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TITLE-24 MANDATORY MEASURES

- EQUIPMENT AND SYSTEMS EFFICIENCY
- ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE.
 - PIPING AND DUCTING SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH THE SECTIONS 120.3, 120.4, 120.7 OF TITLE-24 ENERGY EFFICIENCY STANDARDS, CHAPTER 6 OF THE 2022 CMC, AND ALL CODES HAVING JURISDICTION.
 - ALL HVAC SYSTEMS SHALL MEET THE EFFICIENCY AND CONTROL REQUIREMENTS PER SECTION 110.2 AND 120.2 E.E.S.
 - ALL HVAC EQUIPMENT AND APPLIANCES SHALL MEET THE REQUIREMENTS PER SECTION 110.1-110.3, 110.5, 120.1-120.4 TITLE-24 ENERGY STANDARDS.
 - EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH AN AUTOMATIC TIME SWITCH WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOW OPERATION OF THE SYSTEM DURING OFF-HOURS FOR UP TO 4 HOURS. THE TIME SWITCH SHALL BE CAPABLE OF PROGRAMMING DIFFERENT SCHEDULES FOR WEEKDAYS AND WEEKENDS. INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE THAT TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS, THEN RESUMES THE NORMALLY SCHEDULED OPERATION, AND HAS PROGRAM BACKUP CAPABILITIES THAT PREVENT THE LOSS OF THE DEVICE'S PROGRAM AND TIME SETTING FOR AT LEAST 10 HOURS IF POWER IS INTERRUPTED.
 - EACH SPACE CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT TEMPORARILY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN A SETBACK HEATING AND COOLING THERMOSTAT SETPOINT.
 - EACH SPACE CONDITIONING ZONE SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE. WHERE USED TO CONTROL HEATING, THE CONTROL SHALL BE ADJUSTABLE DOWN TO 55°F OR LOWER. FOR COOLING, THE CONTROL SHALL BE ADJUSTABLE UP TO 85°F OR HIGHER. WHERE USED TO CONTROL BOTH HEATING AND COOLING, THE CONTROL SHALL BE CAPABLE OF PROVIDING A DEAD BAND OR AT LEAST 5°F WITHIN WHICH THE SUPPLY OR HEATING AND COOLING IS SHUT OFF OF REDUCED TO A MINIMUM.
 - THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN "F".
 - THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINT STOPS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.
 - GRAVITY OR AUTOMATIC DAMPERS INTERLOCKED AND CLOSED ON FAN SHUTDOWN SHALL BE PROVIDED ON THE OUTSIDE AIR INTAKES AND DISCHARGES OF ALL SPACE CONDITIONING AND EXHAUST SYSTEMS.
 - ALL GRAVITY VENTILATING SYSTEMS SHALL BE PROVIDED WITH AUTOMATIC OR READILY ACCESSIBLE MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT FOR COMBUSTION AIR OPENINGS.
 - ALL BALANCING: ALL SPACE CONDITIONING AND VENTILATION SYSTEMS SHALL BE BALANCED TO THE QUANTITIES SPECIFIED IN THESE PLANS, IN ACCORDANCE WITH AND PERFORMED BY A COMPANY CERTIFIED BY THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) PROCEDURAL STANDARDS (1983), OR ASSOCIATED AIR BALANCE COUNCIL (AABC) NATIONAL STANDARDS (1986).
 - OUTSIDE AIR CERTIFICATION: THE SYSTEM SHALL PROVIDE THE MINIMUM OUTSIDE AIR AS SHOWN ON THE MECHANICAL DRAWINGS, AND SHALL BE MEASURED AND CERTIFIED BY THE INSTALLING LICENSED C-20 MECHANICAL CONTRACTOR.
 - THE AIR CONDITIONING SYSTEM SHALL BE ENERGIZED 1 HOUR IMMEDIATELY PRIOR TO OCCUPANCY TO PROVIDE THE MINIMUM REQUIRED VENTILATION RATE.

CALGREEN MANDATORY MEASURE NOTES

- FOR NEW BUILDING 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNERS OR OWNER REPRESENTATIVES' COMMISSIONING REQUIREMENTS. THE COMMISSIONING REQUIREMENTS SHALL INCLUDE OWNERS PROJECT REQUIREMENTS (OPR), BASIS OF DESIGN (BOD), COMMISSIONING MEASURES, COMMISSIONING PLAN, FUNCTIONAL PERFORMANCE TESTING, DOCUMENTATION AND TRAINING AND A FINAL COMMISSIONING REPORT. (CALGREEN SECTION 5.4.10.2)
- PROVIDE TESTING AND ADJUSTING OF SYSTEMS IN ACCORDANCE WITH CALGREEN SECTION 5.4.10.4.
- THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF THE BUILDING OR ALTERATION WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION. (CALGREEN SECTION 5.504.1)
- AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHOD ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM. (CALGREEN SECTION 5.501.5 AND 5.504.3)
- ALL PAINTS, ADHESIVES, SEALANTS AND CAULKS SHALL MEET THE REQUIREMENTS OF CALGREEN SECTION 4.504.2 OR 5.504.4.
- IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 13 SHALL BE INSTALLED PRIOR TO OCCUPANCY, AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATIONS AND MAINTENANCE MANUAL. (CALGREEN SECTION 5.504.5.3)
- FOR BUILDINGS OR ADDITIONS EQUIPPED WITH DEMAND CONTROL VENTILATION, CO2 SENSORS AND VENTILATION CONTROLS SHALL BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE. (CALGREEN SECTION 5.506.2)
- HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN ANY CHLOROFLUOROCARBONS (CFCs). (CALGREEN SECTION 5.508.1.1)
- HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN ANY HALONS. (CALGREEN SECTION 5.508.1.2)

SITE VERIFICATIONS

THE DESIGN DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING THE PROJECT TO INSPECT EXISTING FIELD CONDITIONS. CONTRACTOR SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS. THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER AND/OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN. CONTRACTOR SHALL INCLUDE IN HIS BID ALL COST REQUIRED TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER, OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE PROJECT.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BID THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES.

CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH THE BUILDING RULES AND REGULATIONS FOR CONTRACTORS. A COPY OF SUCH DOCUMENT MAY BE OBTAINED FROM THE BUILDING MANAGEMENT OFFICE.

ABBREVIATIONS

A/C	AIR CONDITIONING	HWP	HEATING WATER PUMP
ABV	ABOVE	HWR	HEATING WATER RETURN
ACCEPT	ACCEPTANCE	HWS	HEATING WATER SUPPLY
ACU	AIR CONDITIONING UNIT	HX	HEAT EXCHANGER
AD	ACCESS DOOR	ID	INSIDE DIAMETER
ADA	AMERICANS WITH DISABILITIES ACT	IE	INVERT ELEVATION
ADD	ADDITION	IN	INCH
AFF	ABOVE FINISH FLOOR	IW	INDUSTRIAL WASTE
AHU	AUTHORITY HAVING JURISDICTION	L	LENGTH
AHU	AIR HANDLING UNIT	LBS	POUNDS
AP	ACCESS PANEL	LP	LOW PRESSURE
APPROX	APPROXIMATE	LPC	LOW PRESSURE CONDENSATE
ARCH	ARCHITECTURAL	LPS	LOW PRESSURE STEAM
ARI	AMERICAN REFRIGERATION INSTITUTE	M	MOTOR
AS	AIR SEPARATOR	MA	MIXED AIR
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MAU	MAKEUP AIR
AUTO	AUTOMATIC	MAX	MAXIMUM
AUX	AUXILIARY	MC	MECHANICAL CONTRACTOR
AV	AIR VENT	MCC	MOTOR CONTROL CENTER
B	BOILER	MECH	MECHANICAL
BAS	BUILDING AUTOMATION SYSTEM	MIN	MINIMUM
BDD	BACKDRAFT DAMPER	MP	MEDIUM PRESSURE CONDENSATE
BFF	BELOW FINISH FLOOR	MPS	MEDIUM PRESSURE STEAM
BLDG	BUILDING	MV	MANUAL AIR VENT
BOD	BOTTOM OF DUCT	(N)	NEW
BOP	BOTTOM OF PIPE	N/A	NOT APPLICABLE
BSMT	BASEMENT	NC	NORMALLY CLOSED
BV	BALL VALVE	NO	NORMALLY OPENED
BYV	BUTTERFLY VALVE	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
C	COMMON, CONDENSATE OR CONDUIT	NIC	NOT IN CONTRACT
CA	CONTROL AIR, OR COMBUSTION AIR	NTS	NOT TO SCALE
CAC	CALIFORNIA ADMINISTRATIVE CODE	OA	OUTSIDE AIR
CAP	CAPACITY	OBD	OPOSED BLADE DAMPER
CAV	CONSTANT AIR VOLUME	OC	ON CENTER
CB	CHILLED BEAM	OD	OUTSIDE DIAMETER
CBG	CALIFORNIA BUILDING CODE	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CC	COOLING COIL OR CONTROLS CONTRACTOR	OFOI	OWNER FURNISHED OWNER INSTALLED
CD	CONSTRUCTION DOCUMENTS	P	PUMP OR PRESSURE OR POLE
CEC	CALIFORNIA ELECTRICAL CODE	PC	PUMPED CONDENSATE
CFC	CALIFORNIA FIRE CODE	PCR	PRESSURIZED CONDENSATE RETURN
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP
CH	CHILLER	PE	PNEUMATIC ELECTRIC
CHV	CHECK VALVE	PF	PRE FILTER
CHWP	CHILLED WATER PUMP	PG	PIPE GUIDE OR PRESSURE GAUGE
CHWR	CHILLED WATER RETURN	PH	PHASE
CHWS	CHILLED WATER SUPPLY	PLBG	PLUMBING
CL	CENTERLINE	POC	POINT OF CONNECTION
CLG	CEILING	POD	POINT OF DISCONNECTION
CMC	CALIFORNIA MECHANICAL CODE	PS	PRESSURE SENSOR
CONN	CONNECTION	PSI	POUNDS PER SQUARE INCH
CP	CONTROL PANEL	PSIG	POUNDS PER SQUARE INCH - GAUGE
CPC	CALIFORNIA PLUMBING CODE	QTY	QUANTITY
CV	CONSTANT VOLUME OR CONTROL VALVE	(R)	REMOVE
CWP	CONDENSER WATER PUMP	R	RISERS, RELOCATE OR RISE
CWR	CONDENSER WATER RETURN	RA	RETURN AIR
CWS	CONDENSER WATER SUPPLY	REB	REBALANCE
D	DROP OR DRAIN	REF	RELIEF FAN
DDC	DIRECT DIGITAL CONTROL	REFRIG	REFRIGERANT
DEMO	DEMOLISH / DEMOLITION	REL	RELOCATE
DEPT	DEPARTMENT	REQD	REQUIRED
DET	DETAIL	REV	REVISE, REVISION OR REVOLUTIONS
DIA	DIAMETER	RF	RETURN FAN
DIFF	DIFFERENCE	RHC	REHEAT COIL
DISCH	DISCHARGE	RL	REFRIGERANT LIQUID
DN	DOWN	RM	ROOM
DTR	DOWN THRU ROOF	RS	REFRIGERANT SUCTION
DV	DIAPHRAGM VALVE	RTU	ROOFTOP UNIT
DWG	DRAWING	SA	SUPPLY AIR
DX	DIRECT EXPANSION	SAN	SANITARY
(E)	EXISTING TO REMAIN	SD	SMOKE DAMPER
EA	EXHAUST AIR OR EACH	SEN	SENSIBLE
EC	ELECTRICAL CONTRACTOR	SF	SUPPLY FAN OR SQUARE FEET
ECON	ECONOMIZER	SP	STATIC PRESSURE
EF	EXHAUST FAN	SPEC	SPECIFICATION
EL	ELEVATION	SQ FT	SQUARE FEET
ELEC	ELECTRICAL	SQ IN	SQUARE INCH
EQUIP	EQUIPMENT	ST	STRAINER OR SOUND TRAP OR SOUND TRAP
ESP	EXTERNAL STATIC PRESSURE	STD	STANDARD
ET	EXPANSION TANK	STRUC	STRUCTURAL
EXH	EXHAUST	T	THERMOSTAT OR THERMOMETER OR THERAT
FC	FLEXIBLE CONNECTION OR FAIL CLOSED	TCP	TEMPERATURE CONTROL PANEL
FCU	FAN COIL UNIT	TDH	TOTAL DYNAMIC HEAD
FD	FIRE DAMPER	TEMP	TEMPERATURE
FF	FINISH FLOOR OR FINAL FILTER	THRU	THROUGH
FFE	FINISH FLOOR ELEVATION	TI	TENANT IMPROVEMENT
FLR	FLOOR	TOP OF DUCT	
FPB	FAN POWERED BOX	TS	TEMPERATURE SENSOR
FR	FIRE WRAP	TSP	TOTAL STATIC PRESSURE
FSD	FIRE/SMOKE DAMPER	TYP	TYPICAL
FT	FOOT / FEET	UC	UNDERCUT DOOR
G	GAS	UG	UNDERGROUND
GA	GAUGE, GAGE	UH	UNIT HEATER
GALV	GALVANIZED	UH	UNIT HEATER
GLV	GLOBE VALVE	UNO	UNLESS NOTED OTHERWISE
GN	GENERAL NOTE	UTR	UP THRU ROOF
GND	GROUND	V	VENT
GPM	GALLON PER MINUTE	VAV	VARIABLE AIR VOLUME
GV	GATE VALVE	VD	VOLUME DAMPER
HC	HEATING COIL	VEL	VELOCITY
HP	HORSEPOWER	VFD	VARIABLE FREQUENCY DRIVE
HP	HIGH PRESSURE	WI	WITH
HP	HEAT PUMP	W/O	WITHOUT
HPC	HIGH PRESSURE CONDENSATE	WG	WATER GAUGE
HPS	HIGH PRESSURE STEAM	WMS	WIRE MESH SCREEN
HRU	HEAT RECOVERY UNIT	WPD	WATER PRESSURE DROP
HVAC	HEATING, VENTILATION & AIR CONDITIONING	WSHP	WATER SOURCE HEAT PUMP
HW	HEATING WATER	WT	WEIGHT
		XFMR	TRANSFORMER

HVAC LEGEND

SYMBOL	DESCRIPTION
GENERAL	
	LIMIT OF DEMOLITION
	POINT OF CONNECTION
	KEYNOTE
	FURNISHED & INSTALLED MECHANICAL
	FURNISHED BY MECHANICAL
	FURNISHED BY ELECTRICAL
	FURNISHED & INSTALLED BY ELECTRICAL
	EQUIPMENT TAG
	TYPE MARK
	EQUIPMENT NUMBER
	SUPPLY, RETURN, & EXHAUST REGISTER
	NECK SIZE
	AIR QUANTITY (C.F.M.)
	RELIEF AIR GRILLE
	NECK SIZE
	AIR QUANTITY (CFM)
	LINEAR SUPPLY & RETURN
	# OF SLOTS - SLOT WIDTH
	CFM/FT
	TOTAL LENGTH (FT)
DUCTWORK	
	REMOVE EXIST. EQUIP., PIPES, OR DUCT SHOWN HATCHED
	EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO BE REMOVED
	RELOCATED EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO
	EXIST. DIFFUSER, RETURN AIR GRILLE OR EXHAUST GRILLE TO REMAIN OR BE RELOCATED
	EXIST. MECHANICAL EQUIPMENT & DUCT
	EXIST. DUCTWORK TO BE REMOVED & CAPPED
	LINEAR DIFFUSER
	SUPPLY AIR
	RETURN AIR
	EXHAUST AIR
	RECTANGULAR DUCT SIZE (WIDTH X DEPTH IN INCHES)
	ROUND DUCT SIZE (WIDTH X DEPTH IN INCHES)
	DUCT RISE / DUCT DROP
	DUCT WITH SOUND INSULATION
	STAINLESS STEEL DUCTWORK
	FLEXIBLE DUCT
	RECTANGULAR DUCT UP
	RECTANGULAR DUCT DOWN
	DUCT TRANSITION (RECTANGULAR TO ROUND)
	DOOR LOUVER OR UNDERCUT
	AUTOMATIC DAMPER (WITH ACTUATOR)
	BACKDRAFT DAMPER
	MANUAL VOLUME DAMPER
	COMBINATION FIRE & SMOKE DAMPER
	FIRE DAMPER
CONTROLS (PLAN)	
	CO2 SENSOR
	NITROGEN DIOXIDE SENSOR
	HUMIDITY SENSOR
	OXYGEN SENSOR
	ROOM THERMOSTAT & ZONE NUMBER
	SWITCH (MANUAL WALL MOUNT OR DOOR INTERLOCK)
	SMOKE DETECTOR
	CARBON MONOXIDE SENSOR
	PRESSURE SENSOR (DUCT MOUNTED)
	PRESSURE SENSOR (ROOM PRESSURE)
	PURGE EXHAUST CONTROL SWITCH
	VISUAL STROBE AND AUDIBLE HORN
	REFRIGERANT LEAK DETECTION SENSOR
PIPING	
	PIPE TAG (E.G. 2" CHWS)
	PIPE RISE
	PIPE DROP
	PIPE BRANCH
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CIRCUIT SETTER
	REDUCER
	STRAINER
	UNION
	AIR VENT VALVE
	PRESSURE GAUGE
	THERMOMETER
	CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE & TEMPERATURE RELIEF VALVE
	PIPE ANCHOR
	P.I. FLOW LIMITING DEVICE

DEMOLITION NOTES

- THE MECHANICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR UTILITIES. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
- ITEMS NOT INDICATED TO BE REMOVED SHALL BE PROTECTED IN PLACE.
- DISTRICT SHALL HAVE FIRST RIGHT OF REFUSAL FOR ALL ITEMS INDICATED TO BE REMOVED. PENDING DISTRICT'S INSPECTION AND REVIEW, ALL SUCH ITEMS SHALL BE REMOVED INTACT, FULLY FUNCTIONAL AND SUITABLE FOR REUSE, AND SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL CONFIRM WITH THE DISTRICT'S REPRESENTATIVE ACCEPTANCE OR REFUSAL OF SUCH ITEMS. ALL ITEMS ACCEPTED BY THE DISTRICT SHALL BE DELIVERED BY THE CONTRACTOR TO ONSITE STORAGE LOCATIONS AS DIRECTED BY THE DISTRICT'S REPRESENTATIVE. ALL ITEMS REFUSED BY THE DISTRICT SHALL BE DISPOSED OF BY THE CONTRACTOR IN AN APPROVED MANNER.
- NO EXISTING EQUIPMENT OR MATERIAL SHALL BE REUSED WITHOUT THE SPECIFIC APPROVAL OF THE DISTRICT'S REPRESENTATIVE.
- REMOVAL OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE SATISFACTORY PERFORMANCE OF THE GENERAL WORK. NOT ALL EXISTING CONDITIONS ARE DETAILED ON THE DRAWINGS. CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED BASED ON THE EXISTING CONDITIONS FOR THE PROPER INSTALLATION OF NEW WORK.
- REMOVE AND/OR RELOCATE EXISTING FIXTURES AND EQUIPMENT AS INDICATED. EXISTING HOT WATER, COLD WATER, GAS AND/OR VENT PIPING SERVING SUCH ITEMS SHALL BE REMOVED TO A SUITABLE CONCEALED LOCATION WITHIN EXISTING TO REMAIN WALL OR ABOVE CEILING AND CAPPED WATER/TIGHT. SOIL/WASTE PIPING SERVING SUCH FIXTURES SHALL BE REMOVED TO A SUITABLE CONCEALED LOCATION BELOW FINISHED FLOOR OR WITHIN EXISTING TO REMAIN WALL AND CAPPED WATER/TIGHT.
- UNLESS NOTED OTHERWISE, EXISTING PIPING AND COMPONENTS RENDERED DEFUNCT AS PART OF THIS PROJECT SHALL BE ADDRESSED IN THE FOLLOWING MANNER: DEFUNCT PIPING LOCATED IN CONCEALED AREAS WITHIN EXISTING TO REMAIN WALLS, BELOW SLAB, OR BELOW GRADE SHALL BE REMOVED AS NECESSARY TO AVOID INTERFERENCE WITH NEW WORK. EXISTING DEFUNCT PIPING AND COMPONENTS LOCATED IN EXPOSED AREAS AND IN ATTIC SPACE SHALL BE REMOVED TO THE NEAREST OPERATIONAL PIPING MAIN AND CAPPED, INCLUDING ALL ASSOCIATED HANGERS AND STRUCTURAL SUPPORTS. EXISTING DEFUNCT VENTS THROUGH ROOF SHALL BE REMOVED. COORDINATE REMOVAL WITH ROOFING CONTRACTOR.
- CONTRACTOR SHALL FIELD VERIFY EXISTING PIPING & DUCT RUNS. REUSE AS REQUIRED AND REMOVE ALL UNUSED DUCT AND PIPING. UNUSED PIPING & DUCT IN INACCESSIBLE LOCATIONS (WALLS/SHAFTS) SHALL BE ABANDONED IN PLACE.
- THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
- CONTRACTOR IS RESPONSIBLE TO RELOCATE OR REMOVE FROM WALLS, CEILINGS, FLOOR SPACES, ETC. ANY EXISTING PIPING, DUCT, FIRE-SMOKE DAMPERS, OR OTHER MECHANICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK.
- NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON AS-BUILT DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
- CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLEST AREA POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
- EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
- DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
- RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
- ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN IN THE PROPERTY OF THE DISTRICT. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
- ALL DEMOLISHED, ALTERED AND RELOCATED COMPONENTS SHALL BE REFLECTED ON THE AS-BUILT RECORD DOCUMENTS.

MECHANICAL SCOPE OF WORK

- DEMOLISH EXISTING RESTROOM EXHAUST FAN.
- INSTALL NEW RESTROOM EXHAUST FAN AS REQUIRED TO ACCOMMODATE UPDATED FLOOR PLAN AND RECONNECT TO EXISTING DUCTWORK AS REQUIRED.
- THOROUGHLY CLEAN EXISTING EXHAUST DUCTWORK.
- BALANCE EXHAUST FAN.
- REFER TO ALL OTHER MECHANICAL DRAWING SHEETS FOR ENTIRE SCOPE RESPONSIBILITY.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7 AND 13.6.8, 2022 CBC, SECTIONS 16171.1.24, 16171.1.25 AND 16171.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH ASCE 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☒ MD ☒ PP ☒ E ☒ OPTION 1: PROJECT-SPECIFIC DESIGN
MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: DESIGN BASED ON OSHPD OPM, WITH PROJECT SUBMITTAL
MP ☐ MD ☐ PP ☐ E ☐ OPTION 3: DESIGN BASED ON OSHPD OPM, WITH DEFERRED SUBMITTAL

MECHANICAL GENERAL NOTES

- ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING STRUCTURAL, PLUMBING, AIR CONDITIONING AND ELECTRICAL. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE DISTRICT.
- ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS. ALL DIMENSIONS AND JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL. START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
- THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK AND PROVIDE A FULLY OPERATIONAL SYSTEM. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE CITY AND STATE FIRE MARSHAL.
- CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
- ALL EQUIPMENT THAT IS REMOVED AND NOT REUSED SHALL BE COORDINATED WITH, AND/OR RETURNED TO, THE DISTRICT.
- ALL EXISTING DUCT TAPS THAT ARE REMOVED AND NOT REUSED SHALL BE CAPPED AIR/TIGHT AND SEALED WITH "IMBACUL" DUCT SEALER AND 1/4"IT OR EQUAL.
- VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT AND/OR DISTRICT CONSTRUCTION COORDINATOR PRIOR TO ANY INSTALLATION WORK.
- CONTRACTOR SHALL PROVIDE RECORDS BUILT DOCUMENTS TO CONSTRUCTION COORDINATOR, ARCHITECT AND ENGINEER AT COMPLETION OF CONSTRUCTION.
- MAINTAIN NET FREE AREA EQUAL TO DUCT SIZE WHERE FIRE DAMPERS OCCUR.
- ROOM THERMOSTATS SHALL BE CAPABLE OF BEING SET TO MAINTAIN SPACE TEMPERATURE SET POINTS FOR 55° F TO 85° F AND SHALL BE CAPABLE OF OPERATING THE HEATING AND COOLING IN SEQUENCE. THERMOSTATS SHALL BE ADJUSTABLE TO PROVIDE A TEMPERATURE RANGE OF UP TO 5° F BETWEEN FULL HEATING AND FULL COOLING BEING SUPPLIED. TEMPERATURE CONTROL SYSTEM SHALL OPERATE IN ACCORDANCE WITH THE BASIC BUILDING SEQUENCE OF OPERATION.
- PROVIDE MINIMUM DUCT RADIUS ON ELBOWS AT 1-1/2 TIMES DUCT SIZE.
- ALL CEILING DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE.
- DIFFUSERS SHALL BE ADJUSTED BY MECHANICAL CONTRACTOR AND/OR TEST & BALANCE CONTRACTOR FROM 4-WAY TO 3-WAY OR 2-WAY WHEN WITHIN 3'-0" OF ADJACENT WALL OR CORNER. SUBMIT PROPOSED ADJUSTMENTS IN WRITING PRIOR TO ADJUSTING.
- CONTRACTOR SHALL STRICTLY COORDINATE ALL CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN. IF ANY DISCREPANCIES ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION. VERIFY WITH DISTRICT'S REPRESENTATIVE IN FIELD PRIOR TO INSTALLATION.
- MATERIALS EXPOSED WITHIN DUCT OR PLENUM SHALL COMPLY WITH SECTION 802.2 OF THE 2022 CMC. ALL MATERIALS EXPOSED WITHIN THE CEILING PLENUM SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
- MECHANICAL REFRIGERATION SYSTEMS SHALL COMPLY WITH REQUIREMENTS OF SECTION 608 OF THE 2022 CFC.
- ENVIRONMENTAL AIR DUCTS SHALL NOT TERMINATE LESS THAN 3'-FT. FROM A PROPERTY LINE, 10'-FT FROM A FORCED AIR INLET, 10'-FT ABOVE A PUBLIC WALKWAY AND 3'-FT FROM OPENINGS INTO THE BUILDING. PER 2022 CMC 502.2.1.
- THE CONTRACTOR SHALL COORDINATE ALL CEILING ACCESS PANELS FOR SERVING MECHANICAL EQUIPMENT DEVICES WITH THE ARCHITECT AND INTERIOR DESIGNER AS APPLICABLE.
- PRIOR TO ROUGH-IN OF ELECTRICAL, PROVIDE COORDINATION SHOP DRAWINGS OF 1-STAT LOCATIONS TO ARCH/ENG. FOR REVIEW.
- DUCT SEALING:
 - DUCTWORK SHALL BE SEALED PRIOR TO DELIVERY TO JOB SITE.
 - DUCTWORK SHALL BE SEALED DURING DELIVERY.
 - DUCTWORK SHALL BE SEALED UPON INSTALLATION.
 - OPENINGS INTO EQUIPMENT AND DUCTWORK SHALL BE SEALED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL DIFFUSER/GRILLE/REGISTER/BORDER AND FRAME TYPES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ORDERING. COORDINATE ALL FINISHES WITH ARCHITECT.
- ALL HVAC SYSTEMS INCLUDING HYDRONIC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH AN APPROVED METHOD PER THE 2022 CMC SECTION 314.1, CALGREEN AND THE ENERGY EFFICIENCY STANDARDS.
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STATE OF CALIFORNIA Nonresidential Building Commissioning		CALIFORNIA ENERGY COMMISSION NRCC-CXR-8	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotels/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 1 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
A. GENERAL INFORMATION			
01. Project Location (city)	Grand Terrace	04. Building Size (ft ²)	56
02. Occupancy Type	Nonresidential	05. Total Unconditioned Floor Area	< 10,000 ft ²
03. Project Type	Newly constructed	06. Unitary or packaged equipment each serving one zone	
		07. Climate Zone	10
B. PROJECT SCOPE <i>Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per 120.8. Table B is not editable by the user.</i>			
Commissioning Requirements per 120.8			
01. Table F: Design Review Kickoff	120.8(d)1 and 120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.	
02. Table G: Owner's Project Requirements (OPR)	120.8(b)	This requirement does not apply.	
03. Table H: Basis of Design (BOD)	120.8(g)	This requirement does not apply.	
04. Table I: Design Review	120.8(i) and 120.8(j)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with > 10,000 ft ² of nonresidential conditioned floor area, the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.	
05. Table K: Commissioning Plan	120.8(f)	This requirement does not apply.	
06. Table K: Functional Performance Testing	120.8(j)	This requirement does not apply.	
07. Table L: Documentation and Training	120.8(h)	This requirement does not apply.	
08. Table M: Commissioning Report	120.8(i)	This requirement does not apply.	

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STATE OF CALIFORNIA Nonresidential Building Commissioning		CALIFORNIA ENERGY COMMISSION NRCC-CXR-8	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotels/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 8 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
K. FUNCTIONAL PERFORMANCE TESTING <i>This section does not apply to this project.</i>			
L. DOCUMENTATION AND TRAINING <i>This section does not apply to this project.</i>			
M. COMMISSIONING REPORT <i>This section does not apply to this project.</i>			
N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION <i>There are no forms required for this project.</i>			
O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE <i>There are no forms required for this project.</i>			

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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4						
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>								
Project Name: Terrace View ES TK Bldg		Report Page: (Page 3 of 6)						
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023						
H. FAN SYSTEMS & AIR ECONOMIZERS <i>This section does not apply to this project.</i>								
I. SYSTEM CONTROLS <i>This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (h), 170.2(c)(4D), 170.2(c)(4L) or requirements in 141.0(b)(2), 140.2(b)(2) for altered space conditioning systems.</i>								
01. System Name	System Zoning	03. Thermostats	05. Shut-Off Controls	06. Isolation Zone Controls	07. Demand Response	08. Supply Air Temp. Reset	09. Window Interlocks	
Undefined System	Single zone	<= 25,000 ft ²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	NA: Would increase energy use	Provided

¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4		
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>				
Project Name: Terrace View ES TK Bldg		Report Page: (Page 4 of 6)		
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023		
J. VENTILATION AND INDOOR AIR QUALITY <i>This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1, 120.2(c)(38 & 140.4g) for all nonresidential and hotel/motel and in 120.2(c)(38 & 140.4g) for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflow may be shown on the plans or the calculations can be presented in a spreadsheet.</i>				
01. Check this box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.	02. Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces	03. Check this box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)(2).	Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems	

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STATE OF CALIFORNIA Nonresidential Building Commissioning		CALIFORNIA ENERGY COMMISSION NRCC-CXR-8						
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotels/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.</i>								
Project Name: Terrace View ES TK Bldg		Report Page: (Page 2 of 6)						
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023						
C. COMPLIANCE REQUIREMENTS <i>Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per 120.8. This table is not editable by the user. If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, for guidance.</i>								
01. Design Kickoff Review	02. Owner's Project Requirements	03. Basis of Design	04. Design Review	05. Commissioning Plan	06. Functional Performance Testing	07. Documentation and Training	08. Commissioning Report	09. COMPLIES
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	COMPLIES
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS <i>This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.</i>	
E. ADDITIONAL REMARKS <i>This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.</i>	

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Project Name: Terrace View ES TK Bldg		Report Page: (Page 6 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT <i>I certify that this Certificate of Compliance documentation is accurate and complete.</i>			
Documentation Author Name: WSP USA		Signature Date: 2025-08-13	
Address: 11870 Pierce Street, Suite 160, Riverside, CA 92505		Phone: 951.299.4160	
RESPONSIBLE PERSON'S DECLARATION STATEMENT <i>I certify the following under penalty of perjury, under the laws of the State of California:</i>			
1. The information provided on this Certificate of Compliance is true and correct.			
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).			
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.			
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.			
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.			
Responsible Designer Name: WSP USA		Signature Date: 2025-08-13	
Address: 11870 Pierce Street, Suite 160, Riverside, CA 92505		Phone: 951.299.4160	

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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4				
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>						
Project Name: Terrace View ES TK Bldg		Report Page: (Page 4 of 6)				
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023				
J. VENTILATION AND INDOOR AIR QUALITY						
System Name	Undefined System	System Design OA CFM Airflow ¹	100	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)(2) and 160.2(c)(2) ¹
08. Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)(3) & 160.2(c)(3)	Conditioned Floor Area (ft ²)	56	# of Shower heads/toilets	0	Eah. Vent per 120.1(c)(4) & 160.2(c)(4)
Undefined Zone	Toilet, public	56	0	0	0	100
17. Total System Required Min CA CFM		0		18. Ventilation for this System Complies?		Yes

¹FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.
²Air filtration requirements apply to the following three system types per 120.1(c)(4): space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
³See Standards Tables 120.1-A and 120.1-B.
⁴For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
⁵120.2(d)(3) requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 2500' or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS <i>This section does not apply to this project.</i>	
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STATE OF CALIFORNIA Nonresidential Building Commissioning		CALIFORNIA ENERGY COMMISSION NRCC-CXR-8	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance with mandatory commissioning requirements in 120.8 for nonresidential buildings and hotels/motel or mixed-use buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 3 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
F. DESIGN REVIEW KICKOFF MEETING <i>This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per 120.8(b)(2). This meeting should occur during the Schematic Design phase of the project.</i>			
Design Review Kickoff Meeting Details			
01. Date of Design Review Kickoff Meeting	0001-01-01		
02. Meeting Attendees (one person may play multiple roles)	03. Design Reviewer(s)		
03. Design Reviewer(s)	Designer		
04. Project Manager	05. Design Architect/ Engineer(s)		
05. Design Architect/ Engineer(s)	06. Certified Acceptance Test Tech(s)		
06. Certified Acceptance Test Tech(s)	07. Energy/ T24 Part 6 Consultant		
07. Energy/ T24 Part 6 Consultant	08. Commissioning Provider		
08. Commissioning Provider	09. Design Reviewer(s) meet these qualifications?		
09. Design Reviewer(s) meet these qualifications?	Yes		
10. In addition, for buildings with > 10,000 ft ² but < 50,000 ft ² , the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	No		
11. The design reviewer(s) for this project will be:	Designer		
Preliminary Construction Schedule			
01. Schematic Design	Start Date: 0001-01-01	Completion Date: 0001-01-01	
02. Design Development	0001-01-01	0001-01-01	
03. Construction Documents	0001-01-01	0001-01-01	
04. Construction	0001-01-01	0001-01-01	
05. Building Turnover	0001-01-01	0001-01-01	
Project Goals Related to Energy Efficiency			
06. Operational Costs			
07. Decoupled Building Lifespan			
08. Equipment Lifecycle			
09. Project Energy Efficiency Goals			

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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 1 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
A. GENERAL INFORMATION			
01. Project Location (city)	Grand Terrace	04. Total Conditioned Floor Area	56
02. Climate Zone	10	05. Total Unconditioned Floor Area	0
03. Occupancy Types Within Project:		06. # of Stories (Habitable Above Grade)	1
* Support Areas			
B. PROJECT SCOPE <i>This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)(2) for alterations.</i>			
01. Heating Air System(s)	02. Wet System Components	03. Dry System Components	
04. Heating Air System(s)	05. Water Economizer	06. Air Economizer	
07. Cooling Air System	08. Pumps	09. Electric Resistance Heat	
10. Mechanical Controls (existing to remain, altered or new)	11. System Piping	12. Fan Systems	
13. Mechanical Controls (existing to remain, altered or new)	14. Cooling Towers	15. Ductwork (existing to remain, altered or new)	
16. Chillers	17. Ventilation	18. Zonal Systems/ Terminal Boxes	
19. Boilers	20. Zonal Systems/ Terminal Boxes		

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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 5 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
L. DISTRIBUTION (DUCTWORK AND PIPING) <i>This section does not apply to this project.</i>			
M. COOLING TOWERS <i>This section does not apply to this project.</i>			
N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION <i>Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019/standards/2019_compliance_documents/Nonresidential_Documents/NRCC/</i>			
Form/Title			
NRCC-MCH-4 - Must be submitted for all buildings			
O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE <i>There are no NRCC forms required for this project.</i>			
P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION <i>There are no NRCC forms required for this project.</i>			
Q. MANDATORY MEASURES DOCUMENTATION LOCATION <i>This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.</i>			
01. Compliance with Mandatory Measures documented through MCH	Yes	02. Plan sheet or construction document location	
Mandatory Measures Note Block		M-Sheets	

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Project Name: Terrace View ES TK Bldg		Report Page: (Page 4 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
F. DESIGN REVIEW KICKOFF MEETING <i>This table indicates that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and demonstrates compliance with design review kickoff requirements per 120.8(b)(2). This meeting should occur during the Schematic Design phase of the project.</i>			
Design Review Kickoff Meeting Details			
01. Date of Design Review Kickoff Meeting	0001-01-01		
02. Meeting Attendees (one person may play multiple roles)	03. Design Reviewer(s)		
03. Design Reviewer(s)	Designer		
04. Project Manager	05. Design Architect/ Engineer(s)		
05. Design Architect/ Engineer(s)	06. Certified Acceptance Test Tech(s)		
06. Certified Acceptance Test Tech(s)	07. Energy/ T24 Part 6 Consultant		
07. Energy/ T24 Part 6 Consultant	08. Commissioning Provider		
08. Commissioning Provider	09. Design Reviewer(s) meet these qualifications?		
09. Design Reviewer(s) meet these qualifications?	Yes		
10. In addition, for buildings with > 10,000 ft ² but < 50,000 ft ² , the design reviewer(s) shall be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect, or contractor	No		
11. The design reviewer(s) for this project will be:	Designer		
Preliminary Construction Schedule			
01. Schematic Design	Start Date: 0001-01-01	Completion Date: 0001-01-01	
02. Design Development	0001-01-01	0001-01-01	
03. Construction Documents	0001-01-01	0001-01-01	
04. Construction	0001-01-01	0001-01-01	
05. Building Turnover	0001-01-01	0001-01-01	
Project Goals Related to Energy Efficiency			
06. Operational Costs			
07. Decoupled Building Lifespan			
08. Equipment Lifecycle			
09. Project Energy Efficiency Goals			

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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4						
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Project Name: Terrace View ES TK Bldg		Report Page: (Page 2 of 6)						
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023						
C. COMPLIANCE REQUIREMENTS <i>Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.</i>								
01. System Summary	02. Pumps	03. Fans/ Economizers	04. System Controls	05. Ventilation	06. Terminal Box Controls	07. Distribution	08. Cooling Towers	09. Compliance Results
110.1, 110.2, 140.4, 170.2(c)	140.4(A), 140.4(C), 170.2(c)(4)	140.4(C), 140.4(E), 170.2(c)	120.2, 120.2(c), 140.4(F), 170.2(c)	120.1, 160.2	140.4(B), 140.2, 140.3	120.3, 140.4(B), 140.2, 140.3	110.2(a)(2)	Compliance Results
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
AND	AND	AND	AND	AND	AND	AND	AND	COMPLIES
Mandatory Measures Compliance (See Table G for Details)								
D. EXCEPTIONAL CONDITIONS <i>This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.</i>								
E. ADDITIONAL REMARKS <i>This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.</i>								
F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS) <i>This section does not apply to this project.</i>								
G. PUMPS <i>This section does not apply to this project.</i>								

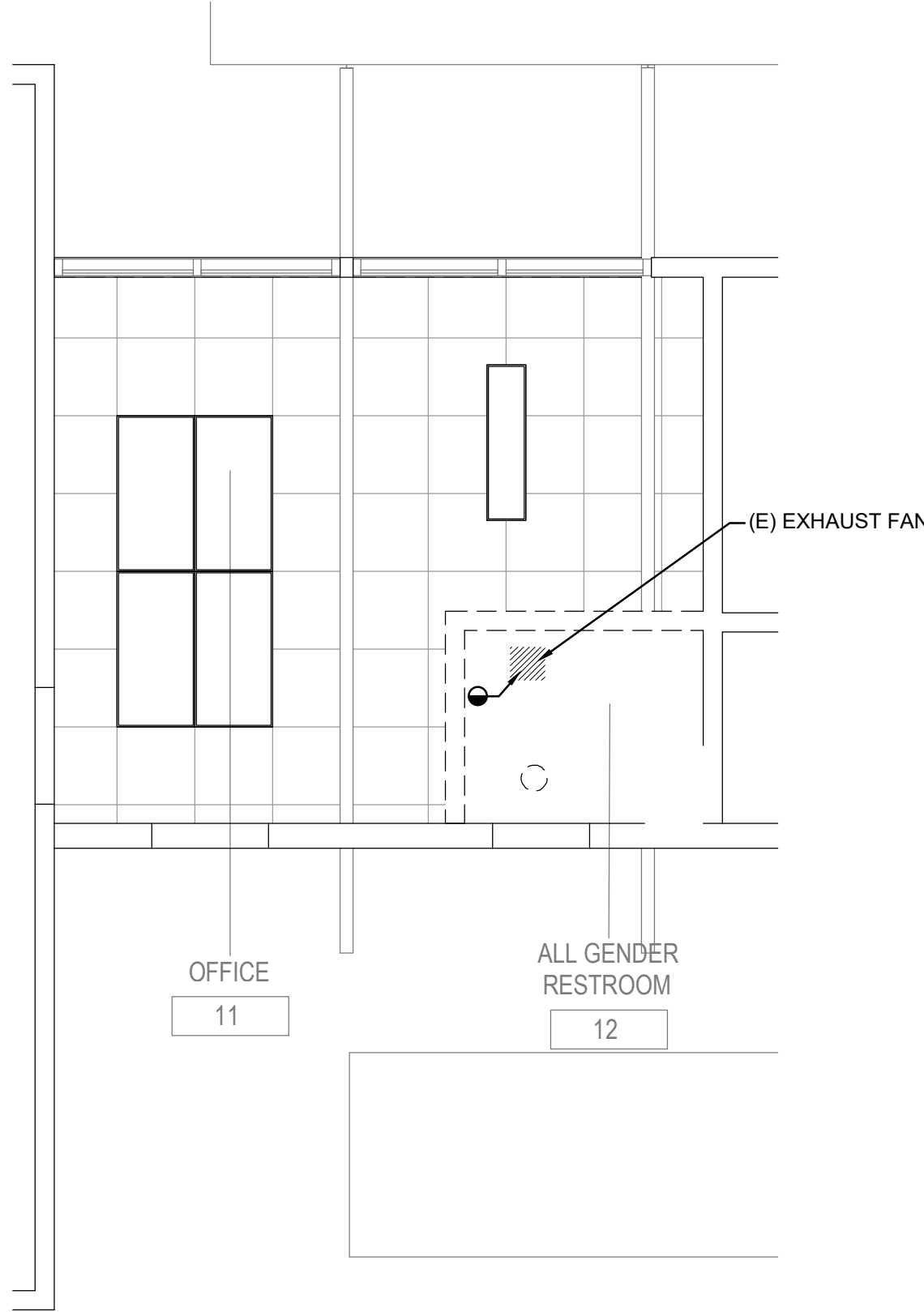
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance	Report Version: 2022.0.000 Schema Version: rev 20220101	Compliance ID: EnergyPro-2945-0825-4541 Report Generated: 2025-08-13 13:23:24
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STATE OF CALIFORNIA Mechanical Systems		CALIFORNIA ENERGY COMMISSION NRCC-MCH-4	
CERTIFICATE OF COMPLIANCE <i>This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)(2) for alterations.</i>			
Project Name: Terrace View ES TK Bldg		Report Page: (Page 6 of 6)	
Project Address: 22731 Grand Terrace Road		Date Prepared: 6/13/2023	
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT <i>I certify that this Certificate of Compliance documentation is accurate and complete.</i>			
Documentation Author Name: WSP USA		Signature Date: 2025-08-13	
Address: 11870 Pierce Street, Suite 160, Riverside, CA 92505		Phone: 951.299.4160	
RESPONSIBLE PERSON'S DECLARATION STATEMENT <i>I certify the following under penalty of perjury, under the laws of the State of California:</i>			
1. The information provided on this Certificate of Compliance is true and correct.			
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).			
3. The energy features and performance specifications, materials, components, and			

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FANS																	
TAG	#	MANUFACTURER	MODEL NUMBER	SERVICE	TYPE	CLASS	DRIVE TYPE	AIR FLOW (CFM)	EXTERNAL STATIC PRESSURE (IN WG)	MOTOR SPEED (RPM)	MOTOR (HP)	ELECTRICAL CONNECTION			ANCHORAGE DETAIL REFERENCE	OPERATING WEIGHT (LBS)	REMARKS
												VOLTAGE (V)	PHASE	HERTZ (HZ)			
EF	1	GREENHECK	8FA125	RESTROOM	CEILING	2	DIRECT	900	0.25	1,100	180	115	1	60	4M1.21	20	1,2

REMARKS:
1. PROVIDE WITH BACKDRAFT DAMPER.
2. INTERLOCK WITH LIGHTS.



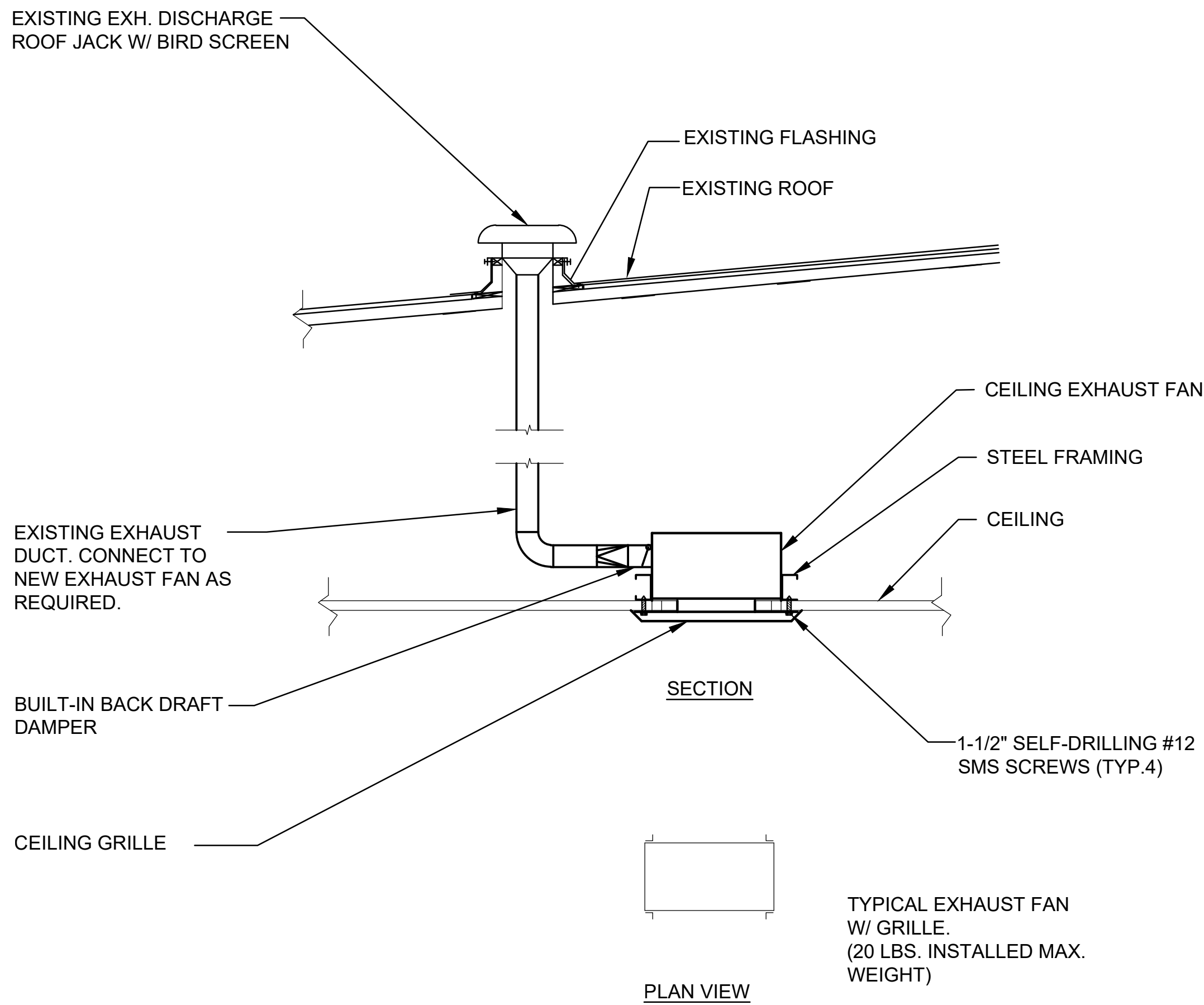
EQUIPMENT SCHEDULES

3

DEMOLITION MECHANICAL PLAN - BLDG A EXISTING RESTROOMS

1

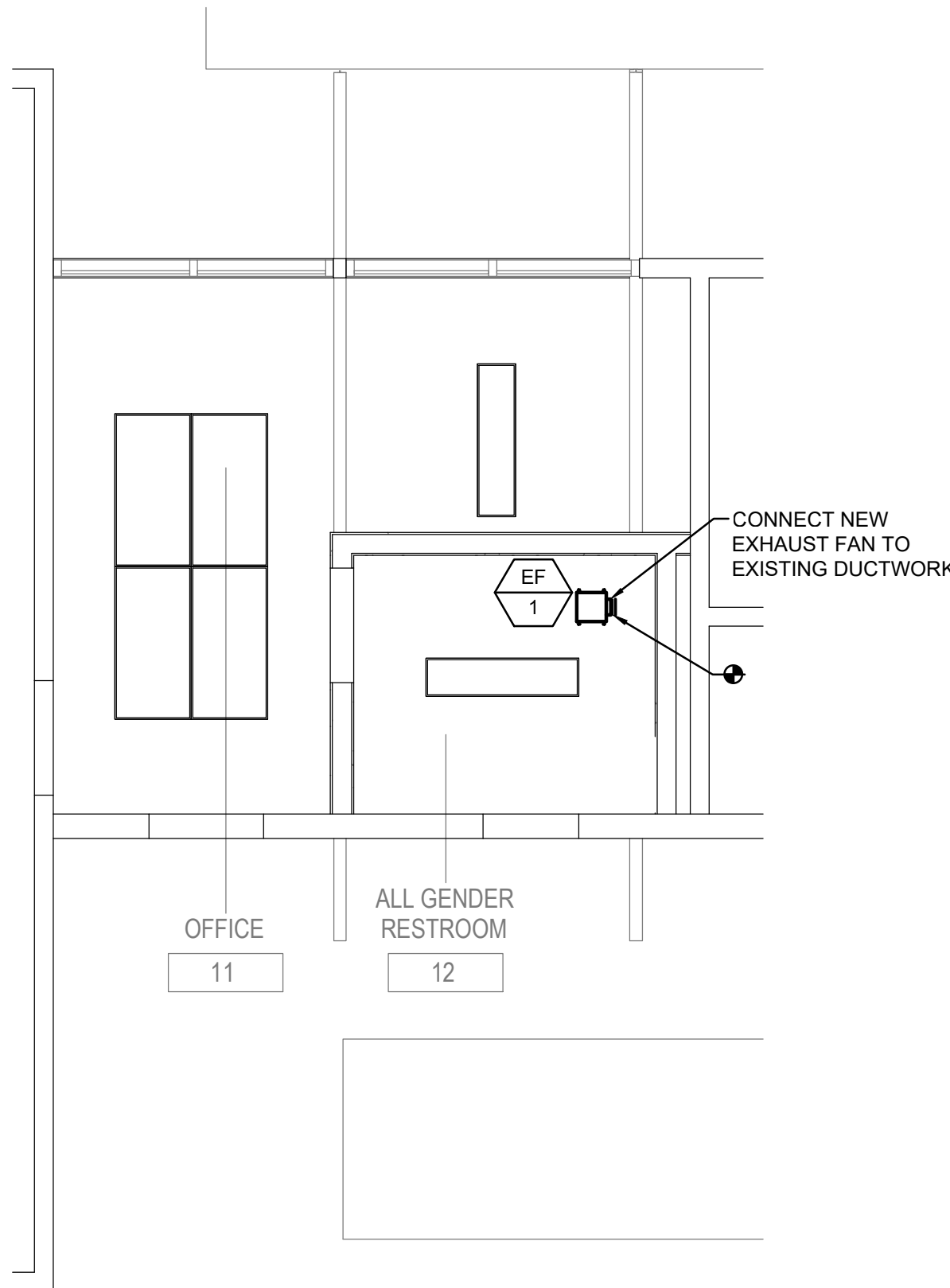
1/8" = 1'-0"



CEILING EXHAUST FAN DETAIL

4

NOT TO SCALE



REMODEL MECHANICAL PLAN - BLDG A EXISTING RESTROOMS

2

1/8" = 1'-0"



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WATER SYSTEM CALCULATION

AVAILABLE PRESSURE, ON-SITE	=	58 P.S.I.
TOTAL FIXTURE UNITS = 102 FU, GPM = 68		
LOSSES:		
EXISTING 2" METER @ 88 GPM	=	2.0 P.S.I.
EXISTING 2" RPBP @ 88 GPM	=	11 P.S.I.
STATIC LOSS (0.433 X 10 FT.)	=	4.33 P.S.I.
RESIDUAL FIXTURE	=	29 P.S.I.
TOTAL	=	42.33 P.S.I.

PRESSURE AVAILABLE FOR FRICTION LOSS: 58 PSI-42.33 PSI	=	15.67 P.S.I.
SYSTEM EQUIVALENT LENGTH: (METER TO RESIDUAL FIXTURE)	=	415+25%*520 FT.
ALLOWABLE AVERAGE LOSS DUE TO FRICTION PER 100 FT. OF PIPE: 15.67 PSI / 520 FT. X 100 FT.	=	3.01 PSI/100 FT.
COLD WATER SYSTEM SIZING IS BASED ON 3 PSI /100' OR 5 FT. PER SECOND MAXIMUM VELOCITY, WHICHEVER RESTRICTION IS GREATER.		
HOT WATER SYSTEM SIZING IS BASED ON 3 PSI /100' OR 5 FT. PER SECOND MAXIMUM VELOCITY, WHICHEVER RESTRICTION IS GREATER.		
NOTE: DOMESTIC HOT AND COLD WATER PIPE SIZING IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2022 CALIFORNIA PLUMBING CODE, APPENDIX "A"		

WATER PIPE SIZING SCHEDULE

(BASED ON 3 PSI/100 FT. OR MAX. VELOCITY OF 5 FPS COLD & 5 FPS HOT)

SIZE	MAXIMUM FIXTURE UNITS			VELOCITY (FT./SEC.)		G.P.M.	
	FLUSH TANK		FLUSH VALVE	HW	CW	HW	CW
	HW	CW					
½"	1	1	0	2.6	2.6	1.9	1.9
¾"	6	6	0	3.2	3.2	4.9	4.9
1"	13	13	0	3.9	3.9	10	10
1¼"	24	24	0	4.4	4.4	17.4	17.4
1½"	47	47	10	4.9	4.9	27	27
2"	120	158	64	5.0	5.9	48	56.5
2½"	246	380	245	5.0	6.7	71	100
3"	412	691	630	5.0	7.5	105	160

PLUMBING FIXTURE SCHEDULE

UNIT NO.	DESCRIPTION	CONNECTION SIZES						REMARKS
		TRAP	W	V	CW	HW	FLOW RATE	
WC-1	WATER CLOSET (ACCESSIBLE)	INT.	4"	2"	1"	-	1.28 GPF	AMERICAN STANDARD MODEL 3351.101, MILLENIUM FLOWISE, WALL MOUNTED, ELONGATED TYPE, WHITE, SLOAN ROYAL 111-1.28 MANUAL OPERATED FLUSH VALVE, BEMIS 1655CT WHITE OPEN FRONT SEAT, MOUNTED AT ACCESSIBLE HEIGHT; REFER TO ARCHITECTURAL PLANS.
L-1	LAVATORY (ACCESSIBLE)(STAFF)	1-1/2"	2"	1-1/2"	1/2"	1/2"	0.35 GPM	AMERICAN STANDARD MODEL 0396.041 LUCERNE, WALL HUNG, WHITE, CHICAGO FAUCETS 3600-E39VPAB MANUAL METERING & FLOW RESTRICTOR, SET FAUCET FOR MINIMUM 10 SECONDS DELIVERY, PROVIDE THERMOSTATIC MIXING VALVE ZURN ZW-1070XL.
TP-1	TRAP PRIMER	-	-	-	1/2"	-	-	PPP P-1 INSTALL BEHIND ACCESS PANEL MIFAB MWH SERIES
WHA	WATER HAMMER ARRESTER	-	-	-	3/4"	-	-	
HB-1	HOSE BIBB (SURFACE)	-	-	-	1/2"	-	-	WOODFORD 24 SERIES WITH KEY TEE. PROVIDE WITH VACUUM BREAKER.
FD-1	FLOOR DRAIN	1-1/2"	2"	1-1/2"	1/2" TP	-	-	JR SMITH 2005-B W/ TRAP PRIMER WITH 1/2" MAX GRATE OPENINGS IN ALL DIRECTIONS.
WCO	CLEAN-OUTS	-	-	-	-	-	-	WALL CLEAN OUT: "ZURN" MODEL: Z1447 SQUARE, Z1446 ROUND.
FCO		-	-	-	-	-	-	FLOOR CLEANOUT: "ZURN" MODEL: Z1400-B2 MUST BE FLUSHED TO SURFACE.
GCO		-	-	-	-	-	-	CLEAN OUT TO GRADE: "ZURN" MODEL: Z1400 MUST BE FLUSHED TO SURFACE.
CO								T CLEAN OUT: "ZURN" MODEL: Z1445.

INSTANTANEOUS WATER HEATER

UNIT NO.	MANUFACTURER & MODEL NO.	SERVICE	REC @ 43° ΔT (GPM)	REC @ 43° ΔT (GPM)	ELECTRICAL				OPER. WT. LBS.	REMARKS
					KW	V	PH	HZ		
IWH-1	EEMAX MODEL AM004120T	DOMESTIC HOT WATER	0.5	--	3.5	120	1	60	10	NON-THERMOSTATIC INSTANTANEOUS WATER HEATER WITH REPLACEABLE CARTRIDGE; LEAD-FREE WITH HIGH-TEMPERATURE LIMIT.

ANCHORAGE & BRACING NOTES

MEP COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE ISA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1611.1-18 THROUGH 1617A, 18 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HANDWIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER, "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/120 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY GSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BY MEANS NOT DEMONSTRATE DESIGN COMPLIANCE WITH REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HANG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL. IN GENERAL, RESPONSIBLE CHANGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY GSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.7 AND 13.6.8 AND 2022 CBC, SECTIONS 1611A, 1611A.15 AND 1616A.15.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED ARE IN ACCORDANCE WITH GSA R 16-13.

MECHANICAL PIPING (RPP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (ES)

- MP MD PP ES OPTION 1: PROJECT SPECIFIC DESIGN.
- MP MD PP ES OPTION 2: DESIGN BASED ON GOSP/DPN WITHIN PROJECT SUBMITTAL.
- MP MD PP ES OPTION 3: DESIGN BASED ON GOSP/DPN DEFERRED SUBMITTAL.

