GENERAL NOTES

- COORDINATE THE LOCATION OF DRAINS, THERMOSTATS, GAS OUTLETS, ETC., WITH ALL CASEWORK EQUIPMENT, MECHANICAL ROOM EQUIPMENT, ETC., PRIOR TO COMMENCING INSTALLATION. WORK NOT SO COORDINATED SHALL BE REMOVED AND PROPERLY INSTALLED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN THE COURSE OF THEIR WORK SO AS TO INSURE THAT THEY DO NOT INTERRUPT ANY EXISTING SERVICE. FOR SAFETY PURPOSES, PAY PARTICULAR ATTENTION TO THIS PRECAUTION RELATIVE TO NATURAL GAS AND ELECTRICAL LINES. VERIFY THE LOCATION, SIZE, TYPE, ETC., OF EACH UNDERGROUND OR OVERHEAD UTILITY. ALL WORK SHALL BE PERFORMED IN ACCORD WITH ALL FEDERAL, STATE AND/OR LOCAL RULES, REGULATIONS, STANDARD AND SAFETY REQUIREMENTS. UTILITIES SHALL BE INSTALLED IN ACCORD WITH THE APPLICABLE MUNICIPALITY OR UTILITY COMPANY STANDARDS. IN ALL CASES, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
- WHERE WORK IS REQUIRED ABOVE EXISTING LAY-IN, PLASTER OR GYPSUM BOARD CEILINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION (OR REPLACEMENT, IF DAMAGED) OF ALL CEILING OR TILE AND GRID MEMBERS NECESSARY TO PERFORM HIS WORK. NEW TILE AND GRID SHALL MATCH THE SURROUNDING AREAS. ALL PATCHING WORK SHALL MATCH ADJACENT SURFACES.
- ALL NEW WORK SHALL BE HUNG FROM STRUCTURE, NOT FROM THE WORK OF OTHER TRADES, WHETHER EXISTING OR NEW.
- PATCH, REPAIR AND PAINT OR PROVIDE WALL COVERING FOR (TO OWNER'S STANDARDS) EXISTING WALLS, CEILINGS, ETC., THAT ARE TO REMAIN IF DAMAGED DURING CONSTRUCTION. REPAIRS SHALL MATCH ADJACENT SURFACES TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
- OBSERVE ALL APPLICABLE CODES, RULES AND REGULATIONS THAT MAY APPLY TO THE WORK UNDER THIS CONTRACT. (CITY, COUNTY, LOCAL, FEDERAL, MUNICIPALITY, UTILITY COMPANY, COMMONWEALTH OF KENTUCKY, ETC.)
- CONTRACTOR SHALL BE AWARE OF UNSEEN PLUMBING, HVAC AND ELECTRICAL WORK DURING DEMOLITION. IF ITEMS ARE UNCOVERED DURING DEMOLITION THEN FIELD VERIFY THE USE OF THE ITEMS AND PLAN AN ALTERNATE ROUTE TO RUN THESE ITEMS. THEN CONTACT THE ENGINEERS TO REVIEW THE ROUTING.
- WHERE FIRE PROOFING IS SPRAYED ON EXISTING STRUCTURE ALL EXISTING CONDUITS, WATER, HYDRONIC, STEAM, CHILLED WATER, FIRE PROTECTION LINES, MED GAS, ETC. SHALL BE LOWERED TO BE BELOW FULL THICKNESS OF FIRE PROOFING WITH NO INTERFERENCE.
- ALL PENETRATIONS OF FIRE AND SMOKE RATED ASSEMBLIES SHALL BE APPROPRIATELY FIRE STOPPED PER AN APPROVED U.L. LISTED STANDARD. CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO INSULATED PIPING PENETRATIONS.
- ALL DUCTWORK, PIPING, CONDUITS, ETC. IN ROOMS WITH CEILINGS SHALL BE ABOVE CEILING EXCEPT AS NOTED.
- INSTALL AIR VENTS AT HIGH POINTS IN PIPING AND DRAINS IN LOW POINTS. USE CARE TO AVOID FREEZING OF EXTERIOR VENTS.
- LOCATIONS OF PIPING, DUCTS AND EQUIPMENT ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. DO NOT SCALE THE DRAWINGS.
- ALL OFFSETS IN DUCTS AND PIPING ARE NOT NECESSARILY SHOWN. PROVIDE ADDITIONAL OFFSETS WHERE NECESSARY.
- COORDINATE ALL HVAC WORK WITH ELECTRICAL, PLUMBING AND OTHER TRADES TO AVOID INTERFERENCE WITH PIPING, DUCTS, CONDUIT AND OTHER EQUIPMENT.
- INSTALL ALL PIPING, DUCTWORK AND EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTION. IF IN CONFLICT WITH THE DESIGN INDICATED IN CONTRACT DOCUMENTS, ADVISE THE ENGINEERS PRIOR TO INSTALLATION FOR CLARIFICATION. PROVIDE RECOMMENDED ACCESS AND SERVICE CLEARANCES FOR ALL EQUIPMENT.
- SEAL AIRTIGHT AROUND ALL DUCTS AND PIPING PENETRATIONS THROUGH WALLS, FLOORS AND ROOF. PROVIDE FIRE STOPPING IN FIRE PARTITION.
- SEAL ALL NEW DUCTWORK JOINTS WITH UNITED MCGILL, IRONGRIP 601 OR EQUAL WATER BASED SEALANT.
- ALL MOTOR DRIVEN EQUIPMENT SHALL BE INSTALLED WITH FLEXIBLE CONNECTIONS TO DUCTWORK, PIPING, ETC., UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL RELOCATE OR AVOID ANY EXISTING EQUIPMENT APPURTENANCES, ETC., THAT CONFLICT WITH NEW WORK.
- WHERE MOUNTING HEIGHTS ARE NOT INDICATED OR ARE IN CONFLICT WITH ANY OTHER BUILDING SYSTEM, CONTACT THE ENGINEERS BEFORE INSTALLATION. REFER ALSO TO ARCHITECTURAL WALL INTERIOR AND EXTERIOR WALL ELEVATIONS, CEILING HEIGHTS AND OTHER DETAIL OF THESE DOCUMENTS.
- DOUBLE WIDTH TURNING VANES SHALL BE INSTALLED IN ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK ELBOWS. TURNING VANES NOT REQUIRED FOR KITCHEN EXHAUSTS.
- ANY VIBRATING, OSCILLATING OR OTHER NOISE OR MOTION PRODUCING EQUIPMENT SHALL BE ISOLATED FROM SURROUNDING SYSTEMS IN AN APPROVED MANNER. NOISY OR STRUCTURALLY DAMAGING INSTALLATIONS SHALL BE SATISFACTORILY REPLACED OR REPAIRED AT THE INSTALLING CONTRACTOR'S EXPENSE. THE FINAL DECISION ON THE SUITABILITY OF A PARTICULAR INSTALLATION'S ACCEPTABILITY SHALL BE THAT OF THE ENGINEER.
- DEVIATIONS IN SIZE, CAPACITIES, FIT, FINISH, ETC. FOR EQUIPMENT FROM THAT USED AS BASIS OF DESIGN SHALL BE THE RESPONSIBILITY OF THE PURCHASER OF THAT EQUIPMENT. ANY PROVISIONS REQUIRED TO ACCOMMODATE A DEVIATION, WHETHER APPROVED BY THE ENGINEERS OR NOT, SHALL BE THE RESPONSIBILITY OF THE PURCHASER.
- VALVES, BALANCING DAMPERS OR ANY MECHANICAL/ELECTRICAL ITEM REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE A HARD CEILING. IF THIS IS NOT POSSIBLE, THEN AN APPROPRIATELY SIZED ACCESS DOOR SHALL BE PLACED UNDER THE ITEM TO ALLOW EASY MAINTENANCE AND ADJUSTMENT. ADDITIONALLY ALL SUCH ITEMS SHALL NOT BE LOCATED AN UNREASONABLE DISTANCE ABOVE THE CEILINGS. IN GENERAL ALL SUCH ITEMS UNLESS INDICATED OTHERWISE SHALL BE MOUNTED SIX TO TWELVE INCHES ABOVE THE CEILING. IF IN DOUBT, CONTACT ENGINEER PRIOR TO INSTALLING.
- ALL MANHOLES, VAULTS AND SIMILAR UNDERGROUND STRUCTURES SHALL HAVE THE TOP ELEVATION SET FLUSH WITH FINISHED GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
- WHEN RUNNING ANY TYPE OF PIPING BELOW A FOOTER, OR IN THE ZONE OF INFLUENCE THE PIPING SHALL BE BACKFILLED WITH CEMENTITIOUS FLOWABLE FILL PER SPECIFICATIONS. WHENEVER POSSIBLE, LOCATE PIPING OUTSIDE OF THE ZONE OF INFLUENCE. THE ZONE OF INFLUENCE IS THE AREA UNDER THE FOOTER WITHIN A 45 DEGREE ANGLE PROJECTING DOWN FROM THE BOTTOM EDGE OF THE FOOTER OF ALL SIDES OF THE FOOTER. ADDITIONALLY, GREASE TRAPS, MANHOLES, VAULTS AND OTHER UNDERGROUND STRUCTURES SHALL BE HELD AWAY FROM BUILDING WALLS FAR ENOUGH TO BE OUTSIDE OF THE ZONE OF INFLUENCE.

SYMBOLS AND ABBREVIATIONS

NOTE: NOT ALL SYMBOLS AND ABBREVIATIONS NECESSARILY USED ON THIS PROJECT.

	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	SLOT DIFFUSER
CA	COMPRESSED AIR
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT
OA	OUTSIDE AIR DUCT
EA	EXHAUST AIR DUCT
	VOLUME DAMPER
EA	EXHAUST AIR DUCT TURNING UP (SIMILAR FOR OTHER DUCT TYPES.)
EA	EXHAUST AIR DUCT TURNING DOWN (SIMILAR FOR OTHER DUCT TYPES.)
OR / OR / M M M	MOTORIZED DAMPER
	FLEXIBLE DUCT
T, T_S	THERMOSTAT, TEMPERATURE SENSOR
T	STEAM TRAP
V	VACUUM BREAKER
LPS (#)	LOW PRESSURE STEAM SUPPLY (#) INDICATES PRESSURE
MPS (#)	MED. PRESSURE STEAM SUPPLY (#) INDICATES PRESSURE
HPS (#)	HIGH PRESSURE STEAM SUPPLY (#) INDICATES PRESSURE
HPC	HIGH PRESSURE STEAM CONDENSATE
MPC	MEDIUM PRESSURE STEAM CONDENSATE
LPC	LOW PRESSURE STEAM CONDENSATE
PD	STEAM CONDENSATE PUMP DISCHARGE
R	REFRIGERANT
CS	COOLING TOWER (CONDENSER WATER) SUPPLY
CR	COOLING TOWER (CONDENSER WATER) RETURN
CD	CONDENSATE DRAIN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
FSD	FIRE/SMOKE DAMPER WITH ACCESS DOOR
FD	FIRE DAMPER WITH ACCESS DOOR
SD	SMOKE DAMPER WITH ACCESS DOOR
	PIPE ELBOW TURNING UP/TURNING DOWN
S-1 XXX	AIR DISTRIBUTION DEVICE DESIGNATOR XXX INDICATES CFM
	CONNECT TO EXISTING (VERIFY EXACT LOCATION)
	BALANCING VALVE
	TWO WAY CONTROL VALVE (CONTROL VALVE GENERAL)
	CONTROL VALVE (3-WAY)
	BUTTERFLY VALVE
	TRIPLE DUTY VALVE
	UNION
	PETE'S PLUG
	CHECK VALVE
	DOUBLE CHECK VALVE ASSEMBLY
	STRAINER
	O S & Y VALVE (GATE)
	PRESSURE REDUCING VALVE (STEAM, GAS, WATER, ETC.)
	BALL VALVE
OR	SAFETY RELIEF VALVE
	GLOBE VALVE
	MANUAL AIR VENT (AUTOMATIC AIR VENT WITH CIRCLE)
PSD	PUMP SUCTION DIFFUSER
	THERMOMETER
PS	PRESSURE SWITCH
TS	TAMPER SWITCH
FS	FLOW SWITCH
AD	ACCESS DOOR IN BOTTOM OF DUCT
AD	ACCESS DOOR IN SIDE OF DUCT
E(NAME)	EXISTING PIPING OR DUCTWORK (THIN LINE)
ABAN(NAME)	ABANDONED EXISTING PIPING (THIN SOLID LINE)
	PIPING TEE (TURNED UP/DOWN)
	LIMIT OF DEMOLITION
	EXISTING DUCT OR PIPING TO BE REMOVED
	MECHANICAL EQUIPMENT DESIGNATOR

H	HUMIDISTAT
P	PRESSURE GAUGE & COCK
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
CAV	CONSTANT AIR VOLUME REHEAT BOX
CD	CONDENSATE DRAIN
C.I.	CAST IRON
DN	DOWN
FD	FIRE DAMPER
ID	INSIDE DIMENSION
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIMENSION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OR	OPEN RECEPTACLE
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE (STEAM, WATER, OR GAS)
PSI	POUNDS PER SQUARE INCH
SD	SMOKE DAMPER
TB	THRUST BLOCK
TE	TOP ELEVATION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME REHEAT BOX
VFD	VARIABLE FREQUENCY DRIVES

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MECHANICAL LEGEND

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M1.0

Drawing file: F:\ACAD\UKA12\HVAC\UKA12 - M1.0.dwg
Day & Time: May 03, 2013 - 8:46am
Login Name: carrie

1 HVAC DEMOLITION BASEMENT PLAN
1/8" = 1'-0"

HVAC DEMOLITION BASEMENT PLAN TAGGED NOTES

1 REMOVE EXISTING DRYER EXHAUST DUCT. PATCH AND REPAIR EXTERIOR WALL TO MATCH ADJACENT.
2 REMOVE EXISTING TRANSFER GRILLE

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HVAC DEMOLITION BASEMENT PLAN

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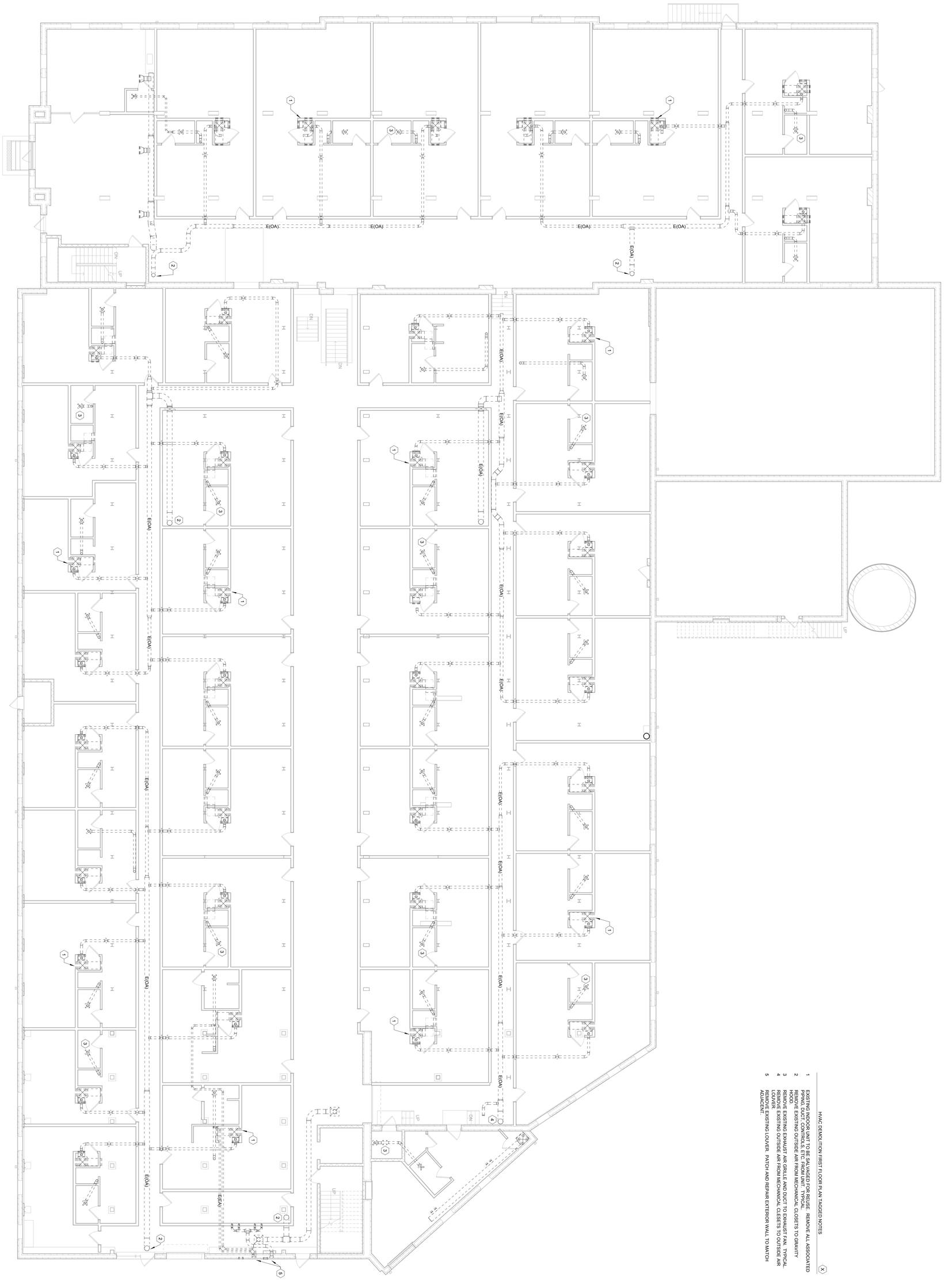

1 HVAC DEMOLITION FIRST FLOOR PLAN
1/8" = 1'-0"

HVAC DEMOLITION FIRST FLOOR PLAN TAGGED NOTES

1. EXISTING INDOOR UNIT TO BE SALVAGED FOR REUSE. REMOVE ALL ASSOCIATED PIPING, DUCT, CONTROLS, ETC. FROM UNIT. TYPICAL.
2. REMOVE EXISTING OUTSIDE AIR FROM MECHANICAL CLOSETS TO GRAVITY ROOF LOUVER
3. REMOVE EXISTING EXHAUST AIR GRILLE AND DUCT TO EXHAUST FAN. TYPICAL
4. REMOVE EXISTING OUTSIDE AIR FROM MECHANICAL CLESETS TO OUTSIDE AIR LOUVER
5. REMOVE EXISTING LOUVER. PATCH AND REPAIR EXTERIOR WALL TO MATCH ADJACENT.

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HVAC DEMOLITION FIRST FLOOR PLAN

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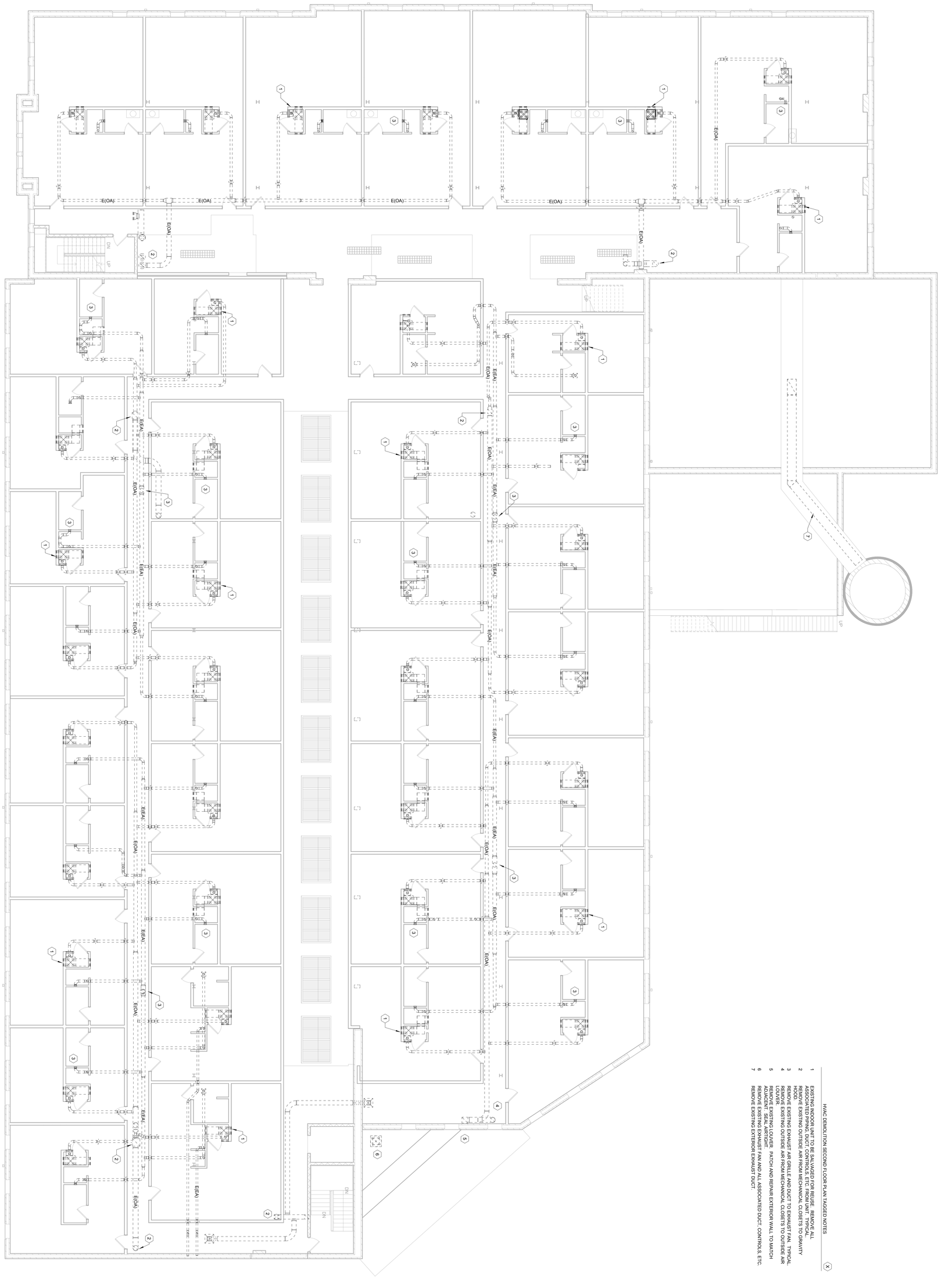
1 HVAC DEMOLITION SECOND FLOOR PLAN
1/8" = 1'-0"



HVAC DEMOLITION SECOND FLOOR PLAN TAGGED NOTES

1. EXISTING INDOOR UNIT TO BE SALVAGED FOR REUSE. REMOVE ALL ASSOCIATED PIPING, DUCT, CONTROLS, ETC. FROM UNIT. TYPICAL.
2. REMOVE EXISTING OUTSIDE AIR FROM MECHANICAL CLOSETS TO GRAVITY HOOD.
3. REMOVE EXISTING EXHAUST AIR GRILLE AND DUCT TO EXHAUST FAN. TYPICAL.
4. REMOVE EXISTING OUTSIDE AIR FROM MECHANICAL CLOSETS TO OUTSIDE AIR LOUVER.
5. REMOVE EXISTING LOUVER. PATCH AND REPAIR EXTERIOR WALL TO MATCH ADJACENT. SEAL AIRTIGHT.
6. REMOVE EXISTING EXHAUST FAN AND ALL ASSOCIATED DUCT, CONTROLS, ETC.
7. REMOVE EXISTING EXTERIOR EXHAUST DUCT.

