

Consultant:
McHUGH ENGINEERING ASSOCIATES, INC.
136 Poplar Street
Ambler, PA 19002
215-641-1158
2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

Owner:
ASTON TOWNSHIP
2 New Road
Suite 123
Aston, PA 19014

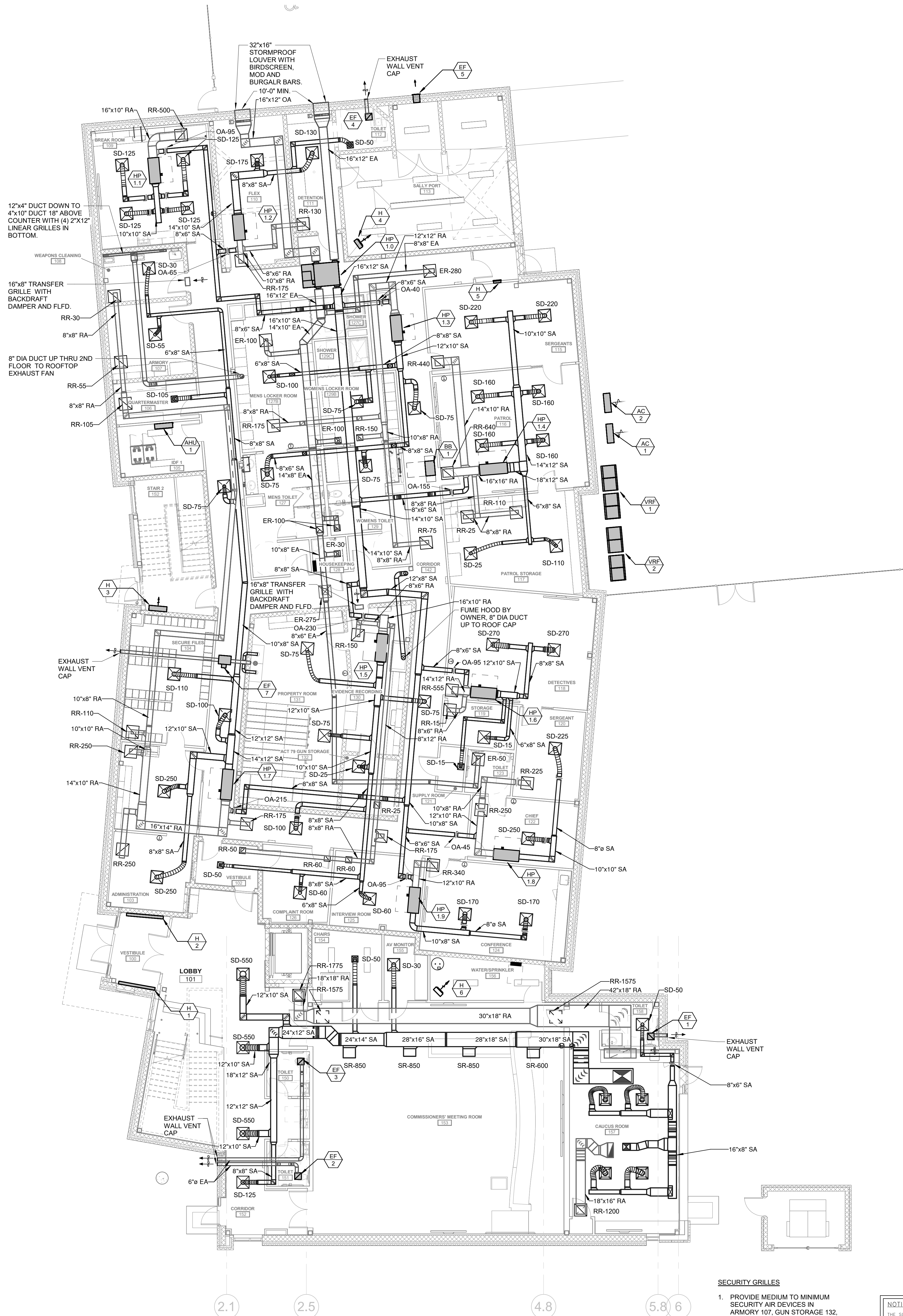
Revision/Issue:
0 03/29/24 Issued

Drawn: JK
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
FIRST FLOOR PLAN - MECHANICAL DUCTWORK

Sheet Number:

M-101



REFRIGERANT PIPING GENERAL NOTES:

- ALL SPLIT SYSTEM COOLING UNITS AND HEAT PUMPS WILL REQUIRE STRICT ADHERENCE TO MANUFACTURER'S DATA SHEETS FOR LONG LINESET INSTALLATION.
- CONTRACTOR MUST SUBMIT CALCULATED LINESET LENGTH, ELEVATION, SIZE, AND REFRIGERANT CHARGE VOLUME FOR EACH SYSTEM OR ENGINEER APPROVAL WILL NOT BE GRANTED. PROVIDE DOCUMENTATION THAT EACH SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. SYSTEM DE-RATING, DROP IN PERFORMANCE, CAPACITY, OR LOSS OF EFFICIENCY SHALL NOT BE ACCEPTABLE. PROVIDE WARRANTY FROM MANUFACTURER AS WELL AS ON INSTALLATION.
- ALL LINESETS MUST BE EXTENDED AS STRAIGHT AND DIRECT AS POSSIBLE WITH THE MINIMAL AMOUNT OF ELBOWS POSSIBLE.
- INSTALL OVERSIZED PIPING, ADDITIONAL INSULATION, CRANKCASE HEATERS, HARD START KITS, OIL TRAPS, SUCTION RISERS, THERMAL EXPANSION VALVES, LIQUID LINE SOLENOIDS, AND ADDITIONAL CHARGE WHEREVER REQUIRED.
- CONTRACTOR MUST PROVIDE FACTORY START-UP AND VERIFICATION FOR EVERY SYSTEM INSTALLED.
- EXPOSED REFRIGERANT PIPING, POWER AND CONTROL WIRING EXTENDING FROM THE BUILDING TO THE REMOTE CONDENSING UNITS SHALL BE PROTECTED AND INSULATED WITH SPLIT TYPE INSULATION WITH PVC JACKET AND CEMENTED JOINTS FOR PIPING LARGER THAN 7/8" TUBE WITH 1" INSULATION. ALL PIPING SMALLER SHALL HAVE A JACKETING SYSTEMS BASED ON AIREX E-FLEX GUARD.
- WALL/DOORHOUSE PIPING PENETRATION TO BE SEALED TIGHT AND INSTALLED WITH AIREX PENETRATION KIT. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

MECHANICAL DUCTWORK NOTE:

DUCTWORK DRAWINGS/LAYOUT IS DIAGRAMMATIC. ALL DUCTWORK INSTALLATIONS AND SHEETMETAL SHOP DRAWINGS SHALL BE IN ACCORDANCE WITH MCHUGH ENGINEERING ASSOCIATES DUCTWORK DETAILS AND PER SMACNA STANDARDS.

SECURITY GRILLES

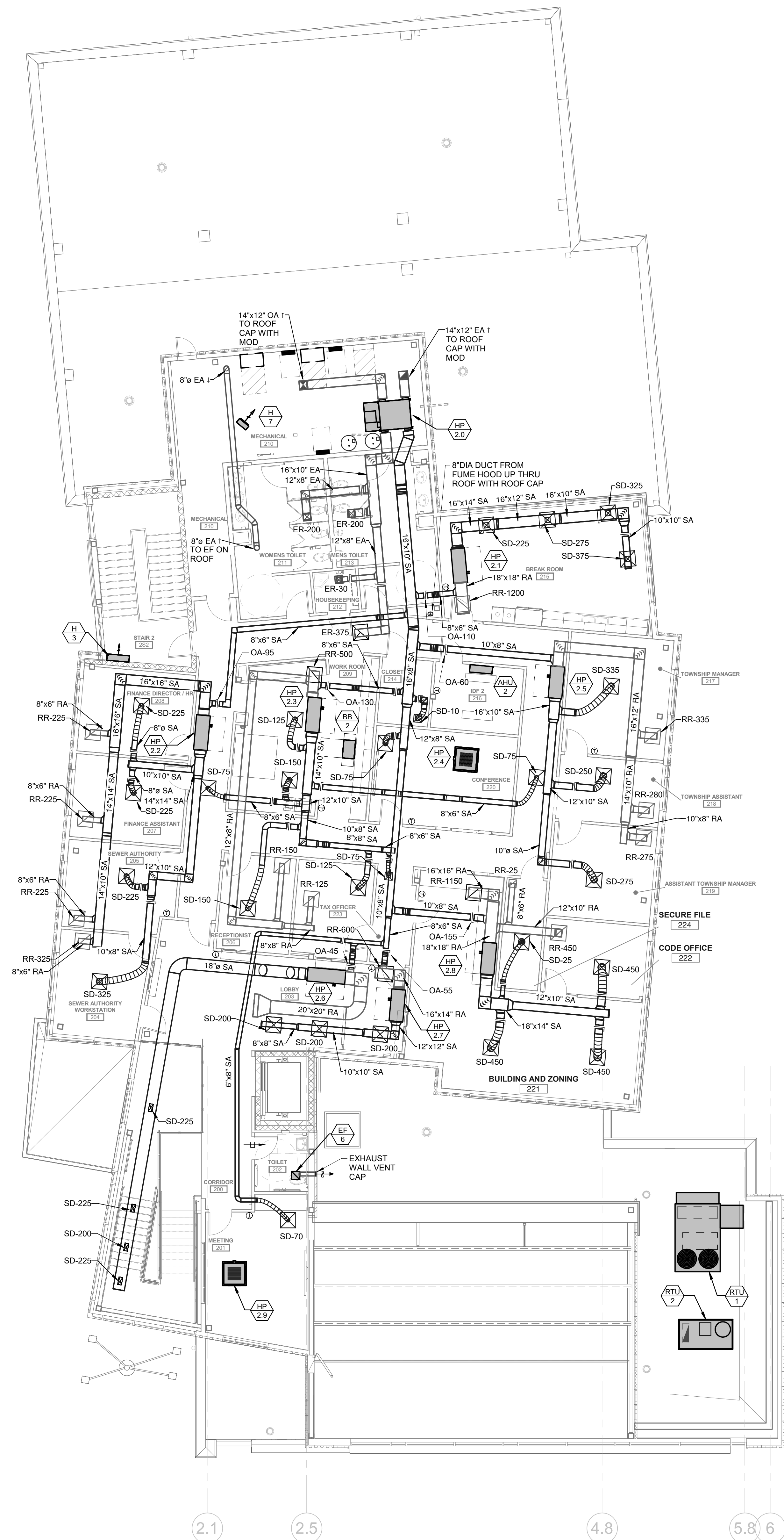
- PROVIDE MEDIUM TO MINIMUM SECURITY AIR DEVICES IN ARMORY 107, GUN STORAGE 132, DETENTION 211.
- PROVIDE MINIMUM SECURITY AIR DEVICES IN EVIDENCE RECORDING 130 AND PROPERTY ROOM 131.

NOTICE

THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BOUND TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING IMPLIES THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL BY THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RESERVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.

1 FIRST FLOOR PLAN - MECHANICAL
1/8" = 1'-0"



1 SECOND FLOOR PLAN - MECHANICAL
1/8" = 1'-0"

1. PROVIDE MEDIUM TO MINIMUM SECURITY AIR DEVICES IN ARMORY 107, GUN STORAGE 132, DETENTION 211.
2. PROVIDE MINIMUM SECURITY AIR DEVICES IN EVIDENCE RECORDING 130 AND PROPERTY ROOM 131.

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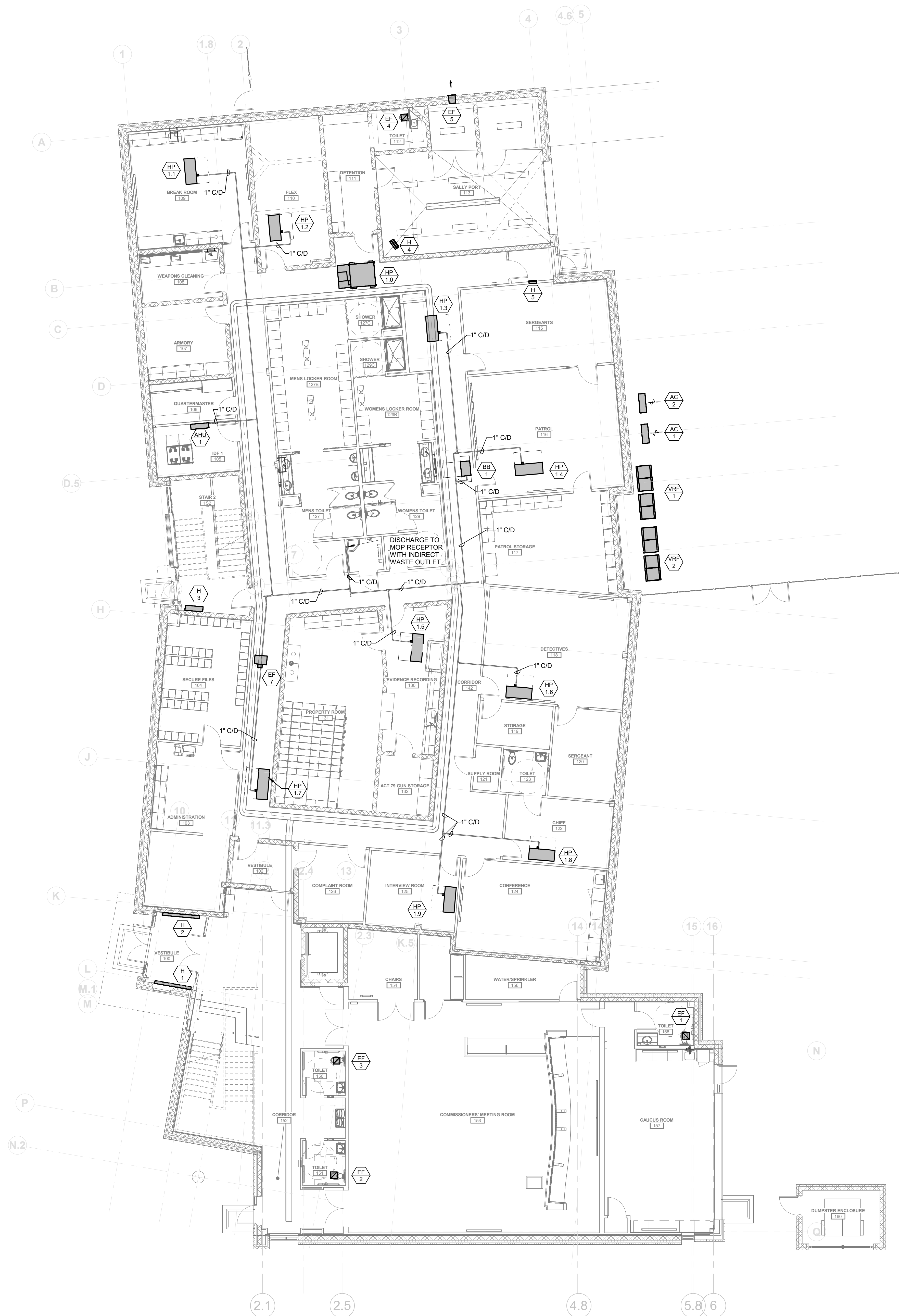
Sheet Title:

FIRST FLOOR PLAN- MECHANICAL PIPING

Sheet Number:

M-103

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1 FIRST FLOOR PLAN - MECHANICAL PIPING
1/8" = 1'-0"

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Sheet Title:
**SECOND FLOOR
PLAN-
MECHANICAL
PIPING**
Sheet Number:

M-104

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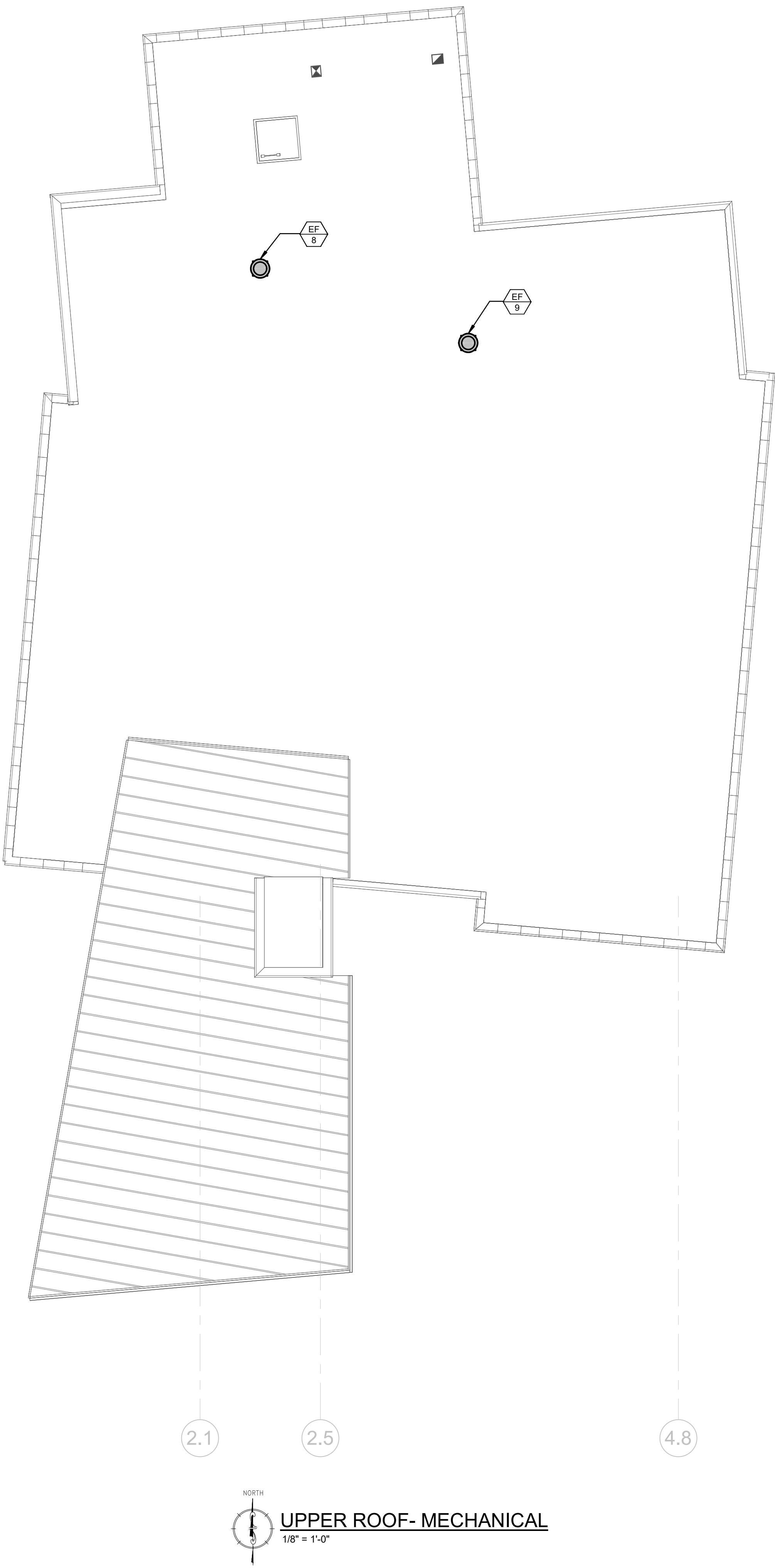
1 SECOND FLOOR PLAN -MECHANICAL PIPING
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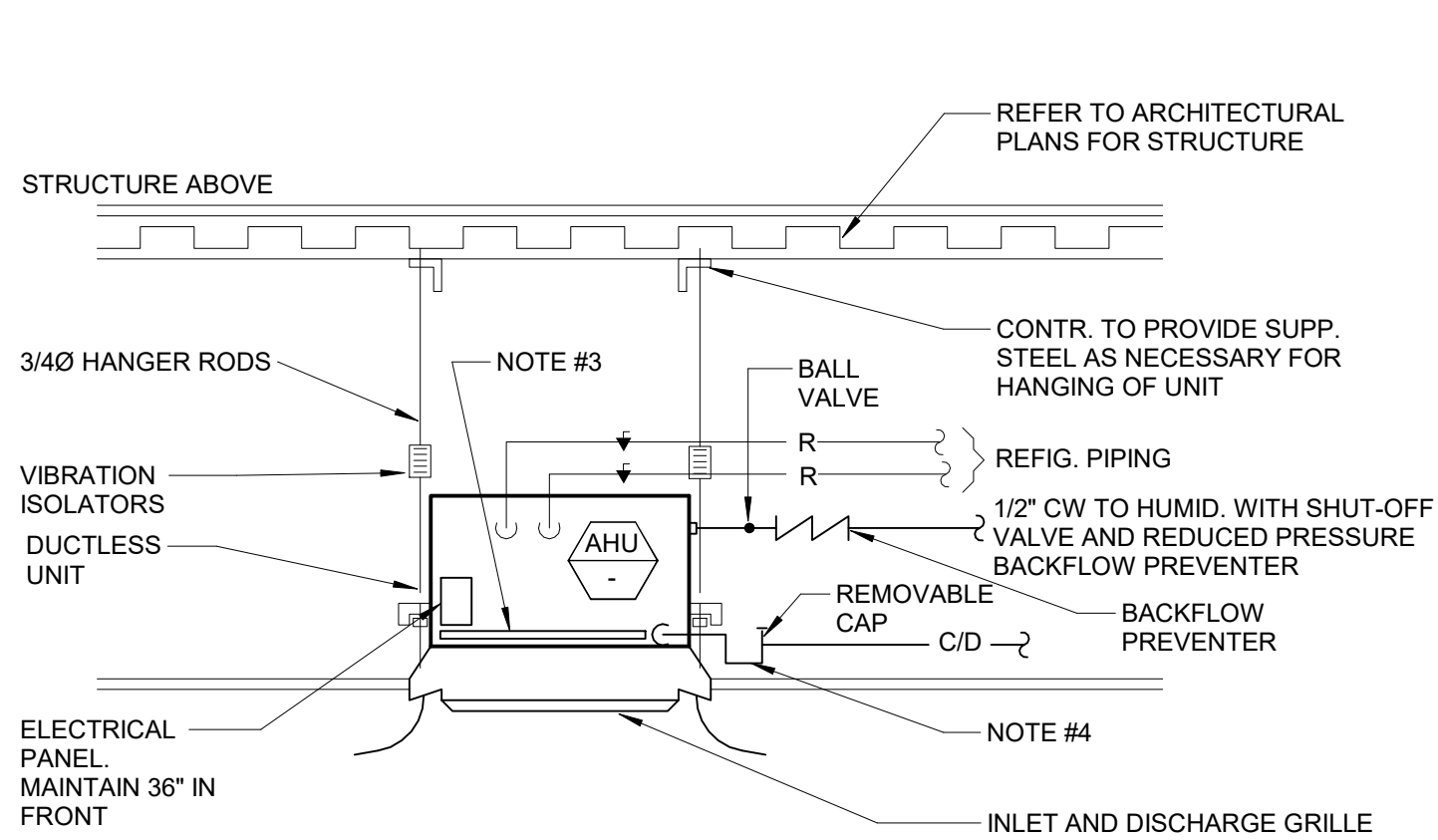
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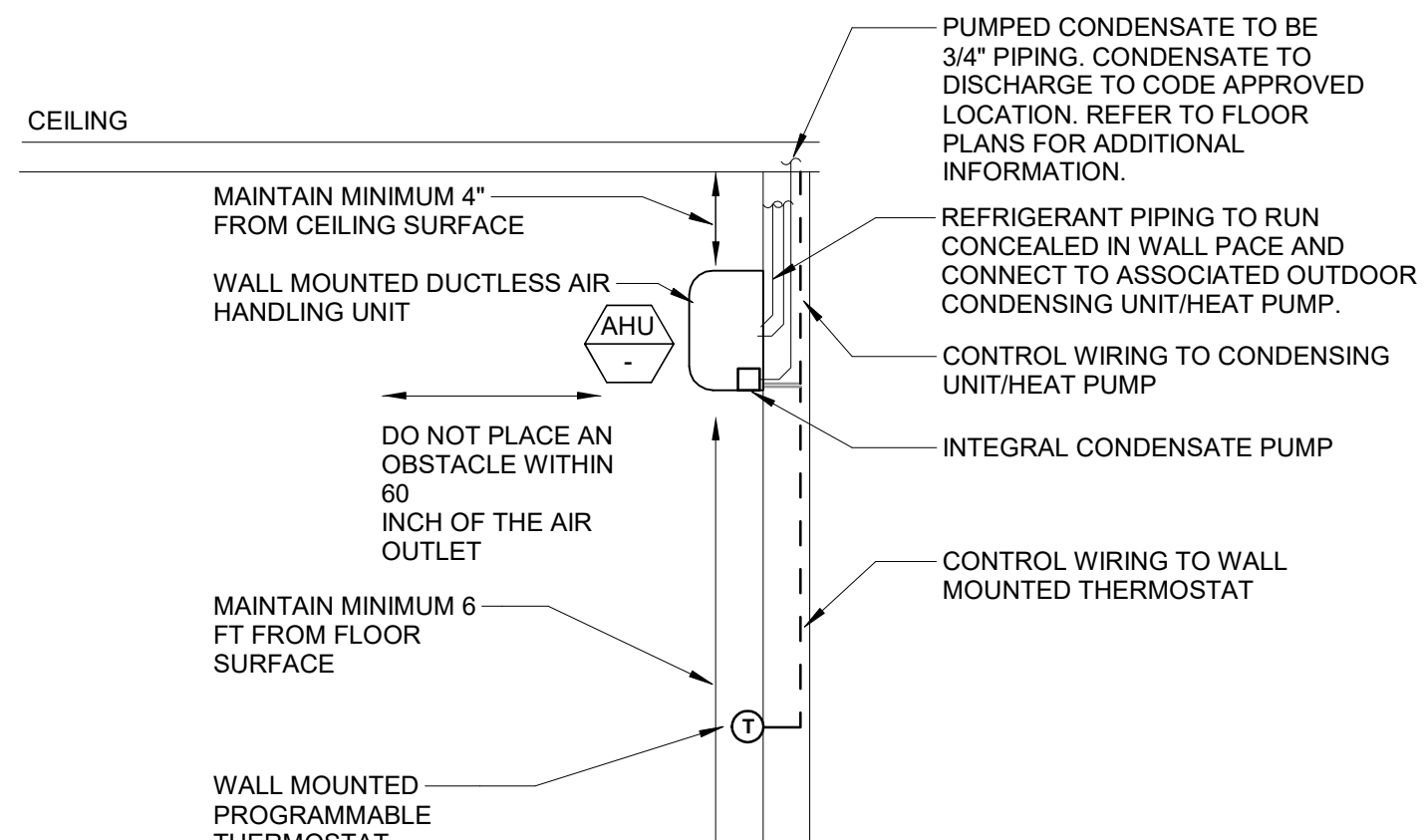
Sheet Title:
ROOF PLAN- MECHANICAL

Sheet Number:
M-105



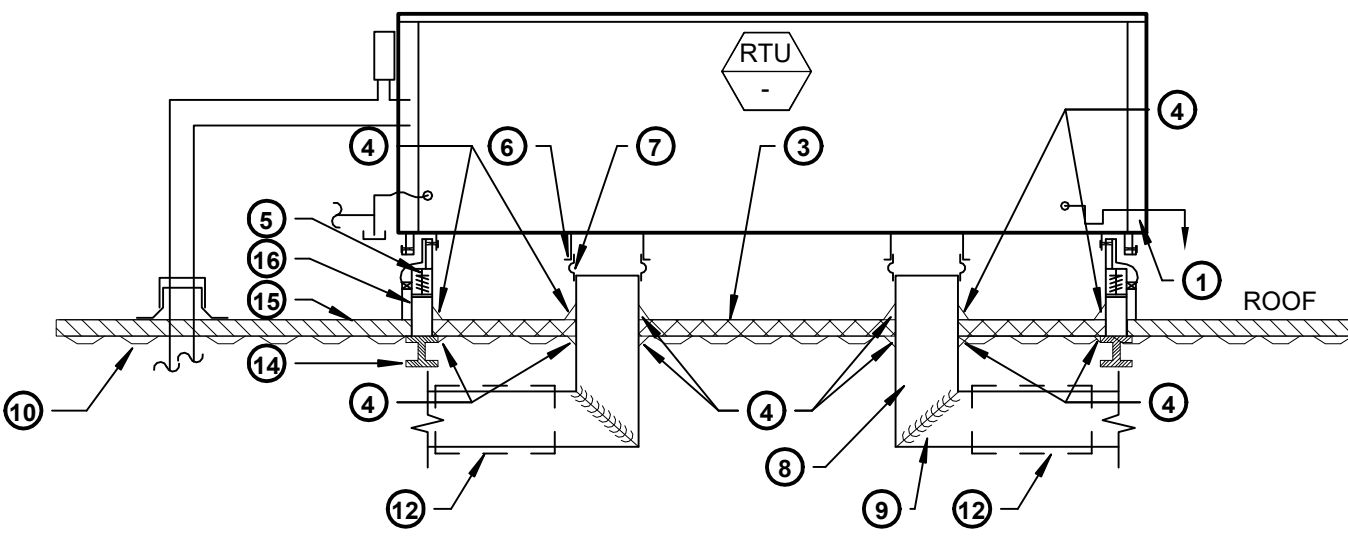
CEILING CASSETTE AIR HANDLING UNIT DETAIL

- SCALE: NONE
- NOTES:**
1. VERIFY IF EQUIPMENT IS PROVIDED WITH INTEGRAL CONDENSATE PUMP.
 2. 24"x24" CASSETTE UNITS REQUIRE A CEILING ACCESS PANEL ADJACENT TO THE CONTROL SIDE, WHERE INSTALLED ON NON ACCESSIBLE CEILINGS
 3. FILTER RACK, ALLOW CLEARANCE FOR ACCESS
 4. 1 1/2" Ø MIN. CONDENSATE LINE TO ACCEPTABLE DISCHARGE POINT. REFER TO SEPARATE CONDENSATE TRAP DETAIL.



WALL MOUNTED DUCTLESS AHU W/ INTEGRAL CONDENSATE PUMP DETAIL

- SCALE: NONE
- NOTE:**
1. INSTALL PER MANUFACTURER REQUIREMENTS.



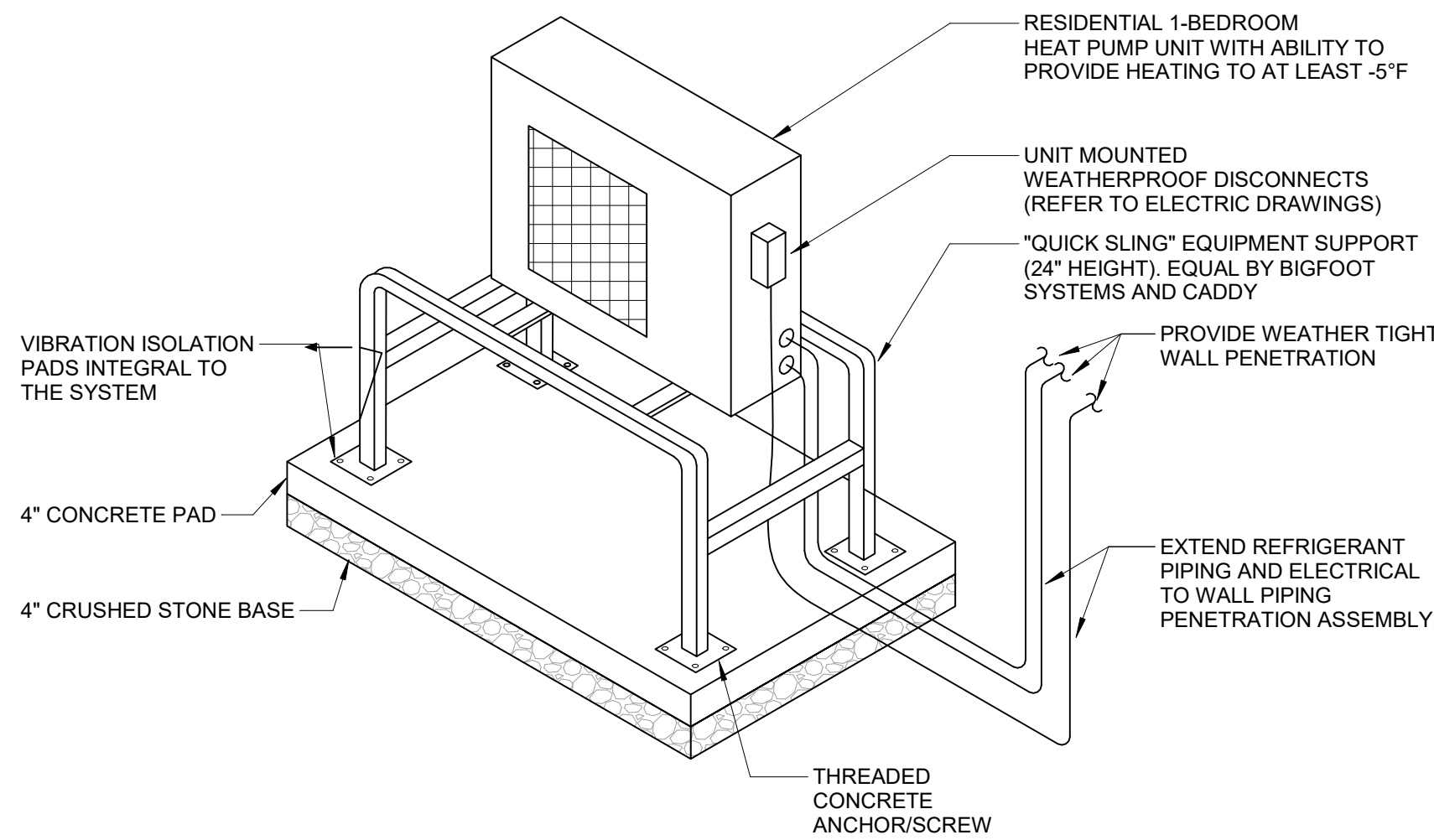
RTU NOISE CONTROL DETAIL

- SCALE: NONE
- | BY RTU UNIT MANUFACTURER | BY ACOUSTICAL MANUFACTURER | BY MECH. CONTRACTOR | BY GENERAL CONTRACTOR |
|--------------------------|---|--|--|
| 1. RTU BASE | 3. HUSH CORE DECK SYSTEM-IN-CURB ACOUSTICAL TREATMENT TO PROVIDE A MINIMUM STC LEVEL OF 50. | 5. RTU CURB W/ SPRING ISOLATORS. | 14. BUILDING STEEL |
| 2. SA/RA UNIT OPENINGS | 4. HUSH SEALANT ACOUSTICAL CAULK AT ALL DUCT DROPS, ANY PENETRATIONS WITHIN 14\"/> | 6. DUCT DROP | 15. BUILT-UP ROOF OR CONCRETE |
| | | 7. FLEX CONNECTORS FOR ALL PIPING AND CONDUITS. | 16. INSULATION AND CANT STRIP |
| | | 8. DUCT WORK | 17. CURB SLOPE REQUIREMENTS WHERE APPLICABLE |
| | | 9. TURNING VANE | |
| | | 10. ROOF DECK FLASHED TO WITHIN 1/4\"/> | |
| | | 11. SUBMIT LETTER OF CERTIFICATION FROM ACOUSTICAL SUPPLIER FOLLOWING INSPECTION | |
| | | 12. SOUND TRAP- CONFIRM LOCATION WITH FLOOR PLANS. | |
| | | 13. 16 GAUGE DUCTWORK FROM UNIT TO SOUND TRAP WITH 1\"/> | |

DESIGNER'S NOTE: NOTES 1,3,5,11,12,13 NEED TO BE EDITED PER PROJECT

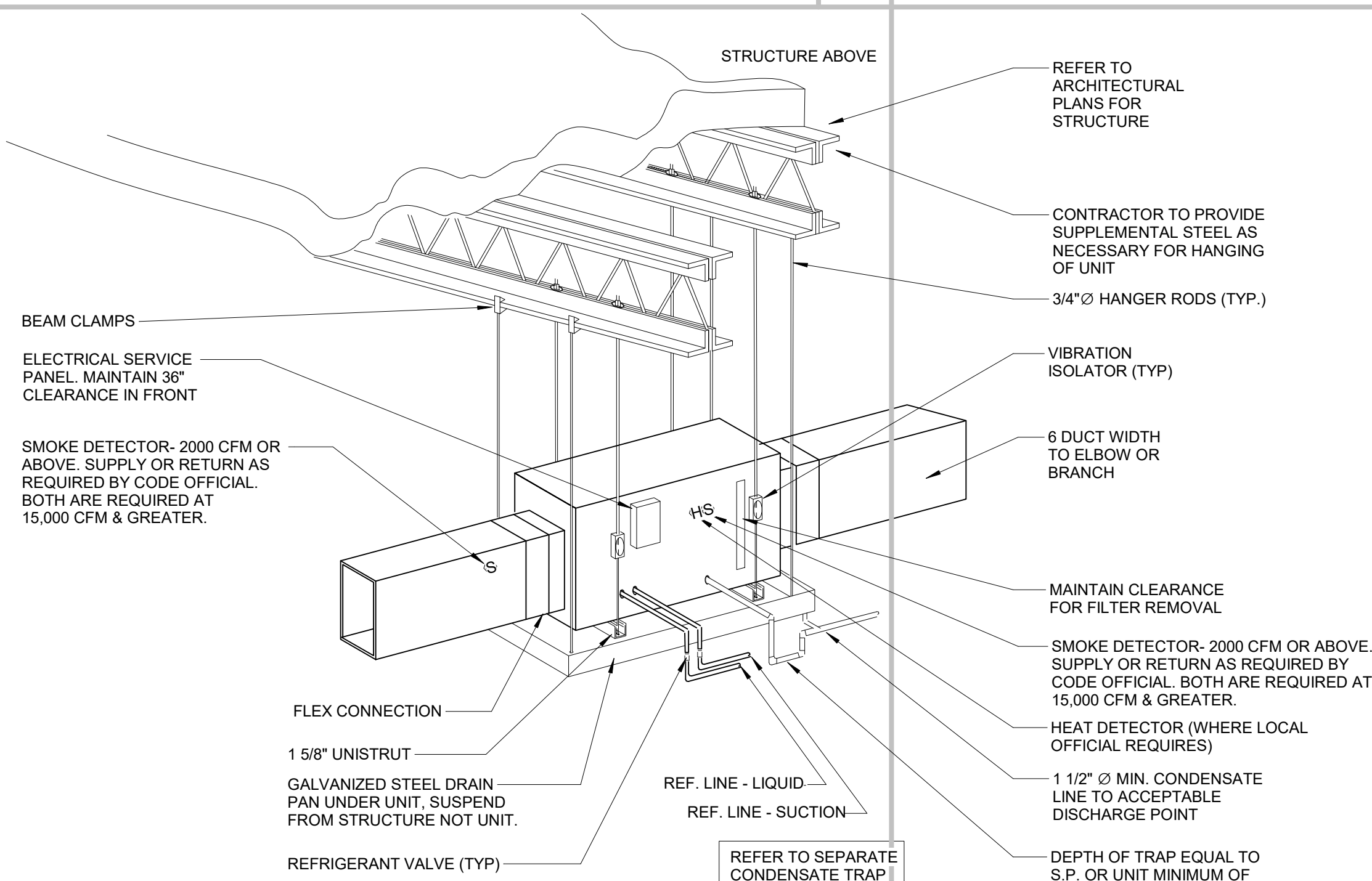
RTU NOISE REDUCTION SYSTEM

THE HUSH CORE SYSTEM SHALL BE A MULTI-LAYERED ACOUSTICAL COMPOSITE FOR PLACEMENT INSIDE THE ROOFTOP EQUIPMENT CURB. OVERALL INSTALLED THICKNESS OF THE COMPOSITE PANELS SHALL BE A MAXIMUM OF 14\"/>



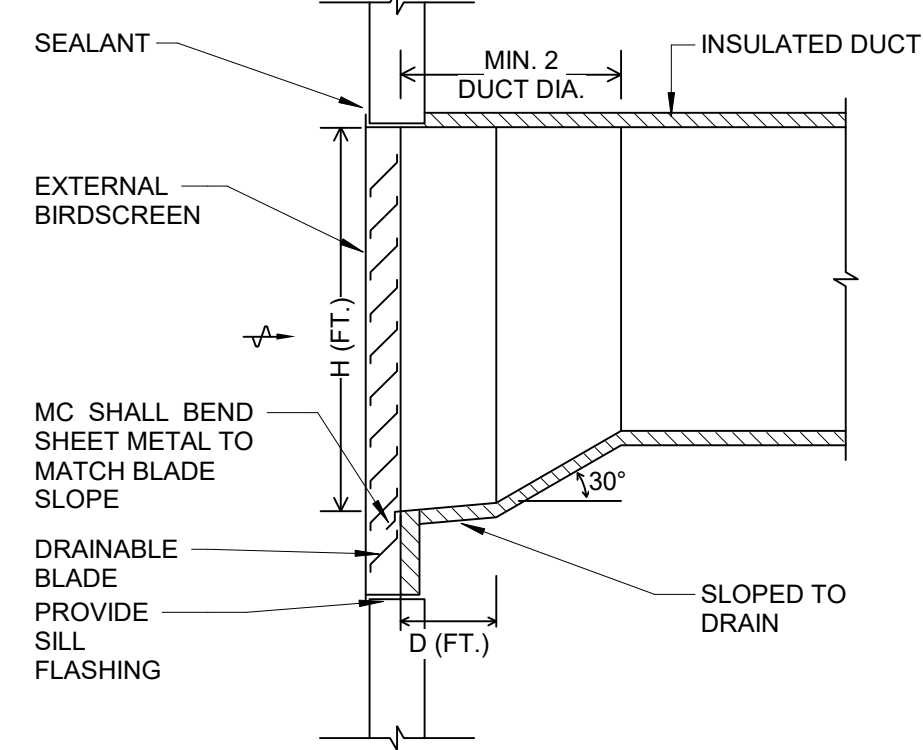
GRADE MOUNTED ELEVATED HEAT PUMP DETAIL

- SCALE: NONE
- NOTES:**
1. SUPPORT HEIGHT SHALL BE DETERMINED BY MANUFACTURER REQUIREMENTS AND THE LOCATION ANTICIPATED SNOWFALL.
 2. COORDINATE WITH ARCHITECT FOR MULTIPLE HEAT PUMP ARRAY DIRECTION.



DETAIL OF HORIZONTAL AIR HANDLING UNIT

- SCALE: NONE
- NOTES:**
1. SMOKE DETECTOR- 2000 CFM OR ABOVE. SUPPLY OR RETURN AS REQUIRED BY CODE OFFICIAL. BOTH ARE REQUIRED AT 15,000 CFM & GREATER.
 2. CONTRACTOR TO FURNISH AND INSTALL A CONDENSATE PUMP IF GRAVITY CONDENSATE DRAINAGE PIPING SYSTEM IS NOT POSSIBLE.
 3. UL LISTED CONDENSATE DETECTION DEVICE ON DRAIN PAN WITH SENOR INTERLOCKED W/AIR HANDLER. SHUT UNIT DOWN IF WATER IS DETECTED



DRAINABLE LOUVER DETAIL

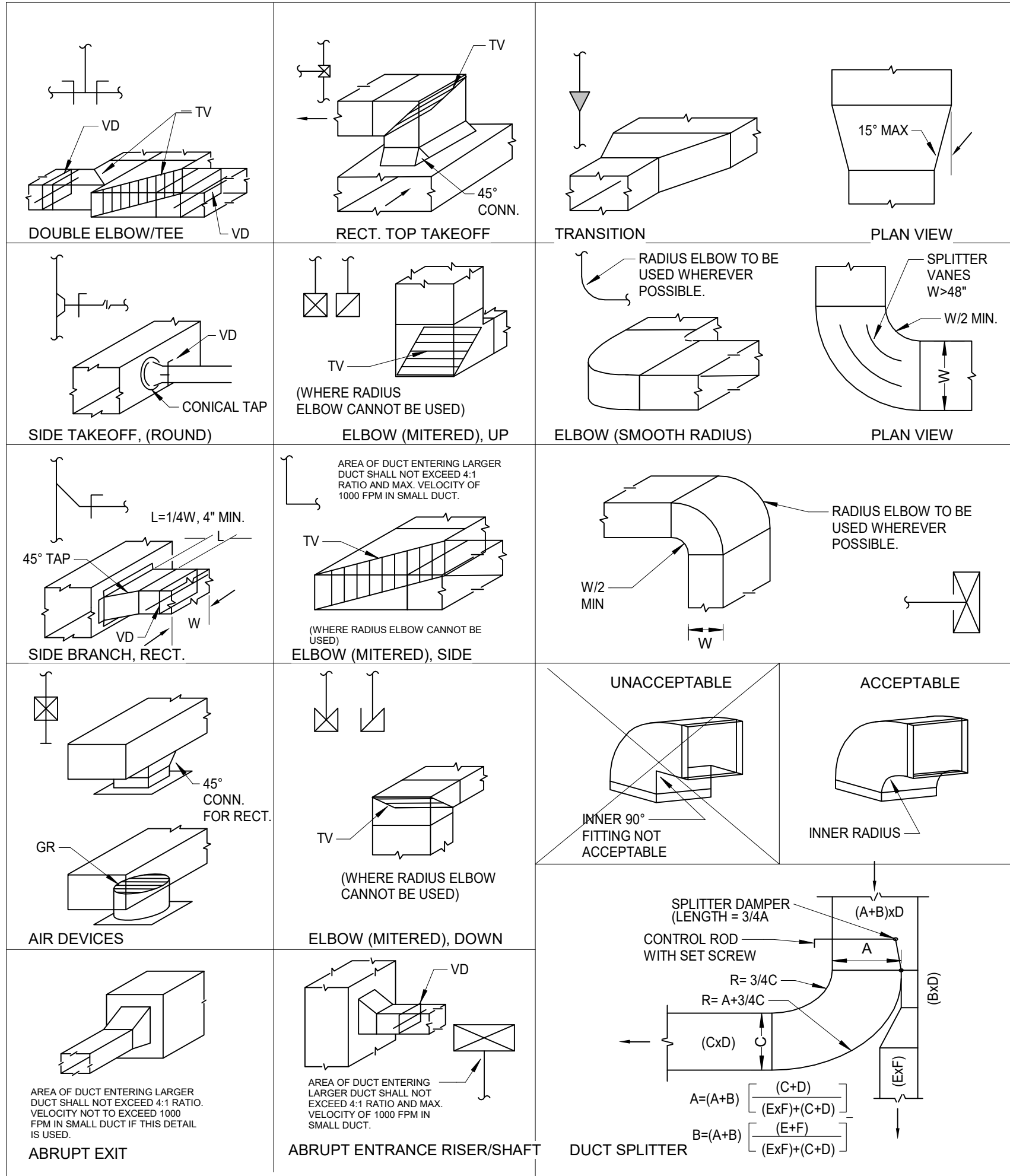
- SCALE: NONE
- NOTES:**
1. INSTALL PER MANUFACTURER'S REQUIREMENTS. REFER TO SCHEDULE FOR SIZES.