PIPING MATERIALS

- SANITARY SEWER, VENT AND STORM DRAIN PIPING BELOW GROUND :
SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS CISP STANDARD 301, ASTM A 888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL HEAVY DUTY NO-HUB COUPLINGS. PROVIDE PIPE WRAP ON ALL UNDERGROUND PIPING IN ACCORDANCE WITH ANSIAWWA STANDARDS C105 /A21 5-93. BED AND BACKFILL WITH CLEAN SAND, 6" THICK ALL AROUND PIPE.
- SOIL, WASTE VENT, STORM DRAIN PIPING ABOVE GROUND :
SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS OF GOSP STANDARD 301, ASTM A888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL STANDARD DUTY NO-HUB COUPLINGS.
- WATER PIPING BELOW GROUND :
TYPE 'K' COPPER WITH BRAZED JOINTS.
- WATER PIPING ABOVE GROUND :
TYPE 'L' COPPER WITH LEAD-FREE SOLDERED JOINTS.
- ALL OF THE ABOVE SHALL COMPLY WITH THE SPECIFICATIONS.

NOTE:
ALL PIPE, FITTINGS, FIXTURES, ETC. THAT CONTACT POTABLE WATER FOR HUMAN CONSUMPTION SHALL SHOW APPROVAL TO NSF 61, ANNEX "G". EFFECTIVE JANUARY 1, 2010, THE LEAD CONTENT OF THE WETTED SURFACE AREA OF THE PIPES, FITTINGS AND FIXTURES CONVEYING POTABLE WATER FOR HUMAN CONSUMPTION, OF NOT MORE THAN 0.2%, SHALL BE DETERMINED PURSUANT TO A PRESCRIBED FORMULA AS DETERMINED BY THIRD PARTY CERTIFIERS TO NSF STANDARD 61, ANNEX "G". REFERENCE SECTION 604-10, CALIFORNIA PLUMBING CODE, 2022 EDITION, AND HEALTH & SAFETY CODE SECTION 118875.

TITLE 24 MANDATORY MEASURES

- EQUIPMENT AND SYSTEMS EFFICIENCY
- ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY STANDARDS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE.
- PIPING SYSTEMS SHALL BE INSULATED IN ACCORDANCE WITH REQUIREMENTS OF THE TITLE 24 STANDARDS AND ALL CODES HAVING THE JURISDICTION .
- SERVICE WATER HEATING SYSTEMS
- THE FOLLOWING SERVICE WATER HEATING SYSTEMS AND EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE EQUIPMENT MEETS OR EXCEEDS ALL APPLICABLE EFFICIENCY REQUIREMENTS LISTED IN 113 OF THE ENERGY EFFICIENCY STANDARDS : GAS-FIRED NON-STORAGE TYPES : 200000 BTU/HK.
- UNFIRE SERVICE WATER HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER HEATING SYSTEMS SHALL HAVE EITHER : EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-12, INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-16, OR SUFFICIENT INSULATION SO THAT THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80° F WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 0.5 BTU / HR / SF.
- IF A CIRCULATING HOT WATER SYSTEM IS INSTALLED, IT SHALL HAVE A CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE CIRCULATING PUMP(S) WHEN HOT WATER IS NOT REQUIRED .
- LAVATORIES IN RESTROOMS OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH:
- OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.5 GALLONS PER MINUTE.
- FOOT ACTUATED CONTROL VALVES, AND OUTLET DEVICES THAT LIMIT THE FLOW OF HOT WATER TO A MAXIMUM OF 0.75 GALLONS PER MINUTE.
- LAVATORIES IN RESTROOM OF PUBLIC FACILITIES SHALL BE EQUIPPED WITH CONTROLS TO LIMIT THE OUTLET TEMPERATURE TO 110° F. PROVIDE WITH WATTS #LFMMV.

PLUMBING GENERAL NOTES

- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT.
- COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH BEAMS, SLABS AND FOOTINGS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS.
- ALL HORIZONTAL WASTE LINES SHALL BE RUN AT A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS OTHERWISE NOTED ON PLAN.
- ALL HORIZONTAL STORM DRAINS AND OVERFLOW DRAIN LINES SHALL BE RUN AT A SLOPE OF 1/8" PER FOOT UNLESS OTHERWISE NOTED ON PLAN.
- COORDINATE AND VERIFY EXACT LOCATION, SIZE, POINTS OF CONNECTION AND INVERT ELEVATIONS OF UTILITY SERVICE PIPING BEFORE TRENCHING OR INSTALLATION.
- COORDINATE WITH ARCHITECTURAL DRAWINGS FOR WALL AND PARTITION CONSTRUCTION AND THICKNESS WHERE PLUMBING PIPING OR EQUIPMENT IS INDICATED.
- THE LOCATION AND ELEVATION OF ALL PLUMBING PIPING SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO START OF INSTALLATION.
- ALL VALVES AND COCKS SHALL BE LOCATED TO BE READILY ACCESSIBLE. WHERE VALVES ARE INSTALLED WITHIN OR BEHIND WALLS, PARTITIONS OR CEILINGS, AN ACCESS PANEL SHALL BE INSTALLED.
- ALL OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED SO AS TO PERMIT EASY CONNECTION - COORDINATE WITH DUCT WORK, STRUCTURAL CONDITIONS AND ARCHITECTURAL LAYOUT.
- ALL PLUGGED OR CAPPED WASTE OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED ABOVE CEILING WITH PIPE INVERT 4 INCHES ABOVE THE CEILING.
- ALL PLUGGED OR CAPPED VENT OUTLETS FOR FUTURE CONNECTIONS SHALL BE INSTALLED ABOVE CEILING WITH PIPE INVERT 12" FROM BOTTOM OF SLAB.
- ALL WALL MOUNTED ACCESS PANELS AND WALL CLEANOUTS SHALL BE MOUNTED AS LOW AS POSSIBLE UNLESS NOTED OTHERWISE OR AS INDICATED IN ARCHITECTURAL PLANS OR AS REQUIRED. CONTRACTOR SHALL GET ARCHITECT AND ENGINEER APPROVAL FOR ALL LOCATIONS PRIOR TO INSTALLATION OF WALL GYPSUM BOARD.
- THESE DRAWINGS ARE DIAGRAMMATIC. THE LOCATION & ELEVATION OF ALL PLUMBING PIPING IS APPROXIMATE AND SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO START OF INSTALLATION.
- PENETRATIONS OF PIPES, ETC. IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE STATE FIRE MARSHAL.
- ALL HOT WATER PIPE SHALL BE INSULATED INCLUDING PIPING IN THE WALLS.
- WATER SUPPLY AND DRAIN PIPES UNDER LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES AND SINKS.
- ALL REQUIRED CLEANOUTS SHALL BE INSTALLED AS PER SECTION 707.0 OF THE PLUMBING CODE.
- CLEANOUTS FOR BUILDING STORM DRAINS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 719.0 OF THE PLUMBING CODE.
- DIELECTRIC UNIONS SHALL BE USED AT ALL POINTS OF CONNECTION WHERE THERE IS A DISSIMILARITY OF METALS.
- ALL VENTS THROUGH ROOF SHALL MAINTAIN A MINIMUM OF 10 FT. CLEARANCE AND 3 FEET ABOVE OF ANY WINDOW, DOOR, OPENING, AIR INTAKE OR VENT SHAFT.
- HOT WATER TEMPERATURE LIMITATION DEVICE SHALL BE INSTALLED FOR PUBLIC LAVATORIES, SHOWERS & TUBS (WHIPPOOL) IN ACCORDANCE WITH ASSE 1070 & 1069, RESPECTIVELY.
- PROVIDE WALL CLEANOUTS TO ALL SINKS, LAVATORIES AND URINALS.
- ALL MECHANICAL EQUIPMENT PRODUCING CONDENSATE DRAIN MUST BE PIPED AND DISCHARGED TO THE NEAREST APPROVED RECEPTOR. SIZE CONDENSATE PIPING PER SECTION 614.3 CPC 2022.
- ALL PLUMBING FIXTURES MATERIALS AND FINISHES SHALL BE DETERMINE BY THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE. IF ANY PART OF THE DRAWINGS ARE UNCLEAR OR CONTRADICTORY, THE MOST EXPENSIVE OPTION SHALL PREVAIL DURING BID PERIOD.

CALIFORNIA GREEN BUILDING STANDARD TABLE 5.303.3 STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

REQUIRED STANDARDS

WATER CLOSETS (TOILETS) - FLUSHOMETER VALVE TYPE SINGLE FLUSH, MAXIMUM FLUSH VOLUME	ASME A 112.19.2/ CSA B45.1 - 1.28 GAL (4.8 L)
WATER CLOSETS (TOILETS) - FLUSHOMETER VALVE TYPE DUAL FLUSH, MAXIMUM FLUSH VOLUME	ASME A 112.19.14 AND USEPA WATERSENSE TANK - TYPE HIGH-EFFICIENCY TOILET SPECIFICATION - 1.28 GAL (4.8 L)
URINALS, MAXIMUM FLUSH VOLUME	ASME A 112.19.2/ CSA B45.1 - 0.5 GAL (1.9 L)
PUBLIC LAVATORY FAUCETS: MAXIMUM FLOW RATE - 0.5 GPM (1.9 L / MIN)	ASME A 112.18.1/ CSA B125.1
PUBLIC METERING SELF-CLOSING FAUCETS: MAXIMUM WATER USE - 0.20 GAL (1.0 L) PER METERING CYCLE	ASME A 112.18.1/ CSA B125.1

LEGEND

SYMBOL	ABBR.	DESCRIPTION
	S OR W	SOIL OR WASTE ABOVE FLOOR OR GRADE
	S OR W	SOIL OR WASTE BELOW FLOOR OR GRADE
	GW	GREASE WASTE BELOW FLOOR OR GRADE
	AW	ACID WASTE ABOVE FLOOR OR GRADE
	AW	ACID WASTE BELOW FLOOR OR GRADE
	SD	STORM DRAIN ABOVE FLOOR OR GRADE
	SD	STORM DRAIN BELOW FLOOR OR GRADE
	OD	OVERFLOW DRAIN ABOVE FLOOR OR GRADE
	OD	OVERFLOW DRAIN BELOW FLOOR OR GRADE
	V	SANITARY VENT
	CW	COLD WATER
	ICW	INDUSTRIAL COLD WATER
	RW	RECYCLED / RECLAIMED WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	F	FIRE MAIN
	D	INDIRECT DRAIN LINE
	CD	CONDENSATE DRAIN
	SCD	SECONDARY CONDENSATE DRAIN
	PCD	PUMPED CONDENSATE DRAIN
	G	FUEL GAS
	MG	MEDIUM PRESSURE FUEL GAS, 5 PSI
	TP	TRAP PRIMER
	RTP	RECYCLED WATER TRAP PRIMER
	P.G.	PRESSURE GAUGE W/PETE COCK
	G.C.	GAS COCK
	P.R.V.	PRESSURE REDUCING VALVE
	G.V.	GATE VALVE
	L.B.V.	LOCKING BALL VALVE
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
		DOWN
		RISE
		UNION
		SLOPE IN DIRECTION OF FLOW
	W.H.A.	WATER HAMMER ARRESTOR
	P.O.C.	POINT OF CONNECTION
	RBPB	REDUCED PRESSURE BACKFLOW PREVENTER
	EXIST. (E)	EXISTING
	ABV.	ABOVE
	A.F.F.	ABOVE FINISHED FLOOR
	A.P.	ACCESS PANEL
	ASSY	ASSEMBLY
	BEH	BEHIND
	BEL	BELOW
	BLDG.	BUILDING
	BMCS	BUILDING MANAGEMENT AND CONTROL SYSTEM
	C.I.	CAST IRON
	C.G.	CEILING
	COTG	CLEANOUT TO GRADE
	CO	CLEAN OUT
	CONT.	CONTINUATION
	FFE	FINISHED FLOOR ELEVATION
	DET.	DETAIL
	DN	DOWN
	DWGS	DRAWINGS
	EA	EACH
	ELEC.	ELECTRIC
	EQUIP	EQUIPMENT
	F.H	FIRE HYDRANT
	FIN	FINISHED
	FU	FIXTURE UNIT
	FLR	FLOOR
	FR	FROM
	GPF	GALLONS PER FLUSH
	GPM	GALLONS PER MINUTE
	GR	GRADE
	HDR	HEADER
	I.E	INVERT ELEVATION
	MECH	MECHANICAL
	S.O.C.	SHUT-OFF COCK
	TYP	TYPICAL
	VTR	VENT THROUGH ROOF
	WI	WITH

APPLICABLE CODES

2025 CALIFORNIA ADMINISTRATIVE CODE (CAC: PART 1, TITLE 24 CCR)

2022 CALIFORNIA BUILDING CODE (CBC: PART 2, TITLE 24, CCR)

2022 CALIFORNIA ELECTRICAL CODE (CEC: PART 3, TITLE 24, CCR)

2022 CALIFORNIA MECHANICAL CODE (CMC: PART 4, TITLE 24, CCR)

2022 CALIFORNIA PLUMBING CODE (CPC: PART 5, TITLE 24, CCR)

2022 CALIFORNIA FIRE CODE (CFC: PART 9, TITLE 24, CCR.)

2022 CALIFORNIA ENERGY CODE (PART 6, TITLE 24, CCR)

2022 CALIFORNIA GREEN BUILDING CODE STANDARDS (CALGREEN) (PART 11, TITLE 24 CCR)

2022 CALIFORNIA REFERENCED CODE STANDARDS CODE (PART 12, TITLE 24 CCR)

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS

LEGEND AND NOTES

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



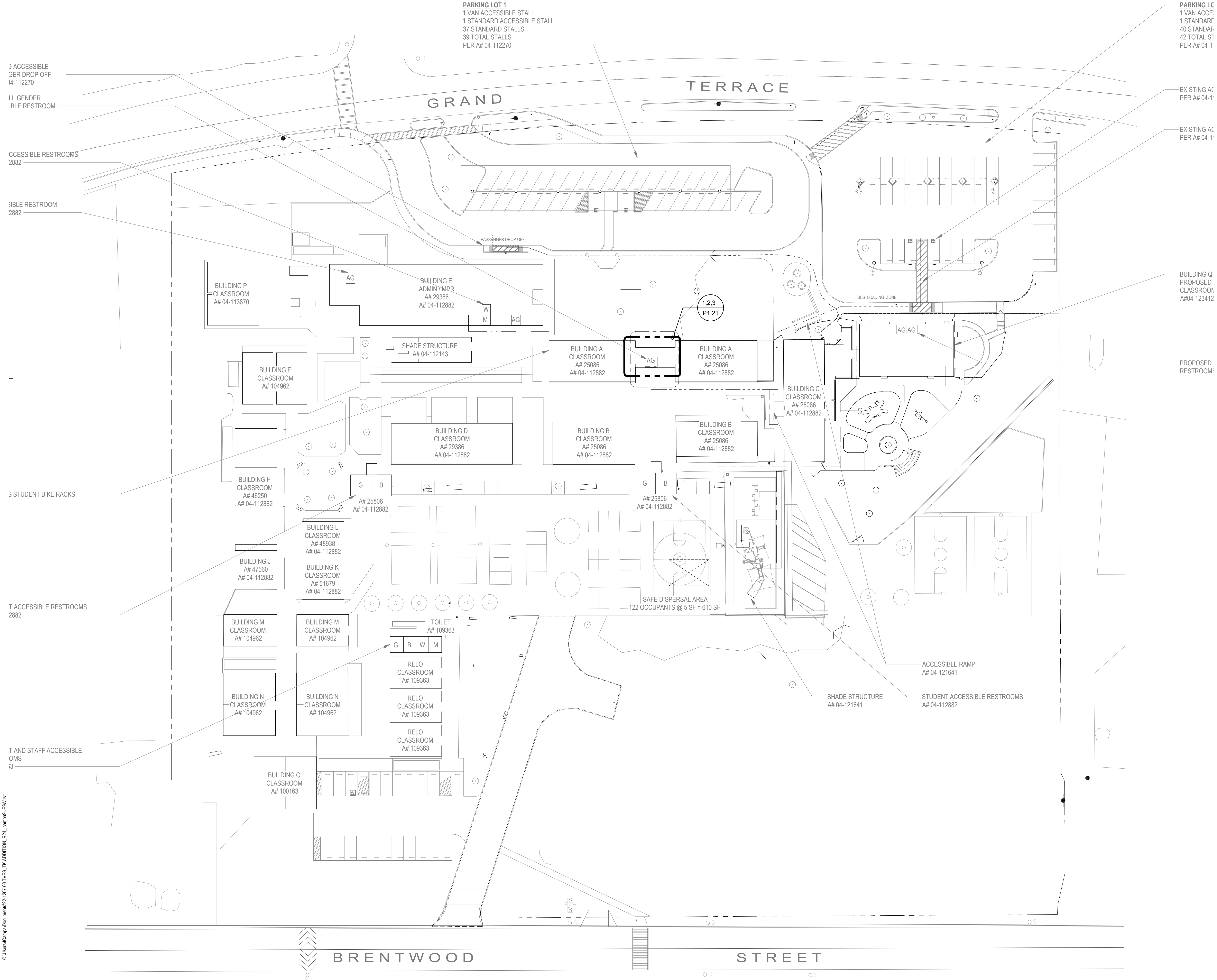
SEALS



PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2025
DATE: DESCRIPTION

P0.00

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PLUMBING SITE PLAN

PROJECT NUMBER	22-12107-00
PROJECT STATUS	BID SET
SHEET ISSUED	11/07/2023
DATE	DATE
DESCRIPTION	DESCRIPTION



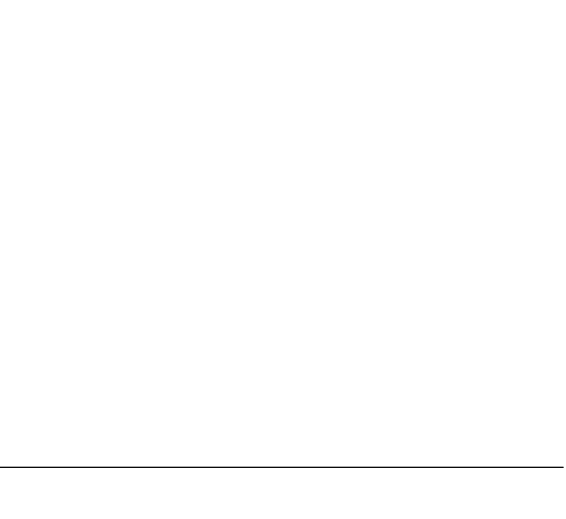
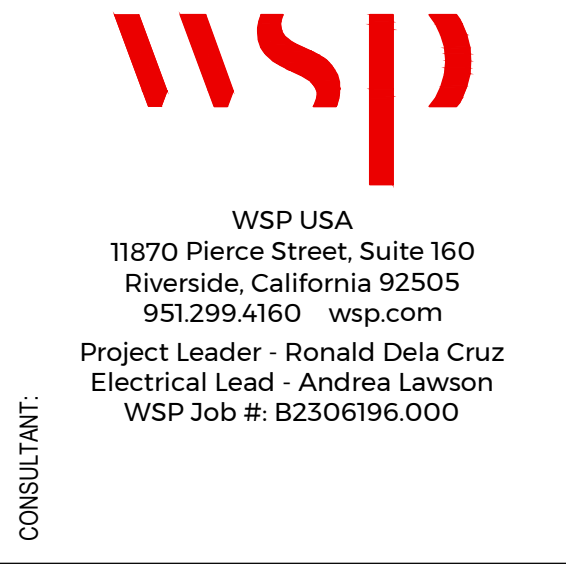
PLUMBING SITE PLAN

COLTON JOINT UNIFIED SCHOOL DISTRICT

TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION

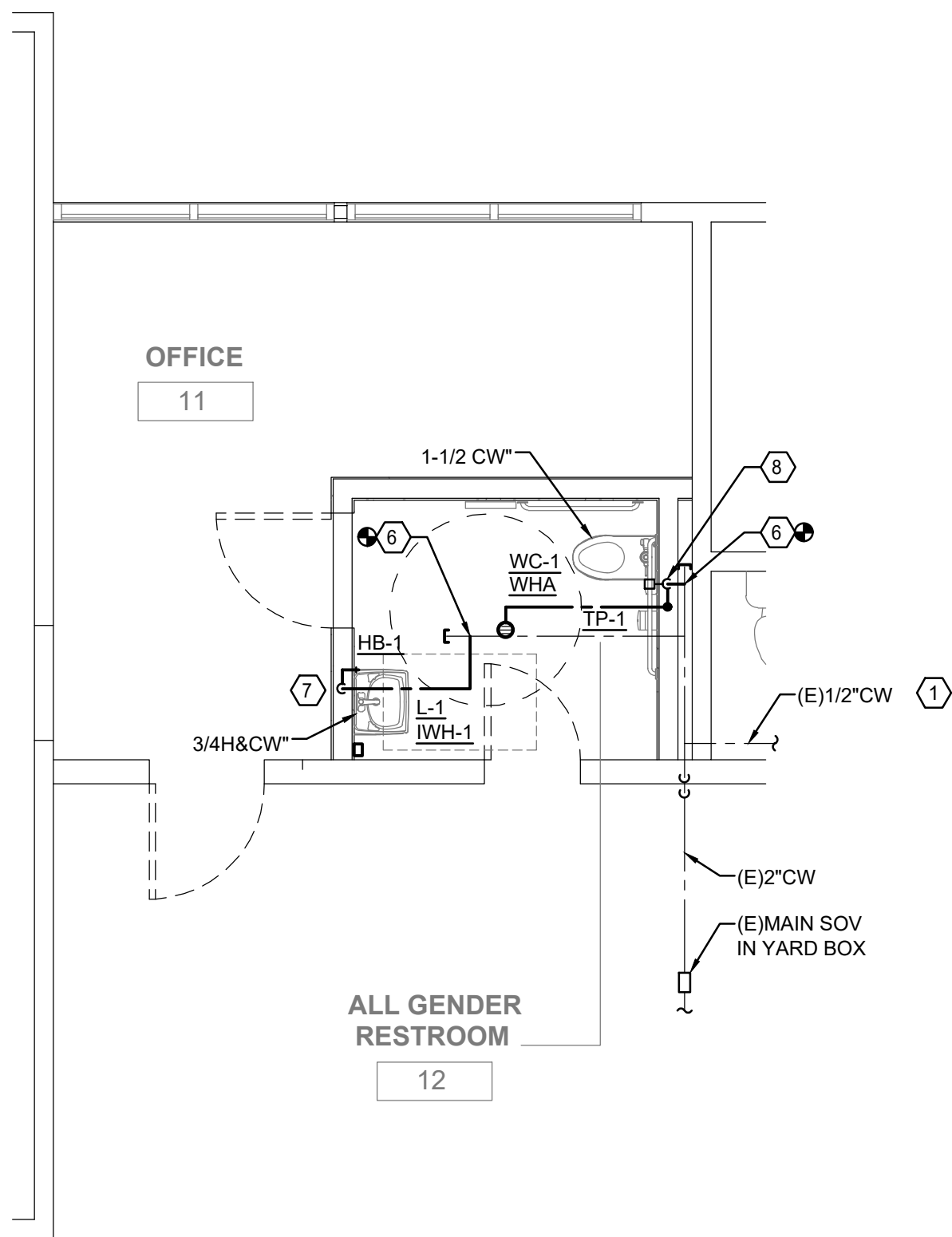
22731 GRAND TERRACE ROAD

GRAND TERRACE, CA 92313

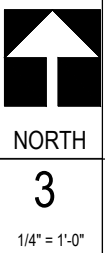


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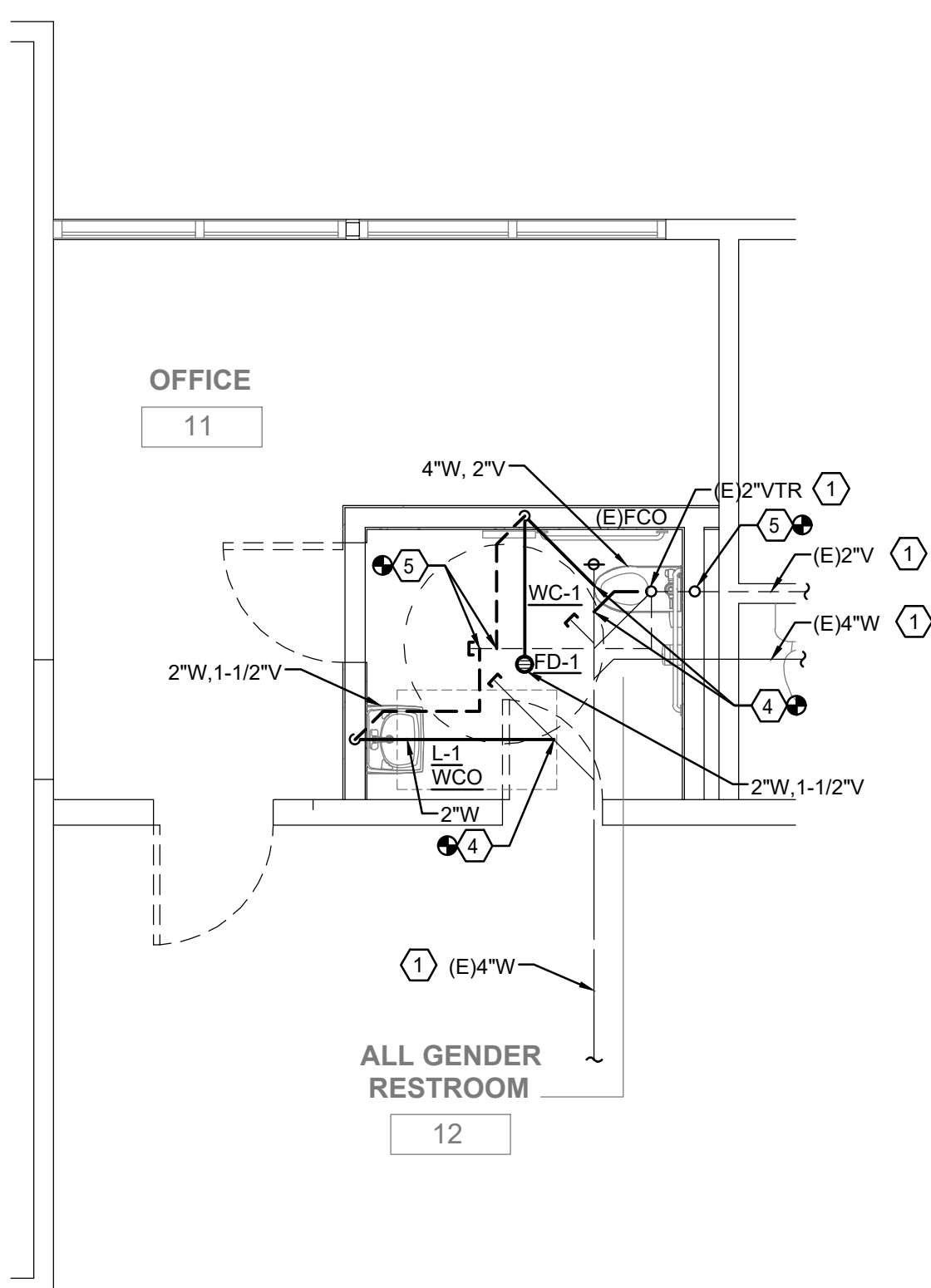
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REMODEL PLUMBING PLAN - BLDG A EXISTING RESTROOMS - WATER



3



REMODEL PLUMBING PLAN - BLDG A EXISTING RESTROOMS - WASTE & VENT



2

DEMOLITION NOTES:

- EXISTING PIPING TO REMAIN PROTECT IN PLACE.
- REMOVE EXISTING PLUMBING FIXTURE AND ASSOCIATED PIPING. CAP IN WALL, BELOW FLOOR, AND/OR ABOVE CEILING AS REQUIRED.

GENERAL NOTES:

- ALL WASTE SHALL SLOPE 2% UNLESS OTHERWISE NOTED ON PLANS.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPING PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL FIELD VERIFY EXISTING PIPING CONDITIONS WITHIN THE ROOM OR VICINITY WHERE NEW WORK IS PERFORMED AND NOTIFY ARCHITECT OF RECOMMENDED REPAIRS ARE BEYOND SCOPE OF WORK.
- PERFORM CAMERA INSPECTIONS OF ALL EXISTING WASTE PIPING.

KEYED NOTES:

- EXISTING PIPING TO REMAIN PROTECT IN PLACE.
- EXTEND NEW 2"S, 1-1/2"V, 3/4"CW PIPES AND CONNECT TO EXISTING NEARBY UTILITIES.
- EXTEND NEW 4"S, 2"V, 1-1/2" CW PIPES AND CONNECT TO EXISTING NEARBY UTILITIES.
- POINT OF CONNECTION TO EXISTING SEWER PIPE BELOW GRADE.
- POINT OF CONNECTION TO EXISTING VENT PIPE OVERHEAD.
- POINT OF CONNECTION TO EXISTING COLD WATER PIPE OVERHEAD.
- 3/4"CW PIPE DOWN IN WALL TO HEADER WITH SHUT-OFF VALVE BEHIND ACCESS PANEL.
- 1-1/2"CW PIPE DOWN IN WALL TO HEADER WITH SHUT-OFF VALVE BEHIND ACCESS PANEL.

PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION:

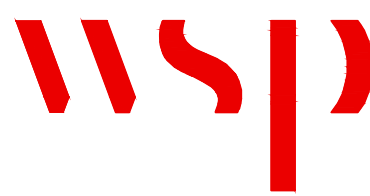
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SEALS:



ENLARGED PLUMBING PLAN EXISTING RESTROOM - BUILDING A
COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313

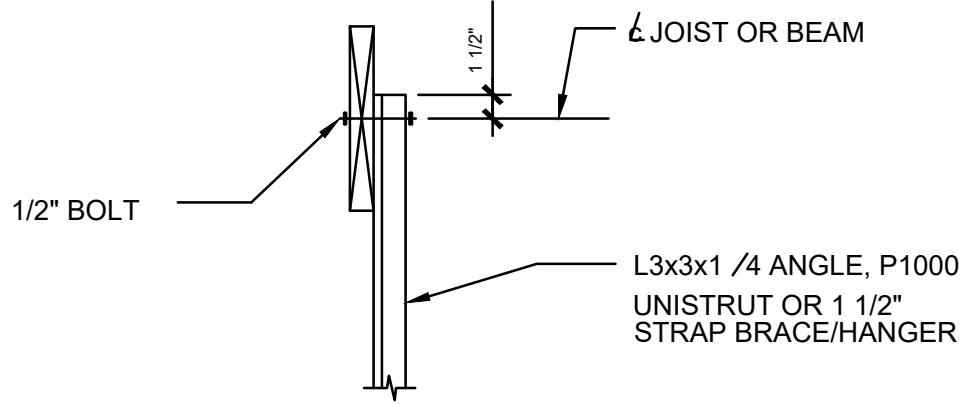
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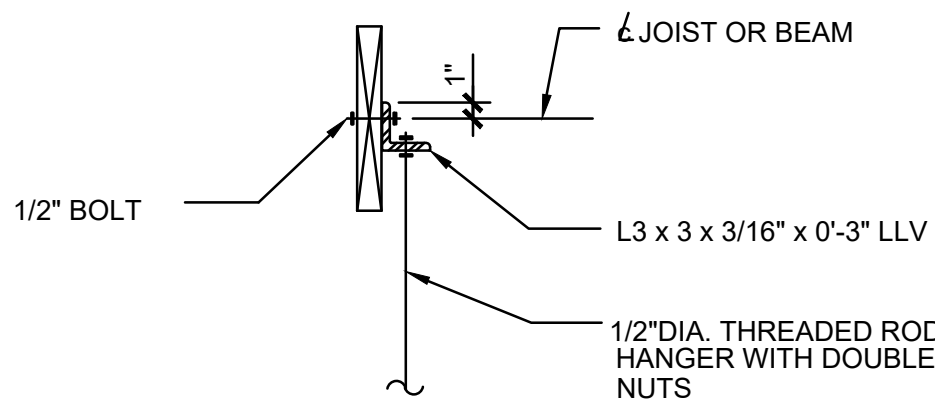
WSP USA
11870 Pierce Street, Suite 160
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951.299.4160 wsp.com
Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

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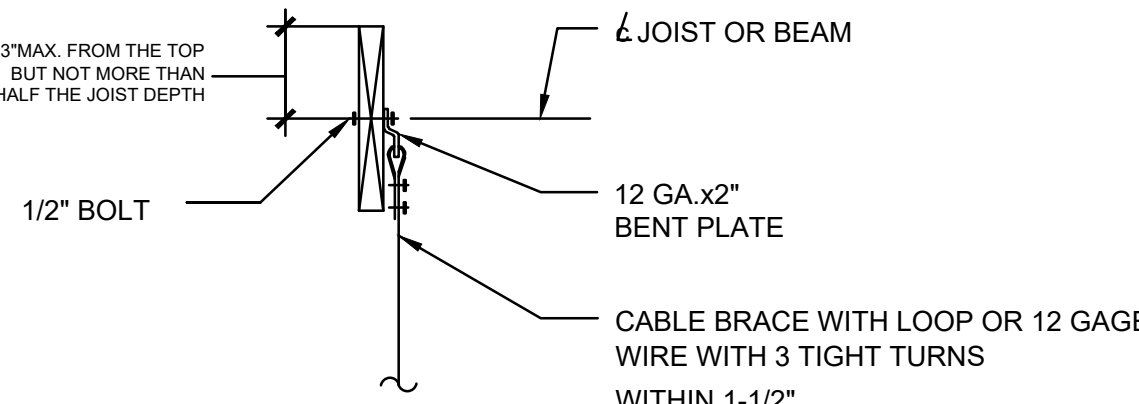
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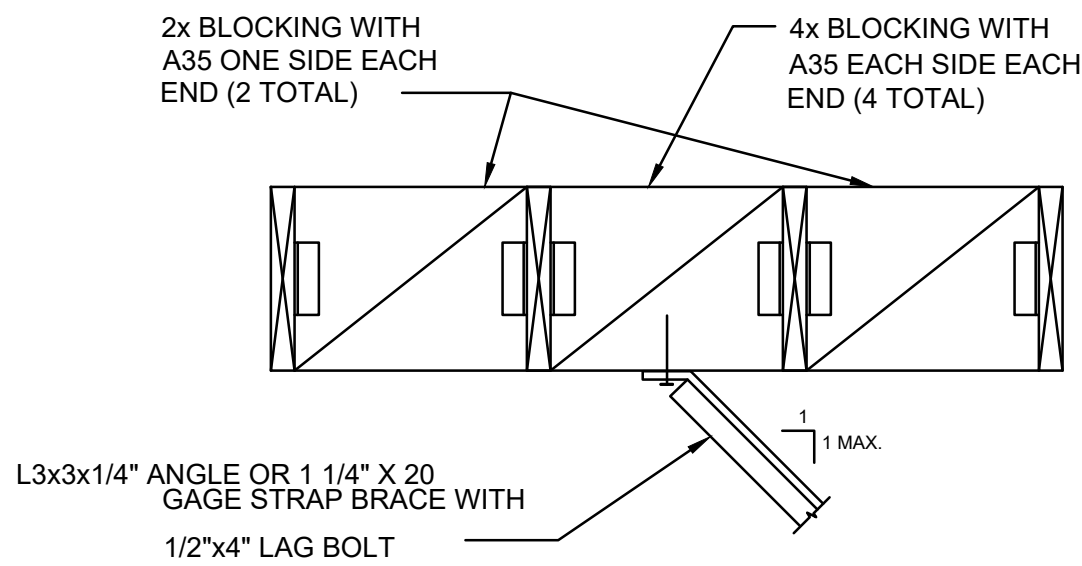
NOTES:
1. MAX. LOAD FOR THIS CONNECTION = 50#.



NOTES:
1. MAX. LOAD FOR THIS CONNECTION = 50#.



NOTES:
1. MAX. LOAD FOR THIS CONNECTION = 50#.



NOTES:
1. COPE ONE FLANGE OF ANGLE AND BEND OTHER FLANGE AT END FOR CONNECTION.

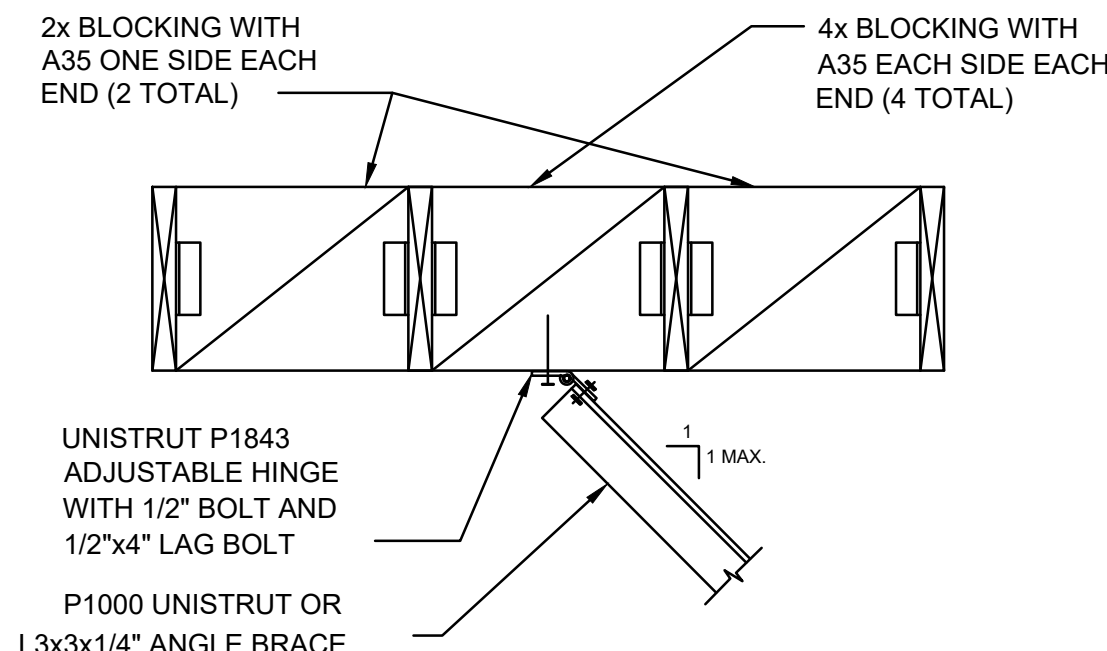


TABLE 1. (L MAX. W/O ROD STIFFENER)

ROD DIA.	3/8"	1/2"	3/4"	1"
L MAX.	15'	21'	26'	32'

TABLE 2. (L MAX. W/ ROD STIFFENER)

ROD STIFFENER	12GA. x 1 1/2" x 1 1/2" STRUT CHANNEL
L MAX.	110'

TABLE 3. (S MAX. W/ ROD STIFFENER)

ROD DIA.	3/8"	1/2"	3/4"	1"
L MAX.	15'	21'	26'	32'

NOTES:
1. THIS DETAIL USED FOR ROD STIFFENER REQUIREMENTS FOR EQUIPMENT CABLE BRACING.
2. SEE TABLE 1 FOR MAXIMUM LENGTH OF 3/8" THRU 7/8" DIAMETER RODS WITHOUT ROD STIFFENER.
3. SEE TABLE 2 FOR MAXIMUM LENGTH OF 3/8" THRU 7/8" DIAMETER RODS WITH ROD STIFFENER.
4. SEE TABLE 3 TO DETERMINE NUMBER OF ROD STIFFENER CLIPS REQUIRED.

TYPICAL PIPE CONNECTION DETAILS

SCALE
NONE

4

2022 CPC, TABLE 313.3 HANGERS AND SUPPORT			
PIPE MATERIAL	TYPE OF JOINT	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	SHROUD COUPLING	MINIMUM 1" OVER JOINT, MIN. LEAD OVER A FEET THEN SUPPORT EACH JOINT	MINIMUM 1" OVER JOINT, MIN. LEAD OVER A FEET THEN SUPPORT EACH JOINT
COPPER TUBE AND PIPE	BOLTERED OR BRANDED	1" OVER AND BRANDED, 1" FEET, 2" OVER JOINT, 1" FEET	1" OVER AND BRANDED, 1" FEET, 2" OVER JOINT, 1" FEET
STEEL PIPE FOR GAS	THREADED OR WELDED	1" FEET, 1" OVER JOINT, 1" FEET, 1" OVER JOINT, 1" FEET	1" FEET, 1" OVER JOINT, 1" FEET, 1" OVER JOINT, 1" FEET

NOTES:
1. SUPPORT ADJACENT TO JOINT, NOT TO EXCEED 18 INCHES LEFT PIPE.
2. BRACK NOT TO EXCEED 18 INCHES TO THE JOINTS TO PREVENT HORIZONTAL MOVEMENT.
3. SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION.
4. HANGERS SHALL NOT BE PLACED ON THE CONNECTION.
5. VERTICAL WATER LINES SHALL BE PERMITTED TO BE SUPPORTED IN ACCORDANCE WITH RECOMMENDED SPACING AND BRACKS WITH REGARD TO DEFORMATION AND CORROSION, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION.
6. SUPPORTS ARE LIMITED TO THE MORE RESTRICTIVE OF THIS TABLE OR OPENING 104-10.

2022 CPC, TABLE 313.6 HANGER ROD SIZE	
PIPE AND TUBE SIZES	ROD SIZE
1/2" - 4"	3/8"

HANGER AND ROD PIPE SUPPORT TABLE

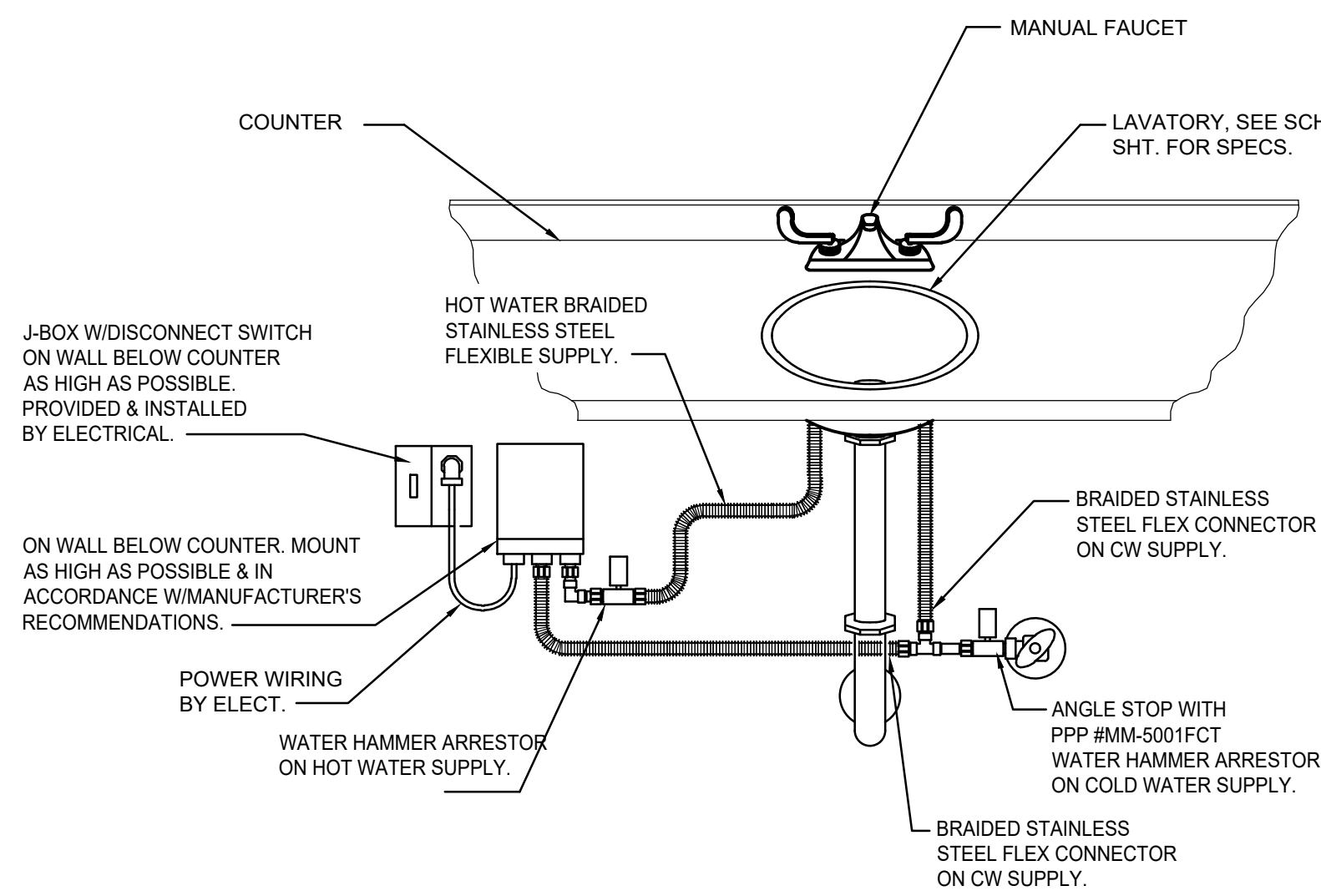
SCALE
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5

INSTANTANEOUS ELECTRIC WATER HEATER

SCALE
NONE

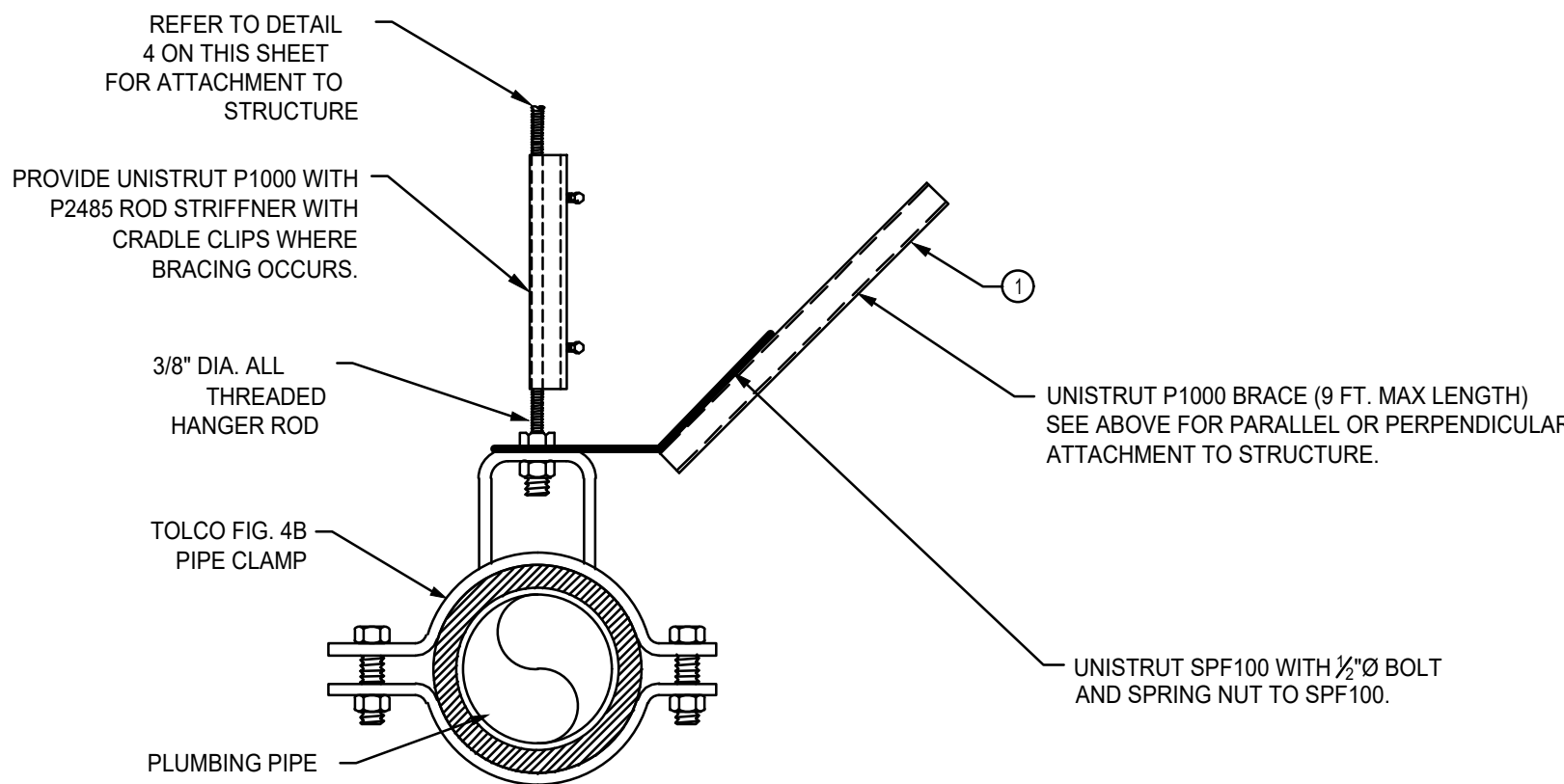
1



GENERAL NOTES:

1. THE INSTANTANEOUS WATER HEATER SHALL BE PROVIDED WITH INTEGRAL 3/4" REDUCER FITTING ON INLET & OUTLET CONNECTIONS.

NOTES:
1. PROVIDE UNISTRUT P1000 TRANSVERSE BRACING AT THE BEGINNING AND END OF EACH RUN AT THE MAX. SPACING PER TABLE ON DETAIL 4, THIS SHEET.

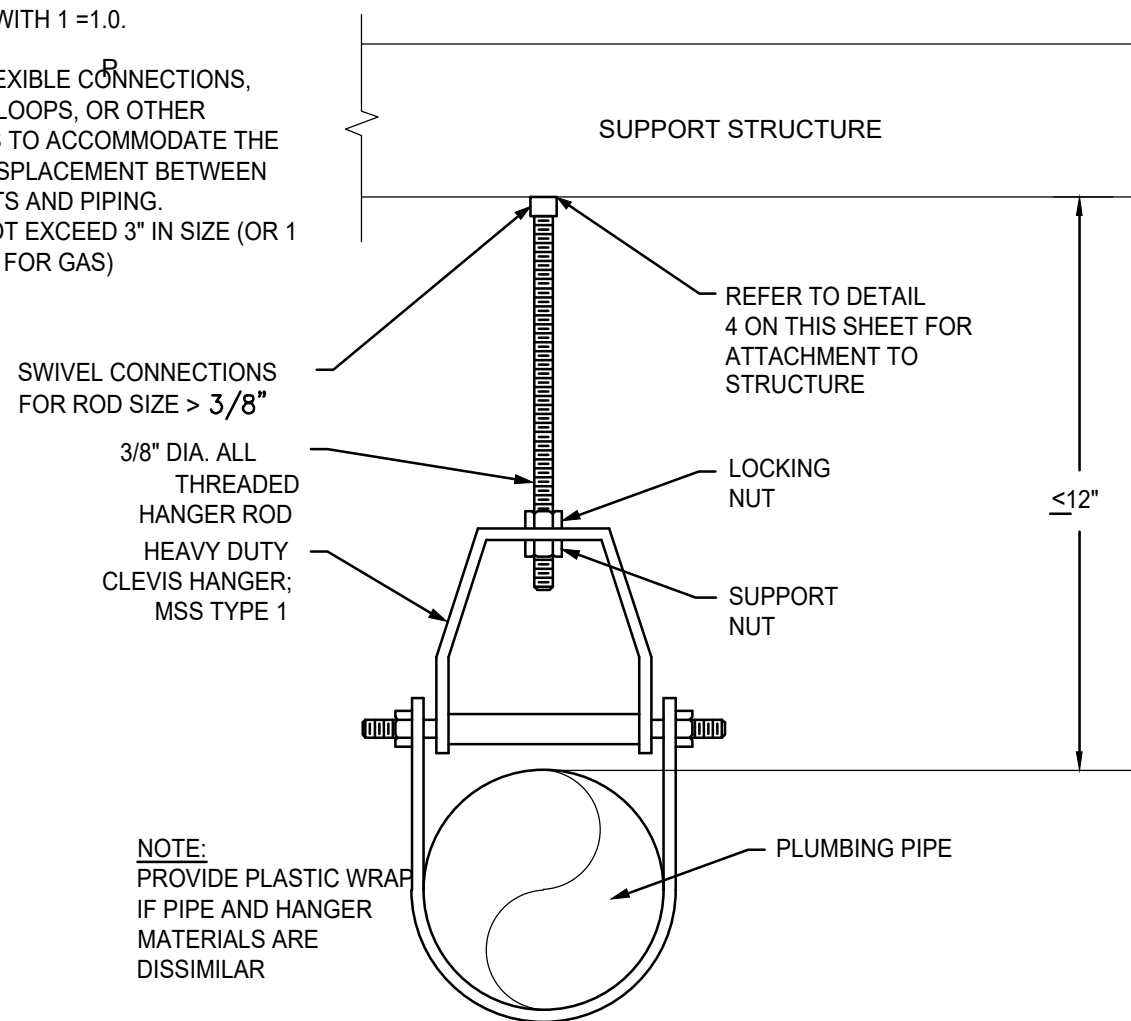


PIPE SUPPORT DETAIL

SCALE
NONE

2

- NOTE:
1. CONNECTIONS COMPLYING INCLUDE SWIVEL JOINTS, EYE BOLTS, ETC.
 2. MAX. VERTICAL SUPPORT SPACING TO BE 8 FT ON 2" PIPES AND 5 FT ON 3" PIPES OR 50 LBS MAX/SUPPORT, PER 1617A.1.20 EXCEPTION 2.
 3. PROJECT SEISMIC DESIGN CATEGORY IS UNDER E WITH 1 = 1.0.
 4. PROVIDE FLEXIBLE CONNECTIONS, EXPANSION LOOPS, OR OTHER ASSEMBLIES TO ACCOMMODATE THE RELATIVE DISPLACEMENT BETWEEN COMPONENTS AND PIPING.
 5. PIPES DO NOT EXCEED 3" IN SIZE (OR 1 INCH IN SIZE FOR GAS)



12" RULE FOR SUSPENDED PIPING

(USE THIS INSTALLATION METHOD ONLY WHERE THIS CONDITION CAN BE ACCOMPLISHED)

PIPE SUPPORT DETAIL

SCALE
NONE

3



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Project Leader - Ronald Dela Cruz
Plumbing Lead - Ramon Cereña
WSP Job #: B2306196.000

CONSULTANT

DETAILS

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



PROJECT NUMBER: 22-1207-00
PROJECT NUMBER: 22-1207-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION:

P2.00

ABBREVIATIONS

4S/DP ADA A.F.F. A.F.G. AWG AMP, A A.I.C. or AIC	4" SQUARE BY 2-1/8" DEEP BOX AMERICAN WITH DISABILITIES ACT ABOVE FINISH FLOOR ABOVE FINISH GRADE AMERICAN WIRE GAUGE AMPERE AMPERES INTERRUPTING CAPACITY (SYMMETRICAL) AVAILABLE FAULT CURRENT AFIAT AHJ AS/AF ATS AUTOMATIC TRANSFER SWITCH AVG BJ BDF BR BLDG CBQ CEC CIRC.-CKT. CB CSFD C C.O. CONN CPT CLCB CLF CT (D) DAS DISC DIST D.P.C.S. E.C. EMS EMT ENT EWG E.P.O. E.O.L. EF EGC or EG or E/G (E) EP (ER) FT or FA or F.A. FLA GRD	GFCI GFP GE or GEC HACR HOA HVAC H.W.D.L. HID HP HPS IN, or " IG IBC I.D.C.S. IDF JBOX K KCMIL KVA KW KWH LCL LF, L.F. LTG, LTS LPS MAX MBJ MDF MOCB MCB MLO M.C. M MM MV MH MIN MCA MCC MCM MCP MFR MOUNTED MTD MW NATS NEC NEMA NC NO	GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION GROUNDING ELECTRODE CONDUCTOR HEATING AIR CONDITIONING REFRIGERATION HAND-OFF-AUTO HEATING, VENTILATING AND AIR CONDITIONING HEIGHT, WIDTH, DEPTH, LENGTH HIGH INTENSITY DISCHARGE HORSEPOWER HIGH PRESSURE SODIUM INCHES ISOLATED GROUND INTERNATIONAL BUILDING CODE INTEGRATED DIMMING CONTROL PANEL INTERMEDIATE DISTRIBUTION FRAME JUNCTION BOX DEGREE KELVIN THOUSAND CIRCULAR MILS KILOVOLT AMPERES KILOWATT KILOWATT HOUR LONG CONTINUOUS LOAD LINEAR FEET LIGHTING LOW PRESSURE SODIUM MAXIMUM MAIN BONDING JUMPER MAIN DISTRIBUTION FRAME MAXIMUM OVERCURRENT PROTECTION MAIN CIRCUIT BREAKER MAIN LUGS ONLY MECHANICAL CONTRACTOR METER METER MAIN MERCURY VAPOR METAL HALIDE MINIMUM MINIMUM CIRCUIT AMPS MOTOR CONTROL CENTER THOUSAND CIRCULAR MILS MOTOR CIRCUIT PROTECTOR MANUFACTURER MOUNTED MICROWAVE NON AUTOMATIC DISCONNECT NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NORMALLY CLOSED NO	NF NIC N.T.S. NL NO, or # NOFCI OFICI OWNER FURNISHED OWNER INSTALLED OWNER FURNISHED, OWNER INSTALLED PERCENT IMPEDANCE PH, or # PC P.C. P P.C. POLY VINYL CHLORIDE POWER DISTRIBUTION UNIT OVER 600 VOLTS FURNISH, INSTALL AND CONNECT POTENTIAL TRANSFORMER PUBLIC ADDRESS PA DENOTES RELOCATED DEVICE LOCATION RECEPTACLE REFRIGERATOR RGS RIGID GALVANIZED STEEL RMS SCC SCCR SCS SFD SMACNA SECONDARY SMACNA TYPICAL U.G.P.S. U.O.N. U.P.S. or UPS VAV V VA VD VP W XFMR	NON-FUSED NOT IN CONTRACT NOT TO SCALE NIGHT LIGHT NUMBER OWNER FURNISHED CONTRACTOR INSTALLED OWNER FURNISHED, OWNER INSTALLED PERCENT IMPEDANCE PHASE PHOTOCELL PLUMBING CONTRACTOR POLE POLY VINYL CHLORIDE POWER DISTRIBUTION UNIT OVER 600 VOLTS FURNISH, INSTALL AND CONNECT POTENTIAL TRANSFORMER PUBLIC ADDRESS PA DENOTES RELOCATED DEVICE LOCATION RECEPTACLE REFRIGERATOR RGS RIGID GALVANIZED STEEL RMS SCC SCCR SCS SFD SMACNA SECONDARY SMACNA TYPICAL U.G.P.S. U.O.N. U.P.S. or UPS VAV V VA VD VP W XFMR
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FIRE ALARM SYSTEM SYMBOLS

SEE FIRE ALARM OR CENTRAL MONITORING SYSTEM DRAWINGS FOR FIRE ALARM SYMBOLS.

