

MECHANICAL CONSTRUCTION IDC

STATE PROJECT NO.: H27-D295-CB

BLATT PE CENTER REPLACE AHU#1

STATE PROJECT NO.: H27-N236-CB COLUMBIA, SC

CONSTRUCTION DOCUMENTS

DESIGN CODES AND STANDARDS

PROJECT DESIGNED IN ACCORDANCE WITH:
 INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION
 INTERNATIONAL EXISTING BUILDING CODE, 2015 EDITION
 INTERNATIONAL ENERGY CONSERVATION CODE, 2009 EDITION
 INTERNATIONAL FIRE CODE, 2015 EDITION
 INTERNATIONAL MECHANICAL CODE, 2015 EDITION
 INTERNATIONAL PLUMBING CODE, 2015 EDITION
 NATIONAL ELECTRICAL CODE, NFPA 70, 2014 EDITION
 STATE FIRE MARSHALL REGULATIONS, LATEST REVISION
 ASHRAE/ESNA 90.1 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS, 2007 EDITION
 10. ICC/ANSI-A117.1-1998, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

BUILDING CODE REVIEW INFORMATION:

ORIGINAL CONSTRUCTION: JULY 1969
 MAJOR RENOVATION: DECEMBER 1995
 1. OCCUPANCY (EXISTING OCCUPANCY TO REMAIN: A-1, SMALL ASSEMBLY WITHOUT STAGE)
 2. TYPE OF CONSTRUCTION
 A. EXISTING BUILDING: IV UNPROTECTED NONCOMBUSTIBLE (1994 SBC)
 3. GENERAL BUILDING DESIGN, ALLOWABLE AREA, HEIGHT AND OCCUPANT LOAD

BUILDING AREA: EXISTING BUILDING AREA WILL NOT BE MODIFIED

BUILDING HEIGHT: EXISTING BUILDING HEIGHT WILL NOT BE MODIFIED

GENERAL BUILDING DESIGN: ALLOWABLE AREA, HEIGHT AND OCCUPANT LOAD: EXISTING AREA, HEIGHT AND OCCUPANCY LOAD WILL NOT BE MODIFIED

4. FIRE RESISTANCE RATING OF BUILDING ELEMENTS

FIRE RESISTANCE RATING OF BUILDING ELEMENTS: THE EXISTING FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS WILL NOT BE MODIFIED.

FIRE RESISTANCE RATING OF BUILDING ELEMENTS

BUILDING ELEMENT	RATING AS REQUIRED (IN HOURS)	RATING AS DESIGNED (IN HOURS)	TESTING AGENCY & DESIGN NUMBER (A.L. FILE ETC.)
STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS AND TRUSSES (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
BEARING WALLS, EXTERIOR (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
BEARING WALLS, INTERIOR (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
NONBEARING WALLS & PARTITIONS, EXTERIOR (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
FLOOR CONSTRUCTION, INCLUDING SUPPORTING BEAMS & JOISTS (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
ROOF CONSTRUCTION, INCLUDING SUPPORTING BEAMS & JOISTS (PER 1994 SBC TABLE 603)	NONCOMBUSTIBLE	NONCOMBUSTIBLE	-
FIRE WALLS (PER 1994 SBC TABLE 703)	4	4	NONE IN PROJECT
SHAFT ENCLOSURES (PER 1994 SBC TABLE 703)	2	2	**
EXITS AND STAIRWAYS (PER 1994 SBC TABLE 703)	1	1	**

** ASSUMED RATING BASED ON ORIGINAL DRAWINGS.

5. OTHER FIRE PROTECTION REQUIREMENTS

ITEM	YES	NO	COMMENTS
ARE SPRINKLERS REQUIRED? (PER 1994 SBC SECTION 903)	-	X	-
ARE STANDPIPES REQUIRED? (PER 1994 SBC SECTION 903)	-	X	-
IS A FIRE ALARM SYSTEM REQUIRED? (PER 1994 SBC SECTION 903)	X	-	EXISTING

DRAWING INDEX

GENERAL

T1 TITLE SHEET

MECHANICAL

M1 FIRST FLOOR DEMOLITION PLAN
 M2 FIRST FLOOR RENOVATION PLAN
 M3 FIRST FLOOR RENOVATION PLAN - PIPING
 M4 DETAILS, NOTES, SCHEDULES, AND LEGEND

CAMPUS PLANNING
AND CONSTRUCTION
COLUMBIA, SC 29208

SCALE

SCALE

CHECKED BY: BJJ
DATE:

ORIG. BY:

DATE:

CHECKED BY: BJJ
DATE:

DRAWN BY:

DATE: 23MAY17

DRAWING: 16385-T1
DESCRIPTION:

BUILDING: 138
REV:

PROJECT TITLE: BLATT PE CENTER - REPLACE AHU#1
STATE PROJECT NO.: H27-N236-CB

UNIVERSITY OF SOUTH CAROLINA

SHEET: T1
OF

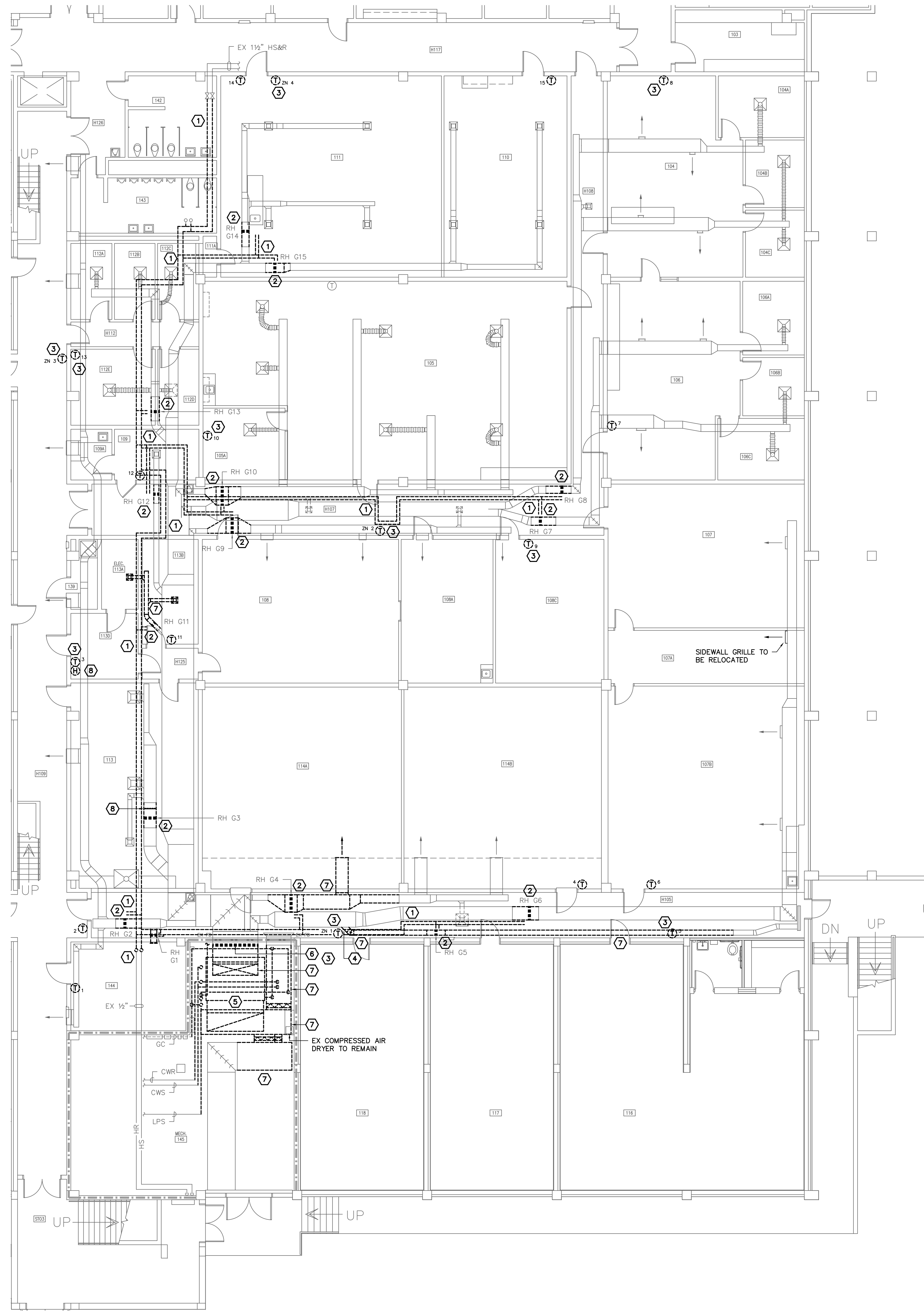
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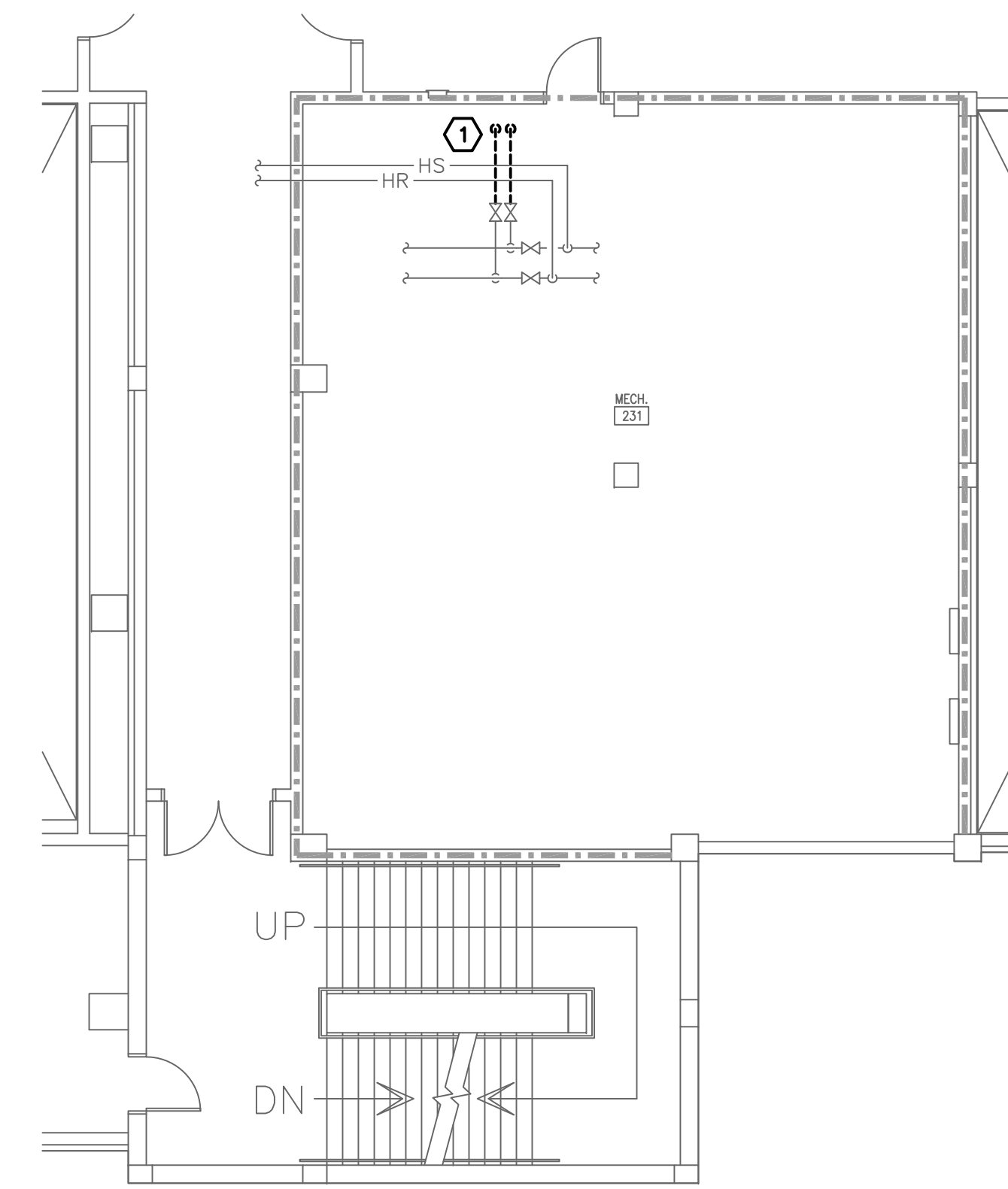
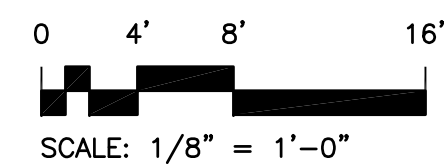
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 mail@swygert-associates.com

