

VIEW KEY	
	INDICATES DIRECTION OF TRUE NORTH
	INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL.
	INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS
	DETAIL REFERRED TO BY SECTION CUT
	SHEET DETAIL IS LOCATED ON
LINE TYPE AND TAG KEY:	
	NEW WORK BY THIS CONTRACTOR (WIDE LINE)
	EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
	NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)
	EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
	EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
	EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)
	HALFTONING DOES NOT MODIFY SCOPE.
	TAG-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING
	TAG-1 UNDERLINED TEXT INDICATES ADDITIONAL INFORMATION CAN BE FOUND ELSEWHERE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST
	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

CONTRACTOR ABBREVIATION KEY	
ABBR:	DESCRIPTION:
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.C.	HEATING CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR
V.C.	VENTILATION CONTRACTOR

PIPING SYMBOL LIST	
NOT ALL SYMBOLS MAY APPLY.	
SYMBOL:	DESCRIPTION:
	CONDENSER WATER RETURN
	CONDENSER WATER SUPPLY
	CHILLED WATER RETURN
	CHILLED WATER SUPPLY
	DRAIN
	GAS REGULATOR VENT
	HIGH PRESSURE CONDENSATE
	HIGH PRESSURE STEAM
	HEATING WATER RETURN
	HEATING WATER SUPPLY
	REFRIGERANT LIQUID
	LOW PRESSURE CONDENSATE
	LOW PRESSURE STEAM
	PUMPED CONDENSATE
	REFRIGERANT SUCTION
	PIPE CAP
	PIPE UP OR UP/DOWN
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	THROTTLING VALVE
	BALANCING VALVE (NUMBER INDICATES GPM)
	AUTOMATIC BALANCING VALVE
	MIXING VALVE
	CONTROL VALVE (THREE-WAY)
	CONTROL VALVE (TWO-WAY)
	SOLENOID VALVE
	CHECK VALVE
	BACKFLOW PREVENTER
	SAFETY/RELIEF VALVE
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PRESSURE REDUCING VALVE (STEAM)
	TRIPLE DUTY VALVE (ANGLE TYPE)
	TRIPLE DUTY VALVE (IN-LINE TYPE)
	PUMP
	VACUUM BREAKER
	"WYE" - STRAINER
	"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
	BASKET STRAINER
	FLEXIBLE CONNECTION
	PRESSURE/TEMPERATURE TEST PLUG
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND POT/FOB
	SUCTION DIFFUSER WITH SUPPORT FOOT
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	DRAIN VALVE WITH HOSE CONNECTION AND CAP
	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	DIFFERENTIAL PRESSURE SENSOR

PIPING SYMBOL LIST	
NOT ALL SYMBOLS MAY APPLY.	
SYMBOL:	DESCRIPTION:
	STATIC SWITCH
	FLOW METER
	FLOW SWITCH
	FLOW SENSOR
	THERMOSTAT
	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
	TEMPERATURE SENSOR
	TEMPERATURE SENSOR WITH WELL
	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	STEAM TRAP (REFER TO SCHEDULE)
	F&T STEAM TRAP (REFER TO SCHEDULE)
	INVERTED BUCKET STEAM TRAP (REFER TO SCHEDULE)
	ALIGNMENT GUIDE
	PIPE ANCHOR
	EXPANSION JOINT
	#.# IS THE EXPANSION TRAVEL INCHES
	METER
	TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE)
	HUMIDIFIER
	HUMIDISTAT SENSOR
	HUMIDISTAT / SENSOR
	CARBON MONOXIDE SENSOR
	CARBON DIOXIDE SENSOR
	OCCUPANCY SENSOR

PIPING ABBREVIATION KEY	
ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

MECHANICAL RENOVATION NOTES:

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
 - NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
 - FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
 - EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.
 - EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH HIS WORK.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILING, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
 - WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
 - PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
 - OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
 - MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
 - DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

PIPING GENERAL NOTES:

- THE SIZE OF BRANCH PIPING TO TERMINAL HEATING DEVICES AND COILS SHALL BE 3/4" UNLESS NOTED OTHERWISE.
- PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.
- INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.

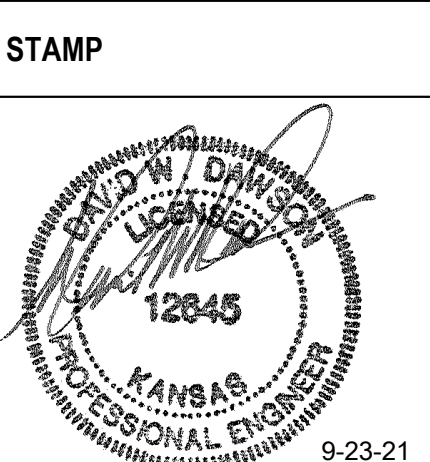
MECHANICAL GENERAL NOTES:

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.
- DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
 - DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS. ALL VALVES MUST BE LOCATED WITH REASONABLE ACCESS FOR SERVICE, MAINTENANCE, AND FUNCTION.
 - REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
 - ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIOVISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
 - SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
 - CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
 - WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATER TIGHT.
 - EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
 - DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
 - MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
 - PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
 - DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

Revisions:	Date:

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ARCHITECT/ENGINEER OF RECORD
A/E: Calvin L. Hinz Architects P.C. 3705 N. 200th Street Elkhorn, NE 68022 (402) 291-6941



Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

Drawing Title PIPING COVERSHEET
Approved:

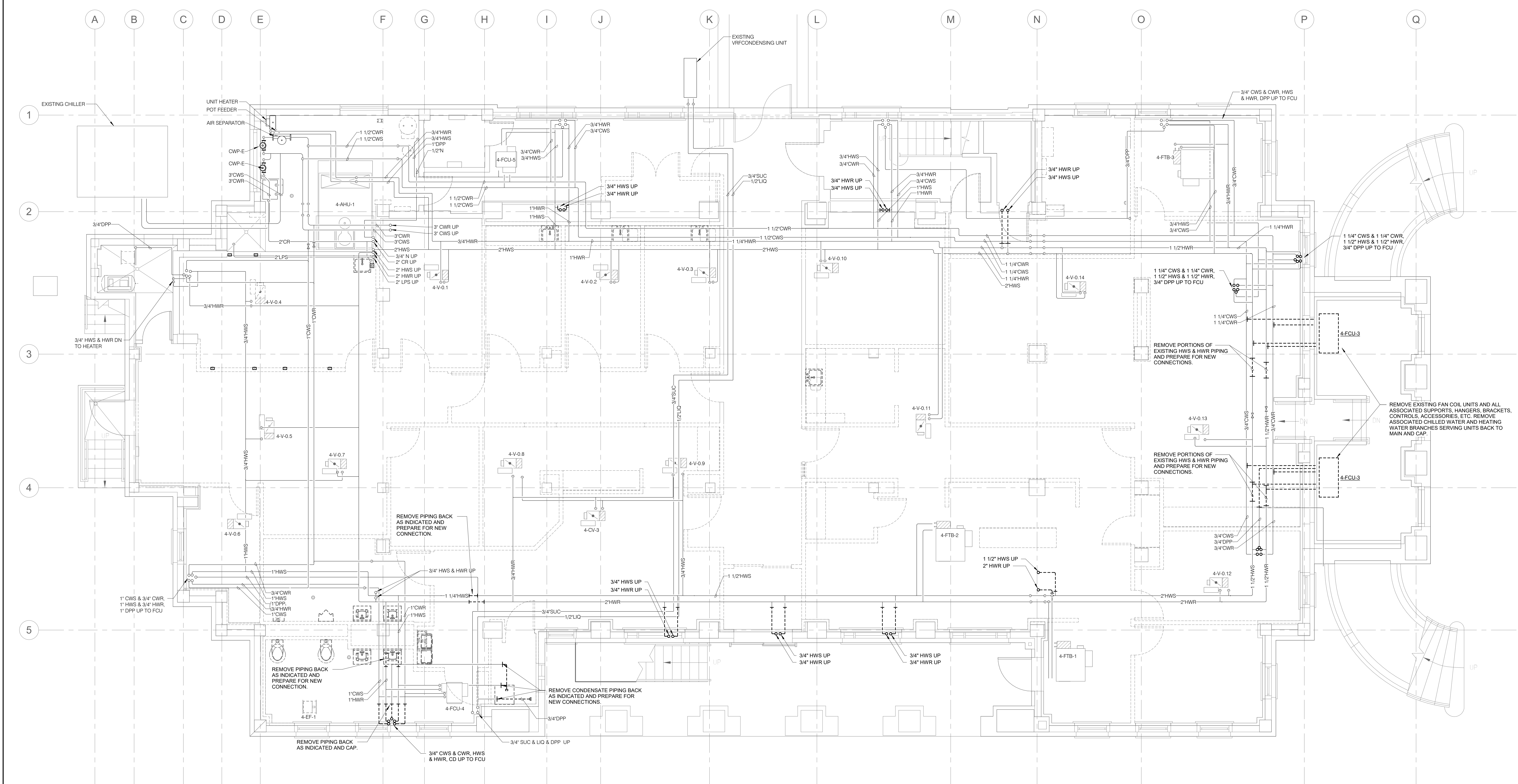
Phase BID DOCUMENTS
FULLY SPRINKLERED

Project Title Renovate and Repair Structural, Building 4	Location Wichita, KS
Issue Date 9/23/2021	Checked RUSARN
Drawn KATDEN	

Project Number 589A7-21-108
Building Number 4
Drawing Number MP-001

SHEET NOTES:

- EXISTING CONDITIONS SHOWN ARE BASED ON INFORMATION AVAILABLE FROM EXISTING DRAWINGS AND LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK.
- REMOVE EXISTING SHUTOFF VALVES FOR ALL TERMINAL UNIT WATER COILS. PREPARE PIPING FOR NEW CONNECTIONS.

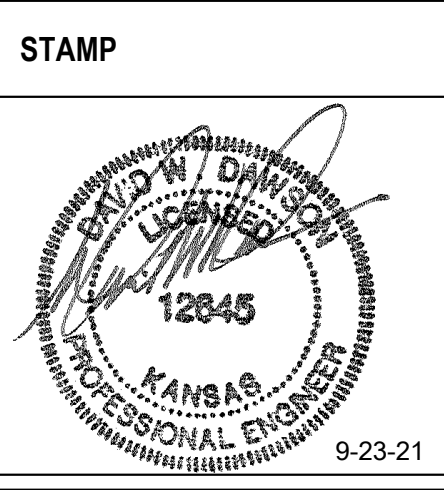


1 BASEMENT PLAN - MECHANICAL PIPING DEMOLITION
 1/4" = 1'-0"

Revisions:	Date:

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Drawing Title
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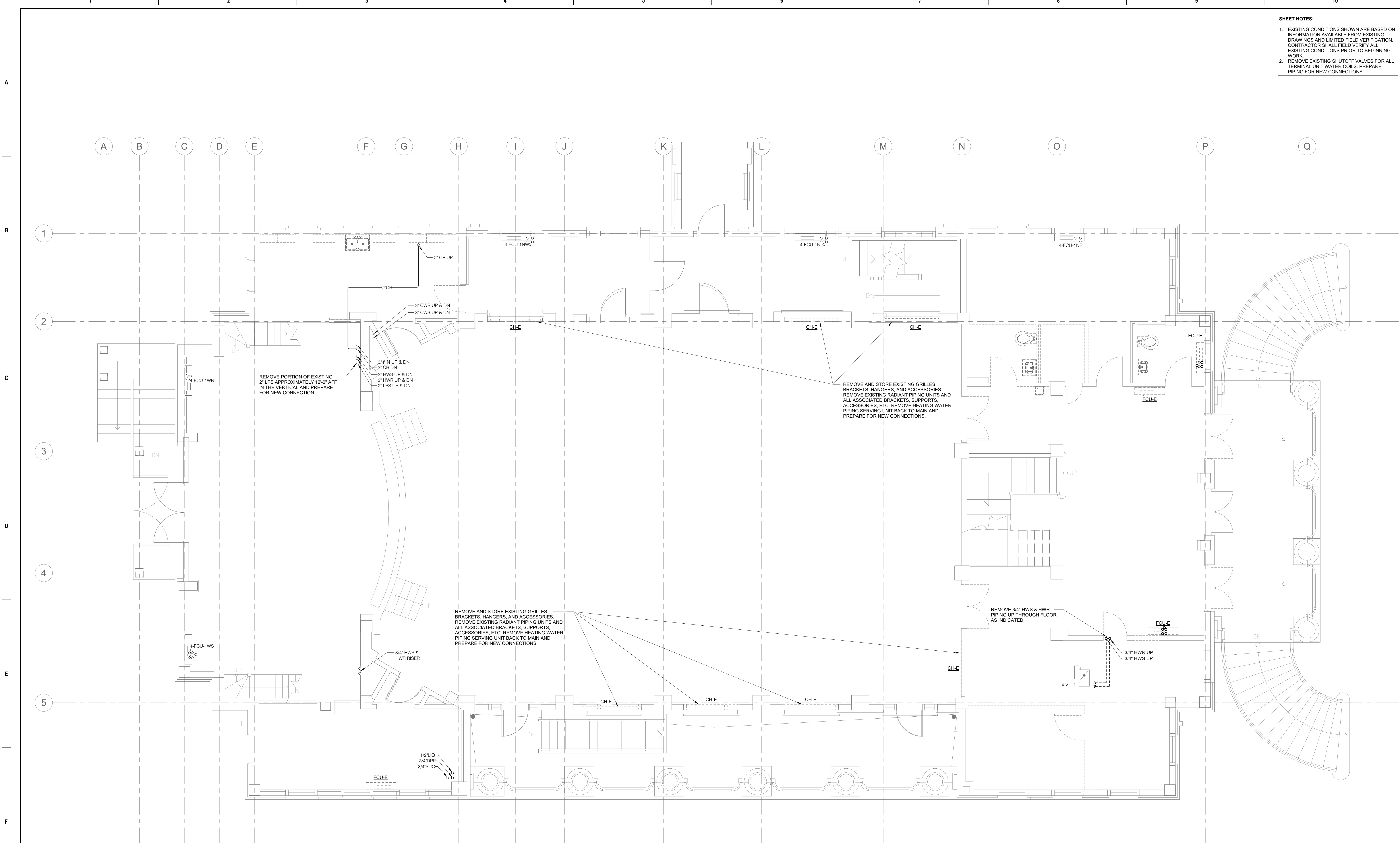
Phase
BID DOCUMENTS
FULLY SPRINKLERED

Project Title
 Renovate and Repair Structural, Building 4
 Location
 Wichita, KS
 Issue Date
 9/23/2021
 Checked
 RUSARN
 Drawn
 KATDEN

Project Number
 589A7-21-108
 Building Number
 4
 Drawing Number
 MD101

SHEET NOTES:

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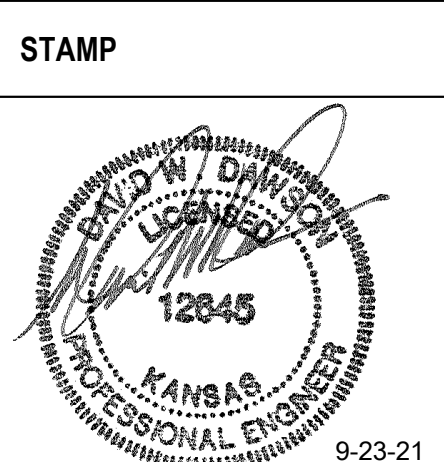


