION	DESCRIPTION
(D)	EXISTING TO BE DEMOLISHED
(E)	EXISTING TO REMAIN
(N)	NEW
ACCU	AIR COOLED CONDENSING UNIT
ADJ.	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMB	AMBIENT
APD	AIR PRESSURE DROP
BAS	BUILDING AUTOMATION SYSTEM
BFP	BACKFLOW PREVENTOR
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CO	CLEAN OUT
COP	COEFFICIENT OF PERFORMANCE
CV	CONSTANT VOLUME
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROLS
DIA	DIAMETER
DN	DOWN
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY RATIO
EG	ETHLENE GLYCOL
ESP	EXTERNAL STATIC PRESSURE
EWI	ENTERING WATER TEMPERATURE
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FN	EXHAUST OR SUPPLY FAN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
GAL	GALLONS
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
ID	INNER DIAMETER
IPLV	INTEGRATED PART LOAD VALUE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTUH
MCA	MAXIMUM CURRENT AMPACITY
MFR	MANUFACTURER
MOCP	MAXIMUM OVERCURRENT PROTECTION
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTDOOR AIR
PD	PRESSURE DROP
PG	PROPYLENE GLYCOL
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
REFRIG	REFRIGERANT
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
RV	RELIEF VENT OR GRAVITY INTAKE
SA	SUPPLY AIR
SP	STATIC PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME
VIF	VERIFY IN FIELD
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
W	WATTS
WB	WET BULB
WG	WATER GAUGE
WPD	WATER PRESSURE DROP

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MECHANICAL SYMBOLS AND ABBREVIATIONS					
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			MICHAEL ROSELLI		
	DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
APPROVAL (FINISHES)	DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.	SHEET #	
	CHECK: EA		F2024113-M0.02	20 OF 110	



1 MECHANICAL FIRST FLOOR DEMOLITION PLAN - AREA "D"
MD1.01 SCALE: 1/8" = 1'-0"



GENERAL DEMOLITION NOTES

- TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
- IN LOCATIONS WHERE EXISTING VAVs MEDIUM PRESSURE INLET DUCTS/OPENINGS WILL BE RE-UTILIZED FOR CONNECTIONS TO NEW VAVs, TEMPORARILY SEAL EXISTING MEDIUM PRESSURE DUCTWORK. ALL DUCT OPENINGS IN EXISTING DUCTWORK NOT BEING RE-UTILIZED MUST BE BLANKED OFF AIR TIGHT WITH SHEET METAL PATCH SECURED WITH SHEET METAL SCREWS AND 3M SEALER. ALL EXISTING AHUs SUPPLY AIR DUCTED SYSTEMS MUST BE SEALED AND MAINTAINED AIR TIGHT DURING OCCUPIED HOURS. FIELD CONFIRM EXACT SCOPE OF WORK AND INCLUDE IN BID PRICING.
- ALL SECTIONS OF DUCTWORK THAT ARE GOING TO BE REMOVED MUST BE SEALED AIR TIGHT AT BOTH ENDS BEFORE MOVING OUT OF THE BUILDING.
- DEMOLITION OF DUCTWORK IS REQUIRED TO BE PHASED TO COINCIDE WITH THE CONSTRUCTION PHASING PLANS.
- COORDINATE ALL WORK WITH OTHER TRADES. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN. ALL HVAC ELEMENTS SUCH AS: WATER RISERS, VALVES, AND CONTROLS MUST REMAIN, UNLESS OTHERWISE NOTED.

KEYNOTES:

- ① DEMOLISH EXISTING VAV BOX. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED. REFER TO DRAWING FOR DOWNSTREAM LOW PRESSURE DUCTWORK AND CONNECTED AIR OUTLETS SCOPE OF WORK (EXISTING TO REMAIN AND DEMOLITION).
- ② EXISTING EXHAUST GRILLE TO REMAIN IN RESTROOM. ELECTRICAL CONTRACTOR TO COORDINATE LIGHTING FIXTURE REPLACEMENT IN RESTROOM TO NOT CONFLICT WITH EXISTING EXHAUST GRILLE.

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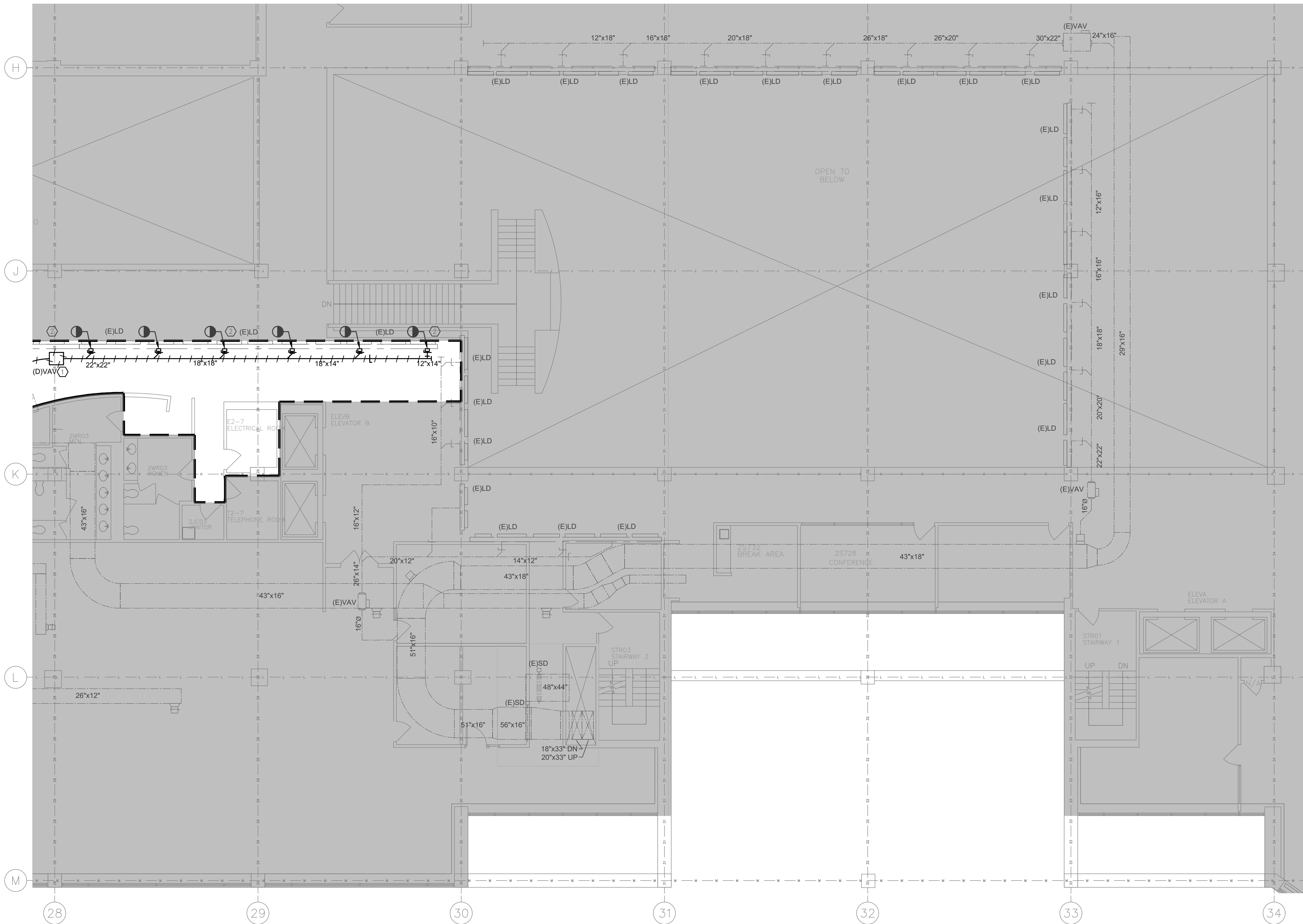
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F	09/16/25	AFTER BID SUBMISSION		
E	07/16/25	REVISED BID SET SUBMISSION		
D	04/22/25	BID SET SUBMISSION		
C	02/21/25	95% DESIGN SUBMISSION		
B	11/26/24	65% DESIGN SUBMISSION		
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

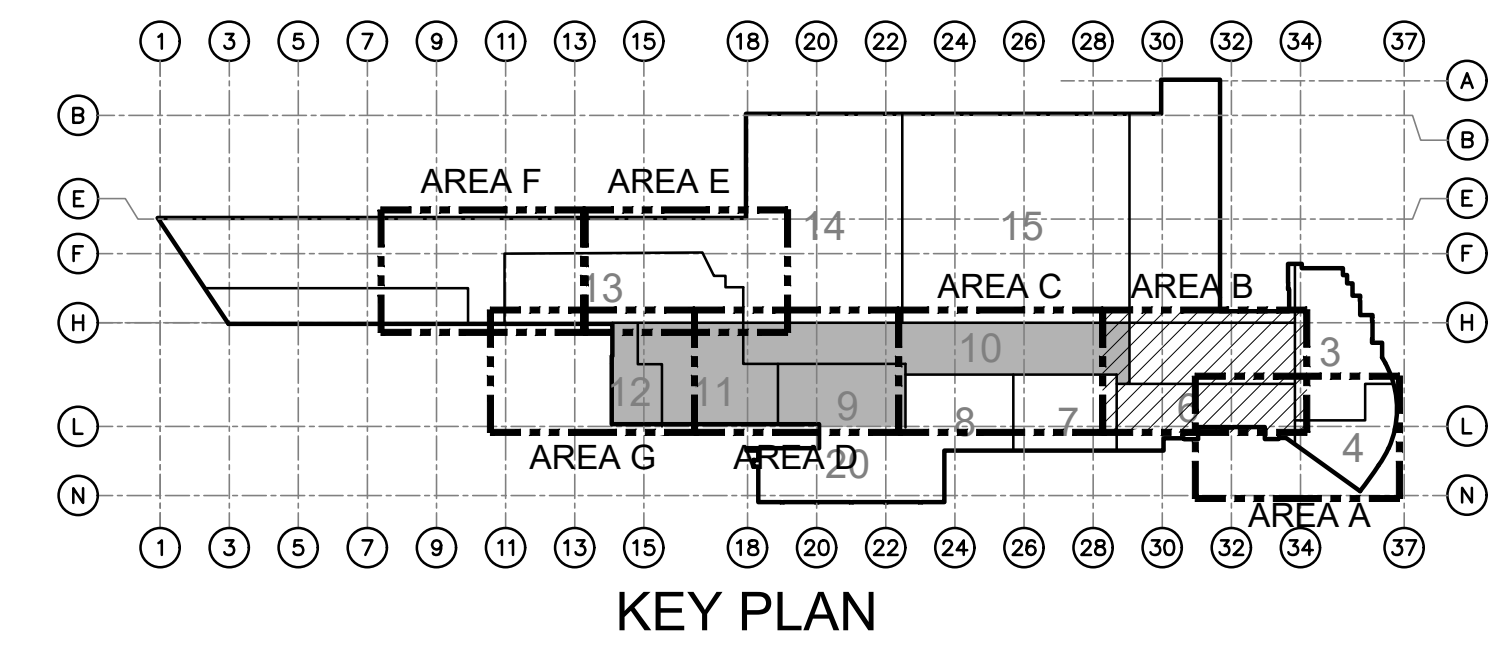
FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL FIRST FLOOR DEMOLITION PLAN – AREA "D"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		
CHECK: EA		F2024113—MD1.01		
			SHEET #	
			21	OF 110



1 MECHANICAL SECOND FLOOR DEMOLITION PLAN - AREA "B"
MD1.02 SCALE: 1/8" = 1'-0"
0 4' 8' 16'



GENERAL DEMOLITION NOTES

- TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
- IN LOCATIONS WHERE EXISTING VAVs MEDIUM PRESSURE INLET DUCTS/OPENINGS WILL BE RE-UTILIZED FOR CONNECTIONS TO NEW VAVs, TEMPORARILY SEAL EXISTING MEDIUM PRESSURE DUCTWORK. ALL DUCT OPENINGS IN EXISTING DUCTWORK NOT BEING RE-UTILIZED MUST BE BLANKED OFF AIR TIGHT WITH SHEET METAL PATCH SECURED WITH SHEET METAL SCREWS AND 3M SEALER. ALL EXISTING AHUs SUPPLY AIR DUCTED SYSTEMS MUST BE SEALED AND MAINTAINED AIR TIGHT DURING OCCUPIED HOURS. FIELD CONFIRM EXACT SCOPE OF WORK AND INCLUDE IN BID PRICING.
- ALL SECTIONS OF DUCTWORK THAT ARE GOING TO BE REMOVED MUST BE SEALED AIR TIGHT AT BOTH ENDS BEFORE MOVING OUT OF THE BUILDING.
- DEMOLITION OF DUCTWORK IS REQUIRED TO BE PHASED TO COINCIDE WITH THE CONSTRUCTION PHASING PLANS.
- COORDINATE ALL WORK WITH OTHER TRADES. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN. ALL HVAC ELEMENTS SUCH AS: WATER RISERS, VALVES, AND CONTROLS MUST REMAIN, UNLESS OTHERWISE NOTED.

KEYNOTES:

- DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN. DISCONNECT AND REMOVE CONNECTED DUCTWORK. THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405				
FACILITY BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT				
MECHANICAL SECOND FLOOR DEMOLITION PLAN – AREA "B"				
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
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GENERAL DEMOLITION NOTES

1. TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
2. IN LOCATIONS WHERE EXISTING VAVS MEDIUM PRESSURE INLET DUCTS/OPENINGS WILL BE RE-UTILIZED FOR CONNECTIONS TO NEW VAVS, TEMPORARILY SEAL EXISTING MEDIUM PRESSURE DUCTWORK. ALL DUCT OPENINGS IN EXISTING DUCTWORK NOT BEING RE-UTILIZED MUST BE BLANKED OFF AIR TIGHT WITH SHEET METAL PATCH SECURED WITH SHEET METAL SCREWS AND 3M SEALER. ALL EXISTING AHUs SUPPLY AIR DUCTED SYSTEMS MUST BE SEALED AND MAINTAINED AIR TIGHT DURING OCCUPIED HOURS. FIELD CONFIRM EXACT SCOPE OF WORK AND INCLUDE IN BID PRICING.
3. ALL SECTIONS OF DUCTWORK THAT ARE GOING TO BE REMOVED MUST BE SEALED AIR TIGHT AT BOTH ENDS BEFORE MOVING OUT OF THE BUILDING.
4. DEMOLITION OF DUCTWORK IS REQUIRED TO BE PHASED TO COINCIDE WITH THE CONSTRUCTION PHASING PLANS.
5. COORDINATE ALL WORK WITH OTHER TRADES. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN. ALL HVAC ELEMENTS SUCH AS: WATER RISERS, VALVES, AND CONTROLS MUST REMAIN, UNLESS OTHERWISE NOTED.

KEYNOTES:

- ① DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- ② LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN. DISCONNECT AND REMOVE CONNECTED DUCTWORK. THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)
- ③ PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)

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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
 WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
 ATLANTIC CITY INT'L AIRPORT, N.J. 08405

	FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT	

MECHANICAL SECOND FLOOR
DEMOLITION PLAN - AREA "C"

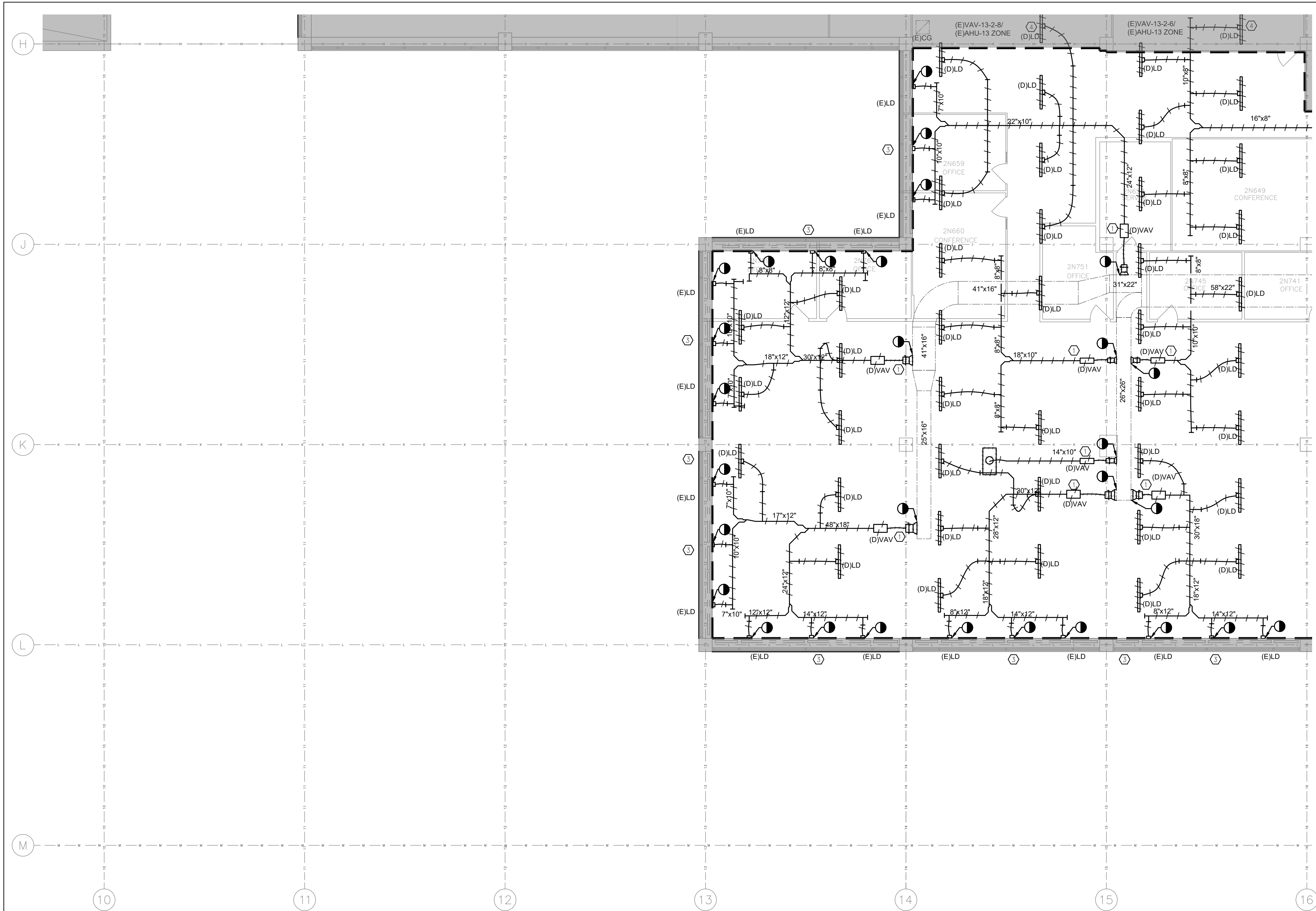
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					MICHAEL ROSELLI		
		DESIGN: TC	ISSUED BY:		DATE: 09/06/2024	JCN:	
APPROVAL (FINISHES)		DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION		DRAWING NO.		SHEET #
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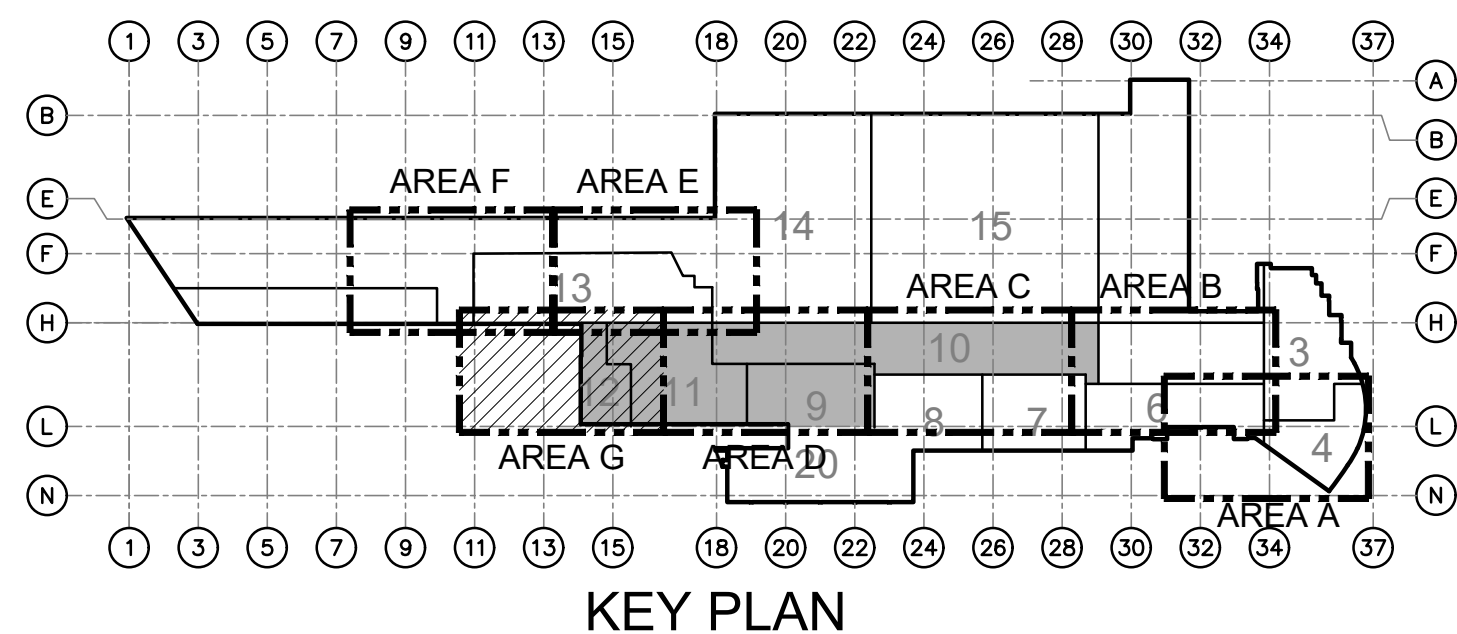
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- ① DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- ② LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN. DISCONNECT & REMOVE CONNECTED DUCTWORK, THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)
- ③ PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)
- ④ CONTRACTOR TO REMOVE EXISTING LINEAR DIFFUSER AND CONNECTED LOW PRESSURE DUCTWORK DISTRIBUTION CONNECTED TO AHU-13, REFER TO PLAN MARKUP FOR EXISTING TO REMAIN ADJACENT VAV AIR DISTRIBUTION ZONE LABELING.

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405					
FACILITY BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT					
MECHANICAL SECOND FLOOR DEMOLITION PLAN — AREA "D"					
REVIEWED BY		SUBMITTED BY	DATE	APPROVED BY	
				MICHAEL ROSELLI	
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APPROVAL (FINISHES)				SHEET # 24 OF 110	



1 MECHANICAL SECOND FLOOR DEMOLITION PLAN - AREA "G"
MD1.05 SCALE: 1/8" = 1'-0"



GENERAL DEMOLITION NOTES

- TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
- IN LOCATIONS WHERE EXISTING VAVs MEDIUM PRESSURE INLET DUCTS/OPENINGS WILL BE RE-UTILIZED FOR CONNECTIONS TO NEW VAVs, TEMPORARILY SEAL EXISTING MEDIUM PRESSURE DUCTWORK. ALL DUCT OPENINGS IN EXISTING DUCTWORK NOT BEING RE-UTILIZED MUST BE BLANKED OFF AIR TIGHT WITH SHEET METAL PATCH SECURED WITH SHEET METAL SCREWS AND 3M SEALER. ALL EXISTING AHUs SUPPLY AIR DUCTED SYSTEMS MUST BE SEALED AND MAINTAINED AIR TIGHT DURING OCCUPIED HOURS. FIELD CONFIRM EXACT SCOPE OF WORK AND INCLUDE IN BID PRICING.
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KEYNOTES:

- DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- NOT USED.
- PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)
- CONTRACTOR TO REMOVE EXISTING LINEAR DIFFUSER AND CONNECTED LOW PRESSURE DUCTWORK DISTRIBUTION CONNECTED TO AHU-13. REFER TO PLAN MARKUP FOR EXISTING TO REMAIN ADJACENT VAV AIR DISTRIBUTION ZONE LABELING.

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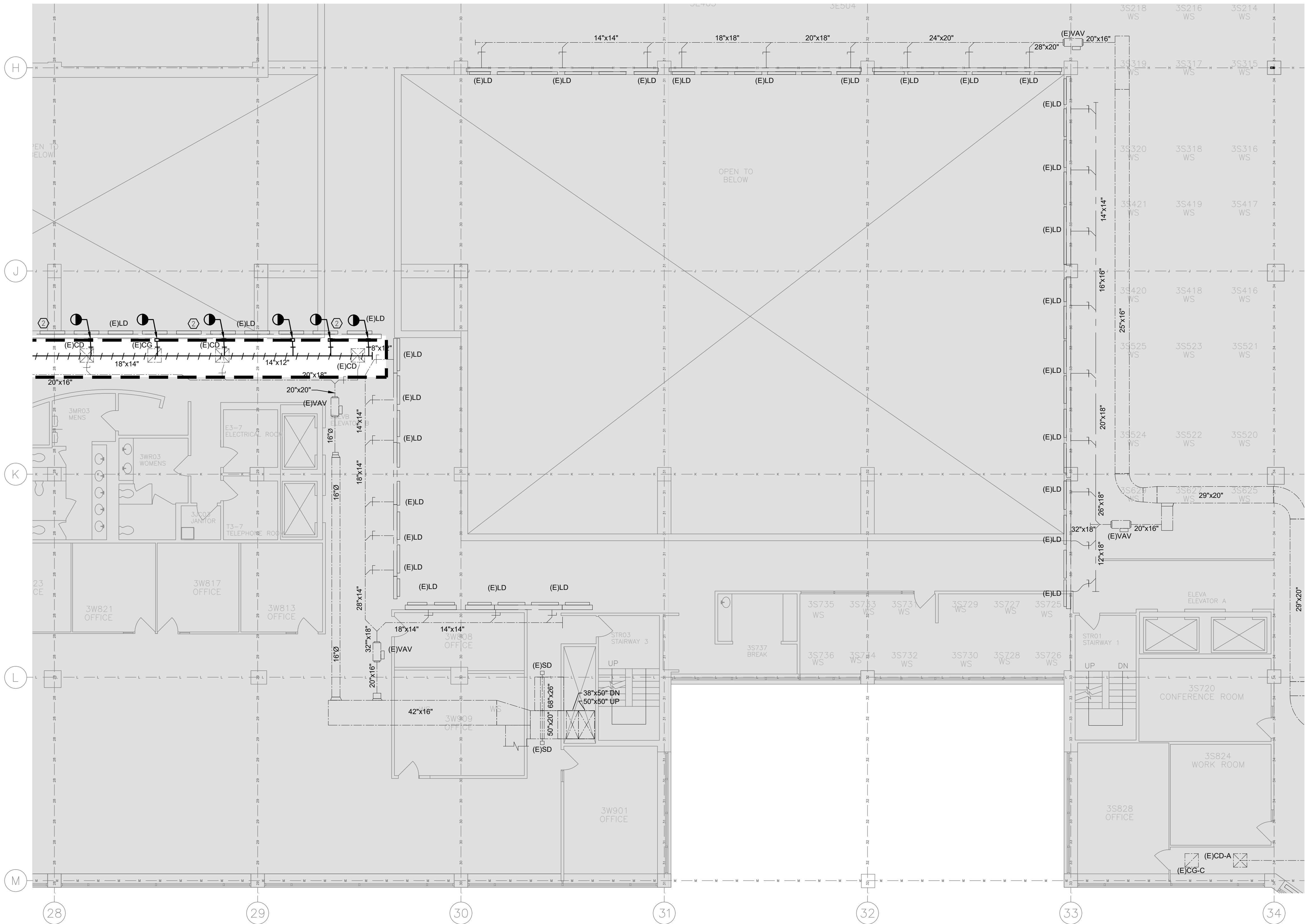
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B	11/26/24	65% DESIGN SUBMISSION		
A	09/06/24	35% DESIGN SUBMISSION		
REV	DATE	DESCRIPTION	CHECK	APPRV'D

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL SECOND FLOOR DEMOLITION PLAN – AREA "G"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
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			25 OF 110	



GENERAL DEMOLITION NOTES

1. TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
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KEYNOTES:

- ① NOT USED.
- ② LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN. DISCONNECT AND REMOVE CONNECTED DUCTWORK. THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)

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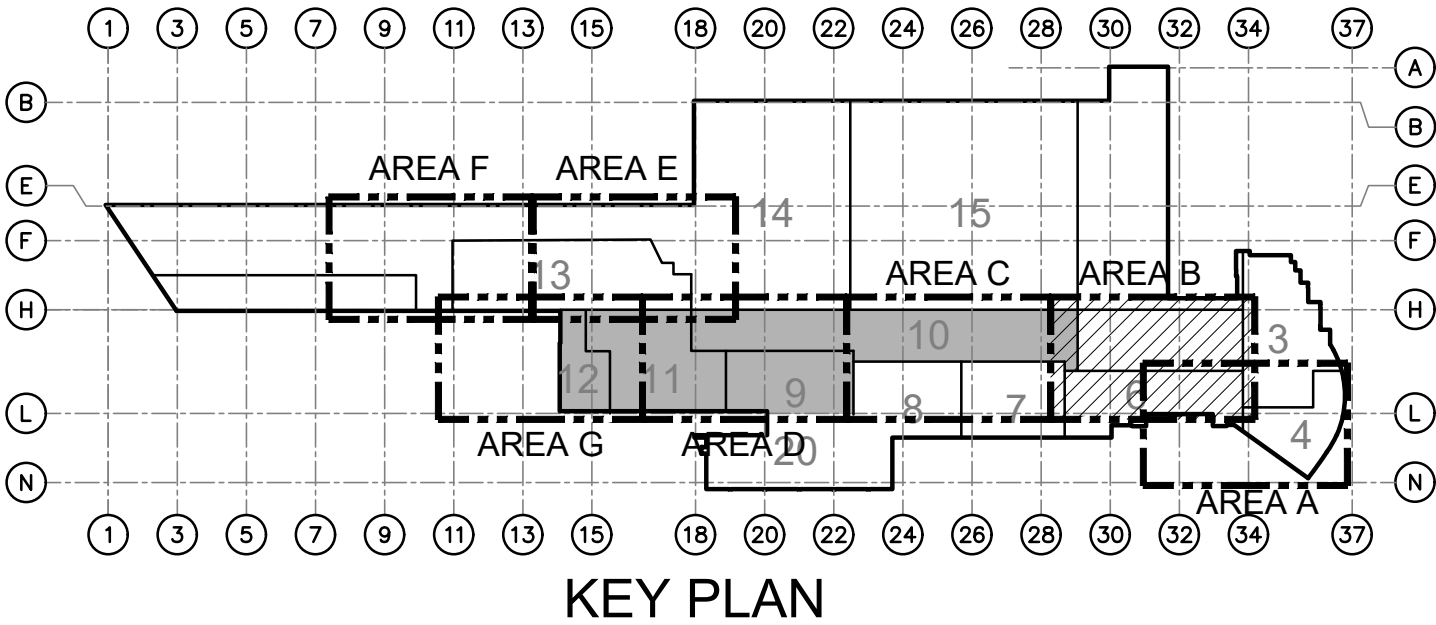
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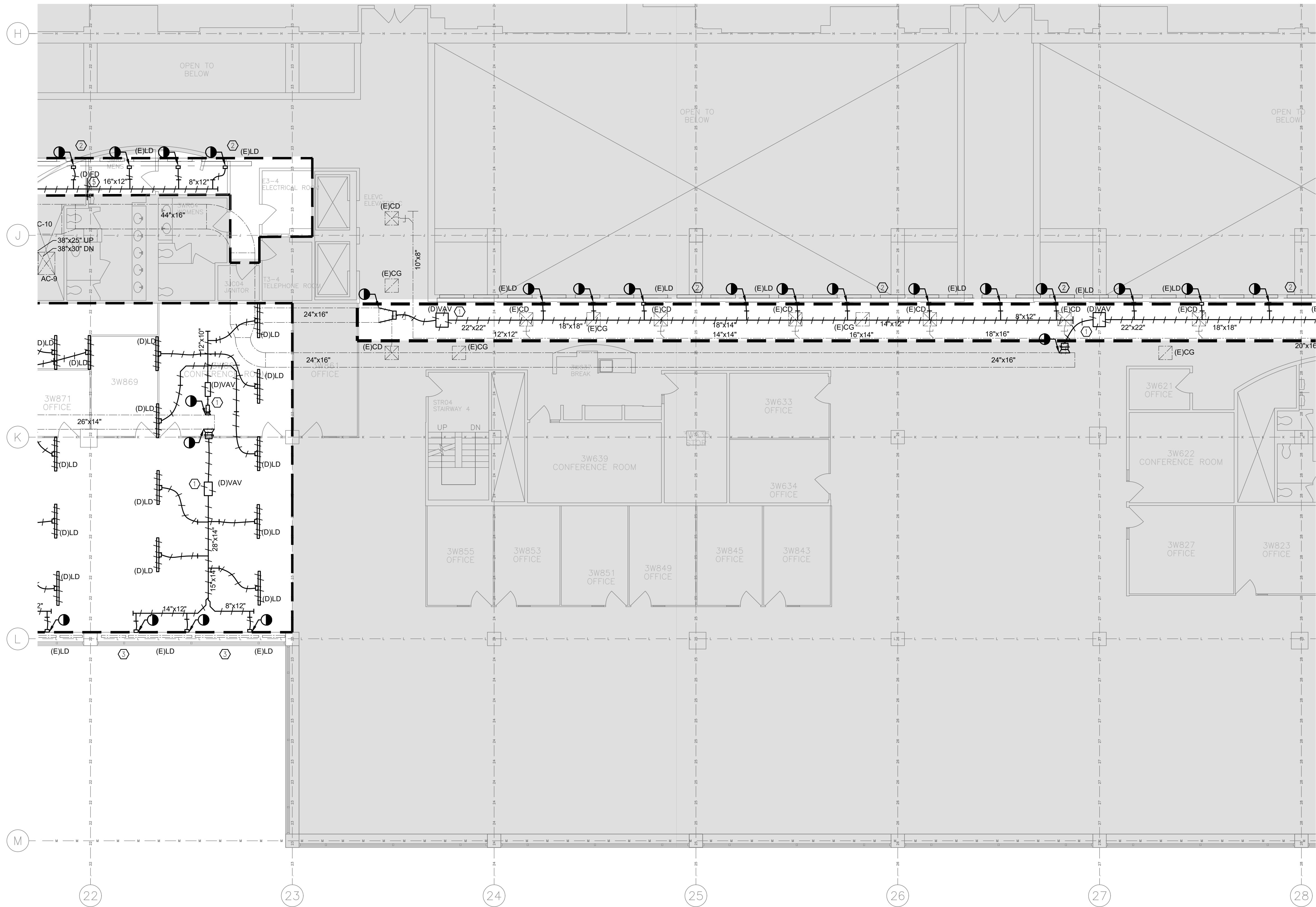
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FEDERAL AVIATION ADMINISTRATION
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ATLANTIC CITY INT'L AIRPORT, N.J. 08405

FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

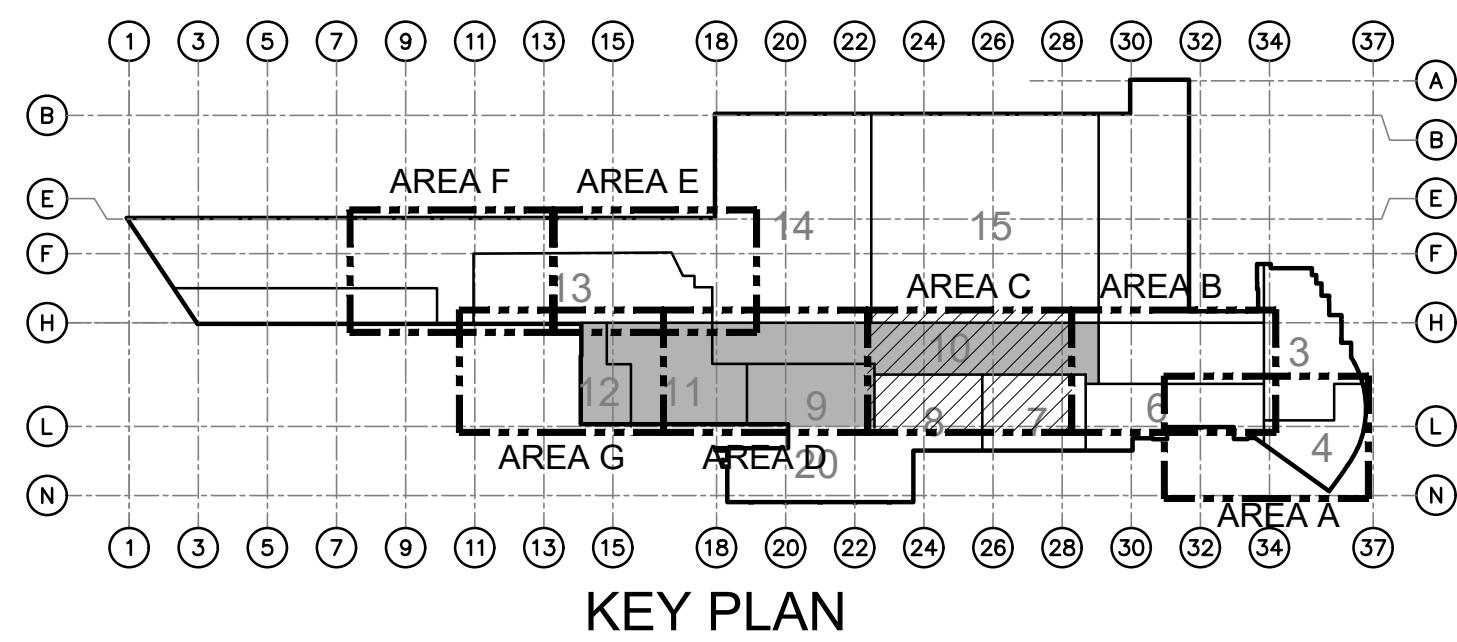
**MECHANICAL THIRD FLOOR
DEMOLITION PLAN – AREA "B"**

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
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1 MECHANICAL THIRD FLOOR DEMOLITION PLAN - AREA "C"
MD1.07 SCALE: 1/8" = 1'-0"



GENERAL DEMOLITION NOTES

- TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
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KEYNOTES:

- DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN. DISCONNECT AND REMOVE CONNECTED DUCTWORK. THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)
- PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)
- NOT USED.
- COORDINATE WITH GC TO PATCH, REPAIR AND SEAL ABANDONED OPENINGS IN EXISTING FIRE-RATED WALLS. REFER TO MECHANICAL PLANS FOR NEW FD LOCATIONS.

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FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

**MECHANICAL THIRD FLOOR
DEMOLITION PLAN – AREA "C"**

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.	SHEET #	
CHECK: EA		F2024113—MD1.07	27 OF 110	



- ① DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- ② LINEAR DIFFUSERS & CONNECTED SUPPLY AIR PLENUMS SERVING THE ATRIUM TO REMAIN, DISCONNECT AND REMOVE CONNECTED DUCTWORK. THOROUGHLY CLEAN SUPPLY AIR PLENUM, FACE AND INSIDE OF THE LINEAR DIFFUSERS. (TYP.)
- ③ PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)
- ④ CONTRACTOR TO REMOVE EXISTING LINEAR DIFFUSER AND CONNECTED LOW PRESSURE DUCTWORK DISTRIBUTION CONNECTED TO AHU-13. REFER TO PLAN MARKUP FOR EXISTING TO REMAIN ADJACENT VAV AIR DISTRIBUTION ZONE LABELING.
- ⑤ COORDINATE WITH GC TO PATCH, REPAIR AND SEAL ABANDONED OPENINGS IN EXISTING FIRE-RATED WALLS. REFER TO MECHANICAL PLANS FOR NEW FD LOCATIONS.

