

SHEET LIST - MECHANICAL

Sheet Number Sheet Name

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M102	LEVEL 2 - THERMAL ZONING
M201	LEVEL 1 - HVAC PLAN
M202	LEVEL 2 - HVAC PLAN
M203	ROOF - HVAC PLAN
M601	RISER DIAGRAMS
M901	MECHANICAL DETAILS
M902	MECHANICAL DETAILS
M903	MECHANICAL DETAILS
MEP 000	MEP COVER SHEET

SHEET LIST - ELECTRICAL

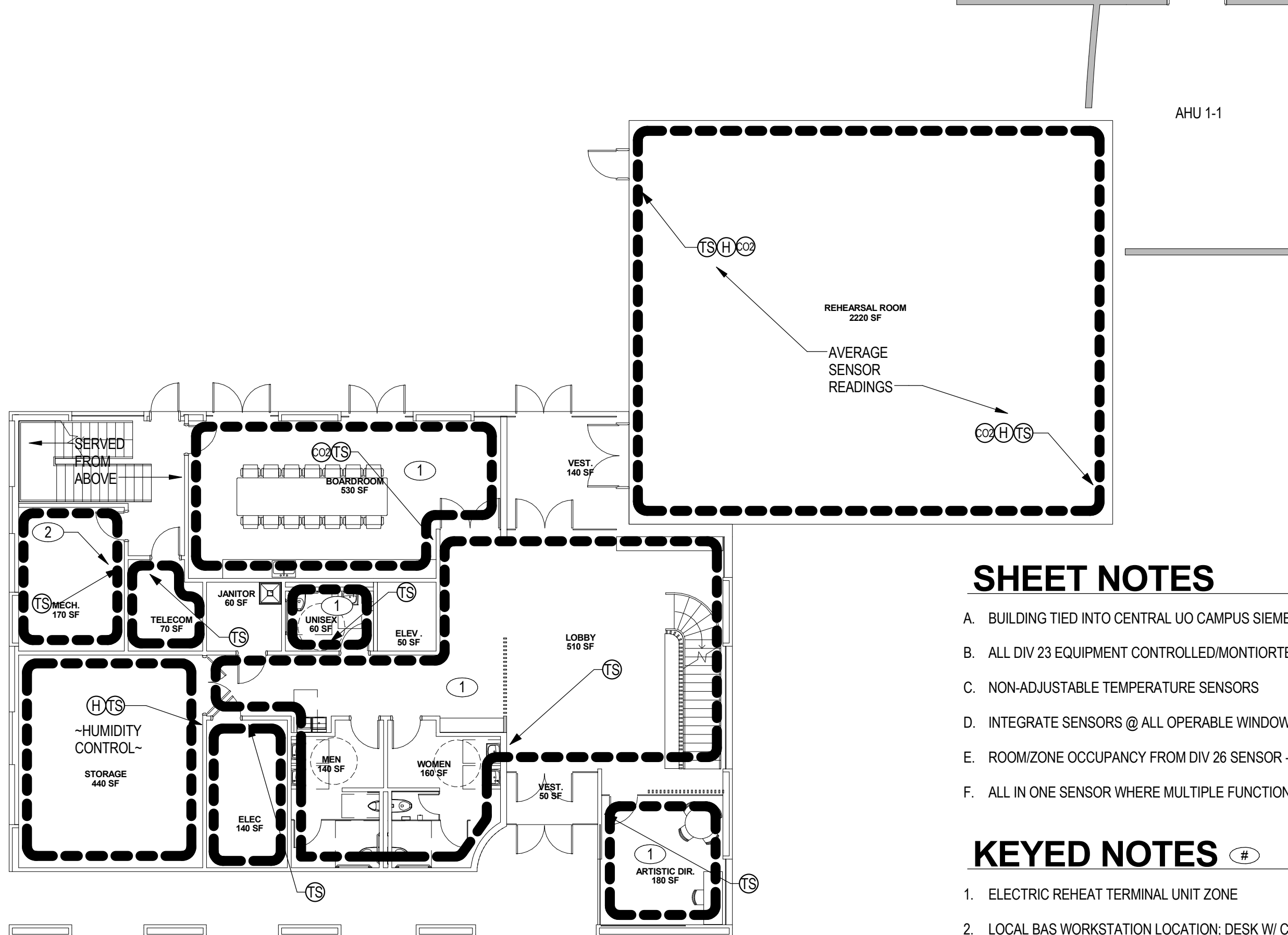
Sheet Number Sheet Name

E101	ELECTRICAL SITE PLAN
E301	LEVEL 1 - POWER AND SIGNAL PLAN
E501	ELECTRICAL SINGLE LINE DIAGRAM
E505	SIGNAL SINGLE LINE DIAGRAM
E601	ENLARGED PLANS

SHEET LIST - PLUMBING

Sheet Number Sheet Name

P001	BASIS OF DESIGN
P002	SCHEDULES
P200	UNDERGROUND PLAN - PLUMBIING
P201	LEVEL 1 - FLOOR PLAN
P202	LEVEL 2 - FLOOR PLAN
P203	ROOF - FLOOR PLAN
P401	PLUMBING WATER RISER DIAGRAMS
P402	PLUMBING SANITARY RISER DIAGRAMS
P403	PLUMBING STORM RISER DIAGRAMS
P601	ENLARGED PLANS
P901	PLUMBING DETAILS



SHEET NOTES

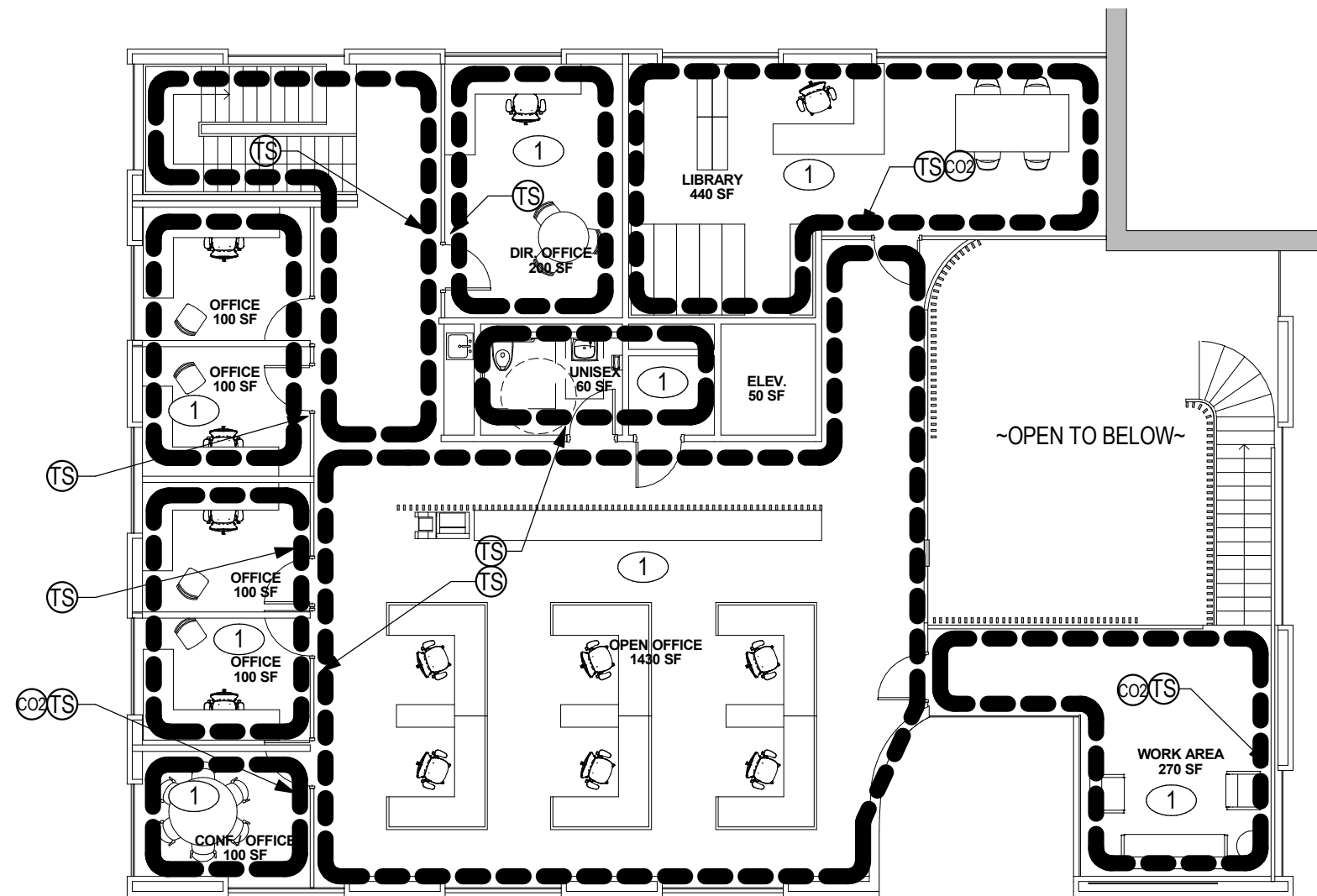
- A. BUILDING TIED INTO CENTRAL UO CAMPUS SIEMENS SYSTEM
- B. ALL DIV 23 EQUIPMENT CONTROLLED/MONTIORTED BY SIEMENS
- C. NON-ADJUSTABLE TEMPERATURE SENSORS
- D. INTEGRATE SENSORS @ ALL OPERABLE WINDOWS
- E. ROOM/ZONE OCCUPANCY FROM DIV 26 SENSOR - HARD CONTACT
- F. ALL IN ONE SENSOR WHERE MULTIPLE FUNCTIONS ARE NOTED

KEYED NOTES

- 1. ELECTRIC REHEAT TERMINAL UNIT ZONE
- 2. LOCAL BAS WORKSTATION LOCATION; DESK W/ COMPUTER TERMINAL

1 LEVEL 1 - FLOOR PLAN - THERMAL ZONING

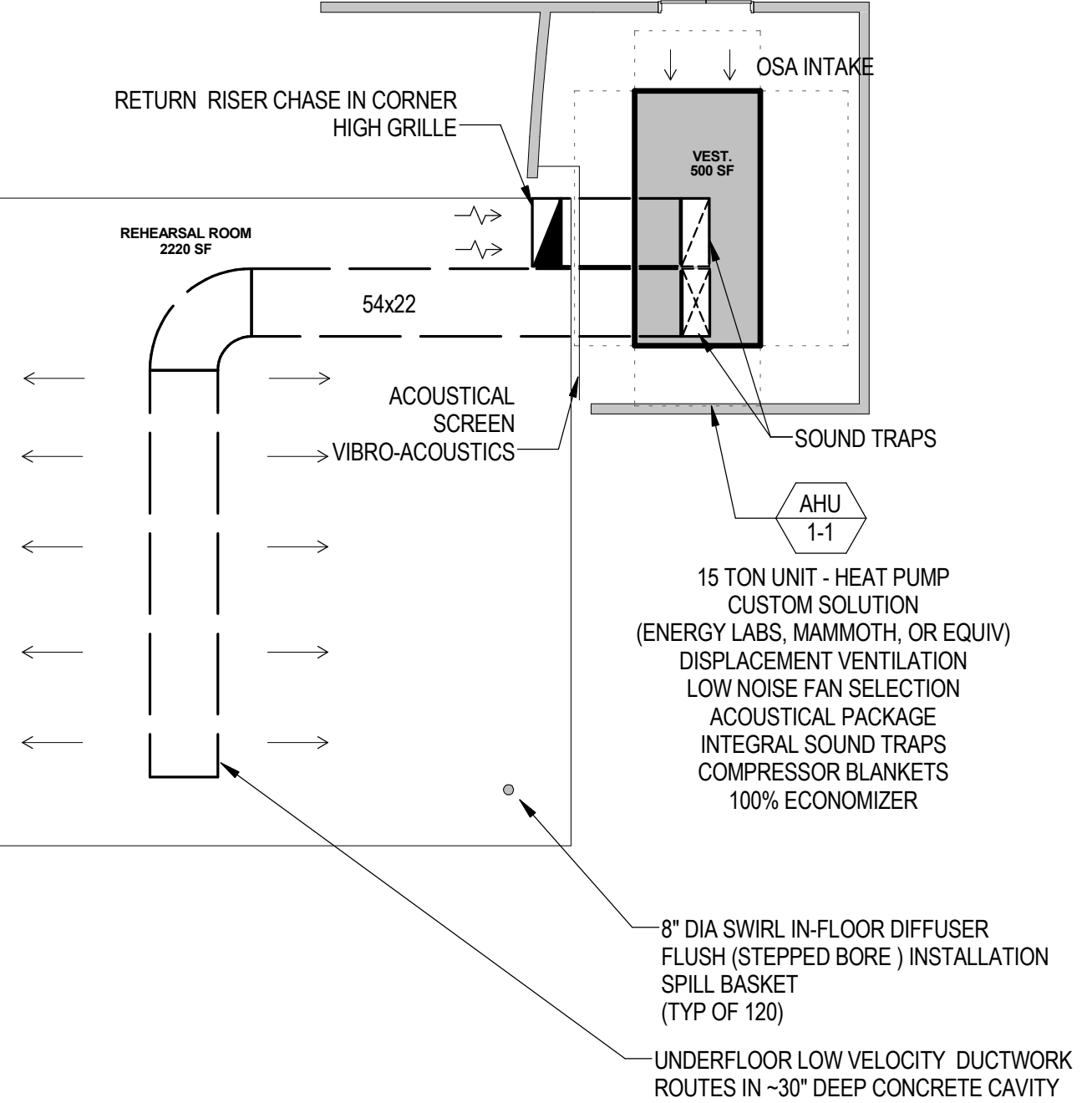
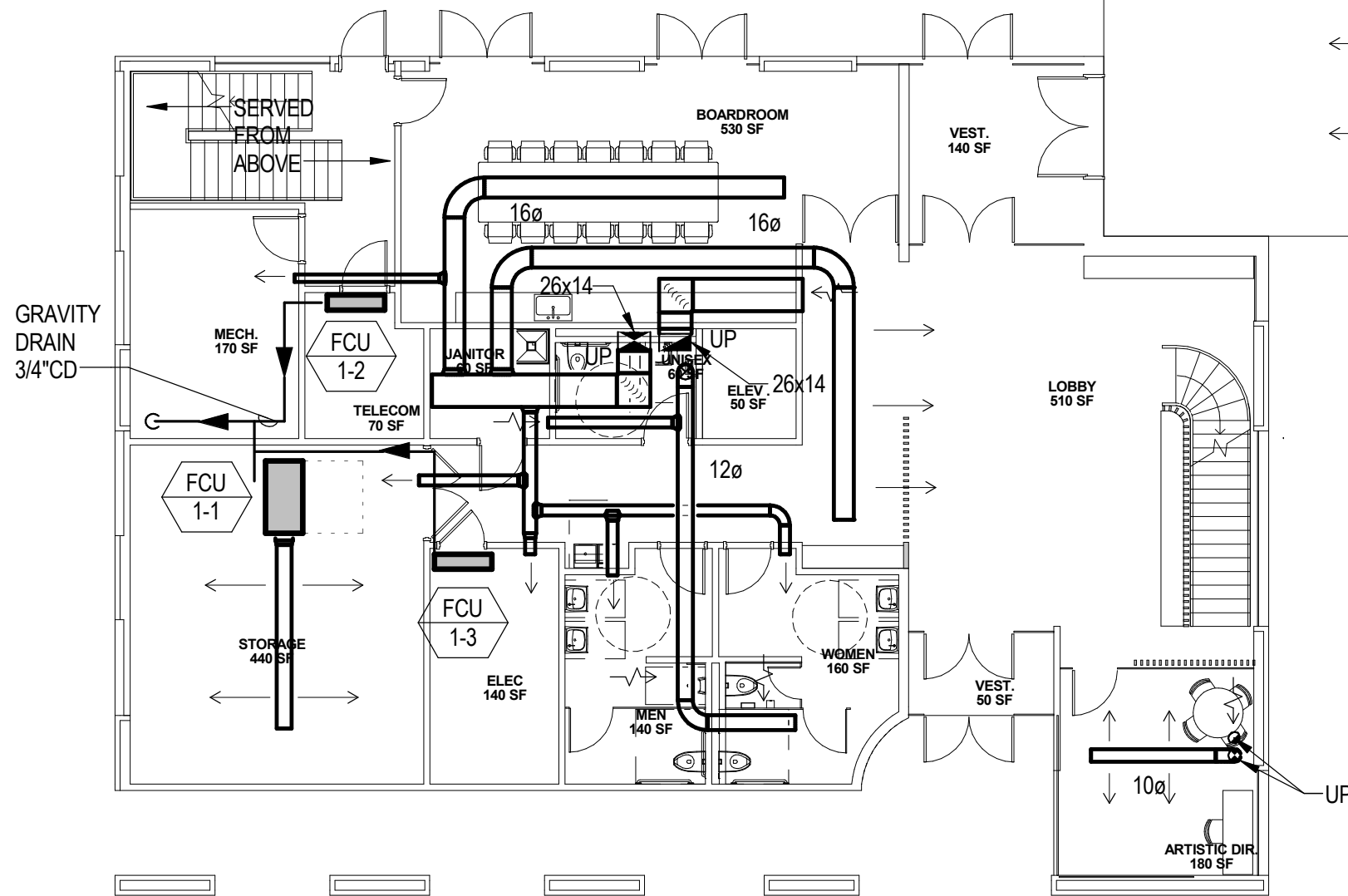
SCALE: 3/32" = 1'-0"