1 FIRST FLOOR PLAN - MECHANICAL PIPING DEMOLITION
 1/4" = 1'-0"

Revisions:	Date:

CONSULTANT
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Drawing Title
FIRST FLOOR PLAN - MECHANICAL PIPING DEMOLITION
 Approved:

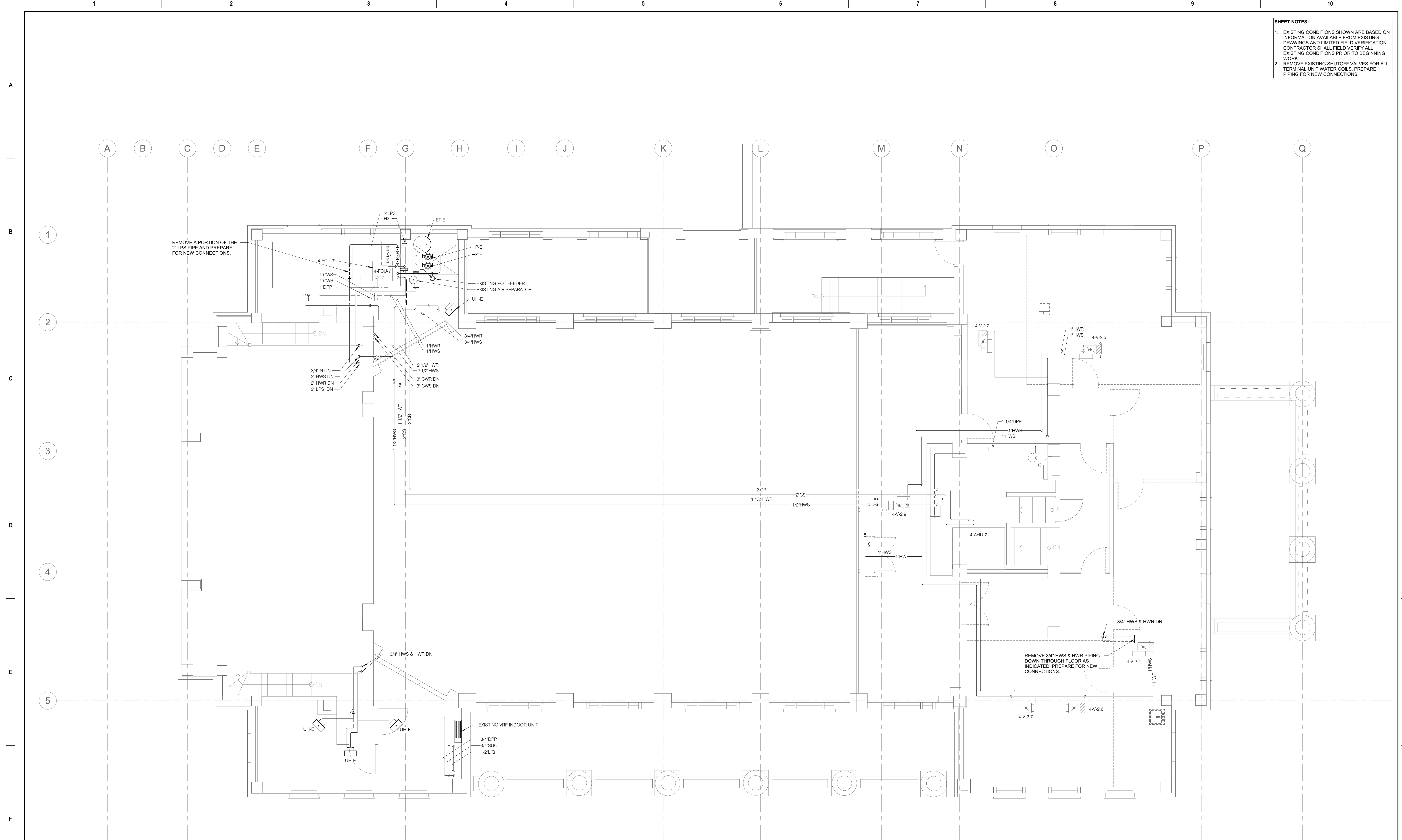
Phase
BID DOCUMENTS
FULLY SPRINKLERED

Project Title
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 Building 4
 Location
 Wichita, KS
 Issue Date
 9/23/2021
 Checked
 RUSARN
 Drawn
 KATDEN

Project Number
 589A7-21-108
 Building Number
 4
 Drawing Number
 MD102

SHEET NOTES:

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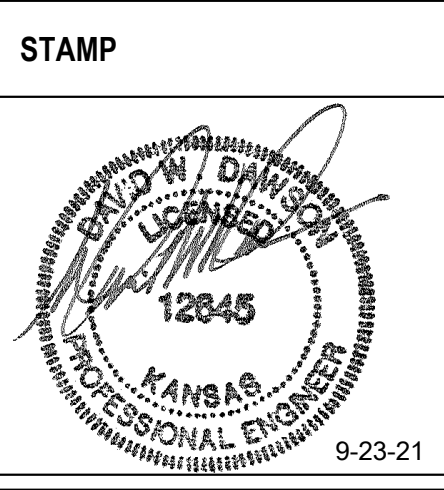


1 SECOND FLOOR PLAN - MECHANICAL PIPING DEMOLITION
 1/4" = 1'-0"

Revisions:	Date:

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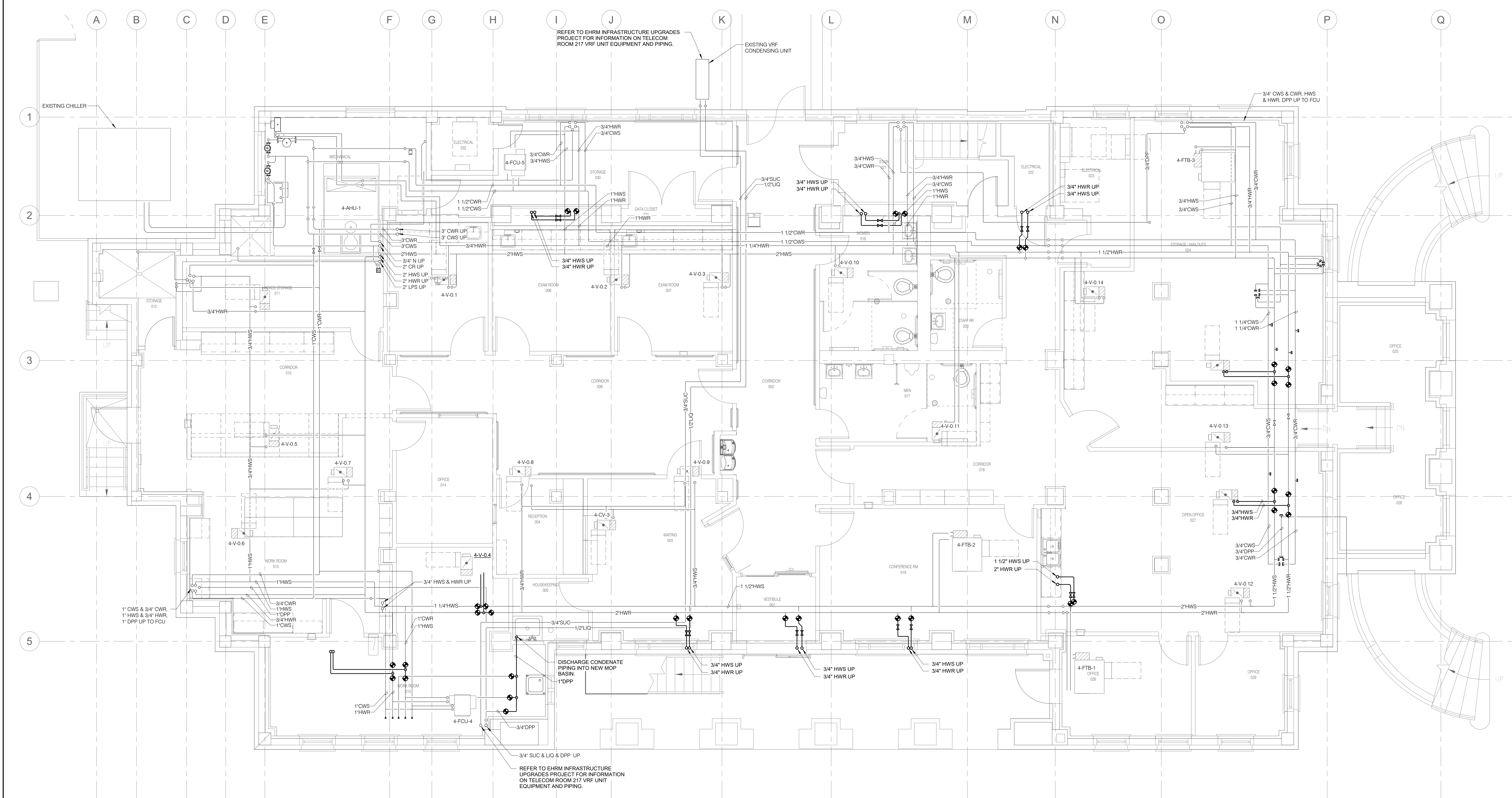
Drawing Title
**SECOND FLOOR PLAN -
 MECHANICAL PIPING DEMOLITION**
 Approved:

Phase
BID DOCUMENTS
FULLY SPRINKLERED

Project Title
 Renovate and Repair Structural,
 Building 4
 Location
 Wichita, KS
 Issue Date
 9/23/2021
 Checked
 RUSARN
 Drawn
 KATDEN

Project Number
 589A7-21-108
 Building Number
 4
 Drawing Number
 MD103

- SHEET NOTES:**
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1
BASEMENT PLAN - MECHANICAL PIPING
1/4" = 1'-0"

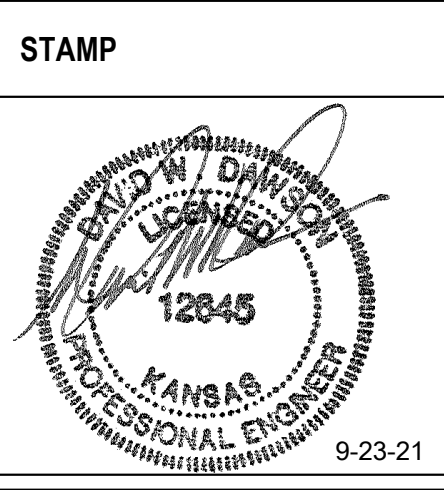
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Drawing Title
BASEMENT PLAN - MECHANICAL PIPING

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FULLY SPRINKLERED

Project Title
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Checked
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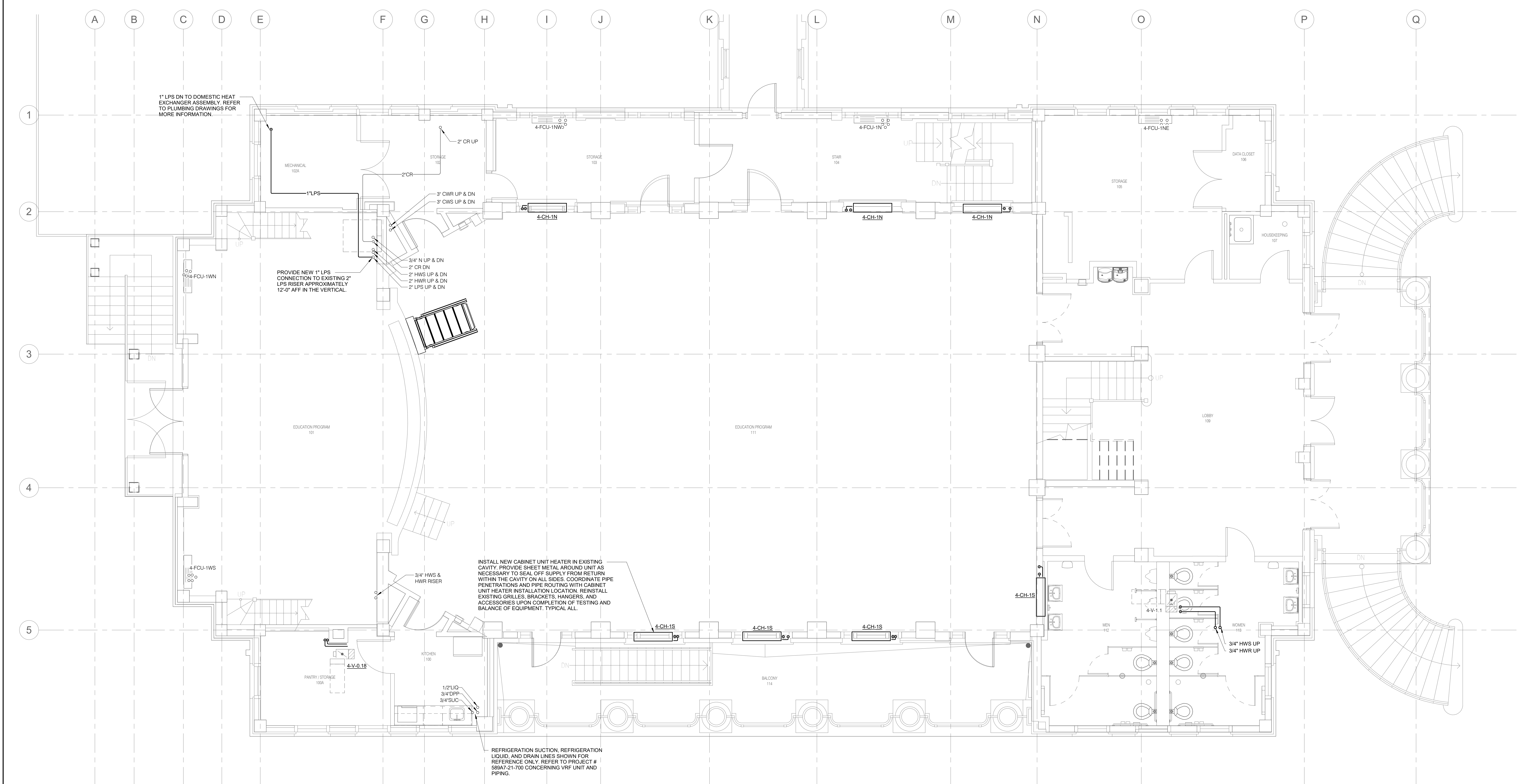
Project Number
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Building Number
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Drawing Number
MP-101

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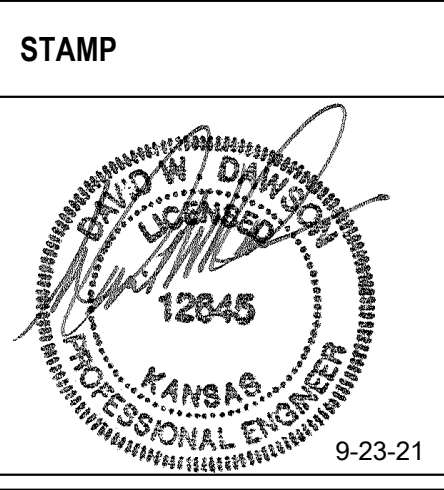


1 FIRST FLOOR PLAN - MECHANICAL PIPING
1/4" = 1'-0"

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 U.S. Department of Veterans Affairs