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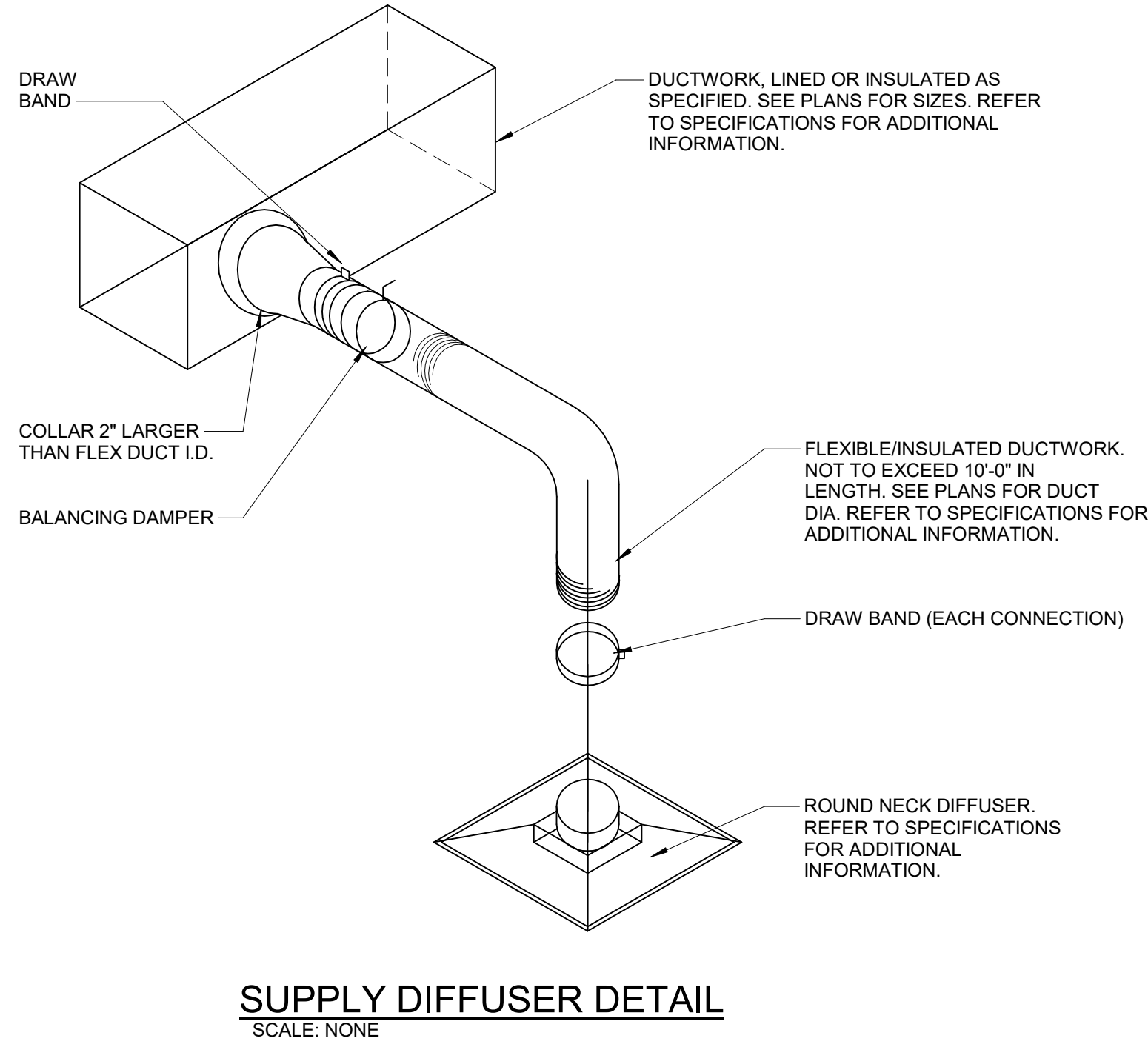
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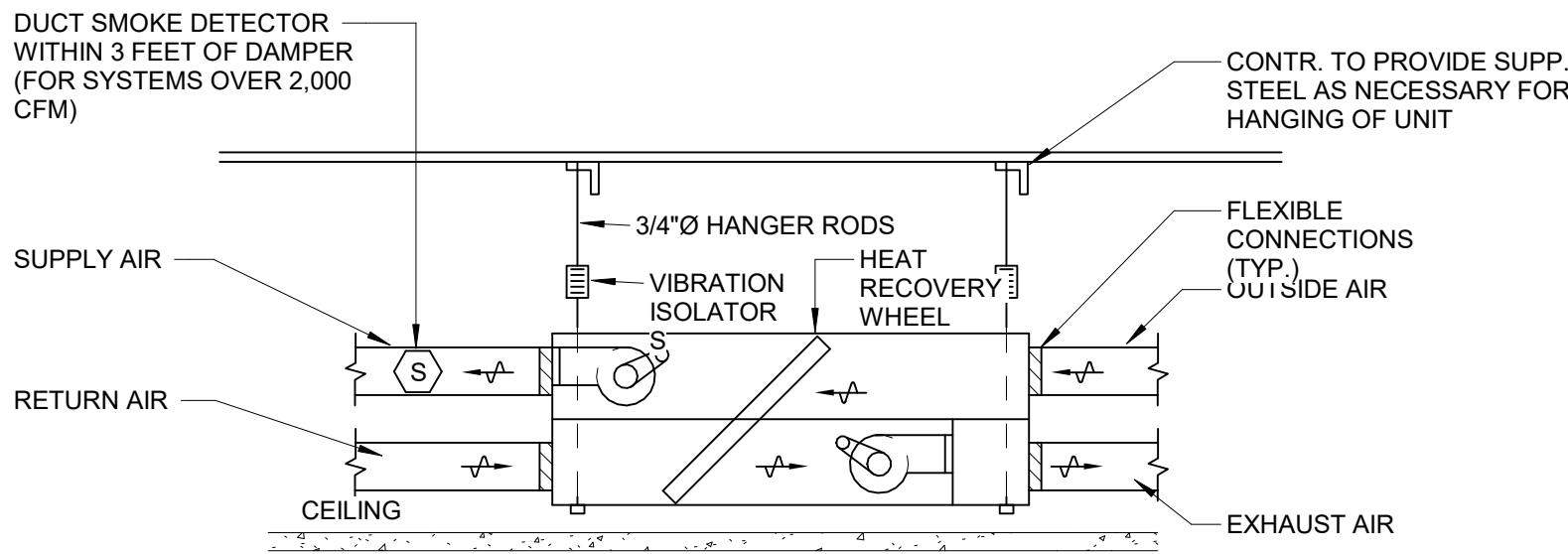
DUCTWORK DETAIL
SCALE: NONE

ABBREVIATIONS:

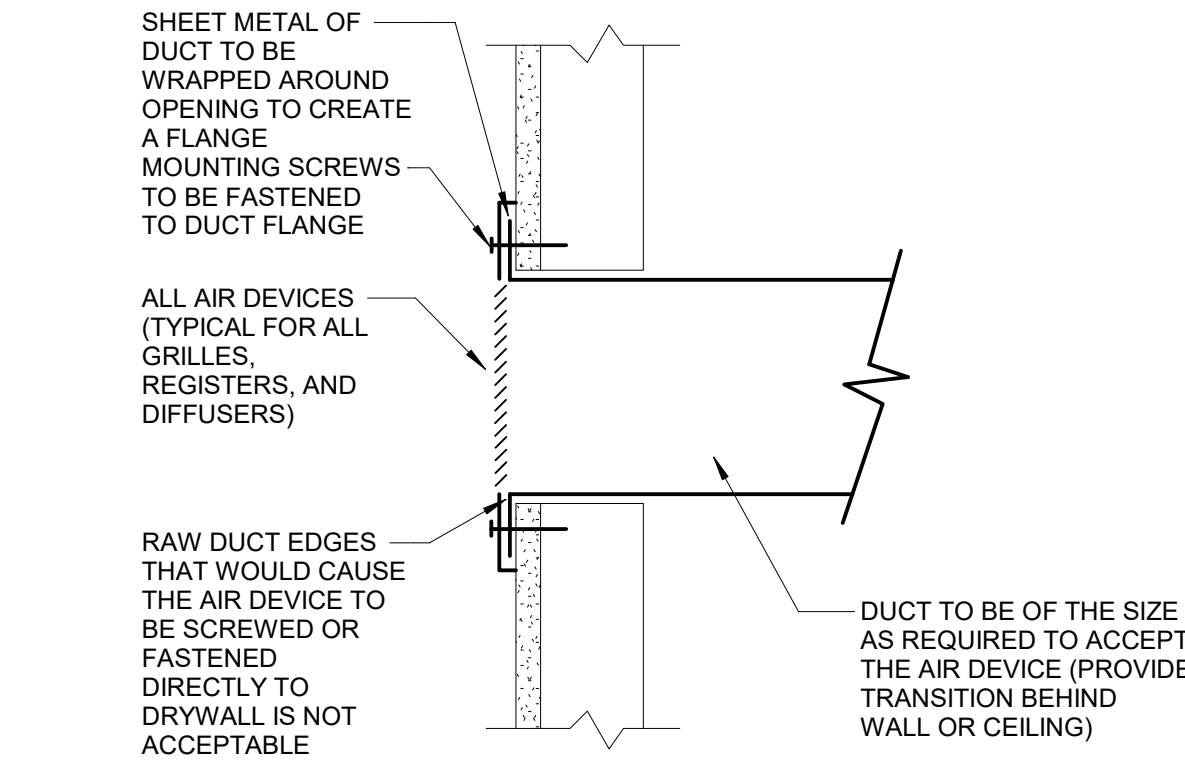
GR = EQUALIZING GRID
TV = TURNING VANES
VD = VOLUME DAMPER
AT = AIR TURN OR EXTRACTOR



SUPPLY DIFFUSER DETAIL
SCALE: NONE



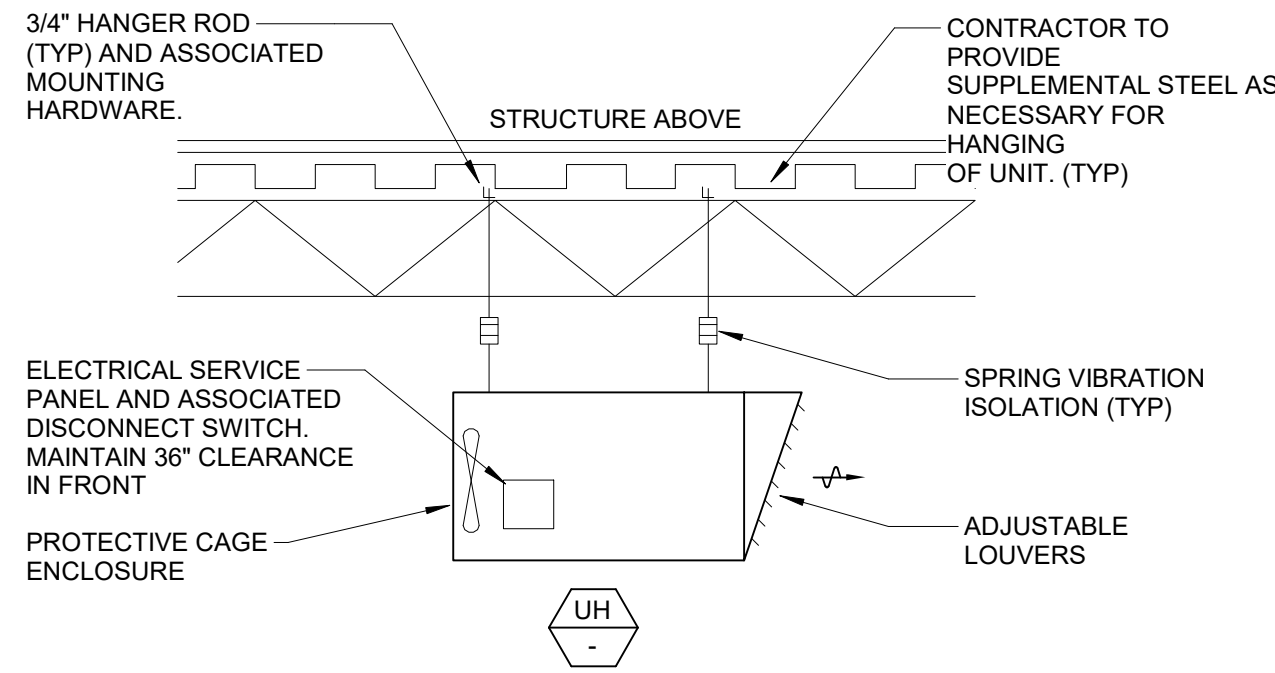
HEAT RECOVERY UNIT DETAIL
SCALE: NONE



AIR DEVICE MOUNTING DETAIL
SCALE: NONE

NOTE:

1. APPLIES TO ALL AIR DEVICES MOUNTED TO WALLS OR CEILINGS.



SUSPENDED ELECTRIC UNIT HEATER DETAIL
SCALE: NONE

NOTES:

1. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR BUILDING STRUCTURE DETAILS.

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**DETAILS-
MECHANICAL**

Sheet Number:

M-202

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ROOFTOP UNIT SCHEDULE (RTU)																																								
TAG	SERVES	CONFIGURATION	NOMINAL TONS	CFM	RETURN AIR CFM	MAX OUTSIDE AIR CFM	FAN EXT S.P.	FAN RPM	WEIGHT (LB)	COOLING										REHEAT				ELECTRIC HEAT					ELECTRICAL					BASIS OF DESIGN	COMMENTS					
										TOTAL MBH	SENSIBLE MBH	OUTSIDE AIR (°F)		MIXED AIR (°F)		LEAVING AIR (°F)		IEER(I) EER(E)	ISMRE	DISCHARGE (°F)		CAPACITY (MBH)		MOISTURE REMOVAL (LBS/HR)	DESIGN KW	MAX KW	VOLTS	AMPS	TEMP RISE (°F)	HP	VOLT	PHASE	MCA			MOCP				
1	COMMISSIONERS RM.	PACKAGED HEAT PUMP	12.50	5000	4245	755	1.0	2158	2000	148.4	111.1							20.0I																					LENNOX LCM150U4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
2	CAUCUS RM.	PACKAGED HEAT PUMP	3.00	1200	1015	185	1.0	2055	1200	35.8	29.0							15.0E																					LENNOX LCM036U4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
COMMENTS:																																								
1. MANUFACTURED BY LENNOX, CAUTION ALTERNATE EQUIPMENT CONFIGURATION, WEIGHT, AND SIZE LIMITATIONS										2. DIRECT DRIVE PLENUM BLOWER. BELT DRIVEN BLOWERS ARE NOT ACCEPTABLE										3. INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR. DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL																				
4. REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE										5. EC MOTOR CONDENSING FANS										6. FULLY MODULATING HOT GAS REHEAT																				
7. SUCTION LINE ACCUMULATOR										8. FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY										9. AVERAGING INTAKE, EVAP AND DISCHARGE TEMP. SENSORS (DISCHARGE SENSOR TO BE FACTORY MOUNTED WITHIN UNIT)																				
10. 2" EXTERIOR DUAL-WALL CONSTRUCTION W/ R-13 INSULATION-MINIMUM 20GA EXTERIOR W/ 14GA BASE										11. ECONOMIZER WITH DIFFERENTIAL ENTHALPY CONTROL										12. BAROMETRIC RELIEF DAMPER, MOTORIZED OUTSIDE AIR DAMPER																				
13. DOWN DISCHARGE/DOWN RETURN										14. BURGULAR BARS (SA AND RA)																														

AIR HANDLING UNIT SCHEDULE (AHU/AC)																										
AHU TAG	CONFIGURATION	SERVES	NOM TONS	CFM	EXT S.P. (IN.WG)	COOLING (AHU)			INDOOR UNIT (AHU)					OUTDOOR UNIT (AC)					EFFICIENCY		FILTERS	BASIS OF DESIGN		COMMENTS		
						TOTAL MBH	SENSIBL E MBH	dB	VOLTS	PHASE	MCA	MOCp	WEIGHT (LBS)	HEIGHT (IN)	VOLTS	PHASE	MCA	MOCp	WEIGHT (LBS)	HEIGHT (IN)		SEER2(S2) SEER(S)	EER2(E2) EER(E)		TYPE	MANUF.
1	WALL MOUNTED DUCTLESS	SERVER/MOBILE 105	3.0	810	NA	36.0	25.2	46.0	(10)	(10)	(10)	(10)	46	14.5	208	1	25.0	31	225	53	19.4 S2	10.8 E2	WASHABLE	TRANE	INDOOR: TPKA0A036 OUTDOOR: TRUYA036	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
2	WALL MOUNTED DUCTLESS	SERVER 216	2.0	705	NA	24.0	18.5	42.0	(10)	(10)	(10)	(10)	46	14.5	208	1	19	26	175	38	21.4 S	12.2 E	WASHABLE	TRANE	INDOOR: TPKA0A0241 OUTDOOR: TRUYA0241	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
NOTE: EQUIPMENT SELLING AGENT/DISTRIBUTOR SHALL HAVE A SERVICE AGENCY THAT IS PART OF THE COMPANY AND COVERS START-UP AND WARRANTY...																										
<u>COMMENTS:</u>																										
1. SINGLE POINT POWER CONNECTION																										
2. DISCONNECT SWITCH																										
3. WALL MOUNTED PROGRAMMABLE 24HR/7 DAY THERMOSTAT. THERMOSTAT SHALL BE WITH UPPER AND LOWER LIMITS THAT ARE PASSWORD PROTECTED. SET UPPER LIMIT TO 78°F IN HEATING AND SET LOWER LIMIT TO 73°F IN COOLING. HARD WIRED WITH DIGITAL OUTPUT.																										
4. EXTEND ALL REFRIGERANT PIPING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS REGARDING LENGTH, TRAPS, INSULATION, ELEVATION DISTANCE, SIZING, CHARGE, ETC.																										
5. EQUIVALENT BY MITSUBISHI, DAIKIN, LG. MUST MEET ENERGY STAR AND HERS MINIMUM ENERGY...																										
6. VIBRATION ISOLATION																										
7. x																										
8. LOW AMBIENT KIT																										
9. CONDENSATE PIPING - FURNISH AND INSTALL INTEGRAL CONENSATE LIFT DEVICE POWERED BY UNIT (SAUERMAN/BLUE DIAMOND). IT IS PROHIBITED TO MOUNT CONDENSATE PUMP BELOW UNIT OR BELOW ADA CLEARANCE REQUIREMENT.																										
10. INDOOR UNIT POWERED FROM OUTDOOR UNIT																										

AIR DEVICE SCHEDULE																	
TAG	MIN CFM	MAX CFM	TYPE	NECK DIAMETER	CONNECTION SIZE	DEVICE SIZE (LxW)	MAX DEPTH FROM CEILING	TOTAL STATIC PRESSURE (IN. W.C.)	NC	VEL FPM	DAMPER	MATERIAL	FINISH	MANUFACTURER	SERIES		
SD	0	70	SQUARE DIFFUSER STAMPED CONE	4"	6"	12" x 12"	3/8"	0.08	18	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	71	105	SQUARE DIFFUSER STAMPED CONE	5"	7"	12" x 12"	3/8"	0.07	21	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	106	160	SQUARE DIFFUSER STAMPED CONE	6"	8"	12" x 12"	3/8"	0.07	26	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	161	190	SQUARE DIFFUSER STAMPED CONE	7"	10"	12" x 12"	3/8"	0.06	25	700	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	191	280	SQUARE DIFFUSER STAMPED CONE	8"	10"	24" x 24"	3/8"	0.07	21	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	281	435	SQUARE DIFFUSER STAMPED CONE	10"	12"	24" x 24"	3/8"	0.07	25	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	436	630	SQUARE DIFFUSER STAMPED CONE	12"	14"	24" x 24"	3/8"	0.08	29	800	YES	STEEL	WHITE	TITUS / PRICE	TMS / SMD		
SD	0	61	SQUARE DIFFUSER PLAQUE STYLE	4"	6"	12" x 12"	1/4"	0.1	21	700	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	61	175	SQUARE DIFFUSER PLAQUE STYLE	8"	10"	12" x 12"	1/4"	0.1	21	500	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	176	280	SQUARE DIFFUSER PLAQUE STYLE	8"	10"	24" x 24"	1/4"	0.072	17	800	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	281	380	SQUARE DIFFUSER PLAQUE STYLE	10"	12"	24" x 24"	1/4"	0.08	15	700	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	381	550	SQUARE DIFFUSER PLAQUE STYLE	12"	14"	24" x 24"	1/4"	0.12	18	700	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	551	640	SQUARE DIFFUSER PLAQUE STYLE	14"	16"	24" x 24"	1/4"	0.12	14	600	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SD	641	735	SQUARE DIFFUSER PLAQUE STYLE	15"	16"	24" x 24"	1/4"	0.13	26	600	YES	STEEL	WHITE	TITUS / PRICE	OMNI / SPD		
SR	0	150	SUPPLY REGISTER	-	10"x5"	8"x6"	1/4"	0.06	11	580	YES	STEEL	WHITE	TITUS / PRICE	300 / 301; 520 / 510		
SR	151	300	SUPPLY REGISTER	-	14"x6"	10"x8"	1/4"	0.075	15	650	YES	STEEL	WHITE	TITUS / PRICE	300 / 301; 520 / 510		
SR	301	600	SUPPLY REGISTER	-	18"x8"	12"x12"	1/4"	0.075	20	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301; 520 / 510		
SR	601	900	SUPPLY REGISTER	-	22"x10"	18"x12"	1/4"	0.08	22	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301; 520 / 510		
SR	901	1400	SUPPLY REGISTER	-	36"x10"	18"x18"	1/4"	0.08	22	670	YES	STEEL	WHITE	TITUS / PRICE	300 / 301; 520 / 510		
EXH/RET REG/ GRILLE	0	100	EXH / RET REG / GRILLE	-	8"x6"	10"x5"	1/4"	0.1	25	400	YES	STEEL	WHITE	TITUS / PRICE	350 / 530		
EXH/RET REG/ GRILLE	101	185	EXH / RET REG / GRILLE	-	10"x8"	14"x6"	1/4"	0.1	27	400	YES	STEEL	WHITE	TITUS / PRICE	350 / 530		
EXH/RET REG/ GRILLE	186	270	EXH / RET REG / GRILLE	-	12"x12"	18"x8"	1/4"	0.06	24	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530		
EXH/RET REG/ GRILLE	271	400	EXH / RET REG / GRILLE	-	12"x18"	22"x10"	1/4"	0.06	25	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530		
EXH/RET REG/ GRILLE	401	625	EXH / RET REG / GRILLE	-	18"x18"	36"x10"	1/4"	0.06	27	300	YES	STEEL	WHITE	TITUS / PRICE	350 / 530		
RETURN	0	400	PERFORATED	12"	12"	24"x24"	FLUSH	0.16	22	500	NO	STEEL	WHITE	TITUS / PRICE	PAR / PDDR		
RETURN	401	700	PERFORATED	16"	16"	24"x24"	FLUSH	0.16	24	500	NO	STEEL	WHITE	TITUS / PRICE	PAR / PDDR		
RETURN NON DUCTED	0	400	PERFORATED	12"	12"	24"x24"	FLUSH	0.16	22	500	NO	STEEL	WHITE	TITUS / PRICE	PXP / PFRF		
RETURN NON DUCTED	401	700	PERFORATED	16"	16"	24"x24"	FLUSH	0.16	24	500	NO	STEEL	WHITE	TITUS / PRICE	PXP / PFRF		
COMMENTS:																	
1. USE SCHEDULE SIZE UNLESS OTHERWISE NOTED.																	
2. USE ALTERNATE SIZE WHEN APPROVED BY ENGINEER.																	
3. PROVIDE VOLUME DAMPER AT TRUNK DUCT CONNECTION.																	
4. ALL SUPPLY REGISTERS TO BE DOUBLE DEFLECTION TYPE.																	
5. ALUMINUM DEVICES ARE TO BE PROVIDED IN MOIST AREAS, I.E. TOILET ROOMS.																	
6. FOR LAY-IN CEILING PROVIDE A 2x2" PAN FOR A 12"x12" FACE SIZE DIFFUSERS.																	
7. BRANCH DUCT DIAMETER SHALL BE REDUCED AT COLLAR CONNECTIONS TO DIFFUSER.																	
8. EACH AIR DEVICE SHALL HAVE A MOUNTING FLANGE SPECIFICALLY SELECTED FOR THE PARTICULAR TYPE OF CEILING FINISH.																	

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VRF HEAT RECOVERY BRANCH BOX SCHEDULE (BB)													
TAG	AREA	NUMBER OF PORTS	MAX PORT CAPACITY (MBH)	MAX UNIT CAPACITY (MBH)	ELECTRICAL			WEIGHT (LB)	H x L x W (IN)	BASIS OF DESIGN	MODEL	COMMENTS	
					VOLT	PHASE	AMPS						MOCPP
1	1st FLR.	12	54	336	208	1	1.2	20	133	9"x44x21"	TRANE	TCMBM1012	1, 2, 3, 4, 5
2	2nd FLR.	12	54	336	208	1	1.2	20	133	9"x44x21"	TRANE	TCMBM1012	1, 2, 3, 4, 5
COMMENTS:													
1. ELECTRICAL DISCONNECT SWITCH BY E.C.													
2. MANUFACTURER'S START-UP AND 1 YEAR MANUFACTURER WARRANTY.													
3. VIBRATION ISOLATION HANGERS.													
4. SHUT-OFF VALVES ON ALL PORTS.													
5. PROVIDE ACCESS PANEL FOR UNITS INSTALLED ABOVE UNACCESSIBLE CEILINGS.													

ELECTRIC UNIT HEATER SCHEDULE (EH)												
TAG	AREA SERVED	CONFIGURATION	BTUH	KW	CFM	LNQTH X WQTH X HQHT (IN)	ELECTRICAL		CONTROL	BASIS OF DESIGN	MODEL	COMMENTS
							VOLTS	PHASE				
1	VESTIBULE 100	PEDESTAL	5121	1.5	NA	72"x3"x6"	208	1	WALL MNTD THERMOSTAT	BERKO	CPLAM6	1, 3, 5, 6, 7, 9, 10
2	VESTIBULE 100	PEDESTAL	5121	1.5	NA	72"x3"x6"	208	1	SEE # 1 ABOVE	BERKO	CPLAM6	1, 3, 5, 6, 7, 9, 10
3	STAIR 01	CABINET UNIT HEATER	13656	4.0	250	24"x36"x10"	208	3	INTEGRAL THERMOSTAT	INDEECO	CUI922U04	1, 3, 5, 6, 9
4	SALLYPORT 113	UNIT HEATER	25605	7.5	270	4"x14"x18"	208	3	WALL MNTD THERMOSTAT	BERKO	HUH724SA	1, 2, 3, 4, 5, 6, 7, 8, 9
5	VESTIBULE ADJ SERGEANTS	WALL MOUNTED, FAN FORCED	13656	4.0	100	4"x14"x18"	208	1	INTEGRAL THERMOSTAT	BERKO	SSHO4008	1, 2, 3, 4, 5, 6, 8
6	UTILITY 136	UNIT HEATER	10659	3.1	270	4"x14"x18"	208	1	WALL MNTD THERMOSTAT	BERKO	HUH524TA	1, 2, 3, 4, 5, 6, 7, 8, 9
7	MECHANICAL 210	UNIT HEATER	17070	5.0	270	4"x14"x18"	208	3	WALL MNTD THERMOSTAT	BERKO	HUH520SA	1, 2, 3, 4, 5, 6, 7, 8, 9
COMMENTS:												
1. EQUIVALENT MANUFACTURERS: MARKEL, QMARK OR PRIOR APPROVED EQUAL.						2. SUMMER / WINTER SWITCH.						
3. THERMOSTAT SHALL BE TAMPERPROOF.						4. MOUNTING BRACKETS AND HARDWARE.						
5. INTEGRAL DISCONNECT. AND THERMAL CUTOUT						6. FINISH AND COLOR TO BE SELECTED BY ARCHITECT AND OWNER.						
7. EXTRUDED ALUMINUM HOUSING AND GRILLES						8. FULLY RECESSED IN WALL						
9. LINE VOLTAGE THERMOSTAT SHALL BE ALLOWED BUT ALL WIRING SHALL STILL BE INSTALLED (OR SUBBED) BY THE M.C.						10. EXTRUDED ALUMINUM HOUSING AND GRILLES						

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE																
Tag Reference	Room Name	Peak Fan Airflow (cfm)	M-NET Address	Type	Capacity			Estimated Cooling Coil LAT (°F)	Estimated Heating Coil LAT (°F)	Max Fan ESP Setting 208V/230V (IN WG)	Sound Pressure Per Fan Speed (dBA)	Electrical			Model	Notes / Options
					Cooling Total Capacity (BTU/h)	Cooling Sensible Capacity (BTU/h)	Heating Capacity (BTU/h)					Voltage / Phase	MCA	MOCP		
1.1	Break	585	9	Multi-Position Air Handler	18,345	13,660	20,442	58.1	98.0	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.2	Detention	400	8	Multi-Position Air Handler	12,128	9,556	13,680	57.5	99.1	0.8	27-31-35	208V/1Ph	3.00	15	PVFY-P12NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.3	Central_Toilet	585	4	Multi-Position Air Handler	18,268	13,646	20,333	58.1	98.9	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.4	SE Patrol Sergeant	1095	2	Multi-Position Air Handler	36,229	25,964	40,294	57.6	102.6	0.8	35-39-43	208V/1Ph	4.13	15	PVFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.5	corridor_Prop.	585	7	Multi-Position Air Handler	18,114	13,676	20,191	57.9	100.1	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.6	SE Det	585	3	Multi-Position Air Handler	18,268	13,646	20,300	58.1	99.2	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.7	NW_Admin	1400	1	Multi-Position Air Handler	48,100	33,919	54,219	57.1	105.0	0.8	35-39-43	208V/1Ph	5.63	15	PVFY-P48NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.8	Serg Chief	585	6	Multi-Position Air Handler	18,114	13,676	20,169	57.9	100.3	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.9	Conf	390	5	Multi-Position Air Handler	12,128	9,556	13,680	57.5	99.1	0.8	27-31-35	208V/1Ph	3.00	15	PVFY-P12NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.1	Break	1095	1	Multi-Position Air Handler	36,383	25,891	36,301	57.7	98.7	0.8	35-39-43	208V/1Ph	4.13	15	PVFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.2	NW Sewer	875	4	Multi-Position Air Handler	30,191	21,801	30,756	56.5	101.2	0.8	32-36-40	208V/1Ph	4.13	15	PVFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.3	Int Corr_Work	1095	8	Multi-Position Air Handler	36,075	26,036	36,085	57.5	99.7	0.8	35-39-43	208V/1Ph	4.13	15	PVFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.4	Conf	328	2	Ceiling Cassette (One-Way)	12,128	7,882	12,278	57.3	102.2	-	32-34-36-37	208V/1Ph	0.26	15	PMFY-P12NBMU-...	1,2,4,5,6,7,8,9,10,11,12,13
2.5	SE Off_Manage	875	6	Multi-Position Air Handler	30,191	21,801	30,722	56.5	101.4	0.8	32-36-40	208V/1Ph	4.13	15	PVFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.6	Stair	875	9	Multi-Position Air Handler	30,063	21,864	30,528	56.4	102.3	0.8	32-36-40	208V/1Ph	4.13	15	PVFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.7	Lobby	585	5	Multi-Position Air Handler	18,191	13,632	18,219	58.0	96.1	0.8	28-32-36	208V/1Ph	3.00	15	PVFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.8	Build Zone	1400	7	Multi-Position Air Handler	48,100	33,919	48,662	57.1	101.6	0.8	35-39-43	208V/1Ph	5.63	15	PVFY-P48NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.9	Mtg	460	3	Ceiling-Cassette (Four-Way)	18,191	11,872	18,151	55.6	104.5	-	33-39-43	208V/1Ph	0.50	15	PLFY-P18NFMU-E	1,2,4,5,6,7,8,9,10,11,12,13
Notes & Options: 1 Manufactured by Mitsubishi, Equivalent by Daikin, LG or prior approved equal. 2 Full design package must be submitted for approval 3 Merv 11 filter rack for ducted units 4 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB) 5 5 year compressor warranty 6 Disconnect switch by Electrical Contractor 7 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB) 8 Manufacturers start-up and 1 year manufacturer warranty 9 Insulated refrigerant lines, Manufacturer to confirm all sizes. 10 See outdoor unit schedule for outdoor data, and other factors associated with corrected capacities 11 Direct drive fan motor 12 Vibration isolation hangers 13 Integral condensate lift pump - powered from associated indoor unit (refer to plans)																

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE																
System Tag	Tag Reference	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Efficiency (I/EER [SEER])	Heating COP @ 47°F [HSPF]	Design Cooling Outdoor Temp DB (°F)	Design Heating Outdoor Temp WB (°F)	Max Pipe Length from BC or 1st Joint (feet)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Electrical			Model Number	Notes / Options
												Voltage / Phase	MCA	RFS	MOCP	
1.0	1st floor	HP120, HP120	240,000	270,000	19.6 / 9.85	3.460	93.0	9.0	119.2	237,017.1	261,185.7	208V / 3	66 (2)	70 (2)	110 (2)	PURY-HP240TSNU-A1 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
2.0	2nd floor	HP120, HP120	240,000	270,000	19.6 / 9.85	3.460	93.0	9.0	101.5	226,116.8	261,702.2	208V / 3	66 (2)	70 (2)	110 (2)	PURY-HP240TSNU-A1 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

- Notes & Options:
1 Manufactured by Mitsubishi, Equivalent by Daikin, LG or prior approved equal.
2 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module twinning.
3 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
4 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.
5 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
6 Full design package must be submitted for approval
7 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
8 5 year compressor warranty
9 Disconnect switch by Electrical Contractor
10 Manufacturers start-up and 1 year manufacturer warranty
11 Unit must provide full capacity heating down to 5 deg. F

EXHAUST FAN SCHEDULE (EF)															
TAG	AREA SERVED	TYPE	DRIVE	AIRFLOW (CFM)	EXT. STATIC PRESSURE (IN. W.C.)	SOUND RATING (SONES)	RPM	TIP Spd. FPM	Watts (W)/HP	Volts	Phase	Max. Height	BASIS OF DESIGN	MODEL	COMMENTS
EF-1	TOILET RM. 158	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-2	TOILET RM. 150	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-3	TOILET RM. 151	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-4	TOILET RM. 112	CEILING	DIRECT	155	0.125	2.5	1050	NA	128 W	120	1	12"	GREENHECK	SP-B150	1, 2, 3, 4, 6, 14
EF-5	SALLYPORT	WALL	DIRECT	350	0.25	7.5	1350		120 W	120	1	18"	GREENHECK	S1-12-436-G	7, 8, 9, 10, 16
EF-6	TOILET RM. 202	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-7	PROPERTY 131, CABINETS	INLINE	DIRECT	100 (11)	0.25	1.0	980	NA	23 W	120	1	12"	GREENHECK	CSP-A125	1, 2, 3, 4, 6, 11, 14
EF-8	GUN CLEAN RM. 108	ROOFTOP	DIRECT	350	0.625	6.9	1315	3852	1/4 HP	120	1	24"	GREENHECK	G098	8, 10, 13, 14, 15, 17
EF-9	FUME HOOD, 130	ROOFTOP	DIRECT	654 (12)	0.625	6.9	1670	4891	1/4 HP	120	1	24"	GREENHECK	G098	8, 10, 12, 13, 15, 17
Comments										Motor Starters:					
1. Equivalent manufacturer by Carnes, Cook, Acme, Penn Ventilation										Mechanical Contractor shall provide for polyphase and single phase above 1/2 hp.					
3. Flexible connection										Electrical contractor shall provide for fractional horsepower up to 1/2 hp.					
5. Control with light switch with time delay off.										Electrical contractor shall install all starters except for those integral to the equipment.					
7. Wall sleeve with fan guard, bird screen and burgular bars															
9. Motor side guard, 45 deg. Weatherhood															
11. Coordinate air volume with cabinet maufacturer, owner															
13. 8" High roof curb															
15. Manual motor starter															
17. Vari-green variable speed															

Consultant:

McHUGH ENGINEERING
ASSOCIATES, INC.
136 Poplar Street
Ambler, PA 19002
215-641-1158

2023-141

Project:

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Revision/Issue:

0 03/29/24 Issued

Drawn: JK
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:

SCHEDULES-
MECHANICAL

Sheet Number:

M-303

International Mechanical Code 2018 Section 403 Calculations															
						Clg Ez = 1.0...						Based on IMC 2018		Used in "Ventilation ERU" tab.	
VRF IDU	Room #	Room Name	Occupancy Lookup	International Mechanical Code Occupancy Category	Area (S.F.)	Breathing Zone OA Flow - "Vbz"...	Zone Air Distribution Effectiveness - "Ez"	Zone Outdoor Air Flow - "Voz" ...	System Ventilation Efficiency - "Ev"	OA Air Intake Flow - "Vot" ...	OA Air Intake Flow - "Vot" ...	Min. Exhaust Required (CFM)/S...	Min. Exhaust Required (CFM)	Design Exhaust Air (CFM)	Design OA Flow (CFM) ~ Vot Rounded
1.8	122	Chief Room	42	Office Space	206	17	0.8	22	1.0	22	25	0.0	0	0	25
	120	Sergeant	42	Office Space	176	16	0.8	19	1.0	19	20	0.0	0	0	20
Total Area =					412					Total O...	45		Total...	0	60
1.9	124	Conference	35	Conference / Meeting	384	73	0.8	91	1.0	91	95	0.0	0	0	95
Total Area =					384					Total O...	95		Total...	0	95
1.7	143	Corridor	49	Corridors	146	9	0.8	11	1.0	11	15	0.0	0	0	15
	106	Quartermaster	42	Office Space	105	11	0.8	14	1.0	14	15	0.0	0	0	15
	107	Armory	69	Storage Rooms	182	22	0.8	27	1.0	27	30	0.0	0	0	30
	108	Weapons cleaning	42	Office Space	125	8	0.8	9	1.0	9	10	0.0	0	80	10
	103	Admin	42	Office Space	382	38	0.8	47	1.0	47	50	0.0	0	0	50
	104	Secure Files	69	Storage Rooms	274	33	0.8	41	1.0	41	45	0.0	0	0	45
	140	Corridor	49	Corridors	407	24	0.8	31	1.0	31	35	0.0	0	150	35
	144.1	Corridor	49	Corridors	188	11	0.8	14	1.0	14	15	0.0	0	0	15
Total Area =					1809					Total O...	215		Total...	230	215
1.6	121	Supply	69	Storage Rooms	30	4	0.8	4	1.0	15	15	0.0	0	0	15
	119	Storage	69	Storage Rooms	33	4	0.8	5	1.0	5	5	0.0	0	0	5
	118	Detectives	42	Office Space	456	57	0.8	72	1.0	72	75	0.0	0	0	75
Total Area =					489					Total O...	95		Total...	0	80
1.5	102	Vestibule	49	Corridors	67	4	0.8	5	1.0	5	10	0.0	0	0	10
	126	Compliant Room	42	Office Space	133	23	0.8	29	1.0	29	30	0.0	0	0	30
	125	Interview Room	42	Office Space	177	21	0.8	26	1.0	26	30	0.0	0	0	30
	144	Corridor	49	Corridors	439	26	0.8	33	1.0	33	35	0.0	0	0	35
	131	Property Room	69	Storage Rooms	499	60	0.8	75	1.0	75	75	0.0	0	0	75
	132	ACT 79 GUN Storage	69	Storage Rooms	81	10	0.8	12	1.0	12	15	0.0	0	0	15
	130	Evidence Recording	69	Storage Rooms	221	27	0.8	33	1.0	33	35	0.0	0	0	35
Total Area =					1617					Total O...	230		Total...	0	230
1.4	115	Sergeants	42	Office Space	348	41	0.8	51	1.0	51	55	0.0	0	0	55
	117	Patrol Storage	69	Storage Rooms	154	18	0.8	23	1.0	23	25	0.0	0	0	25
	116	Patrol	42	Office Space	523	56	0.8	70	1.0	70	75	0.0	0	0	75
Total Area =					1025					Total O...	155		Total...	0	155
1.1	109	Breakroom	4	Day Room	414	75	0.8	94	1.0	94	95	0.0	0	0	95
Total Area =					414					Total O...	95		Total...	0	95
1.2	110	Flex	42	Office Space	304	33	0.8	42	1.0	42	45	0.0	0	0	45
	111	Detention	42	Office Space	164	15	0.8	19	1.0	19	20	0.0	0	0	20
	112	Toilet	59	Toilet rooms - public	83	0	0.8	0	1.0	0	0	50 / 70	0	50	0
Total Area =					551					Total O...	65		Total...	50	65
1.3	142	Corridors	49	Corridors	491	29	0.8	37	1.0	37	40	0.0	0	0	40
	127	Toilet Room(M)	59	Toilet rooms - public	593	0	0.8	0	1.0	0	0	50 / 70	200	200	0
	129	Toilet Room(W)	59	Toilet rooms - public	405	0	0.8	0	1.0	0	0	50 / 70	200	200	0
Total Area =					1489					Total O...	40		Total...	400	40
RTU-1	153	Commission Room	35	Conference / Meeting	1540	512	0.8	641	1.0	641	645	0.0	0	0	645
	152	Corridor	49	Corridors	289	17	0.8	22	1.0	22	25	0.0	0	0	25
	101	Lobby/ Stairs	41	Main Entry Lobby	653	39	0.8	49	1.0	49	50	0.0	0	0	50
	111	Chairs	69	Storage Rooms	126	15	0.8	19	1.0	19	20	0.0	0	0	20
	155	AV Monitor	69	Storage Rooms	67	8	0.8	10	1.0	10	15	0.0	0	0	15
Total Area =					2675					Total O...	755		Total...	0	755
2.9	201	Meeting Room	35	Conference / Meeting	242	55	0.8	68	1.0	68	70	0.0	0	0	70
Total Area =					242					Total O...	70		Total...	0	70
2.6	200	Corr/ stairs Upper	49	Corridors	543	33	0.8	41	1.0	41	45	0.0	0	0	45
Total Area =					785					Total O...	45		Total...	0	115
2.7	203	Lobby	41	Main Entry Lobby	440	41	0.8	52	1.0	52	55	0.0	0	0	55
Total Area =					983					Total O...	55		Total...	0	100
RTU-2	157	Caucus Room	35	Conference / Meeting	570	144	0.8	180	1.0	180	185	0.0	0	0	185
Total Area =					570					Total O...	185		Total...	0	185
2.2	205	Sewer authority	42	Office Space	190	16	0.8	21	1.0	21	25	0.0	0	0	25
	204	Sewer workstation	42	Office Space	161	20	0.8	25	1.0	25	25	0.0	0	0	25
	207	Finance Assistant	42	Office Space	173	15	0.8	19	1.0	19	20	0.0	0	0	20
	208	Finance Director/ HR	42	Office Space	185	16	0.8	20	1.0	20	25	0.0	0	0	25
Total Area =					709					Total O...	95		Total...	0	95
2.5	217	Township Manager	42	Office Space	210	18	0.8	22	1.0	22	25	0.0	0	0	25
	218	Township Assistant	42	Office Space	112	12	0.8	15	1.0	15	15	0.0	0	0	15
	215	Assistant Township...	42	Office Space	164	15	0.8	19	1.0	19	20	0.0	0	0	20
Total Area =					486					Total O...	60		Total...	0	60
2.8	224	Secure Files	69	Storage Rooms	66	8	0.8	10	1.0	10	10	0.0	0	0	10
	222	Code Office	42	Office Space	129	43	0.8	53	1.0	53	55	0.0	0	0	55
	216	Building and Zone	42	Office Space	551	68	0.8	85	1.0	85	90	0.0	0	0	90
Total Area =					680					Total O...	155		Total...	0	145
2.4	222	Conference	35	Conference / Meeting	282	57	0.8	71	1.0	71	75	0.0	0	0	75
Total Area =					282					Total O...	75		Total...	0	75
2.1	212	Breakroom	4	Day Room	416	85	0.8	106	1.0	106	110	0.0	0	0	110
Total Area =					416					Total O...	110		Total...	0	110
2.3	223	Tax Office	42	Office Space	123	12	0.8	15	1.0	15	20	0.0	0	0	20
	206	Building Receptionist	42	Office Space	118	12	0.8	15	1.0	15	20	0.0	0	0	20
	209	Work Room/ Corridor	42	Office Space	360	32	0.8	40	1.0	40	40	0.0	0	0	40
230/231/23...					628	38	0.8	47	1.0	47	50	0.0	0	0	50
Total Area =					2673					Total O...	130		Total...	0	470
x	113	Sally Port	45	Garages, common for...	618	0	0.8	0	1.0	0	0	0.8	0.30cfm/sf	125	0
x	210	Elec/Mech	61	Mechanical / Electrical Rm.	581	0	0.8	0	1.0	0	0	0.0	0	0	0
x	145	Mech/ Water/ Sprinkler	61	Mechanical / Electrical Rm.	122	0	0.8	0	1.0	0	0	0.0	0	2	0
Total Area =					1321					Total O...	0		Total...	127	0
x	212	Housekeeping	59	Toilet rooms - public	30	0	0.8	0	1.0	0	0	50 / 70	1cfm/sf	30	0
x	213	Men's Toilet	59	Toilet rooms - public	253	0	0.8	0	1.0	0	0	50 / 70	200	200	0
x	211	Women's Toilet	59	Toilet rooms - public	265	0	0.8	0	1.0	0	0	50 / 70	200	200	0
x	202	Toilet Room	59	Toilet rooms - public	53	0	0.8	0	1.0	0	0	50 / 70	50	50	0
Total Area =					601					Total O...	0		Total...	480	0
x	128	Housekeeping	59	Toilet rooms - public	30	0	0.8	0	1.0	0	0	50 / 70	1cfm/sf	30	0
x	123	Toilet Room	59	Toilet rooms - public	51	0	0.8	0	1.0	0	0	50 / 70	50	50	0
x	158	Toilet	59	Toilet rooms - public	64	0	0.8	0	1.0	0	0	50 / 70	50	50	0
x	150	Toilet	59	Toilet rooms - public	50	0	0.8	0	1.0	0	0	50 / 70	50	50	0
x	151	Toilet	59	Toilet rooms - public	50	0	0.8	0	1.0	0	0	50 / 70	50	50	0
Total Area =					245					Total O...	0		Total...	230	0

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SPRINKLER NOTE:

1. SPRINKLER CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL A SPRINKLER SYSTEM THROUGHOUT THE BUILDING IN ACCORDANCE WITH NFPA-13.
2. SPRINKLER SYSTEM SHALL BE DESIGNED PER NFPA-13 LIGHT HAZARD CATEGORY A, UNLESS EXCEPT WHERE DICTATED BY NFPA-13 TO BE ORDINARY HAZARD.
3. PROVIDE FM200 AND DOUBLE INTERLOCK PREACTION SYSTEMS FOR CEILING AREA.
4. PROVIDE DRY SPRINKLER HEADS IN AREAS SUBJECT TO FREEZING.
5. ALL WET SPRINKLER PIPING SHALL BE LOCATED WITHIN BUILDING ENVELOPE.
6. SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL TO THE LOCAL FIRE MARSHALL AUTHORITY.
7. SPRINKLER HEADS IN AREAS WITH UNFINISHED CEILINGS SHALL BE STANDARD BRASS UPRIGHT TYPE.
8. SPRINKLER HEADS IN FINISHED PUBLIC AREAS SHALL BE CONCEALED.
9. SPRINKLER HEADS IN AREAS WITHOUT A CEILING SHALL BE PENDANT TYPE.

FLOW TEST INFO: ____ PSI STATIC, ____ PSI RESIDUAL, ____ GPM.

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Revision/Issue:
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Drawn: PR
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
**FIRST FLOOR PLAN-
SANITARY**

Sheet Number:
P-101

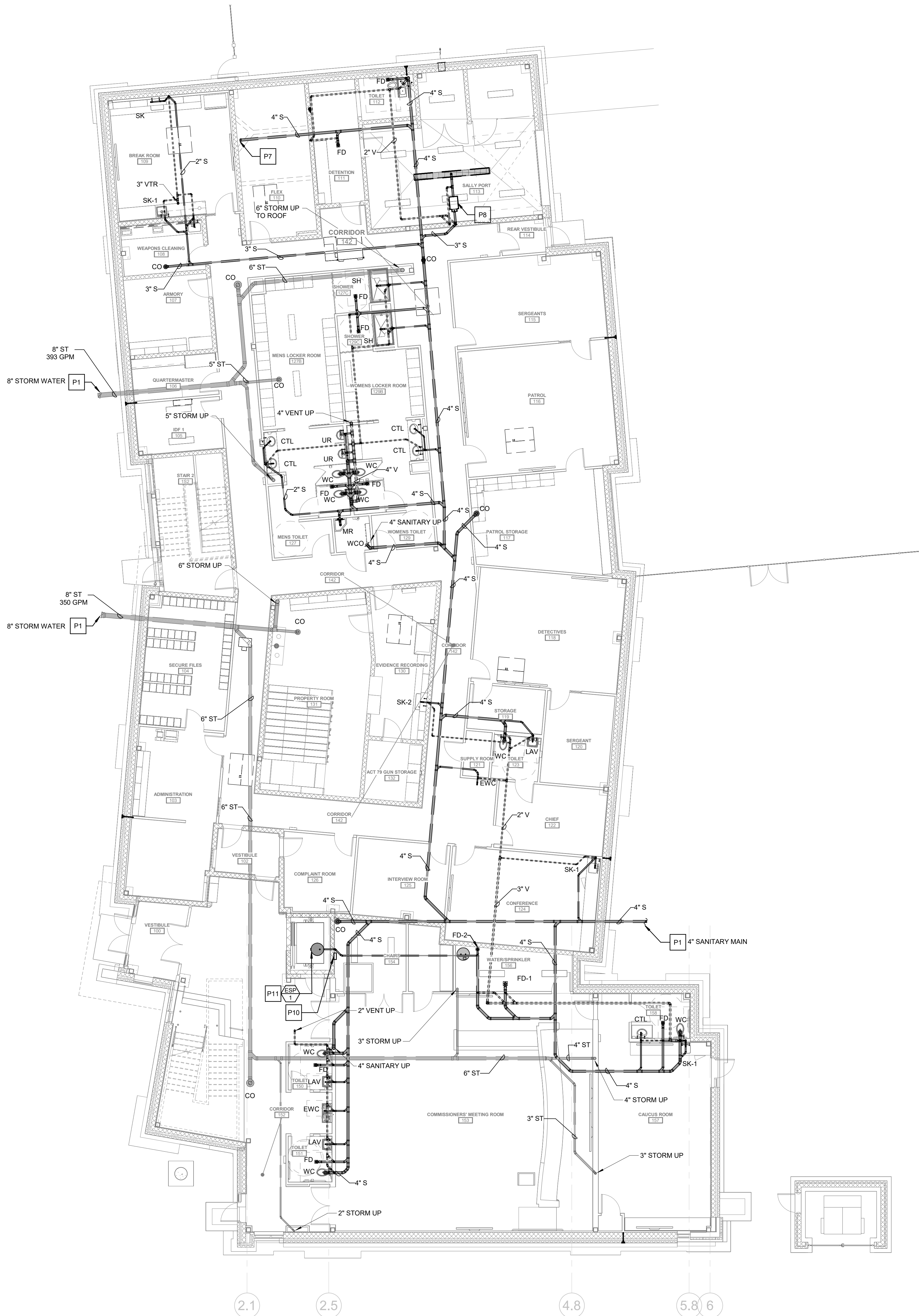
GENERAL PLUMBING NOTES:

- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES(COMMERCIAL AND RESIDENTIAL), SOLENOIDS, FAST CLOSING VALVES, ETC.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
- PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISER SERVING PLUMBING FIXTURES, CASEWORK OR EQUIPMENT. PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITOR'S CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CIELINGS.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING KEYNOTES

- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
P7 PROVIDE CAP ON 4" SANITARY FOR FUTURE CONNECTION.
P8 SAND AND OIL INTERCEPTOR. REFER TO DETAIL.
P10 ELEVATOR SUMP PUMP CONTROL MODULE.
P11 ELEVATOR SUMP PUMP. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

NOTED THUS



1 FIRST FLOOR PLAN - SANITARY/STORM
1/8" = 1'-0"

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Drawn: PR
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Number:

P-102

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- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH FDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES (COMMERCIAL AND RESIDENTIAL), SOLENOIDS, FAST CLOSING VALVES, ETC.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
- PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISES FOR EACH PLUMBING FIXTURES, CASEWORK OR EQUIPMENT. PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50' ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE LIMITER LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR WHERE SEWER SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITOR'S CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DRAIN PIPING.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

P1 REFER TO CIVIL PLANS FOR CONTINUATION.

P3 THE SPRINKLER SERVICE LINE SHALL NOT BE INSTALLED UNTIL ALL FLOW/PRESSURE CALCULATIONS FOR THE SPRINKLER SYSTEM ARE HYDRAULICALLY VERIFIED BY THE SPRINKLER CONTRACTOR. THE LINE SIZE MAY INCREASE(OR DECREASE) AS A RESULT OF SUCH CALCULATIONS.

P4 ELECTRICAL WATER HEATER. REFER TO DETAIL.

P5 PROVIDE HOT WATER BALANCING VALVE AND SHUTOFF VALVE.

P6 HOT WATER RECIRCULATION PUMP. REFER TO DETAIL.

P7 PROVIDE ACCESS PANEL FOR WALL HYDRANT SHUT OFF VALVE.

P12 FIRE DEPARTMENT CONNECTION. SPRINKLER CONTRACTOR TO COORDINATE FINAL LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION.

P14 PROVIDE GUARDIAN G1848 ANSI-COMPLIANT WALL MOUNTED EYEWASH AT SINK. COORDINATE SPECIFIC MODEL AND MOUNTING POSITION WITH ARCHITECT PRIOR TO ORDERING.

P15 PROVIDE 55020 THERMO-TECHNICAL WALL MOUNTED EYEWASH.