SHEET NOTES

- A. BUILDING TIED INTO CENTRAL UO CAMPUS SIEMENS SYSTEM
- B. ALL DIV 23 EQUIPMENT CONTROLLED/MONITORED BY SIEMENS
- C. NON-ADJUSTABLE TEMPERATURE SENSORS
- D. INTEGRATE SENSORS @ ALL OPERABLE WINDOWS
- E. ROOM/ZONE OCCUPANCY FROM DIV 26 SENSOR - HARD CONTACT
- F. ALL IN ONE SENSOR WHERE MULTIPLE FUNCTIONS ARE NOTED

1 LEVEL 2 - FLOOR PLAN - THERMAL ZONING
SCALE: 3/32" = 1'-0"

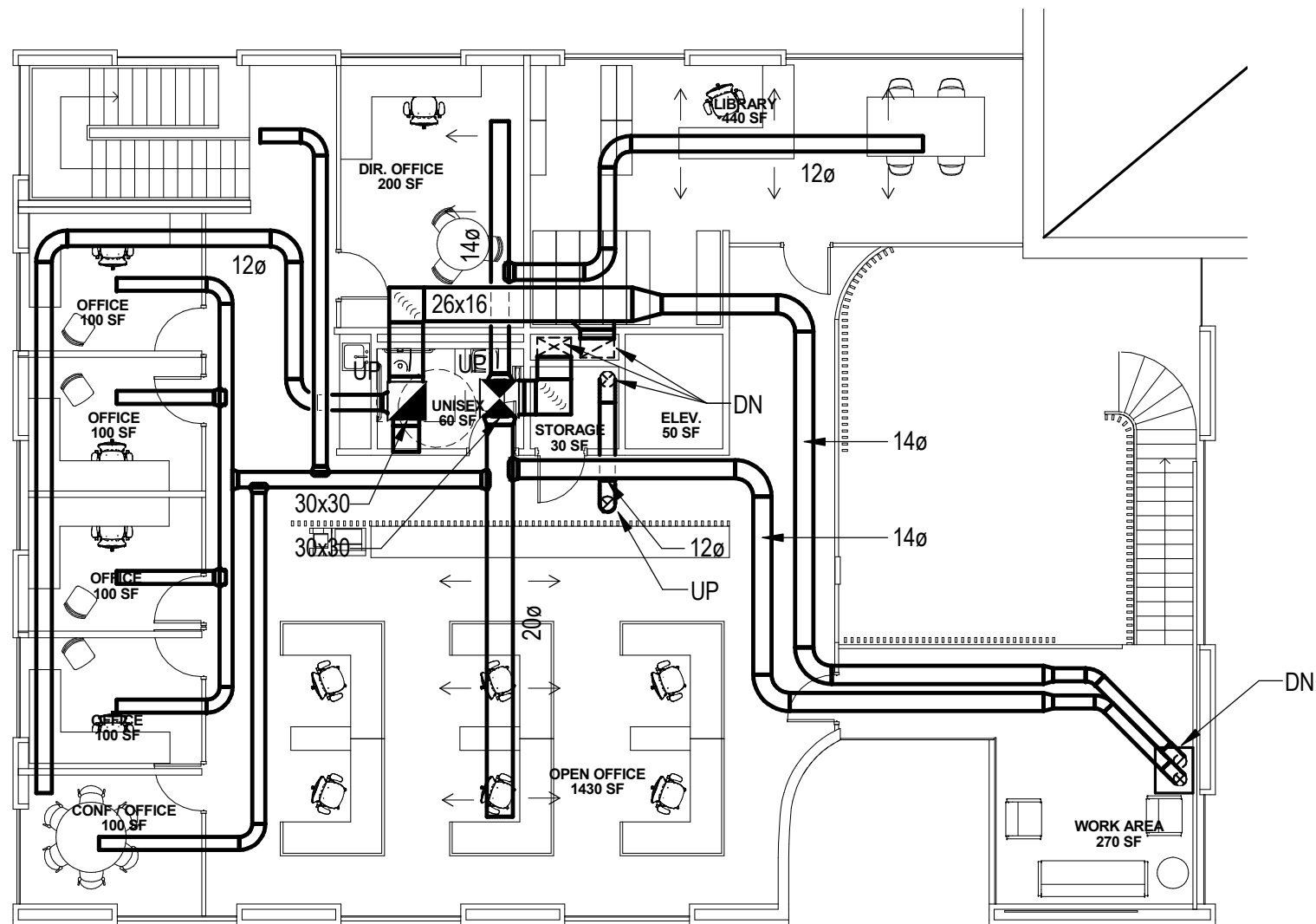


SHEET NOTES

- A. SEE ZONING PLANS FOR ELECTRIC REHEAT TERMINAL UNIT COUNTS. FINAL EASILY ACCESSABLE LOCATIONS TO BE COORDIANATED.

1 Level 1 - FLOOR PLAN - HVAC

SCALE: 3/32" = 1'-0"

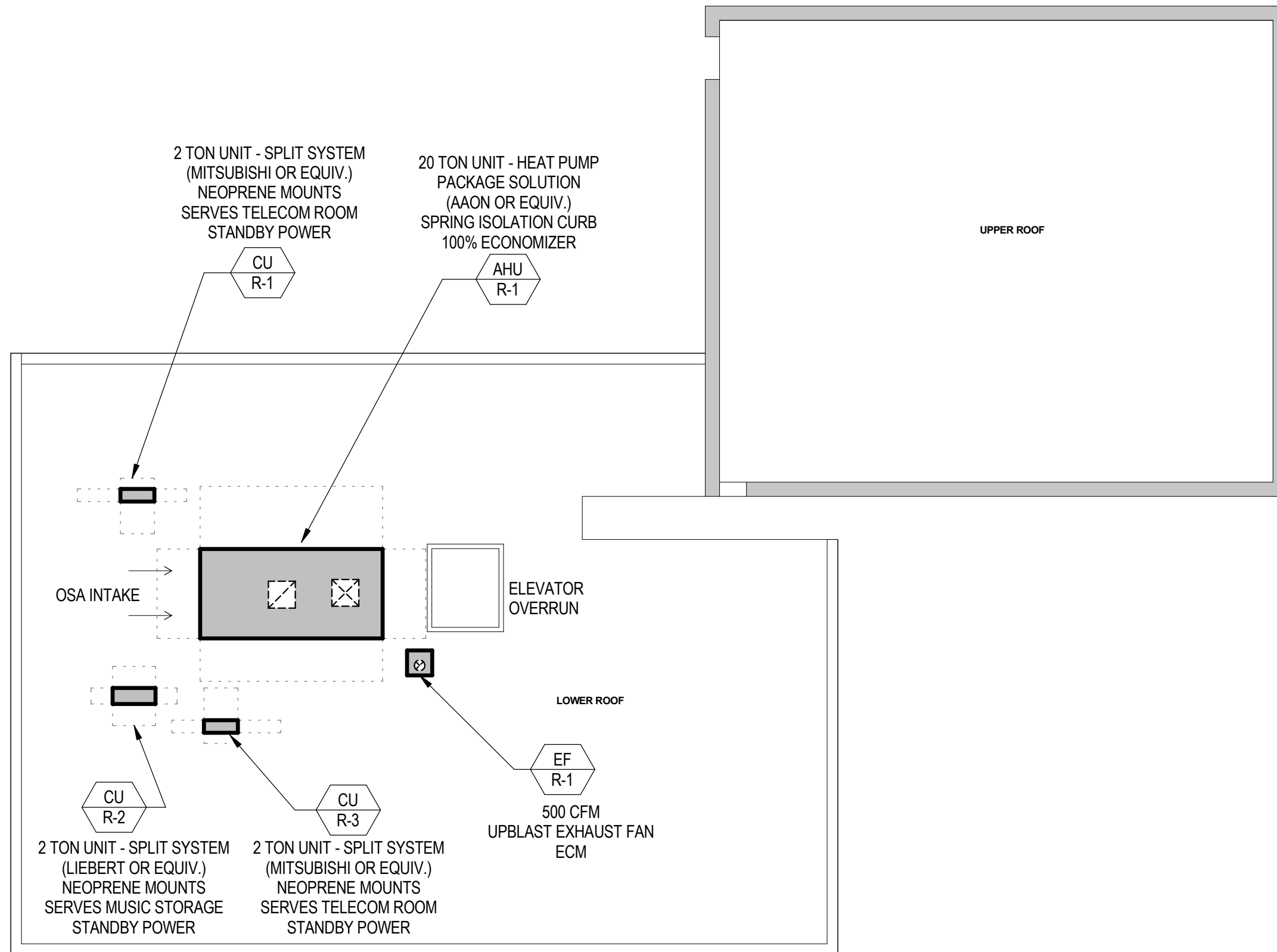


SHEET NOTES

- A. SEE ZONING PLANS FOR ELECTRIC REHEAT TERMINAL UNIT COUNTS. FINAL EASILY ACCESSABLE LOCATIONS TO BE COORDIANATED.
- B. NO FIBERGLASS ACOUSTICAL LINER
- C. PROVIDE BALANCE DAMPERS ON ALL SUPPLY, RETURN & EXHAUST BRANCHES
- D. PROVIDE 2' MINIMUM STRAIGHT DUCT BEFORE CONNECTION WITH VAV NECK