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HVAC DEMOLITION SECOND FLOOR PLAN

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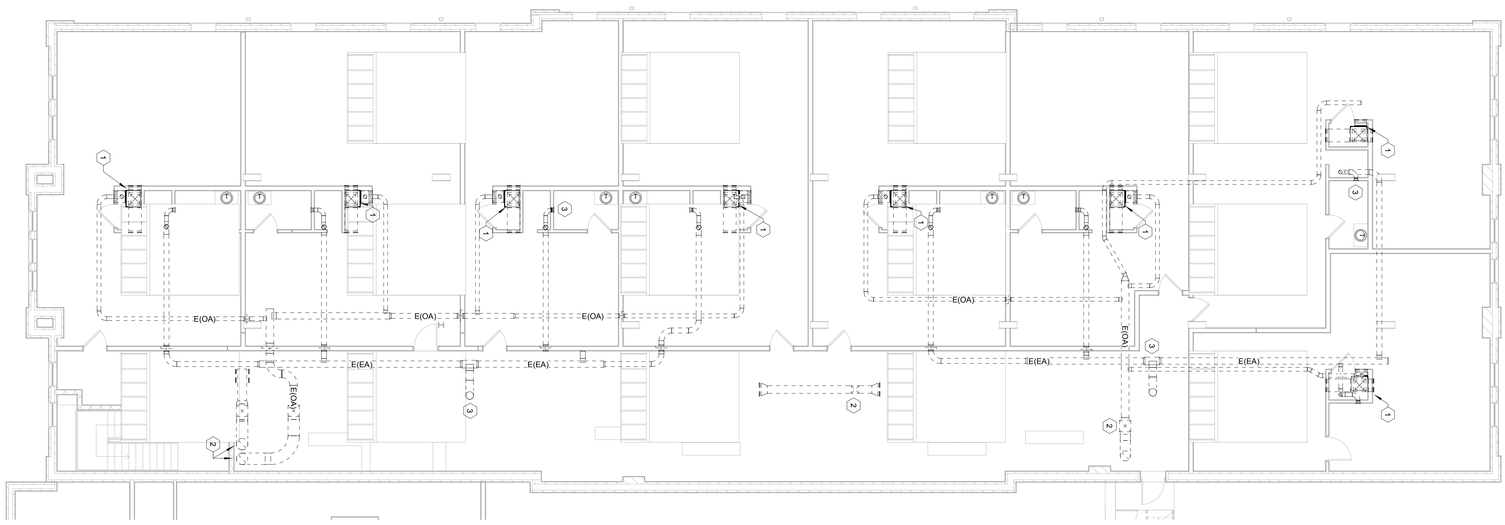
1 HVAC DEMOLITION THIRD FLOOR PLAN
1/8" = 1'-0"



HVAC DEMOLITION THIRD FLOOR PLAN TAGGED NOTES

1 EXISTING INDOOR UNIT TO REMAIN. REMOVE ALL ASSOCIATED PIPING, DUCT, CONTROLS, ETC. FROM UNIT. TYPICAL.
2 REMOVE EXISTING OUTSIDE AIR FROM MECHANICAL CLOSETS TO GRAVITY HOOD.
3 REMOVE EXISTING EXHAUST AIR GRILLE AND DUCT TO EXHAUST FAN. TYPICAL.

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HVAC DEMOLITION THIRD FLOOR PLAN

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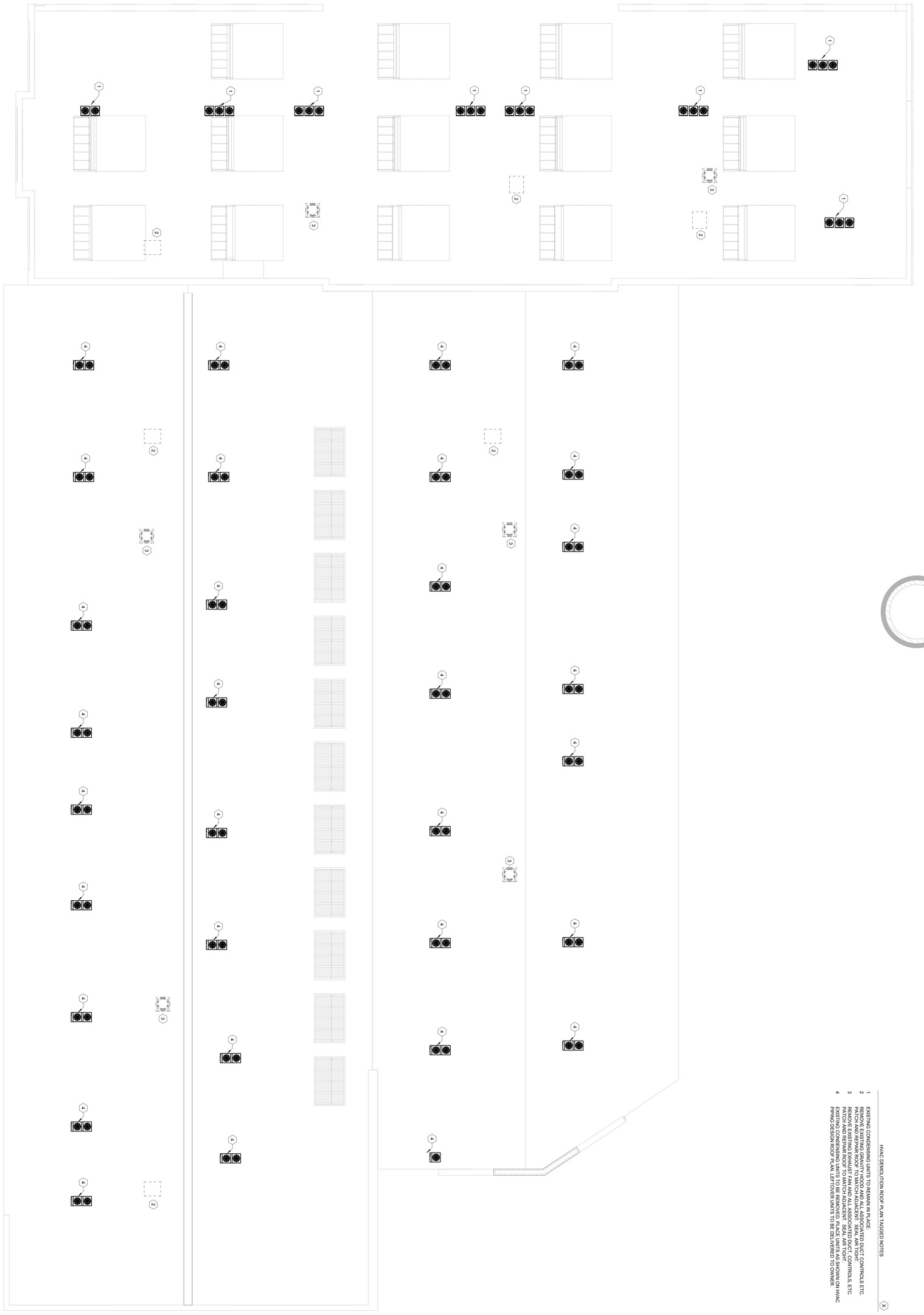
1 HVAC DEMOLITION ROOF PLAN
1/8" = 1'-0"



HVAC DEMOLITION ROOF PLAN TAGGED NOTES

1 EXISTING CONDENSING UNITS TO REMAIN IN PLACE.
2 REMOVE EXISTING GRAVITY HOOD AND ALL ASSOCIATED DUCT CONTROLS ETC. PATCH AND REPAIR ROOF TO MATCH ADJACENT. SEAL AIR TIGHT.
3 REMOVE EXISTING ROOF TOP EXHAUST FAN AND ALL ASSOCIATED CONTROLS. ETC. PATCH AND REPAIR ROOF TO MATCH ADJACENT. SEAL AIR TIGHT.
4 EXISTING CONDENSING UNITS TO BE REMOVED. PLACE UNITS AS SHOWN ON HVAC PIPING DESIGN ROOF PLAN. LEFT OVER UNITS TO BE DELIVERED TO OWNER.

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HVAC DEMOLITION ROOF PLAN

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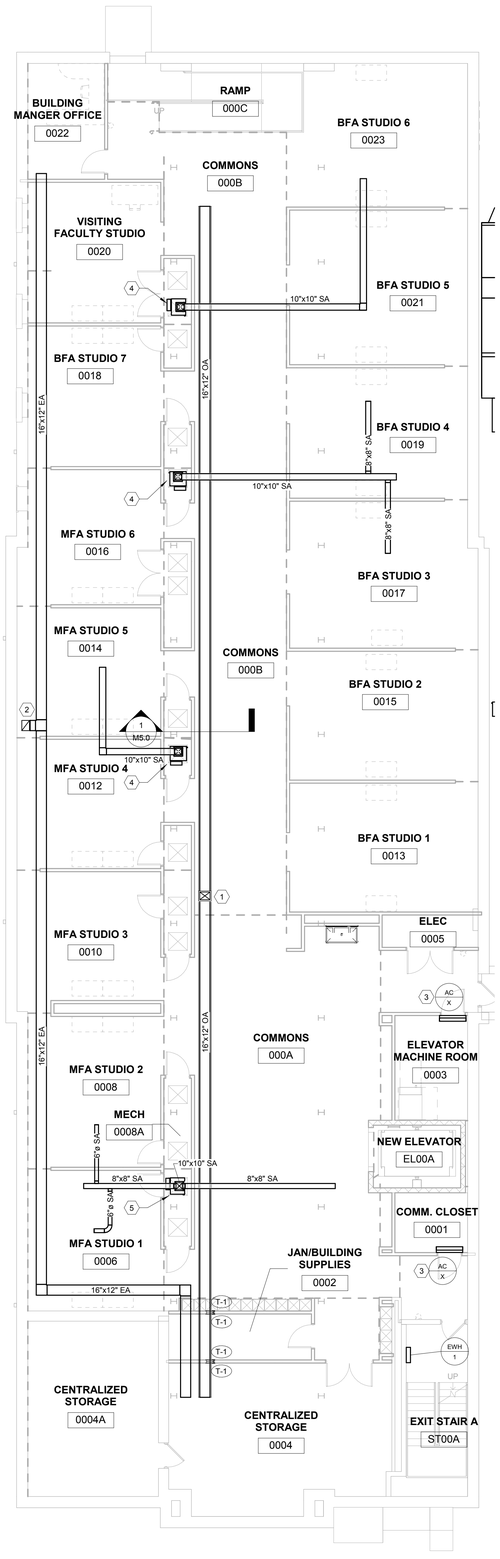

1 AIR DISTRIBUTION DESIGN BASEMENT PLAN
1/8" = 1'-0"

AIR DISTRIBUTION GENERAL NOTES

A ALL EXPOSED DUCT WORK SHALL BE DUAL-WALL DUCT AND PAINTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COLOR SELECTED BY ARCHITECT.
B ALL DARKROOM PENETRATIONS SHALL BE SEALED AIR TIGHT TO PREVENT ILLUMINATION SPILL FROM ADJACENT SPACE.

AIR DISTRIBUTION DESIGN BASEMENT PLAN TAGGED NOTES (X)

1 ROUTE OUTSIDE AIR DUCT UP. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
2 ROUTE EXHAUST DUCT UP. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
3 MOUNT UNIT ABOVE DOOR.
4 RELOCATED EXISTING 2.5 TON INDOOR UNIT.
5 RELOCATED EXISTING 3.5 TON INDOOR UNIT.

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PRE-DESIGN

M3.0

AIR DISTRIBUTION GENERAL NOTES

A ALL EXPOSED DUCT WORK SHALL BE DUAL-WALL DUCT AND PAINTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COLOR SELECTED BY ARCHITECT.
B ALL DARKROOM PENETRATIONS SHALL BE SEALED AIR TIGHT TO PREVENT ILLUMINATION SPILL FROM ADJACENT SPACE.

AIR DISTRIBUTION DESIGN FIRST FLOOR PLAN TAGGED NOTES (X)

1 PROVIDE 4" EXHAUST DUCT TO EQUIPMENT.
2 PROVIDE SNORKEL EXHAUST.
3 PROVIDE EXHAUST FOR EQUIPMENT.
4 PROVIDE NEW STRUCTURE MOUNTED AIR FILTRATION SYSTEM.
5 PROVIDE EXHAUST HOOD OVER EQUIPMENT.
6 PROVIDE SIDEWALL EXHAUST SYSTEM. BOTTOM OF EXHAUST AT 1'-0" A.F.F
7 PROVIDE EXHAUST TO RELOCATED INLINE EXHAUST FAN.
8 ROUTE OUTSIDE AIR DUCT UP TO GRAVITY HOOD ON ROOF. REFER TO AIR DISTRIBUTION SECOND FLOOR PLAN FOR CONTINUATION.
9 ROUTE EXHAUST AIR FROM UNIT TO LOUVER.
10 ROUTE OUTSIDE AIR DUCT UP. REFER TO AIR DISTRIBUTION SECOND FLOOR FOR CONTINUATION.
11 ROUTE EXHAUST AIR UP. REFER TO AIR DISTRIBUTION SECOND FLOOR FOR CONTINUATION.
12 ROUTE SUPPLY AIR DUCT UP. REFER TO AI DISTRIBUTION SECOND FLOOR FOR CONTINUATION.
13 ROUTE RETURN AIR DUCT UP. REFER TO AIR DISTRIBUTION SECOND FLOOR FOR CONTINUATION.
14 ROUTE EXHAUST AIR DUCT DOWN. REFER TO AIR DISTRIBUTION BASEMENT PLAN FOR CONTINUATION.
15 ROUTE OUTSIDE AIR DUCT DOWN. REFER TO AIR DISTRIBUTION BASEMENT PLAN FOR CONTINUATION.
16 MOUNT UNIT ABOVE DOOR.
17 PROVIDE EXTERIOR INSULATION AND SHEET METAL ON UNUSED DOOR PORTION OF LOUVER.
18 MAINTAIN A MINIMUM OF 4' CLEARANCE BETWEEN AIR HANDLING UNIT AND WALL FOR EASE OF EGRESS.
19 AVOID DUCT ROUTING IN DELIVERY ZONE OR COILING DOOR FRAMING. REFER TO ARCHITECTURE PLANS FOR ADDITIONAL INFORMATION.
20 RELOCATED EXISTING 1.5 TON INDOOR UNIT.
21 RELOCATED CONDENSING UNITS. MOUNT CONDENSING UNIT FROM EXISTING EXTERIOR WALL AT 9'-0" A.F.F.
22 PROVIDE NEW CONDENSING UNIT. MOUNT CONDENSING UNIT FROM EXISTING EXTERIOR WALL AT 9'-0" A.F.F.
23 PROVIDE SIDEWALL SLOTTED HOOD EXHAUST.
24 RELOCATED EXISTING 2 TON INDOOR UNIT.
25 RELOCATED EXISTING 2.5 TON INDOOR UNIT.
26 RELOCATED EXISTING 3 TON INDOOR UNIT.
27 RELOCATED EXISTING 3.5 TON INDOOR UNIT.

1 AIR DISTRIBUTION DESIGN FIRST FLOOR PLAN
1/8" = 1'-0"

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AIR DISTRIBUTION DESIGN FIRST FLOOR PLAN

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PRE-DESIGN

M3.1

AIR DISTRIBUTION GENERAL NOTES

A ALL EXPOSED DUCT WORK SHALL BE DUAL-WALL DUCT AND PAINTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COLOR SELECTED BY ARCHITECT.
B ALL DARKROOM PENETRATIONS SHALL BE SEALED AIR TIGHT TO PREVENT ILLUMINATION SPILL FROM ADJACENT SPACE.

AIR DISTRIBUTION DESIGN SECOND FLOOR PLAN TAGGED NOTES (X)

1 PROVIDE SIDEWALL EXHAUST ABOVE SINK LEDGE.
2 PROVIDE EXHAUST TO NEW CHEMICAL STORAGE CABINET.
3 PROVIDE EXHAUST DUCT TO CONNECT TO COLOR PROCESSOR.
4 PROVIDE EXHAUST HOOD OVER EQUIPMENT.
5 PROVIDE 4" DRYER EXHAUST.
6 PROVIDE SNORKEL EXHAUST.
7 ROUTE SUPPLY AIR DUCT DOWN. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
8 ROUTE RETURN AIR DUCT DOWN. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
9 ROUTE OUTSIDE AIR DUCT DOWN. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
10 ROUTE EXHAUST AIR DUCT DOWN. REFER TO AIR DISTRIBUTION FIRST FLOOR PLAN FOR CONTINUATION.
11 ROUTE EXHAUST AIR DUCT UP. REFER TO AIR DISTRIBUTION THIRD FLOOR PLAN FOR CONTINUATION.
12 ROUTE OUTSIDE AIR DUCT UP. REFER TO AIR DISTRIBUTION THIRD FLOOR PLAN FOR CONTINUATION.
13 MOUNT UNIT ABOVE DOOR.
14 RELOCATED EXISTING 1.5 TON INDOOR UNIT.
15 EXHAUST DUCT UP TO FAN ON ROOF.
16 RELOCATED EXISTING 2 TON INDOOR UNIT.
17 RELOCATED EXISTING 2.5 TON INDOOR UNIT.
18 RELOCATED EXISTING 3 TON INDOOR UNIT.
19 RELOCATED EXISTING 4 TON INDOOR UNIT.

1 AIR DISTRIBUTION DESIGN SECOND FLOOR PLAN
1/8" = 1'-0"

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AIR DISTRIBUTION DESIGN SECOND FLOOR PLAN

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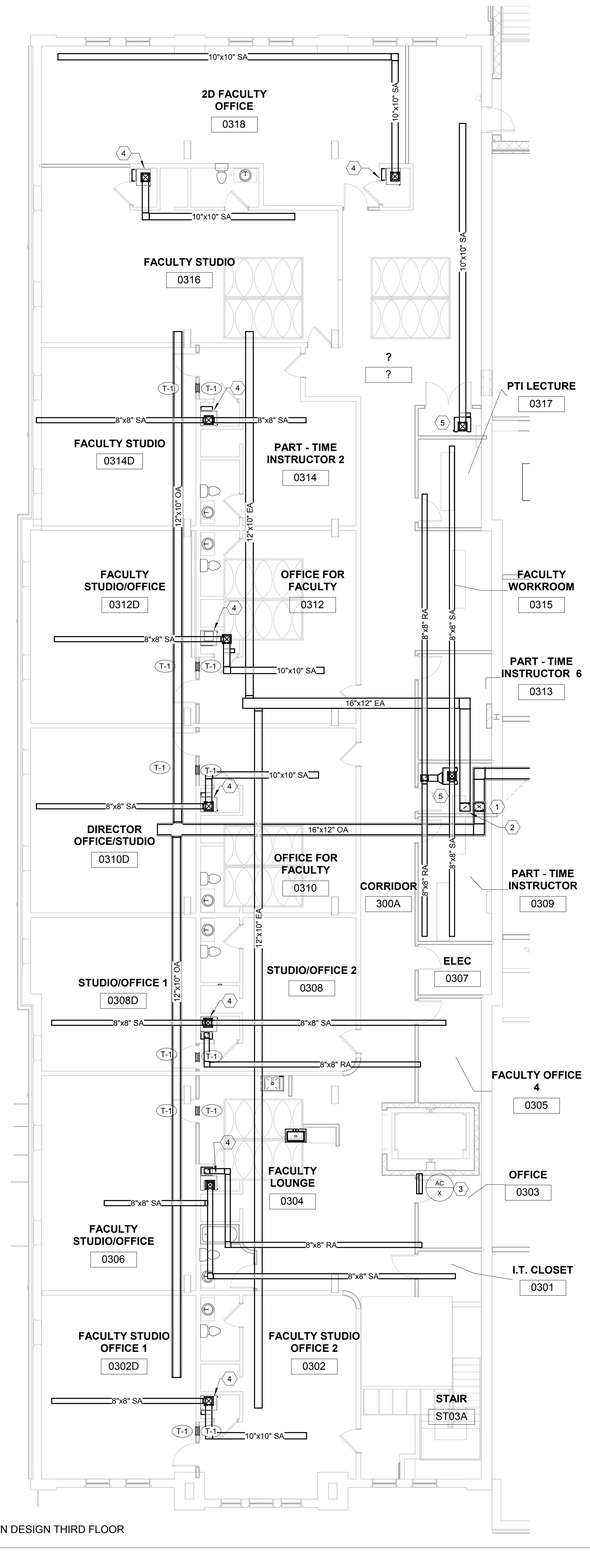

1 AIR DISTRIBUTION DESIGN THIRD FLOOR PLAN
1/8" = 1'-0"

AIR DISTRIBUTION GENERAL NOTES

A ALL EXPOSED DUCT WORK SHALL BE DUAL-WALL DUCT AND PAINTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COLOR SELECTED BY ARCHITECT.
B ALL DARKROOM PENETRATIONS SHALL BE SEALED AIR TIGHT TO PREVENT ILLUMINATION SPILL FROM ADJACENT SPACE.

AIR DISTRIBUTION DESIGN THIRD FLOOR PLAN TAGGED NOTES (X)

1 ROUTE OUTSIDE AIR DUCT DOWN. REFER TO AIR DISTRIBUTION SECOND FLOOR PLAN FOR CONTINUATION.
2 ROUTE EXHAUST AIR DUCT DOWN. REFER TO AIR DISTRIBUTION SECOND FLOOR PLAN FOR CONTINUATION.
3 MOUNT UNIT ABOVE DOOR.
4 EXISTING INDOOR UNIT TO REMAIN.
5 RELOCATED EXISTING INDOOR UNIT.

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NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CWE/CRK Checked By: JMS Revision:

AIR DISTRIBUTION DESIGN THIRD FLOOR PLAN

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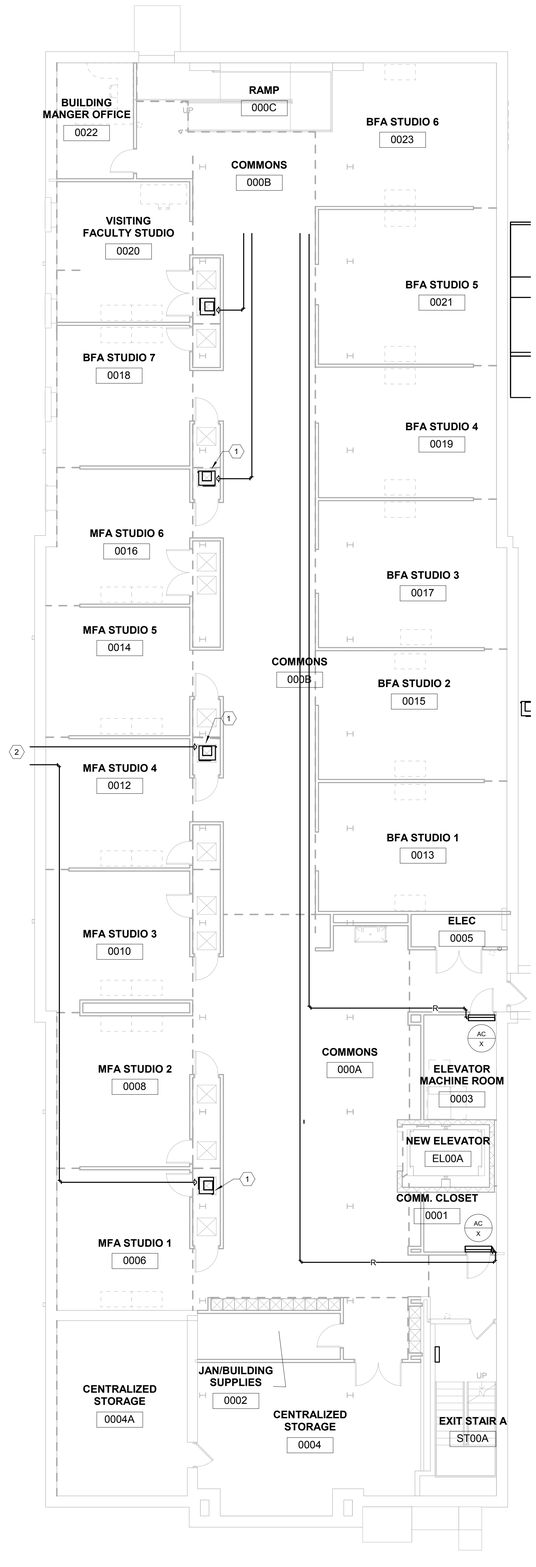
PRE-DESIGN

M3.3



1 HYDRONIC DESIGN BASEMENT PLAN
1/8" = 1'-0"

HYDRONIC DESIGN BASEMENT PLAN TAGGED NOTES X

1 RELOCATED EXISTING INDOOR UNIT. PROVIDE NEW REFRIGERANT PIPING FROM INDOOR UNIT TO CONDENSING UNIT. TYPICAL.
2 ROUTE REFRIGERANT PIPING UP. REFER TO HVAC PIPING DESIGN FIRST FLOOR PLAN FOR CONTINUATION.