SIGNAL SYSTEM SYMBOLS

	WALL MOUNTED CLOCK. FIELD VERIFY MOUNTING HEIGHT PRIOR TO INSTALLATION. "B" INDICATES BATTERY OPERATED CLOCK. CEILING FLUSH MOUNTED SPEAKER. MATCH EXISTING MODEL ON CAMPUS, OR PER SPECIFICATIONS. CONCEALED SPEAKER CONDUIT RUN 3/4" CONDUIT, OR AS NOTED, WITH CONDUCTORS - REFER TO SPECIFICATIONS.
--	---

ANNOTATIONS

	PANEL CALLOUT, "A" INDICATES PANELBOARD OR EQUIPMENT DESIGNATION. MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS. DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER. PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED. REVISION REFERENCE. WYE CONFIGURATION DELTA CONFIGURATION GROUND
--	--

TELEPHONE/DATA SYMBOLS

	TELEPHONE OUTLET BOX. WALL MOUNTED. STUB A 1" C. UP 6" ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING. 4S/DP MINIMUM WITH SINGLE GANG RING. W = WALL MOUNTED PHONE +44" AFF. DATA OUTLET BOX. WALL MOUNTED. STUB A 1" C. UP 6-INCHES ABOVE THE ACCESSIBLE CEILING AND PROVIDE A BUSHING, OR PROVIDE SURFACE MOUNTED BOX AND RACEWAY (WIREFOLD OR EQUAL) TO ACCESSIBLE CEILING. CONCEALED TELEPHONE/DATA CONDUIT RUN, 1-INCH CONDUIT (MIN). SEE BELOW FOR CONDUIT SIZE VARIATIONS. T2 = 1-1/4" C. T3 = 1-1/2" C. T4 = 2" C. FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED. SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.
--	---

SECURITY ALARM SYSTEM SYMBOLS

	EXISTING SECURITY ALARM CONTROL PANEL - MODIFY AS REQUIRED SECURITY SYSTEM POWER SUPPLY AND TERMINAL ENCLOSURE COMPLETE SECURITY ALARM DUAL TECHNOLOGY MOTION SENSOR - SEE SPECIFICATIONS SECURITY ALARM DOOR CONTACT - SEE SPECIFICATIONS CONCEALED 3/4" C. WITH CONDUCTORS PER SECURITY ALARM RISER DIAGRAM AND/OR SPECIFICATIONS.
--	--

LIGHTING SYMBOLS

SITE LIGHTING FIXTURE SYMBOLS DEPICTED WITH CAPITAL LETTER(S) ADJACENT TO RESPECTIVE SYMBOL(S) INDICATE(S) LIGHT FIXTURE MOUNTING BASE DETAIL(S). SEE LIGHTING FIXTURE SCHEDULE FOR FIXTURE SYMBOL INFORMATION.

	LIGHTING FIXTURE CALL OUT, NUMBER(S) AND/OR UPPER CASE LETTER(S) (i.e. "1") INDICATES FIXTURE TYPE (REFER TO LIGHTING FIXTURE SCHEDULE). LOWER CASE LETTER (i.e. "a") ADJACENT TO FIXTURE TYPE INDICATES BALLAST OPTION (SEE GENERAL LIGHTING FIXTURE SCHEDULE NOTES). INDICATES FINAL CONNECTION TO A LIGHTING FIXTURE, NUMBER OF CONDUCTORS AS REQUIRED.
--	---

LIGHTING CONTROL SYMBOLS

SEE THE DISTRIBUTED LIGHTING CONTROL (DLCs) SPECIFICATIONS AND SEQUENCE OF OPERATIONS (SOO) FOR MORE INFORMATION.

	LOW VOLTAGE WIRING INTERCONNECTING DLCs COMPONENTS AS REQUIRED. SEE DLCs SPECIFICATIONS FOR MORE INFORMATION. WALL MOUNTED DIMMER. SEE SINGLE POLE SWITCH SYMBOL FOR RELATED SUBSCRIPTS. QUANTITY OF ADJACENT LOWER CASE LETTERS INDICES QUANTITY OF DIMMERS REQUIRED. PROVIDE DIMMER TYPE TO MATCH INDICATED BALLAST TYPE AND CONTROL REQUIREMENTS. WALL MOUNTED STAND ALONE OCCUPANCY SENSOR. WALL MOUNTED SYSTEM-BASED OCCUPANCY SENSOR. 1-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR. 2-WAY DIRECTIONAL CEILING MOUNTED, SYSTEM-BASED OCCUPANCY SENSOR. LOW VOLTAGE MOMENTARY SWITCHES, WALL MOUNTED, FOR MANUAL ON/OFF SWITCHING, DIMMING, AND OVERRIDE CONTROL OF LIGHTING. AUTOMATIC SWITCHING/STEP-DIMMING DAYLIGHTING CONTROLLER USED TO SWITCH OFF LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCs SOO FOR TARGET ILLUMINATION VALUE. AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. REFER TO THE DLCs SOO FOR TARGET ILLUMINATION VALUE.
--	--

LIGHTING CONTROL SYMBOL SUPERScript & SUBScript KEY:

- "Y" INDICATES THAT SWITCH LEG "Y" TO BE CONFIGURED PER THE SOO. ADJACENT LOWER CASE LETTERS INDICATES QUANTITY OF SWITCHLEGS TO BE CONTROLLED. EXACT CONTROL FUNCTION IS DETERMINED BY THE BALLAST/DRIVER/FIXTURE TYPE.
- ADJACENT UPPER CASE LETTER(S) INDICATE THE FOLLOWING:
AV INDICATES CONNECTION TO AV CONTROL SYSTEM.
DM INDICATES DUAL MODE CONTROL AT CORRIDORS, STAIRWELLS AND WAREHOUSE AISLEWAYS
H INDICATES CONNECTION TO HVAC SYSTEM CONTROLS VIA CONTROLLED DRY-CONTACT CLOSURE.
K INDICATES LOCKING SWITCH FOR THE SUBSEQUENT LOWER CASE LETTER.
P INDICATES CONNECTION TO MOVEABLE PARTITION INTERFACE, SENSOR AND STATUS INDICATOR.
V INDICATES VANDAL RESISTANT SWITCH.
- ADJACENT LOWER CASE LETTER(S) INDICATE SWITCH LEG(S) CONTROLLED EXCEPT WHERE "DM" INDICATES DUAL MODE CONTROL SWITCH.
- ADJACENT "+, +, AND "+" INDICATES PORTION OF SWITCH LEG CONTROLLED BY SENSOR WHERE "+" INDICATES PRIMARY SIDELIT DAYLIT ZONE, "+,+" INDICATES SECONDARY SIDELIT DAYLIT ZONE, AND "++" INDICATES SKYLIT DAYLIT ZONE.

MISCELLANEOUS SYSTEM SYMBOLS

	INVERTER CONTROL PANEL - SEE INVERTER SPECIFICATIONS. INVERTER ANNUNCIATOR PANEL - SEE INVERTER SPECIFICATIONS. GENERATOR ANNUNCIATOR PANEL - SEE GENERATOR SYSTEM SPECIFICATIONS FOR MORE INFORMATION. INTEGRATED DIMMING CONTROL STATION (IDCS) PANEL - WALL MOUNTED. SEE IDCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION. DIMMING PANEL CONTROL STATION (DPCS) PANEL - WALL MOUNTED. SEE DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION. LIGHTING CONTROL SYSTEM LOCAL SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION. LIGHTING CONTROL SYSTEM OVERRIDE SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION. LIGHTING CONTROL SYSTEM MASTER SWITCH - WALL MOUNTED. SEE LIGHTING CONTROL SYSTEM SPECIFICATIONS FOR MORE INFORMATION. IDCS/DPCS SYSTEM REMOTE STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION. IDCS/DPCS SYSTEM PARTITION STATION SWITCH - WALL MOUNTED. SEE IDCS SYSTEM AND/OR DPCS SYSTEM SPECIFICATIONS FOR MORE INFORMATION.
--	--

BRANCH CIRCUIT SYMBOLS

	HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED. HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS WITH SEPARATE NEUTRALS. "a" INDICATES SEPARATE NEUTRALS. HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. "+" INDICATES SEPARATE #10 NEUTRAL THROUGHOUT BRANCH CIRCUIT. HASH MARK "+" INDICATES AN ISOLATED GROUND CONDUCTOR. CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM. CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE. 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND. SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM. TANDEM WIRING CONNECTION. CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS CONDUIT CONTINUATION. FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN. CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE
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FLOOR BOX / SPECIALTY WALL BOX / PEDESTAL BOX SYMBOLS

	ON-GRADE FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX SCHEDULE, DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ABOVE GRADE POKE-THRU DEVICE. PROVIDE DEVICES PER PLAN. SEE FLOOR BOX SCHEDULE, DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. RECESSED, ADJUSTABLE DEPTH, FLAT PANEL TV/DISPLAY WALL BOX WITH FLUSH GROMMETED COVER PANEL (CHIEF #PAC525F) AND MINIMUM OF (1) 1-1/4" O. FROM TOP-MOUNTED L.V. CONDUIT ENTRY BOX TO ACCESSIBLE CEILING. SEE PLANS FOR ANY ADDITIONAL CONDUIT REQUIREMENTS. PROVIDE ADDITIONAL L.V. AND LINE VOLTAGE CONDUIT ENTRY BOXES AS REQUIRED TO ACCOMPLISH WALL BOX CONFIGURATION DEPICTED ON PLANS. FLUSH GROMMETED COVER SHALL BE WHITE, BLACK OR CUSTOM COLOR PER ARCHITECT. WHEN FIELD CONDITIONS PROHIBIT INSTALLATION OF THIS DEVICE (SUCH AS WALL STUD/CAVITY DEPTH OF LESS THAN 2.5" ETC), CONFIRM VIA WRITTEN RFI THE INSTALLATION OF A TRADITIONAL POWER AND DATA RECEPTACLE INSTALLATION ALONG SIDE CCTV/AV JUNCTION BOX CONSISTING OF 2-GANG DEEP JUNCTION BOX/2-GANG RING WITH 1-1/4" O. TO ACCESSIBLE CEILING IN ADDITION TO ANY OTHER CONDUIT REQUIREMENTS DEPICTED ON PLANS. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR MOUNTING HEIGHT. SINGLE OR DUAL SERVICE RECESSED EXTERIOR WALL BOX - TYPE "WP-A". PROVIDE DEVICES PER PLAN. EACH LV OR UNUSED COMPARTMENT SHALL BE EQUIPPED WITH A 1" C.O. TO THE NEAREST ACCESSIBLE CEILING SPACE U.O.N. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. SINGLE OR DUAL SERVICE EXTERIOR PEDESTAL - TYPE "WP-C". PROVIDE DEVICES PER PLAN. SEE EXTERIOR DETAILS AND SPECIFICATIONS FOR MORE INFORMATION. ARROW DENOTES DEVICE DOOR LOCATION.
--	--

POWER SYMBOLS

ALL RECEPTACLE OUTLETS SHOWN WITH A DIAGONAL SLASH SHALL BE CONTROLLED BY OCCUPANCY SENSOR OR LIGHTING CONTROL PANEL. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. WHERE DOUBLE DUPLEX RECEPTACLE OUTLETS ARE INDICATED AS CONTROLLED, ONLY A SINGLE RECEPTACLE OUTLET TYPE SHALL BE CONTROLLED. WITHIN ANY CONTROLLED, WITHIN ANY CONTROLLED, DOUBLE DUPLEX RECEPTACLE OUTLET, ONLY ONE RECEPTACLE SHALL BE CONTROLLED. NOTE THAT FOR FLOOR BOXES OR POKE-THRU DEVICES, THE ASSOCIATED CONTROL RELAY MAY NEED TO BE LOCATED WITHIN THE ELECTRICAL ROOM WHERE THE CONTROLLED CIRCUIT ORIGINATES.

	OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY. WHERE LETTER DESIGNATION "a" REPRESENTS OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROL ZONE. SEE THE DISTRIBUTED LIGHTING CONTROL SPECIFICATION FOR MORE INFORMATION. DUPLEX RECEPTACLE, WALL MOUNTED. DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED. DUPLEX, GFCI RECEPTACLE, WALL MOUNTED. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS. DOUBLE DUPLEX, WALL MOUNTED, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS. DUPLEX RECEPTACLE, ONE HALF SWITCHED, WALL MOUNTED. DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED. COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED. COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND RECEPTACLES, WALL MOUNTED. SIMPLEX RECEPTACLE, WALL MOUNTED. SPECIAL RECEPTACLE. REFER TO PLAN NOTES. DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. DUPLEX RECEPTACLE, ONE HALF SWITCHED, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. DUPLEX, ISOLATED GROUND RECEPTACLE, FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, MOUNTED FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL. COMBINATION DOUBLE DUPLEX FLUSH IN CEILING: TWO ISOLATED GROUND RECEPTACLES - MOUNT FLUSH IN FLOOR WHEN INDICATED IN FLOOR BOX SYMBOL. SIMPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. SPECIAL RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. DOUBLE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. DUPLEX, GFCI RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS. DOUBLE DUPLEX, WALL MOUNTED 6-INCHES ABOVE COUNTER OR SPLASH, WITH (1) GFCI RECEPTACLE AND (1) DUPLEX RECEPTACLE CONNECTED ON LOAD SIDE OF GFCI. WP INDICATES WEATHERPROOF, A, B OR C INDICATES THE TYPE OF COVER, REFER TO THE GENERAL PRODUCT SPECIFICATIONS. DUPLEX RECEPTACLE, BOTTOM HALF SWITCHED, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. DUPLEX, ISOLATED GROUND RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. COMBINATION DOUBLE DUPLEX: ONE ISOLATED GROUND DUPLEX RECEPTACLE AND ONE DUPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. COMBINATION DOUBLE DUPLEX: TWO ISOLATED GROUND DUPLEX RECEPTACLES, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. SIMPLEX RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. SPECIAL RECEPTACLE, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. REFER TO PLAN NOTES. WET LOCATION-LISTED (RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION. DAMP LOCATION-LISTED (NOT-RAINTITE-IN-USE) RECEPTACLE - SEE ELECTRICAL SPECIFICATION FOR ADDITIONAL INFORMATION. DUPLEX RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.) QUAD RECEPTACLES WITH TWO 5V, 3.6A USB CHARGING PORTS. PROVIDE COLOR AS REQUIRED IN 15A OR 20A CONFIGURATION AND/OR TAMPER RESISTANT AND/OR HOSPITAL GRADE AS REQUIRED BY PLANS AND THE WIRING DEVICES SECTION OF THE GENERAL ELECTRICAL SPECIFICATIONS. (PASS & SEYMOUR OR EQUAL BY HUBBELL OR LEVITON.) JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F. OR AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C. OR CEC, WHERE ADOPTED. JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C. OR CEC, WHERE ADOPTED. JUNCTION BOX, WALL MOUNTED AT 6-INCHES ABOVE COUNTER OR SPLASH. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED. JUNCTION BOX, 4S MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED. MOUNTED IN ACCESSIBLE CEILING SPACE PER PLAN FOR FLEXIBLE CONNECTION TO PRE-WIRED FURNITURE SYSTEM. MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALL OUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. JUNCTION BOX, WALL MOUNTED AT +18-INCHES A.F.F., 4S/DP MINIMUM OR AS REQUIRED BY N.E.C., OR CEC, WHERE ADOPTED, FOR FLEXIBLE CONNECTION TO PREWIRED FURNITURE SYSTEM. WHEN SHOWN WITH A DIAGONAL SLASH, THE LAST GENERAL RECEPTACLE CIRCUIT ON THE HOME-RUN CALLOUT SHALL BE CONTROLLED BY THE OCCUPANCY SENSOR. COORDINATE CONTROLLED CIRCUIT CONNECTION REQUIREMENTS WITH FURNITURE SYSTEM MANUFACTURER PRIOR TO ROUGH-IN. SEE DISTRIBUTED LIGHTING CONTROLS FOR ADDITIONAL REQUIREMENTS. SURFACE MOUNTED MULTI-OUTLET ASSEMBLY. REFER TO GENERAL PRODUCT SPECIFICATIONS. PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION. THERMOSTAT OUTLET BOX, PROVIDE 1/2" C.O. TO RESPECTIVE MECHANICAL UNIT. EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL, PLUMBING OR KITCHEN DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED. FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE. SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE. DISTRIBUTION SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM. TRANSFORMER. REFER TO SINGLE LINE DIAGRAM. FUSED DISCONNECT SWITCH, HP RATED, OR COMBINATION MOTOR STARTER/DISCONNECT SWITCH WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT AND STARTER SIZES. NON-FUSED DISCONNECT SWITCH, HP RATED AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT SIZES. UTILITY COMPANY METER. PROVIDE "CT's" AND "PT's" AS REQUIRED, REFER TO SINGLE LINE DIAGRAM. CIRCUIT BREAKER: "A" REPRESENTS CIRCUIT BREAKER AMPERE RATING, "B" REPRESENTS NUMBER OF POLES AND "C" REPRESENTS MISCELLANEOUS BREAKER FEATURES. SHUNT+ PROVIDE SHUNT TRIP MECHANISM GFP+ GROUND FAULT PROTECTION CLOB+ CURRENT LIMITING CIRCUIT BREAKER SS+ PROVIDE SOLID STATE CIRCUIT BREAKER LO+ PROVIDE PERMANENT LOCK-OPEN (OFF) HARDWARE LC+ PROVIDE PERMANENT LOCK-CLOSED (ON) HARDWARE FUSIBLE SWITCH: "A" REPRESENTS SWITCHFRAME AMPERE RATING, "B" REPRESENTS THE FUSE AMPERE RATING, "C" INDICATES NUMBER OF POLES AND "D" REPRESENTS MISCELLANEOUS FUSE/SWITCH FEATURES. SHUNT+ PROVIDE SHUNT TRIP MECHANISM GFP+ GROUND FAULT PROTECTION CLF+ CURRENT LIMITING FUSE GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED. SINGLE POLE SWITCHES, WALL MOUNTED. SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING: 2 - DOUBLE POLE LV - LOW VOLTAGE RL - ROTARY LOCK KEY TYPE 3 - THREE WAY P - PILOT LIGHT PB - PUSHBUTTON 4 - FOUR WAY R - REMOTE CONTROL S - PROJECTION SCREEN K - KEY OPERATED M - MOTOR STARTING a, b, c, ETC. - DESIGNATES QUANTITY OF SWITCHES AT EACH LOCATION. NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY". EMERGENCY POWER OFF STATION, WALL MOUNTED PER EPO SYSTEM DETAIL. PULLBOX, SIZED PER N.E.C. OR AS NOTED.
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WALL MOUNTED DEVICE MOUNTING HEIGHT NOTE:

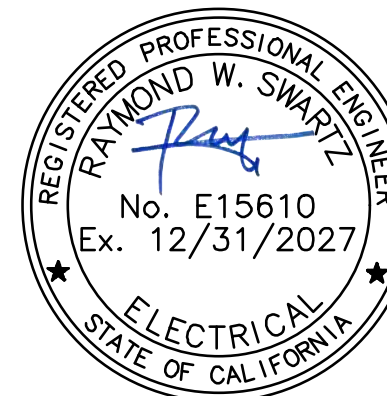
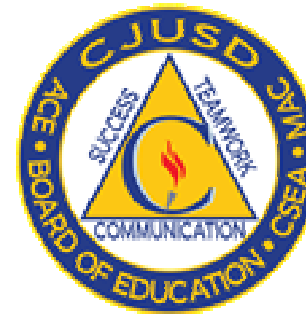
ALL WALL-MOUNTED EQUIPMENT MOUNTING HEIGHTS SHALL BE VERIFIED PRIOR TO ROUGH-IN PER REQUIREMENTS OF THE DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS AND SPECIFICATIONS.

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Electrical Lead - Andrius Lawson
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CONSULTANT

SYMBOLS LIST

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



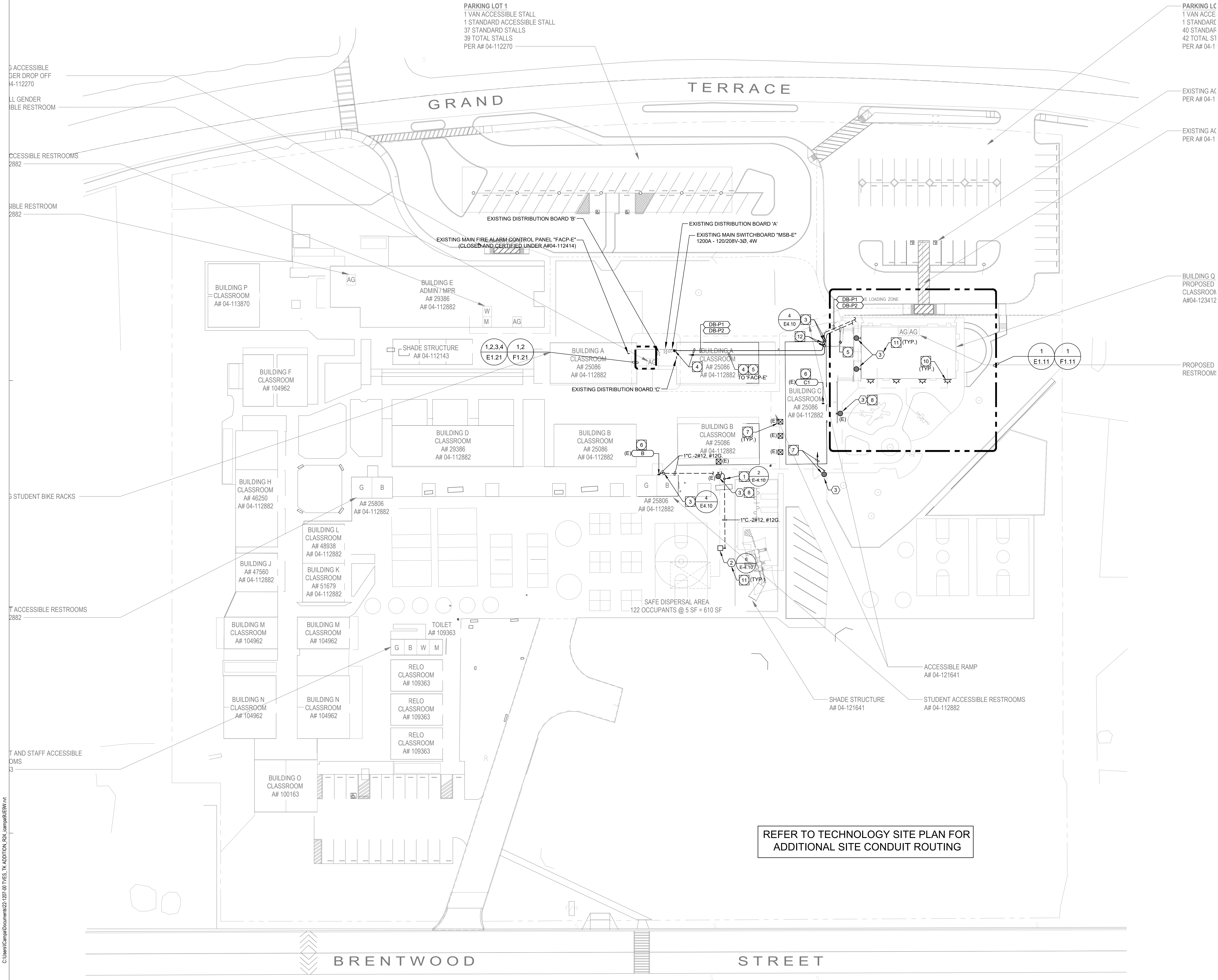
SEALS



PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/17/2025
DATE: DESCRIPTION

E0.00

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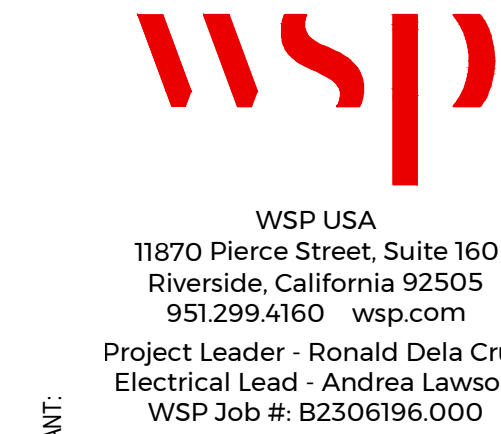


PLAN NOTES:

- 1 PROVIDE IN-GRADE, 11" x 17" x DEPTH AS REQUIRED, TRAFFIC RATED PULLBOX ENGRAVED "FIRE ALARM".
- 2 PROVIDE IN-GRADE, 11" x 17" x DEPTH AS REQUIRED, TRAFFIC RATED PULLBOX ENGRAVED "POWER".
- 3 ROUTE CONDUIT FROM BELOW GRADE EXPOSED ON BUILDING EXTERIOR TO TOP OF ROOF. PAINT CONDUIT TO MATCH THE SURROUNDING SURFACE.
- 4 ROUTE CONDUIT ON TOP OF ROOF. PROVIDE A SEALED PENETRATION THROUGH ROOF AND INTO ELECTRICAL ROOM AS REQUIRED TO PERFORM WORK INDICATED. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 5 PROVIDE THE FOLLOWING CONDUIT WITH CONDUCTORS AS INDICATED:
1" (FIRE ALARM)
- 6 EXISTING ELECTRICAL PANEL TO REMAIN PROTECTED IN PLACE. VERIFY EXACT LOCATION IN FIELD.
- 7 NEW LIGHT FIXTURE. PROVIDE 2x12-1/2"C. ROUTED THROUGH ACCESSIBLE CEILING SPACE WHERE APPLICABLE TO SPARE 20A-1P CIRCUIT BREAKER WITHIN BUILDINGS 120V PANELBOARD. PROVIDE RELAY AND TIMECLOCK/PHOTOCELL AS REQUIRED FOR CONTROL OF EXTERIOR LIGHTING BY PHOTOCELL. ON TIMECLOCK OFF. MOUNT RELAY IN SEPARATE BARRIERED COMPARTMENT OF PANELBOARD. REFER TO FIXTURE SCHEDULE E3.10 FOR ADDITIONAL INFORMATION.
- 8 EXISTING WALL PACK LIGHT FIXTURE TO BE DISCONNECTED, REMOVED AND REPLACED WITH NEW IN SAME LOCATION. RE-USE EXISTING CIRCUIT AND CONTROL WIRING AND RECONNECT AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- 9 EXISTING DOWNLIGHT TO BE REMAIN PROTECTED IN PLACE.
- 10 WALL PACK LIGHT FIXTURE PREFABRICATED WITH PORTABLE CLASSROOM BUILDING.
- 11 LIGHT FIXTURE TYPE. REFER TO SYMBOL LIST E0.00 AND FIXTURE SCHEDULE E3.10 FOR ADDITIONAL INFORMATION.
- 12 PROVIDE NEMA 3R CODE-SIZED PULL BOX ON ROOF TOP. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

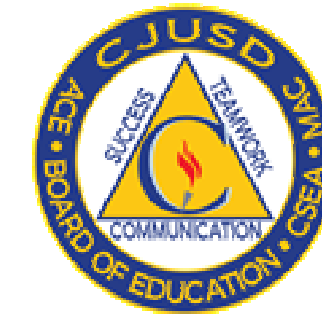
SITE PLAN GENERAL NOTES:

1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
2. CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
4. MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N.
5. ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
6. ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
7. ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
8. SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (I), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.



CONSULTANT

SITE ELECTRICAL PLAN
COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION: OVERALL SITE ELECTRICAL PLAN

E1.01

OVERALL SITE ELECTRICAL PLAN



NORTH

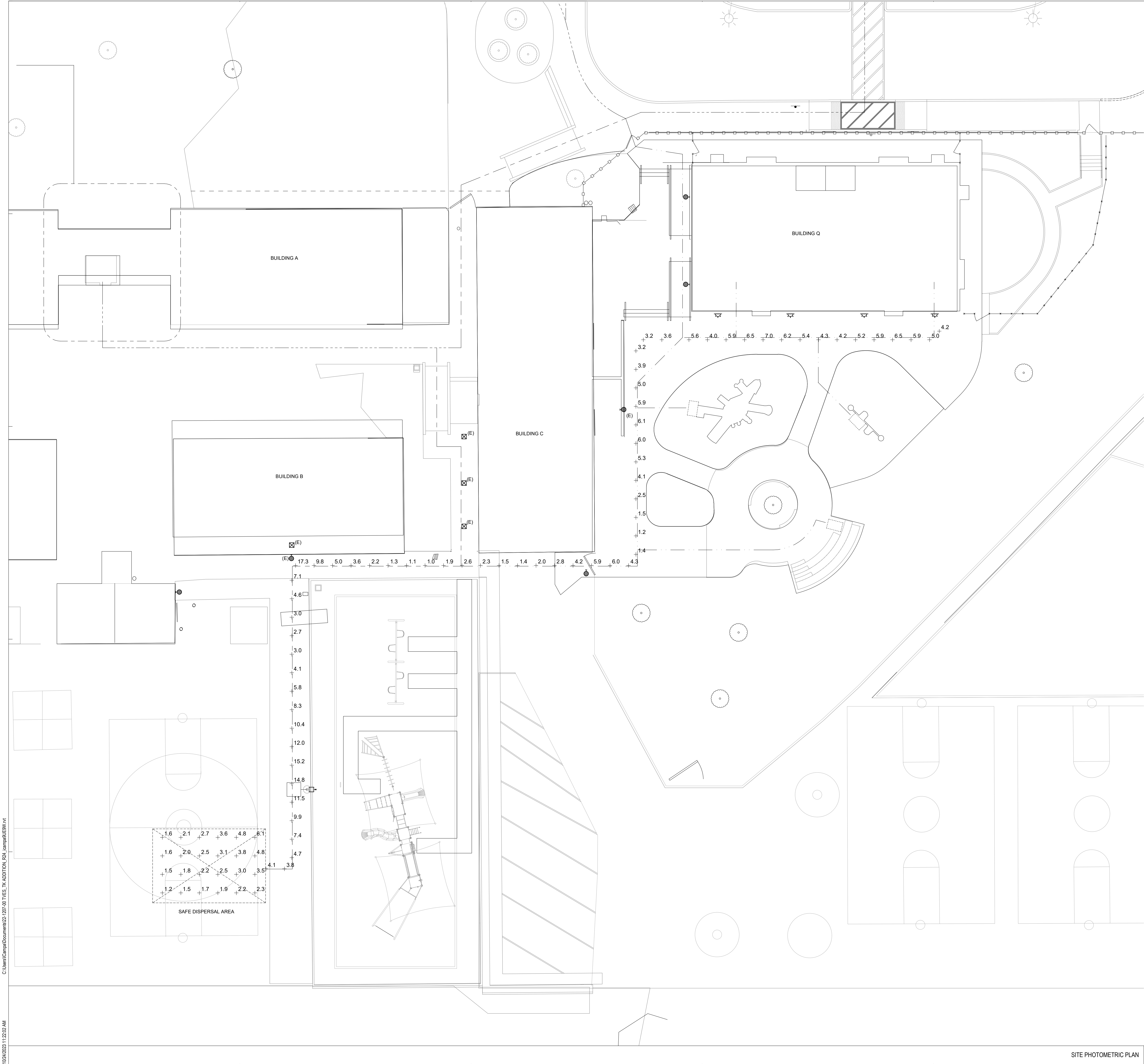
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1"

30'-0"

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NOTE:

THIS LIGHTING CALCULATION REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS.

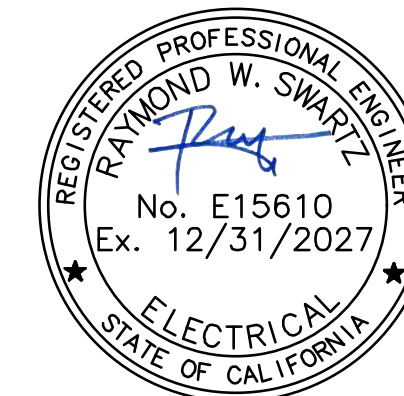
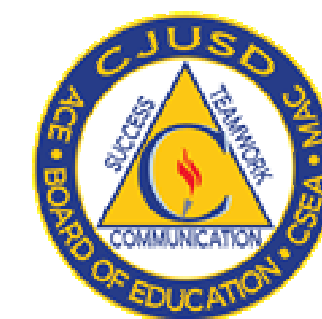


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Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

CONSULTANT

SITE PHOTOMETRIC PLAN

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION:

E1.01P



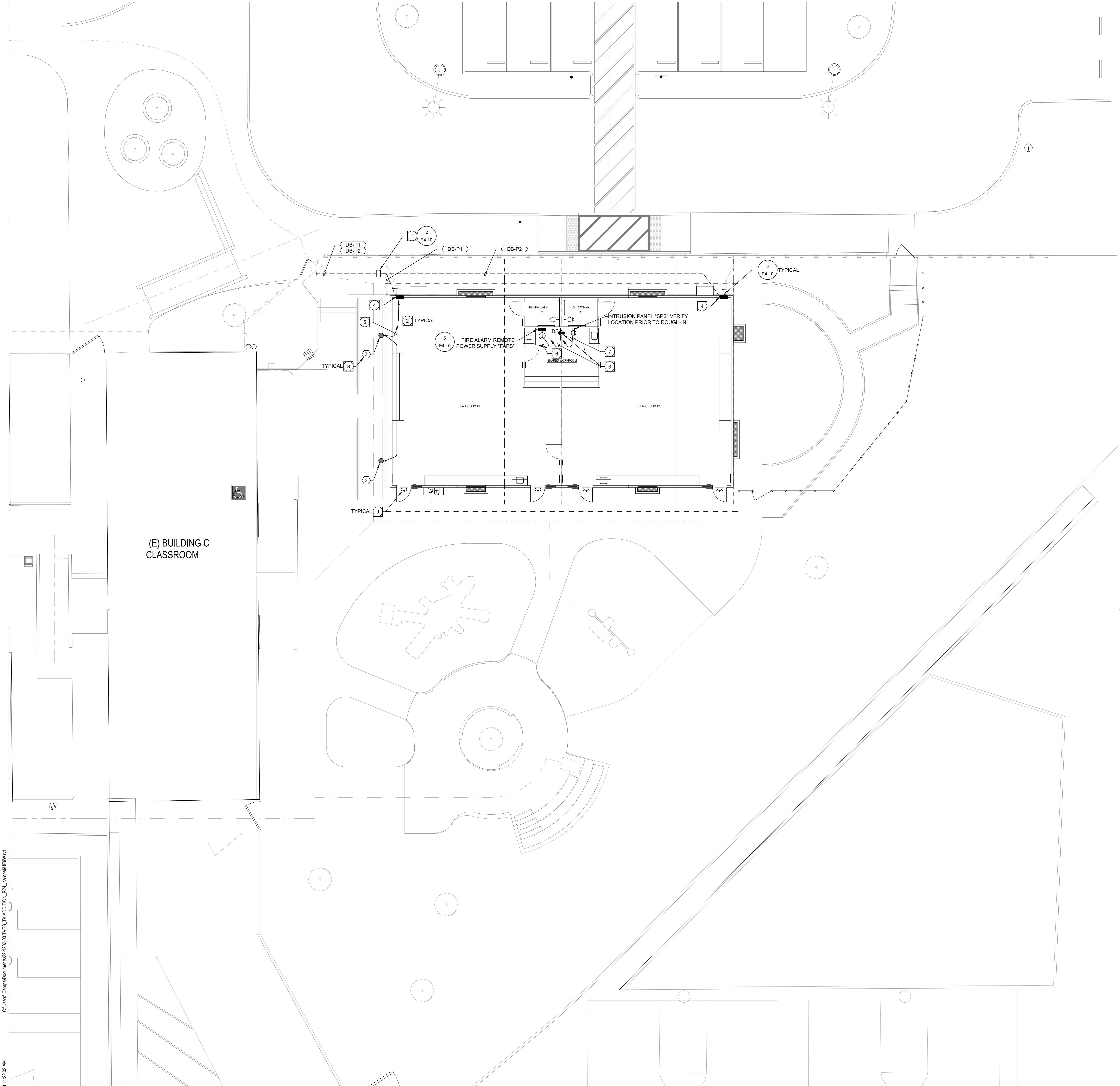
NORTH

1

1" = 10'-0"

SITE PHOTOMETRIC PLAN

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PLAN NOTES:

- EXISTING IN-GRADE, CODE SIZED, TRAFFIC RATED PULL BOX ENGRAVED "POWER".
- PREFABRICATED ELECTRICAL PANEL PROVIDED BY MODULAR MANUFACTURER. PROVIDE CONNECTION AS REQUIRED.
- PROVIDE DEDICATED QUAD RECEPTACLE FOR IDF CABINET. PROVIDE 3/4" - 2#12, #12G, AND CONNECT TO SPARE 20A-1P BREAKER WITHIN RELOCATABLE PANELBOARD FOR POWER TO IDF. MOUNT RECEPTACLE AT SAME HEIGHT AS IDF CABINET. REFER TO TECHNOLOGY DRAWINGS FOR EXACT LOCATION AND ADDITIONAL INFORMATION.
- ROUTE CONDUIT BELOW GRADE, UNDER FOUNDATION AND STUBBED UP DIRECTLY BELOW MODULAR PANELBOARD AS INDICATED. VERIFY EXACT ROUTING PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DETAIL 23A10.51 FOR ADDITIONAL INFORMATION.
- NEW WALL PACK LIGHT FIXTURE. PROVIDE 2#12-1/2"C. TO SPARE 20A-1P CIRCUIT BREAKER WITHIN RELOCATABLE 120V PANELBOARD. PROVIDE RELAY AND TIMECLOCK/PHOTOCELL AS REQUIRED FOR CONTROL OF EXTERIOR LIGHTING BY PHOTOCELL ON TIMECLOCK OFF. MOUNT RELAY IN SEPARATE BARRIERED COMPARTMENT OF PANELBOARD. PROVIDE ALL REQUIRED CONDUIT, J-BOX, ETC. CONDUIT TO BE ROUTED ON INTERIOR OF BUILDING. REFER TO FIXTURE SCHEDULE E3.10 FOR ADDITIONAL INFORMATION.
- PROVIDE 3/4" WITH 3#12, 1#12G, TO (2) 120V DEDICATED CIRCUITS FOR POWER. PROVIDE (2) 20AMP, 1-POLE CIRCUIT BREAKERS WITH APPROVED LOCK-ON DEVICES. RED INDICATORS AND IDENTIFIED AS "FIRE ALARM CONTROL CIRCUIT" (NFPA 72, SECTION 10.6.5.2). CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED. REFER TO FIRE ALARM DRAWINGS FOR E ADDITIONAL INFORMATION.
- PROVIDE 3/4" WITH 2#12, 1#12G, TO 120V DEDICATED CIRCUIT FOR POWER. PROVIDE (1) 20AMP, 1-POLE CIRCUIT BREAKERS. CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED. REFER TO TECHNOLOGY DRAWINGS FOR ADDITIONAL INFORMATION.
- LIGHT FIXTURE TYPE. REFER TO SYMBOL LIST E0.00 AND FIXTURE SCHEDULE E3.10 FOR ADDITIONAL INFORMATION.
- WALL PACK LIGHT FIXTURE PREFABRICATED WITH PORTABLE CLASSROOM BUILDING.

POWER PLAN GENERAL NOTES:

- ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
- ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
- ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
- WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
 - ALL BRANCH CIRCUITS SHALL BE EMT.
 - ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRAINED, IN PARALLEL TO STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIUS BENDS AND SWEEPS.
 - VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
- EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
- PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN RECEPTACLES ARE 50A OR LESS, 150V TO GROUND OR LESS AND ARE LOCATED WITHIN 6-FEET OF ANY SINK OR THERAPEUTIC TUB, LAUNDRY AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE, LOCKER ROOM AREA, GARAGE AND BATHROOM SPACE AND/OR LOCATED OUTDOORS. WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
- PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
- PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
- CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE FOR ALL DEVICES TO PANELBOARD(S) INDICATED ON PLANS FOR A COMPLETE AND OPERABLE SYSTEM.
- CONTRACTOR SHALL PROVIDE MINIMUM 2#12, 1#12G IN 1/2" CONDUIT UNLESS OTHERWISE NOTED. REFERENCE WIRE SIZE TABLE CHART BELOW, WHERE REQUIRED, CONDUIT AND WIRE SHALL BE UP-SIZED TO MEET THE REQUIREMENT OF THE DEVICE BEING SERVED BY THE BRANCH CIRCUIT. WHERE CONDUIT AND WIRING IS INDICATED AT THE HOME RUN, WIRING AND CONDUIT SHALL CONTINUE AT THAT SIZE FOR THE ENTIRE LENGTH OF THE CIRCUIT.
- CONTRACTOR SHALL FURNISH ADDITIONAL SWITCHLEGS OR HOT WIRES AS REQUIRED TO MEET THE CONTROL INTENT OF THE DOCUMENTS AND AS REQUIRED BY CODE (I.E. EMERGENCY LIGHTING AND SWITCHED RECEPTACLES).
- MULTIPLE CIRCUITS MAY BE USED IN A SINGLE RACEWAY. NO MORE THAN (3) DEDICATED CIRCUITS OR (4) CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN ANY RACEWAY UNLESS OTHERWISE NOTED. WHERE A COMMON GROUNDED CONDUCTOR IS USED FOR MULTIPLE INDIVIDUAL BRANCH CIRCUITS, PER SECTIONS CEC 200.4, 250.122, 310.15(B)(2), CONDUIT SIZE SHALL BE INCREASED AS REQUIRED FOR THE CONDUCTORS INCLUDING TEMPERATURE DERATING PER CEC TABLE C1.
- FURNISH AND INSTALL JUNCTION BOXES AS REQUIRED TO MEET MAXIMUM BEND REQUIREMENTS FOR PULLING WIRES PER CEC 358.26. JUNCTION BOXES SHALL BE SIZED AS REQUIRED PER CEC 314.28 UNLESS OTHERWISE NOTED.

SITE PLAN GENERAL NOTES:

- CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
- CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
- MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N.
- ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
- ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
- ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
- SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.



NORTH

ENLARGED SITE ELECTRICAL PLAN
1
1/8" = 1'-0"

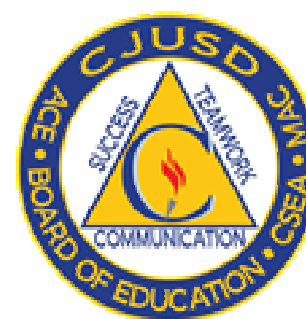


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CONSULTANT

ENLARGED SITE ELECTRICAL PLAN

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



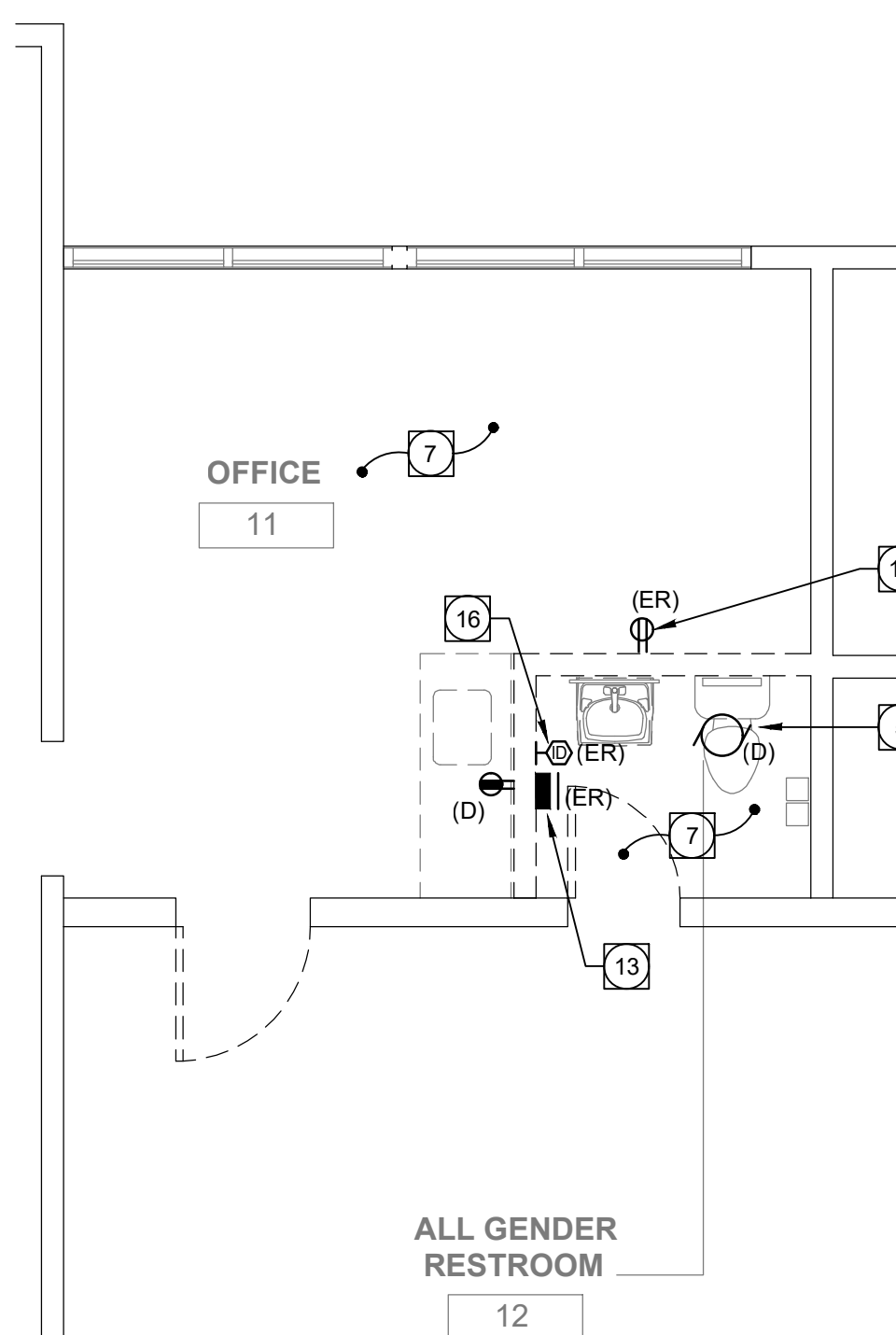
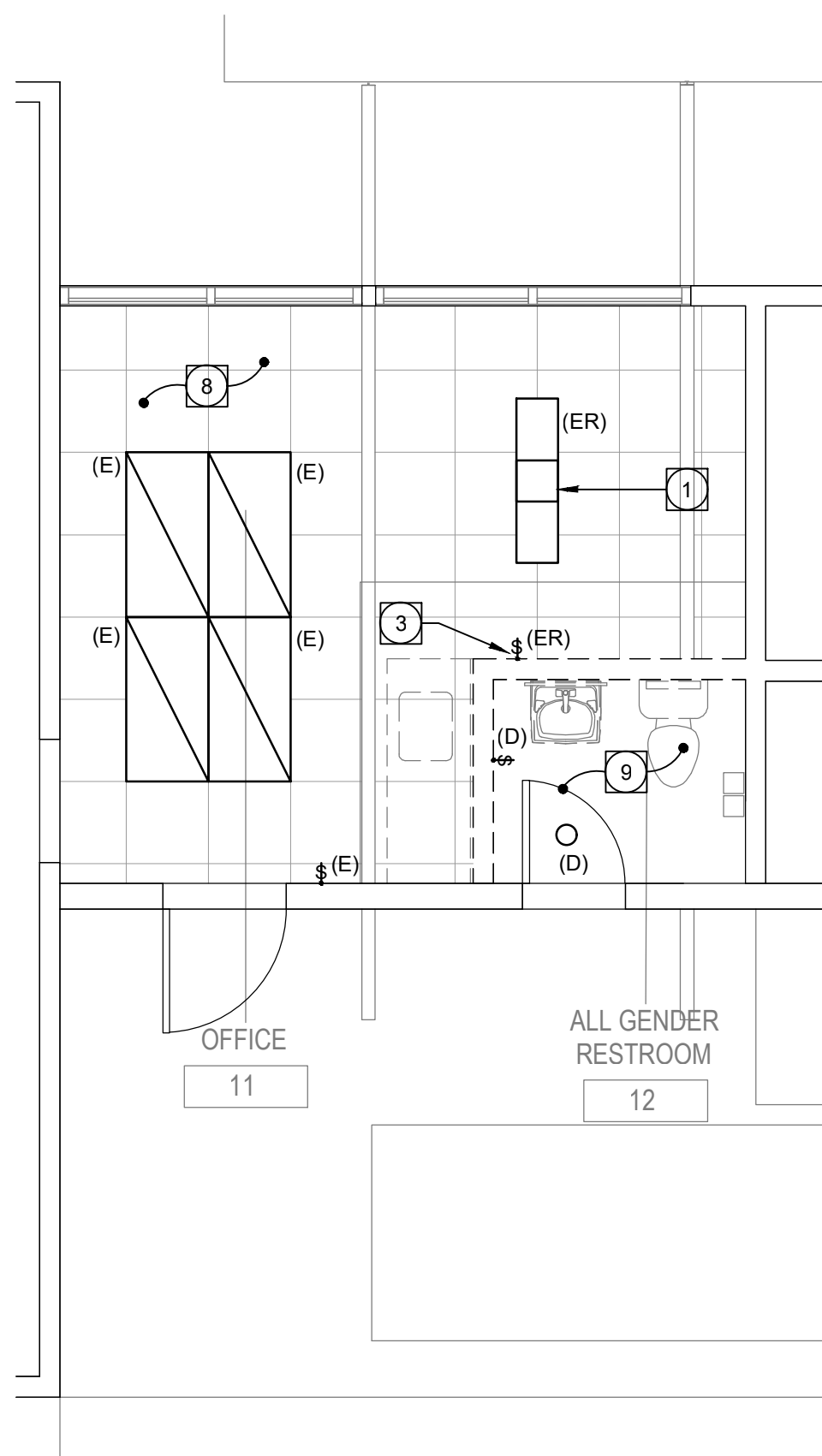
SEALS



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PROJECT NUMBER:	22-12107-00
PROJECT STATUS:	BID SET
SHEET ISSUED:	11/07/2023
DATE:	DATE
DESCRIPTION:	DESCRIPTION

E1.11



LEGEND:

- (D) EXISTING DEVICE TO BE DEMOLISHED
(E) EXISTING DEVICE TO REMAIN
(ER) EXISTING DEVICE TO BE RELOCATED
(R) DENOTES RELOCATED DEVICE LOCATION

GENERAL DEMOLITION NOTES:

1. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS, ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
2. THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION OR RELOCATION OF ELECTRICAL WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
3. CONTRACTOR IS RESPONSIBLE FOR RELOCATING OR REMOVING FROM WALLS, CEILING, FLOOR SPACES, ETC., ANY EXISTING CONDUITS, WIRES, BOXES, FITTINGS, FIXTURES OR OTHER ELECTRICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK. PROVIDE CIRCUIT CONTINUATION REQUIRED FOR ALL EXISTING OUTLETS, FIXTURES, EQUIPMENT, ETC. SCHEDULED TO REMAIN.
4. IF THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
5. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE WALLS AND AREA AT POINT OF PENETRATION TO THE ORIGINAL CONDITION. ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
6. EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
7. DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORKING TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
8. DO ALL DRILLING, CUTTING, ETC. REQUIRED TO DEMOLISH ELECTRICAL WORK AS INDICATED OR PROVIDE BLANK COVER PLATE ON ALL OUTLETS EXPOSED BY REMOVAL OF FIXTURES OR DEVICES.
9. RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
10. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT TO THE OWNER'S DESIGNATED LOCATION AND NEATLY PLACE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
11. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT/WIRING RUNS, REUSE AS MUCH AS POSSIBLE. REMOVED CONDUIT SHALL BE REMOVED IN SUCH A MANNER AS TO LEAVE ACCESSIBLE LOCATIONS (WALLS TO REMAIN) MAY BE ABANDONED IN PLACE. REMOVE UNUSED WIRING INCLUDING ABANDONED TELEPHONE, DATA AND OTHER LOW VOLT, AGE SYSTEMS CABLING AFTER CONFIRMING WITH THE OWNER'S PROJECT MANAGER THAT CABLING IS ABANDONED AND WILL NOT BE RE-USED.
12. CONTRACTOR TO VERIFY CIRCUIT NUMBER AND LOADS FOR ALL EXISTING EQUIPMENT PRIOR TO INSTALLATION OF NEW OR RELOCATED ELECTRICAL EQUIPMENT. REASONABLE ATTEMPTS SHALL BE MADE TO OBTAIN COMPLETE "AS-BUILT" DRAWINGS AND TYPEWRITTEN DIRECTORIES FOR PANELS.
13. WHERE NECESSARY TO SHUT OFF UTILITY SERVICES OR CAUSE INTERRUPTION TO POWER OR SIGNAL SYSTEMS WHILE A BUILDING IS OCCUPIED OR THAT AFFECT ADJACENT BUILDINGS, SCHEDULE OUTAGES OR INTERRUPTIONS WITH THE ADJACENT BUILDING OWNERS AND/OR ADJACENT BUILDING OWNERS) AND OCCUPANTS PRIOR TO CONDUCTING OUTAGES OR INTERRUPTIONS.

PLAN NOTES:

- 1 EXISTING LIGHT FIXTURE TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL LIGHTING PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
- 2 EXISTING LIGHT FIXTURE NEW LOCATION. PROVIDE ADDITIONAL CONDUIT AND WIRING AS NEEDED TO RECONNECT TO EXISTING LIGHTING BRANCH CIRCUITING AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- 3 EXISTING LIGHT SWITCH TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL LIGHTING PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
- 4 EXISTING LIGHT SWITCH NEW LOCATION. PROVIDE ADDITIONAL CONDUIT AND CONTROL WIRING AS REQUIRED TO RECONNECT TO EXISTING LIGHTING FIXTURES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- 5 EXISTING EXHAUST FAN TO BE DISCONNECTED, REMOVED AND REPLACED WITH NEW IN SAME LOCATION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 6 PROVIDE NEW INTERCONNECT BETWEEN NEW EXHAUST FAN AND NEW LIGHT SWITCH AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 7 ALL EXISTING POWER, AND EXISTING SIGNAL SYSTEMS (CLOCKS, DATA OUTLETS, TELEPHONE OUTLETS, TELEVISION OUTLETS, SPEAKERS, ETC.), SHALL REMAIN PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.
- 8 ALL EXISTING LIGHTING FIXTURES AND ASSOCIATED CONTROLS SHALL REMAIN PROTECTED IN PLACE, UNLESS OTHERWISE NOTED.
- 9 EXISTING LIGHTING FIXTURES AND ASSOCIATED CONTROLS TO BE DEMOLISHED, UNLESS OTHERWISE NOTED.
- 10 EXISTING SECURITY PANEL NEW LOCATION. INTERCEPT EXISTING CONDUIT AND WIRING AND EXTEND AS REQUIRED, RECONNECT EXISTING SECURITY PANEL AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- 11 EXISTING RECEPTACLE TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL POWER PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
- 12 EXISTING RECEPTACLE NEW LOCATION. INTERCEPT EXISTING CONDUIT AND WIRING AND CIRCUIT WIRING AND EXTEND AS REQUIRED. RECONNECT EXISTING RECEPTACLE AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- 13 EXISTING SECURITY PANEL TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL POWER PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
- 14 INTERCEPT EXISTING BRANCH CIRCUIT AND EXTEND AS INDICATED TO NEW LIGHT FIXTURE.
- 15 INTERCEPT EXISTING EXHAUST FAN POWER CIRCUIT AND EXTEND AS INDICATED TO NEW EXHAUST FAN. RECONNECT NEW EXHAUST FAN AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 16 EXISTING INTRUSION DETECTION MOTION SENSOR TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL POWER PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
- 17 EXISTING INTRUSION DETECTION MOTION SENSOR NEW LOCATION. INTERCEPT EXISTING CONDUIT AND WIRING AND EXTEND AS REQUIRED. RECONNECT EXISTING MOTION SENSOR AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION AND MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- 18 CONNECT CONNECT TO INSTANTWATER HEATER PER MANUFACTURER'S REQUIREMENTS. REFER TO SINGLE LINE DIAGRAM FOR CIRCUITING INFORMATION. REFER TO PLUMBING PLANS FOR ADDITIONAL INFORMATION. VERIFY LOCATION PRIOR TO ROUGH-IN.