1 Level 2 - FLOOR PLAN - HVAC

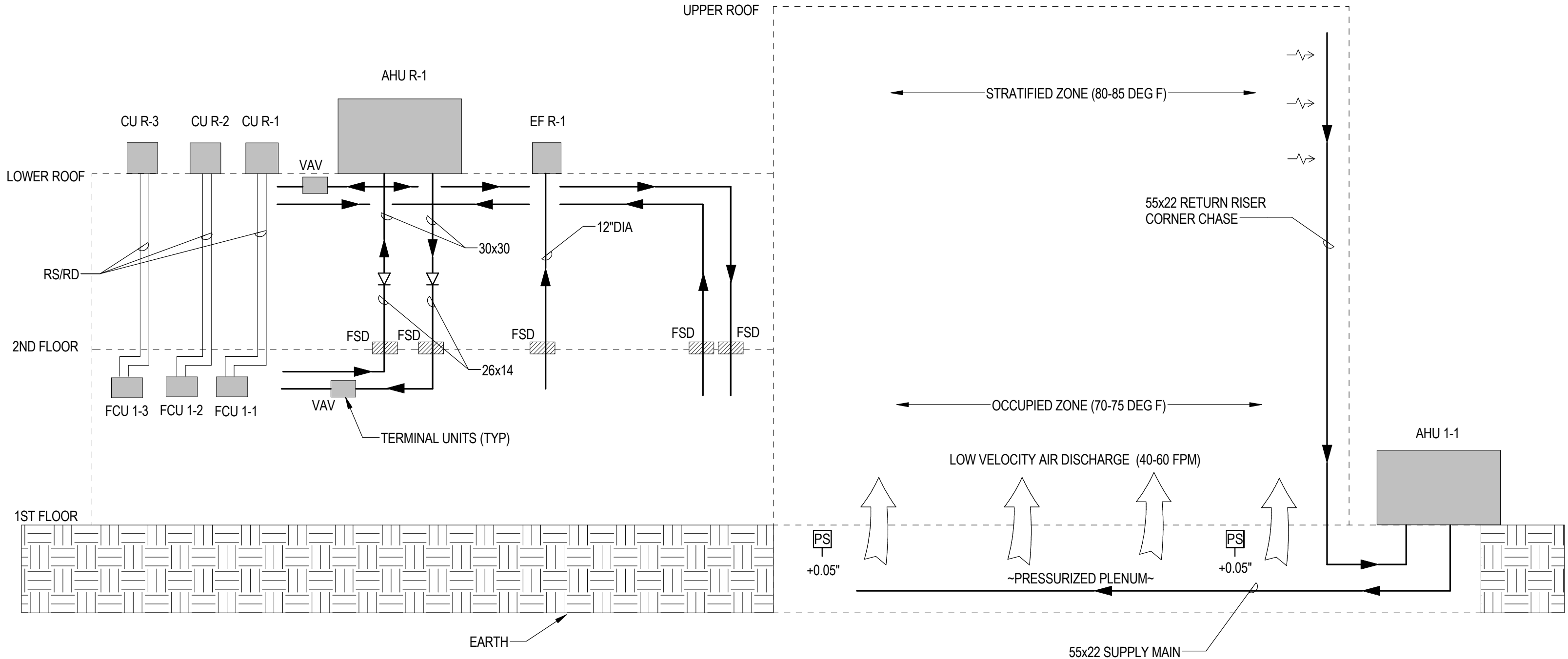
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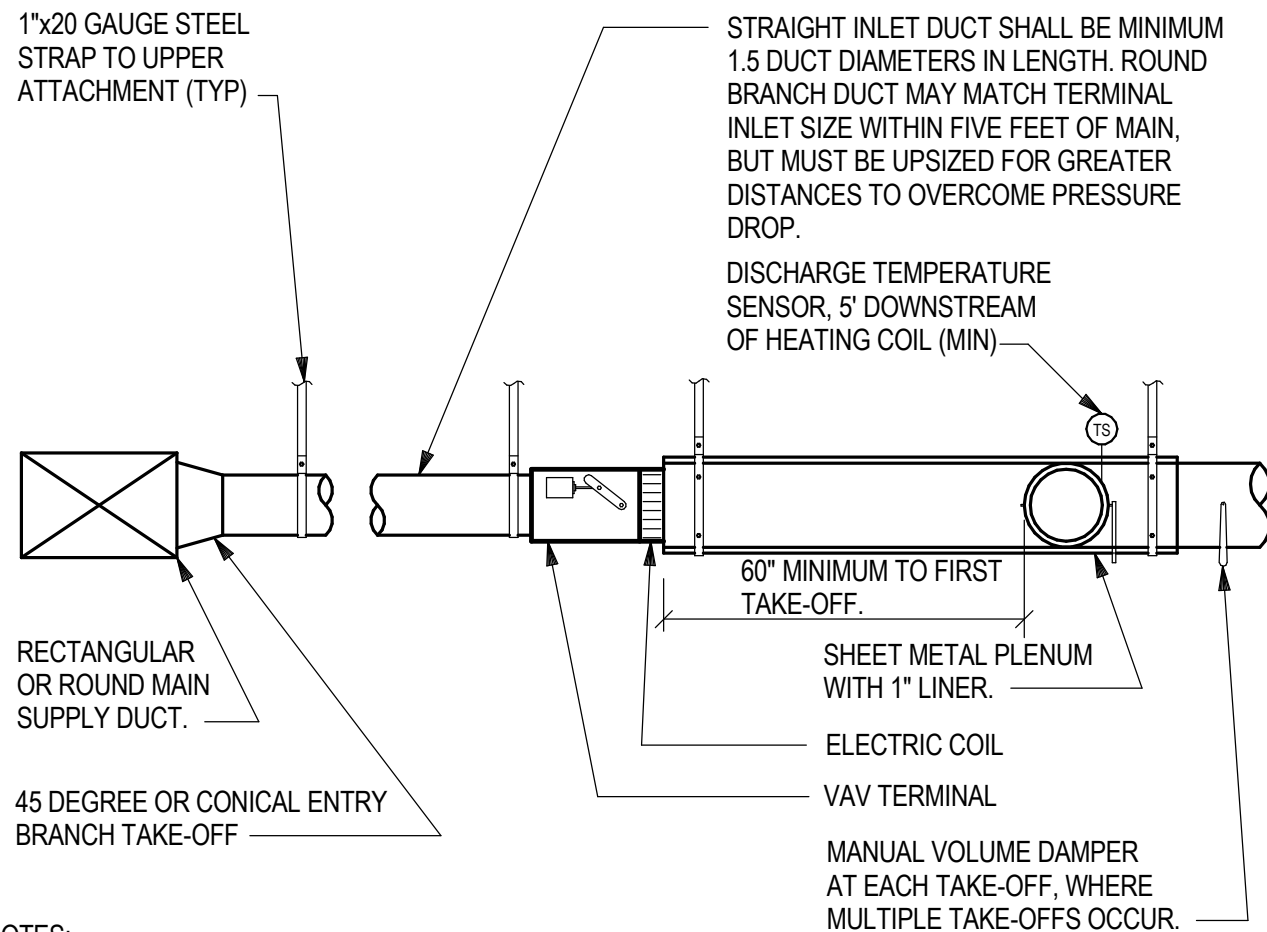
1 **ROOF - FLOOR PLAN - HVAC**
 SCALE: 3/32" = 1'-0"

OFFICE BAR

REHEARSAL ROOM



1 RISERS - HVAC
SCALE: NONE

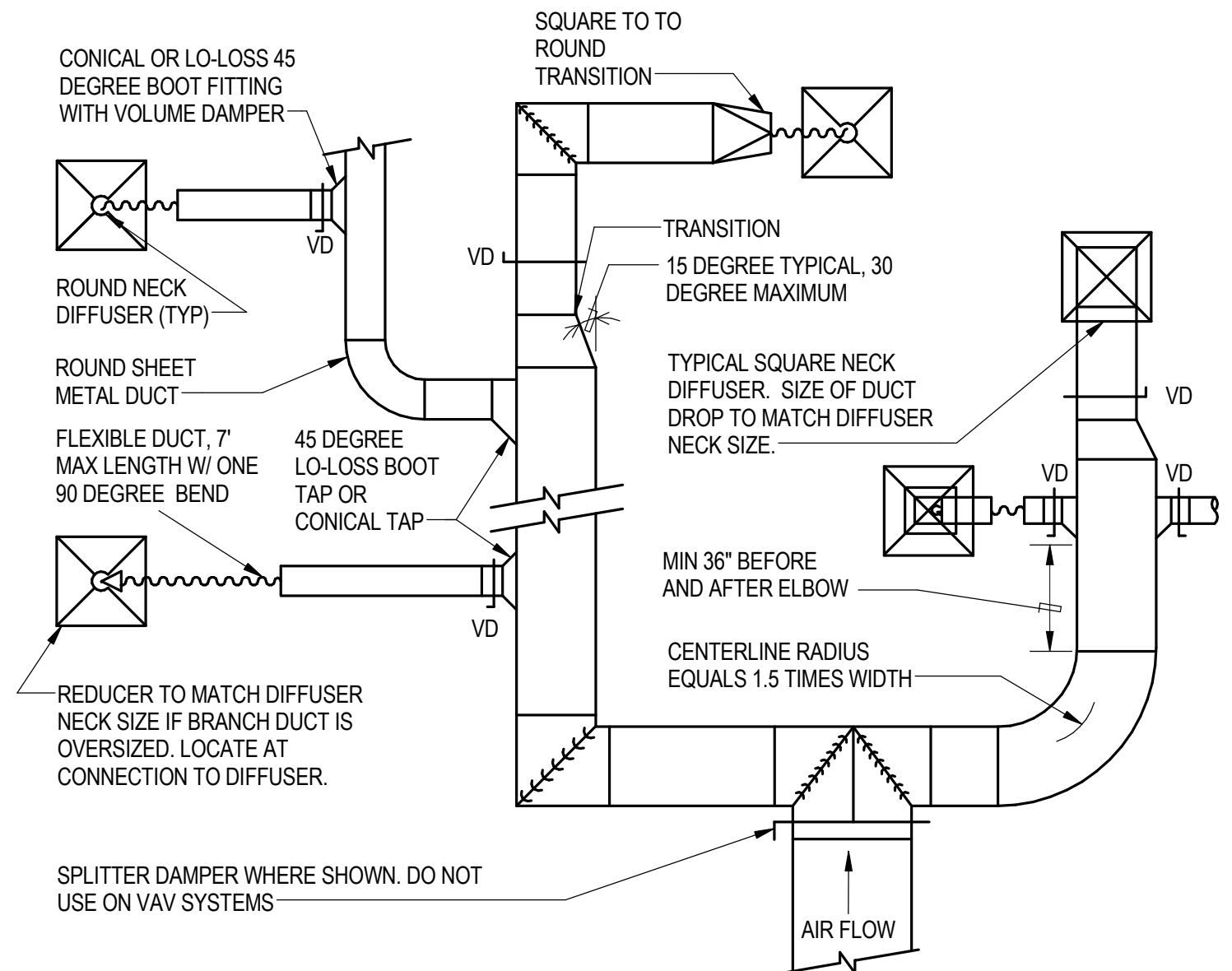


NOTES:

1. SHEET METAL OUTLET PLENUM SHALL BE LINED WITH 1" THICK INSULATION WITH FIBER-FREE LINER. INSIDE CLEAR DIMENSIONS SHALL BE 2" HIGHER THAN UNIT HEIGHT AND 4" WIDER THAN UNIT WIDTH.

NOTES: (ADD TO NOTES ABOVE AS APPLICABLE.)

2. FOR ACUTE CARE FACILITIES AND SURGERY CENTERS: THE INSIDE SURFACE OF THE DISCHARGE PLENUM SHALL INCLUDE 24 GAUGE SHEET METAL FOR A CLEANABLE SURFACE.
3. HEATING WATER COIL MUST BE 2-ROW MINIMUM FOR IMPROVED TEMPERATURE CONTROL AND INCREASED LIFE.



NOTES:

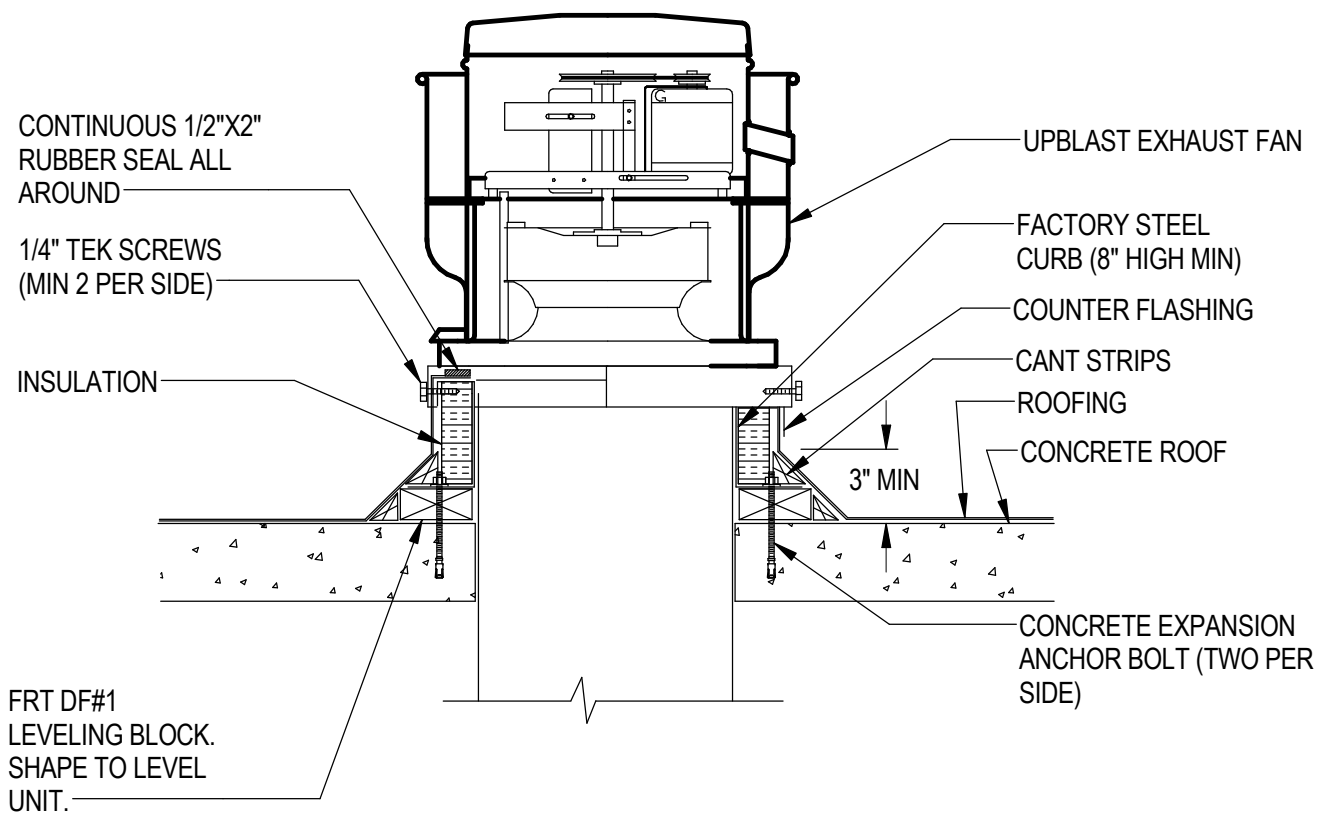
1. PROVIDE DUCT LINER AND/OR EXTERNAL DUCT INSULATION AS NOTED ON PLANS OR IN SPECIFICATIONS.
2. PROVIDE HANGERS AND SEISMIC BRACING PER SMACNA AND BUILDING CODE REQUIREMENTS.
3. LOCATE MANUAL BALANCING DAMPERS IMMEDIATELY DOWNSTREAM OF EACH DUCT TAP.
4. CUSHION HEADS OR BULLHEAD TEES ARE NOT ALLOWED.
5. MAINTAIN MINIMUM 36" CLEARANCE BETWEEN LEADING OR TRAILING ELBOW JOINT AND DUCT TAP FITTINGS.
6. RADIUSSED ELBOWS OR TURNING VANES REQUIRED ON RECTANGULAR DUCT SYSTEM ELBOWS. SINGLE THICKNESS VANES UP TO 25" HEIGHT AND DOUBLE THICKNESS VANES IN DUCTS GREATER THAN 25" HEIGHT.

2 VAV W/ ELECTRIC REHEAT

SCALE: NONE

1 SUPPLY DUCT FITTINGS

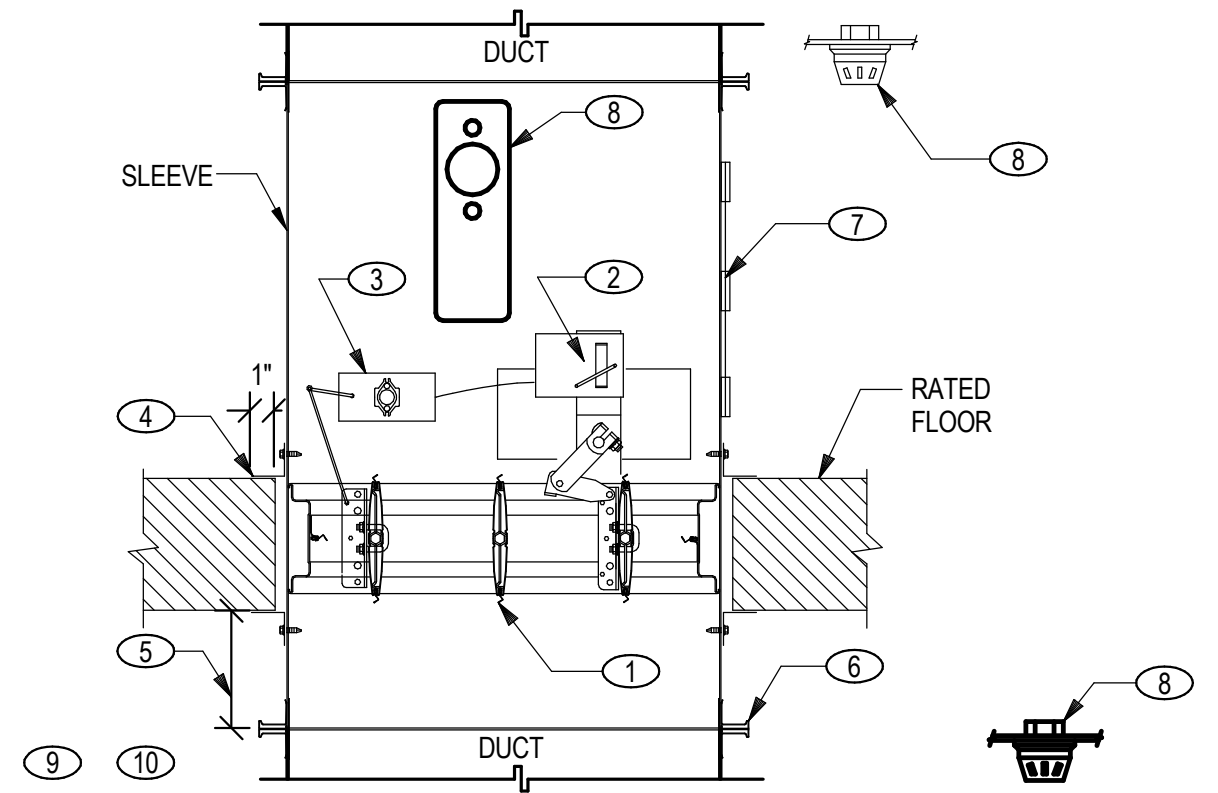
SCALE: NONE



NOTES:
1. COORDINATE ANCHORAGE REQUIREMENTS WITH STRUCTURAL DESIGN.