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HVAC PIPING DESIGN BASEMENT PLAN

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PRE-DESIGN

M4.0

HYDRONIC DESIGN FIRST FLOOR PLAN TAGGED NOTES (X)

1 RELOCATED EXISTING INDOOR UNIT. PROVIDE NEW REFRIGERANT PIPING FROM INDOOR UNIT TO CONDENSING UNIT. TYPICAL.
2 ROUTE REFRIGERANT PIPING DOWN. REFER TO HVAC PIPING DESIGN BASEMENT PLAN FOR CONTINUATION.
3 ROUTE REFRIGERANT PIPING UP. REFER TO HVAC PIPING DESIGN SECOND FLOOR PLAN FOR CONTINUATION.
4 ROUTE HWS/HWR PIPING UP. REFER TO HVAC PIPING DESIGN SECOND FLOOR PLAN FOR CONTINUATION.

INSTALLATION ROOM 0118
GALLERY STORAGE 0114A
BLACKBOX 0116
STORAGE 0118A
BARNHART GALLERY 0114
MAIN COMM ROOM 0128
MECHANICAL/ELECTRICAL 0130
FACULTY STUDIO/ OFFICE 1 0126
OFFICE/SHOP 0132
MIXED MEDIA 0134
KILN ROOM 2 0138
HOUSE CLEANING 0140A
WELDING BOOTH 0142A
COMPRESSOR 0142B
GLAZE APPLICATION 0146
GLAZE FORMULATION & MIX 0148
ART INSTITUTE 0124
DIGITAL MEDIA LAB 0136
GENERAL CLASSROOM 0140
HAND-BUILDING CLASSROOM 0142
WHEEL THROWING CLASSROOM 0144
FACULTY STUDIO/OFFICE 3 0154
ELEV. MACH. ROOM 0156
EQUIPMENT/MEDIA STUDENT OFFICE 0120
DOCUMENTATION LAB 0158
EXISTING STAIR ST01E
ENTRY VESTIBULE 0125
WOMENS RESTROOM 0112
MENS RESTROOM 0108
JAN 0110A
ELEC 0109
NEW ELEVATOR EL01A
SOA CONFERENCE 0106
HOUSE KEEPING 0107
COMM. CLOSET 0105
SHARED STORAGE 0111A
TOOL STORAGE 0115A
TOOL CRIB 0123A
DUST COLLECTION 0123B
OFFICE 0123G
FACULTY WORKROOM 0104
DEPARTMENT CHAIR 0102A
ADMIN ASST. 0102
VESTIBULE 0101
ASST. DIRECTOR'S OFFICE 0103
EXISTING STAIR A ST01A
2D CLASSROOM 0111
2D CLASSROOM 0113
AS-355 STUDIO 0115
3D CARDBOARD STUDIO/CLASSROOM 0117
3D STUDIO/CLASSROOM 0121
SPRAY BOOTH 0123E
SHOP 0123
ADVANCED WOOD WORKING STUDIO 0123D
STORAGE 0123C
SPRINKLER VAULT 0117D

4" HWS
4" HWR

1 HYDRONIC DESIGN FIRST FLOOR PLAN
1/8" = 1'-0"

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HVAC PIPING DESIGN FIRST FLOOR PLAN

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Checked By: JMS
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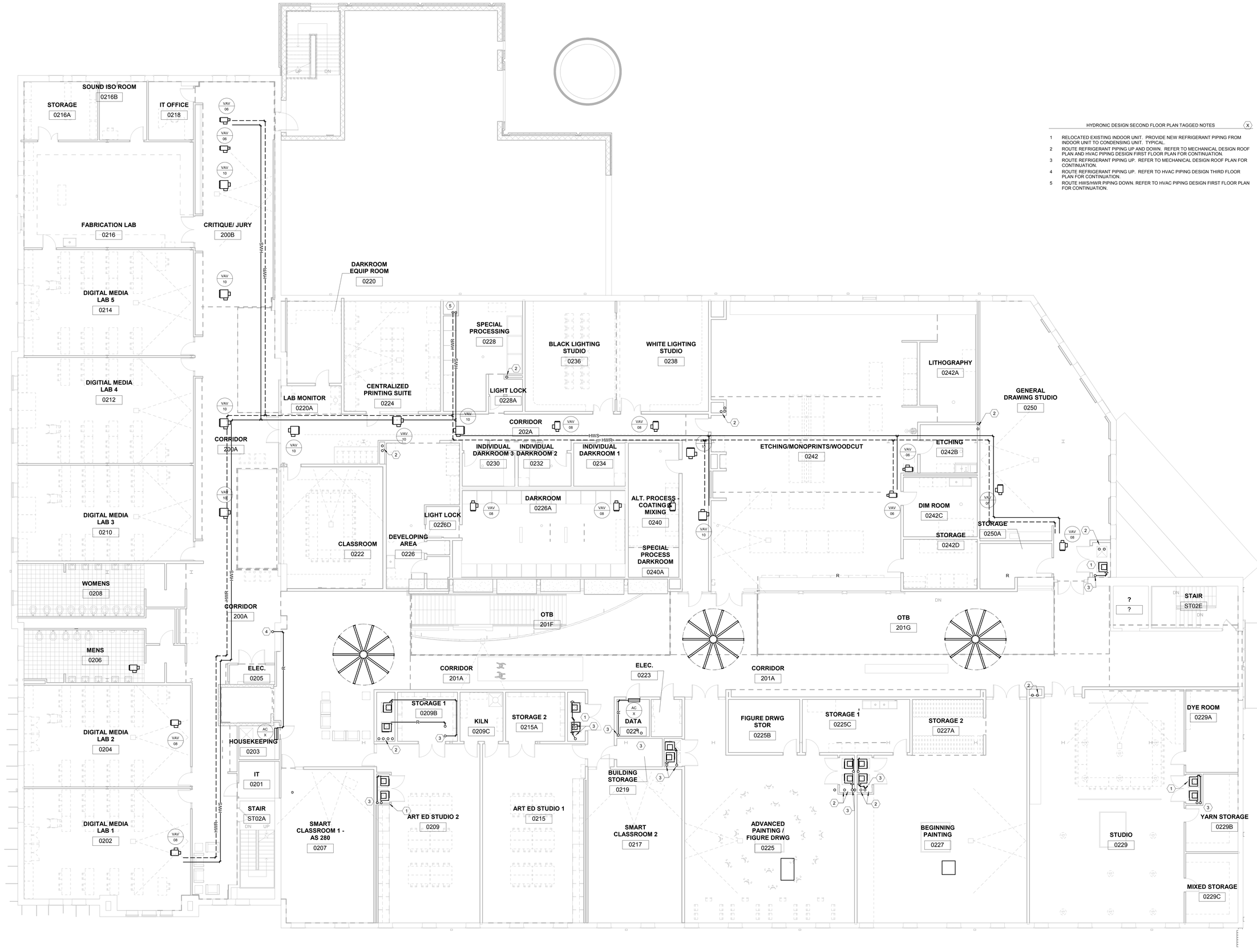
PRE-DESIGN

M4.1



HYDRONIC DESIGN SECOND FLOOR PLAN TAGGED NOTES (X)

1. RELOCATED EXISTING INDOOR UNIT. PROVIDE NEW REFRIGERANT PIPING FROM INDOOR UNIT TO CONDENSING UNIT. TYPICAL.
2. ROUTE REFRIGERANT PIPING UP AND DOWN. REFER TO MECHANICAL DESIGN ROOF PLAN AND HVAC PIPING DESIGN FIRST FLOOR PLAN FOR CONTINUATION.
3. ROUTE REFRIGERANT PIPING UP. REFER TO MECHANICAL DESIGN ROOF PLAN FOR CONTINUATION.
4. ROUTE REFRIGERANT PIPING UP. REFER TO HVAC PIPING DESIGN THIRD FLOOR PLAN FOR CONTINUATION.
5. ROUTE HWS/HWR PIPING DOWN. REFER TO HVAC PIPING DESIGN FIRST FLOOR PLAN FOR CONTINUATION.

1 HYDRONIC DESIGN SECOND FLOOR PLAN
1/8" = 1'-0"

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HVAC PIPING DESIGN SECOND FLOOR PLAN

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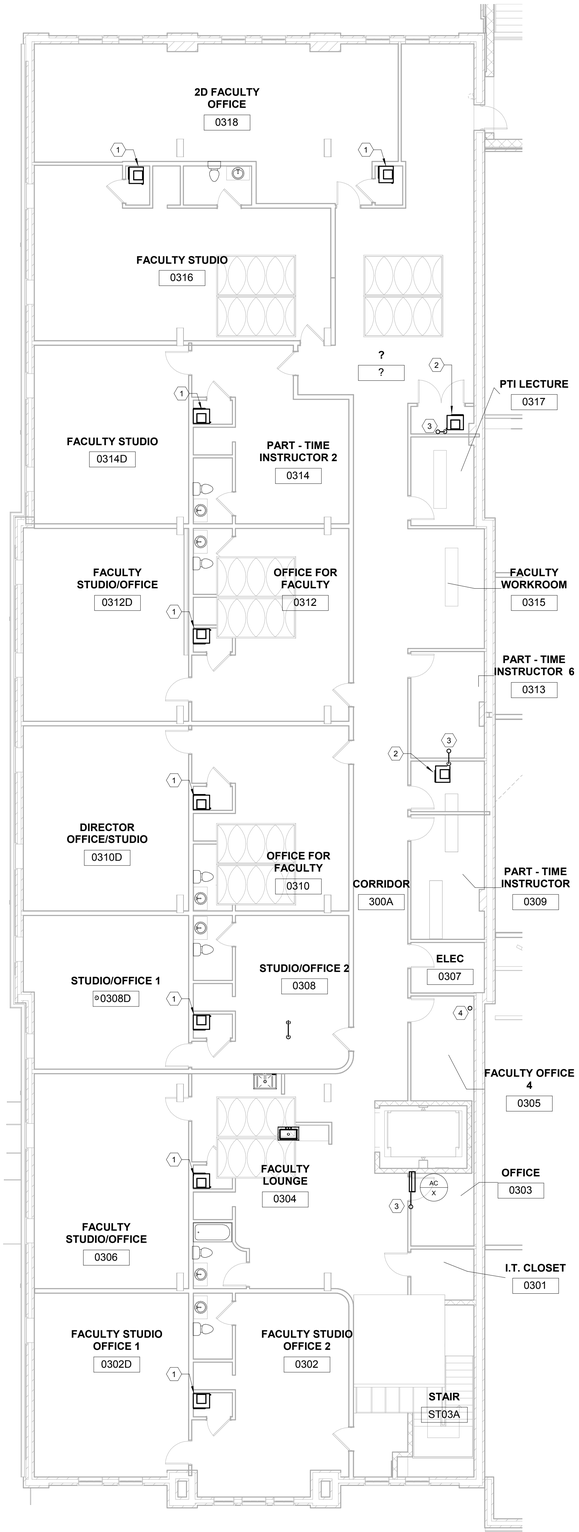
PRE-DESIGN

M4.2



1 HYDRONIC DESIGN THIRD FLOOR PLAN
1/8" = 1'-0"

HYDRONIC DESIGN THIRD FLOOR PLAN TAGGED NOTES (X)

1 EXISTING INDOOR UNIT. TO REMAIN. TYPICAL.
2 RELOCATED EXISTING INDOOR UNIT. PROVIDE NEW REFRIGERANT PIPING FROM INDOOR UNIT TO CONDESNING UNIT.
3 ROUTE REFRIGERANT PIPING UP. REFER TO MECHANICAL DESIGN ROOF PLAN FOR CONTINUATION.
4 ROUTE REFRIGERANT PIPING UP AND DOWN. REFER TO HYDRONIC DESIGN SECOND FLOOR AND MECHANICAL DESIGN ROOF PLAN FOR CONTINUATION.

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HVAC PIPING DESIGN THIRD FLOOR PLAN

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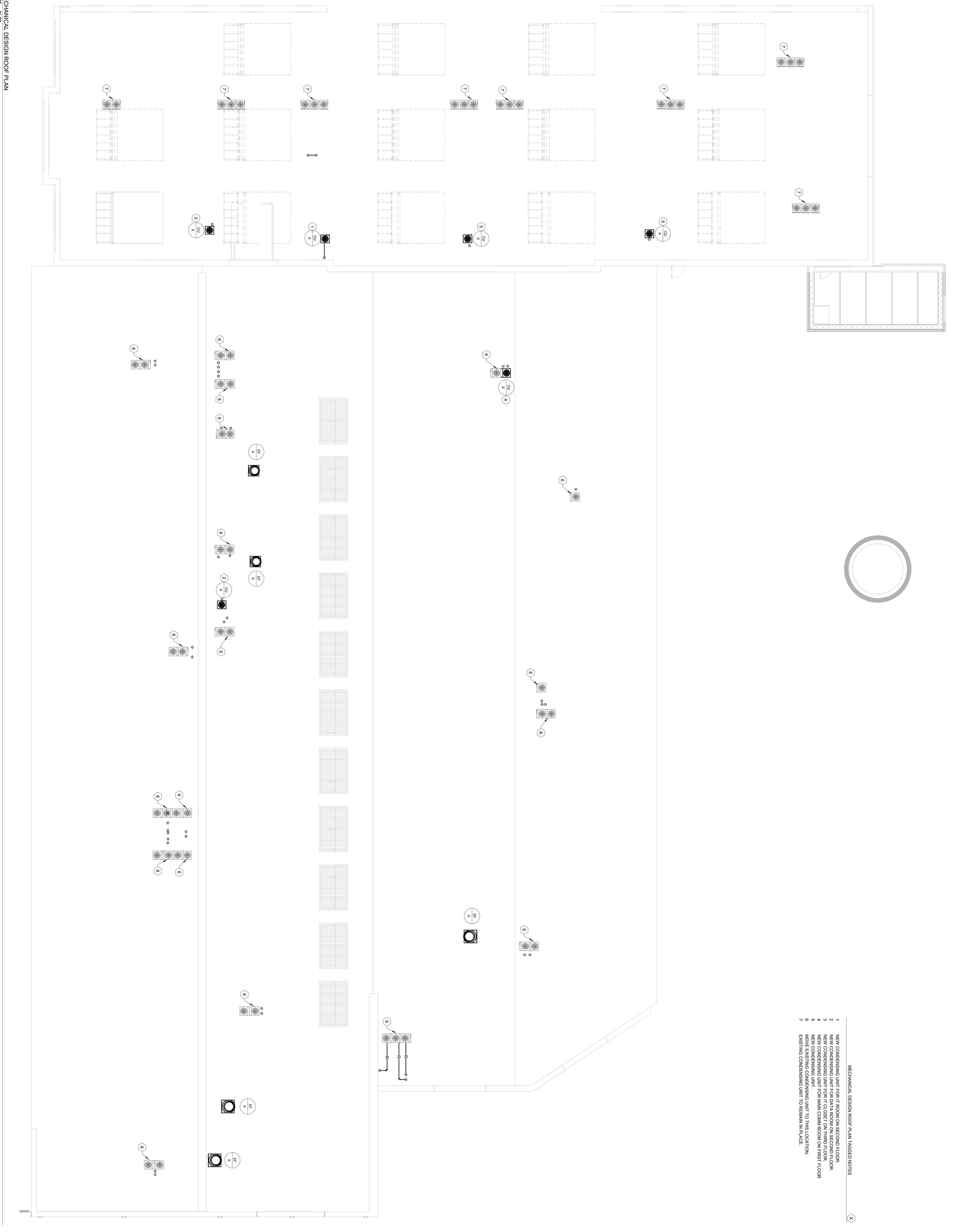
PRE-DESIGN

M4.3

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



MECHANICAL DESIGN ROOF PLAN TAGGED NOTES

1 NEW CONDENSING UNIT FOR IT ROOM ON SECOND FLOOR.
2 NEW CONDENSING UNIT FOR DATA ROOM ON SECOND FLOOR.
3 NEW CONDENSING UNIT FOR IT CLOSET ON THIRD FLOOR.
4 NEW CONDENSING UNIT FOR MAIN COMM ROOM ON FIRST FLOOR
5 NEW CONDENSING UNIT.
6 MOVE EXISTING CONDENSING UNIT TO THIS LOCATION.
7 EXISTING CONDENSING UNIT TO REMAIN IN PLACE.

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HVAC PIPING DESIGN ROOF PLAN

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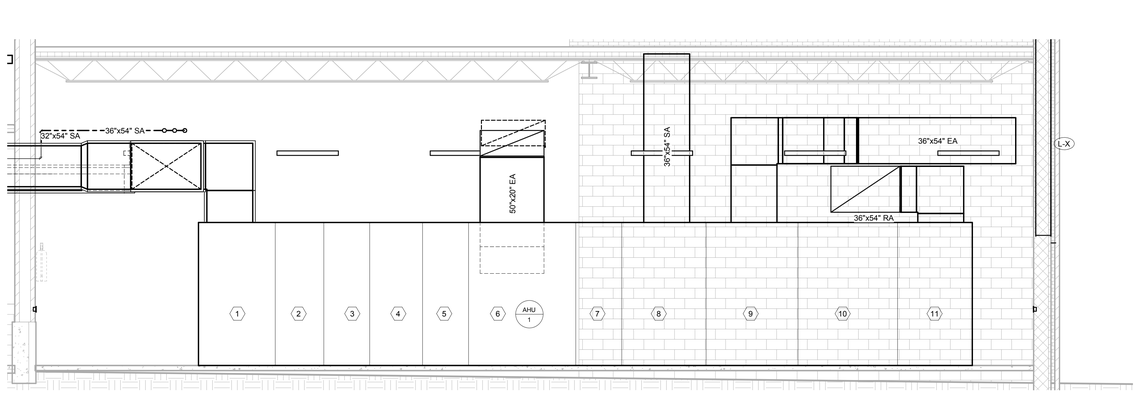
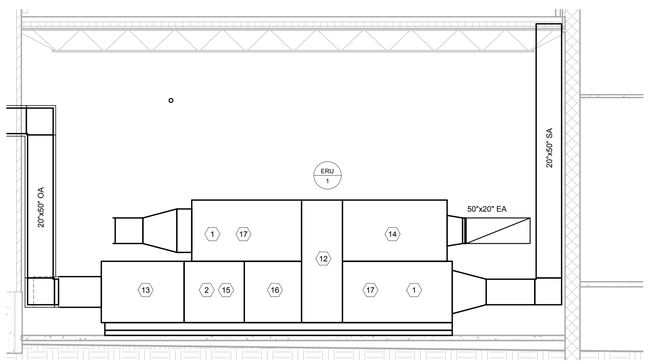
MECHANICAL SECTIONS TAGGED NOTES

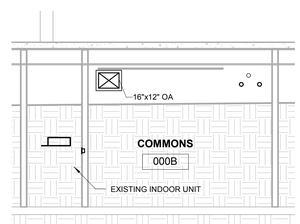
1 PLENUM SECTION.
2 CHILLED WATER COIL SECTION.
3 ACCESS SECTION.
4 PREHEAT SECTION.
5 ACCESS SECTION.
6 SUPPLY FAN SECTION.
7 AIR BLENDER SECTION.
8 FILTER/MIXING SECTION
9 RELIEF AIR SECTION.
10 RETURN FAN SECTION.
11 PLENUM SECTION
12 ENERGY RECOVERY WHEEL.
13 OUTSIDE AIR FAN.
14 EXHAUST AIR FAN.
15 FACE AND BYPASS SECTION.
16 HOT WATER COIL.
17 FILTER SECTION.



3 AIR HANDLING UNIT SECTION
1/4" = 1'-0"



2 ENERGY RECOVERY UNIT SECTION
1/4" = 1'-0"



1 BASEMENT COMMONS
1/4" = 1'-0"

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NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CWE/CRK Checked By: JMS Revision:

MECHANICAL SECTIONS

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PRE-DESIGN

M5.0

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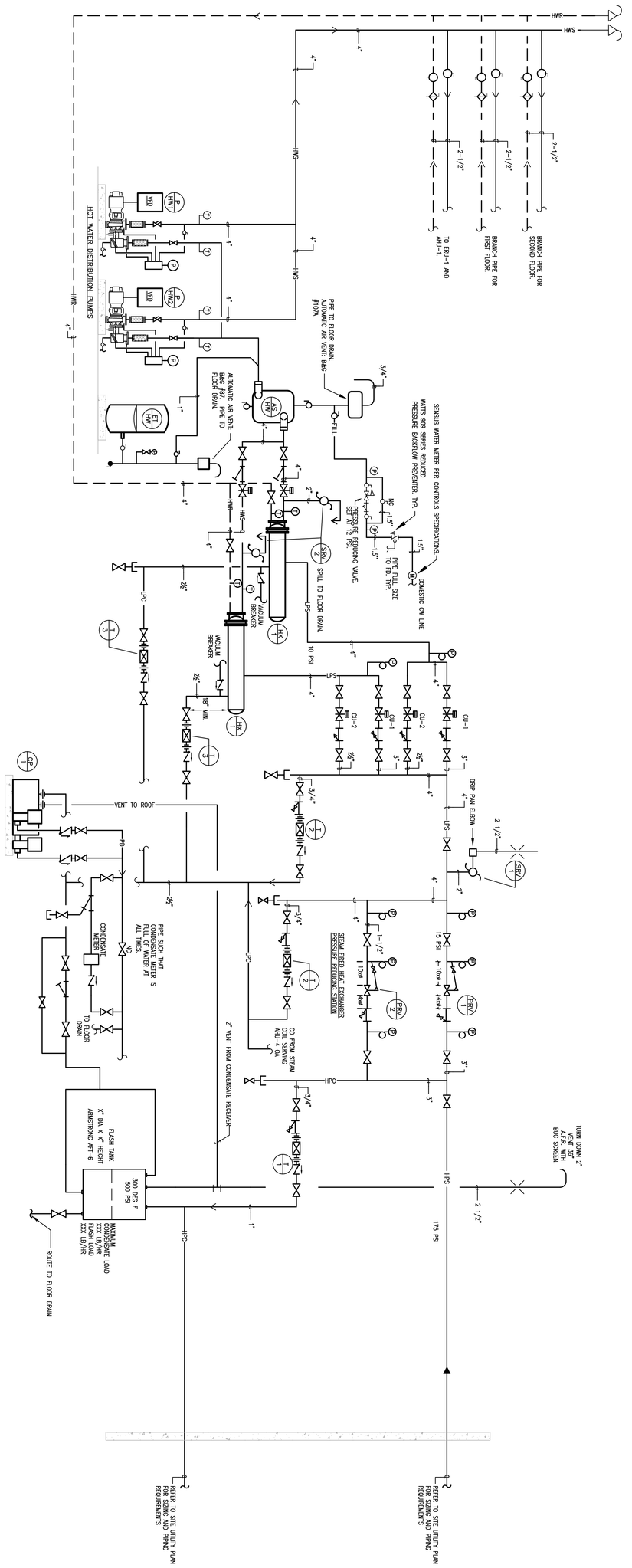
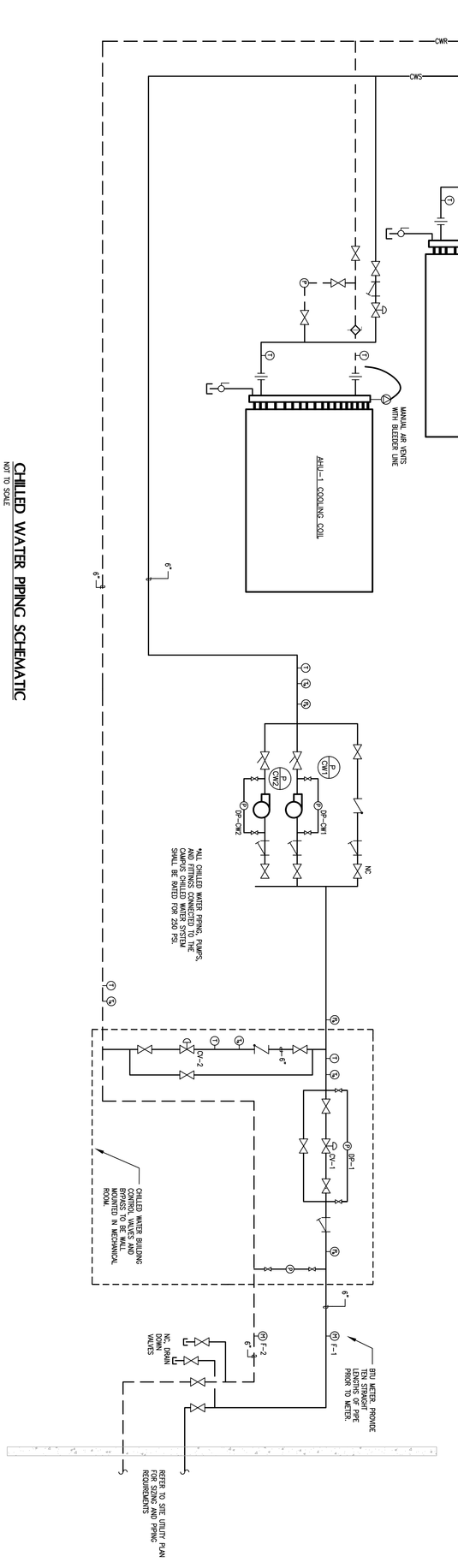
Day & Time: May 03, 2013 - 8:47pm
Login Name: corrie