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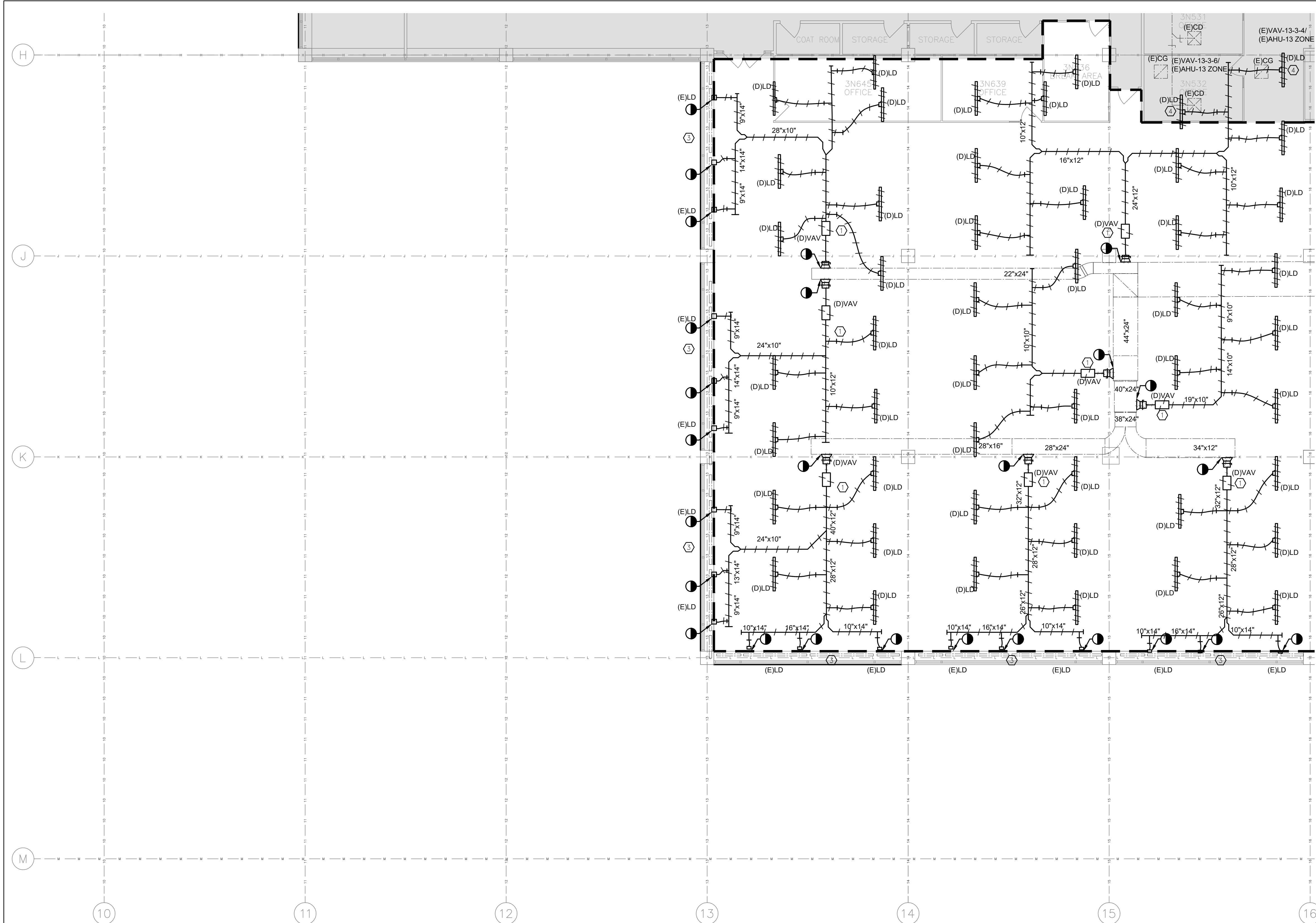
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G	05/22/26	FINAL SUBMISSION		
F	09/16/25	AFTER BID SUBMISSION		
E	07/16/25	REVISED BID SET SUBMISSION		
D	04/22/25	BID SET SUBMISSION		
C	02/21/25	95% DESIGN SUBMISSION		
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
 WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
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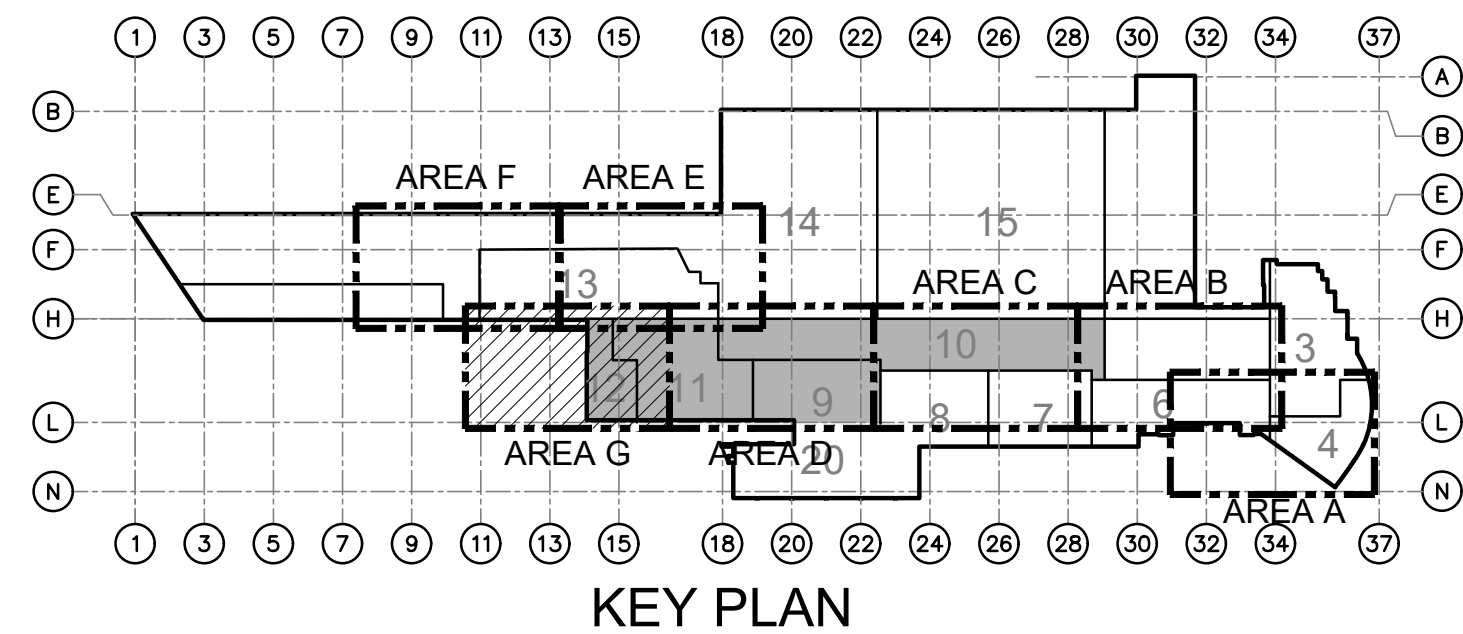
	FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT	

MECHANICAL THIRD FLOOR
DEMOLITION PLAN - AREA "D"

REVIEWED BY		SUBMITTED BY		DATE	APPROVED BY		DATE
					MICHAEL ROSELLI		
		DESIGN: TC	ISSUED BY:		DATE: 09/06/2024		JCN:
APPROVAL (FINISHES)		DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION		DRAWING NO.		SHEET #
		CHECK: EA			F2024113--MD1.08		28 OF 110



1 MECHANICAL THIRD FLOOR DEMOLITION PLAN - AREA "G"
MD1.09 SCALE: 1/8" = 1'-0"



GENERAL DEMOLITION NOTES

- TAKE CARE NOT TO DAMAGE THE EXISTING DUCTWORK. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
- IN LOCATIONS WHERE EXISTING VAVs MEDIUM PRESSURE INLET DUCTS/OPENINGS WILL BE RE-UTILIZED FOR CONNECTIONS TO NEW VAVs, TEMPORARILY SEAL EXISTING MEDIUM PRESSURE DUCTWORK. ALL DUCT OPENINGS IN EXISTING DUCTWORK NOT BEING RE-UTILIZED MUST BE BLANKED OFF AIR TIGHT WITH SHEET METAL PATCH SECURED WITH SHEET METAL SCREWS AND 3M SEALER. ALL EXISTING AHUs SUPPLY AIR DUCTED SYSTEMS MUST BE SEALED AND MAINTAINED AIR TIGHT DURING OCCUPIED HOURS. FIELD CONFIRM EXACT SCOPE OF WORK AND INCLUDE IN BID PRICING.
- ALL SECTIONS OF DUCTWORK THAT ARE GOING TO BE REMOVED MUST BE SEALED AIR TIGHT AT BOTH ENDS BEFORE MOVING OUT OF THE BUILDING.
- DEMOLITION OF DUCTWORK IS REQUIRED TO BE PHASED TO COINCIDE WITH THE CONSTRUCTION PHASING PLANS.
- COORDINATE ALL WORK WITH OTHER TRADES. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN. ALL HVAC ELEMENTS SUCH AS: WATER RISERS, VALVES, AND CONTROLS MUST REMAIN, UNLESS OTHERWISE NOTED.

KEYNOTES:

- DEMOLISH EXISTING VAV BOX, ALL ASSOCIATED DOWNSTREAM DUCTWORK AND AIR OUTLETS. REMOVE WALL MOUNTED THERMOSTAT AND PNEUMATIC CONTROLS. REMOVE PNEUMATIC TUBING BACK TO SOURCE AND CAP. REMOVE EXISTING VAV BOX INLET DUCTWORK AS INDICATED.
- NOT USED.
- PERIMETER LINEAR DIFFUSERS TO BE WIPED CLEAN AND ABANDONED IN PLACE. (TYP.)
- CONTRACTOR TO REMOVE EXISTING LINEAR DIFFUSER AND CONNECTED LOW PRESSURE DUCTWORK DISTRIBUTION CONNECTED TO AHU-13. REFER TO PLAN MARKUP FOR EXISTING TO REMAIN ADJACENT VAV AIR DISTRIBUTION ZONE LABELING.

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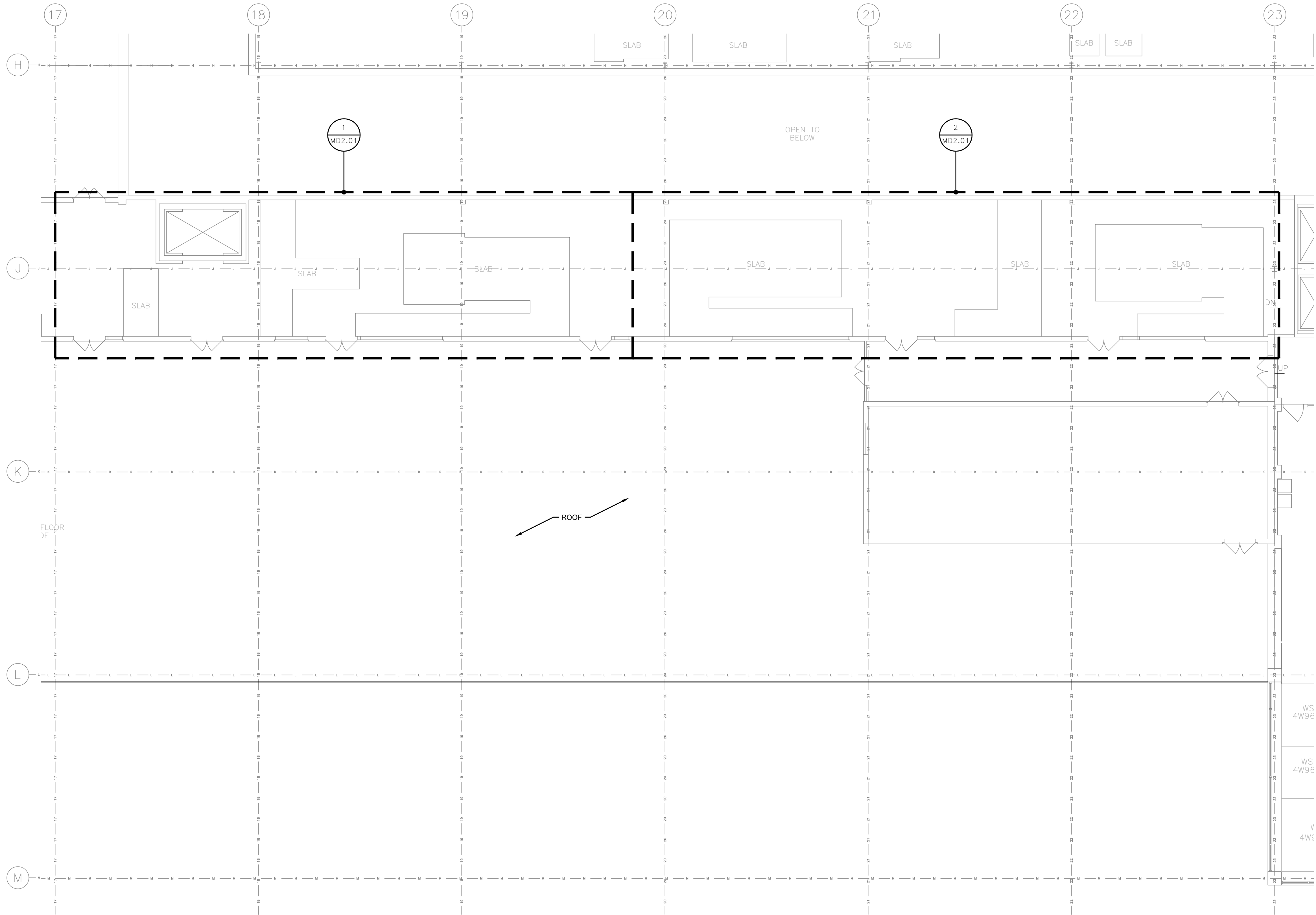
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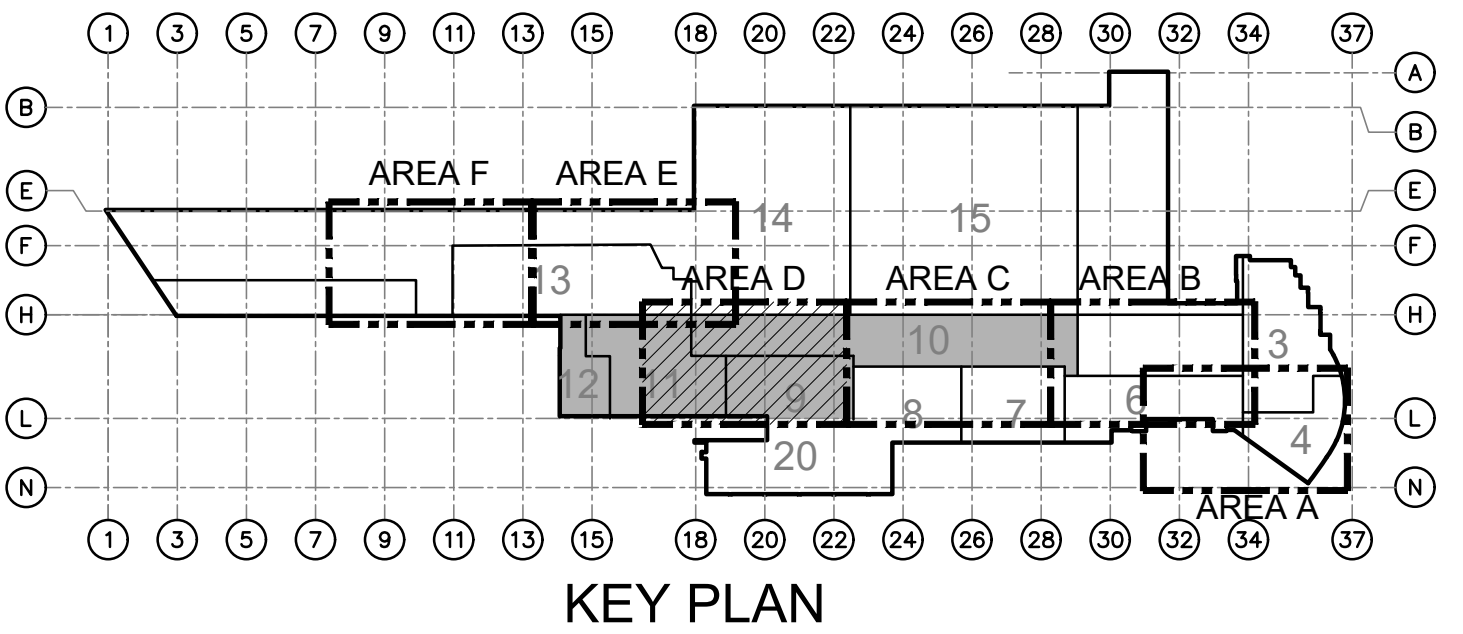
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MECHANICAL THIRD FLOOR DEMOLITION PLAN – AREA "G"

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1 MECHANICAL FOURTH FLOOR DEMOLITION PLAN - AREA "D"
MD1.10 SCALE: 1/8" = 1'-0"



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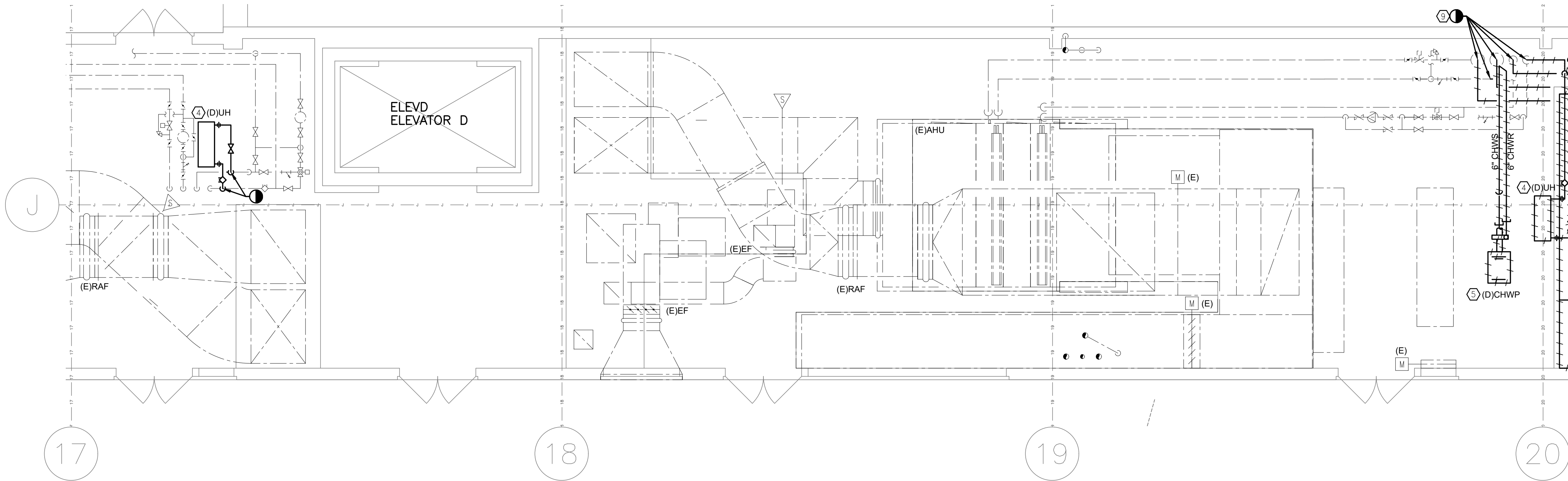
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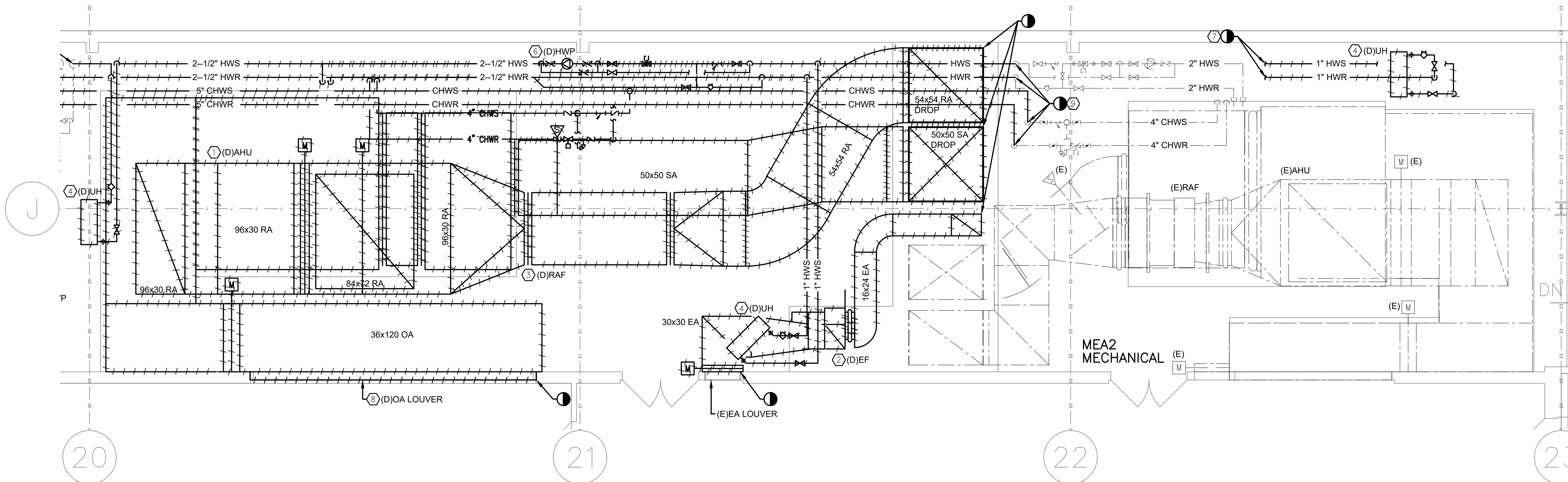
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MECHANICAL FOURTH FLOOR
DEMOLITION PLAN – AREA "D"

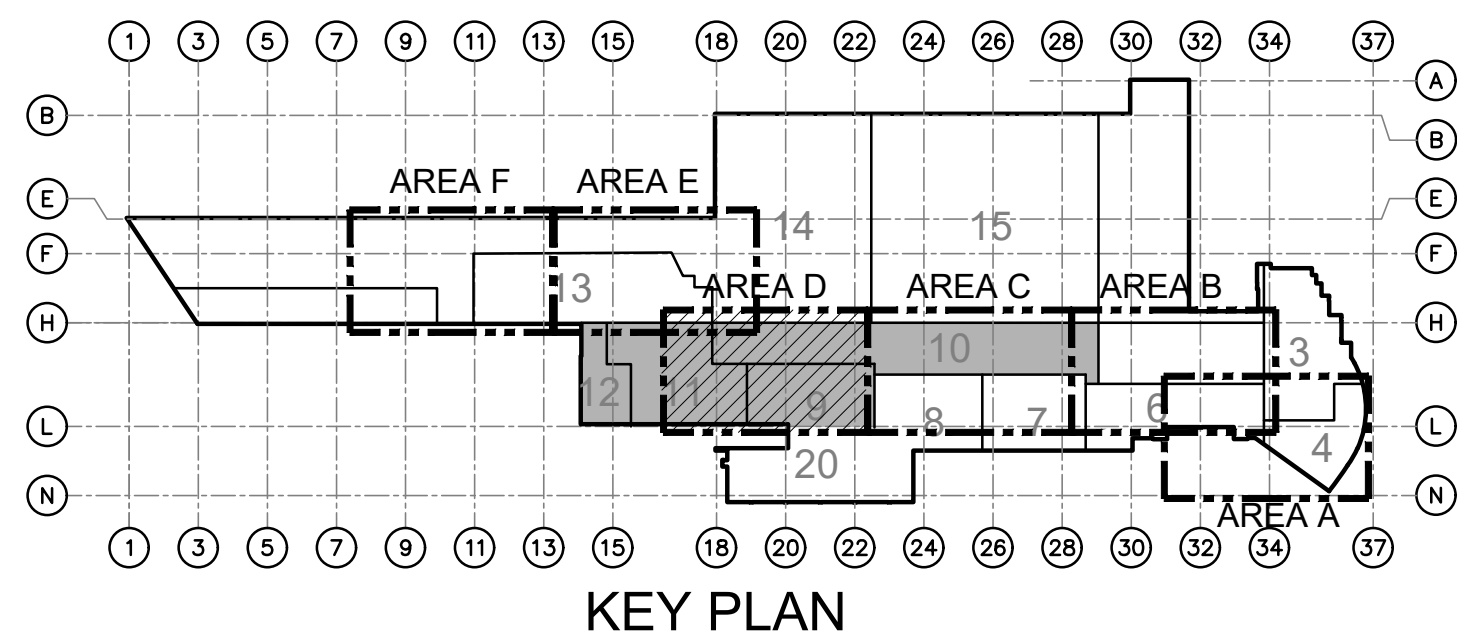
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1 MECHANICAL DEMOLITION PART PLAN - MER-2 - WEST
MD2.01 SCALE: 1/4" = 1'-0"
0 2' 4' 8'



2 MECHANICAL DEMOLITION PART PLAN - MER-2 - EAST
MD2.01 SCALE: 1/4" = 1'-0"
0 2' 4' 8'



GENERAL DEMOLITION NOTES

1. TAKE CARE NOT TO DAMAGE THE EXISTING LOUVERS, DUCTWORK AND PIPING. ONLY REMOVE WHAT IS SHOWN TO BE REMOVED. TRIM DUCTWORK STRAIGHT AND SQUARE TO FACILITATE FUTURE CONNECTIONS.
2. ALL SECTIONS OF DUCTWORK THAT ARE GOING TO BE REMOVED MUST BE SEALED AIR TIGHT AT BOTH ENDS BEFORE MOVING OUT OF THE BUILDING.
3. DEMOLITION OF DUCTWORK AND PIPING IS REQUIRED TO BE PHASED TO COINCIDE WITH THE CONSTRUCTION PHASING PLANS.
4. COORDINATE ALL WORK WITH OTHER TRADES. ALL EXISTING BASE BUILDING CORE, UTILITIES, RISERS AND ALL SHAFTS MUST REMAIN. ALL HVAC ELEMENTS SUCH AS; WATER RISERS, VALVES, AND CONTROLS MUST REMAIN, UNLESS OTHERWISE NOTED.
5. EXISTING HWS&R AND CHWS&R PIPING MAINS IN MER TO REMAIN. ONLY REMOVE BRANCH PIPING FROM PIPING MAINS TO DEMOLISHED EQUIPMENT AS SHOWN ON PLANS. PROVIDE TEMPORARY CAP AT MAIN FOR FUTURE BRANCH PIPE ROUTING TO REPLACEMENT EQUIPMENT.
6. EXISTING CONCRETE PADS IN MER TO REMAIN. GC TO PROVIDE CONCRETE PAD REPAIR AS NEEDED, REFER TO STRUCTURAL DRAWINGS SET.
7. AHU- 9, 11 & 12 IN MER-2 TO REMAIN OPERATIONAL DURING AHU-10 AND CONNECTED COMPONENTS REMOVAL. PIPING MAINS SERVING AHU-9, 11 & 12 TO REMAIN UNOBSTRUCTED DURING AHU-10 REMOVAL AND REPLACEMENT SCOPE OF WORK. CHILLED WATER PUMP REPLACEMENT TO BE COMPLETED DURING BUILDING OFF-HOURS, COORDINATE REQUIRED SCHEDULING WITH FAA REPRESENTATIVE.

KEYNOTES:

- 1 DEMOLISH EXISTING AHU. REMOVE CONNECTED DUCTWORK AND PIPING INCLUDING ALL CONNECTED COMPONENTS TO THE EXTENT INDICATED ON THE PLAN AND AS NEEDED TO ALLOW INSTALLATION OF NEW AHU. REMOVE EXISTING CONDENSATE PIPING. PROVIDE TEMPORARY CAP IN HWS&R & CHWS&R PIPING AT MAIN FOR FUTURE CONNECTION TO NEW AHU. REMOVE EXISTING UNIT SUPPORTS.
- 2 DEMOLISH EXISTING EXHAUST FAN & CONNECTED DUCTWORK, COMPONENTS AND CONTROLS.
- 3 DEMOLISH EXISTING RETURN FAN & CONNECTED DUCTWORK, COMPONENTS AND CONTROLS.
- 4 DEMOLISH EXISTING UNIT HEATER & CONNECTED PIPING, COMPONENTS AND CONTROLS. PROVIDE TEMPORARY CAP IN HWS&R PIPING AT MAIN FOR CONNECTION TO NEW UNIT HEATER.
- 5 DEMOLISH EXISTING CHILLED WATER PUMP AND ASSOCIATED CONTROLS. REMOVE PIPING AS INDICATED AND AS NEEDED TO ALLOW INSTALLATION OF NEW PUMP. PROVIDE TEMPORARY CAP IN CHWS&R PIPING FOR CONNECTION TO NEW PUMP.
- 6 DEMOLISH EXISTING HOT WATER PUMP & CONNECTED PIPING, COMPONENTS AND CONTROLS. PROVIDE TEMPORARY CAP IN HWS&R PIPING AT MAIN FOR CONNECTION TO NEW PUMP.
- 7 CONTRACTOR REMOVE HWS&R BRANCH PIPING TO PIPING MAIN LOCATION IN-FIELD, FIELD CONFIRM EXACT LOCATION. PROVIDE TEMPORARY CAP FOR CONNECTION.
- 8 EXISTING OUTDOOR AIR LOUVER TO BE REMOVED. PROVIDE TEMPORARY EXTERIOR BUILDING ENVELOPE PROTECTION WHEN OPENING IS NOT BEING UTILIZED FOR NEW AHU-10 INSTALLATION.
- 9 MAIN PIPING INDICATED TO BE REPLACED SHOULD BE COMPLETED AFTER HOURS WHEN THE ASSOCIATED AC UNITS ARE NOT IN OPERATION. PIPING INDICATED FOR REMOVAL ALSO CURRENTLY PROVIDES CHILLED WATER DISTRIBUTION TO AHU-9,10 & 11 AND HOT WATER DISTRIBUTION TO AHU-9. COORDINATE WITH FAA REPRESENTATIVE FOR FINAL PHASING OF WORK. DOCUMENT EXISTING PIPING DISTRIBUTION INCLUDED CONNECTED VALVES, CONTROLS AND ANY ASSOCIATED BYPASS LOCATIONS PRIOR TO DEMOLITION. REPLACEMENT PIPING DISTRIBUTION AND CONNECTED VALVES, CONTROLS AND BYPASSES TO MATCH PAST DISTRIBUTION.

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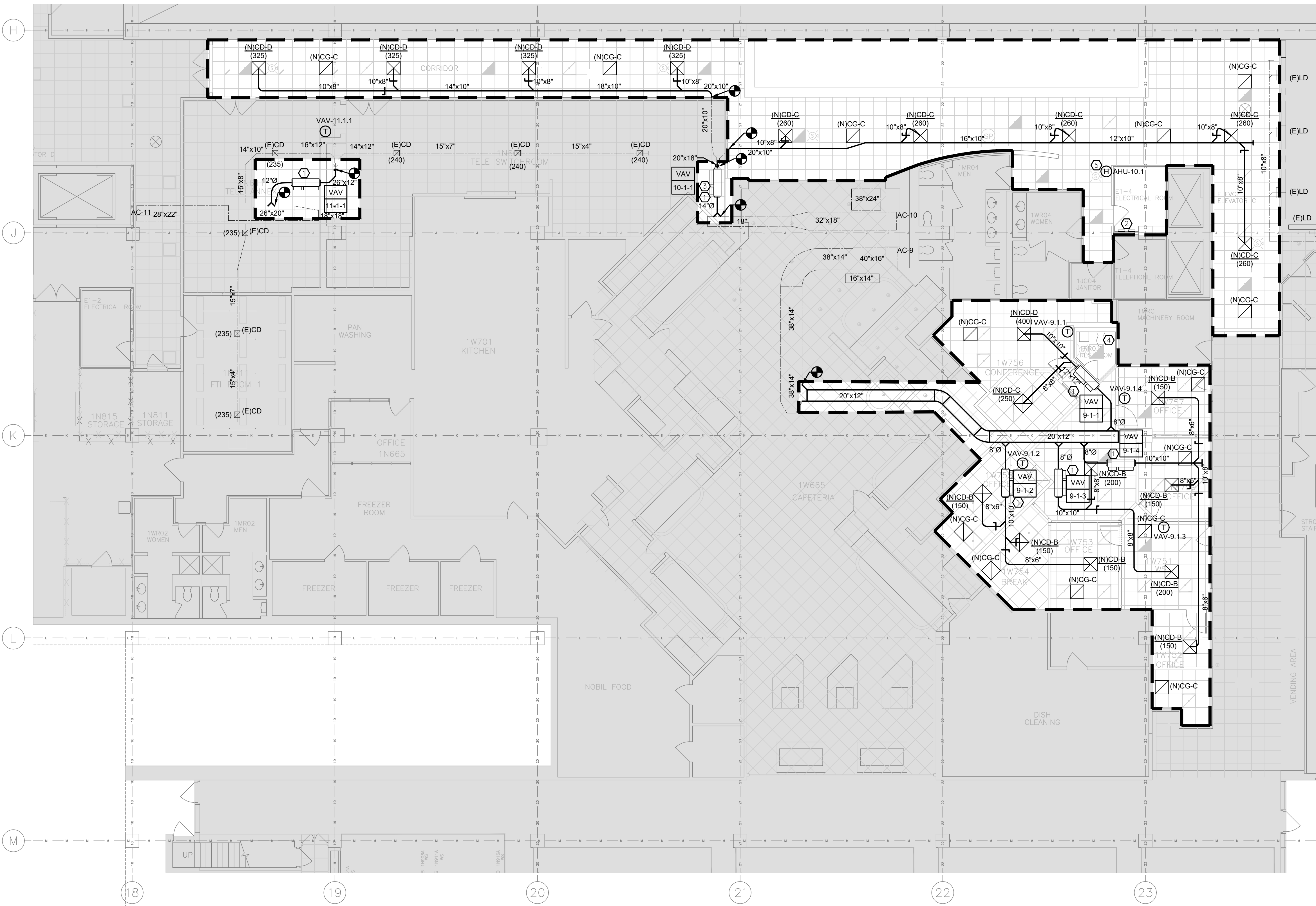
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FACILITY
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MECHANICAL DEMOLITION PART PLAN - MER-2

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		
CHECK: EA		F2024113-MD2.01	SHEET #	31 of 110



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
- SUPPLY AND EXHAUST LOW PRESSURE DUCT SPLITS AND TAKE-OFFS MUST BE PROVIDED WITH VOLUME DAMPERS. PROVIDE CABLE-OPERATED VOLUME DAMPERS FOR ALL DAMPERS ABOVE INACCESSIBLE CEILINGS.
- GC TO PROVIDE ACCESS DOORS AS REQUIRED FOR ALL NEW AND EXISTING EQUIPMENT REQUIRING ACCESS ABOVE INACCESSIBLE CEILINGS, INCLUDING BUT NOT LIMITED TO: FANS, VAVS AND DAMPERS. MAINTAIN ACCESS TO ALL EXISTING DAMPERS, SENSORS, ACTUATORS, VALVES, CONTROLLERS, DRAIN LINE CLEAN-OUTS & ELECTRICAL PULL BOXES. FINAL ACCESS DOOR LOCATIONS TO BE FIELD COORDINATED AND APPROVED BY THE BUILDING MAINTENANCE STAFF.
- THERMOSTAT LOCATION MUST BE COORDINATED WITH STROBE AND SWITCH LOCATIONS. FINAL THERMOSTAT LOCATIONS MUST BE COORDINATED WITH BUILDING MAINTENANCE STAFF.
- INSTALL MECHANICAL EQUIPMENT AT AN ELEVATION THAT ALLOWS FOR PROPER MAINTENANCE. CONFIRM ALL MECHANICAL EQUIPMENT IS PROVIDED WITH MANUFACTURER RECOMMENDED CLEARANCES PRIOR TO INSTALLATION.
- ALL AIR BALANCING MUST BE PERFORMED BY A TESTING AND BALANCING AGENCY APPROVED BY BUILDING MANAGEMENT.
- CONTRACTOR TO PROVIDE MEP COORDINATION AND DUCT SHOP DRAWINGS FOR REVIEW PRIOR TO NEW DUCTWORK INSTALLATION. KEEP ALL DUCTWORK TIGHT TO UNDERSIDE OF TYPICAL BEAMS EXCEPT AS NECESSARY. CROSS DUCTWORK BETWEEN BEAMS WHEREVER POSSIBLE, AND AVOID CROSSING DUCTWORK ABOVE RECESSED LIGHT FIXTURES TO PROVIDE MAXIMUM CLEARANCES.

KEYNOTES:

- PROVIDE NEW VAV BOX, DOWNSTREAM DUCTWORK, AND AIR OUTLETS. INCREASE, MODIFY AND/OR EXTEND EXISTING MEDIUM PRESSURE DUCTWORK OPENING AS REQUIRED FOR NEW VAV INLET CONNECTION. FIELD CONFIRM EXACT SCOPE OF WORK. PROVIDE NEW DDC CONTROLS, WIRING AND WALL MOUNTED THERMOSTAT. COORDINATE EXACT LOCATION OF VAV BOX AND ROUTING OF NEW DUCTWORK AND POINT OF CONNECTION TO EXISTING IN FIELD. ENSURE THAT THE VAV BOXES HAVE ADEQUATE ACCESS CLEARANCES ABOVE CEILING AND ACCESSIBLE THROUGH CEILING TILES.
- NEW SMOKE EVACUATION SYSTEM INTERFACE PANEL AND DDC SYSTEM CONTROL TRANSFORMER PANEL. DESIGN INTENT IS FOR EXISTING CONTROL PANELS IN ELECTRICAL ROOMS TO BE REPLACED WITH NEW. CONTROL VENDOR TO FIELD CONFIRM REQUIRED SCOPE OF WORK. REFER TO CONTROLS DETAIL 5/WB.01 FOR MORE INFORMATION.
- NEW THERMOSTAT LOCATIONS FOR ATRIUM VAV BOXES TO MATCH EXISTING LOCATIONS. VERIFY EXISTING IN FIELD.
- EXISTING EXHAUST GRILLE TO REMAIN IN RESTROOM. ELECTRICAL CONTRACTOR TO COORDINATE LIGHTING FIXTURE REPLACEMENT IN RESTROOM TO NOT CONFLICT WITH EXISTING EXHAUST GRILLE.
- NEW AHU HUMIDITY SENSOR, REFER TO FLOOR PLAN SYMBOL FOR ASSOCIATED AHU TAGGING REFERENCE. FIELD CONFIRM FINAL LOCATION WITH FAA REPRESENTATIVE PRIOR TO INSTALLATION.