2 UPBLAST EXHAUST FAN

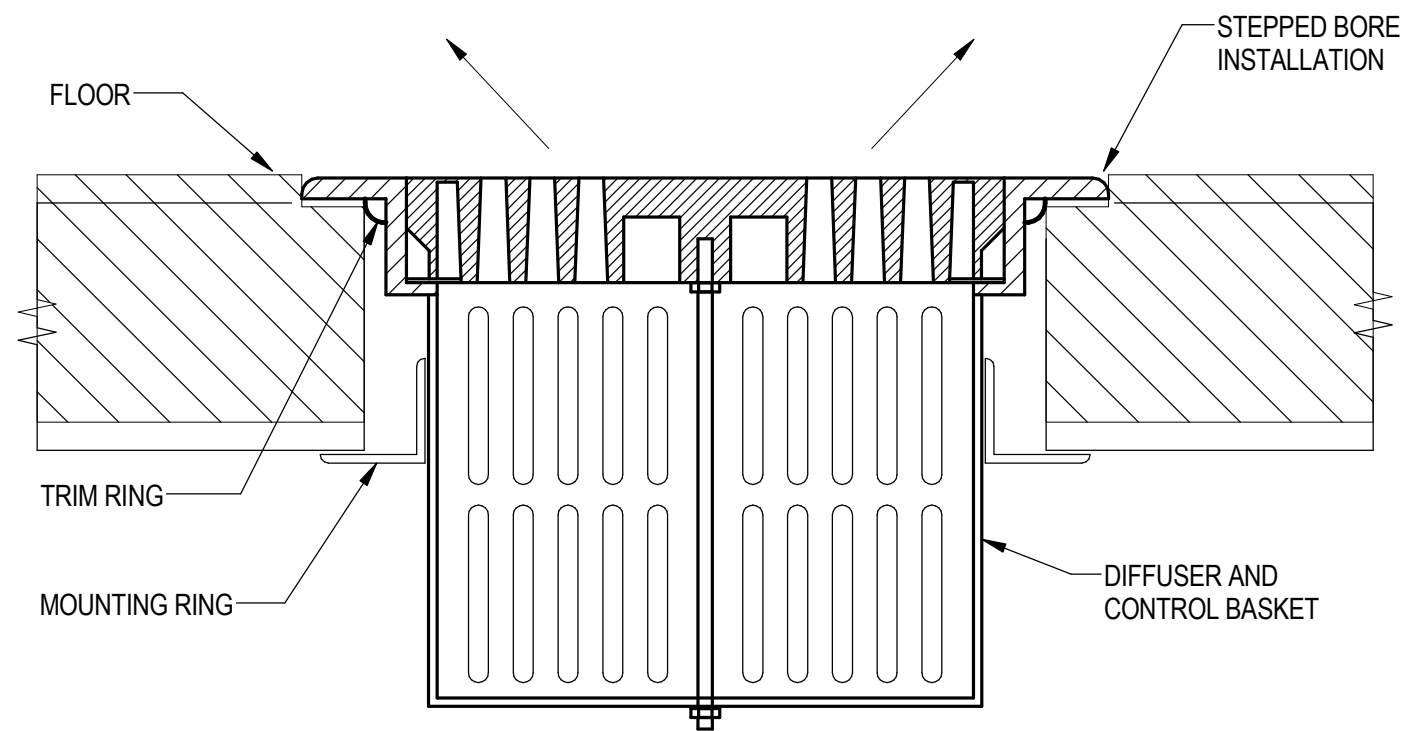
SCALE: NONE



- NOTES: #
1. DAMPER BLADES
 2. ELECTRIC ACTUATOR MOTOR INTERLOCKED WITH SMOKE DETECTOR OR FIRE ALARM SYSTEM. COORDINATE WITH ELECTRICAL DESIGN FOR POWER, CONTROL WIRING AND SEQUENCE OF OPERATION.
 3. ELECTRIC RESETTABLE FUSIBLE LINK CLOSURES AND LOCKS THE DAMPER WHEN TEMPERATURE EXCEEDS PRESET TEMPERATURE. DAMPER MAY BE RESET BY PRESSING RESET BUTTON. INTEGRAL DAMPER BLADE INDICATOR SWITCH FOR REMOTE MONITORING OF OPEN AND CLOSED POSITIONS.
 4. STEEL RETAINING ANGLES, MINIMUM 1-1/2"x1-1/2"x0.060", FASTENED TO FIRE DAMPER SLEEVE. ANGLES SHALL BE INSTALLED ON ALL FOUR SIDES OF DAMPER AND ON EACH SIDE OF THE WALL. FASTEN ANGLE TO SLEEVE WITH #10 SHEET METAL SCREWS (MINIMUM). ANGLE GAGE AND FASTENING METHOD AS PERMITTED AS A CONDITION OF DAMPER LISTING. REFER TO MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. MINIMUM 1" ANGLE OVERLAP ON ALL SIDES OF PARTITION WALL.
 5. DAMPER SLEEVE ON OPPOSITE SIDE OF WALL FROM ACTUATOR MUST BE MINIMUM 3" AND MAXIMUM OF 6" LONG.
 6. DUCT CONNECTION AS PERMITTED AS A CONDITION OF DAMPER LISTING. FLANGED BREAK-AWAY STYLE DUCT/SLEEVE CONNECTIONS ARE SHOWN.
 7. ACCESS DOOR SHOWN ON BOTTOM OF SLEEVE FOR ACCESS TO FIRE DAMPER BLADES. PANEL TO BE HINGED WITH AIRTIGHT SEAL. ACCESS SIZE MUST BE MINIMUM OF 12" BY 12" OR THE WIDTH OF DUCT IF SMALLER THAN 12" WIDE. ACCESS PANEL MUST BE LABELED WITH THE WORDS, "FIRE DOOR - DO NOT OBSTRUCT" IN LETTERS NO LESS THAN 1" IN HEIGHT. EXTERNAL INSULATION SHALL NOT CONCEAL ACCESS UNLESS A LABEL IS ATTACHED TO THE INSULATION WHICH INDICATES THE EXACT LOCATION OF THE OPENING.
 8. DUCT SMOKE DETECTOR MOUNTED ON DUCT SLEEVE OPPOSITE ACTUATOR WITHIN FIVE FEET OF DAMPER. OR, AREA SMOKE DETECTORS CONNECTED TO CENTRAL FIRE ALARM SYSTEM. SMOKE DETECTORS SHALL BE ADDRESSABLE AND UNIQUELY TAGGED
 9. LOCATE 3/4" HIGH WHITE PLASTIC LAMINATE SIGNS WITH 3/8" HIGH BLACK LETTERING WITH THE INITIALS "FSD" AND UNIQUE NUMBER ON THE WALL DAMPER ACCESS PANEL. ATTACH WITH EPOXY ADHESIVE.
 10. FIRE/SMOKE DAMPER DETAIL FOR REFERENCE ONLY. FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED. INSTALL PER MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS WHICH SHALL BE MADE AVAILABLE TO INSPECTION AUTHORITIES.
 11. UL 555 & 555S COMPLIANT. LISTINGS: RUSKIN#R5531, GREENHECK#R13317, POTTORFF#R11767, NAILOR#R9492, CESCO#R6462 .
 12. REFER TO SPECIFICATION SECTION 233113 FOR ADDITIONAL REQUIREMENTS.

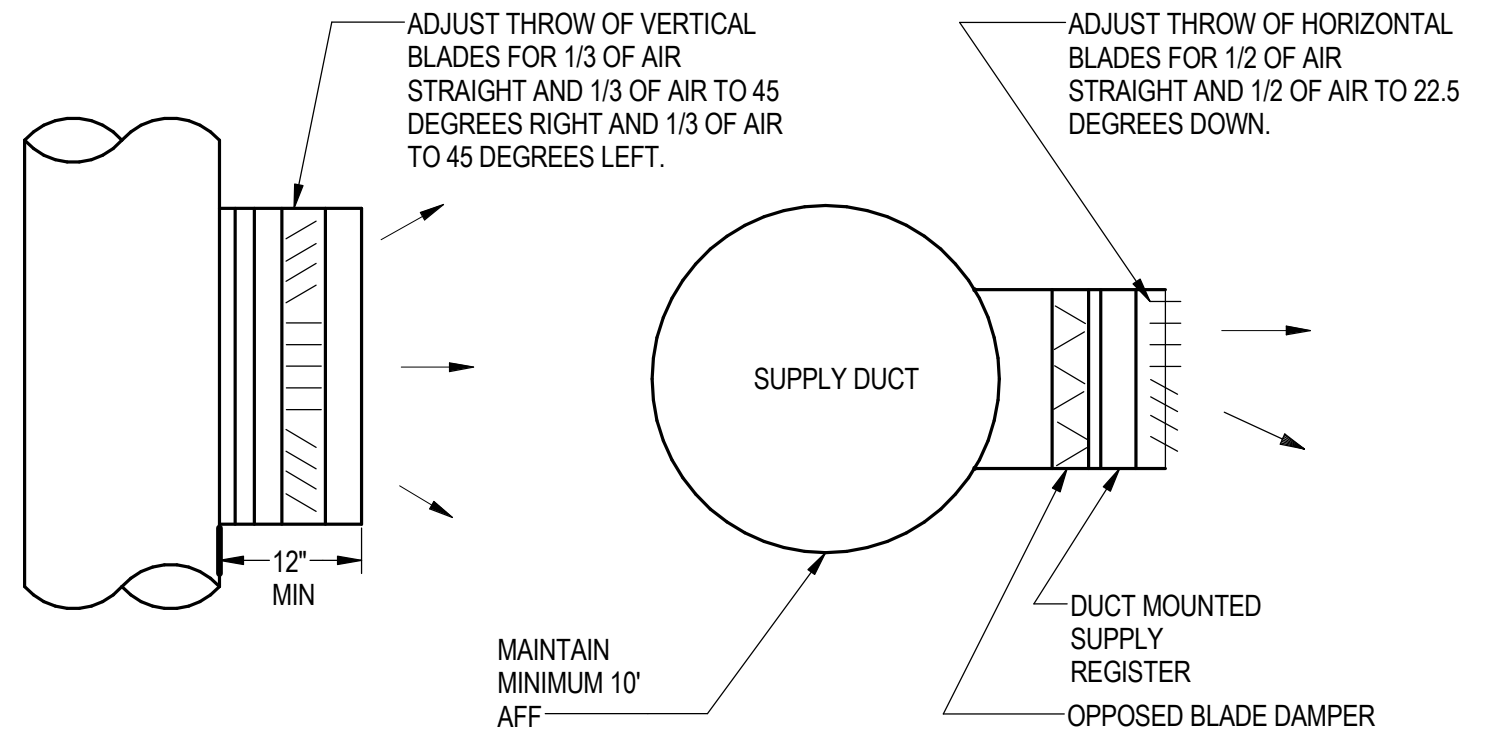
1 FSD FLOOR AIRFOIL BLADE

SCALE: NONE



NOTES:

1. NON-ROOM SIDE ADJUSTABLE, DAMPER ACCESSED VIA DIFFUSER FACE REMOVAL.
2. STEPPED BORE INSTALLATION FOR FLUSH INSTALLATION WITH FLOOR. COORDINATE WITH GC.



NOTES:

1. ADJUST INITIAL AIR FLOW DIRECTIONS AS SHOWN. FINAL AIR BALANCE SHALL ADJUST FLOW DIRECTIONS TO REDUCE AIR VELOCITIES IN OCCUPIED SPACE TO 50 FPM (MAXIMUM).

2 UFAD DIFFUSER

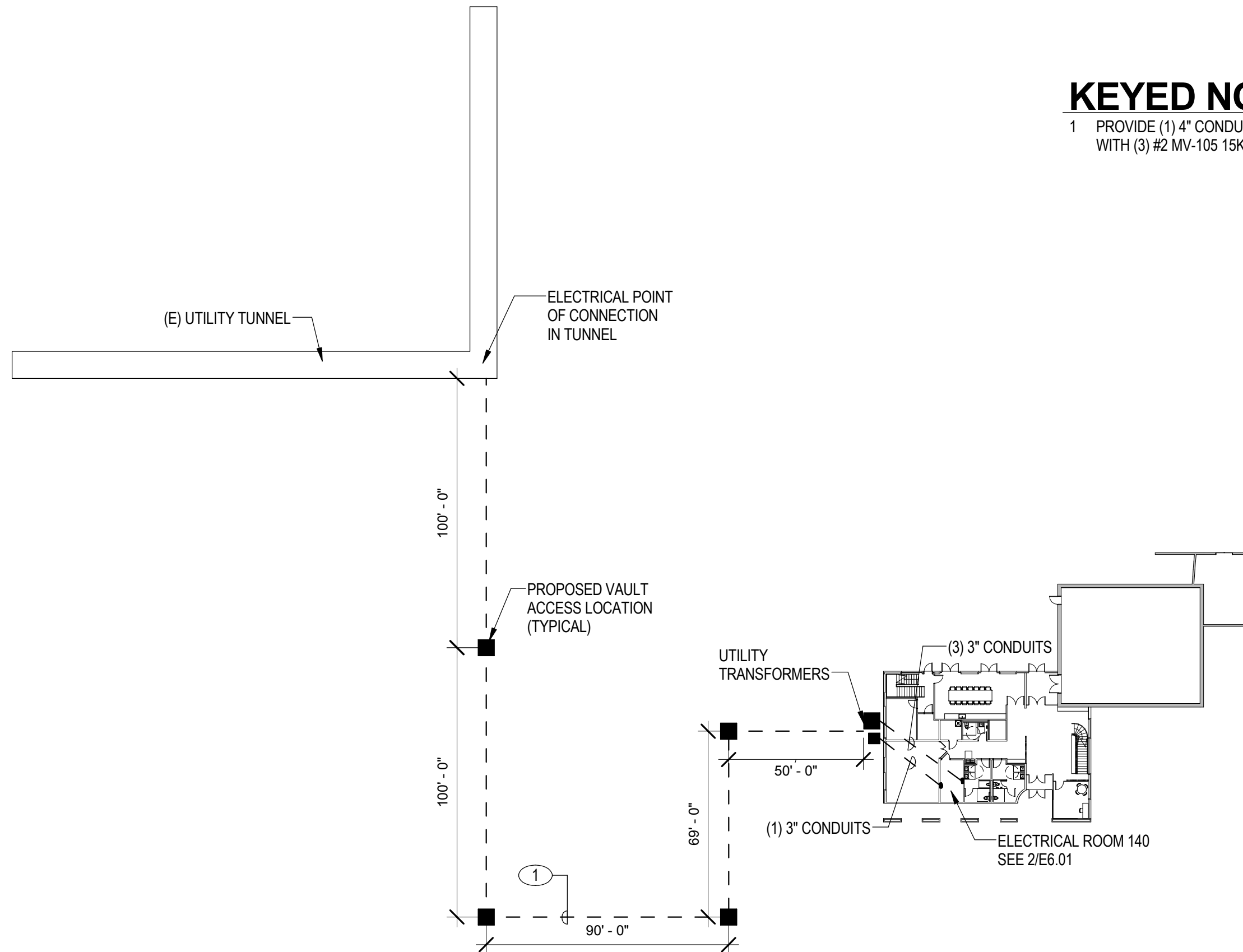
SCALE: 1/8" = 1'-0"