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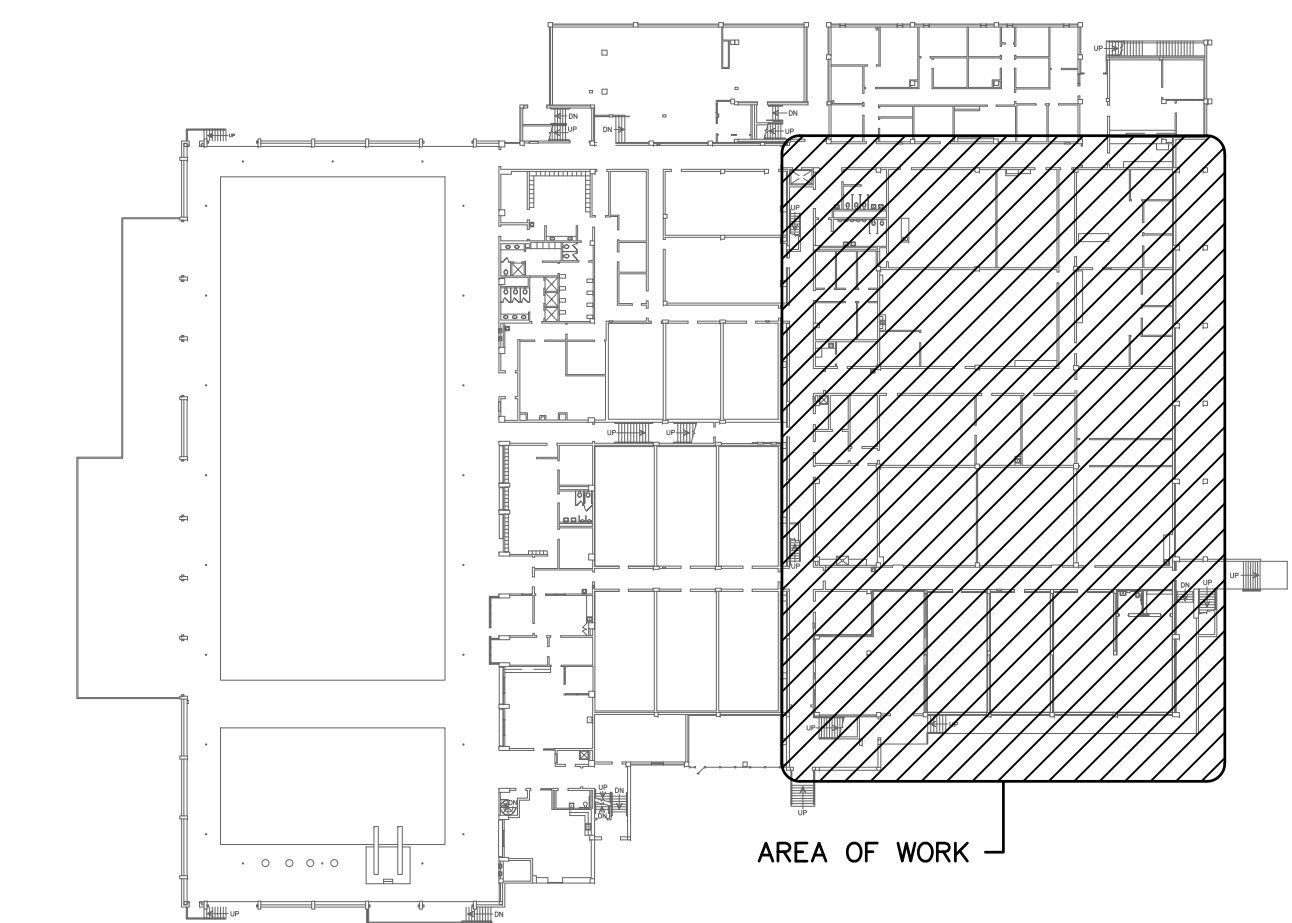
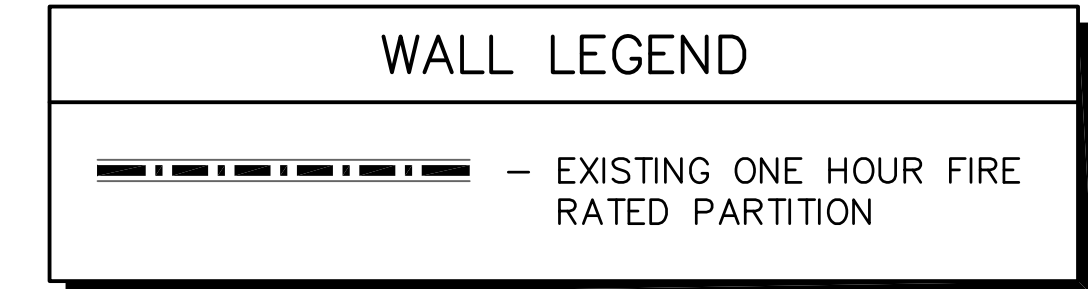


1 PARTIAL FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



2 PARTIAL SECOND FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

- ### DEMOLITION NOTES
- ① REMOVE EXISTING HOT WATER PIPING AS SHOWN.
 - ② REMOVE EXISTING DUCT MOUNTED HOT WATER COIL, CONTROLS, AND DUCT AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE STAINLESS STEEL BLANK PLATES OVER UNUSED WALL BOXES.
 - ③ REMOVE EXISTING ZONE SENSOR AND PROVIDE STAINLESS STEEL BLANK PLATE OVER WALL BOX.
 - ④ REMOVE TAKEOFF FITTING AND PATCH TRUNK DUCT WITH GALVANIZED METAL SEALED WITH DUCT MASTIC AND EXTERNALLY INSULATED TO MATCH EXISTING.
 - ⑤ REMOVE AIR HANDLER COMPLETE. CONCRETE PAD TO REMAIN.
 - ⑥ REMOVE SMOKE DAMPER.
 - ⑦ REMOVE DUCTWORK AS SHOWN AND AS REQUIRED TO ACCOMMODATE NEW WORK.
 - ⑧ REMOVE DUCT MOUNTED STEAM HUMIDIFIER AND CONTROLS COMPLETE. PROVIDE STAINLESS STEEL BLANK PLATES OVER UNUSED WALL BOXES. REMOVE ALL STEAM AND CONDENSATE PIPING BACK TO MECHANICAL ROOM AND CAP LINES AT MAINS.