P15 PROVIDE CAP ON 1" COLD WATER AND 1/2" HOT WATER FOR FUTURE CONNECTION.

☐

P1 REFER TO CIVIL PLANS FOR CONTINUATION.

P2 THE SPRINKLER SERVICE LINE SHALL NOT BE INSTALLED UNTIL THE PREPRESSURE GAS SYSTEM HAS BEEN INSTALLED. THE SYSTEM ARE HYDRAULICALLY VERIFIED BY THE SPRINKLER CONTRACTOR THE LINE SIZE MAY INCREASE(OR DECREASE) AS A RESULT OF SUCH CALCULATIONS.

P3 ELECTRICAL WATER HEATER. REFER TO DETAIL.

P5 PROVIDE HOT WATER BALANCING VALVE AND SHUTOFF VALVE.

P6 HOT WATER RECIRCULATION PUMP. REFER TO DETAIL.

P7 PROVIDE ACCESS PANEL FOR WALL HYDRANT SHUT OFF VALVE.

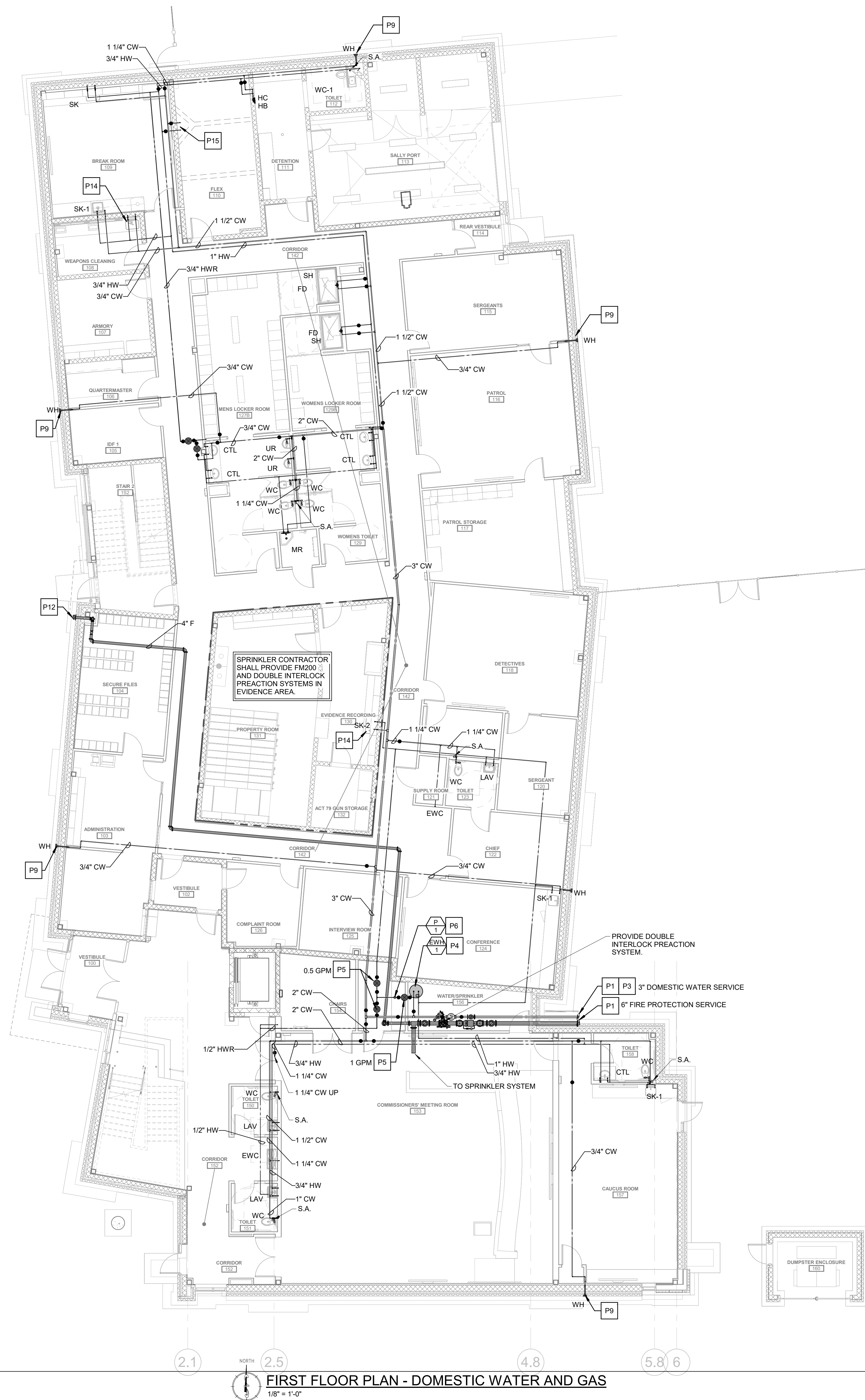
P12 FIRE DEPARTMENT CONNECTION. SPRINKLER CONTRACTOR TO DETERMINE EXACT LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION.

P14 PROVIDE GUARDIAN G1848 ANS-COMPLIANT WALL MOUNTED SPRINKLER WITH SING. COORDINATE WITH ARCHITECT AND MOUNTING OPTION WITH ARCHITECT PRIOR TO ORDERING. PROVIDE 66020 THERMOSTATIC MIXING VALVE FOR EYEWASH.

P15 CAP ON 1" HOT WATER AND 1/2" HOT WATER FOR FUTURE CONNECTION.

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**SECOND FLOOR
PLAN- PLUMBING**

Sheet Number:

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GENERAL PLUMBING NOTES:

1. COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
2. PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES/COMMERCIAL AND RESIDENTIAL, SOLENOIDS, FAST CLOSING VALVES, ETC.
3. DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
4. DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
5. PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISER. PROVIDE PLUMBING FIXTURES, CASEWORK OR EQUIPMENT PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
6. COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
7. PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS. AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
8. PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
9. THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
10. PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSURES/JUNCTION BOXES. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CEILINGS.
11. REFER TO DOMESTIC WATER PIPING AND CASEWORK FOR ADDITIONAL PIPE SIZE INFORMATION.
12. REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
13. REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING KEYNOTES

☐ NOTED THUS

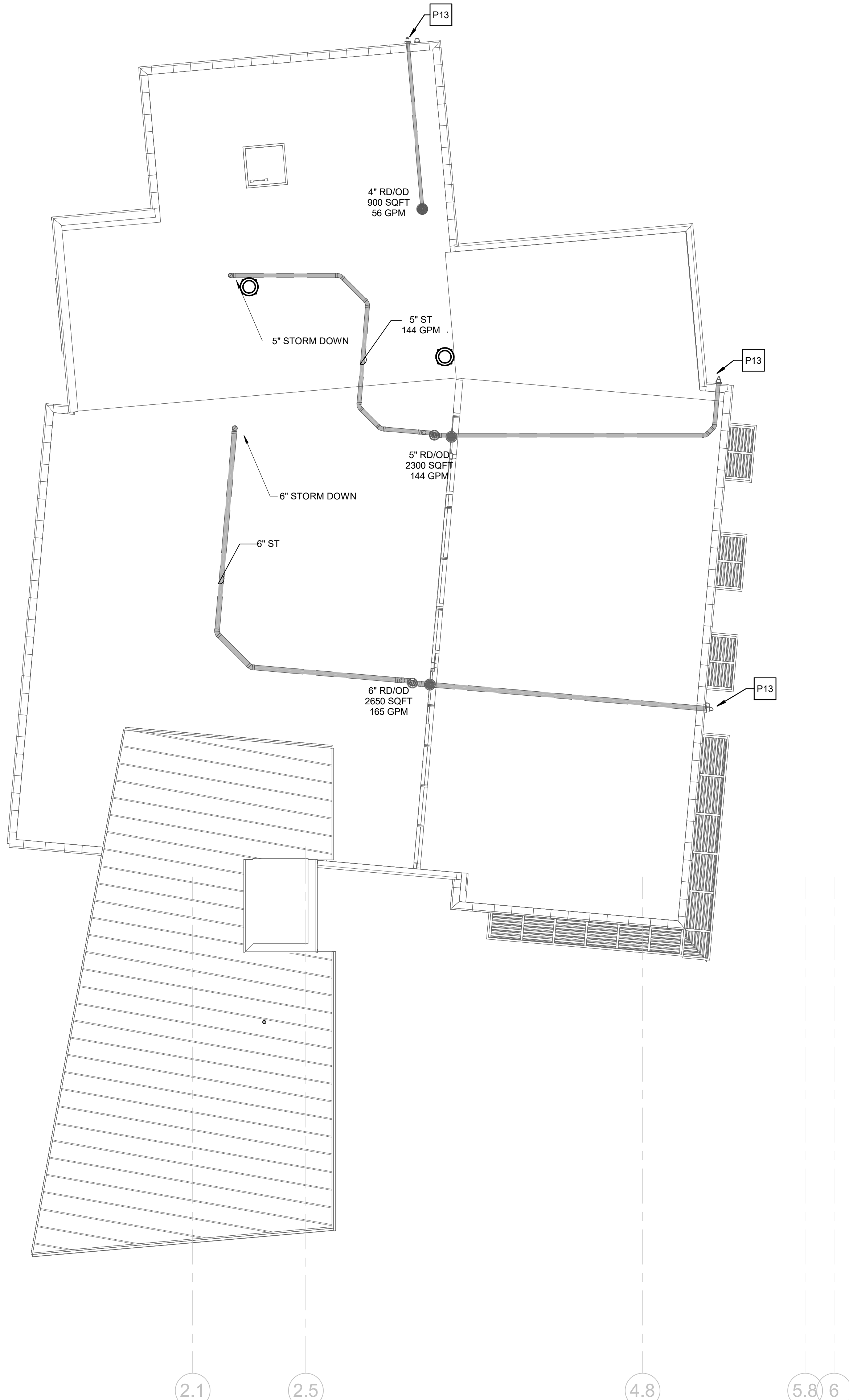
- P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL

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1 ROOF PLAN - PLUMBING
1/8" = 1'-0"

GENERAL PLUMBING NOTES:

- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDJ AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES(COMMERCIAL AND RESIDENTIAL), SOLENOIDS, FAST CLOSING VALVES, ETC.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
- PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISER SERVING PLUMBING FIXTURES, CASEWORK OR EQUIPMENT. PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITOR'S CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CIELINGS.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING ROOF NOTES

- COORDINATE LOCATIONS OF ROOF DRAINS WITH ARCHITECTURAL PLANS.
- ALL VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 10' FROM OUTSIDE AIR INTAKES.
- ALL VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 6' FROM PARAPET OR ADJOINING BUILDING.
- THE ROOF VENTS SHALL BE TERMINATED NOT LESS THAN 2' ABOVE THE ROOF. WHERE A ROOF IS TO BE USED FOR ASSEMBLY OR AS A PROMENADE, OBSERVATION DECK, SUNBATHING DECK, OR SIMILAR PURPOSES, OPEN VENT PIPES SHALL TERMINATE NOT LESS THAN 7' ABOVE THE ROOF.

PLUMBING KEYNOTES

NOTED THUS

- P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL.

NOTICE

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Ambler, PA 19002
215-641-1158

2023-141

Project:

ASTON TOWNSHIP
MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

Owner:

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Suite 123
Aston, PA 19014

Revision/Issue:

0 03/29/24 Issued

Drawn:

PR

Reviewed:

PAS

Contact:

Paul Andrew Sgroi

Project Number: 2301.00-22

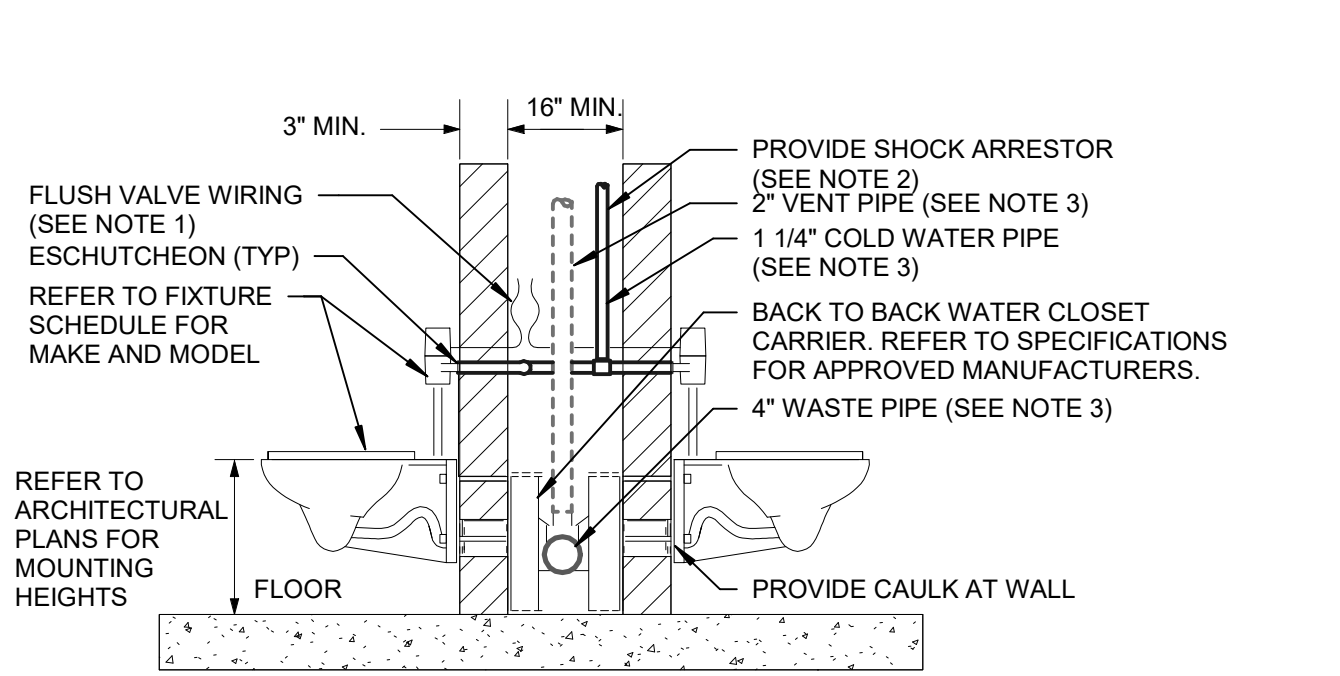
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ROOF PLAN-
PLUMBING

Sheet Number:

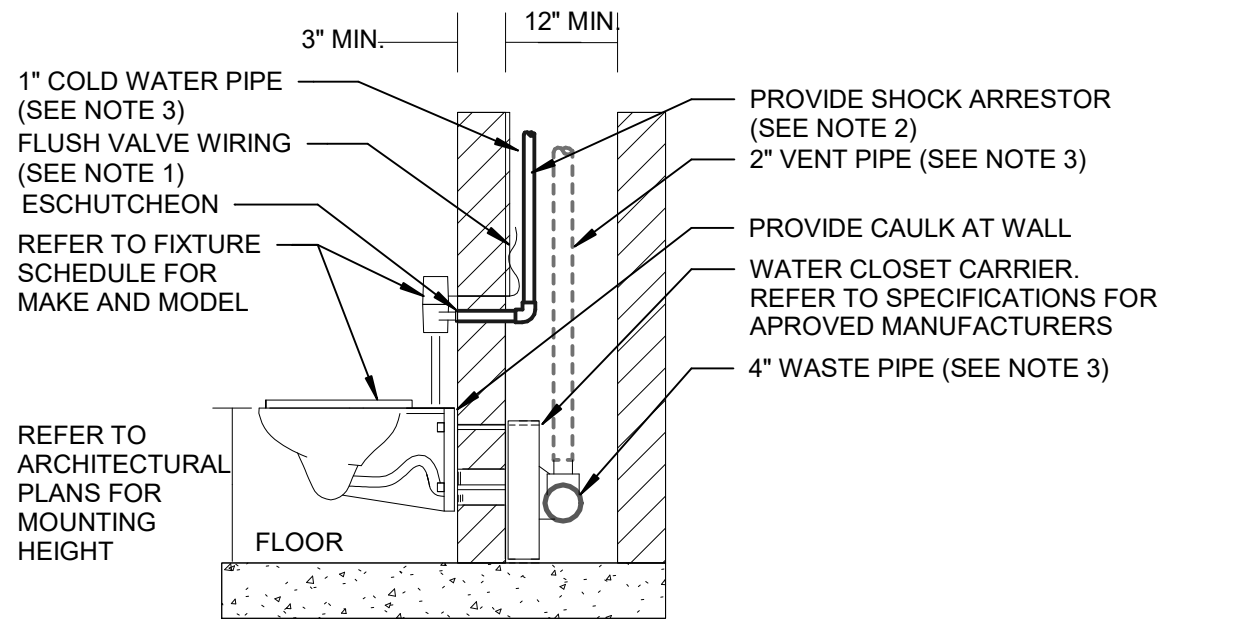
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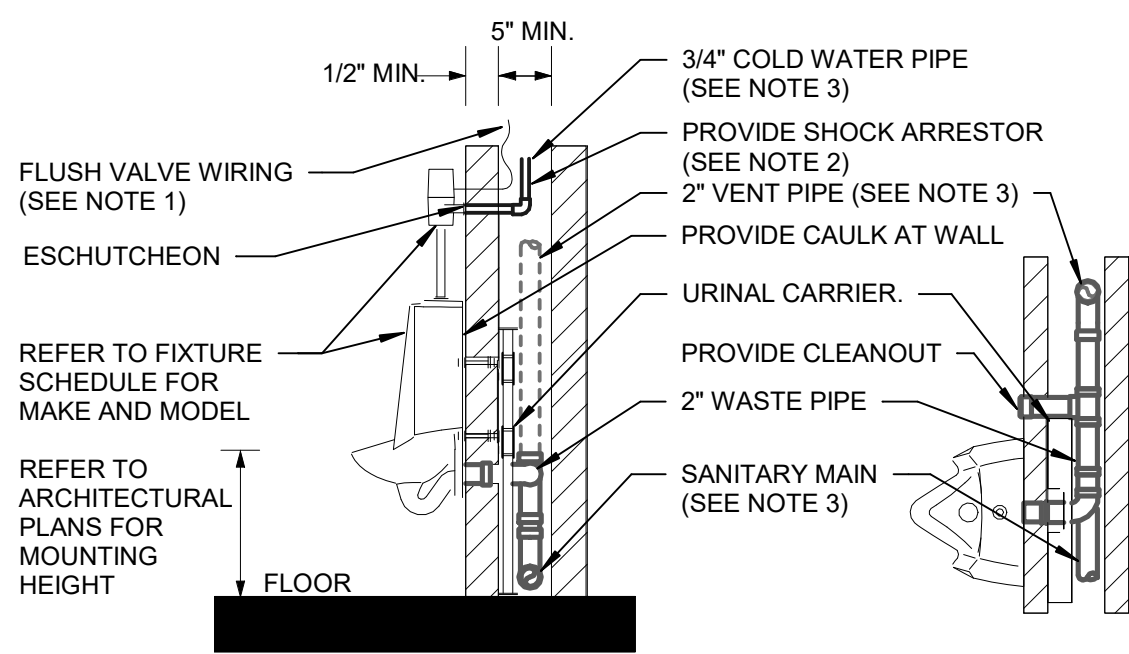
BACK TO BACK WATER CLOSET DETAIL

- SCALE: NONE
- NOTES:
- COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR FOR HARDWIRED FLUSH VALVES.
 - REFER TO DOMESTIC WATER RISER DIAGRAM FOR SHOCK ARRESTOR LOCATIONS.
 - REFER TO FLOOR PLANS FOR CONTINUATION OF PIPING.
 - WALL MATERIAL AND CARRIER CAN AFFECT MINIMUM CHASE SIZE. COODINATE FINAL CHASE SIZE WITH ARCHITECT.
 - MOUNTING HEIGHT FOR ADA WATER CLOSET SHALL BE 17"-19" TO THE TOP OF THE SEAT.



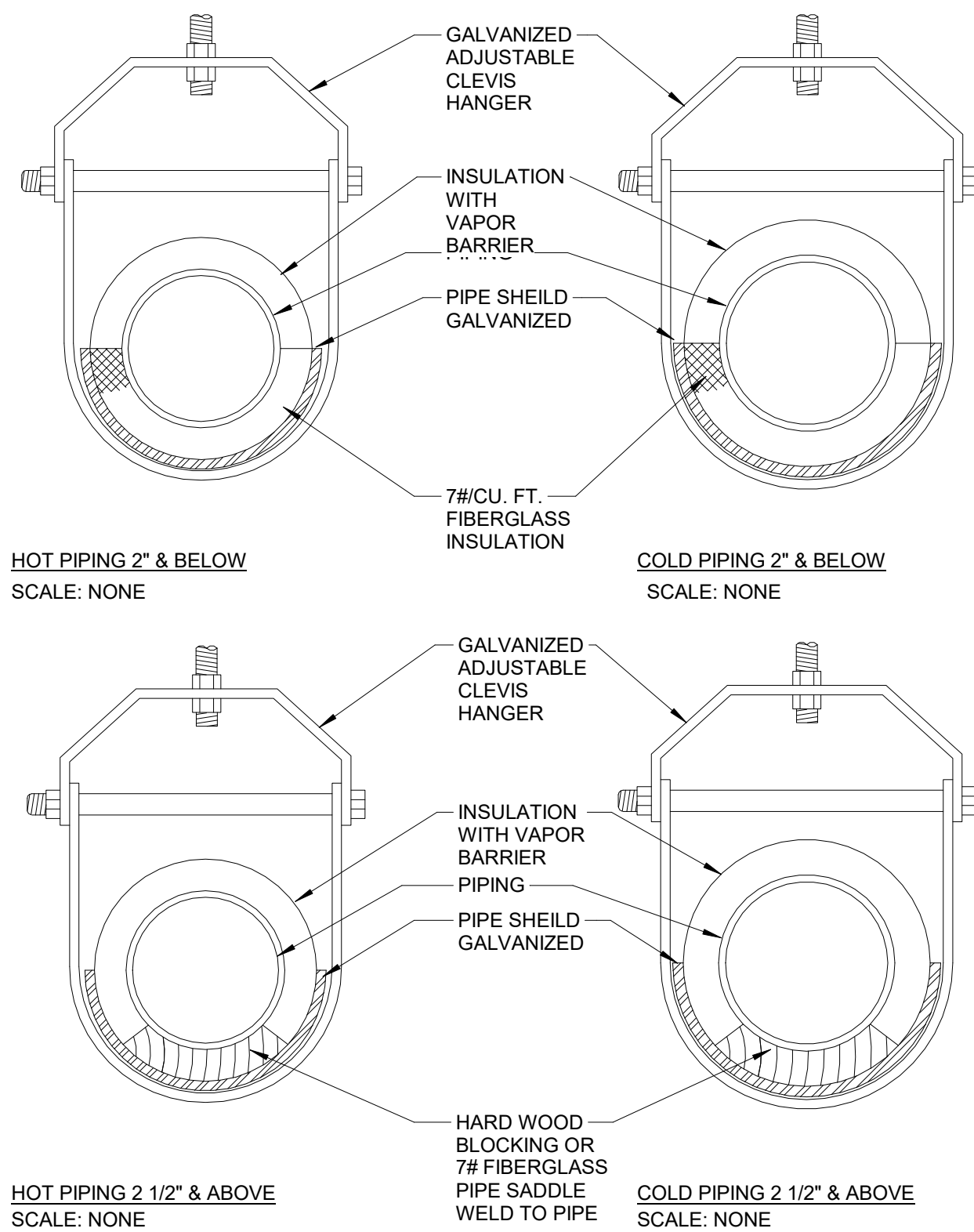
WALL HUNG WATER CLOSET DETAIL

- SCALE: NONE
- NOTES:
- COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR FOR HARDWIRED FLUSH VALVES.
 - REFER TO DOMESTIC WATER RISER DIAGRAM FOR SHOCK ARRESTOR LOCATIONS.
 - REFER TO FLOOR PLANS FOR CONTINUATION OF PIPING.
 - WALL MATERIAL AND CARRIER CAN AFFECT MINIMUM CHASE SIZE. COORDINATE FINAL CHASE SIZE WITH ARCHITECT.
 - MOUNTING HEIGHT FOR ADA WATER CLOSET SHALL BE 17"-19" TO THE TOP OF THE SEAT.



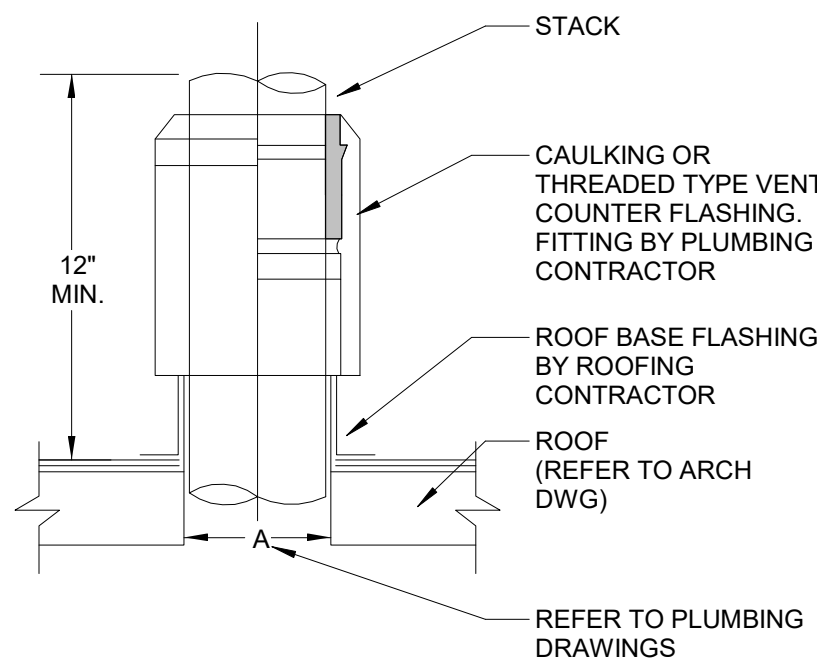
WALL HUNG URINAL DETAIL

- SCALE: NONE
- NOTES:
- COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR FOR HARDWIRED FLUSH VALVES.
 - REFER TO DOMESTIC WATER RISER DIAGRAM FOR SHOCK ARRESTOR LOCATIONS.
 - REFER TO FLOOR PLANS FOR CONTINUATION OF PIPING.
 - PROVIDE CLEANOUT FOR URINAL.
 - COORDINATE FINAL CHASE SIZE WITH ARCHITECT.
 - MOUNTING HEIGHT FOR ADA URINALS SHALL BE A MAXIMUM OF 17".
 - REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS FOR URINAL CARRIERS.



PIPE HANGER DETAILS

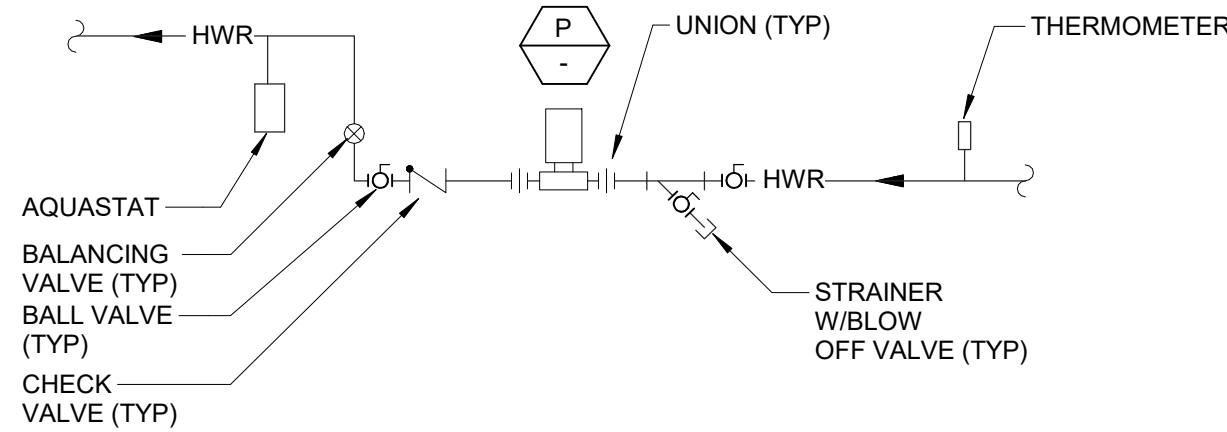
SCALE: NONE



ROOF VENT DETAIL

SCALE: NONE

- NOTES:
- FITTING IS OF THE COUPLING TYPE THAT PERMITS STACK EXTENSION TO THE DESIRED HEIGHT. COUNTER FLASHING FITTING. J.R. SMITH FIG. 1740C OR 1750T.



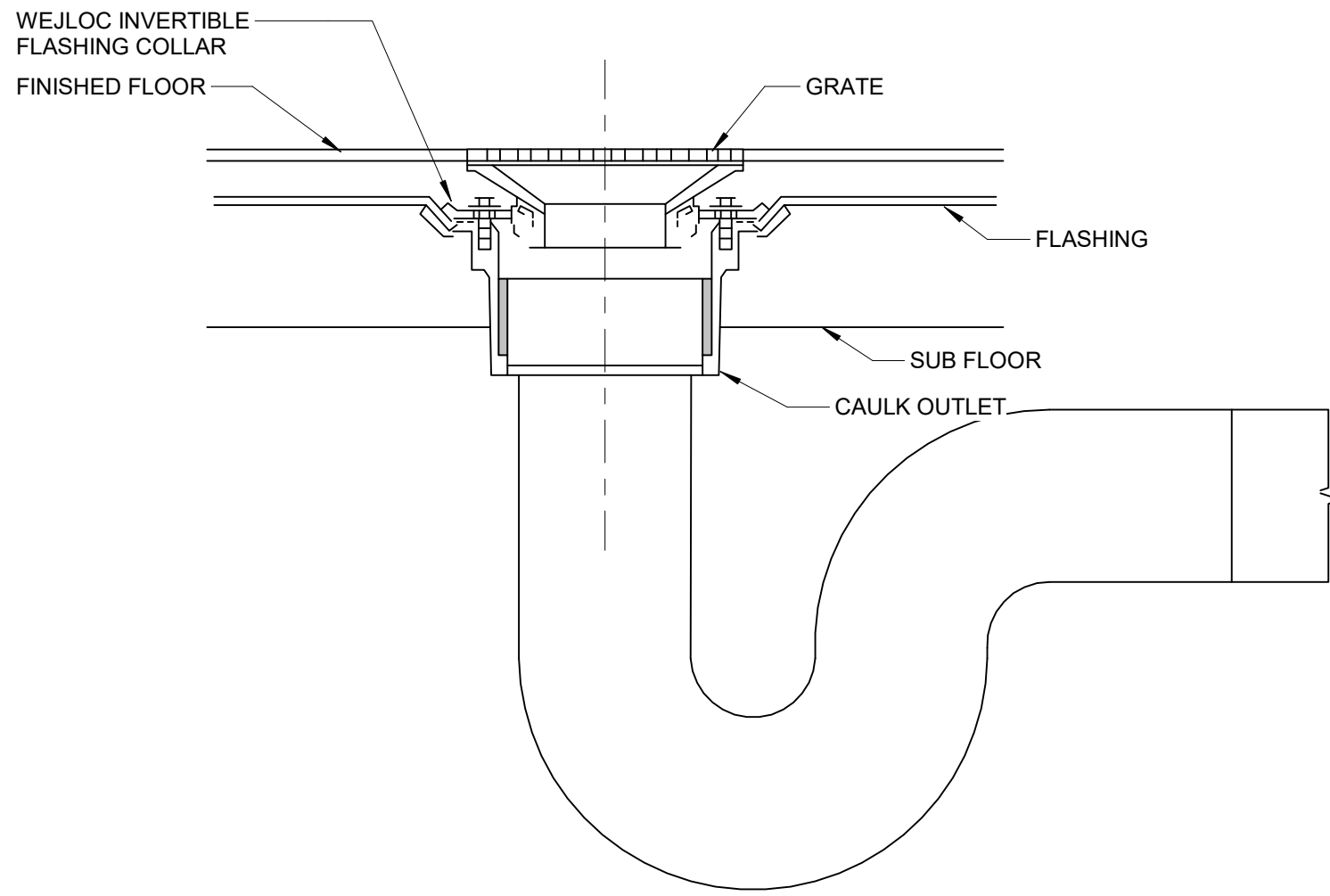
DOMESTIC HOT WATER RETURN PUMP DETAIL

SCALE: NONE

NOTICE

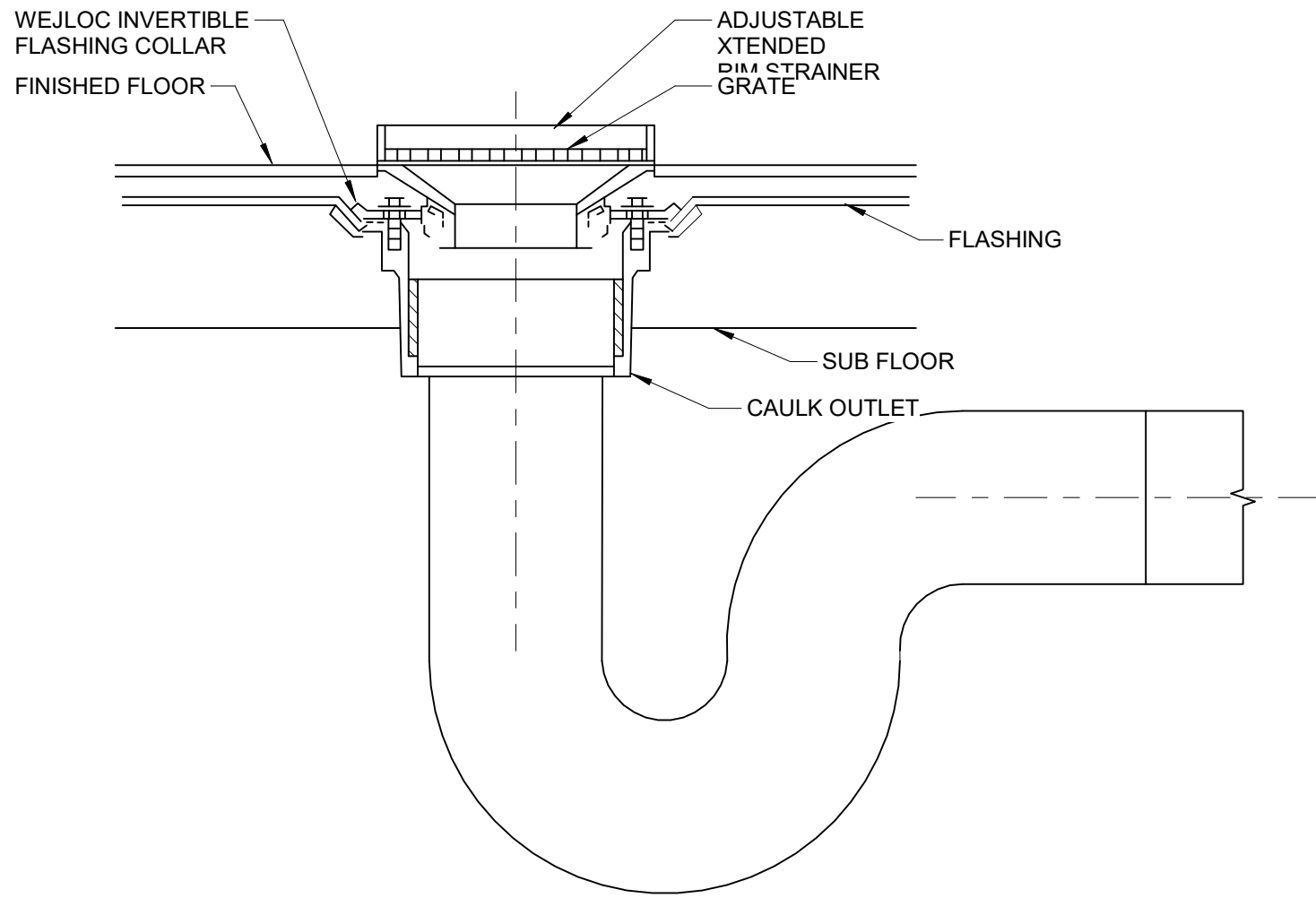
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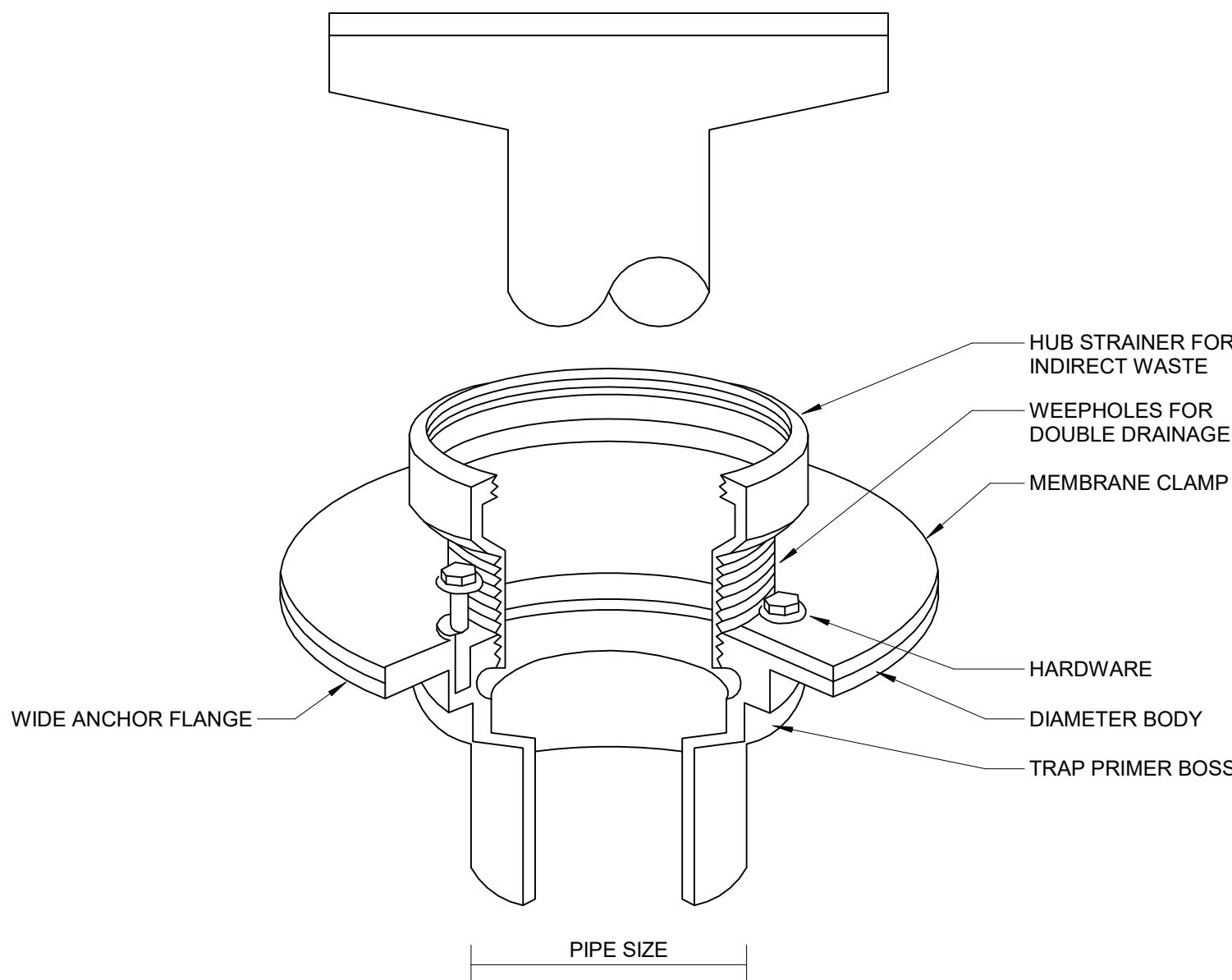
FLOOR DRAIN DETAIL
SCALE: NONE

- NOTE:**
1. CONTRACTOR TO PROVIDE TRAP PRIMER. REFER TO TRAP PRIMER DETAIL FOR MORE INFORMATION.

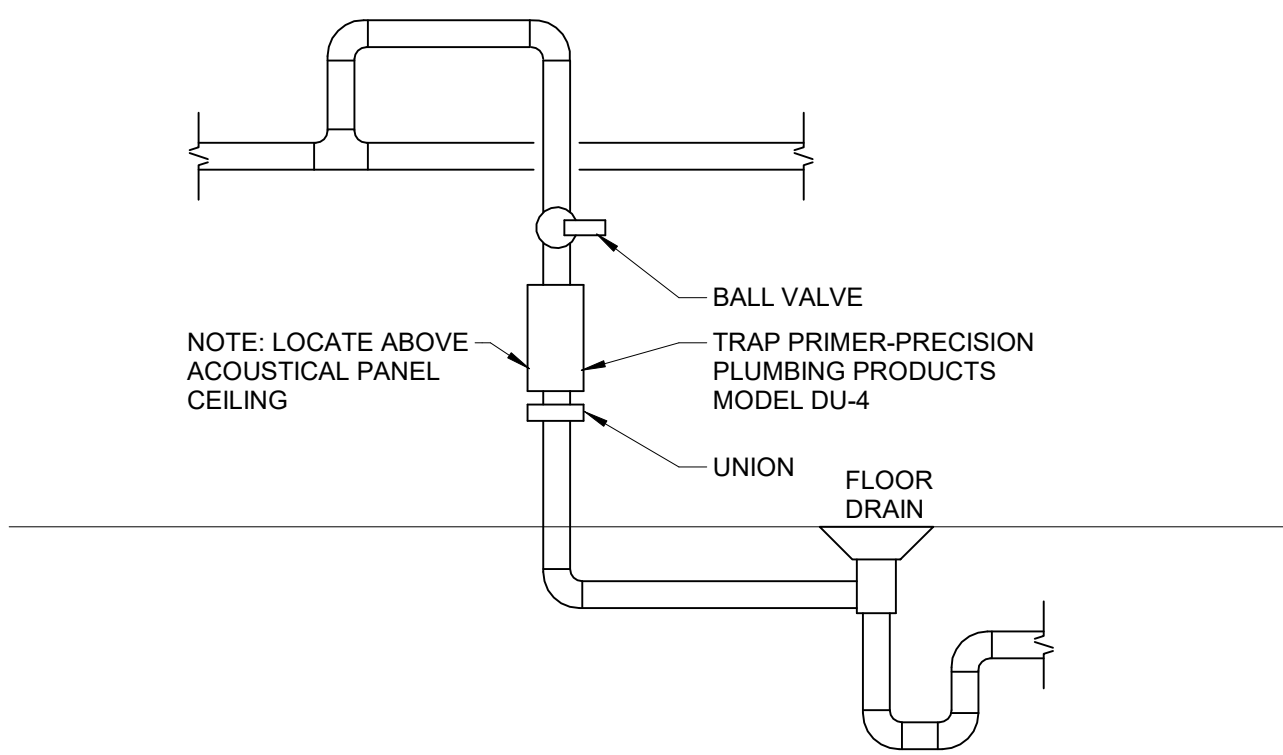


MECHANICAL ROOM FLOOR DRAIN DETAIL
SCALE: NONE

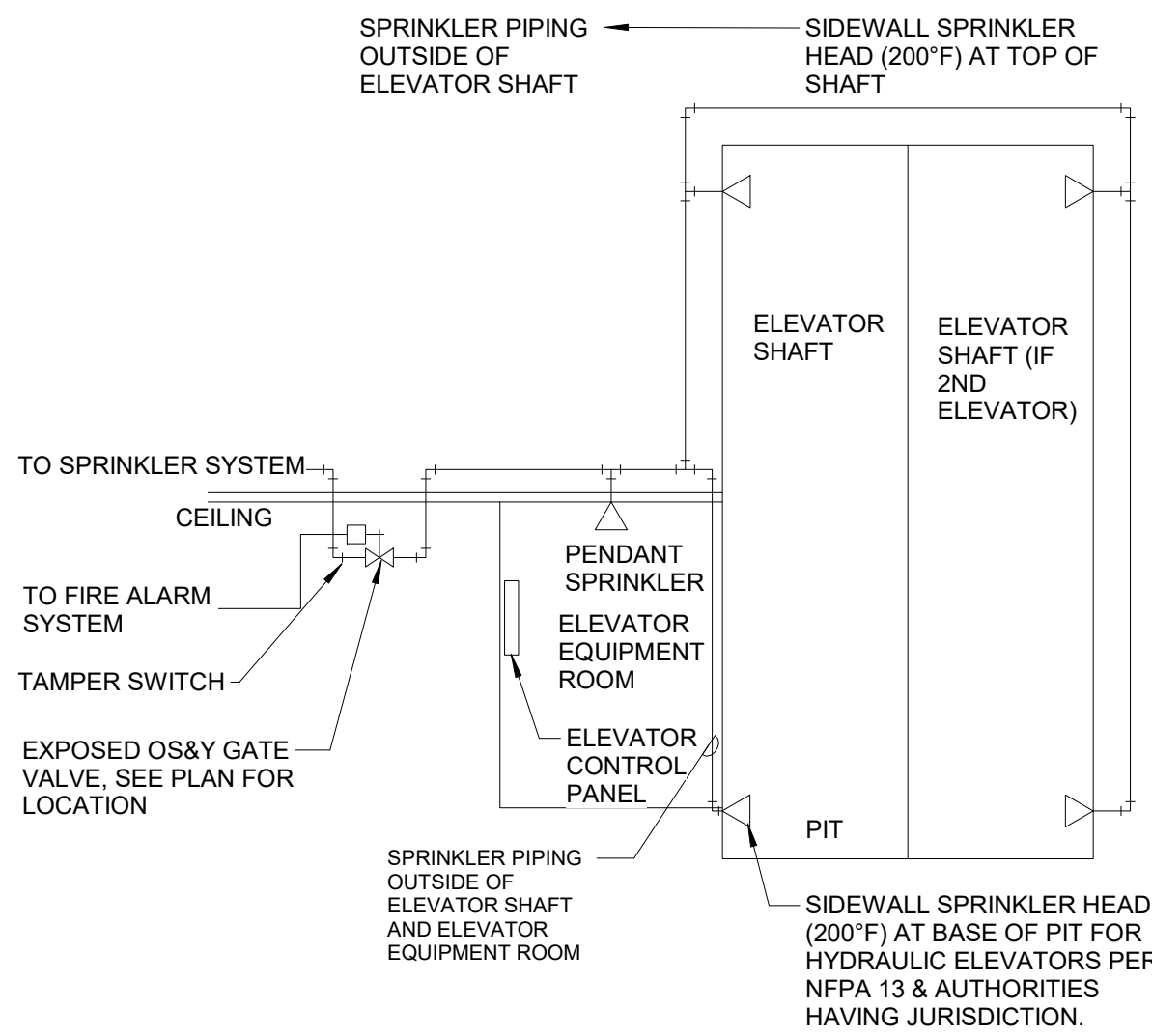
- NOTE:**
1. CONTRACTOR TO PROVIDE TRAP PRIMER. REFER TO TRAP PRIMER DETAIL FOR MORE INFORMATION.



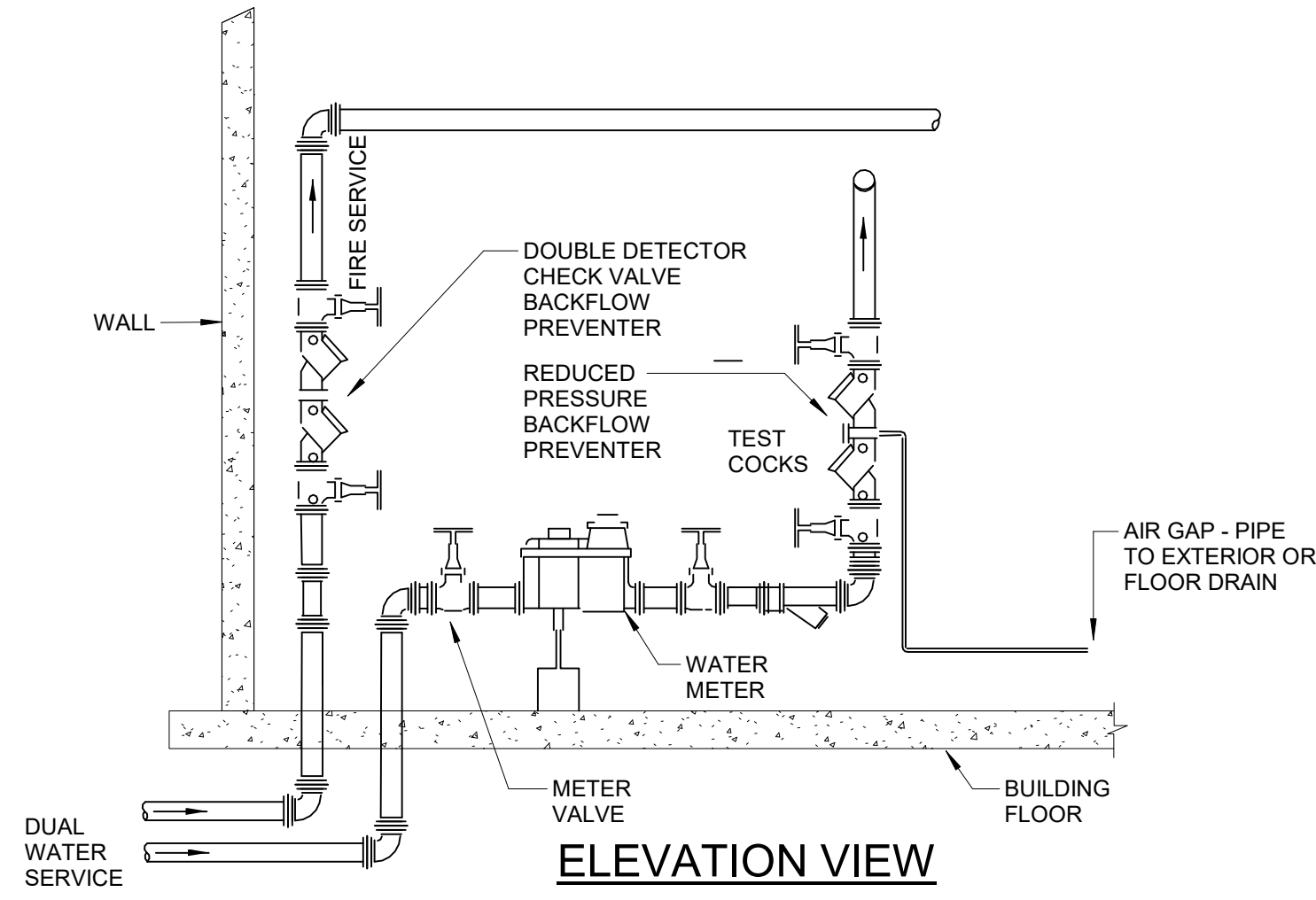
HUB DRAIN DETAIL
SCALE: NONE



TRAP PRIMER DETAIL (TP-1)
SCALE: NONE



ELEVATOR SPRINKLER PIPING DIAGRAM
NO SCALE



WATER SERVICE DETAIL
SCALE: NONE

- NOTES:**
1. BACKFLOW PREVENTERS TO BE SET A MINIMUM OF 12" FROM FLOOR TO THE LOWEST PART OF DEVICE, AND A MAXIMUM OF 5'-0" FROM THE FLOOR TO THE TOP OF DEVICE, AND 12" FROM ANY WALL.
 2. CONTRACTOR TO PROVIDE PRESSURE REDUCING VALVE IF PRESSURE EXCEEDS 80 PSI.
 3. CONTRACTOR TO COORDINATE INSTALLATION REQUIREMENTS WITH LOCAL UTILITY COMPANY.