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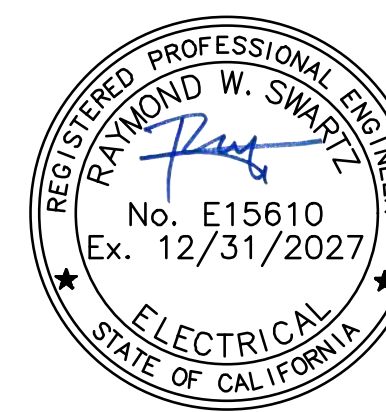
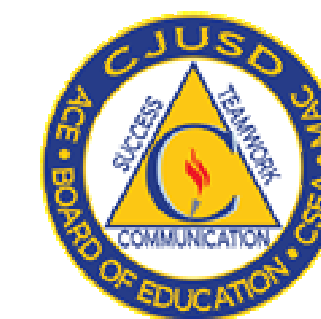
CONSIDER THIS:

ENLARGED LIGHTING AND POWER PLAN EXISTING RESTROOM - BUILDING A

COLTON JOINT UNIFIED SCHOOL DISTRICT

TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION

22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



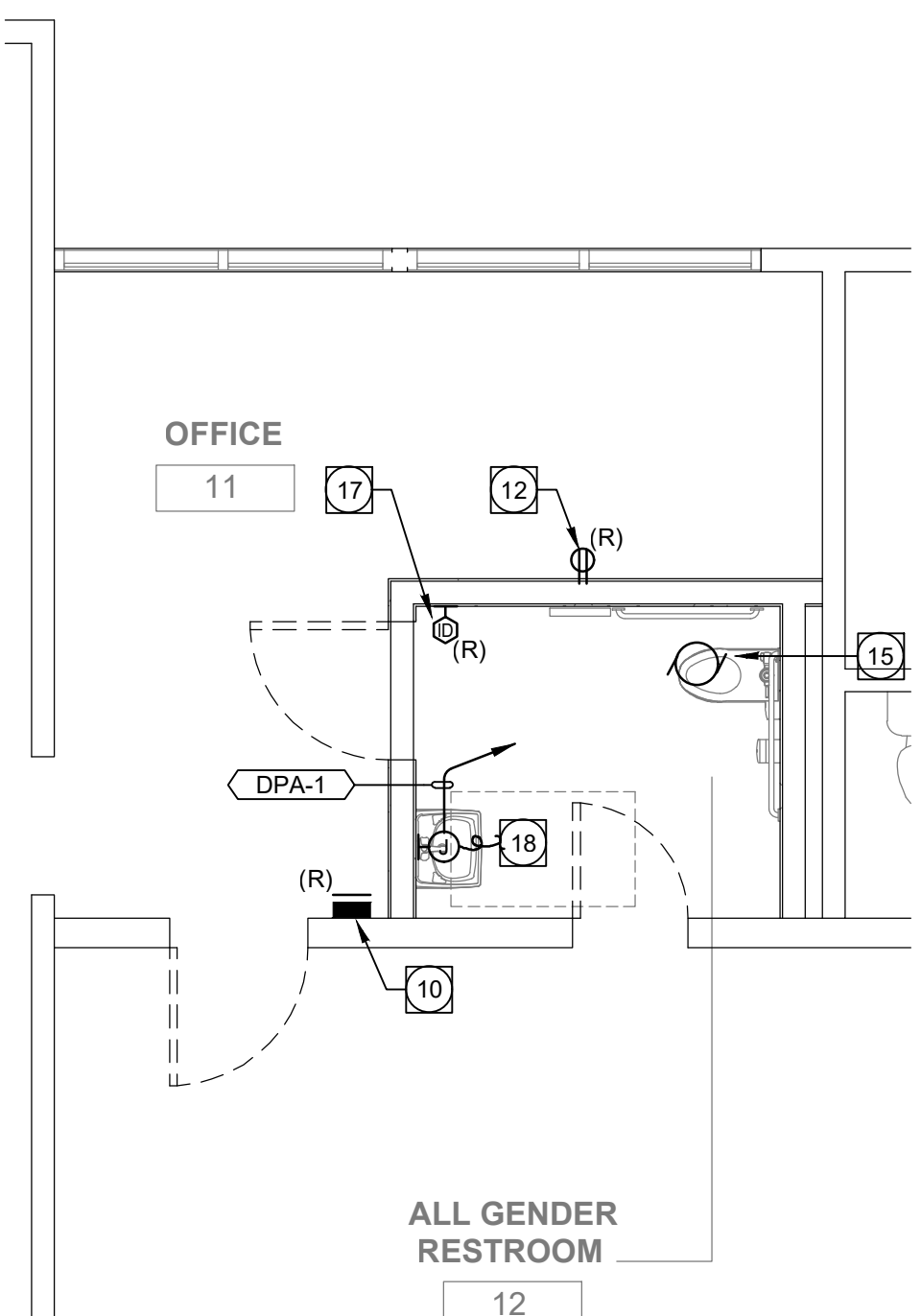
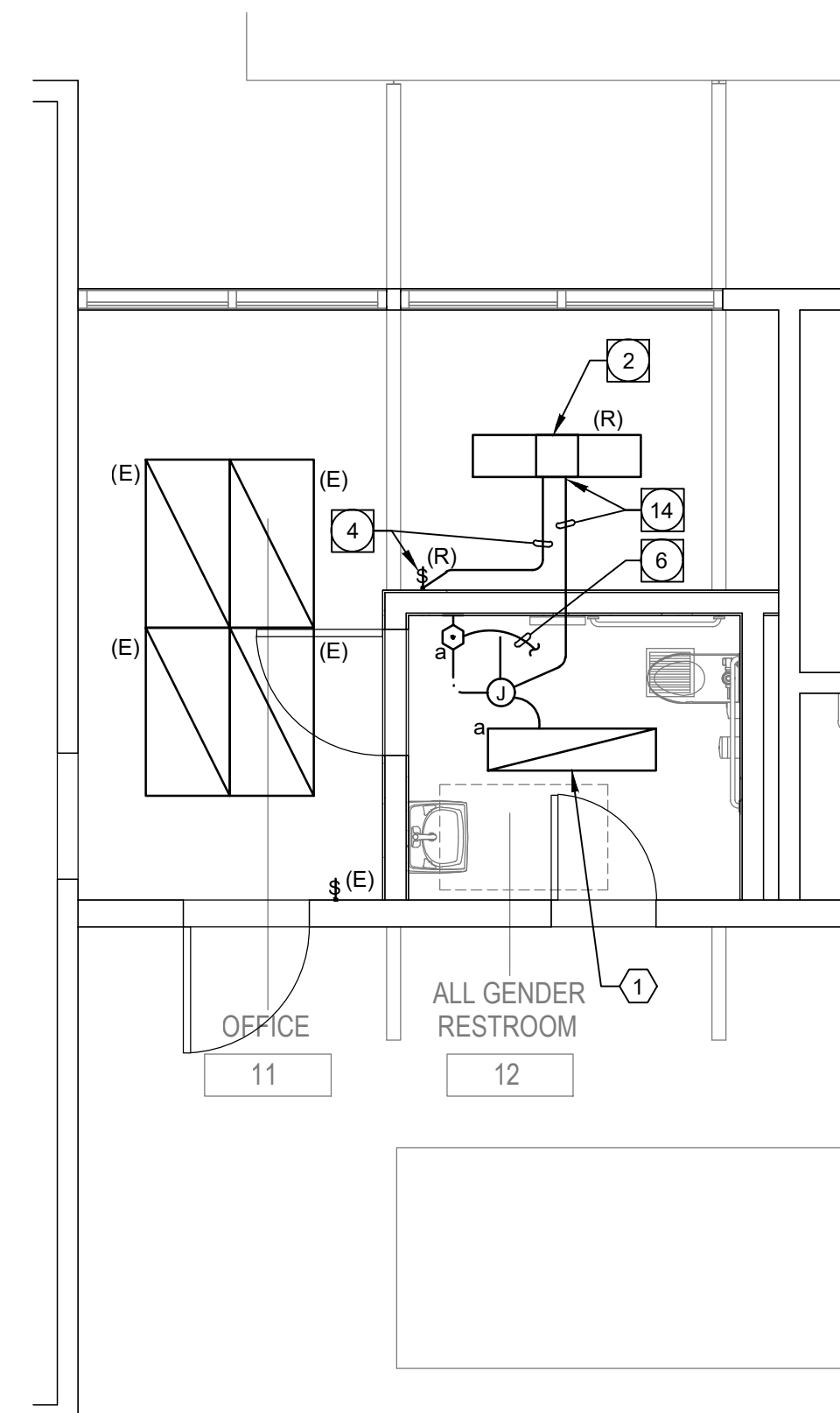
SEALS:



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PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/21/2025
DATE: DESCRIPTION:

PROJ. SHEET DELT.

E1.21



LIGHTING PLAN GENERAL NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ALL DEVICES. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
2. VERIFY EXIST CEILING CONSTRUCTION WITH ARCHITECTURAL REFLECTED CEILING PLANS AND SPECIFICATIONS. PROVIDE LIGHTING FIXTURES WITH ALL NECESSARY MOUNTING HARDWARE.
3. ALL RECESSED FIXTURES SHALL BE PROVIDED WITH ALL STRUCTURAL SUPPORTS AS REQUIRED BY THE IBC, OR CBC WHERE ADOPTED, IN ADDITION TO ANY LOCAL CODES.
4. ALL PERIMETER AND COVE LIGHTING SHALL EXTEND THE FULL LENGTH OF THE WALLS OR COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF FIXTURES AS REQUIRED.
5. ALL LINE VOLTAGE DIMMING BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR FOR EACH ZONE/CHANNEL.
6. RECESSED FIXTURES LOCATED IN A FIRE-RATED CEILING OR WALL SHALL BE PROVIDED WITH A FIRE-RATED ENCLOSURE SO CONSTRUCTED AS TO ALLOW CODE AND MANUFACTURER-REQUIRED CLEARANCES BETWEEN THE FIXTURE AND THE ENCLOSURE.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXIT SIGN CHEVRONS AND NUMBER OF FACES PER EXIT SIGN. ANY DISCREPANCIES BETWEEN EXIST SIGN SHOWS ON THE ELECTRICAL AND ARCHITECTURAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
8. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
 - a. ALL BRANCH CIRCUITS SHALL BE EMT.
 - b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEARLY TRANNED, IN PARALLEL, TO STRUCTURES OR DUCTWORK. THE TERM "NEARLY TRANNED" MEANS ALL PARALLEL BRANCHCIRCUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE RADIAL BENDS AND SWEEPS.
 - c. VISUAL OBJECTIONABLE BRANCH CIRCUITS WILL BE REROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
9. ALL LED REMOTE INDICATORS FOR DUCT DETECTORS AND FIRE/SMOKE DAMPERS REQUIRED BY THE LOCAL AHJ SHALL BE LOCATED IN CEILINGS IN COORDINATION WITH ARCHITECT PRIOR TO ANY ROUGH-IN.
10. PROVIDE ADDITIONAL -100V NERF PANEL FOR PORTAL HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES ARE NEW.
12. REFER TO GENERAL POWER PLAN NOTES AND COMMUNICATIONS PATHWAYS GENERAL NOTE FOR ADDITIONAL REQUIREMENTS WHEN POWER AND/OR DATA DEVICES ARE SHOWN ON THIS PLAN.
13. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM SPREAD OF FIRE BY INSTALLING A MINIMUM 1" FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.

POWER PLAN GENERAL NOTES:

1. ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24-INCHES MINIMUM.
2. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
3. ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
4. ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
5. ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
6. WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
 - a. ALL BRANCH CIRCUITS SHALL BE EMT.
 - b. ALL BRANCH CIRCUITS SHALL BE ROUTED ORTHOGONALLY, NEATLY TRIMMED, IN PARALLEL WITH STRUCTURES OR DUCTWORK. THE TERM "TRAINED" MEANS ALL PARALLEL CONDUITS SHALL MAINTAIN THE SAME SPATIAL RELATIONSHIP WITH EACH OTHER FOR ENTIRE RUN TO INCLUDE ALL BENDS AND SWEEPS.
 - c. VISUALLY OBJECTIONABLE BRANCH CIRCUITS WILL BE DEROUTED AT THE REQUEST OF THE ARCHITECT AT NO ADDITIONAL COST.
7. EXPOSED CABLE/CONDUITS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
8. PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN RECEPTACLES ARE 50A OR LESS, 150V TO GROUND OR LESS AND ARE LOCATED WITHIN 6-FEET OF ANY SINK OR DISH/WASHING TUB, TOILET AREA, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE, LOCKER ROOM AREA, GARAGE AND BATHROOM SPACE AND/OR LOCATED OUTDOORS. WHEN RECEPTACLES ARE NOT READILY ACCESSIBLE, PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL GROUND FUNCTION IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
9. PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED BY REMOTE RELAY(S). RELAY(S) REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AND/OR NOT ON PLANS. PROVIDE ADDITIONAL SWITCHING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
10. PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
11. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
12. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE FOR ALL DEVICES TO PANELBOARD(S) INDICATED ON PLANS FOR A COMPLETE AND OPERABLE SYSTEM.
13. CONTRACTOR SHALL PROVIDE MINIMUM 2#12, 1#12 IN 1/2" CONDUIT UNLESS OTHERWISE NOTED. REFERENCE WIRE SIZE TABLE CHART BELOW. WHEN REQUIRED, CONDUIT AND WIRE SHALL BE UP-SIZED TO MEET THE REQUIREMENT OF THE DEVICE BEING SERVED BY THE BRANCH CIRCUITRY. WHEN CONDUIT AND WIRE ARE NOT INDICATED, CONTRACTOR SHALL DETERMINE WIRE SIZE SHALL CONTINUE AT THAT SIZE FOR THE ENTIRE LENGTH OF THE CIRCUIT.
14. CONTRACTOR SHALL FURNISH ADDITIONAL SWITCHES OR HOT WIRES AS REQUIRED TO MEET THE CONTROL INTENT OF THE DOCUMENTS AND AS REQUIRED BY CODE (I.E. EMERGENCY LIGHTING AND SWITCHED RECEPTACLES).
15. MULTIPLE CIRCUITS MAY BE USED IN A SINGLE RACEWAY. NO MORE THAN (3) DEDICATED CIRCUITS OR (4) CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN ANY RACEWAY UNLESS OTHERWISE NOTED. WHEN A COMMON GROUND AND CONDUIT ARE REQUIRED, THE CONDUCTORS SHALL BE 1/2" RATED PER SECTIONS CEC 200.4, 250.122, 310.15(B)(2). CONDUIT SIZE SHALL BE INCREASED AS REQUIRED FOR THE CONDUCTORS INCLUDING TEMPERATURE DERATING PER CEC TABLE C1.
16. FURNISH AND INSTALL JUNCTION BOXES AS REQUIRED TO MEET MAXIMUM BEND PER SECTION CEC 200.4. FOR LONG WIRTS FOR CEC 350.28, THE MAXIMUM BEND SHALL BE SIZED AS REQUIRED PER CEC 314.28(C) UNLESS OTHERWISE NOTED.

DEMOLITION LIGHTING PLAN - BLDG A EXISTING RESTROOMS

DEMOLITION POWER PLAN - BLDG A EXISTING RESTROOMS

REMODEL LIGHTING PLAN - BLDG A EXISTING RESTROOMS

REMODEL POWER PLAN - BLDG A EXISTING RESTROOMS

POWER SYSTEMS STUDY SPECIFICATIONS:

THE CONTRACTOR SHALL PROVIDE, WITH THE ASSISTANCE OF THE SWITCHGEAR MANUFACTURER, POWER SYSTEMS STUDIES CONSISTING OF A SHORT CIRCUIT STUDY, A COORDINATION STUDY, AND AN ARC FLASH STUDY - ALL PER LATEST PUBLISHED EDITIONS OF THE FOLLOWING STANDARDS: ANSI C37, IEEE 141, IEEE 242, IEEE 999 - BROWN BOOK, NFPA 70E AND IEEE STD 1584/1584s. ADDITIONALLY:

- a. CONTRACTOR SHALL PERFORM STUDY USING SKM "SYSTEMS ANALYSIS POWER TOOLS FOR WINDOWS" COMPUTER SOFTWARE PROGRAM - LATEST AVAILABLE VERSION OR EQUAL BY ETAP.
- b. CONTRACTOR SHALL FURNISH/OBTAIN ALL DATA REQUIRED FOR POWER SYSTEMS STUDIES. DATA COLLECTION EFFORT SHALL BE PERFORMED IN AN EXPEDITIOUS MANNER AND AS SOON AS POSSIBLE AFTER CONTRACT AWARD TO ENSURE STUDY COMPLETION FOR SUBMISSION AS PART OF THE ELECTRICAL DISTRIBUTION EQUIPMENT SHOP DRAWINGS AND SUBMITTALS. DATA COLLECTION EFFORTS MAY INCLUDE, BUT ARE NOT LIMITED TO: CALCULATED UTILITY COMPANY FAULT VALUES, SERVICE TRANSFORMER PRIMARY PROTECTIVE DEVICE AND APPLIED VOLTAGE, ELECTRICAL CHARACTERISTICS AND FAULT CONTRIBUTION FROM EXISTING MOTORS/GENERATORS, EXISTING CONDUCTOR QUANTITIES, SIZE AND LENGTHS, EXISTING NEW OVERCURRENT PROTECTIVE DEVICE SPECIFICATIONS AND PART NUMBERS, TRANSFER SWITCH CHARACTERISTICS AND SHORT CIRCUIT CURRENT RATINGS IN ADDITION TO ANY OTHER DATA REQUIRED TO PERFORM COMPREHENSIVE POWER SYSTEM STUDIES. RANGES OF FAULT CURRENT VALUES OR GENERIC FAULT CURRENT VALUES PROVIDED BY THE UTILITY COMPANY ARE UNACCEPTABLE AS ARE ANY FAULT CURRENT VALUES SHOWN ON THE SINGLE LINE DIAGRAM OR FEEDER SCHEDULE.

DATA GATHERING SHALL BE CONDUCTED IN A SAFE MANNER WITH 1) EQUIPMENT COMPLETELY DE-ENERGIZED IN COORDINATION WITH THE OWNER DURING A SCHEDULED POWER SHUTDOWN OR 2) UTILIZING A LICENSED ELECTRICIAN WEARING APPROPRIATE PERSONNEL PROTECTIVE EQUIPMENT PER NFPA 70E STANDARDS.

CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING UTILITY DATA FROM THE UTILITY COMPANY - INCLUDE ALL COSTS IN BASE BID FOR ANY UTILITY COMPANY FEES FOR PROVIDING NECESSARY DATA. WHERE THE PROJECT IS LOCATED ON A CAMPUS WITH AN OWNER-FURNISHED ELECTRICAL DISTRIBUTION SYSTEM, CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN SUFFICIENT ELECTRICAL SYSTEM DATA TO DEMONSTRATE COORDINATION OF THE PROJECT'S ELECTRICAL SYSTEM WITH CAMPUS DISTRIBUTION SYSTEM. THIS DATA MAY BE AVAILABLE IN THE FORM OF AN OWNER-PROVIDED CAMPUS POWER SYSTEM STUDY. WHERE SUCH STUDIES ARE NOT AVAILABLE, THE CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO PERFORM NECESSARY FIELD INVESTIGATION OF CAMPUS DISTRIBUTION SYSTEM INCLUDING CAMPUS SERVICE ENTRANCE AND SERVING UTILITY DATA AS REQUIRED TO DEMONSTRATE COORDINATION OF THE PROJECT'S ELECTRICAL SYSTEM WITH CAMPUS DISTRIBUTION SYSTEM. INCLUDE ALL COSTS FOR RECOMMENDING ADJUSTMENTS TO EXISTING CAMPUS DISTRIBUTION SYSTEM SETTINGS DISCOVERED TO BE INCORRECT. OWNER SHALL BE RESPONSIBLE TO UNDERTAKE ANY PHYSICAL ADJUSTMENTS TO EXISTING MEDIUM OR HIGH VOLTAGE DISTRIBUTION EQUIPMENT WITH THE EXCEPTION OF: FUSES, RELAYS OR OTHER CIRCUIT PROTECTIVE DEVICES LOCATED IN EXISTING DISTRIBUTION EQUIPMENT THAT ARE DEDICATED TO SERVE ONLY THIS PROJECT'S ELECTRICAL SYSTEM.

CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING EQUIPMENT SCCR RATING FROM ALL OTHER PROJECT TRADES AND FOR ANY OWNER-FURNISHED OR TENANT-FURNISHED EQUIPMENT CONNECTED TO THE ELECTRICAL SYSTEM IN ORDER TO VALIDATE AVAILABLE FAULT CURRENT AT THE EQUIPMENT CONNECTIONS IS LESS THAN THE RESPECTIVE EQUIPMENT SCCR.

- c. THE SHORT CIRCUIT STUDY SHALL INCLUDE CALCULATED SHORT-CIRCUIT MOMENTARY AND INTERRUPTING DUTIES FOR 3-PHASE BOLTED FAULTS AND LINE-TO-GROUND FAULTS THROUGHOUT THE SINGLE LINE TO INCLUDE UTILITY SERVICE SUPPLY, GENERATORS AND TRANSFER SWITCHES, SUBSTATIONS, SWITCHGEAR, PANEL BOARDS ETC. STUDY SHALL EVALUATE ALL ELECTRICAL DISTRIBUTION EQUIPMENT AND PROTECTIVE DEVICES AGAINST SHORT CIRCUIT CURRENT RATINGS. THIS STUDY EFFORT SHALL EXTEND TO SCCR RATINGS OF EQUIPMENT, EQUIPMENT CONTROL PANELS, VARIABLE FREQUENCY DRIVES ETC PROVIDED BY OTHER TRADES THAT ARE CONNECTED TO THE ELECTRICAL SYSTEM. NOTE ANY EXISTING CIRCUIT PROTECTIVE DEVICE(S) ELECTRICAL DISTRIBUTION THAT IS INADEQUATELY RATED TO WITHSTAND CALCULATED FAULT VALUES OR WHERE EQUIPMENT SCCR IS EXCEEDED. WHERE THE UTILITY COMPANY PROVIDES MULTIPLE FAULT CURRENT VALUES REFLECTING INITIAL TRANSFORMER CAPACITY AND WORST CASE TRANSFORMER CAPACITY, THE CONTRACTOR SHALL PROVIDE SHORT CIRCUIT ANALYSIS PRIMARILY BASED ON WORST CASE TRANSFORMER CAPACITY. ALL SERVICE EQUIPMENT SHALL BE LABELED WITH THE MAXIMUM AVAILABLE FAULT CURRENT AND FAULT CURRENT CALCULATION DATE PER NEC (OR CEC WHERE ADOPTED) 110.24. SEE LABELING SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

- d. THE COORDINATION STUDY SHALL INCLUDE TIME-CURRENT CURVES (TCC) FOR OVER CURRENT PROTECTIVE DEVICES (OCPDs) ALONG WITH TRANSFORMER FULL-LOAD CURRENT, INRUSH CURRENT, AND THROUGH-FAULT PROTECTION CURVES, CONDUCTOR DAMAGE CURVES, GROUND FAULT PROTECTIVE DEVICE CURVES, MOTOR STARTING CURVE(S)/DAMAGE POINT(S), GENERATOR SHORT-CIRCUIT CURVE(S) /DAMAGE POINT(S) ETC. - CLEARLY IDENTIFIED AND PLOTTED ON LOG-LOG SCALE GRAPH(S). TCC GRAPH(S) SHALL INCLUDE A ONE-LINE DIAGRAM IDENTIFYING THE SPECIFIC PORTION COVERED BY THE GRAPH. DEMONSTRATE THAT ADEQUATE TIME-SELECTIVE OPERATION EXISTS BETWEEN PROTECTIVE DEVICES WHILE PROVIDING PROPER SYSTEM PROTECTION & COORDINATION. STUDY SHALL INCLUDE ALL MAIN AND FEEDER OCPDs INCLUDING SECONDARY SIDE OF EACH TRANSFORMER DOWN TO BREAKERS IN PANEL BOARDS AND INDIVIDUAL BREAKERS IN DISTRIBUTION BOARDS. IN ALL CASES, SOLID STATE AND/OR ADJUSTABLE OCPDs SHALL BE ANALYZED WITH UPSTREAM AND DOWNSTREAM OCPDs AS REQUIRED TO ESTABLISH PROPER COORDINATION SETTINGS. SPECIAL EMPHASIS SHALL BE PLACED ON ANALYZING PORTIONS OF THE ELECTRICAL SYSTEM REQUIRING SELECTIVE COORDINATION WHICH INCLUDE, BUT ARE NOT LIMITED TO, NEC (OR CEC WHERE ADOPTED) ARTICLES 517, 620, 700, 701 & 708, ALONG WITH ANY ARTICLE 702 OPTIONAL STANDBY SYSTEMS SERVING SERVER ROOMS/DATA CENTERS OR OTHER AREAS REQUIRING HIGH AVAILABILITY/PROPER COORDINATION SUCH AS MANUFACTURING, CLEAN ROOM OR LAB FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE TO RECOMMEND SETTINGS OF ALL DEVICES, TO INCLUDE GROUND FAULT SETTINGS, TO ACHIEVE THE TCC COORDINATION. THE CONTRACTOR SHALL FIELD ADJUST NEW AND EXISTING DEVICES ACCORDINGLY UTILIZING A QUALIFIED MANUFACTURER'S REPRESENTATIVE OR A THIRD-PARTY ELECTRICAL TESTING AGENCY.

- e. THE ARC FLASH ANALYSIS SHALL BE BASED ON THE INCIDENT ENERGY ANALYSIS METHOD (NFPA 70E 130.5). THE ARC FLASH ANALYSIS SHALL DETERMINE THE FLASH BOUNDARY, THE WORKING DISTANCE, THE INCIDENT ENERGY AND MINIMUM ARC RATINGS OF CLOTHING/CALCMF AT LOCATIONS IN THE ELECTRICAL SYSTEM WHERE WORK CAN OR MIGHT BE PERFORMED ON ENERGIZED COMPONENTS WHERE MULTIPLE SYSTEM CONFIGURATION SCENARIOS ARE POSSIBLE. THE CONFIGURATION WITH GREATEST INCIDENT ENERGY MUST BE SHOWN. DECREMENT FAULT CONTRIBUTIONS FROM MOTOR(S) AND GENERATOR(S) BASED ON INDUSTRY STANDARDS. THE CONTRACTOR SHALL MAKE RECOMMENDATIONS WITH REGARD TO SYSTEM ADJUSTMENTS OR OTHER MITIGATION MEASURES TO OPTIMIZE RESULTS OF THE STUDY AS IT RELATES TO SAFE AND RELIABLE ELECTRICAL SYSTEM OPERATION (E.G. OVERCURRENT DEVICE SETTINGS, WORKING DISTANCES, CURRENT LIMITING DEVICES). THIS INCLUDES MITIGATION, WHERE POSSIBLE, OF INCIDENT ENERGY LEVELS THAT EXCEED 40 CAL/CM². PERFORM ITERATIVE CALCULATIONS TO DEMONSTRATE EFFECTS OF OPENING PROTECTIVE DEVICES UTILIZING A VARIETY OF DIFFERENT SETTINGS TO BEST MITIGATE ARC FLASH ENERGY WHILE MAINTAINING AN ACCEPTABLE LEVEL OF SYSTEM COORDINATION. WHERE SUCH RECOMMENDATIONS COMPROMISE SELECTIVE COORDINATION SETTINGS, SO STATE IN THE ANALYSIS.

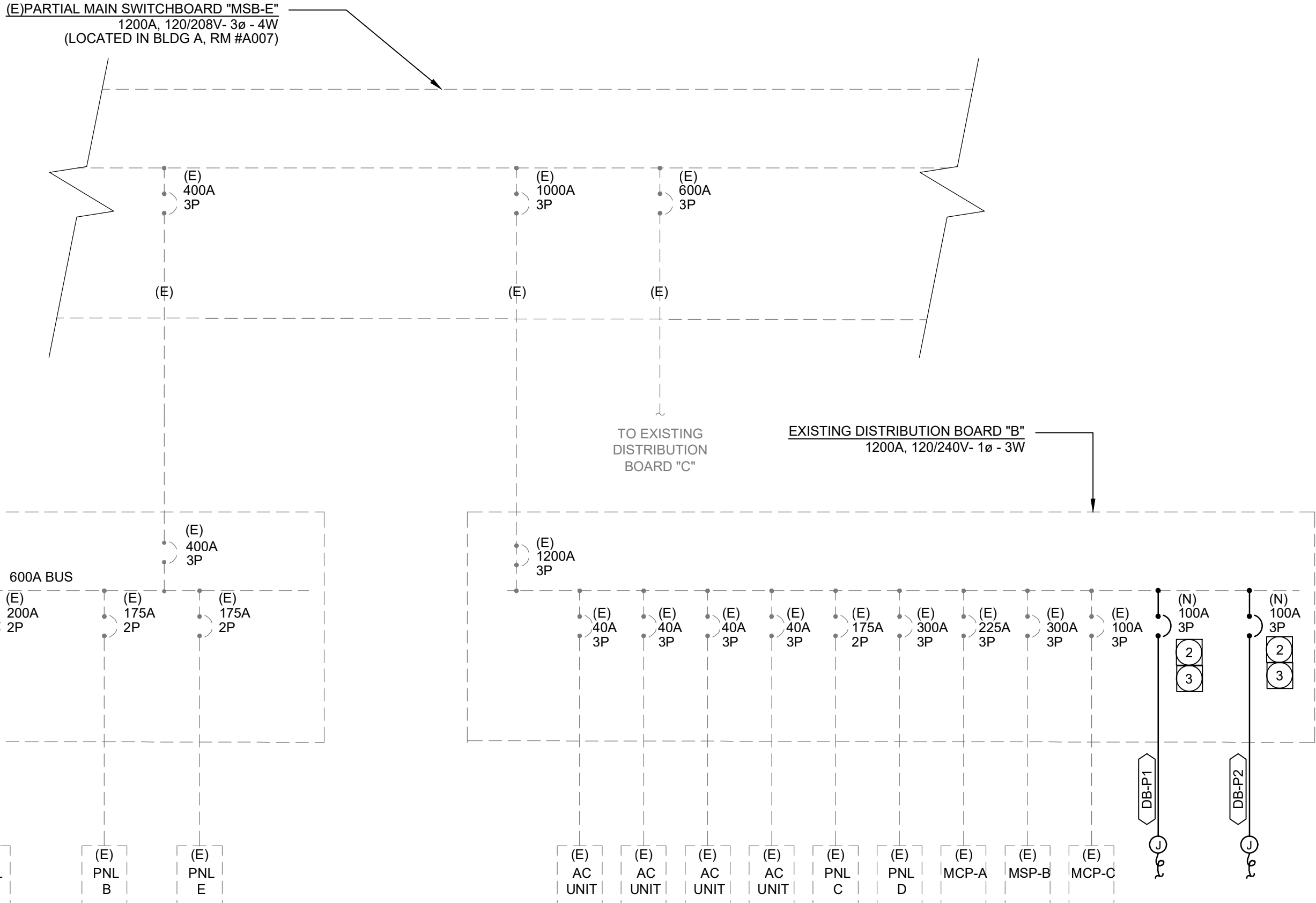
- f. BASED ON THE RESULTS OF THE ARC FLASH ANALYSIS, THE CONTRACTOR SHALL PRODUCE AND INSTALL A WARNING LABEL (ORANGE <40 CAL/CM²) OR DANGER LABEL (RED >40 CAL/CM²) FOR EACH PIECE OF EQUIPMENT PER NEC (OR CEC WHERE ADOPTED) 110.16 AND IN ACCORDANCE WITH ANSI Z39.4-2007 OR LATEST PUBLISHED EDITION. THE LABEL MUST BE READABLE IN BOTH INDOOR AND OUTDOOR ENVIRONMENTS FOR AT LEAST 3 YEARS AND CONTAIN THE FOLLOWING INFORMATION: NOMINAL SYSTEM VOLTAGE, ARC HAZARD BOUNDARY (INCHES), WORKING DISTANCE (INCHES), AVAILABLE ARC FLASH INCIDENT ENERGY AT THE WORKING DISTANCE (CAL/CM²), MINIMUM ARC RATING OF CLOTHING, EQUIPMENT BUS NAME, DATE PREPARED, SUPPLIER'S NAME AND ADDRESS. PROVIDE LABEL AS MANUFACTURED BY BRADY OR EQUAL. PRIOR TO PLACING ARC FLASH LABELS, CONTRACTOR SHALL SET ALL PROTECTIVE DEVICE SETTINGS PER THE APPROVED COORDINATION STUDY.

- g. DURING THE CONSTRUCTION PHASE OF THE PROJECT, ALL GROUND FAULT RELAYS SHALL BE SET AT THE LOWEST AVAILABLE TIME DELAY AND PICK-UP SETTINGS.

- h. POWER SYSTEMS STUDIES SHALL BE SUBMITTED AS PART OF THE OVERALL SWITCHGEAR SUBMITTAL. THE RESULTS OF THE POWER SYSTEMS STUDY SHALL BE PRESENTED IN A COMPREHENSIVE REPORT THAT INCLUDES:
- REPORT SUMMARY WITH ANALYSIS METHODOLOGY, FINDINGS AND RECOMMENDATIONS
 - SUMMARY OF INPUT DATA FOR UTILITY SOURCE, EQUIPMENT AND CABLES
 - AVAILABLE FAULT CURRENT AT EACH EQUIPMENT LOCATION WITH COMPARISON TO EQUIPMENT RATING
 - OVERCURRENT DEVICE SETTINGS (E.G. PICK-UP, TIME DELAY, CURVE), 'AS FOUND' AND 'AS RECOMMENDED'
 - OVERCURRENT DEVICE COORDINATION CURVES INCLUDING RELATED SECTION OF THE SINGLE-LINE DIAGRAM
 - COMPLETE SYSTEM SINGLE-LINE DIAGRAM FOR THE SYSTEM ANALYZED
 - INCIDENT ENERGY LEVEL (CAL/CM²) FOR EACH EQUIPMENT LOCATION, RECOMMENDED PPE AND SAMPLE ARC FLASH WARNING LABELS
 - A DVD OR CD CONTAINING ELECTRONIC PROJECT FILES USED TO DEVELOP THE STUDY TO INCLUDE SKM OR ETAP PROJECT AND REFERENCE LIBRARY FILES. ALL FILES SHALL BE AVAILABLE FOR REVIEW AND/OR FUTURE MODIFICATION WITHOUT LIMITATION. LOCKING OR SECURING FILES BY OTHER MEANS IS NOT ACCEPTABLE. FAILURE TO SUBMIT COMPLETE STUDIES AND FULLY ACCESSIBLE FILES SHALL RESULT IN THE REJECTION OF THE ENTIRE SWITCHGEAR SUBMITTAL.

- i. AS A PART OF A CLOSEOUT SUBMITTAL TO BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL PROJECT CONSTRUCTION OBSERVATIONS, CONTRACTOR SHALL PROVIDE PHOTOS OF ALL ADJUSTABLE CIRCUIT BREAKERS DEPICTING THEIR FINAL SETTINGS BASED ON THE POWER SYSTEMS STUDY. SUBMITTAL SHALL BE ORGANIZED WITH OCPD IDENTIFICATION, OCPD PHOTO IMAGE AND RESPECTIVE POWER SYSTEM STUDY OCPD SETTING REQUIREMENTS TO ALLOW EFFICIENT CONFIRMATION OF RECORD SETTINGS. PLEASE NOTE THAT IMAGES MAY NEED TO BE TAKEN PRIOR TO INSTALLATION OF EQUIPMENT COVERS/EQUIPMENT ENERGIZATION SINCE OCPD SETTINGS MAY BE OBSTRUCTED BY EQUIPMENT COVERS.

- j. THE STUDY SHALL INCLUDE ALL PORTIONS OF ELECTRICAL SINGLE LINE DIAGRAM TO INCLUDE UPSTREAM OR DOWNSTREAM ELEMENTS THAT MAY NOT BE SHOWN INCLUDING, BUT NOT LIMITED TO, UTILITY SOURCE CONTRIBUTION, RELEVANT PORTIONS OF THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM WITHIN A BUILDING AND/OR CAMPUS ELECTRICAL DISTRIBUTION SYSTEMS AS DESCRIBED ABOVE.



1 SINGLE LINE DISTRIBUTION DIAGRAM
SCALE: N.T.S.

SPECIFIC SINGLE LINE NOTES:

- 1 CONNECT TO PREFABRICATED PANEL PER MODULAR MANUFACTURER'S REQUIREMENTS.
- 2 PROVIDE NEW CIRCUIT BREAKER IN AVAILABLE SPACE OF EXISTING DISTRIBUTION SWITCHBOARD. TYPE AND AIC RATING TO MATCH EXISTING. PROVIDE ALL MOUNTING HARDWARE, DEAD FRONT COVERS AND NAMEPLATES FOR A COMPLETE INSTALLATION.
- 3 PROVIDE LIMITED POWER SYSTEM STUDY FOR NEW SINGLE LINE ITEMS TO INCLUDE UPSTREAM SYSTEM COMPONENT/CONTRIBUTIONS. SEE POWER SYSTEM STUDY SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 4 EXISTING CIRCUIT BREAKER TO REMAIN. MARK AS SPARE.
- 5 EXISTING CIRCUIT BREAKER TO BE DISCONNECTED AND REMOVED. REPLACE WITH NEW CIRCUIT BREAKER IN SPACE OF EXISTING. TYPE AND AIC RATING TO MATCH EXISTING. PROVIDE ALL MOUNTING HARDWARE, DEAD FRONT COVERS AND NAMEPLATES FOR A COMPLETE INSTALLATION.
- 6 PROVIDE CONNECTION TO NEW INSTAHOT WATER HEATER LOCATED IN BUILDING A, RESTROOM 12.

FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD (A)	DISTANCE (FT)	V.D. (%)	AVAIL.FAULT CURRENT (A)	NOTES
MS-P1	2" C-4#2/0, #4G.	56	200'	2.08	6,211	TO RELOCATABLE
MS-P2	2" C-4#2/0, #4G.	56	275'	2.86	4,638	TO RELOCATABLE
DPA-1	3/4" C-2#8, #10G.	29	50'	2.60	1,968	TO INSTAHOT WATER HTR

GENERAL FEEDER SCHEDULE NOTES:

1. ALL FEEDERS SHOWN, UNLESS SPECIFICALLY NOTED OTHERWISE, ARE PRESUMED TO BE ROUTED IN METAL RACEWAYS. IF P.V.C. CONDUITS ARE UTILIZED, THE CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND PER NEC, OR CEC WHERE ADOPTED, TABLE 250.122 OR, WHERE REQUIRED, PROVIDE A MAIN BONDING JUMPER PER TABLE 250.66 AND INCREASE THE CONDUIT SIZE ACCORDINGLY.
2. LOADS INDICATED WITH "()" REPRESENT WORST CASE LOAD IN AMPS.
3. DISTANCE SHOWN IS FOR DESIGN PURPOSES ONLY. IT IS NOT A MATERIAL TAKEOFF.
4. VOLTAGE DROP VALUE INDICATED IS AT THE END OF THE FEEDER.
5. AVAILABLE FAULT CURRENT VALUE AT THE END OF THE FEEDER INDICATED. CALCULATIONS ARE BASED UPON INITIAL VALUES RECEIVED FROM THE SERVING UTILITY AND THE LENGTH AND IMPEDANCE OF THE FEEDER. THE SHORT CIRCUIT CURRENT RATING, EQUIPMENT BUS BRACING, AND/OR AMP INTERRUPTING CURRENT OF EQUIPMENT CONNECTED ON THE LOAD SIDE OF THE FEEDER SHALL BE GREATER THAN THE AVAILABLE FAULT CURRENT.

GENERAL SINGLE LINE DIAGRAM NOTES:

1. ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER-HAMMER, RSE-SIERRA, G.E., SIEMENS, OR Z-POWER AND DISTRIBUTION.
2. ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
3. ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT-SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
4. SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY U.L. IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED AND SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC-WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING WHICH SHALL BE READILY VISIBLE.
5. ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
6. ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED-RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION (1000A/90in. FOR CU, 750A/90in. FOR AL). NO HEAT RISE RATED BUSSING ALLOWED. NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH BUSSING RATED FOR 100% OPERATION - SEE SPECIFICATION FOR CIRCUIT BREAKER REQUIREMENTS. ALL NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED-RATED, BACKFEED RATINGS SHALL COMPLY WITH NEC, OR CEC WHERE ADOPTED, 710.15 (E) AND 705.12(B)(4). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
7. PROVIDE CIRCUIT BREAKER ARC ENERGY REDUCTION MAINTENANCE SWITCHING PER NEC, OR CEC WHERE ADOPTED, 240.87(B)(3) FOR ANY CIRCUIT BREAKER, 1200A FRAME AND LARGER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
8. ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:
- a. TIN-PLATED ALUMINUM BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.
- b. LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.
- c. PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC-WHERE ADOPTED) SECTIONS 225.37, 230.2(E), 690.56, 692.56, 700.7, 701.7, 702.7, AND 705.10 AND IFC (OR CFC - WHERE ADOPTED) SECTION 608.2.6.1. DENOTING THE PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY, STATIONARY BATTERY STORAGE SYSTEMS, OR STAND-BY POWER SOURCES AS APPLICABLE.
9. CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS, TRANSFORMERS, PANEL BOARDS, AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE, PRIOR TO FABRICATION.
11. ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4" = 1'-0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
12. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
13. WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OR WHERE A NEW GROUND FAULT PROTECTIVE DEVICE IS BEING INSTALLED, A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY INDEPENDENT TESTING AGENCY PER NEC (OR CEC-WHERE ADOPTED) 230.95(C). THE GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION. VERIFICATION OF DEVICE SETTINGS PER THE POWER SYSTEMS STUDY SPECIFICATION SHALL BE PERFORMED BY THE SAME INDEPENDENT TESTING AGENCY. THE GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER OF RECORD. DURING THE CONSTRUCTION PHASE OF THE PROJECT, ALL NEW GROUND FAULT RELAYS SHALL BE SET AT THE LOWEST AVAILABLE TIME DELAY AND PICK-UP SETTINGS.
14. SEE POWER SYSTEMS STUDY SPECIFICATION FOR ADDITIONAL REQUIREMENTS. ALL REQUIRED POWER SYSTEMS STUDIES MUST BE COMPLETED AND SUBMITTED WITH ELECTRICAL POWER DISTRIBUTION EQUIPMENT SUBMITTAL. FAILURE TO DO SO WILL PREVENT THE ENGINEER FROM EFFECTIVELY EVALUATING THE SUBMITTAL AND SHALL RESULT IN REJECTION OF THE ELECTRICAL POWER DISTRIBUTION EQUIPMENT SUBMITTAL AS INCOMPLETE.

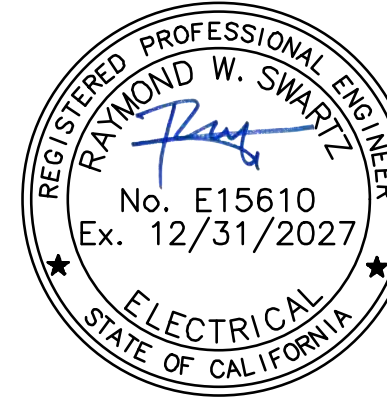
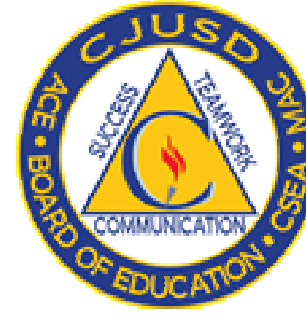
WSP

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CONSULTANT

SINGLE LINE DIAGRAM

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
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GRAND TERRACE, CA 92313



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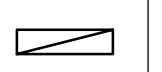
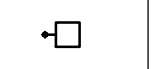
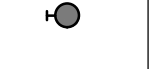
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PROJECT STATUS	BID SET
SHEET ISSUED	11/21/2023
DATE	DESCRIPTION

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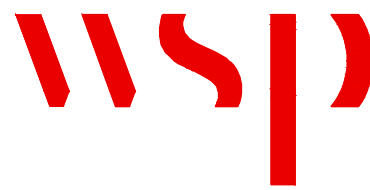
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LIGHTING FIXTURE SCHEDULE NOTES:

- A. GENERAL NOTES:
- THE LIGHTING FIXTURES, LAMPS, BALLASTS, POWER SUPPLIES, DRIVERS AND TRANSFORMERS FOR THIS PROJECT HAVE BEEN SPECIFIED TO ENSURE THAT SPECIFIC AESTHETIC AND PERFORMANCE REQUIREMENTS WILL BE SATISFIED. THESE PRODUCTS HAVE BEEN CAREFULLY RESEARCHED AND EACH SPECIFIED ITEM HAS UNIQUE QUALITIES WHICH WERE DETERMINED TO BE ESSENTIAL IN SATISFYING THE OWNER'S, ARCHITECT'S, ENGINEER'S AND LIGHTING CONSULTANT'S DESIGN CRITERIA.
 - CONTRACTOR SHALL PROVIDE ALL MATERIALS AS DETAILED ON DRAWINGS AND/OR SCHEDULES, AND LABOR AS REQUIRED TO ACHIEVE A COMPLETE AND OPERATING LIGHTING SYSTEM.
 - CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT OF ANY PROVISIONS OF THE SPECIFICATION THAT IS IN CONFLICT WITH LOCALLY ENFORCED CODES.
 - CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY REQUIRED MODIFICATIONS THAT ARE NOT SHOWN ON THE DRAWINGS.
 - ALL ELECTRICAL MATERIAL SHALL BE IN NEW & UNDAMAGED CONDITION WHEN INSTALLED. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.
 - ALL DIMENSIONS & MEASUREMENTS FOUND ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL VALIDATE ALL DIMENSIONS PRIOR TO ORDERING MATERIAL TO INCLUDE MAKING FIELD MEASUREMENTS BASED ON ACTUAL SITE CONDITIONS TO DEVELOP COMPLETE ORDERS AND INSTALL SYSTEMS PER DRAWINGS AND SPECIFICATIONS.
 - REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES AND ASSOCIATED DEVICES AND EQUIPMENT.
 - PRIOR TO AIMING/ADJUSTING ACTIVITIES, COMMISSIONING OR PUNCHWALK COMMENCEMENT, CONTRACTOR SHALL PROPERLY TEST AND VERIFY ALL CIRCUITRY AND CONTROL WIRING AND IMPLEMENT ALL CONTROLS PROGRAMMING.
- B. INSTALLATION:
- LOCATIONS OF THE FIXTURES SHALL BE PER THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND SHALL BE COORDINATED AT TIME OF ROUGH IN. CONFLICTS BETWEEN THE ARCHITECTURAL REFLECTED CEILING PLAN(S) AND THE ELECTRICAL/LIGHTING DESIGN PLAN(S) SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO ORDERING FIXTURES.
 - LIGHTING DRAWINGS REPRESENT THE DESIGN INTENT OF THE EQUIPMENT, DEVICES, ETC. TO BE CONNECTED AND THE CIRCUITS TO WHICH THEY ARE TO BE CONNECTED. CONTRACTOR SHALL INSTALL ALL CONDUIT, J-BOXES AND ADDITIONAL HARDWARE AND DEVICES AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
 - ALL LIGHTING FIXTURES SHALL BE MOUNTED AND INDIVIDUALLY SUPPORTED IN ACCORDANCE WITH APPLICABLE CODES. FIXTURES SHALL BE FURNISHED AND INSTALLED WITH ALL REQUIRED MOUNTING DEVICES, HARDWARE AND ACCESSORIES.
 - CONTRACTOR TO VERIFY LIGHTING FIXTURE MOUNTING HARDWARE IS COMPATIBLE WITH APPROVED MOUNTING CONDITIONS. MOUNTING CONDITIONS MUST ALLOW FOR AIMING AND ADJUSTING OF LIGHTING FIXTURES ON SITE.
 - CONTRACTOR TO INCLUDE AIMING/ADJUSTING LABOR AFTER DARK AS REQUIRED FOR ANY ADJUSTABLE LIGHTING FIXTURE AND FOR EACH INDIVIDUAL LIGHTING FIXTURE HEAD OR LAMP HOLDER IN A MULTI-FIXTURE/MULTI-LAMP ASSEMBLY. LIGHTING FIXTURES TO BE AIMED/ADJUSTED PER THE DIRECTION OF OWNER, ARCHITECT AND/OR LIGHTING CONSULTANT.
 - CONTRACTOR TO SUPPLY ADEQUATE SUPPORT INCLUDING LADDERS, LIFTS OR OTHER EQUIPMENT REQUIRED TO ACCESS LIGHTING FIXTURES AT THE TIME OF FOCUS, INCLUDING EVENING OR NIGHT WORK AS MAY BE REQUIRED DUE TO SCHEDULE CONFLICT OR DAYLIGHT IMPACT. AIMING/ADJUSTING LABOR SHALL BE PREPARED FOR WORK WITH COMMON HAND TOOLS TO MAKE ADJUSTMENTS AND MINOR REPAIRS DURING AIMING.
 - ALL COVE MOUNTED LIGHTING FIXTURES SHALL EXTEND THE FULL LENGTH OF THE COVE. CONTRACTOR TO FIELD MEASURE COVE LENGTH AND ORDER QUANTITY OF LIGHTING FIXTURES AS REQUIRED. PROVIDE COMPLETE MANUFACTURER SHOP DRAWINGS OF BUILT-IN COVE OR LINEAR LIGHTING SYSTEMS.
 - CONTRACTOR TO REPLACE ALL INOPERATIVE LAMPS, LED ARRAYS OR SYSTEMS AT THE END OF THE CONSTRUCTION PHASE PRIOR TO THE FOCUS AND PROGRAMMING PHASE AND AGAIN PRIOR TO OWNER OCCUPANCY OR PROJECT OPENING.
 - ALL POLE MOUNTED FIXTURES, POST MOUNTED FIXTURES AND BOLLARDS SHALL BE PROVIDED WITH A STRUCTURAL FOOTING AS DETAILED ELSEWHERE IN THE DRAWINGS. FOOTING SIZE TO BE PROVIDED BY STRUCTURAL ENGINEER. REFERENCE FIXTURE SCHEDULE AND DETAILS FOR MORE INFORMATION.
 - ALL EXIT SIGNS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE LOCAL FIRE PREVENTION CODE AUTHORITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY HARDWARE SUCH THAT ALL EXIT SIGNS ARE INSTALLED IN AN APPROVED VISIBLE LOCATION. THE CONTRACTOR SHALL VERIFY CHEVRONS AND NUMBER OF PAGES PER EXIT SIGN WITH ARCHITECTURAL REFLECTED CEILING PLAN(S). ANY DISCREPANCIES BETWEEN EXIT SIGNS DEPICTED ON ARCHITECTURAL AND ELECTRICAL PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO ORDERING EXIT SIGNS.
- C. SUBMITTALS AND SUBSTITUTIONS:
- CONTRACTOR TO SUBMIT FOR APPROVAL ON THE PRODUCTS THEY INTEND TO FURNISH WITHIN TEN (10) DAYS OF AWARD OF CONTRACT. FAILURE TO SUBMIT WITHIN DEADLINE CONSTITUTES A GUARANTEE THAT ONLY THE BASE SPECIFIED PRODUCTS WILL BE SUPPLIED AND THAT NO OTHER PRODUCTS, WHETHER LISTED AS ALTERNATES OR NOT, WILL BE CONSIDERED.
 - CONTRACTOR TO PROVIDE A SUBMITTAL/SHOP DRAWING SUBMITTAL FOR EACH LIGHTING FIXTURE TYPE INCLUDING ACCESSORIES, BALLAST(S), POWER SUPPLIES, DRIVER(S) TRANSFORMER(S), AND INTEGRAL EMERGENCY BATTERIES AND TEST SWITCHES. ANY LIGHTING FIXTURE SUBMITTAL PROVIDED WITHOUT SPECIFIC LIGHTING FIXTURE'S ACCESSORIES, BALLAST, POWER SUPPLY, DRIVER, TRANSFORMER OR BATTERY INFORMATION SHALL BE REJECTED AS INCOMPLETE.
 - SUBSTITUTIONS OF THE SPECIFIED PRODUCTS ARE STRICTLY PROHIBITED - UNLESS APPROVED AS NOTED HEREIN. LIGHTING FIXTURE SUBSTITUTIONS SHALL BE FORMALLY PRESENTED TO THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, BY APPOINTMENT ONLY, AT LEAST TEN (10) WORKING DAYS PRIOR TO BID TIME. THE SUBMITTAL MATERIAL SHALL INCLUDE THE FOLLOWING ITEMS:
 - A COMPLETE AND OPERATING SAMPLE, WIRED FOR 120V OPERATION, WITH LAMP, CORD AND PLUG.
 - A COMPLETE PHOTOMETRIC REPORT, FOR THE PROPOSED SUBSTITUTE PRODUCT, USING THE SPECIFIED LAMP OR LED TYPE AND WATTAGE, INCLUDING TABULATED CANDLEPOWER VALUES, COEFFICIENT OF UTILIZATION, AND AN ISO-FOOT-CANDLE DIAGRAM. PRORATED DATA WILL NOT BE ACCEPTABLE. THE PHOTOMETRIC REPORT MUST BE DONE IN ACCORDANCE WITH PUBLISHED I.E.S. TESTING PROCEDURES AND CERTIFIED BY A REGISTERED ELECTRICAL ENGINEER.
 - A CURRENT ORIGINAL CATALOG DATA SHEET WITH LIGHTING FIXTURE CATALOG NUMBERS, MODIFIED DATA SHEETS WILL NOT BE ACCEPTABLE.
 - A SIGNED COPY OF THE "SUBSTITUTION COMPLIANCE FORM", LOCATED IN THE DIVISION 1 SPECIFICATION, STATING THAT IF THE PROPOSED SUBSTITUTION IS ACCEPTED, THE PROJECT SCHEDULE WILL NOT BE NEGATIVELY AFFECTED. IF THE COMPLETION OF THE PROJECT IS DELAYED BECAUSE OF THE APPROVED SUBSTITUTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF ANY ESTABLISHED LIQUIDATED DAMAGES.
 - FOR SPECIFIC INTERIOR FIXTURE SUBSTITUTIONS, WHEN DIRECTED BY THE ELECTRICAL ENGINEER AND/OR LIGHTING CONSULTANT, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE SPECIFIC INTERIOR AREA. IF THE SUBSTITUTED FIXTURE IS AN EMERGENCY FIXTURE, THE REPORT SHALL BE RUN IN BOTH NORMAL AND EMERGENCY MODES. THIS REPORT SHALL BE CONFIGURED WITH SPECIFIC CONSTRAINTS, AS DIRECTED BY THE ENGINEER OF RECORD. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO OR BETTER THAN THE LIGHTING LEVELS OF THE SPECIFIED PRODUCT.
 - FOR ALL EXTERIOR FIXTURE SUBSTITUTIONS, A POINT-BY-POINT SCALED COMPUTER PRINTOUT SHALL BE PROVIDED VERIFYING THE ILLUMINATION LEVELS FOR THE ENTIRE SITE PLAN BASED ON USING THE PROPOSED ALTERNATIVE FIXTURES. THE REPORT MUST SHOW THAT THE SUBSTITUTED FIXTURE PROVIDES PERFORMANCE EQUAL TO, OR BETTER THAN THE LIGHTING LEVELS AND UNIFORMITY RATIOS (MAX-MIN AND AVG-MIN) OF THE SPECIFIED PRODUCT. THIS REPORT SHALL BE CONFIGURED WITH THE FOLLOWING CONSTRAINTS:
 - THE SPACING INCREMENT OR POINTS ON THE VERIFICATION REPORT SHALL NOT EXCEED TEN (10) FEET IN EITHER DIRECTION.
 - THE PHOTOMETRIC CALCULATION SHALL BE BASED ON PROVIDING MAINTAINED FOOT-CANDLE LEVELS USING MEAN LAMP LUMENS AND A LIGHT LOSS FACTOR, AS DIRECTED BY THE ENGINEER OF RECORD.
 - THE PHOTOMETRIC CALCULATION SHALL SHOW ANY ADDITIONAL ENERGY AND/OR ENERGY COSTS, FOR A TEN YEAR PERIOD, AS COMPARED TO THE ORIGINALLY SPECIFIED ITEM. THE TOTAL COSTS FOR THESE EXPENSES WILL BE DEDUCTED FROM THE CONTRACT COST.
 - DURING THE BIDDING PROCESS, THE CONTRACTOR SHALL REFER TO THE LIGHTING FIXTURE SCHEDULES ON THE ARCHITECTURAL PLANS (IF PROVIDED ON PROJECT), LIGHTING DESIGN PLANS/SPECIFICATIONS (IF PROVIDED ON PROJECT), AND THE ELECTRICAL PLANS. ANY DISCREPANCIES BETWEEN THEM INCLUDING, BUT NOT LIMITED TO, PART NUMBERS AND FIXTURE DESCRIPTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT, ELECTRICAL ENGINEER, AND LIGHTING DESIGNER WITH PRE-BID RFI(S). WHERE DISCREPANCIES ARE DISCOVERED WHEN THERE IS INSUFFICIENT TIME TO ISSUE PRE-BID RFI(S), THE BASE BID SHALL INCORPORATE THE MOST COSTLY VERSION OF THE DISCREPANCY AND SHALL BE MEMORIALIZED IN AN RFI OR AS A BID CLARIFICATION. PROVIDING A VOLUNTARY DEDUCTIVE ALTERNATE BID CLARIFYING FIXTURE SCHEDULE DISCREPANCIES IS ALSO AN ACCEPTABLE FORM OF DISCREPANCY DOCUMENTATION.

LIGHTING FIXTURE SCHEDULE						
SYMBOL	TYPE	MANUFACTURER AND MODEL NUMBER	FIXTURE VA WATTS	LAMP/ LAMP OPTION	GENERAL DESCRIPTION	
	1	HE WILLIAMS AVX VANDAL WRAP AVX-4-L308R25-CPC-DIM-UNV- DIM-UNV EQUAL BY: FALL-SAFE OR COLUMBIA	31W	LED/3500K .	SURFACE MOUNTED 4" LED WRAP, VANDAL RESISTANT POLYCARBONATE LENS, 3600 LUMENS, DIMMING DRIVER.	
	2	MCGRAW-EDISON #GLEON-S44-A-740-U-SL4-(MOUNT)-(FINISH)-BPC- MS/DIM EQUAL BY: GARDCO	129W	LED/4000K	POLE MOUNTED LED FIXTURE, SINGLE HEAD AS SHOWN ON PLANS, WITH 14" OVERALL HEIGHT, 6" ROUND STEEL POLE, WET LOCATION LISTED, IP66 RATED, WITH TYPE 4 DISTRIBUTION, 0.059m MINIMUM LIGHT OUTPUT, EXTRUDED ALUMINUM HOUSING, WITH INTEGRAL MOTION SENSOR AND DIMMING, FINISH AS SELECTED BY ARCHITECT.	
	3	MCGRAW-EDISON IMPACT ELITE LED IST-S44-E-740-U-T4FT-(FINISH)-TR-BPC-MS/DIM EQUAL BY: GARDCO	58W	LED/4000K	WALL MOUNTED LED FIXTURE, TRAPEZOID DESIGN, IK10 IMPACT RATED HOUSING AND OPTIC, TAMPER-RESISTANT FASTENERS, 7,149lm MINIMUM LIGHT OUTPUT, DIE-CAST ALUMINUM HOUSING, WITH INTEGRAL MOTION SENSOR AND DIMMING, PROVIDE 90 MINUTE BATTERY BACK-UP, FINISH AS SELECTED BY ARCHITECT.	