KEY PLAN - FIRST FLOOR - 138
NO SCALE

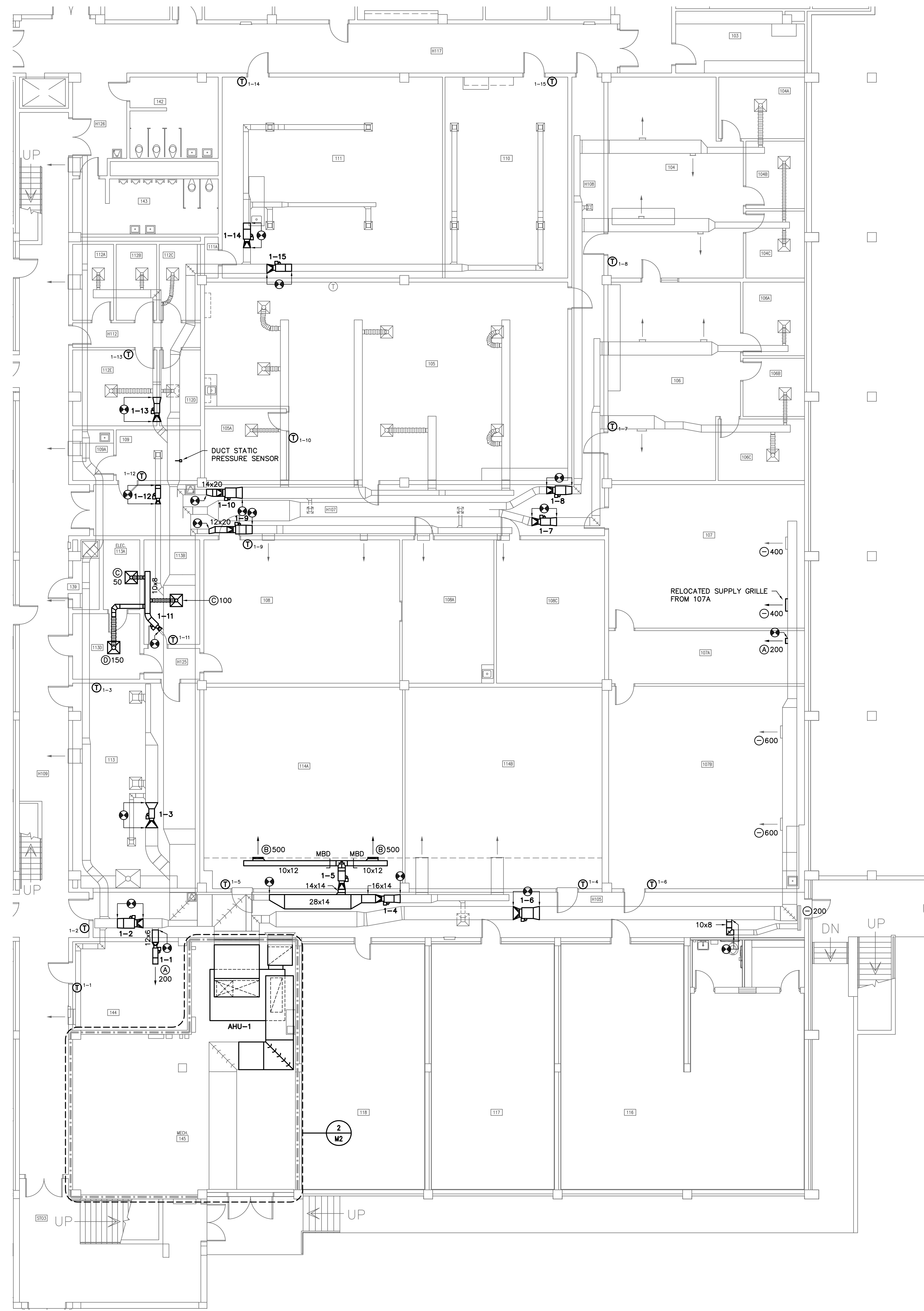
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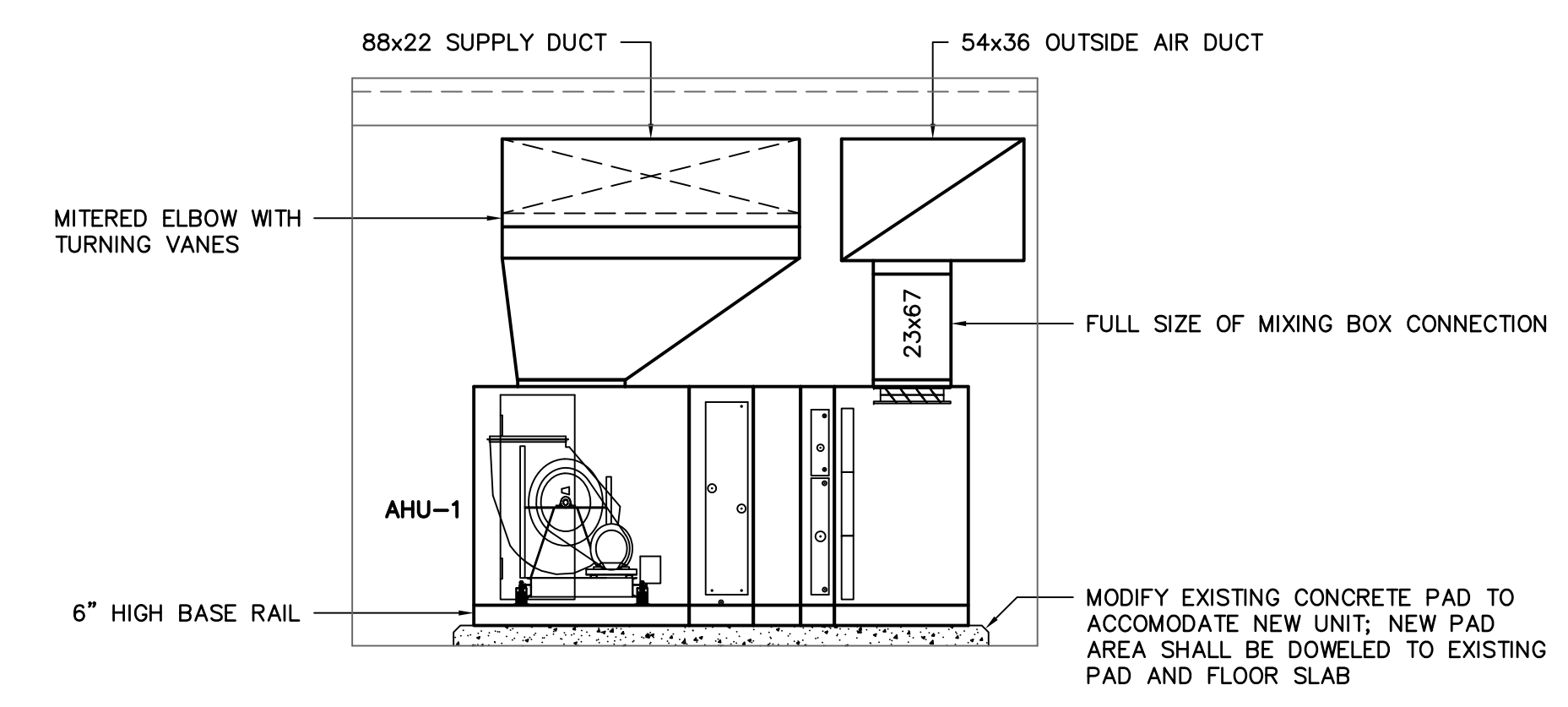
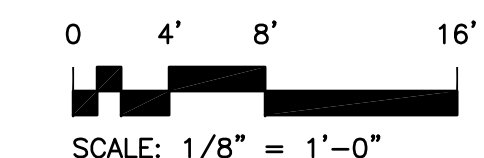
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DRAWING: 16385-M1	DATE: 23MAY17	CHECKED BY: BJJ	DRAWN BY: BJJ
PROJECT TITLE: BLATT PE CENTER - REPLACE AHU#1	DESCRIPTION:	DATE:	DATE:
STATE PROJECT NO.: H27-N236-CB		ORIG. BY:	
University of South Carolina			
SHEET: M1		OF 4	
SHEET IN SET:		OF	

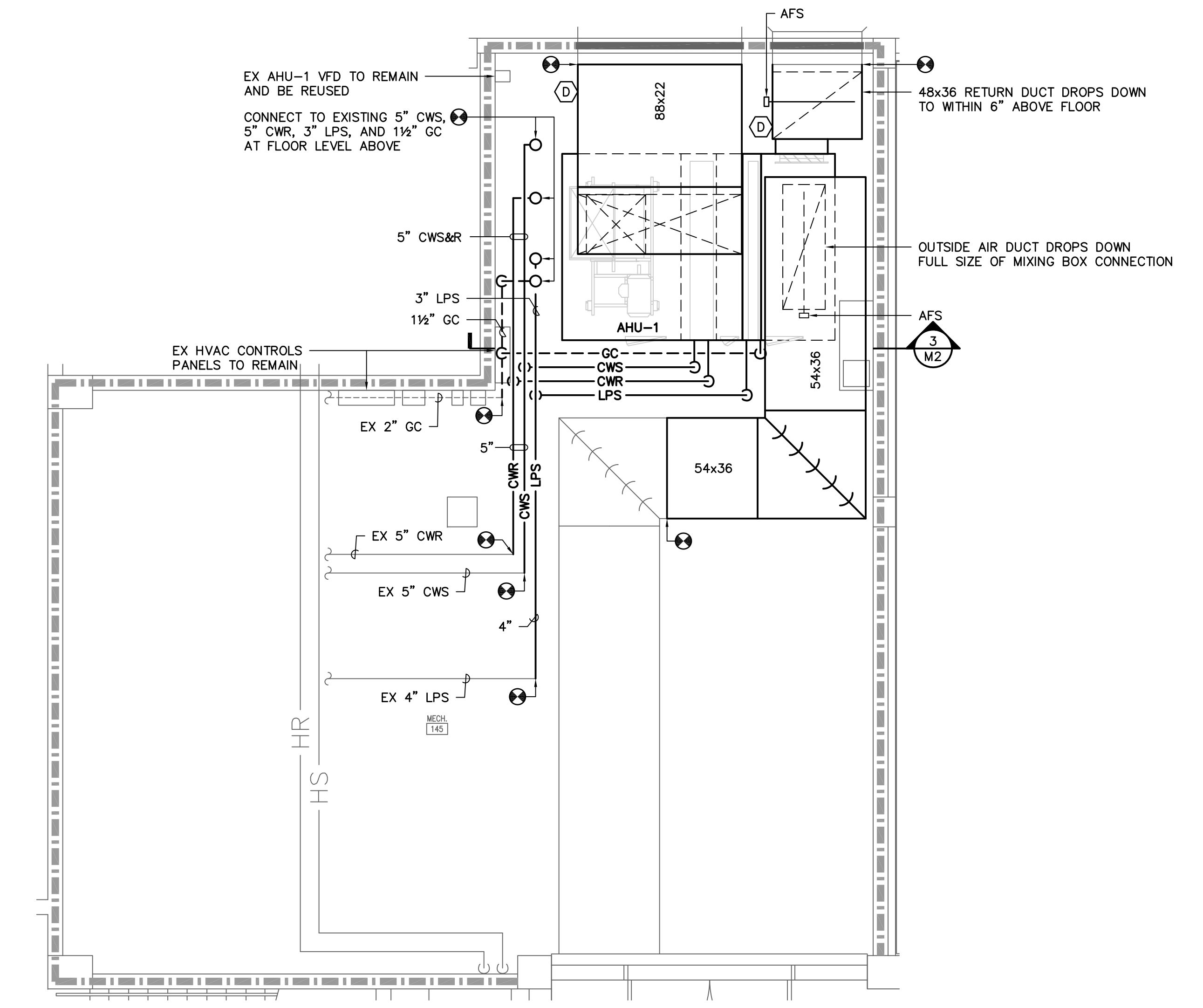
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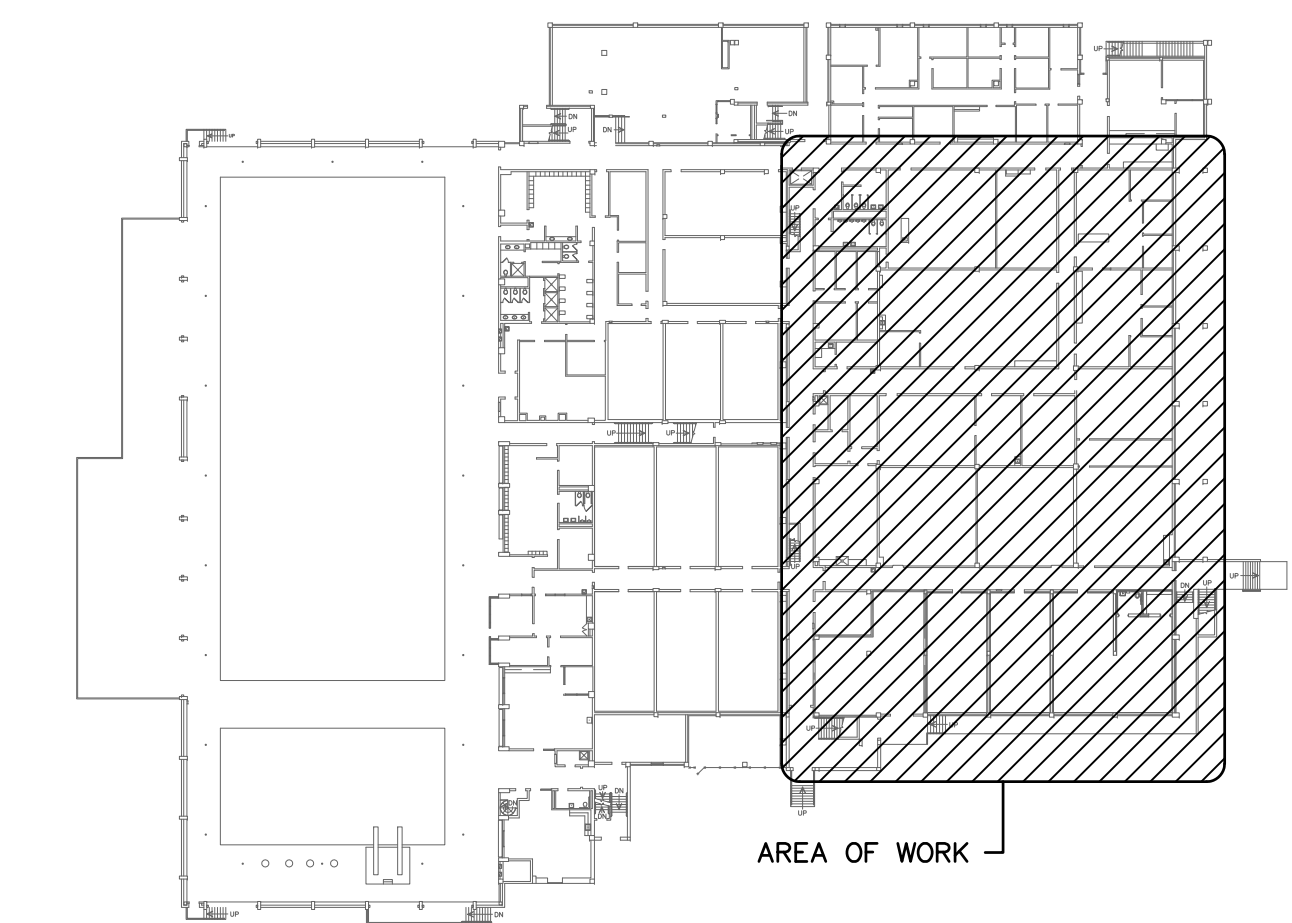
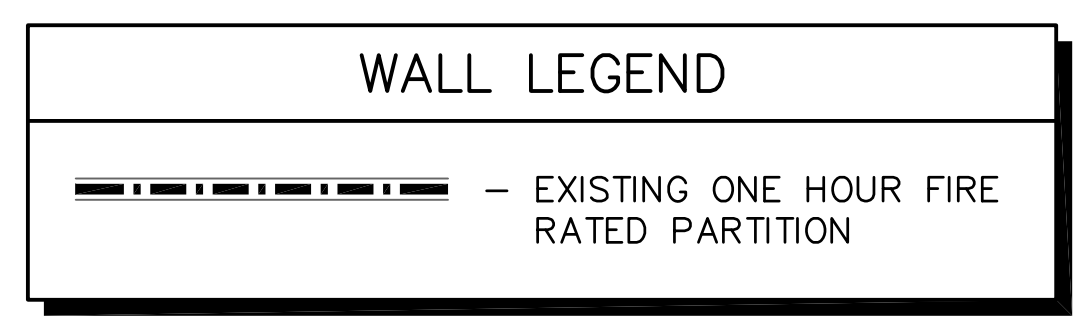
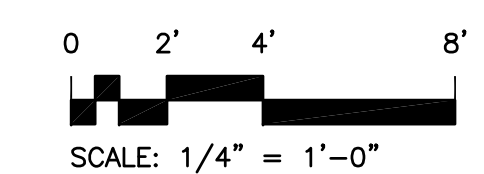
1 PARTIAL FIRST FLOOR RENOVATION PLAN
SCALE: 1/8" = 1'-0"