1 EXPOSED DUCT SUPPLY REGISTER

SCALE: 1/8" = 1'-0"

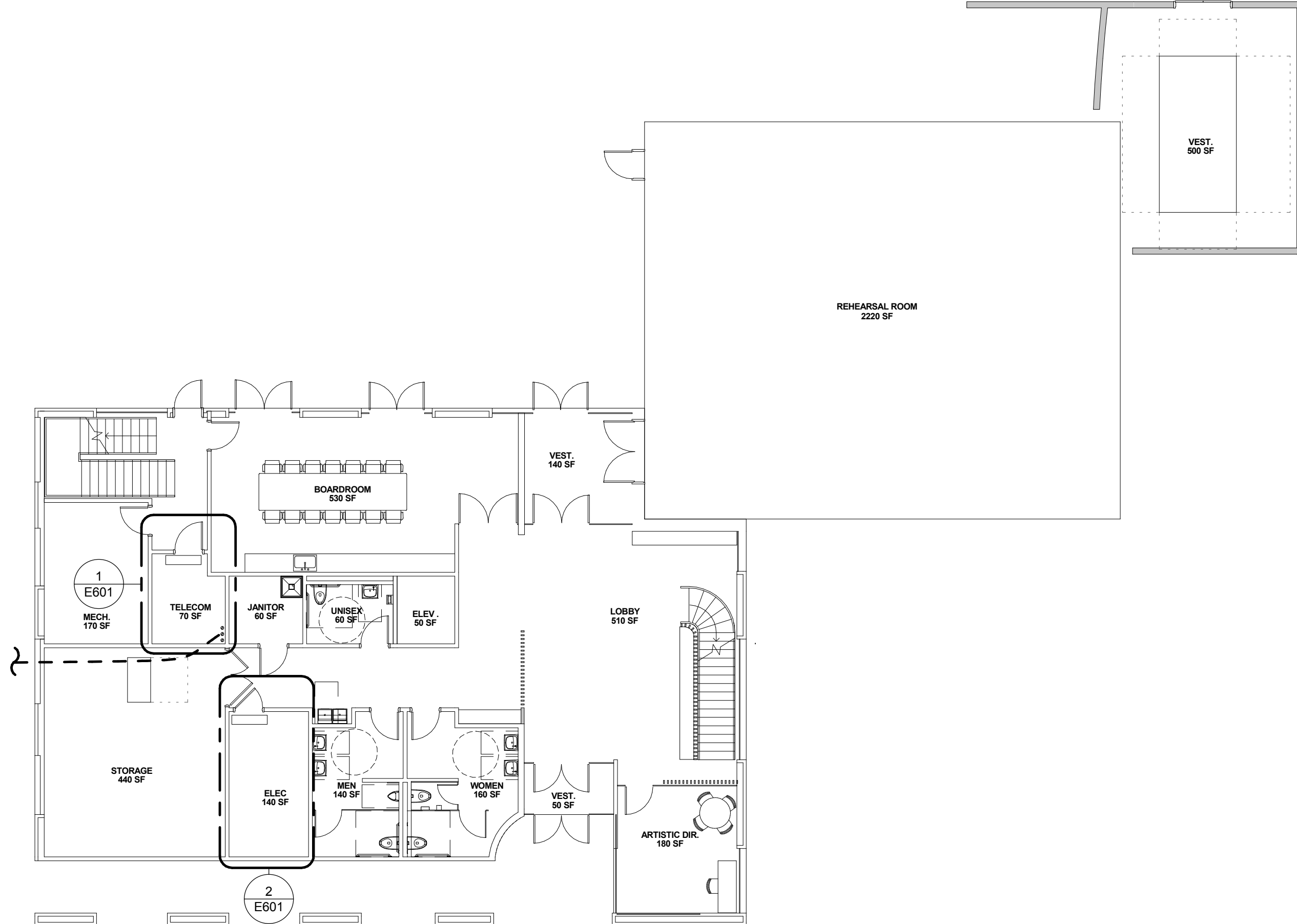
KEYED NOTES

- 1 PROVIDE (1) 4" CONDUITS (SPARE) AND (1) 4" CONDUITS WITH (3) #2 MV-105 15KV CABLES PER SERVICE.

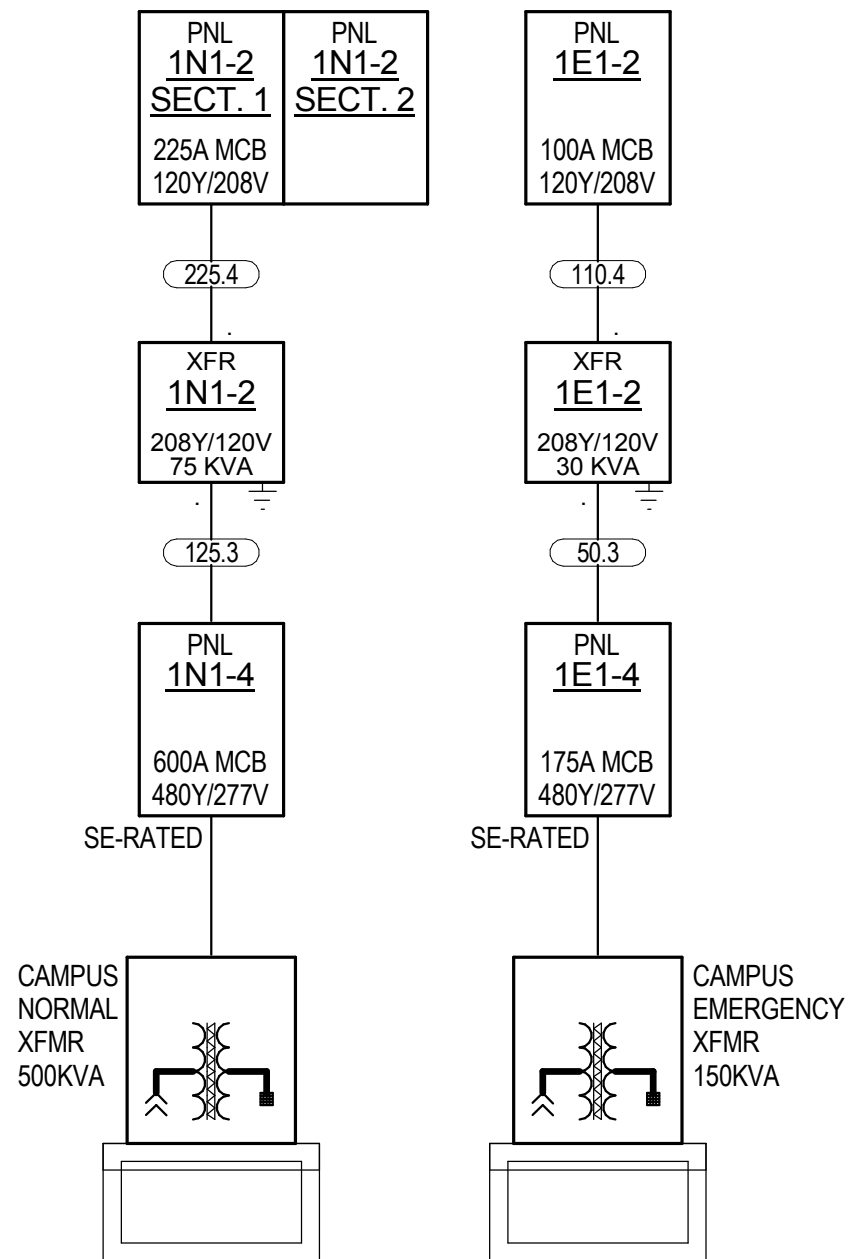


1 ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"



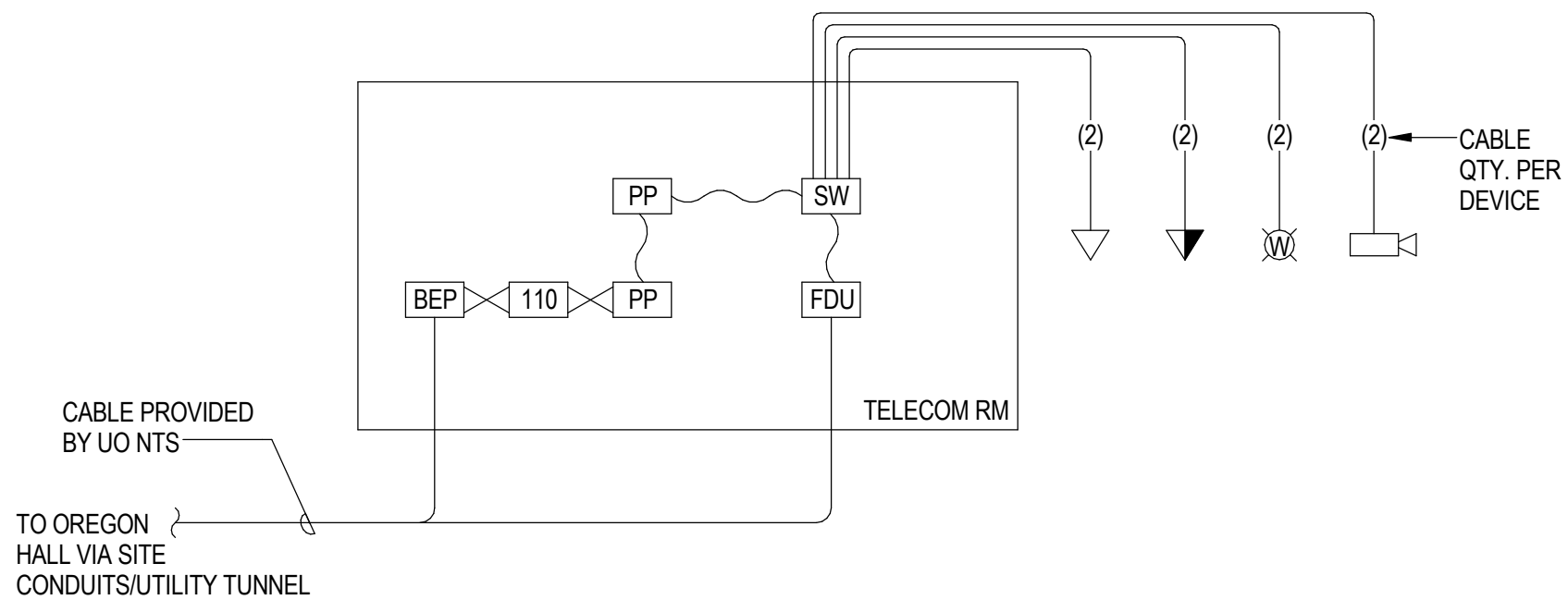
1 Level 1 - FLOOR PLAN - POWER AND SIGNAL
SCALE: 3/32" = 1'-0"



1

ELECTRICAL SINGLE-LINE DIAGRAM

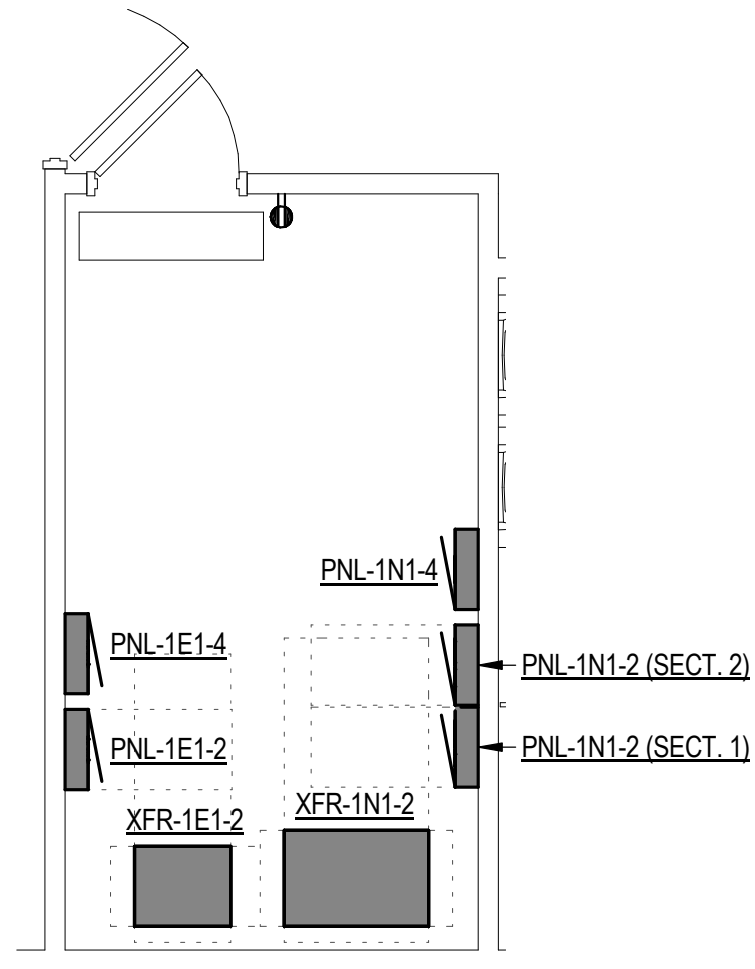
SCALE: NONE



LEGEND	
	= COPPER CROSS-CONNECT
	= PATCH CORDS (BY OWNER)
	= BUILDING ENTRANCE PROTECTOR BLOCKS
	= 110-BLOCKS
	= 48-PORT CAT5E PATCH PANEL
	= OWNER PROVIDED NETWORK SWITCH
	= FIBER DISTRIBUTION UNIT

1 SIGNAL SINGLE LINE DIAGRAM

SCALE: 1/4" = 1'-0"