Drawing Title
 FIRST FLOOR PLAN - MECHANICAL PIPING
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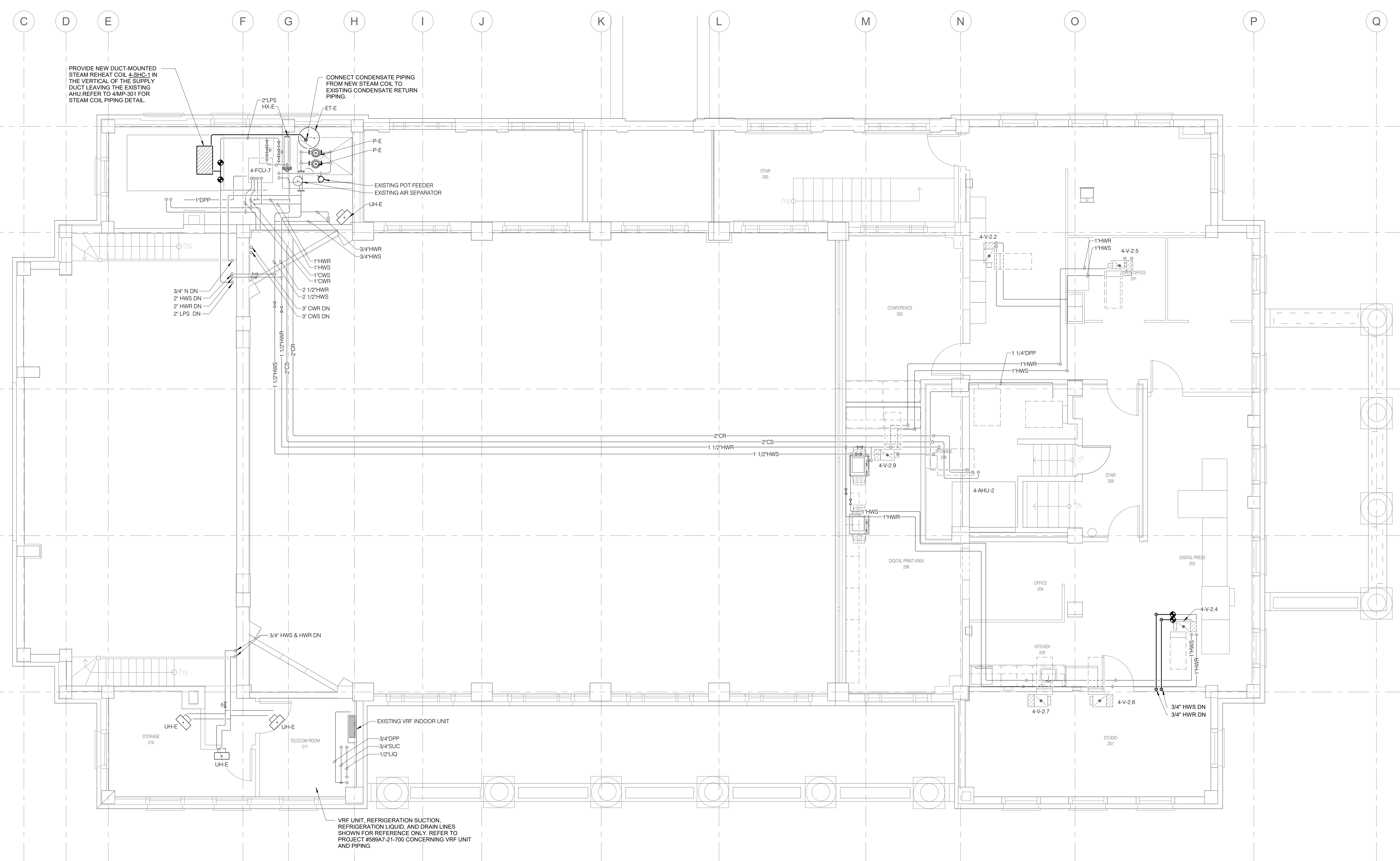
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Project Number
 589A7-21-108
Building Number
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Drawing Number
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Checked
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Drawn
 KATDEN

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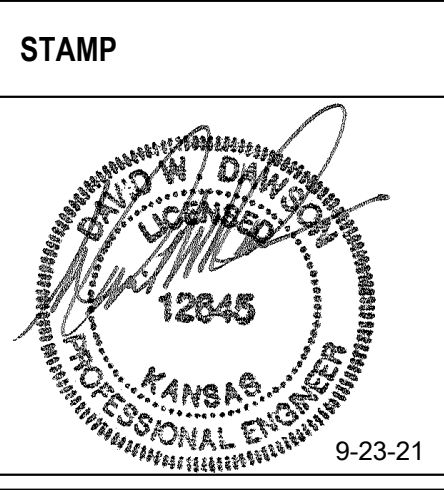


1 SECOND FLOOR PLAN - MECHANICAL PIPING
1/4" = 1'-0"

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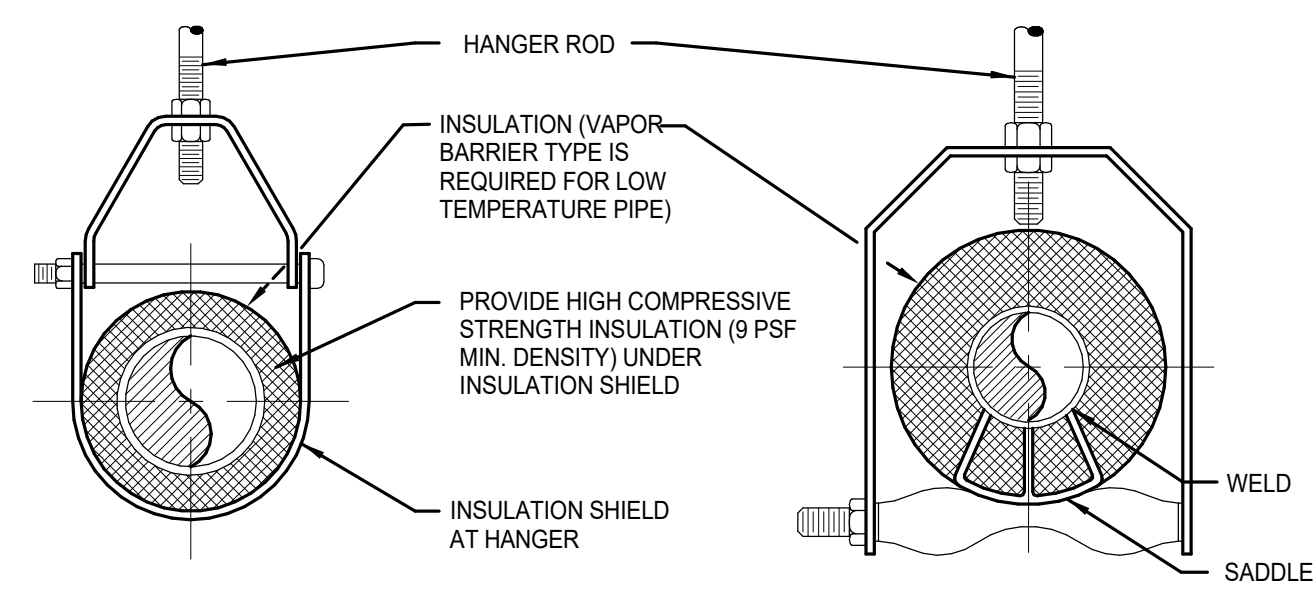
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Drawing Title
 SECOND FLOOR PLAN - MECHANICAL PIPING
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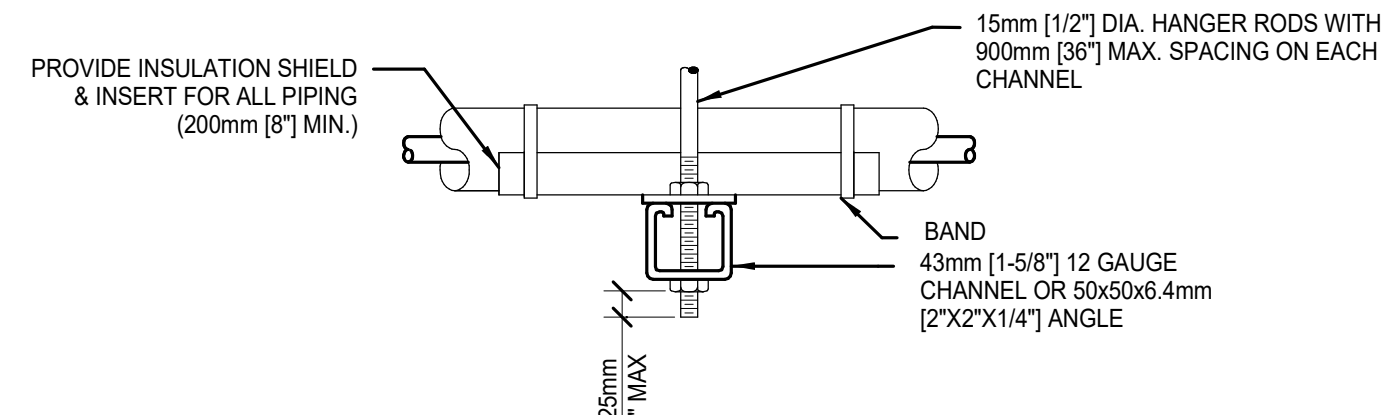
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ADJUSTABLE CLEVIS HANGER TYPE 1 - SEE SPECIFICATIONS
ADJUSTABLE CLEVIS HANGER TYPE 43 - SEE SPECIFICATIONS