DIMENSION	PIPE SIZE				
	3"	4"	6"	8"	10"
E	2'-1/2"	2'-5 1/2"	3'-1"	4'-5 1/2"	5'-8 3/4"
G	1'-6"	2'-6"	2'-6"	3'-6"	2'-6"
H	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"

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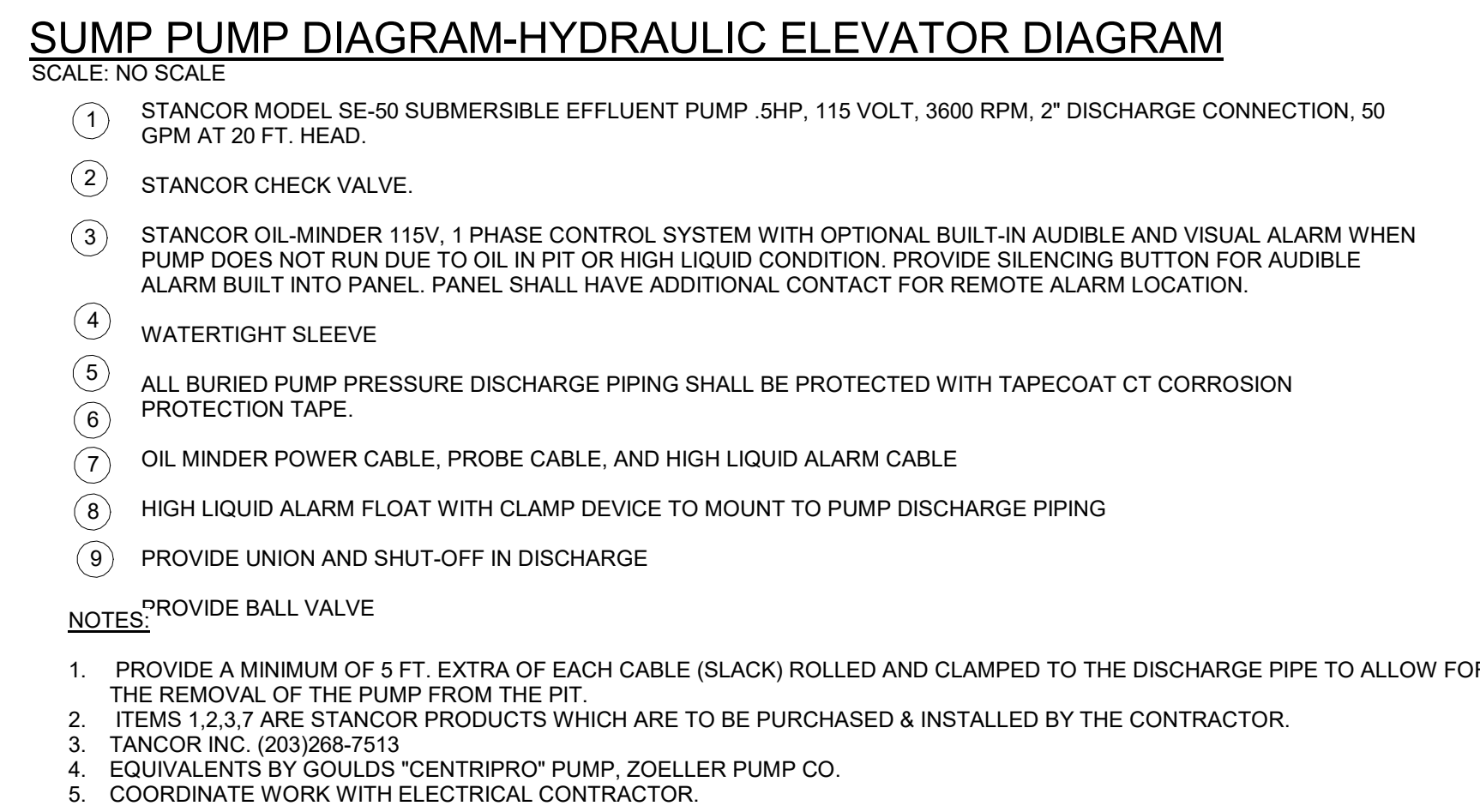
2023-141

Owner:
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2 New Road
Suite 123
Aston, PA 19014

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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Number:

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SCALE: NONE

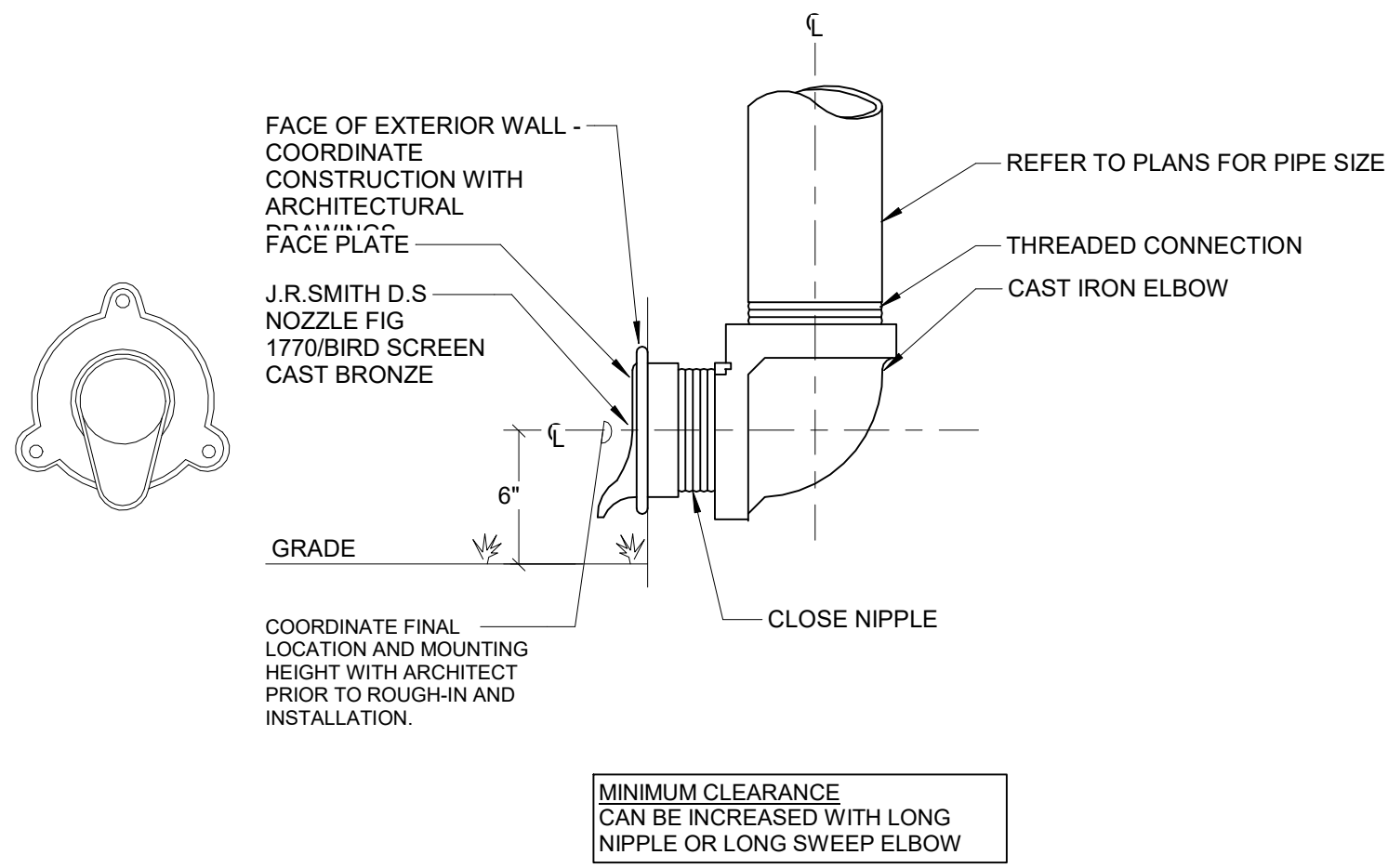
NOTE:
1. PROVIDE ACCESS COVER FOR FLOW CONTROL DEVICES.

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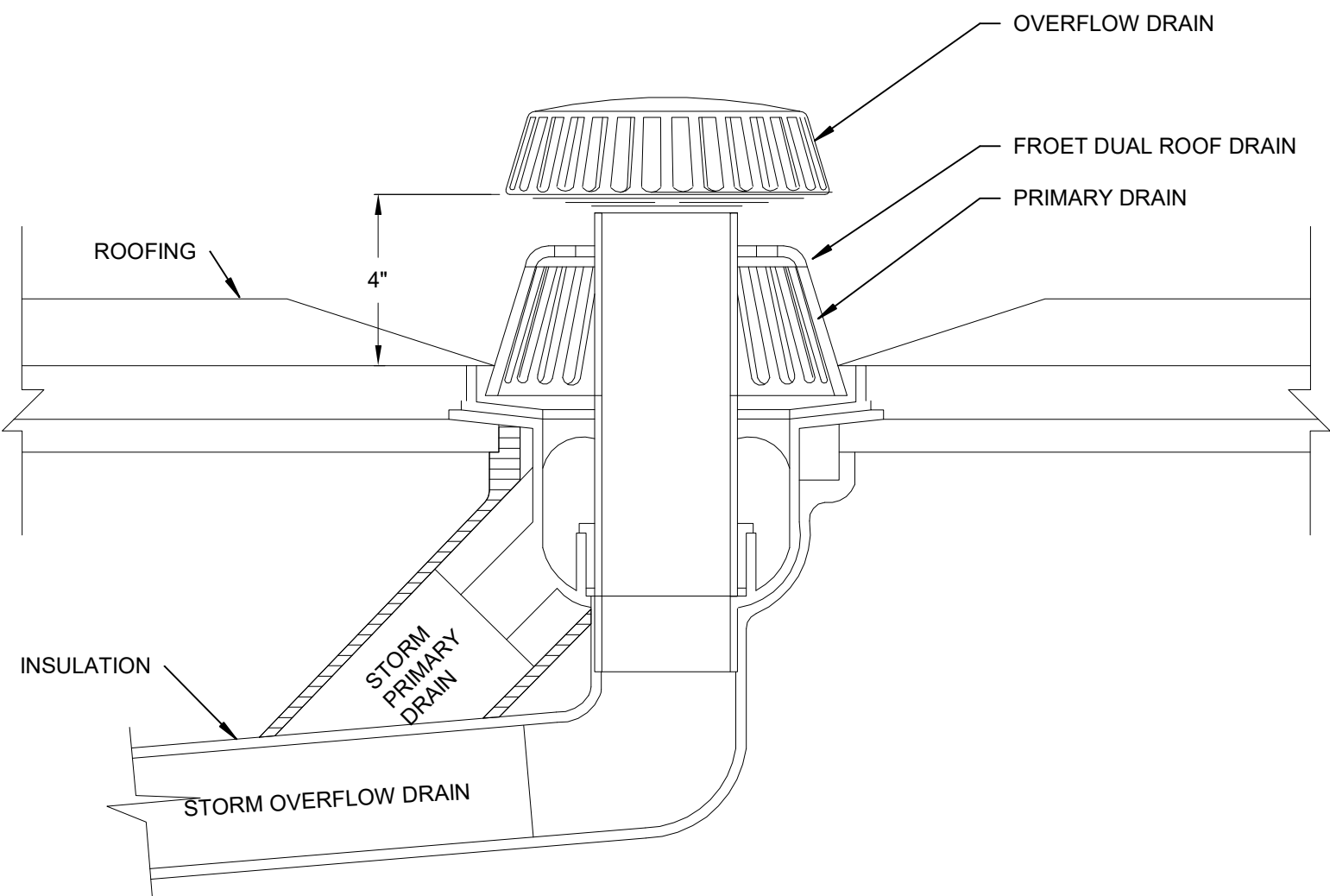
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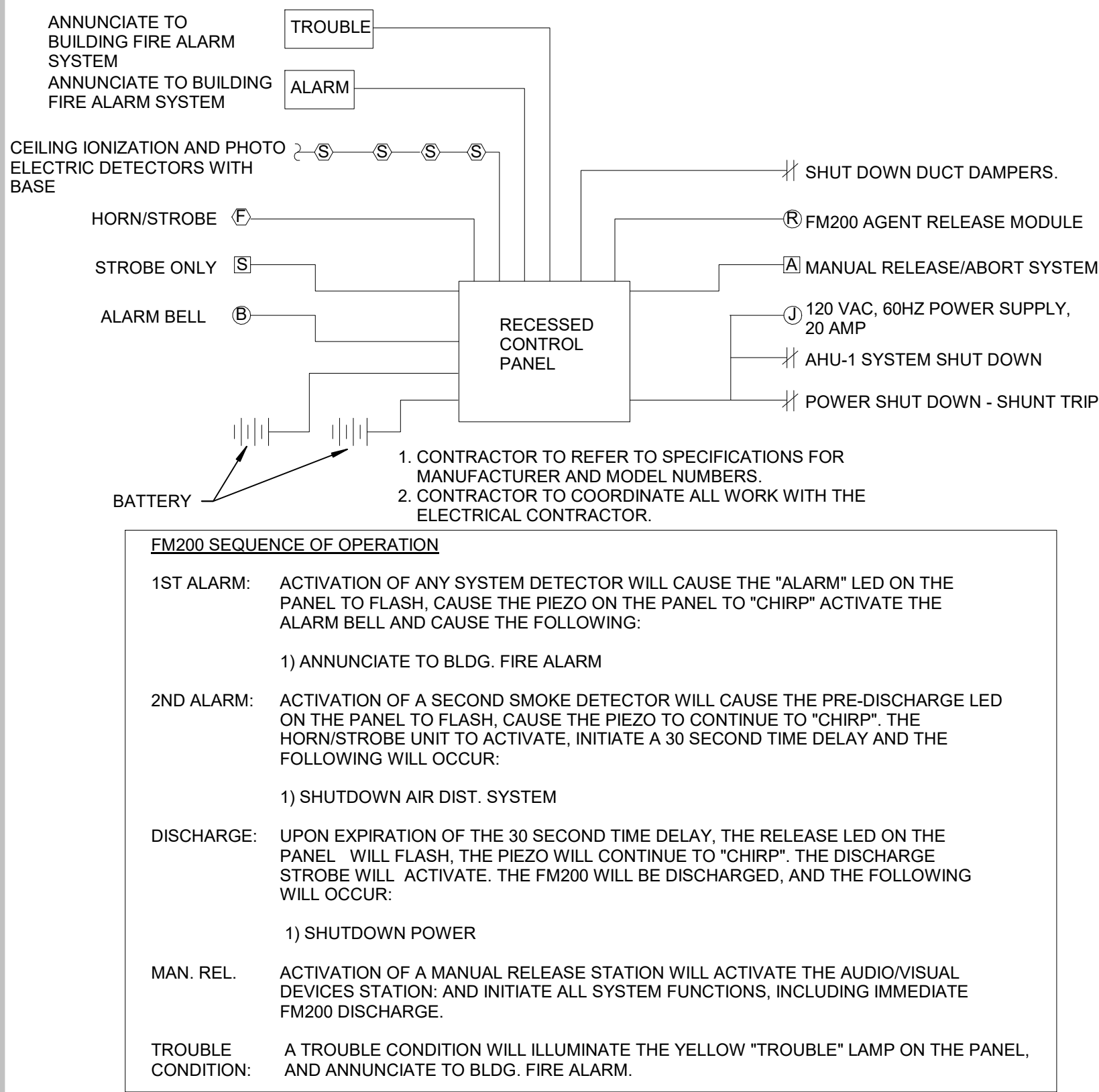
OVERFLOW DISCHARGE NOZZLE DETAIL

SCALE: NONE
NOTE:
1. CONTRACTOR TO REFER TO DRAWINGS AND SPECIFICATIONS FOR PIPING.
2. CONTRACTOR TO COORDINATE FINISH WITH ARCHITECT.



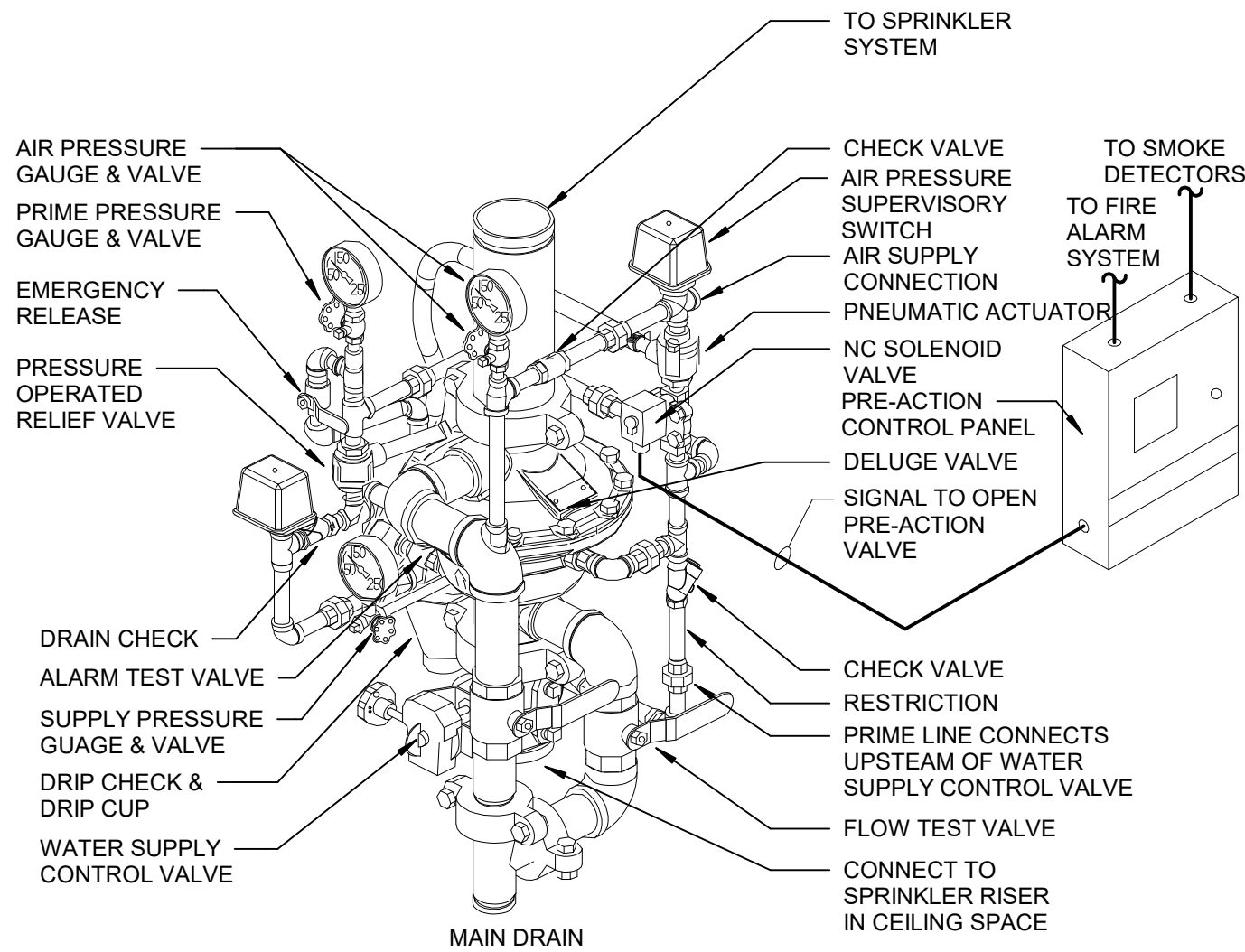
ROOF DRAIN DETAIL

NOT TO SCALE



FM200 RISER DIAGRAM

NOT TO SCALE



NOTES:

- DOUBLE INTERLOCK PRE-ACTION SYSTEMS SHALL MAINTAIN A MINIMUM SUPERVISING AIR OR NITROGEN PRESSURE OF 7 PSI.
- AIR OR NITROGEN SUPERVISING PRESSURE FOR PRE-ACTION SYSTEMS SHALL BE INSTALLED IN CONFORMANCE WITH THE DRY PIPE SYSTEM AIR PRESSURE AND SUPPLY RULES.
- ALL DEVICES ARE TO BE U.L. LISTED & FIRE MARSHALL APPROVED.
- BASED ON VIKING MODEL G-4000P DOUBLE INTERLOCK PREACTION W/ELECTRIC/PNEUMATIC RELEASE.
- CONTRACTOR TO COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR.
- FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR WIRING AND PROGRAMMING CONTROLLER.

DOUBLE INTERLOCK PRE-ACTION SYSTEM DETAIL

NOT TO SCALE

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PLUMBING FIXTURE SCHEDULE

1. ALL FIXTURES AND TRIM TO BE LEAD FREE																
2. ALL HANDICAP FIXTURES TO BE INSTALLED ADA COMPLIANT WITH OFFSET WASTE WHERE REQUIRED AND INCLUDING UNDERFIXTURE PROTECTIVE KIT.																
3. REFER TO SPECIFICATION FOR ADDITIONAL FIXTURE REQUIREMENTS AND ALTERNATE MFR.'S.																
4. ALL TRIM TO BE CHROME PLATED CAST BRASS.																
5. LAVATORIES IN PUBLIC TOILETS TO BE FURNISHED WITH GRID STRAINERS. FIXTURES IN PRIVATE TOILETS AND LOCKER ROOMS SHALL BE FURNISHED WITH POP-UP DRAINS.																
6. TRAPS FOR LAV./SINKS SHALL BE SEMI-CAST BRASS/17 GAUGE WASTE 1 1/4"x1 1/2" OR 1 1/2" DEPENDING ON FIXTURE OUTLET.																
7. ALL FIXTURES TO BE FURNISHED WITH INDIVIDUAL FIXTURE STOP VALVES. IN PUBLIC AREAS VALVES SHALL BE LOOSE KEY TYPE.																
8. ALL WALL HUNG FIXTURES TO BE PROVIDED WITH SUITABLE FLOOR MOUNTED SUPPORTS.																
9. WALL HUNG WATER CLOSETS SHALL BE PROVIDED WITH COMBINATION CARRIER WITH HORIZONTAL OR VERTICAL FITTING TO SUIT PIPING ARRANGEMENT.																
10. VENTS NOTED ARE FOR INDIVIDUAL FIXTURE VENTS ONLY.																
11. WATER CLOSETS LOCATED IN PUBLIC AREAS SHALL BE PROVIDED WITH OPEN FRONT SEATS.																
12. COORDINATE WITH ARCHITECT FOR BLOCKING REQUIREMENTS.																
BASIS OF DESIGN (APPROVED MFR.'S ARE LISTED IN SPECIFICATIONS)																
TAG	DESCRIPTION	MANUFACTURER	MODEL NO.	FAUCET OR FLUSH VALVE	CARRIER OR SUPPORT	SENSOR OPERATED	COLOR/FINISH	FLOW (GPF)	MAP	ROUGH IN				FIXTURE UNITS		MEA NOTES:
CTL	COUNTER-TOP LAVATORY	KOHLER	CAXTON K-2210	DELTA 500-DST	COUNTER-TOP	-	WHITE	0.5 GPM	-	CW	HW	SAN	SWV	CW	HW	1 WATERSENSE LABELED.
EWC	ELECTRIC WATER COOLER	ELKAY	EZSTL8W/SLK	-	WALL MOUNTED	-	LIGHT GRAY	8 GPH	-	1/2"	-	1 1/4"	1 1/4"	-	-	BILEVEL WATER COOLER, ELKAY EZH20 BOTTLE FILLING STATION, FLEXIGUARD SAFETY BUBBLER, 115 V, 60 HZ, 6A, ADA COMPLIANT.
FD	FLOOR DRAIN	J.R. SMITH	2010	-	-	-	-	-	-	-	-	3"	2"	-	-	PROVIDE TRAP PRIMER, REFER TO SPEC SECTION 22 13 00 FOR MORE INFORMATION
FD-1	FLOOR DRAIN	J.R. SMITH	2530	-	-	-	-	-	-	-	-	4"	2"	-	-	BALL FLOAT BACKWATER VALVE, PROVIDE TRAP PRIMER, REFER TO SPEC SECTION 22 13 00 FOR MORE INFORMATION.
FD-2	FUNNEL DRAIN	-	-	-	-	-	-	-	-	-	-	4"	2"	-	-	PROVIDE TRAP PRIMER
HC	HOT AND COLD HOSE BIBB	ACORN ENGINEERING	8145	-	WALL MOUNTED	-	STAINLESS STEEL	-	-	3/4"	3/4"	-	-	-	-	LOCKABLE HOT AND COLD HOSE BIBB, VACUUM BREAKER.
LAV	LAVATORY HANDICAPPED	AMERICAN STANDARD	LUCERNE 0355.912	MOEN COMMERCIAL M-BITION 8432	WALL MOUNTED	-	WHITE	0.5 GPM	-	1/2"	1/2"	1 1/4"	1 1/4"	1.5	1.5	1 VITREOUS CHINA, ADA COMPLIANT, WATERSENSE LABELED.
MR	MOP RECEPTOR	FIAT	TSB-1610	FIAT 830-AA	FLOOR MOUNTED	-	TERRAZZO	1.5 GPM	-	1/2"	1/2"	3"	2"	-	-	CORNER MOP RECEPTOR, 24"x24"x12", 832-AA HOSE AND BRACKETS, 833-AA SILICONE SEALANT, & BUMPER GUARD
RD/OD	ROOF DRAIN OVERFLOW DRAIN	FROET	100	-	-	-	-	-	-	-	-	2' 3", 4' 5", 6' 8"	-	-	-	DUAL DRAIN DESIGN, 5" HIGH PRIMARY STRAINER, 6" HIGH OVERFLOW INLET, CAST IRON BODY.
SH	SHOWER HANDICAPPED	FREEDOM	APF6233BF875	MOEN 834ZEP15	FLOOR MOUNTED	-	WHITE	1.5 GPM	-	1/2"	1/2"	2"	2"	-	-	62"x32.75"x78.825" ONE-PIECE SHOWER, TEXTURED FLOOR, ADA COMPLIANT, WATERSENSE LABELED.
SK	KITCHEN SINK HANDICAPPED	ELKAY	LUSTERONE LRAD332255	DELTA 100-DST	DROP-IN	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	33"x22"x5-1/2", 18 GAUGE 304 STAINLESS STEEL, EQUAL DOUBLE BOWL, REAR CENTER DRAIN, SINGLE LEVER FAUCET, ADA COMPLIANT.
SK-1	KITCHEN SINK HANDICAPPED	ELKAY	LUSTERONE LRAD252240	DELTA 100-DST	DROP-IN	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	25"x22"x4", 18 GAUGE 304 STAINLESS STEEL, SINGLE BOWL, REAR CENTER DRAIN, ADA COMPLIANT.
SK-2	KITCHEN SINK	ELKAY	CROSSTOWN ECTSR33229TBG	ELKAY LKEC2031	UNDERMOUNT	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	33"x22"x9", 18 GAUGE 304 STAINLESS STEEL, DOUBLE BOWL, REAR CENTER DRAIN, PROVIDE ELKAY PART #64090022 FOR DROP-IN INSTALLATION.
UR	URINAL HANDICAPPED	AMERICAN STANDARD	TRIMBROOK 6561.017	SLOAN ROYAL 180 ESS	WALL MOUNTED	-	WHITE	1.0 GPF	-	3/4"	-	2"	2"	-	-	VITREOUS CHINA, ADA COMPLIANT (REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT).
WC	WATER CLOSET HANDICAPPED	AMERICAN STANDARD	MADERA FLOWWISE 3461.001	SLOAN ROYAL 111 ESS	FLOOR MOUNTED	-	WHITE	1.28 GPF	-	1"	-	4"	2"	10	-	4 VITREOUS CHINA, 16-1/2" HEIGHT FLOOR MOUNTED FLUSH VALVE, ELONGATED BOWL, EVERCLEAN SURFACE, ADA COMPLIANT, PROVIDE TOILET SEAT.
WC-1	COMBINATION FIXTURE	ACORN	1432AL	ACORN	FLOOR MOUNTED	-	STAINLESS STEEL	1.28 GPF	-	1"	1/2"	3"	2"	11.5	1.5	5 LOW CONSUMPTION, FLUSHING RIM, INTEGRAL STRAINER, WASHOUT FLUSH ACTION.
WH	WALL HYDRANT	J.R. SMITH	5509QT	-	-	-	-	-	-	3/4"	-	-	-	-	-	1/4 TURN NON-FREEZE WALL HYDRANT, INTEGRAL VACUUM BREAKER, 20 GAUGE STAINLESS STEEL BOX, OPERATING KEY LOCK.

WATER HEATER SCHEDULE

TAG	LOCATION	TYPE	MANUFACTURER	MODEL NO.	GALLON STORAGE	ENERGY FACTOR	THERMAL EFFICIENCY	RECOVERY 90°F RISE	BTU INPUT	ELECTRICAL			NOTES:
										WATTS	VOLTS	PHASE	
EW-H-1	WATER ROOM	ELECTRIC	BRADFORD WHITE	LE230S3-3	30	-	-	21 GAL	-	4500	-	-	18" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.
EW-H-2	MECHANICAL(210)	ELECTRIC	BRADFORD WHITE	LE255T3-3	55	-	-	25 GAL	-	5500	-	-	23" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.
EW-H-3	MECHANICAL(210)	ELECTRIC	BRADFORD WHITE	LE255T3-3	55	-	-	25 GAL	-	5500	-	-	23" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.

PLUMBING PUMP SCHEDULE

SYMBOL	TYPE	MANUFACTURER	MODEL	CONFIGURATION	GPM	HEAD	HP	HEADER SIZE	WATTS	ELECTRICAL			NOTES:
										VOLTS	PHASE		
P-1	HOT WATER RECIRCULATION PUMP	TACO	0015E3	INLINE	4	12 FT	-	-	44	115	1		HIGH EFFICIENCY CIRCULATOR, SET TO LOWEST MODE REQUIRED TO BALANCE SYSTEM. REFER TO DETAIL.
P-2	HOT WATER RECIRCULATION PUMP	TACO	0015E3	INLINE	4	12 FT	-	-	44	115	1		HIGH EFFICIENCY CIRCULATOR, SET TO LOWEST MODE REQUIRED TO BALANCE SYSTEM. REFER TO DETAIL.
ESP-1	SUMP PUMP	STANCOR	SE-50	-	50	22	0.5	-	-	-	1		

EXPANSION TANK SIZE SCHEDULE

WATER HEATER GALLONS	EXTROL SIZE GALLONS		DIAMETER	HEIGHT	CONN. SIZE
	TOTAL	ACCEPTANCE			
1 TO 50	2	0.9	8"	12 1/2"	3/4"
51 TO 100	4.4	2.4	11"	15"	3/4"
100 TO 199	8.6	8.6	11"	24 3/4"	3/4"
200 AND OVER	11.3	14	15 3/8"	23 7/8"	1"

NOTICE

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Consultant:
McHUGH ENGINEERING ASSOCIATES, INC.
136 Poplar Street
Ambler, PA 19002
215-641-1158
2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

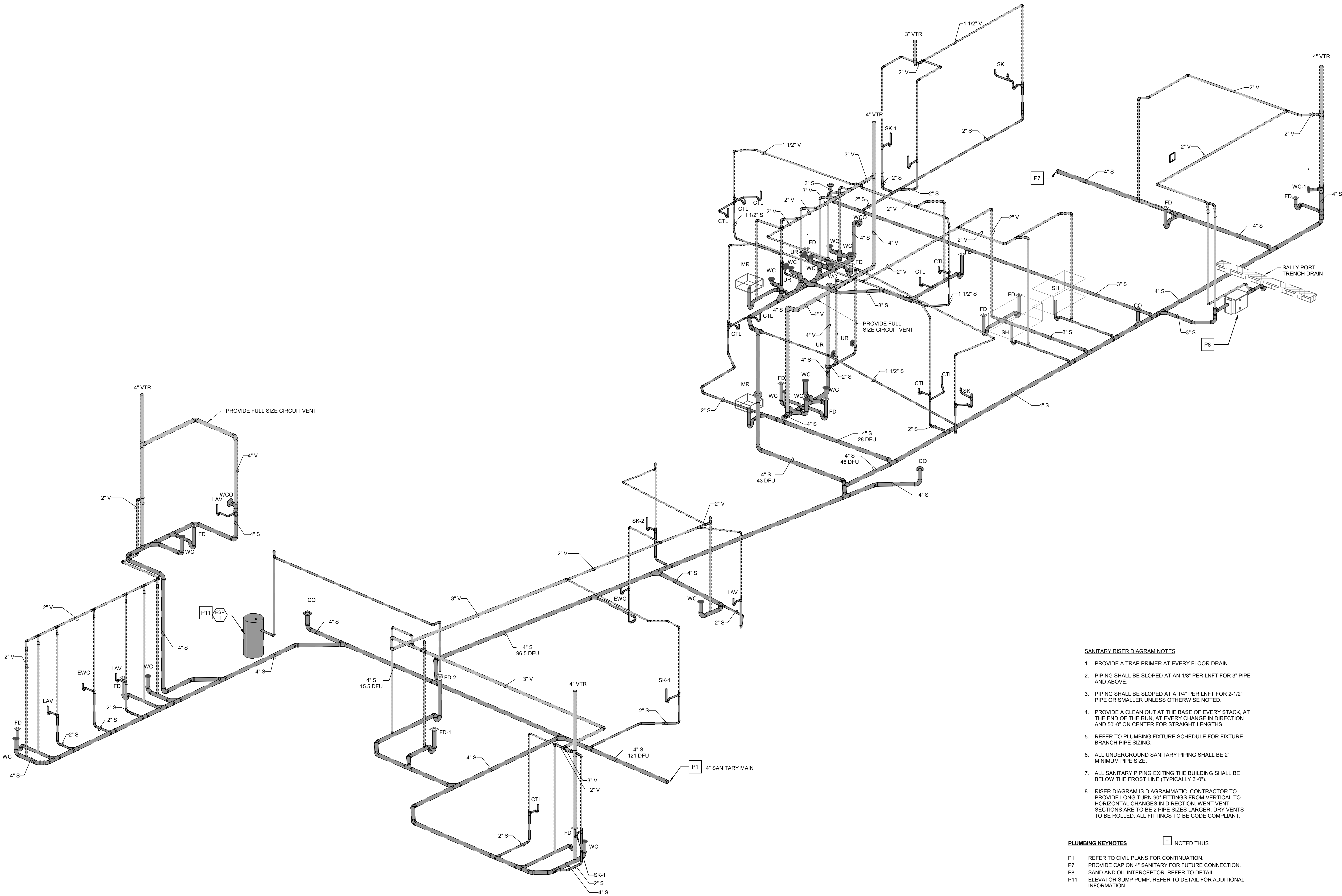
Owner:
ASTON TOWNSHIP
2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:
0 03/29/24 Issued

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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
**RISER DIAGRAMS-
SANITARY**

Sheet Number:
P-401



SANITARY RISER DIAGRAM
NOT TO SCALE

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2023-141

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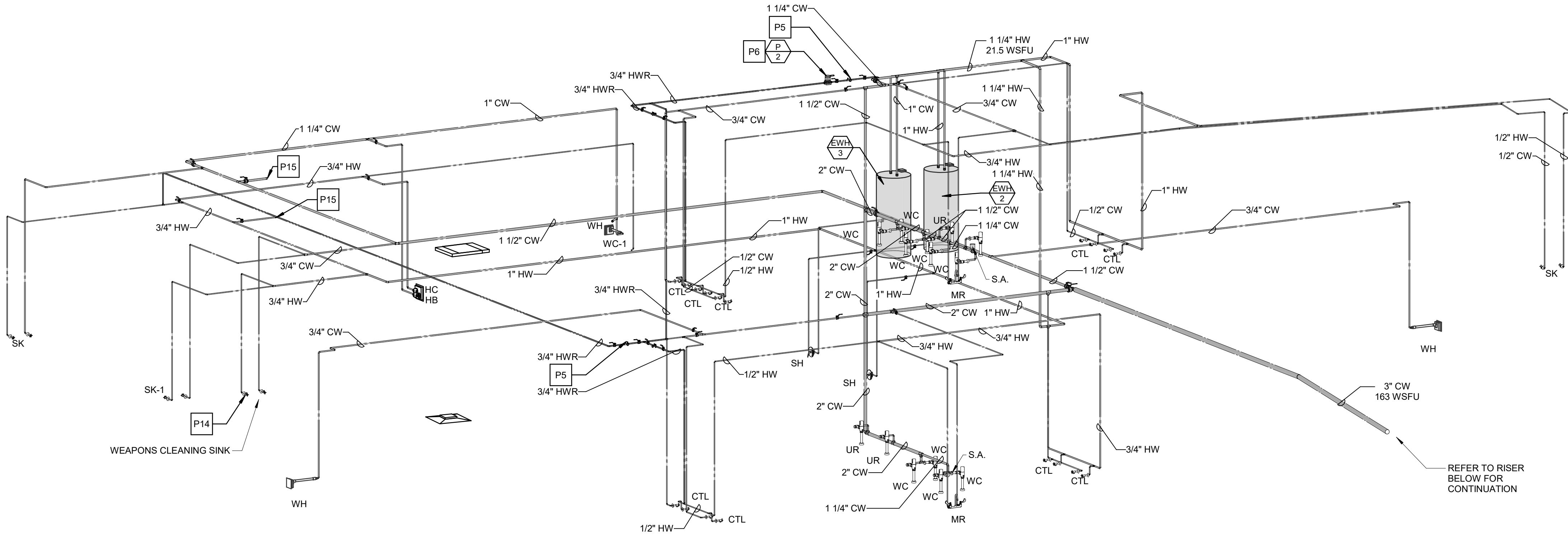
Owner:
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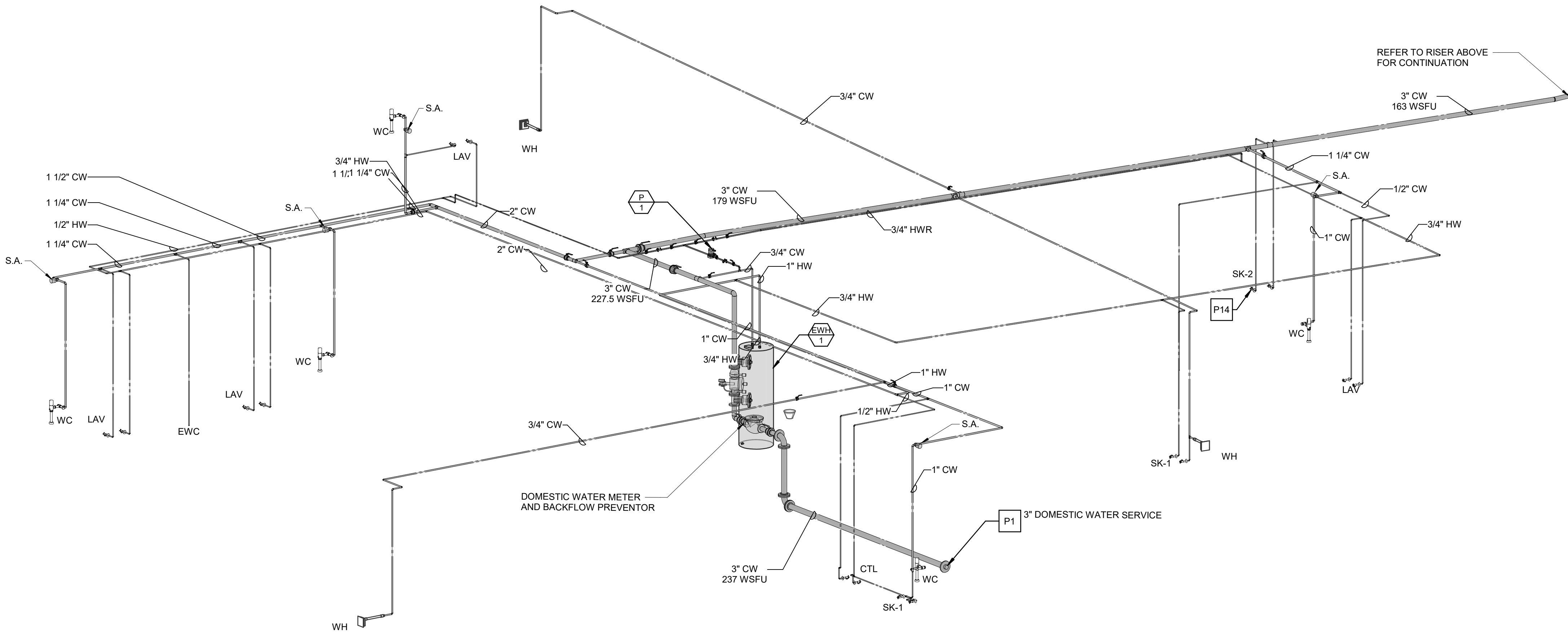
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Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
RISER DIAGRAMS- DOMESTIC WATER

Sheet Number:
P-402



DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE



DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE

- DOMESTIC WATER RISER DIAGRAM NOTES**
1. PROVIDE A TRAP PRIMER AT EVERY FLOOR DRAIN.
 2. PROVIDE A SHUT OFF VALVE AT EACH PIECE OF EQUIPMENT.
 3. PROVIDE A CHECK VALVE AND BALANCING VALVE AT EVERY DOMESTIC HOT WATER RETURN BRANCH / LOOP. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A CERTIFIED BALANCING REPORT ON EACH HOT WATER RETURN SYSTEM.
 4. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE BRANCH PIPE SIZING.

- PLUMBING KEYNOTES**
- ☐ NOTED THUS
- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
P5 PROVIDE HOT WATER BALANCING VALVE AND SHUTOFF VALVE.
P6 HOT WATER RECIRCULATION PUMP. REFER TO DETAIL.
P14 PROVIDE GUARDIAN 6186 ANSI-COMPLIANT WALL MOUNTED EYEWASH AT SINK. COORDINATE SPECIFIC MODEL AND MOUNTING OPTION WITH ARCHITECT PRIOR TO ORDERING.
P15 PROVIDE G8020 THERMOSTATIC MIXING VALVE FOR EYEWASH.
PROVIDE CAP ON 1\"/>

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136 Poplar Street
Ambler, PA 19002
215-641-1158
2023-141

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Aston, PA 19014

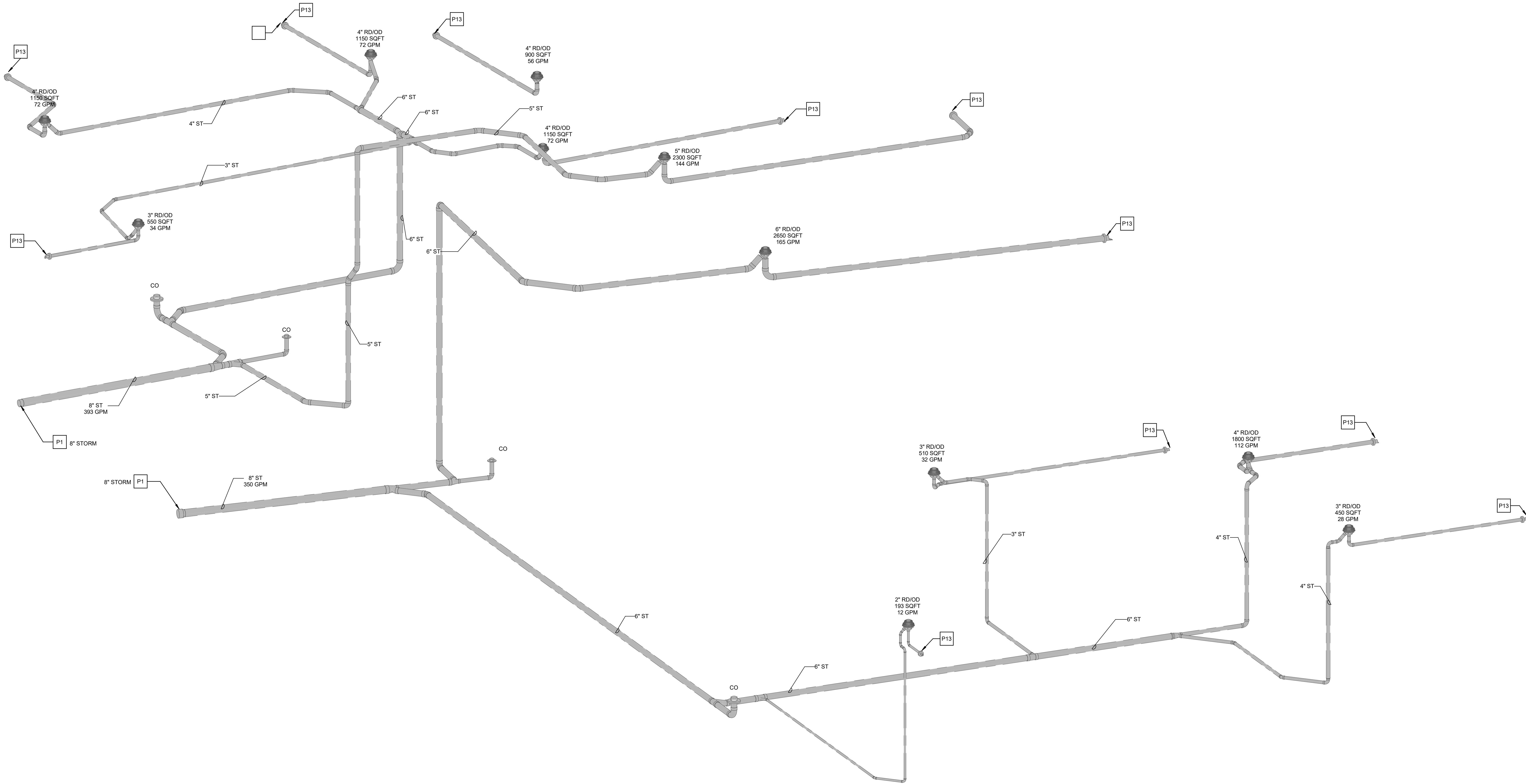
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Revision/Issue:
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Contact: Paul Andrew Sgroi
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Sheet Title:
**RISER DIAGRAMS-
STORM WATER**

Sheet Number:
P-403



STORM WATER RISER DIAGRAM
NOT TO SCALE

PLUMBING KEYNOTES

P1 REFER TO CIVIL PLANS FOR CONTINUATION.
P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL.

NOTED THUS

RAIN WATER RISER DIAGRAM NOTES

1. PIPING SHALL BE SLOPED AT AN 1/8" PER LNFT. FOR 3" PIPE DIAMETER AND GREATER AND 1/4" PER LNFT FOR 2" OR SMALLER UNLESS OTHERWISE NOTED.
2. PROVIDE A CLEAN OUT AT THE BASE OF EVERY STACK, AT THE END OF THE RUN, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
3. ALL STORM WATER PIPING EXITING THE BUILDING SHALL BE BELOW THE FROST LINE (TYPICALLY 3'-0").