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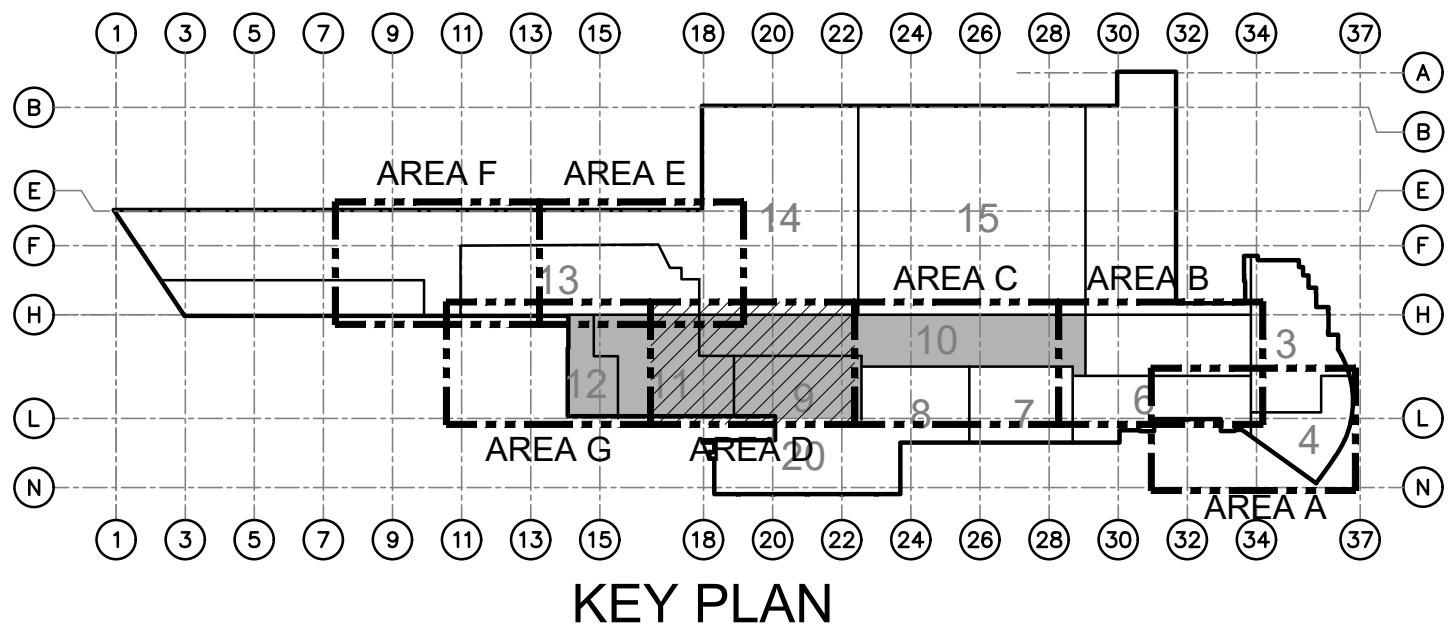
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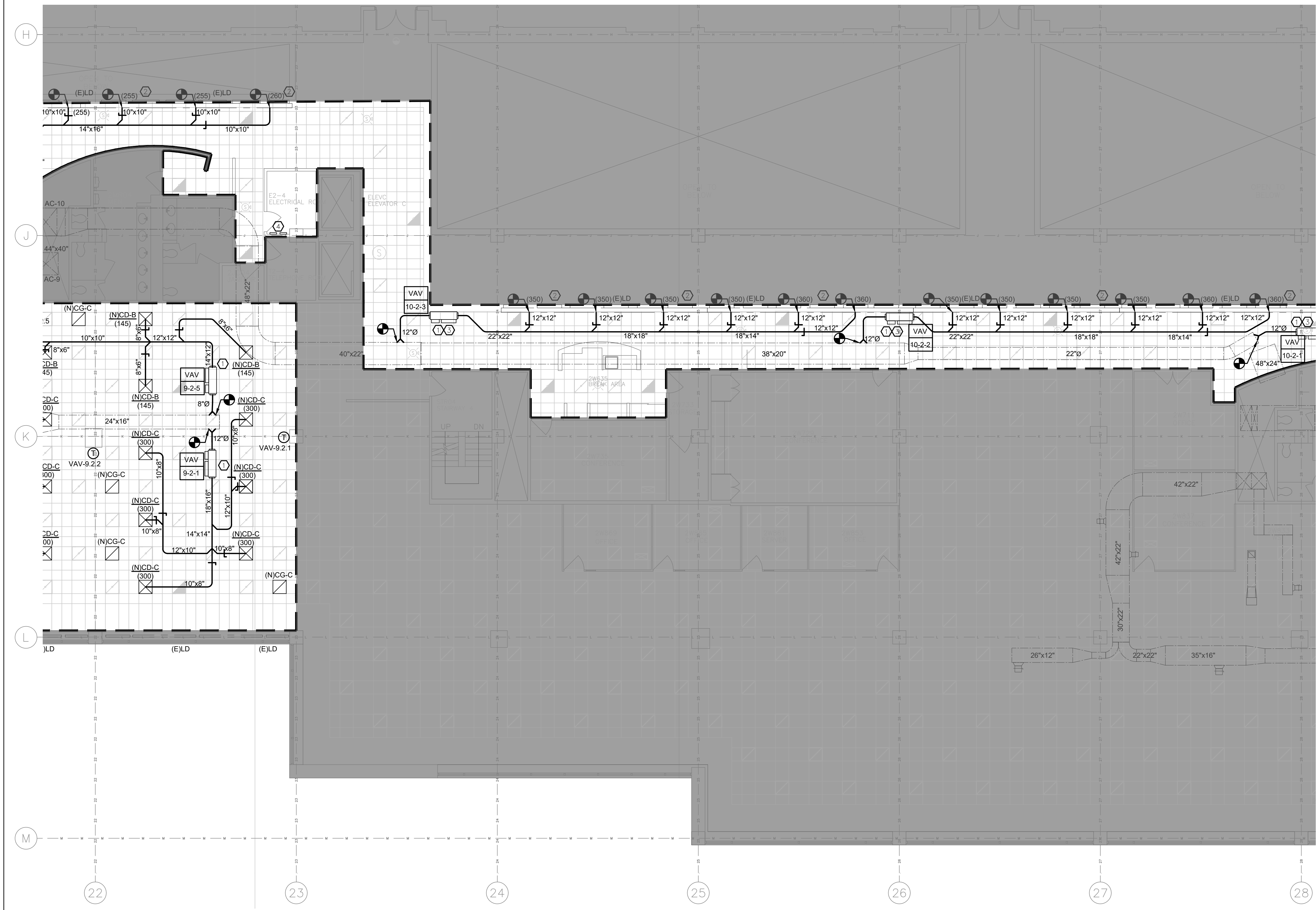
MECHANICAL FIRST FLOOR PLAN – AREA "D"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
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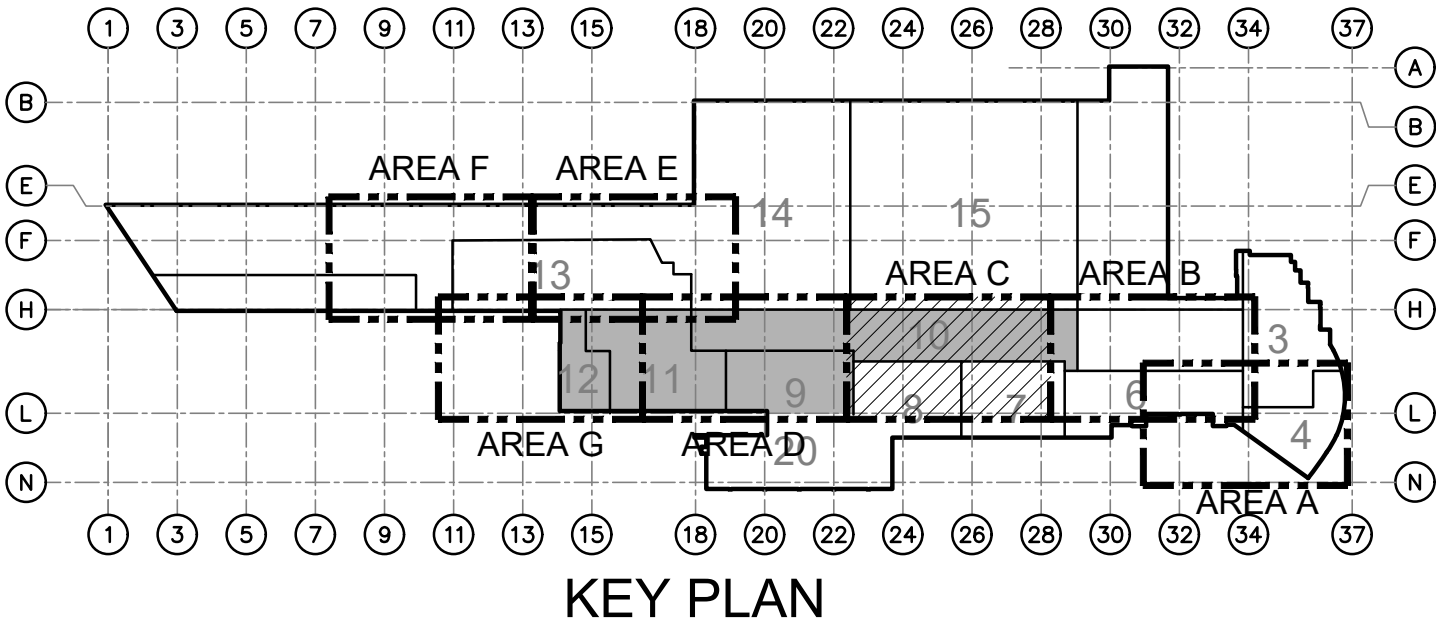
1 MECHANICAL FIRST FLOOR PLAN - AREA "D"
M1.01 SCALE: 1/8" = 1'-0"

0 4' 8' 16'





1 MECHANICAL SECOND FLOOR PLAN - AREA "C"
M1.03 SCALE: 1/8" = 1'-0"



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
- SUPPLY AND EXHAUST LOW PRESSURE DUCT SPLITS AND TAKE-OFFS MUST BE PROVIDED WITH VOLUME DAMPERS. PROVIDE CABLE-OPERATED VOLUME DAMPERS FOR ALL DAMPERS ABOVE INACCESSIBLE CEILINGS.
- GC TO PROVIDE ACCESS DOORS AS REQUIRED FOR ALL NEW AND EXISTING EQUIPMENT REQUIRING ACCESS ABOVE INACCESSIBLE CEILINGS, INCLUDING BUT NOT LIMITED TO: FANS, VAVS AND DAMPERS. MAINTAIN ACCESS TO ALL EXISTING DAMPERS, SENSORS, ACTUATORS, VALVES, CONTROLLERS, DRAIN LINE CLEAN-OUTS & ELECTRICAL PULL BOXES. FINAL ACCESS DOOR LOCATIONS TO BE FIELD COORDINATED AND APPROVED BY THE BUILDING MAINTENANCE STAFF.
- THERMOSTAT LOCATION MUST BE COORDINATED WITH STROBE AND SWITCH LOCATIONS. FINAL THERMOSTAT LOCATIONS MUST BE COORDINATED WITH BUILDING MAINTENANCE STAFF.
- INSTALL MECHANICAL EQUIPMENT AT AN ELEVATION THAT ALLOWS FOR PROPER MAINTENANCE. CONFIRM ALL MECHANICAL EQUIPMENT IS PROVIDED WITH MANUFACTURER RECOMMENDED CLEARANCES PRIOR TO INSTALLATION.
- ALL AIR BALANCING MUST BE PERFORMED BY A TESTING AND BALANCING AGENCY APPROVED BY BUILDING MANAGEMENT.
- CONTRACTOR TO PROVIDE MEP COORDINATION AND DUCT SHOP DRAWINGS FOR REVIEW PRIOR TO NEW DUCTWORK INSTALLATION. KEEP ALL DUCTWORK TIGHT TO UNDERSIDE OF TYPICAL BEAMS EXCEPT AS NECESSARY. CROSS DUCTWORK BETWEEN BEAMS WHEREVER POSSIBLE, AND AVOID CROSSING DUCTWORK ABOVE RECESSED LIGHT FIXTURES TO PROVIDE MAXIMUM CLEARANCES.

KEYNOTES:

- PROVIDE NEW VAV BOX, DOWNSTREAM DUCTWORK, AND AIR OUTLETS. INCREASE, MODIFY AND/OR EXTEND EXISTING MEDIUM PRESSURE DUCTWORK OPENING AS REQUIRED FOR NEW VAV INLET CONNECTION. FIELD CONFIRM EXACT SCOPE OF WORK. PROVIDE NEW DDC CONTROLS, WIRING AND WALL MOUNTED THERMOSTAT. COORDINATE EXACT LOCATION OF VAV BOX AND ROUTING OF NEW DUCTWORK AND POINT OF CONNECTION TO EXISTING IN FIELD. ENSURE THAT THE VAV BOXES HAVE ADEQUATE ACCESS CLEARANCES ABOVE CEILING AND ACCESSIBLE THROUGH CEILING TILES.
- PROVIDE NEW DUCTWORK CONNECTED TO EXISTING TO REMAIN ATRIUM LINEAR DIFFUSER SUPPLY AIR PLENUMS. TYPICAL.
- NEW THERMOSTAT LOCATIONS FOR ATRIUM VAV BOXES TO MATCH EXISTING LOCATIONS. VERIFY EXISTING IN FIELD. PROVIDE ONE COMBINATION THERMOSTAT/HUMIDITY SENSOR FOR AHU-10 ZONE HUMIDITY MONITORING.
- NEW SMOKE EVACUATION SYSTEM INTERFACE PANEL AND DDC SYSTEM CONTROL TRANSFORMER PANEL. DESIGN INTENT IS FOR EXISTING CONTROL PANELS IN ELECTRICAL ROOMS TO BE REPLACED WITH NEW. CONTROL VENDOR TO FIELD CONFIRM REQUIRED SCOPE OF WORK. REFER TO CONTROLS DETAIL 5/M8.01 FOR MORE INFORMATION.

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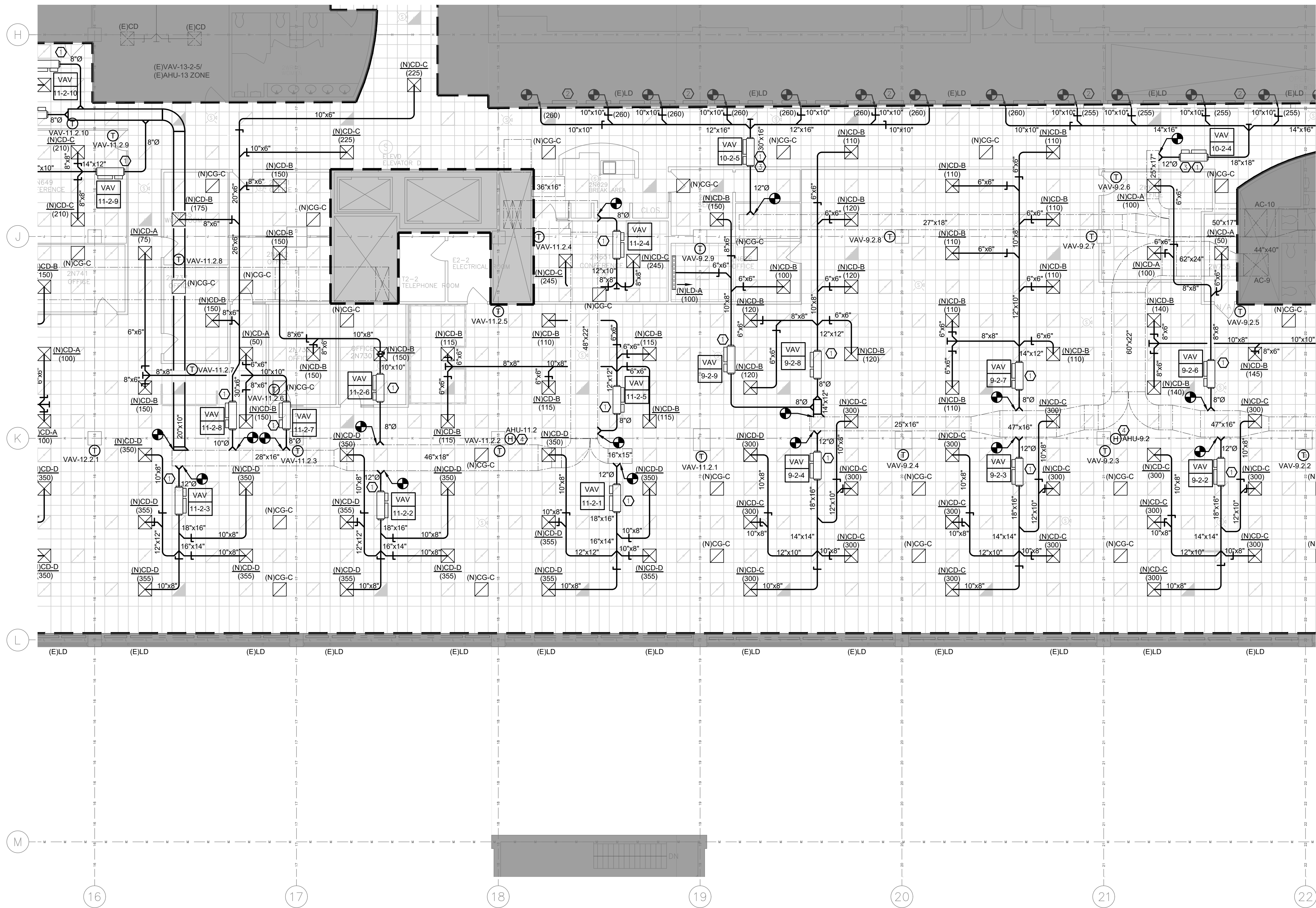
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E	07/16/25	REVISED BID SET SUBMISSION		
D	04/22/25	BID SET SUBMISSION		
C	02/21/25	95% DESIGN SUBMISSION		
B	11/26/24	65% DESIGN SUBMISSION		
A	09/06/24	35% DESIGN SUBMISSION		
REV	DATE	DESCRIPTION	CHECK	APPR'D

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

FACILITY
BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL SECOND FLOOR PLAN - AREA "C"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		
CHECK: EA		F2024113-M1.03		
APPROVAL (FINISHES)			SHEET #	
				34 OF 110



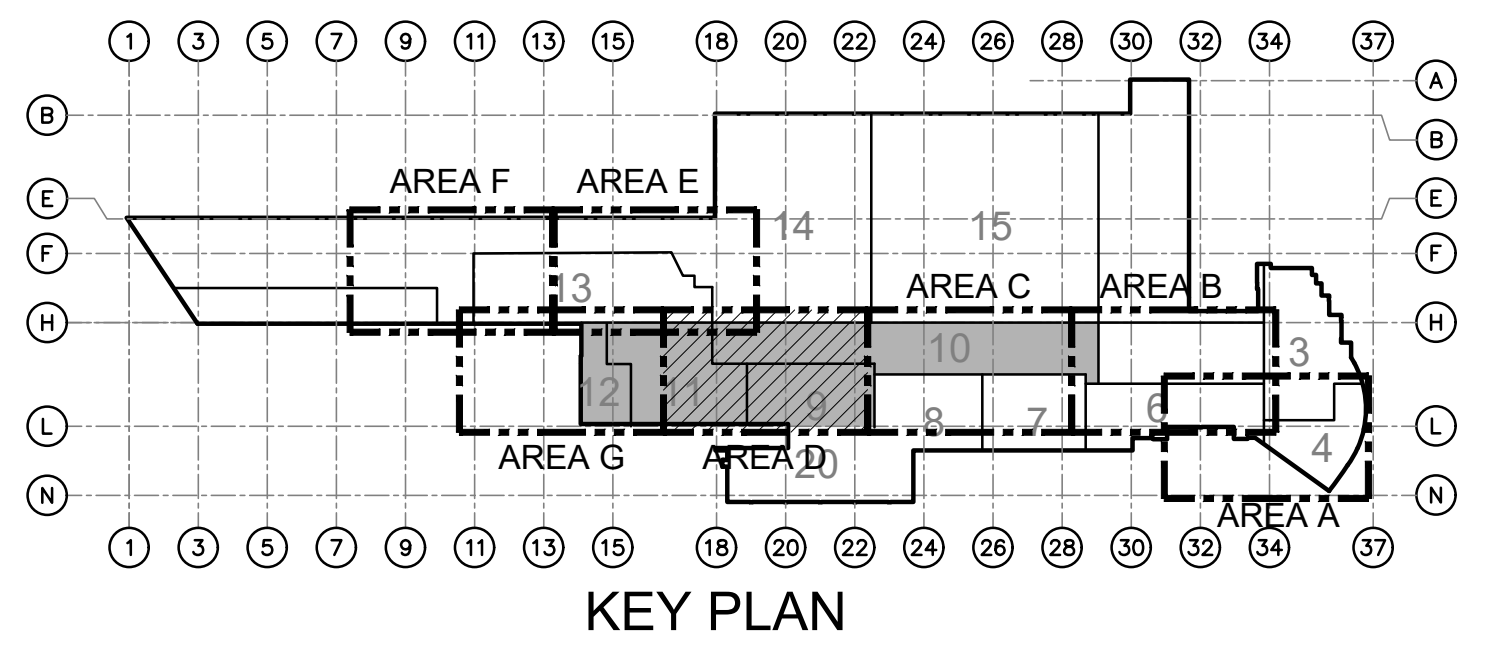
- GENERAL NOTES**
- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
 - ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
 - SUPPLY AND EXHAUST LOW PRESSURE DUCT SPLITS AND TAKE-OFFS MUST BE PROVIDED WITH VOLUME DAMPERS. PROVIDE CABLE-OPERATED VOLUME DAMPERS FOR ALL DAMPERS ABOVE INACCESSIBLE CEILINGS.
 - GC TO PROVIDE ACCESS DOORS AS REQUIRED FOR ALL NEW AND EXISTING EQUIPMENT REQUIRING ACCESS ABOVE INACCESSIBLE CEILINGS, INCLUDING BUT NOT LIMITED TO: FANS, VAVS AND DAMPERS. MAINTAIN ACCESS TO ALL EXISTING DAMPERS, SENSORS, ACTUATORS, VALVES, CONTROLLERS, DRAIN LINE CLEAN-OUTS & ELECTRICAL PULL BOXES. FINAL ACCESS DOOR LOCATIONS TO BE FIELD COORDINATED AND APPROVED BY THE BUILDING MAINTENANCE STAFF.
 - THERMOSTAT LOCATION MUST BE COORDINATED WITH STROBE AND SWITCH LOCATIONS. FINAL THERMOSTAT LOCATIONS MUST BE COORDINATED WITH BUILDING MAINTENANCE STAFF.
 - INSTALL MECHANICAL EQUIPMENT AT AN ELEVATION THAT ALLOWS FOR PROPER MAINTENANCE. CONFIRM ALL MECHANICAL EQUIPMENT IS PROVIDED WITH MANUFACTURER RECOMMENDED CLEARANCES PRIOR TO INSTALLATION.
 - ALL AIR BALANCING MUST BE PERFORMED BY A TESTING AND BALANCING AGENCY APPROVED BY BUILDING MANAGEMENT.
 - CONTRACTOR TO PROVIDE MEP COORDINATION AND DUCT SHOP DRAWINGS FOR REVIEW PRIOR TO NEW DUCTWORK INSTALLATION. KEEP ALL DUCTWORK TIGHT TO UNDERSIDE OF TYPICAL BEAMS EXCEPT AS NECESSARY. CROSS DUCTWORK BETWEEN BEAMS WHEREVER POSSIBLE, AND AVOID CROSSING DUCTWORK ABOVE RECESSED LIGHT FIXTURES TO PROVIDE MAXIMUM CLEARANCES.

- KEYNOTES:**
- PROVIDE NEW VAV BOX, DOWNSTREAM DUCTWORK, AND AIR OUTLETS. INCREASE, MODIFY AND/OR EXTEND EXISTING MEDIUM PRESSURE DUCTWORK OPENING AS REQUIRED FOR NEW VAV INLET CONNECTION. FIELD CONFIRM EXACT SCOPE OF WORK. PROVIDE NEW DDC CONTROLS, WIRING AND WALL MOUNTED THERMOSTAT. COORDINATE EXACT LOCATION OF VAV BOX AND ROUTING OF NEW DUCTWORK AND POINT OF CONNECTION TO EXISTING IN FIELD. ENSURE THAT THE VAV BOXES HAVE ADEQUATE ACCESS CLEARANCES ABOVE CEILING AND ACCESSIBLE THROUGH CEILING TILES.
 - PROVIDE NEW DUCTWORK CONNECTED TO EXISTING TO REMAIN ATRIUM LINEAR DIFFUSER SUPPLY AIR PLENUMS. TYPICAL.
 - NEW THERMOSTAT LOCATIONS FOR ATRIUM VAV BOXES TO MATCH EXISTING LOCATIONS. VERIFY EXISTING IN FIELD.
 - NEW AHU HUMIDITY SENSOR, REFER TO FLOOR PLAN SYMBOL FOR ASSOCIATED AHU TAGGING REFERENCE. FIELD CONFIRM FINAL LOCATION WITH FAA REPRESENTATIVE PRIOR TO INSTALLATION.

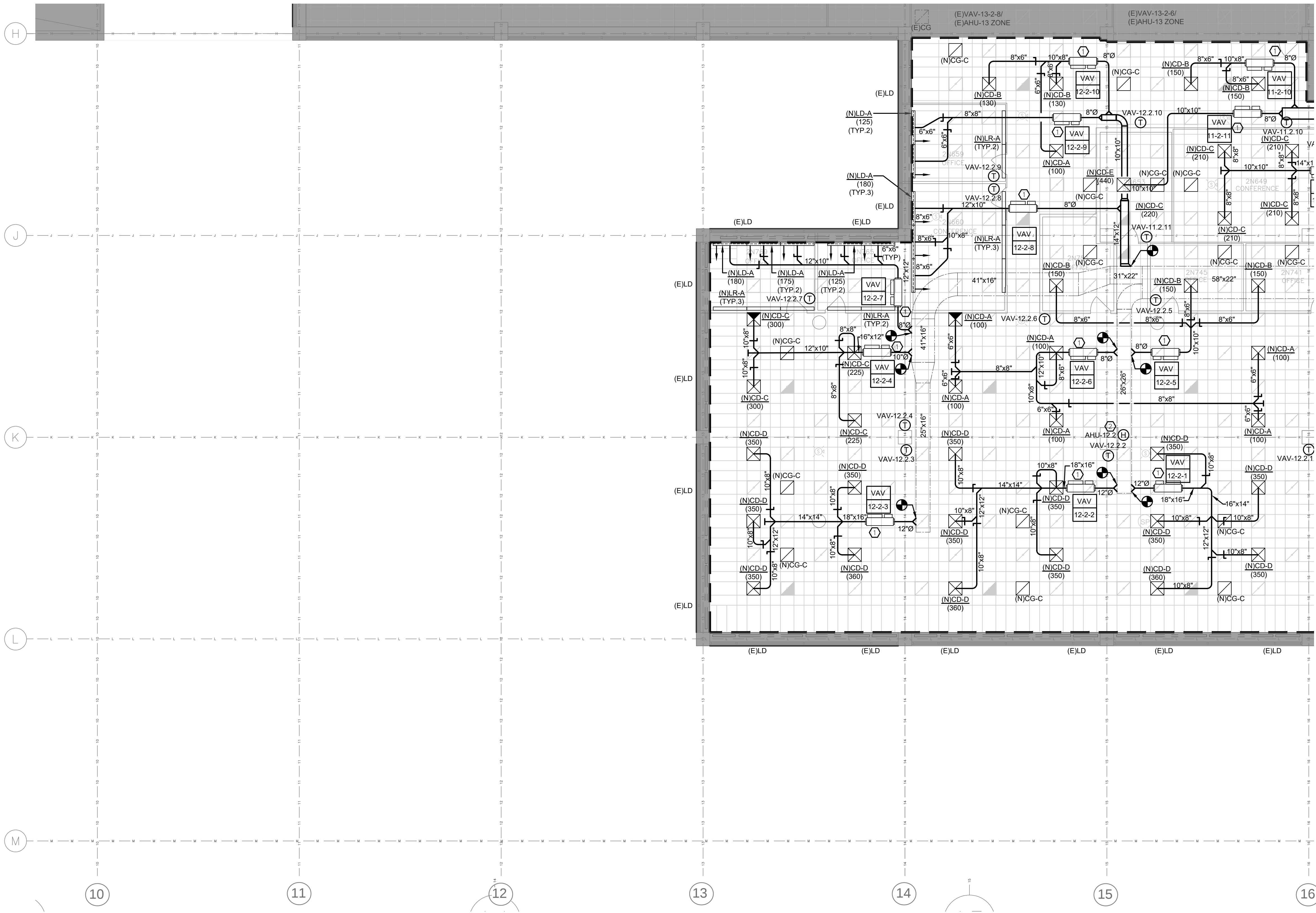
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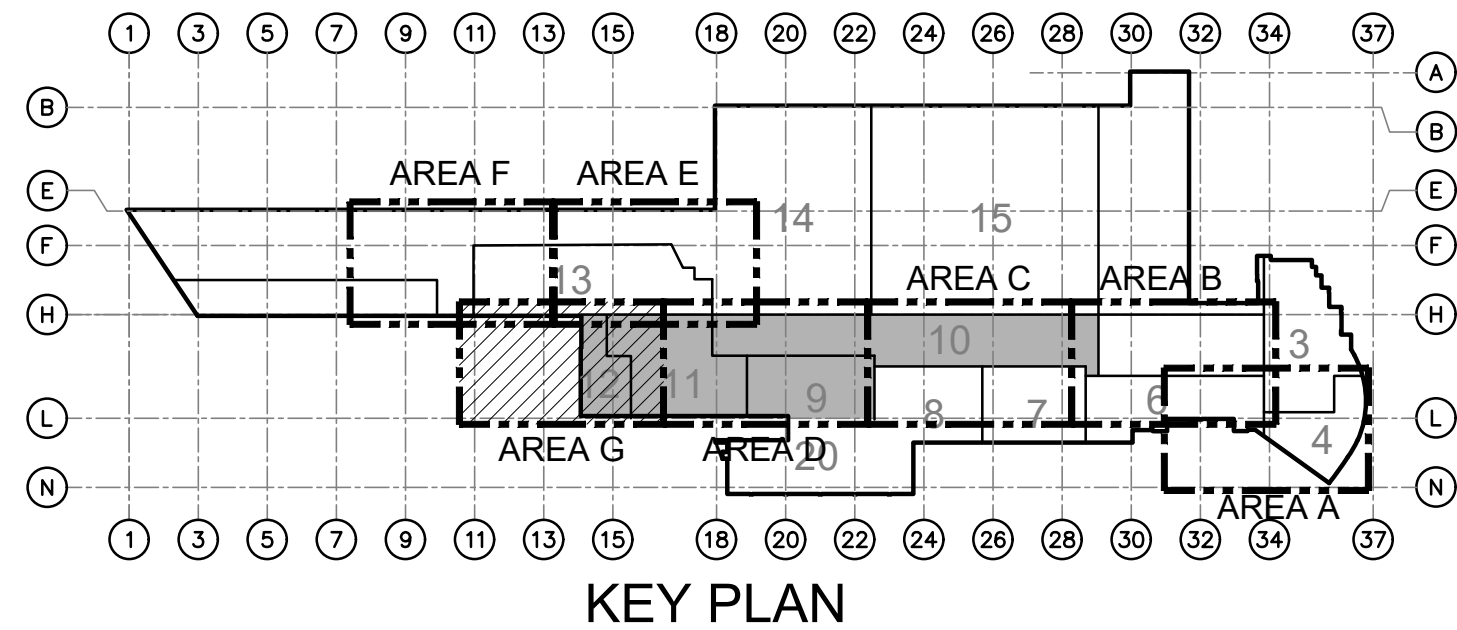
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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405				
FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT				
MECHANICAL SECOND FLOOR PLAN - AREA "D"				
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES &	DRAWING NO.		
CHECK: EA	ENGINEERING DIVISION	F2024113-M1.04	SHEET #	
			35	OF 110



1 MECHANICAL SECOND FLOOR PLAN - AREA "D"
M1.04 SCALE: 1/8" = 1'-0"
0 4' 8' 16'



1 MECHANICAL SECOND FLOOR PLAN - AREA "G"
M1.05 SCALE: 1/8" = 1'-0"



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
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KEYNOTES:

- PROVIDE NEW VAV BOX, DOWNSTREAM DUCTWORK, AND AIR OUTLETS. INCREASE, MODIFY AND/OR EXTEND EXISTING MEDIUM PRESSURE DUCTWORK OPENING AS REQUIRED FOR NEW VAV INLET CONNECTION. FIELD CONFIRM EXACT SCOPE OF WORK. PROVIDE NEW DDC CONTROLS, WIRING AND WALL MOUNTED THERMOSTAT. COORDINATE EXACT LOCATION OF VAV BOX AND ROUTING OF NEW DUCTWORK AND POINT OF CONNECTION TO EXISTING IN FIELD. ENSURE THAT THE VAV BOXES HAVE ADEQUATE ACCESS CLEARANCES ABOVE CEILING AND ACCESSIBLE THROUGH CEILING TILES.
- NEW AHU HUMIDITY SENSOR. REFER TO FLOOR PLAN SYMBOL FOR ASSOCIATED AHU TAGGING REFERENCE. FIELD CONFIRM FINAL LOCATION WITH FAA REPRESENTATIVE PRIOR TO INSTALLATION.

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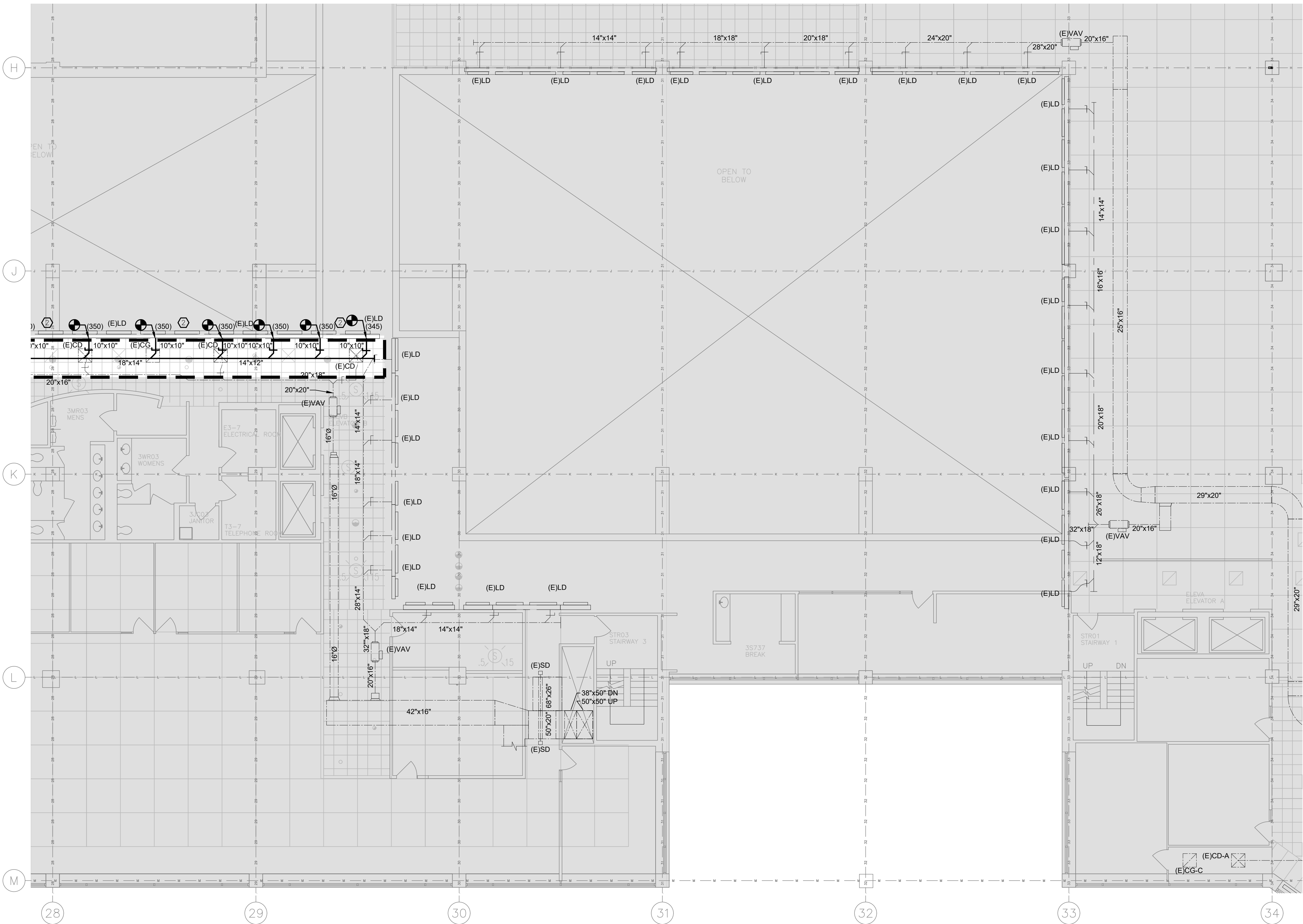
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FEDERAL AVIATION ADMINISTRATION
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ATLANTIC CITY INT'L AIRPORT, N.J. 08405

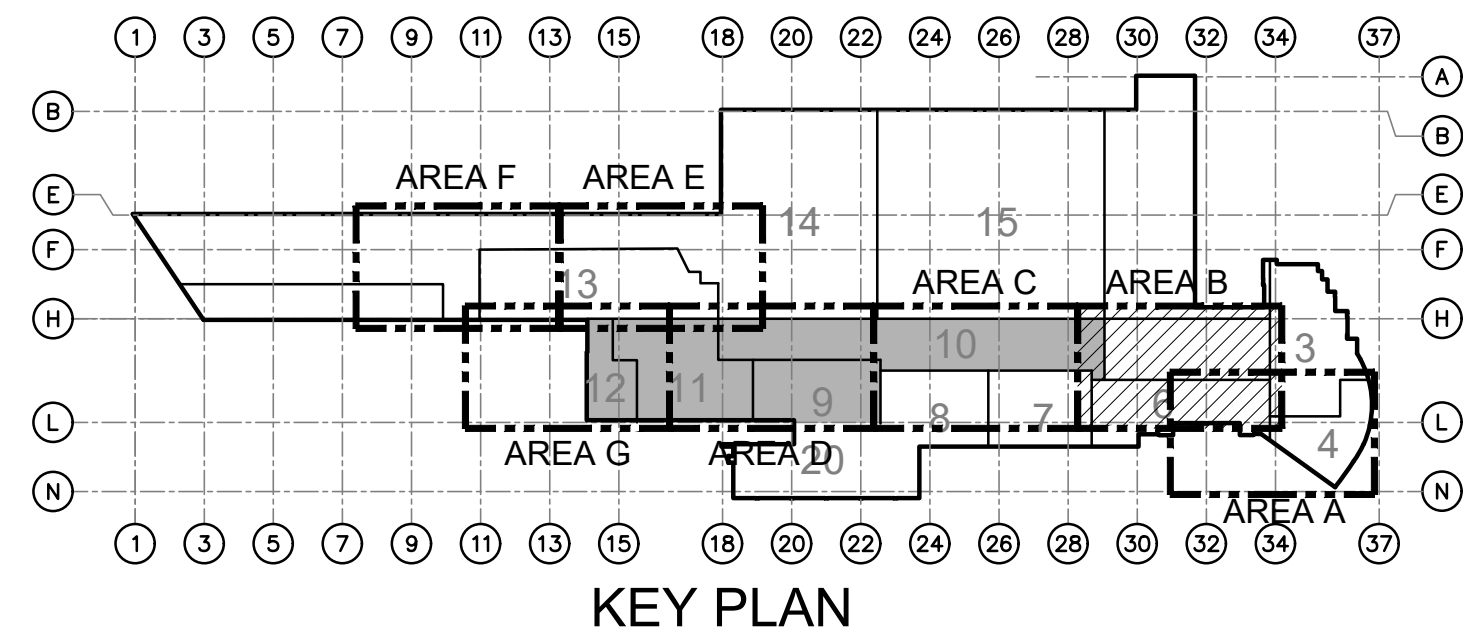
FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL SECOND FLOOR PLAN – AREA "G"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		SHEET #
CHECK: EA		F2024113—M1.05		36 OF 110



1 MECHANICAL THIRD FLOOR PLAN - AREA "B"
M1.06 SCALE: 1/8" = 1'-0"
0 4' 8' 16'



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
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KEYNOTES:

- ① NOT USED
- ② PROVIDE NEW DUCTWORK CONNECTED TO EXISTING TO REMAIN ATRIUM LINEAR DIFFUSER SUPPLY AIR PLENUMS. TYPICAL.

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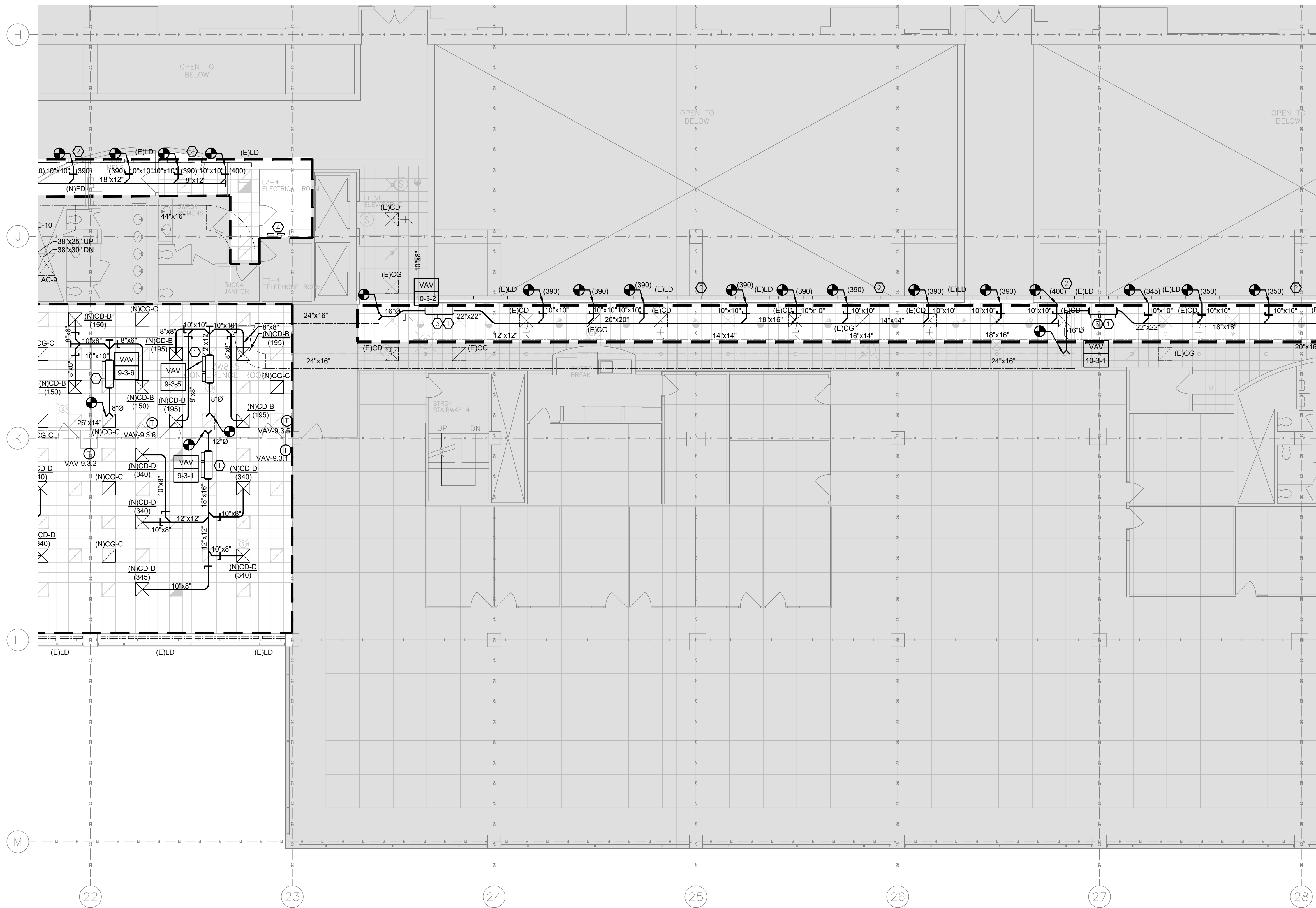
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
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ATLANTIC CITY INT'L AIRPORT, N.J. 08405

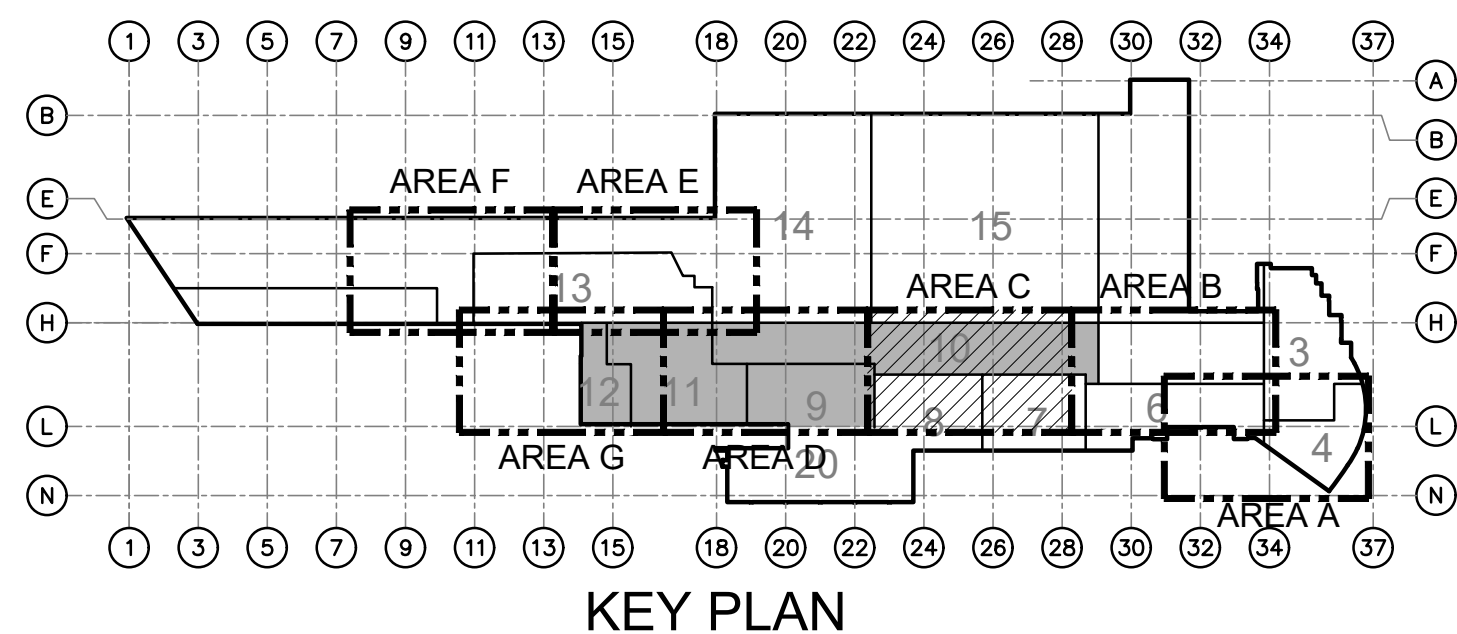
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BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL THIRD FLOOR PLAN - AREA "B"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
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			37 OF 110	



1 MECHANICAL THIRD FLOOR PLAN - AREA "C"
M1.07 SCALE: 1/8" = 1'-0"



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
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KEYNOTES:

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- PROVIDE NEW DUCTWORK CONNECTED TO EXISTING TO REMAIN ATRIUM LINEAR DIFFUSER SUPPLY AIR PLENUMS. TYPICAL.
- NEW THERMOSTAT LOCATIONS FOR ATRIUM VAV BOXES TO MATCH EXISTING LOCATIONS. VERIFY EXISTING IN FIELD. PROVIDE ONE COMBINATION THERMOSTAT/HUMIDITY SENSOR FOR AHU-10 ZONE HUMIDITY MONITORING.
- NEW SMOKE EVACUATION SYSTEM INTERFACE PANEL AND DDC SYSTEM CONTROL TRANSFORMER PANEL. DESIGN INTENT IS FOR EXISTING CONTROL PANELS IN ELECTRICAL ROOMS TO BE REPLACED WITH NEW. CONTROL VENDOR TO FIELD CONFIRM REQUIRED SCOPE OF WORK. REFER TO CONTROLS DETAIL 5/M8.01 FOR MORE INFORMATION.