HOT WATER PIPING SCHEMATIC
NOT TO SCALE



CHILLED WATER PIPING SCHEMATIC
NOT TO SCALE

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PIPING SCHEMATICS

NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CE/CRK Checked By: JMS Revision: XXX

M6.0

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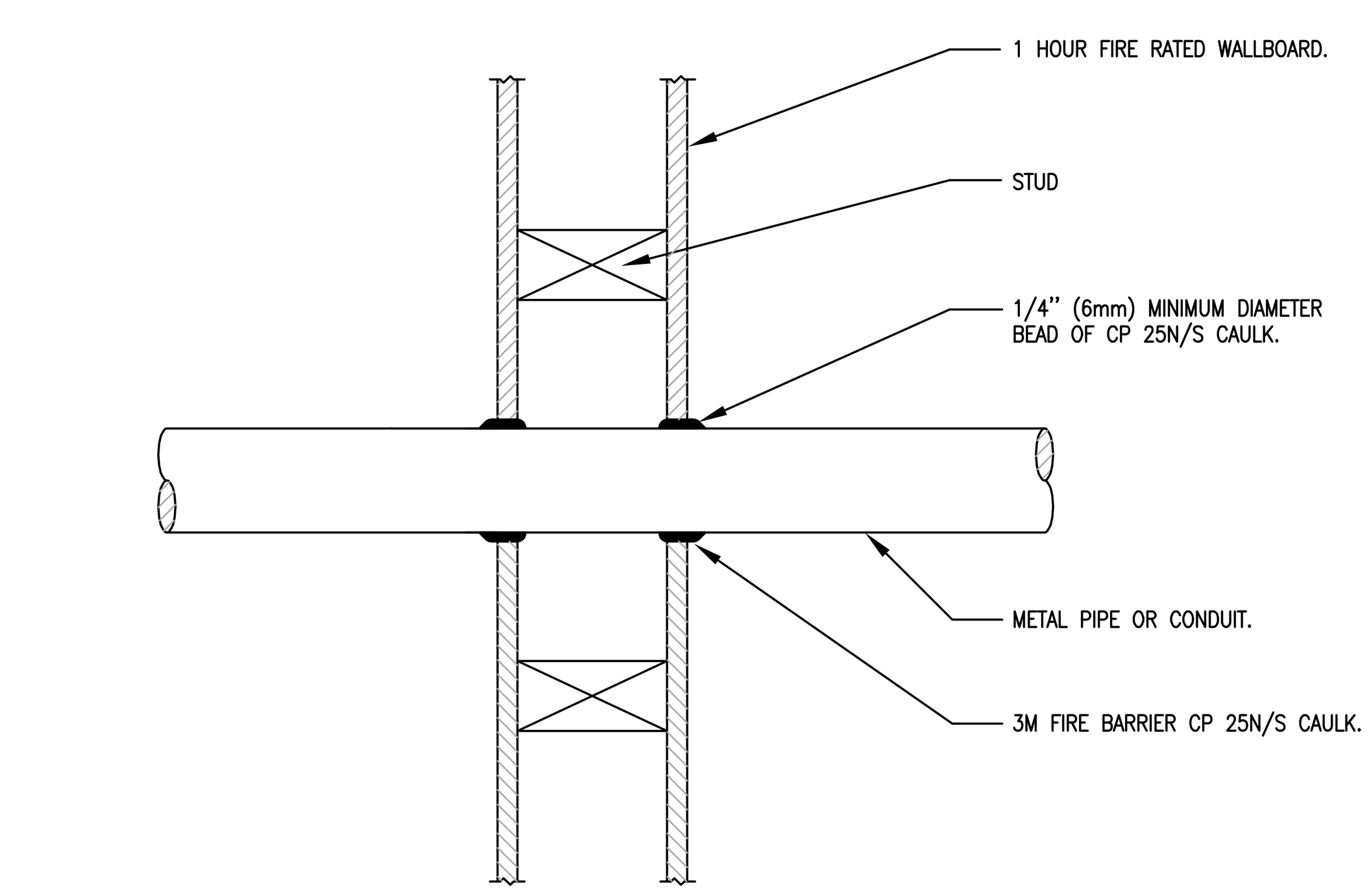


NOTES

1. FORCE THE 3M MODEL# CP 25N/S CAULK INTO THE ANNULAR SPACE TO THE MAXIMUM EXTENT POSSIBLE, FLUSH WITH THE EXTERIOR OF THE PENETRATION SURFACE.

2. FINISH CAULKING WITH A 1/4" (6mm) MINIMUM BEAD OF CP 25N/S CAULK APPLIED TO THE PERIMETER OF THE CONDUIT/PIPE AT ITS EGRESS FROM THE WALL.

3. THE MAXIMUM ANNULAR SPACE IS NOT TO EXCEED 3/16" (5mm). (IF IT DOES PATCH WALL AND PENETRATE WALL AT ANOTHER LOCATION).

4. INSTALL THE 3M FIRESTOP ON BOTH SIDES OF THE WALL.

PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH ONE HOUR WALL

NTS

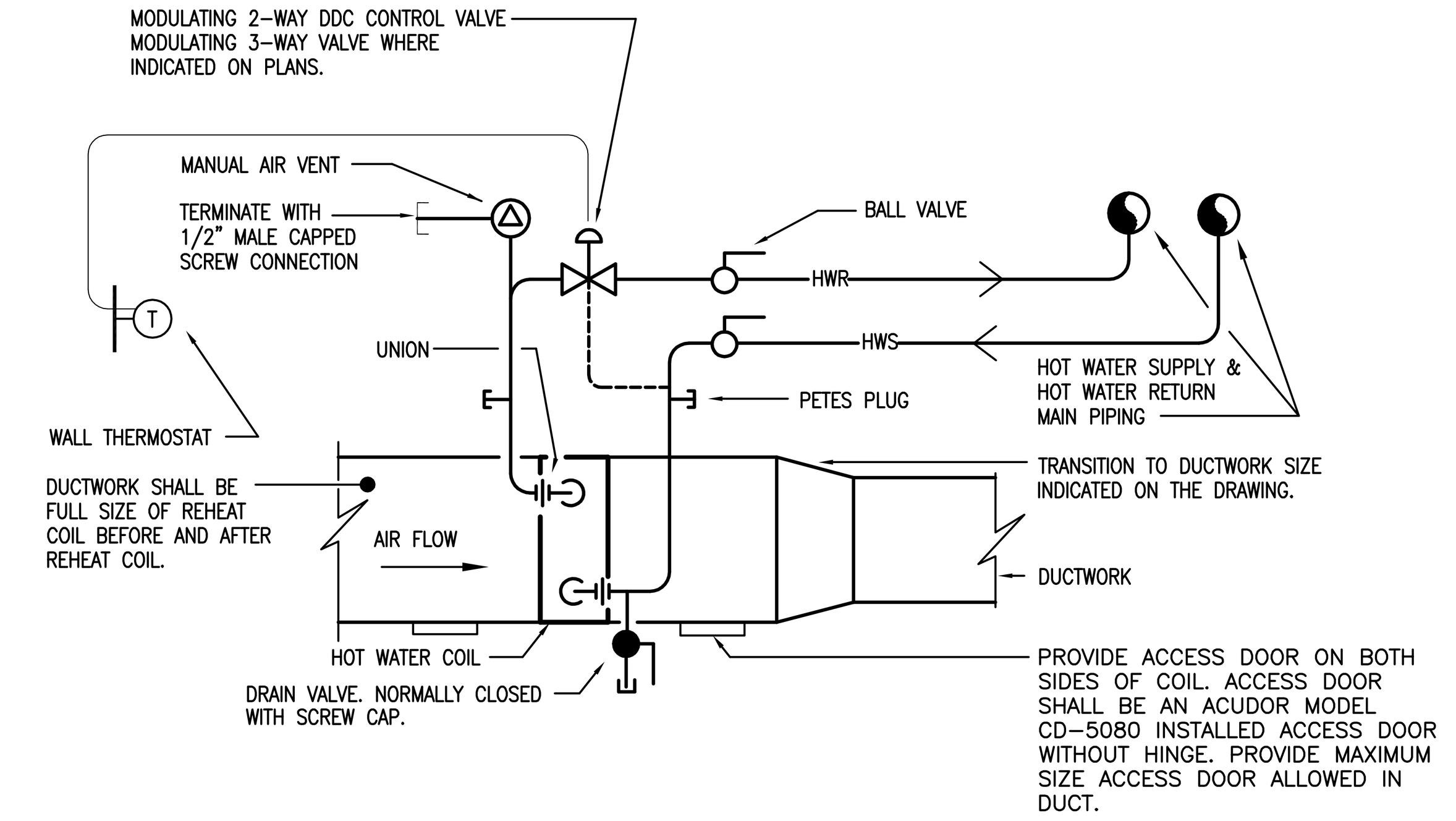
FIRE STOPPING NOTES:

1. FIRE STOPPING IS CRITICAL AND MUST BE ACCOMPLISHED.

ALL PIPES MUST BE FIRESTOPPED WHERE THEY PENETRATE FIRE RESISTIVE, FIRE RATED, AND SMOKE RESISTIVE WALLS OR FLOORS. ALL FLOORS CORRIDOR WALLS, MECHANINCAL ROOM WALLS, STORAGE ROOM WALLS AND OTHER HAZARDOUS ROOM WALLS ARE ONE HOUR RATED.

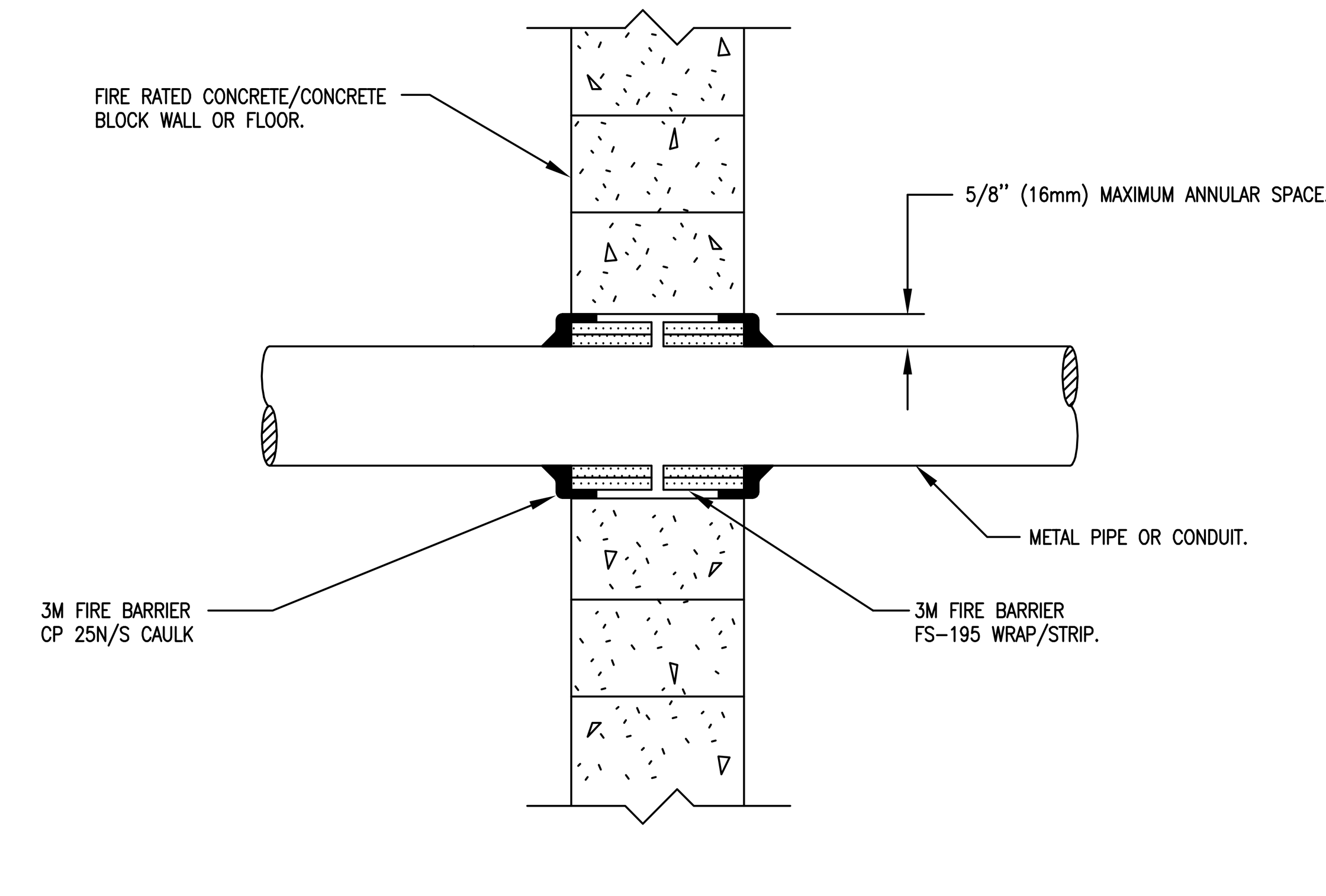
2. A FOUR-HOUR TRAINING SESSION SHALL BE CONDUCTED BY MANUFACTURER OF THE FIRESTOPPING MATERIAL. THIS SHALL BE DONE PRIOR TO THE INSTALLATION OF THE MATERIAL. CONTACT ENGINEER TO ADVISE OF THE DATE AND TIME OF THIS MEETING.

3. ALL PENETRATIONS WILL BE REVIEWED BY THE ENGINEER PRIOR TO INSPECTION. ALL CEILING TILES BENEATH THE PENETRATIONS SHALL BE REMOVED BY THE CONTRACTOR.



REHEAT COIL, VAV, & CAV BOX PIPING SCHEMATIC

NTS



NOTES

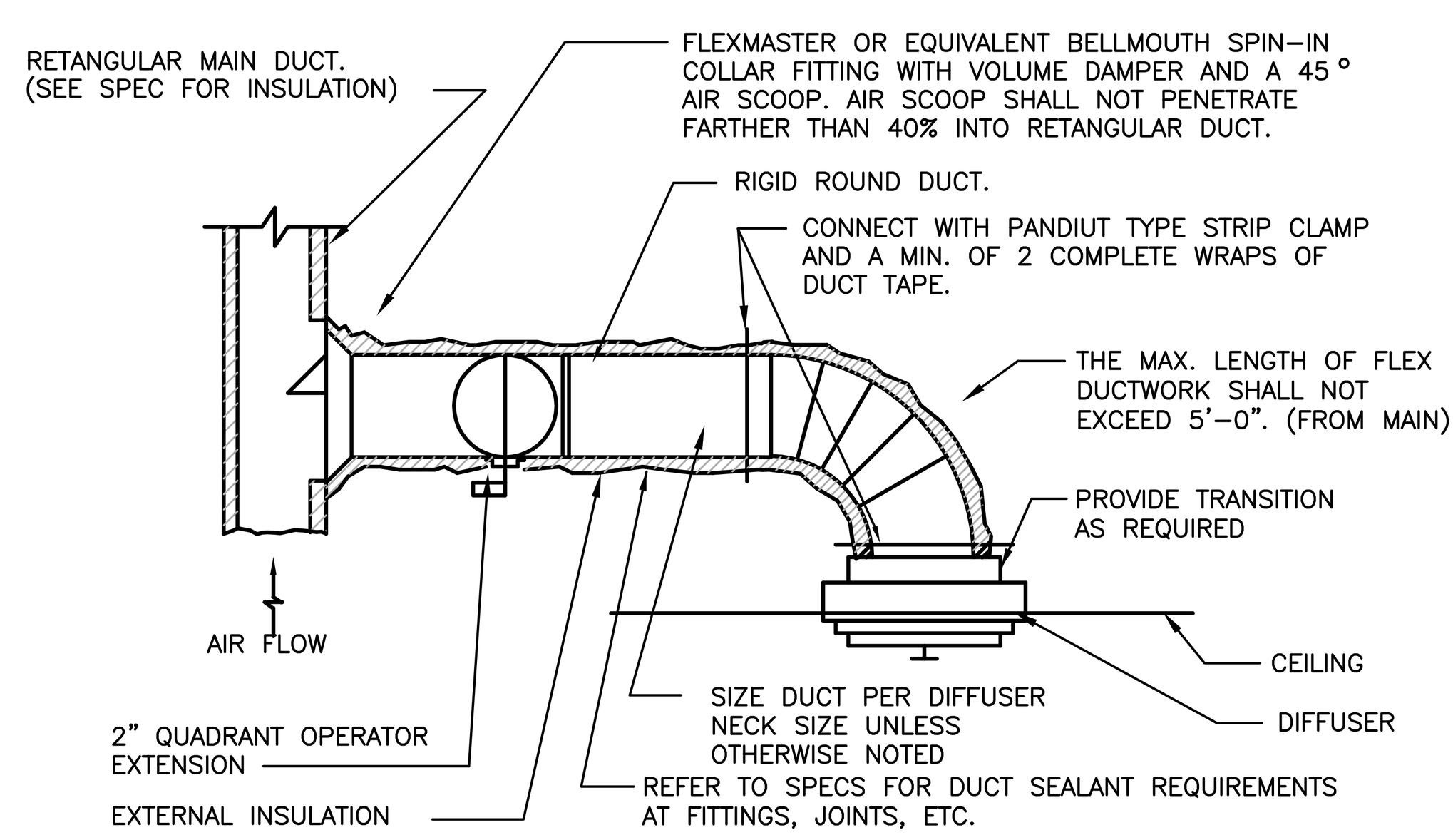
1. THE MAXIMUM ANNULAR SPACE AROUND THE METAL PIPE OR CONDUIT IS 5/8" (16mm). (IF THE ANNULAR SPACE EXCEEDS 5/8" PATCH THE WALL AND PENETRATE WALL AT ANOTHER LOCATION).

2. WRAP THE 3M MODEL# FS-195 WRAP/STRIP AROUND THE PIPE/CONDUIT, FOIL SIDE OUT, TO FILL THE SPACE BETWEEN THE PIPE/CONDUIT AND THE WALL OPENING. THE 3M MODEL# FS-195 WRAP/STRIP SHOULD BE TIGHTLY SECURED WITH ALUMINUM FOIL TAPE OR STEEL TIE WIRE AND PUSHED INTO THE OPENING UNTIL THE TOP EDGE OF THE WRAP IS FLUSH WITH THE WALL SURFACE. THE IDENTICAL INSTALLATION SHOULD BE INSTALLED ON THE OTHER SIDE OF THE WALL.

3. USE 3M MODEL# CP 25N/S(NO SAG) CAULK TO FILL THE AREA BETWEEN THE FS-195 WRAP/STRIP AND THE EDGES OF THE OPENING AND ANY VOIDS IN THE 3M MODEL# FS-195 WRAP/STRIP. A FILLM OF CP 25 CAULK SHOULD COAT ALL EXPOSED EDGES OF THE FS-195 WRAP/STRIP AND COMPLETELY SEAL THE AREA BETWEEN THE FS-195 WRAP/STRIP, THE PIPE/CONDUIT AND THE WALL SURFACE.

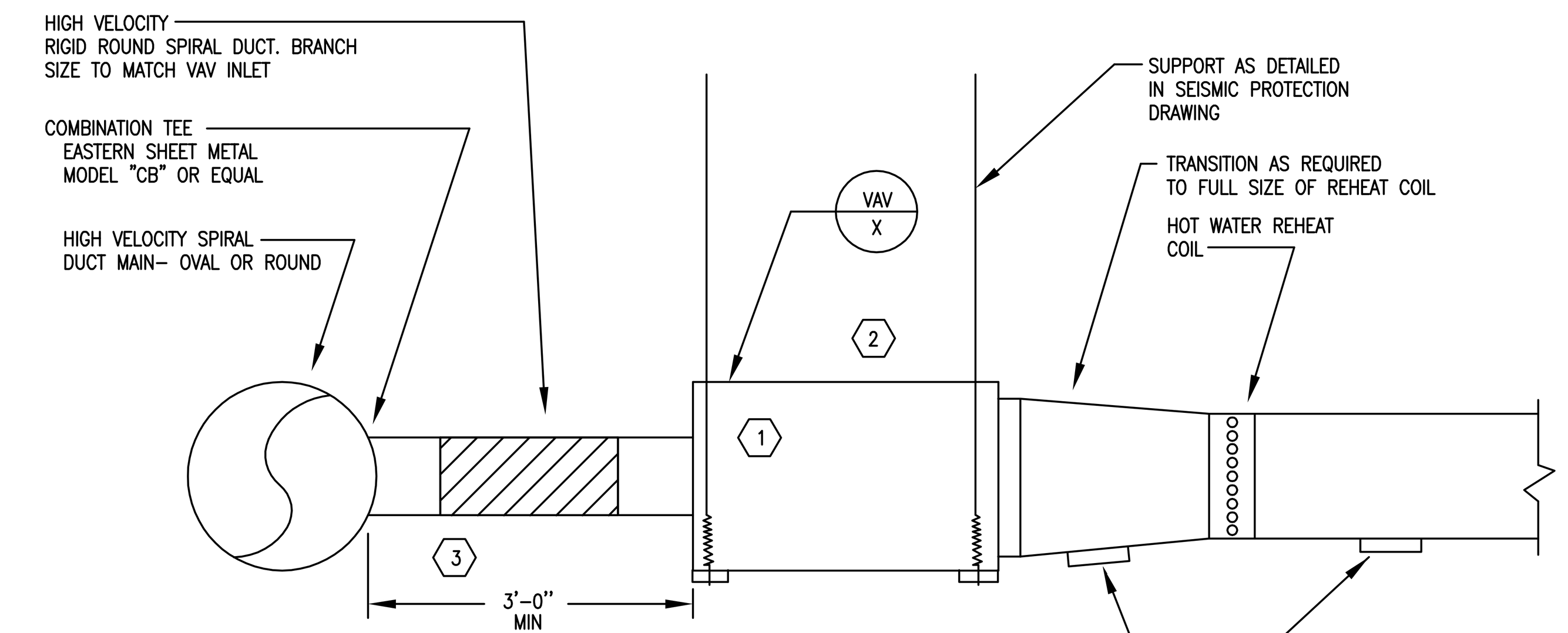
PENETRATION FIRESTOP FOR METAL PIPE/CONDUIT THROUGH A CONCRETE WALL

NTS



TYPICAL ROUND SUPPLY, RETURN, EXHAUST BRANCH DUCT DETAIL

NTS



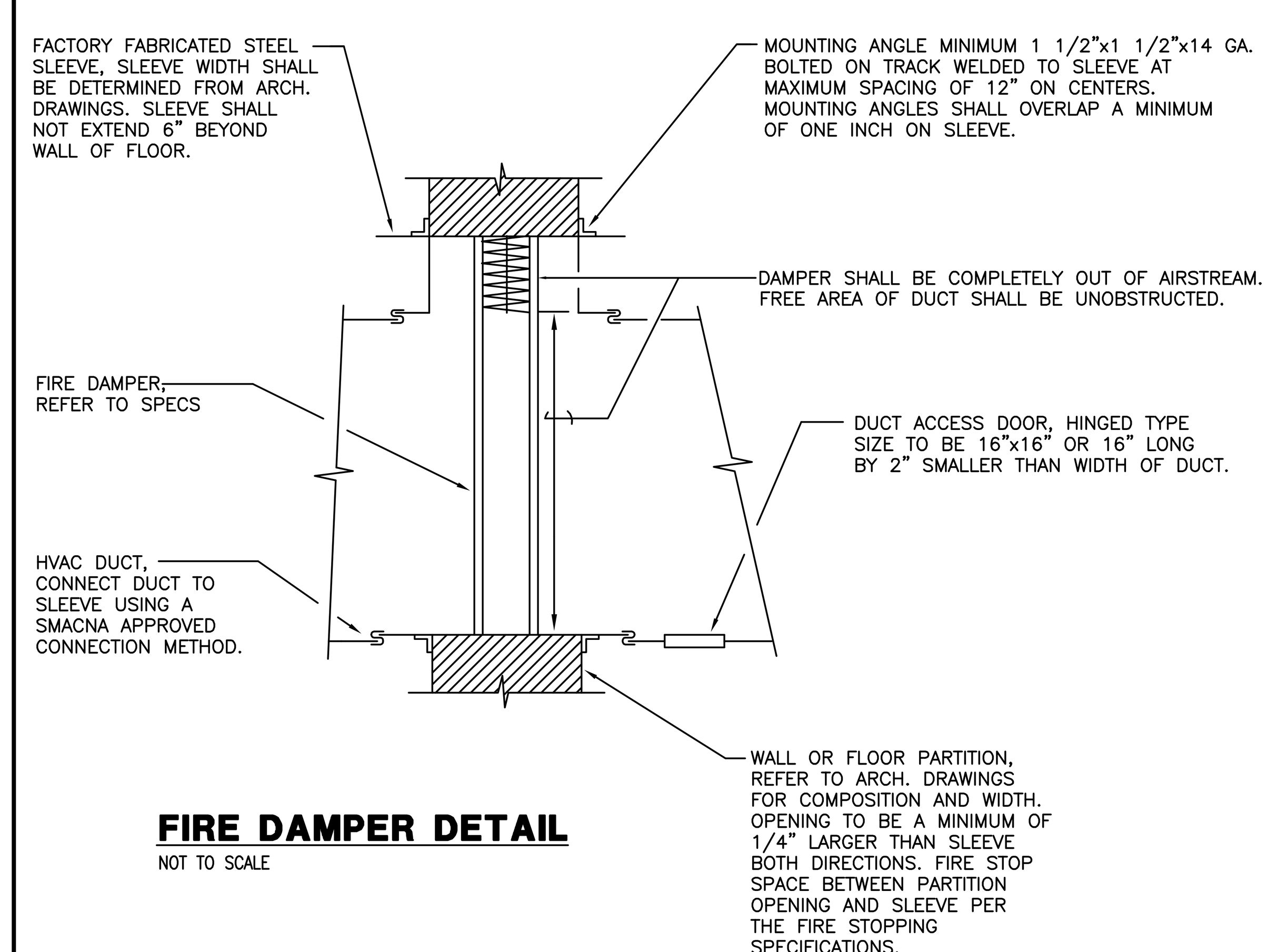
1. SUBMITTAL AND SHEET METAL SHOP DRAWINGS SHALL SHOW PHYSICAL SIZE OF UNIT. AIR FLOW CONTROLS AND ACCESS PANELS. SHOP DRAWINGS SHALL ALSO SHOW ELEVATION OF INSTALLED TERMINAL UNITS.