2

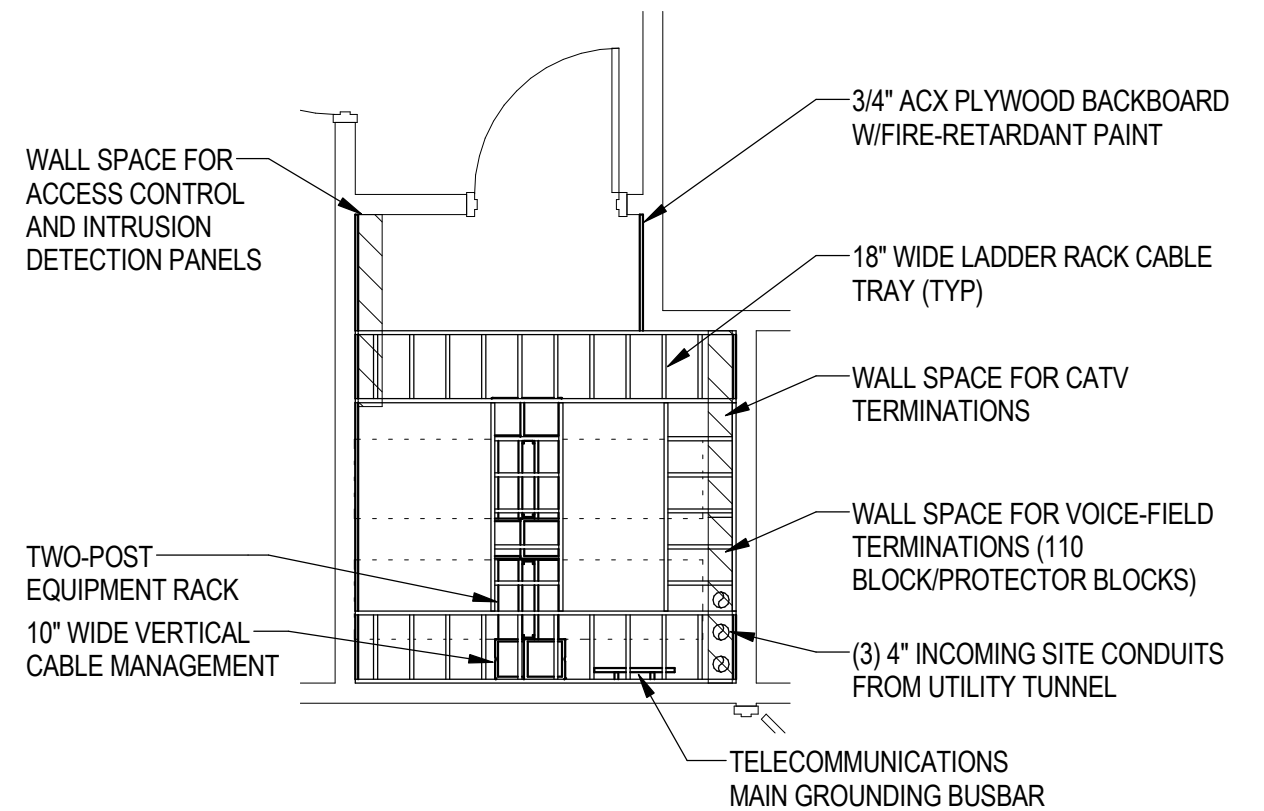
ENLARGED PLAN - ELECTRICAL ROOM

SCALE: 1/4" = 1'-0"

1

ENLARGED PLAN - TELECOM ROOM

SCALE: 1/4" = 1'-0"



PLUMBING BASIS OF DESIGN

1.1 PLUMBING BASIS OF DESIGN

- A. THIS BUILDING IS A NEW TWO-STORY CONCERT HALL AND OFFICE SPACE.
- B. THE DESIGN INCLUDES THE FOLLOWING NOTABLE FEATURES, BUT IS NOT LIMITED TO THIS SCOPE. CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONTRACT DOCUMENTS AND COORDINATING WITH ALL DISCIPLINES.
- C. CODES AND STANDARDS
 - 1. AMERICANS WITH DISABILITIES ACT (ADA)
 - 2. NFPA 99: HEALTH CARE FACILITIES CODE, 2012 EDITION
 - 3. OREGON BUILDING CODES ENFORCED BY THE AUTHORITY HAVING JURISDICTION (AHJ):
 - a) 2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC) (BASED ON THE 2009 INTERNATIONAL BUILDING CODE WITH STATE AMENDMENTS).
 - b) 2011 OREGON PLUMBING SPECIALTY CODE (OPSC) (BASED ON THE 2009 UNIFORM PLUMBING CODE WITH STATE AMENDMENTS).
 - c) 2010 OREGON MECHANICAL SPECIALTY CODE (OMSC) BASED ON THE 2009 INTERNATIONAL MECHANICAL CODE AND THE 2009 INTERNATIONAL FUEL GAS CODE (IMC).
- D. WATER SUPPLY
 - 1. MINIMUM AVAILABLE WATER PRESSURE (STATIC): _____ PSI AVAILABLE FROM MUNICIPAL WATER SERVICE
 - 2. COLD WATER PIPE SIZE: 2" INCHES
 - 3. COLD WATER METER SIZE: 1 1/2" INCHES
 - 4. COLD WATER DEMAND: 48 GPM (DESIGN TOTAL)
 - 5. COLD WATER AVAILBLE: 130 GPM (FUTURE TOTAL)
 - 6. REFER TO PLUMBING CALCULATIONS AND SCHEDULES FOR FUTHER CRITERIA
- E. DOMESTIC HOT WATER:
 - 1. DOMESTIC HOT WATER SUPPLY TEMPERATURE: 120°F
 - 2. DOMESTIC HOT WATER RECIRCULATION TEMPERATURE: 90°F. ABOVE THIS TEMPERATURE THE RECIRCULATING PUMP WILL BE OFF.
 - 3. DOMESTIC INCOMING COLD WATER TEMPERATURE: 55°F
 - 4. DOMESTIC HOT WATER HEATER SETPOINT TEMPERATURE: 140°F
- F. SANITARY SEWER:
 - 1. BUILDING SEWER SIZE 4 INCHES AT 2% SLOPE
 - 2. TOTAL CAPACITY 216 DRAINAGE FIXTURE UNITS
 - 3. CONNECTED LOAD 46.5 DRAINAGE FIXTURE UNITS
- G. STORM DRAIN:
 - 1. RAINFALL INTENSITY 1.3 INCHES/HOUR
 - 2. TOTAL SQUARE FOOTAGE: 6160 SQFT
 - 3. PIPE SIZE: 6"

DOMESTIC WATER HEATER SCHEDULE

TAG	#	MANUFACTURER	MODEL NUMBER	LOCATION	VOL (GAL)	RECOV (GPH)	EWT (°F)	LWT (°F)	CONNECTION SIZE		ELECTRICAL				UNIT SIZE (L"xW"xH")	OPER. WT. (LBS)	NOTES
									CW (IN)	HW (IN)	KW	VOLTS	PH	MCA			
EWH	1	AO SMITH	SDE-30	MECH ROOM	30	35	55	120	1	1	6	408	3	8	26X26X36	375	1-2

- NOTES
- COORDINATE WITH ELECTRICAL FOR POWER AND DISCONNECT AS REQUIRED.
 - SMALL TANK TYPE, ELECTRIC WATER HEATER.

EXPANSION TANK SCHEDULE

TAG	#	MANUFACTURER	MODEL NUMBER	LOCATION	TANK VOL. (GAL)	ACCEPT. VOL. (GAL)	SYSTEM VOL. (GAL)	FILL PRESS. (PSIG)	OPER. PRESS. (PSIG)	RELIEF PRESS. (PSIG)	MIN. TEMP. (°F)	MAX. TEMP. (°F)	SYSTEM CONN. (IN)	SIZE DIA x H (IN)	OPER. WT. (LBS)	NOTES
ET	1	WATTS	DETA-5	MECH ROOM	3.5	1.3	0	10	75	85	55	120	3/4"	10X14	30	1-3

- NOTES
- PROVIDE TANK RATED FOR ASME WORKING PRESSURE OF 125 PSIG.
 - PROVIDE TANK WITH VERTICAL CONFIGURATION.
 - ANCHOR TO HOUSEKEEPING PAD. COORDINATE WITH STRUCTURAL DESIGN.

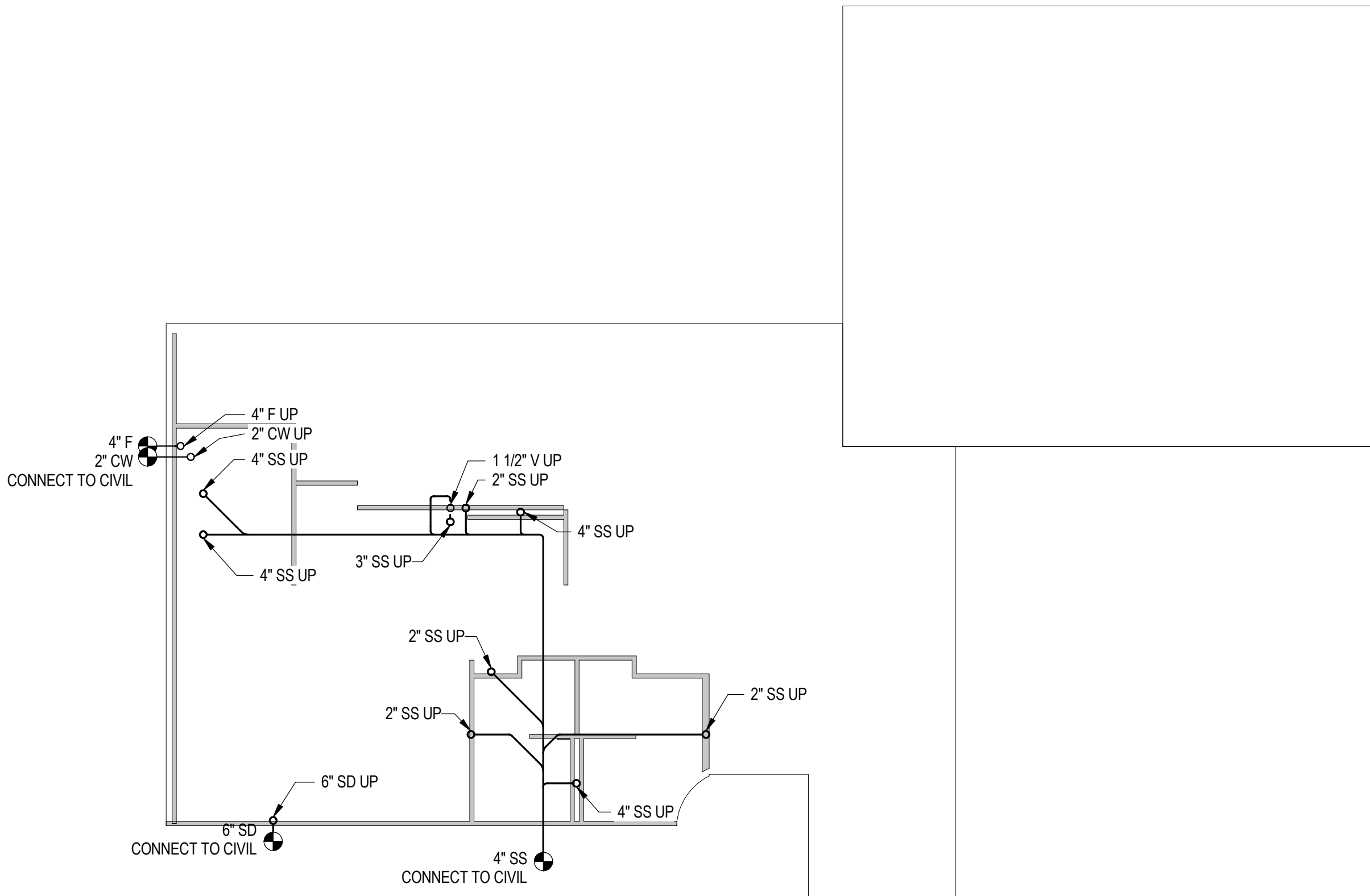
DOMESTIC RECIRCULATION PUMP SCHEDULE

TAG	#	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	FLOW (GPM)	HEAD (FT WG)	RPM	CONNECTION SIZE (IN)	ON/OFF SETPOINT (°F)	ELECTRICAL				EMERG POWER (Y/N)	OPER. WT. (LBS)	NOTES
											HP	WATTS	VOLTS	PH			
CP	1	BELL & GOSSETT	NBF-9U/LW	MECH ROOM	INLINE	5	6	2800	1/2"	90		41	115	1	No	10	1-4

- NOTES
- COORDINATE WITH ELECTRICAL FOR POWER AND DISCONNECT AS REQUIRED.
 - PUMP TO CONTAIN LESS THAN 0.25% LEAD CONTENT ON WETTED SURFACE FOR DOMESTIC DISTRIBUTION.
 - MAXIMUM WORKING PRESSURE 150 PSIG AND MAXIMUM OPERATING TEMPERATURE OF 225° F.
 - PROVIDE AQUASTAT TO OPERATE PUMP WHEN HOT WATER RETURN TEMPERATURE DROPS BELOW SETPOINT.