3 AHU-1 SECTION
NO SCALE



2 ENLARGED FIRST FLOOR MECHANICAL ROOM RENOVATION PLAN
SCALE: 1/4" = 1'-0"

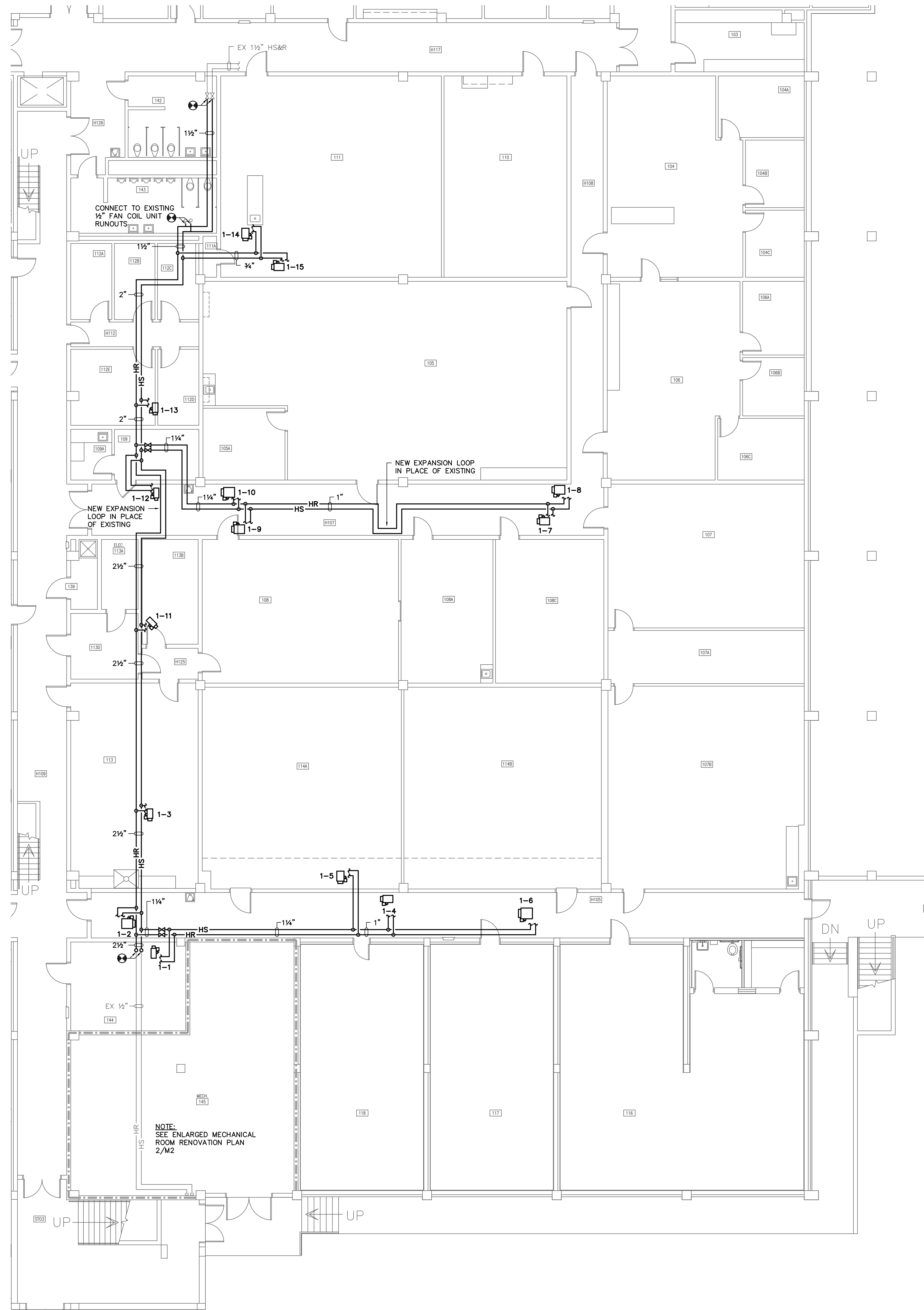


KEY PLAN - FIRST FLOOR - 138
NO SCALE

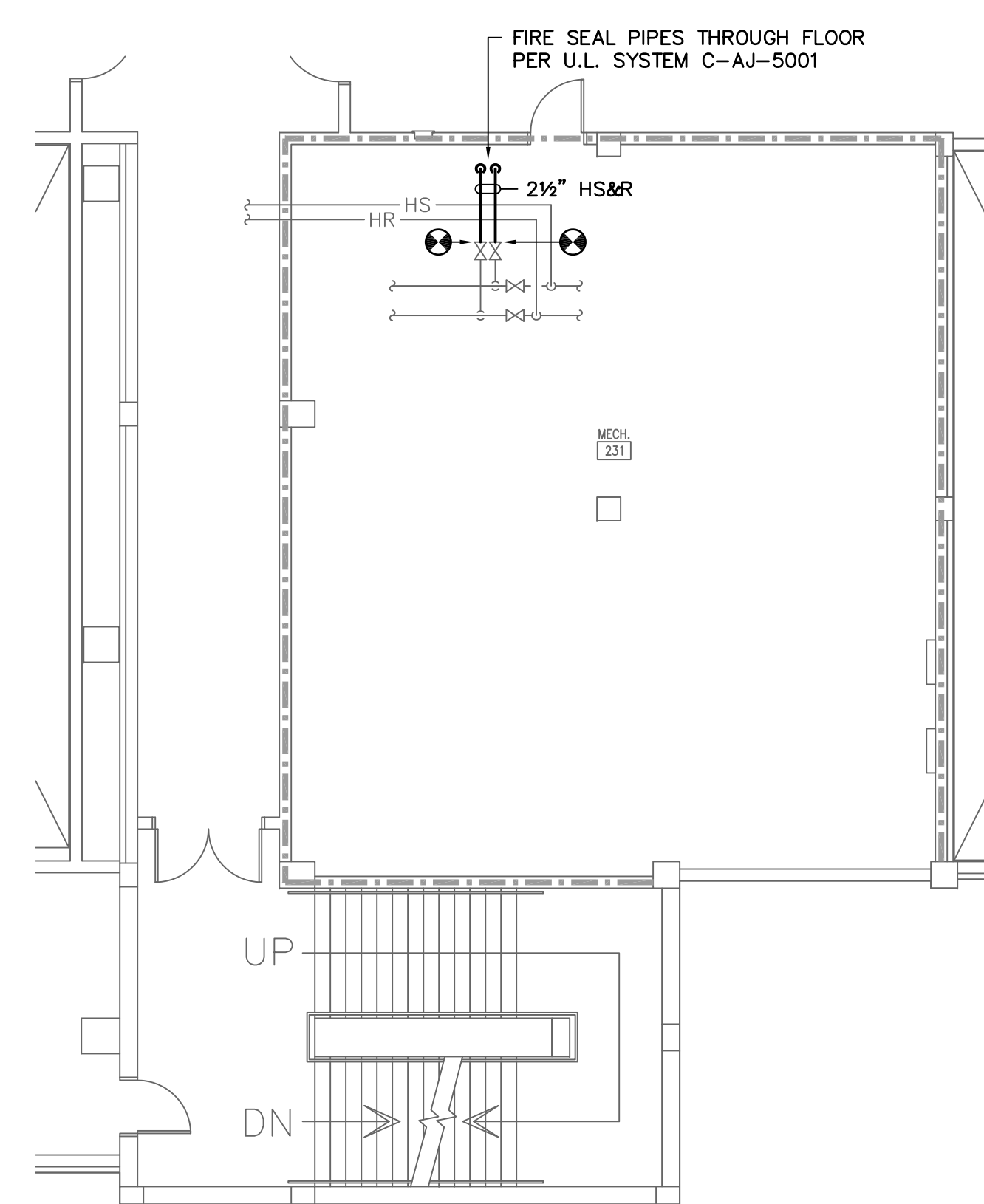
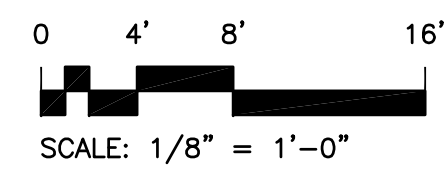
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CHECKED BY: BJJ	DRAWN BY: BJJ
ORIG. BY: BJJ	DATE: 23MAY17
DRAWING: 16385-M2	DATE: 23MAY17
PROJECT TITLE: BLATT PE CENTER - REPLACE AHU#1	DESCRIPTION: MECHANICAL ROOM RENOVATION
STATE PROJECT NO.: H27-N236-CB	
University of South Carolina	
SHEET: M2	OF 4
SHEET IN SET: OF	