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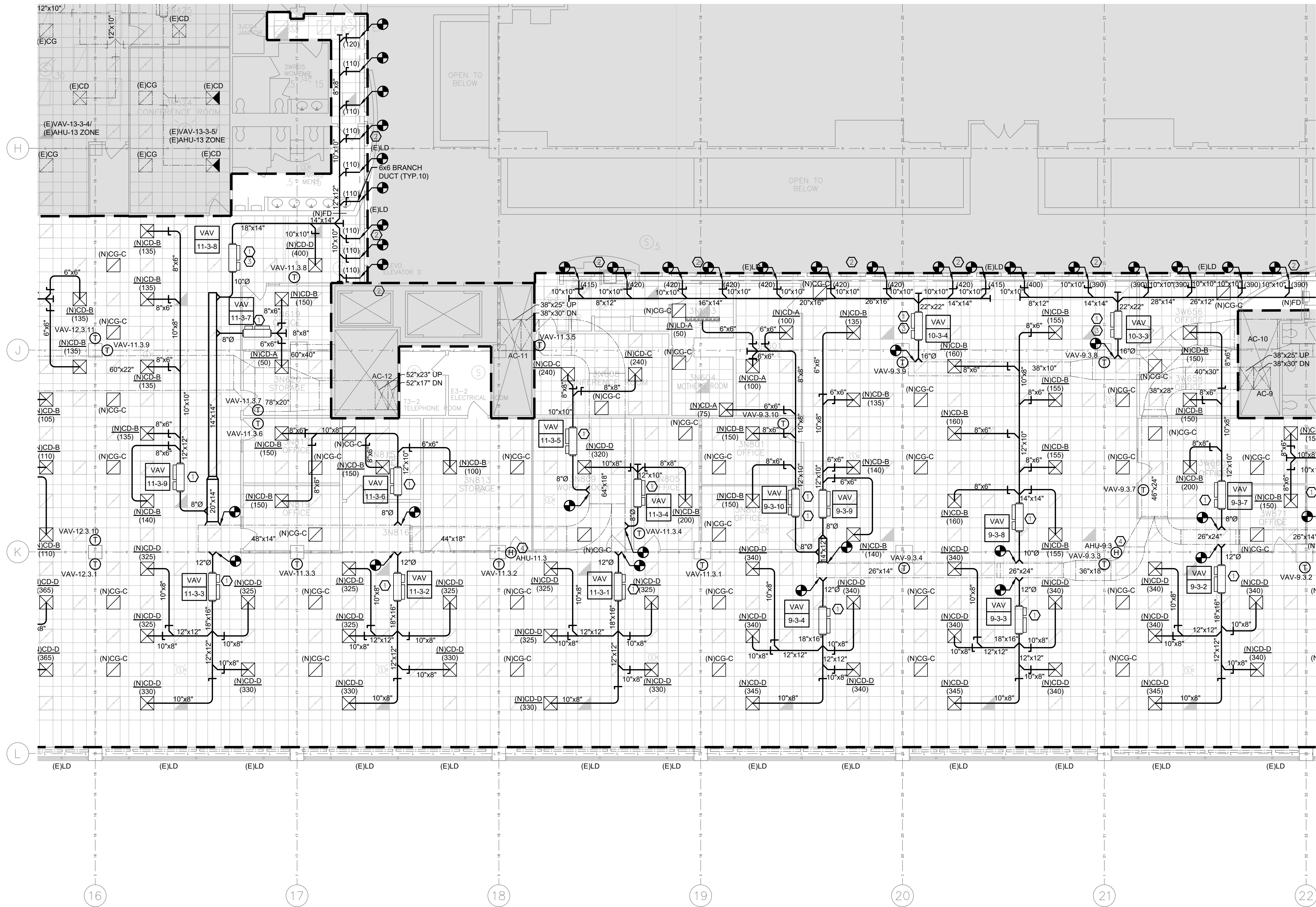
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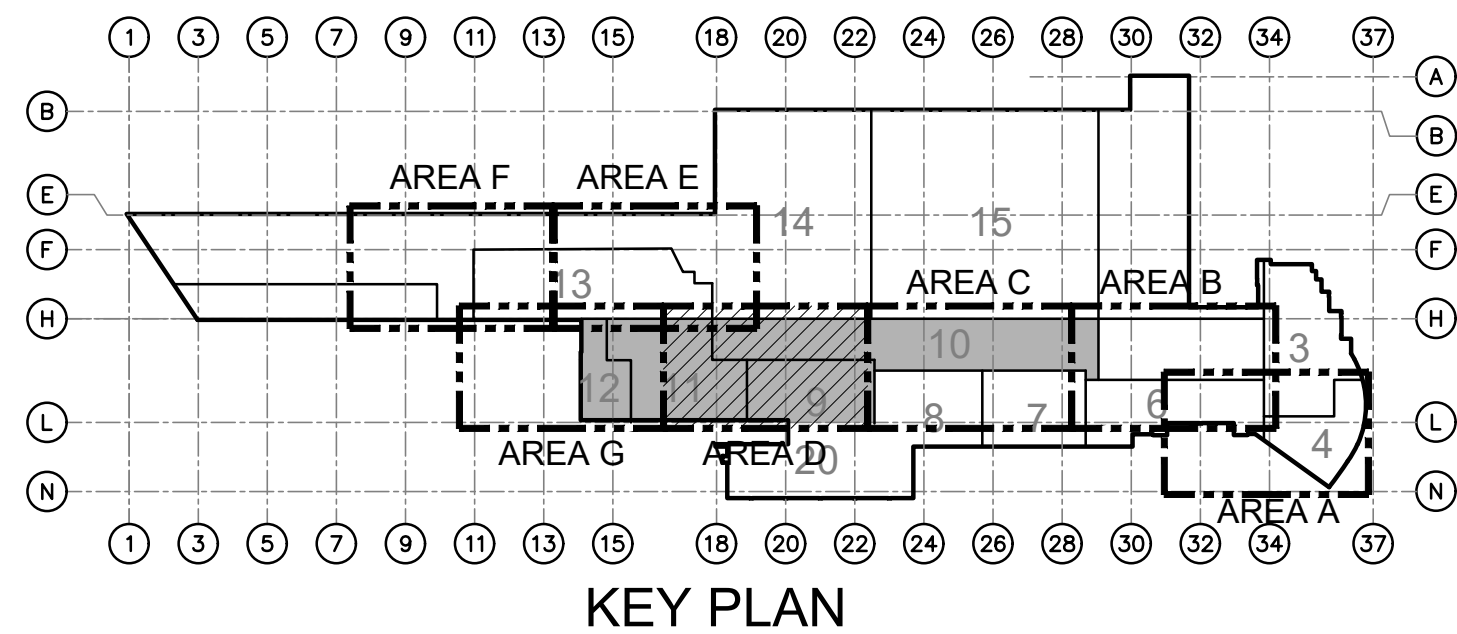
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MECHANICAL THIRD FLOOR PLAN - AREA "C"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		SHEET #
CHECK: EA		F2024113-M1.07		38 of 110



1 MECHANICAL THIRD FLOOR PLAN - AREA "D"
M1.08 SCALE: 1/8" = 1'-0"



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE HEATING THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
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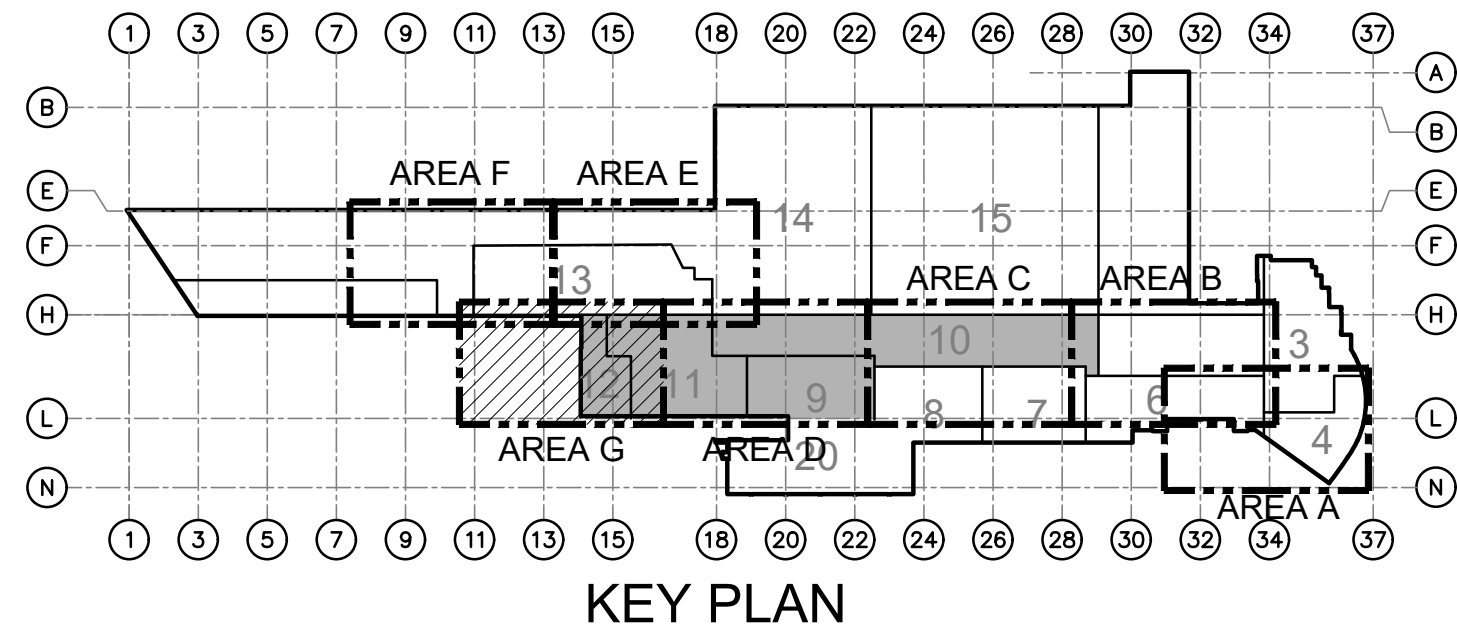
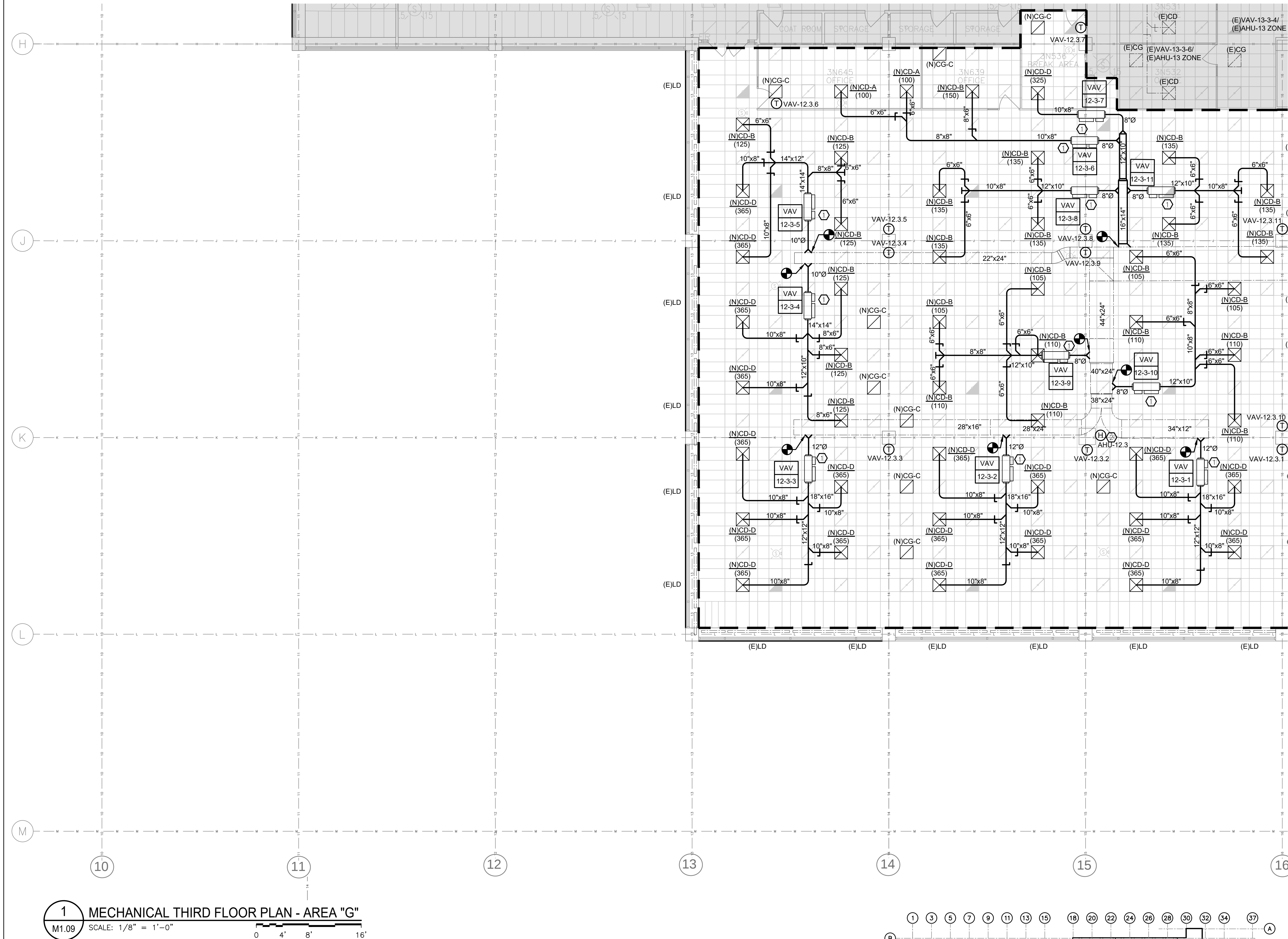
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B	11/26/24	65% DESIGN SUBMISSION		
A	09/06/24	35% DESIGN SUBMISSION		
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

FACILITY
BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL THIRD FLOOR PLAN - AREA "D"

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
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CHECK: EA		F2024113-M1.08		
			SHEET #	
			39	110



GENERAL NOTES

- EXISTING FIN-TUBE PERIMETER HEATING SYSTEM & ASSOCIATED PNEUMATIC CONTROLS ARE TO REMAIN. DO NOT REMOVE PNEUMATIC THERMOSTATS. DISCONNECT VAV BOX TUBING FROM SYSTEM & CAP ALL PORTS IN TUBING NOT BEING REUSED.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
- SUPPLY AND EXHAUST LOW PRESSURE DUCT SPLITS AND TAKE-OFFS MUST BE PROVIDED WITH VOLUME DAMPERS. PROVIDE CABLE-OPERATED VOLUME DAMPERS FOR ALL DAMPERS ABOVE INACCESSIBLE CEILINGS.
- GC TO PROVIDE ACCESS DOORS AS REQUIRED FOR ALL NEW AND EXISTING EQUIPMENT REQUIRING ACCESS ABOVE INACCESSIBLE CEILINGS, INCLUDING BUT NOT LIMITED TO: FANS, VAVS AND DAMPERS. MAINTAIN ACCESS TO ALL EXISTING DAMPERS, SENSORS, ACTUATORS, VALVES, CONTROLLERS, DRAIN LINE CLEAN-OUTS & ELECTRICAL PULL BOXES. FINAL ACCESS DOOR LOCATIONS TO BE FIELD COORDINATED AND APPROVED BY THE BUILDING MAINTENANCE STAFF.
- THERMOSTAT LOCATION MUST BE COORDINATED WITH STROBE AND SWITCH LOCATIONS. FINAL THERMOSTAT LOCATIONS MUST BE COORDINATED WITH BUILDING MAINTENANCE STAFF.
- INSTALL MECHANICAL EQUIPMENT AT AN ELEVATION THAT ALLOWS FOR PROPER MAINTENANCE. CONFIRM ALL MECHANICAL EQUIPMENT IS PROVIDED WITH MANUFACTURER RECOMMENDED CLEARANCES PRIOR TO INSTALLATION.
- ALL AIR BALANCING MUST BE PERFORMED BY A TESTING AND BALANCING AGENCY APPROVED BY BUILDING MANAGEMENT.
- CONTRACTOR TO PROVIDE MEP COORDINATION AND DUCT SHOP DRAWINGS FOR REVIEW PRIOR TO NEW DUCTWORK INSTALLATION. KEEP ALL DUCTWORK TIGHT TO UNDERSIDE OF TYPICAL BEAMS EXCEPT AS NECESSARY. CROSS DUCTWORK BETWEEN BEAMS WHEREVER POSSIBLE, AND AVOID CROSSING DUCTWORK ABOVE RECESSED LIGHT FIXTURES TO PROVIDE MAXIMUM CLEARANCES.

KEYNOTES:

- PROVIDE NEW VAV BOX, DOWNSTREAM DUCTWORK, AND AIR OUTLETS. INCREASE, MODIFY AND/OR EXTEND EXISTING MEDIUM PRESSURE DUCTWORK OPENING AS REQUIRED FOR NEW VAV INLET CONNECTION. FIELD CONFIRM EXACT SCOPE OF WORK. PROVIDE NEW DDC CONTROLS, WIRING AND WALL MOUNTED THERMOSTAT. COORDINATE EXACT LOCATION OF VAV BOX AND ROUTING OF NEW DUCTWORK AND POINT OF CONNECTION TO EXISTING IN FIELD. ENSURE THAT THE VAV BOXES HAVE ADEQUATE ACCESS CLEARANCES ABOVE CEILING AND ACCESSIBLE THROUGH CEILING TILES.
- NEW AHU HUMIDITY SENSOR, REFER TO FLOOR PLAN SYMBOL FOR ASSOCIATED AHU TAGGING REFERENCE. FIELD CONFIRM FINAL LOCATION WITH FAA REPRESENTATIVE PRIOR TO INSTALLATION.

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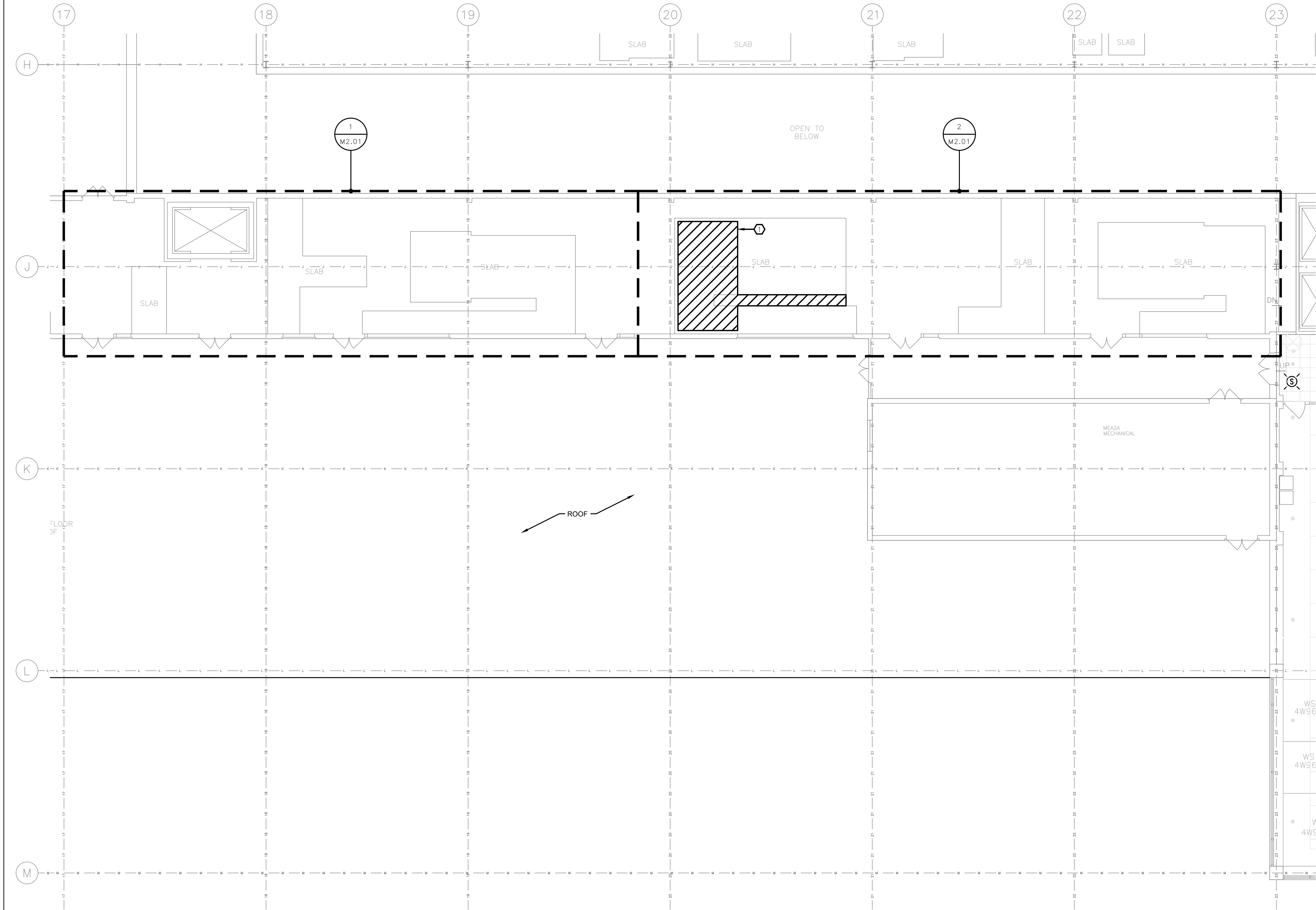
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ATLANTIC CITY INT'L AIRPORT, N.J. 08405

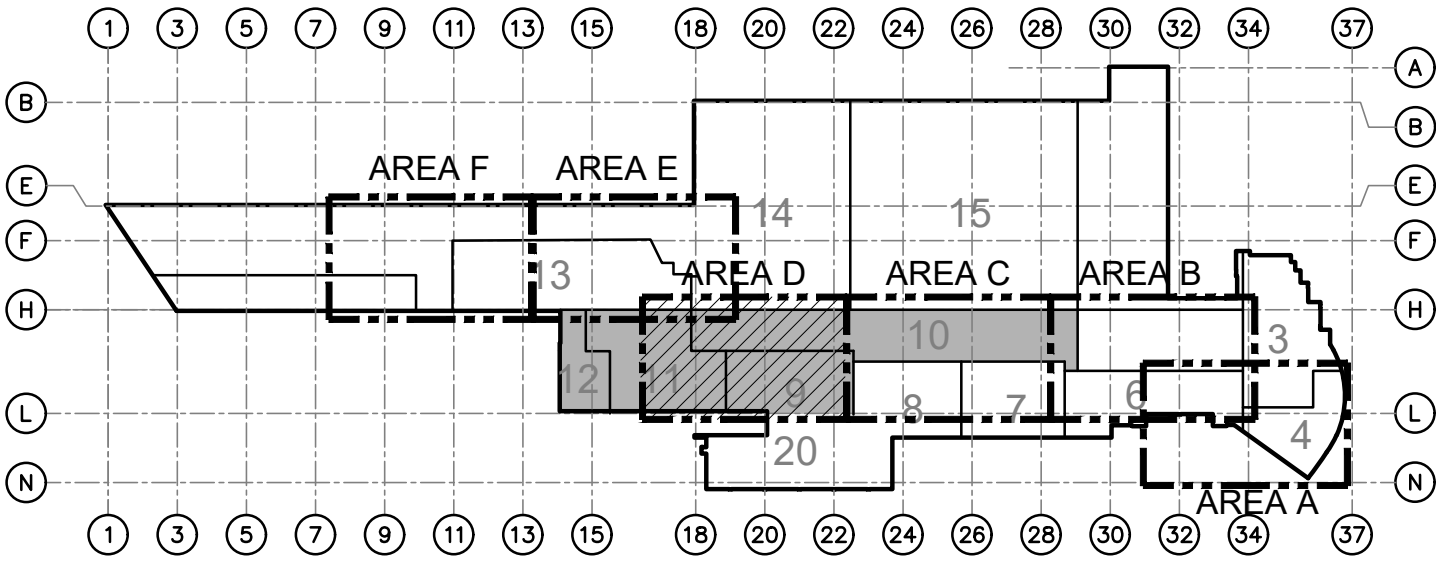
FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL THIRD FLOOR PLAN – AREA “G”

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024	JCN:	
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CHECK: EA		F2024113—M1.09		40 OF 110



1 MECHANICAL FOURTH FLOOR PLAN - AREA "D"
M1.10 SCALE: 1/8" = 1'-0" 0 4' 8' 16'



KEY PLAN

KEYNOTES:

- ① COORDINATE WITH GC TO POUR NEW CONCRETE SLAB WITHIN EXISTING CONCRETE CURB FOOTPRINT, FIELD CONFIRM REQUIRED SCOPE AREA. GC TO COORDINATE WITH STRUCTURAL DRAWING SET FOR INSTALLATION REQUIREMENTS.

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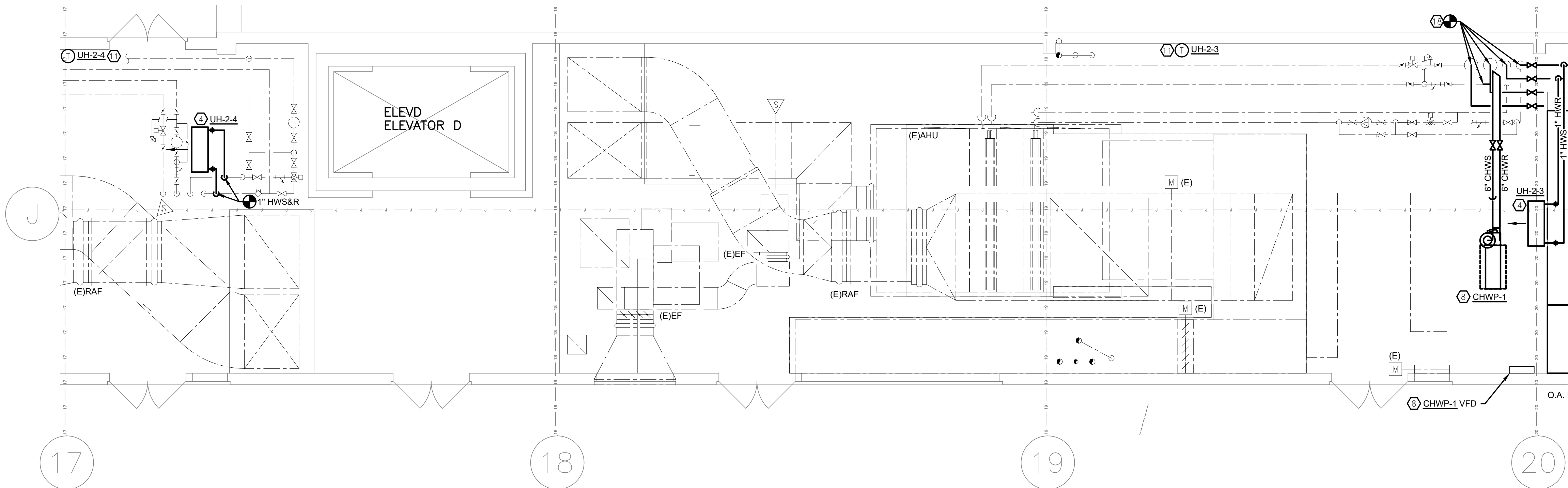
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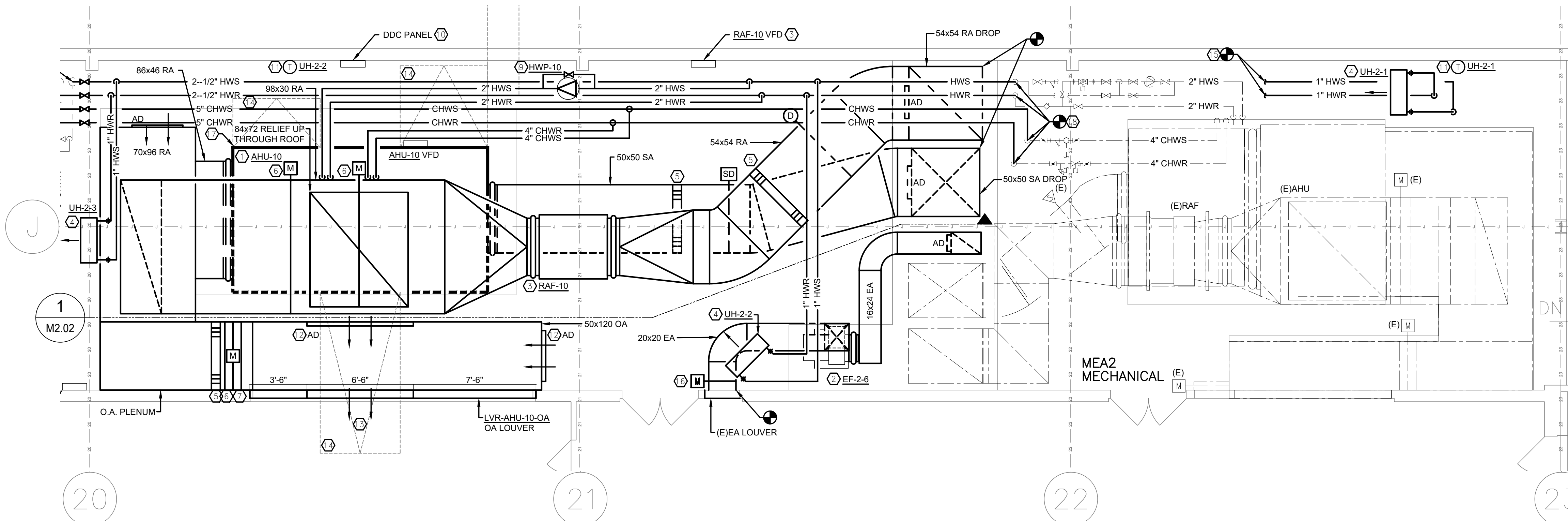
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**MECHANICAL FOURTH FLOOR
PLAN – AREA "D"**

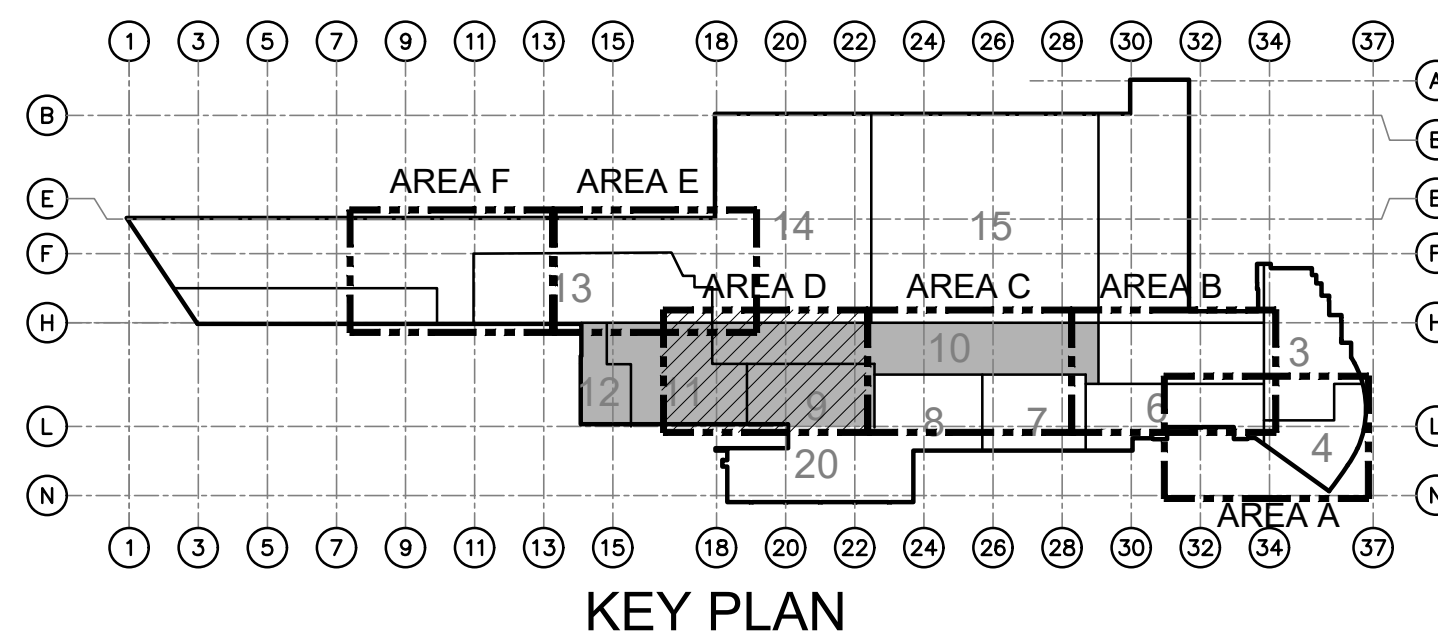
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1 MECHANICAL PART PLAN - MER-2 - WEST
M2.01 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



2 MECHANICAL PART PLAN - MER-2 - EAST
M2.01 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



GENERAL NOTES

- BLANK-OFF UNUSED SECTIONS OF LOUVERS WITH SHEET METAL AND BOARD INSULATION. SEAL ALL GAPS AIRTIGHT.
- VERIFY SIZE OF EXISTING LOUVERS IN FIELD.
- ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. REFER TO DUCTWORK GENERAL NOTES ON SHEET M0.01 FOR DUCTWORK TO BE PROVIDED WITH CLOSED CELL LINING. ALL UNLINED DUCTWORK TO BE PROVIDED WITH EXTERNAL INSULATION PER SPECIFICATIONS PACKAGE.
- INSTALL MECHANICAL EQUIPMENT AT AN ELEVATION THAT ALLOWS FOR PROPER MAINTENANCE. CONFIRM ALL MECHANICAL EQUIPMENT IS PROVIDED WITH MANUFACTURER RECOMMENDED CLEARANCES PRIOR TO INSTALLATION.
- ALL AIR BALANCING MUST BE PERFORMED BY A TESTING AND BALANCING AGENCY APPROVED BY BUILDING MANAGEMENT.
- CONTRACTOR TO PROVIDE DUCT AND PIPE SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION OF NEW DUCTWORK AND PIPING INSTALLATION.
- REPLACEMENT FLOOR-MOUNTED EQUIPMENT TO BE INSTALLED ON EXISTING CONCRETE PADS. GC TO PROVIDE CONCRETE PAD REPAIR AS NEEDED, REFER TO STRUCTURAL DRAWINGS SET.

KEYNOTES:

- INSTALL NEW AHU ON EXISTING CONCRETE PAD. INSTALL ASSOCIATED DUCTWORK, PIPING AND CONNECTED SYSTEM COMPONENTS AS INDICATED ON PLANS. CONNECT NEW DUCTWORK TO EXISTING DUCT SHAFT LOCATIONS AND CONNECT NEW BRANCH PIPING TO EXISTING PIPING MAINS IN MER. INSTALL NEW CONDENSATE PIPING FROM AHU TO NEAREST FLOOR DRAIN IN MER. REFER TO MECHANICAL DETAILS & CONTROLS FOR PIPING SYSTEM COMPONENTS TO BE INSTALLED.
- INSTALL NEW EXHAUST FAN AND ASSOCIATED DUCTWORK, SUPPORTS AND ACCESSORIES.
- INSTALL NEW RETURN FAN AND ASSOCIATED DUCTWORK AND ACCESSORIES. RETURN FAN VFD TO BE WALL-MOUNTED IN MER ROOM NEAR FAN LINE OF SIGHT.
- INSTALL NEW UNIT HEATER AND ASSOCIATED PIPING, SUPPORTS AND ACCESSORIES. CONNECT TO EXISTING PIPING AS INDICATED. REFER TO MECHANICAL DETAILS FOR PIPING SYSTEM COMPONENTS TO BE INSTALLED.
- INSTALL NEW AIR FLOW MONITORS AS INDICATED IN SUPPLY, RETURN & OUTDOOR AIR DUCTWORK.
- INSTALL NEW MOTORIZED DAMPERS AS INDICATED IN OUTDOOR AIR, RETURN AIR & RELIEF AIR DUCTWORK.
- INSTALL MOTORIZED DAMPER ACTUATOR IN AIRSTREAM FOR MAINTENANCE ACCESSIBILITY.
- INSTALL NEW CHILLED WATER PUMP ON EXISTING CONCRETE PAD. INSTALL ASSOCIATED PIPING AND ACCESSORIES. REFER TO MECHANICAL DETAILS FOR PIPING SYSTEM COMPONENTS TO BE INSTALLED. CHILLED WATER PUMP VFD TO BE WALL-MOUNTED IN MER ROOM NEAR FAN LINE OF SIGHT.
- INSTALL NEW CEILING SUSPENDED HOT WATER PUMP AND ASSOCIATED PIPING AND ACCESSORIES. REFER TO MECHANICAL DETAILS FOR PIPING SYSTEM COMPONENTS TO BE INSTALLED.
- INSTALL NEW DDC CONTROL PANEL. COORDINATE EXACT LOCATION WITH FIELD CONDITIONS.
- INSTALL NEW DDC TEMPERATURE SENSOR TO CONTROL UNIT HEATER.
- REMOVABLE DUCTWORK ACCESS PANEL FOR AHU-10 COIL PULL CLEARANCE AND MOTORIZED DAMPER ACCESSIBILITY.
- CONTRACTOR TO INSTALL NEW AHU-10 OUTDOOR AIR INTAKE LOUVER. LOUVER TO BE PROVIDED WITH A FRENCH DOOR REMOVABLE SECTION FOR AHU-10 COIL PULL CLEARANCE. INSTALL FINAL DUCTWORK LOUVER CONNECTIONS AFTER-HOURS PRIOR TO AHU-10 STARTUP.
- AHU-10 COIL PULL, FILTER AND FAN/VFD MAINTENANCE CLEARANCE.
- CONTRACTOR TO CONNECT HWS&R BRANCH PIPING TO TEMPORARILY CAPPED PIPING MAIN LOCATION IN-FIELD. FIELD CONFIRM EXACT LOCATION.
- INSTALL NEW MOTORIZED DAMPER IN EXHAUST AIR DUCTWORK PRIOR TO LOUVER CONNECTION.
- AREA OF DAMAGED FIREPROOFING ABOVE - REFER TO ARCHITECTURE DRAWINGS SHEET 7/A3.00
- MAIN PIPING INDICATED TO BE REPLACED SHOULD BE COMPLETED AFTER HOURS WHEN THE ASSOCIATED AC UNITS ARE NOT IN OPERATION, PIPING INDICATED FOR REMOVAL ALSO CURRENTLY PROVIDES CHILLED WATER DISTRIBUTION TO AHU-9,10 & 11 AND HOT WATER DISTRIBUTION TO AHU-9. COORDINATE WITH FAA REPRESENTATIVE FOR FINAL PHASING OF WORK. DOCUMENT EXISTING PIPING DISTRIBUTION INCLUDED CONNECTED VALVES, CONTROLS AND ANY ASSOCIATED BYPASS LOCATIONS PRIOR TO DEMOLITION. REPLACEMENT PIPING DISTRIBUTION AND CONNECTED VALVES, CONTROLS AND BYPASSES TO MATCH PAST DISTRIBUTION.