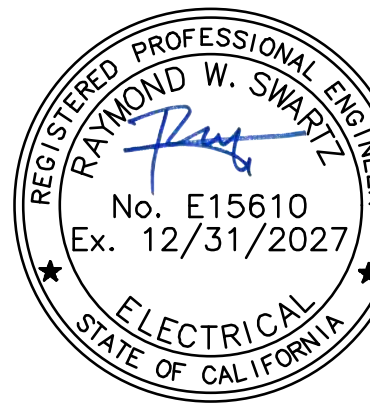
5. FIXTURE FINISHES:
- ALL FIXTURE FINISHES AND COLORS, UNLESS NOTED AS PREMIUM OR CUSTOM, SHALL BE SELECTED FROM THE MANUFACTURERS STANDARD COLOR OPTIONS AS LISTED ON THE FIXTURE SPECIFICATION SHEET. STANDARD FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
 - ALL FIXTURES INDICATED WITH A PREMIUM OR CUSTOM COLOR SHALL BE ASSIGNED A CUSTOM COLOR REFERENCE NUMBER (SUCH AS RAL#) OR PROVIDE FIVE (5) PAINT CHIPS FOR MANUFACTURER TO USE TO MATCH COLOR. PREMIUM OR CUSTOM FINISH SHALL BE SELECTED BY THE ARCHITECT, INTERIOR DESIGNER OR OWNER. THIS DIRECTION WILL BE PROVIDED IN THE SHOP DRAWING REVIEW PROCESS.
6. THE LIGHTING FIXTURE MODEL NUMBER MAY INDICATE A FIXTURE OPTION THAT THE CONTRACTOR MUST IDENTIFY PRIOR TO ORDERING/PROVIDING SUBMITTALS, INCLUDING, BUT NOT LIMITED TO: VOLTAGE, MOUNTING CONDITION/HARDWARE, FINISH, DIMMING REQUIREMENTS/BALLAST INFORMATION. GENERALLY, CONTRACTOR-SELECTED OPTIONS ARE DENOTED IN THE PART NUMBER WITH BRACKET'S EX: [VOLTS?]
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND PROVIDING ALL HANGERS, CLIPS AND NECESSARY HARDWARE TO INSTALL THE FIXTURE IN THE ENVIRONMENT AS SHOWN ON THE ARCHITECTURAL PLANS. ALL FIXTURES SHALL BE PROVIDED WITH ALL REQUIRED STRUCTURAL SUPPORTS AS REQUIRED BY THE CURRENTLY ADOPTED CODES.
 - VOLTAGES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING - SEE ELECTRICAL DRAWINGS FOR BRANCH CIRCUIT INFORMATION. IT IS POSSIBLE THAT FIXTURES WILL BE REQUIRED IN VARIOUS VOLTAGES.
7. 'NO KNOWN EQUAL' LIGHTING FIXTURE PRICING/BIDDING NOTES:
- EACH FIXTURE IDENTIFIED AS "NO KNOWN EQUAL" ON THIS PROJECT SHALL BE BID IN A "LINE ITEM" FORMAT. A PER UNIT MATERIAL COST SHALL BE PROVIDED FOR EACH "NO KNOWN EQUAL" FIXTURE. THIS PRICE SHALL INCLUDE LAMPS AS WELL AS ALL OTHER REQUIRED MATERIALS REQUIRED FOR INSTALLATION. THE FIXTURE PRICE QUOTED WILL BE UTILIZED, PRIOR TO SHOP DRAWING APPROVAL, FOR "ADDING" AND/OR "DELETING" ANY QUANTITY OF THE FIXTURE.
 - A UNIT COST SHALL BE SUBMITTED FOR EACH "NO KNOWN EQUAL" FIXTURE. SUBMIT THE PRICING AS PART OF THE BID FORM ON A SEPARATE 8 1/2" X 11" SHEET.
 - FAILURE TO SUBMIT A LINE ITEM FOR EACH "NO KNOWN EQUAL" FIXTURE MAY RESULT IN THE REJECTION, REFUSAL, OR NON-ACCEPTANCE OF THE CONTRACTOR'S BID.
8. FIXTURES IDENTIFIED AS "NO KNOWN EQUAL - OWNER STANDARD" OR "CAMPUS STANDARD" ARE TO BE PROVIDED AS SPECIFIED, WITH SUBSTITUTIONS STRICTLY PROHIBITED. SEE ADDITIONAL NOTES FOR "NO KNOW EQUAL" BIDDING REQUIREMENTS.
- D. LIGHTING FIXTURE SPECIFICATIONS:
- ALL EXTERIOR LIGHTING EQUIPMENT SHALL BE RATED FOR WET LOCATION AND THE IP RATING OF ALL EQUIPMENT, INCLUDING BALLAST, POWER SUPPLY AND TRANSFORMER ENCLOSURES SHALL CONFORM TO THE CONDITIONS IN WHICH THE LIGHTING FIXTURE IS MOUNTED.
 - ALL BALLASTS, POWER SUPPLIES, DRIVERS AND/OR TRANSFORMERS THAT ARE REMOTELY LOCATED SHALL BE INSTALLED AS NEAR TO THE LIGHTING FIXTURE(S) AS POSSIBLE, HIDDEN FROM PUBLIC VIEW IN AN ACCESSIBLE COMPARTMENT THAT IS WELL VENTILATED. CONTRACTOR TO COORDINATE LOCATION(S) WITH ARCHITECT PRIOR TO ROUGH-IN.
 - ALL TRANSFORMERS SHALL BE FUSED ON THE SECONDARY SIDE.
 - COLOR FILTERS SHALL BE GLASS OR DICHRIC UNLESS OTHERWISE INDICATED ON DRAWINGS.
 - CONTRACTOR TO PROVIDE 20% ADDITIONAL COLOR FILTERS FOR EACH COLOR AND SIZE.
 - CONTRACTOR TO VERIFY THAT ALL LIGHTING FIXTURES SPECIFIED WITH A COLOR FILTER ARE SUPPLIED WITH ANY AND ALL ATTACHMENT DEVICES FOR THE FILTER.
 - ALL TRACK LIGHTING FIXTURES SHALL BE PROVIDED WITH THE APPROPRIATE TRACK SYSTEM WHICH SHALL INCLUDE ALL MISCELLANEOUS COMPONENTS REQUIRED, AS WELL A ANY REQUIRED CIRCUIT LIMITERS FOR A COMPLETE INSTALLATION. TRACK LENGTH(S) SHALL BE PER DRAWINGS.
- E. DRIVERS / TRANSFORMERS:
- [OPTION?] IN FIXTURE MODEL NUMBER INDICATE THAT THE FIXTURE DRIVER TYPE AND QUANTITY MUST BE VERIFIED BY THE CONTRACTOR USING FIXTURE CALLOUT INFORMATION AND FIXTURE SWITCHING CONFIGURATION INFORMATION.
 - CONTINUOUS DIMMING AND CONTROLLABLE LED:
 - PROVIDE CONTROLLABLE LED DIMMING DRIVERS (INTEGRAL OR REMOTE) WITH POWER FACTOR GREATER THAN 0.85 AND MAXIMUM THD OF 20% AT FULL LOAD.
 - PRIOR TO BID CONTRACTOR TO VERIFY DRIVER COMPATIBILITY WITH DIMMERS, DIMMING CONTROL SYSTEM(S) AND DISTRIBUTED LIGHTING CONTROL SYSTEM(S) WITH RESPECTIVE LIGHTING MANUFACTURER(S) AND LIGHTING/DIMMING CONTROL SYSTEM MANUFACTURERS. IF COMPATIBILITY DOCUMENTATION IS UNAVAILABLE FOR A GIVEN LED FIXTURE/LIGHTING CONTROL SYSTEM COMBINATION, CONTRACTOR SHALL INCLUDE COSTS IN THE BASE BID FOR RESPECTIVE LIGHTING MANUFACTURER AND LIGHTING CONTROLS MANUFACTURER TO TEST/WARRANT COMPATIBILITY OF SAID COMBINATIONS.
 - CONTINUOUS LED DIMMING DRIVERS SHALL BE AT MINIMUM 4-WIRE 0-10V 10% DIMMING (HOT, NEUTRAL, DIM+, DIM-).
- F. EMERGENCY FIXTURES / BATTERY PACKS:
- LIGHT FIXTURES INDICATED AS EMERGENCY SHALL BE IDENTIFIED / PROVIDED AS FOLLOWS:
 - INTEGRAL BATTERY PACK (EB):
 - 3a/EB - FIXTURE CONNECTED TO CIRCUIT "3", CONTROL SWITCH/EG "a" - WITH THE BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
 - 3NL/EB - FIXTURE CONNECTED TO A CONSTANT HOT CIRCUIT "B3". BATTERY CHARGING LEAD CONNECTED TO A CONSTANT HOT CIRCUIT "3".
 - REMOTE BACK-UP SOURCE (EM):
 - 3a/SEM - ROUTED THROUGH A U.L. LISTED TRANSFER RELAY (LC & D #CR-2001E/S) FOR SWITCHED CONTROLS OR A U.L. LISTED TRANSFER SWITCH (BODINE #GTD SERIES DEVICE) FOR DIMMING CONTROLS. CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3". SEE DISTRIBUTED LIGHTING CONTROL SPECIFICATIONS FOR DEVICE REQUIREMENTS WHEN CONTROLLED BY OCCUPANCY SENSORS.
 - 3NL/SEM - FIXTURE CONNECTED TO A CONSTANT HOT EMERGENCY CIRCUIT "3".
 - REMOTE BACK-UP SOURCE (EM) NOTES:
 - ALL REMOTE BACK UP SOURCE (EM) FIXTURES SHALL BE PROVIDED WITH AN IN LINE FUSE. PROVIDE ADDITIONAL LABELING TO INDICATE FIXTURE IS PROTECTED BY A FUSE.
 - EMERGENCY BATTERY PACK NOTES:
 - PROVIDE INTEGRAL TEST SWITCH / CHARGE LIGHT OPTION FOR ALL EMERGENCY BATTERY PACKS INSTALLED IN LIGHT FIXTURES.
 - ALL RECESSED DOWNLIGHTS SUPPLIED WITH A BATTERY PACK SHALL BE PROVIDED WITH AN INTEGRAL COMBINATION TEST SWITCH / CHARGING INDICATOR LIGHT- MOUNTED INSIDE THE REFLECTOR. REMOTE TEST SWITCH / CHARGING LIGHTS ARE NOT ALLOWED. THE TEST SWITCH / CHARGING INDICATOR LIGHT SHALL BE SECURELY ATTACHED TO THE REFLECTOR WITH 18" OR SLACK LEADS, FOR EASY REMOVAL OF THE REFLECTOR ASSEMBLY.
 - ALL BATTERY PACKS AND ALL COMBINATION LED BATTERY PACK/EMERGENCY DRIVERS SHALL BE UL924 LISTED.
 - PRIOR TO BID, CONTRACTOR SHALL VERIFY WITH FIXTURE MANUFACTURER(S) THAT EMERGENCY BATTERY PACKS ARE MANUFACTURED TO BE INTEGRAL TO FIXTURE HOUSINGS.
 - SHOULD THE SPECIFIED LED EMERGENCY BATTERY PACK(S) NOT FIT WITHIN A GIVEN FIXTURE(S) OR SHOULD THE FIXTURE NOT BE MANUFACTURED TO ACCOMMODATE A BATTERY PACK, CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID TO LOCATE/CONNECT SELF-TESTING MINI INVERTER(S) (IOTA NLS SERIES OR BODINE/ELLS-WATT?) REMOTELY FROM THE FIXTURE(S) IN THE NEAREST ELECTRICAL ROOM OR TO LOCATE EMERGENCY BATTERY PACK(S) REMOTELY FROM THE FIXTURE ABOVE THE NEAREST ACCESSIBLE CEILING.
 - LED BATTERY PACKS SHALL PROVIDE A MINIMUM OF 90 MINUTES OF EMERGENCY ILLUMINATION, AND SHALL BE RATED AT A MINIMUM OF 10 WATTS, OR AS SPECIFIED. WHERE A FIXTURE TYPE IS UNAVAILABLE WITH A 10W BATTERY PACK OR WHERE THE WATTAGE IS NOT SPECIFIED ON THE PLANS, INCLUDE ALL COST IN BASE BID TO PROVIDE THE HIGHEST WATTAGE AVAILABLE ON THE FIXTURE CUTSHEET. ANY LISTED EQUAL FIXTURE OR ANY SUBSTITUTION OFFERED BY THE CONTRACTOR MUST ALSO HAVE BATTERY PACKS CAPABLE OF PRODUCING THE SAME OR MORE LUMENS WHEN ON BATTERY AS OUTLINED ABOVE. ACCEPTABLE MANUFACTURERS: BODINE OR IOTA.
 - TO MAINTAIN UL LISTING OF LED FIXTURE, FIXTURE MANUFACTURER(S) SHALL INSTALL LED EMERGENCY BATTERY PACKS AT THE FACTORY AND OBTAIN A UL LISTING FOR THE FIXTURE WITH EMERGENCY BATTERY PACK. FIELD-INSTALLATION OF LED EMERGENCY BATTERY PACK(S) IS PROHIBITED.
 - PROVIDE DAMP LOCATION VERSION IN ALL DAMP LABEL INSTALLATIONS.



WSP USA
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Riverside, California 92505
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Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.0000

LIGHTING FIXTURE SCHEDULE

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



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PROJECT NUMBER: 22-1207-00
PROJECT NUMBER: 22-1207-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: DESCRIPTION

E3.10

C:\Users\Carpal\Documents\22-12107-00\TILES, TK ADDITION, R24, LampshIEB\W-11

10/24/2023 11:22:02 AM

STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION

Outdoor Lighting

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F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L, only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (i.e. existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per luminaire ^{1,2}	How is Wattage determined	Total Number Luminaires ²	Luminaire Status ³	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 Initial lumen output 130.2(b) / 160.5(c)1 ⁴	Field Inspector
2	Type 2 - Pole Mtd LED Single Head	Linear	129	Mfr. Spec	1	New	129	NA - < 6200 lumens	Pass Fail
3	Type 3 - Wall Mtd LED	Linear	58	Mfr. Spec	4	New	232	NA - < 6200 lumens	Pass Fail
Total Design Watts:							361		

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.

OK: Luminaire is lighting a statue: EXCEPTION 2 to 140.2(b)

* FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)

² For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.

³ Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.

⁴ Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b) / 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

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M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. (f any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title

NRCC-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

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TITLE 24 PROCEDURES FOR TESTING AND ADJUSTING

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2022 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTIONS 13.1.2.2 AND 13.1.2.3.

LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LT-02-A DOCUMENTS.

AUTOMATIC DAYLIGHT CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LT-03-A DOCUMENTS.

DEMAND RESPONSE LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LT-04-A DOCUMENTS.

INSTITUTIONAL TUNING PAF ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LT-05-A DOCUMENTS.

OUTDOOR LIGHTING CONTROL ACCEPTANCE TESTING AND ADJUSTING PROCEDURES - REFER TO NRCA-LTO-02-A DOCUMENTS.

ALL LIGHTING CONTROLS TESTING AND ADJUSTING DOCUMENTS NOTED ABOVE ARE AVAILABLE FROM THE CALIFORNIA ENERGY COMMISSION WEB SITE AT:
<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-5>

TITLE 24 GENERAL NOTE

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH FINAL INSPECTION AND APPLICABLE ACCEPTANCE REQUIREMENT PROCEDURES. INCLUDE ALL COSTS IN THE BASE BID. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION INSPECTION, MEASUREMENTS, MONITORING, FUNCTIONAL TESTING, CALIBRATING, ETC. CONTRACTOR SHALL ASSUME THE ROLE OF "FIELD TECHNICIAN" AND "RESPONSIBLE PERSON" AS DEFINED IN STATE OF CALIFORNIA 2022 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL SECTION 14.1.2.

SEE STATE OF CALIFORNIA 2022 BUILDING ENERGY EFFICIENCY STANDARDS SECTIONS 10-103(a)3A AND 10-103(a)3B AND SECTION 130.4 FOR MORE INFORMATION.

SEE STATE OF CALIFORNIA 2022 BUILDING ENERGY EFFICIENCY STANDARDS NONRESIDENTIAL COMPLIANCE MANUAL CHAPTER 14 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

SEE STATE OF CALIFORNIA 2022 BUILDING ENERGY EFFICIENCY STANDARDS RESIDENTIAL COMPLIANCE MANUAL CHAPTER 2 FOR MORE DETAILED REQUIREMENTS / INFORMATION.

PROVIDE COMPLETED INSTALLATION CERTIFICATE(S) AND CERTIFICATE(S) OF ACCEPTANCE AS REQUIRED TO THE SATISFACTION OF THE ENFORCEMENT AGENCY.

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C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv

01	02	03	04	05	06	07	08	09					
General Hardscape Allowance 140.7(f)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M) OR Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	Total Allowed (Watts)	≥	Total Actual (Watts)	07 must be >= 08
389	+	---	+	---	+	---	+	---	=	389	≥	361	COMPLIES

Shielding Compliance (See Table G for Details)

Controls Compliance (See Table H for Details)

N/A

Not applicable

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/ Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B / Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance. Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Illuminated Area (ft ²)	Area Wattage Allowance (AWA) (W/ft ²)	Area Allowance (Watts)	Perimeter Length (ft)	Allowed Density (W/ft)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)
Pedestrian Hardscape	5661	0.019	107.6	544	0.2	81.6	189
Initial Wattage Allowance for Entire Site (Watts):							200
Instances of Initial Wattage Allowance (LZ 0 only) ¹							
Total General Hardscape Allowance (Watts):							389

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

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Project Name: Terrace View Elementary School

Report Page: (Page 1 of 7)

Date Prepared: 10/2/2023

A. GENERAL INFORMATION

01 Project Location (city) Grand Terrace

02 Climate Zone 10

04 Total Illuminated Hardscape Area (ft²) 5661

03 Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):

☐ LZ-0: Very Low - Undeveloped Parkland ☒ LZ-2: Moderate - Urban Clusters ☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval

☐ LZ-1: Low - Rural Areas ☐ LZ-3: Moderately High - Urban Areas

☐ Occupancy Types within Project

• All Other Occupancies

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?
03	04
% of Existing Luminaires Being Altered ¹	Sum Total of Luminaires Being Added or Altered
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%	Calculation Method

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

¹ FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Schema Version: rev 20220101

Compliance ID: EnergyPro-2945-1025-6819

Report Generated: 2025-10-02 10:41:53

STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION

Outdoor Lighting

CERTIFICATE OF COMPLIANCE

Project Name: Terrace View Elementary School

Report Page: (Page 4 of 7)

Date Prepared: 10/2/2023

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.

Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit.

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector
				Pass Fail

¹ FOOTNOTES: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.

² Authority having jurisdiction may ask for cut sheets or other documentation to confirm compliance of light source.

³ Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

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STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION

Outdoor Lighting

CERTIFICATE OF COMPLIANCE

Project Name: Terrace View Elementary School

Report Page: (Page 7 of 7)

Date Prepared: 10/2/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Raymond Swartz

Signature Date: 2025-10-02

Address: 11870 Pierce Street

City/State/Zip: Riverside CA 92505

Phone: 951-299-4160

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct;

2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer);

3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations;

4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application;

5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Raymond Swartz

Signature Date: 2025-10-02

Address: 11870 Pierce St., Ste 160

City/State/Zip: Riverside CA 92505

Phone: 951-299-4160

Generated Date/Time:

Documentation Software: EnergyPro

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000

Schema Version: rev 20220101

Compliance ID: EnergyPro-2945-1025-6819

Report Generated: 2025-10-02 10:41:53

TITLE -24 EXTERIOR

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313

SEALS

PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION: DESCRIPTION

E3.11

MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS.

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

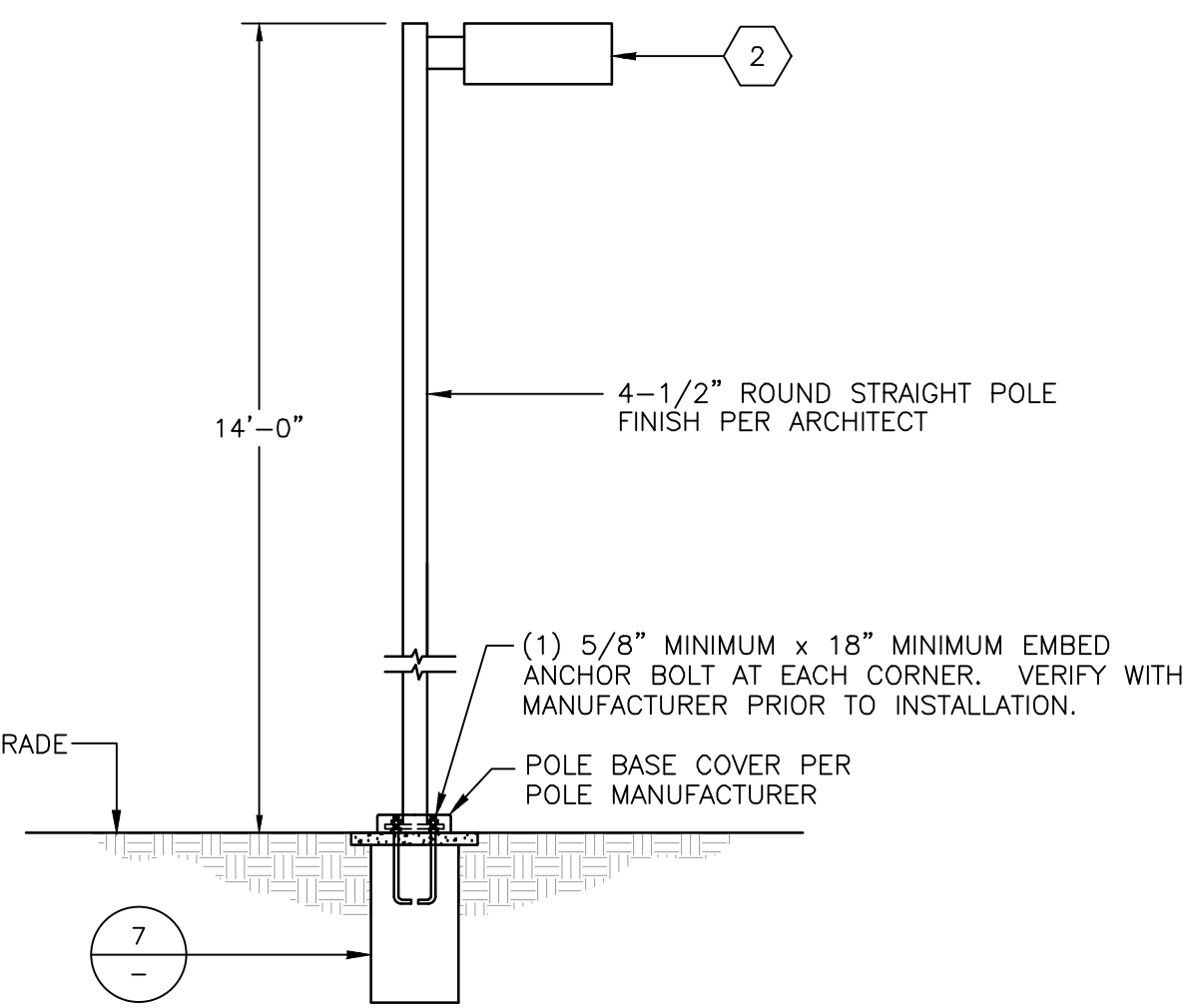
THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP MD PP OPTION 1: PROJECT SPECIFIC DESIGN.

MP MD PP OPTION 2: DESIGN BASED ON OSHPD OPM, WITHIN PROJECT SUBMITTAL.

MP MD PP OPTION 3: DESIGN BASED ON OSHPD OPM, DEFERRED SUBMITTAL.

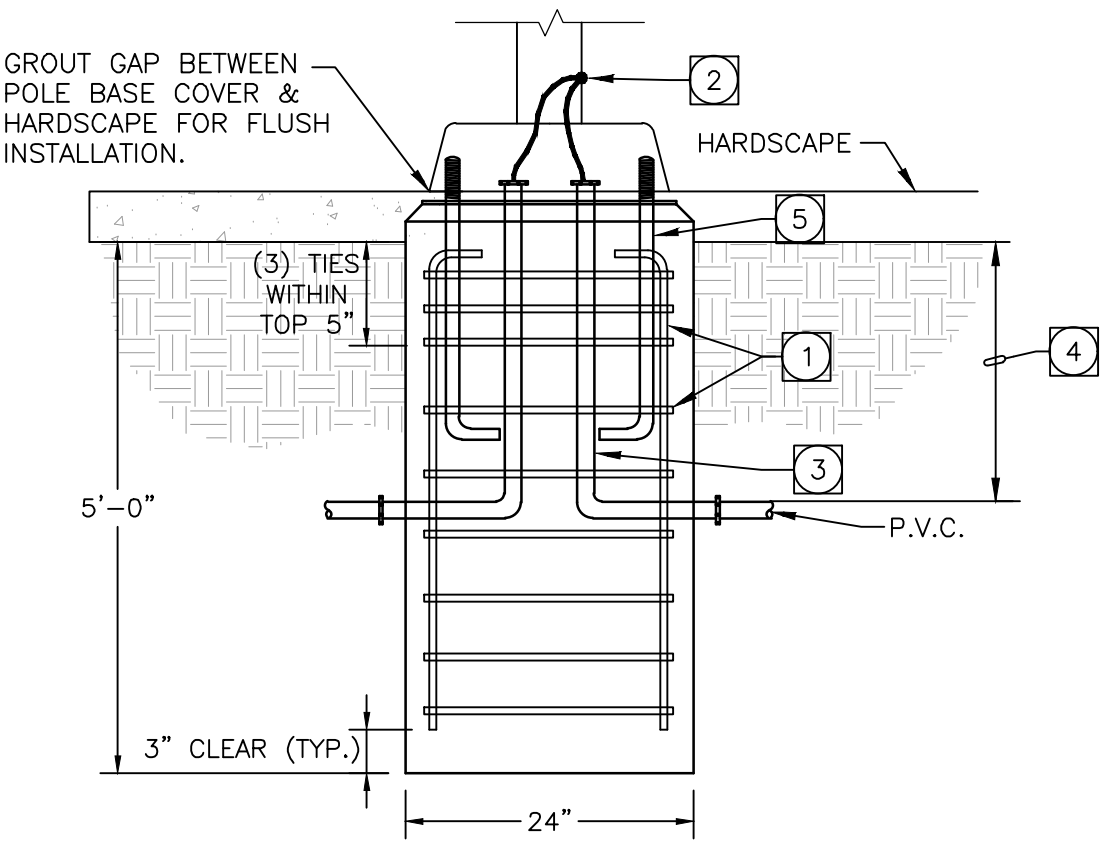


NOTE: POLES WITH TOTAL HEIGHTS LESS THAN 35' HIGH ARE NOT REQUIRED TO BE REVIEWED BY DSA.

POST TOP FIXTURE DETAIL

SCALE: N.T.S.

6



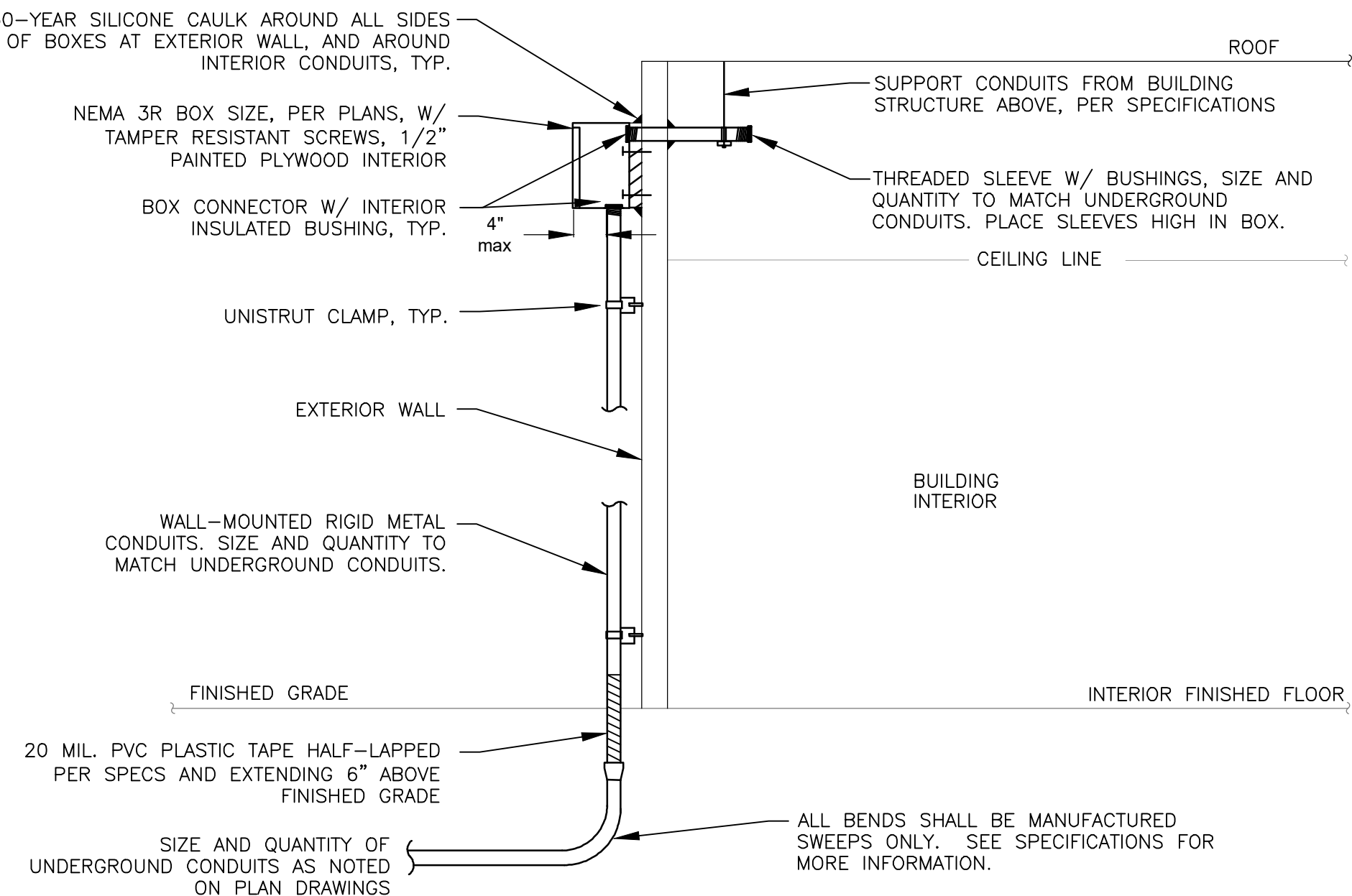
NOTE: MAX HEIGHT OF LIGHT POLE = 14'-0". MAX WEIGHT OF LIGHT FIXTURE = 35 LBS.

- 6-#6 VERT WITH #3 TIES @ 6" O.C.
- BOND EQUIPMENT GROUND TO POLE.
- BRANCH CIRCUIT CONDUIT PER SITE PLAN.
- PROVIDE MINIMUM COVER OF 24" FROM FINISH GRADE.
- POLE ANCHOR BOLTS PER MANUFACTURER SPEC'S.

POLE BASE DETAIL

SCALE: N.T.S.

7



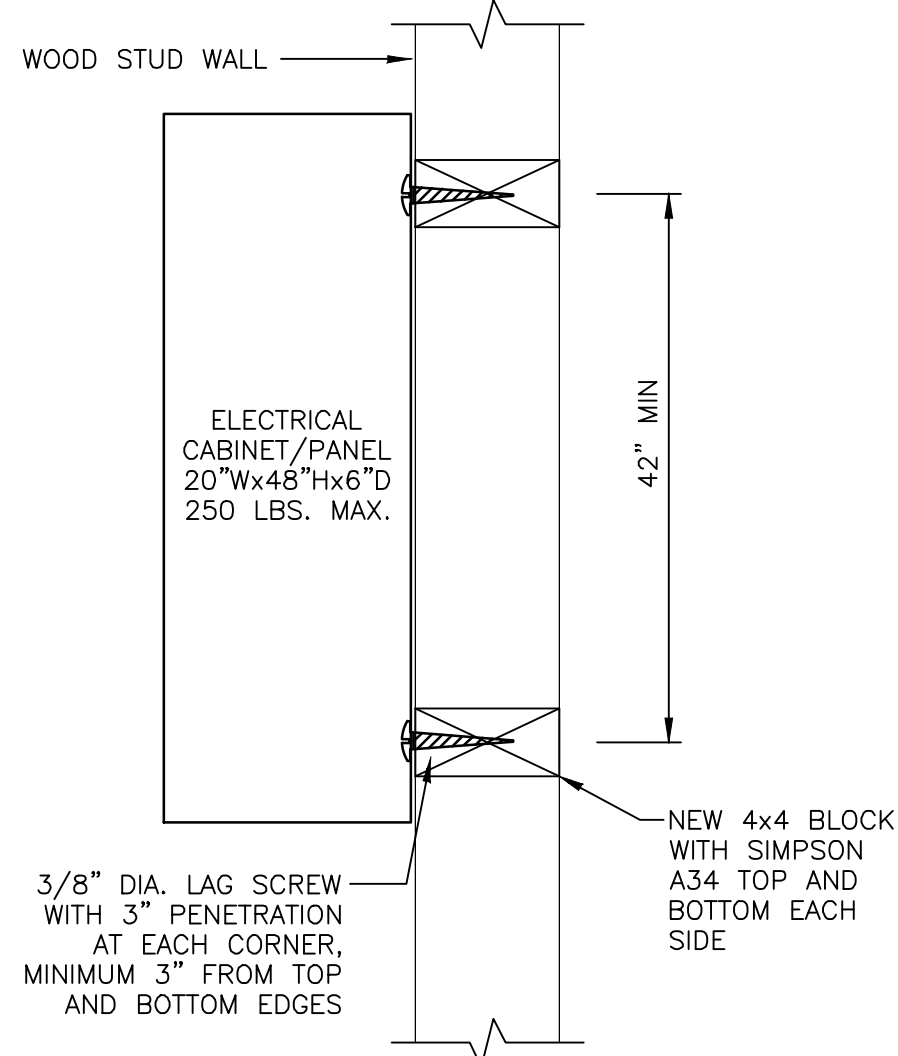
NOTES:

- ALL BOXES/PLYWOOD TO BE SECURED TO BUILDING STRUCTURE USING MIN. 3/8" X 2" WALL ANCHORS/LAG BOLTS.
- 50-YEAR SILICONE CAULK AROUND ALL PENETRATIONS, BOXES AND ALL THREADS AS REQUIRED.
- SEAL ALL UNDERGROUND CONDUITS PER COMMUNICATION PATHWAY NOTES, GENERAL PROJECT NOTES, AND PROJECT SPECIFICATIONS.
- SEE SPECIFICATIONS FOR MORE INFORMATION.

TYPICAL EXTERIOR JUNCTION BOX DETAIL

SCALE: N.T.S.

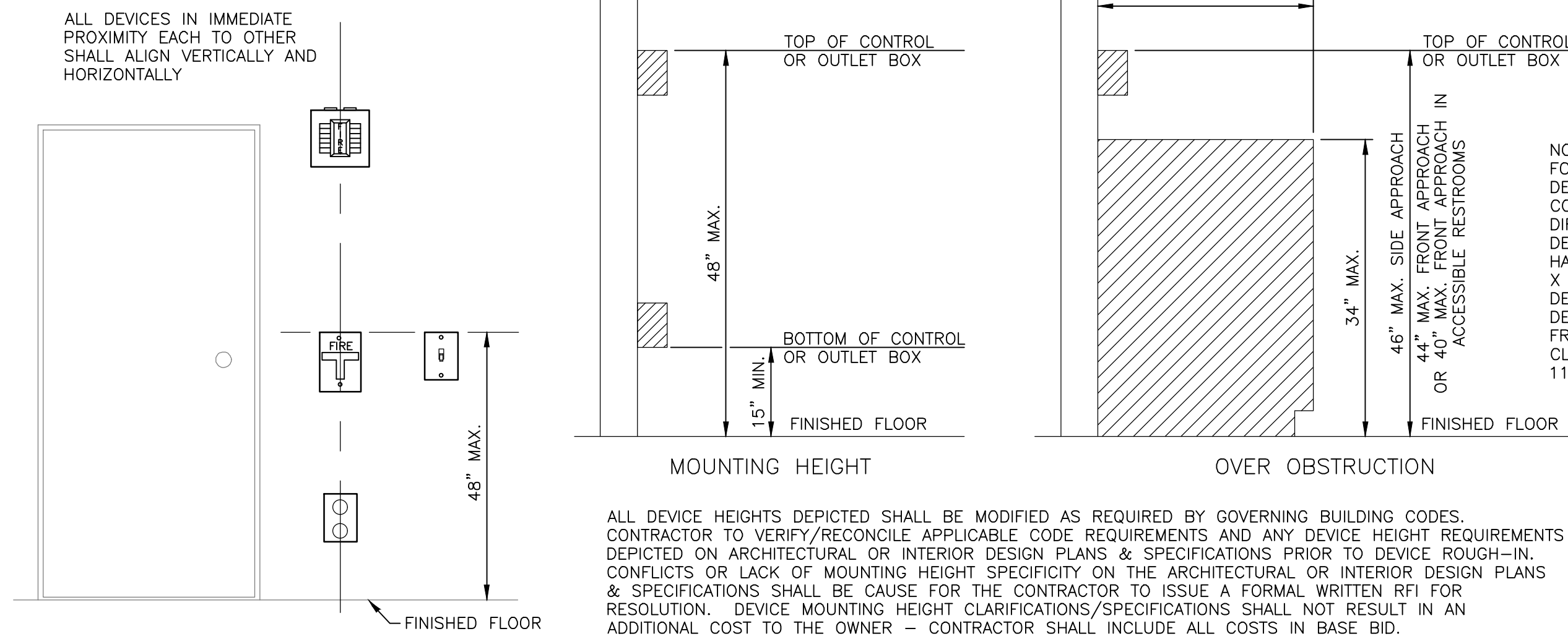
4



TYPICAL SURFACE PANEL MOUNTING

SCALE: N.T.S.

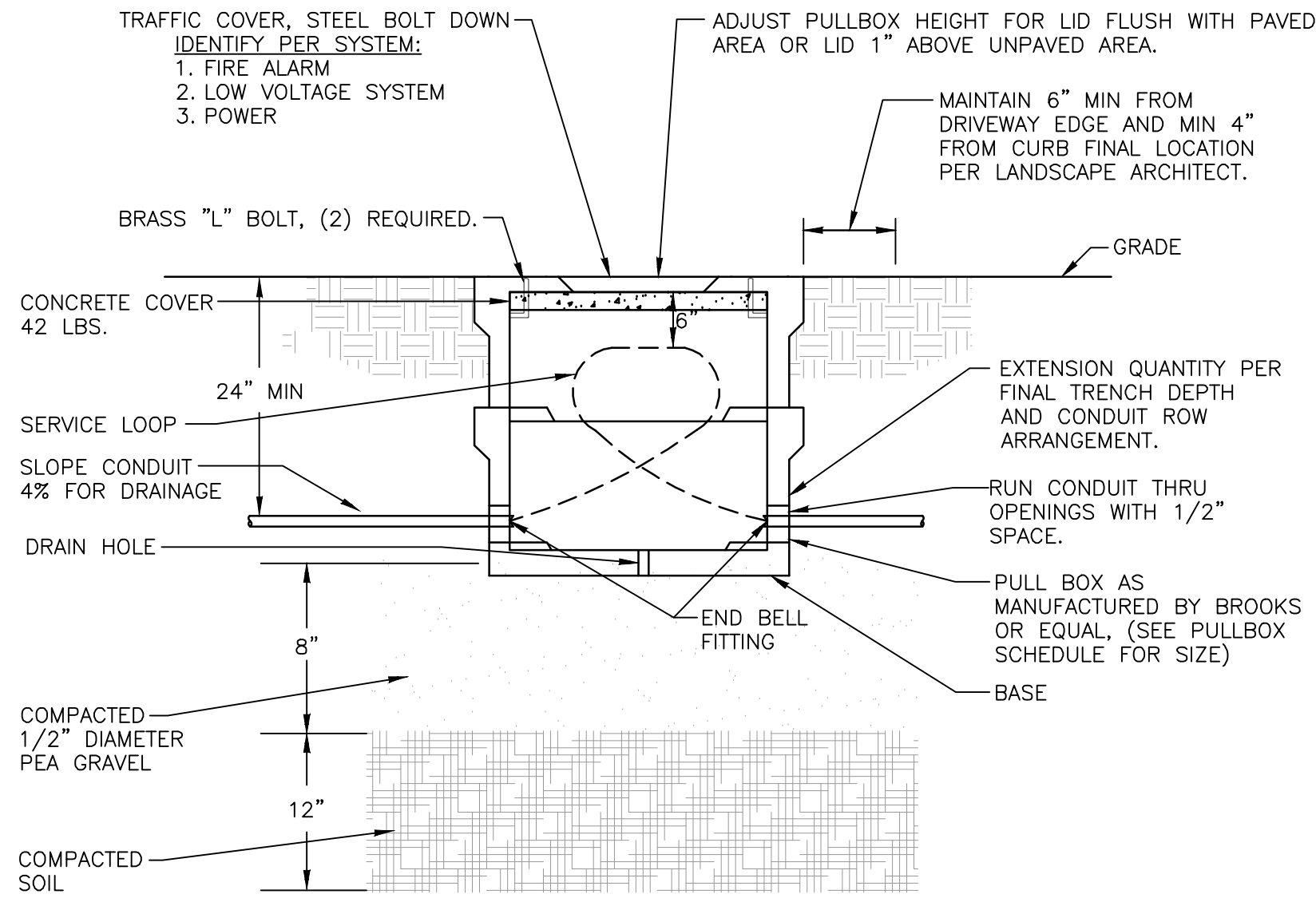
5



DEVICE ALIGNMENT & MOUNTING HEIGHT DETAILS

SCALE: N.T.S.

1



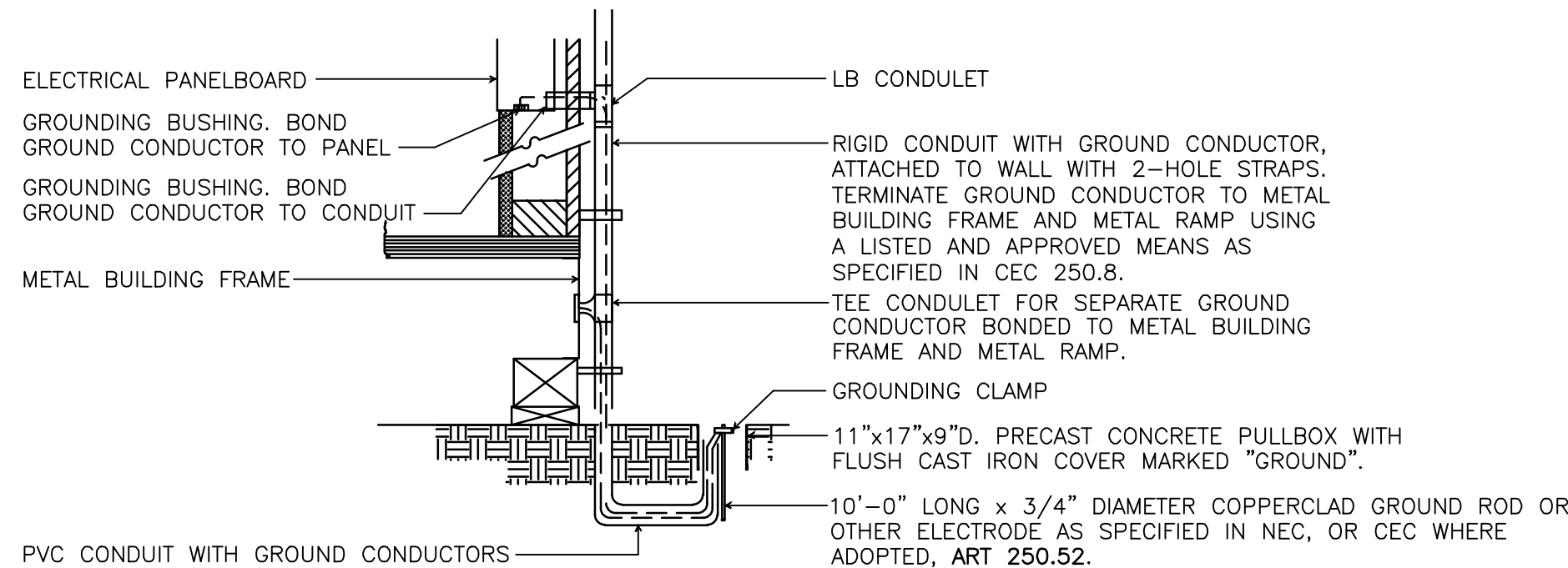
PULL BOX DETAIL

SCALE: N.T.S.

2

PULL BOX NOTES

- ALL BOXES SHALL BE SET ON A MINIMUM 8" GRAVEL BASE WITH 1/2" DIAMETER PEA GRAVEL.
- ALL INCIDENTAL CONCRETE SHALL BE REMOVED FROM BOXES.
- PROVIDE WATERTIGHT SPLICES AND CAPS FOR POWER CONDUCTORS.
- PROVIDE SEALING GEL IN ALL CONDUITS (BOTH W/ CONDUCTORS AND IN EMPTY SPARE CONDUITS.) THE GEL SHALL BE INSERTED IN THE CONDUIT TO A DEPTH OF 6" AND FLUSH W/ THE END OF THE CONDUIT. THE GEL SHALL BE MANUFACTURED BY 3M #4442 RE-ENTERABLE ENCAPSULANT.
- PROVIDE IDENTIFYING TAGS ON ALL POWER AND COMMUNICATION CONDUCTORS IN PULLBOXES.
- PULLBOX SHALL BE SIZED PER N.E.C. REQUIREMENTS.



NOTES:

- METAL MODULAR BUILDINGS: WHEN METAL BUILDINGS ARE MADE OF COMPONENTS, EACH BUILDING COMPONENT, INCLUDING STEEL RAMP, MUST BE ELECTRICALLY BONDED TOGETHER IN A MANNER ACCEPTABLE TO DSA/SSS. PAINT ON THE SURFACE WILL INHIBIT PASSAGE OF ELECTRICAL CURRENT; THEREFORE, BOLTED CONNECTIONS OF COMPONENT PARTS ARE NOT AN ACCEPTABLE ELECTRICAL BOND.
- WOOD MODULAR BUILDINGS: IN WOOD FRAME MODULAR BUILDINGS, THE ELECTRICAL SYSTEM MUST BE GROUNDED AS REQUIRED IN TITLE 24, C.E.C.
- GROUNDING: THE ELECTRICAL CIRCUITS ARE USUALLY PROPERLY GROUNDED, HOWEVER, IT IS ALSO NECESSARY TO INDEPENDENTLY GROUND THE STEEL FRAMES. THIS IS PARTICULARLY IMPORTANT WHEN THE BUILDING IS SUPPORTED ON A FOUNDATION MADE OF WOOD.
- INSPECTOR OF RECORD (I.O.R.) SHALL WITNESS GROUND TEST AND SUBMIT A COPY OF THE REPORT TO THE ARCHITECT. ALL BUILDING COMPONENTS MUST BE ELECTRICALLY BONDED TOGETHER AND MUST BE INDEPENDENTLY GROUNDED. ALL GROUNDING SYSTEMS ARE TO BE TESTED WITH A MEGGER UNIT OR IN AN OTHERWISE ACCEPTABLE MANNER. REFER TO C.E.C. SECTIONS 250-52 AND NEC. 250-53 FOR SPECIFIC GROUNDING REQUIREMENTS.
- SIZE OF CONDUCTORS SHALL COMPLY WITH NEC. TABLE 250-95.
- BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL, TO METAL BUILDING FRAME, AND TO THE BUILDING RAMP (NEC. 250-52). IN ADDITION TO THE DETAIL SHOWN ABOVE, BOND THE ELECTRICAL CONDUCTOR GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10 FEET INTO THE SOIL IF AVAILABLE (N.E.C. 250-52 AND NEC. 250-53).
- ALL MODULES OF METAL FRAME BUILDINGS AND RAMPS SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING).
- CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN, SEPARATED AT LEAST 6'-0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS. (NEC. 250-53).
- SEE SPECIFICATIONS FOR TESTING OF GROUNDING REQUIRED.
- ALL ELECTRICAL WORK TO MEET THE REQUIREMENTS OF THE STATE ELECTRICAL CODES. PART 3 OF TITLE 24, CAC, WHICH REQUIRES PROPER GROUNDING OF ALL ELECTRICAL CIRCUITS, EQUIPMENT, ETC. FOR PUBLIC SCHOOL BUILDING(S), REGARDLESS OF THE TYPE OF CONSTRUCTION.

RELOCATABLE BUILDING GROUNDING DETAIL

SCALE: N.T.S.

3

DETAILS

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION: E4.10

E4.10

FIRE ALARM NOTES

1. WALL MOUNTED, AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM ABOVE THE FINISHED FLOOR, AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE. (NFPA 72, SECTION 18.4.8.1). ALL WALL MOUNTED VISUAL APPLIANCES AND COMBINATION AUDIBLE/VISUAL APPLIANCES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM ABOVE FINISHED FLOOR AS MEASURED TO THE LENS. (NFPA 72, SECTION 18.5.5.1)
2. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
3. ALL FIRE ALARM WIRING SHALL BE FLP (FIRE POWER LIMITED) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
4. PER THE CEC, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPICE THE WIRE. THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC AND SHALL HAVE THEIR COVERS PAINTED RED WHERE APPLICABLE.
5. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM ELECTRICAL ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
6. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM INTERFACE SHALL BE BY MECHANICAL CONTRACTOR, AND SHALL BE COORDINATED WITH FIRE ALARM SYSTEM.
7. ALL DUCT SMOKE DETECTORS SHALL BE MOUNTED BY THE MECHANICAL CONTRACTOR. DUCT SMOKE DETECTORS EXPOSED TO THE WEATHER SHALL BE C.S.F.M. LISTED FOR OUTDOOR INSTALLATION, AND WEATHER PROTECTED BY THE MECHANICAL CONTRACTOR. ALL AIR VELOCITY TESTING SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.
8. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES AND ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
9. SMOKE DETECTOR TESTING SHALL BE PERFORMED TO ENSURE THAT EACH DETECTOR IS WITHIN ITS LISTED AND MARKED SENSITIVITY RANGE USING THE METHODS RECOMMENDED PER CFC, SECTION 907.8.4 AND NFPA 72, SECTION 14.4.4.3.4.
10. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
- A. INITIATING DEVICE CIRCUITS (IDC): CLASS B
- B. SIGNALING LINE CIRCUITS (SLC): CLASS B
- C. NOTIFICATION APPLIANCE CIRCUITS (NAC): CLASS B
11. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.
12. POINT AND COMMON ANNUNCIATION AND T-TAPPING ARE PROHIBITED. (T-TAPPING IS ALLOWABLE ON SLC LOOPS).
13. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING, WHEN APPLICABLE.
14. CONTRACTOR TO FIELD VERIFY AND PROVIDE DECIBEL METER FOR TESTING OF AMBIENT NOISE LEVELS AUDIBLE DEVICES TO BE AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75 DBA AT 10 FEET OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL BUT NOT MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE. SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS. (CFC, SECTION 907.5.2.1.1) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS. PROVIDE UPDATED PLANS AND CALCULATIONS THROUGH THE "CHANGE ORDER" PROCESS WHEN INSTALLING ADDITIONAL DEVICES.
15. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15-CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
16. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT OR APPROVED SURFACE RACEWAY IN A NEAT AND PROTECTED MANNER AS INDICATED ON THE DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. ALL CONDUITS SHALL BE 3/4" MINIMUM. CONTRACTOR TO VERIFY CONDUIT FILL PRIOR TO INSTALLATION.
17. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.
18. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
19. SYSTEM SHALL BE FURNISHED AND INSTALLED BY AN AUTHORIZED DISTRIBUTOR.
20. FIRE ALARM SYSTEM INSTALLATION COMPANY SHALL BE UL LISTED (UJUS).
21. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER'S SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
22. SMOKE DETECTOR SHALL NOT BE ANY CLOSER THAN 1 FOOT FROM FIRE SPRINKLERS OR 3 FEET FROM ANY SUPPLY DIFFUSER. IN THE AREA OF CONSTRUCTION OR WHERE POSSIBLE DAMAGE/CONTAMINATION COULD OCCUR ON NEWLY INSTALLED FIRE ALARM DEVICES, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER. DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO FINAL CLEAN-UP BY ALL TRADES SHALL BE CLEANED OR REPLACED IN ACCORDANCE WITH CFC, SECTION 907. CLEANING OR REPLACEMENT OF DEVICES THAT WERE MOUNTED AT THE REQUEST OF THE CONTRACTOR WILL NOT BE PERFORMED WITHOUT WRITTEN AUTHORIZATION THAT ASSUMES FINANCIAL RESPONSIBILITY FOR COSTS INCURRED. TESTING OF DETECTORS SHALL BE PERFORMED PER NFPA 72, SECTION 14.4.5.3 AND CFC, SECTION 907.8.4.
23. PER CBC, SECTION 11B-309 ACTIVATION OF INITIATING DEVICE SHALL NOT REQUIRE MORE THAN 5 LBS. (22.2N) OF FORCE OR REQUIRE TIGHT GRASPING PINCHING, OR TWISTING OF WRIST.
24. THE SYSTEM SHALL CONFORM TO CALIFORNIA CODE OF REGULATIONS (CCR) TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
25. THE FIRE ALARM SYSTEM SHALL COMPLY WITH NFPA 72, SECTIONS 18.4 AND 24.4 FOR GENERAL REQUIREMENTS, INTELLIGIBILITY, AUDIBILITY, TONES, ETC.

26. A DEDICATED 120V BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION AND BE LABELED AS FOLLOWS:
- A. "FIRE ALARM" FOR FIRE ALARM SYSTEMS
- B. "EMERGENCY COMMUNICATIONS" FOR EMERGENCY COMMUNICATION SYSTEMS, OR
- C. "FIRE ALARM/ECOS" FOR COMBINATION FIRE ALARM AND COMMUNICATIONS SYSTEMS.
27. WHERE A DETECTOR IS INSTALLED ABOVE THE CEILING, THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED. FOR DUCT SMOKE DETECTORS A REMOTE TEST STATION SHALL BE PROVIDED. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PLACES TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC.
28. THE "END OF LINE RESISTANCE" OF EACH CIRCUIT SHALL BE TESTED IN THE PRESENCE OF THE I.O.R. AND SHALL NOT EXCEED THE LISTED MANUFACTURER'S MINIMUM OPERATING VOLTAGE.
29. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE LISTED FOR WET LOCATIONS, IN ACCORDANCE WITH CEC, SECTIONS 110.1.1, 300.5(B), 300.6, 300.9, 310.10, AND 760.3(D).
30. FIRE ALARM SYSTEM IS A FULLY AUTOMATIC SYSTEM. CONTRACTOR TO UTILIZE AREA COVERAGE SMOKE DETECTORS AND ADDRESSABLE CONTROL RELAYS FOR THE SHUTDOWN AND/OR CLOSURE OF HVAC UNITS AND COMBINATION SMOKE/FIRE DAMPERS. CONTROL RELAYS TO BE LOCATED WITHIN 3FT OF THE CONTROLLED CIRCUIT OR APPLIANCE PER NFPA 72, SECTION 21.2.4.
31. PROVIDE (VIA CHANGE ORDER PROCESS) APPROPRIATE MANUFACTURER PRODUCT DATA SHEETS AND APPLICABLE CSFM LISTINGS FOR ALL SUBSTITUTED MANUFACTURER'S MATERIAL, EQUIPMENT OR APPLIANCES, TO DSA PRIOR TO START OF INSTALLATION.
32. CONTRACTOR SHALL PROVIDE FIRE WATCH FOR ALL OCCUPIED AREAS OF WORK WHERE THE REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR THE DURATION OF THE SYSTEM OUTAGE. FIRE WATCH AND SYSTEM/EQUIPMENT SHALL BE PER CFC, SECTION 901.7.
33. ALL MEMBRANE AND THROUGH-PENETRATIONS OF RATED ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED FIRE STOP SYSTEM AS IDENTIFIED IN CBC, CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
34. CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.

FIRE ALARM SYSTEM TESTING NOTES:

1. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
2. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
3. DISTRICT SHALL PROVIDE A CERTIFIED IMPARTIAL FIRE ALARM INSPECTOR. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
4. 100% OF THE SYSTEM IN CONTRACT WILL BE TESTED AND INSPECTED WITH THE CONTRACTOR OR CONTRACTOR'S SUB AND DISTRICT'S ETS STAFF MEMBER PRESENT. INSPECTION WILL INCLUDE, BUT NOT BE LIMITED TO, REMOVING STROBES/HORNS TO CHECK FOR "T-TAPS", REMOVING J-BOX COVERS TO CHECK WIRE GAGE AND SPLICES.
5. FOLLOW ALL REQUIREMENTS AND INSTRUCTIONS PROVIDED BY MANUFACTURER UPON INSTALLATION OF MANUFACTURER'S PRODUCTS AND DEVICES.
6. PRIOR TO REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE FIRE CODE OFFICIAL THAT THE SUBJECT FIRE PROTECTION SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH APPROVED PLANS AND HAS BEEN TESTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE APPROPRIATE INSTALLATION STANDARD. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT. ANY DEVIATIONS FROM THE DESIGN STANDARDS SHALL BE NOTED AND COPIES OF THE APPROVALS FOR SUCH DEVIATIONS SHALL BE ATTACHED TO THE WRITTEN STATEMENT. (CFC, SECTION 901.2.1)
7. UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO DSA/I.O.R. CONTRACTOR SHALL SUPPLY NECESSARY TESTING EQUIPMENT, INCLUDING A "SOUND LEVEL METER" TO CHECK ACCEPTABLE NOISE LEVELS OF AUDIBLE DEVICES. PROVIDE TEST RESULTS PER NFPA 72 TO ARCHITECT, D.S.A., I.O.R. AND TO LOCAL FIRE AUTHORITY, PER CFC, SECTION 907.8.2.
8. INSPECTION, TESTING AND MAINTENANCE SHALL BE IN COMPLIANCE WITH NFPA 72, CHAPTER 14, REACCEPTANCE TESTING SHALL BE IN COMPLIANCE WITH NFPA 72, SECTION 14.4.2.
9. THE LOCAL FIRE AUTHORITY SHALL BE NOTIFIED FOR TESTING. THE FIRE AUTHORITY SHALL BE PRESENT AND SHALL BEAR WITNESS FOR TESTING PROCEDURES. DOCUMENTATION FOR WHETHER THE FIRE AUTHORITY WAS PRESENT AND WITNESSED TESTING SHALL BE DOCUMENTED AS PART OF TESTING PROCEDURES DOCUMENTATION.
10. PRIOR TO COMPLETION OF FIRE ALARM SYSTEM THE TWO WAY COMMUNICATION SYSTEM SHALL BE TESTED AND CERTIFIED VIA NFPA 72 EMERGENCY COMMUNICATION SYSTEM SUPPLEMENTARY RECORD OF INSPECTION AND TESTING FORM.
11. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED RECORD OF COMPLETION PER NFPA 72, FIGURE 7.8.2(A) THROUGH (I) AS APPLICABLE. A COMPLETE RECORD OF THE TESTS AND OPERATIONS OF EACH SYSTEM SHALL BE KEPT UNTIL THE NEXT TEST AND FOR ONE YEAR AFTER PER NFPA 72, SECTION 7.7.1.
12. FIRE ALARM SYSTEM DOCUMENTS SHALL BE HOUSED IN THE DOCUMENT CABINET. THE DOCUMENT CABINET SHALL BE INSTALLED AT THE SYSTEM CONTROL UNIT OR AT ANOTHER APPROVED LOCATION AT THE PROTECTED PREMISES AS REQUIRED BY NFPA 72, SECTION 7.7.2.
13. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CFC, SECTION 907.6.6. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A FIRE ALARM SYSTEM MONITORING CONTRACT.

SEQUENCE OF OPERATIONS

ACTION	DEVICE					
	120 VOLT POWER FAILURE	SYSTEM TROUBLE- WIRING FAULT, SYSTEM LOW BATTERY, CIRCUIT SHORT	MANUAL STATION	AREA SMOKE DETECTOR	AREA air ATTC HEAT DETECTOR	
SOUND CONTROL PANEL TROUBLE BUZZER	YES	YES	NO	NO	NO	
SOUND CONTROL PANEL SUPERVISORY BUZZER	NO	NO	NO	NO	NO	
SOUND CONTROL PANEL ALARM BUZZER	NO	NO	YES	YES	YES	
ACTIVATE RELAY FOR CENTRAL STATION MONITORING	YES	YES	YES	YES	YES	
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (ALARM)	NO	NO	YES	YES	YES	
ANNUNCIATE AT FIRE ALARM CONTROL PANEL (TROUBLE)	YES	YES	NO	NO	NO	
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (ALARM)	NO	NO	YES	YES	YES	
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (TROUBLE)	YES	YES	NO	NO	NO	
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES	
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT CAMPUS	NO	NO	YES	YES	YES	
ACTIVATE AUDIBLE NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES	
ACTIVATE VISUAL NOTIFICATION ALARM SIGNAL THROUGHOUT BLDG	NO	NO	YES	YES	YES	
SHUTDOWN ASSOCIATED AIR HANDLING (HVAC) THROUGHOUT BUILDING	NO	NO	NO	YES	YES	
NOTIFY FIRE DEPARTMENT VIA MONITORING STATION	NO	NO	YES	YES	YES	
SOUND AN ALERT TONE TEMPORAL 3	NO	NO	YES	YES	YES	

FIRE ALARM SYMBOL LEGEND

SYMBOL	DESCRIPTION	MODEL	MANUFACTURER	BACKBOX	MOUNTING HEIGHT	C.S.F.M. NUMBER
FACP	EXISTING FIRE ALARM CONTROL PANEL (A#04-112414)	NF52-3030	NOTIFIER	EXISTING	EXISTING	EXISTING
FATC	FIRE ALARM TERMINAL CABINET	N/A	BY ELECTRICIAN	18"SQ. x 6"D U.N.O. (RED)	VERIFY IN FIELD	N/A
FAPS	FIRE ALARM POWER SUPPLY	FCPS-24S6	NOTIFIER	PROVIDED	5'-6" A.F.F. TO TOP	7315-0028:0225
SD	AREA SMOKE DETECTOR (ADDRESSABLE PHOTO)	FSP-951	NOTIFIER	4S DEEP BOX	CEILING MOUNTED	7272-0028:0503
HD	AREA HEAT DETECTOR (ADDRESSABLE FIXED 135°F)	FST-951	NOTIFIER	4S DEEP BOX	CEILING MOUNTED	7270-0028:0502
HPCD	HORN/STROBE CEILING	PC2WLBD (WHITE)	SYSTEM SENSOR	4S DEEP BOX w/ 4S EXTENSION	CEILING MOUNTED	7135-1653:0526
FWP	OUTDOOR WEATHERPROOF HORN (WALL)	HR(K) (RED)	SYSTEM SENSOR	WEATHERPROOF MOUNTING BOX	WALL @ 90" A.F.F. TO TOP OF LENS	7135-1653:0189
Q	FIRE ALARM JUNCTION BOX	N/A	BY ELECTRICIAN	4S BOX, U.N.O.	VERIFY IN FIELD	N/A
A.F.F.	ABOVE FINISHED FLOOR		N/A	NOT APPLICABLE		
E.O.L.	END OF LINE RESISTOR		U.N.O.	UNLESS NOTED OTHERWISE		
(E)	EXISTING DEVICE		VL	VERIFY LOCATION IN FIELD		
F.B.O.	FURNISHED BY OTHERS		WP	WEATHERPROOF DEVICE		
TSP	TWISTED SHIELDED PAIR		CD	INDICATED CANDELA RATING OF STROBE DEVICE		

GENERAL FIRE ALARM SYMBOL LIST NOTES:

1. CONFIRM NOTIFICATION DEVICE COLOR (WHITE OR RED) WITH ARCHITECT PRIOR TO ANY ORDER OR INSTALLATION. COLOR TO BE INDICATED IN SHOP DRAWING SUBMITTAL.
2. NUMBER ADJACENT TO VISUAL DEVICES INDICATES MINIMUM CANDELA RATING OF STROBE DEVICE.