2. DAMPER AND AIR FLOW CONTROLS MUST BE ACCESSIBLE FOR ADJUSTMENT AND MAINTENANCE. DUCTWORK, CONDUIT OR MAIN CEILING GRIDS SHOULD BE LOCATED ACCORDINGLY.

3. HIGH PRESSURE SUPPLY DUCT SHOULD NOT MAKE ANY SEVERE TRANSITIONS OR TURNS 3 FEET PRIOR TO CONNECTING TO THE TERMINAL UNIT. THESE UNITS HAVE AIR FLOW MEASURING DEVICES THAT REQUIRE STRAIGHT, LAMINAR AIR FLOW ENTERING FOR GOOD CONTROL. FLEXIBLE DUCT IS NOT ALLOWED.

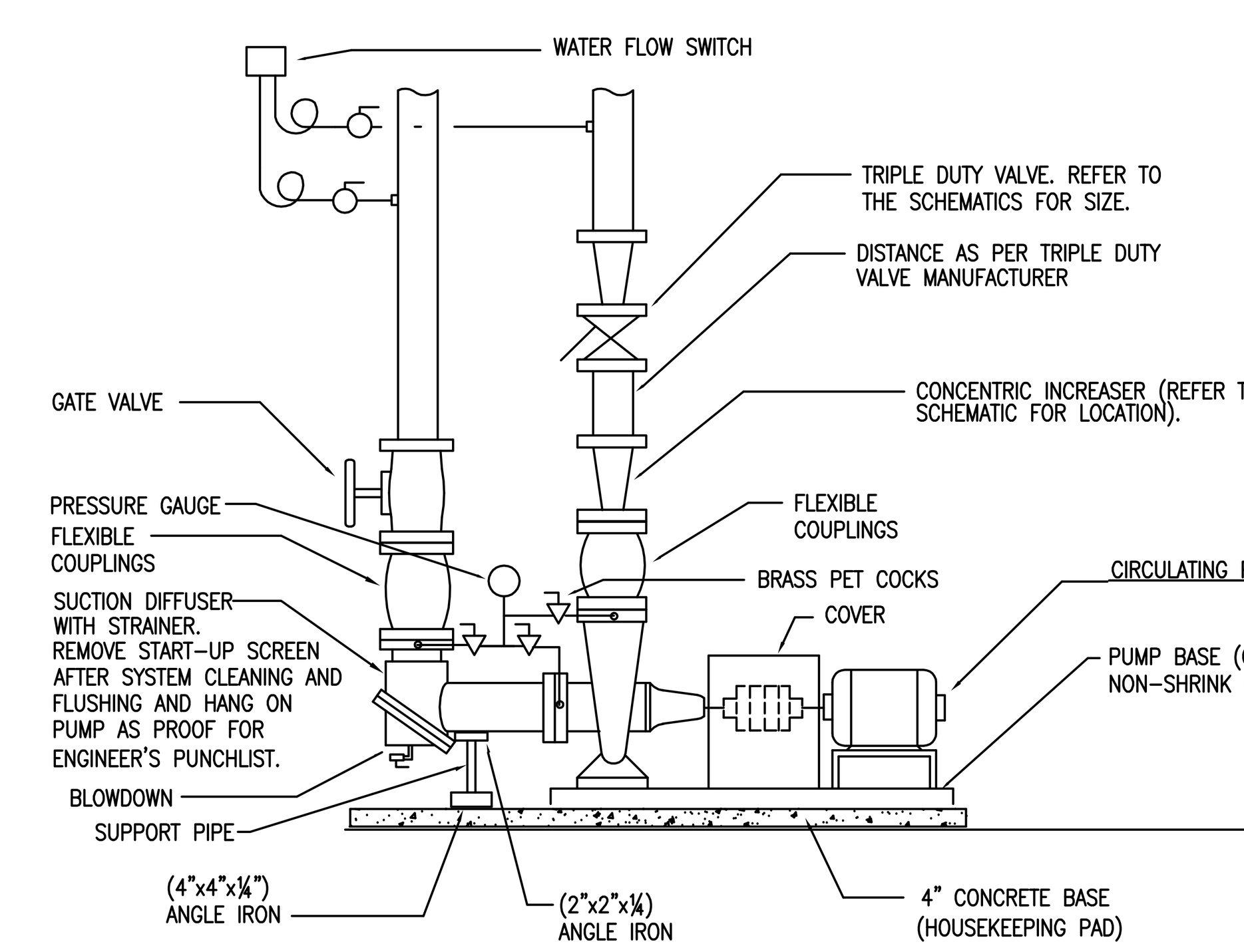
MAINTAIN A MINIMUM OF 24" CLEAR SPACE AROUND THE VAV DEVICE TO ACCESS COIL DAMPERS, ETC.

VAV BOX DETAIL



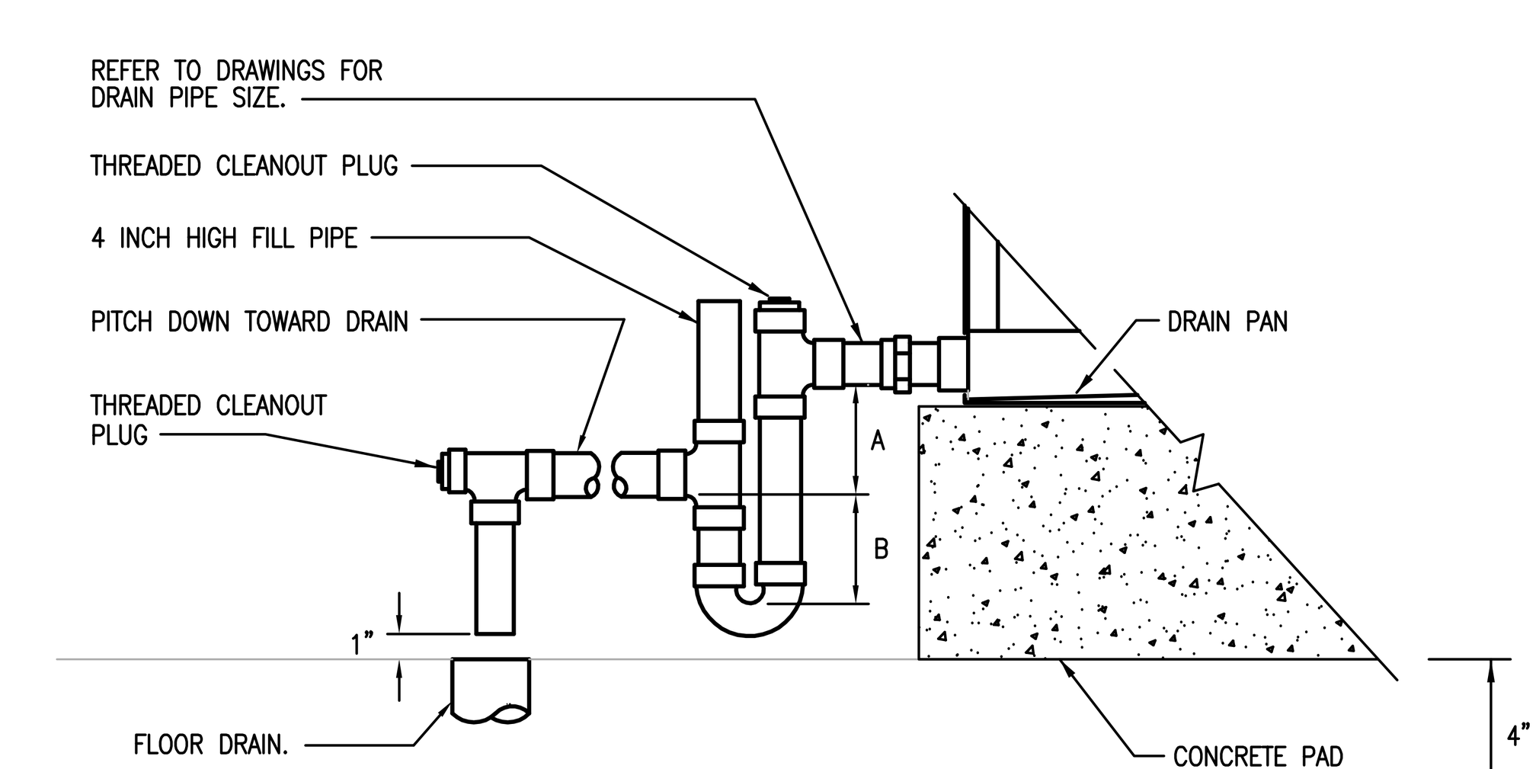
FIRE DAMPER DETAIL

NOT TO SCALE



BASE MOUNTED PUMP PIPING DETAIL

NOT TO SCALE



UNIT TYPE	A	B
BLOW THRU	1" MINIMUM	FAN OUTLET PRESSURE PLUS 2"

AIR HANDLING UNIT DRAIN TRAP DETAIL

NOT TO SCALE

UNIVERSITY LOFTS - Renovate Academic Facility UK School of Art & Visual Studies

MECHANICAL DETAILS

NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CE/CRK Checked By: JMS Revision: XXX

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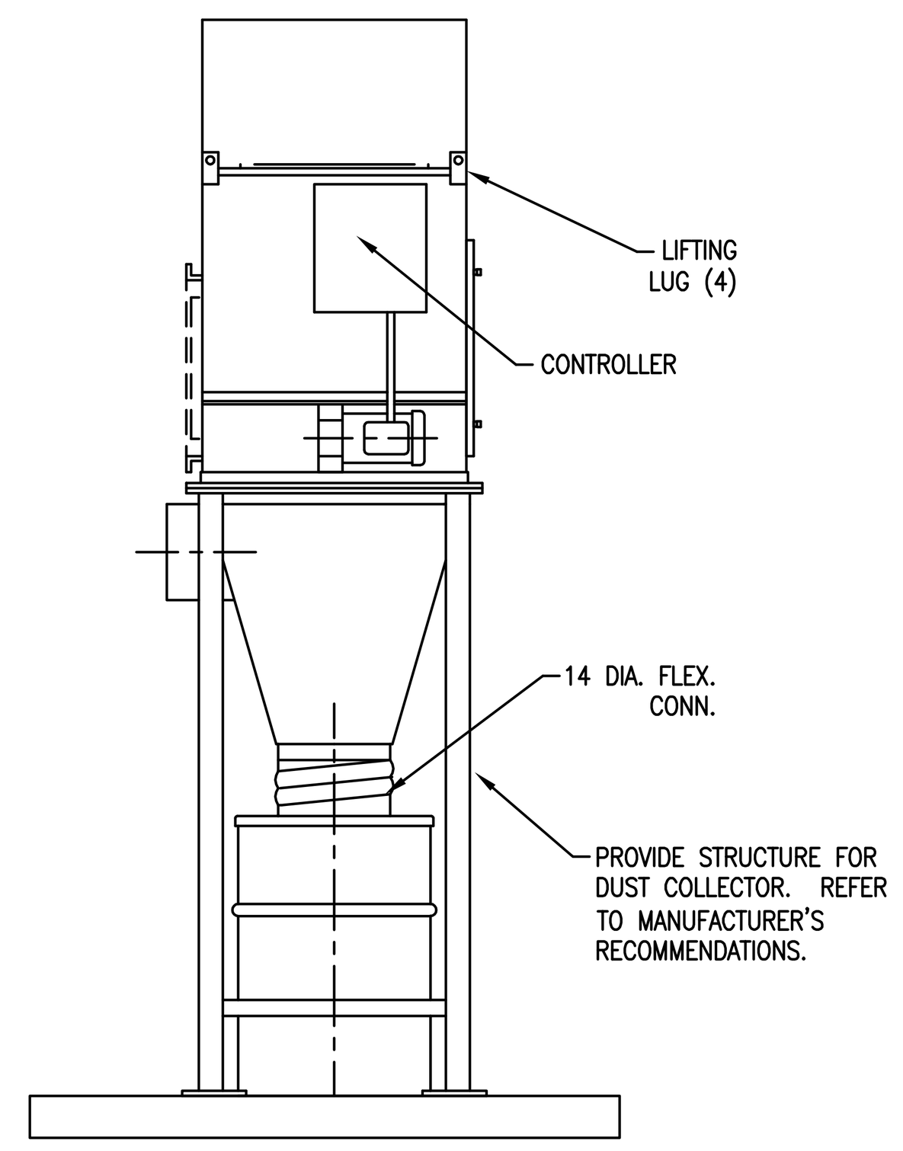
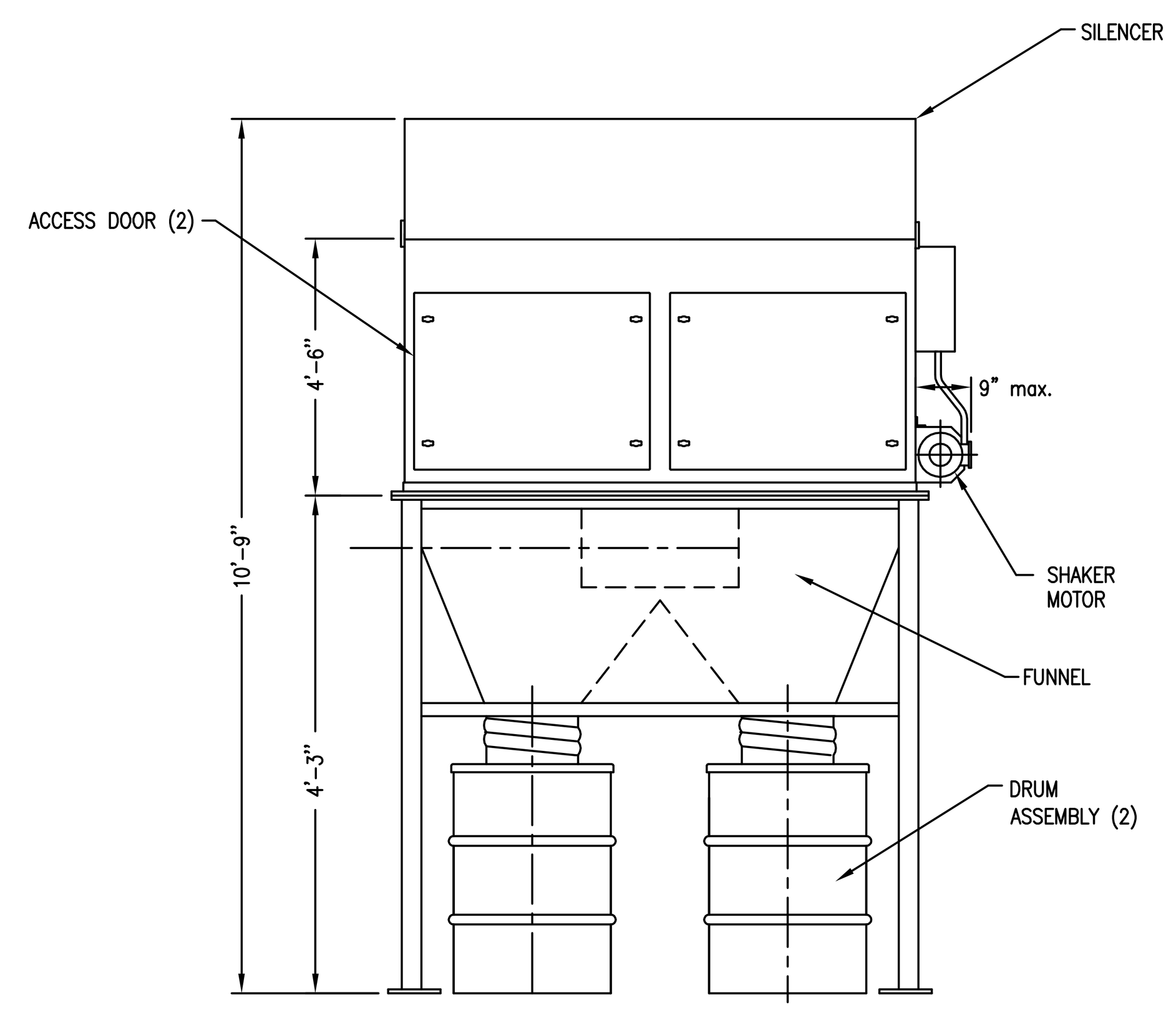
PRE-DESIGN