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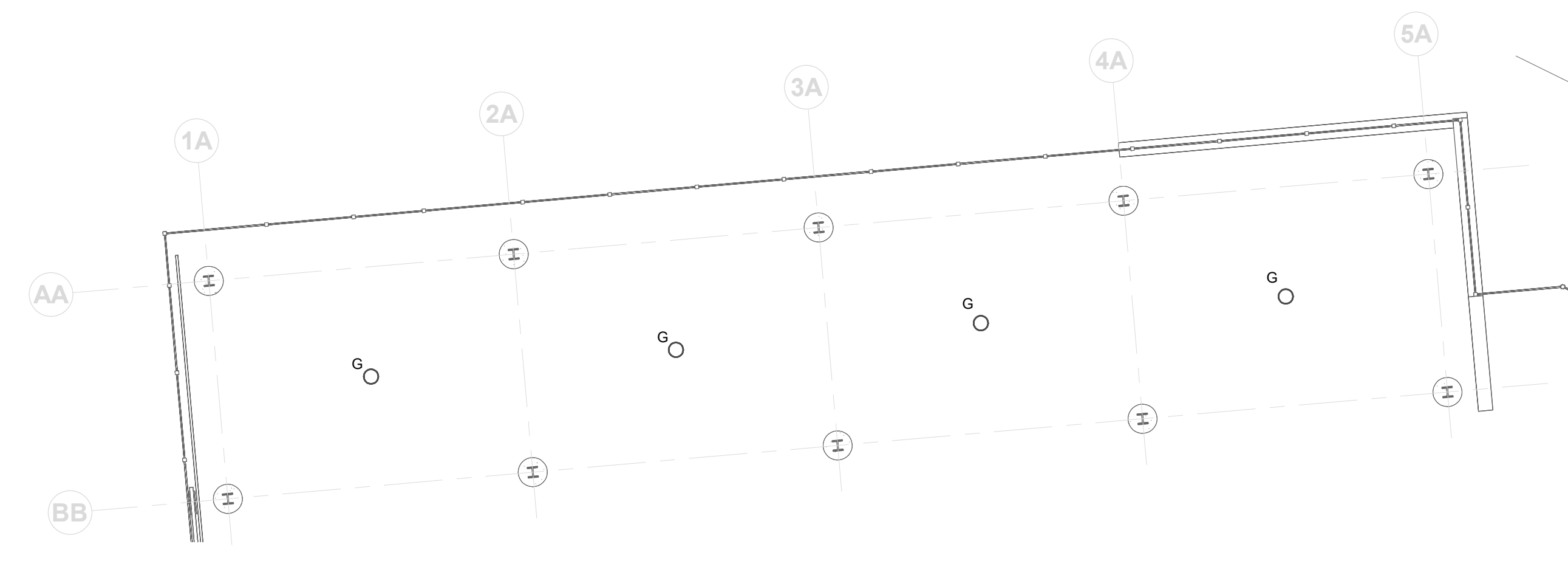
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1 FIRST FLOOR PLAN- LIGHTING
1/8" = 1'-0"



2 VEHICLE SHLTER- LIGHTING
1/8" = 1'-0"

ELECTRICAL KEY NOTES

NOTED THUS

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Consultant:
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136 Poplar Street
Ambler, PA 19002
215-641-1158
2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

Owner:
ASTON TOWNSHIP
2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:
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Drawn: IM
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
FIRST FLOOR PLAN -LIGHTING

Sheet Number:
E-101

Consultant:
McHUGH ENGINEERING ASSOCIATES, INC.
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Contact: Paul Andrew Sgroi
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Sheet Title:
SECOND FLOOR PLAN- LIGHTING

Sheet Number:
E-102



1 SECOND FLOOR PLAN- LIGHTING
1/8" = 1'-0"

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Consultant:

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ASSOCIATES, INC.**
36 Poplar Street
Ambler, PA 19002
610-641-1158

023-141

Project:

**ASTON TOWNSHIP
MUNICIPAL COMPLEX
1264 Concord Road
Aston, PA 19014**

Owner:

ASTON TOWNSHIP
2000 New Road
Suite 123
Aston, PA 19014

Revision/Issue:

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Sheet Title:

FIRST FLOOR PLAN- POWER

Sheet Number:

E-103

2024 Bernardon Design PC



1 FIRST FLOOR PLAN- POWER
1/8" = 1'-0"

2 VEHICLE SHELTER- POWER
1/8" = 1'-0"

ELECTRICAL KEY NOTES

⊖ NOTED THUS

E1	COORDINATE WIREMOLD REQUIREMENTS WITH OWNER
E2	COORDINATE LOCKER POWER REQUIREMENTS WITH FINAL SELECTION

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136 Poplar Street
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215-641-1158
2023-141

Project:
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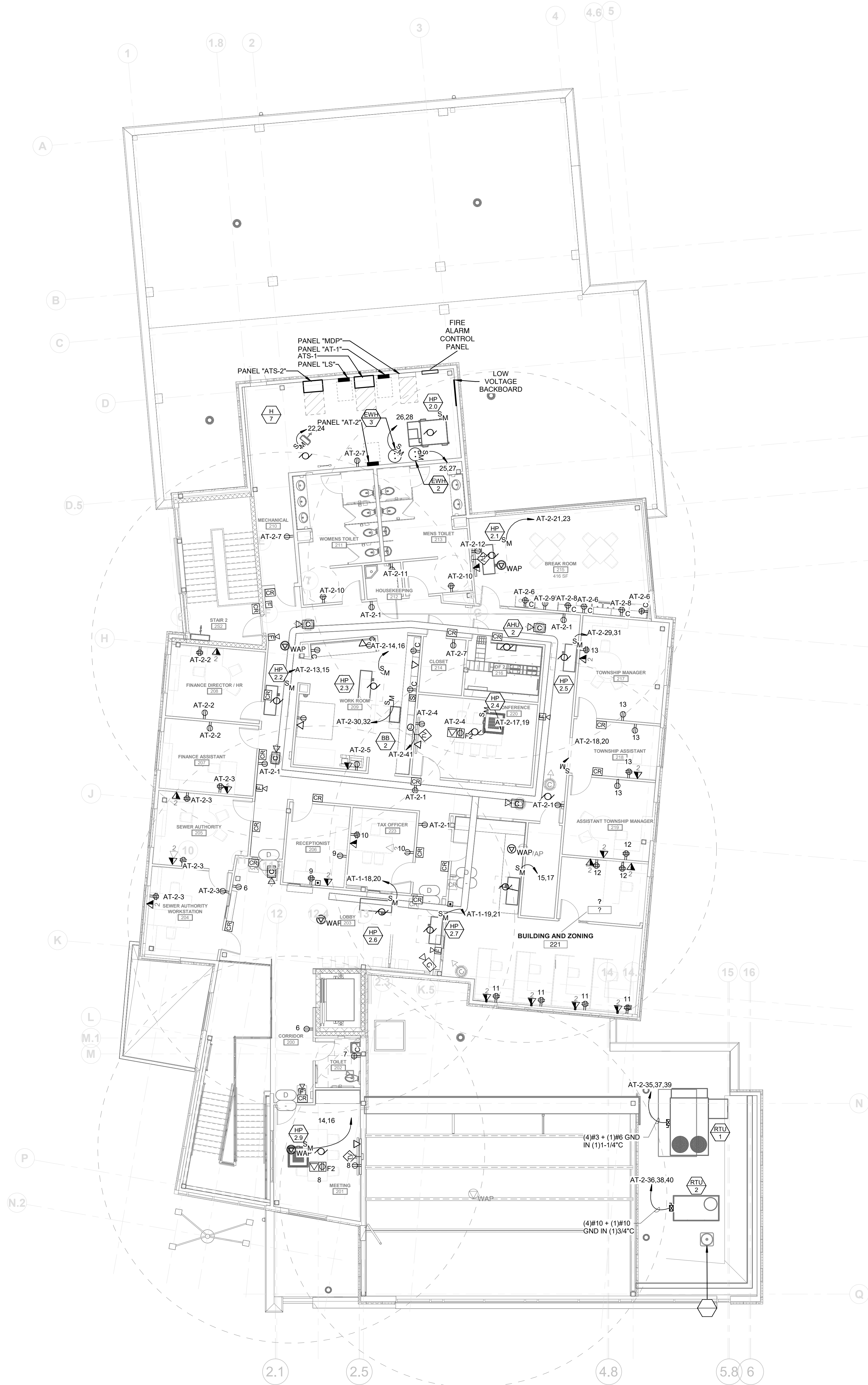
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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
SECOND FLOOR PLAN- POWER

Sheet Number:
E-104

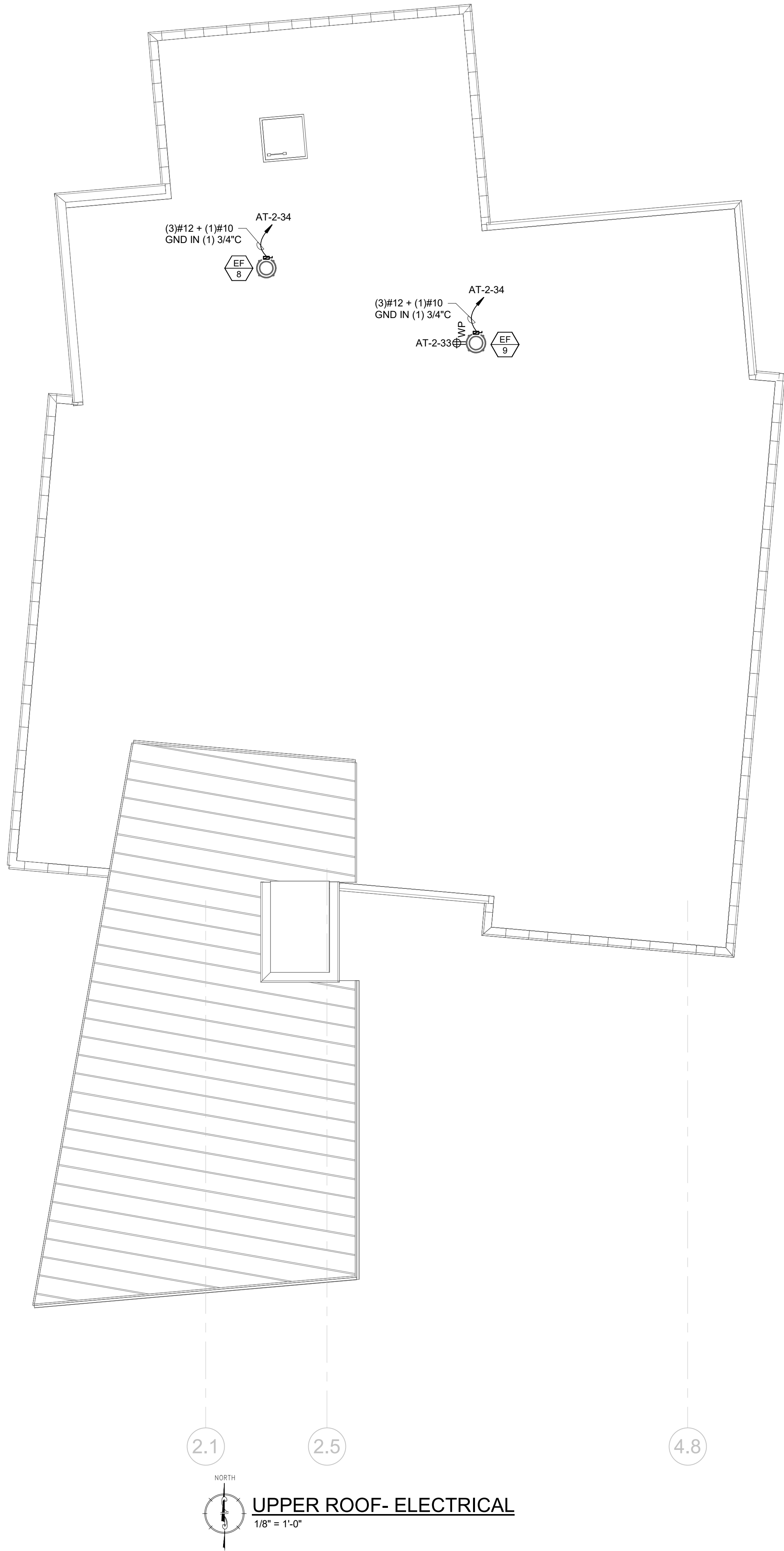


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136 Poplar Street
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215-641-1158
2023-141

Project:
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3264 Concord Road
Aston, PA 19014

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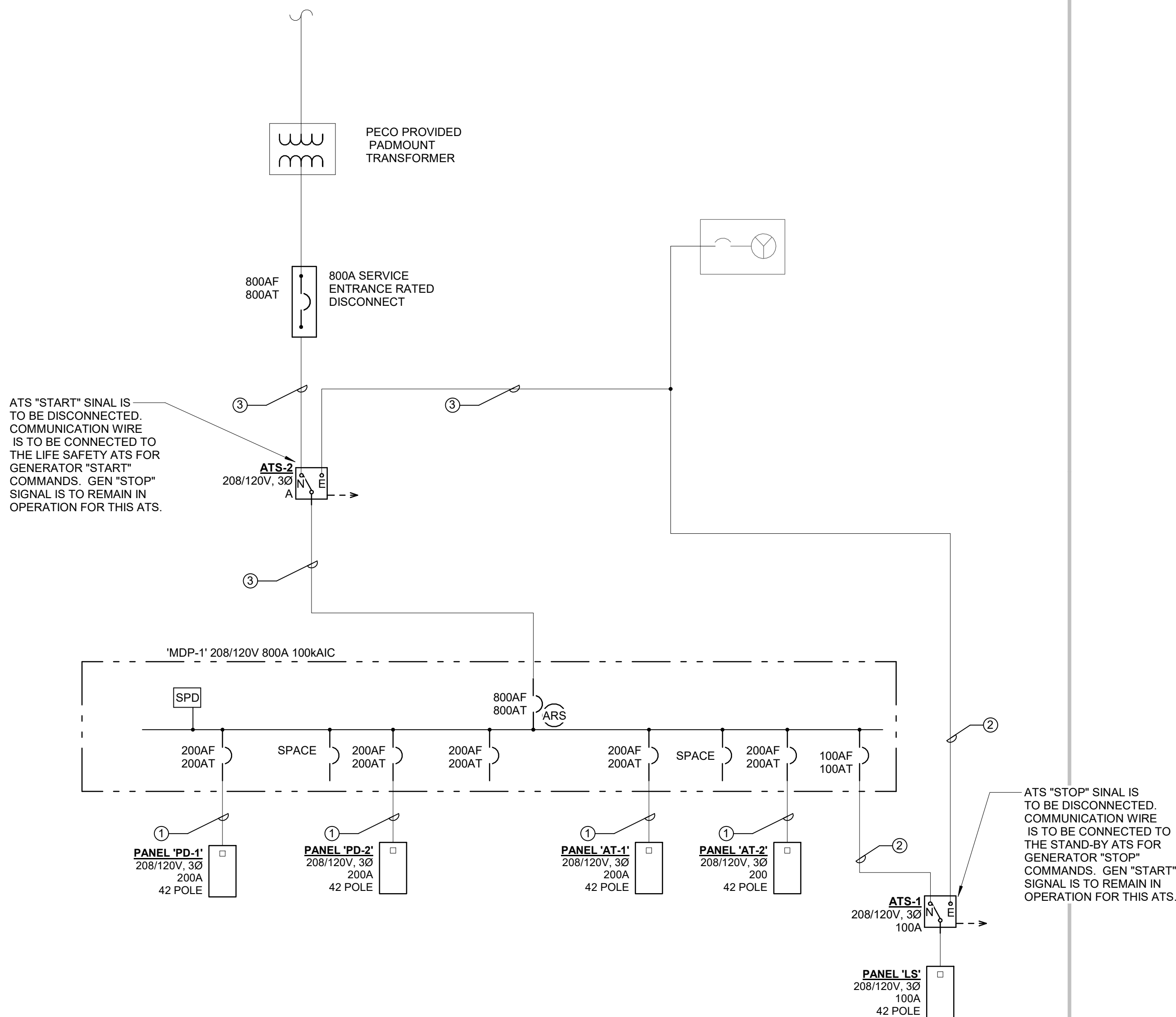
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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
ROOF PLAN- ELECTRICAL

Sheet Number:
E-105

GRS CONDUIT, SCHEDULE 40 PVC, EMT OR IMC UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR APPLICATION REQUIREMENTS.

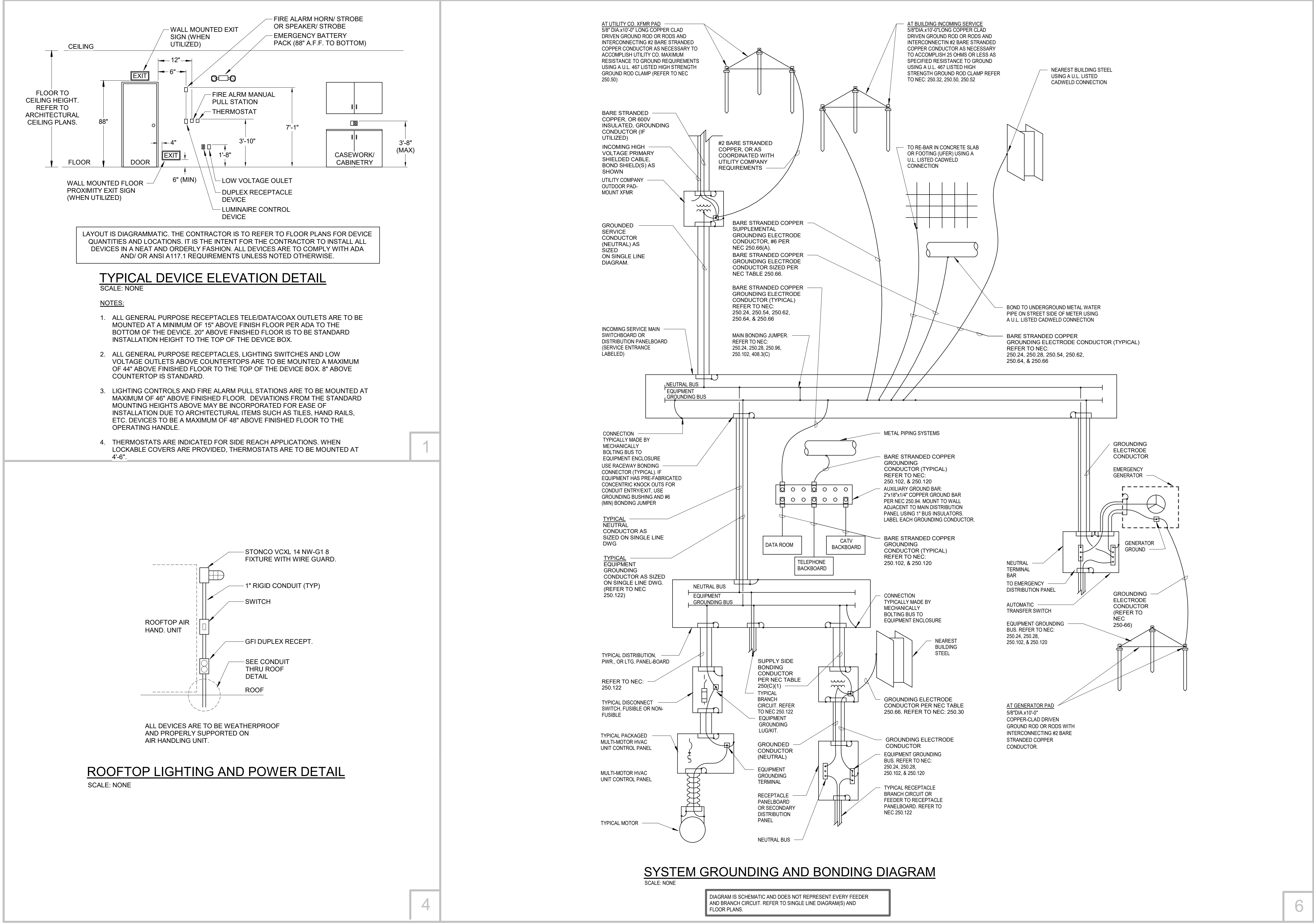


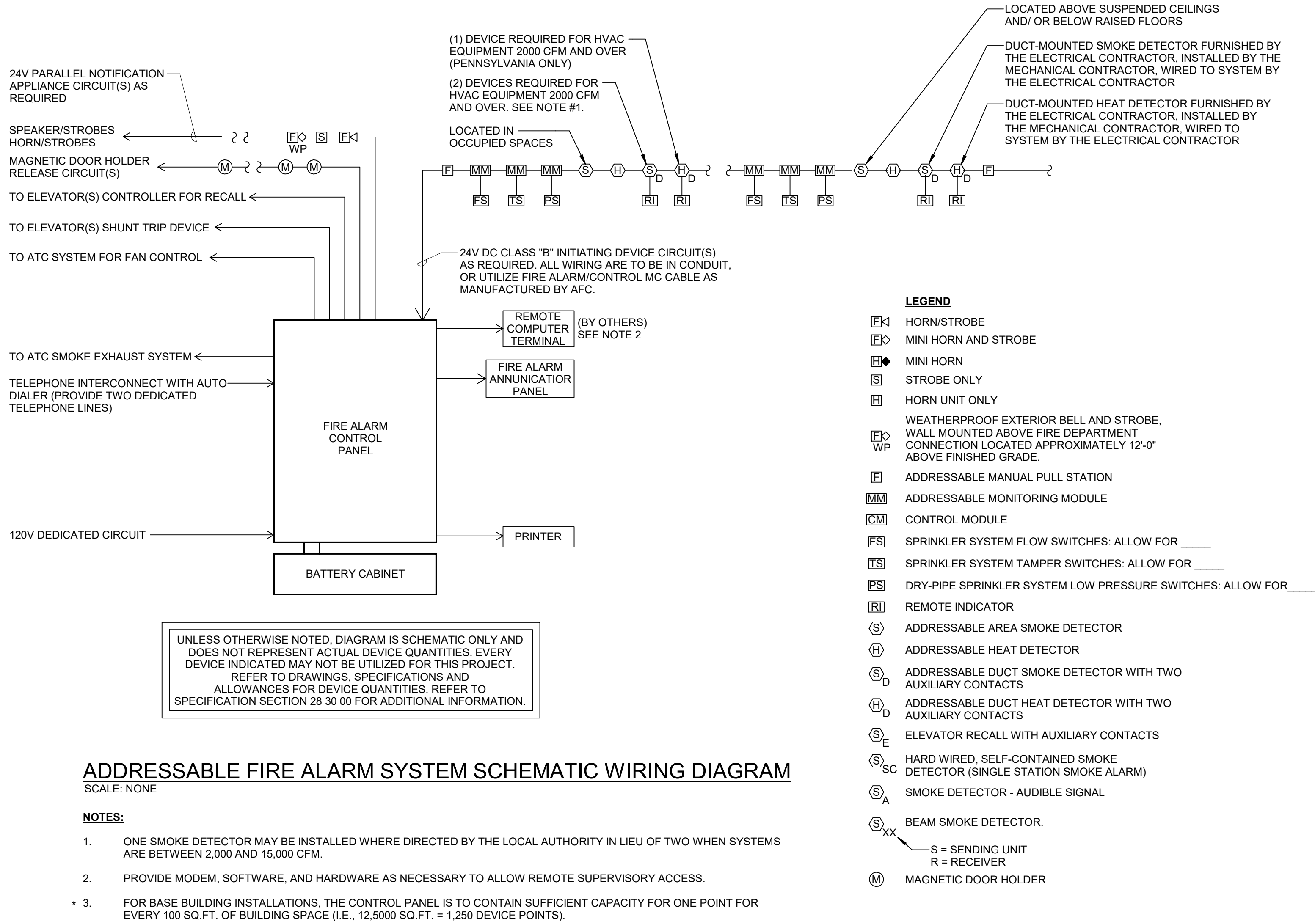
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Switchboard: MDP

Location: MECHANICAL 210

Supply From:

Mounting:

Enclosure:

Volts: 208/120 Wye

Phases: 3

Wires: 4

A.I.C. Rating:

Mains Type:

Mains Rating:

MCB Rating: 1 A

Notes:

CKT		Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	ATS-1		3	100 A	100 A	0 VA	
2	ATS-2		3	400 A	20 A	0 VA	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total Conn. Load:						0 VA	
Total Amps:						0 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
LIGHTING	0 VA	0.00%	0 VA	
				Total Conn. Load: 0 VA
				Total Est. Demand: 0 VA
				Total Conn. Current: 0 A
				Total Est. Demand Current: 0 A

Notes:











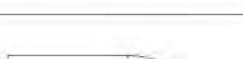









PANEL SCHEDULE														AT-1	
PANEL... AT-1				MAINS: 200 A				ENCLOSURE						Type 1	
A.I.C.				MCB:				NEMA:						MOUNTIN... SURFACE	
SERVED VIA				LUGS:				WIDTH: 20"							
208/120 Wye VOLT				TOP				BOTTOM:							
3 Ø 4 WIRE															
CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/ LOCATION	WATT	A	B	C	WATT	DESCRIPTION/ LOCATION	LOAD TYPE	POLE	TRIP	CKT	
1	20 A	1	LIGHTING	CORRIDOR LIGHTING	0	0	0	0	0	CONFERENCE LIGHTING	RECEPTACLE	1	20 A	2	
3	20 A	1	LIGHTING	MANAGER OFFICES LIGHTING	0	0	0	0	0	LOBBYMEETING LIGHTING	RECEPTACLE	1	20 A	4	
5	20 A	1	LIGHTING	SEWER/FINANCE LIGHTING	0	360	360	360	360	CORR 200 RECPT	RECEPTACLE	1	20 A	6	
7	20 A	1	RECEPTACLE	TOILET 202 RECPT	180	540	540	540	540	MEETING 201	RECEPTACLE	1	20 A	8	
9	20 A	1	RECEPTACLE	RECEPTIONIST 206 RECPT	540	540	540	540	540	TAX OFFICER RECPT	RECEPTACLE	1	20 A	10	
11	20 A	1	RECEPTACLE	BUILDING AND ZONING RECPT	1440	1080	1080	1080	1080	ASSIST TOWN MANAGER RECPT	RECEPTACLE	1	20 A	12	
13	20 A	1	RECEPTACLE	TOWN MANAGER RECPT	1200	104	104	104	104	Other MEETING	Other MEETING	2	20 A	14	
15	20 A	2	Other BUILDING AND ZONING 221	HP-2.8	1171	860	860	860	860	HP-2.9	Other MEETING	2	20 A	16	
17	20 A	2	Other LOBBY 221	HP-2.7	625	860	860	860	860	HP-2.6	Other	2	20 A	18	
19	20 A	2	Other LOBBY 203	HP-2.7	625	860	860	860	860	HP-2.6	Other	2	20 A	20	
21	20 A	2	Other LOBBY 204	HP-2.7	625	860	860	860	860	HP-2.6	Other	2	20 A	22	
23														24	
25														26	
27														28	
29														30	
31														32	
33														34	
35														36	
37														38	
39														40	
41														42	
43														44	
45														46	
47														48	
49														50	
51														52	
53														54	
55														56	
57														58	
59														60	
61														62	
63														64	
65														66	
67														68	
69														70	
71														72	
TOTAL WATTS					8520 VA					TOTAL AMPS					21 A

PANEL SCHEDULE														LS	
PANEL... LS				MAINS: 100 A				ENCLOSURE						Type 1	
A.I.C.				MCB:				NEMA:						MOUNTIN... SURFACE	
SERVED VIA				LUGS:				WIDTH: 20"							
208/120 Wye VOLT				TOP				BOTTOM:							
3 Ø 4 WIRE															
CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/ LOCATION	WATT	A	B	C	WATT	DESCRIPTION/ LOCATION	LOAD TYPE	POLE	TRIP	CKT	
1	20 A	1	LIGHTING	AT-EX LIGHTING	0	0	0	0	0	PD-EX LIGHTING	LIGHTING	1	20 A	2	
3	20 A	1	LIGHTING	STAIR OZ LIGHTING	0	0	0	0	0					4	
5														6	
7														8	
9														10	
11														12	
13														14	
15														16	
17														18	
19														20	
21														22	
23														24	
25														26	
27														28	
29														30	
31														32	
33														34	
35														36	
37														38	
39														40	
41														42	
TOTAL WATTS					0 VA					TOTAL AMPS					0 A

PANEL SCHEDULE														AT-2	
PANEL... AT-2			MAINS: 200 A						ENCLOSURE					Type 1	
A.I.C.			MCB:						NEMA:					MOUNTIN... SURFACE	
SERVED VIA			LUGS:						WIDTH: 20"						
208/120 Wye VOLT			TOP						BOTTOM:						
3 Ø 4 WIRE															
CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/ LOCATION	WATT	A	B	C	WATT	DESCRIPTION/ LOCATION	LOAD TYPE	POLE	TRIP	CKT	
1	20 A	1	RECEPTACLE	CORRIDOR RECPT	1080				720	HR FINANCE RECPT	RECEPTACLE	1	20 A	2	
3	20 A	1	RECEPTACLE	SEWER AUTH. RECPT	1620				360	CONF 220 RECPT	POWER	1	20 A	4	
5	20 A	1	RECEPTACLE	WORKROOM 209 PRINTER	180				540	BREAKROOM 215 COUNTER 1	RECEPTACLE	1	20 A	6	
7	20 A	1	RECEPTACLE	MICHELLE RECPT	540				360	BREAKROOM 215 COUNTER 2	RECEPTACLE	1	20 A	8	
9	20 A	1	REFRIGERATOR	BREAK 215 FRIDGE	900				360	TOILET 211 213 RECPT	RECEPTACLE	1	20 A	10	
11	20 A	1	RECEPTACLE	HOUSEKEEPING RECPT	180				180	BREAKROOM 215 RECPT	RECEPTACLE	1	20 A	12	
13	20 A	2	Other	HP-2.2	860				860	HP-2.3	Other WORK ROOM 209	2	20 A	14	
15														16	
17	20 A	2	Other	CONFERENCE...	HP-2.4				860	HP-2.5	Other	2	20 A	18	
21	20 A	2	Other	BREAK ROOM 215	HP-2.1	54			4000	H-6	Other MECHANICAL 210	2	20 A	22	
23	20 A	2	Other	MECHANICAL 210	HP-2.1	5500			5500	EVH-3	Other MECHANICAL 210	2	20 A	24	
25	20 A	2	Other	MECHANICAL 210	HP-2.1	5500			5500	EVH-3	Other MECHANICAL 210	2	20 A	26	
27	20 A	2	Other	MECHANICAL 210	HP-2.1	5500			5500	EVH-3	Other MECHANICAL 210	2	20 A	28	
29	20 A	2	Other	MECHANICAL 210	HP-2.1	5500			5500	EVH-3	Other MECHANICAL 210	2	20 A	30	
31	20 A	2	Other	MECHANICAL 210	HP-2.1	5500			5500	EVH-3	Other MECHANICAL 210	2	20 A	32	
33	20 A	1	RECEPTACLE	RECEPTS - ROOFTOP	180				1000	EF-8 & EF-9	EQUIPMENT	1	20 A	34	
35														36	
37	90 A	3	EQUIPMENT	RTU-1	30000				7500	RTU-2	EQUIPMENT	3	30 A	38	
39	20 A	1	EQUIPMENT...		500									40	
41	20 A	1	EQUIPMENT...		500									42	
43														44	
45														46	
47														48	
49														50	
51														52	
53														54	
55														56	
57														58	
59														60	
61														62	
63														64	
65														66	
67														68	
69														70	
71														72	
					TOTAL WATTS		65804 VA							TOTAL AMPS 183 A	

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LOW VOLTAGE SYSTEMS SYMBOL LEGEND

SYMBOL:	DESCRIPTION:	BACKBOX:	CONDUITS:	MOUNTING HEIGHT:	ELECTRONICS:	TELECOM CABLE:	POWER REQUIREMENTS:	SPECIFICATION SECTION
	CEILING RECESSED LOUDSPEAKER	CUSTOM BACK BOX	N/A	CEILING RECESSED	LOUDSPEAKER	N/A	N/A	27 41 00
	WALL MOUNTED LOUDSPEAKER	1-GANG TRIM RING	N/A	80" AFF	LOUDSPEAKER	N/A	N/A	27 41 00
	DIGITAL SIGNAGE DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	FLAT PANEL DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	FLAT PANEL DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	WALL MOUNTED VIDEO CAMERA	VADDIO 999-2225-118	N/A	60" AFF	VIDEO CAMERA	N/A	REMOTE LOW VOLTAGE POWER	27 41 00
	AUDIO INTERCOM	CUSTOM BACK BOX	ONE (1) 1" EC	48" AFF	AUDIO INTERCOM STATION	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 13 00
	2-GANG MULTI-MEDIA WALLBOX	2-GANG BOX	ONE(1) 1-1/4" EC	VARIES	N/A	N/A	N/A	N/A
	5-GANG MULTI-MEDIA WALLBOX	5-GANG BOX	THREE (3) 1-1/4" EC	OUTLET HEIGHT	N/A	N/A	N/A	N/A
	REMOTE CONTROL TOUCH PANEL	3-GANG BOX	ONE (1) 1" EC	SWITCH HEIGHT	REMOTE CONTROL TOUCH PANEL	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	27 41 00
	AUDIOVISUAL EQUIPMENT RACK	N/A	N/A	ON FLOOR	SEE AV SIGNAL FLOW	N/A	(2) DEDICATED 20-AMP,120V CIRCUITS W/ DUPLEX RECEPTACLE	27 41 00
	STANDARD TELECOMMUNICATION OUTLET	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1-1/4" EC	OUTLET HEIGHT	N/A	"X" CATEGORY CABLES (TO TELECOM CLOSET)	N/A	27 41 00
	WALL PHONE TELECOMMUNICATIONS OUTLET	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1" EC	SWITCH HEIGHT	N/A	ONE (1) CATEGORY CABLE	N/A	27 41 00
	FLOORBOX	WIREMOLD EFB8S	THREE (3) 1-1/4" EC	IN FLOOR	N/A	FOUR (4) CATEGORY CABLES	120V DUPLEX RECEPTACLE	27 41 13
	WIRELESS ACCESS POINT	SURFACE MOUNTED BISCUIT BOX	N/A	CEILING MOUNTED	OFOI WIRELESS ACCESS POINT	TWO (2) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	27 10 00
	ELECTRONIC ACCESS CONTROL DOOR	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	N/A	REMOTE LOW VOLTAGE POWER	28 13 00
	CARD READER	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1" EC	REFER TO ACCESS CONTROL DOOR DETAILS	CARD READER	N/A	REMOTE LOW VOLTAGE POWER	28 13 00
	VIDEO INTERCOM STATION	CUSTOM BACK BOX	ONE (1) 1" EC	48" AFF	VIDEO INTERCOM STATION	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 13 00
	FIXED SURVEILLANCE VIDEO CAMERA	SURFACE MOUNTED BISCUIT BOX	N/A	CEILING MOUNTED	FIXED VIDEO CAMERA	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 23 00
	EXTERIOR SURVEILLANCE VIDEO CAMERA	2-GANG BOX INTERIOR TO BUILDING	N/A	VARIES	EXTERIOR VIDEO CAMERA	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 23 00

LOW VOLTAGE SYSTEM SHEET LIST

Sheet Number	Sheet Name
TA-001	LOW VOLTAGE SYSTEMS TITLESHEET
TA-002	LOW VOLTAGE SYSTEMS INFRASTRUCTURE DETAILS
TA-003	LOW VOLTAGE SYSTEMS INFRASTRUCTURE DETAILS
TA-005	OVERALL SITE PLAN
TA-010	TELECOM RISER DIAGRAM
TA-101	FIRST FLOOR PLAN
TA-102	SECOND FLOOR PLAN
TA-121	FIRST FLOOR REFLECTED CEILING PLAN
TA-122	SECOND FLOOR REFLECTED CEILING PLAN
TA-300	TELECOM ROOM DETAILS - FIRST FLOOR
TA-301	TELECOM ROOM DETAILS - SECOND FLOOR
TA-302	TELECOM ROOM RACK ELEVATIONS - FIRST FLOOR
TA-303	TELECOM ROOM RACK ELEVATIONS - SECOND FLOOR
TA-304	TYPICAL FACEPLATE DETAILS
TA-400	AV ELEVATIONS 1
TA-401	AV ELEVATIONS 2
TA-500	ACCESS CONTROL DETAILS
TA-501	ACCESS CONTROL DOOR SCHEDULE
TA-502	AV SIGNAL FLOW COMMISSIONERS MEETING ROOM
TA-503	AV SIGNAL FLOW TYPICAL CONFERENCE ROOMS
TA-504	AV SIGNAL FLOW MISC SPACES

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Project:
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3270 Concord Road
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2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:
0 03/29/24 Issued

Drawn: AP
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
LOW VOLTAGE SYSTEMS TITLESHEET

Sheet Number:
TA-001

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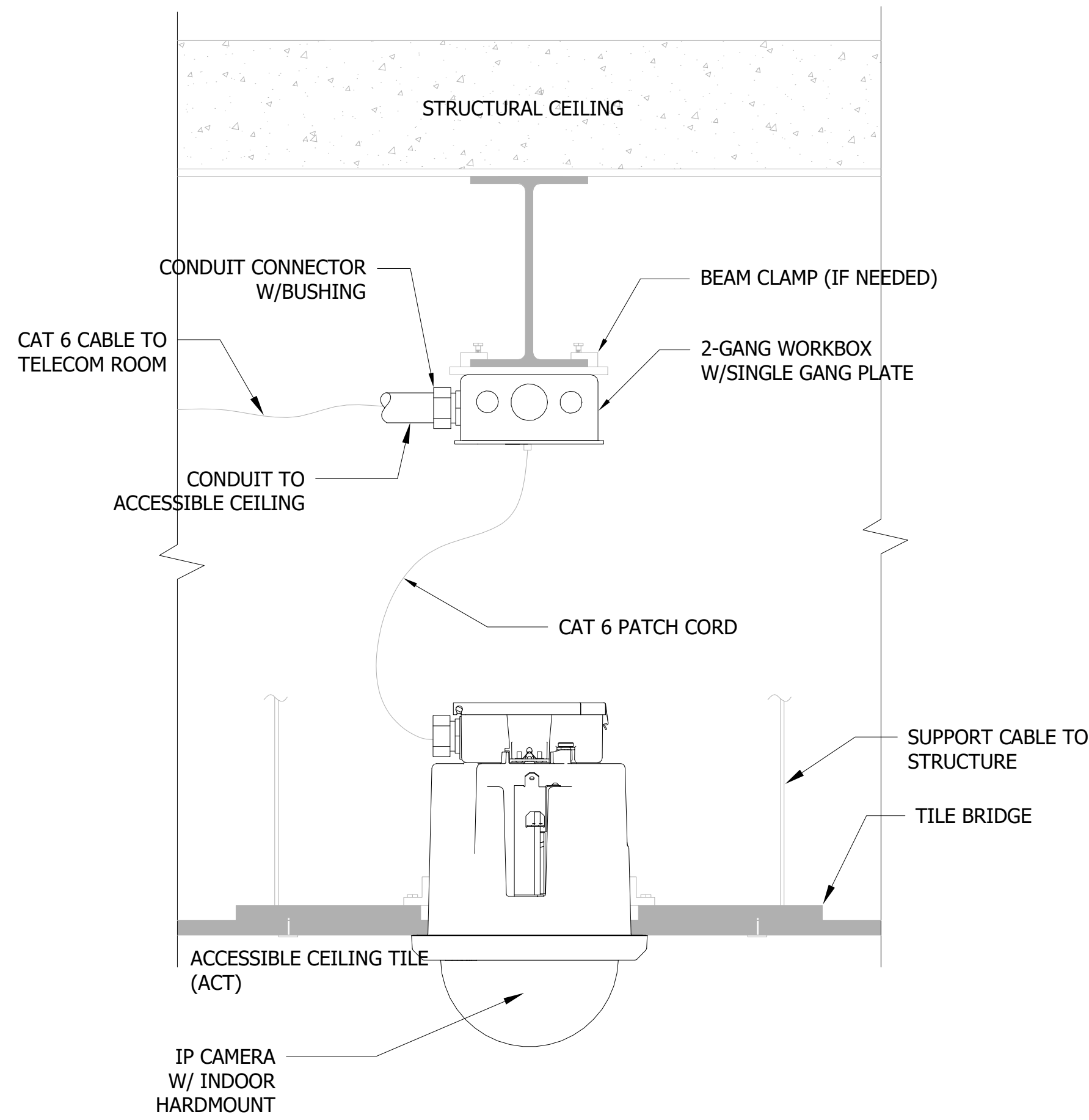
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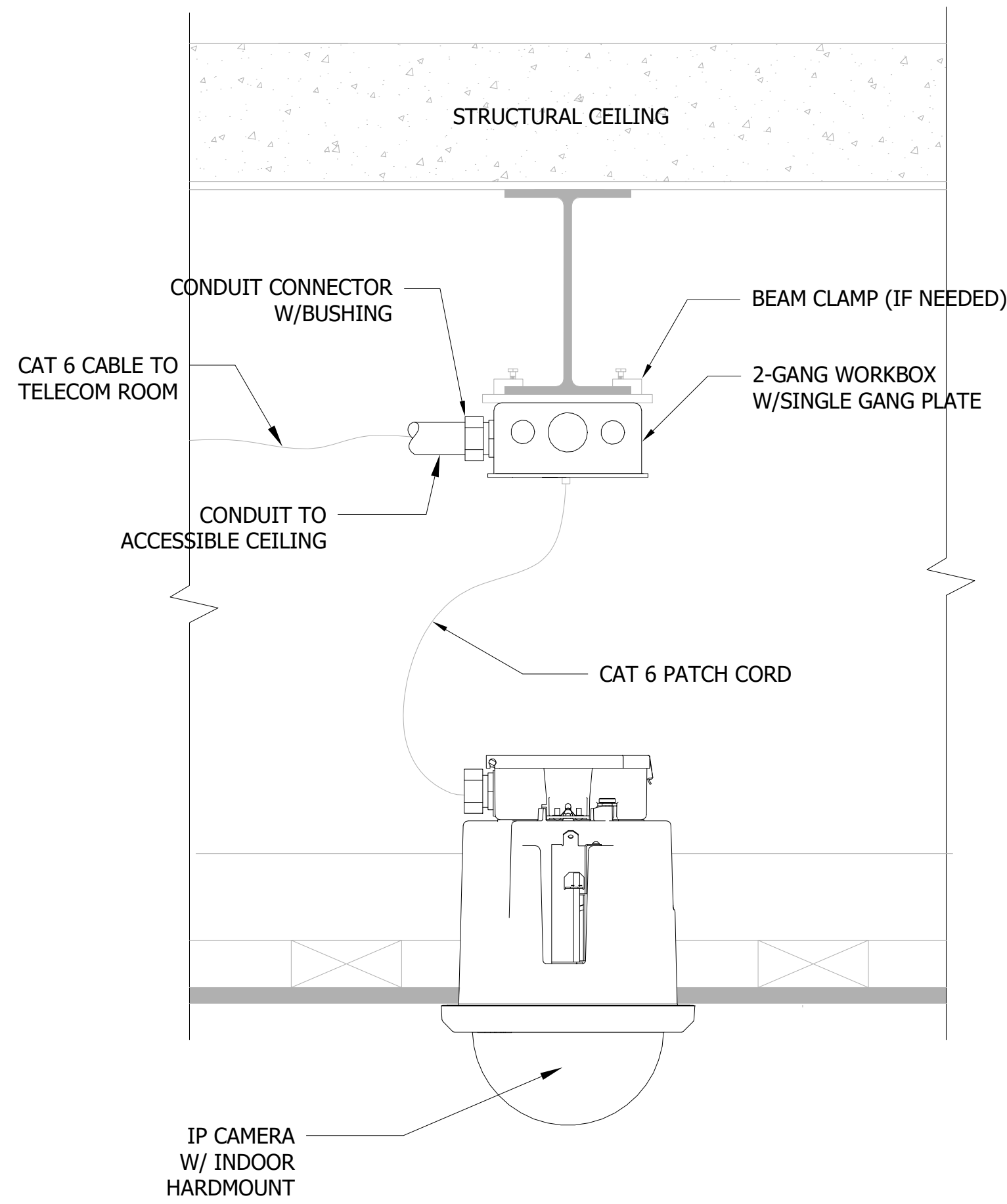
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Sheet Title:
**LOW VOLTAGE
SYSTEMS
INFRASTRUCTURE
DETAILS**
Sheet Number:

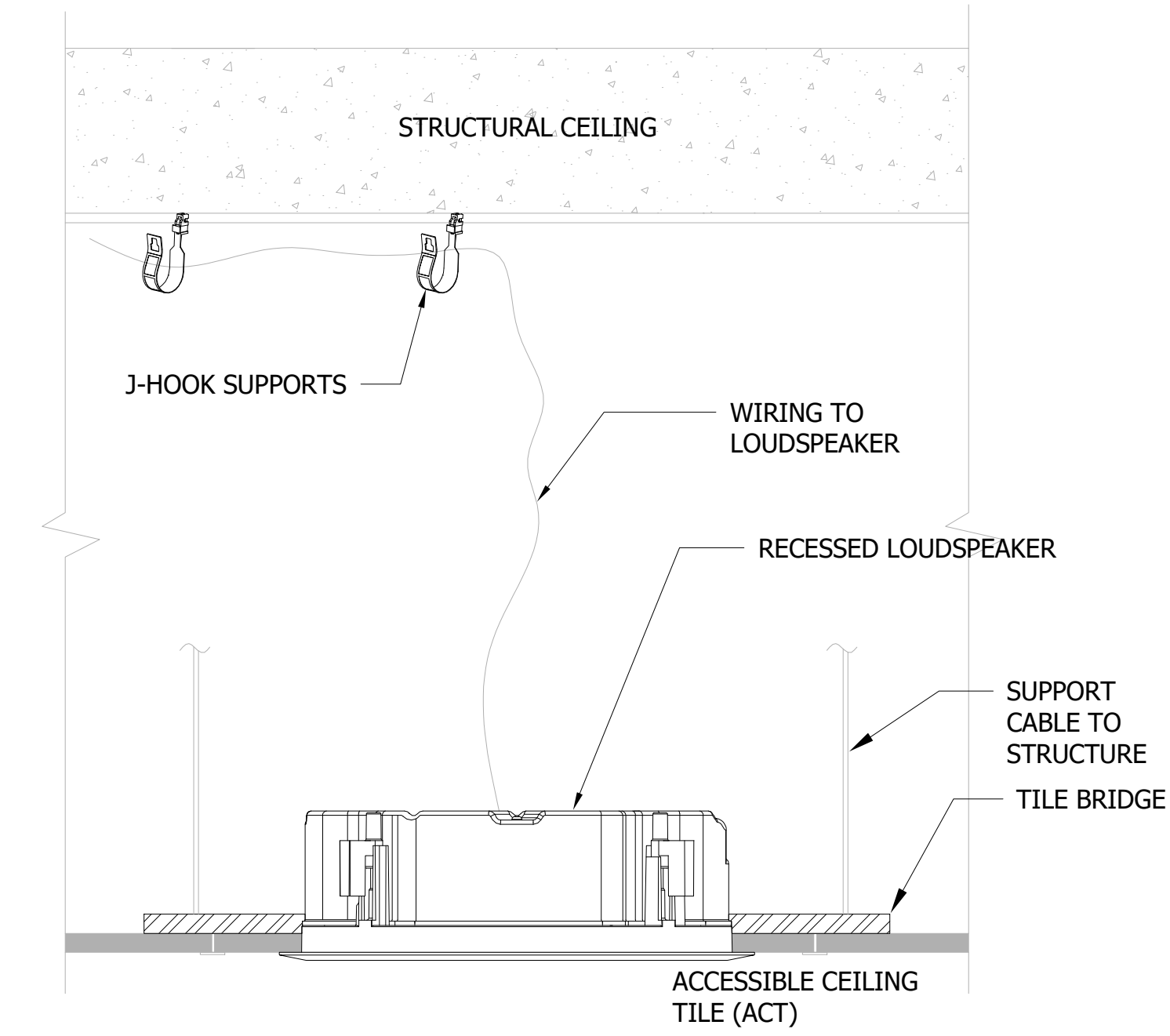
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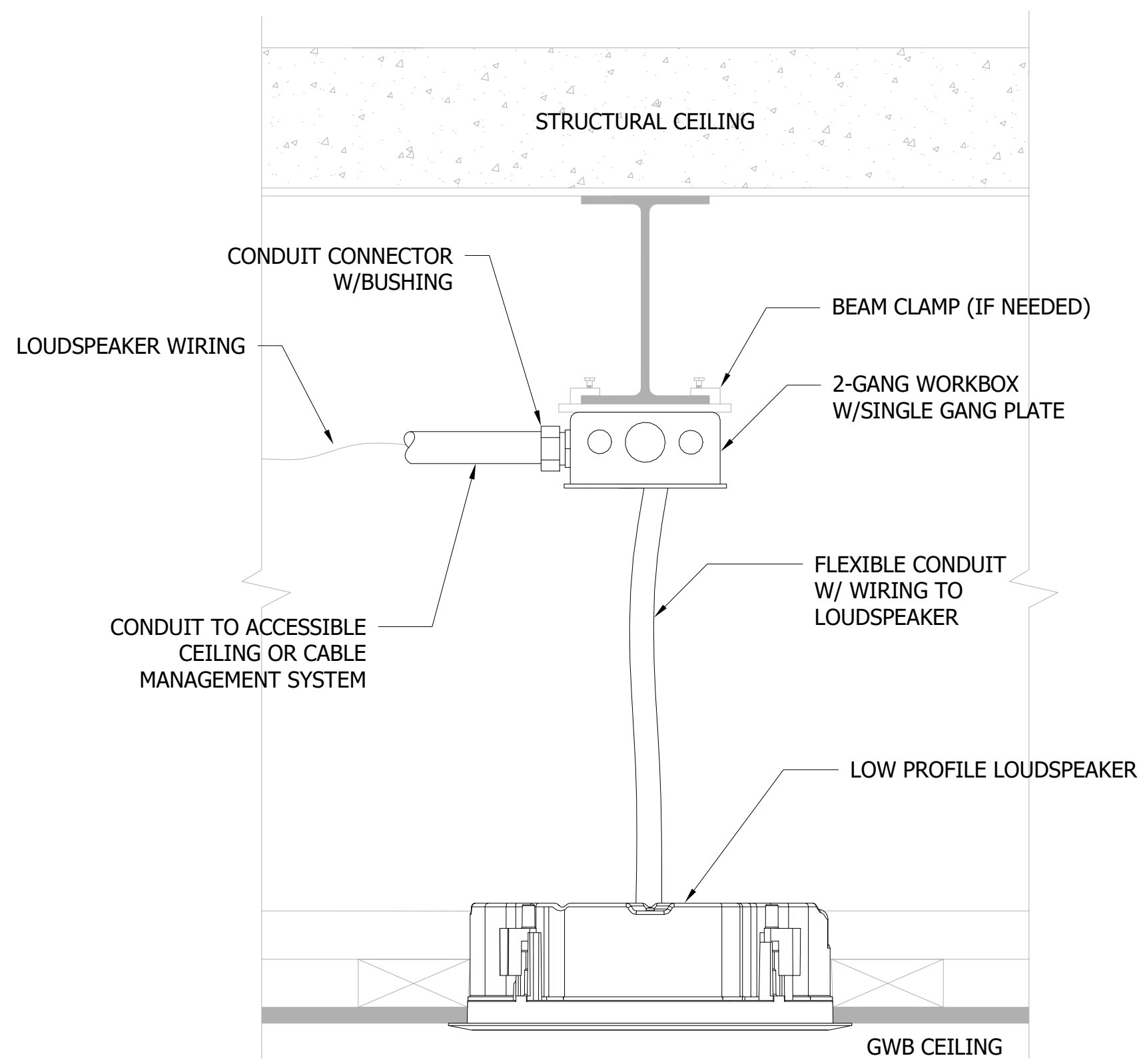
1 **CAMERA IN ACT CEILING DETAIL**
3" = 1'-0"