WIRING LEGEND

WIRE DESIGNATION	WIRE IN CONDUIT	WIRE IN CONDUIT UNDERGROUND/WET LOC.	UNDERGROUND/WET WIRE DESIGNATION
INITIATING CIRCUITS Z	2 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	INITIATING CIRCUITS ZU
POWER CKT. P	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	POWER CKT. PU
NETWORK CONTROL C	2 CONDUCTOR #12 THHN STRANDED	2 CONDUCTOR #12 STRANDED TYPE THWN	NETWORK CONTROL CU
ANNUNCIATOR A	4 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	4 CONDUCTOR #18 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	ANNUNCIATOR DU
AUDIBLE LOOP B	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	2 CONDUCTOR #18 FPL TWISTED/ SHIELDED W/OVERALL JACKET	AUDIBLE LOOP BU
NOTIFICATION CKT. N	2 CONDUCTOR #12 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	2 CONDUCTOR #12 FPL TWISTED/ UNSHIELDED W/OVERALL JACKET	NOTIFICATION CKT. NU
S-BUS S	4 CONDUCTOR #16 FPLR (2 PAIR)	4 CONDUCTOR #16 FPLR (2 PAIR)	S-BUS SU

NOTE:

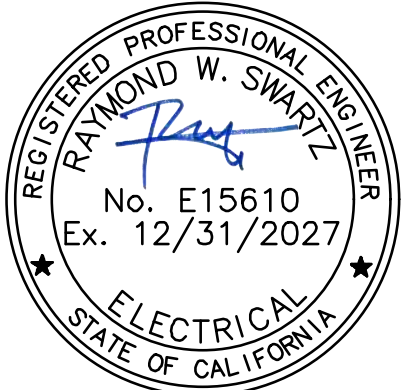
1. ALL WIRE TO BE CLASS 'B' PATHWAY SURVIVAL LEVEL 1.
2. ALL CABLING TO BE WEST PENN OR APPROVED EQUAL.
3. COLOR CODE ALL FIRE ALARM CONDUCTORS PER DISTRICT STANDARDS. VERIFY COLOR SCHEMES PRIOR TO ORDERING FIRE ALARM CONDUCTORS.

PLAN REVIEW REQUIREMENTS AND APPLICABLE CODES AND STANDARDS

- 1.0 FIRE ALARM PLAN REVIEW
- A. FIRE ALARM PLAN REVIEW
1. AS PART OF THE FIRE ALARM PLAN REVIEW, PLANS AND SPECIFICATIONS FOR THE FIRE ALARM SYSTEM HAVE BEEN INCLUDED FOR REVIEW AND COMMENT BY THE DIVISION OF THE STATE ARCHITECT, FIRE & LIFE SAFETY.
2. THE FLOOR PLANS AND SPECIFICATIONS INCLUDE THE FOLLOWING : LOCATIONS OF ALL ALARM-INITIATING AND SIGNALING DEVICES, CONTROL AND TROUBLE SIGNALING EQUIPMENT (FIRE ALARM CONTROL PANEL, BUILDING ANNUNCIATION (FIRE ALARM ANNUNCIATOR).
- B. FIRE ALARM COMPONENTS
1. PROVIDE CALIFORNIA STATE FIRE MARSHAL LISTING SHEETS AND U.L. LISTING NUMBERS FOR EACH COMPONENT.
2. EQUIPMENT POWER CONNECTIONS.
3. RISER DIAGRAM SHOWING EACH COMPONENT.
4. VOLTAGE DROP CALCULATIONS.
5. POWER CONNECTIONS TO APPLICABLE COMPONENTS.
6. WIRE AND/OR CABLING TYPES AND SIZES.
7. PROVIDE CATALOG DATA SHEETS FOR ALL FIRE ALARM SYSTEM COMPONENTS.
8. CONTRACTOR TO FURNISH STATEMENT OF COMPLIANCE BEFORE REQUESTING FINAL APPROVAL OF INSTALLATION IN ACCORDANCE WITH CFC, SECTION 901.2.1.
9. A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE PROJECT INSPECTOR AND, IF APPLICABLE, LOCAL FIRE AUTHORITY.
10. THE INSTALLER SHALL SUPPLY THE OWNER WITH A WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS BUILT DRAWINGS AND EQUIPMENT SPECIFICATIONS. AS BUILT RECORDS SHALL BE MAINTAINED ON PREMISES FOR A MINIMUM OF THREE YEARS PER CFC, SECTION 901.6.3.
- C. SCOPE OF WORK
1. INSTALL A FULLY AUTOMATIC, ADDRESSABLE, FIRE ALARM SYSTEM WITHIN ALL BUILDINGS IN SCOPE OF PROJECT AS DEFINED PER CFC, SECTION 907.2.3 AND NFPA 72.
2. FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE U.L. LISTED AS ULFX (CENTRAL STATION) PER CFC, SECTION 907.6.6.3.
- 2.0 LIST OF CURRENT CALIFORNIA CODE OF REGULATIONS
- APPLICABLE CODES AS OF APRIL 6, 2025
- 2025 California Administrative Code (CAC), Part 1, Title 24, C.C.R.
- 2022 California Building Code (CBC), Volumes 1 & 2, Part 2, Title 24, C.C.R.
- 2022 California Electrical Code (CEC), Part 3, Title 24, C.C.R.
- 2022 California Mechanical Code (CMC), Part 4, Title 24, C.C.R.
- 2022 California Plumbing Code (CPC), Part 5, Title 24, C.C.R.
- 2022 California Energy Code, Part 6, Title 24, C.C.R.
- 2022 California Historical Building Code, Title 24, C.C.R.
- 2022 California Fire Code (CFC), Part 9, Title 24, C.C.R.
- 2022 California Existing Building Code (CEBC), Part 10, Title 24, C.C.R.
- 2022 California Green Building Standards Code (CALGreen), Part 11, Title 24, C.C.R.
- 2022 California Referenced Standards Code, Part 12, Title 24, C.C.R.
- Title 19 C.C.R., Public Safety, State Fire Marshal Regulations
- LIST OF FEDERAL CODES AND STANDARDS (if applicable)
- Americans with Disabilities Act (ADA), Title II or Title III
- For Title II: Uniform Federal Accessibility Standards (UFAS) or ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)
- For Title III: ADA Standards for Accessible Design (Appendix A of 28 CFR Part 36.)
- Americans with Disabilities Act Accessibility Guidelines (ADAAG) (with amendments through September 2002)
- PARTIAL LIST OF APPLICABLE NFPA STANDARDS:
- | | | |
|---------|--|--|
| NFPA 72 | National Fire Alarm and Signaling Code (CA Amended) | 2022 Edition (Note: See UL Standard 1971 for "Visual Devices") |
| UL 38 | Manual Operating Signal Boxes | 1999 Edition |
| UL 268 | (with revisions through February 2, 2005 as amended) | |
| UL 464 | Smoke Detectors for Fire Alarm Systems | 2016 Edition |
| | Audible Signal Appliances | 2003 Edition |
| | (with revisions through October 10, 2003 as amended) | |
| UL 521 | Heat Detectors for Fire Protective Signaling Systems | 1999 Edition |
| | (with revisions through July 20, 2005 as amended) | |
| UL 864 | Control Units for Fire Protective Signaling Systems | 2014 Edition |
| | (with revisions through December 2018) | |
- For a list of applicable standards, including California amendments to the NFPA Standards, refer to CBC Chapter 35 and CFC Chapter 80.

FIRE ALARM GENERAL NOTES

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



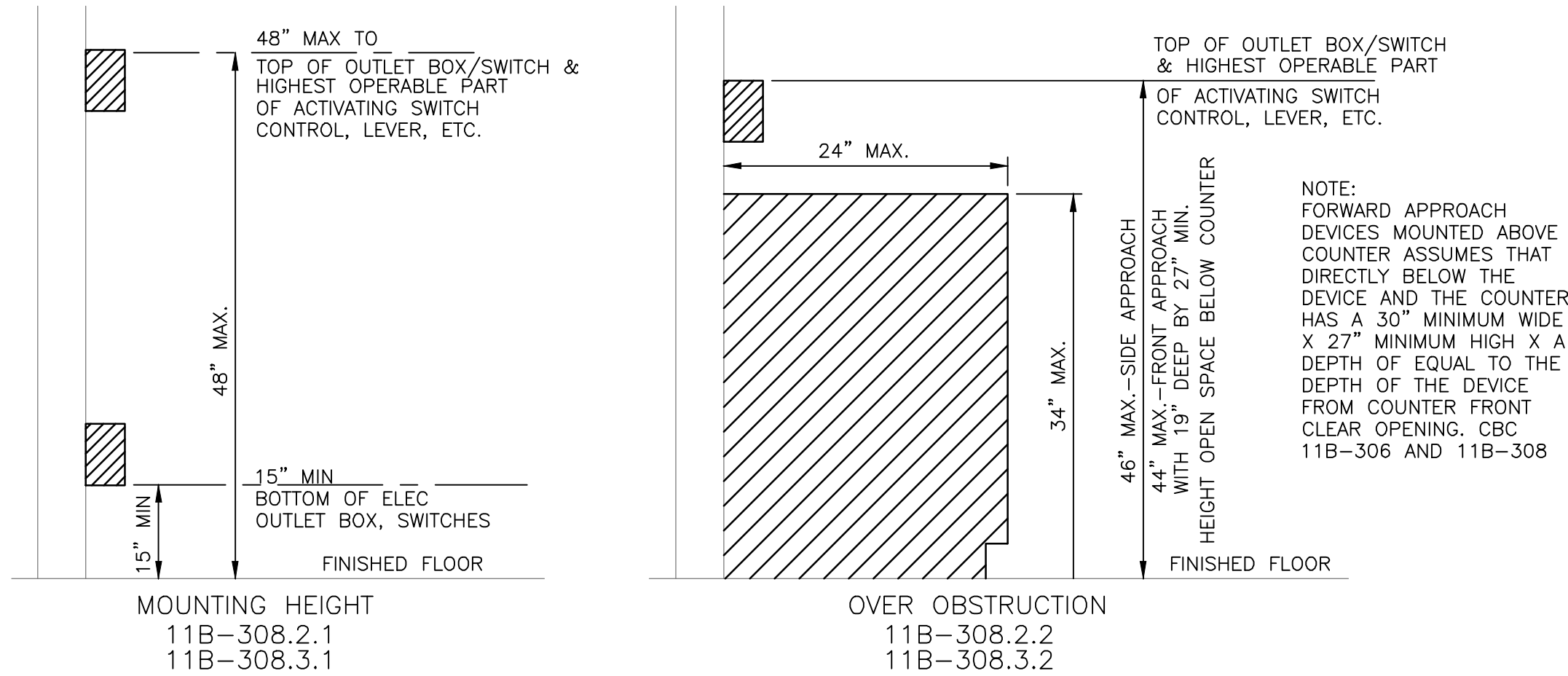
SEALS



PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2025
DATE: DESCRIPTION

COMPLETE FIRE ALARM SUBMITTAL
AUTOMATIC, ADDRESSABLE
FIRE ALARM SYSTEM

F0.00

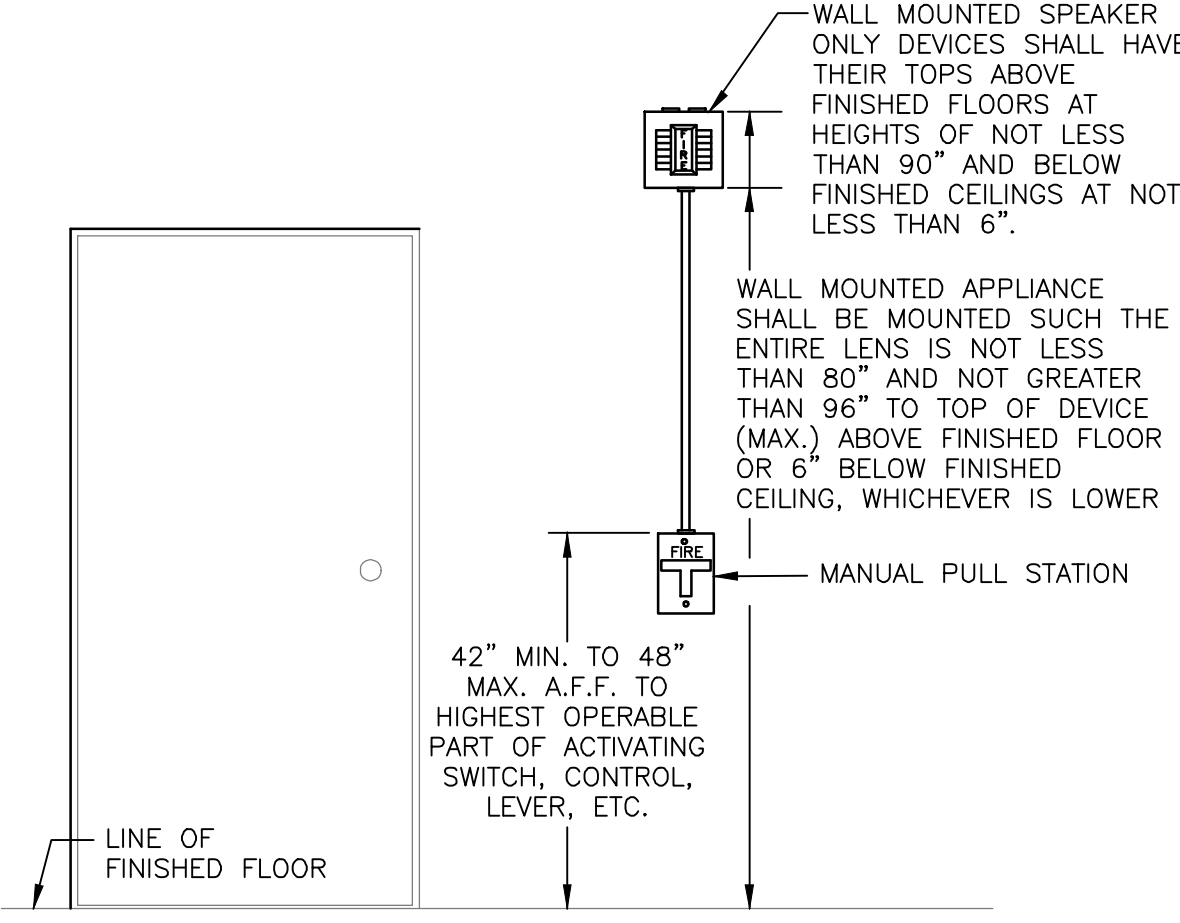


ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS & SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATIONS/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER - CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

MOUNTING HEIGHT OVER OBSTRUCTION DETAIL

SCALE: N.T.S.

9

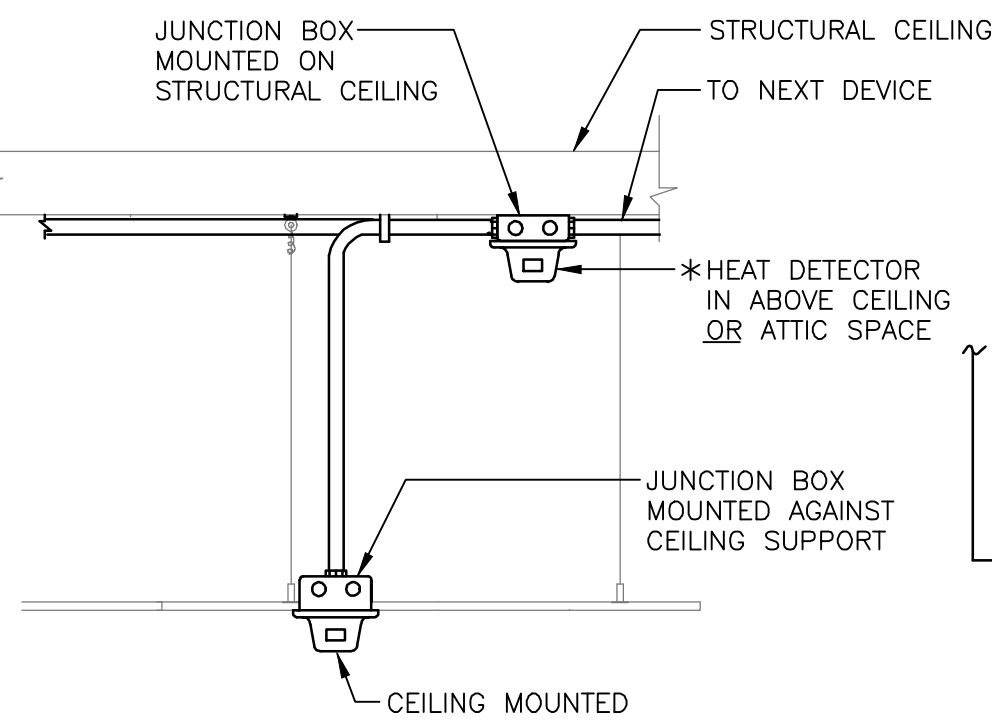


** NOTE: PER ADAAG, 4.27.4 & CBC, 11B-309 CONTROLS AND OPERATING MECHANISMS AT INITIATING DEVICE "SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5lbs (22.2N)."

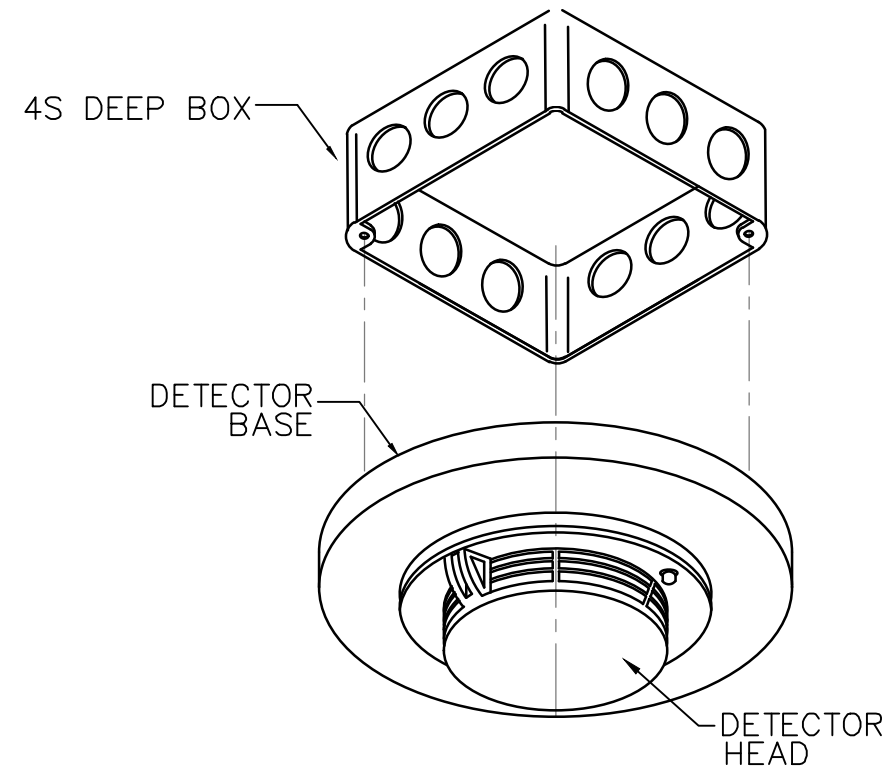
DEVICE MOUNTING DETAILS

SCALE: N.T.S.

8



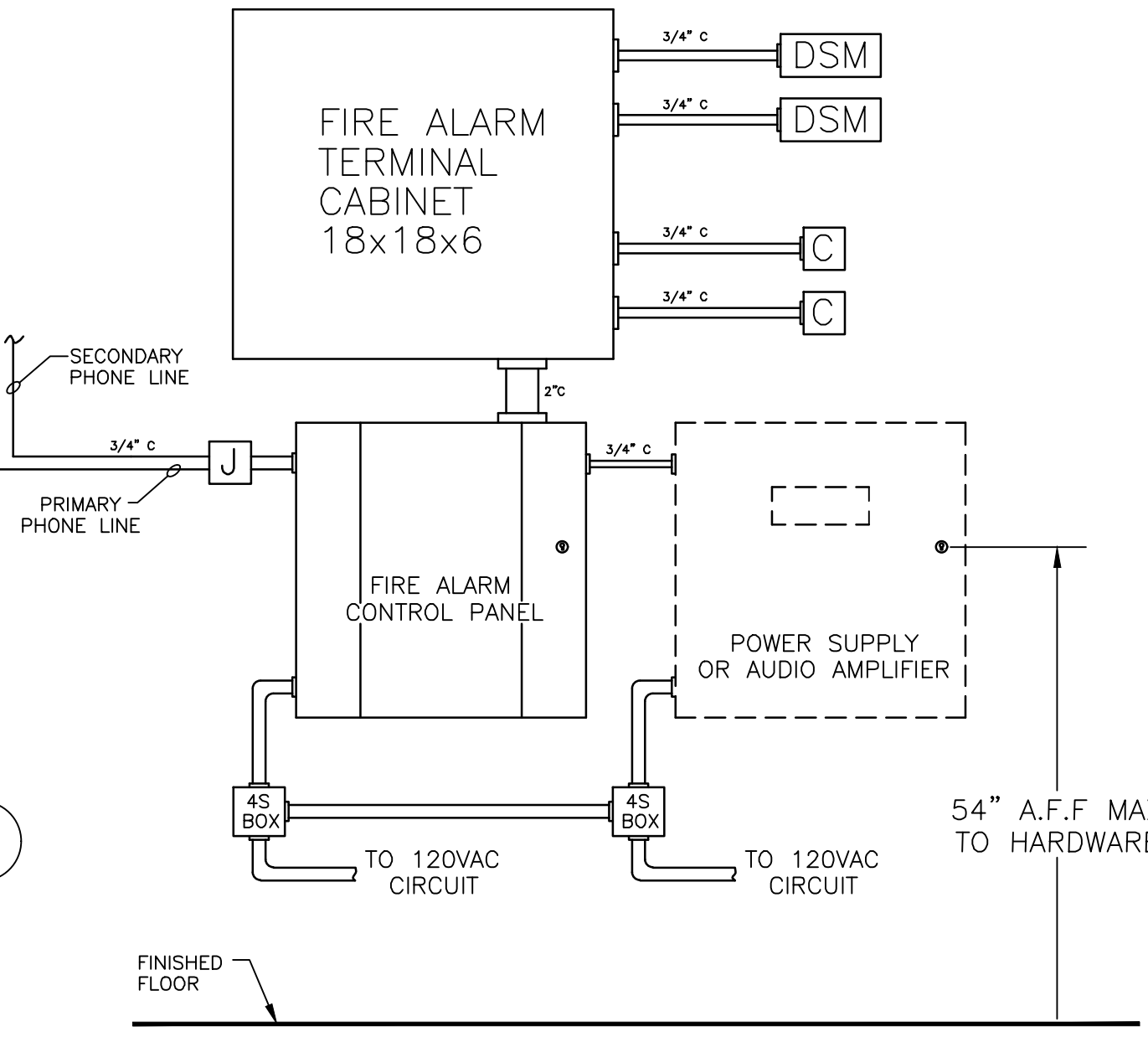
* - TEMPERATURE SETTING OF HEAT DETECTOR DEVICE TO BE SET AT MINIMUM OF 20°F. ABOVE THE MAXIMUM EXPECTED TEMPERATURE OF THE SPACE INSTALLED PER NFPA 72, 17.6.2.3.



DETECTOR MOUNTING DETAIL

SCALE: N.T.S.

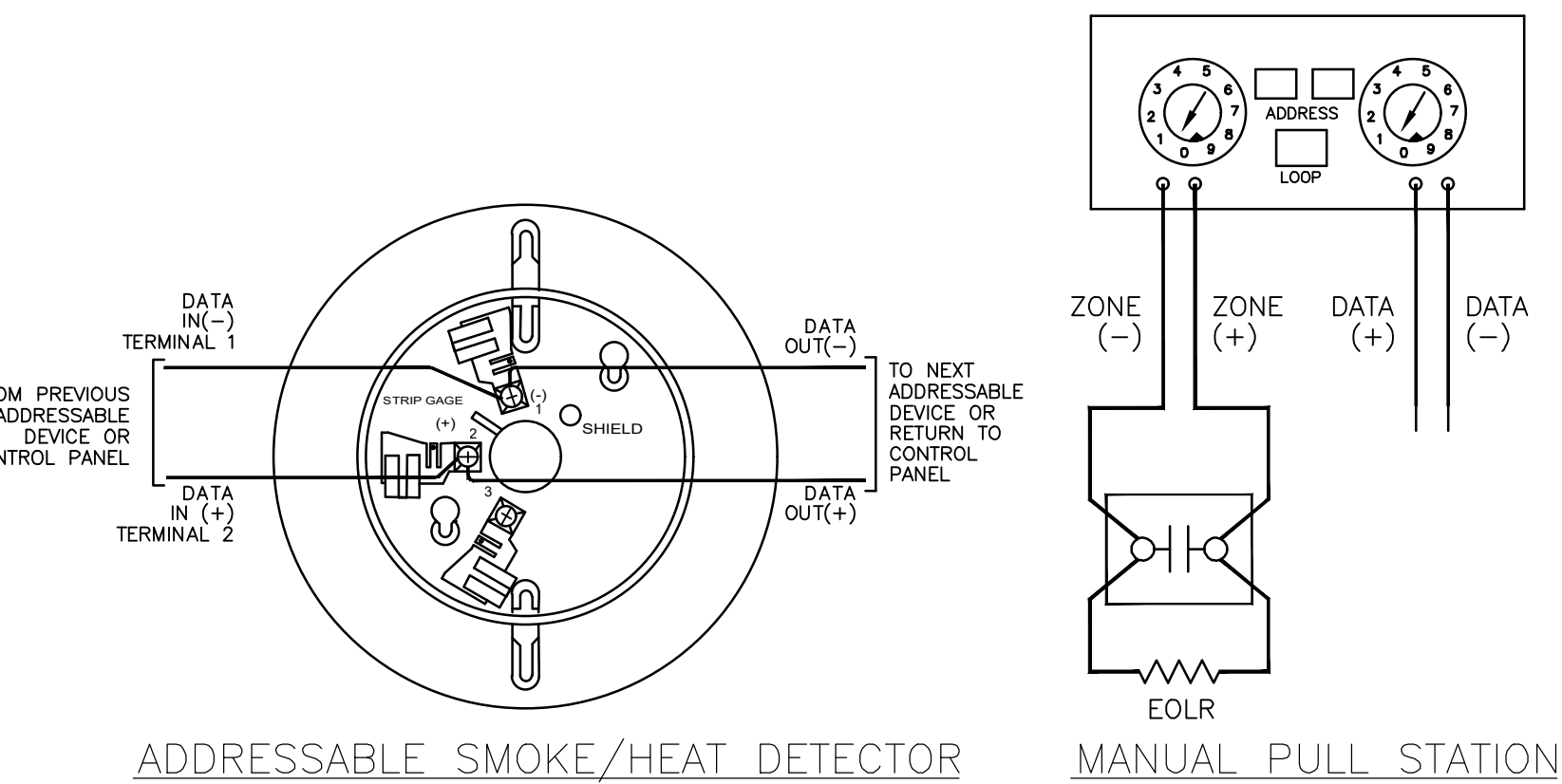
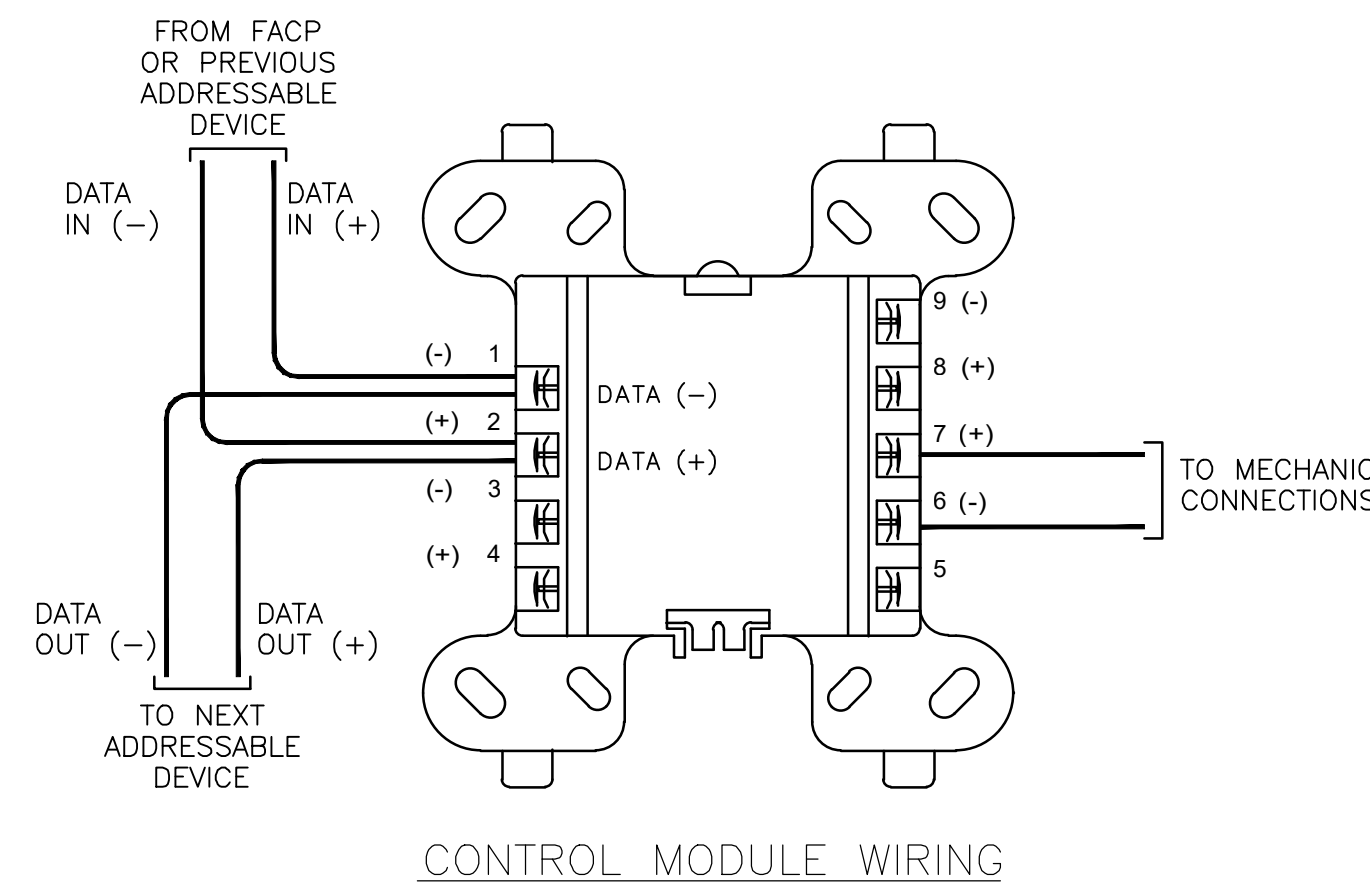
6



FIRE ALARM PANEL/POWER SUPPLY MOUNTING ELEVATION

SCALE: N.T.S.

5



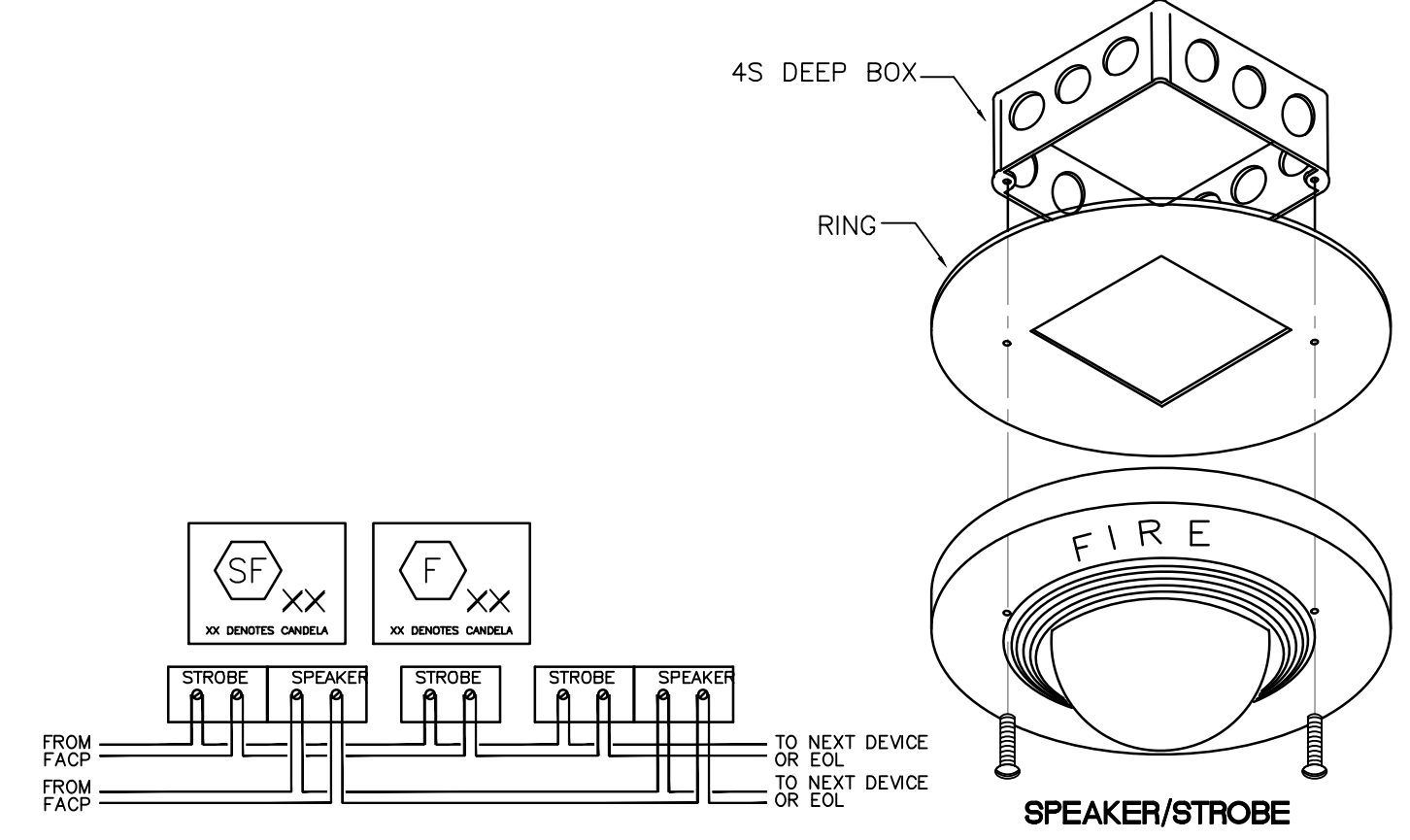
DEVICE WIRING DETAILS

SCALE: N.T.S.

4

COMPLETE FIRE ALARM SUBMITTAL

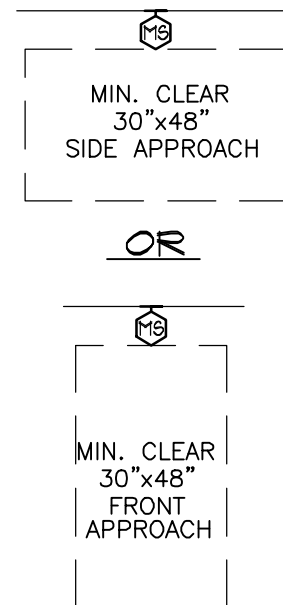
AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM



CEILING MTD. AUDIBLE/VISUAL

SCALE: N.T.S.

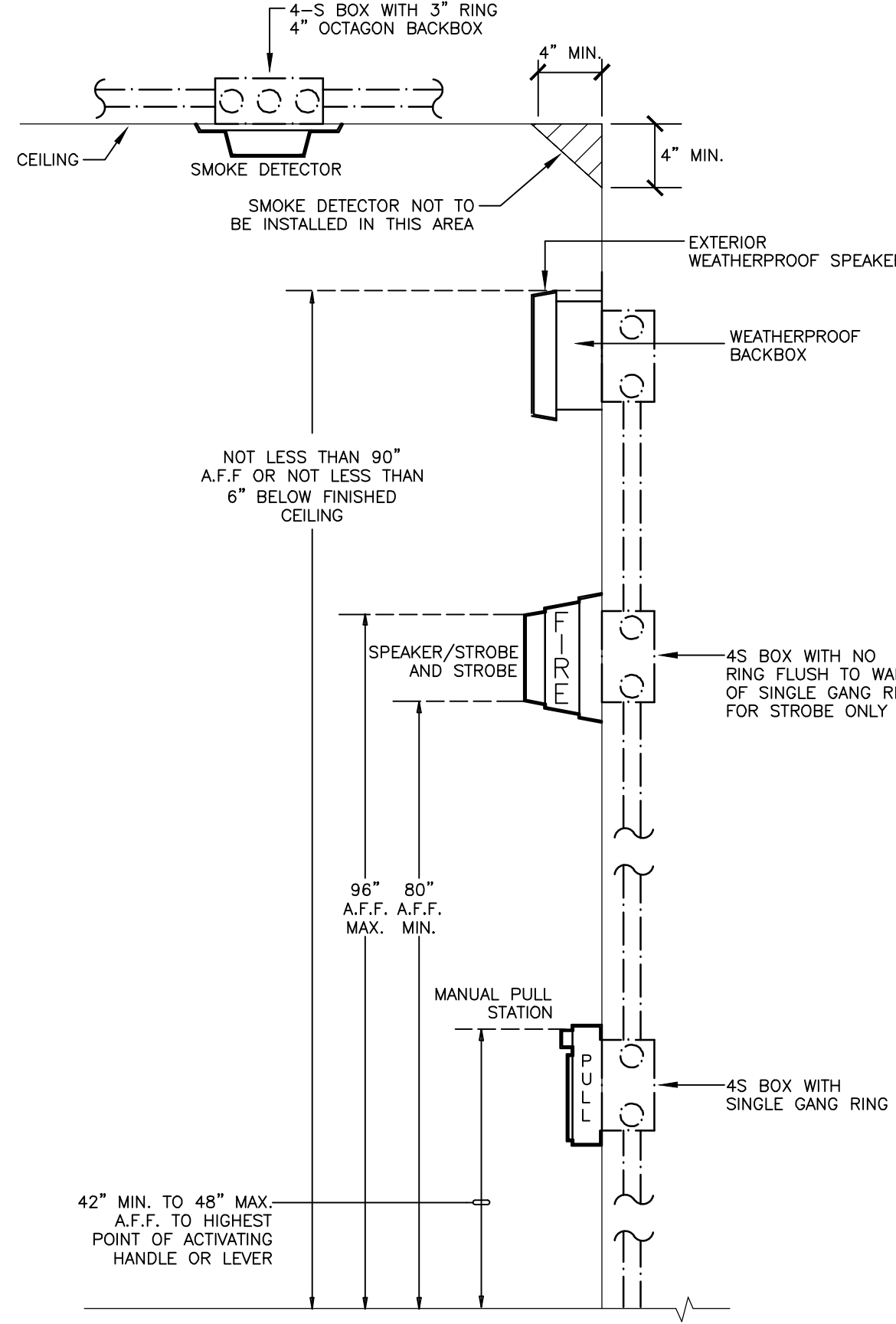
3



PULL STATION DETAIL

SCALE: N.T.S.

2



GENERAL NOTES:

- THE ENTIRE LENS OF STROBE LIGHTS MUST BE BETWEEN 80" AND 96" ABOVE FLOOR FINISH. (NFPA 72, 18.5.5)
- MANUAL FIRE ALARM BOXES SHALL BE INSTALLED IN ACCORDANCE WITH CFC, SECTIONS 907.4 THROUGH 907.5.
- WHEN APPLICABLE, MANUAL FIRE ALARM BOXES SHALL BE LOCATED NOT MORE THAN 5 FEET FROM THE ENTRANCE TO EACH EXIST. ADDITIONAL MANUAL FIRE ALARM BOXES SHALL BE LOCATED SO THAT TRAVEL DISTANCE TO THE NEAREST BOX DOES NOT EXCEED 200 FEET. (CFC, 907.4.2.1)

MOUNTING HEIGHT DETAIL

SCALE: N.T.S.

1

SECTION A-A

PENETRATION THRU GYPSUM BOARD WALL

NO SCALE

System No. W-1-1252

January 22, 2012

1. Wall Assembly - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Details in the UL Fire Resistance Directory and shall include the following construction features:

- Steel - Wall framing may consist of steel channel studs. Steel studs to be min 3-1/2 in. (89 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.
- Gypsum Board - Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm). The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant - One metallic pipe, conduit or tube to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe, conduit or tube and periphery of opening shall be min 5 in. (127 mm) for sizes of penetrants A, B, C and E and may be used to be rigidly supported on both sides of wall assembly.

- Steel Pipe - Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- Iron Pipe - Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
- Conduit - Nom 4 in. (102 mm) diam (or smaller) rigid steel conduit.
- Conduit - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic conduit.
- Copper Tubing - Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
- Copper Pipe - Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Fill Void or Cavity Material - Sedant - 1. Fill material applied within annulus, flush with both surfaces of wall. Type and thickness of sedant is dependent on F and FH Ratings as indicated in Table below. An additional 1/2 in. (13 mm) diameter bead of sedant applied at penetrant/gypsum board interface at point contact location on both surfaces of wall.

F, FH RATINGS (HR)	SEALANT TYPE	SEALANT THICKNESS, IN. (MM)
1/2	PS-ONE, PS-ONE MAX OR CP-608	5/16 (13)
2	PS-ONE, PS-ONE MAX OR CP-608	1 (25)
4	PS-ONE, PS-ONE MAX	1 (25)

*Bearing the UL Classification Mark

SECTION A-A

PENETRATION THRU CONCRETE WALL OR FLOOR

NO SCALE

System No. C-A-1630

January 22, 2012

1. Floor or Wall Assembly - 1. See Configuration A above. Reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete as specified in the Table in Item 4 below. Wall may also be constructed of any UL Classified Concrete Block*. Max diam of sleeve opening is 32 in. (813 mm). See Concrete Blocks (CA27) category in the Fire Resistance Directory for names of manufacturers.

2. Steel Sleeve (Conduit) - Nom 32 in. (813 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast or grouted into floor or wall assembly, flush with both surfaces of floor or wall. As an option, sleeve may extend max 2 in. above top surface of floor or beyond one or both surfaces of wall. Steel sleeves may be used in 2 and 3 hr F Rated systems only.

3. Through Penetrant - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. See Table in Item 4 for sizes of penetrants A, B, C and E and may be used. See Item 3C below for size of conduit that may be used. The annular space shall be as specified in Table in Item 4 below. The following types and sizes of metallic pipes, conduits or tubing may be used:

- Steel Pipe - Schedule 10 (or heavier) steel pipe.
- Iron Pipe - Cast or ductile iron pipe.
- Conduit - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) steel conduit.
- Copper Tubing - Type L (or heavier) copper tubing.
- Copper Pipe - Regular (or heavier) copper pipe.

4. Firestop System - The F Rating of the system is dependent upon the type of concrete, thickness of concrete, annular space, fill and packing material thickness, packing material density and penetrant size as shown in the Table below. Rating applies to annular spaces of min 0 in. (point contact) to max. 1-7/8 in. and to Configuration A detail only.

F RATING	MIN THICK CONCRETE IN.	ANNULAR SPACE MIN THICK CONCRETE IN.	MIN DENSITY PACKING MAT. PCF (KG/M ³)	MIN THICK CONCRETE IN.	MIN THICK CONCRETE IN.	PENETRANT SIZE (IN. (MM))	MIN THICK CONCRETE IN.
1	5-1/2 (140)	0 TO 1-7/8 (0 TO 44)	5 (127)	4 (64)	1/2 (13)	4 (102)	16 (406)
2	4-1/2 (114)	0 TO 2-7/8 (0 TO 71)	4 (64)	1/4 (6)	5 (127)	30 (762)	
4	5-1/2 (140)	0 TO 1-7/8 (0 TO 44)	5 (127)	4 (64)	1/2 (13)	4 (102)	8 (203)

A. Packing Material - Min 4-1/4 or 5 in. (108 or 127 mm) thickness of min 4.0 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form as specified in the Table above. Packing material to be recessed from top surface of floor or top end of sleeve, or from both surfaces of wall or ends of sleeve, as required to accommodate the required thickness of fill material. For hollow-core floor applications as shown in Configuration B, one half of the required thickness of mineral wool packing material shall be recessed flush with the bottom surface of the floor and the remaining half of the mineral wool packing material installed at the top of the opening and recessed from the top surface of the floor to accommodate the required thickness of the fill material.

B. Fill Void or Cavity Material - Sedant - Min 1/4 or 1/2 in. (6 or 13 mm) thickness of fill material as specified in the Table above applied within the annulus, flush with top surface of floor or top end of sleeve, or with both surfaces of wall or ends of sleeve. At the point contact location between pipe and concrete or sleeve, a min 1/2 in. (13 mm) diam bead of fill material shall be applied. As an option, for hollow-core floors, the packing material (Item 4A) on the bottom surface of the floor may be recessed to accommodate a 1/4 in. (6 mm) depth of fill material installed flush with bottom surface of floor.

HLT CONSTRUCTION CHEMICALS, DIV OF HILTI INC. --- CFS-S SL G2 (floors or walls) and CFS-S SL SL (floors only)

*Bearing the UL Classification Mark

SECTION A-A

PENETRATION THRU CONCRETE FLOOR

NO SCALE

System No. C-A-1630

January 22, 2012

1. Floor or Wall Assembly - 1. Floor or Wall Assembly - Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Block*. Max diam of opening is 6 in. (152 mm). See Concrete Blocks (CA27) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrant - One metallic pipe, conduit or tubing to be centered within the firestop system. A non annular space of 3/8 in. (19 mm) is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- Steel Pipe - Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- Conduit - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.

3. Firestop System - The firestop system shall consist of the following:

- Packing or Forming Material - Optional - One of the following packing or forming materials may be used:
 - Foam Backer Rod - Foam backer rod lightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Mineral Wool Batt Insulation - Min 4 pcf (64 kg/m³), lightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - Forming Material - Forming material to be formed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
- Fill Void or Cavity Material - Putty - Min 1 in. (25 mm) thickness of putty applied within the annulus, flush with top surface of floor or with both surfaces of wall.

HLT CONSTRUCTION CHEMICALS, DIV OF HILTI INC. --- CP 618 Firestop Putty Stick

*Bearing the UL Classification Mark

THROUGH RATED WALL OR FLOOR PENETRATIONS (U.L. LISTINGS)

SCALE: N.T.S.

7

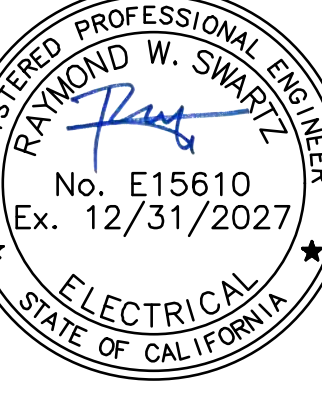
wsp

WSP USA
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 wsp.com
Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

CONSULTANT

FIRE ALARM DETAILS

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313

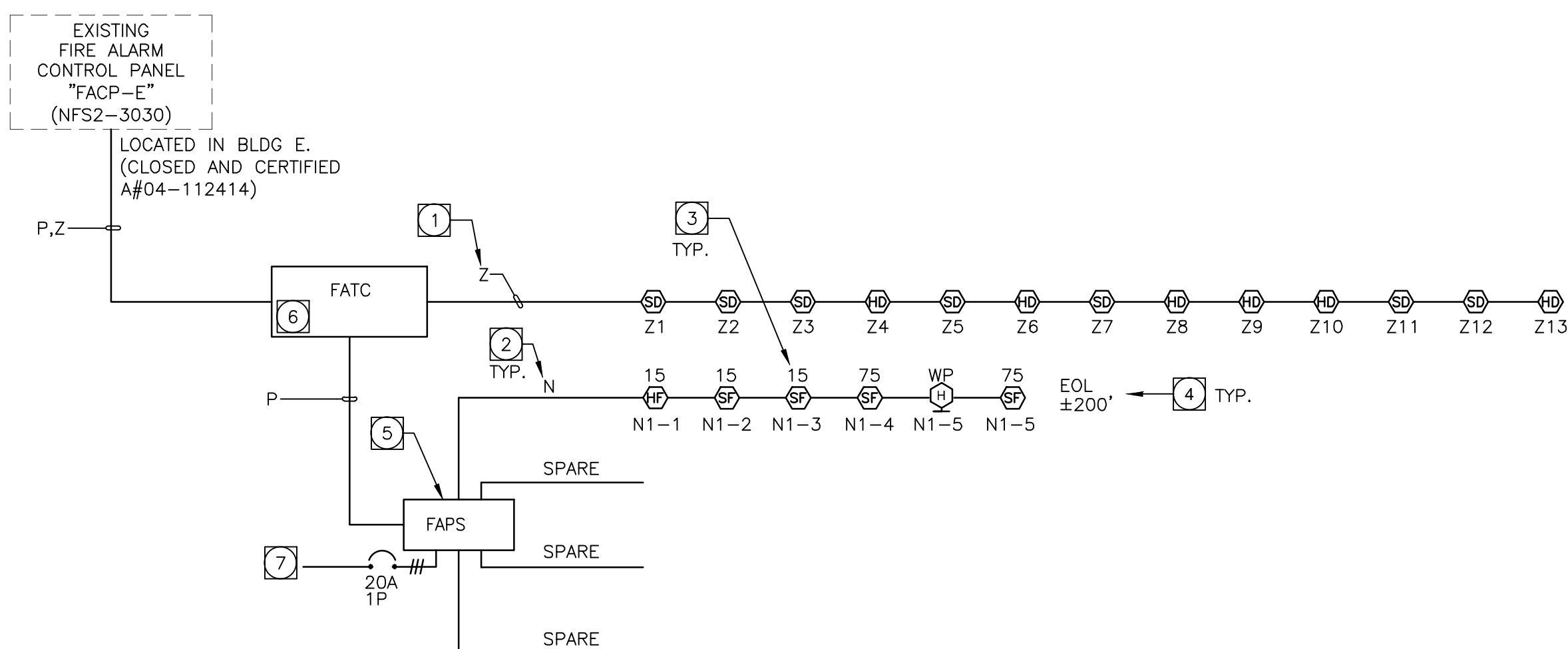


SEALS



PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET STATUS: 11/17/2025
DATE: 11/17/2025
DESCRIPTION: F0.01

F0.01



FIRE ALARM RISER DIAGRAM

BATTERY SIZING CALCULATION					
PROJECT NAME:		TERRACE VIEW ES			
PANEL LOCATION		BLDG E ELEC RM			
DATE PERFORME		November 19, 2025			
<u>FACP-E</u>					
QTY.	DEVICE NAME	STD-BY (AMPS)		ALARM (AMPS)	
EXISTING DEVICE LOAD					
1	EXISTING LOAD	0.1200	0.1200	0.1700	0.1700
NEW DEVICE LOAD					
7	SMOKE DETECTOR	0.0003	0.0021	0.0002	0.0014
6	HEAT DETECTOR	0.0003	0.0018	0.0003	0.0018
TOTALS =			0.1239		0.1732
STAND-BY LOAD =		0.1239		ALARM LOAD =	0.1732 AMPS
STAND-BY TIME =		60		ALARM TIME =	19 / 60 HRS
STAND-BY =		7.4340		ALARM =	0.0289 AMP HRS
TOTAL = STAND-BY		+	ALARM		
= 7.43		+	0.03		
=		7.46	Ah (AMP HRS)		
MULTIPLY BY DERATING FACTOR OF 1.2		9.33	Ah (AMP HRS)		
MINIMUM BATTERY SIZE = 9.33 AMPERE HOURS					
EXISTING (2) 22.00 Ah 12VDC BATTERIES AS REQUIRED FOR 24VDC BATTERIES					
IS ADEQUATE FOR ADDITIONAL DEVICES					

BATTERY SIZING CALC			
PROJECT NAME:		TERRACE VIEW ES	
PANEL LOCATION:		NEW TK PORTABLE	
DATE PERFORMED:		#####	
<u>FAPS</u>			
QTY.	DEVICE NAME	STD-BY (AMPS)	ALARM (AMPS)
1	POWER SUPPLY PANEL	0.0650 0.0650	0.1450 0.1450
1	HORN VP. (EXTIOR)	0.0000 0.0000	0.0210 0.0210
3	15cd HORN/STROBE (CLG)	0.0000 0.0000	0.0730 0.2190
2	75cd HORN/STROBE (CLG)	0.0000 0.0000	0.1490 0.2980
		0.0000 0.0000	0.0000 0.0000
TOTALS =		0.0650	0.6630
STAND-BY LOAD =		0.0650	ALARM LOAD = 0.6830 AMPS
STAND-BY TIME =		24 HRS	ALARM TIME = 5 MINUTES
STAND-BY = 1.56		ALARM = 0.056916667 AMP HRS	
TOTAL = STAND-BY + ALARM			
= 1.56 + 0.06			
		1.62 Ah (AMP HRS)	
MULTIPLY BY DERATING FACTOR OF 1.25 =		2.02 Ah (AMP HRS)	
OCCUPIED BATTERY SPACE =		2.02 AMPERE HOURS	
SPARE CAP & C171 =		4.98 AMPERE HOURS	
(USE (2) 7.0 AMP HOUR 12VDC BATTERY FOR 24VDC OPERATION)			

BATTERY CALCULATIONS GENERAL NOTE:

1. CONTRACTOR TO PROVIDE BATTERY MANUFACTURER DATE STAMP PER NFPA 72. TYPICAL FOR ALL CONTROL PANELS, POWER SUPPLY PANELS AND AUDIO AMPLIFIER PANELS.

VOLTAGE DROP CALCULATIONS				
DEVICE	UL MAX	TERRACE VIEW E S		
	CURRENT AMPS	NO	NOTIF. CIRCUIT	N
HORN (WP) (EXTERIOR)	0.021			0.021
HORN/STROBE (CLG) 15 CD	0.073	3		0.219
HORN/STROBE (CLG) 75 CD	0.149	2		0.298
				0.000
TOTAL CURRENT ON CIRCUIT				0.538 AMPS
TOTAL WIRE LENGTH IN FEET				200
% VOLTAGE DROP				1.74
WIRE SIZE			#12	
CIRCUIT LOCATION			FAPS	
VOLTS DROPPED				0.36

VOLTAGE DROP CALCULATIONS GENERAL NOTES:

1. THE LISTED MANUFACTURE OPERATING VOLTAGE RANGE FOR EQUIPMENT AND DEVICES ARE AS FOLLOWS:
 - DEVICES = 16 - 33 VDC (STROBES), 70.7 VDC (SPEAKERS)
 - EQUIPMENT = +24VDC FILTERED, REGULATED
 - BATTERY = 20.4 VDC END OF USEFUL LIFE PER NFPA 72 HANDBOOK AND UL 864.
2. VOLTAGE DROP OPERATING VOLTAGE FORMULA:

$$\frac{(\text{WIRE LENGTH} \times \text{TOTAL CURRENT AMPS} \times 21.6)}{\text{CIRC. MILS.}} = \text{VOLTS DROPPED}$$

$$\frac{(\text{VOLTS DROPPED} \times 100)}{20.4} = \% \text{ VOLTS DROPPED}$$

VOLTS DROPPED - 20.4 = OPERATING VOLTAGE

RISER DIAGRAM SPECIFIC NOTES:

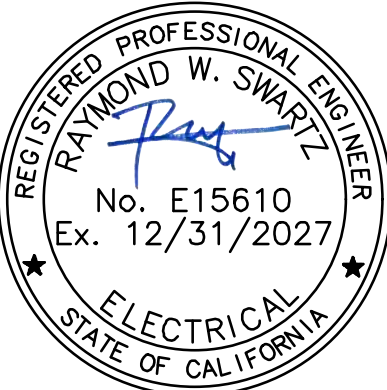
- ① 'Z' INDICATES ZONABLE/ADDRESSABLE CIRCUIT, PROVIDE 2#18 TWISTED PAIR PER CIRCUIT. SEE WIRE LEGEND FOR ADDITIONAL INFORMATION.
- ② 'N' INDICATES NOTIFICATION CIRCUIT, SEE WIRE LEGEND FOR ADDITIONAL INFORMATION.
- ③ NUMBER INDICATES CANDELA RATING OF STROBE DEVICE.
- ④ INDICATES LENGTH OF WIRE IN FEET. SEE WIRING DIAGRAM FOR WIRE TYPES. SEE VOLTAGE DROP CALCULATIONS FOR PERCENT DROPPED AND ADDITIONAL INFORMATION.
- ⑤ FIRE ALARM POWER SUPPLY (FAPS), PROVIDE DEDICATED 120V CIRCUIT WITH RED INDICATOR AND APPROVED LOCK-ON DEVICE PER PLANS.
- ⑥ FIRE ALARM TERMINAL CABINET (FATC), LETTER INDICATES BUILDING AREA CABINET IS LOCATED.
- ⑦ PROVIDE 3/4"X, WITH 2#12, #12 GRD. TO 120V DEDICATED CIRCUIT FOR POWER. PROVIDE 20AMP, 1-POLE CIRCUIT BREAKER WITH APPROVED LOCK-ON DEVICE, RED INDICATOR AND IDENTIFIED AS "FIRE ALARM CONTROL CIRCUIT" (NFPA 72, SECTION 10.6.5.2). CONNECT AS REQUIRED - PROVIDE ALL REQUIRED MOUNTING HARDWARE, MATCH A.I.C. RATING OF DEVICES USED.