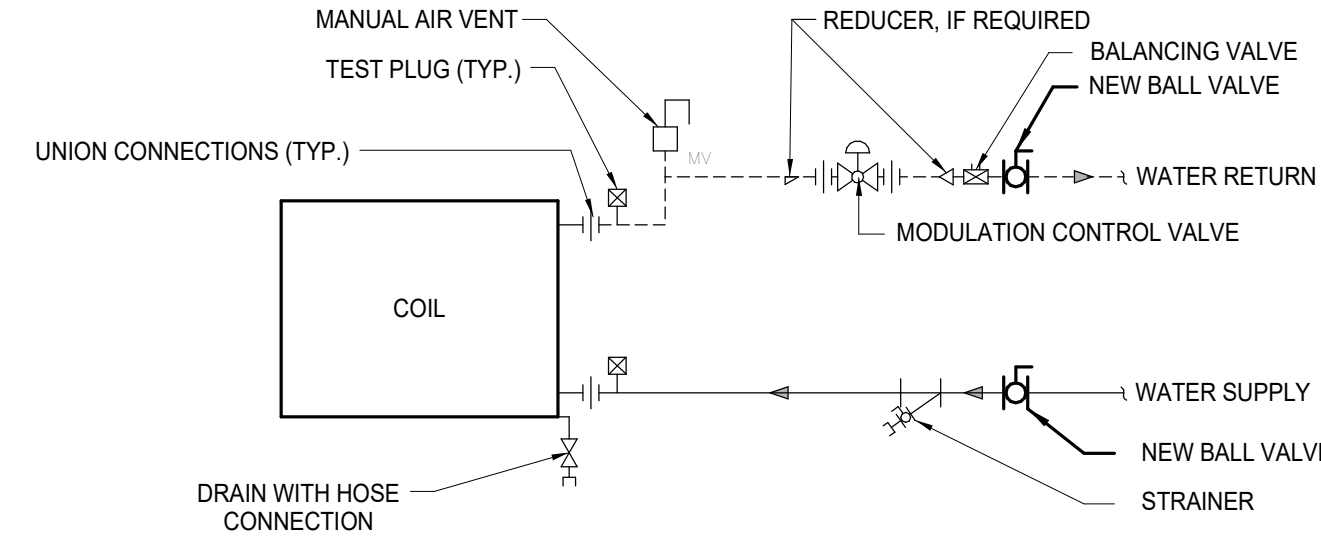
SIDE VIEW TRAPEZE HANGER FOR UP TO 45KG (1000 LB) UNIFORM LOAD

		MAXIMUM PIPE/TUBING SUPPORT SPACING																		
NOM. SIZE	mm (IN)	THRU 20	25	32	40	50	65	75	100	125	150	200	250	300	350	400	450	500	600	
PIPE	mm (FT)	[7]	[7]	[7]	[7]	[9]	[9]	[9]	[11]	[11]	[11]	[13]	[13]	[13]	[13]	[13]	[13]	[13]	[13]	[13]
TUBING	mm (FT)	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