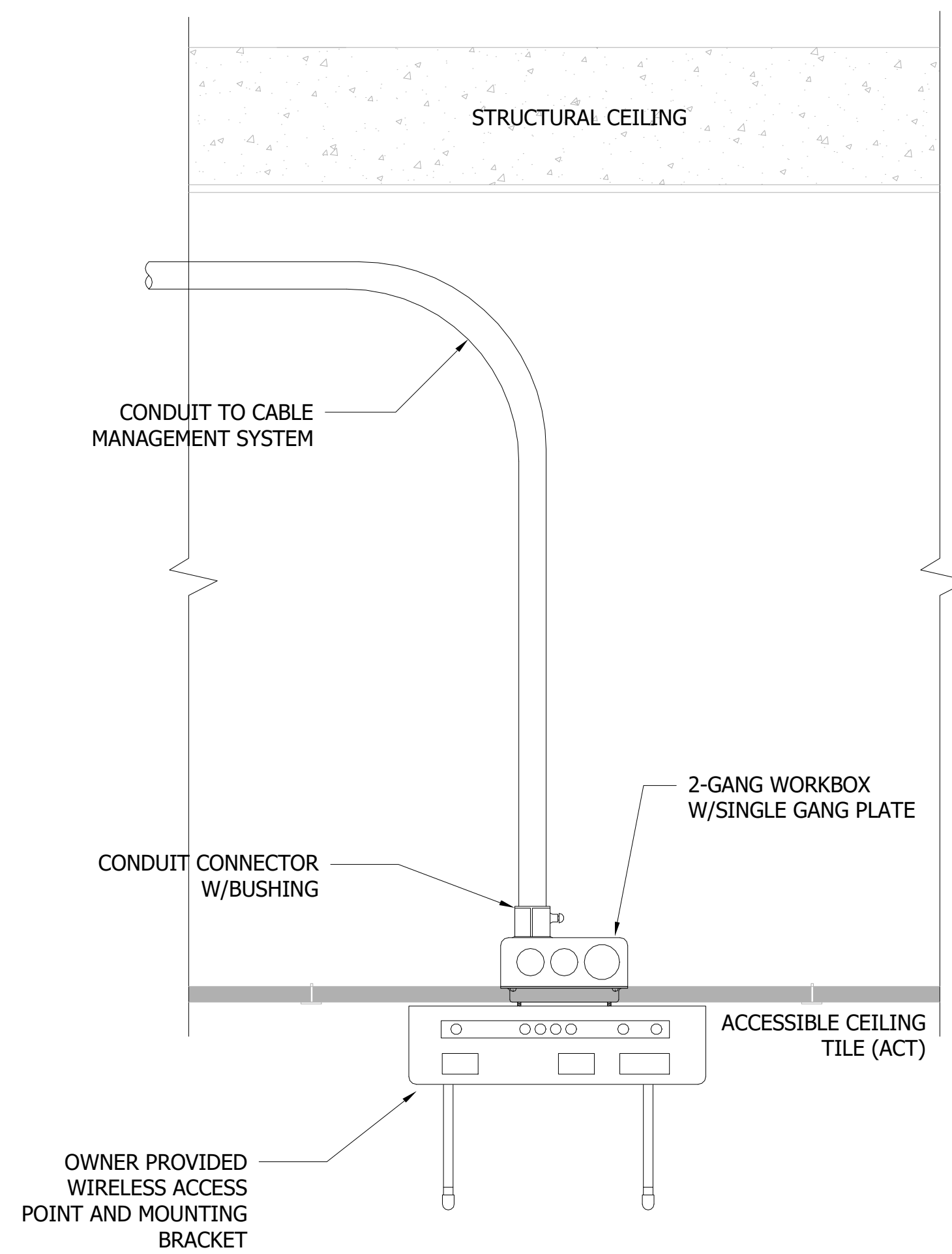
2 **CAMERA IN GWB CEILING DETAIL**
3" = 1'-0"



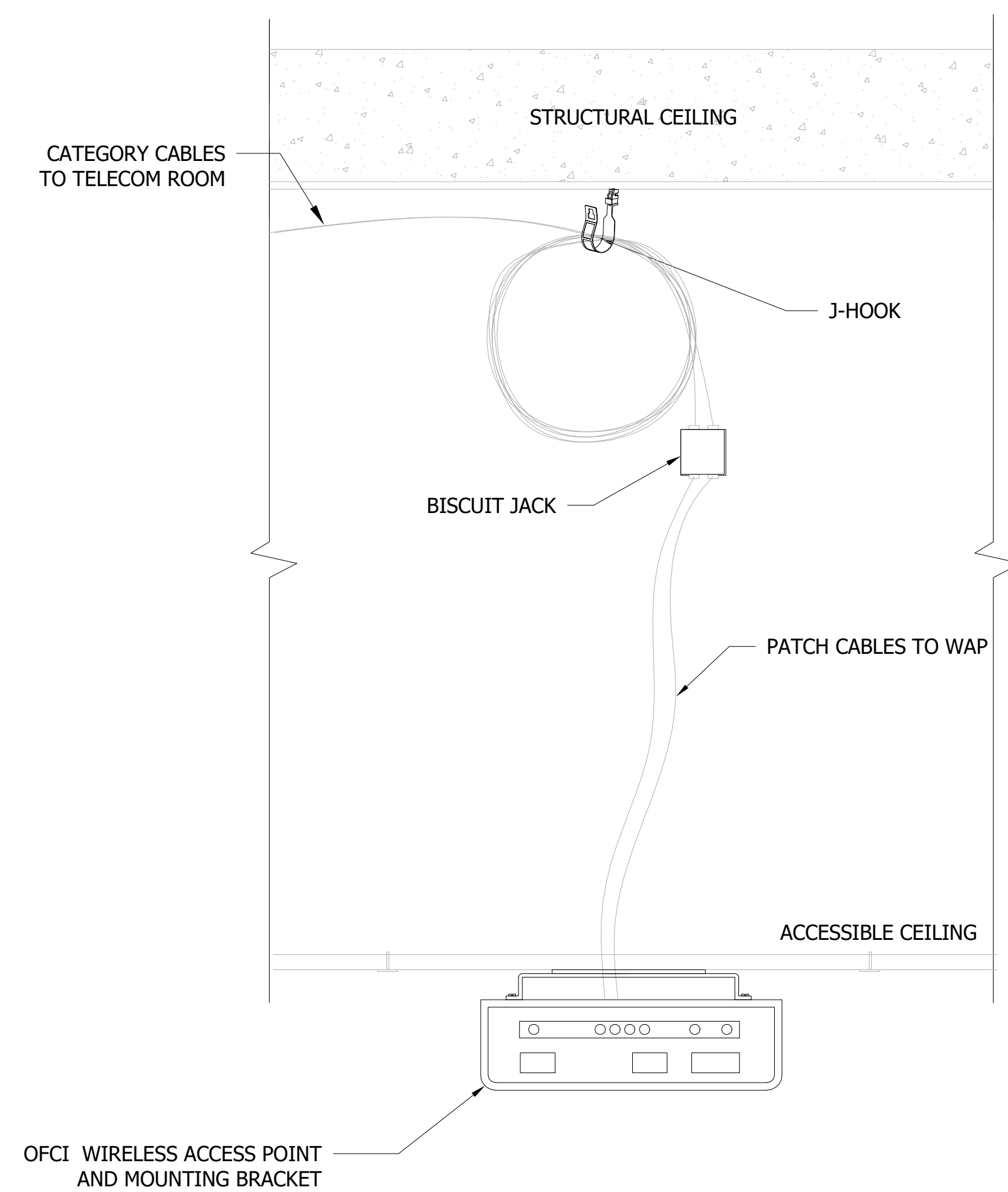
3 **LOUDSPEAKER IN ACT CEILING DETAIL**
3" = 1'-0"



4 **LOUDSPEAKER IN GWB CEILING DETAIL**
3" = 1'-0"

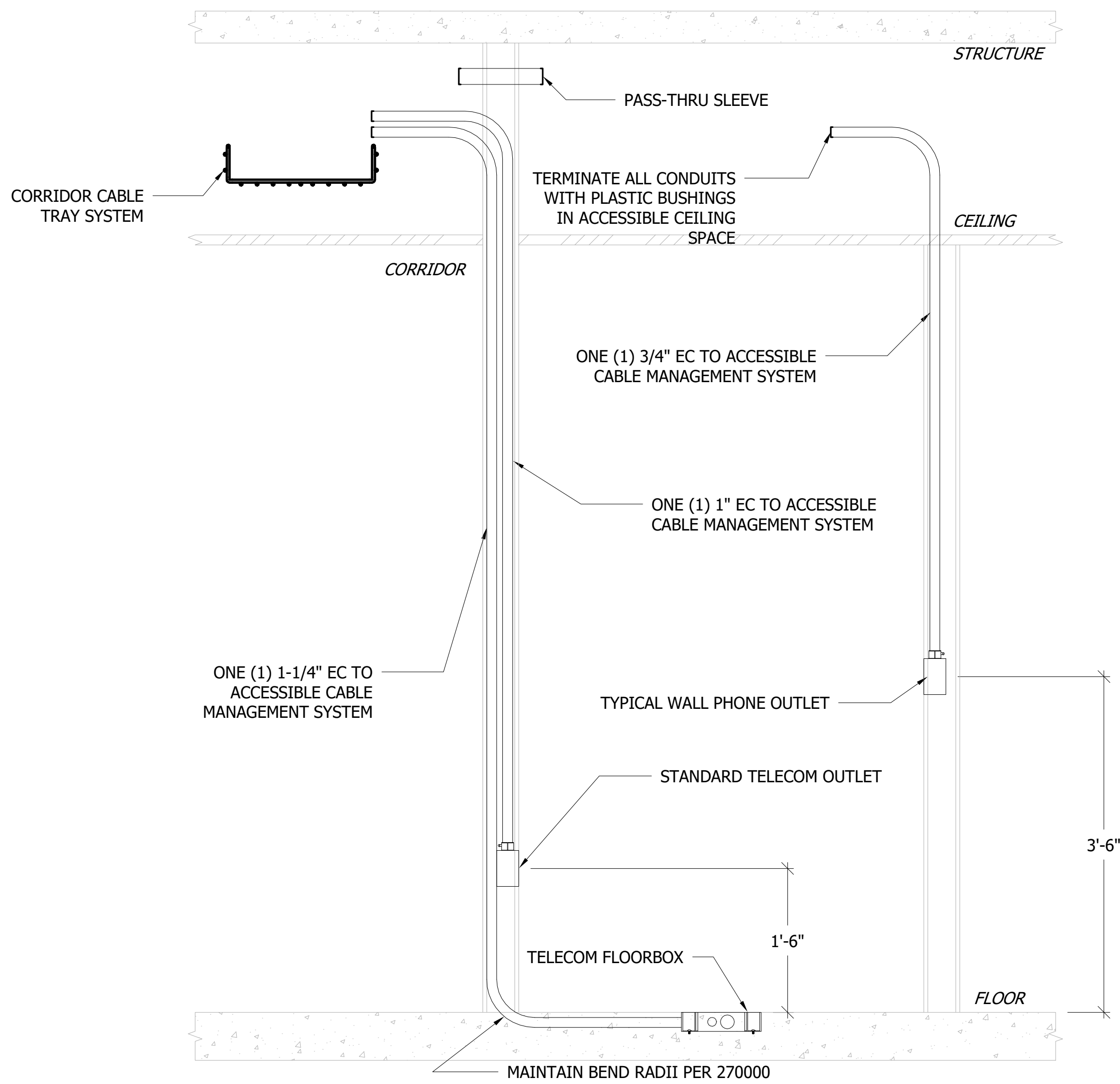


5 **WAP IN ACT CEILING DETAIL**
3" = 1'-0"

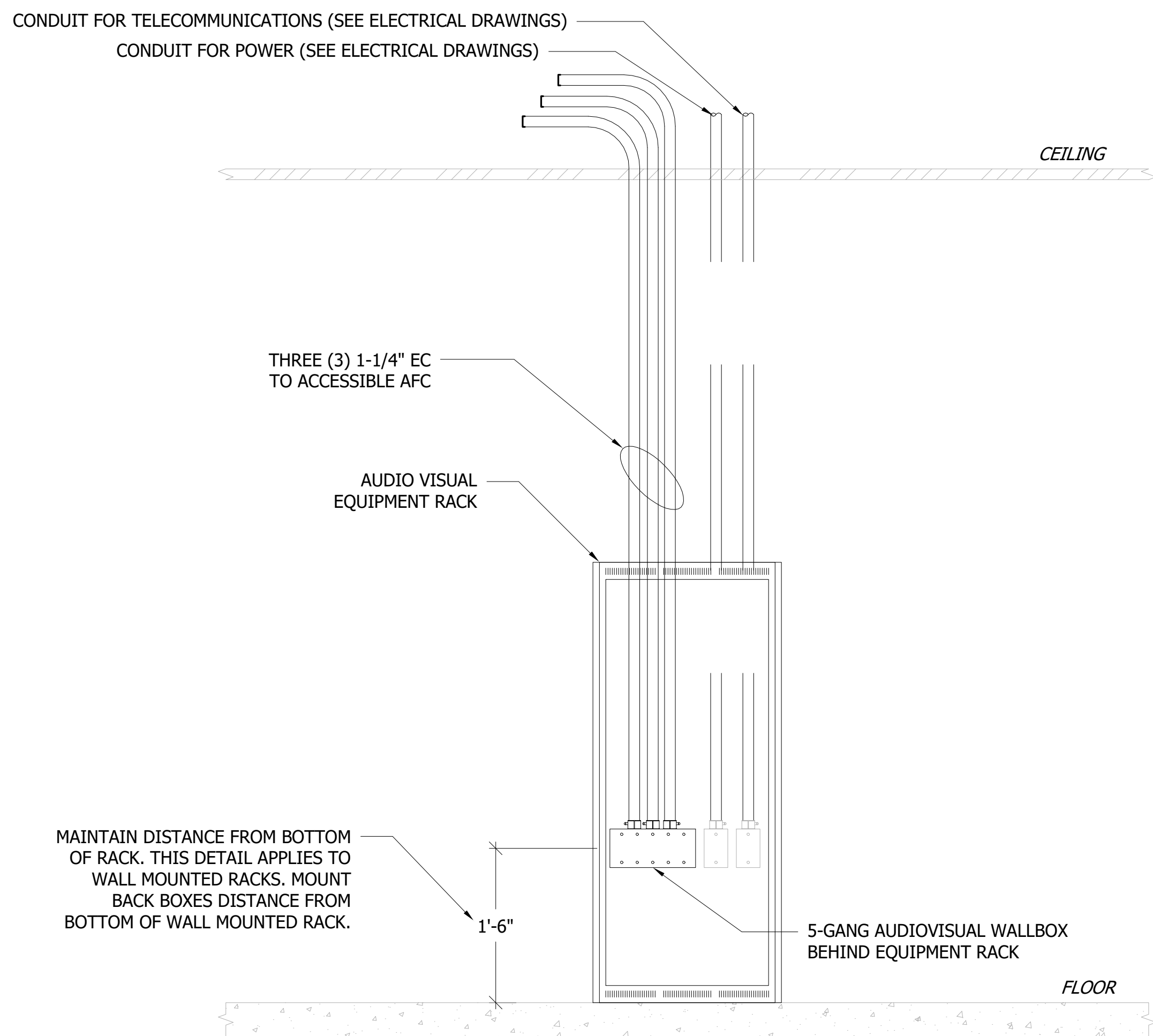


6 **WAP IN GWB CEILING DETAIL**
3" = 1'-0"

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1 TYPICAL TELECOM DETAIL
1" = 1'-0"



2 TYPICAL AV RACK DETAIL
1" = 1'-0"

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Sheet Title:
**LOW VOLTAGE
SYSTEMS
INFRASTRUCTURE
DETAILS**
Sheet Number:

TA-003

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Sheet Title:
**OVERALL SITE
PLAN**

Sheet Number:
TA-005



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Sheet Title:
TELECOM RISER
DIAGRAM

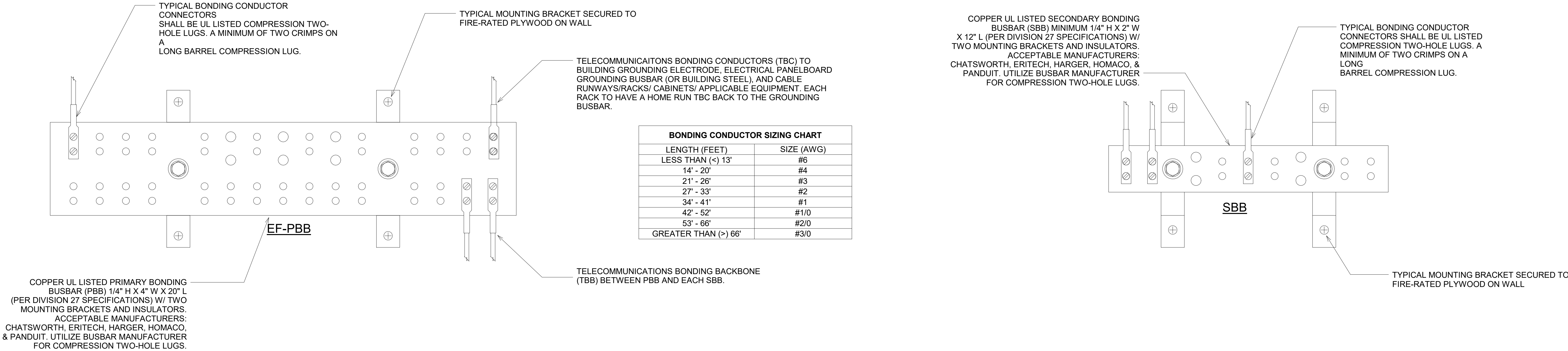
Sheet Number:
TA-010

RISER NOTES

1. PROVIDE 24 STRAND SINGLE MODE AND 24 STRAND MULTIMODE FIBER FROM IDF ROOM 105 TO IDF ROOM 216
2. PROVIDE FOUR (4) 4" CONDUITS BETWEEN IDF ROOM 105 AND IDF ROOM 216
3. PROVIDE ONE(1) 4" SCH40 CONDUIT FROM IDF ROOM 216 TO ELECTRIC POLE 657.
4. PROVIDE ONE(1) 4" SCH40 CONDUIT FROM IDF ROOM 105 TO ELECTRIC POLE 1146.



1 **TELECOM RISER DIAGRAM**
1" = 1'-0"



BONDING CONDUCTOR SIZING CHART	
LENGTH (FEET)	SIZE (AWG)
LESS THAN (<) 13'	#6
14' - 20'	#4
21' - 26'	#3
27' - 33'	#2
34' - 41'	#1
42' - 52'	#1/0
53' - 66'	#2/0
GREATER THAN (>) 66'	#3/0

2 **TELECOMMUNICATIONS GROUNDING DETAILS**
6" = 1'-0"

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Sheet Title:
FIRST FLOOR PLAN

Sheet Number:
TA-101



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

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Sheet Title:
**SECOND FLOOR
PLAN**

Sheet Number:
TA-102



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Project Number: 2301.00-22

Sheet Title:
**FIRST FLOOR
REFLECTED
CEILING PLAN**

Sheet Number:

TA-121



1 FIRST FLOOR RCP
1/8" = 1'-0"

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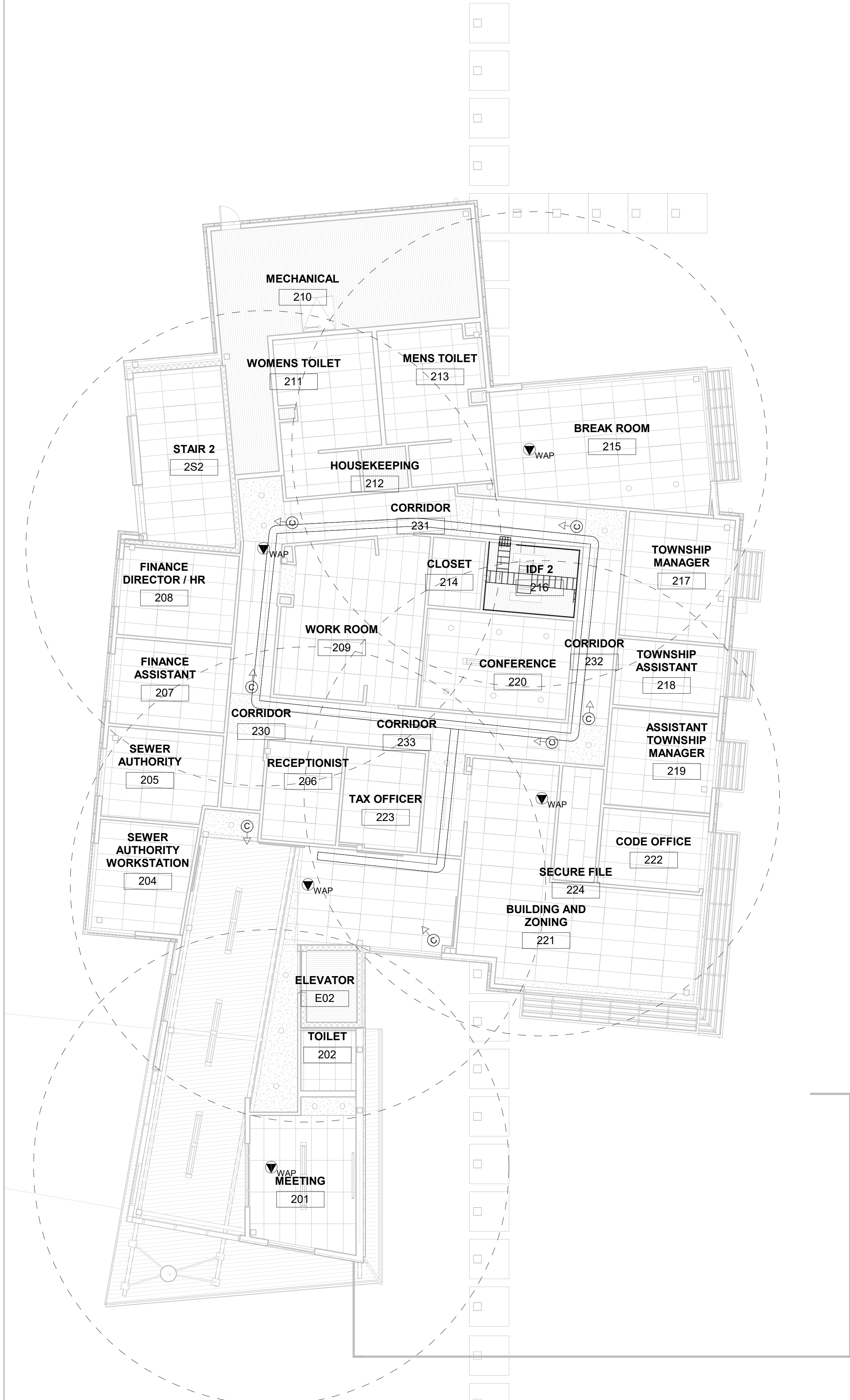
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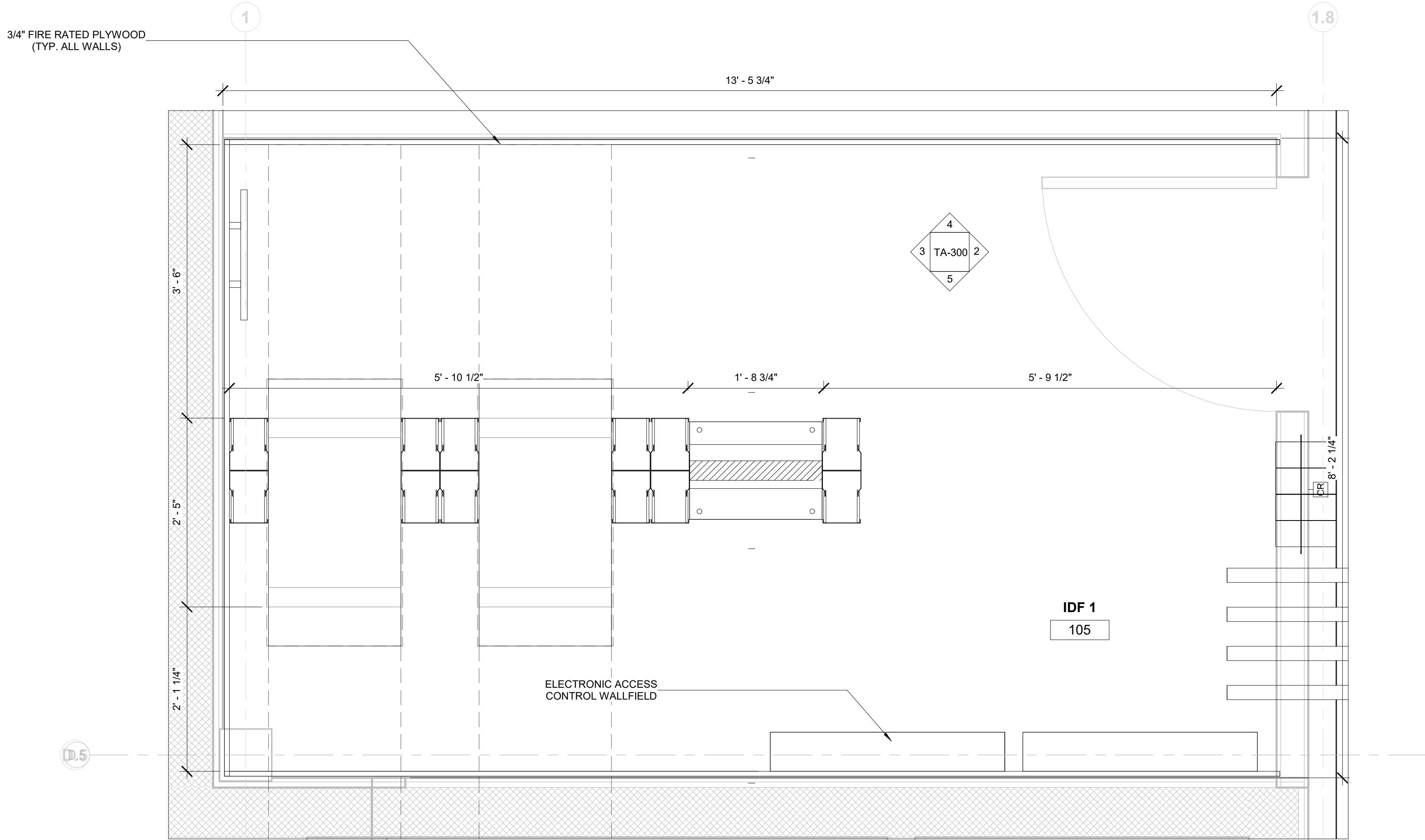
Revision/Issue:
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Drawn: AP
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

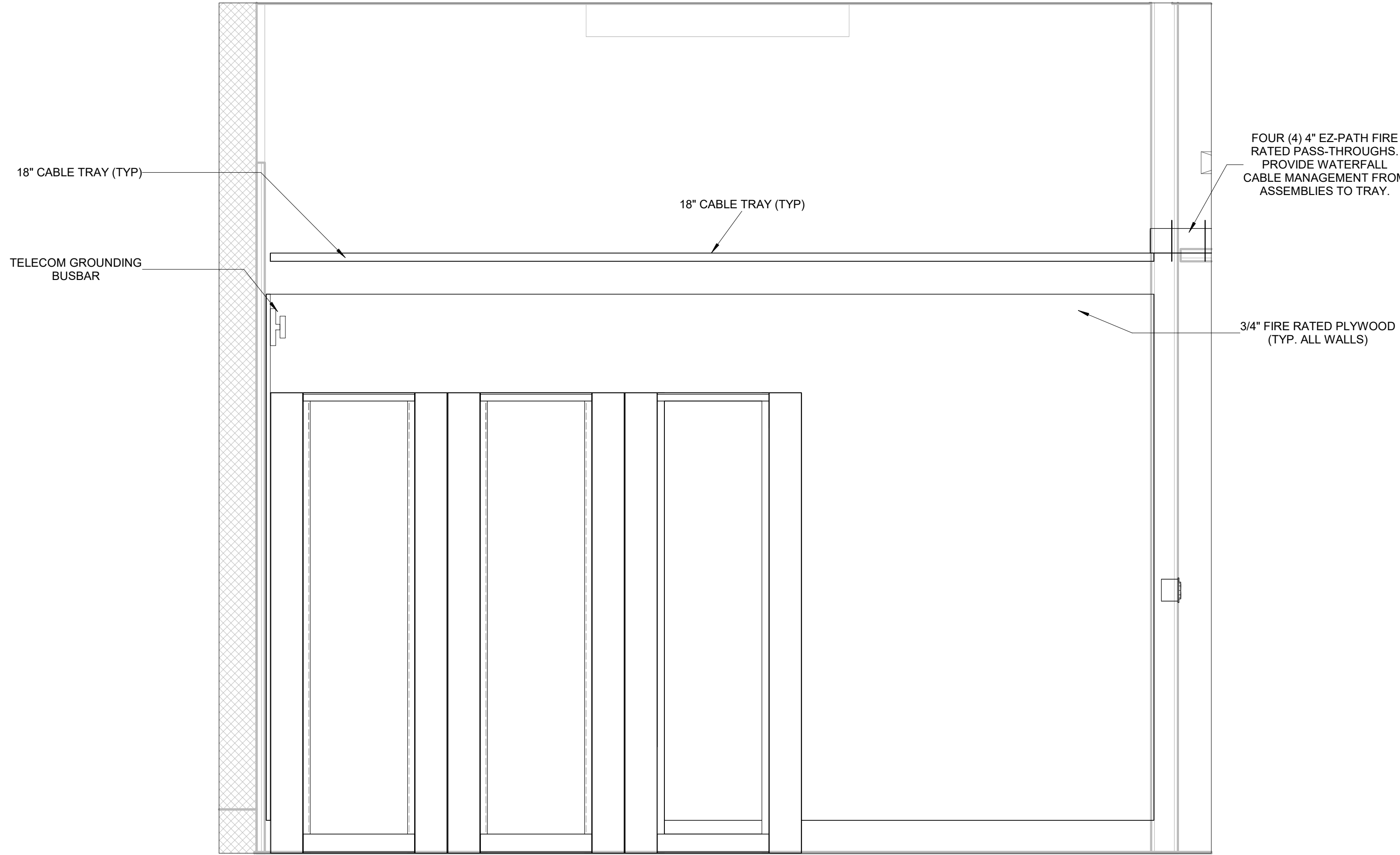
Sheet Title:
**SECOND FLOOR
REFLECTED
CEILING PLAN**

Sheet Number:
TA-122

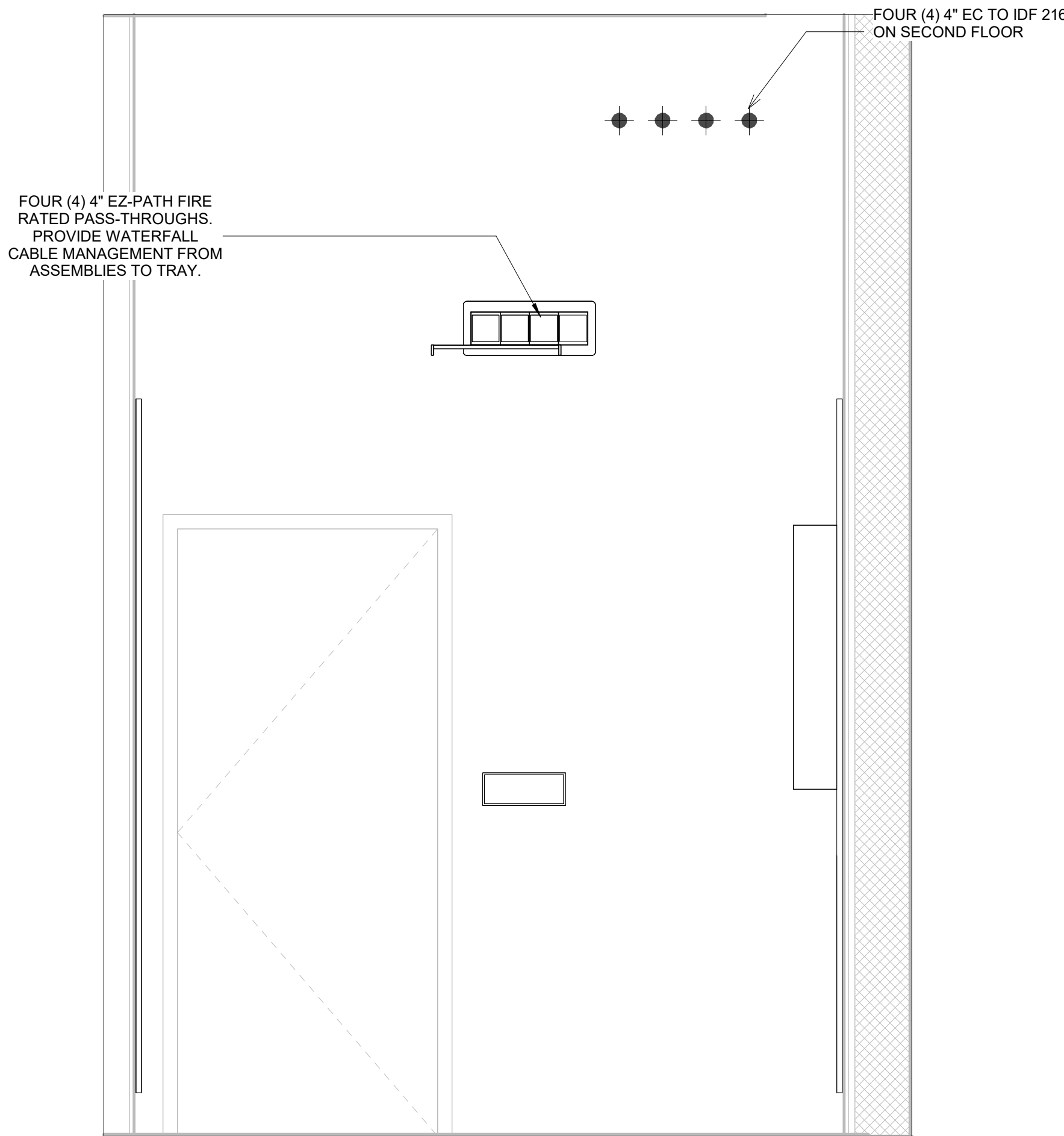




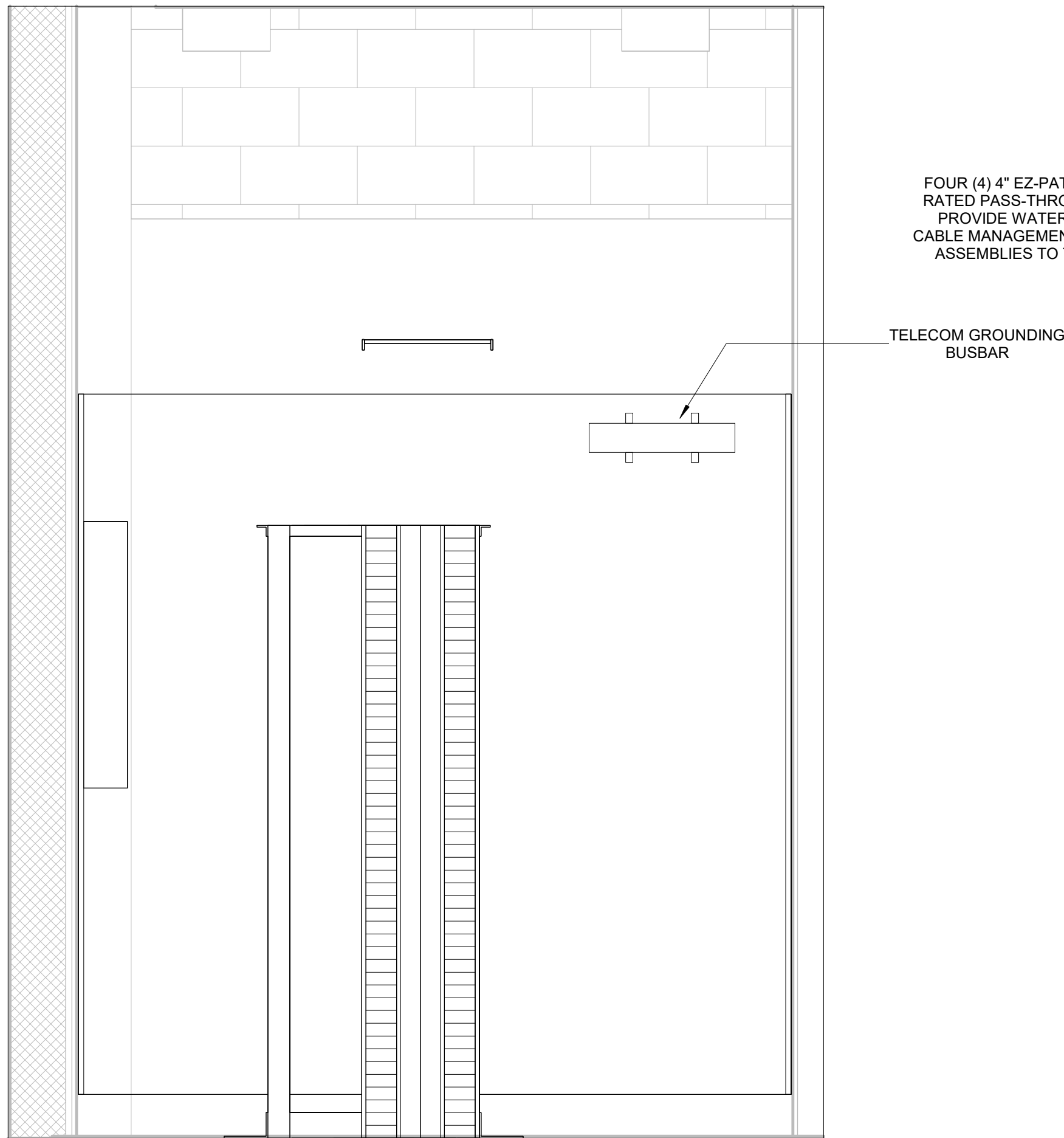
1 FIRST FLOOR IDF
1" = 1'-0"



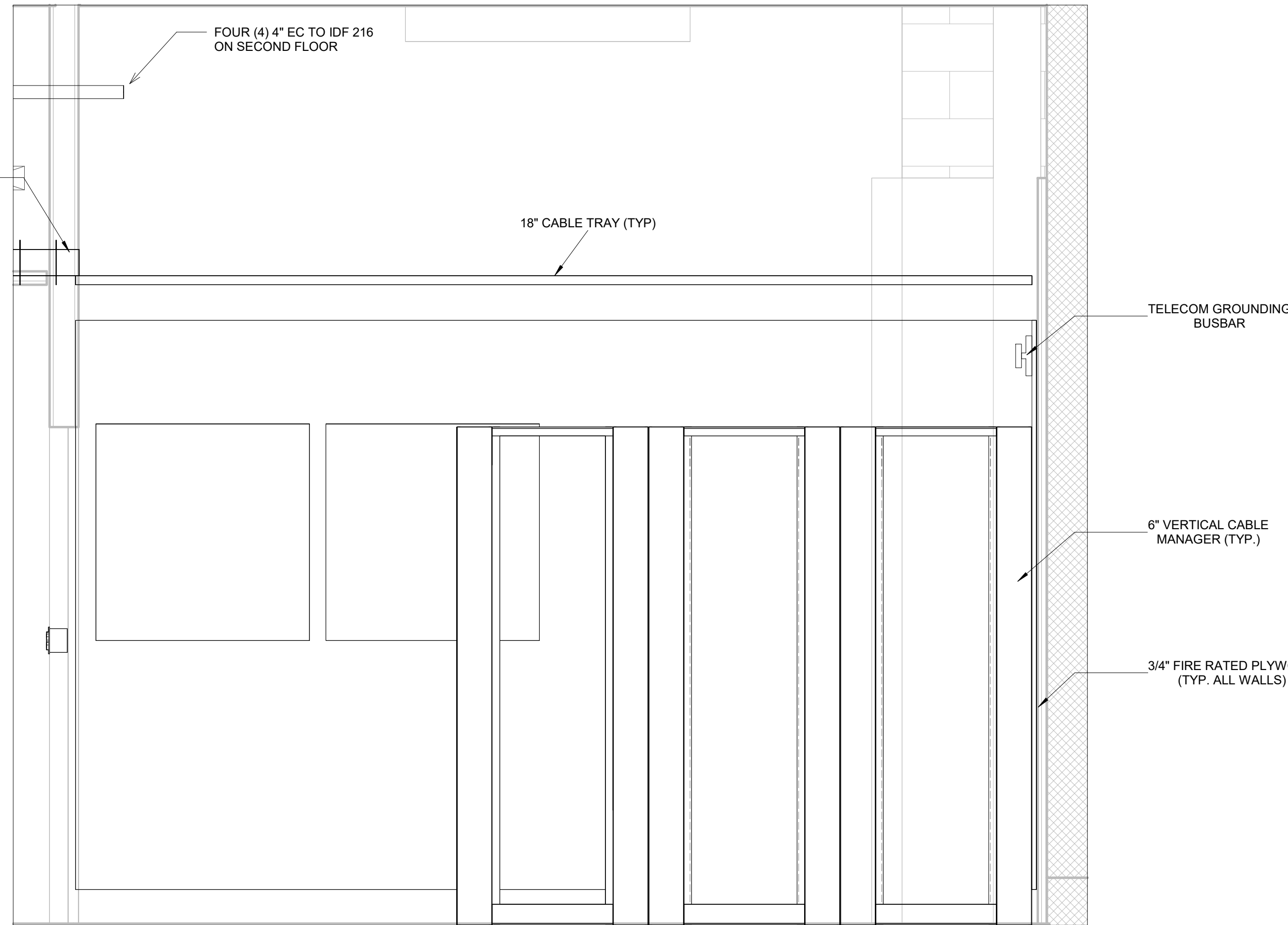
4 FIRST FLOOR IDF - NORTH
3/4" = 1'-0"



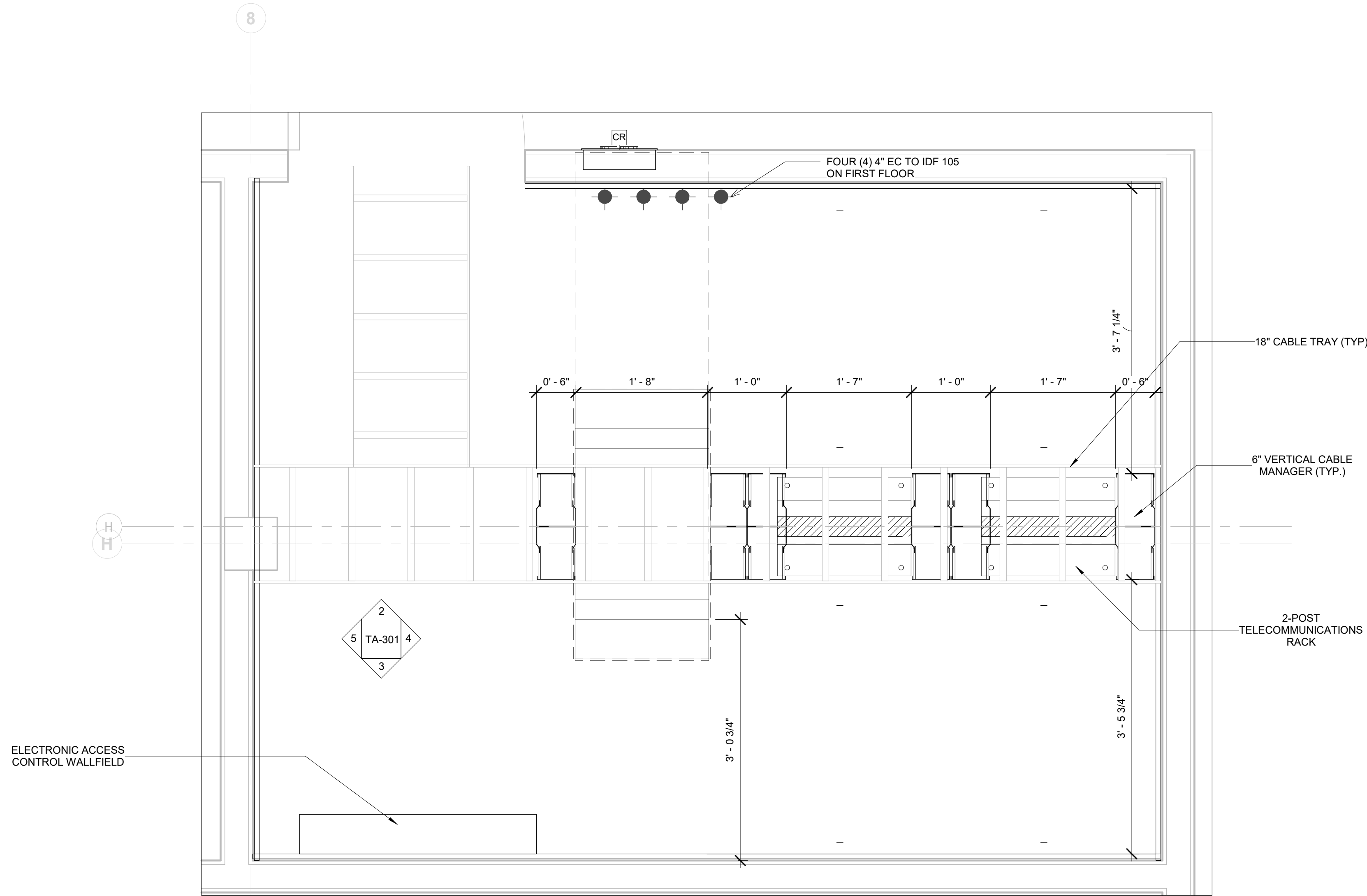
2 FIRST FLOOR IDF - EAST
3/4" = 1'-0"



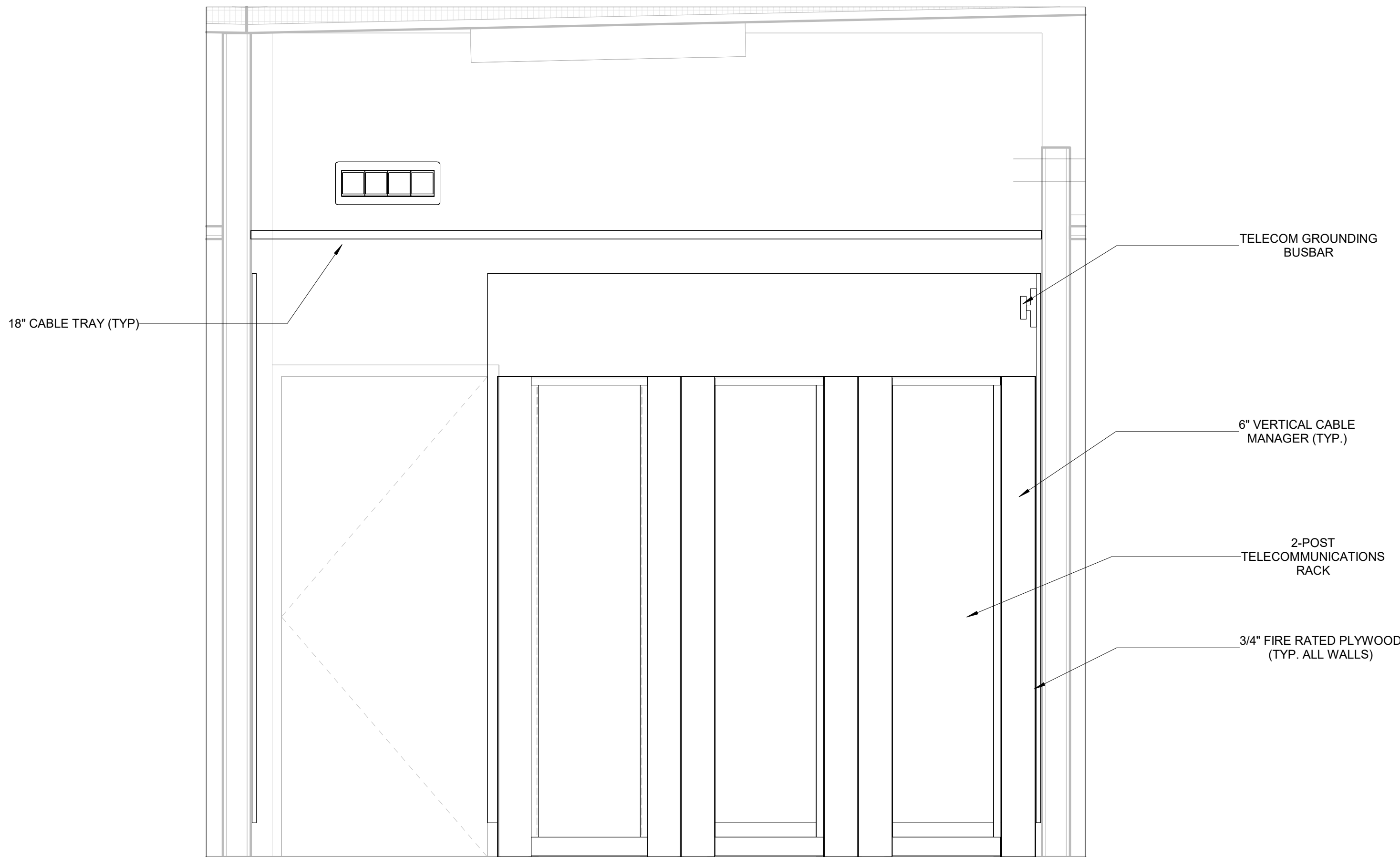
3 FIRST FLOOR IDF - WEST
3/4" = 1'-0"



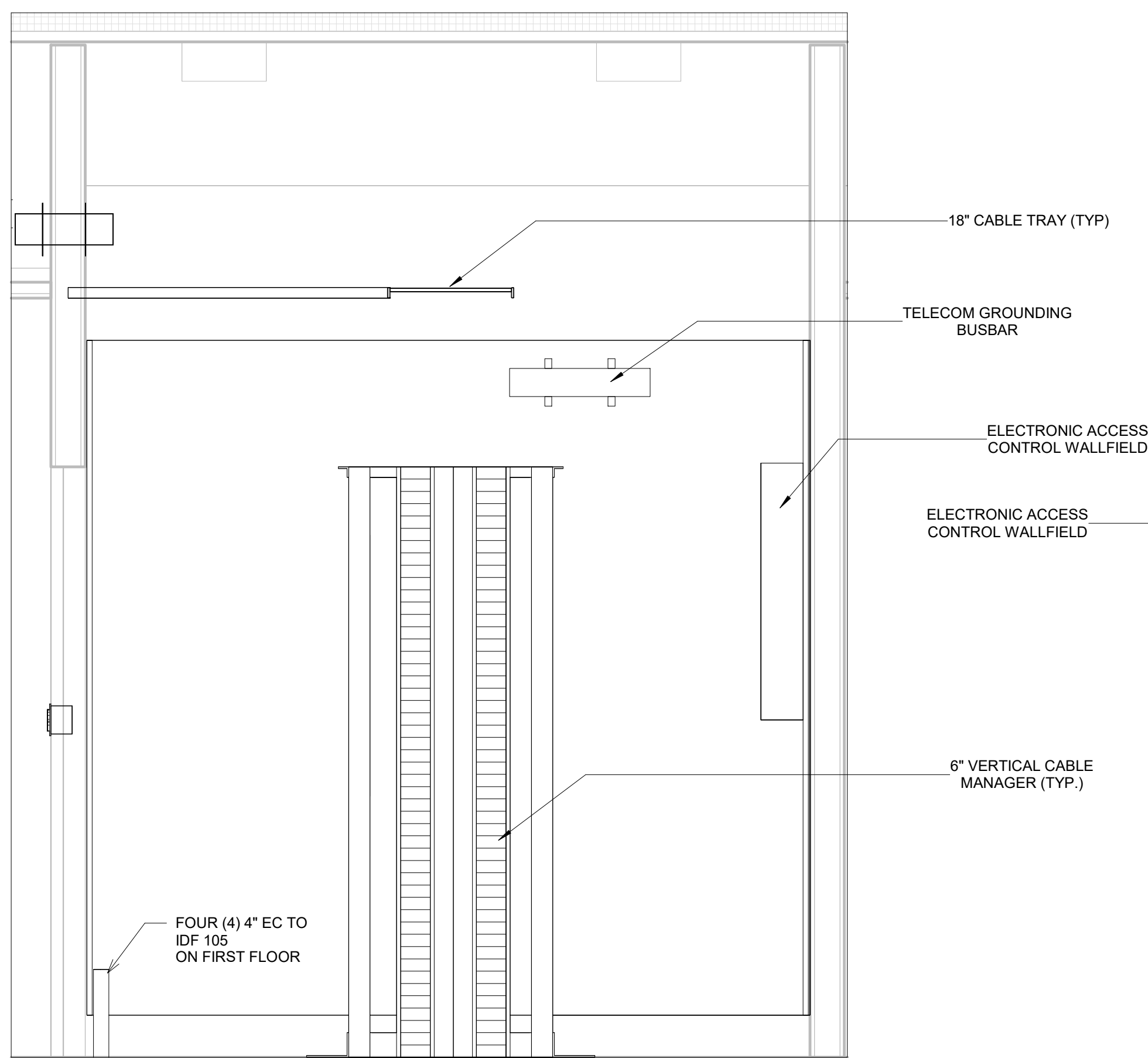
5 FIRST FLOOR IDF - SOUTH
3/4" = 1'-0"