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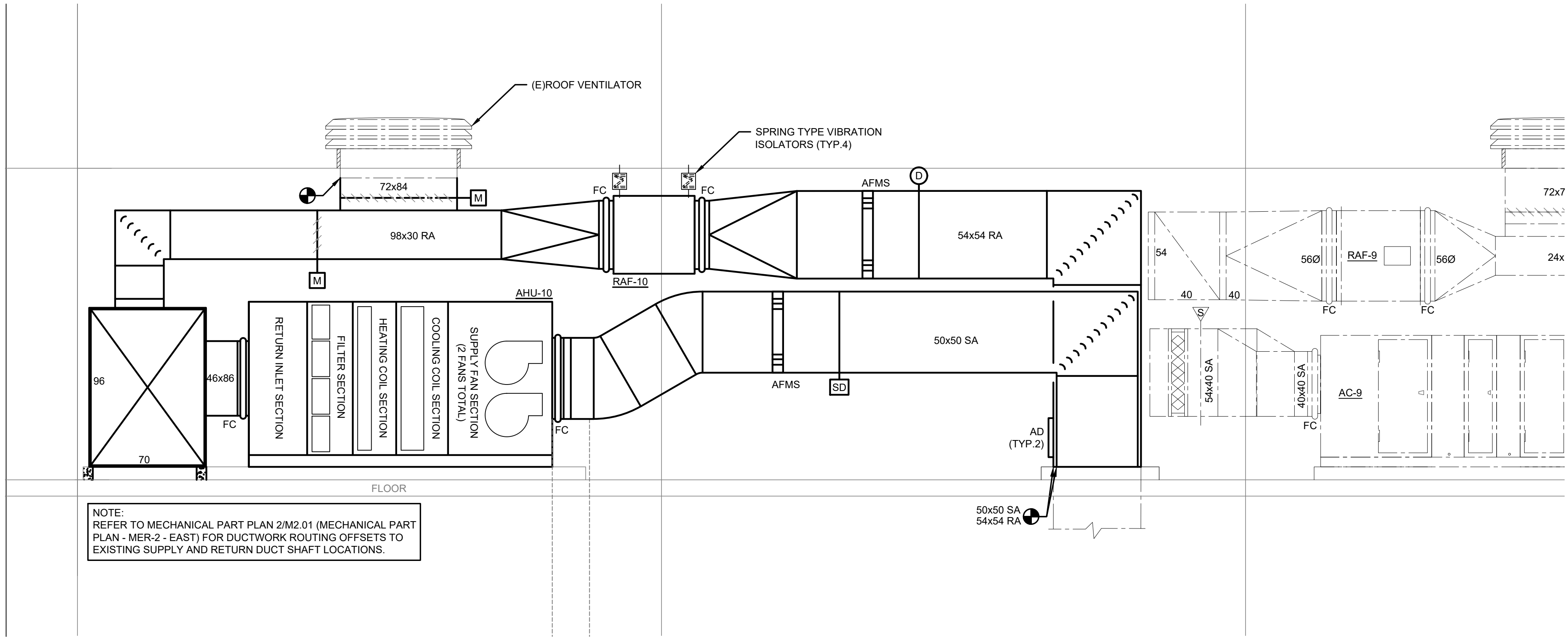
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ATLANTIC CITY INT'L AIRPORT, N.J. 08405

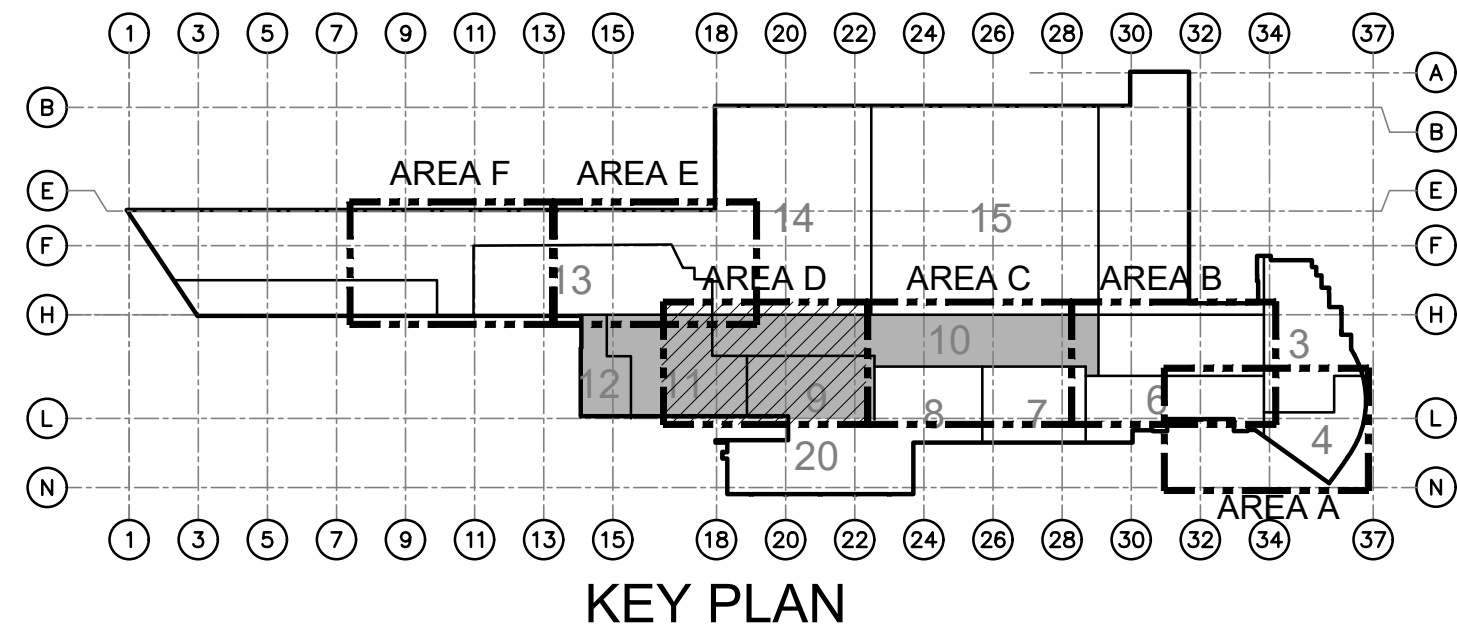
FACILITY
BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL PART PLAN - MER-2

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO. F2024113-M2.01	SHEET #	
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1 MECHANICAL SECTION 1 - AHU-10 - MER-2
M2.02 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



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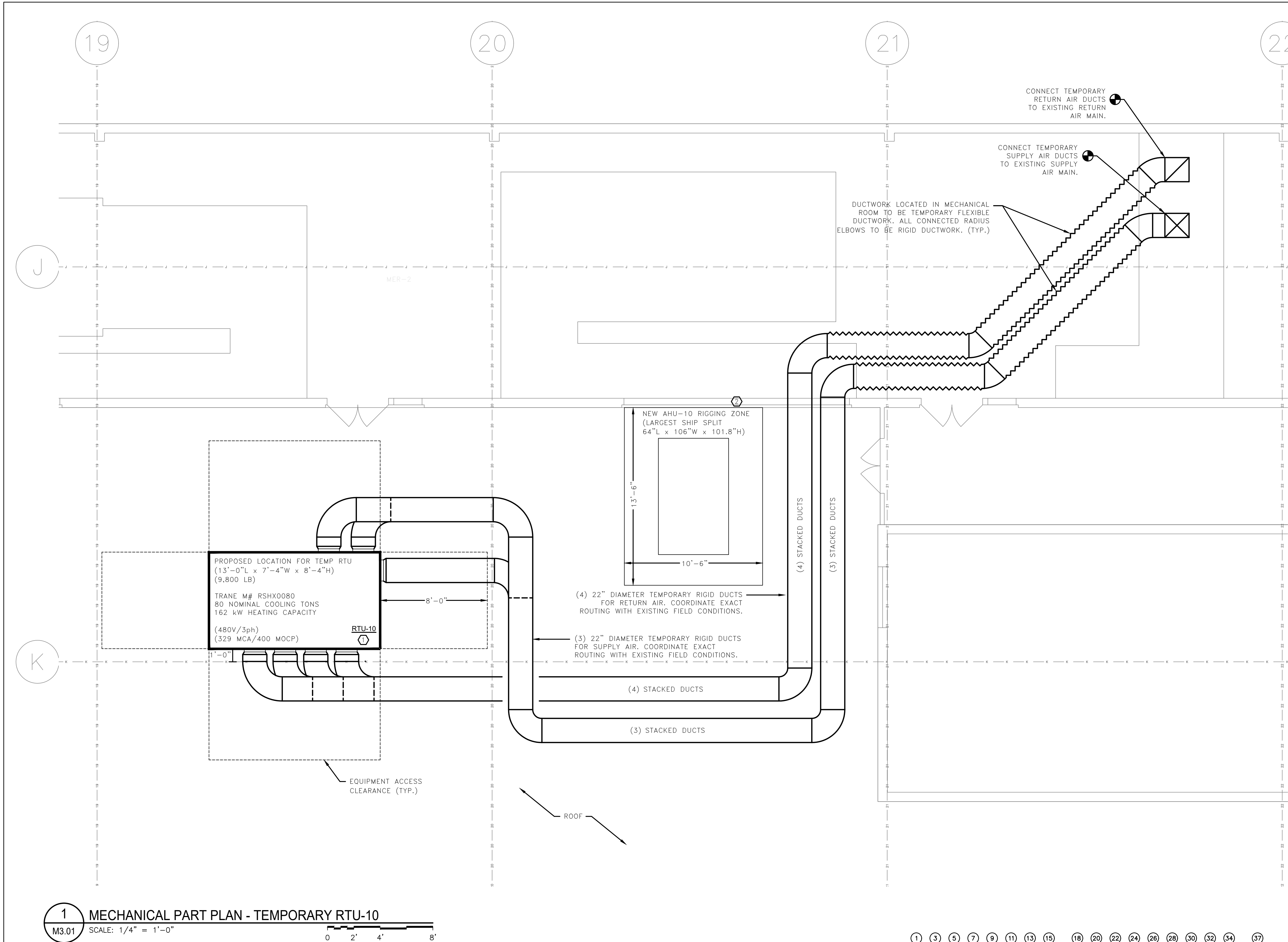
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

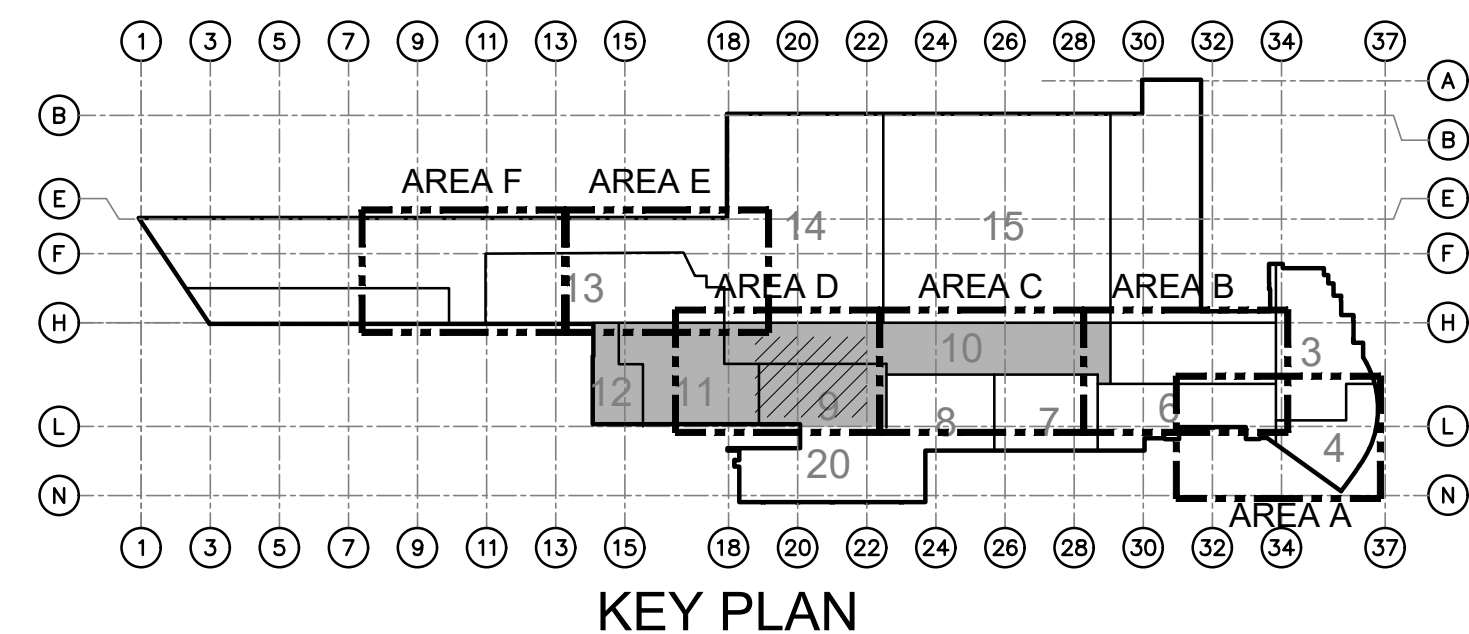
FACILITY
BUILDING 300—HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL SECTIONS —
MER—2

REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
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DRAWN: CM	FACILITY SERVICES &	DRAWING NO.	SHEET #	
CHECK: EA	ENGINEERING DIVISION	F2024113—M2.02	43 OF 110	



1 MECHANICAL PART PLAN - TEMPORARY RTU-10
M3.01 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



GENERAL NOTES:

1. FLEXIBLE DUCTWORK TO BE INSULATED AND RATED FOR 10" STATIC PRESSURE.
2. AIR FLOW TO BE MAINTAINED TO SYSTEMS DURING CONSTRUCTION PERIOD.
3. PROVIDE THREE (3) 22"Ø SUPPLY DUCTS AND FOUR (4) 22"Ø RETURN DUCTS (RIGID DUCTWORK INSTALLED OUTDOORS AND FLEXIBLE DUCTWORK W/ RIGID ELBOWS INSTALLED INDOORS) FROM TEMPORARY RTU-10 AND EXTEND TO MAIN DUCTS OF SYSTEM UNDER CONSTRUCTION.
4. ENSURE LOCATION OF TEMPORARY UNIT IS LEVEL AND PER MANUFACTURER GUIDELINES PRIOR TO INSTALLATION. REFER TO STRUCTURAL PLANS FOR ADDITIONAL MOUNTING DETAILS.
5. FINAL TEMPORARY DUCT ROUTING TO BE FIELD CONFIRMED BY CONTRACTOR. DUCT ROUTING TO NOT CONFLICT WITH NEW CONSTRUCTION IN MECHANICAL ROOM OCCURRING SIMULTANEOUSLY.
6. TEMPORARY DUCTWORK SUPPORTS TO BE A DELEGATED DESIGN BY PROJECT MC & GC.
7. PROVIDE TEMPORARY OUTDOOR SUPPLY AND RETURN DUCTWORK WITH RIGID BOARD FIBROUS GLASS INSULATION, 2 INCH THICKNESS, 6 LB. MINIMUM DENSITY WITH ALUMINUM FOIL-FACED FLAME RESISTANT VAPOR BARRIER FACTORY APPLIED, SIMILAR TO OWENS-CORNING TYPE ED-75. INSTALL PER MANUFACTURER INSTALLATION MANUAL/REQUIREMENTS.

KEYNOTES:

- ① PROVIDE TEMPORARY RTU-10. UTILIZE TO PROVIDE AIR FLOW TO THE SYSTEM UNDER CONSTRUCTION. TEMPORARY ELECTRICAL DISCONNECT TO BE PROVIDED BY PROJECT E.C.
- ② EXISTING LOUVER OPENING TO BE TEMPORARILY SEALED WHEN NOT BEING UTILIZED FOR EQUIPMENT REMOVAL AND REPLACEMENT. COORDINATE REQUIRED TEMPORARY SEALING AROUND FLEX DUCTS AND RIGGING ZONE IN-FIELD.

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405				
FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT				
MECHANICAL PART PLAN – TEMPORARY RTU-10				
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE
			MICHAEL ROSELLI	
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:		
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.		
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			SHEET #	
			44 OF 110	

AIR HANDLING UNIT SCHEDULE

UNIT NO.	FAA REFERENCE NOMENCLATURE	MANUFACTURER	MODEL NO.	LOCATION	AREA SERVED	TOTAL SUPPLY AIR (CFM)	MIN. OUTSIDE AIR (CFM)	OUTDOOR DESIGN TEMPERATURE		INDOOR DESIGN CONDITIONS				CHILLED WATER COOLING COIL DATA										HOT WATER HEATING COIL DATA						FAN DATA				ELECTRICAL DATA			FILTER SECTION			UNIT DIMENSION WxHxL (IN.)	UNIT WEIGHT (LB.)	NOTES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
								SUMMER (DB/WB) (°F/°F)	WINTER (DB)	TEMP. (DB)	HUMIDITY (%)	WINTER TEMP. (DB) (°F)	TOTAL COOLING (MBH)	SENS. COOLING (MBH)	GPM	EWT (°F)	LWT (°F)	WATER PRESSURE DROP (FT. W.C.)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	AIR PRESSURE DROP (IN. W.C.)	TOTAL HEATING (MBH)	GPM	EWT (°F)	EAT DB (°F)	LAT DB (°F)	AIR PRESSURE DROP (IN. W.C.)	WATER PRESSURE DROP (FT. W.C.)	NO. FANS	T.S.P. (IN. W.C.)	E.S.P. (IN. W.C.)	BHP	MOTOR HP	V/PH/HZ	FLA	MFS	TYPE				QTY.	SIZE (IN.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
AHU-10	AHUHW-B300-4-J21	TRANE	PSCA-54	MER 2	AREAS B,C,D&G	27,000	5,400	91 / 74	8.0	75	45	72	995	880	248	44	52	8.33	81.7	64.2	52.0	51.48	0.678	371	37	130	60	73	0.072	1.06	2	4.31	2.32	34.7	2x25	460/3/60	65	125	MERV 13	40	16x20	106x102x187	5,842	1-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

- NOTES:
- AHU MANUFACTURER TO PROVIDE COMBINATION VFD/DISCONNECT COMPATIBLE WITH THE UNIT. SINGLE-POINT POWER CONNECTION
 - PROVIDE UNIT WITH 2" INJECTED-FOAM WALL PANELS FOR MINIMUM R-VALUE OF 13
 - AIR HANDLING CASING SHALL LEAK LESS THAN ASHRAE 111 CLASS 6 LEVELS AT +/-8" SP AND HAVE DEFLECTION LESS THAN L/240
 - PROVED CASING WITH MID-SPAN, NO-THROUGH-METAL, INTERNAL THERMAL BREAK SHALL BE PROVIDED FOR ALL FOAM INJECTED UNIT CASING PANELS
 - MANUFACTURER TO CONFIRM NO SWEATING OF AIR HANDLER AT DESIGN CONDITIONS
 - 6" INTEGRAL BASE FRAME
 - STAINLESS STEEL DRAIN PAN
 - AHU INTEGRAL SPRING ISOLATED FAN COMPONENTS BY MANUFACTURER
 - STARTUP TO BE PERFORMED BY EQUIPMENT MANUFACTURER
 - 1 YEAR MANUFACTURER PARTS AND LABOR WARRANTY
 - FINAL CONTROL WIRING AND BUILDING BAS INTEGRATION BY BUILDING CONTROLS VENDOR
 - PROVIDE MANUFACTURER CORROSION RESISTANT PROTECTIVE COATINGS ON ALL COILS

FAN SCHEDULE

TAG	FAA REFERENCE NOMENCLATURE	MANUFACTURER	MODEL	LOCATION	SERVICE	PERFORMANCE			MOTOR DATA				WEIGHT (LBS)	NOTES
						FLOW (CFM)	E.S.P. (IN.WC.)	FAN RPM	DRIVE	BHP	HP	V/PH/HZ		
RAF-10	FANRA-B300-4-J20	GREENHECK	QEID-30-100	MER-2	AHU-10 RETURN AIR/ SMOKE EVACUATION	27000	1.5	1426	DIRECT	16.7	20	460 / 3 / 60	1450	1-12
EF-2-6	EF-B300-4-J22	GREENHECK	USF-15	MER-2	RESTROOM EXHAUST	2370	1.0	1521	DIRECT	0.72	1.5	460 / 3 / 60	250	1, 4, 6-10, 12-16

- NOTES:
- PREMIUM EFFICIENCY DIRECT DRIVE MOTOR
 - RATED FOR UL POWER VENTILATOR SMOKE CONTROL SYSTEMS
 - VFD RATED MOTOR WITH CLASS F OR GREATER INSULATION WITH BACNET INTERFACE
 - PERMATECTOR COATING FAN AND ACCESSORIES
 - MANUFACTURER SPRING HANGING ISOLATORS AND BRACKETS
 - NEMA 3R-DISCONNECT SWITCH, THERMAL OVERLOAD
 - BOLTED ACCESS DOOR
 - SURE-AIRE FLOW STATION (WITH ELECTRONICS)
 - INLET AND OUTLET FLANGES
 - MOTOR COVER WITH EXTENDED MOTOR WIRING

- MANUFACTURER VFD PACKAGE (WALL-MOUNTED IN-FIELD)
 - FINAL CONTROL WIRING AND BUILDING BAS INTEGRATION BY BUILDING CONTROLS VENDOR.
 - SOLID STATE SPEED CONTROLLER WITH BACNET INTERFACE.
 - MOTOR WITH CLASS B OR GREATER INSULATION
 - MANUFACTURER SPRING ISOLATION MOUNTING BASE
 - UL POWER VENTILATOR
 - GRAVITY OPERATED BACKDRAFT DAMPER

HOT WATER UNIT HEATER SCHEDULE

UNIT NO.	FAA REFERENCE NOMENCLATURE	MANUFACTURER	MODEL NO.	LOCATION	SERVICE	PERFORMANCE DATA						ELECTRICAL DATA		NOTES	
						HEATING CAPACITY (MBH)	AIRFLOW (CFM)	EAT (°F)	LAT (°F)	WATER FLOW (GPM)	EWT (°F)	MAX. WATER P.D. (FT.)	MOTOR HP		V/PH/HZ
UH-2-1	UH-B300-4-J23	MODINE	HC 121	MER-2	MER-2	93	1775	-	70	9.7	130	3.3	1/5	115/1/60	1,2,3,4,5,6,7,8
UH-2-2	UH-B300-4-J21	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
UH-2-3	UH-B300-4-J20	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
UH-2-4	UH-B300-4-J17	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

- NOTES:
- EQUIPMENT MANUFACTURERS TO BE MODINE OR APPROVED EQUAL.
 - REFER TO SPECIFICATION SECTION 23 82 00.00 20.
 - FURNISH AND INSTALL NEW PIPING AS REQUIRED AND CONNECT TO EXISTING.

- USE EXISTING SUPPORTS TO ACCOMMODATE NEW INSTALLATION.
 - FURNISH AND INSTALL NEW VIBRATION ISOLATORS AS REQUIRED.
 - FURNISH AND INSTALL NEW CONTROLS AND WALL MOUNTED THERMOSTATS.

- DISCONNECT SWITCH BY PROJECT E.C.
 - PROVIDE SPEED CONTROLLER FOR LOCAL FAN SPEED ADJUSTMENT (ROTARY KNOB)

LOUVER SCHEDULE

TAG	LOCATION	SERVICE	TYPE	MATERIAL	FREE AREA (SQ.FT.)	DIMENSIONS		AIR PERFORMANCE			MANUFACTURER & MODEL NO.	NOTES
						WIDTH (IN.)	HEIGHT (IN.)	AIR FLOW (CFM)	VELOCITY (FPM)	MAX P.D. (IN. WC)		
LVR-AHU-10-0A	MER-10	AHU-10	OUTDOOR AIR	ALUMINUM	78.1	210	120	27000	350	0.08	GREENHECK EHH-401	1-5

- NOTES:
- LOUVER TO BE PROVIDED WITH BIRD & INSECT SCREEN (1/4" SQUARE MESH OPENINGS).
 - PROVIDE ALL REQUIRED HARDWARE FOR EXTERIOR WALL MOUNTING. COORDINATE INSTALLATION WITH GC.
 - LOUVER FRAME WALL THICKNESS DEPTH TO MATCH EXISTING LOUVER MODEL AT SITE, CONTRACTOR TO FIELD CONFIRM.
 - LOUVER COLOR TO MATCH EXISTING LOUVER COLORS AT SITE, CONTRACTOR TO FIELD CONFIRM.
 - PROVIDE STATIONARY LOUVERS AT EACH SIDE INCLUDING A FRENCH DOOR WITH PERIMETER SUBFRAME BETWEEN THEM TO FACILITATE AHU COIL PULL CLEARANCE ON ROOF. CUSTOM SPECIAL DESIGN REQUEST "SDR" BY GREENHECK, BLADES TO BE ALIGNED ACROSS THE ENTIRE LOUVER.

PUMP SCHEDULE

TAG	FAA REFERENCE NOMENCLATURE	MANUFACTURER	MODEL	PERFORMANCE		MOTOR DATA				WEIGHT (LBS)	NOTES
				FLOW (GPM)	HEAD (FT)	BHP	HP	RPM	V/PH/HZ		
CHWP-1	CHWP-B300-4-J20	GRUNDFOS	LCS-DOL50957	600	30	5.65	7.5	1173	460/3/60	359	1,2,4,5
HWP-10	HWP-B300-4-J21	GRUNDFOS	MAGNA3-DOL40-80GF	38	15	-	1/3	-	115/1/60	-	1,3,4,5

- NOTES:
- EQUIPMENT MANUFACTURER TO BE GRUNDFOS OR APPROVED EQUAL.
 - MANUFACTURER TO PROVIDE COMBINATION VFD/DISCONNECT PACKAGE (WALL-MOUNTED IN-FIELD)
 - INTEGRATED ECM MOTOR, DISCONNECT BY PROJECT E.C.
 - FINAL CONTROL WIRING AND BUILDING BAS INTEGRATION BY BUILDING CONTROLS VENDOR.
 - REFER TO SPECIFICATION SECTION 23 21 23.

CEILING DIFFUSER AND GRILLE SCHEDULE

TAG	TYPE	NECK SIZE (IN.)	CFM RANGE	NO. OF SLOTS	SLOT SIZE	CEILING MODULE (IN.)	DIRECTION	SYMBOL
CD-A	SQUARE	6ø	UP TO 100	-	-	24 x 24	SUPPLY	
CD-B		8ø	105 TO 200	-	-			
CD-C		10ø	205 TO 300	-	-			
CD-D		12ø	305 TO 400	-	-			
CD-E		14ø	405 TO 550	-	-			
CD-F		15ø	550 TO 650	-	-			
RG-C	SQUARE	-	UP TO 1000	-	-	24 x 24	RETURN	
LD-A	LINEAR	8"	UP TO 36 CFM/SF	1	1"	-	SUPPLY	
LR-A	LINEAR	-	UP TO 36 CFM/SF	1	1"	-	RETURN	

- NOTES:
- SQUARE CEILING DIFFUSERS (CD) BASED ON METALAIRE 5750-6. PROVIDE WITH FIBERGLASS INSULATED BACKPAN (FGBP).
 - SQUARE CEILING GRILLES/REGISTERS (RG) BASED ON METALAIRE RH-6.
 - LINEAR DIFFUSERS (LD) BASED ON METALAIRE MODEL 6600. REFER TO DRAWINGS FOR LENGTHS. PROVIDE 5'-0" FACTORY SUPPLY AIR PLENUMS (HIGH THROW/HORIZONTAL PATTERN DEFLECTORS) WITH 1/2" CLOSED CELL FOAM ACOUSTICAL LINING FOR ALL ACTIVE SECTIONS. UNUSED SECTIONS TO BE USED FOR RETURN AIR. PROVIDE RETURN AIR LIGHT SHIELDS.
 - LINEAR RETURNS (LR) BASED ON METALAIRE MODEL 6600 (JET THROW/VERTICAL PATTERN DEFLECTORS). REFER TO DRAWINGS FOR LENGTHS. PROVIDE RETURN AIR LIGHT SHIELDS.
 - ALL DIFFUSERS AND GRILLES MUST BE COMPATIBLE WITH CEILING TYPE. CONTRACTOR TO COORDINATE BORDER / FRAME TYPES
 - PROVIDE BLANK-OFF PLATES FOR SQUARE CEILING DIFFUSERS WHERE INDICATED ON PLAN. INCREASE DIFFUSER NECK SIZE WHEN BLANK-OFF PLATES ARE USED.
 - ALL NEW CEILING SUPPLY AND RETURN AIR DEVICES SHALL MATCH EXISTING IN TYPE AND COLOR WHEN INSTALLED IN AREAS WHERE THE REST OF THE SPACE HAS RECENTLY BEEN RENOVATED UNDER ANOTHER CONTRACT.

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405			
FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT			
MECHANICAL SCHEDULES – 1			
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY
			MICHAEL ROSELLI
	DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:
APPROVAL (FINISHES)	DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.
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			SHEET #
			45 OF 110

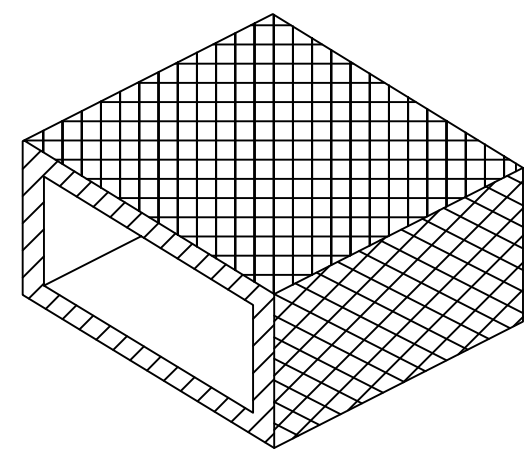


FIG. A

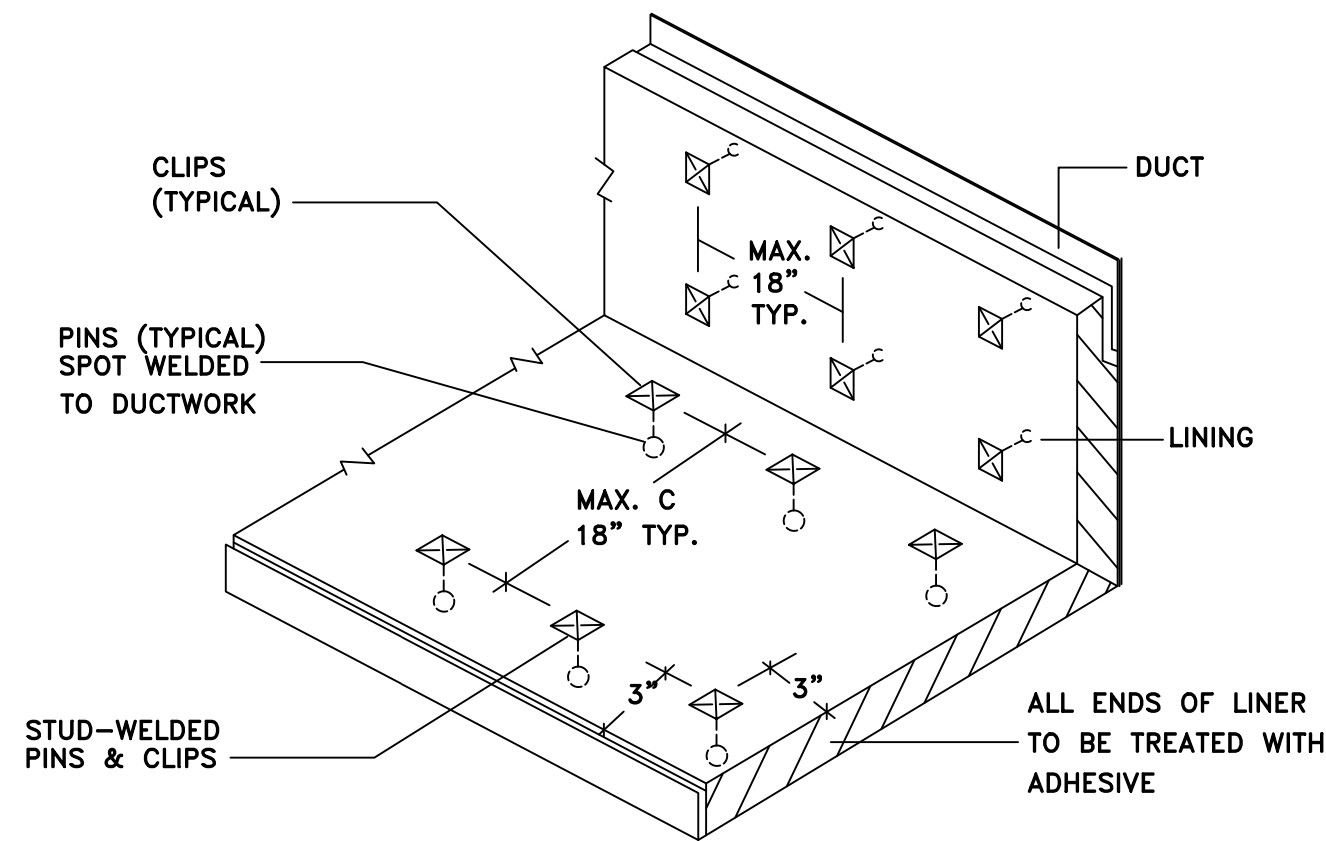
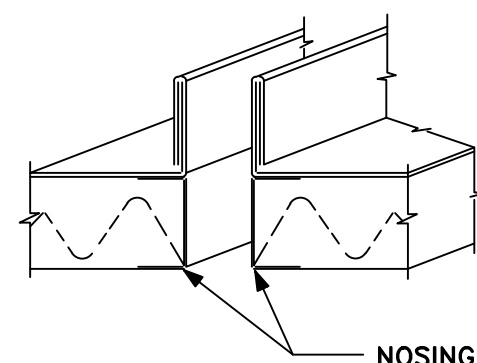
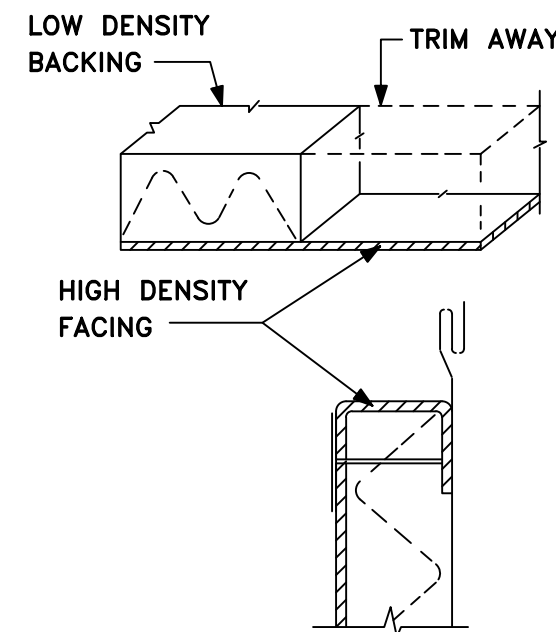


FIG. B



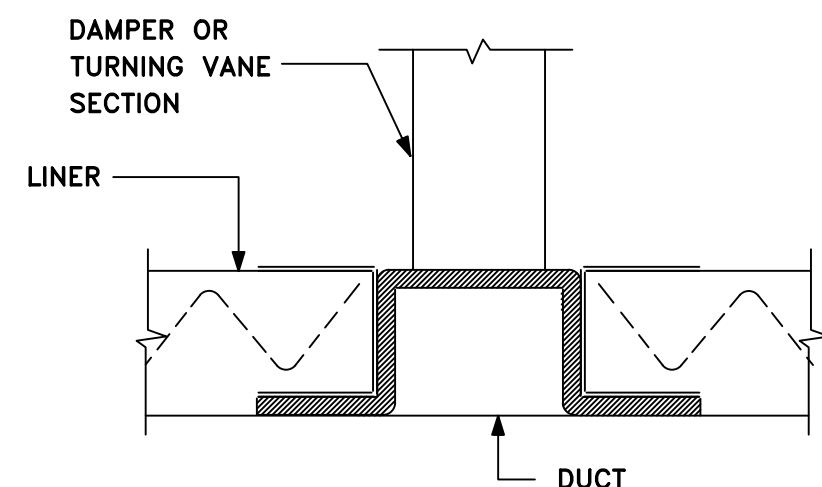
NOTE :
ENTERING, BUTTING AND TRAILING
EDGES OF LINER AT TRANSVERSE
JOINTS TO BE COVERED BY NOSING.

TRANSVERSE JOINT DETAIL



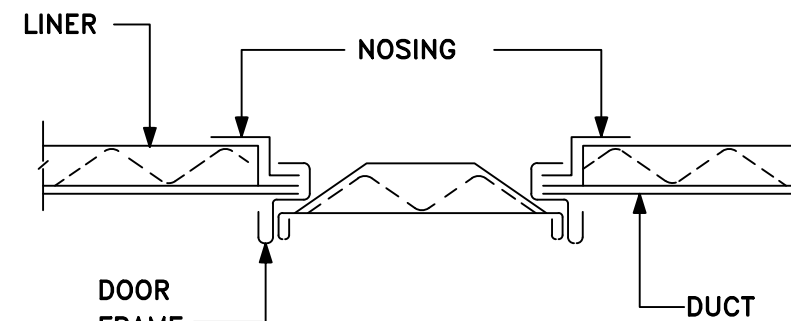
NOTE :
FOLD OVER HIGH DENSITY FACING
ON ALL LONGITUDINAL JOINTS &
SECURE WITH MECHANICAL FASTENER.

LONGITUDINAL JOINT DETAIL

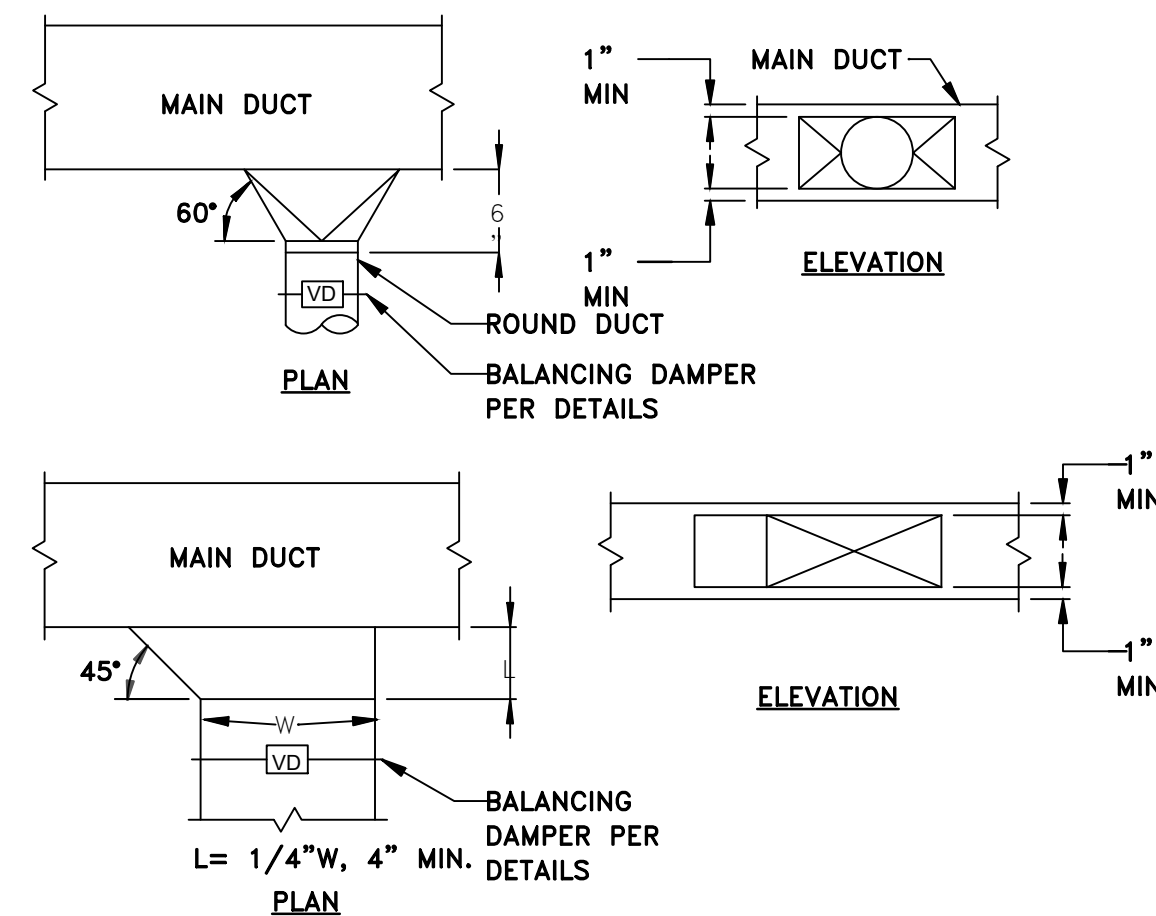


NOTE :
THAT SECTION INSTALLED WITH NOSING
TO CONCEAL LINER EDGES.