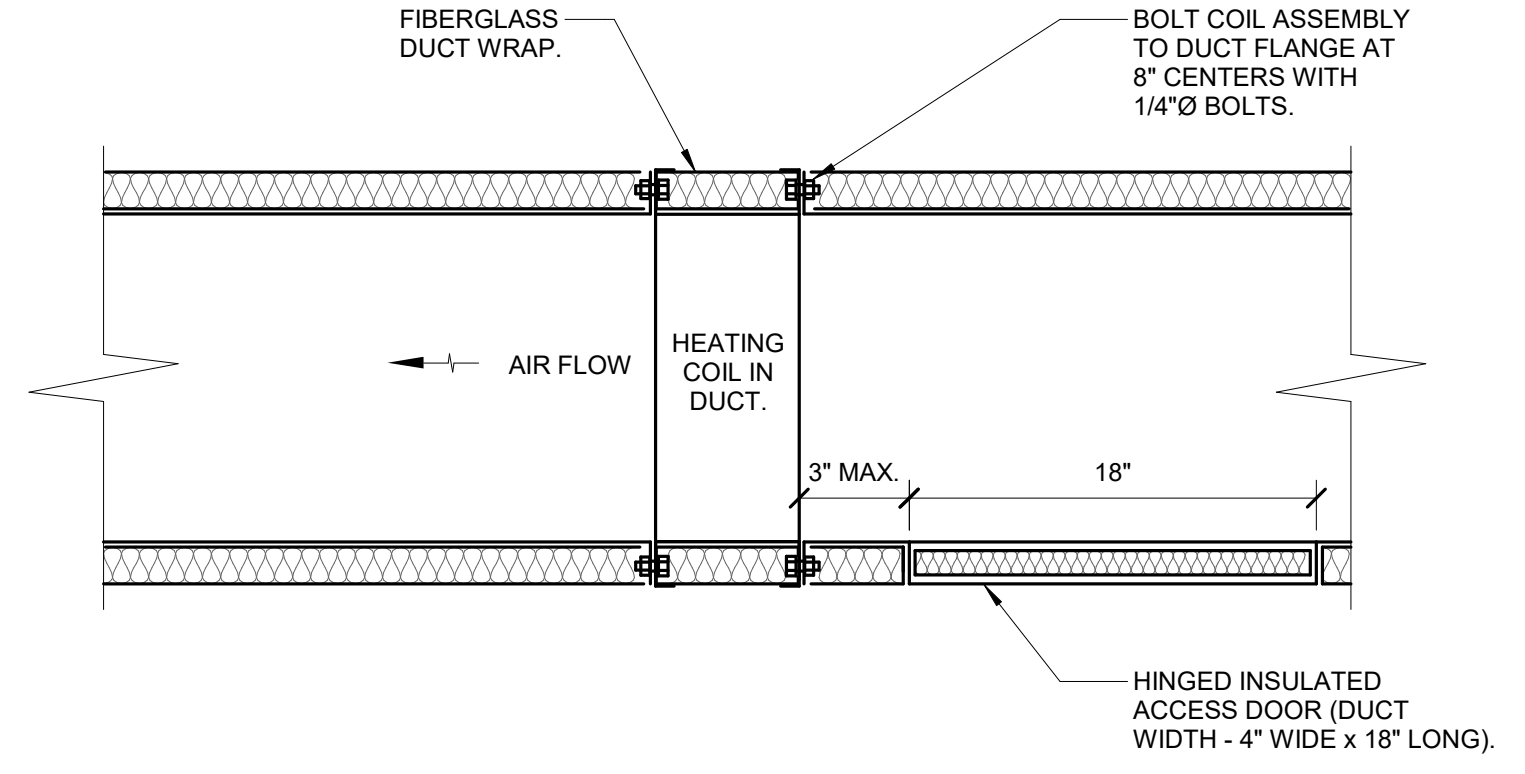
1 PIPE HANGERS

NTS
NOTE:
SEE SPECIFICATIONS FOR DETAILED HANGER REQUIREMENTS



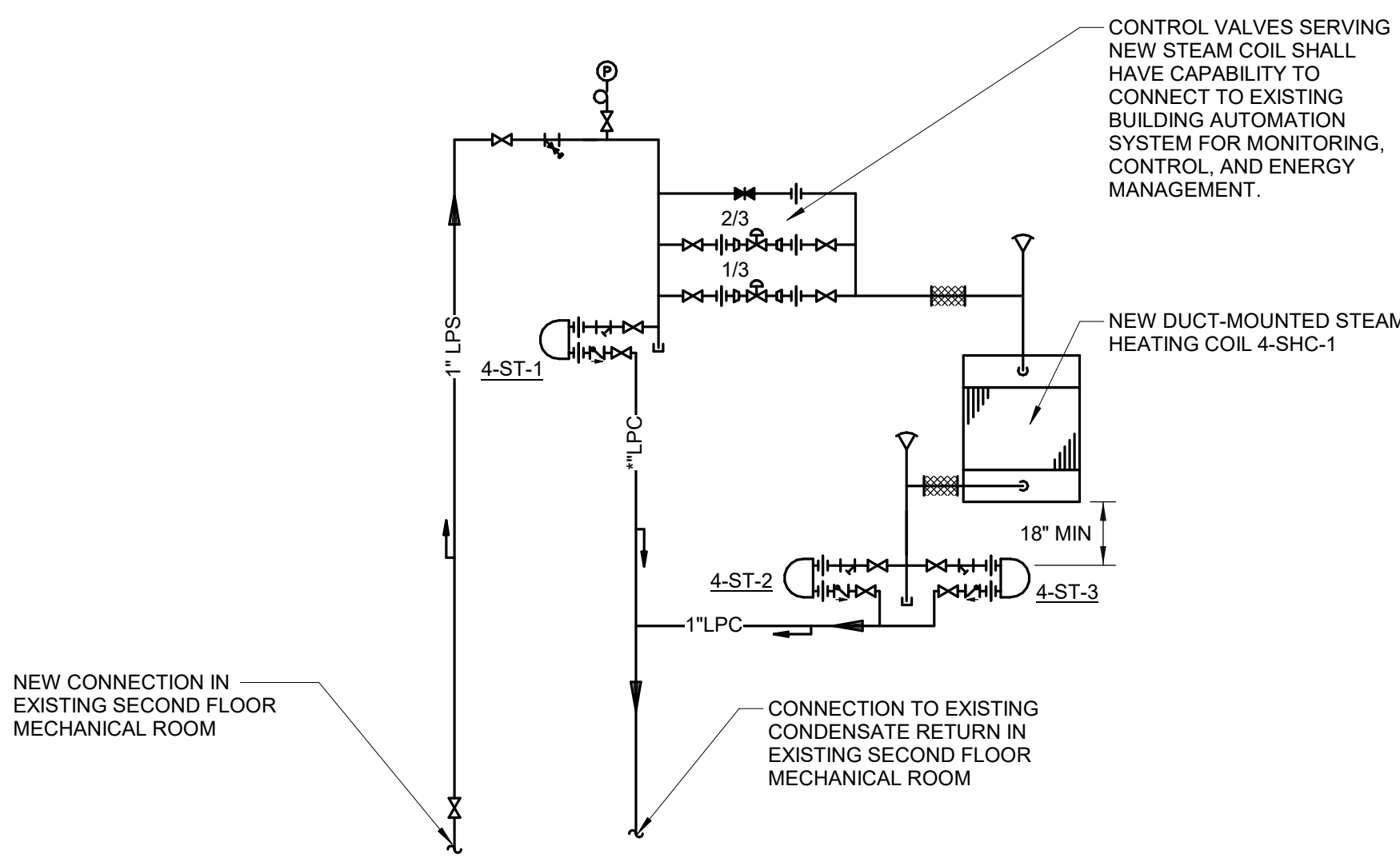
2 TERMINAL UNIT WATER COILS - PIPING CONNECTIONS

NTS
NOTE:
1. EXISTING TERMINAL UNITS SHALL HAVE NEW ISOLATION BALL VALVES PROVIDED ON BOTH THE HEATING WATER SUPPLY AND HEATING WATER RETURN PIPES SERVING THE REHEAT COIL.
2. PROVIDE NEW TERMINAL UNITS WITH ALL PIPING, CONNECTIONS, VALVES, ACCESSORIES, ETC. SHOWN.



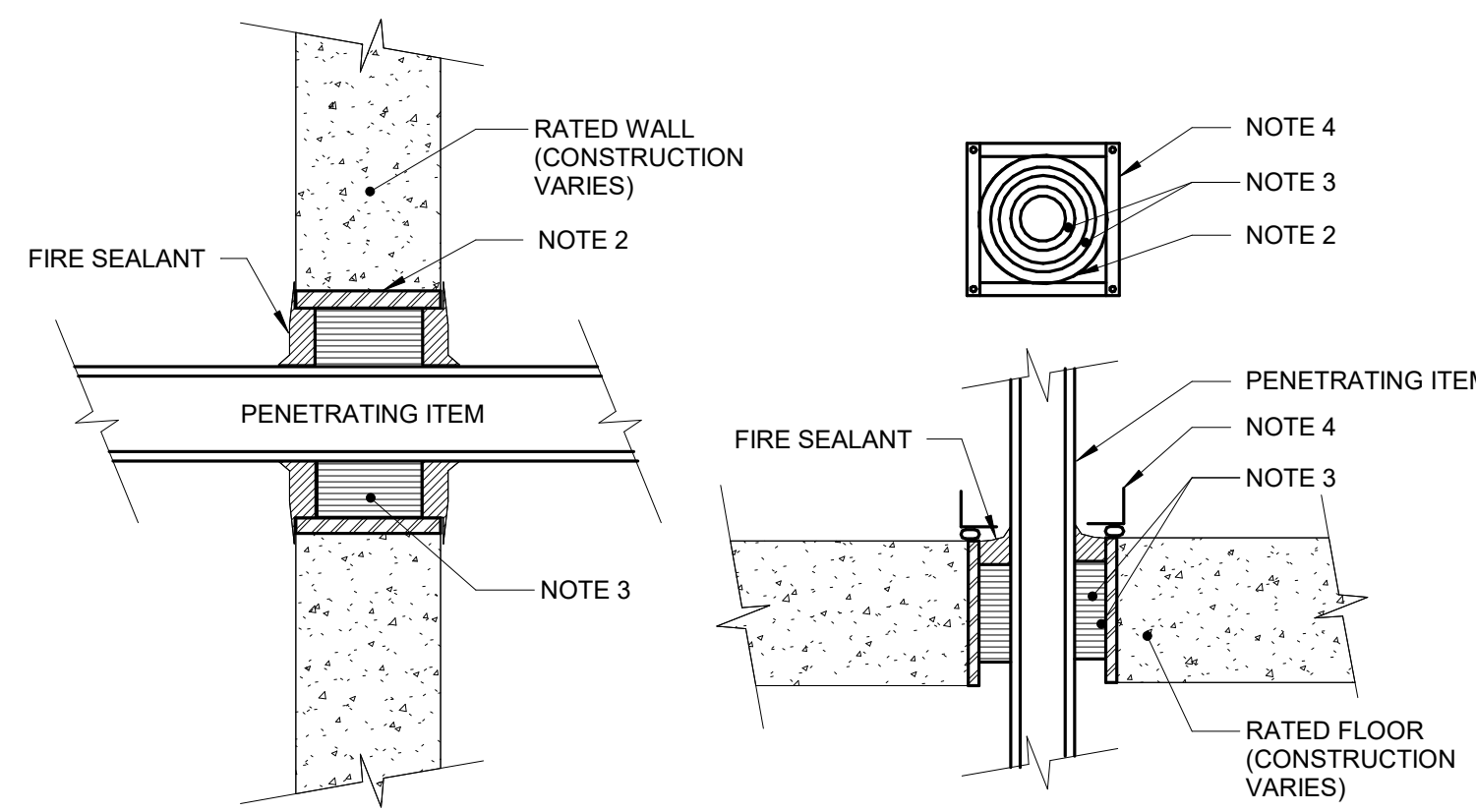
3 DUCT HEATING COIL DETAIL (WRAPPED DUCT)