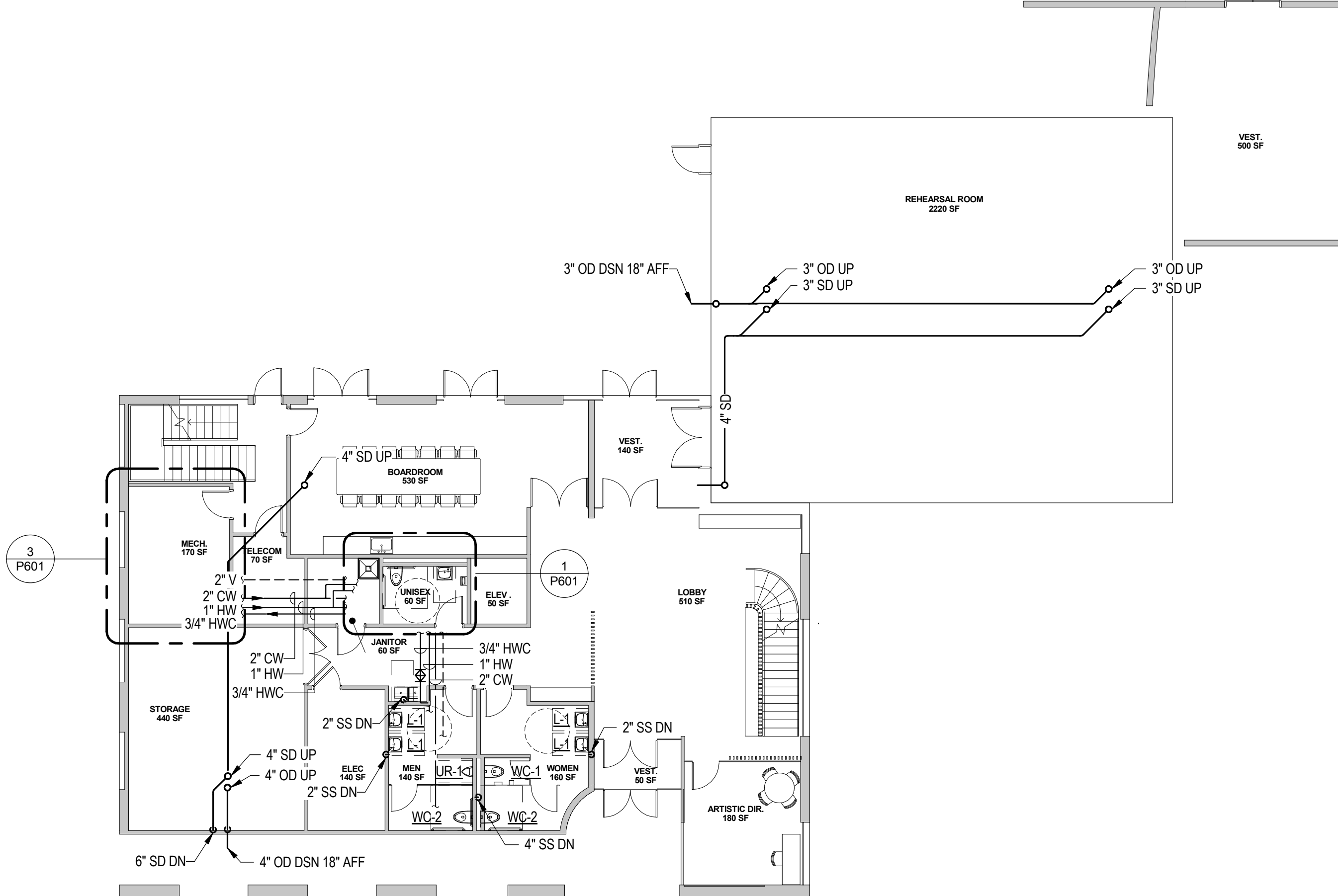
PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	MANUFACTURER	MODEL	ADA (Y/N)	FLOW (GPF/GPM)	CONNECTION SIZE				REMARKS	
						W	V	HW	CW		
FD-1	FLOOR DRAIN				0	4"					
FS-1	FLOOR SINK				0	4"					
OD-1	OVERFLOW DRAIN	JR SMITH			0	4"					SEE PLANS FOR SIZE
RD-1	ROOF DRAIN	JR SMITH			0	6"					SEE PLANS FOS SIZE
WC-1	WATER CLOSET WALL HUNG	KOHLER	KINGSTON LITE K-4330	N	1.28	4"	2"		1 1/4"		1.28 GALLONS PER FLUSH (GPF) SLOAN 111-1.28, OLSONITE NO.95 SEAT
WC-2	WATER CLOSET WALL HUNG ADA	KOHLER	KINGSTON LITE K-4330	Y	1.28	4"	2"		1 1/4"		1.28 GALLONS PER FLUSH (GPF) SLOAN 111-1.28, OLSONITE NO.95 SEAT
UR-1	URINAL	KOHLER	K-4960-T BARDON LITE	N	0.5	2"	1 1/2"		3/4"		0.125 GALLONS PER FLUSH (GPF) SLOAN 186-0.125
L-1	LAVATORY WALL HUNG ADA	KOHLER	BROOKELINE K-220204	Y	0.5	1 1/2"	1 1/2"	1/2"	1/2"		0.5 GPM CHICAGO 2200
MS-1	MOP SINK	STERN WILLIAMS	CRS-2200BP	N	2.5	3"	3"	3/4"	3/4"		CHICAGO 897-CRCF WITH VACUUM BREAKER
S-1	SINK	ELKAY	DLR-2222-10	Y	1.5	2"	1 1/2"	1/2"	1/2"		CHICAGO 201-G8AE2805F317AB WITH GOOSNECK AND WRIST BLADE HANDLES, PROVIDE VALVE & SUPPLY TUBING FOR COFFEE MAKER



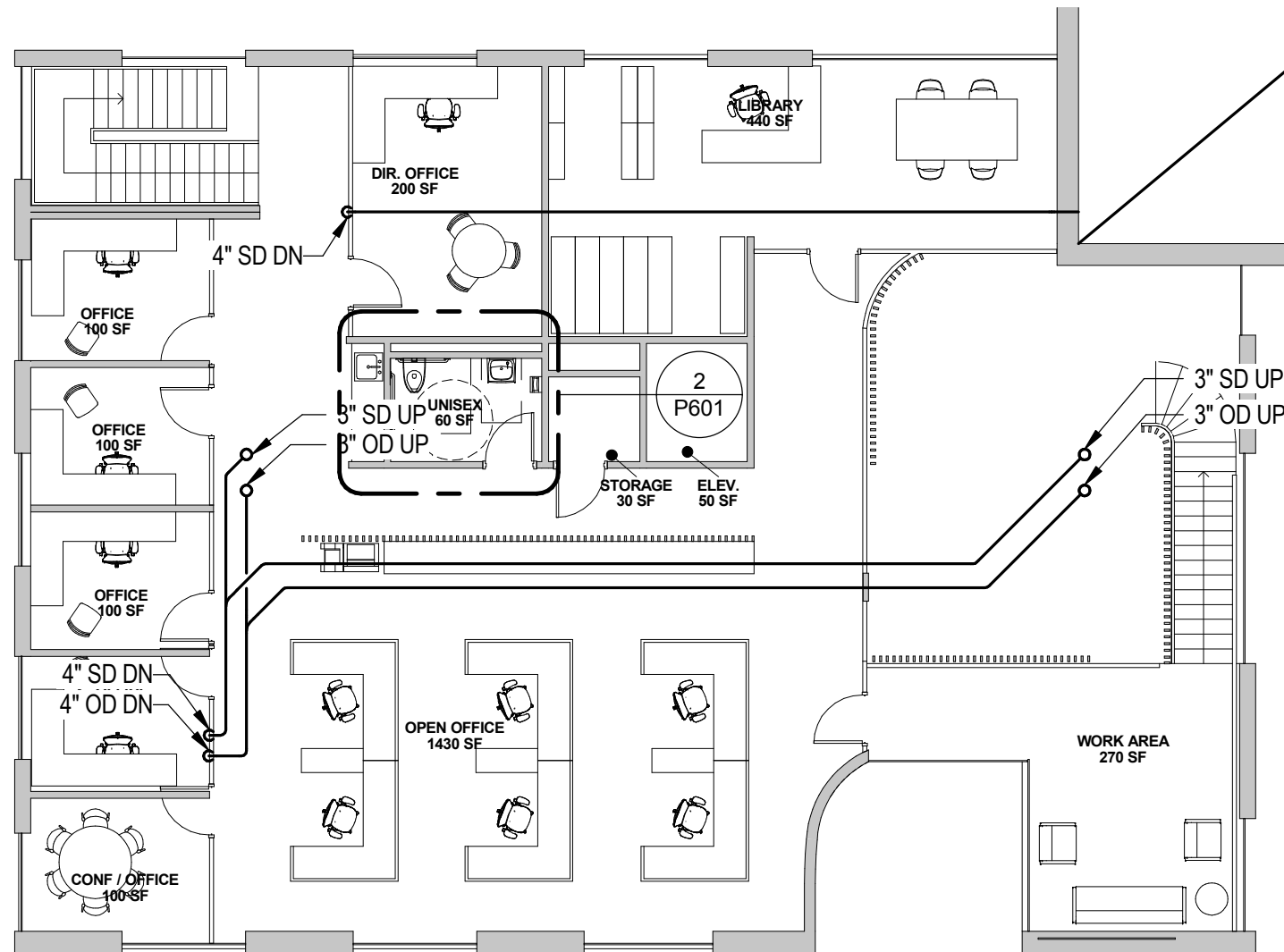
1 UNDERGROUND PLAN - PLUMBING

SCALE: 3/32" = 1'-0"



1 Level 1 - FLOOR PLAN - PLUMBING

SCALE: 3/32" = 1'-0"



1

Level 2 - FLOOR PLAN - PLUMBING

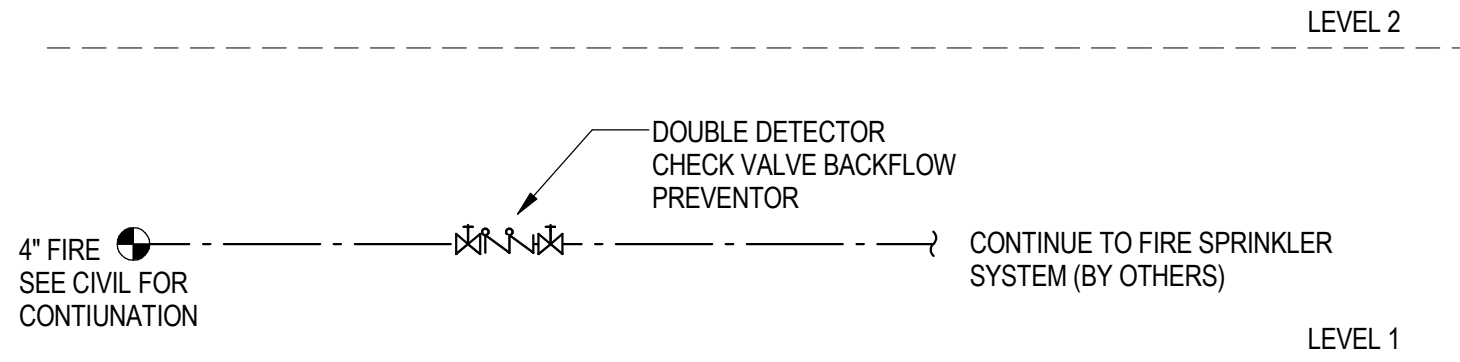
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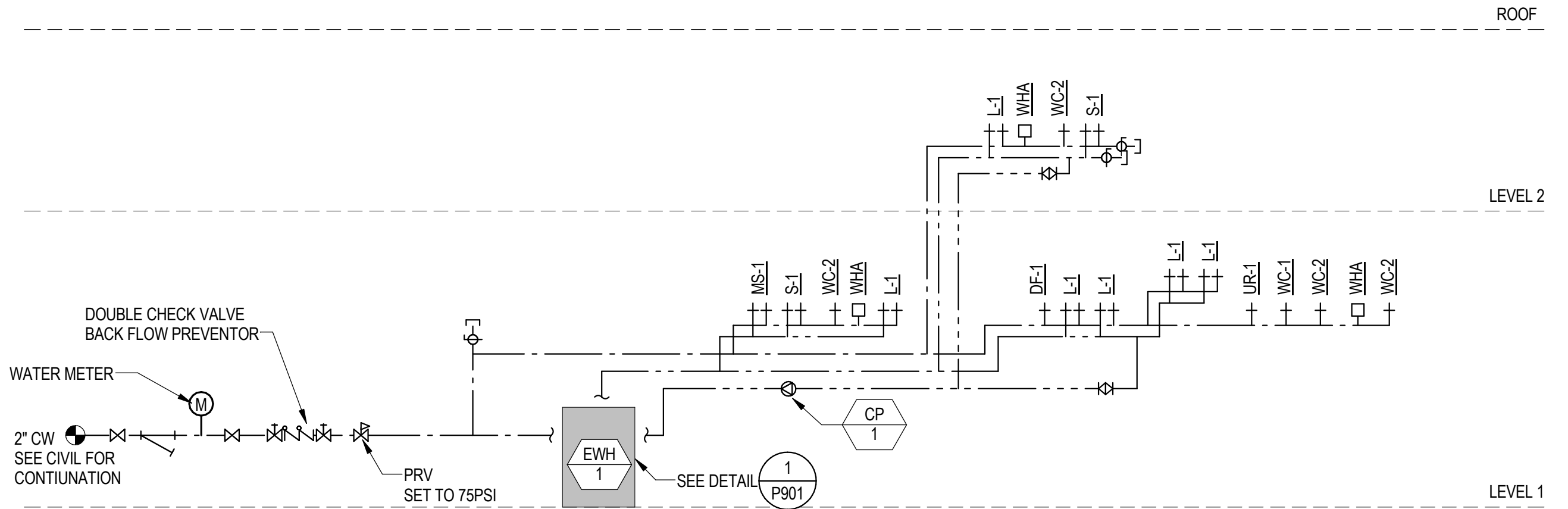
Lower Roof - FLOOR PLAN - PLUMBING

SCALE: 3/32" = 1'-0"