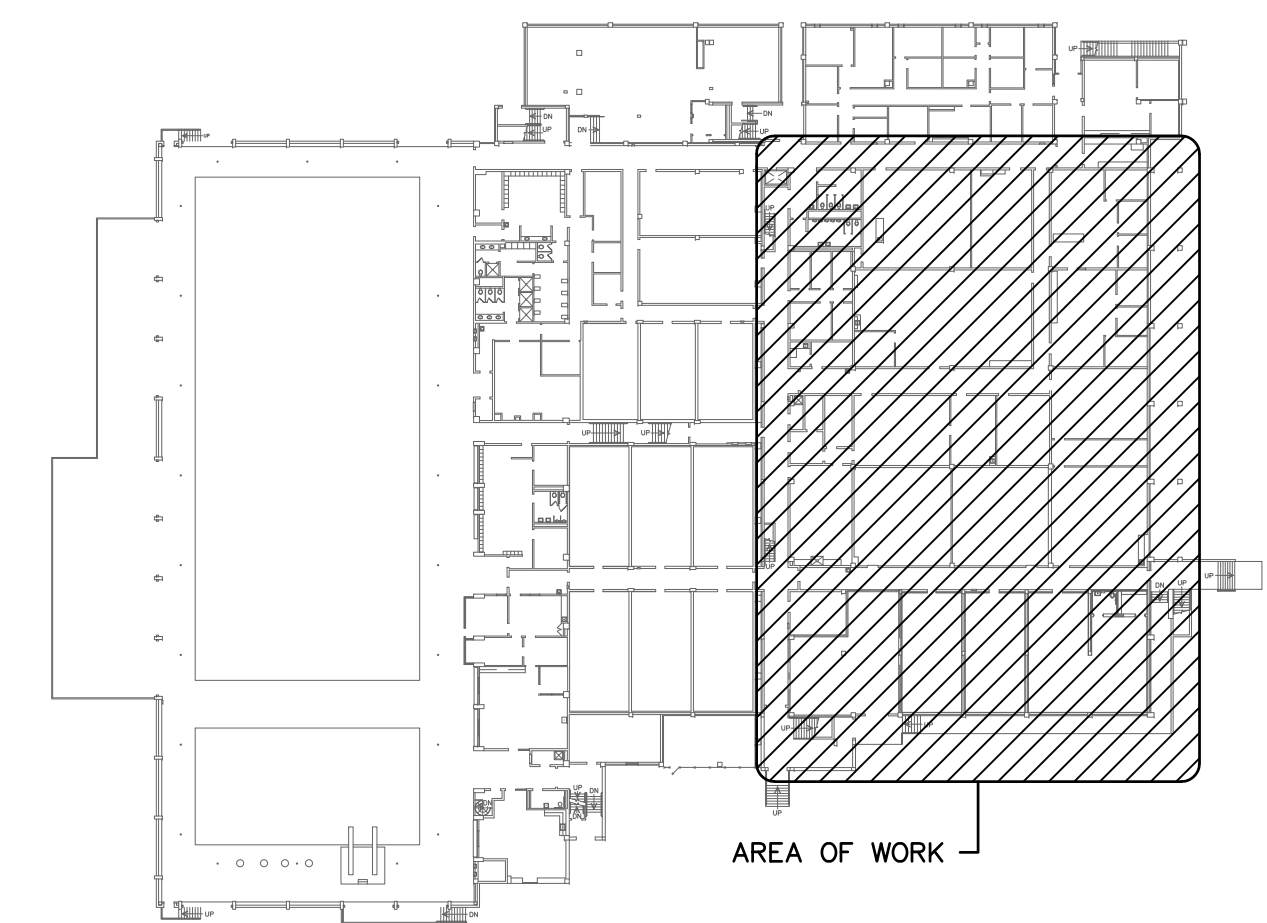
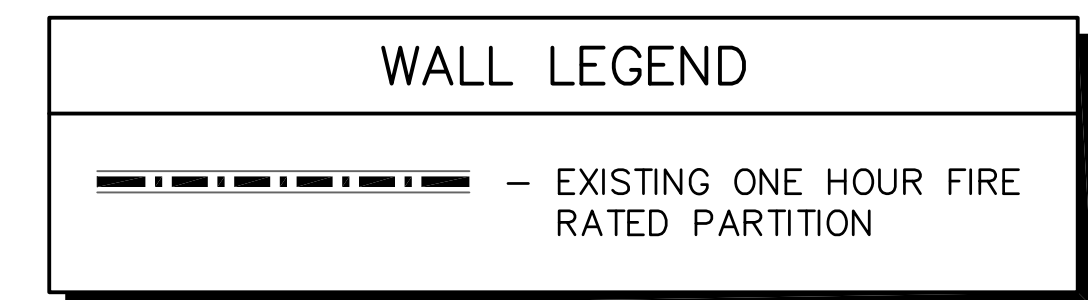
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1 PARTIAL FIRST FLOOR RENOVATION PLAN
M3 SCALE: 1/8" = 1'-0"



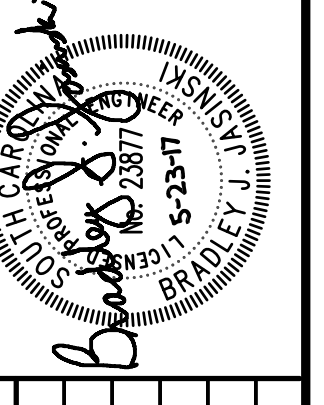
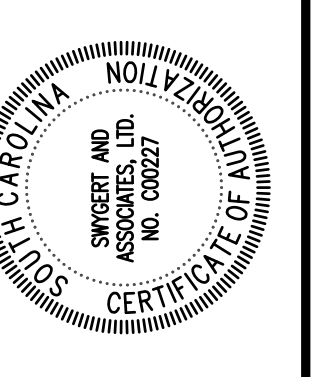
2 PARTIAL SECOND FLOOR RENOVATION PLAN
M3 SCALE: 1/8" = 1'-0"



KEY PLAN - FIRST FLOOR - 138
NO SCALE

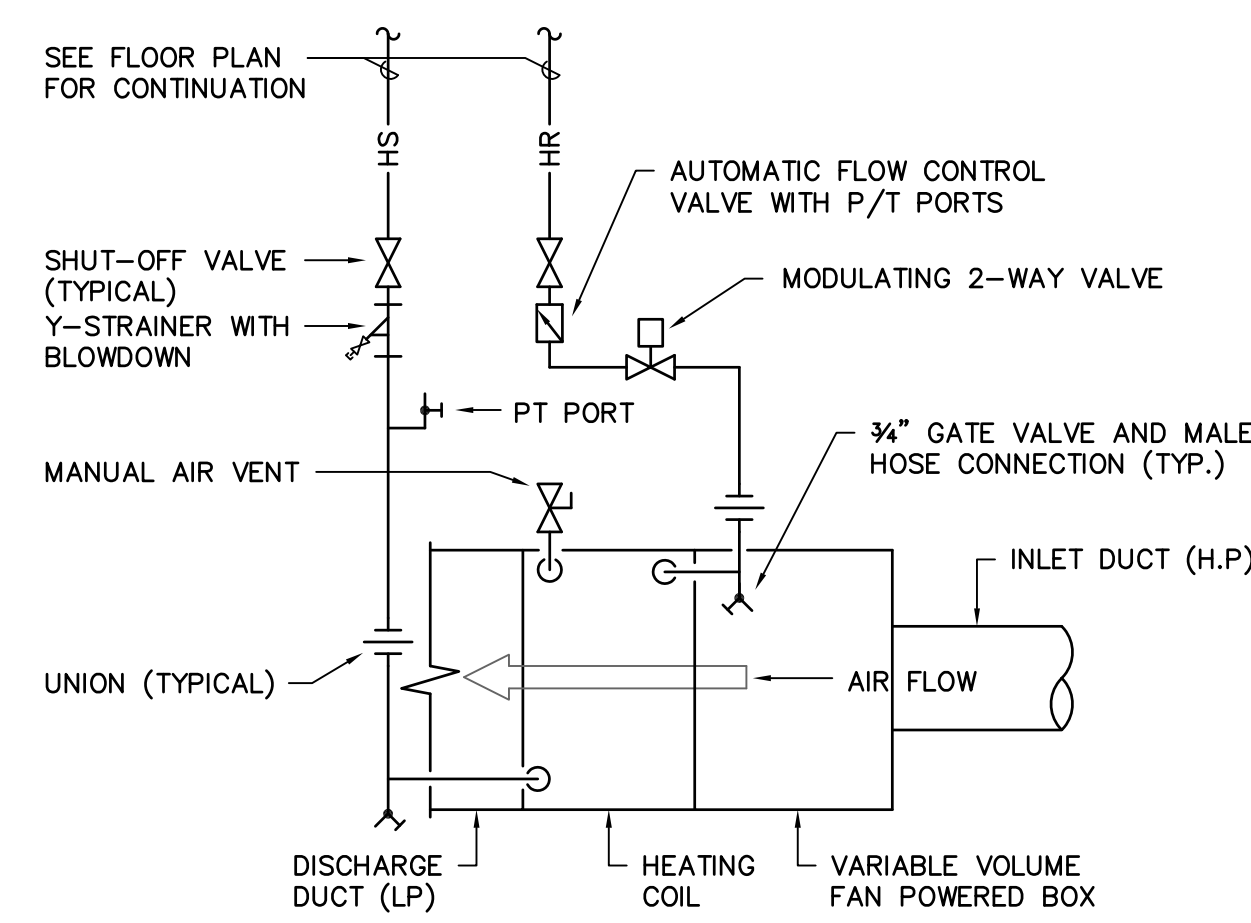
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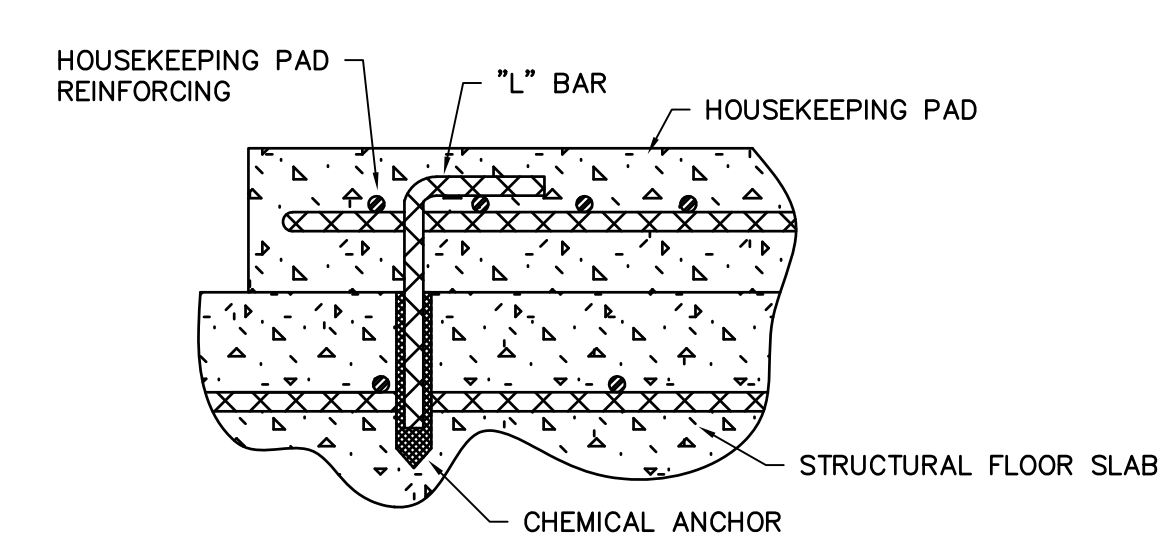