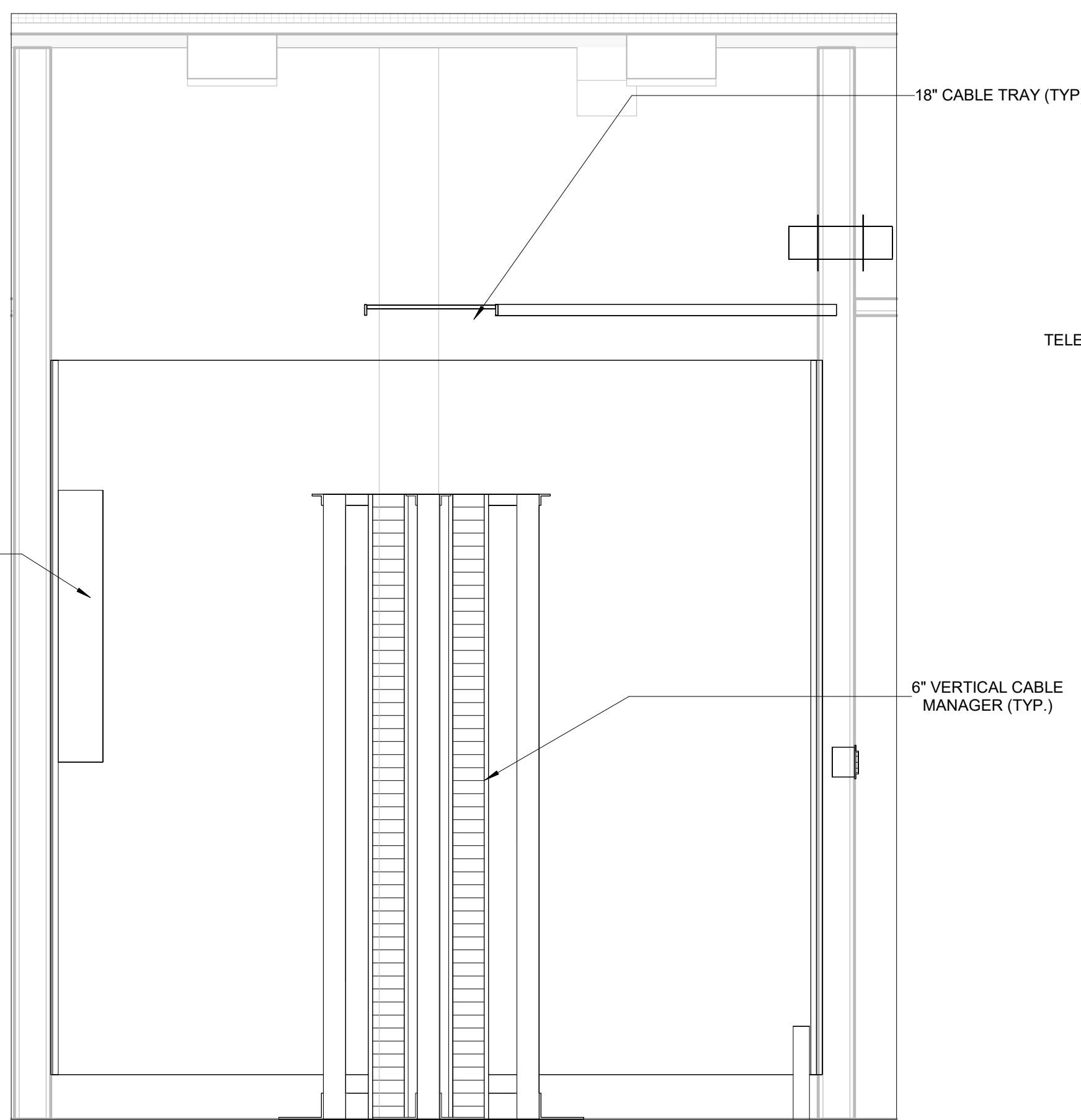
1 **SECOND FLOOR IDF**
1" = 1'-0"



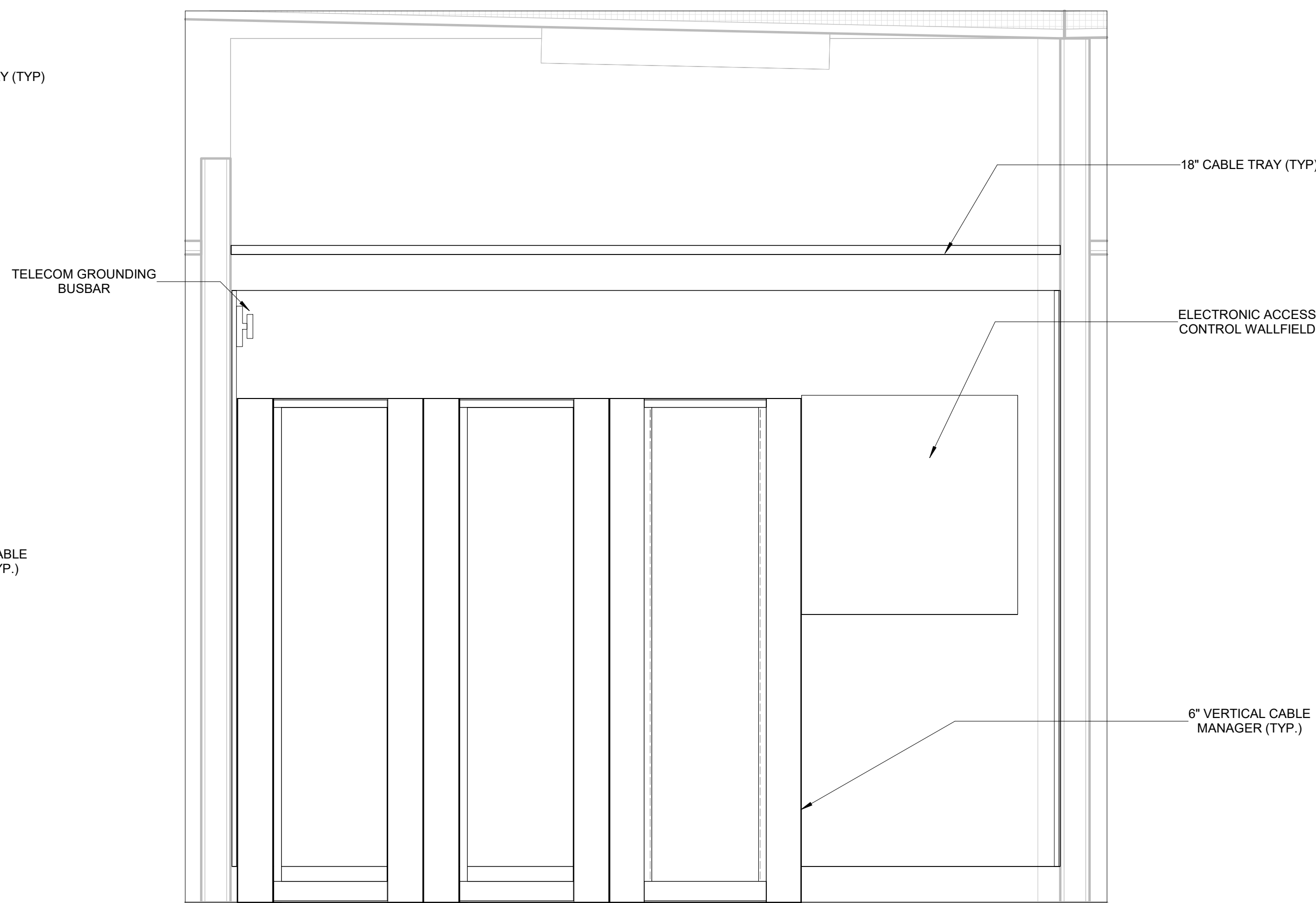
2 **SECOND FLOOR IDF - NORTH**
3/4" = 1'-0"



4 **SECOND FLOOR IDF - EAST**
3/4" = 1'-0"



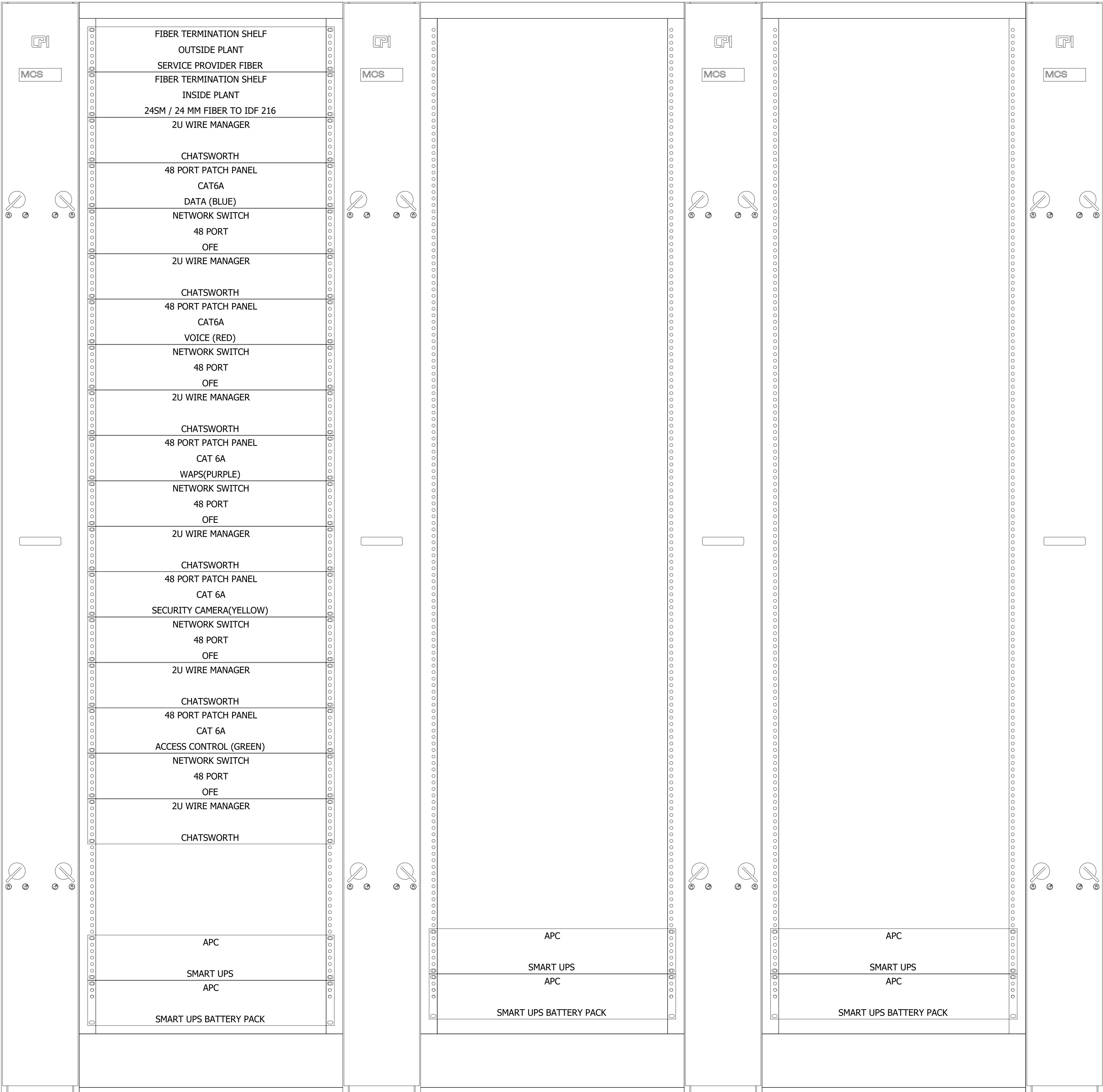
5 **SECOND FLOOR IDF - WEST**
3/4" = 1'-0"



3 **SECOND FLOOR IDF - SOUTH**
3/4" = 1'-0"

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RACK UNITS	HEIGHT INCHES
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43	75.25
42	73.50
41	71.75
40	70.00
39	68.25
38	66.50
37	64.75
36	63.00
35	61.25
34	59.50
33	57.75
32	56.00
31	54.25
30	52.50
29	50.75
28	49.00
27	47.25
26	45.50
25	43.75
24	42.00
23	40.25
22	38.50
21	36.75
20	35.00
19	33.25
18	31.50
17	29.75
16	28.00
15	26.25
14	24.50
13	22.75
12	21.00
11	19.25
10	17.50
9	15.75
8	14.00
7	12.25
6	10.50
5	8.75
4	7.00
3	5.25
2	3.50
1	1.75
0	0.00



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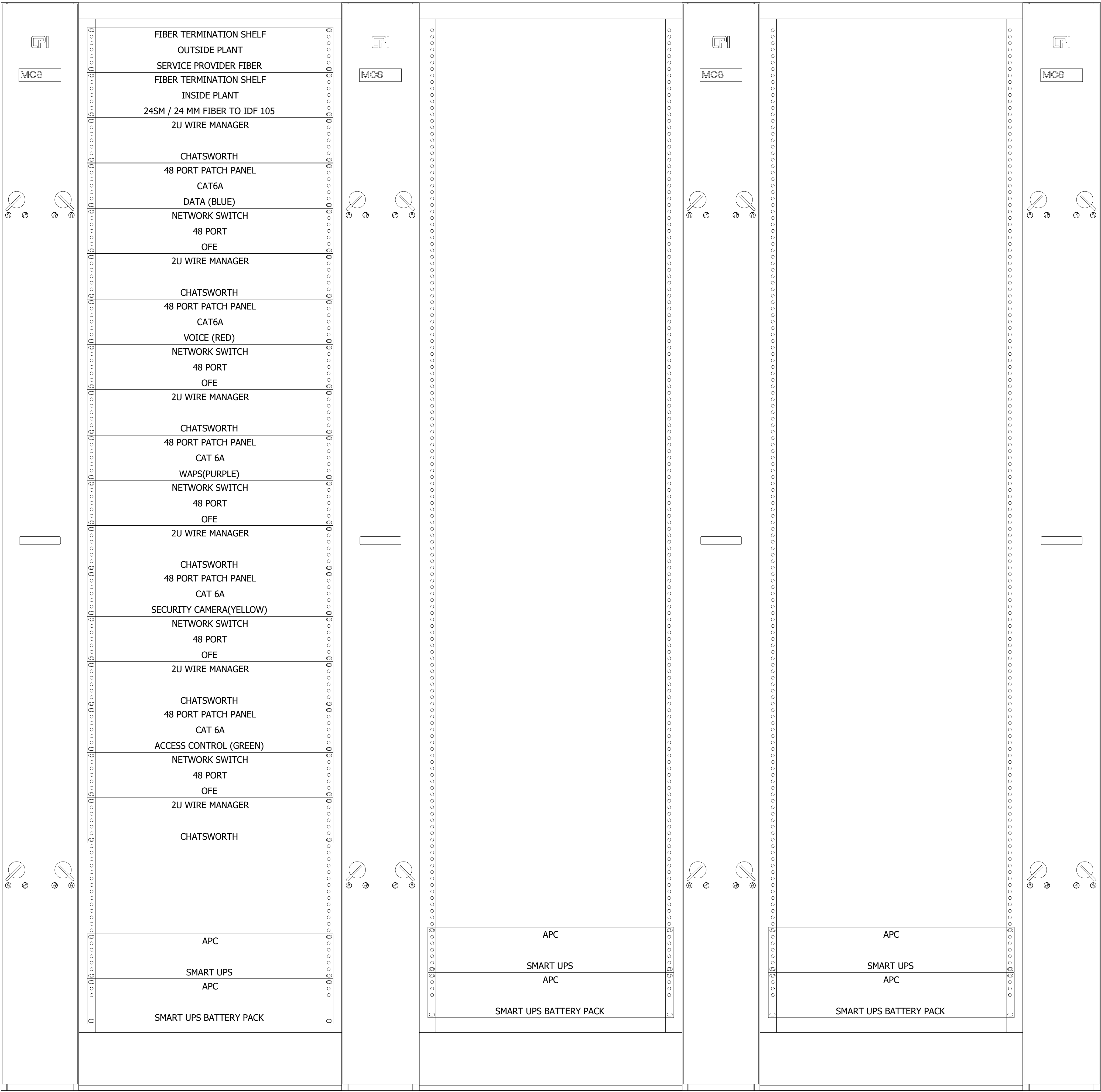
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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
**TELECOM ROOM
RACK ELEVATIONS
- FIRST FLOOR**

Sheet Number:
TA-302

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RACK UNITS	HEIGHT INCHES
44	77.00
43	75.25
42	73.50
41	71.75
40	70.00
39	68.25
38	66.50
37	64.75
36	63.00
35	61.25
34	59.50
33	57.75
32	56.00
31	54.25
30	52.50
29	50.75
28	49.00
27	47.25
26	45.50
25	43.75
24	42.00
23	40.25
22	38.50
21	36.75
20	35.00
19	33.25
18	31.50
17	29.75
16	28.00
15	26.25
14	24.50
13	22.75
12	21.00
11	19.25
10	17.50
9	15.75
8	14.00
7	12.25
6	10.50
5	8.75
4	7.00
3	5.25
2	3.50
1	1.75
0	0.00



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Sheet Title:
**TELECOM ROOM
RACK ELEVATIONS
- SECOND FLOOR**

Sheet Number:
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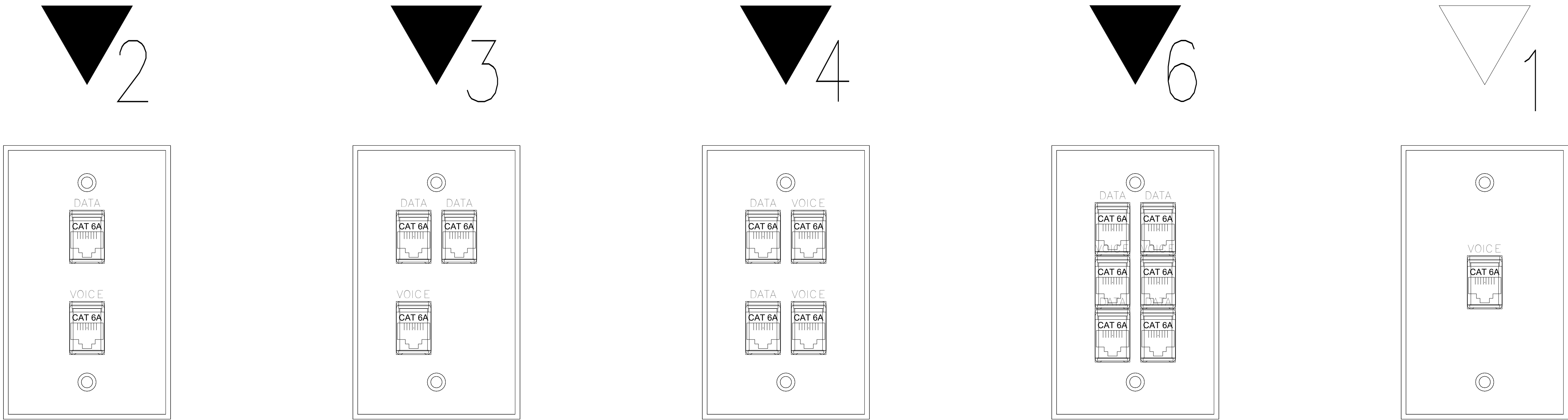
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Sheet Title:
**TYPICAL
FACEPLATE
DETAILS**

Sheet Number:
TA-304



1 **TYPICAL FACEPLATE DETAILS**
12" = 1'-0"

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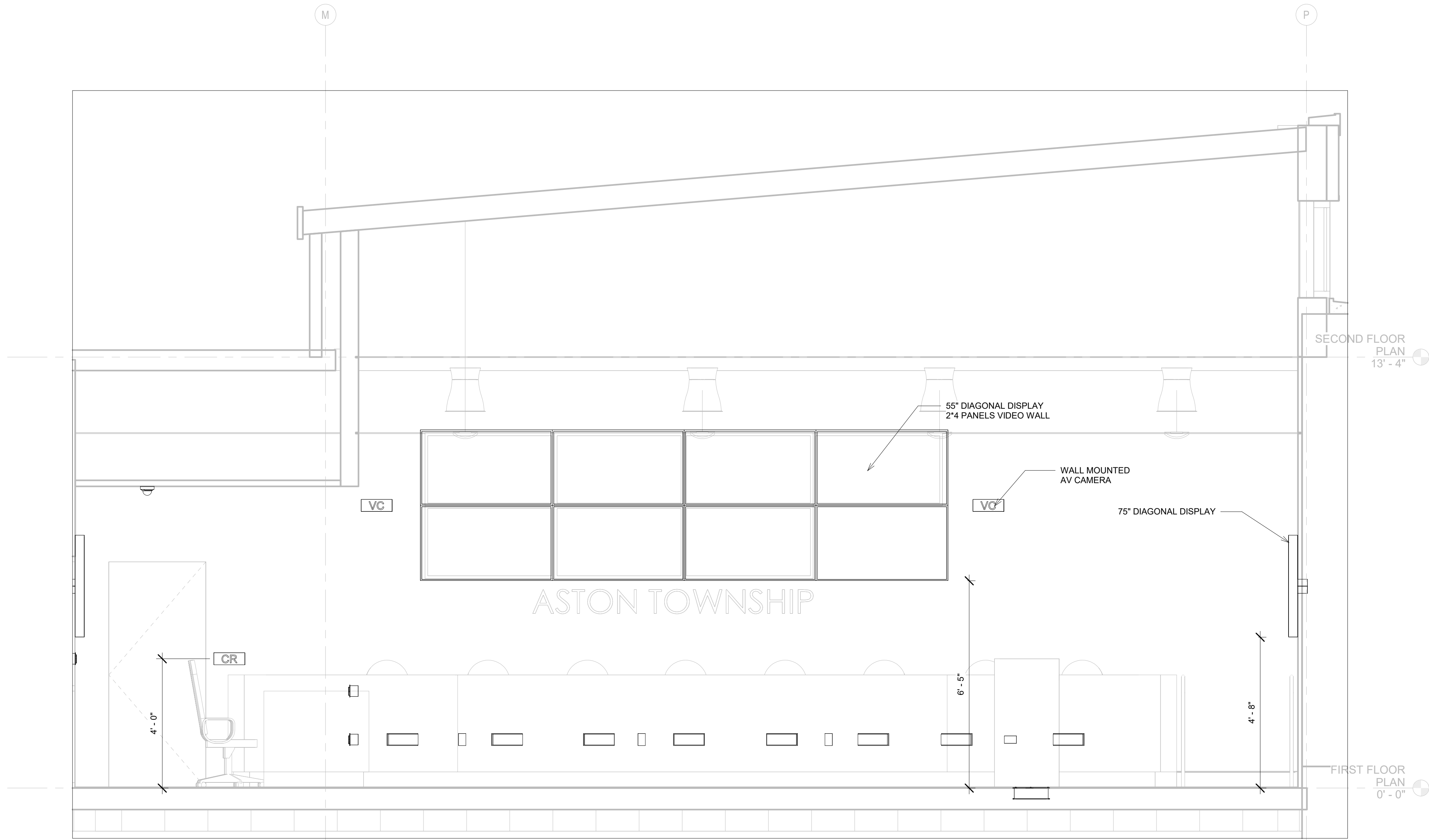
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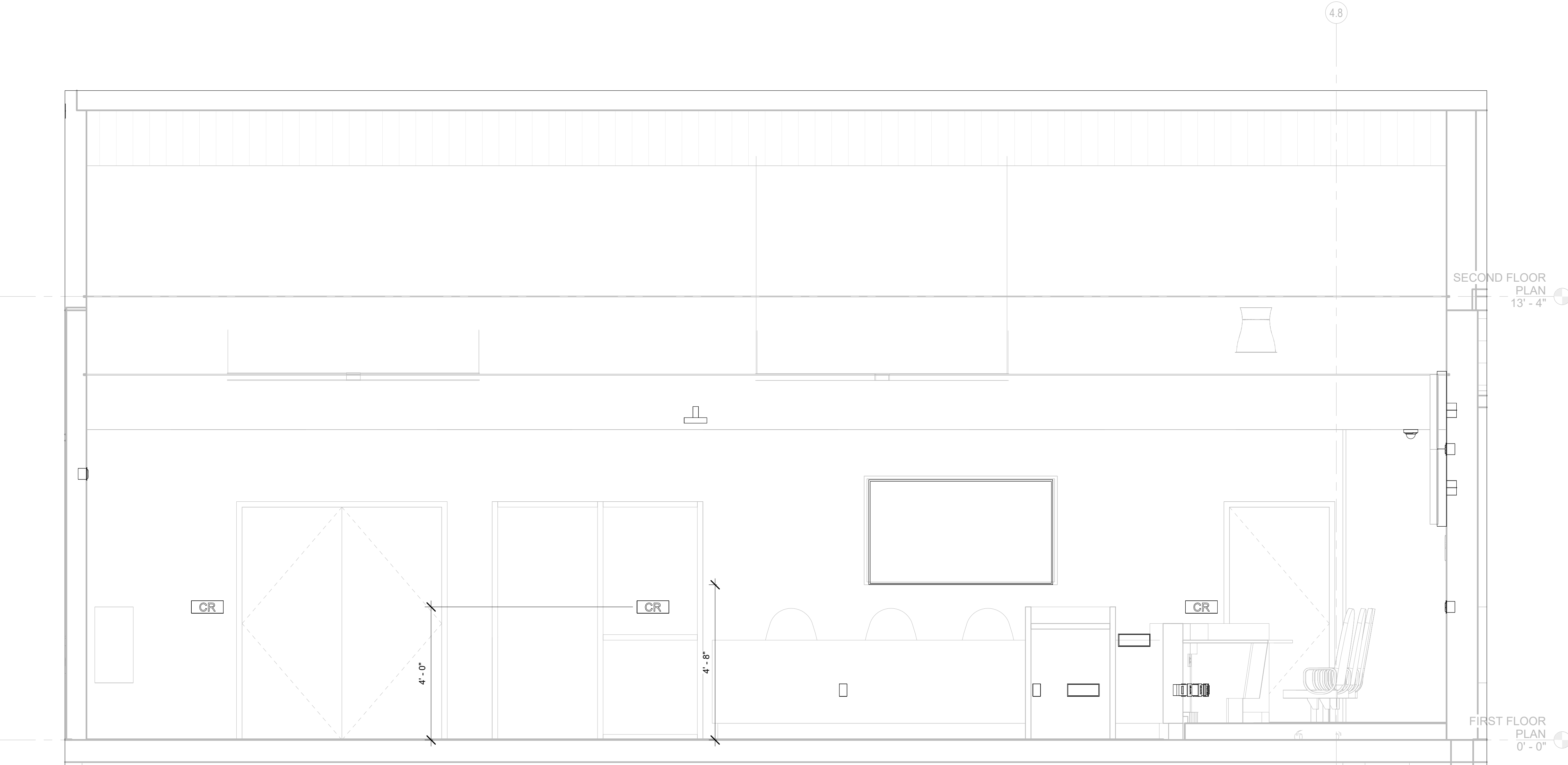
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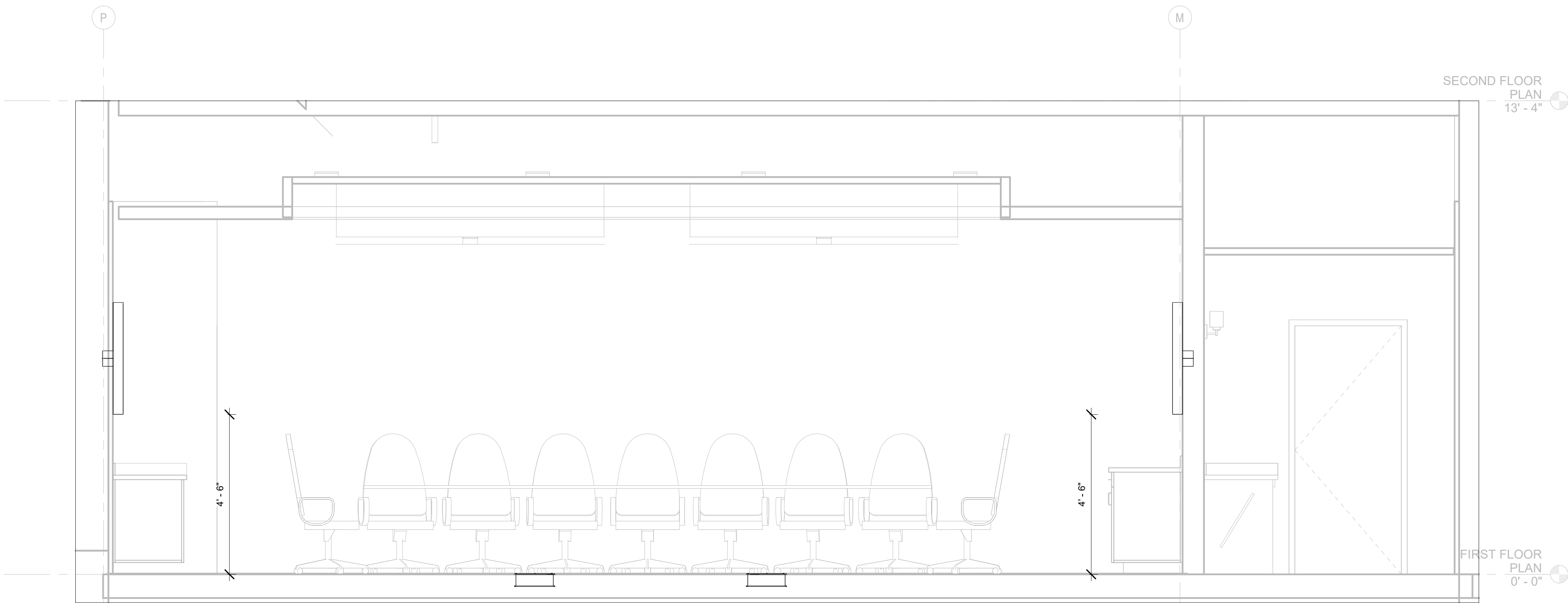
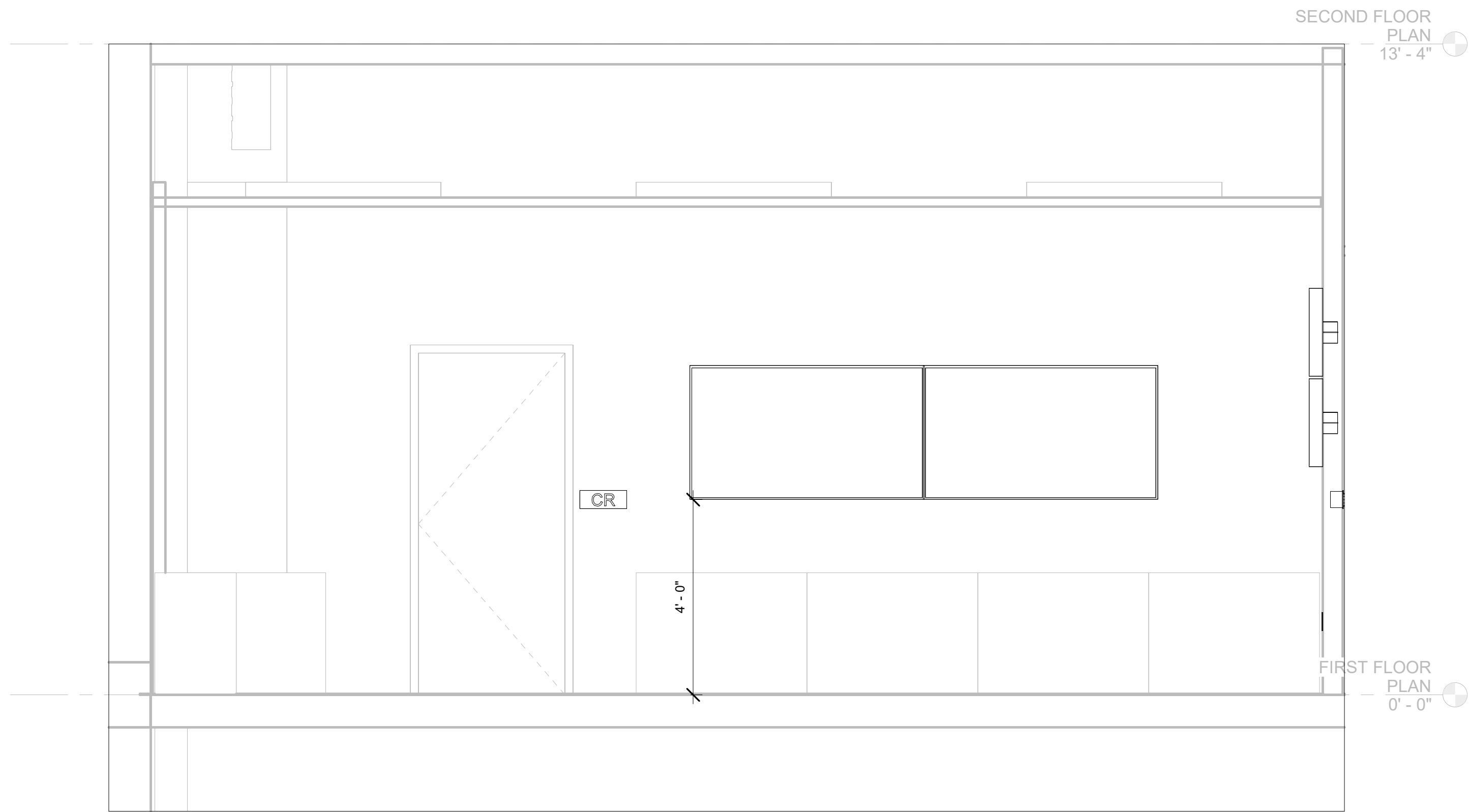
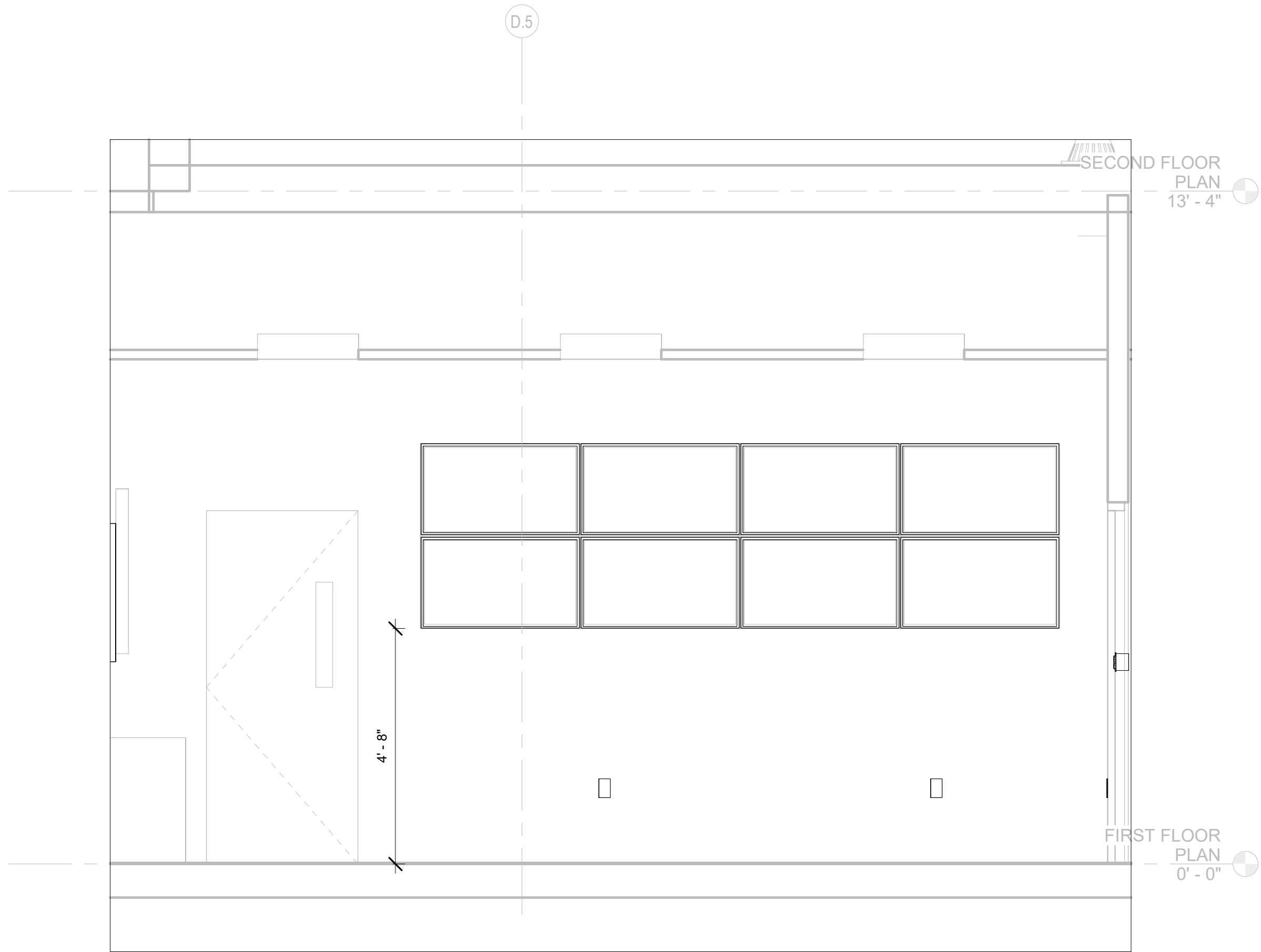
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TA-400



1 **COMMISSIONERS MEETING ROOM FRONT ELEVATION**
1/2" = 1'-0"



2 **COMMISSIONERS MEETING ROOM SIDE ELEVATION**
1/2" = 1'-0"



2 CAUCUS ROOM ELEVATION

1/2" = 1'-0"

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Sheet Title:
ACCESS CONTROL DETAILS