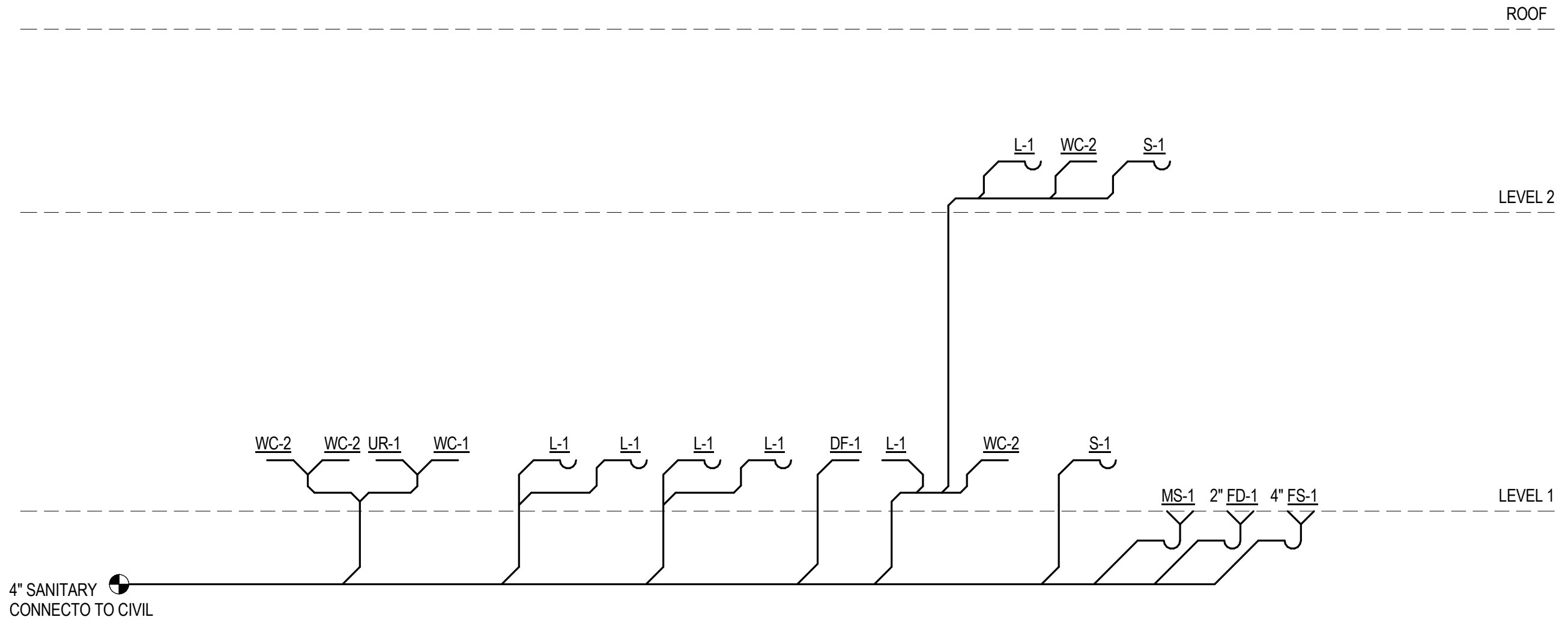
2 FIRE RISER DIAGRAM

SCALE: NONE

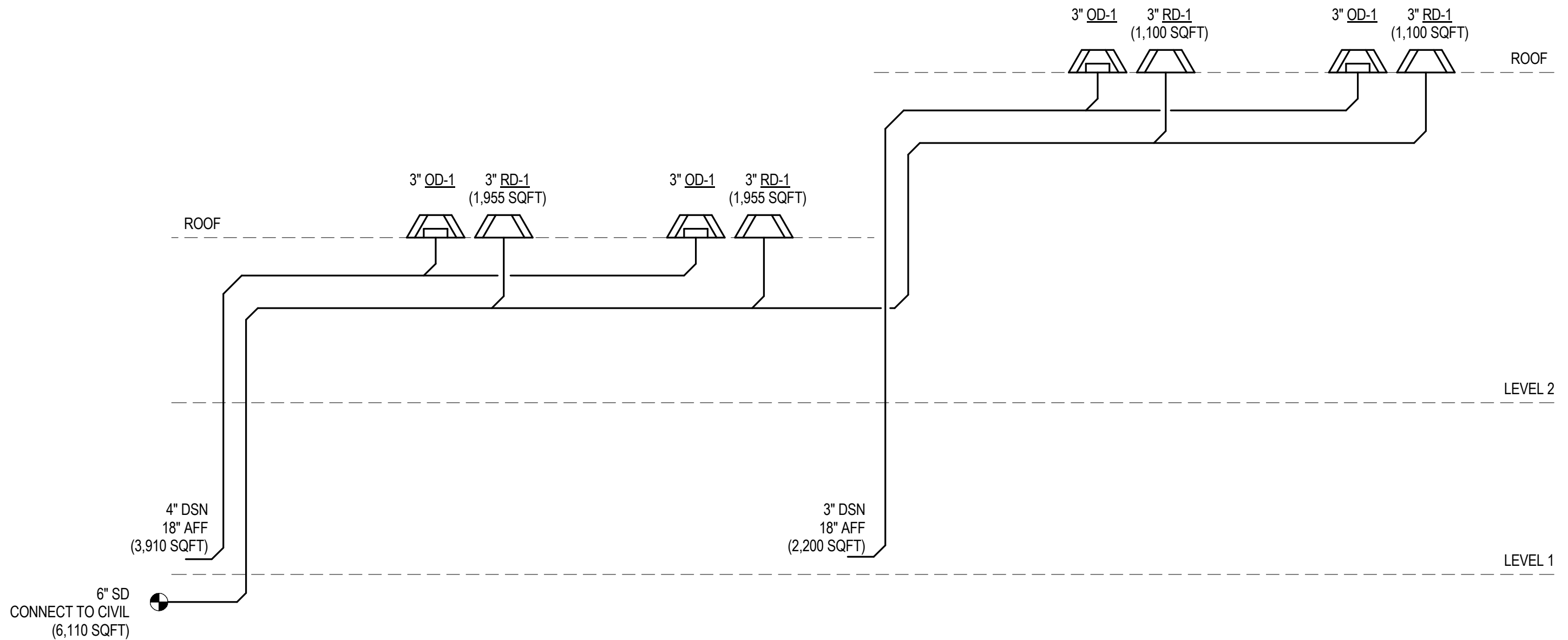


1 DOMESTIC WATER RISER DIAGRAM

SCALE: NONE

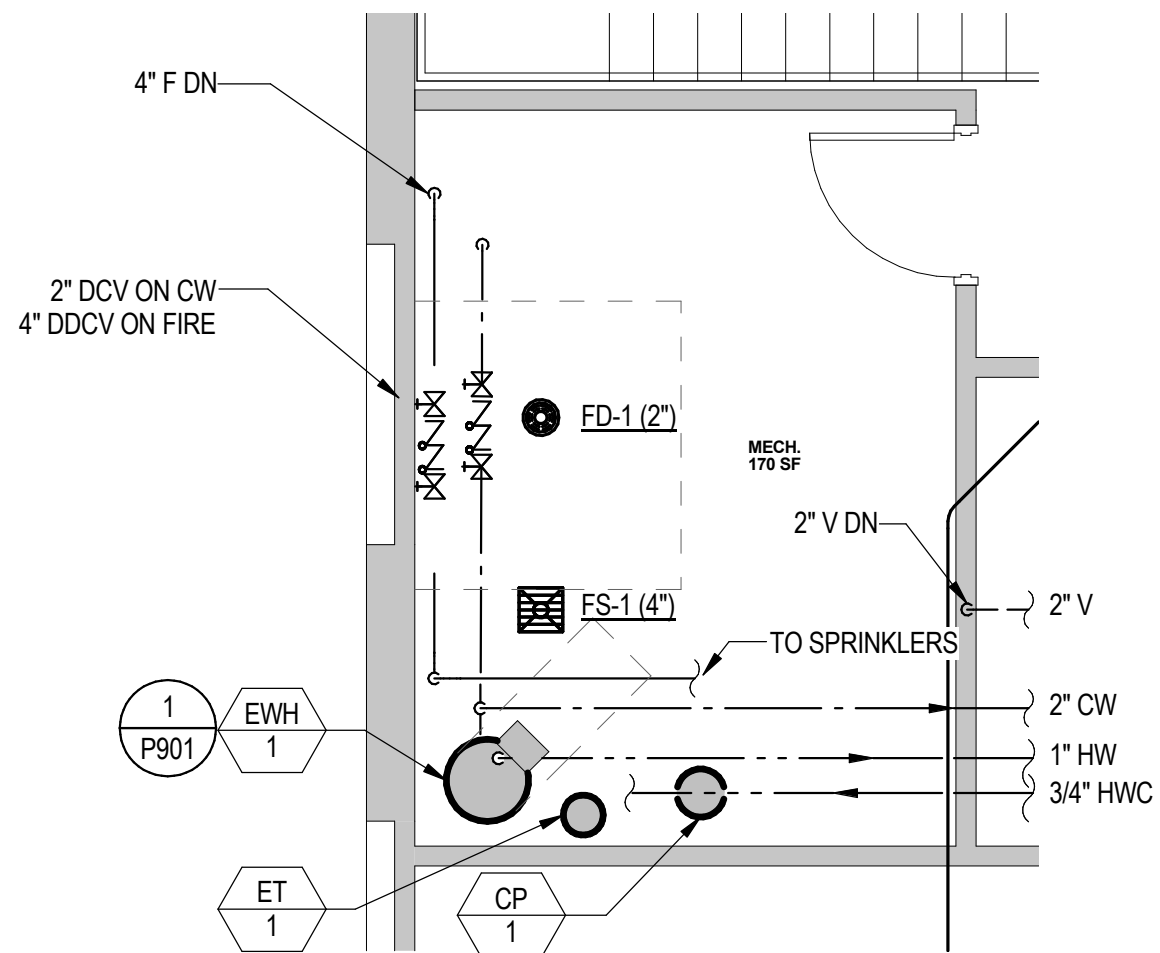


1 WASTE & VENT RISER DIAGRAM
SCALE: NONE

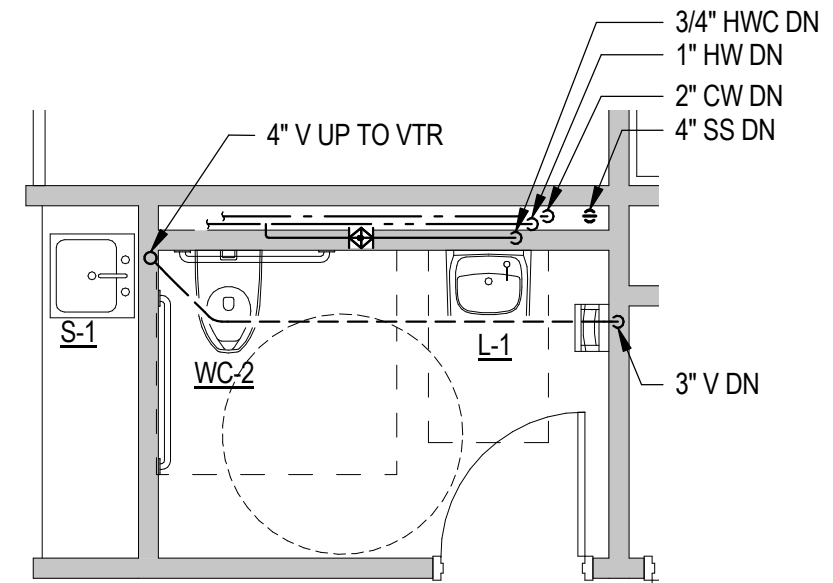


1 **STORM WATER RISER DIAGRAM**

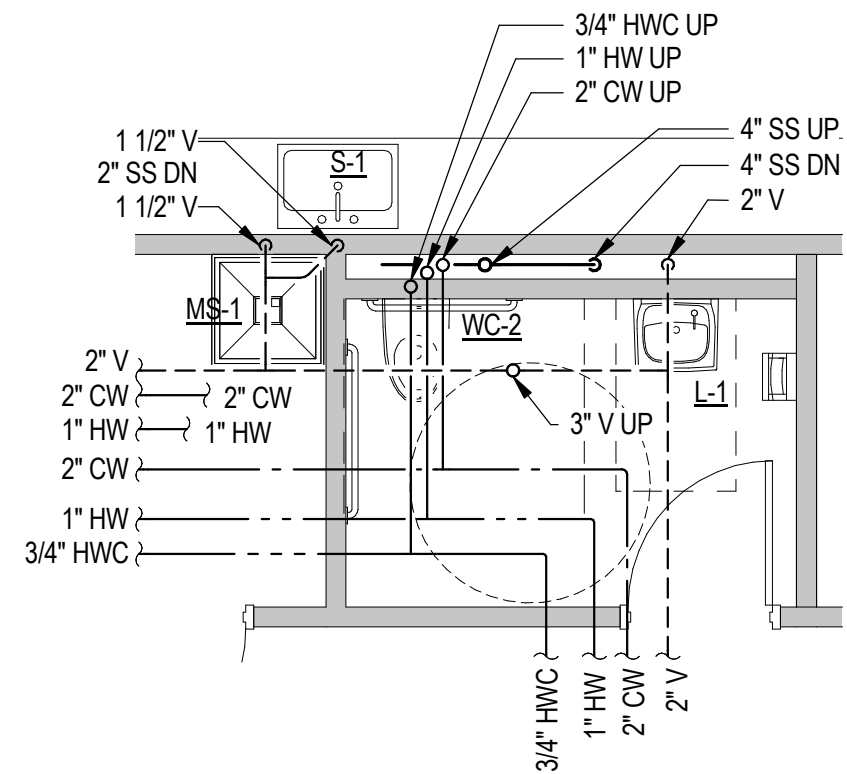
SCALE: 12" = 1'-0"



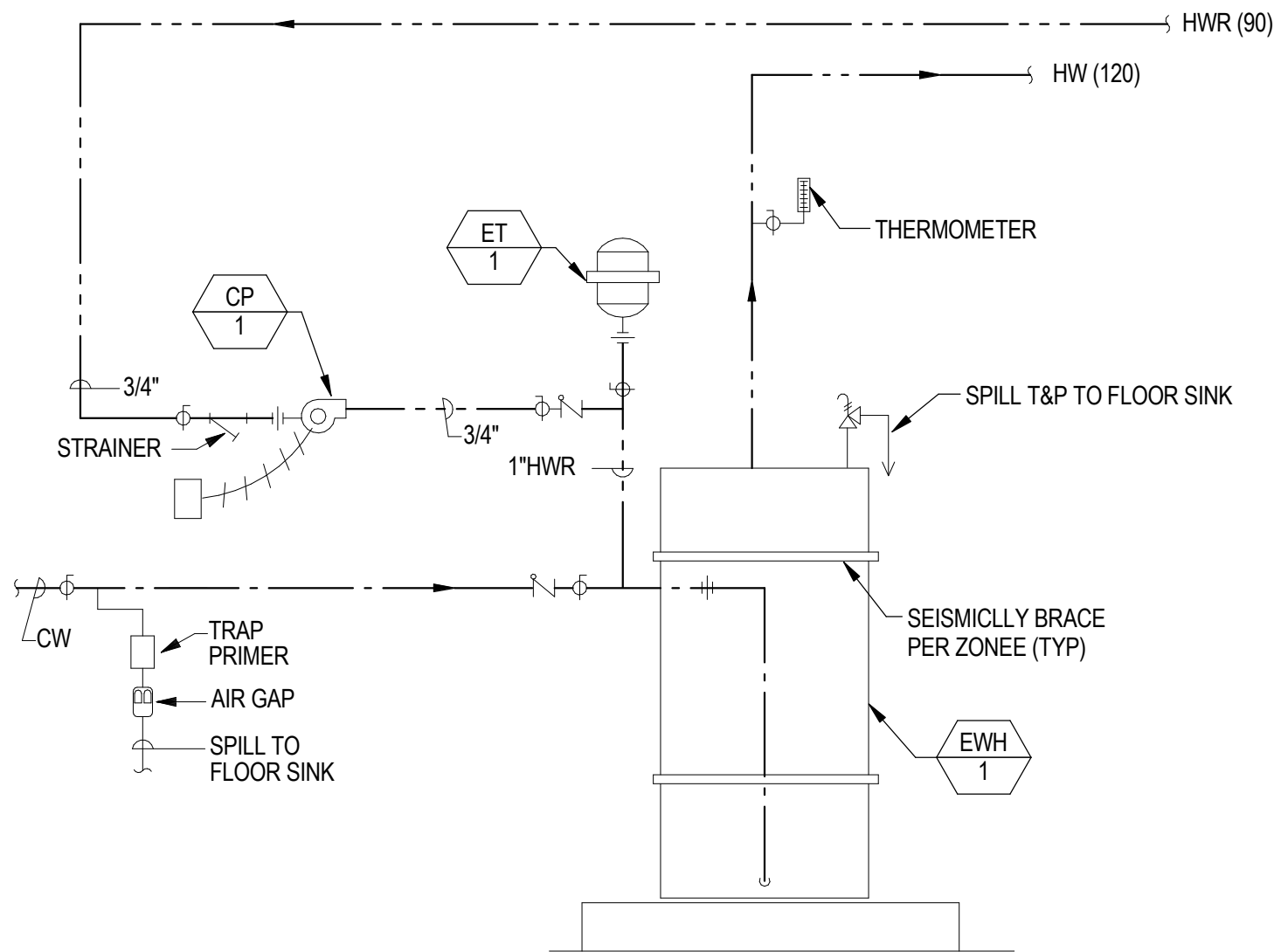
3 PLUMBING - WATER ENTRY
SCALE: 1/4" = 1'-0"



2 PLUMBING - LEVEL 2 RR
SCALE: 1/4" = 1'-0"



1 PLUMBING - LEVEL 1 RR
SCALE: 1/4" = 1'-0"



1

ELECTRIC WATER HEATER

SCALE: 1/8" = 1'-0"