PROJECT TITLE:	BLATT PE CENTER - REPLACE AHU#1
STATE PROJECT NO.:	H27-N236-CB
BUILDING:	138
DRAWING:	16385-M3
DATE:	23MAY17
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CHECKED BY:	BJJ
DATE:	
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DATE:	

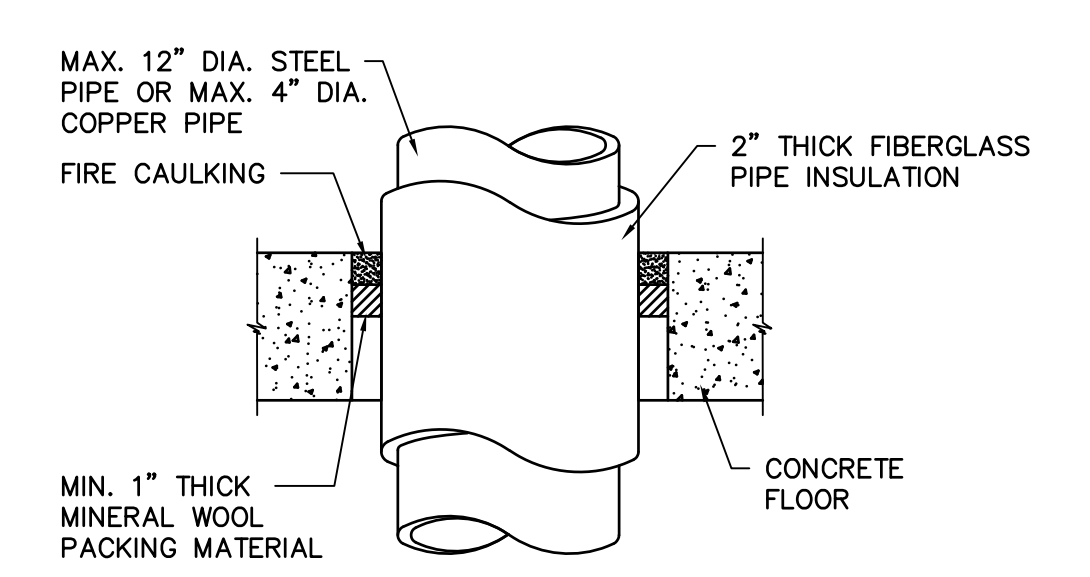
University of South Carolina
SHEET: M3
OF 4
SHEET IN SET: OF