FIRE ALARM GENERAL NOTES:

1. NOTIFICATION DEVICES IN ROOMS CONTAINING (2) OR MORE AUDIBLE AND/OR (2) OR MORE VISUAL DEVICES SHALL BE SYNCHRONIZED PER NFPA 72. THIS SHALL INCLUDE AUDIBLE AND VISUAL DEVICES LOCATED IN ADJACENT/ADJOINING SPACES.
2. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITH THE EXCEPTION OF THE REQUIREMENT FOR SUPERVISOR ENGINEER FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. DETECTORS SHALL NOT BE LOCATED IN DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY SUPPLY DIFFUSER.
4. THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND PRESSURE LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL, WHICHEVER IS GREATER, DURING A MINIMUM OF 10 SECONDS. THE MAXIMUM SOUND LEVEL, DURING OPERATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIED SPACE WITHIN THE BUILDING PER CFC SECTION 907.2.2.1.1, THE SOUND PRESSURE LEVEL SHALL BE 60 dBA PER NFPA 72, TABLE A.18.4.3.
5. THE AUDIBLE ALARM SHALL BE THE STANDARD FIRE ALARM EVALUATION SIGNAL, ANSI S34.1-ALD1 EMERGENCY EVALUATION SIGNAL. THIS PROVISION IS REQUIRED BY NFPA 72, SECTION 7.2. EXCEPTION: THE USE OF THE EXISTING EVALUATION SIGNALING SCHEME SHALL BE PERMITTED WHERE APPROVED BY THE ENFORCING AGENCY. (CFC, SECTION 907.5.2.1.3)
6. THE EXISTING CAMPUS FIRE ALARM SYSTEM SHALL BE MAINTAINED AND OPERATIONAL AT ALL TIMES DURING ALTERATIONS AND CONSTRUCTION. THE PROVISIONS OF THIS SECTION SHALL NOT BE USED TO REMOVE ANY REMAINDER OF THE SYSTEM SHALL BE KEPT IN SERVICE. IF NECESSARY TO SHUT DOWN ENTIRE FIRE ALARM SYSTEM, CONTRACTOR SHALL PROVIDE A TEMPORARY SYSTEM TO MAINTAIN THE SYSTEM WHERE THE REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR THE DURATION OF THE SYSTEM OUTAGE. FIRE WATCH AND SYSTEM/EQUIPMENT IDENTIFICATIONS SHALL BE PER CFC, SECTION 907.2.1.1. LOCAL FIRE DEPARTMENT SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY SHUT DOWN.

FIRE ALARM BATTERY CALCULATIONS

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313

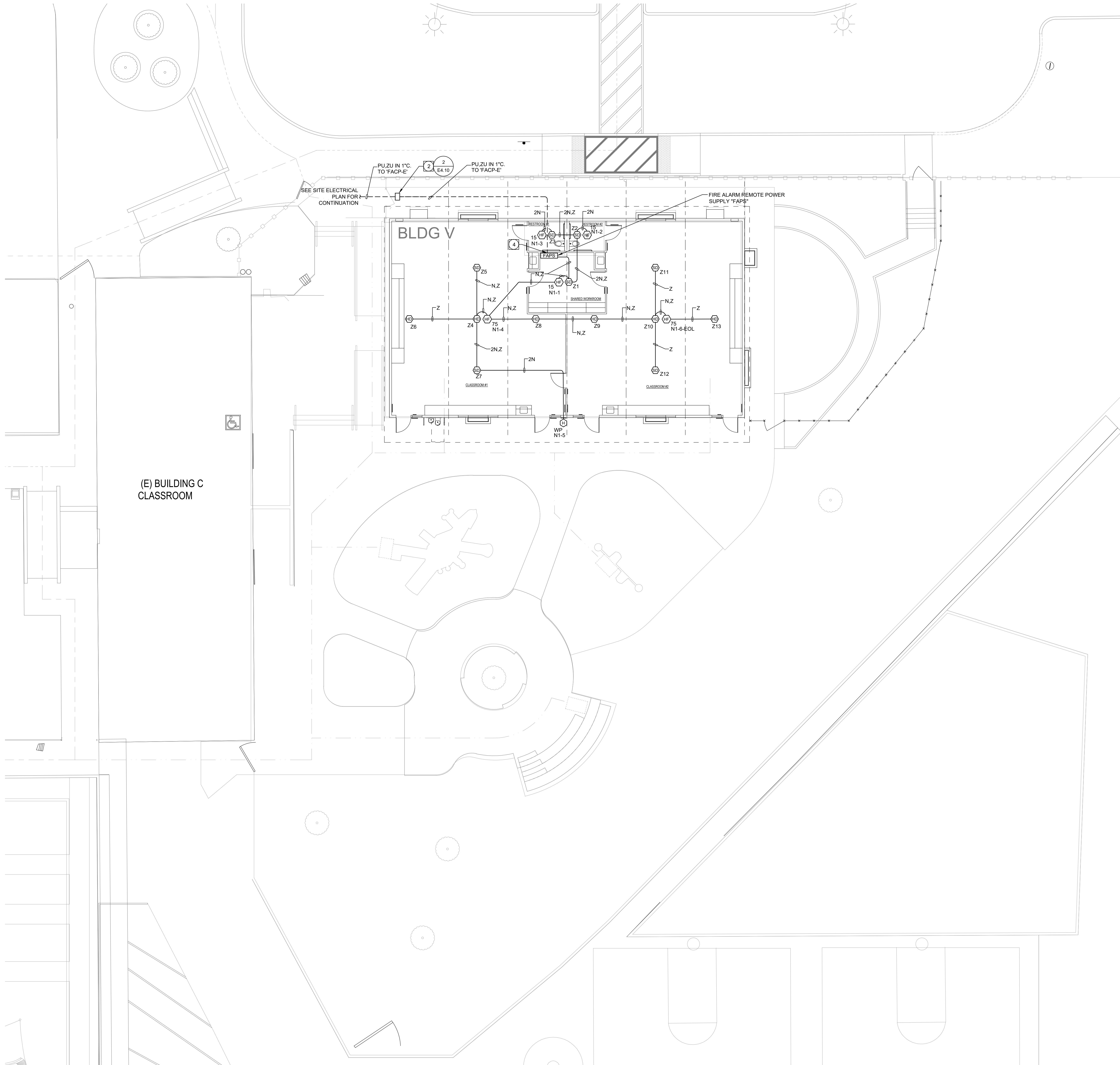
The logo for sg|h ARCHITECTS is located in the bottom right corner. It features the lowercase letters "sg|h" in a bold, green, sans-serif font, followed by the word "ARCHITECTS" in a smaller, green, all-caps, sans-serif font.

PROJECT NUMBER:	22-12107-00
PROJECT NUMBER:	22-12107-00
PROJECT STATUS:	BID SET
SHEET ISSUED:	11/21/2025
DELTA: DATE:	DESCRIPTION:

COMPLETE FIRE ALARM SUBMITTAL

AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM

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PLAN NOTES:

- 1 PROVIDE 8" X 8" X 4"D WEATHERPROOF BOX MOUNTED TO SIDE OF MODULAR BUILDING FOR FIRE ALARM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
- 2 PROVIDE IN-GRADE, 11" X 17" X DEPTH AS REQUIRED, TRAFFIC RATED PULLBOX ENGRAVED "FIRE ALARM".
- 3 REFER TO ENLARGED SITE ELECTRICAL PLAN, SHEET E1.11, FOR POWER REQUIREMENTS.
- 4 ROUTE CONDUIT BELOW GRADE, UNDER FOUNDATION AND STUBBED UP DIRECTLY BELOW FIRE ALARM PANEL AS INDICATED. VERIFY EXACT ROUTING PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DETAIL 28A/10.51 FOR ADDITIONAL INFORMATION.

FIRE ALARM PLAN GENERAL NOTES:

1. NOTIFICATION DEVICES IN ROOMS CONTAINING (2) OR MORE AUDIBLE AND/OR (2) OR MORE VISUAL DEVICES SHALL BE SYNCHRONIZED PER NFPA 72. THIS SHALL INCLUDE AUDIBLE AND VISUAL DEVICES LOCATED IN ADJACENT/ADJOINING SPACES.
2. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER / ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY AIR SUPPLY DIFFUSER.
4. THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIED SPACE WITHIN THE BUILDING PER CFC SECTION 907.5.2.1.1. THE MINIMUM SOUND PRESSURE LEVEL SHALL BE 60 dBA PER NFPA 72, TABLE A.18.4.3.
5. NOT USED.
6. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR PRECISE OUTLET LOCATIONS. IF OUTLETS ARE PRESENT, COORDINATE WITH ARCHITECT.
7. COORDINATE WITH ARCHITECT FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES.
8. IF SHIELDED WIRE IS USED, THE FOLLOWING MUST BE OBSERVED.
 - A. METALLIC CONTINUITY OF THE SHIELD MUST BE MAINTAINED AND INSULATED THROUGHOUT THE ENTIRE LENGTH OF THE CABLE.
 - B. THE ENTIRE LENGTH OF THE CABLE MUST HAVE A RESISTANCE GREATER THAN 1 MEGOHM TO EARTH.
9. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE FIRE RATING OF THE STRUCTURE / SURFACE BEING PENETRATED AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
10. A SYSTEM GROUND MUST BE PROVIDED FOR EARTH DETECTION AND LIGHTNING PROTECTION DEVICES. THIS CONNECTION SHALL BE MADE TO AN APPROVED DEDICATED EARTH CONNECTION PER CEC, ARTICLE 250.
11. WIRING IN DUCTS, PLENUMS AND OTHER AIR HANDLING SPACES MUST BE INSTALLED IN ACCORDANCE WITH CEC.
12. UNDERGROUND WIRING MUST BE FREE OF ALL WATER.
13. ALL FIRE ALARM SYSTEM CONDUCTORS SHALL BE RUN IN A DEDICATED FIRE ALARM CONDUIT SYSTEM.
14. WHERE A DETECTOR IS INDICATED TO BE INSTALLED ABOVE THE CEILING AND NO ACCESS TO THE CEILING SPACE EXISTS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS. THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED.
15. FIRE ALARM SYSTEM UTILIZES A COMPLETE COVERAGE, FULLY AUTOMATIC SYSTEM. PROVIDE RELAY MODULE(S) AT FATC/FACP LOCATIONS FOR CONTROL OF HVAC SHUT DOWN, SMOKE/FIRE DAMPER CLOSURE AND DOOR HOLD RELEASES.
16. WHERE NEW DEVICES (AND ASSOCIATED CONDUIT) CANNOT PHYSICALLY BE MOUNTED CONCEALED IN WALLS, RUN IN PANDUIT SURFACE RACEWAY/WIREWAY (AND DEVICES SHALL BE MOUNTED ON SURFACE OUTLET BOXES). REFER TO SPECIFICATIONS. PROVIDE SIZE OF RACEWAY TO ACCOMMODATE THE REQUIRED CONDUCTORS. WHERE CONDUIT IS INDICATED, PROVIDE SURFACE RACEWAY WITH AN EQUAL CROSS SECTION TO THE DIAMETER OF THE CONDUIT INDICATED.
17. DETECTOR SENSITIVITY SHALL BE TESTED USING MANUFACTURER'S CALIBRATED SENSITIVITY INSTRUMENT OR OTHER CALIBRATED TESTING METHOD. (CFC, SECTIONS 907.8.3 AND 907.8.4)



NORTH

1
1/8" = 1'-0"

COMPLETE FIRE ALARM SUBMITTAL

AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM



WSP USA
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 wsp.com
Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

CONSULTANT

ENLARGED FIRE ALARM SITE PLAN

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



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PROJECT NUMBER: 22-12107-00	
PROJECT NUMBER: 22-12107-00	
PROJECT STATUS: BID SET	
SHEET ISSUED: 11/27/2023	
DATE: 11/27/2023	
DESCRIPTION:	

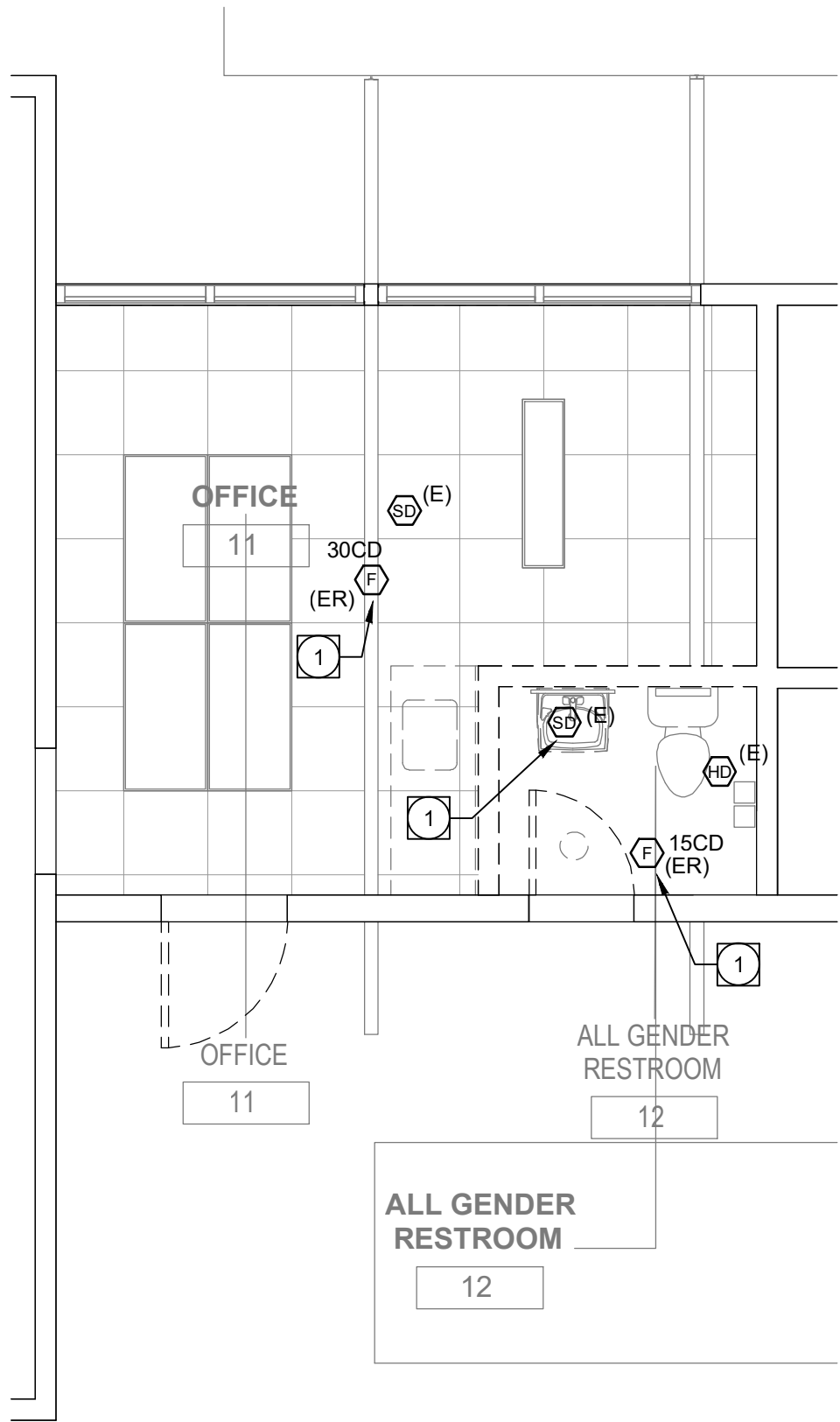
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GENERAL DEMOLITION NOTES:

1. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. SEE ARCHITECTURAL PLANS, WHERE PROVIDED ON PROJECT, FOR EXTENT OF DEMOLITION.
2. THE EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO SUBMITTING BID. ALL DEMOLITION, ALTERATION, EXTENSION, RELOCATION, REHABILITATION WORK SHALL BE INCLUDED IN CONTRACT. NO ADDITIONAL ALLOWANCE OR CHANGE ORDERS WILL BE ACCEPTED.
3. CONTRACTOR IS RESPONSIBLE FOR RELOCATING OR REMOVING FROM WALLS, CEILINGS, FLOOR SPACES, ETC., ANY EXISTING CONDUITS, WIRES, BOXES, FITTINGS, FIXTURES OR OTHER ELECTRICAL EQUIPMENT WHICH INTERFERES WITH PLANNED REMODEL WORK. PROVIDE CIRCUIT CONTINUATION REQUIRED FOR ALL EXISTING OUTLETS, FIXTURES, EQUIPMENT, ETC. SCHEDULED TO REMAIN.
4. NOTIFY THE ENGINEER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, OR NOT INDICATED ON "AS-BUILT" DRAWINGS OR WAS BURIED UNDERGROUND OR EMBEDDED IN STRUCTURE WALLS.
5. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT, UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE SMALLER AREA IF POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
6. EQUIPMENT, MATERIALS AND SUPPLIES TEMPORARILY REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
7. DEMOLITION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT SITE, AND NOT INTERFERE WITH ITS OPERATION. ANY DEMOLITION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE.
8. DO ALL DRILLING, CUTTING, ETC. REQUIRED TO DEMOLISH ELECTRICAL WORK AS INDICATED OR PROVIDE BLANK COVER PLATE ON ALL OUTLETS EXPOSED BY REMOVAL OF FIXTURE OR DEVICES.
9. RESEAL ALL PENETRATIONS OR OPENING THROUGH WALLS, CEILING, FLOORS, ETC., TO MAINTAIN THE RATING OF STRUCTURE.
10. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGED MATERIALS SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER AND NEATLY PILE OR STORE AND PROTECT FROM DAMAGE. DISPOSE OF ALL HAZARDOUS MATERIAL PER FEDERAL, STATE AND LOCAL REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION.
11. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDUIT/WIRING RUNS, REUSE AS REQUIRED, AND REMOVE ALL UNUSED CONDUIT/WIRING. UNUSED CONDUIT IN INACCESSIBLE LOCATIONS (WALLS TO REMAIN) MAY BE ABANDONED IN PLACE. REMOVE UNUSED WIRING INCLUDING ABANDONED TELEPHONE, DATA AND OTHER LOW VOLTAGE SYSTEMS CABLING AFTER CONFIRMING WITH THE OWNER'S PROJECT MANAGER THAT CABLING IS ABANDONED AND WILL NOT BE RE-USED.
12. CONTRACTOR TO VERIFY CIRCUIT NUMBER AND LOADS FOR ALL EXISTING EQUIPMENT PRIOR TO INSTALLATION OF NEW OR RELOCATED ELECTRICAL EQUIPMENT. REASSIGN CIRCUITS AND LOADS ACCORDINGLY. PROVIDE COMPLETE "AS BUILT" DRAWINGS AND TYPEWRITTEN DIRECTORIES FOR PANELS.
13. WHERE NECESSARY TO SHUT OFF UTILITY SERVICES OR CAUSE INTERRUPTION TO POWER OR SIGNAL SYSTEMS WHILE A BUILDING IS OCCUPIED OR THAT AFFECT ADJACENT BUILDINGS, SCHEDULE OUTAGES OR INTERRUPTIONS WITH THE OWNER, BUILDING OCCUPANTS AND/OR ADJACENT BUILDING OWNER(S) AND OCCUPANTS PRIOR TO CONDUCTING OUTAGE(S) OR INTERRUPTIONS.



DEMOLITION FIRE ALARM PLAN - BLDG A EXISTING RESTROOMS

PLAN NOTES:

1. EXISTING FIRE ALARM DEVICE TO BE DISCONNECTED, REMOVED AND REINSTALLED IN NEW LOCATION. REFER TO REMODEL FIRE ALARM PLAN FOR NEW LOCATION AND ADDITIONAL INFORMATION.
2. EXISTING FIRE ALARM DEVICE NEW LOCATION, INTERCEPT EXISTING CONDUIT AND CONDUCTORS AND EXTEND AS REQUIRED TO RELOCATED DEVICE. RECONNECT FIRE ALARM DEVICE TO EXISTING FIRE ALARM SYSTEM AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

SYMBOL LIST:

- (D) CEILING MOUNTED SMOKE DETECTOR
- (E) HEAT DETECTOR MOUNTED IN ATTIC SPACE
- (ER) CEILING MOUNTED STROBE. CD INDICATES CANDELA RATING.

LEGEND:

- (D) EXISTING DEVICE TO BE DEMOLISHED
- (E) EXISTING DEVICE TO REMAIN
- (ER) EXISTING DEVICE TO BE RELOCATED
- (R) DENOTES RELOCATED DEVICE LOCATION

FIRE ALARM PLAN GENERAL NOTES:

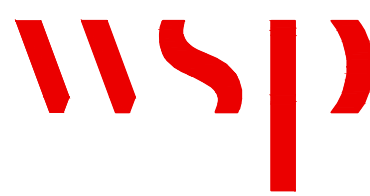
1. NOTIFICATION DEVICES IN ROOMS CONTAINING (2) OR MORE AUDIBLE AND/OR (2) OR MORE VISUAL DEVICES SHALL BE SYNCHRONIZED PER NFPA 72. THIS SHALL INCLUDE AUDIBLE AND VISUAL DEVICES LOCATED IN ADJACENT/ADJOINING SPACES.
2. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER / ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
3. DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY AIR SUPPLY DIFFUSER.
4. THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER. IN EVERY OCCUPIED SPACE WITHIN THE BUILDING PER CFC SECTION 907.5.2.1.1, THE MINIMUM SOUND PRESSURE LEVEL SHALL BE 60 dBA PER NFPA 72, TABLE A.18.4.3.
5. NOT USED.
6. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR PRECISE OUTLET LOCATIONS. IF OUTLETS ARE PRESENT, COORDINATE WITH ARCHITECT.
7. COORDINATE WITH ARCHITECT FOR LOCATIONS OF ALL CEILING MOUNTED DEVICES.
8. IF SHIELDED WIRE IS USED, THE FOLLOWING MUST BE OBSERVED.
 - A. METALLIC CONTINUITY OF THE SHIELD MUST BE MAINTAINED AND INSULATED THROUGHOUT THE ENTIRE LENGTH OF THE CABLE.
 - B. THE ENTIRE LENGTH OF THE CABLE MUST HAVE A RESISTANCE GREATER THAN 1 MEGOHM TO EARTH.
9. ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE FIRE RATING OF THE STRUCTURE / SURFACE BEING PENETRATED AS IDENTIFIED IN CBC CHAPTER 7.1.01 OR OTHER LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE FIRE ALARM SECTION OF THE PROJECT SPECIFICATIONS.
10. A SYSTEM GROUND MUST BE PROVIDED FOR EARTH DETECTION AND LIGHTNING PROTECTION DEVICES. THIS CONNECTION SHALL BE MADE TO AN APPROVED DEDICATED EARTH CONNECTION PER CEC, ARTICLE 250.
11. WIRING IN DUCTS, PLENUMS AND OTHER AIR HANDLING SPACES MUST BE INSTALLED IN ACCORDANCE WITH CEC.
12. UNDERGROUND WIRING MUST BE FREE OF ALL WATER.
13. ALL FIRE ALARM SYSTEM CONDUCTORS SHALL BE RUN IN A DEDICATED FIRE ALARM CONDUIT SYSTEM.
14. WHERE A DETECTOR IS INDICATED TO BE INSTALLED ABOVE THE CEILING AND NO ACCESS TO THE CEILING SPACE EXISTS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS. THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED.
15. FIRE ALARM SYSTEM UTILIZES A COMPLETE COVERAGE, FULLY AUTOMATIC SYSTEM. PROVIDE RELAY MODULE(S) AT FATC/FACP LOCATIONS FOR CONTROL OF HVAC SHUT DOWN, SMOKE/FIRE DAMPER CLOSURE AND DOOR HOLD RELEASES.
16. WHERE NEW DEVICES (AND ASSOCIATED CONDUIT) CANNOT PHYSICALLY BE MOUNTED CONCEALED IN WALLS, RUN IN PENDUIT SURFACE RACEWAY/WIREWAY (AND DEVICES SHALL BE MOUNTED ON SURFACE OUTLET BOXES). REFER TO SPECIFICATIONS. PROVIDE SIZE OF RACEWAY TO ACCOMMODATE THE REQUIRED CONDUCTORS. WHERE CONDUIT IS INDICATED, PROVIDE SURFACE RACEWAY WITH AN EQUAL CROSS SECTION TO THE DIAMETER OF THE CONDUIT INDICATED.
17. DETECTOR SENSITIVITY SHALL BE TESTED USING MANUFACTURER'S CALIBRATED SENSITIVITY INSTRUMENT OR OTHER CALIBRATED TESTING METHOD. (CFC, SECTIONS 907.5.3 AND 907.5.4)

COMPLETE FIRE ALARM SUBMITTAL

AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM

REMODEL FIREALARM PLAN - BLDG A EXISTING RESTROOMS

2



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Electrical Lead - Andrew Lawson
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CONSULTANT

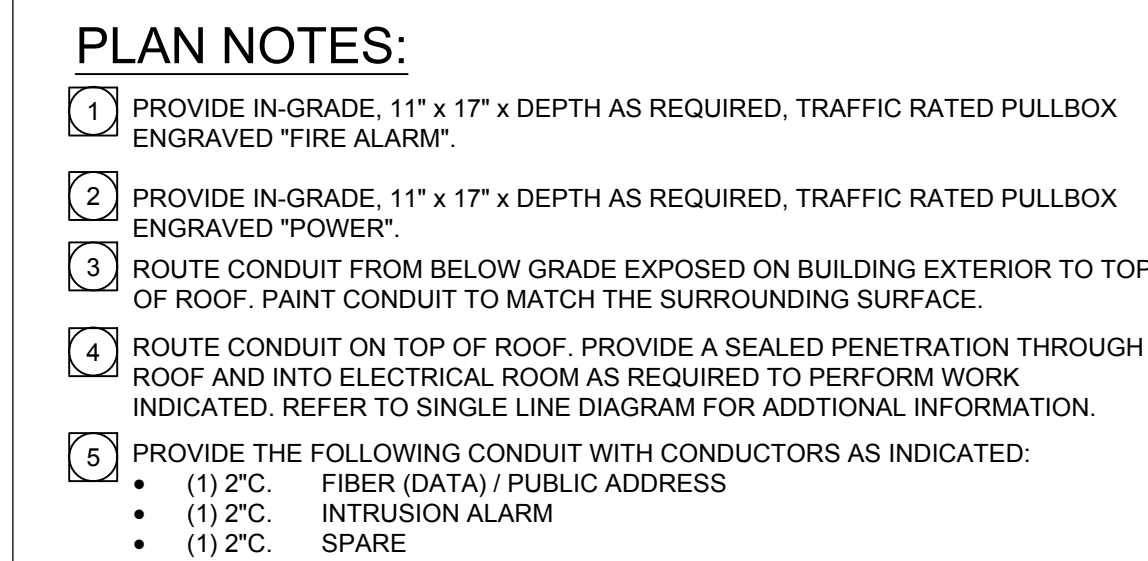
ENLARGED FIRE ALARM PLAN EXISTING RESTROOM - BUILDING A

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION: DEMOLITION

F1.21



1. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF EXISTING UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. SEE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
2. CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
3. MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
4. MINIMUM CONDUIT SIZE SHALL BE 1/2" AWG - U.O.N.
5. ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR. WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
6. ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
7. ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
8. SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULL BOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
9. UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

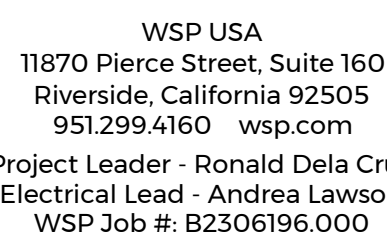
1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPES RATED AT 2000 LBS. WITH A MINIMUM TENSILE EXTRA PULL TAPES TO BE COILED EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHES TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER SECTION 5509-2.0. PULL BOXES SHALL BE SIZED FOR ALL UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE AREAS WITHIN THE ACCESSIBLE CEILING PLANS AND BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-568-C TABLE 12. -
LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.

10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.

11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.



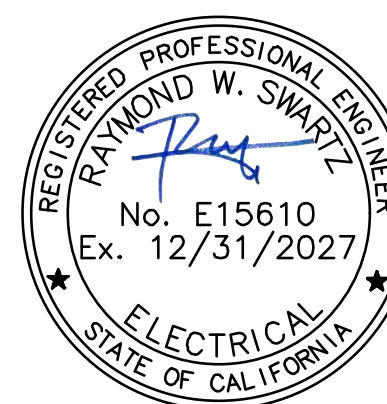
CONSULTANT:

SITE ELECTRICAL PLAN

COLTON JOINT UNIFIED SCHOOL DISTRICT

TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION

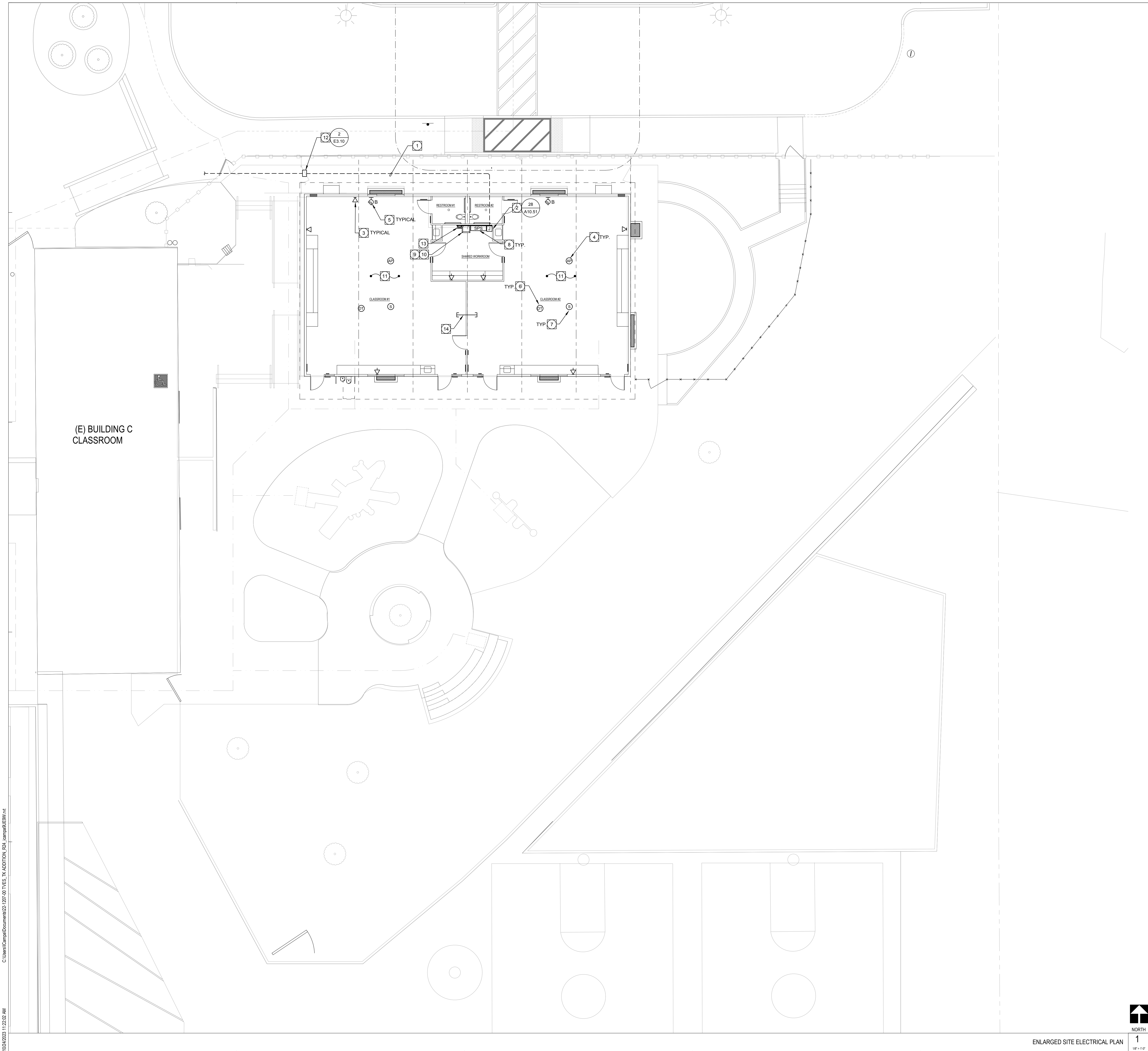
222731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



PROJECT NUMBER:	22-12107-00
PROJECT STATUS:	BID SET
SHEET ISSUED:	11/21/2025
DELTA: DATE:	DESCRIPTION:

T1.01

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PLAN NOTES:

- 1 PROVIDE THE FOLLOWING UNDERGROUND CONDUITS WITH CONDUCTORS (AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM):
 - (1) 2" FIBER (DATA) / PUBLIC ADDRESS
 - (1) 2" INTRUSION ALARM
 - (1) 2" SPARE
- 2 ROUTE CONDUIT BELOW GRADE, UNDER FOUNDATION TO NEW PULL BOX OR GUTTER BOX AND STUB UP THROUGH FLOOR PER DETAIL 28A/10.51. SURFACE MOUNT CONDUIT TO THE INTERIOR WALL AND PAINT WHITE. VERIFY EXACT ROUTING PRIOR TO ROUGH-IN.
- 3 DATA OUTLET. SEE FACEPLATE DETAILS SHEET 7/T3.10.
- 4 ABOVE CEILING OUTLET IN CEILING SPACE FOR OWNER FURNISHED OWNER INSTALLED WIRELESS ACCESS POINT (WON). ROUTE CABLES TO IDF CABINET. REFER TO DATA/VOIP DIAGRAM AND FACEPLATE DETAILS 8/T3.10 FOR CABLE REQUIREMENTS.
- 5 OWNER FURNISHED OWNER INSTALLED BATTERY POWERED ANALOG CLOCK TO MATCH EXISTING CAMPUS CLOCKS. SHOWN FOR REFERENCE ONLY.
- 6 CEILING MOUNTED MOTION SENSOR. TO MATCH EXISTING BOSCH INTRUSION ALARM SYSTEM. E.C. TO PROVIDE 4S DP BOX WITH 3/4" TO NEAREST ACCESSIBLE CEILING SPACE, OR AS NOTED ON PLANS.
- 7 CEILING MOUNTED PUBLIC ADDRESS SYSTEM SPEAKER WITH BACKBOX AND 3/4" WITH CONDUCTORS TO PUBLIC ADDRESS SYSTEM TERMINAL ENCLOSURE. REFER TO PUBLIC ADDRESS SYSTEM DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 8 INTRUSION ALARM SYSTEM TERMINAL ENCLOSURE COMPLETE WITH POWER SUPPLY, POP-UPS, ETCETERA AS REQUIRED. REFER TO SYSTEM DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 9 PUBLIC ADDRESS SYSTEM TERMINAL TERMINAL STRIPS, ETCETERA MOUNTED ON BACK WALL INSIDE IDF CABINET. REFER TO SYSTEM DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- 10 WALL MOUNTED IDF CABINET COMPLETE WITH FIBER ENCLOSURE, PATCH PANELS, OPOI NETWORK SWITCH(S), ETCETERA. REFER TO CABINET DETAIL 6 ON SHEET T3.10 FOR ADDITIONAL REQUIREMENTS. MOUNT ON E.C. PROVIDED PAINTED PLYWOOD BACKBOARD.
- 11 PROVIDE COMPLETE PORTABLE ASSISTIVE LISTENING SYSTEM(S) (ALS) WITH ALL CABLES, DEVICES, EQUIPMENT, RECHARGEABLE BATTERIES, CHARGING/CARRYING CASES, ANTENNAS, COMPONENTS, TERMINATIONS AND TESTING FOR COMPLETE AND OPERABLE SYSTEM. SEE DETAIL 4/T2.10 FOR MORE INFORMATION.
- 12 NEW IN-GRADE, 17" X 30" X 24", TRAFFIC RATED PULLBOX ENGRAVED "COMMUNICATIONS".
- 13 ANSI-J-STD 607A COMPLIANT U.L.-LISTED TELECOMMUNICATIONS MAIN GROUND BUSBAR (TMGB), (CHATSWORTH #40153-020 OR EQUAL BY HARGER). PROVIDE 1/8" BRASS ENGRAVED NAMEPLATE WITH ABBREVIATION "T.M.G.B.". ATTACH NAMEPLATE TAG TO BUS BAR.
- 14 PROVIDE (1)2"C. (DATA), (1)2"C. (SECURITY) SLEEVES.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

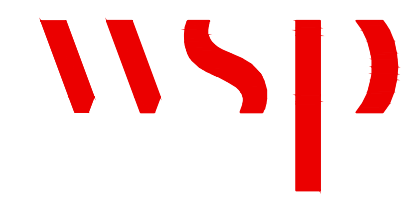
1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHES TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI/TIA-568-C. PULL BOXES FOR UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	6"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-568-C TABLE 12. LATEST PUBLISHED EDITION.
9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.



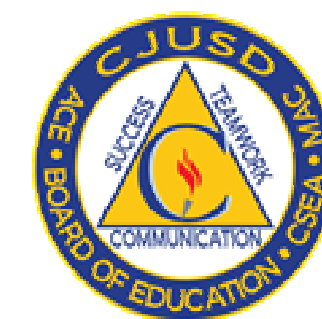
ENLARGED SITE ELECTRICAL PLAN
1
1/8" = 1'-0"



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Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

CONSULTANT

ENLARGED SITE ELECTRICAL PLAN
COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



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PROJECT NUMBER: 22-12107-00
PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2023
DATE: 11/07/2023
DESCRIPTION: T1.11

T1.11

ASSISTIVE LISTENING SYSTEM CALCULATIONS NOTE:

DEVICE QUANTITIES ARE BASED ON CBC 11B-219.3 EXCEPTION 1, AND APRIL 2020 DSA CODE APPEAL INTERPRETATION:

"FOR EACH SCHOOL, PROVIDE 2 PORTABLE ASSISTIVE LISTENING SYSTEMS, EACH WITH A TRANSMITTER AND A MINIMUM OF 2 RECEIVERS FOR USE IN CLASSROOMS WITHOUT AUDIO AMPLIFICATION. THE ASSISTIVE LISTENING RECEIVERS AND TRANSMITTER SHALL BE STORED IN THE SCHOOL SITE ADMINISTRATION OFFICE UNTIL REQUESTED.

IN ACCORDANCE WITH THE "APRIL 2020 DSA CODE APPEAL INTERPRETATION", CONTRACTOR SHALL PROVIDE TWO (2) PORTABLE ALS KITS, LISTEN TECHNOLOGIES #LKS-4-A1. EACH KIT SHALL CONSIST OF THE FOLLOWING:

- QTY DESCRIPTION
- (1) LK-1 LISTEN TALK TRANSMITTER
 - (3) LK-1 LISTEN TALK RECEIVER WITH LA-401 EAR SPKR
 - (1) LA-452 HEADSET 2 (OVER HEAD W/ MIC)
 - (2) LA-438 ADVANCED INDUCTION NECK LOOPS
 - (4) LA-445 BK BREAKAWAY LANYARD
 - (1) LA-423 4-PORT USB CHARGER
 - (1) LA-438 MIC INPUT/HEADPHONE OUTPUT CABLE
 - (4) LA-365 RECHARGEABLE BATT. AA (2-PACK)

- ADDITIONAL REQUIRED ITEMS:
- (1) LA-483 SOFT SHELL CASE 4
 - (1) LA-304 ALS NOTIFICATION SIGNAGE KIT

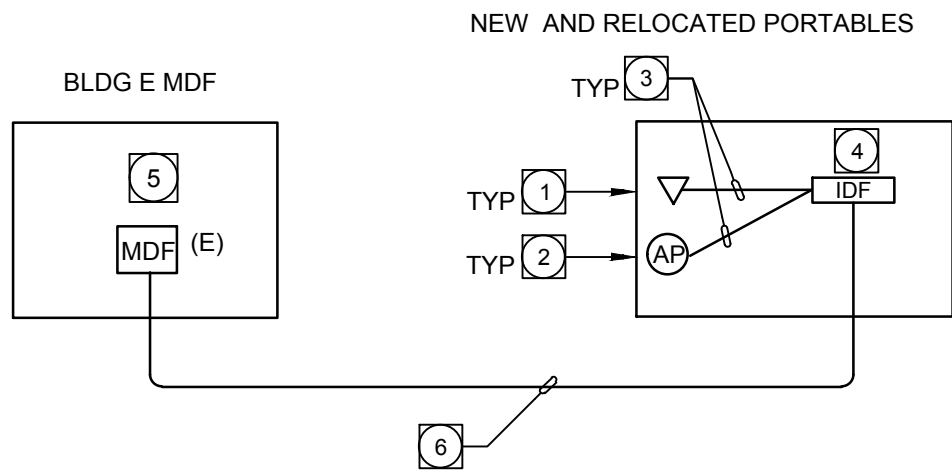
ASSISTIVE LISTENING SYSTEM SPECIFICATION AND NOTES:

1. PROVIDE COMPLETE PORTABLE ASSISTIVE LISTENING SYSTEM(S) (ALS) WITH ALL CABLES, DEVICES, EQUIPMENT, RECHARGEABLE BATTERIES, CHARGING/CARRYING CASES, ANTENNAS, COMPONENTS, TERMINATIONS AND TESTING FOR COMPLETE AND OPERABLE SYSTEM.
2. DRAWINGS AND LAYOUTS ARE PRIMARILY DIAGRAMMATIC, CONTRACTOR IS RESPONSIBLE FOR FINAL FOOTAGES AND EXACT LOCATIONS.
3. THE ALS SYSTEM SHALL ACCOMMODATE A MINIMUM OF 4% OF TOTAL NUMBER OF SEATS, AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND NOTED IN THE ALS CALCULATION TABLE.
4. QUANTITY OF PORTABLE RECEIVERS REQUIRED SHALL BE CALCULATED PER 2022 CALIFORNIA BUILDING CODE (CBC) 11B-219.3 RECEIVERS EXCEPTION #1 WHICH STATES, "WHERE A BUILDING CONTAINS MORE THAN ONE ASSEMBLY AREA AND THE ASSEMBLY AREAS REQUIRED TO PROVIDE ASSISTIVE LISTENING SYSTEMS ARE UNDER ONE MANAGEMENT, THE TOTAL NUMBER OF REQUIRED RECEIVERS SHALL BE PERMITTED TO BE CALCULATED ACCORDING TO THE TOTAL NUMBER OF SEATS IN THE ASSEMBLY AREAS IN THE BUILDING PROVIDED THAT ALL RECEIVERS ARE USABLE WITH ALL SYSTEMS."
5. EQUIPMENT NUMBERS ABOVE ARE SHOWN FOR REFERENCE. CONTRACTOR IS RESPONSIBLE TO MATCH EXISTING ALS MANUFACTURER AND MODEL ON CAMPUS. PROVIDE MOST CURRENT PRODUCT MODELS AND PART NUMBERS. CONTRACTOR SHALL COORDINATE DIRECTLY WITH OWNER IN FIELD.
6. CONTRACTOR TO PROVIDE ANTENNA(S) AND ASSOCIATED ACCESSORIES/HARDWARE AS REQUIRED, FOR COMPLETE COVERAGE WITHIN ENTIRE PROJECT AREA.
7. PROVIDE ALS SIGNAGE IN THE QUANTITIES AND LOCATIONS AS INDICATED IN ARCHITECTURAL DRAWINGS, AND AS REQUIRED BY 2022 CBC AND 2010 ADA STANDARDS.
8. PROVIDE MANUFACTURER'S 3 YEAR (MINIMUM) WARRANTY FOR ALL PORTABLE TRANSMITTERS AND RECEIVERS.
9. PRIOR TO ORDERING ALS EQUIPMENT, CONTRACTOR SHALL PERFORM A RADIO FREQUENCY (RF) TEST TO DETERMINE AND IDENTIFY ANY POTENTIAL RECEIVED RF INTERFERENCE. CONTRACTOR SHALL BE RESPONSIBLE TO SELECT ALS SYSTEM RADIO FREQUENCIES (72 MHZ OR 216 MHZ) THAT DO NOT RECEIVE RF INTERFERENCE FROM OTHER BUILDING SYSTEMS SUCH AS LIGHTING, POWER, GENERATORS, HVAC, COMPUTERS, AUDIO, PAGING, ETCETERA. FINAL SYSTEM TESTING SHALL BE CONDUCTED WITH ALL BUILDING SYSTEMS TURNED ON TO VERIFY THE ALS SYSTEM IS FREE OF INTERFERENCE. IF RF INTERFERENCE IS DETECTED WITHIN THE FIRST 30 DAYS AFTER PROJECT COMPLETION, CONTRACTOR SHALL REPLACE ALS EQUIPMENT WITH EQUIPMENT ON ANOTHER FREQUENCY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.
10. ANY PENETRATIONS THROUGH FIRE-RATED WALLS SHALL BE SEALED BY THE CONTRACTOR AS REQUIRED BY THE 2022 CALIFORNIA ELECTRICAL CODE AND AS DIRECTED BY, AND TO THE SATISFACTION OF, THE OWNER'S PROJECT MANAGER.
11. THE ASSISTIVE LISTENING SYSTEM SIGNS SHALL BE PROVIDED BY THE CONTRACTOR. SIGNS SHALL COMPLY WITH ALS SIGN DETAIL ON A-SERIES OR G-SERIES SHEETS. THE ASSISTIVE LISTENING SYSTEM SIGNS SHALL ALSO MEET THE REQUIREMENTS AS SET FORTH IN THE FOLLOWING SECTION OF THE 2010 ADA STANDARDS:
 - a. 216.10. ASSISTIVE LISTENING SYSTEMS. EACH ASSEMBLY AREA REQUIRED BY 219 TO PROVIDE ASSISTIVE LISTENING SYSTEMS SHALL PROVIDE SIGNS INFORMING PATRONS OF THE AVAILABILITY OF THE ASSISTIVE LISTENING SYSTEM. ASSISTIVE LISTENING SIGNS SHALL COMPLY WITH 703.5 AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS COMPLYING WITH 703.7.2.4.
 - b. EXCEPTION, WHERE TICKET OFFICES OR WINDOWS ARE PROVIDED, SIGNS SHALL NOT BE REQUIRED AT EACH ASSEMBLY AREA PROVIDED THAT SIGNS ARE DISPLAYED AT EACH TICKET OFFICE OR WINDOW INFORMING PATRONS OF THE AVAILABILITY OF ASSISTIVE LISTENING SYSTEMS.
12. THE ASSISTIVE LISTENING SYSTEM SHALL CONFORM TO THE FOLLOWING SECTIONS OF 2022 CALIFORNIA BUILDING CODE (CBC):
 - 11B-706 ASSISTIVE LISTENING SYSTEMS
 - 11B-706.1 GENERAL. ASSISTIVE LISTENING SYSTEMS REQUIRED IN ASSEMBLY AREAS CONFERENCE AND MEETING ROOMS SHALL COMPLY WITH SECTION 11B-706.
 - 11B-706.2 RECEIVER JACKS. RECEIVERS REQUIRED FOR USE WITH AN ASSISTIVE LISTENING SYSTEM SHALL INCLUDE A 1/8 INCH (3.5MM) STANDARD MONO JACK.
 - 11B-706.3 RECEIVER HEARING-AID COMPATIBILITY. RECEIVERS REQUIRED TO BE HEARING-AID COMPATIBLE SHALL INTERFACE WITH TELECOILS IN HEARING AIDS THROUGH THE PROVISION OF NECK LOOPS.
 - 11B-706.4 SOUND PRESSURE LEVEL. ASSISTIVE LISTENING SYSTEMS SHALL BE CAPABLE OF PROVIDING A SOUND PRESSURE LEVEL OF 110 DB MINIMUM AND 118 DB MAXIMUM WITH A DYNAMIC RANGE ON THE VOLUME CONTROL OF 50 DB.
 - 11B-706.5 SIGNAL-TO-NOISE RATIO. THE SIGNAL-TO-NOISE RATIO FOR INTERNALLY GENERATED NOISE IN ASSISTIVE LISTENING SYSTEMS SHALL BE 18 DB MINIMUM.
 - 11B-706.6 PEAK CLIPPING LEVEL. PEAK CLIPPING SHALL NOT EXCEED 18 DB OF CLIPPING RELATIVE TO THE PEAKS OF SPEECH.

ASSISTIVE LISTENING SYSTEM CALCULATION TABLE AND SPECIFICATIONS

SCALE: N.T.S.

4



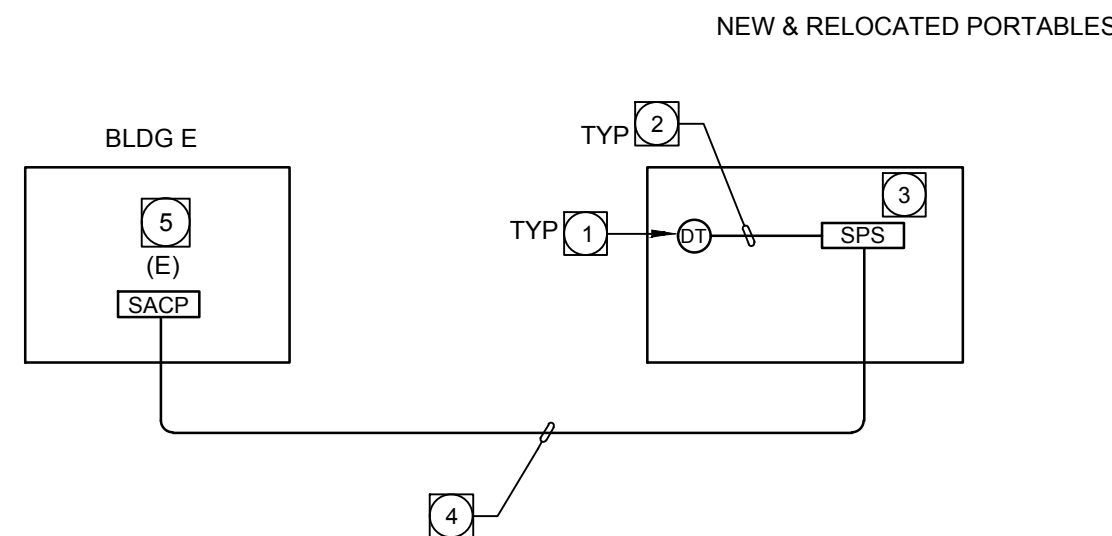
LAN/VOIP SYSTEM BLOCK DIAGRAM KEY NOTES:

1. WALL MOUNT DUAL DATA DEVICE. REFER TO FACEPLATE DETAILS FOR MORE INFORMATION. QUANTITY AND LOCATIONS PER PLANS.
2. ABOVE CEILING DUAL DATA DEVICE. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE SPECIFICATIONS AND FACEPLATE DETAILS FOR MORE INFORMATION.
3. CATEGORY-6 UTP 4-PAIR CABLES. CABLE QUANTITIES AT EACH DEVICE PER FACEPLATE DETAILS. TERMINATE ON FACEPLATE AT DEVICE LOCATION AND ON CAT-6 PATCH PANEL AT IDF CABINET. SEE PLAN DRAWINGS FOR LOCATIONS AND QUANTITIES. SEE FACEPLATE DETAILS FOR MORE INFORMATION.
4. WALL MOUNTED LAN CABINET WITH LOCKABLE DOOR. COMPLETE WITH FIBER ENCLOSURE, CAT-6 PATCH PANELS, ETCETERA COMPLETE. REFER TO IDF CABINET DETAIL. ETHERNET SWITCH IS OWNER FURNISHED CONTRACTOR INSTALLED. MOUNT 6\"/>

LOCAL AREA NETWORK SYSTEM BLOCK DIAGRAM

SCALE: N.T.S.

1



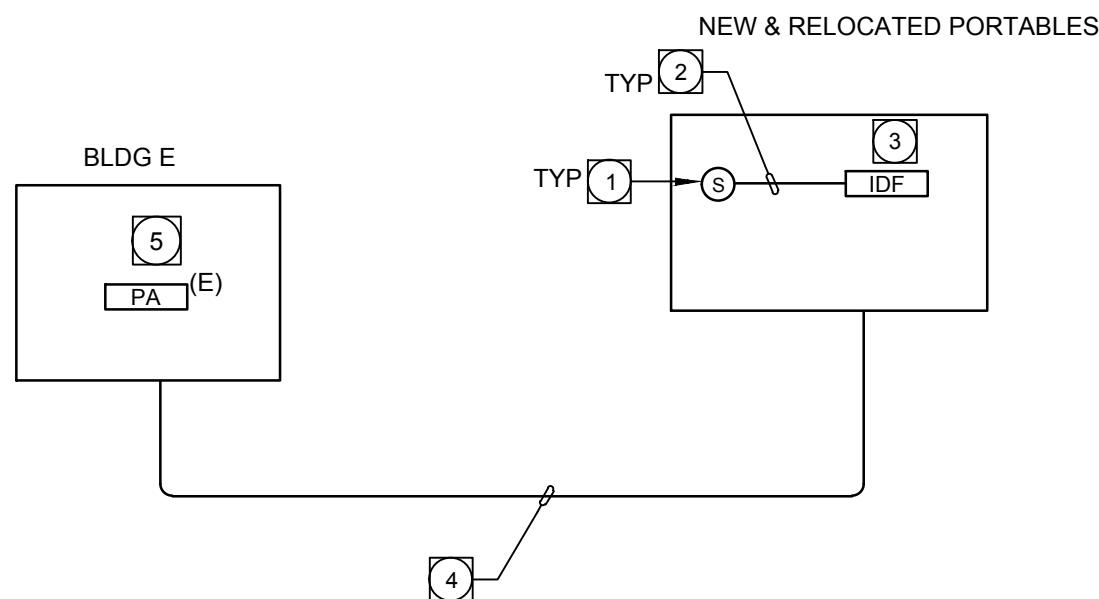
BLOCK DIAGRAM KEY NOTES:

1. CEILING MOUNTED DUAL TECHNOLOGY MOTION DETECTOR. MATCH EXISTING MODEL ON CAMPUS. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE DISTRICT STANDARDS AND SPECIFICATIONS FOR MORE INFORMATION.
2. DEVICE CABLE PER MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. CABLE SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED.
3. WALL MOUNTED TERMINAL CABINET WITH TERMINAL BLOCKS, PORTS, ZONE EXPANDERS, POWER SUPPLY, ETCETERA, AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
4. BACKBONE CABLING PER MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. CABLE SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED. ALL CABLING INSTALLED OUTSIDE SHALL BE WET LOCATION RATED.
5. EXISTING MAIN SECURITY CONTROL PANEL. MODIFY AS REQUIRED TO INCORPORATE ALL EXISTING AND NEW DEVICES ON THIS CAMPUS. PROVIDE ADDITIONAL POWER SUPPLIES, ZONE EXPANDERS, TERMINAL BLOCKS, PROGRAMMING, ETC AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

INTRUSION ALARM SYSTEM DIAGRAM

SCALE: N.T.S.

2



PUBLIC ADDRESS SYSTEM BLOCK DIAGRAM KEY NOTES:

1. FLUSH CEILING MOUNTED PUBLIC ADDRESS SPEAKER WITH BACK BOX AND BAFFLE. MATCH EXISTING TYPE ON CAMPUS. QUANTITY AND LOCATIONS PER PLAN DRAWINGS. SEE DISTRICT STANDARDS AND SPECIFICATIONS FOR MORE INFORMATION.
2. DEVICE CABLE PER MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. CABLE SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED.
3. WALL MOUNTED TERMINAL. TERMINAL BLOCKS. INSTALL ON BACK WALL OF IDF CABINET. INCLUDE ALL COMPONENTS AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
4. BACKBONE CABLING PER MANUFACTURER REQUIREMENTS AND RECOMMENDATIONS. CABLE SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED. ALL CABLING INSTALLED OUTSIDE SHALL BE WET LOCATION RATED.
5. EXISTING BOKEN PUBLIC ADDRESS SYSTEM HEAD END EQUIPMENT CABINET. MODIFY AS REQUIRED TO INCORPORATE ALL EXISTING AND NEW DEVICES ON THIS CAMPUS. PROVIDE ADDITIONAL AMPLIFIERS, TERMINAL BLOCKS, PROGRAMMING, ETC AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

PUBLIC ADDRESS SYSTEM GENERAL INSTALLATION NOTES:

1. DRAWINGS AND LAYOUTS ARE PRIMARILY DIAGRAMMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR FINAL FOOTAGES AND EXACT LOCATIONS.
2. REFERENCE DISTRICT STANDARDS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
3. PROVIDE NEW MULTIPAIR BACKBONE CABLING FROM SYSTEM HEAD END TO EACH NEW BUILDING.
4. PROVIDE NEW PUBLIC ADDRESS SPEAKERS, BACK BOXES, CABLING, TERMINAL CABINETS, TERMINAL BLOCKS, AMPLIFIERS, ETC AS REQUIRED FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. PROVIDE HEAD END PROGRAMMING AND ZONING PER THE DISTRICT'S DIRECTION. CONTRACTOR SHALL COORDINATE PROGRAMMING REQUIREMENTS IN THE FIELD WITH THE DISTRICT.
5. ALL NEW CABLE SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED, PER THE CEC AND CBC CODES.
6. CONTRACTOR SHALL TERMINATE, TEST AND LABEL ALL CABLES IN ACCORDANCE WITH THE DISTRICT STANDARDS AND PROJECT SPECIFICATIONS.
7. VERIFY ALL QUANTITIES AND LOCATIONS WITH PLAN DRAWINGS AND SPECIFICATIONS.

PUBLIC ADDRESS SYSTEM BLOCK DIAGRAM

SCALE: N.T.S.

3

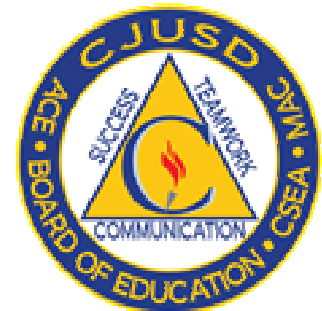


WSP USA
11870 Pierce Street, Suite 160
Riverside, California 92505
951.299.4160 wsp.com
Project Leader - Ronald Dela Cruz
Electrical Lead - Andrea Lawson
WSP Job #: B2306196.000

CONSULTANT

SINGLE LINE DIAGRAM

COLTON JOINT UNIFIED SCHOOL DISTRICT
TERRACE VIEW ELEMENTARY SCHOOL TK MODULAR ADDITION
22731 GRAND TERRACE ROAD
GRAND TERRACE, CA 92313



SEALS



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PROJECT NUMBER: 22-12107-00
PROJECT STATUS: BID SET
SHEET ISSUED: 11/07/2025
DATE: 11/07/2025

DESCRIPTION

T2.10

MEP COMPONENT ANCHORAGE NOTE:

ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16, CHAPTERS 13, 26 AND 30.

- ALL PERMANENT EQUIPMENT AND COMPONENTS.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
- TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

MEP DISTRIBUTION SYSTEM BRACING NOTE FOR PIPING, DUCTWORK, AND ELECTRICAL CONDUIT:

APPLICABLE CODE: 2022 CBC PER IR 16-13

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7 SECTION 13.3 AS DEFINED IN ASCE 7 SECTIONS 13.6.5, 13.6.6, 13.6.7, AND 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEMS ARE AS NOTED BELOW. THE MEP DESIGN PROFESSIONAL ENGINEER RESPONSIBLE FOR CONTENT ON THESE SHEETS HAS VERIFIED THAT THE DESIGN METHODS IDENTIFIED BELOW ARE IN ACCORDANCE WITH DSA IR 16-13.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP □ MD □ PP □ E □ IR 16-13 SECTION 2.1: PROJECT SPECIFIC DESIGN.