DETAIL AT DAMPERS AND
TURNING VANES



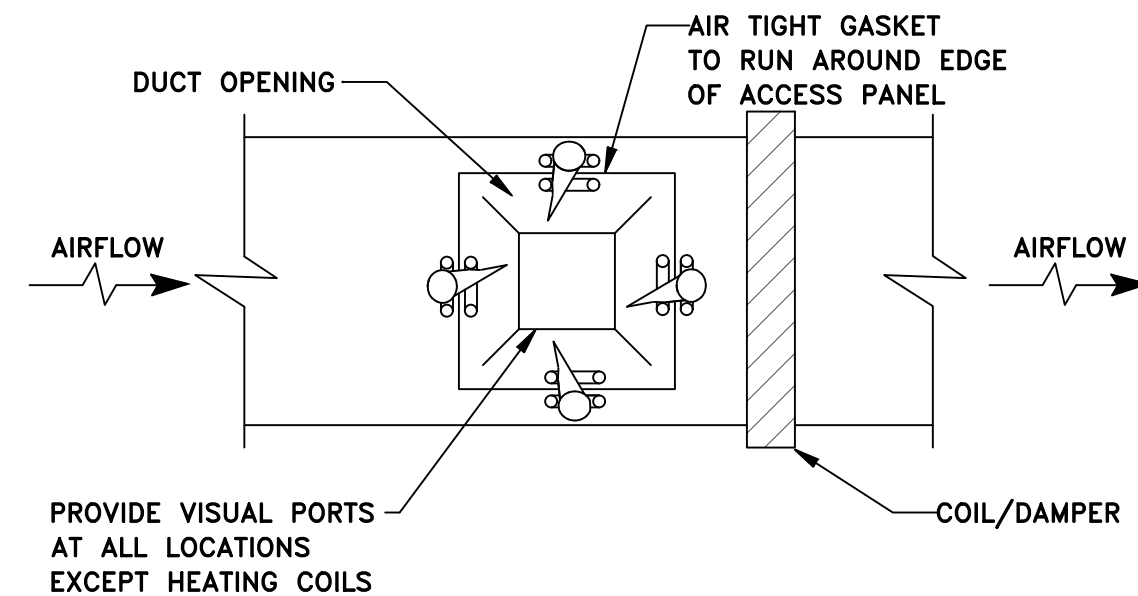
ACCESS DOOR NOSING DETAIL



NOTES:
1. TRANSITION AS REQUIRED WHEN BRANCH OR RUNOUT DUCT
DEPTH IS SAME OR LARGER THAN THE MAIN DUCT

1 | TYPICAL DUCT CONNECTION DETAILS
M5.01 | NTS

3 | ACOUSTICAL DUCT LINING DETAIL
M5.01 | NTS

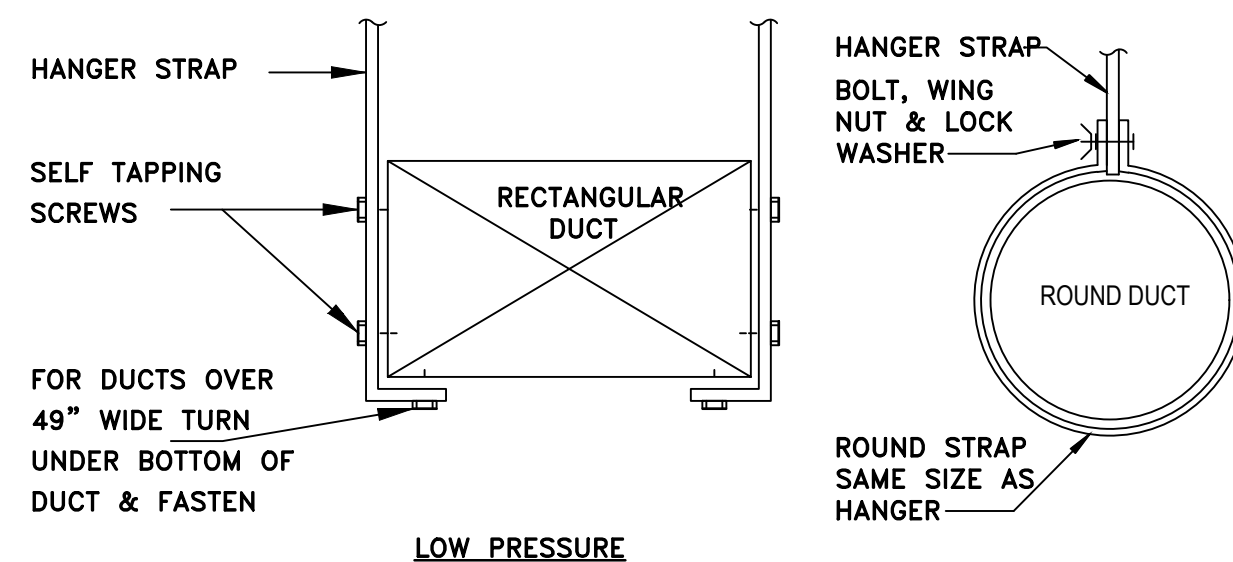


ACCESS PANEL SIZE SCHEDULE	
DUCT SIZE	ACCESS PANEL SIZE
6" TO 15"	10" W x (DUCT DEPTH - 2")D
15" TO 21"	12" W x (DUCT DEPTH - 2")D
21" AND ABOVE	18" W x (DUCT DEPTH - 2")D

ALL OTHER ACCESS PANELS TO BE A MINIMUM OF 15" x 15"
WHERE DUCT SIZE ALLOWS. USE FOR CAM LATCHES ON PANELS
LARGER THAN 15" x 15" SIZE.

6 | DUCT ACCESS PANEL DETAIL
M5.01 | NTS

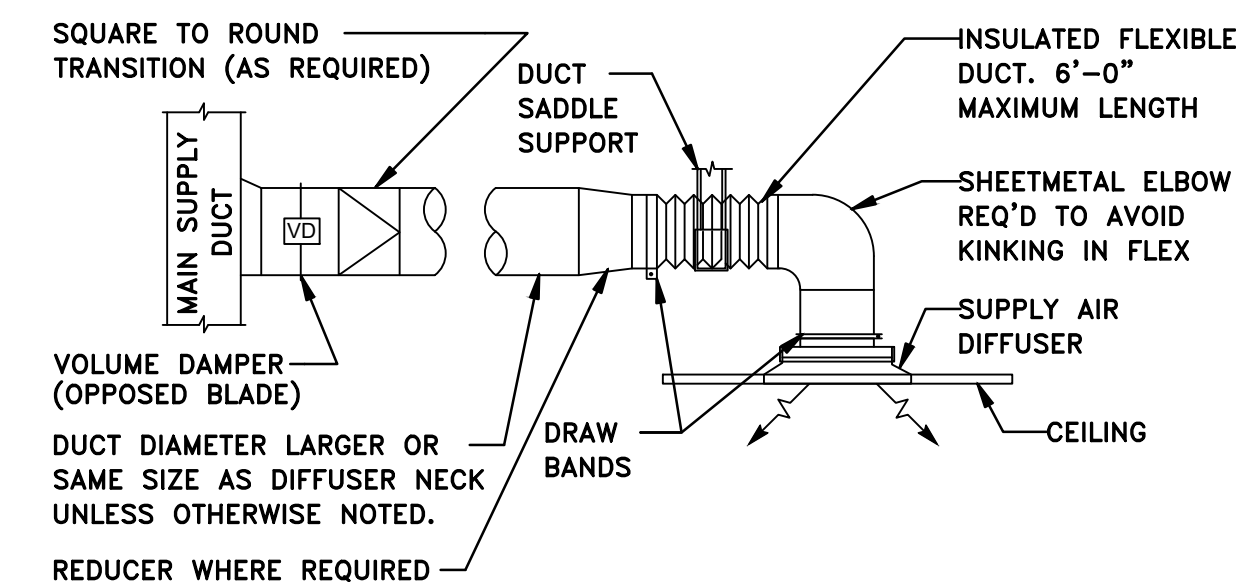
2 | ACOUSTICAL LINING NOSING DETAIL
M5.01 | NTS



LOW PRESSURE

DUCT HANGER SCHEDULE		
DUCT CROSS SECTIONAL AREA	STRAP HANGER SIZE	MAX. SPACING
UNDER 2 SQ FT.	1" X 1/16"	6"-0" O.C.
2 TO 4 SQ FT.	1" X 1/8"	8"-0" O.C.
4 TO 8 SQ FT.	1" X 1/8"	6"-0" O.C.
OVER 8 SQ FT.	1" X 1/8"	4'-0" O.C.

5 | DUCT HANGING DETAIL
M5.01 | NTS



4 | DIFFUSER CONNECTION DETAIL
M5.01 | NTS

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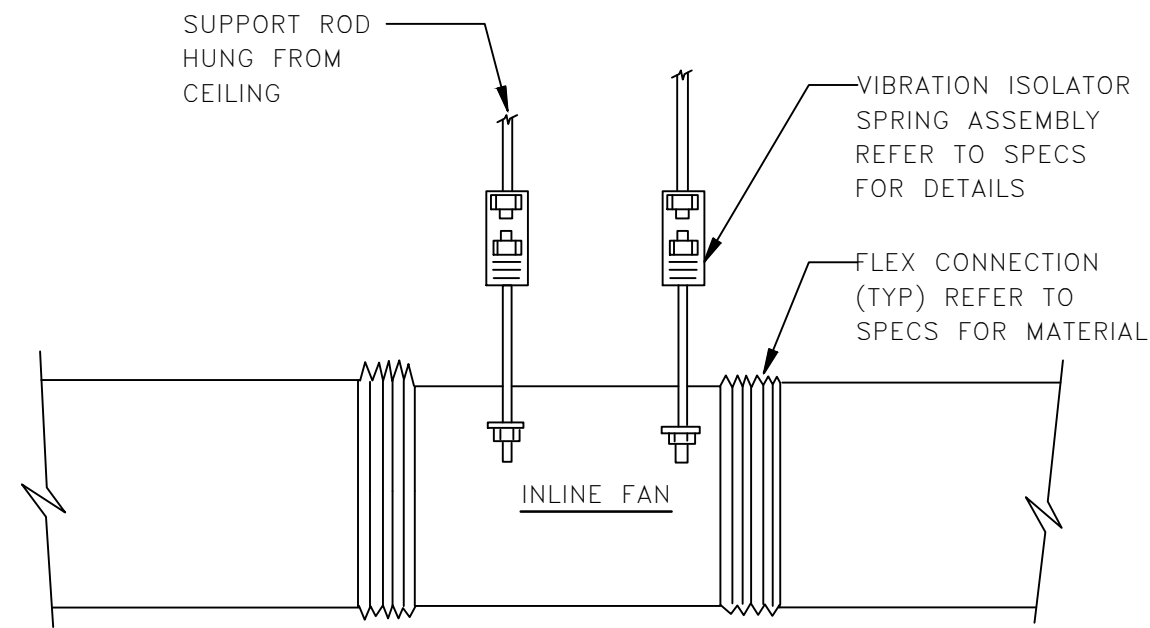
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UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA)
ATLANTIC CITY INT'L AIRPORT, N.J. 08405

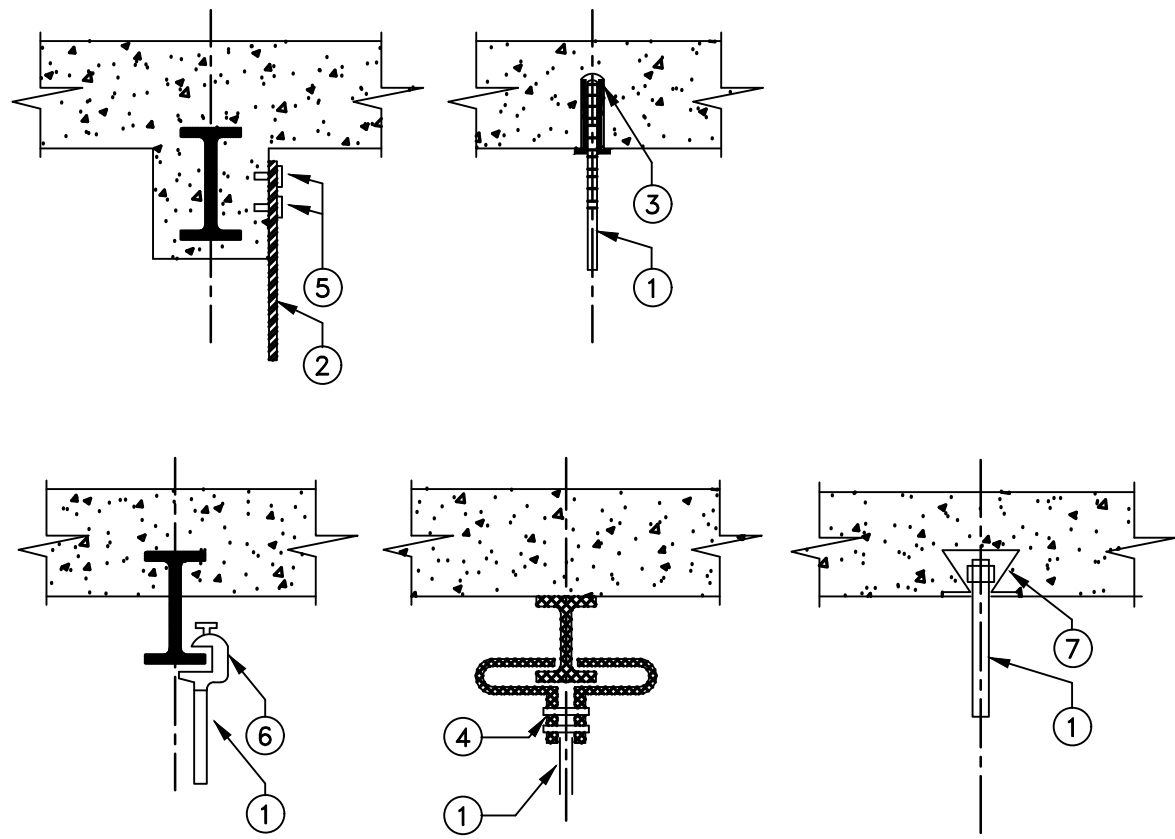
FACILITY
BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT

MECHANICAL DETAILS – 1

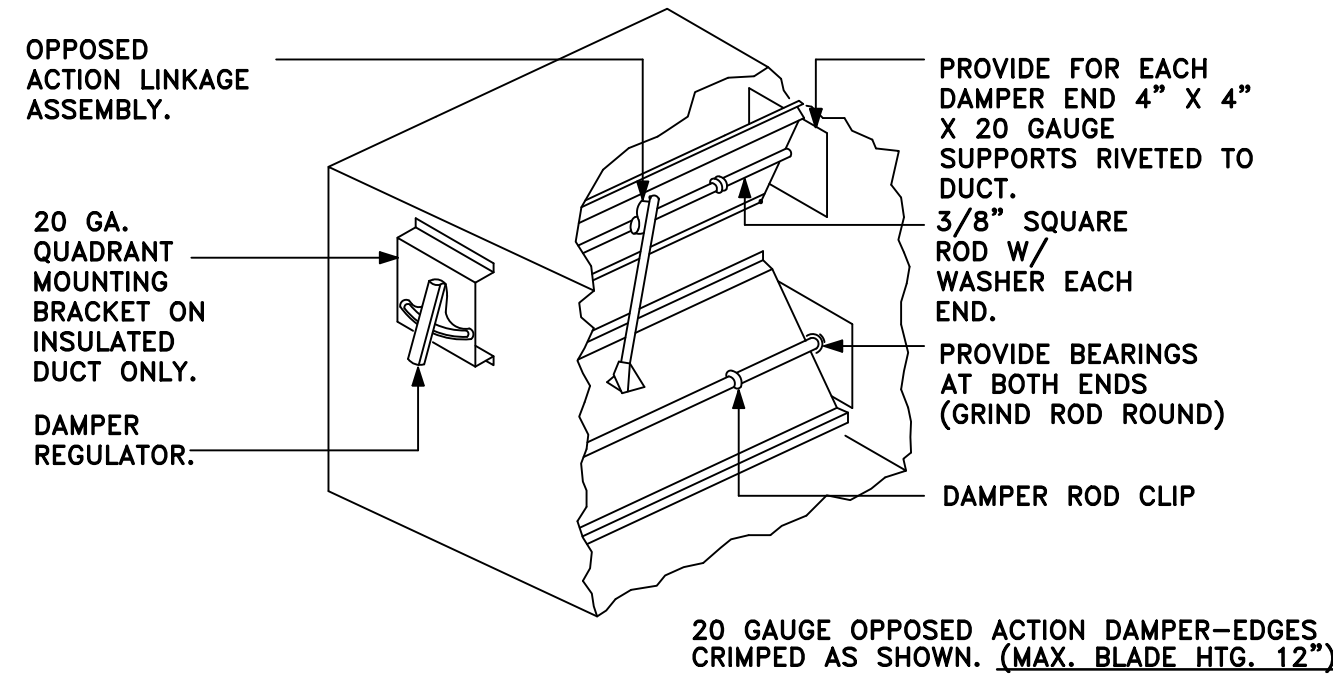
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			MICHAEL ROSELLI	
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4 | INLINE FAN HANGING DETAIL
M5.02 | NTS

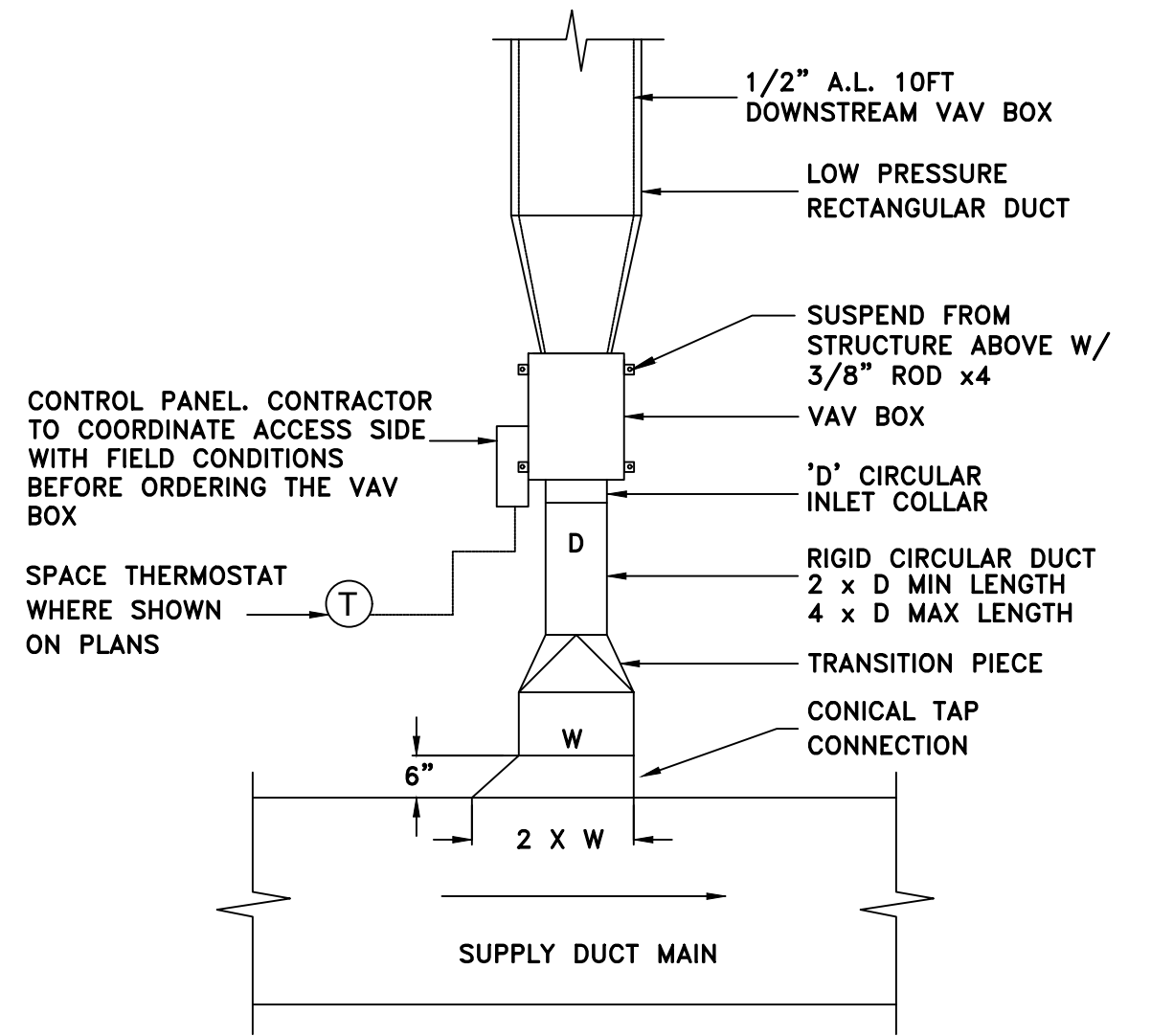


3 | HANGER SUPPORT DETAILS
M5.02 | NTS

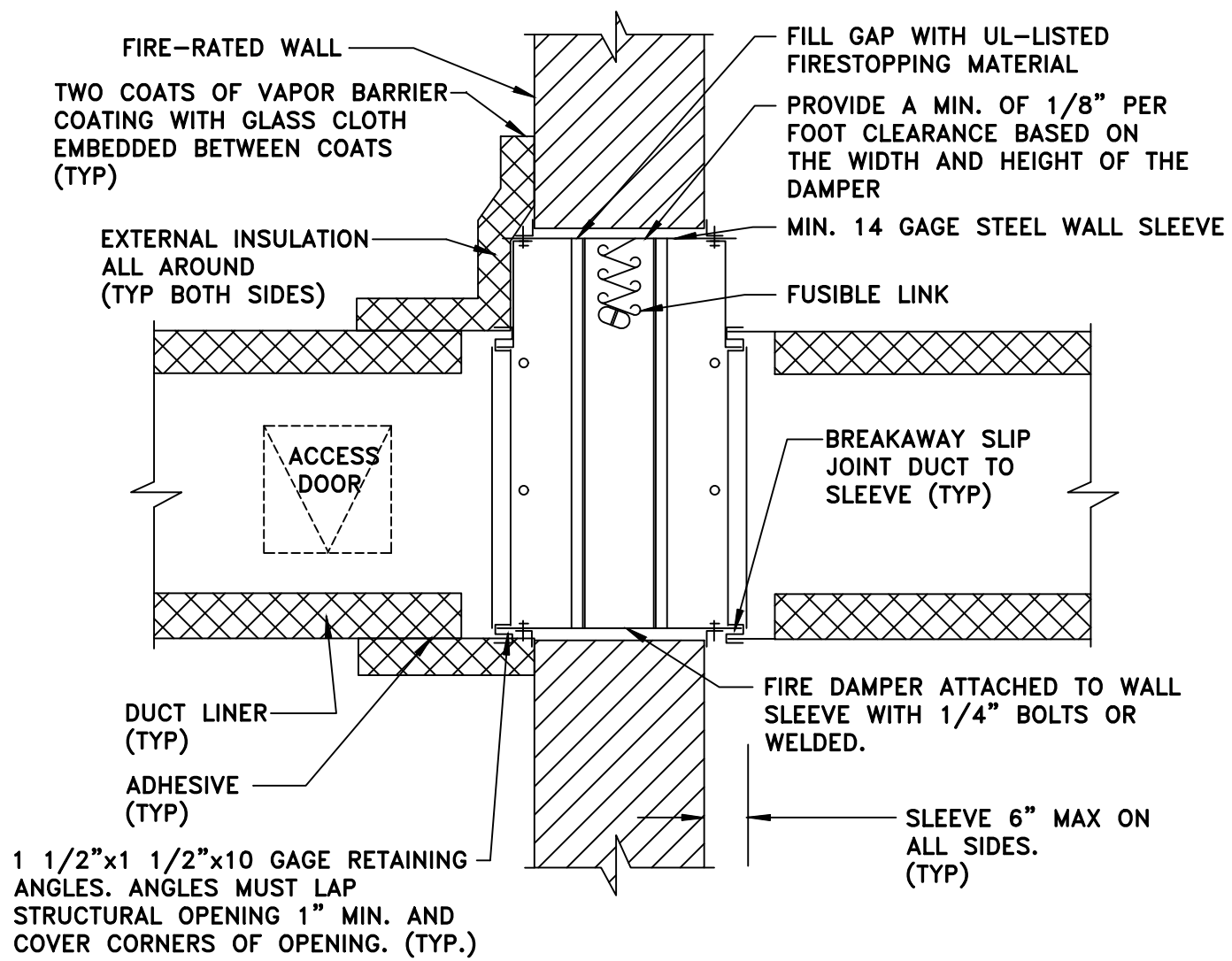


NOTE : 1. FOR DUCTS OVER 29" WIDE AND/OR OVER 12" HIGH.

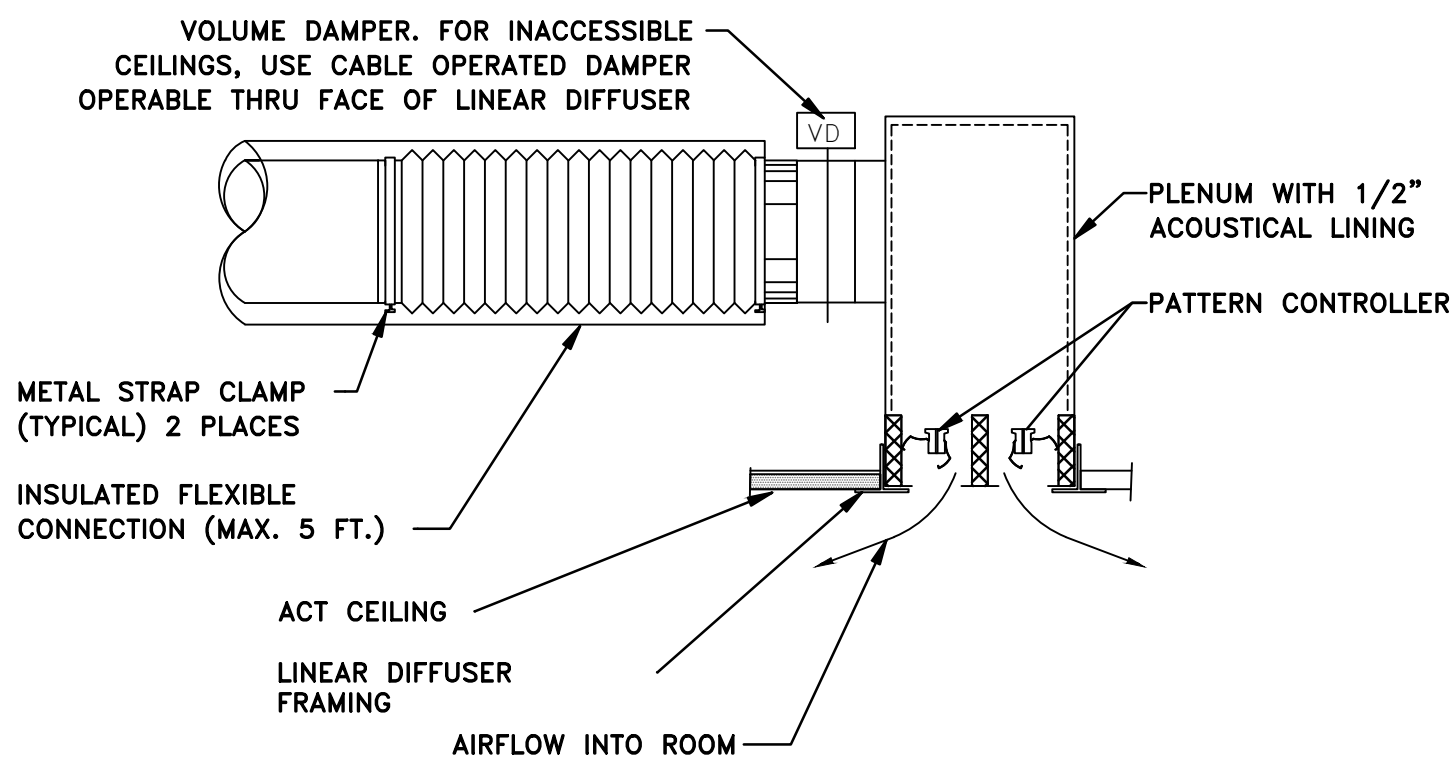
2 | BALANCING DAMPER DETAIL
M5.02 | NTS



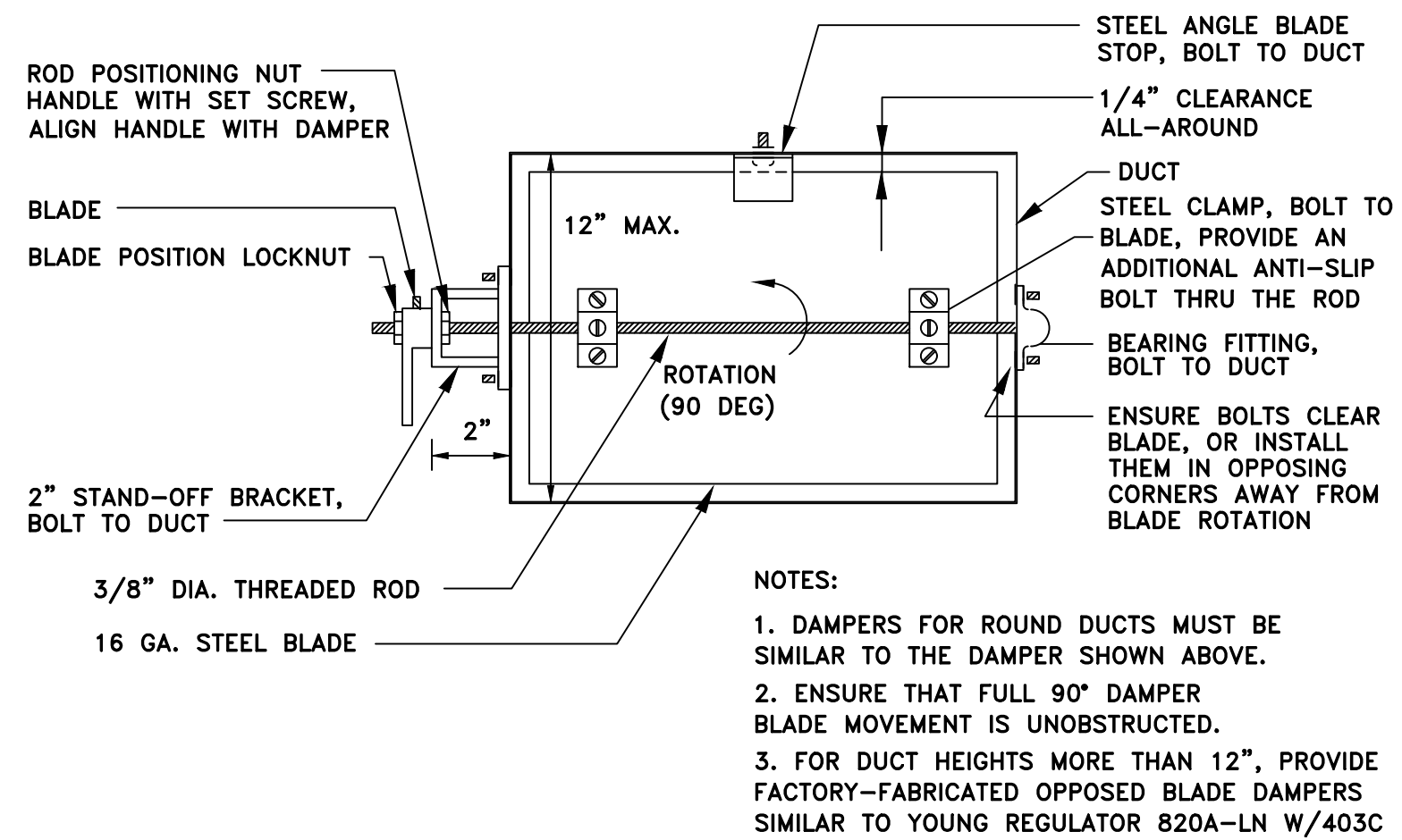
1 | VAV AIR TERMINAL UNIT DUCT CONNECTION
M5.02 | NTS



7 | VERTICAL FIRE DAMPER DETAIL
M5.02 | NTS



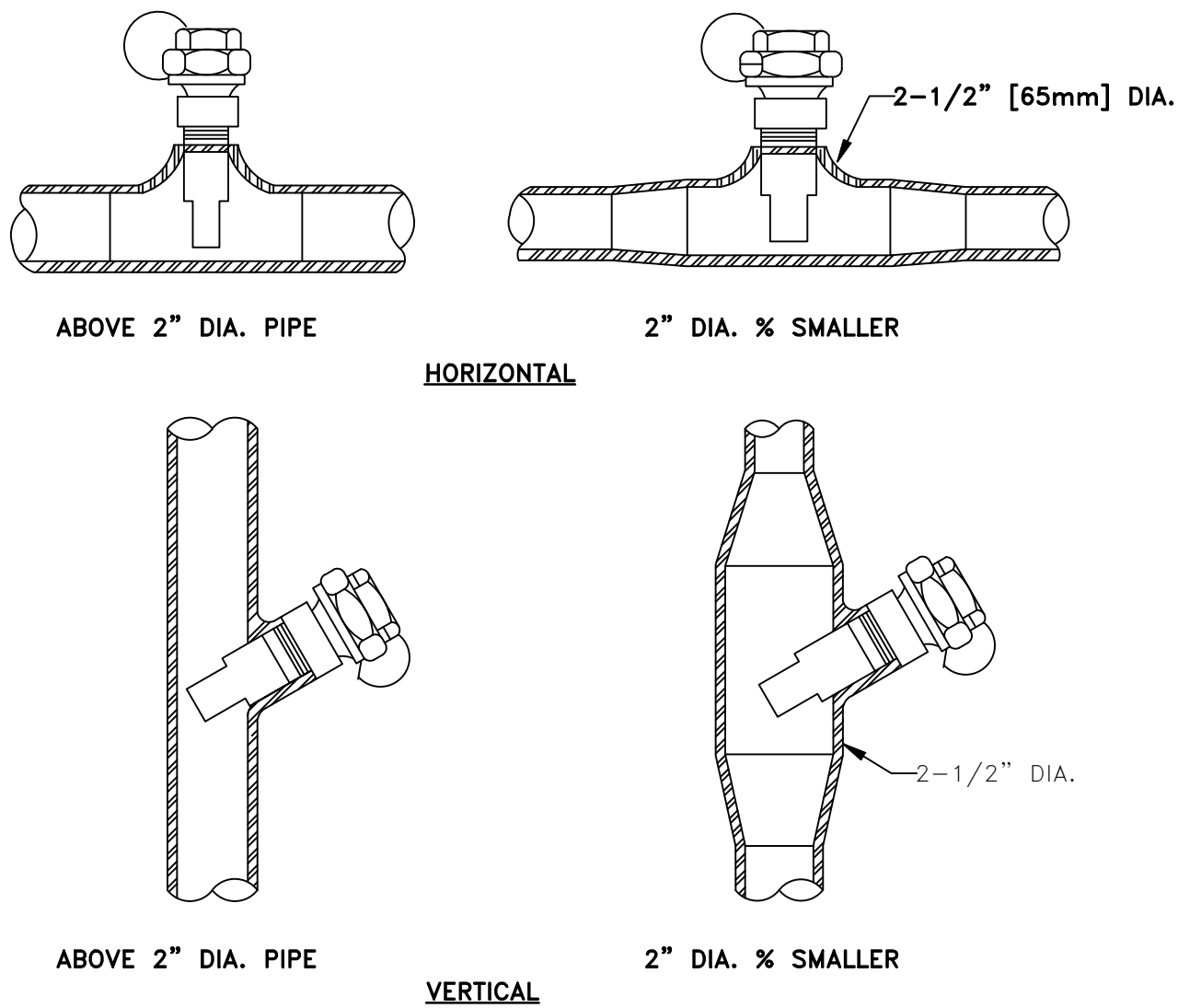
6 | LINEAR DIFFUSER DETAIL
M5.02 | NTS



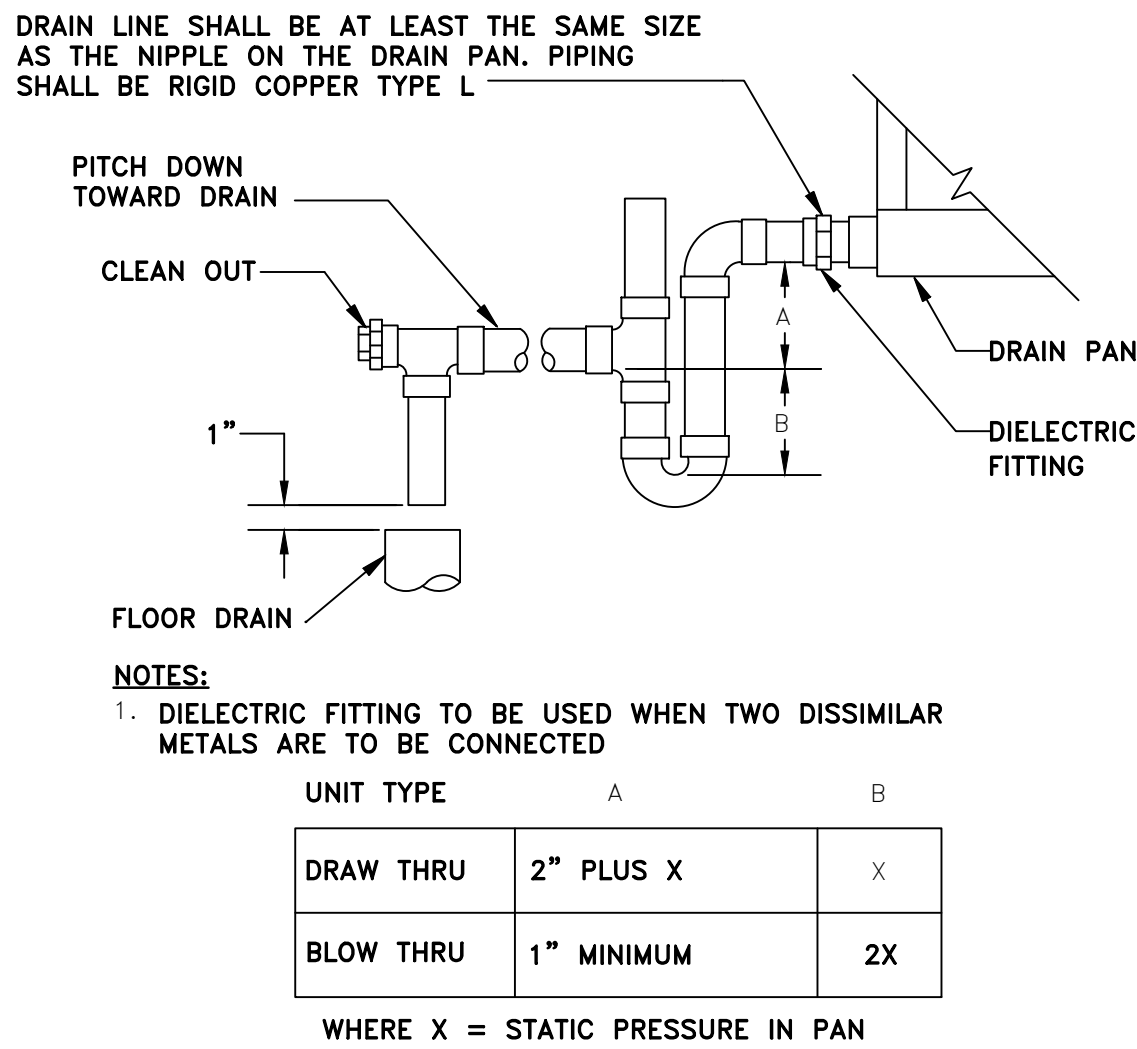
NOTES:
1. DAMPERS FOR ROUND DUCTS MUST BE SIMILAR TO THE DAMPER SHOWN ABOVE.
2. ENSURE THAT FULL 90° DAMPER BLADE MOVEMENT IS UNOBSTRUCTED.
3. FOR DUCT HEIGHTS MORE THAN 12", PROVIDE FACTORY-FABRICATED OPPOSED BLADE DAMPERS SIMILAR TO YOUNG REGULATOR 820A-LN W/403C