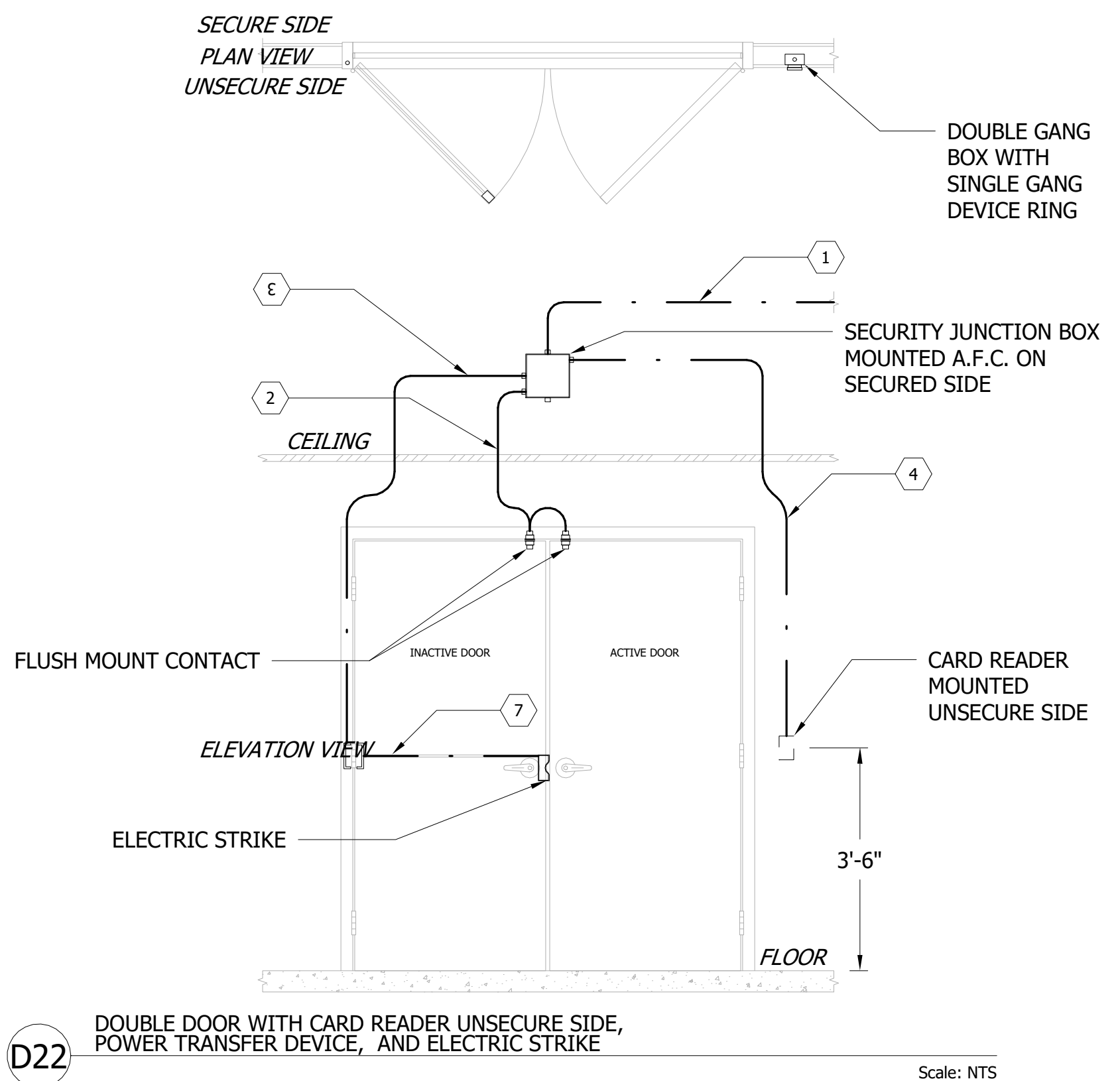
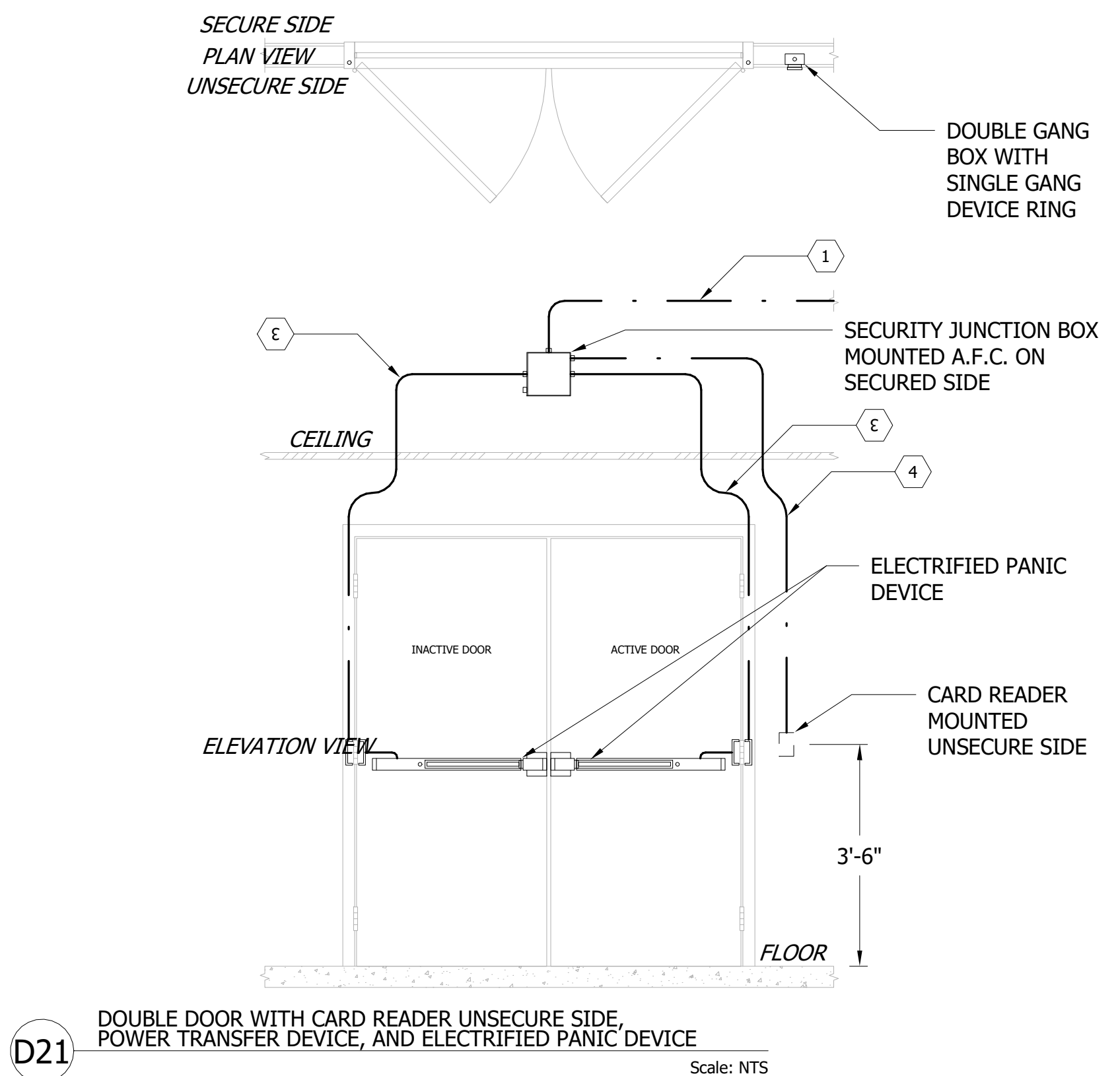
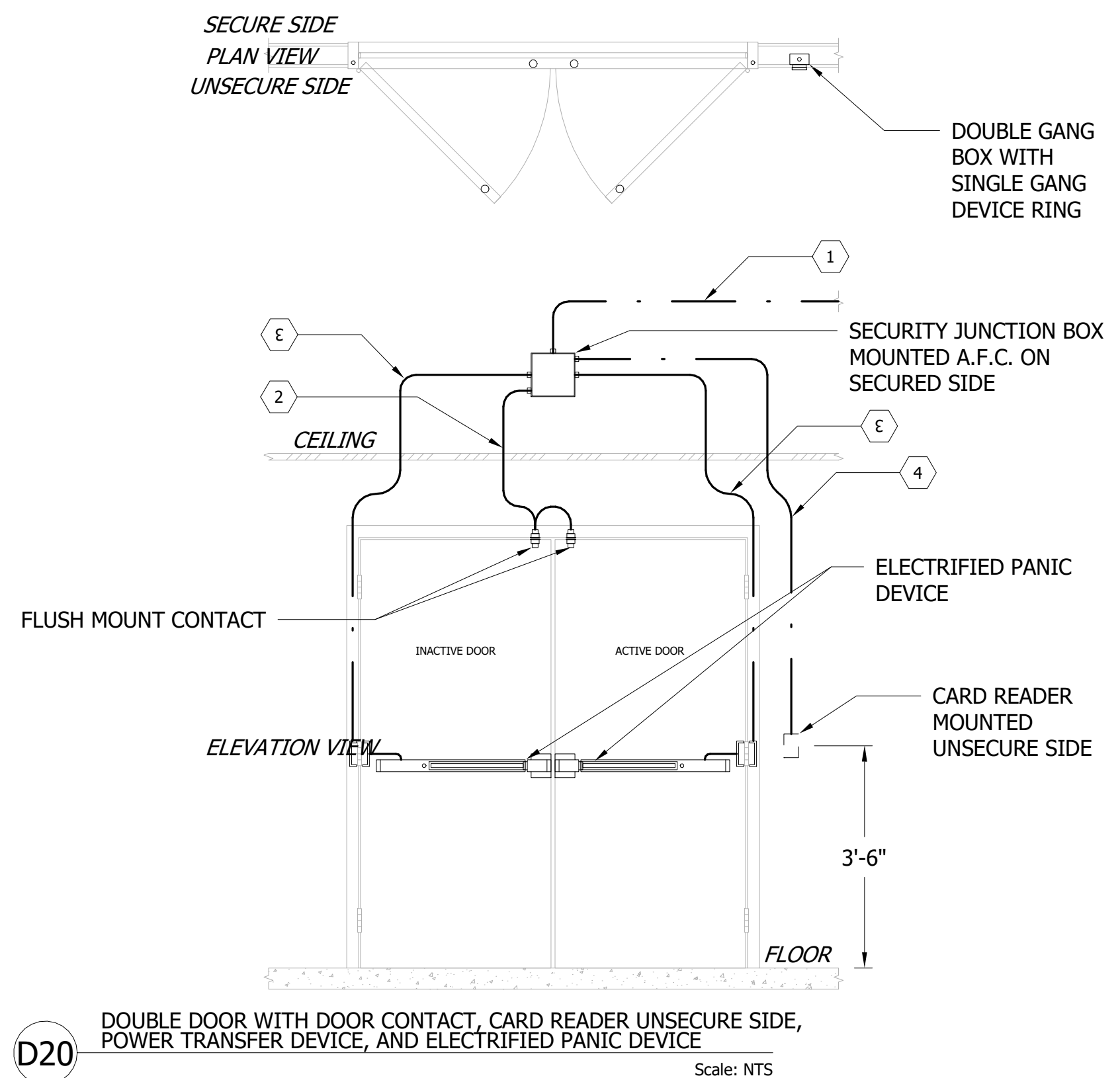
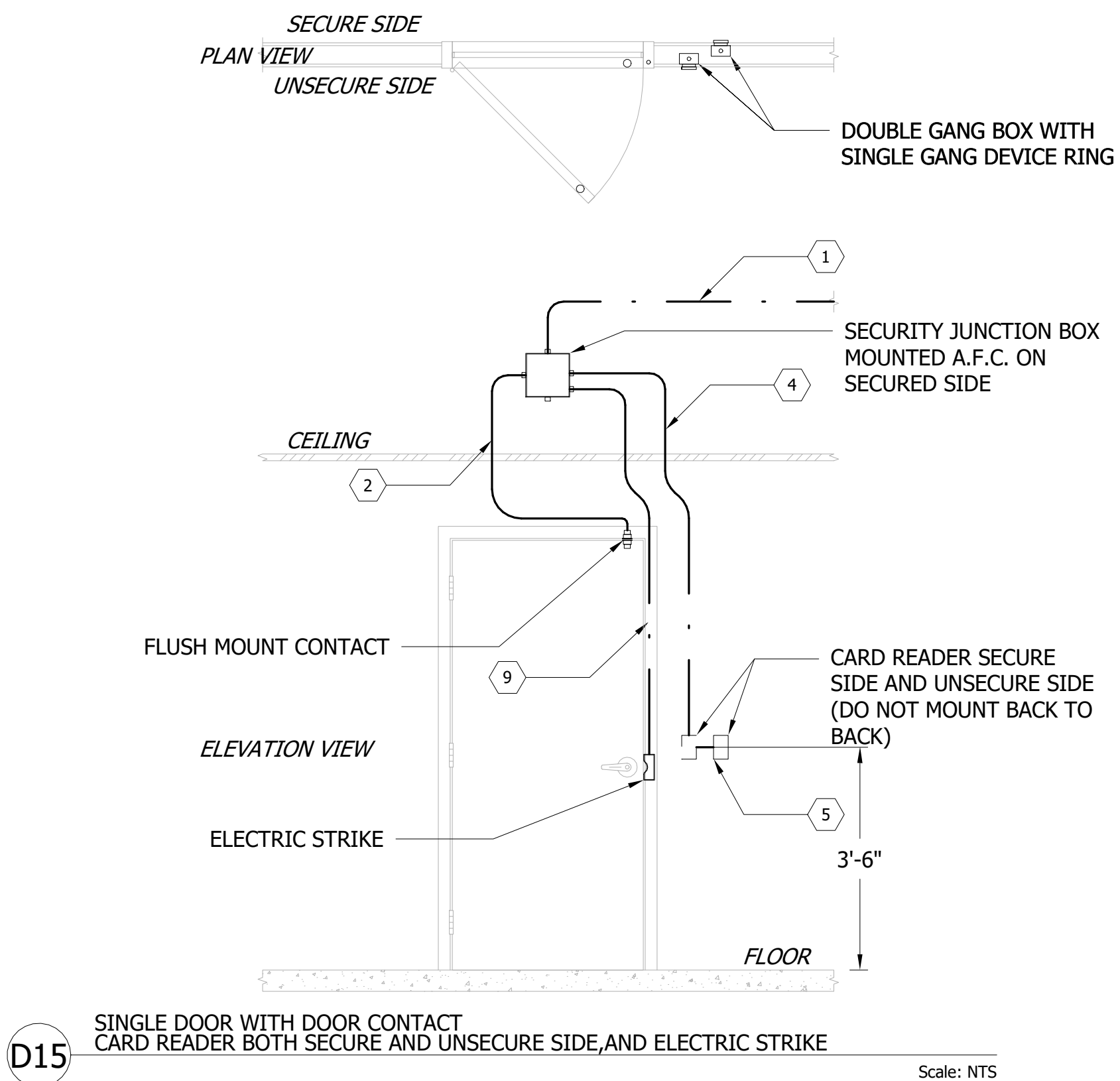
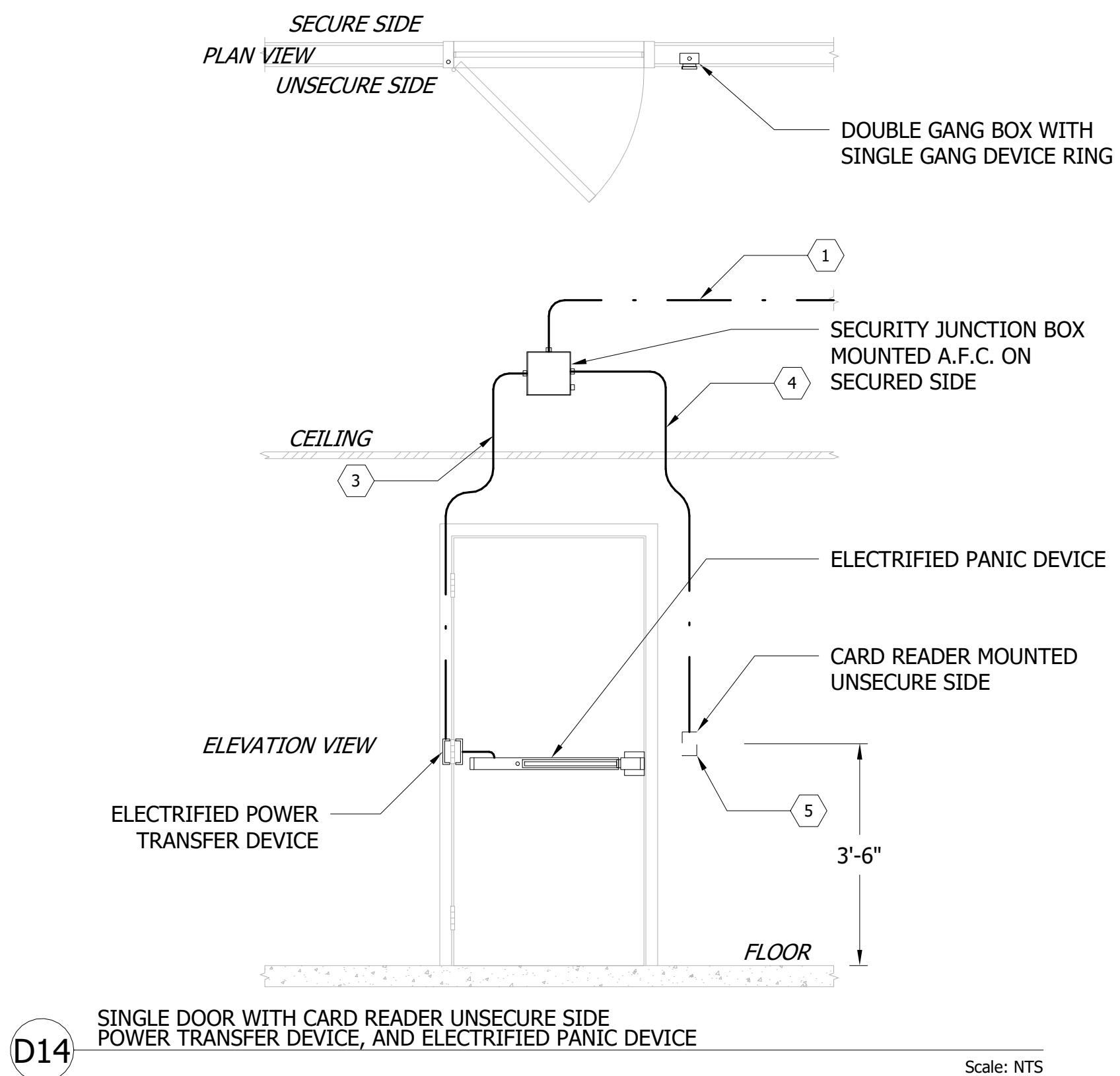
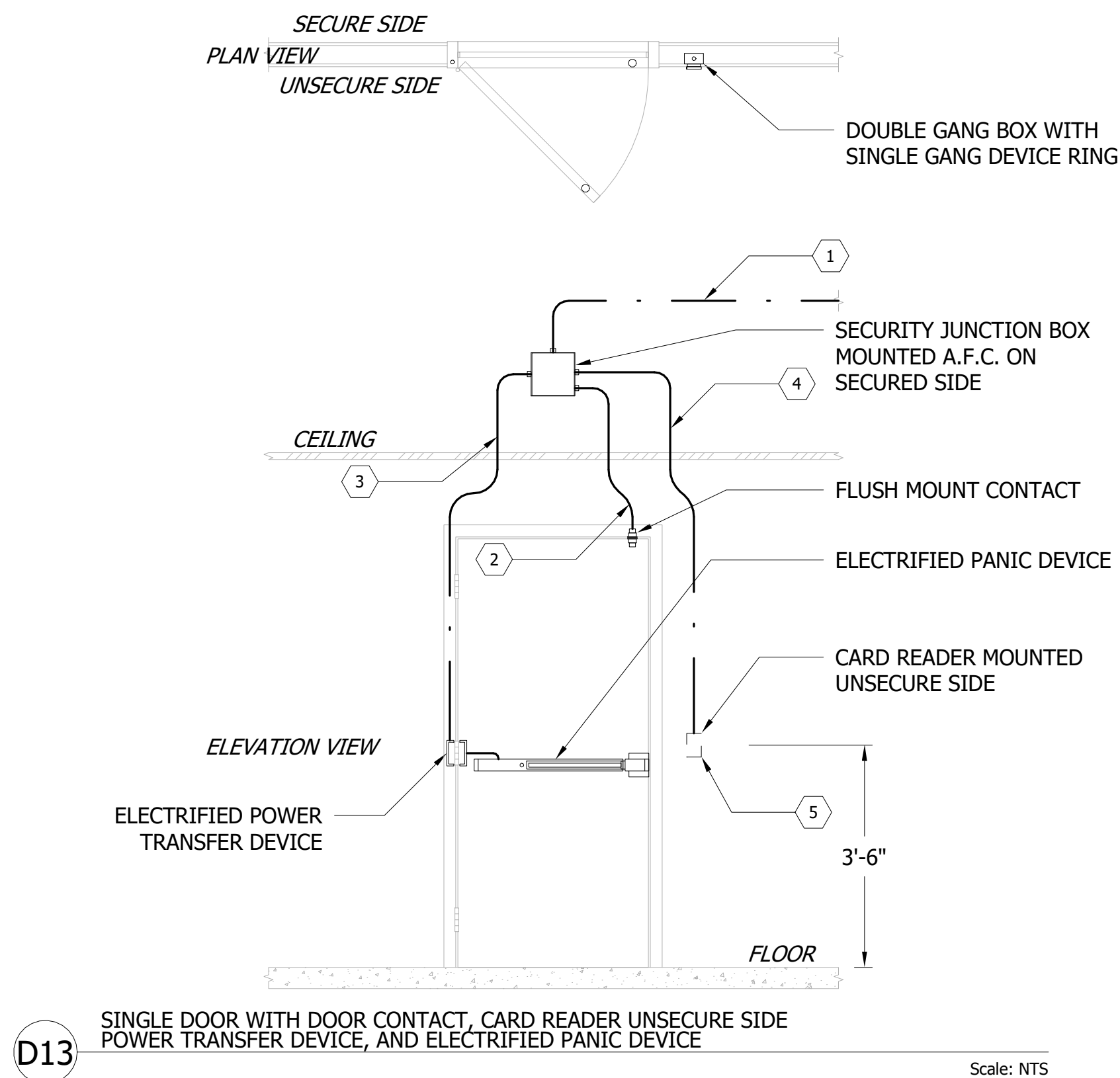
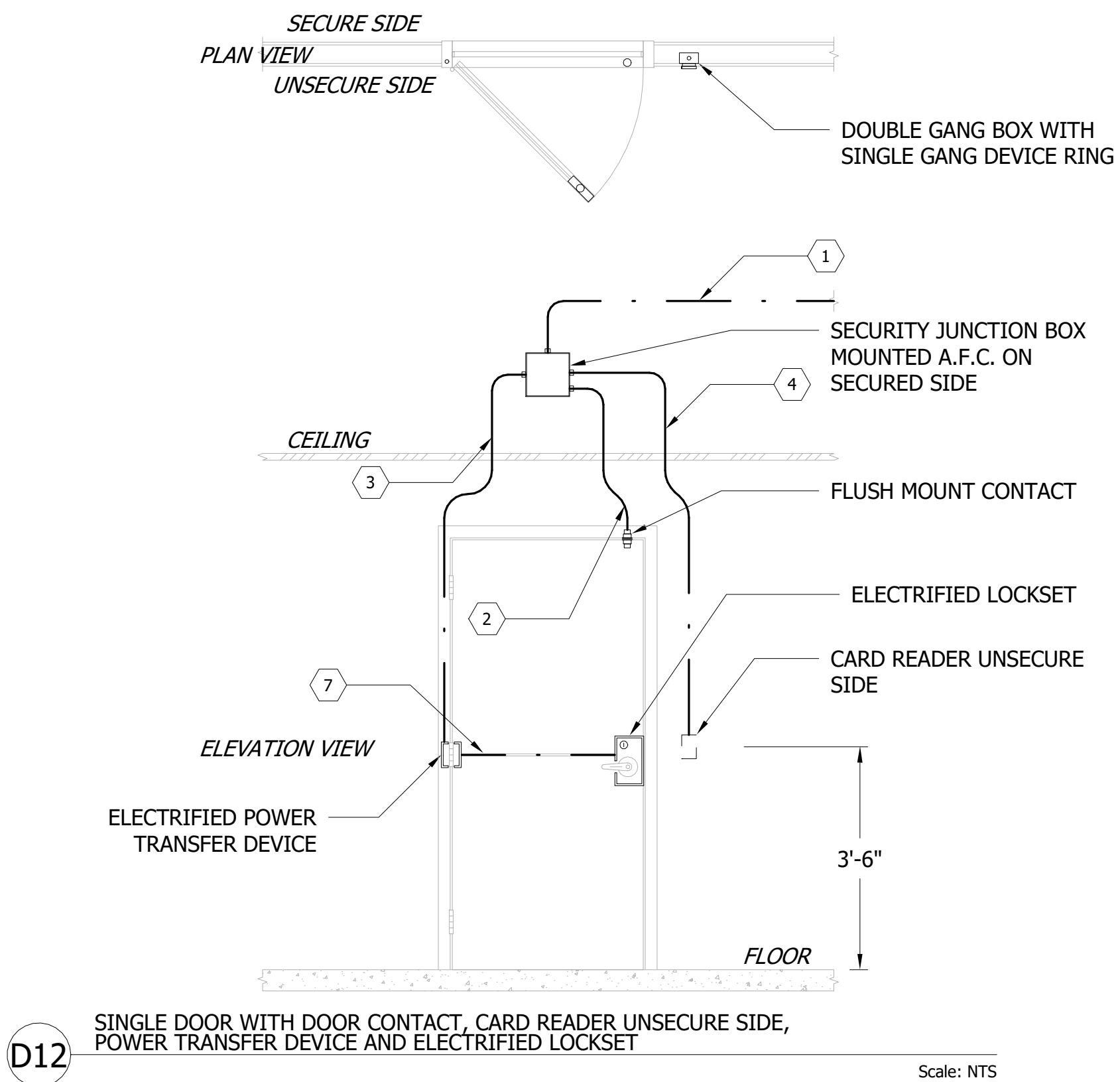
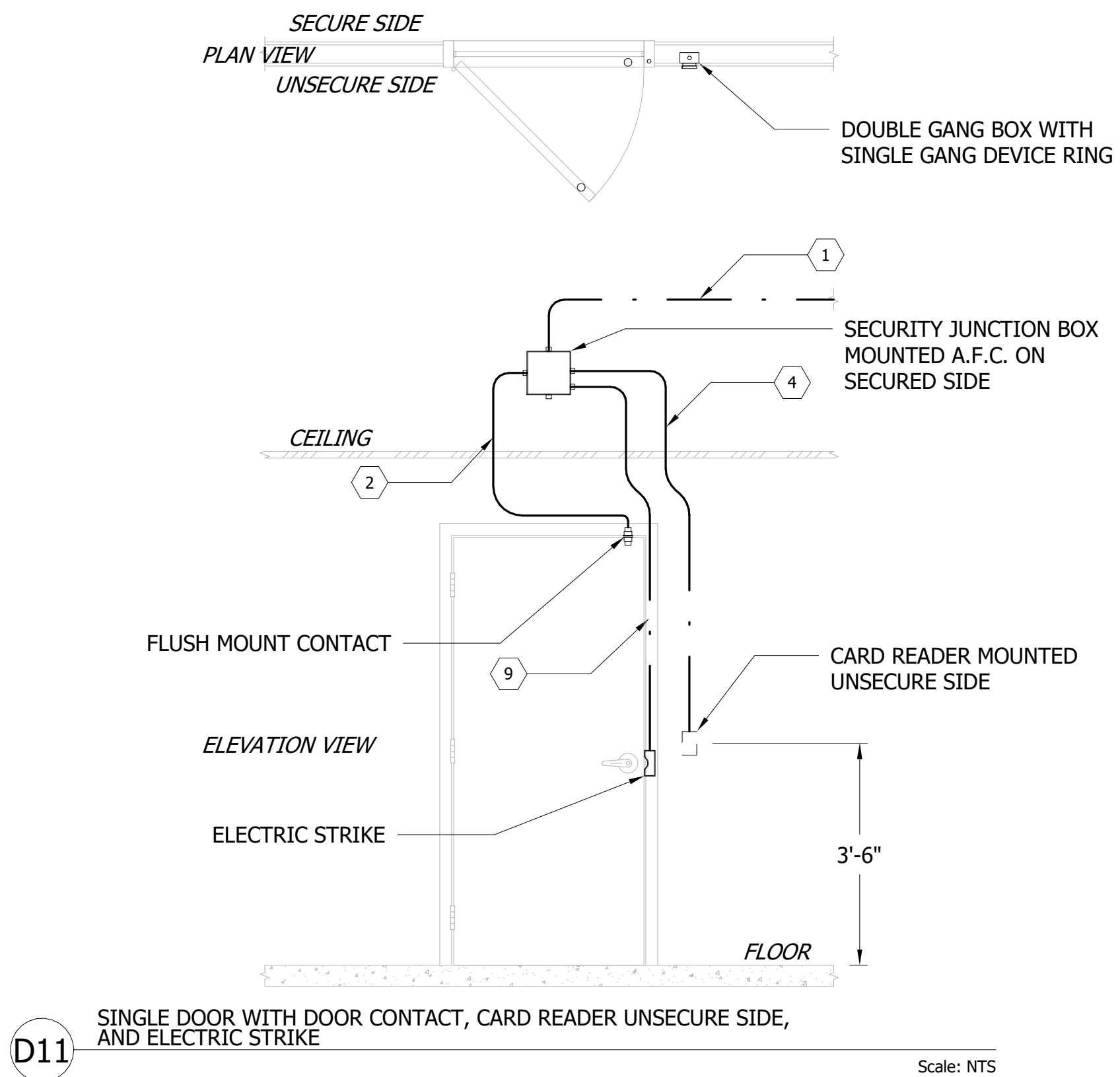
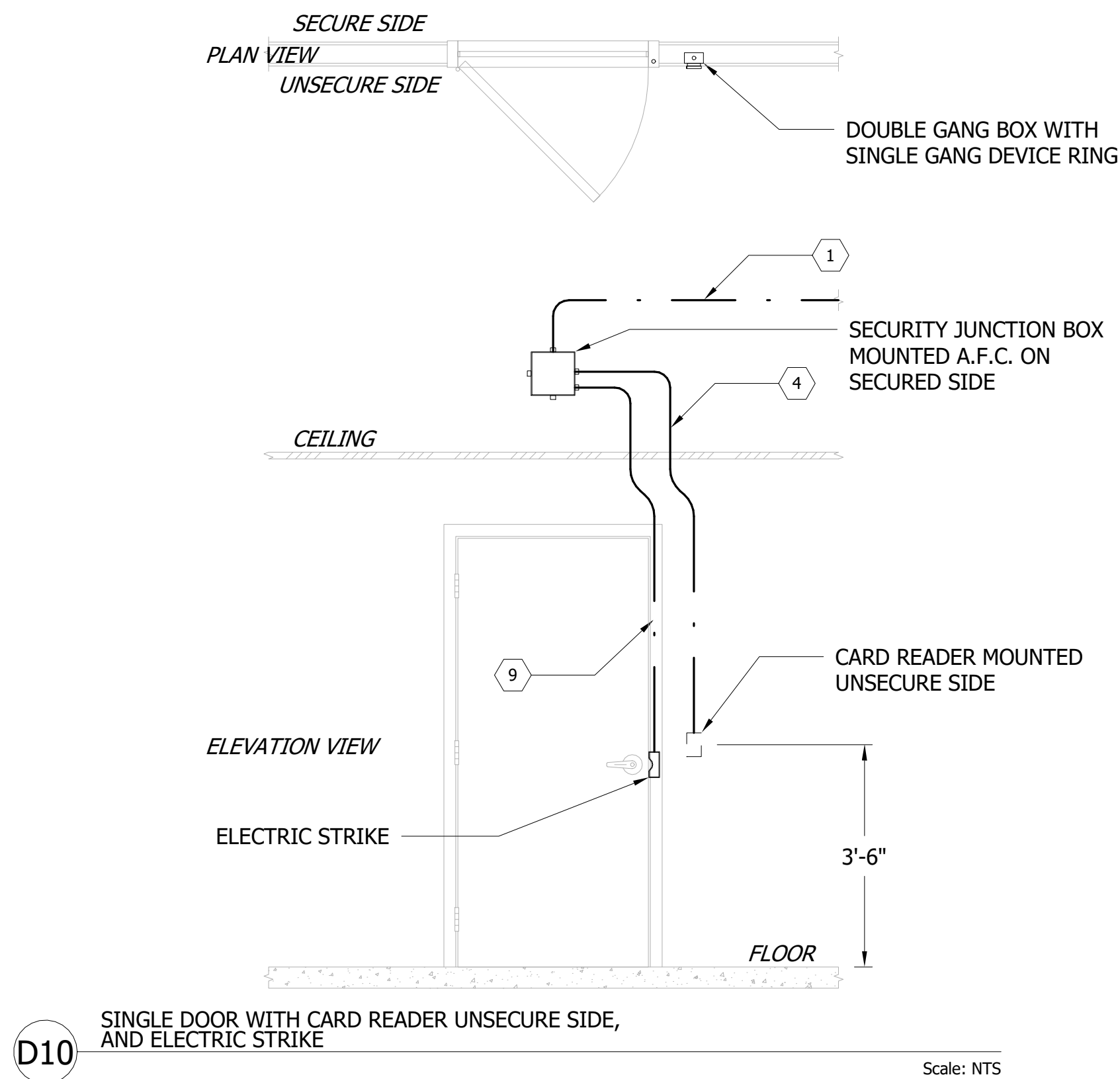
Sheet Number:

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KEY LEGEND

- 1 = ONE (1) 1" EC FROM SECURITY JUNCTION BOX TO ACCESS CONTROL PANEL.
- 2 = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX TO DOOR CONTACT MOUNT LOCATION.
- 3 = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX STUBBED BEHIND DOOR FRAME TO ELECTRIFIED POWER TRANSFER DEVICE.
- 4 = DOUBLE GANG BOX WITH SINGLE GANG DEVICE RING MOUNTED 42" A.F.F. WITH ONE (1) 3/4" TO SECURITY JUNCTION BOX.
- 5 = DOUBLE GANG BOX WITH SINGLE GANG DEVICE RING MOUNTED 42" A.F.F. WITH ONE (1) 3/4" TO ADJACENT DOUBLE GANG BOX.
- 6 = DOUBLE GANG BOX WITH HORIZONTALLY ARRAYED SINGLE GANG DEVICE RING MOUNTED ABOVE DOOR WITH ONE (1) 3/4" EC TO SECURITY JUNCTION BOX.
- 7 = ONE (1) 3/8" CORE DRILL THROUGH DOOR TO LOCKSET .
- 8 = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX TO MAGNETIC LOCK.
- 9 = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX STUBBED BEHIND DOOR FRAME TO ELECTRIC STRIKE.
- 10 = AUTOMATIC DOOR OPERATOR. COORDINATE WITH DOOR MANUFACTURER.



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ELECTRONIC ACCESS CONTROL DOOR SCHEDULE									
Level	Door Number	Door Type	Single/Double	Telecom Room	Door Contact	Electronic Locking Mechanism	Card Reader (Unsecure Side)	Electronic Locking Mechanism (2nd Lead)	Comments
FIRST FLOOR PLAN	1S2A	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	1S2B	D14	SINGLE	IDF 105	No	EED / EPT	Yes		Integrate with Fire Alarm System
FIRST FLOOR PLAN	100	D20	DOUBLE	IDF 105	Yes	EED / EPT	Yes	EED / EPT	
FIRST FLOOR PLAN	102A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	102B	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	103	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	104	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	105	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	106	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	107	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	108	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	110	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	111	D15	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	113A	D15	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	114A	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	115A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	115B	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	116	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	117	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	118	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	119	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	120	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	121	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	122	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	124	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	125	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	126A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	126B	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	130	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	131	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	132	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	152	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	153A	D21	DOUBLE	IDF 105	No	EED / EPT	Yes	EED / EPT	Integrate with Fire Alarm System
FIRST FLOOR PLAN	153B	D21	DOUBLE	IDF 105	No	EED / EPT	Yes	EED / EPT	Integrate with Fire Alarm System
FIRST FLOOR PLAN	154	D22	DOUBLE	IDF 105	No	ES / EPT	Yes		
FIRST FLOOR PLAN	155	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	156	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	157A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	157B	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	E01	D10	SINGLE	IDF 105	No	ES	Yes		Integrate with Fire Alarm System
SECOND FLOOR PLAN	252	D14	SINGLE	IDF 216	No	EED / EPT	Yes		Integrate with Fire Alarm System
SECOND FLOOR PLAN	201	D11	SINGLE	IDF 216	Yes	ES	Yes		
SECOND FLOOR PLAN	203	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	204A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	204B	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	205	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	206	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	207	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	208	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	210A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	210B	D12	SINGLE	IDF 216	Yes	EL / EPT	Yes		
SECOND FLOOR PLAN	214	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	216	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	217	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	219	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	220	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	221	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	223A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	224	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	233	D10	SINGLE	IDF 216	No	ES	Yes		

Grand total: 60

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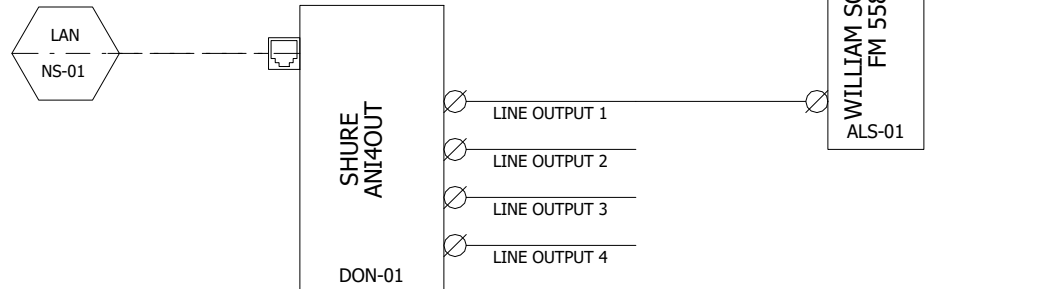
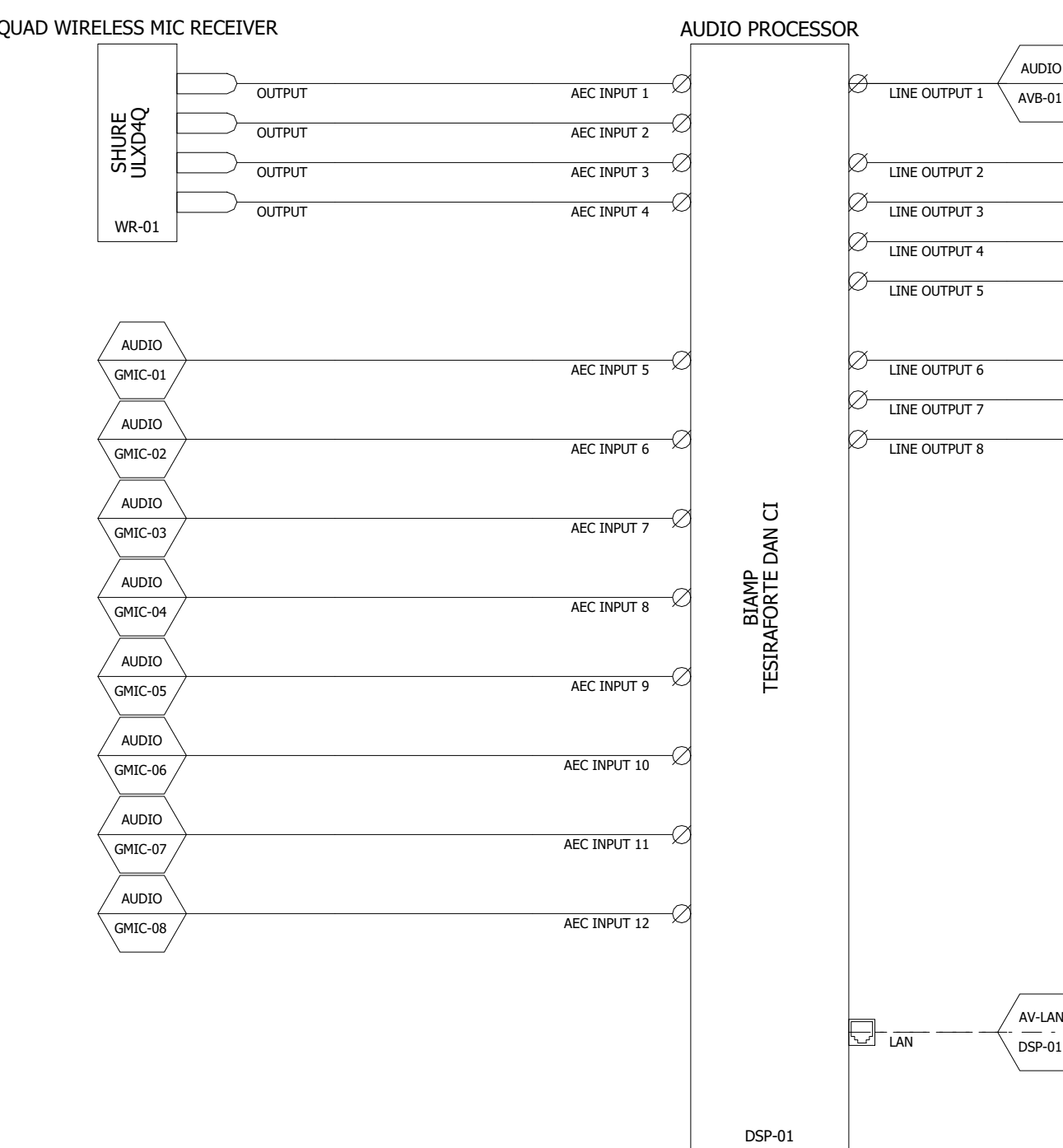
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Sheet Title:
**ACCESS CONTROL
DOOR SCHEDULE**

Sheet Number:
TA-501

The diagram illustrates the system architecture. On the left, the **FLIPTOP INPUT** section includes two **FLIPTOP** units. These are connected to the **NETWORK ENCODER** via **HDMI INPUT** and **HDMI OUTPUT** lines. A dashed oval encircles the FLIPTOP units and their connections. The **NETWORK ENCODER** is a central vertical block containing a **CUSTOMER DM-WX-351** module and a **TX-09** output. A dashed line connects the TX-09 output to the **RJ-45A RS-01** unit on the right. Below this, the **GOOSENECK MICROPHONE** section features a **SHURE MX4180/C** microphone and a **CMC-09** control unit. A solid line connects the microphone to the **MX02 CMC-09** unit on the right.

Figure 1 illustrates the Network Encoder and Decoder Architecture. The Network Encoder receives inputs from the FLIPTOP INPUT and the GOOSENECK MICROPHONE. It processes these inputs and outputs three signals: GSETRON, DMWVXZG8BT, and TX-01. These signals are then sent to the Network Decoder, which outputs RX-01, DMWVXZG8BT, and GSETRON. The RX-01 signal is connected to the SHURE MK4130DC microphone, which is connected to the GOOSENECK MICROPHONE. The GSETRON signal is connected to the AIR-LAN block, which is connected to the Network Decoder.

[illegible][illegible]

The figure contains three diagrams illustrating network connections for VC cameras and AV receivers.

VC CAMERA (Top Left): A VC CAMERA (VADO000, EASYIP 20, CAM-01) is connected to an AV-LAN (RG-01) via a switch. The connection is labeled AV-LAN.

VC CAMERA (Top Middle): A VC CAMERA (VADO000, EASYIP 20, CAM-02) is connected to an AV-LAN (RG-01) via a switch. The connection is labeled AV-LAN.

VC CAMERA (Top Right): A VC CAMERA (VADO000, EASYIP 20, CAM-03) is connected to an AV-LAN (RG-01) via a switch. The connection is labeled AV-LAN.

AV RECEIVER (Bottom Left): An AV RECEIVER (CRESTRON NIX-360, RX-09) is connected to a 75" 4K FLAT PANEL DISPLAY (LG 75UH53-H, FPD-09) via a switch. The connection is labeled AV-LAN.

AV RECEIVER (Bottom Right): An AV RECEIVER (CRESTRON NIX-360, RX-10) is connected to a 75" 4K FLAT PANEL DISPLAY (LG 75UH53-H, FPD-10) via a switch. The connection is labeled AV-LAN.

LOUDSPEAKER

JBL
CONTROL 65 P/T
LS-01

AUDIO
PA-01

LOUDSPEAKER

JBL
CONTROL 65 P/T
LS-04

AUDIO
PA-01

LOUDSPEAKER

JBL
CONTROL 65 P/T
LS-02

AUDIO
PA-01

LOUDSPEAKER

JBL
CONTROL 65 P/T
LS-03

AUDIO
PA-01

LOUDSPEAKER

JBL
CONTROL 65 P/T
LS-05

AUDIO
PA-01

SUBWOOFER

JBL
CONTROL 60 PS/T
LS-07

AUDIO
PA-01

The diagram illustrates the AV system architecture. It shows a signal path starting from a 'TABLE TOP MONITOR' (DELL P2424HT, MCN-01) which connects to a 'NETWORK ENCODER' (CRESTRON DMWXE202GBT, TX-11). The encoder then connects to an 'AV LAN' (NS-01) switch. This switch connects to a 'NETWORK DECODER' (CRESTRON DM-INV-D30, RX-11), which in turn connects to another 'AV LAN' (NS-01) switch. Finally, this switch connects to a 'REMOTE CONTROL PANEL' (CRESTRON TS-1070-RS, TP-02), which also connects to a third 'AV LAN' (NS-01) switch. The diagram uses standard AV symbols: a monitor icon for the Table Top Monitor, a box for the Network Encoder and Network Decoder, a hexagon for the AV LAN switches, and a control panel icon for the Remote Control Panel. Arrows indicate the direction of signal flow.

The diagram illustrates a 4x2 matrix switch system. It consists of 8 receivers (RX-01 to RX-08) and 8 processors (PPD-01 to PPD-08) arranged in a 4x2 grid. Each receiver is a CRESTON NMX-360 AV RECEIVER. Each processor is a LG 55VSM53. The receivers are connected to the processors via a central switch matrix. The connections are as follows:

- Receiver RX-01 is connected to Processor PPD-01.
- Receiver RX-02 is connected to Processor PPD-02.
- Receiver RX-03 is connected to Processor PPD-03.
- Receiver RX-04 is connected to Processor PPD-04.
- Receiver RX-05 is connected to Processor PPD-05.
- Receiver RX-06 is connected to Processor PPD-06.
- Receiver RX-07 is connected to Processor PPD-07.
- Receiver RX-08 is connected to Processor PPD-08.

The diagram also shows the internal connections of each receiver and processor, including LAN, HDMI INPUT, HDMI OUTPUT, COM, and RS-485 ports.

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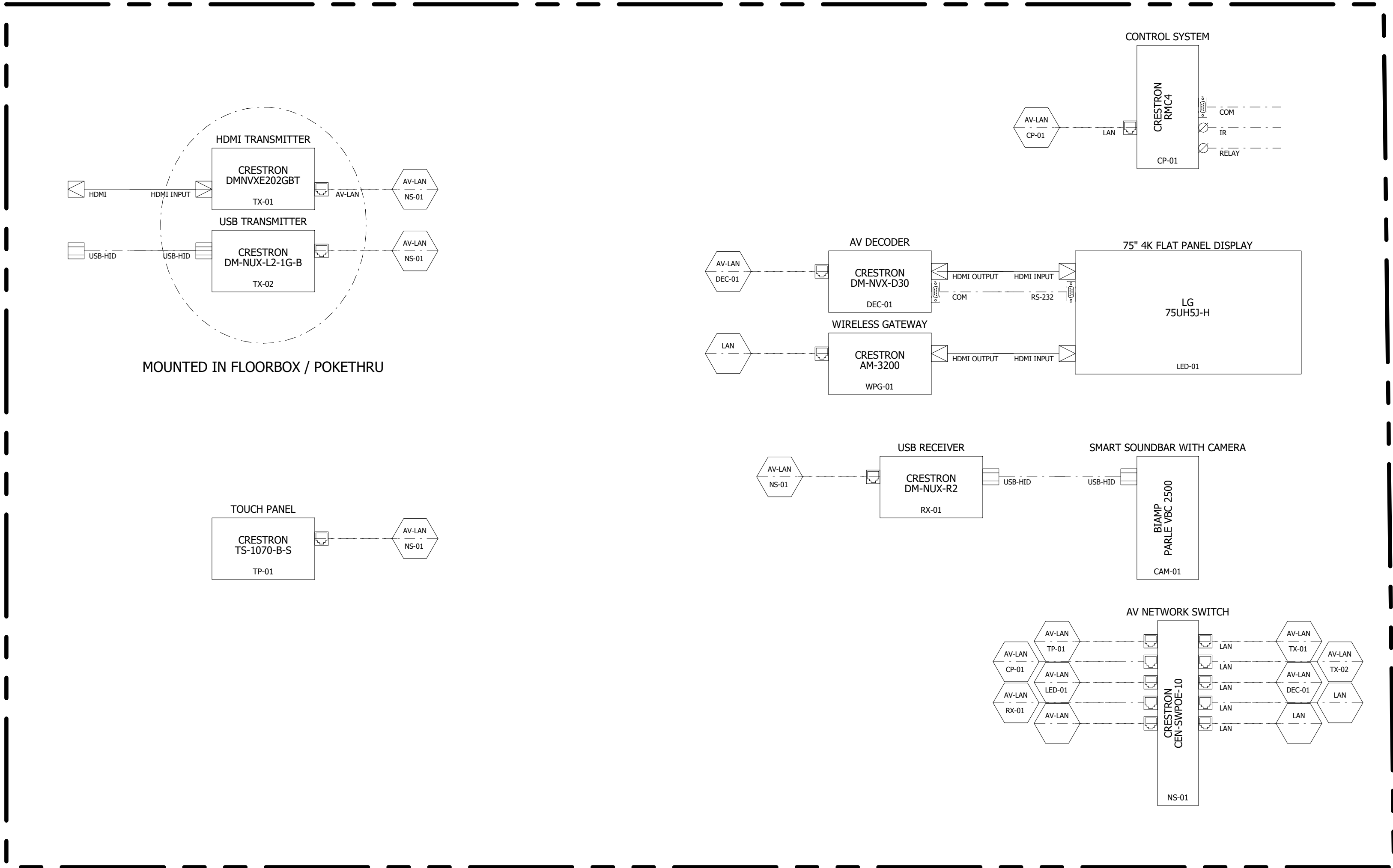
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Project Number: 2301.00-22

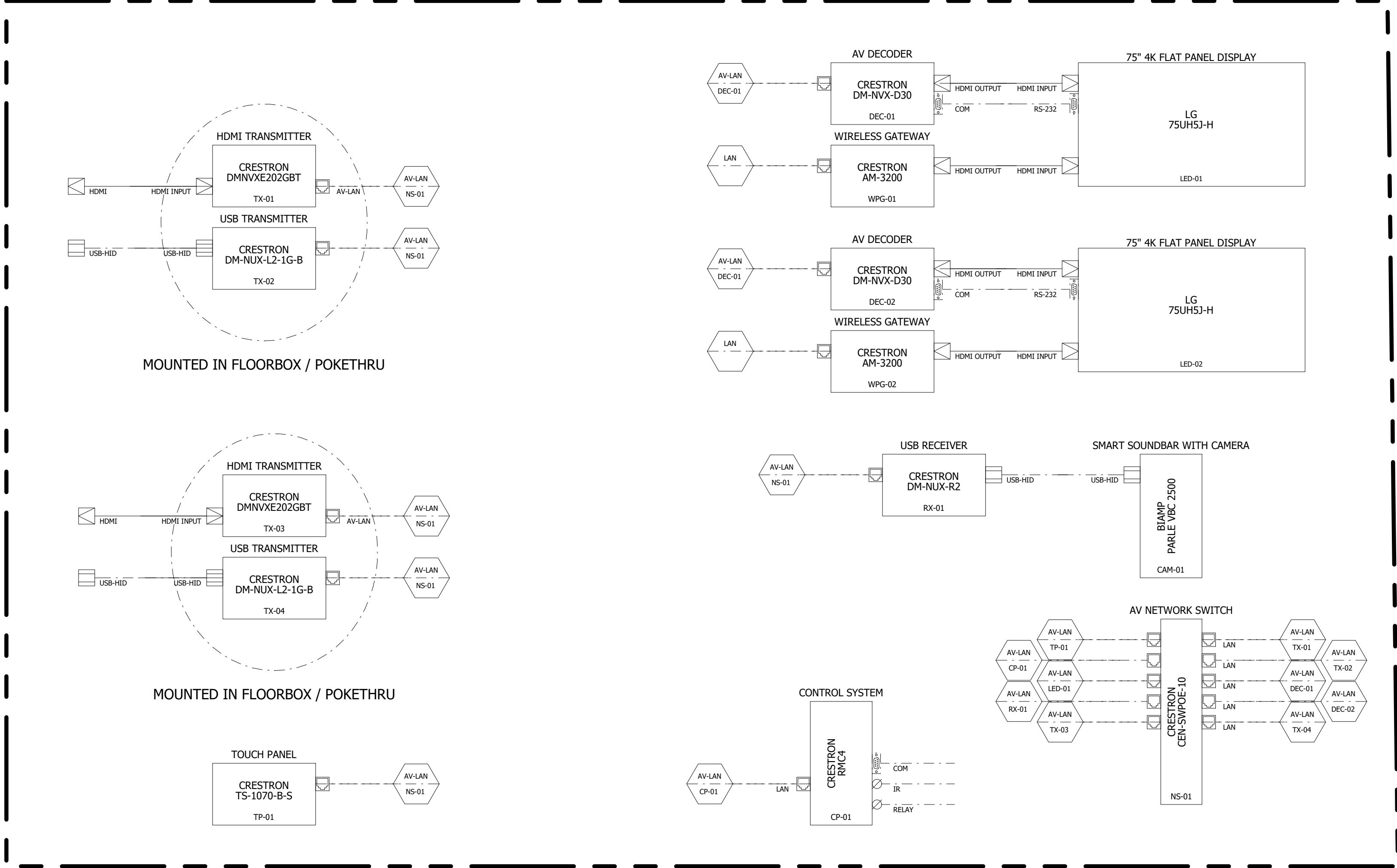
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AV SIGNAL FLOW
TYPICAL
CONFERENCE
ROOMS
Sheet Number:

TA-503

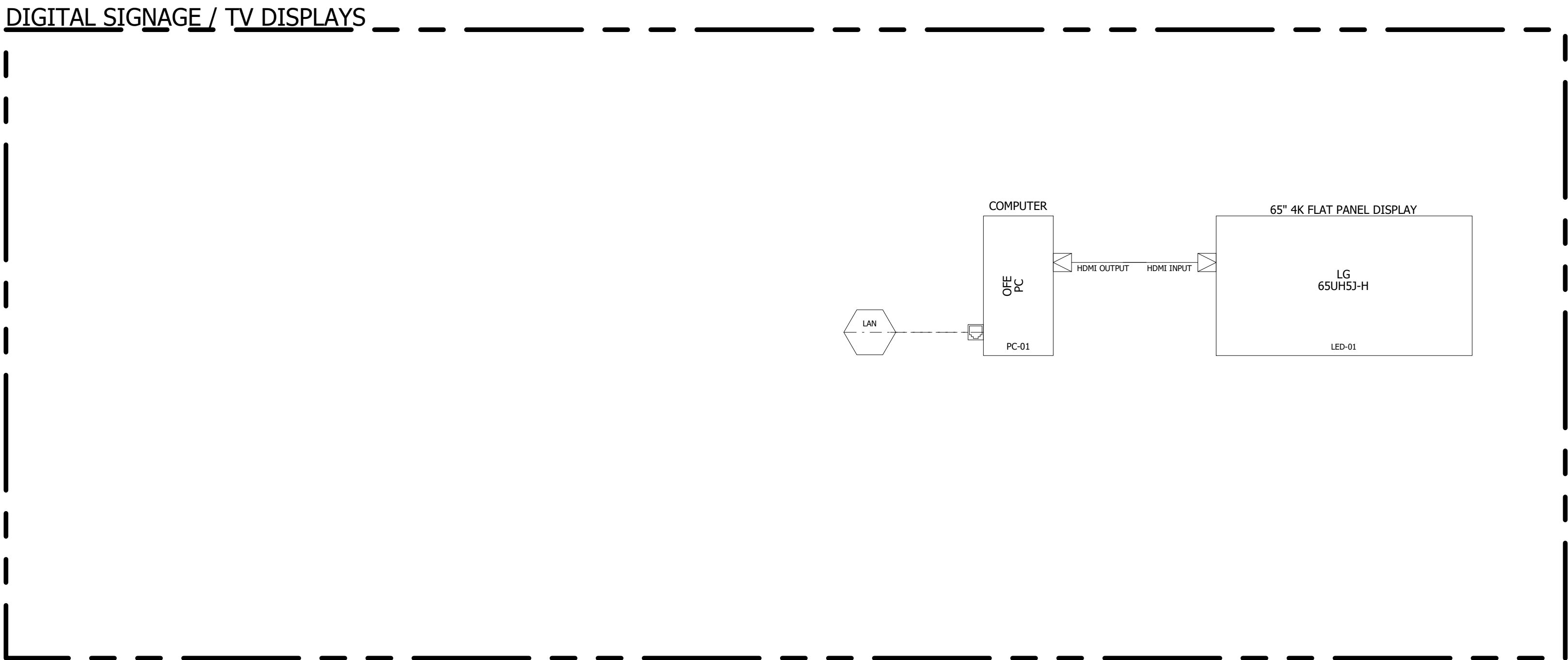
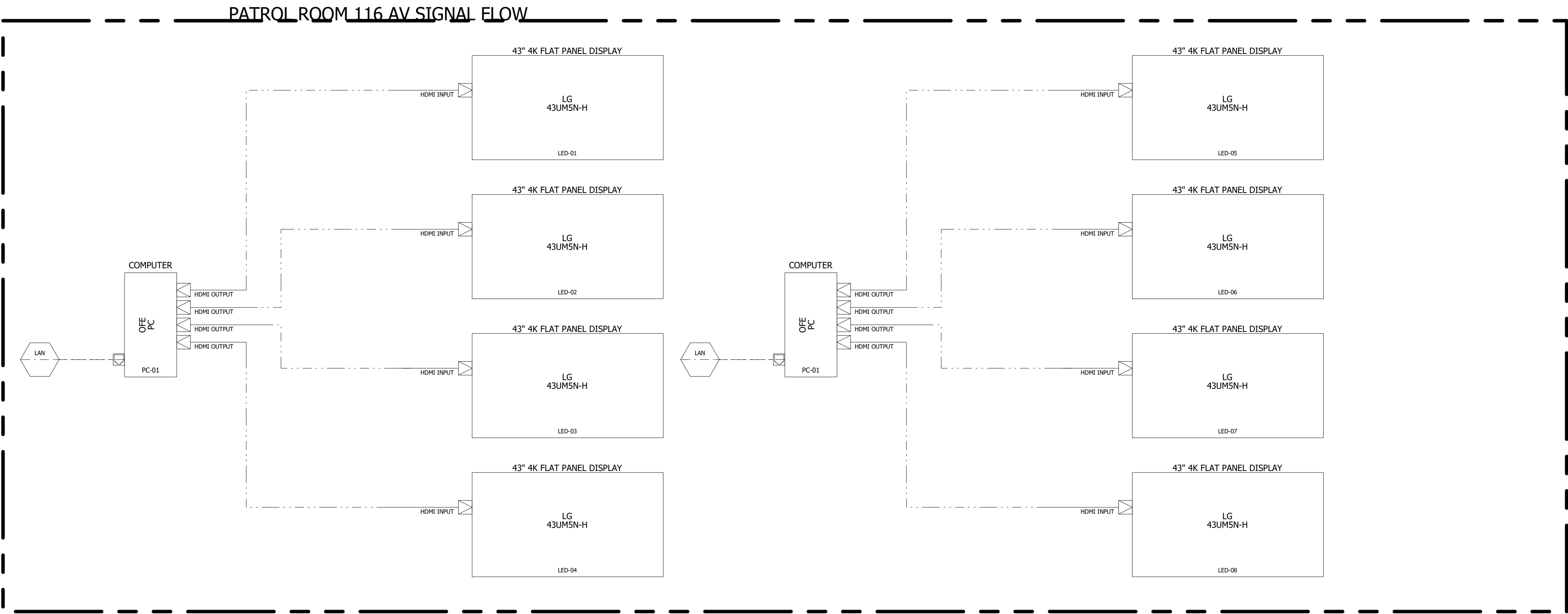
CONFERENCE ROOM 124 AND 220 / MEETING ROOM 201 / DETECTIVE ROOM 118 SIGNAL FLOW



CAUCUS ROOM 157 SIGNAL FLOW



C:\Users\jinkypati\Documents\2301_0022 Aston Township Municipal Complex Low Voltage_apatib8MW6y.rvt 3/28/2024 1:25:08 PM



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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
**AV SIGNAL FLOW
MISC SPACES**

Sheet Number:
TA-504