NO SCALE
NOTES:
1. THIS DETAIL APPLIES TO ALL HEATING COILS INSTALLED IN DUCTS. ACCESS DOORS AND FLANGED CONNECTIONS MUST BE PROVIDED AT ALL COILS UNLESS SPECIFICALLY NOTED OTHERWISE.
2. PROVIDE FLANGED CONNECTION ON BOTH SIDES OF COILS. ACCESS DOORS ARE ONLY REQUIRED UPSTREAM OF COILS.
3. PROVIDE 48" STRAIGHT DUCT UPSTREAM AND 24" DOWNSTREAM OF HEATING COIL.



4 COIL PIPING DETAIL

NO SCALE



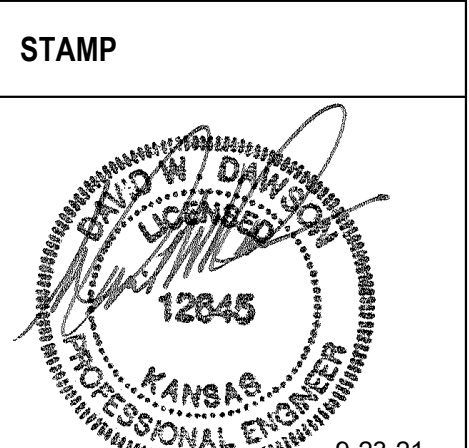
5 RATED FIRE BARRIER PENETRATION

NO SCALE
NOTES:
1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT.
2. SCHEDULE 5 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO G.C. COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. G.C. BUILDS SLEEVE INTO WALL OR FLOOR ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNUAL SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
3. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
4. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

Revisions:	Date:

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Office of Construction and Facilities Management
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Drawing Title
MECHANICAL PIPING DETAILS
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BID DOCUMENTS
FULLY SPRINKLERED

Project Title
Renovate and Repair Structural, Building 4
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Issue Date
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Checked
RUSARN
Drawn
KATDEN

Project Number
589A7-21-108
Building Number
4
Drawing Number
MP-301

HEATING ONLY TWO PIPE FAN COIL UNIT SCHEDULE																										
MARK	LOCATION	TYPE	FAN AIR FLOW		EXTERNAL APD		HEATING REQUIREMENTS				CIRCULATING WATER						FILTER	FAN MOTOR				REMARKS				
			CFM	[L/s]	IN WG	[Pa]	MIN CAPACITY	EAT, Db	FLOW	EWT	WPD	RUNOUT SIZE	MERV RATING	POWER		SPEED CONTROL										
							BTUH	[W]	°F	[°C]	GPM	[L/s]		°F	[°C]	FT	[kPa]	IN	[mm]	HP	[W]		PHASE	VOLT	RPM	
4-CH-1	EDUCATION PROGRAM 111	VERTICAL WALL MOUNT	500	[240]	0.1	[25]	15000	[4400]	65	[18]	1.5	[20]	180	[82]	12.31	[37]	0.75	[19]	8	0.25	[190]	1	120	1091	NOTE 1	NOTE 2
4-FTB-1	OFFICE 028	HORIZONTAL CONCEALED	200	[94]	0.5	[130]	5400	[1600]	70	[21]	1	[13]	180	[82]	1.1	[3]	0.75	[19]	8	0.125	[93]	1	208	1750		NOTE 3
4-FTB-2	CONFERENCE ROOM 019	HORIZONTAL CONCEALED	300	[140]	0.5	[130]	8100	[2400]	70	[21]	1	[13]	180	[82]	0.5	[2]	0.75	[19]	8	0.125	[93]	1	208	1750		NOTE 3
4-FTB-3	STORAGE/MALOUT S 024	HORIZONTAL CONCEALED	275	[130]	0.5	[130]	7425	[2200]	70	[21]	1	[13]	180	[82]	.5	[2]	.75	[19]	8	0.125	[93]	1	208	1750		NOTE 3

NOTES

- MANUAL SPEED CONTROL WITH A SELECTOR SWITCH.
- PROVIDE 7 NEW UNITS WITH FRONT STAMPED LOUVER INLET AND OUTLETS. FIELD VERIFY CAVITY SPACE PRIOR TO ORDERING UNITS. REFER TO V-401 FOR CONTROL REQUIREMENTS.
- EXISTING UNIT. BALANCE FAN AIR FLOW AND HEATING WATER GPM TO SCHEDULED VALUES.

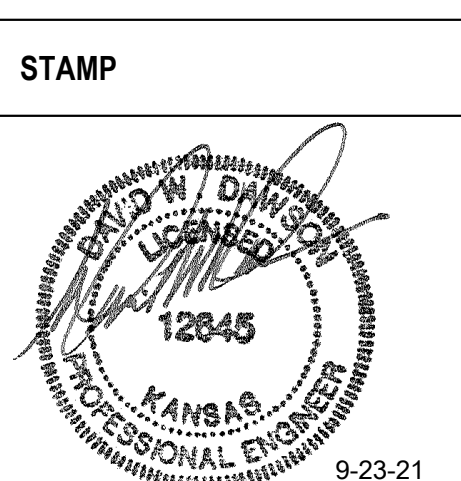
STEAM HEATING COIL SCHEDULE																										
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	APPLICATION	AIR FLOW		MAX FACE VELOCITY		APD		TEMPERATURES				STEAM						REMARKS					
					CFM	[L/s]	FPM	[m/s]	IN WG	[Pa]	EAT	LAT	TOTAL MIN CAPACITY	ENT CONT VALVE		ENT COIL		FLOW		STEAM TRAP						
											°F	[°C]	°F	[°C]	MBH	[kW]	PSIG	[kPa]	PSIG	[kPa]		LBS/HR	[kg/HR]	MARK	LBS/HR	[kg/HR]
4-SHC-1	EXISTING SECOND FLOOR MECHANICAL ROOM	BUILDING 4	EXISTING AHU	REHEAT	3070	[1400]	500	[2.54]	0.1	[25]	45	[7]	80	[27]	116	[400]	5	[35]	5	[35]	122	[55]	4-ST-1, 2, 3	100	[45]	---

BUILDING - STEAM TRAP SCHEDULE												
MARK	LOCATION	SYSTEM AND/OR SERVICE	CAPACITY AT MIN DIFF PRESS		MIN DIFF PRESS		MIN INLET PRESS		TRAP TYPE	TRAP SIZE		REMARKS
			LBS/HR	[kg/HR]	PSI	[kPa]	PSI	[kPa]		IN	[mm]	
4-ST-1	EXISTING 2ND FLR MECH ROOM	4-SHC-1	100	[45]	10	[69]	5	[35]	F&T	.75	[19]	
4-ST-2	EXISTING 2ND FLR MECH ROOM	4-SHC-1	100	[45]	10	[69]	5	[35]	F&T	.75	[19]	
4-ST-3	EXISTING 2ND FLR MECH ROOM	4-SHC-1	100	[45]	10	[69]	5	[35]	F&T	.75	[19]	

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