5 | MANUAL VOLUME DAMPER DETAIL
M5.02 | NTS

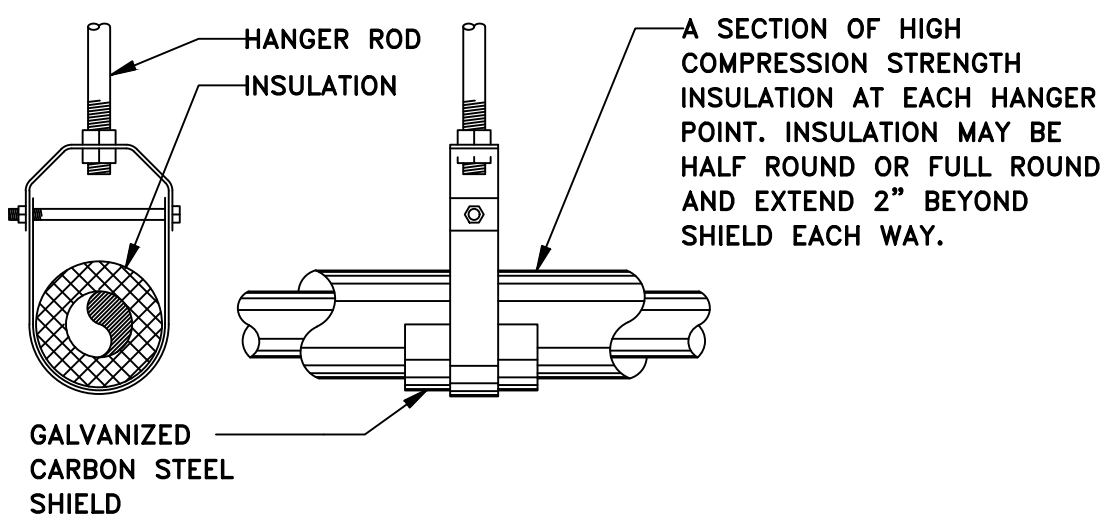
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FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT			
MECHANICAL DETAILS – 2			
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY
			MICHAEL ROSELLI
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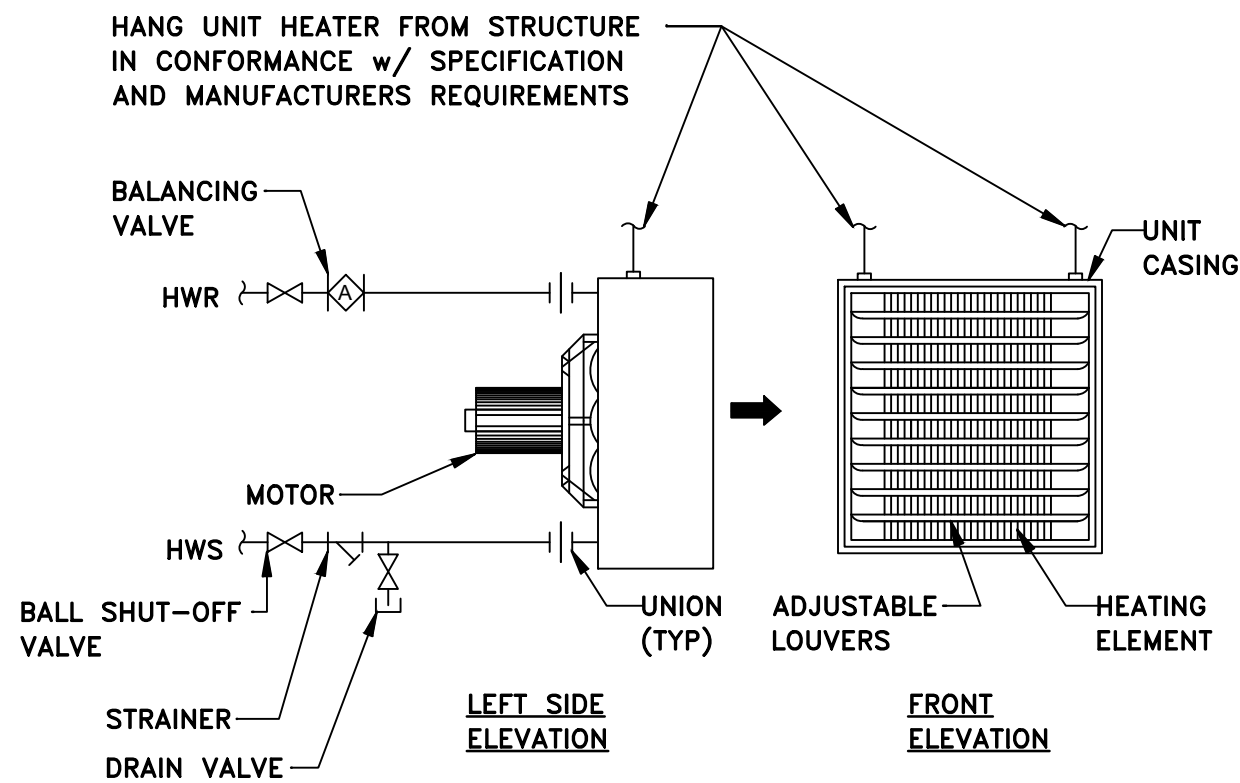
3 THERMOWELL DETAILS
M5.03 NTS



2 CONDENSATE DRAIN PIPING
M5.03 NTS

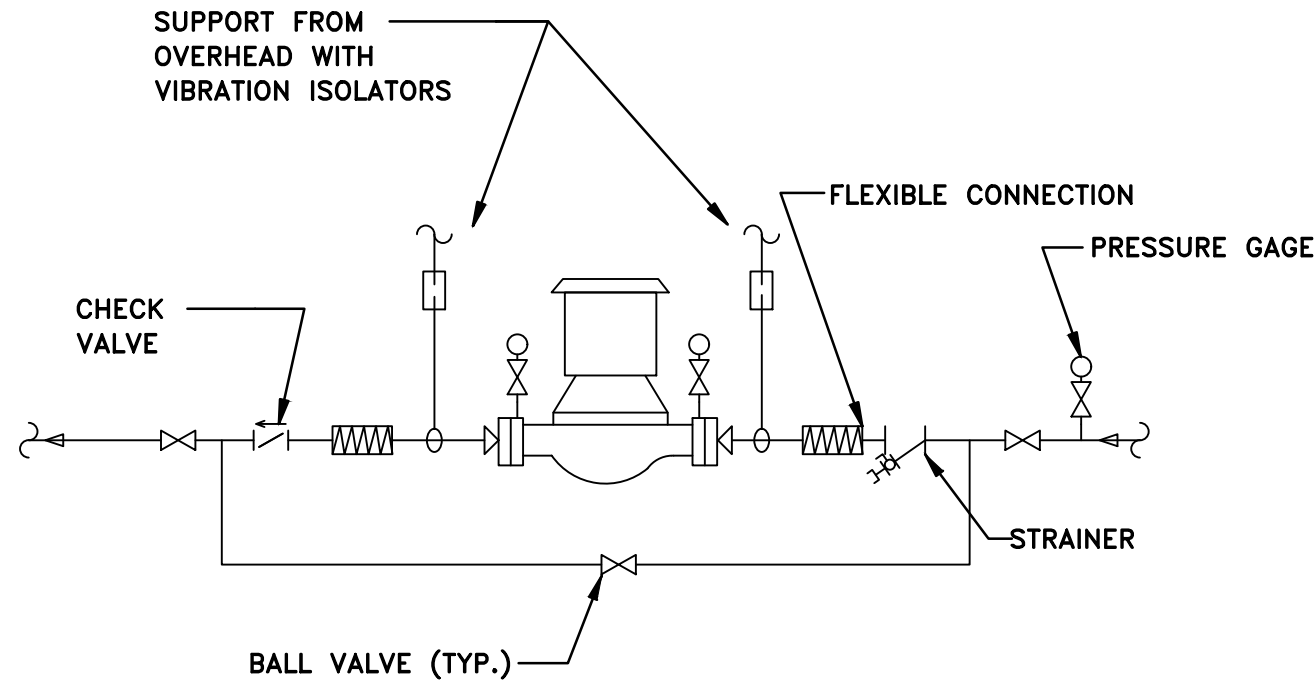


1 PIPING CLAVIS HANGER
M5.03 NTS

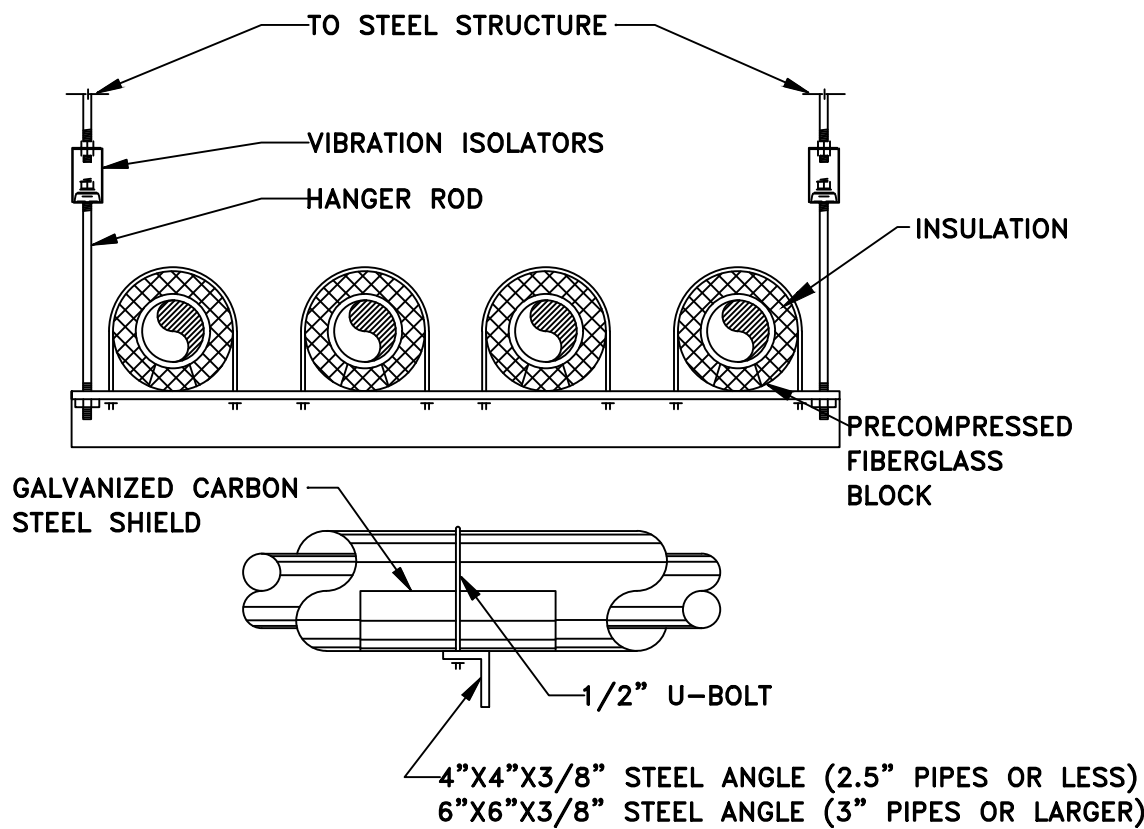


- NOTES:
- AIR VENTS REQUIRED ON UP-FED UNITS ONLY.
 - PROVIDE CLEARANCE FROM OBSTRUCTIONS (WALL, ECT.) TO ALLOW FOR REMOVAL OF MOTOR WITH UNIT HEATER IN PLACE.

6 HW UNIT HEATER
M5.03 NTS

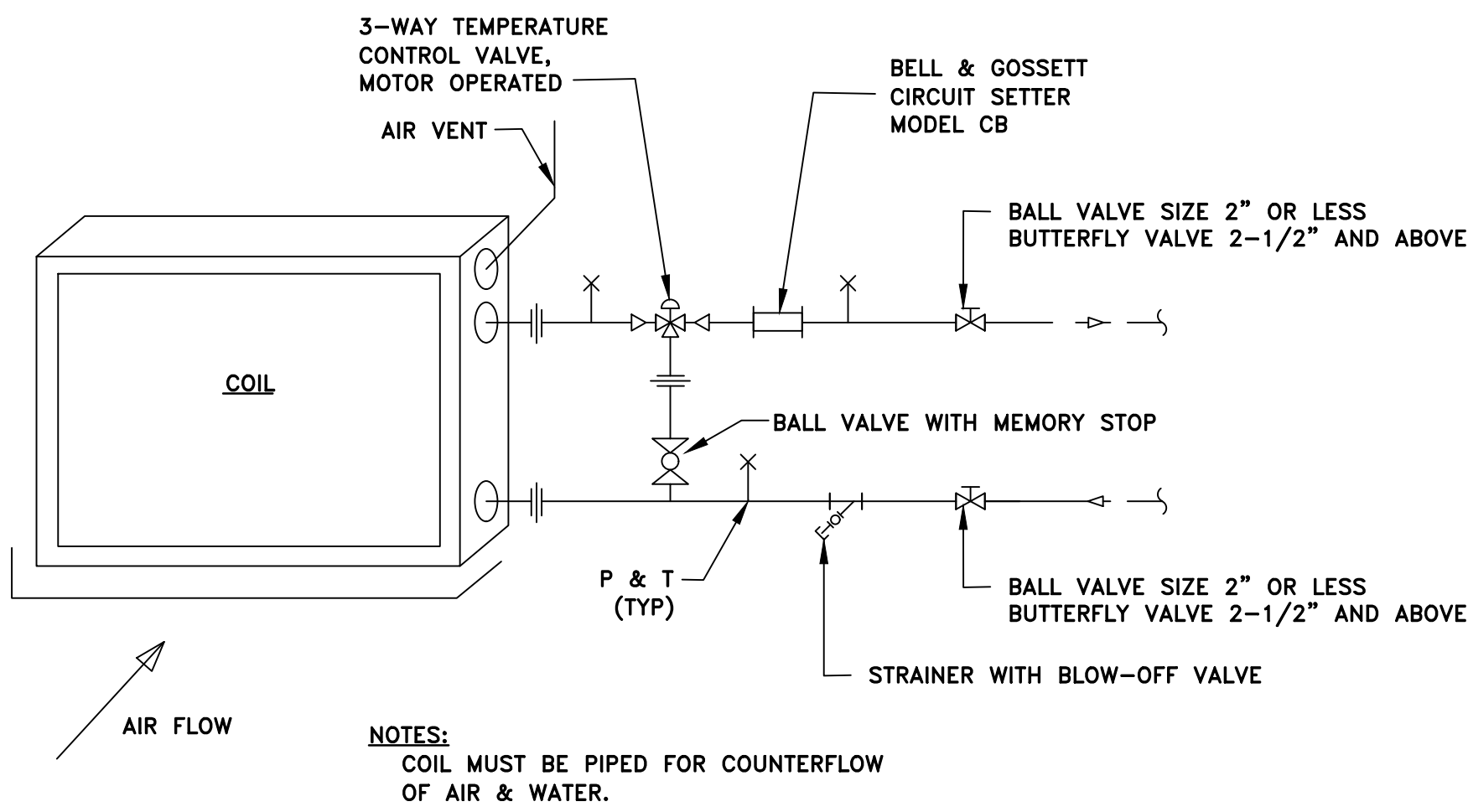


5 IN-LINE PUMPS - CONNECTIONS
M5.03 NTS



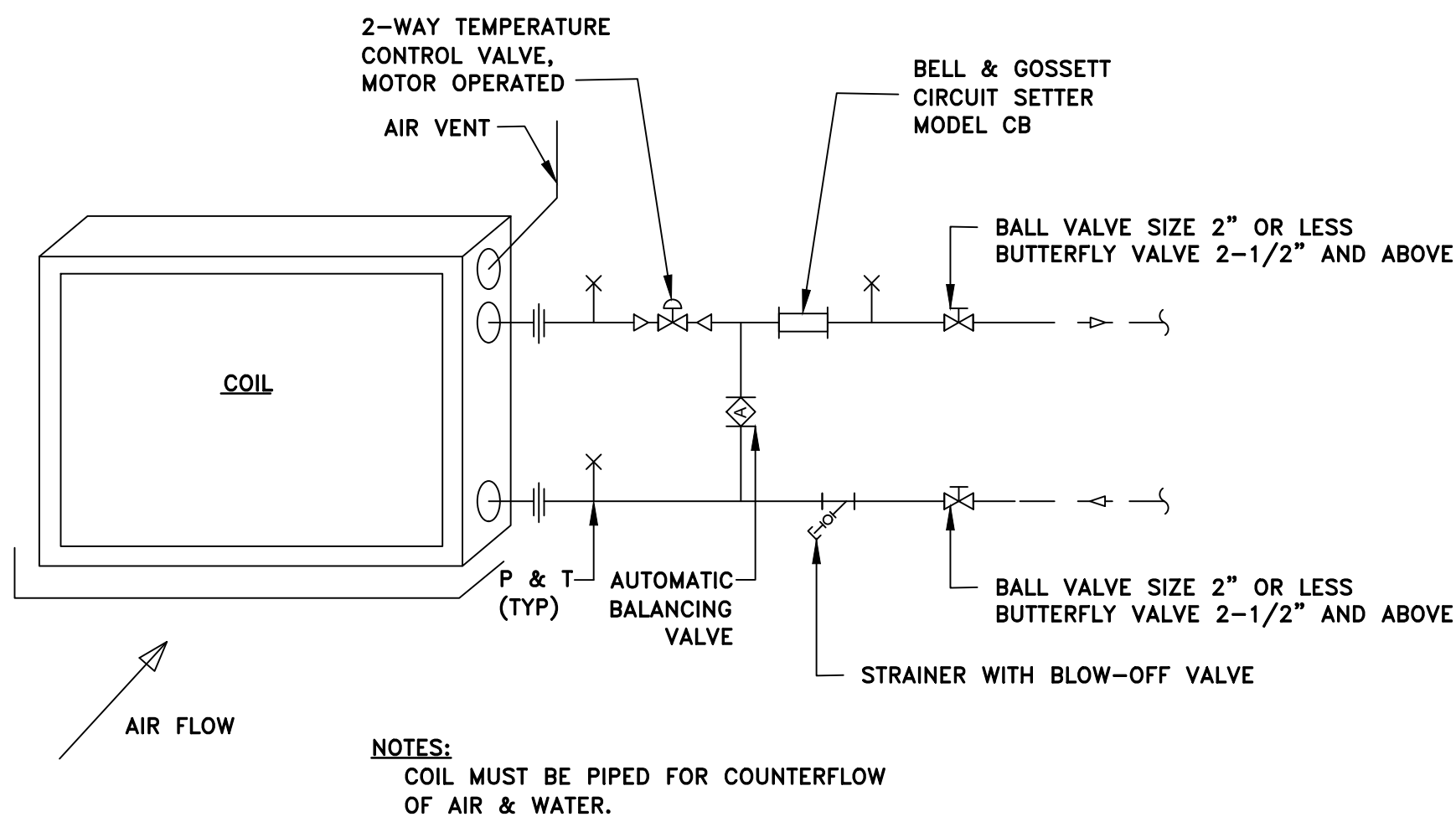
4 PIPING HANGER
M5.03 NTS

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FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT			
MECHANICAL DETAILS – 3			
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY
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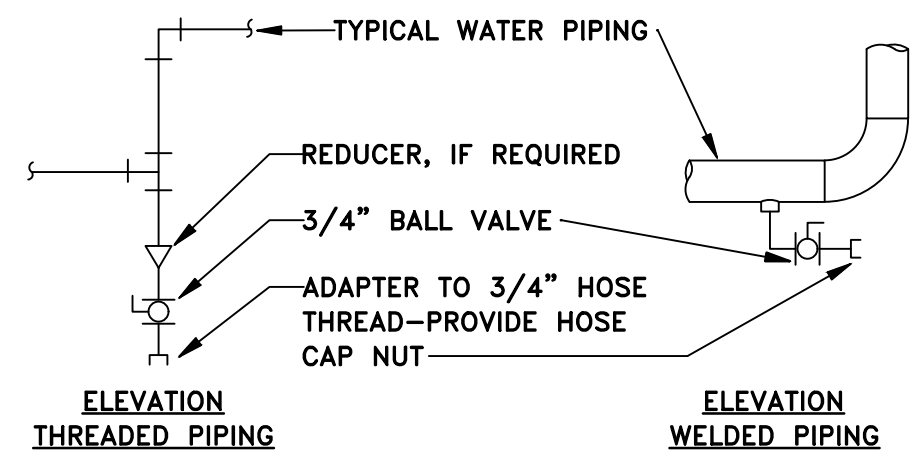
NOTES:
COIL MUST BE PIPED FOR COUNTERFLOW
OF AIR & WATER.

4 | HOT WATER COIL CONNECTION DETAIL | NTS



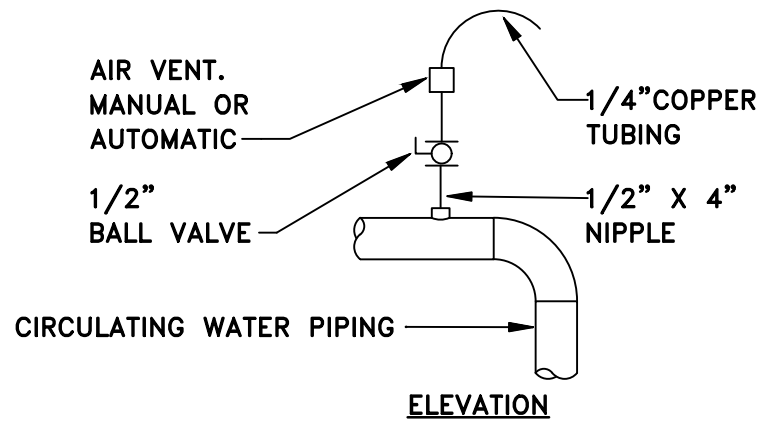
NOTES:
COIL MUST BE PIPED FOR COUNTERFLOW
OF AIR & WATER.

3 | CHILLED WATER COIL CONNECTION DETAIL | NTS



TYPICAL HOT WATER PIPING
DRAIN VALVE CONNECTIONS

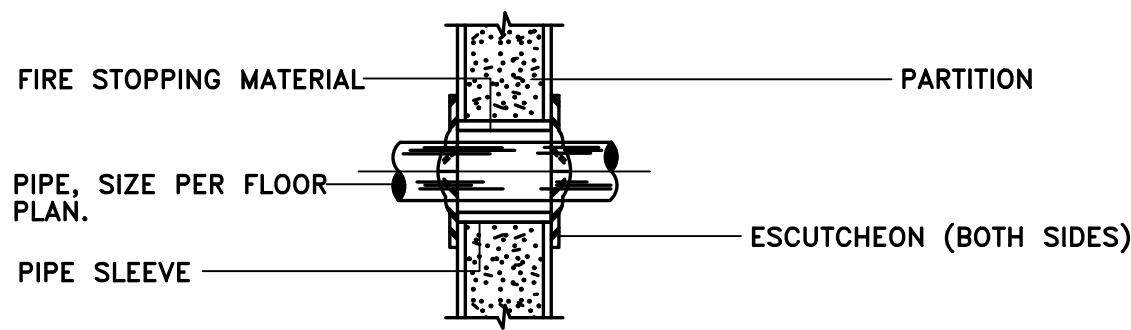
NOTES:
1. DRAIN ALL LOW POINTS AS INDICATED ABOVE.
2. WHERE SCALE POCKETS ARE SHOWN ON PIPE RISER DIAGRAMS
AND/OR PLANS LOCATE DRAIN AT BOTTOM OF SCALE POCKET.



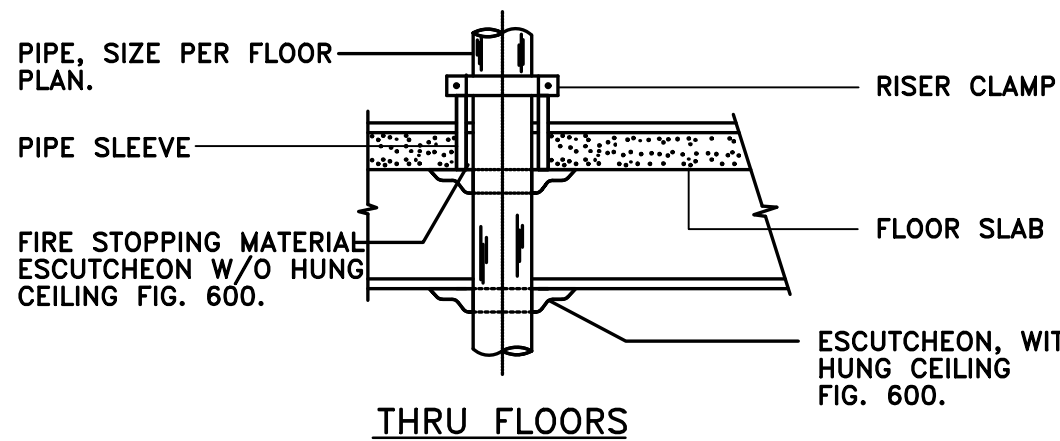
TYPICAL MANUAL AIR VENT

NOTES:
1. VENT ALL HIGH POINTS INDICATED ABOVE.
2. IF AUTOMATIC AIR VENTS ARE USED, PIPE DISCHARGE TO DRAIN

2 | DRAIN VALVE AND AIR VENT CONNECTIONS | NTS

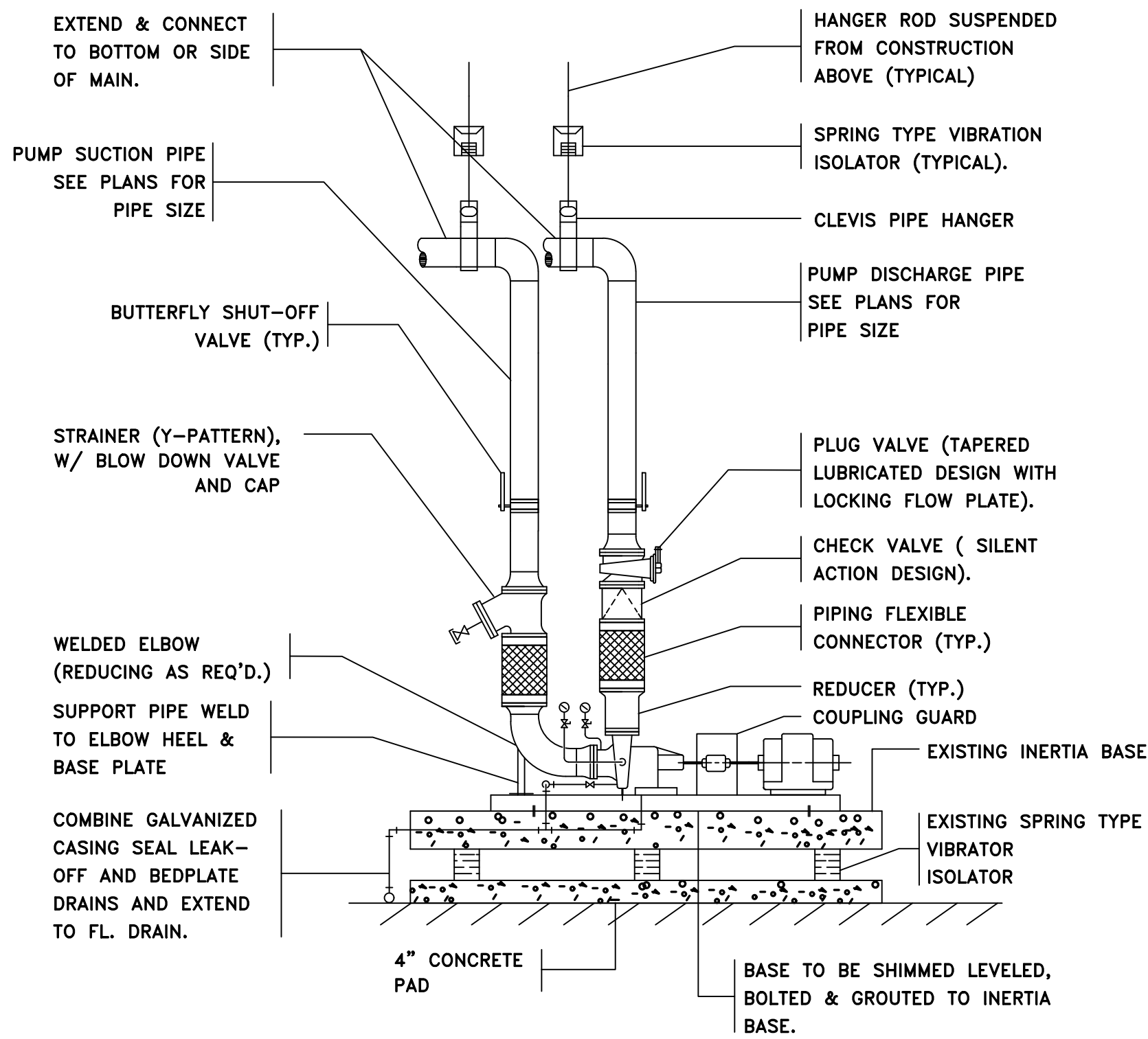


THRU INTERIOR PARTITION



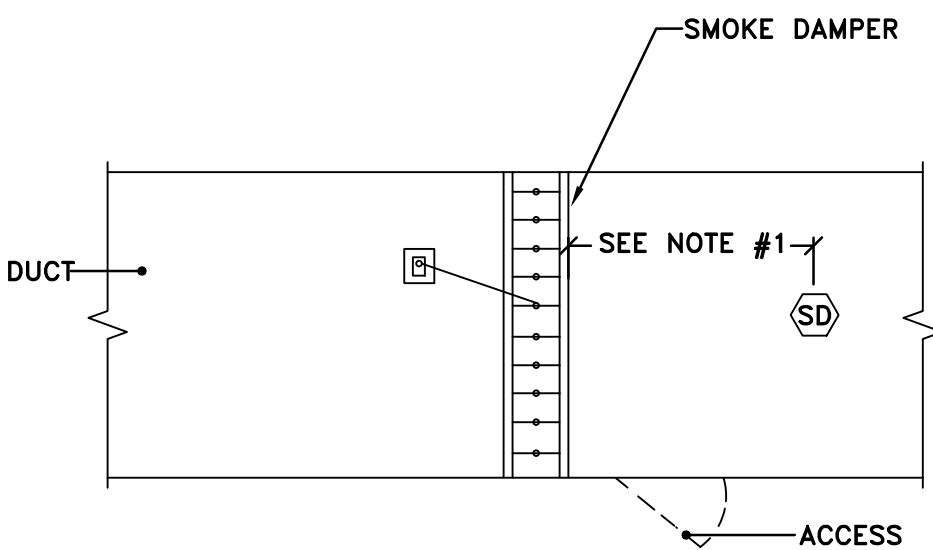
THRU FLOORS

1 | PIPING PENETRATIONS | NTS



END-SUCTION WATER PUMP
INSTALLATIONS

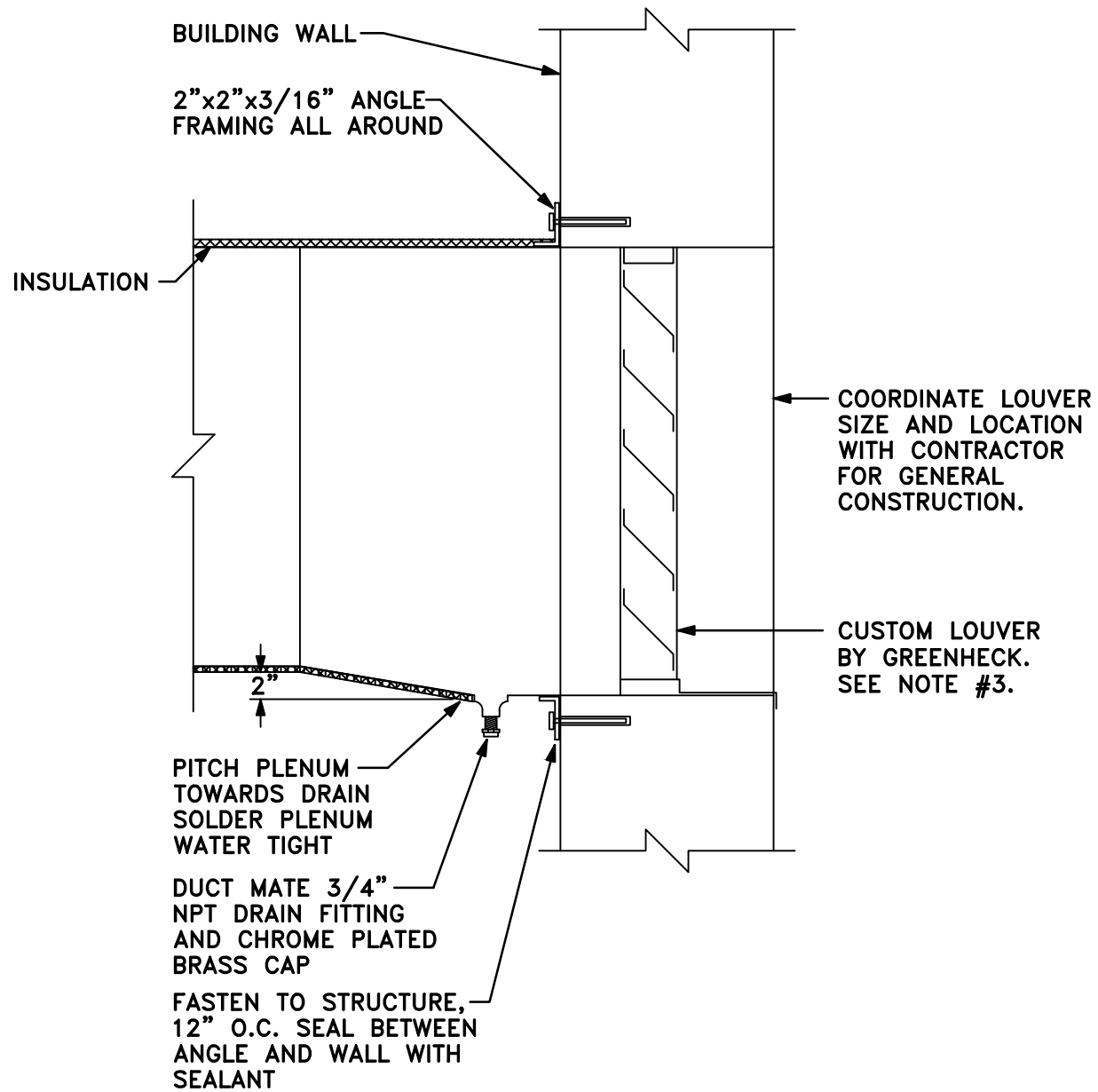
7 | M5.04 | NTS



NOTES:
1. DUCT MOUNTED SMOKE DETECTOR MUST BE MOUNTED WITHIN 5
FEET OF DAMPER WITH NO AIR INLETS OR AIR OUTLETS IN
BETWEEN.
2. PROVIDE ACCESS DOOR FOR SERVICE OF SMOKE DAMPER.

DETAIL OF SMOKE DAMPER

6 | M5.04 | NTS



NOTES:
1. INSTALL MOTORIZED DAMPER IN OUTDOOR AIR PLENUM WHERE
SHOWN ON PLANS.
2. PROVIDE ACCESS DOORS IN OUTDOOR AIR PLENUM WHERE
SHOWN ON PLANS.
3. PROVIDE STATIONARY LOUVERS AT EACH SIDE INCLUDING A
FRENCH DOOR WITH PERIMETER SUBFRAME BETWEEN THEM TO
FACILITATE AHU COIL PULL CLEARANCE ON ROOF. CUSTOM
SPECIAL DESIGN REQUEST "SDR" BY GREENHECK, BLADES TO
BE ALIGNED ACROSS THE ENTIRE LOUVER.

LOUVER PLENUM DETAIL

5 | M5.04 | NTS

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405					
FACILITY BUILDING 300–HVAC UNITS 9,10,11&12 REPLACEMENT					
MECHANICAL DETAILS – 4					
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE	
			MICHAEL ROSELLI		
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:			
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.			
CHECK: EA		F2024113–M5.04			
			SHEET #		
			50 OF 110		

SEQUENCE OF OPERATION

HEATING, VENTILATION AND AIR CONDITIONING UNIT (AHU-10 & RTU-10):

AIR HANDLING UNIT OPERATION SHALL BE INDEXED FROM AN OCCUPIED/ UNOCCUPIED SCHEDULE FROM THE DDC SYSTEM. DURING OCCUPIED PERIODS SUPPLY FANS SHALL RUN CONTINUOUSLY AND BE CONTROLLED BY DUCT PRESSURE SENSORS TO MAINTAIN 1.5" STATIC PRESSURE AT THE BOTTOM OF THE DUCT SHAFT. PROVIDE A HIGH DUCT PRESSURE SAFETY ALGORITHM TO SHUT FAN DOWN IF DUCT PRESSURE AT THE BOTTOM OF THE SHAFT EXCEEDS 2.5". DURING NORMAL OCCUPIED OR UNOCCUPIED MODES, UPON A SENSING OF SMOKE THROUGH AIR HANDLING UNIT SMOKE DETECTORS, THE SUPPLY FAN SHALL SHUTDOWN.

RETURN FANS SHALL ALSO RUN CONTINUOUSLY AND BE CONTROLLED TO 2500 CFM LESS THAN THEIR CORRESPONDING SUPPLY FAN. THE DDC SYSTEM SHALL UTILIZE THE AIR FLOW MONITOR READINGS TO CALCULATE THE CFM DIFFERENTIAL AND ADJUST THE VFD ACCORDINGLY TO PROVIDE THIS FIXED 2500 CFM DIFFERENTIAL. THE SPACE PRESSURE SENSORS SHOULD BE CHECKED AT INITIAL SETUP TO ASSURE THEIR IS POSITIVE PRESSURE IN THE SPACE. THE 2500 CFM IS AN ESTIMATED EXHAUST SYSTEM AIR FLOW VALUE THAT MAY NEED A ONE TIME ADJUSTMENT DURING STARTUP AND BALANCING. ADJUSTMENTS TO THIS 2500 CFM DIFFERENTIAL MAY BE REQUIRED.

WHEN OUTDOOR AIR ENTHALPY EXCEEDS INDOOR ENTHALPY, DAMPERS SHALL BE INDEXED TO PROVIDE A MINIMUM 25% OUTDOOR AIR. THIS SHALL BE ACCOMPLISHED FROM AIR FLOW MONITOR READINGS. RETURN AIR, OUTDOOR AIR AND RELIEF AIR DAMPERS SHALL BE POSITIONED AS REQUIRED TO ACHIEVE THIS FIXED OUTDOOR AIR PERCENTAGE. SUPPLY AIR TEMPERATURE, AS DICTATED BY THE RESET SCHEDULE, SHALL BE MAINTAINED BY [MODULATING THE CHILLED WATER CONTROL VALVE (AHU-10)] / [STAGING COMPRESSORS (RTU-10)].

WHEN INDOOR AIR ENTHALPY EXCEEDS OUTDOOR ENTHALPY, DAMPERS SHALL BE INDEXED TO PROVIDE SUPPLY AIR TEMPERATURE AS DICTATED BY THE RESET SCHEDULE. IF COOLING IS STILL REQUIRED AT 100% OUTDOOR AIR FLOW THEN THE [CHILLED WATER VALVE (AHU-10) SHALL MODULATE] / [COMPRESSORS (RTU-10) SHALL STAGE] TO ACHIEVE THE SCHEDULED SUPPLY AIR TEMPERATURE.

UPON A FURTHER DROP IN OUTDOOR AIR TEMPERATURE WHEN THE 25% MINIMUM OUTDOOR AIR FLOW IS REACHED AND THE SUPPLY AIR TEMPERATURE IS BELOW THE DECEDED RESET SCHEDULE VALUE, THE DAMPERS SHALL CONTINUE TO PROVIDE THE 25% MINIMUM OUTDOOR AIR BY UTILIZING THE AIR FLOW MONITORS AND [THE HOT WATER VALVE SHALL MODULATE (AHU-10)] / [ELECTRIC HEAT SHALL STAGE (RTU-10)] AS REQUIRED TO ACHIEVE THE SUPPLY AIR TEMPERATURE IN THE RESET SCHEDULE.

[AHU-10 & (E)AHU-9, 11 & 12] WHEN AHU ZONE HUMIDITY LEVELS, AS SENSED BY AHU HUMIDITY SENSOR(S), ARE ABOVE SETPOINT [55%RH(ADJ.)] FOR MORE THAN 15MIN(ADJ.) WHILE AVERAGE VAV ZONES TEMPERATURE SENSORS ARE WITHIN ±2°F(ADJ.) OF OCCUPIED COOLING SETPOINT AND NO VAV DAMPERS ARE OPEN BEYOND 50% CALLING FOR COOLING, ASSOCIATED AHU SHALL SWITCH TO DEHUMIDIFICATION MODE. DEHUMIDIFICATION MODE SHALL ENABLE ASSOCIATED AHU CHILLED WATER CONTROL VALVE OPERATION & DOWNSTREAM LOCAL VAV SCR ELECTRIC REHEAT COILS TO CYCLE TO MEET ZONE TEMPERATURE SETPOINTS. DEHUMIDIFICATION MODE WILL BE ENABLED WHEN AHU ZONE HUMIDITY LEVEL EXCEEDS 55%RH(ADJ.) AND SHALL RUN UNTIL IT IS BELOW 50%RH(ADJ.). CONTROLS VENDOR TO FIELD CONFIRM (E)AHU-9, 11 & 12 CONTROL MODIFICATION REQUIREMENTS FOR NEW DEHUMIDIFICATION SEQUENCE AND INCLUDE IN BID PRICING.

(AHU-10 ONLY) UPON THE COIL LEAVING AIR TEMPERATURE DROPPING TO 39 DEGREES, AS SENSED BY THE FREEZESTAT, THE HEATING COIL CONTROL VALVE SHALL GO TO FULL OPEN, OUTDOOR AIR DAMPERS SHALL CLOSE, FAN SHALL STOP AND AN ALARM SHALL BE SENT TO THE CENTRAL DDC SYSTEM.

DURING UNOCCUPIED PERIODS SUPPLY AND RETURN FANS SHALL BE OFF. IF SPACE TEMPERATURE FALLS BELOW 60 DEGREES THE SUPPLY AND RETURN FANS SHALL BE INDEXED TO FULL AIR FLOW. [HOT WATER COIL VALVE (AHU-10) SHALL BE INDEXED FULL OPEN] / [ELECTRIC HEAT (RTU-10) SHALL BE ACTIVATED AT FULL CAPACITY]. OUTDOOR AIR DAMPERS SHALL REMAIN CLOSED AND AIR TERMINAL UNITS SHALL BE IN THEIR NORMALLY FULL OPEN POSITION. WHEN SPACE TEMPERATURE REACHES 65 DEGREES FANS SHALL BE INDEXED OFF.

DURING UNOCCUPIED PERIODS IF SPACE TEMPERATURE RISES TO 85 DEGREES THE SUPPLY AND RETURN FANS SHALL BE INDEXED TO FULL AIR FLOW. [CHILLED WATER COIL VALVE (AHU-10) SHALL BE INDEXED FULL OPEN] / [COMPRESSORS (RTU-10) SHALL BE ACTIVATED]. THE OUTDOOR AIR DAMPERS SHALL REMAIN CLOSED AND AIR TERMINAL UNITS SHALL BE IN THEIR NORMALLY FULL OPEN POSITION. WHEN SPACE TEMPERATURE REACHES 80 DEGREES FANS SHALL BE INDEXED OFF.

AIR TERMINAL UNITS:

AIR TERMINAL UNIT OPERATION SHALL BE INDEXED FROM AN OCCUPIED/ UNOCCUPIED SCHEDULE FROM THE DDC SYSTEM. DURING OCCUPIED PERIODS AIR TERMINAL UNIT SHALL MODULATE THE AIR VALVE FROM THE MINIMUM TO THE MAXIMUM SETTING AS REQUIRED TO MAINTAIN SPACE TEMPERATURE. AIR TERMINAL UNITS SHALL BE FULLY MODULATING AND THE INTENT IS FOR THEM TO REACH A STEADY STATE AIR FLOW RATE. ANY TYPE OF STEPPED CONTROL IS NOT ACCEPTABLE.