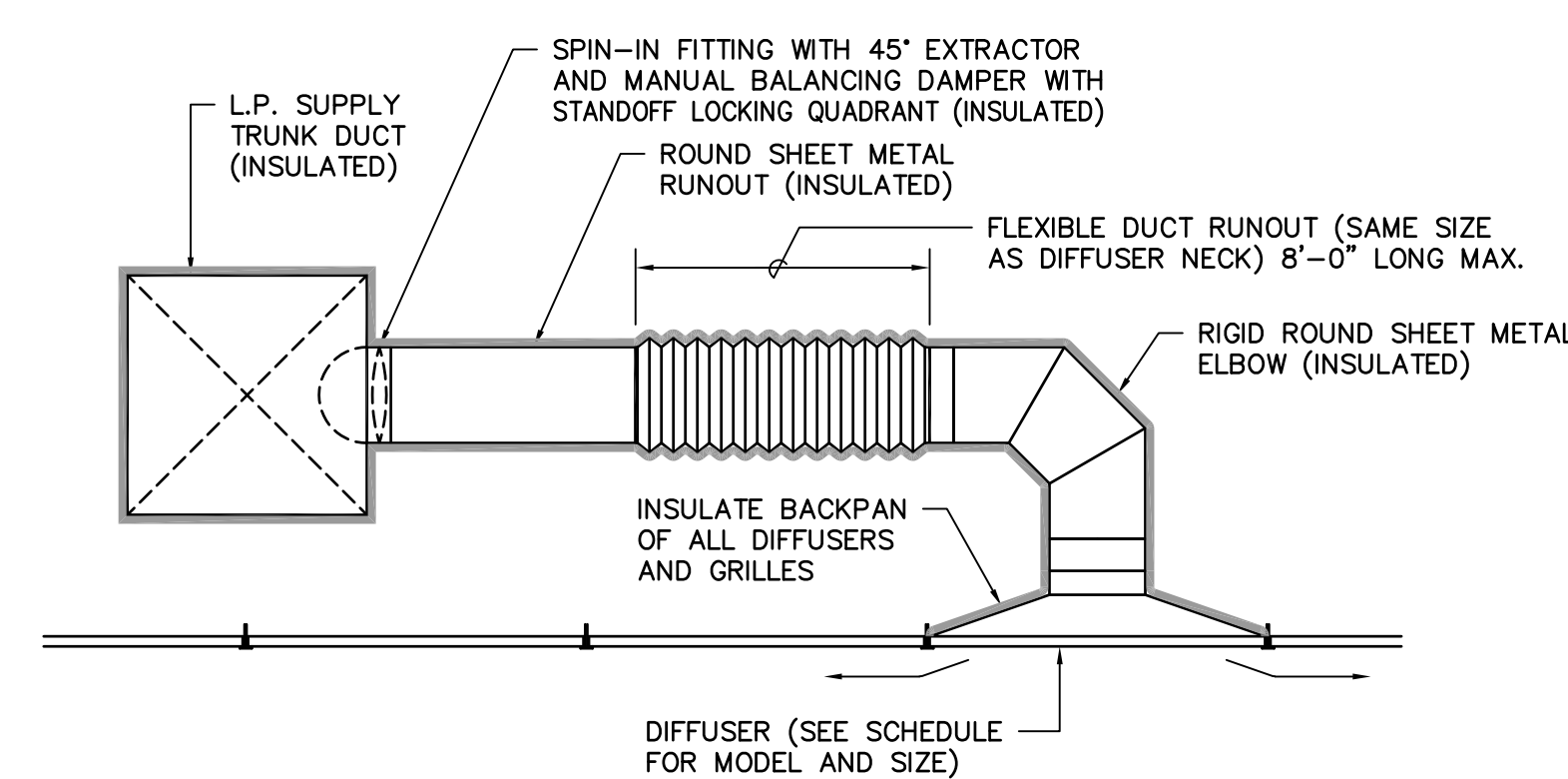
HEATING COIL PIPING DETAIL
NO SCALE



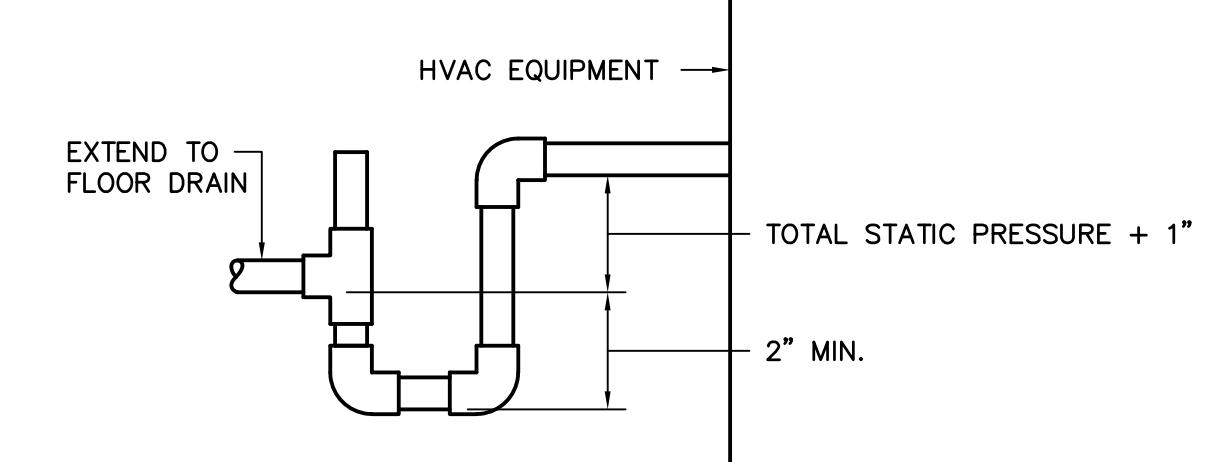
HOUSEKEEPING PAD DETAIL
NO SCALE



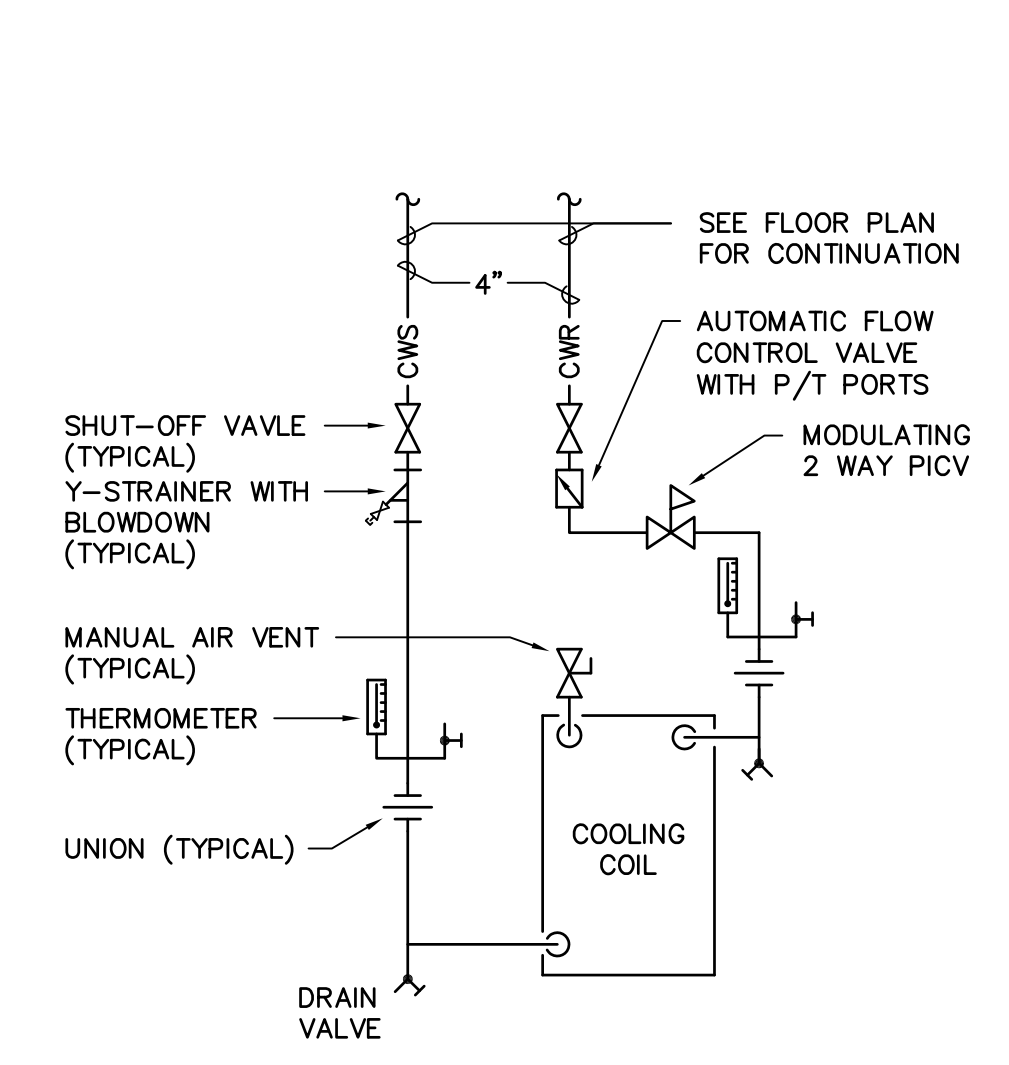
U.L. SYSTEM C-AJ-5001 DETAIL
NO SCALE



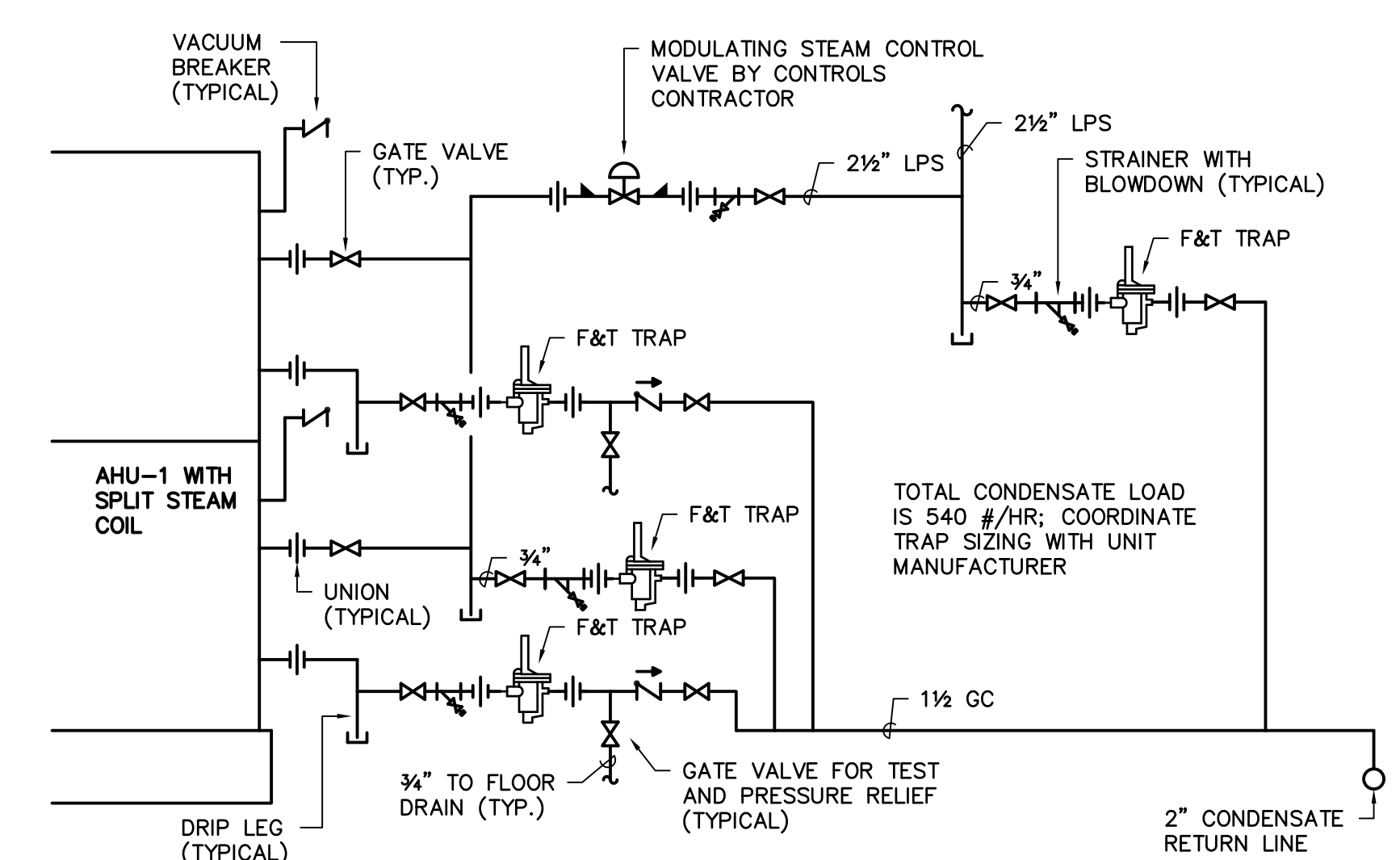
CEILING DIFFUSER DETAIL
NO SCALE



CONDENSATE DRAIN DETAIL
NO SCALE



AHU-1 COOLING COIL PIPING DETAIL
NO SCALE



AHU-1 STEAM COIL PIPING DETAIL
NO SCALE

TAG	TRANE MODEL	TOTAL CFM	OUTDOOR AIR-CFM	ESP IN. WG	BRAKE H.P.	MOTOR H.P.	STEAM HEATING COIL			COOLING COIL			FACE VEL. MAX-FPM	REMARKS	
							EADB	LADB	STEAM LBS./HR.	EADB/WB	LADB/WB	GPM			
										(GROSS)					
AHU-1	PCC 35	16,000	4,000	2.0	14.3	15	40	70	540	80.0/67.0	54.4/54.1	106	7.4	500	1-8

1. UNIT SELECTION SHALL INCLUDE 0.62" FILTER LOAD AND 3% BELT AND DRIVE LOSSES.
 2. ENTERING CHILLED WATER TEMPERATURE SHALL BE 45F AND THE WATER TEMPERATURE RISE SHALL BE 12F.
 3. STEAM PRESSURE SHALL BE 2 P.S.I.
 4. PROVIDE MIXING BOX AND FILTER SECTION WITH TWO INCH MERV 8 FILTERS, 2 EXTRA SETS OF FILTERS, AND WITH AIRFLOW MEASURING STATIONS FOR RETURN AND OUTSIDE AIR PROVIDED BY THE CONTROLS CONTRACTOR.
 5. PROVIDE DUCT SMOKE DETECTORS COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM AND WIRED TO SHUT THE UNIT DOWN UPON SENSING PRODUCTS OF COMBUSTION.
 6. FAN SECTION TO BE INTERNALLY ISOLATED WITH EXTENDED LUBE LINES.
 7. PROVIDE UNIT MOUNTED FUSIBLE DISCONNECT SWITCH.
 8. AIR HANDLER SHALL BE HORIZONTAL DRAW THRU. CONFIGURATION SHALL BE MIXING & FILTER/STEAM COIL/ACCESS/CW COIL/FAN.

TAG	TRANE MODEL	AIR INLET (NOM. DIA.)	CFM	HEATING COIL			COIL FLUID P.D. FT. W.G.	RUNOUTS	MAX. UNIT A.P.D. INCHES W.G.	REMARKS		
				MAX./MIN.	HEATING MBH	EAT(F)					LA(T)	GPM
1-1	VCWF	05	200/60	100	6.0	55	110	0.5	0.5	3/4"	0.04	1,2
1-2	VCWF	14	1,900/570	950	38.9	55	93	2.6	1.8	3/4"	0.14	1,2
1-3	VCWF	08	700/210	350	13.4	55	90	0.9	1.8	3/4"	0.21	1,2
1-4	VCWF	10	1,200/360	600	22.8	55	90	1.6	6.2	3/4"	0.31	1,2
1-5	VCWF	10	1,000/300	500	20.5	55	93	1.4	5.2	3/4"	0.22	1,2
1-6	VCWF	16	2,400/720	1,200	49.3	55	93	3.3	3.1	3/4"	0.15	1,2
1-7	VCWF	10	1,200/360	600	22.8	55	90	1.6	6.2	3/4"	0.31	1,2
1-8	VCWF	12	1,350/400	675	27.5	55	93	1.9	1.9	3/4"	0.22	1,2
1-9	VCWF	12	1,400/420	700	28.1	55	92	1.9	1.9	3/4"	0.24	1,2
1-10	VCWF	14	1,900/570	950	38.9	55	93	2.6	1.8	3/4"	0.14	1,2
1-11	VCWF	05	300/90	150	7.1	55	98	0.5	0.5	3/4"	0.08	1,2
1-12	VCWF	05	200/60	100	6.0	55	110	0.5	0.5	3/4"	0.04	1,2
1-13	VCWF	08	800/240	400	14.4	55	88	1.0	2.0	3/4"	0.26	1,2
1-14	VCWF	10	1,200/360	600	22.8	55	90	1.5	6.2	3/4"	0.31	1,2
1-15	VCWF	10	900/270	450	19.3	55	95	1.3	4.7	3/4"	0.19	1,2

1. HEATING COIL SELECTION BASED ON 180F EWT WITH 30F DROP.
 2. PROVIDE FACTORY MOUNTING OF CONTROLS BY JOHNSON CONTROLS.

TAG	DESCRIPTION	MANUFACTURER	MODEL	FRAME	CFM	NECK SIZE	FACE SIZE	MAX NC	REMARKS
(A)	SIDEWALL SUPPLY	PRICE	620	SURFACE	200	10"x8"	12"x10"	30	1,2,3
(B)	SIDEWALL SUPPLY	PRICE	620	SURFACE	500	18"x8"	20"x10"	30	1,2,3
(C)	SQ. CONE SUPPLY	PRICE	ASCD	LAY-IN	0-125	6"φ	24"x24"	30	1,2
(D)	SQ. CONE SUPPLY	PRICE	ASCD	LAY-IN	126-225	8"φ	24"x24"	30	1,2

1. PROVIDE WITH STANDARD WHITE FINISH.
 2. PROVIDE ALUMINUM OR ALUMINIZED STEEL CONSTRUCTION.
 3. PROVIDE WITH DOUBLE DEFLECTION BLADES WITH FRONT BLADES PARALLEL TO SHORT DIMENSION.
 4. PROVIDE WITH OPPOSED BLADE DAMPER.