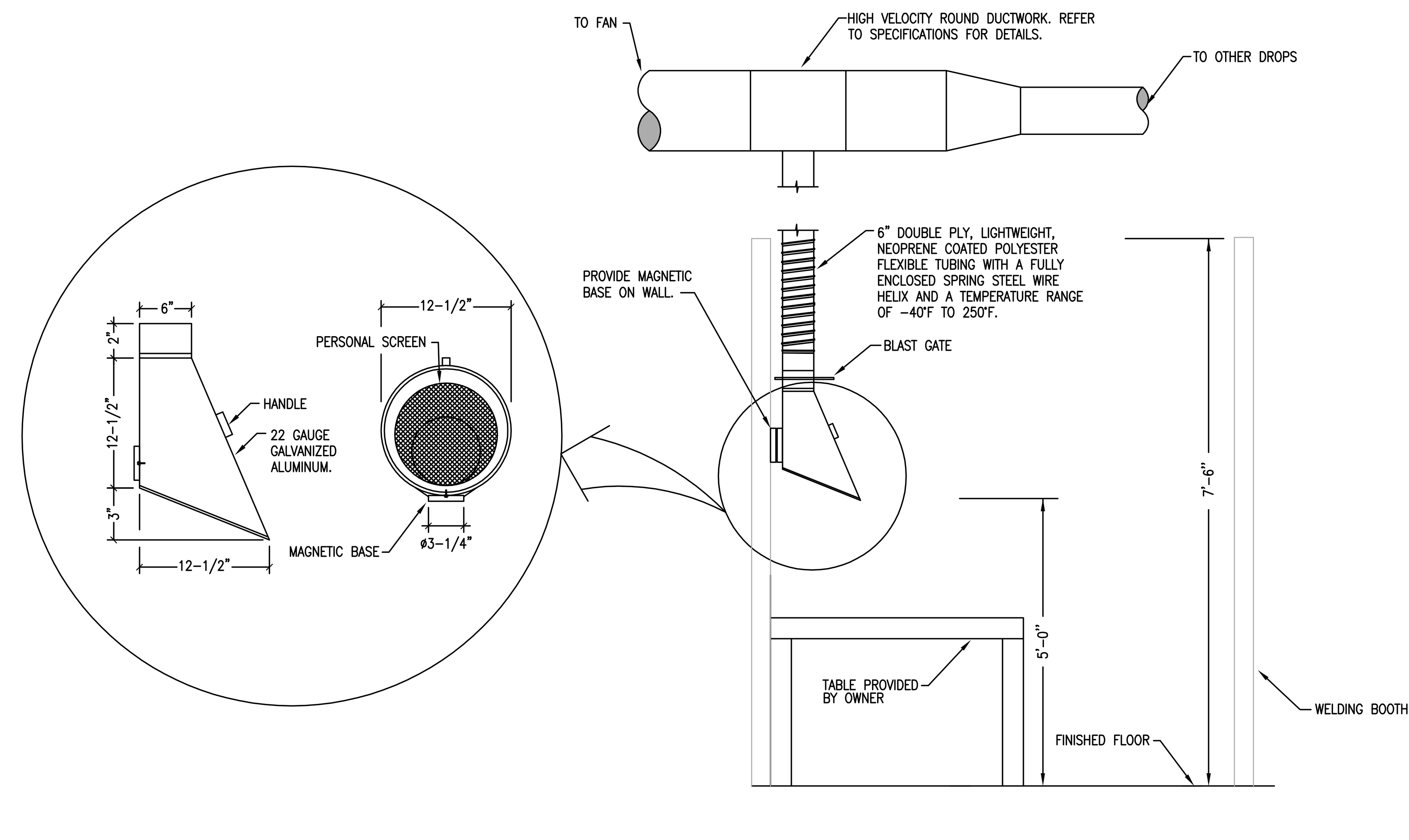
M7.0



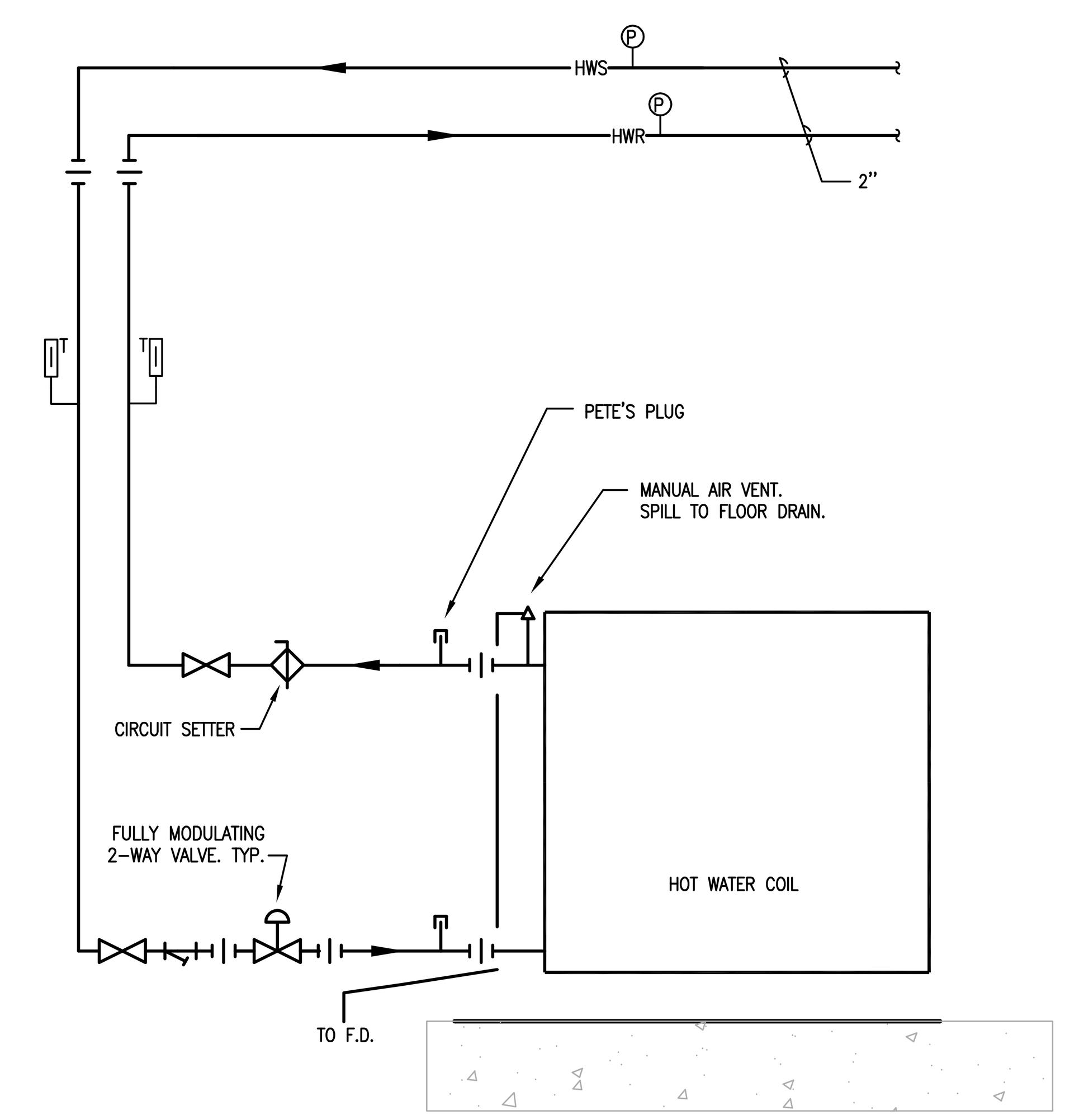
DUST COLLECTOR SIDE VIEW
NTS



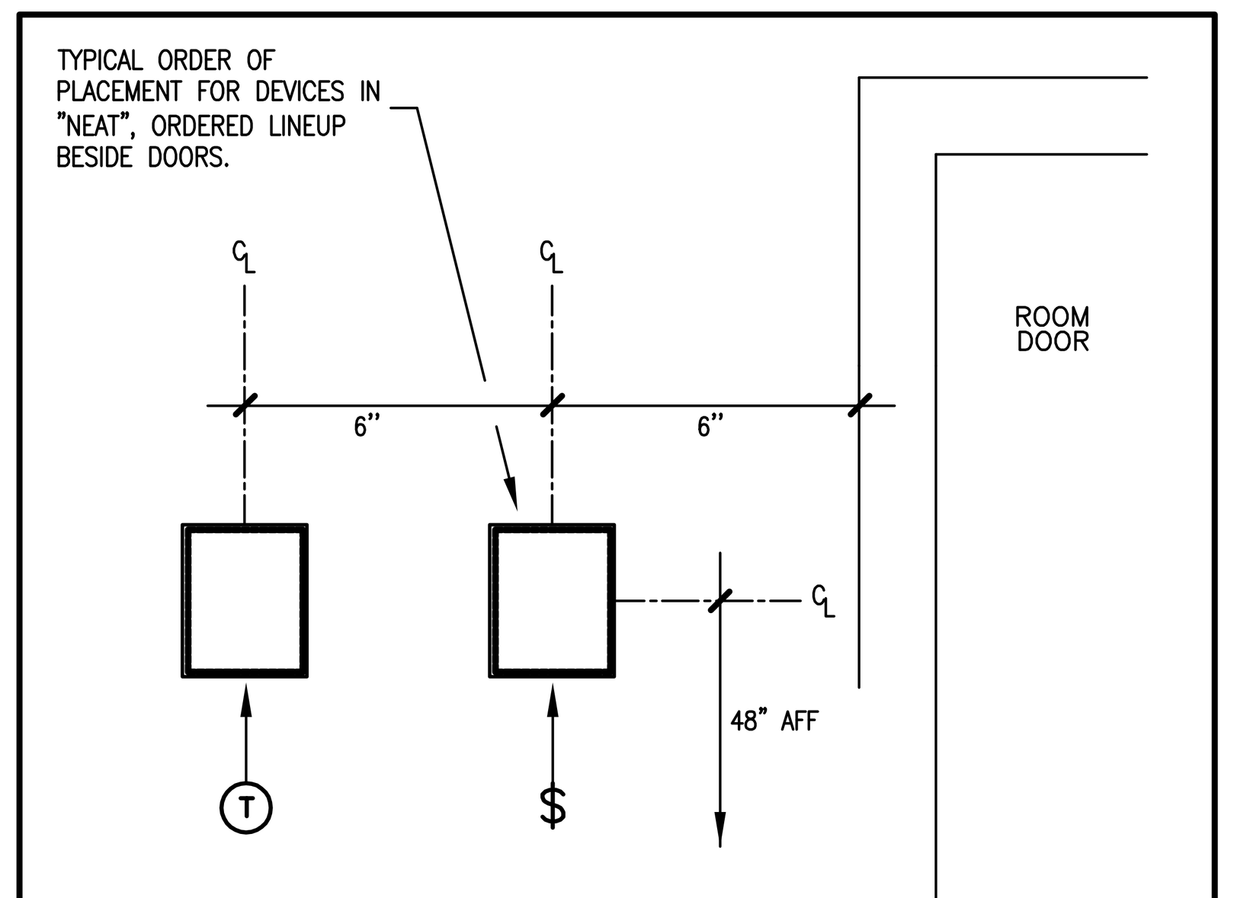
DUST COLLECTOR FRONT VIEW
NTS



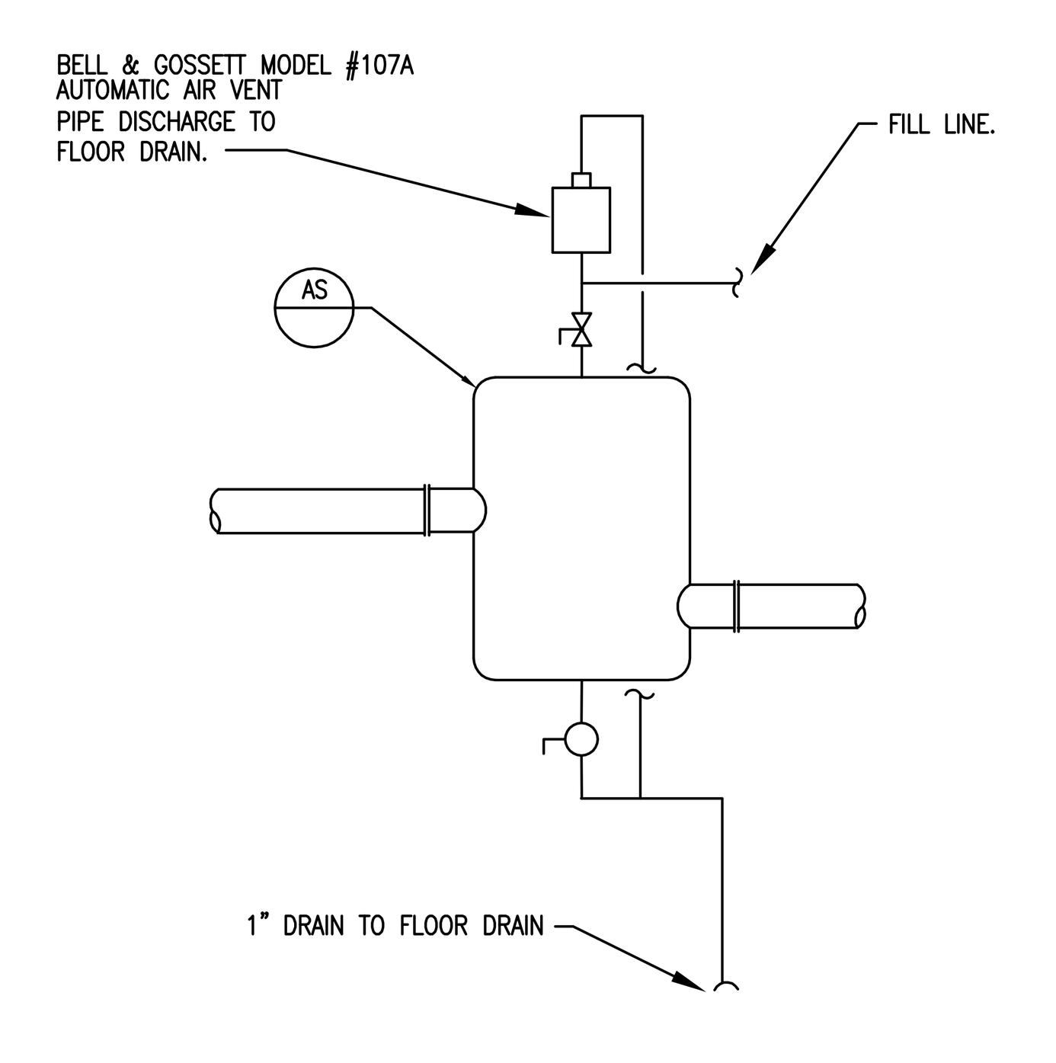
WELDING EXHAUST BOOTH DETAIL
NTS



AHU-3 AND AHU-4 HOT WATER COIL PIPING DETAIL
NOT TO SCALE



THERMOSTAT SENSOR COORDINATION DETAIL
NOT TO SCALE



AIR SEPARATOR TANK DETAIL
NOT TO SCALE

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MECHANICAL DETAILS

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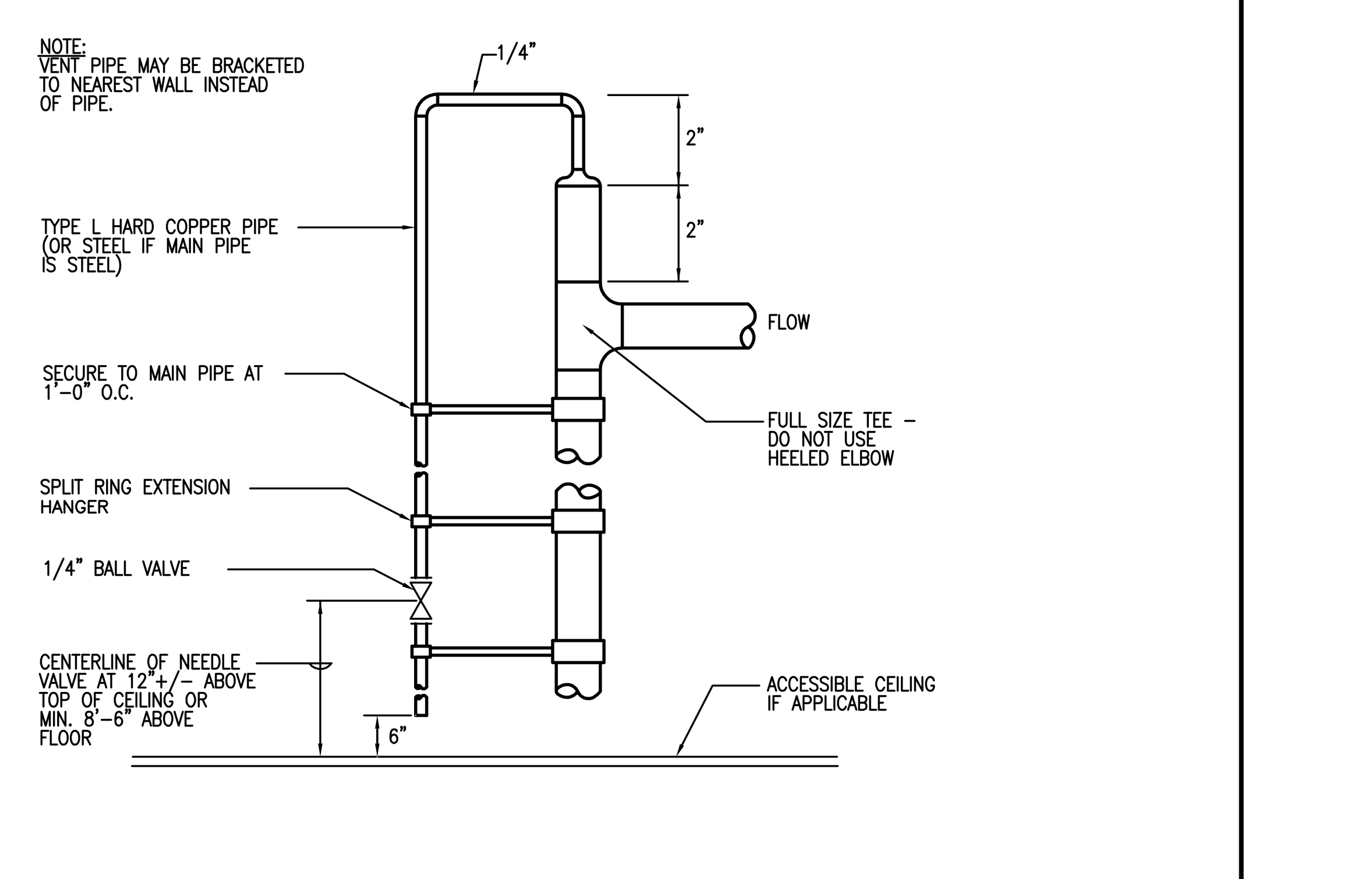
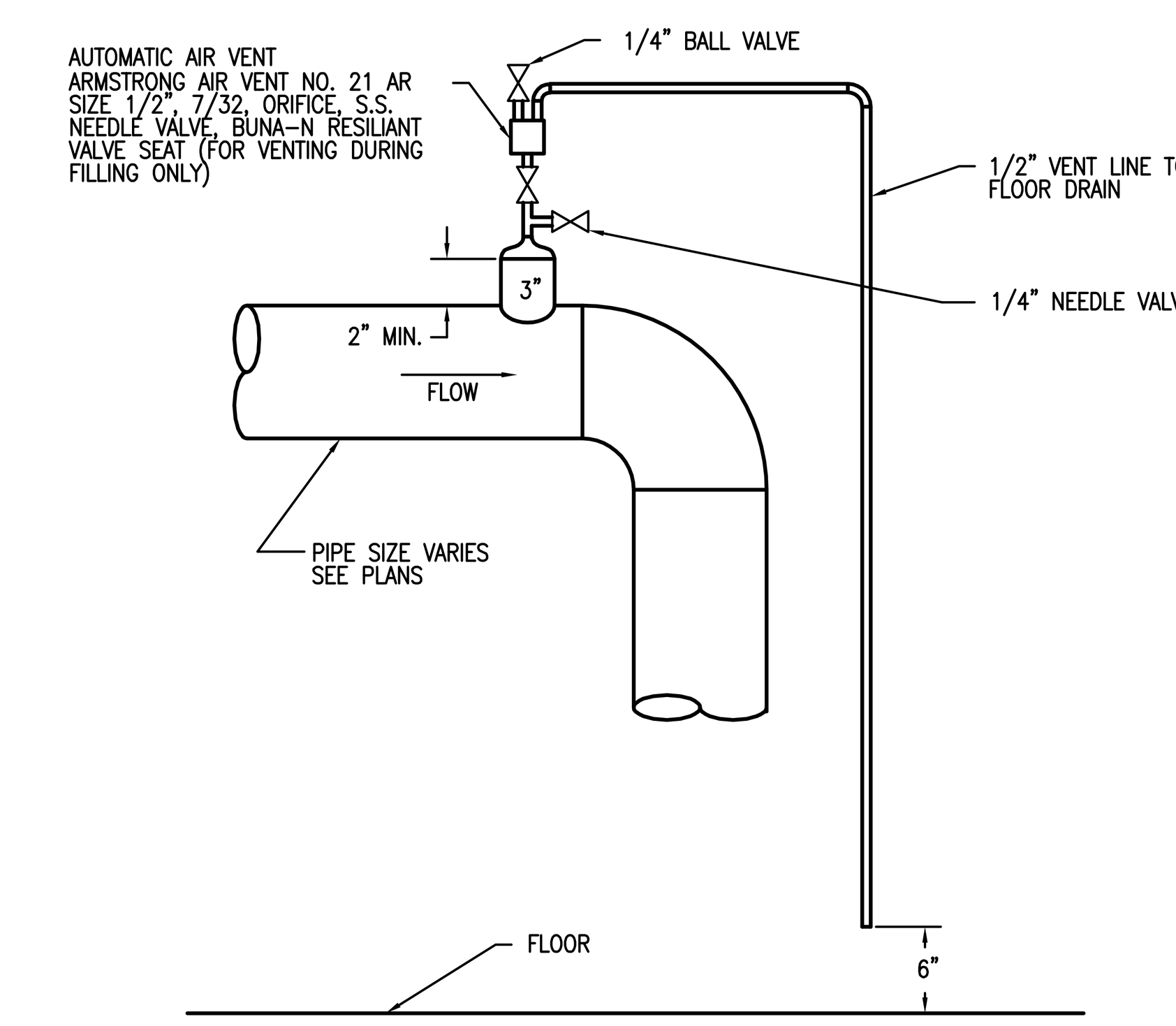


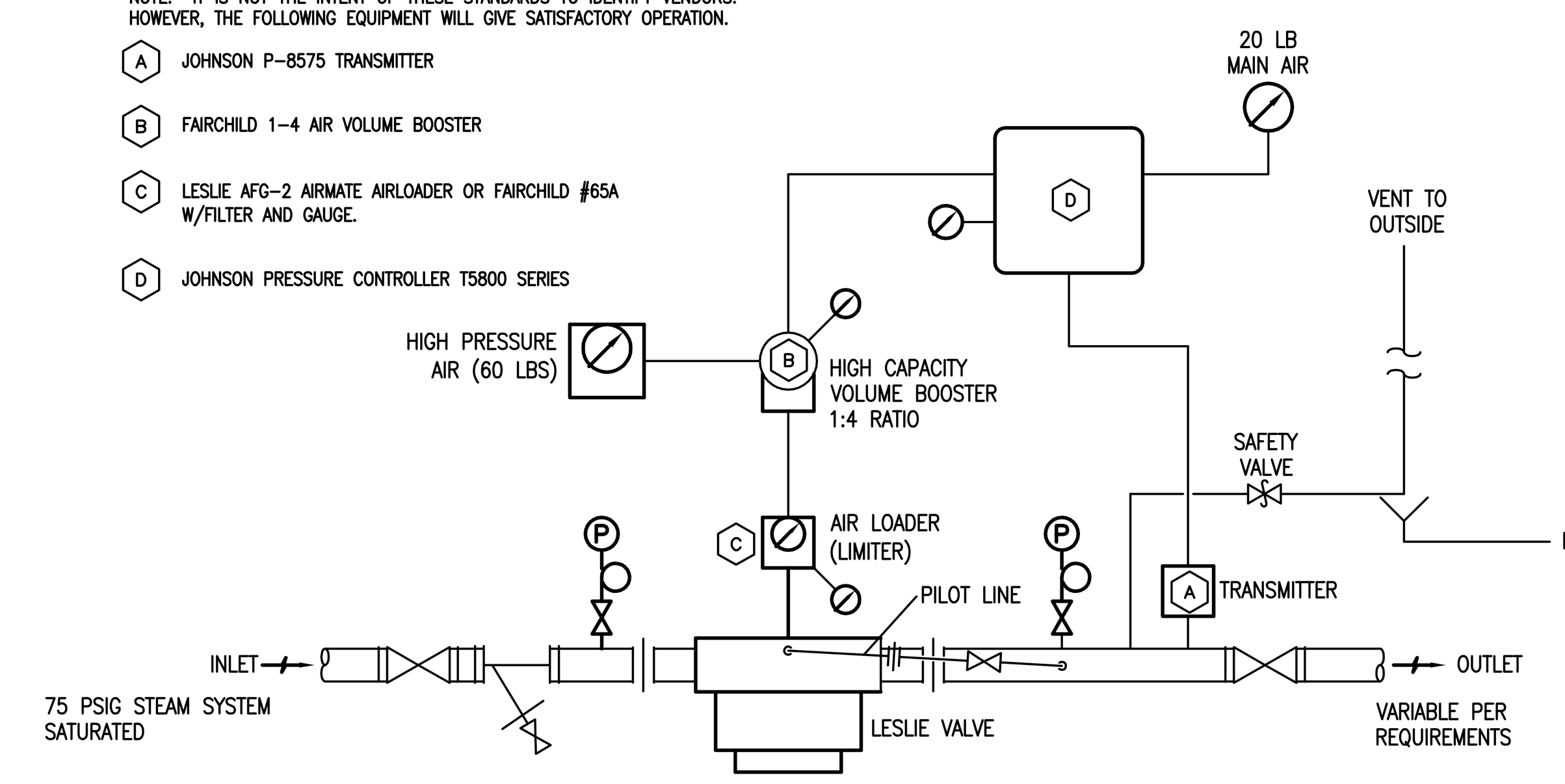
MANUAL AIR VENT DETAIL - PIPES 3" AND SMALLER
NOT TO SCALE



AUTOMATIC AIR VENT DETAIL - PIPES 4" AND LARGER
NOT TO SCALE

NOTE: IT IS NOT THE INTENT OF THESE STANDARDS TO IDENTIFY VENDORS. HOWEVER, THE FOLLOWING EQUIPMENT WILL GIVE SATISFACTORY OPERATION.