IF THE AIR TERMINAL UNITS HAVE BEEN IN OPERATION AT THEIR MINIMUM POSITION AND SPACE TEMPERATURE HAS BEEN TWO DEGREES BELOW SET POINT FOR MORE THAN FIVE MINUTES THEN THE VAV BOX ELECTRIC HEAT SHALL BE ENERGIZED AND PROPORTIONALLY INCREASED THROUGH ITS SCR CONTROLS UNTIL THE SPACE TEMPERATURE REACHES AND REMAINS ONE DEGREE ABOVE SET POINT FOR FIVE MINUTES AT WHICH TIME THE ELECTRIC HEAT SHALL BE DE-ENERGIZED.

DURING UNOCCUPIED PERIODS THE AIR TERMINAL UNITS SHOULD REMAIN IN THEIR NORMALLY FULL OPEN POSITION.

EACH VAV CONTAINING ELECTRIC REHEAT COILS SHALL CONTAIN A PRIMARY AUTOMATIC RESET THERMAL CUTOUT, A SECONDARY MANUAL RESET THERMAL CUTOUT, PROPORTIONAL ELECTRONIC AIRFLOW SENSOR FOR PROOF OF FLOW AND LINE TERMINAL BLOCK. THE VAV SHALL STOP HEATING WITH NO AIRFLOW. HIGH TEMPERATURE AND AIRFLOW PROVING ALARMS TO ANNUNCIATE AT BMS AND REQUIRE MANUAL RESET AT VAV.

SMOKE CONTROL MODE:

UPON A SIGNAL FROM THE EXISTING PNEUMATIC SMOKE CONTROL SYSTEM THROUGH THE PNEUMATIC TO ELECTRIC SWITCH, AIR HANDLING UNIT SHALL BE INDEXED TO THE SMOKE CONTROL MODE. THE OUTDOOR AND RELIEF DAMPERS SHALL INDEX TO THE FULL OPEN POSITION. THE RETURN AIR DAMPERS SHALL BE INDEXED TO THE FULLY CLOSED POSITION. THE SUPPLY AIR FAN SHALL REMAIN UNDER CONTROL OF THE DUCT PRESSURE SENSOR. THE RETURN AIR FAN SHALL BE INDEXED TO 100% AIR FLOW. FREEZESTAT AND SMOKE DETECTOR SAFETIES SHALL BE OVERRIDDEN. HOT WATER VALVE SHALL BE INDEXED TO FULL FLOW OF THE COIL.

DURING SMOKE CONTROL MODE THE AIR TERMINAL UNITS SHALL BE INDEXED TO THEIR NORMALLY FULL OPEN POSITION. 24 VOLT CONTROL POWER FOR ALL VAV BOXES SHALL BE OBTAINED FROM A SMOKE EVACUATION SYSTEM INTERFACE PANEL TO BE LOCATED ON EACH FLOOR. PROVIDE PNEUMATIC TO ELECTRIC SWITCHES TO TERMINATE CONTROL POWER TO ALL VAV BOXES SUCH THAT THEY FAIL TO THEIR NORMALLY OPEN POSITION. PROVIDE COMPLETE INTERFACE BETWEEN THE EXISTING PNEUMATIC SYSTEM AND NEW DDC SYSTEM. PROVIDE ALL SWITCHES AS REQUIRED. SWITCHES SHALL BE LATCHING, MANUAL RESET TYPE & SHALL BE INSTALLED IN A CONTROL PANEL. SWITCHES SHALL BE UL864 RATED.

THE EXISTING PNEUMATIC SMOKE CONTROL SYSTEM SHALL CONTROL THE DUCT SMOKE DAMPERS THROUGH PNEUMATIC TO ELECTRIC SWITCHES. CONNECT TO EXISTING TUBING. THIS IS AN EXISTING TO REMAIN SMOKE CONTROL SYSTEM. CONTROL INDEXING OF THESE DAMPERS SHALL REMAIN FROM THE EXISTING PNEUMATIC SYSTEM. THESE DAMPERS ARE LOCATED IN THE MAIN SUPPLY AND RETURN DUCTS AT EACH FLOOR. SEE FLOOR PLANS FOR LOCATIONS. CONNECT NEW SMOKE DETECTORS TO EXISTING PNEUMATIC SMOKE CONTROL SYSTEM.

TEMPORARY RTU-10 NOTES:

PROVIDE DDC CONTROLS INTERFACE WITH COMMUNICATIONS CARD WHICH SHALL BE COMPATIBLE WITH THE EXISTING BMS. PROVIDE ALL CONTROLS WIRING AND DEVICES FOR A COMPLETE OPERATING SYSTEM AS PER THE SEQUENCE OF OPERATION AND CONTROLS DIAGRAMS ON THIS SHEET.

EXHAUST FAN (EF-6)

RESTROOM EXHAUST FAN (EF-6) SHALL START / STOP BASED ON OCCUPANCY SCHEDULE AS PROGRAMMED THROUGH BUILDING DDC CONTROL SYSTEM. MOTORIZED ISOLATION DAMPER IN THE TOILET EXHAUST DUCTWORK SHALL OPEN WHEN THE FAN IS IN OPERATION AND CLOSE WHEN THE FAN IS OFF. FAN STATUS AND MOTORIZED DAMPER POSITION SHALL BE MONITORED BY BUILDING DDC CONTROL SYSTEM. ALARMS SHALL BE GENERATED FOR FAN OR MOTORIZED DAMPER FAILURE, WHEN COMMANDED ON/OPEN, BUT THE STATUS IS OFF/CLOSED OR COMMANDED OFF/CLOSED, BUT THE STATUS IS ON/OPEN.

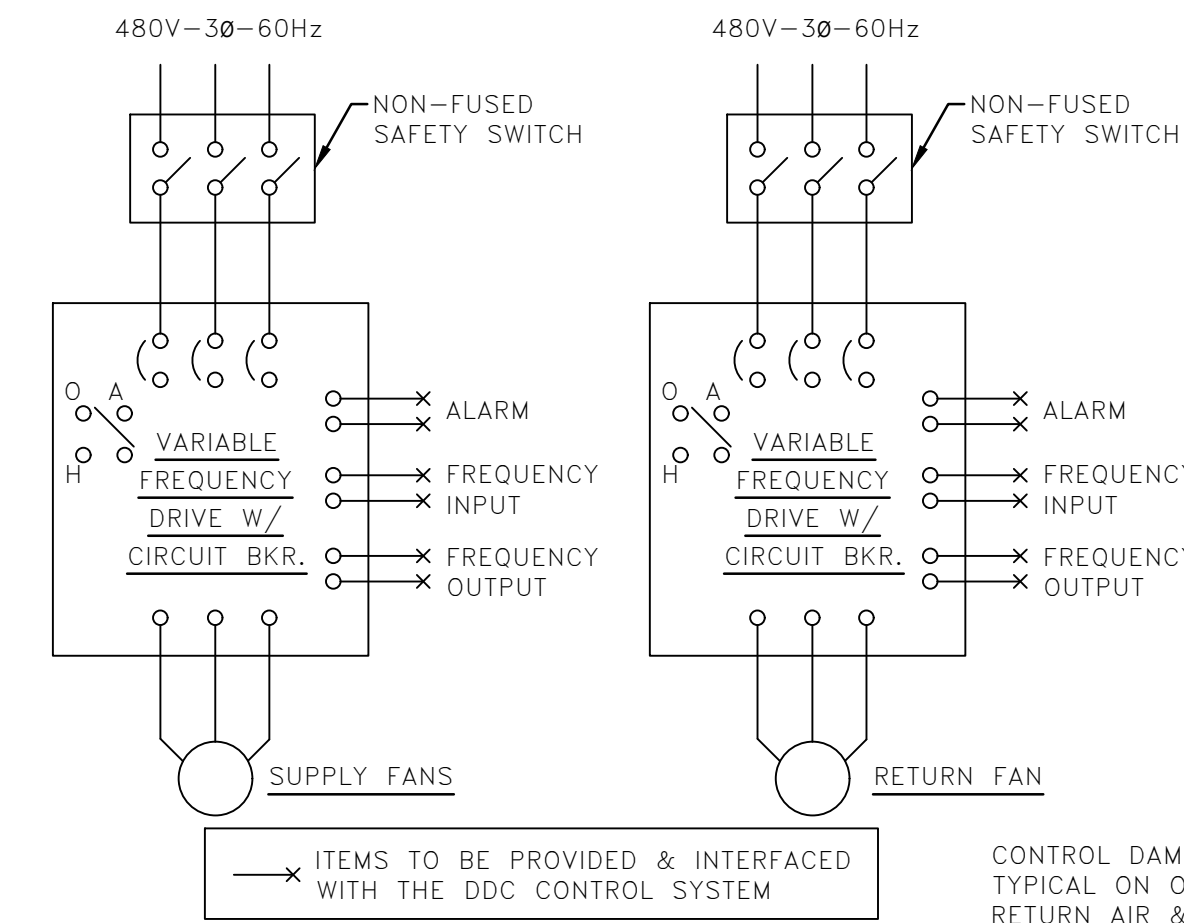
MER UNIT HEATERS (UH-2-1,2,3,4) NOTES:

DDC SPACE TEMPERATURE SENSOR INTEGRATED WITH EXISTING BUILDING BMS TO MONITOR MER ROOM TEMPERATURE AND CONTROL ASSOCIATED UNIT HEATER OPERATION. WHEN SENSOR HAS A LOCAL TEMPERATURE READING OF 60°F OR BELOW, ASSOCIATED UNIT HEATER TO BEGIN OPERATION. WHEN SENSOR TEMPERATURE RISES ABOVE SET-POINT OF 65°F, ASSOCIATED UNIT HEATER TO STOP OPERATION. ALARM TO ANNUNCIATE AT BUILDING BMS IF UNIT HEATER SENSOR REMAINS BELOW 60°F FOR 15 MINUTE PERIOD.

1	HVAC SYSTEM CONTROLS
M8.01	NTS

PROJECT DDC POINTS LIST			
MARK	EQUIPMENT DESCRIPTION	POINT DESCRIPTION	MARK
AHU-10 & RTU-10	AHU-10 & RTU-10 SYSTEMS INCLUDING BUT NOT HEREBY LIMITED TO SUPPLY FANS, RETURN FANS, AIR FLOW MONITORS, DAMPERS, TEMPERATURE SENSORS, SMOKE DETECTORS & VARIABLE FREQUENCY DRIVES	SPACE TEMPERATURE	A I
		SUPPLY AIR TEMPERATURE	A I
		RETURN AIR TEMPERATURE	A I
		OUTDOOR AIR TEMPERATURE	A I
		LOW LIMIT TEMPERATURE	A I
		SUPPLY AIR CFM	A I
		RETURN AIR CFM	A I
		OUTDOOR AIR CFM	A I
		SUPPLY DUCT PRESSURE	A I
		SPACE PRESSURE	A I
		DUCT SMOKE DETECTORS	D I
		SUPPLY FAN VFD HERTZ	A I
		RETURN FAN VFD HERTZ	A I
		SUPPLY FAN STATUS	D I
		RETURN FAN STATUS	D I
		ALARM	D I
		SMOKE CONTROL ACTIVATION	D I
		SUPPLY FAN START/ STOP	D O
		RETURN FAN START/ STOP	D O
		SUPPLY FAN VFD HERTZ	A I
		RETURN FAN VFD HERTZ	A I
VAV-X-X-X	VAV AIR TERMINAL UNITS WITH ELECTRIC REHEAT COILS	OCCUPIED/ UNOCCUPIED	D I
		SPACE TEMPERATURE	A I
		CONTROL POWER	D I
		FLOW SENSOR	A I
		VAV AIR DAMPER	A O
UH-X-X	HOT WATER PROPELLER UNIT HEATERS	STATUS	D I
		FAN START/ STOP	D O
		SPACE TEMPERATURE	A O
EF-6	EXHAUST FAN & EXHAUST LOUVER	SPACE TEMPERATURE	D I
		START/STOP	A I
		STATUS	D I
		DAMPER ACTUATOR	A I

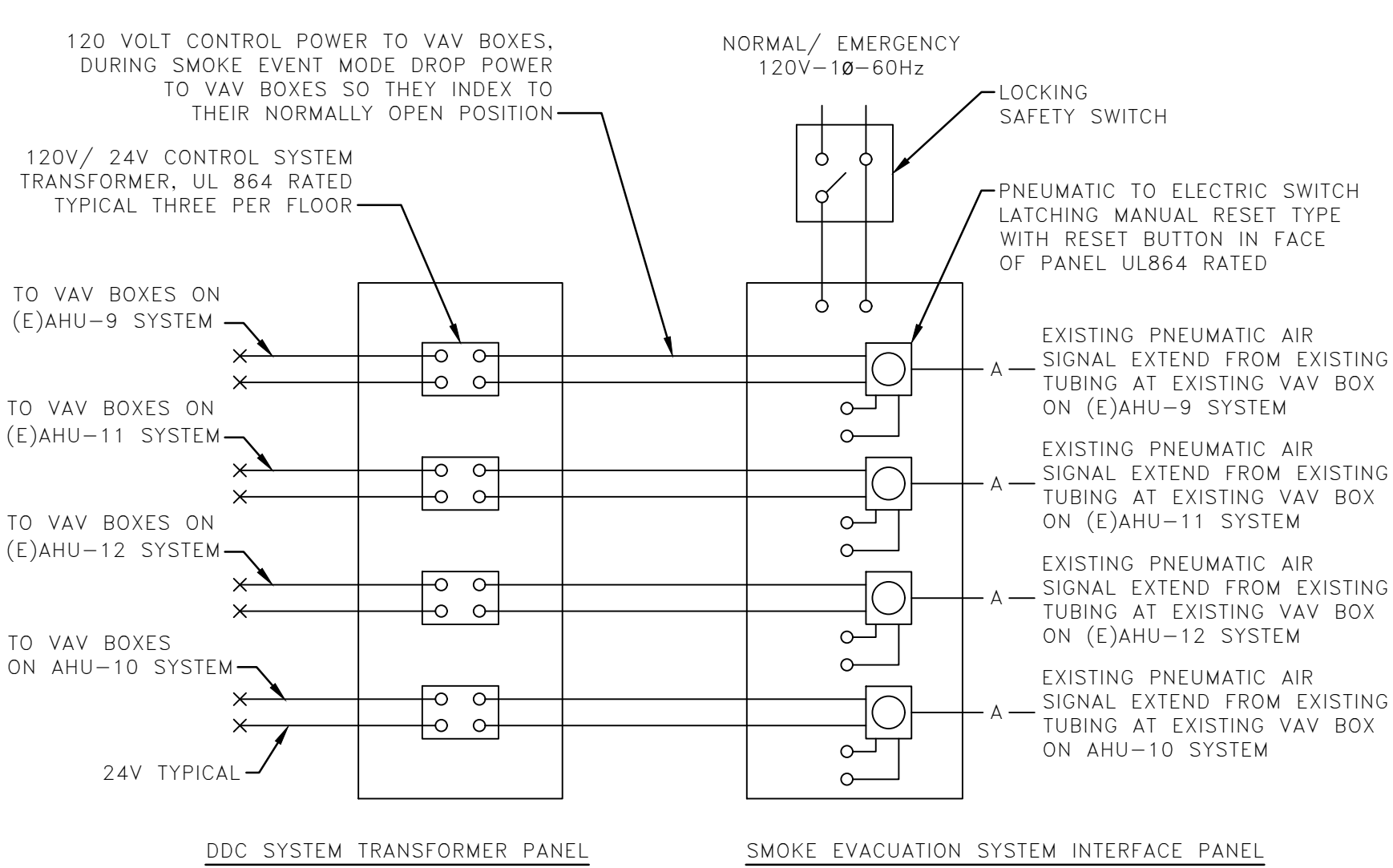
3	DDC POINT LIST
M8.01	NTS



4	SCHEMATIC CONTROL DIAGRAM AHU-10 & RTU-10
M8.01	NTS

SUPPLY AIR RESET SCHEDULE (ADJUSTABLE)	
O.A. TEMP (°F)	SUPPLY AIR TEMP (°F)
10	58
30	57
50	56
70	55

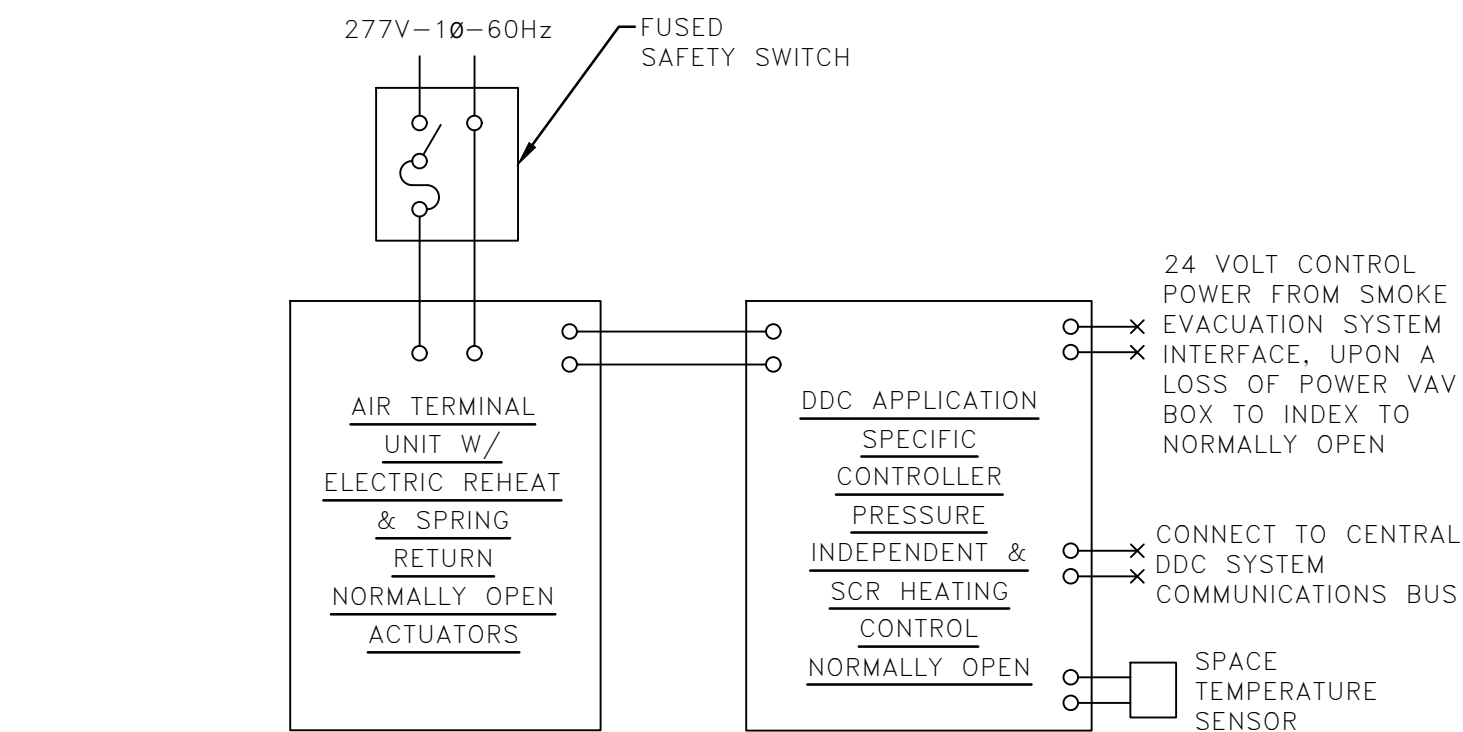
2	AHU SYSTEM SUPPLY AIR RESET SCHEDULE
M8.01	NTS



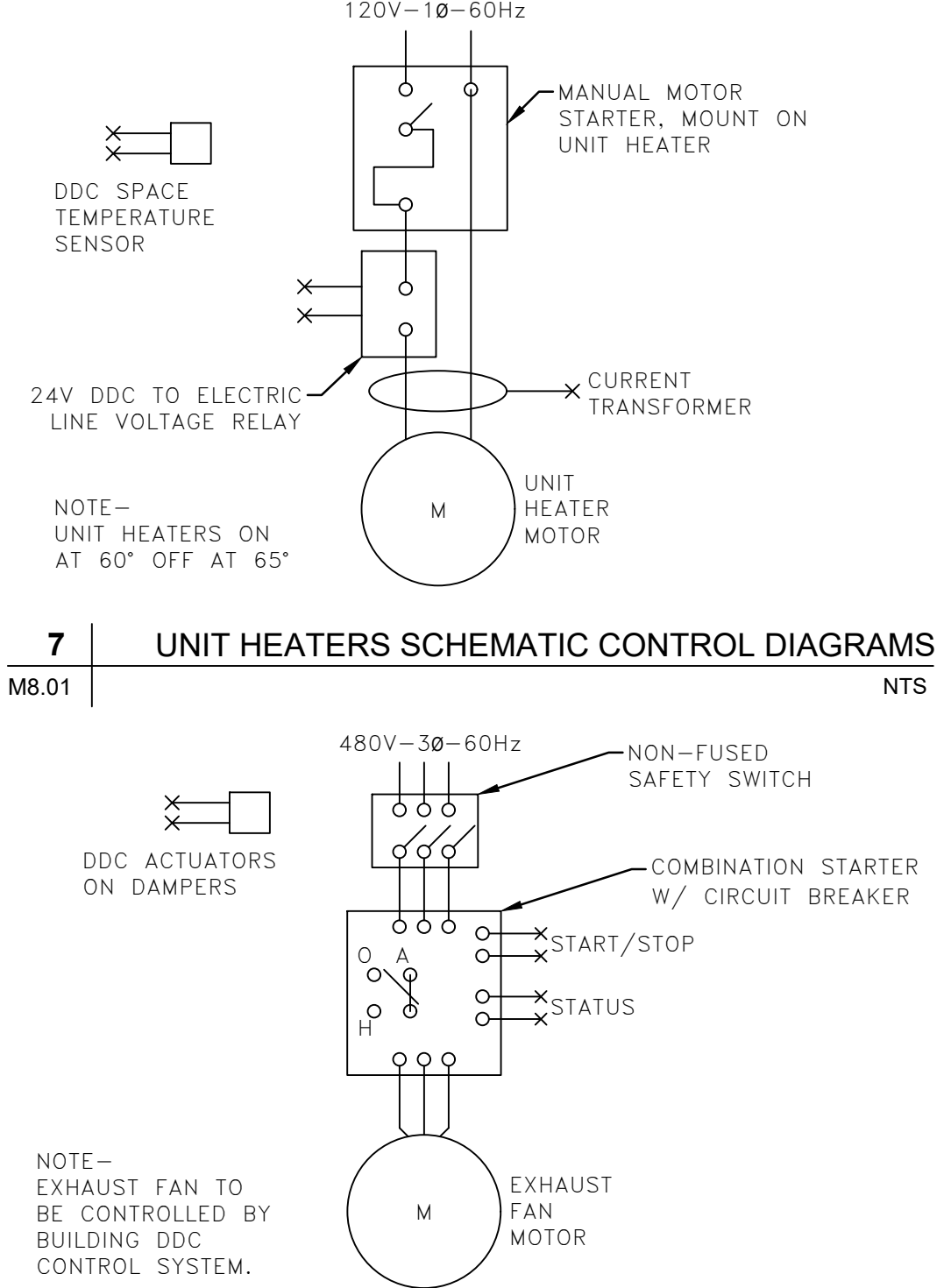
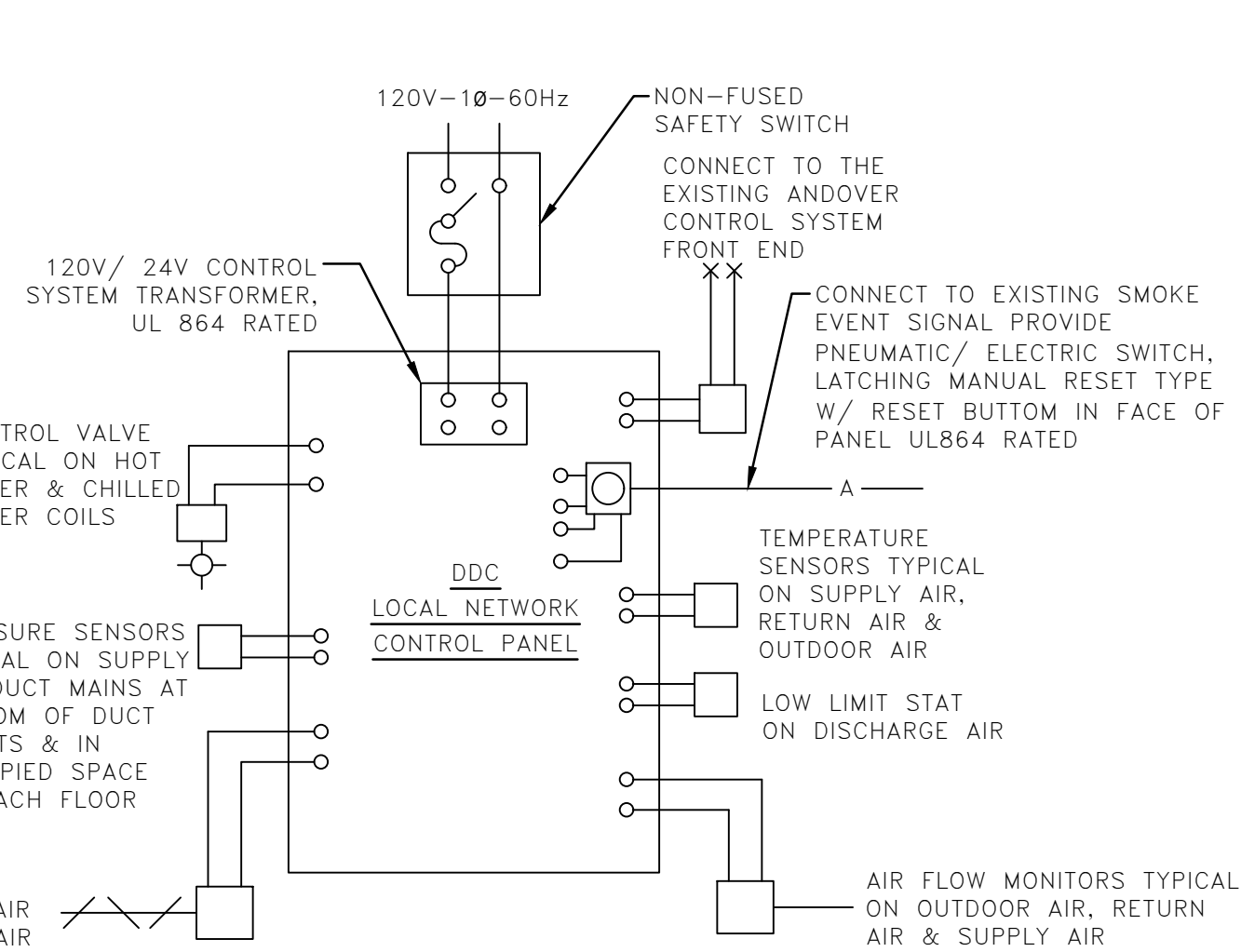
NOTES:

- DDC SYSTEM PANELS AND SMOKE EVACUATION SYSTEM INTERFACE PANELS ARE INDICATED ON DRAWINGS FOR REFERENCE. CONTRACTOR TO COORDINATE QUANTITIES AS REQUIRED TO HANDLE ALL SYSTEM COMPONENTS.
- CONTROLS VENDOR TO FIELD CONFIRM SCOPE OF WORK FOR EXISTING PANEL REPLACEMENTS.

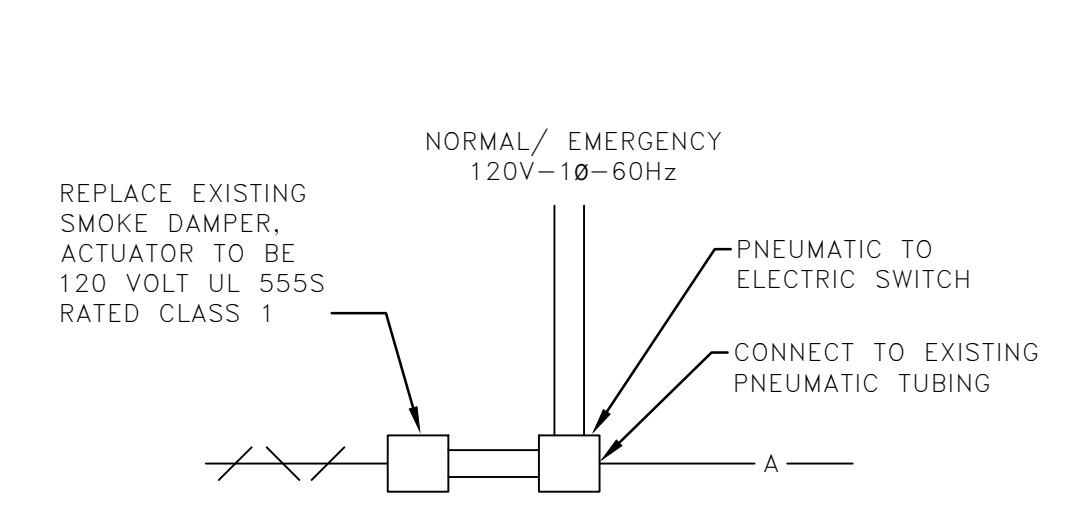
5	SMOKE EVACUATION SYSTEM CONTROL PANELS
M8.01	NTS



6	SCHEMATIC CONTROL DIAGRAM VAV BOX
M8.01	NTS



8	EXHAUST FAN SCHEMATIC CONTROL DIAGRAMS
M8.01	NTS



9	SMOKE DAMPER CONTROL
M8.01	NTS

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UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER FOR ADVANCED AEROSPACE (WJHTCAA) ATLANTIC CITY INT'L AIRPORT, N.J. 08405			
FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT			
MECHANICAL CONTROLS DIAGRAM - 1			
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY
			MICHAEL ROSELLI
DESIGN: TC	ISSUED BY:	DATE: 09/06/2024 JCN:	
DRAWN: CM	FACILITY SERVICES & ENGINEERING DIVISION	DRAWING NO.	SHEET #
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SEQUENCE OF OPERATION

CHILLED WATER PUMP (CHWP-1):

CHILLED WATER PUMP SHALL RUN WHENEVER (E) AHU-9, (E) AHU-11, (E) AHU-12 OR AHU-10 RUN. THE VFD SHALL START THE CHILLED WATER PUMP SOFT AND STOP ONLY AFTER ALL AHUs ARE OFF. THE BUILDING DDC CONTROL SYSTEM SHALL MODULATE THE PUMP VFD & AHU CONTROL VALVE(S) POSITION(S) TO MAINTAIN THE PIPE SYSTEM PRESSURE AT SETPOINT, AS MEASURED BY THE DIFFERENTIAL PRESSURE TRANSMITTER AT THE FURTHEST AHU. THE AHU CONTROL VALVE ACTUATOR(S) TO MODULATE FLOW THROUGH THE AHU CHILLED WATER COIL BASED ON THE AHU ZONE COOLING DEMAND. WHEN ALL AHUs ARE OFF, THE DDC CONTROL SYSTEM TO MODULATE THE VFD CAPACITY MODULATION TO ZERO PERCENT & SHUT AHU CONTROL VALVE(S). ALARMS SHALL BE GENERATED FOR PUMP FAILURE, WHEN COMMANDED ON, BUT THE STATUS IS OFF OR COMMANDED OFF, BUT THE STATUS IS ON.

FURNISH AND INSTALL A CHILLED WATER DIFFERENTIAL PRESSURE TRANSMITTER AT THE FURTHEST UNIT (EXISTING AHU-11) CHILLED WATER PIPING TO CONTROL PUMP SPEED. DIFFERENTIAL PRESSURE TRANSMITTER SETPOINT: 15FT. WC (ADJ.). AUTOMATIC BALANCING VALVE UPSTREAM OF CONTROL VALVE AT EACH AHU TO PROVIDE MINIMUM PUMP FLOW BY-PASS.

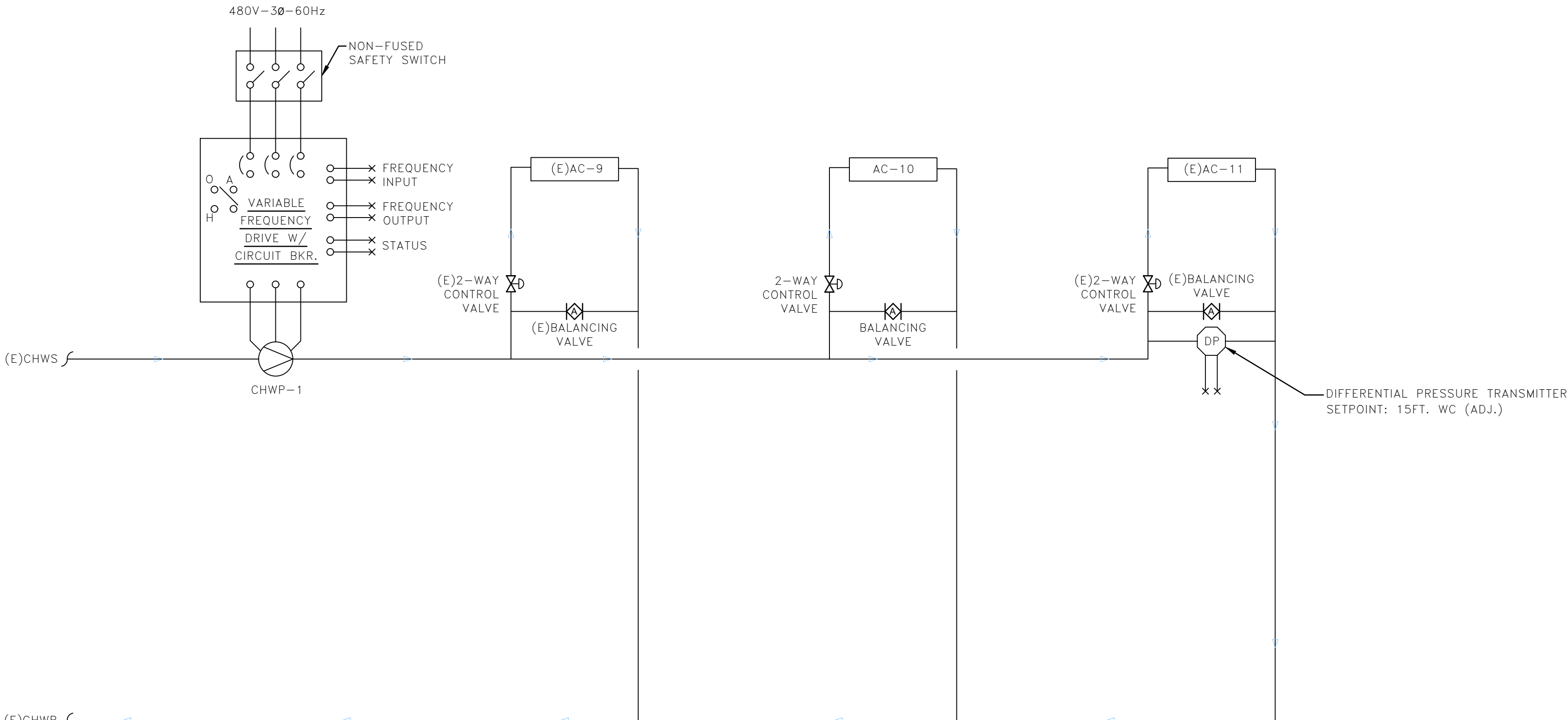
HOT WATER PUMP (HWP-10)

HOT WATER PUMP (HWP-10) SHALL RUN WHENEVER ITS ASSOCIATED AHU (AHU-10) RUNS AND STOP WHEN THE UNIT IS OFF. WHEN AHU IS OFF, AHU CONTROL VALVE TO SHUT. BUILDING DDC CONTROL SYSTEM TO CONTROL PUMP OPERATION & AHU CONTROL VALVE POSITION. THE AHU CONTROL VALVE ACTUATOR TO MODULATE FLOW THROUGH THE AHU HOT WATER COIL BASED ON THE AHU ZONE HEATING DEMAND. PUMP ECM MOTOR TO BE USED FOR INITIAL SYSTEM BALANCING. ALARMS SHALL BE GENERATED FOR PUMP FAILURE, WHEN COMMANDED ON, BUT THE STATUS IS OFF OR COMMANDED OFF, BUT THE STATUS IS ON.

1 HVAC SYSTEM CONTROLS

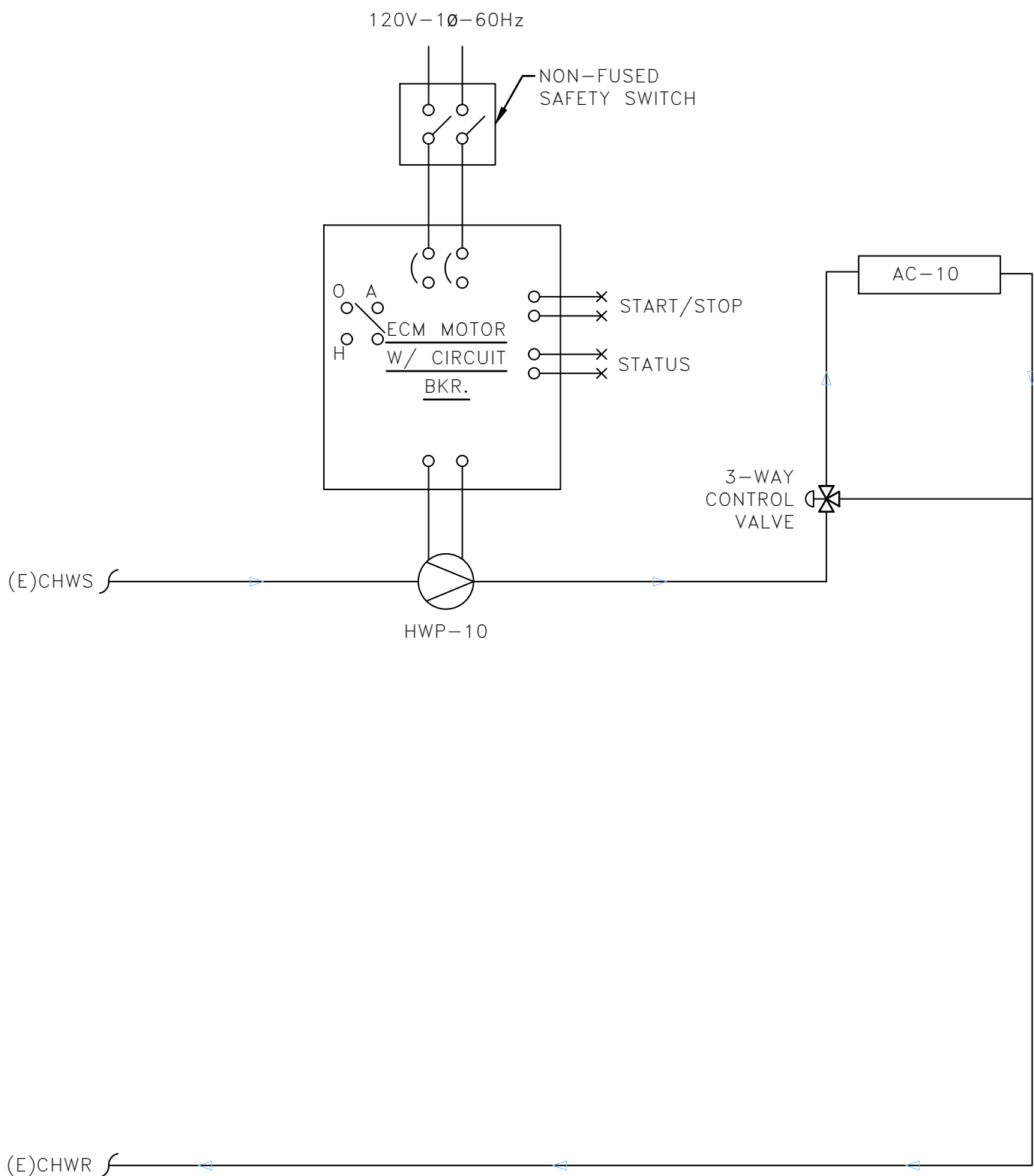
CHWP-1	CHILLED WATER PUMP	STATUS	A I
		PUMP START STOP	D O
		SPEED COMMAND	A O
		DIFFERENTIAL PRESSURE	D I
		CONTROL VALVE POSITION	A O
HWP-10	HOT WATER PUMP	STATUS	A I
		PUMP START STOP	D O
		CONTROL VALVE POSITION	A O

2 DDC POINT LIST



3 CHWP-1 SCHEMATIC CONTROL DIAGRAM

—x ITEMS TO BE PROVIDED & INTERFACED WITH THE DDC CONTROL SYSTEM



4 HWP-10 SCHEMATIC CONTROL DIAGRAM

—x ITEMS TO BE PROVIDED & INTERFACED WITH THE DDC CONTROL SYSTEM

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FACILITY BUILDING 300-HVAC UNITS 9,10,11&12 REPLACEMENT					
MECHANICAL CONTROLS DIAGRAM – 2					
REVIEWED BY	SUBMITTED BY	DATE	APPROVED BY	DATE	
			MICHAEL ROSELLI		
APPROVAL (FINISHES)	DESIGN: TC DRAWN: CM CHECK: EA	ISSUED BY: FACILITY SERVICES & ENGINEERING DIVISION	DATE: 09/06/2024 JCN: DRAWING NO. F2024113-M8.02	SHEET # 52 OF 110	