RISK CATEGORY = II		SEISMIC DESIGN CATEGORY = D		
EQUIPMENT TAG	COMPONENT IP	ISOLATION SPECIFICATION	SEISMIC REST. SPECIFICATION	ISOLATION DEFLECTION
AIR HANDLING UNITS (FLOOR)	1.0	INTERNAL BY MANUFACTURER	NOTE 1,2	2"
VAV (NON-FAN) < 75 LBS	1.0	NONE	NONE	N/A
VAV (NON-FAN) > 75 LBS	1.0	NONE	SPEC SC	N/A
AIR DISTRIBUTION ≥ 20 LBS	1.0	NONE	TWO 12 GA WIRE TO STRUCTURE	N/A
AIR DISTRIBUTION < 20 LBS	1.0	NONE	NOTE 3	N/A

1. ANCHOR BOLTS FOR NON-ISOLATED AND INTERNALLY ISOLATED EQUIPMENT SHALL BE SIZED BY THE SEISMIC RESTRAINT SUPPLIER. IF REQUIRED, SPEC. SL SHUBBERS OR SPEC. SC CABLE KITS SHALL BE PROVIDED.
 2. PADS REINFORCED AND DOWELED IN ACCORDANCE WITH ASHRAE SEISMIC GUIDELINES.
 3. DIFFUSERS WEIGHING LESS THAN 20 LBS MUST BE MECHANICALLY ATTACHED TO CEILING GRID, BUT REQUIRE NO ADDITIONAL RESTRAINT.

- ELECTRICAL NOTES**
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH NEC.
 - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING EX. AHU-1 AND REMOVING THE EXISTING BRANCH CIRCUIT BACK TO EX. WALL MOUNTED VFD. PROVIDE NEW BRANCH CIRCUIT IN 1" EMT FROM EX. VFD TO NEW AHU-1 CONNECTION POINT. PROVIDE FLEXIBLE METAL CONDUIT (MAX. 6'-0" LENGTH) FOR CONNECTION TO UNIT.
 - THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING EXISTING DUCT SMOKE DETECTORS FROM FIRE ALARM SYSTEM AND STORING DETECTORS IN A CLEAN AND DRY LOCATION DURING DEMOLITION PHASE. DETECTORS SHALL BE REINSTALLED AND RECONNECTED TO FIRE ALARM SYSTEM AND HVAC CONTROLS FOR UNIT SHUTDOWN. TEST DETECTORS PER NFPA 72. COORDINATE ALL FIRE ALARM WORK WITH TODD GRIFFIN AT USC.
 - THE HVAC CONTROLS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A 120V 20A CIRCUIT IN 3/4" EMT TO EACH NEW VAV BOX. PROVIDE MOTOR-RATED TOGGLE SWITCH AT EACH VAV BOX AND FLEXIBLE METAL CONDUIT (MAX. 6'-0" LENGTH) FOR CONNECTION TO UNIT.

- GENERAL NOTES**
- VISIT SITE PRIOR TO BIDDING. THIS CONTRACTOR SHALL DETERMINE DIFFICULTY OF INSTALLATION AND REFLECT THIS IN HIS BIDDING.
 - DO NOT SCALE DRAWINGS. THIS CONTRACTOR SHALL VERIFY ALL EXISTING ITEMS AND LOCATIONS IN THE FIELD.
 - EXISTING PIPE, DUCTWORK, CONDUIT, ETC THAT INTERFERES WITH THE ROUTING OF NEW SYSTEMS SHALL BE RELOCATED. THIS CONTRACTOR SHALL INCLUDE THE COST OF SUCH IN HIS BID UNLESS NOTED OTHERWISE.
 - WATER SYSTEMS SHALL BE DRAINED BY THIS CONTRACTOR AS REQUIRED FOR INSTALLATION OF WORK. UPON COMPLETION, SYSTEM SHALL BE FILLED WITH WATER AND VENTED OF ALL AIR.
 - ALL PIPING AND DUCTWORK INSULATION SHALL BE RUN CONTINUOUSLY THROUGH FLOORS, ROOFS AND PARTITIONS.
 - ALL PIPING IS SHOWN DIAGRAMMATIC. HOWEVER, THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED FITTINGS, PIPING AND INSULATION FOR ALL OFFSETS AND/OR CHANGES IN ELEVATION.
 - ALL WATER PIPING SHALL PITCH DOWN IN DIRECTION OF FLOW ONE-INCH PER FIFTY FEET WITH MANUAL AIR VENTS AT ALL HIGH POINTS AND 3/4-INCH DRAIN VALVES WITH STANDARD HOSE CONNECTION AT ALL LOW POINTS.
 - ALL VALVES AND SPECIALTIES SHALL BE LINE SIZE UNLESS NOTED OTHERWISE. USE ECCENTRIC REDUCERS ON AUTOMATIC VALVES AS REQUIRED.
 - MINIMUM PIPE SIZE SHALL BE 3/4-INCH UNLESS INDICATED OTHERWISE.
 - ALL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE 2012 IMC AND FURTHER SUPPORTS OR HANGERS SHALL BE PROVIDED TO PREVENT WEIGHT OF PIPING BEING PLACED ON EQUIPMENT.
 - PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT.
 - ALL ITEMS OF EQUIPMENT IN MECHANICAL ROOM SHALL BE LOCATED ON REINFORCED CONCRETE FOUNDATIONS, MINIMUM 6-INCH THICK AND 6 INCHES LARGER THAN EQUIPMENT IN EACH DIRECTION. PADS SHALL BE REINFORCED PER THE HOUSEKEEPING PAD SECTION OF THE ASHRAE PRACTICAL GUIDE FOR SEISMIC RESTRAINT. ALL UNITS SHALL BE SECURED TO THE HOUSEKEEPING PAD WITH SEISMIC RESTRAINTS. PROVIDE 1-INCH CHAMFERS ON ALL SIDES.
 - INSTALL ALL VAV BOXES WITHIN 24" OF CEILING TO ALLOW FOR SERVICE ACCESS.
 - THIS CONTRACTOR SHALL PROVIDE ALL ITEMS OF MISCELLANEOUS STEEL AS REQUIRED FOR INSTALLATION OF ALL MECHANICAL ITEMS.
 - CONTACT JOHNSON CONTROLS FOR CONTROLS AND WIRING. ALL NEW CONTROLS SHALL BE DDC, INCLUDING SENSORS, CONTROLLERS AND CONTROL VALVES. NEW VAV BOXES WILL INCLUDE NEW CONTROLLERS AND SENSORS, BUT WILL NOT BE CONNECTED TO THE CENTRAL ENERGY MANAGEMENT SYSTEM. CONTROLLERS WILL BE COMPATIBLE FOR CONNECTION AT A FUTURE DATE. CONTROL WIRING SHALL BE RUN IN EMT CONDUIT AND SHALL BE PLENUM RATED CABLE, IN A PROTECTIVE COVER.
 - LOCATE ALL SPACE CONTROL INSTRUMENTS 4'-0" ABOVE FINISHED FLOOR TO TOP OF DEVICE.
 - THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY DISMANTLING OF EQUIPMENT TO BE REMOVED. ITEMS REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.
 - THIS CONTRACTOR SHALL PATCH ALL WALLS AND FINISHES TO MATCH EXISTING WHERE ALL ITEMS OR EQUIPMENT ARE REMOVED.

LEGEND

SYMBOL	DESCRIPTION
→ CWS →	CHILLED WATER SUPPLY LINE
← CWR ←	CHILLED WATER RETURN LINE
→ HS →	HOT WATER SUPPLY LINE
← HR ←	HOT WATER RETURN LINE
→ LPS →	LOW PRESSURE STEAM LINE
→ GC →	GRAVITY CONDENSATE LINE
○	BALL VALVE
○	CHECK VALVE
○	STRAINER WITH BLOWDOWN
○	UNION
○	PIPE TURNS TO, AWAY
○	THERMOMETER / PRESSURE GAGE
○	THERMOMETER WELL CAPPED / GAGE COCK
○	CONCENTRIC REDUCER
○	ECCENTRIC REDUCER
(A)100	TYPE "A" DIFFUSER, 100 CFM
100	EXISTING DIFFUSER BALANCED TO 100 CFM
(D)	DUCT SMOKE DETECTOR (FURNISHED BY ELECTRICAL)
(T)	THERMOSTAT
AFS	AIRFLOW MEASURING STATION
⊠	RECTANGULAR SUPPLY DUCTWORK
⊠	RETURN, EXHAUST, FRESH AIR DUCTWORK
48x24	48"x24" RECTANGULAR DUCT
○	CONNECTION POINT OF NEW TO EXISTING

- CEILING NOTES**
- CEILING WORK SHALL BE PERFORMED BY A CONTRACTOR NORMALLY EMPLOYED TO DO SUCH WORK.
 - WHERE REQUIRED FOR COMPLETION OF MECHANICAL AND ELECTRICAL WORK REMOVE AND SALVAGE EXISTING CEILING GRID AND TILES. RE-INSTALL EXISTING GRID, TILES, LIGHTS, AND ALL OTHER MISC. CEILING DEVICES AFTER WORK IS COMPLETE.
 - REPLACE DAMAGED CEILING GRID AND TILES TO MATCH EXISTING. DO NOT INSTALL OR RE-INSTALL NEW CEILING TILES ADJACENT TO EXISTING CEILING TILES. RELOCATE EXISTING CEILING TILES FROM OTHER ROOMS AS REQUIRED SO THAT THE ENTIRE CEILING OF EACH ROOM WILL EITHER HAVE NEW CEILING TILES OR EXISTING CEILING TILES TO PROVIDE A UNIFORM APPEARANCE IN EACH ROOM.
 - WHEN THE ENTIRE CEILING GRID IS REMOVED FROM A PARTICULAR ROOM, THE RE-INSTALLATION WITH NEW OR EXISTING GRID SHALL COMPLY WITH GRID MANUFACTURER'S REQUIREMENTS FOR SEISMIC DESIGN CATEGORY D. CEILING HEIGHTS AND GRID PATTERNS SHALL MATCH EXISTING.
 - ALL MATERIALS INSTALLED WITHIN CEILING PLENUM SPACES SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

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