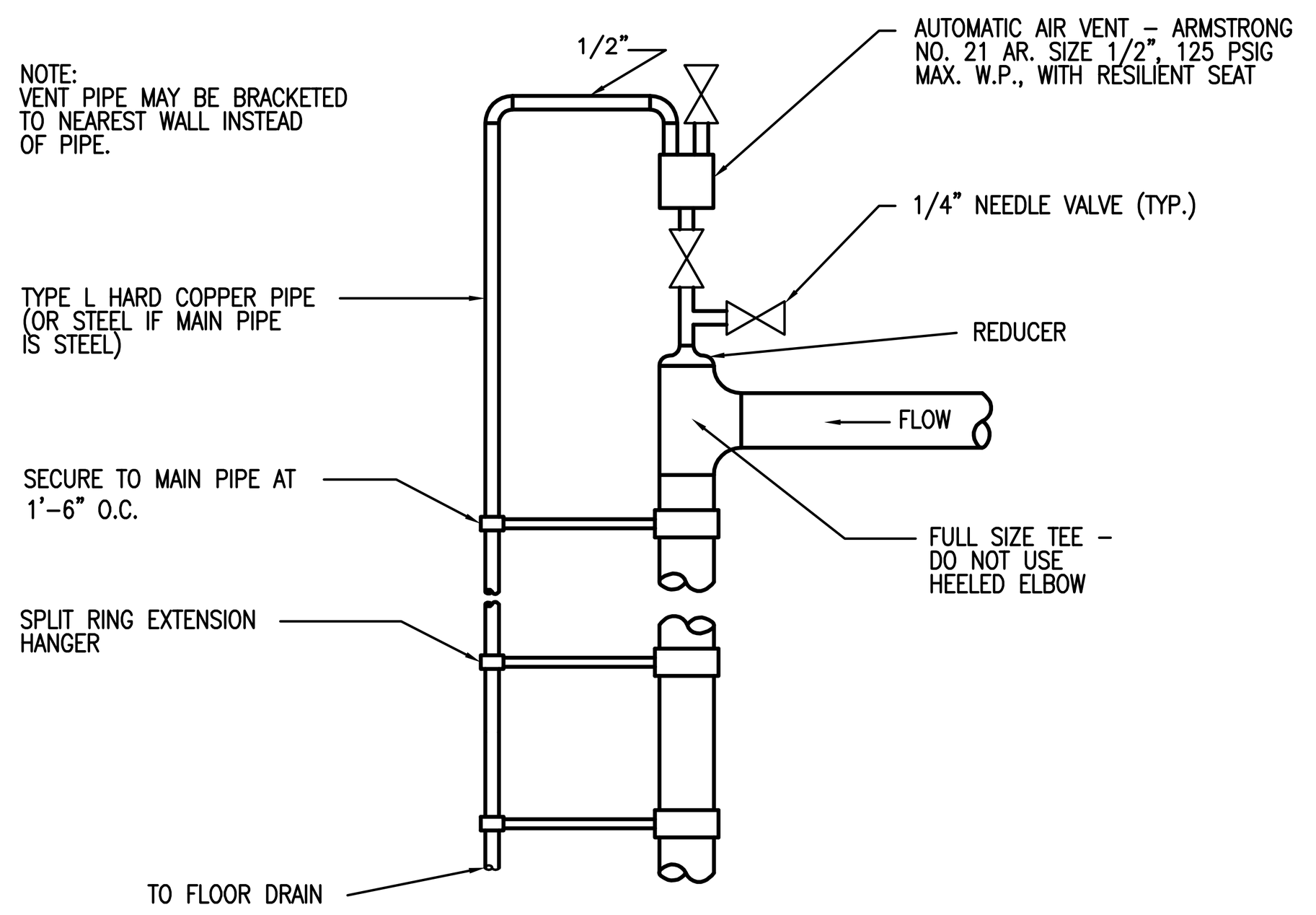
- (A) JOHNSON P-8575 TRANSMITTER
- (B) FAIRCHILD 1-4 AIR VOLUME BOOSTER
- (C) LESLIE AFG-2 AIRMATE AIRLOADER OR FAIRCHILD #65A W/FILTER AND GAUGE.
- (D) JOHNSON PRESSURE CONTROLLER T5800 SERIES



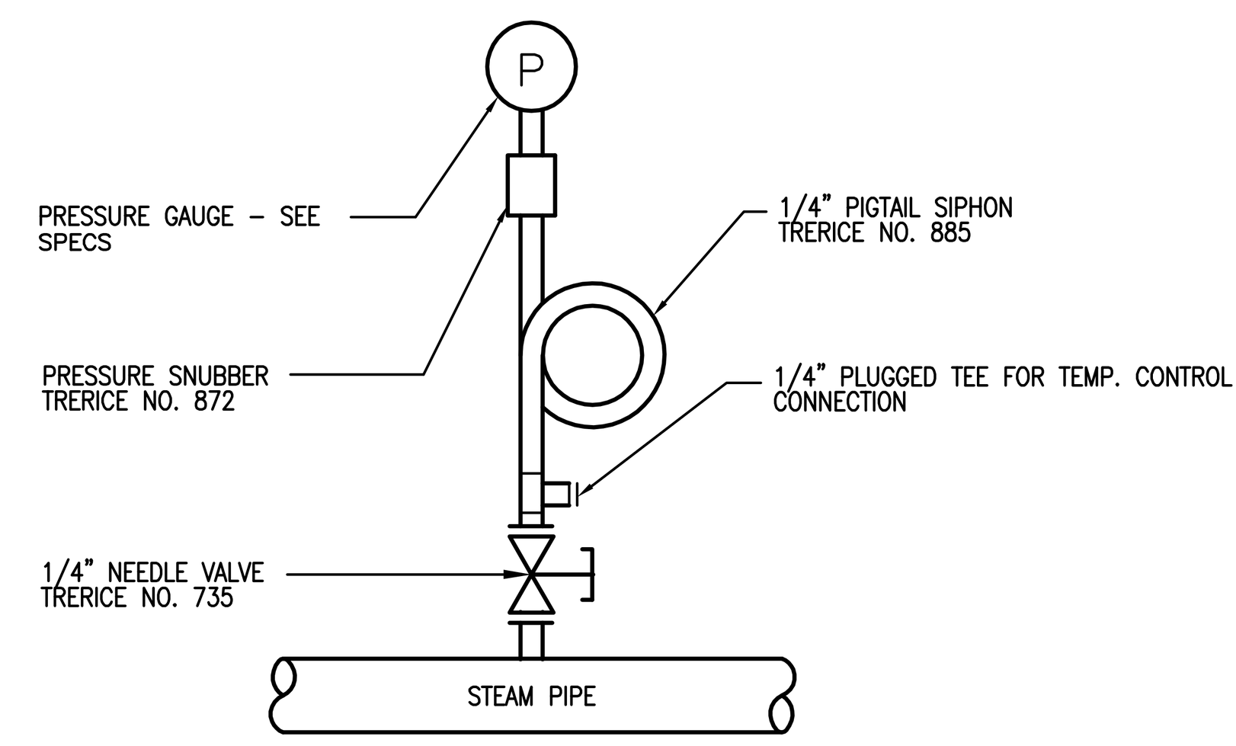
PRESSURE REDUCING VALVE

1. A PRESSURE CONTROLLER SENSING THE REDUCED PRESSURE WILL RELOAD THE PRESSURE REDUCING VALVE, ONLY WHEN THE INLET PRESSURE CHANGES, DUE TO PLANT CONDITIONS, PRESSURE DROPS, ETC. TO INSURE THE PROPER OUTLET PRESSURE IS MAINTAINED. THE AIR LOADER WILL BE SET AT A MAXIMUM PRESSURE TO LIMIT THE AMOUNT OF LOADING PRESSURE ON THE REDUCING VALVE.
2. THE HIGH CAPACITY VOLUME BOOSTER IS ONLY NEEDED WHEN THE LOADING PRESSURE IS ABOVE 18 PSIG. ALL CONTROLLERS MUST HIGH VOLUME RELAY TYPE (NOT ONE PIPE BLEED PRESSURE CONTROLLER).
3. PROVIDE GAUGES FOR MAIN AIR PRESSURE AND AT PRESSURE REDUCTIONS.
4. PRV MUST BE STEEL RATED FOR 300 PSIG, 500 DEG. F. DUCTILE IRON IS NOT ACCEPTABLE.

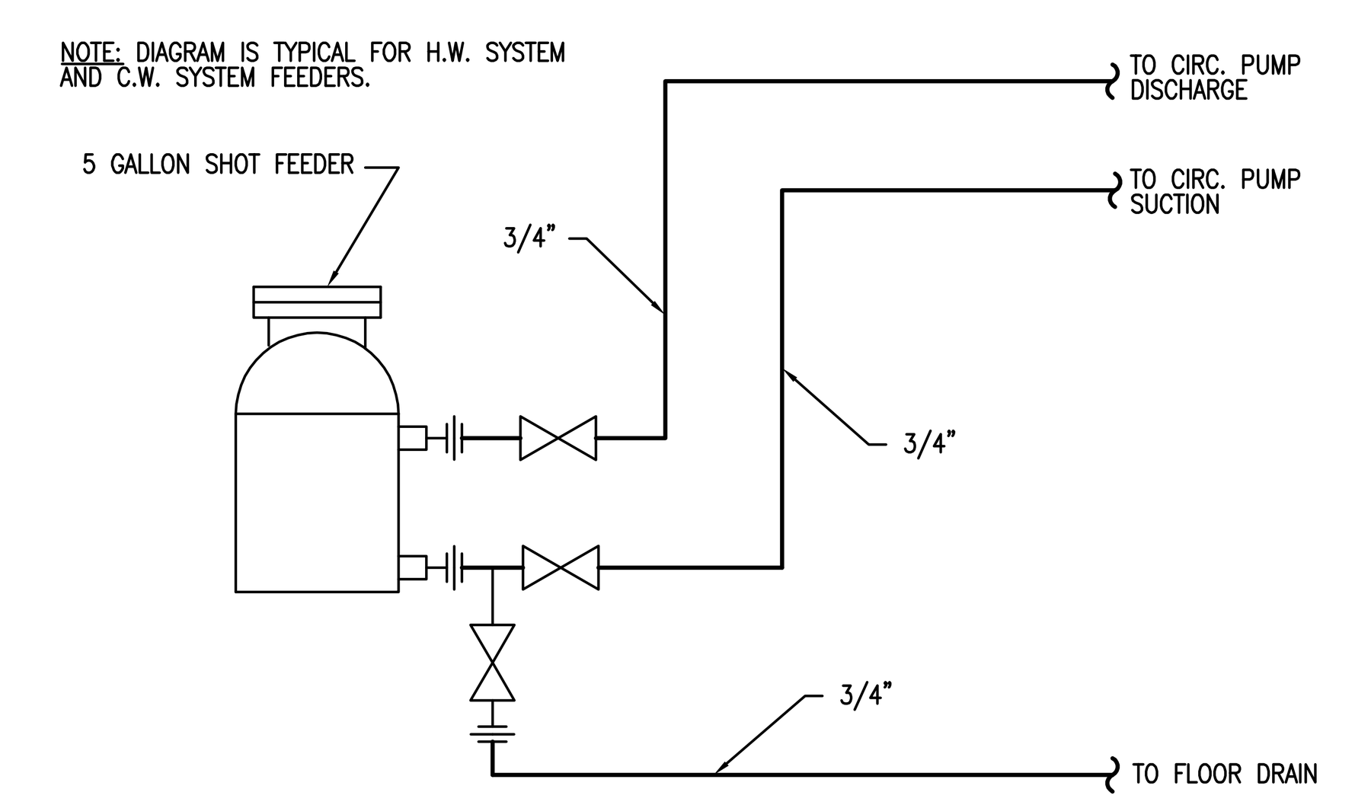
STANDARD STEAM PRESSURE REDUCING SYSTEM [CONTROL]
NOT TO SCALE



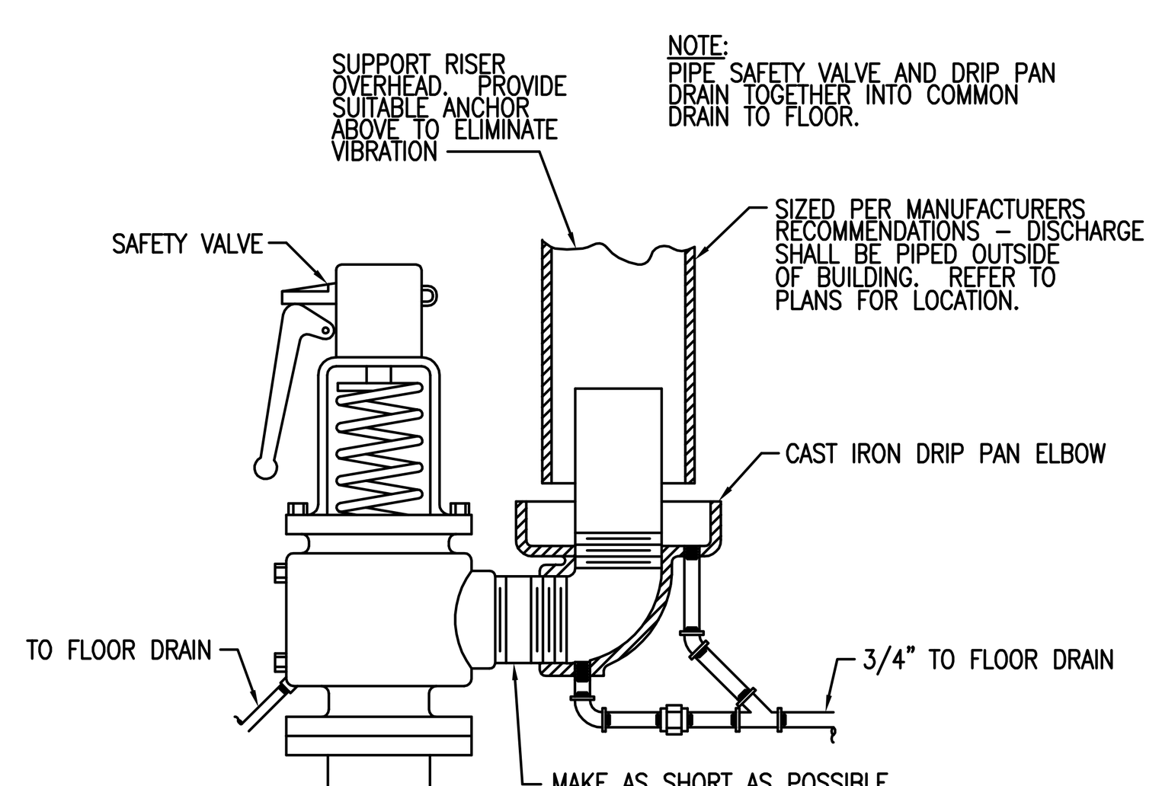
AUTOMATIC AIR VENT DETAILS - 3" & SMALLER
NOT TO SCALE



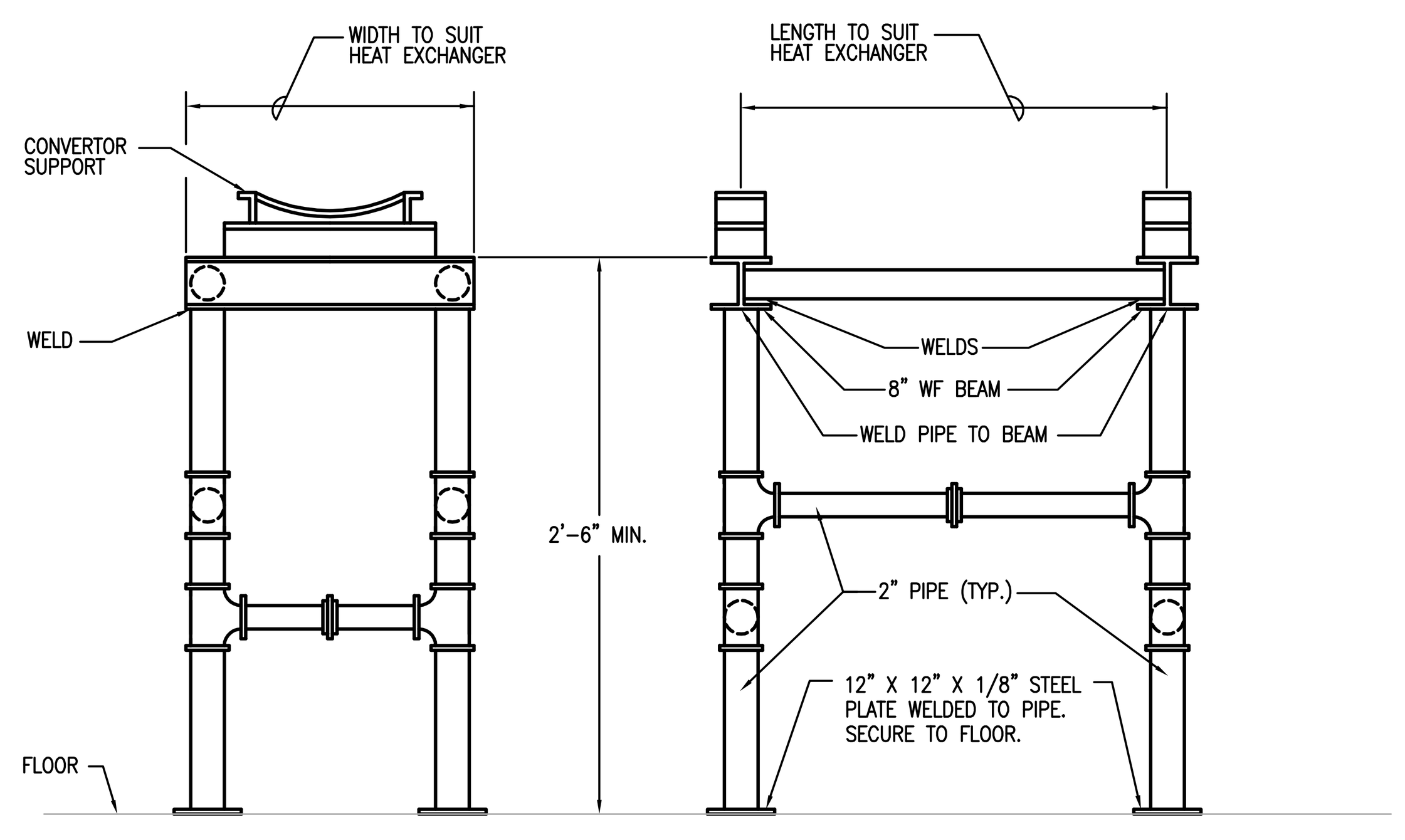
STEAM PRESSURE GAUGE INSTALLATION
NOT TO SCALE



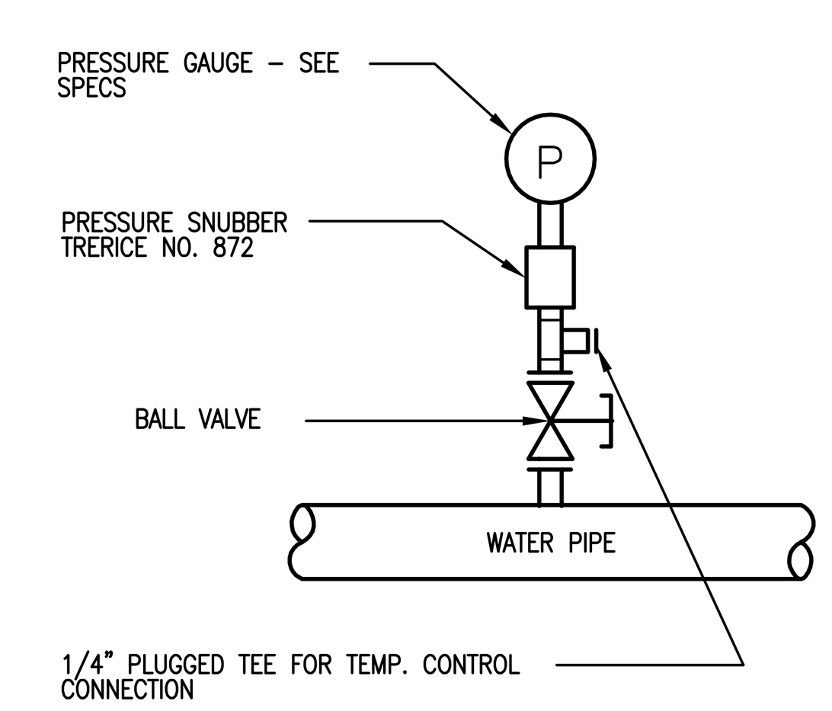
POT FEEDER PIPING DIAGRAM
NOT TO SCALE



DRIP PAN ELBOW INSTALLATION
NOT TO SCALE



H.W. HEAT EXCHANGER SUPPORT DETAIL
NOT TO SCALE



WATER PRESSURE GAUGE INSTALLATION
NOT TO SCALE

UNIVERSITY LOFTS - Renovate Academic Facility UK School of Art & Visual Studies

MECHANICAL DETAILS

NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CE/CRK Checked By: JMS Revision: XXX

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PRE-DESIGN

M7.2

SHELL AND TUBE HEAT EXCHANGERS

MARK	MFR.	MODEL	MIN. TUBE AREA (FT^2)	DIMENSIONS		HEATING MBH	SHELL SIDE (STEAM)		TUBE SIDE (HOT WATER)					REMARKS
				DIA.	LENGTH		LBS/HR	ENT. PRESS.	GPM	P.D.	EWT	LWT	F.FCTR.	
HX-1														

REMARKS:

1. 4" INLET, 4" OUTLET.
2. PROVIDE HX SUPPORT STRUCTURE. SEE MECHANICAL DETAILS.
3. 18 BWG MINIMUM THICKNESS ON TUBE BUNDLES.
4. FRONT HEAD-CAST IRON K SHAPED.
5. BRASS BAFFLES, STEEL SHELL, BRASS TIE RODS/SPACERS.

LOOP FILTER SCHEDULE

MARK	MFR/MODEL	GPM	MICRON	P.D. (PSI)	FOOTPRINT	REMARKS
LF-HW	HARMSCO WB90SC					
LF-CW	HARMSCO WB90SC					

REMARKS:
1. PROVIDE TWO CLEAN FULL SETS OF 50 MICRON FILTERS TO OWNER.

CONDENSATE PUMPS AND RECEIVERS

MARK	MANUFACTURER	MODEL	CAPACITY LB/HR	RECEIVER CAP.-GALS	GPM	DISCHARGE PRESS.-PSIG	MOTOR				REMARKS
							HP	RPM	PH	VOLTS	
CP-1											

REMARKS:

1. PROVIDE WATER LEVEL GAUGE WITH SHUT-OFF VALVE, DIAL THERMOMETER, INLET BASKET STRAINER, DISCHARGE PRESSURE GAUGES, MECHANICAL ALTERNATOR FOR SEQUENCING AND STANDBY, U.L. LISTED CONTROL PANEL, SUCTION BUTTERFLY VALVE, AND LIFTING EYES.

2. PROVIDE THE FOLLOWING WITH CONTROL PANEL: MAGNETIC STARTERS, DISCONNECT SWITCHES AND CIRCUIT BREAKERS, "OFF-HAND-LEAD-LAG" SELECTOR SWITCHES, ELECTRIC ALTERNATOR, TRANSFORMER, PILOT LIGHTS, AND CONTACTS FOR REMOTE ALARM.

AIR SEPARATOR SCHEDULE

MARK	MFG./MODEL	MAX. FLOW (GPM)	P.D. (PSIG)	AIR REMOVAL (%)
AS-HW				
AS-CW				

LOUVER SCHEDULE

MARK	MODEL	CFM	DEVICE SIZE W X H	FREE AREA	MAX. VELOCITY FPM	P.D. IN H20	REMARKS
L-1	RUSKIN ELF375D	2800	36"x36"				
L-2	RUSKIN ELF375D	2800	48"X36"				
L-3	RUSKIN ELF375D	3600	48"X36"				
L-4	RUSKIN ELF375D	4500	60"X36"				
L-5	RUSKIN ELF375D	5700	60"X48"				
L-6	RUSKIN ELF375D	7000	72"X60"				
L-7	RUSKIN ELF375D	7000	60"X60"				
L-8	RUSKIN ELF375D	7000	72"X60"				

REMARKS:
1. FINISH AND CUSTOM COLOR SELECTED BY ARCHITECT.
2. DRAINABLE BLADES, 4" DEEP FRAME AND BIRDSCREEN.

EXPANSION TANK

MARK	SERVICE	B&G MODEL	TOTAL VOLUME GAL.	REQUIRED ACCEPTANCE GAL.	SIZE (IN)
ET-HW	HOT WATER LOOP				
ET-CW	CHILLED WATER LOOP				

REMARKS:
1. PROVIDE ASME RATED TANKS WITH NPT SYSTEM CONNECTION.
2. ET-HW SHALL BE PAD MOUNTED.

DUST COLLECTION SYSTEM

MARK	MANUF/MODEL	TYPE	CFM	ESP IN. W.G.	NUM. OF FILTERS	DIMENSIONS L"XW"XH"	HP	V/ø	REMARKS
DC-1									

REMARKS:
1. BLOWER MOTOR SHALL BE 15 HP.
2. SHAKER MOTOR SHALL BE 3/4 HP.
3. PROVIDE WITH TWO 55 GALLON DRUM FOR DUST COLLECTION.
4. CONTRACTOR TO MAINTAIN ALL MANUFACTURER'S REQUIRED CLEARANCES.
5. PROVIDE WITH SPARK DETECTION SYSTEM. REFER TO SPECIFICATIONS FOR DETAILS.
6. PROVIDE WITH SAFETY FILTERS.
7. FILTER MEDIA SHALL BE COTTON SATEEN 2-24 MULTI-POCKET MODULES 24"x30".
8. PROVIDE WITH EXPLOSION RELIEF DOOR.
9. PROVIDE WITH SINGLE POINT POWER CONNECTION.
10. FACTORY MOUNTED NEMA 4 RATED CONTROLLER SHALL INCLUDE MAGNETIC STARTERS FOR BLOWER AND SHAKER.
11. PROVIDE WITH STANDARD WEATHERPROOF FINISH RED OXIDE PRIMER AND EXTERIOR ONE COAT GRAY ENAMEL.
12. ACCEPTABLE MANUFACTURERS INCLUDE VIBRACLEAN, AIREX INDUSTRIES, OR APPROVED EQUAL.
13. BLOWER MOTOR SHALL BE 3 HP.
14. SHAKER MOTOR SHALL BE 1/4 HP.

VARIABLE AIR VOLUME BOX SCHEDULE

SYMBOL	VAV-5	VAV-6	VAV-8	CAV-12	CAV-16
MANUFACTURER & MODEL	NAILOR- 3000 SERIES	NAILOR- 3000 SERIES	NAILOR- 3000 SERIES	NAILOR- 3000 SERIES	NAILOR- 3000 SERIES
BOX TYPE	VARIABLE VOLUME WITH DUCT MOUNTED HOT WATER COIL	VARIABLE VOLUME WITH DUCT MOUNTED HOT WATER COIL	VARIABLE VOLUME WITH DUCT MOUNTED HOT WATER COIL	VARIABLE VOLUME WITH DUCT MOUNTED HOT WATER COIL	VARIABLE VOLUME WITH DUCT MOUNTED HOT WATER COIL
TOTAL APD @ MAX. CFM	0.04"WG	0.10"WG	0.05"WG	0.01"WG	0.01"WG
VOLUME CONTROL DAMPER					
MAX. CFM	300	500	900	2000	3000
MIN. CFM	0	0	0	-	-
LEAKAGE RATE @ 2.0" S.P.	2.0%	2.0%	2.0%	2.0%	2.0%
PRESSURE INDEPENDENT CONTROLS	YES	YES	YES	YES	YES
INLET SIZE	5"ø	6"ø	8"ø	13"X10"ø	20"X10"ø

REMARKS:

1. TOTAL PRESSURE DROP INCLUDING HEATING COIL SHALL BE 0.20"wg. COILS TO BE MOUNTED IN DUCTWORK PER DETAIL. INTEGRAL COIL IN VAV BOX NOT ACCEPTABLE.
2. BOX SHALL BE DOUBLE WALL WITH 1" THICK INSULATION.
3. CONTROLLER SHALL BE BACNET COMPATIBLE.
4. COILS SHALL BE DUCT MOUNTED WITH ACCESS PANELS ON EITHER SIDE. REFER TO DETAIL.
5. PROVIDE CONTROLS ENCLOSURE FOR FIELD MOUNTED CONTROLS.

REHEAT COIL SCHEDULE

MARK	RHC-5	RHC-6	RHC-8	RHC-12	RHC-16
CFM	300	500	900	2000	3000
EAT/LAT	55°F/95°F	55°F/95°F	55°F/95°F	55°F/95°F	55°F/95°F
EWT/LWT	180°F/150°F	180°F/150°F	180°F/150°F	180°F/150°F	180°F/150°F
GPM/WPD	0.9/7 FT	1.44/7 FT	2.6/7 FT	5.8/7 FT	8.64/7 FT
MBH	12.9	21.6	38.9	86.4	129.6
SERVICE	VAV-5	VAV-6	VAV-8	CAV-12	CAV-16
BRANCH PIPE SIZE	3/4"	3/4"	1"	1-1/4"	1-1/2"

DX SPLIT SYSTEM HEAT PUMP

MARK	INDOOR UNIT							OUTDOOR UNIT									REMARKS
	MFR./ SERIES	CFM	E.S.P.	FAN MOTOR	ELECTRICAL			MARK	MFR./ SERIES	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	TOTAL HEATING (MBH)	MIN. SEER	ELECTRICAL			
					MCA	MOP	V/ø							MCA	MOP	V/ø	
AC-X								CU-X									

REMARKS:
1. MAINTAIN MANUFACTURER'S CLEARANCES ON INDOOR AND OUTDOOR UNITS.
2. HEATING CAPACITY IS BASED ON 70 DB INDOOR AIR TEMPERATURE. COOLING CAPACITY IS BASED ON 78 DB/67 WB INDOOR AIR TEMPERATURE AND 95 DB AMBIENT.
3. PROVIDE A SEPERATE SINGLE POINT ELECTRICAL CONNECTION FOR INDOOR UNIT AND OUTDOOR UNIT.
4. PROVIDE LOW AMBIENT COOLING TO 0 DEGREES F.
5. PROVIDE CONDENSATE DRAIN TRAP PER MANUFACTURER'S RECOMMENDATIONS.
6. SIZE ALL REFRIGERANT PIPING PER MANUFACTURER'S INSTRUCTIONS. REVIEW PIPING RUNS WITH MANUFACTURER. PROVIDE ALL COMPONENTS NECESSARY FOR PROPER OPERATION. R410 REFRIGERANT.
7. SET INDOOR UNIT TO LOWEST SPEED POSSIBLE TO MAINTAIN AIR FLOW. REFER TO THE MANUFACTURER'S HEATER/FAN SPEED MATRIX.

PUMPS

MARK	MFR. & MODEL	SERVICE	TYPE	GPM	HEAD (FT)	% EFF.	RPM	HP	VOLT/ø	DUPLICATES	REMARKS
P-HW1		HEATING HOT WATER								P-HW2	
P-CW1		CHILLED WATER								P-CW2	

REMARKS:
1. FLOW PERFORMANCE BASED ON WATER AS WORKING FLUID.
2. PUMPS SHALL BE NON-OVERLOADING.
3. FURNISH EACH WITH VARIABLE SPEED DRIVE AND NEC DISCONNECT.
4. PROVIDE WITH 250 PSI WORKING PRESSURE RATING.

MAKE-UP AIR UNITS

MARK	MAU-1	MAU-2	MAU-3
MANUFACTURER / MODEL	AAON	AAON	AAON
WEIGHT			
SUPPLY FAN			
SUPPLY AIR (CFM)	7000	2800	7000
EXTERNAL STATIC PRESSURE (IN)			
MOTOR HORSEPOWER			
VOLT/PHASE			
MCA/MOP			
RPM			
EAT - SUMMER (DB/WB)			
LAT - SUMMER (DB/WB)			
EAT - WINTER (DB/WB)			
LAT - WINTER (DB/WB)			
ELECTRICAL HEATER			
TOTAL KW			
REMARK			

REMARKS:
1. PROVIDE SINGLE POINT ELECTRICAL CONNECTION ON ALL OUTSIDE AIR HANDLERS.
2. PROVIDE INSULATED ROOF CURB WITH ALL OUTSIDE AIR HANDLERS.
3. PROVIDE THREE STAGES OF ELECTRICAL HEATER.
4. UNIT TO BE DOWNFLOW CONFIGURATION.
5. PROVIDE MOTORIZED DAMPER.
6. ACCEPTABLE MANUFACTERS INCLUDE TRANE, YORK, CARRIER, OR APPROVED EQUAL.

SAFETY RELIEF VALVES

MARK	MANUFACTURER	MODEL NO.	INLET SIZE	ORIFACE SIZE	OUTLET SIZE	CAPACITY MBH (#/HR)	SET PRESSURE	REMARKS
SRV-1	SPENCE							
SRV-2	SPENCE							

REMARKS:

1. SERVICE: STEAM FIRED HEAT EXCHANGER STEAM PRESSURE REDUCING STATION SAFETY RELIEF VALVE. CAST IRON BODY, MEETS ASME SECTION 8, 300 PSI, 500 DEG F. PROVIDE DRIP PAN ELBOW. VENT FULL SIZE VALVE DISCHARGE PIPING THRU ROOF.

2. SERVICE: PROCESS STEAM PRESSURE REDUCING STATION SAFETY RELIEF VALVE. CAST IRON BODY, MEETS ASME SECTION 8, 250 PSI, 400 DEG F. PROVIDE DRIP PAN ELBOW. VENT FULL SIZE VALVE DISCHARGE PIPING THRU ROOF.

ELECTRIC HEATER SCHEDULE

MARK	MANUF.	MODEL	TYPE	KW	V/ø	REMARKS
EWH-1	MARKEL	3000 SERIES	RECESSED MOUNT WALL HEATER	1.5	115	ALL

REMARKS:
1. UL LISTED AND NEC COMPLIANT POWER DISCONNECT.
2. PROVIDE WITH THERMAL OVERLOAD PROTECTION.
3. PROVIDE INTEGRAL THERMOSTAT.
4. EQUIVALENT MANUFACTURERS ARE Q-MARK, REZNOR AND CHROMOLOX.

STEAM TRAPS

MARK	MANUFACTURER	TYPE	MODEL	ORIFACE SIZE	MAX OP PRESS	CONN SIZE	CAPACITY LB/HR	DIFF PRESS	REMARKS
T-1	ARMSTRONG								
T-2	ARMSTRONG								
T-3	ARMSTRONG								

1. SERVICE: END OF MAIN TRAPS. THERMOSTATIC STEAM TRAP, FORGED STEEL BODY WITH ALL STAINLESS STEEL INTERNALS. RATED FOR 300 PSI AT 500 DEG F.

2. SERVICE: STEAM FIRE HEAT EXCHANGER TRAP. FLOAT AND THERMOSTATIC. DUCTILE IRON BODY AND CAP WITH ALL STAINLESS STEEL INTERNALS. COORDINATE WITH HEAT EXCHANGER MFGR. ON LOCATION OF VACUUM BREAKER; IF REQUIRED, PROVIDE TRAP WITH INTEGRAL VACUUM BREAKER.

STEAM PRESSURE REDUCING VALVES

MARK	MANUFACTURER	MODEL	SIZE	LB/HR	UPSTREAM PRESSURE	DELIVERY PRESSURE	MAX NOISE LEVEL @ 3'	REMARKS
PRV-1	LESLIE							
PRV-2	LESLIE							

REMARKS:

1. STEAM FIRED HEAT EXCHANGER STEAM PRESSURE REDUCING VALVE. EXTERNAL PRESSURE PILOT, DUCTILE IRON BODY WITH ALL STAINLESS STEEL INTERNALS. 300 PSI, 600 DEG F, THREADED CONNECTIONS. INSTALL VALVES IN A 1/3 - 2/3 ARRANGEMENT.
2. REFER TO PRV DETAIL, TYPICAL FOR EACH PRV.

Drawing file: F:\ACAD\UKA12\HVAC\UKA12 - M8.0.dwg
Day & Time: May 03, 2013 - 8:49am
Login Name: carrie

UNIVERSITY LOFTS - Renovate Academic Facility UK School of Art & Visual Studies

MECHANICAL SCHEDULES

NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CE/CRK Checked By: JMS Revision: XXX

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PRE-DESIGN

M8.0

ENERGY RECOVERY UNIT

SYMBOL	ERU-1
AREA SERVED	ENTIRE BUILDING
TYPE OF SYSTEM	100% OUTSIDE AIR
MANF. & MODEL	MCQUAY/CAH025GDAC
CONFIGURATION	SEE DRAWINGS
REMARKS (SEE NOTES BELOW)	1, 2, 3, 4, 5, 6
OUTSIDE AIR FAN	
DESIGN CFM/MAX RPM	9200/XXX
TYPE	
TSP / ESP	
HP/VOLTS/PHASE/HZ	
DRIVE/STARTER	
EXHAUST AIR FAN	
DESIGN CFM/MAX RPM	9200/XXX
TYPE	
TSP / ESP	
HP/VOLTS/PHASE/HZ	
DRIVE/STARTER	
ENERGY RECOVERY WHEEL	
HP/VOLTS/PHASE/HZ	
MINIMUM EFFECTIVENESS	
OUTSIDE AIR SIDE	
CFM	
EAT - SUMMER (DB/WB)	
LAT - SUMMER (DB/WB)	
EAT - WINTER (DB/WB)	
LAT - WINTER (DB/WB)	
RETURN AIR SIDE	
CFM	
EAT - SUMMER (DB/WB)	
EAT - WINTER (DB/WB)	
EXHAUST AIR SIDE	
CFM	
EAT - SUMMER (DB/WB)	
EAT - WINTER (DB/WB)	
CHILLED/HOT WATER COIL	
TOTAL COOLING CAP. (MBH)	
SENSIBLE COOLING CAP. (MBH)	
MAX. FACE VELOCITY	
TOTAL CFM	
MAX. AIR PRESSURE DROP (INS WC)	
EWT - COOLING	
EAT - SUMMER (DB/WB)	
LAT - SUMMER (DB/WB)	
TOTAL HEATING CAP. (MBH)	
EWT - HEATING	
EAT - WINTER (DB)	
LAT - WINTER (DB)	
WATER FLOW RATE (GPM)	
MAX. WATER PRESSURE DROP (FT HD)	
FACE & BYPASS	
COIL BYPASS CFM @ 50%	
MIXED AIR TEMP - SUMMER (WB/DB)	
MIXED AIR TEMP - WINTER (WB)	
DISPOSABLE PRIMARY FILTER	
MODEL/TYPE	
EFFICIENCY/TEST METHOD	
CFM/VELOCITY	
SIZE (W" x H" x D")	
RESISTANCE (CL./DIRT.)	

REMARKS:

1. ENTIRE UNIT SHALL BE DOUBLE WALL CONSTRUCTION.
2. SUPPLY STAINLESS STEEL IAQ CONDENSATE DRAIN PAN. ENTIRE PAN SHALL BE PITCHED TO OUTLET.
3. PROVIDE STAINLESS STEEL CHILLED WATER COIL CASING.
4. PROVIDE WITH HIGH EFFICIENCY OUTSIDE AIR AND EXHAUST AIR FAN MOTORS.
5. PROVIDE 6" BASE RAIL UNDER ENTIRE PERIMETER OF UNIT.
6. THESES SYSTEMS ARE SIZED BASED UPON AN AIR LEAKAGE FACTOR. PROVIDE UNIT AS REQUIRED TO DELIVER INITIAL AIRFLOWS LISTED TO SUPPLY DIFFUSERS AND EXHAUST GRILLES.

HOOD SCHEDULE

MARK	TYPE & SERVICE MANUFACTURER-MODEL	DESIGN CFM	OVERALL SIZE (L"xW"xH")	THROAT SIZE (L'xW")	PD (IN WC)	REMARKS
GH-1	GRAVITY INTAKE HOOD GRENNHECK-FABRAHOOD	9200				
GH-2	GRAVITY RELIEF HOOD GREEHECK-FABRAHOOD	9200				
KH-1	KILN HOOD	3600				
KH-2	KILN HOOD	4500				
KH-3	KILN HOOD	5700				

REMARKS:

1. PROVIDE BIRDSCREEN.
2. PROVIDE 12" ROOF CURB.
3. PROVIDE 110 V MOTORIZED DAMPERS.
4. PROVIDE TWO 110 V MOTORIZED DAMPERS.
5. PROVIDE WITH 75W LIGHT BULB, RECALCULATING FAN, ON/OFF SWITCH, FAN SPEED SELECTOR.
6. ARCHITECT TO SELECT COLOR.
7. LOWER LIP NOT TO BE INSTALLED LESS THAN 33 INCHES AND NOT MORE THAN 48 INCHES ABOVE RANGE.
8. PROVIDE WITH ANSUL R102, SIZE 3.0 FIRE SUPPRESSION SYSTEM AND ASSOCIATED CABINET AND PIPING SYSTEM.
9. PROVIDE WITH 17.0 INCH HIGH FIELD WRAPPER ON THE FRONT, LEFT AND RIGHT SIDES.
10. PROVIDE WITH 3 INCH BACK STAND-OFF.
11. PROVIDE WITH TWO INCANDESCENT LIGHT BULBS AND STAINLESS STEEL BAFFLE FILTER.

REGISTERS, GRILLES AND DIFFUSERS

SYMBOL	MANUF. & MODEL	MATERIAL & TYPE	CFM FANGE	PHYSICAL SIZE			P.D.	NC	REMARKS
				OVERALL FACE SIZE	NECK SIZE	INLET DUCT SIZE			
S-1	TITUS MP SLOT	LINEAR SLOT DIFFUSER 1 SLOT, 1" SLOTS ALUMINUM	0-100	4'x6"	8"	8"	.05	15	3, 5
S-2	TITUS MP39 SLOT	LINEAR SLOT DIFFUSER 2 SLOT, 1" SLOTS ALUMINUM	101-225	4'x6"	12"	12"	.05	28	3, 5
S-3	TITUS MP39 SLOT	LINEAR SLOT DIFFUSER 4 SLOT, 1" SLOTS	226-325	4'x6"	12"	8"	.05	25	3, 5
S-4	TITUS FL15-JT	LINEAR SLOT DIFFUSER 4 SLOT, 1" SLOTS ALUMINUM	326-500	12"	5'X8"	12"	.05	26	3, 5
S-5	TITUS FL20-HT	LINEAR SLOT DIFFUSER 1 SLOT, 2" SLOT ALUMINUM	300-425	4'X6"	12"	12"	.05	25	3, 5
S-6	TITUS 300FL	HEAVY DUTY SIDEWALL ADJUSTABLE DOUBLE DEFLECTION GRILLE	0-225	12X6	14X8	12X6	.05	25	3
S-7	TITUS 300FL	HEAVY DUTY SIDEWALL ADJUSTABLE DOUBLE DEFLECTION GRILLE	1000-1250	28X12	30X14	28X12	.05	25	3
S-8	TITUS CT480	ALUMINUM SIDEWALL BAR GRILLE DEFLECTION GRILLE	300-500	24X10	26X12	24X10	.05	25	4
S-9	TITUS CT580	ALUMINUM SIDEWALL BAR GRILLE DEFLECTION GRILLE	1000-1250	6'X6"	6'X6"	6'X6"	.05	27	4
S-10	TITUS 300FL	HEAVY DUTY SIDEWALL ADJUSTABLE DOUBLE DEFLECTION GRILLE	226-350	12X6	14X8	12X6	.05	27	3
R-1	TITUS 50F	ALUMINUM 1/2" EGG CRATE	0-100	24X24	6"ø	6"ø	.05	25	3
R-2	TITUS 50F	ALUMINUM 1/2" EGG CRATE	0-225	24X24	8"ø	8"ø	.05	25	3
R-3	TITUS 50F	ALUMINUM 1/2" EGG CRATE	226-375	24X24	10"ø	10"ø	.05	25	3
R-4	TITUS 50F	ALUMINUM 1/2" EGG CRATE	376-600	24X24	12"ø	12"ø	.05	25	3
R-5	TITUS 50F	ALUMINUM 1/2" EGG CRATE	601-950	24X24	14ø	14ø	.05	25	3
R-6	TITUS 50F	ALUMINUM 1/2" EGG CRATE	951-1200	24X24	16ø	16ø	.05	25	3
R-7	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	751-2500	42X16	44X18	44X16	.05	25	3
R-8	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	2500-3500	30X36	32X38	30X36	.05	25	3
R-9	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	0-750	18X12	20X14	18X12	.05	25	3
R-10	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	2000	30X12	20X14	18X12	.05	25	3
R-11	TITUS MLR39	LINEAR SLOT DIFFUSER 6 SLOT, 1" SLOTS RETURN	1200	6'X8"	6'X8"	6'X8"	.07	18	3
R-12	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	400	14"X8"	16"X8"	14"X8"	.07	18	3
E-1	TITUS 50F	ALUMINUM 1/2" EGG CRATE	0-100	24X24	6"ø	6"ø	.05	25	3
E-2	TITUS 50F	ALUMINUM 1/2" EGG CRATE	0-225	24X24	8"ø	8"ø	.05	25	3
E-3	TITUS 50F	ALUMINUM 1/2" EGG CRATE	226-375	24X24	10"ø	10"ø	.05	25	3
E-4	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	751-2500	42X16	44X18	44X16	.05	25	3
T-1	TITUS 350FL	HEAVY DUTY EXTRUDED ALUMINIUM SIDEWALL RETURN	0-750	18X12	20X14	18X12	.05	25	3

HEAVY DUTY EXTRUDED

REMARKS:

1. CEILING T-BAR MOUNTED IN 24"X24" ALUMINUM PANEL.
2. INLET TRANSITION BOX, ROUND TO RECTANGULAR.
3. WHITE COLOR.
4. CUSTOM COLOR SLECTED BY ARCHITECT.
5. PROVIDE WITH PLENUM BOX INLET. PLENUM TO BE EXTERNALLY INSULATED.

GENERAL COMMENTS:

A. COORDINATE FRAME/BORDER TYPE WITH CEILING TYPE. REFER TO ARCHITECTURAL PLANS.

AIR HANDLING UNIT SCHEDULE

SYMBOL		AHU-1
MANUFACTURER/MODEL		
TYPE OF SYSTEM		VAV
CONFIGURATION		
SERVICE		
LOCATION		
NOM. SIZE LxWxH (IN.)		
WEIGHT (lbs)		
SUPPLY AIR FAN		
SA CFM		44000
MIN. OUTSIDE AIR CFM		
RPM		
T.S.P./E.S.P. (IN WG)		
MOTOR HP/BHP		
VOLTS/ø		
DRIVE		
VAR. FREQ. DRIVE		
RETURN AIR FAN		
RA CFM		
RPM		
T.S.P./E.S.P. (IN WG)		
MOTOR HP/BHP		
VOLTS/ø		
DRIVE		
VAR. FREQ. DRIVE		
CHILLED WATER COIL		
TOTAL COOLING CAP. (MBH)		
SENSIBLE COOLING CAP. (MBH)		
EAT (DB/WB) (F) COOLING		
LAT (DB/WB) (F) COOLING		
EWT/LWT (F) COOLING		
MAX. FACE VELOCITY (FPM)		
MAX. AIR PRESSURE DROP (IN. WG.)		
WATER FLOW RATE (GPM)		
MAX. WATER PRESSURE DROP (FT)		
COIL ROWS/NO. OF COILS		
FIN SPACING (FINS/FT)		
HOT WATER COIL- PREHEAT		
TOTAL HEATING CAP. (MBH)		
EAT (F) HEATING		
LAT (F) HEATING		
EWT/LWT (F) HEATING		
MAX. FACE VELOCITY (FPM)		
MAX. AIR PRESSURE DROP (IN. WG.)		
WATER FLOW RATE (GPM)		
MAX. WATER PRESSURE DROP (FT)		
INTERNAL FACE & BYPASS		
COIL ROWS/NO. OF COILS		
FIN SPACING (FINS/FT)		
SA TEMP MORNING WARM UP (F)		
HOT WATER COIL- REHEAT		
TOTAL HEATING CAP. (MBH)		— —
EAT (F) HEATING		
LAT (F) HEATING		
EWT/LWT (F) HEATING		
MAX. FACE VELOCITY (FPM)		
MAX. AIR PRESSURE DROP (IN. WG.)		
WATER FLOW RATE (GPM)		
MAX. WATER PRESSURE DROP (FT)		
INTERNAL FACE & BYPASS		
COIL ROWS/NO. OF COILS		
FIN SPACING (FINS/FT)		
SA TEMP MORNING WARM UP (F)		— —
FILTER SECTION		
SIZE (IN.)		
TYPE	PREFILTER	
	FILTER	
MAX. VELOCITY (FPM)		
SIZE (SQ. FT.)		
RESISTANCE (MID LIFE) (IN. WG.)		
GENERATED SOUND		
OCTAVE BANDS		
CASTING RADIATION		
SUPPLY FAN OUTLET		
UNIT RETURN		
COMPONENTS FOR AHU:		

REMARKS

1. PROVIDE ACCESS DOORS TO ACCESS ALL SECTIONS OF AIR HANDLING UNITS.
2. PROVIDE 3/4" DRAINS WITH CAPPED HOSE CONNECTION ON ALL COILS.
3. PROVIDE 1/2" AIR VENTS ON ALL COILS.
4. COILS SHALL BE 100% DRAINABLE.
5. INDEPENDENTLY REMOVABLE COILS.
6. PROVIDE MARINE LIGHTS AND CONVENIENCE OUTLETS AS INDICATED ON SECTIONS.

AIR FILTRATION SCHEDULE

MARK	MFG.	MODEL	SERVICE	TYPE	CFM	ESP	RPM	HP	ELECTRICAL	DRIVE	STARTER/ DISC SW.	MAX SONE	REMARKS
AF-1													
EF-2													
EF-3													
EF-4													
EF-5													
EF-6													

REMARKS:

1. PROVIDE WITH NEC DISCCONNECT.

VENTILATION FAN SCHEDULE

MARK	MFG.	MODEL	SERVICE	TYPE	CFM	ESP	RPM	HP	ELECTRICAL	DRIVE	STARTER/ DISC SW.	MAX SONE	REMARKS
EF-1													
EF-2													
EF-3													
EF-4													
EF-5													
EF-6													

REMARKS:

1. PROVIDE WITH BACKDRAFT DAMPER.
2. PROVIDE WITH INSULATED ROOF CURB TO EXTEND 12" ABOVE FINISHED ROOF.
3. PROVIDE WITH NEC DISCONNECT.
4. PROVIDE WITH UNIT MOUNTED SPEED CONTROL FOR BALANCING PURPOSES.
5. PROVIDE WITH MOTORIZED DAMPER.
6. FAN SHALL BE AMCA SPARK RESISTANT TYPE CLASS A. ALL ELECTRICAL COMPONENTS SHALL BE CLASS 1 DIVISION 1.
7. ACCEPTABLE MANUFACTURERS INCLUDE CARNES, TWIN CITY, ACME, OR APPROVED EQUAL.

UNIVERSITY LOFTS - Renovate Academic Facility UK School of Art & Visual Studies

NOT FOR CONSTRUCTION Job Number: 1205 Date: 03/2013 Drawn By: CE/CRK Checked By: JMS Revision: XXX

MECHANICAL SCHEDULES

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