MP □ MD □ PP □ E □ IR 16-13 SECTION 2.2: DESIGN BASED ON OSHPD OPM, PART OF PROJECT SUBMITTAL.

OPM NUMBERS: _____

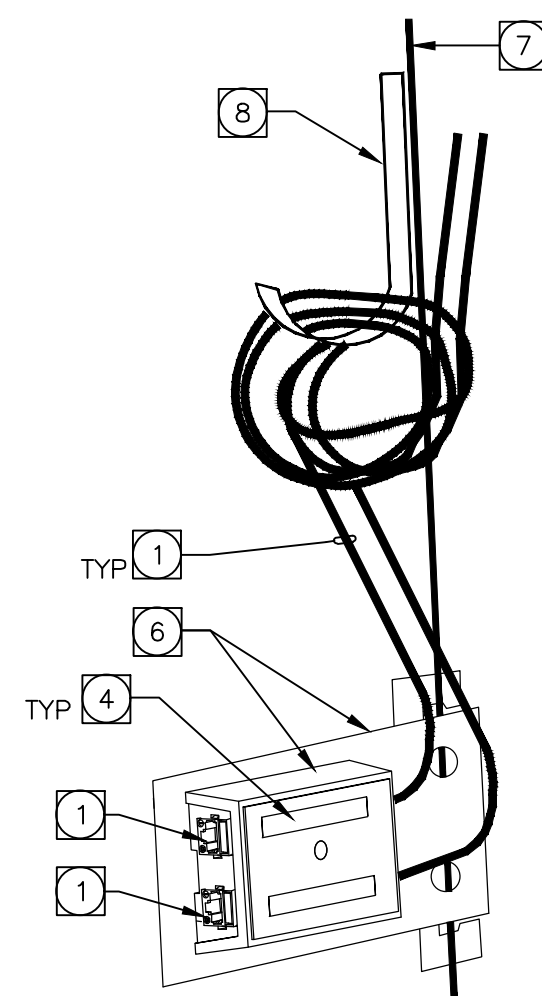
SHEET NUMBERS: _____

MP □ MD □ PP □ E □ IR 16-13 SECTION 2.2.3: DESIGN BASED ON OSHPD OPM, DEFERRED APPROVAL.

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND / OR STRUCTURED CABLING SYSTEM DRAWINGS:

Ⓐ

THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



WIRELESS ACCESS POINT DEVICE

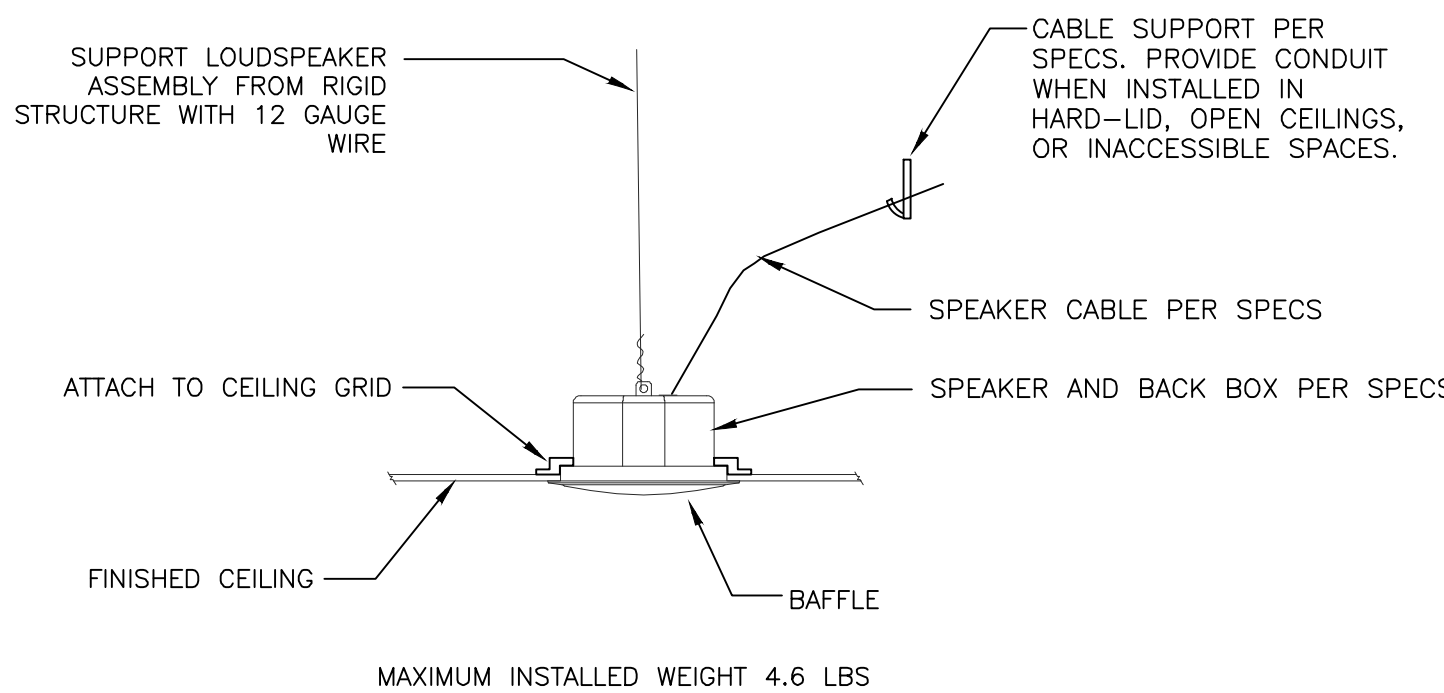
SCALE: N.T.S.

8

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND / OR STRUCTURED CABLING SYSTEM DRAWINGS:

Ⓐ

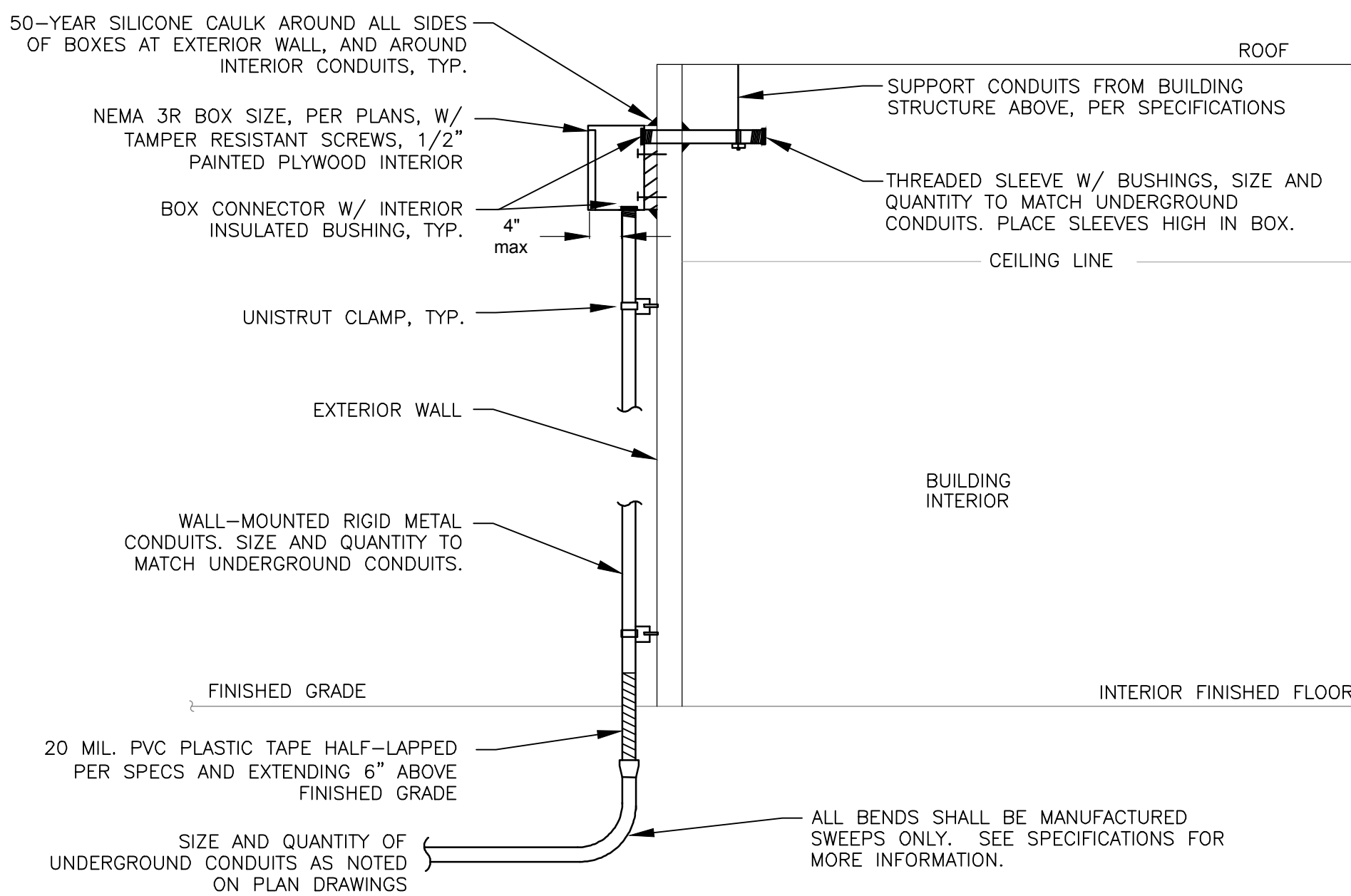
THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



CEILING-MOUNTED PUBLIC ADDRESS SPEAKER

SCALE: N.T.S.

9



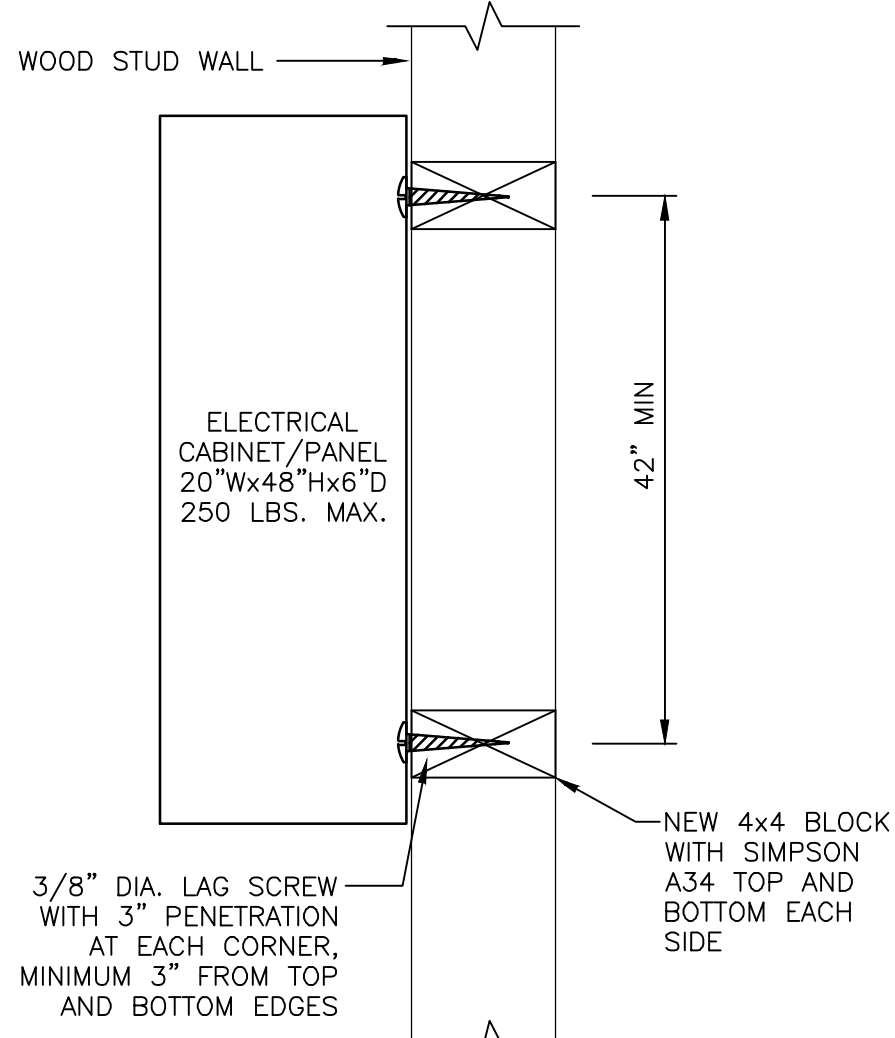
NOTES:

- ALL BOXES/PLYWOOD TO BE SECURED TO BUILDING STRUCTURE USING MIN. 3/8" X 2" WALL ANCHORS/LAG BOLTS.
- 50-YEAR SILICONE CAULK AROUND ALL PENETRATIONS, BOXES AND ALL THREADS AS REQUIRED.
- SEAL ALL UNDERGROUND CONDUITS PER COMMUNICATION PATHWAY NOTES, GENERAL PROJECT NOTES, AND PROJECT SPECIFICATIONS.
- SEE SPECIFICATIONS FOR MORE INFORMATION.

TYPICAL EXTERIOR JUNCTION BOX DETAIL

SCALE: N.T.S.

5



TYPICAL SURFACE PANEL MOUNTING

SCALE: N.T.S.

6

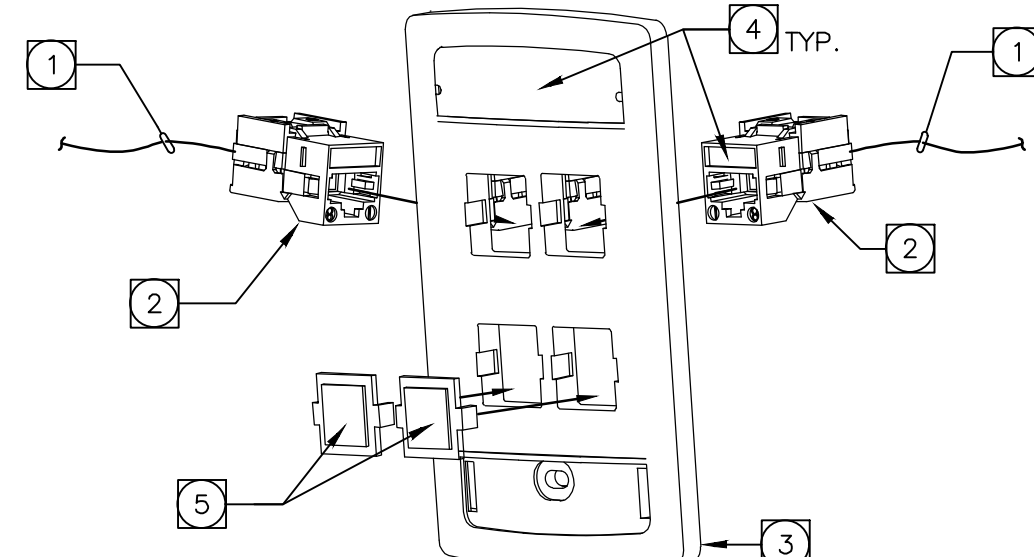
FACEPLATE NOTES

- PROVIDE (1) CATEGORY-6, 4-PAIR, UTP CABLE(S) TO IDF CABINET. CABLE COLOR BLUE. TERMINATE STATION END(S) IN STATION CONNECTOR(S) PER DETAILS. TERMINATE IDF ROOM RACK END(S) ON CATEGORY-6 PATCH PANEL(S).
- PROVIDE CATEGORY-6 STATION CONNECTOR. CONNECTOR COLOR BLUE.
- PROVIDE FACEPLATE PER SPECIFICATIONS. FACEPLATE MATERIAL AND FINISH SHALL MATCH ADJACENT/NEARBY POWER FACEPLATES UNLESS OTHERWISE NOTED.
- PROVIDE FACEPLATE LABELING PER SPECIFICATIONS. SEE SPECIFICATIONS FOR ALL LABELING REQUIREMENTS.
- BLANK INSERT. ALL UNUSED FACEPLATE OPENINGS SHALL BE COVERED WITH A BLANK INSERT MATCHING THE COLOR OF THE FACEPLATE.
- PROVIDE (1) SURFACE-MOUNT PLENUM-RATED TWO-PORT HOUSING (LEVITON 41089-2WP OR EQUAL). MOUNT TO CONTRACTOR-PROVIDED IN-CEILING BRACKET WITH MULTI-FUNCTION CLIP FOR ROD OR HANGER WIRE MOUNTING (LEVITON 49223-CBC OR EQUAL). PROVIDE 15FT SLACK LOOP ON J-HOOK MOUNTED ABOVE HOUSINGS. MOUNT HOUSING 10 TO 12 INCHES ABOVE ACCESSIBLE CEILING TILE.
- INSTALL DEDICATED SUSPENDED CEILING WIRE/HANGER OR SUPPORT ROD/ROD HANGER DIRECTLY TO STRUCTURAL CEILING ABOVE TO SUPPORT WAP SURFACE MOUNT HOUSING.
- PROVIDE J-HOOK ABOVE ACCESSIBLE CEILING PER SPECIFICATIONS. J-HOOKS SHALL BE SPACED AT A MAXIMUM OF 5 FEET APART.

WHERE THE FOLLOWING SYMBOLS ARE INDICATED ON THE ELECTRICAL DRAWINGS ARCHITECTURAL DRAWINGS AND/OR SIGNAL SYSTEM DRAWINGS:

X

"X" WILL BE REPLACED ON THE FLOORPLANS WITH A NUMBER INDICATING HOW MANY CABLES TO INSTALL AT THAT LOCATION. WHERE NO "X" IS SHOWN, INSTALL PER DETAIL BELOW. THE FOLLOWING SHALL BE PROVIDED, AS DEPICTED IN THE FOLLOWING DIAGRAMMATIC CONNECTIVITY DETAIL.



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A0.2	SIGNAGE AND SYMBOLS	
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A0.4	DSA-103 T&I PL WOOD FLOORS	
A0.5	CAL GREEN SPECS	
A0.6	CAL GREEN CHECKLIST	
A0.7	CAL GREEN CHECKLIST	
A0.8	CAL GREEN CHECKLIST	
Architectural		
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A1.1	36'x40' FLOOR PLAN	
A1.2	48'x40 thru 120'x40 FLOOR PLAN	
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A2.1(B)	ARCHITECTURAL WUI DETAILS (WOOD FRAMING SHG TO FINISH)	
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A2.2(A)	ARCHITECTURAL DETAILS (1 HR WOOD FRAMING SHG TO FINISH)	
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Sheet List	
Sheet Number	Sheet Name
GR0	MODULE PLAN AND NOTES
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GR5	RAMP DETAILS
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Grand total: 124 21 82 6517	
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SEISMIC DESIGN - SITE SPECIFIC PARAMETERS	
Select One	☒ Design based on Site Class D _{default} No geotechnical investigation required S _s = 2.129 Fa = 1.2
	☐ Design based on site class determined per chapter 20 of ASCE 7-16 Geotechnical investigation provided Site Class: ☐ C ☐ D ☐ E S _s = _____ Fa = _____ per ASCE 7-16 Suppl 3, Table 11.4-1
	☐ Design based on site specific ground motion hazard analysis per chapter 21 of ASCE 7-16 Short-period design spectral response parameter, S _{0.2} , shall be as specified in geotechnical investigation CGS approval required Not eligible for OTC review Site Class: ☐ C ☐ D ☐ E
	S _{0.2} = 2/3 Fa S _s = 1.702 Site Class C or D: 0.7 x S _{0.2} = 0.7 x 1.702 = 1.19 ≤ 1.307 Site Class E: _____ S _{0.2} = _____ ≤ 1.307 C _s = 0.373 used in design Seismic Design Category: ☐ D ☒ E * Site specific S _{0.2} value before applying reduction allowed by ASCE 7 section 12.8.1.3

Acceptance tests be completed on newly installed or replacement of lighting controls, mechanical systems, fenestration, and process equipment before project completion per the California Energy Code Section 10-103. Acceptance tests must be performed by a certified Acceptance Test Technician (ATT). The Acceptance Testing procedures must be repeated, and deficiencies corrected until the installation of the specified systems conform and pass the required acceptance criteria. Completed NRCA forms shall be submitted to the project inspector and the district.

A DSA CERTIFIED INSPECTOR EMPLOYED BY THE DISTRICT (OWNER), AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-333 AND 4-342, PART 1, TITLE 24, CCR, CLASS R.B.I.P. FOR IN-PLANT INSPECTIONS.

SITE SPECIFIC:
COMPLY WITH CFC CHAPTERS 5 & 7, CBC CHAPTERS 3.5,7,11B & 14

NOTE: * THIS PC IS NOT APPROVED FOR CHAPTER 7A WILDLAND URBAN AREAS*. THIS REVIEW IS PART OF THE SITE SPECIFIC PROJECT. THE APPROVAL OF THE PC DOES NOT INCLUDE THE SITE.

ALT-01.2 FLOOR PLAN	_____
ALT-02.2 REFLECTED CEILING PLAN	_____
ALT-03.2 ELECTRICAL PLAN	_____
ALT-04.2 MECHANICAL PLAN	_____
ALT-05.2 PLUMBING PLAN	_____
ALT-06.2 FIRE ALARM PLAN	_____
ALT-07.2 INTERIOR ELEVATIONS	_____
ALT-08.2 EXTERIOR ELEVATIONS	_____

SEISMIC DESIGN - SITE SPECIFIC PARAMETERS	
Seismic Data	☒ Design based on Site Class D _{max} No geotechnical investigation required S _s = 2.129 Fa = 1.2
	☐ Design based on site class determined per chapter 20 of ASCE 7-16 Geotechnical investigation provided Site Class: ☐ C ☐ D ☐ E S _s = _____ Fa = _____ per ASCE 7-16 Suppl 3, Table 11.4-1
	☐ Design based on site specific ground motion hazard analysis per chapter 21 of ASCE 7-16 Short-period design spectral response parameter, S _{0.2} , shall be as specified in geotechnical investigation CGS approval required Not eligible for OTC review Site Class: ☐ C ☐ D ☐ E
	S _{0.2} = 2/3 Fa S _{0.2} = 1.702 Site Class C or D: 0.7 x S _{0.2} = 0.7 x 1.702 = 1.19 ≤ 1.307 Site Class E: _____ S _{0.2} = _____ ≤ 1.307
	C ₀ = 0.375 used in design Seismic Design Category: ☐ D ☒ E
	* Site specific S _{0.2} value before applying reduction allowed by ASCE 7 section 12.6.1.3

Acceptance tests be completed on newly installed or replacement of lighting controls, mechanical systems, fenestration, and process equipment before project completion per the California Energy Code Section 10-103. Acceptance tests must be performed by a certified Acceptance Test Technician (ATT). The Acceptance Testing procedures must be repeated, and deficiencies corrected until the installation of the specified systems conform and pass the required acceptance criteria. Completed NRCA forms shall be submitted to the project inspector and the district.

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SITE SPECIFIC:
COMPLY WITH CFC CHAPTERS 5 & 7, CBC CHAPTERS 3.5,7,11B & 14

NOTE: * THIS PC IS NOT APPROVED FOR CHAPTER 7A WILDLAND URBAN AREAS*. THIS REVIEW IS PART OF THE SITE SPECIFIC PROJECT. THE APPROVAL OF THE PC DOES NOT INCLUDE THE SITE.

ALT-01.2 FLOOR PLAN
ALT-02.2 REFLECTED CEILING PLAN
ALT-03.2 ELECTRICAL PLAN
ALT-04.2 MECHANICAL PLAN
ALT-05.2 PLUMBING PLAN
ALT-06.2 FIRE ALARM PLAN
ALT-07.2 INTERIOR ELEVATIONS
ALT-08.2 EXTERIOR ELEVATIONS

STKP #345

COLTON JUSD

(1) 108x40

(3) 72x40

(1) 108x40

C-23-2856 A-F

(3) 72x40

C-23-2859 A-F

C-23-2860 A-F

C-23-2861 A-F

HIGH SEISMIC

DESIGN CRITERIA

FILE #: PC-128

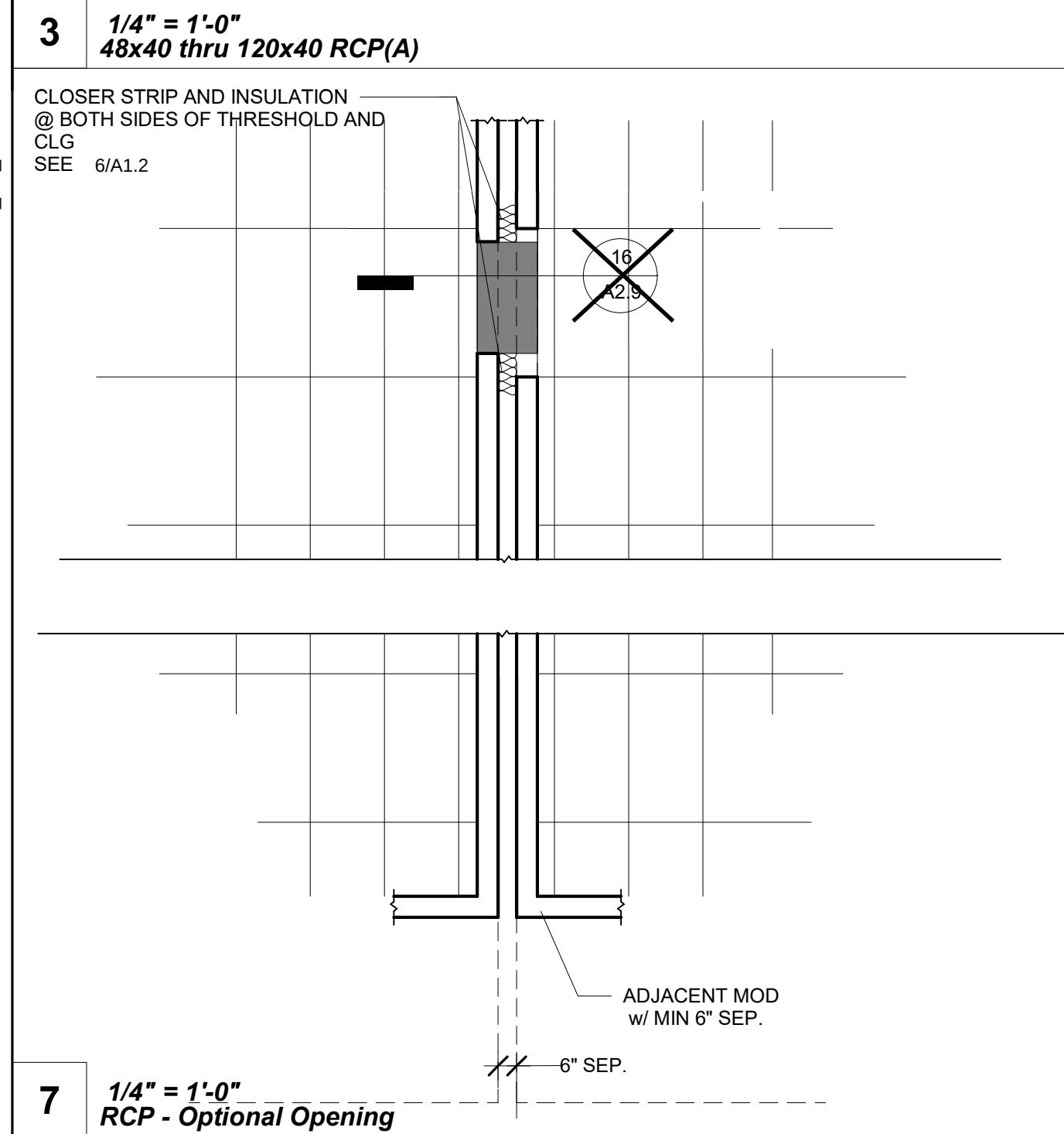
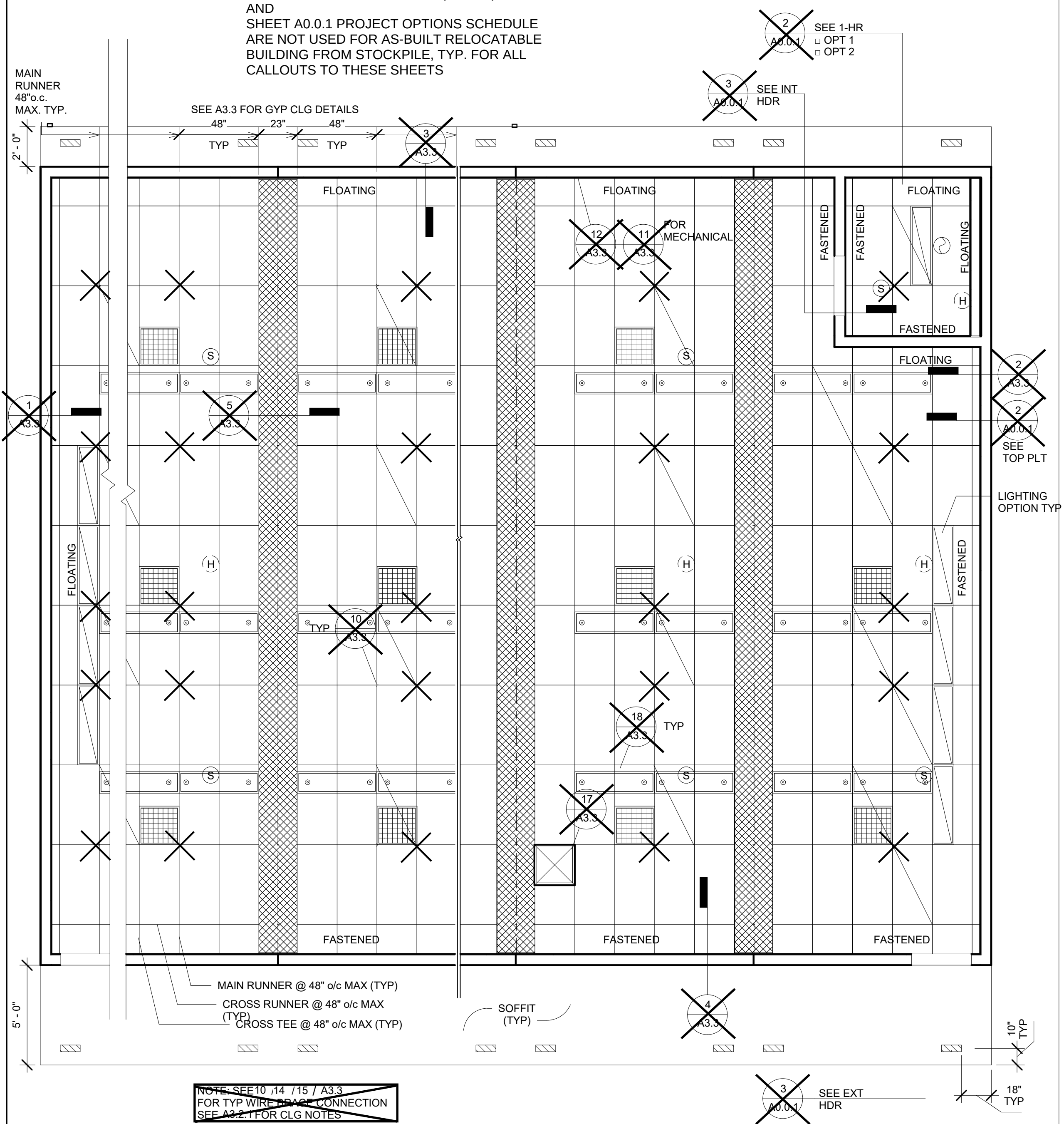
2022 CBC

2

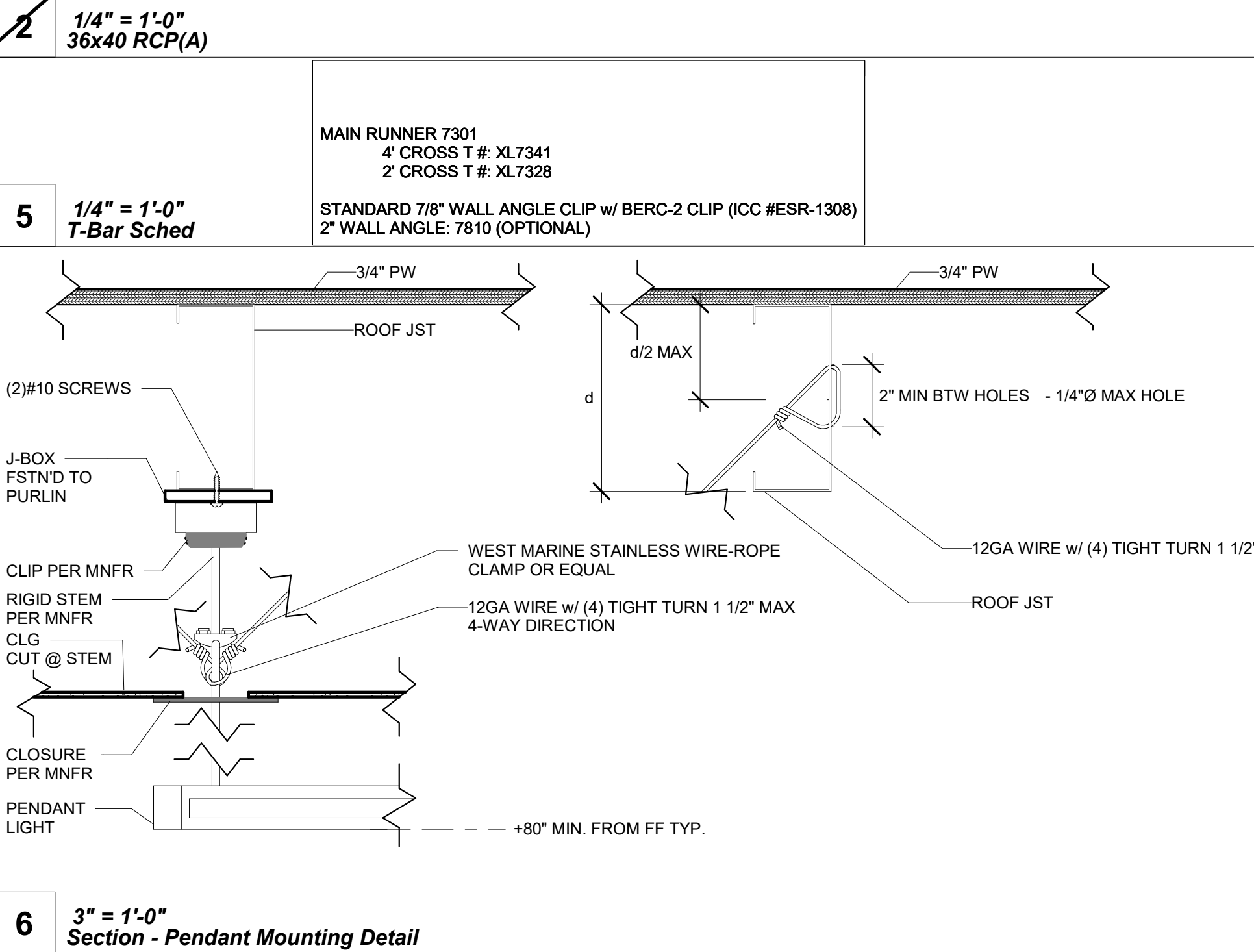
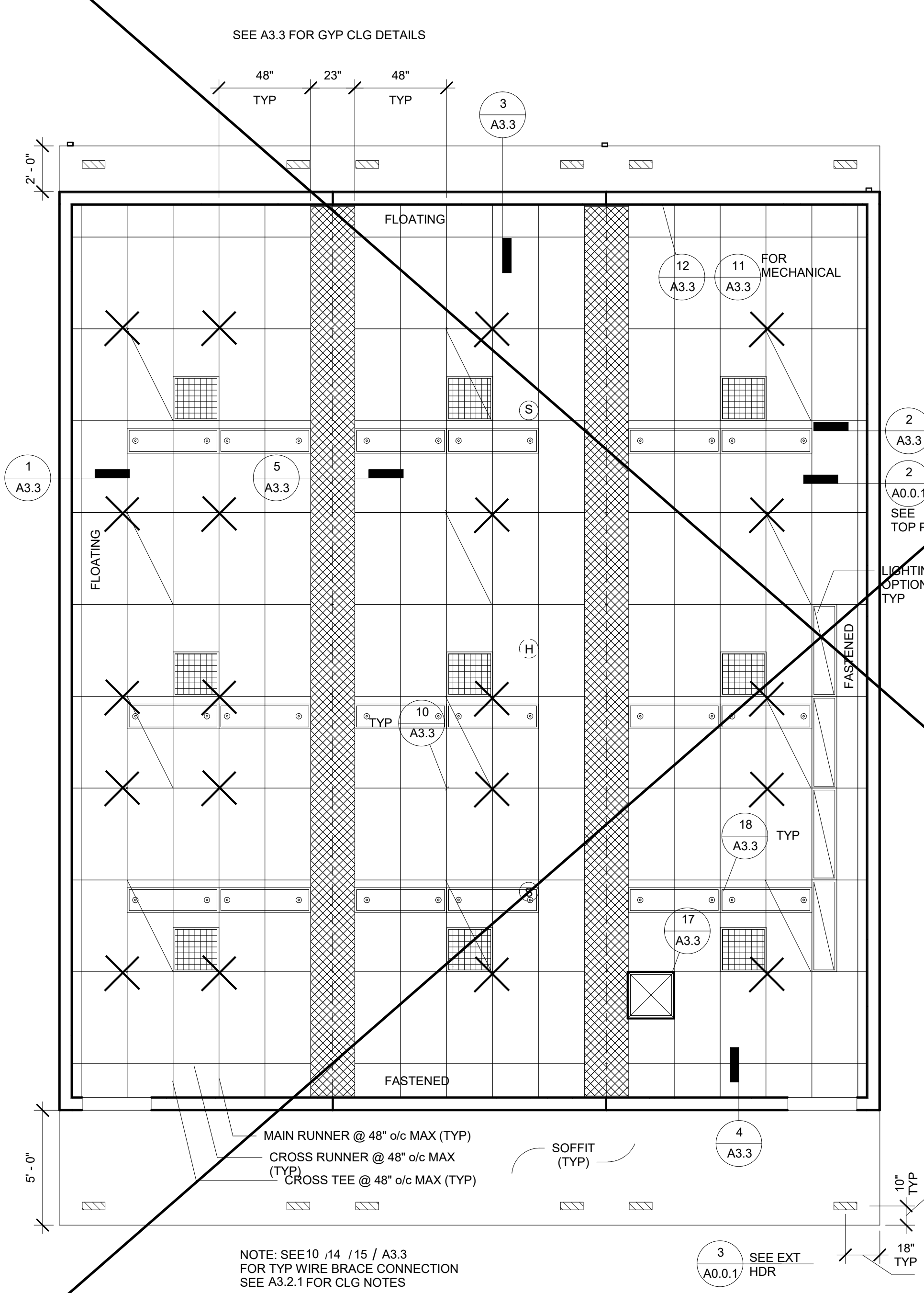
@	ANCHOR BOLT	FIXT	FIXTURE
ABC	AGGREGATE BASE COURSE	FLR	FLOOR
ABV	ABOVE	FLUR	FLUORESCENT
AD	AREA DRAIN	FLEX	FLEXIBLE
ADD	ADDITION	FND	FOUNDATION
ADH	ADHESIVE	FP	FACE OF
ADJ	ADJACENT, ADJUSTABLE	FP	FIREPROOF (ED)
ADPH	ALTERNATE DIRECTION	FR	FRAME (D)(ING)
ATF	AT THE END OF HOOK	FRG	FIRE RESISTANT COATING
AGG	AGGREGATE	FRGD	FORGED
ALT	ALTERNATE	FRMG	FRAMING
ALUM	ALUMINUM	FT	FOOT, FEET
ANOD	ANCHOR (AGE)	FOOT	FOOTING
AND	AND/ED	FURR	FURRED, FURRING
APPRX	APPROXIMATE	FV	FIELD VERIFY
ARCH	ARCHITECT (URAL)		
ASPH	ASPHALT	GA	GAUGE
AUTO	AUTOMATIC	GALV	GALVANIZED
		GC	GENERAL CONTRACTOR
B	BOTTOM	GI	GALVANIZED IRON
BB	BOND BEAM	GSKT	GASKET
BC	BOTTOM CHORD	GL	GLASS
BD	BOARD	GLM	GULLUM
BEG	BEG (ING)	GPR	GALVANIZED PIPE
BEL	BELOW	GPM	GALLONS PER MINUTE
BIT	BITUMINOUS	GPP	GYPSUM PLASTER
BJD	BENT JOINT	GRV	GRAVEL, GRANULAR
BLDG	BUILDING	GRD	GRADE, GRADING
BLK	BLOCK (G, ING)	GRN	GRANITE
BLW	BELOW	GSS	GALVANIZED SHEET STEEL
BM	BENCH MARK	GT	GROUT
BMK	BENCH MARK	GVL	GRAVEL
BO*	BOTTOM OF BEARING PLATE	GWB	GYPSUM WALLBOARD
BPL	BEARING PLATE	GY	GYPSUM
BRD	BOARD	H	HIGH
BRD	BRIDGING	HBD	HARDBOARD
BRG	BEARING	HC	HOLLOW CORE
BRK	BRICK	HD	HEAVY DUTY
BRZ	BRONZE	HDNR	HARDENER
BS	BOTH SIDES	HDR	HEADER
BTWN	BETWEEN	HDWR	HARDWARE
BVL	BEVELED	HDWR	HARDWOOD
BW	BOTH WAYS	HES	HIGH EARLY STRENGTH CEMENT
		HJT	HEADJOINT
C	CHANNEL, COMPRESSION	HKB	HEAD STRAIGHT BOLT
CAD	CAD	HT	HARDWARE
CAM	CAMMER	HWID	HARDWOOD
C/C	CENTER TO CENTER		
CEM	CEMENT	I	INCH (ES)
CF	CUBIC FOOT	INCL	INCLUDE (D), INCLUDING
CHAM	CHAMFER	INSUL	INSULATE, INSULATION
CIR	CIRCLE	INT	INTERIOR
CIP	CAST-IN-PLACE	INTN	INTERMEDIATE </td
CIRC	CIRCUMFERENCE	INV	INVERT
CJT	CORNER JOINT	J	JOINT
CLK	CEILING	JST	JOIST
CLK	CAULK (G, ING)	K	KIP (S)
CLS	CAULKING	KNO	KNOCKOUT
CLS	CLEAR	KSI	KIPS PER SQUARE INCH
CLG	CLOSURE	L	LONG, LENGTH
CM	CENTER	LAM	LAMINATE (D)
CMP	CORRUGATED METAL PIPE	LBN	POUND, LAG BOLT
CONC	CONCRETE MASONRY UNIT	LBS	LBS
CNTR	CENTER	LCL	LIGHT CONTROL
COG	CENTER OF GRAVITY	LD	DEVELOPMENT LENGTH
COMB	COMBINATION	LF	LINEAR FOOT
COB	COMPRESSION (EDON)(BLE)	LH	LEFT HAND
COMPOSITE	COMPOSITE	LL	LEVEL LOAD
CONN	CONNECTION (ION)	LLH	LONG LEG HORIZONTAL
CONC	CONCRETE	LLV	LONG LEG VERTICAL
CONSTR	CONSTRUCTION (ION) (ED)	LPT	LIGHT POINT
CONT	CONTINUE, CONTINUOUS	LTL	LINTEL
CONTR	CONTRACTOR	LVL	LEVEL (ING)
COR	CORRUGATED	LWG	LIGHT WEIGHT
CP	COMPLETE PENETRATION	LWC	LIGHT WEIGHT CONCRETE
COP	COPING	LWF	LIGHT WEIGHT FILL
CPR	COPPER	M	METER (S) MOMENT
		MATL	MATERIAL
CRS	COURSE (S)	MAS	MASONRY
CS	COUNTERSINK	MAX	MAXIMUM
CTSK	COUNTERSUNK SCREW	MB	MACHINE BOLT
CU	CUBIC	MEMB	MEMBER
CX	CONNECTION	MCON	MOMENT CONNECTION
CY	CUBIC YARD	MECH	MECHANICAL
		MED	MEDIUM
D	DEEP, DEPTH	MET	METAL
DBL	DOUBLE	MEMB	MEMBER
DEF	DEFLECTION	MEP	MECHANICAL, ELECTRICAL, & PLUMBING
DEG	DEGREE	MFD	METAL FLOOR DECKING
DEMOL	DEMOLISH, DEMOLITION	MFR	MANUFACTURE (R) (ED)
DEP	DEPRESSION	MD	MIDDLE
DEPT	DEPARTMENT	MID	MID, MIDDLE
DET	DETAIL	MIN	MINIMUM, MINUTE
DNG	DIAGONAL	MISC	MISCELLANEOUS
DA	DIAMETER	MLINETER (S)	MILINETTER (S)
DN	DIMENSION (ED)	MMB	MEMBRANE
DV	DIVISION	MMS	MASONRY OPENING
DL	DEAD LOAD	MOD	MODEL
DN	DOWN	MODU	MODULAR
DO	DOWEL	MOV	MOVABLE
DP	DAMPPOOFING	MTL	MATERIAL
DWL	DRAWING (S)	ML	MODULE, MODULINE
DWG	DRAWING	N	NORTH, NEW
E	EAST	NAT	NATURAL
EA	EA, EACH	NAL	NALABLE
EB	EXPANSION BOLT	NO	NUMBER
EF	EACH FACE	NOM	NOMINAL
EJT	EXPANSION JOINT	NTS	NOT TO SCALE
EL	ELEVATION		
ELEC	ELECTRIC (AL)	OA	OVERALL
ENCL	ENCLOSURE, ENCLOSED	O.C	ON CENTER
ENG	ENGINEER	OD	OUTSIDE DIAMETER
EQ	EQUAL, EQUILIBRIUM	OH	OVERHEAD
EQUIP	EQUIPMENT	OWS	OVALHEAD MACHINE SCREW
ESTM	ESTIMATE (ED)	OPH	OPPOSITE HAND
EV	EXPANSION BOLT	OPN	OPENING
EW	EACH WAY	OPR	OPPOSITE
EKA	ELEVATE (D) (ION)	OFO	OWNER FURNISHED OWNER INSTALLED
(E), EXIST	EXISTING		
EXP	EXPANDED METAL PLATE		
EXPN	EXPANDED		
EXT	EXTERIOR, EXTERNAL		
FAS	FASTENER		
FBO	FURNISHED BY OTHERS		
FMS	FIRE HOSE STATION		
FHD	FLOOR DRAIN		
FHS	FIRE HOSE STATION		
FHSV	FLATHEAD WOOD SCREW		
FIN	FINISH (ED)		

6/15/2021 11:50:56 PM C:\Users\User\Documents\20093 - Aris, 24x40 PC - MainFile - Low Seismic_6.7_CESAR24D63.rvt

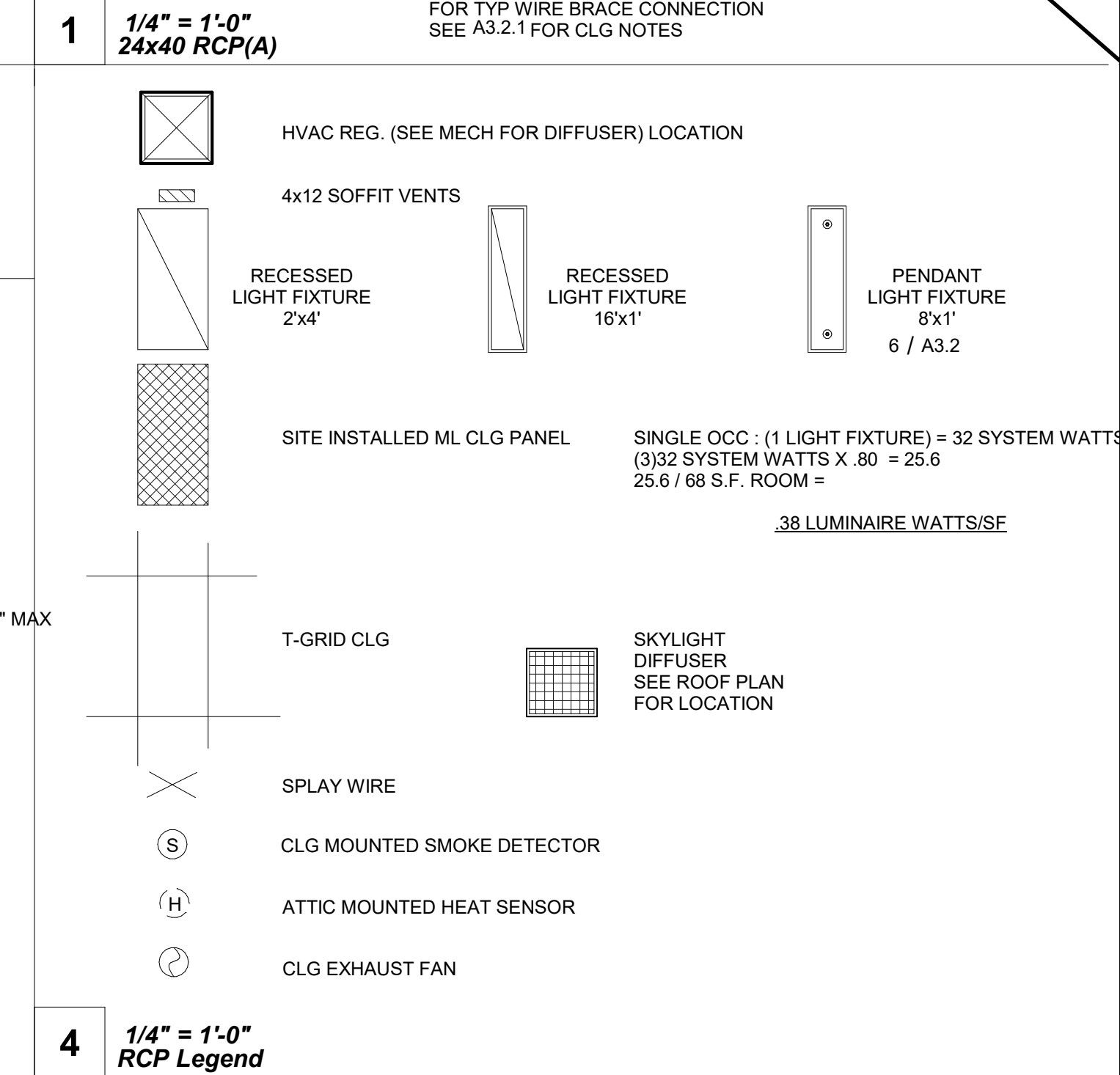
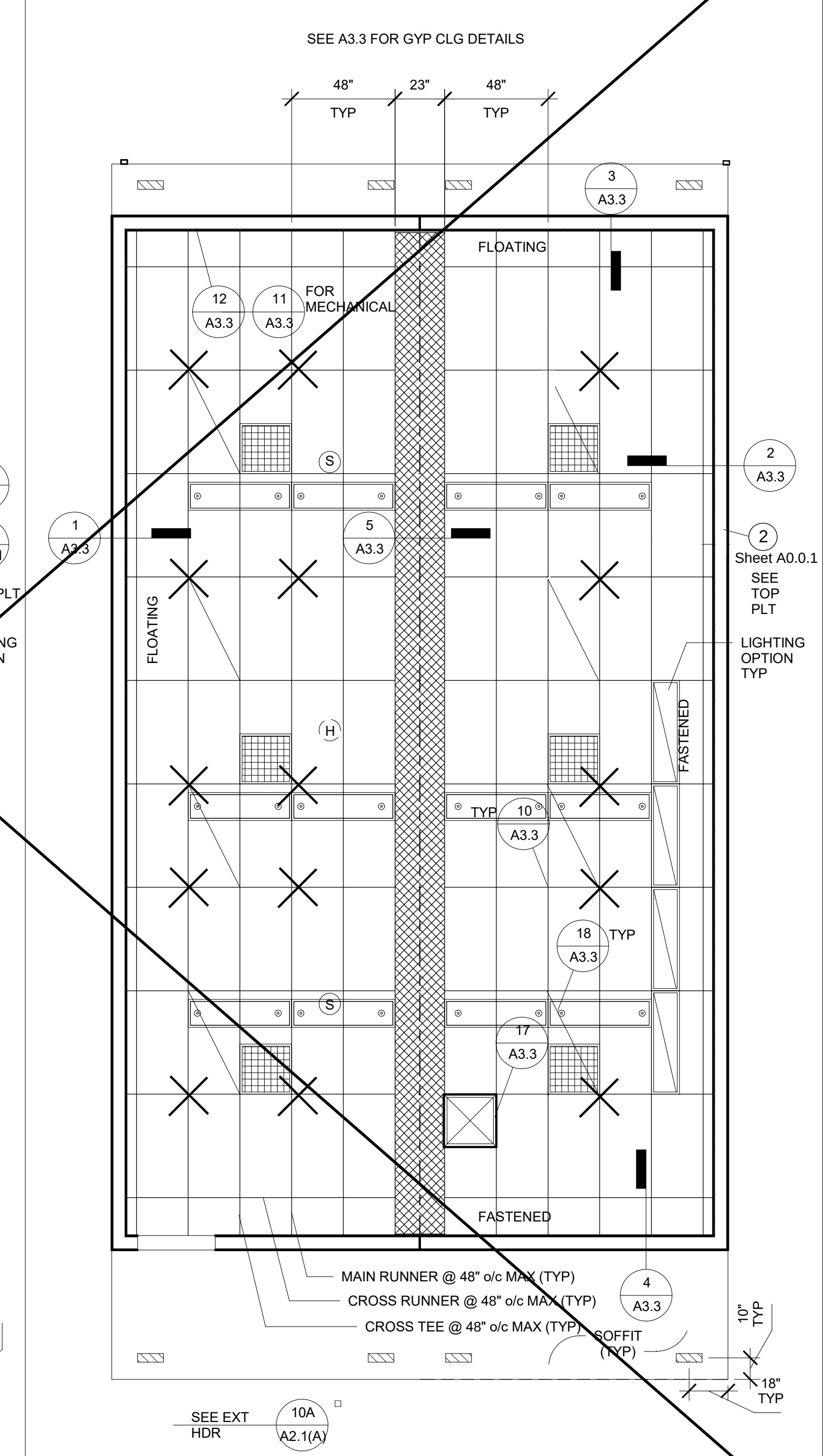
NOTE:
SHEET A3.3 CEILING DETAILS (T-GRID)
AND
SHEET A0.0.1 PROJECT OPTIONS SCHEDULE
ARE NOT USED FOR AS-BUILT RELOCATABLE
BUILDING FROM STOCKPILE, TYP. FOR ALL
CALLOUTS TO THESE SHEETS



7 1/4" = 1'-0"
RCP - Optional Opening



6 3" = 1'-0"
Section - Pendant Mounting Detail



4 1/4" = 1'-0"
RCP Legend

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123412 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/04/2024

R&S TAVARES ASSOCIATES
DESIGN & CONSULTING • PROJECT MEET
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP
REGISTERED PROFESSIONAL ARCHITECT
MANNY D. FLORES
C3380
03/21/24
STATE OF CALIFORNIA
02/16/24
RST122088

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CLIENT
Class Leasing
1651 Juanita Street, San Jacinto, CA 92583
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ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024

Revision Schedule

#	Description	Date
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PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
RCP

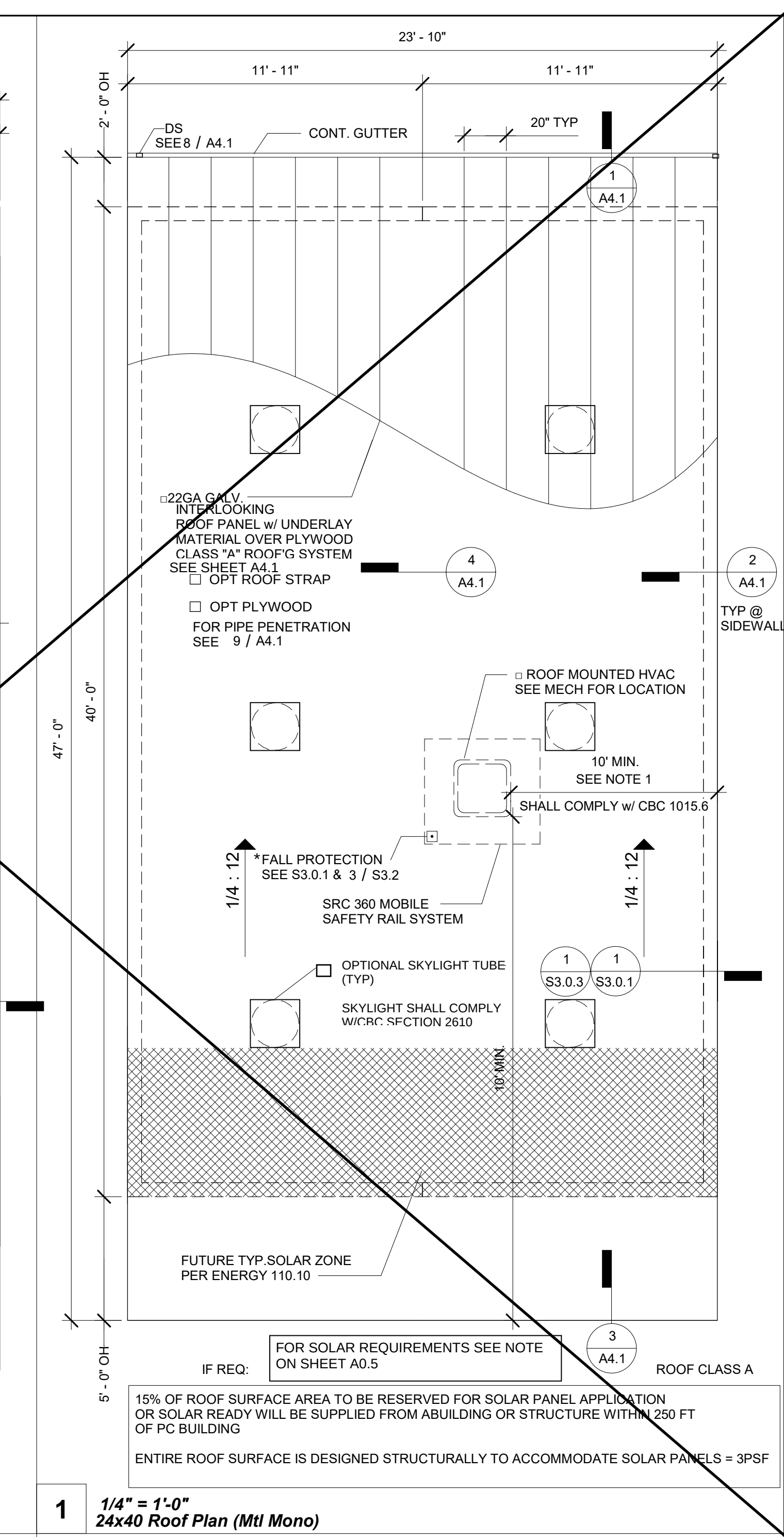
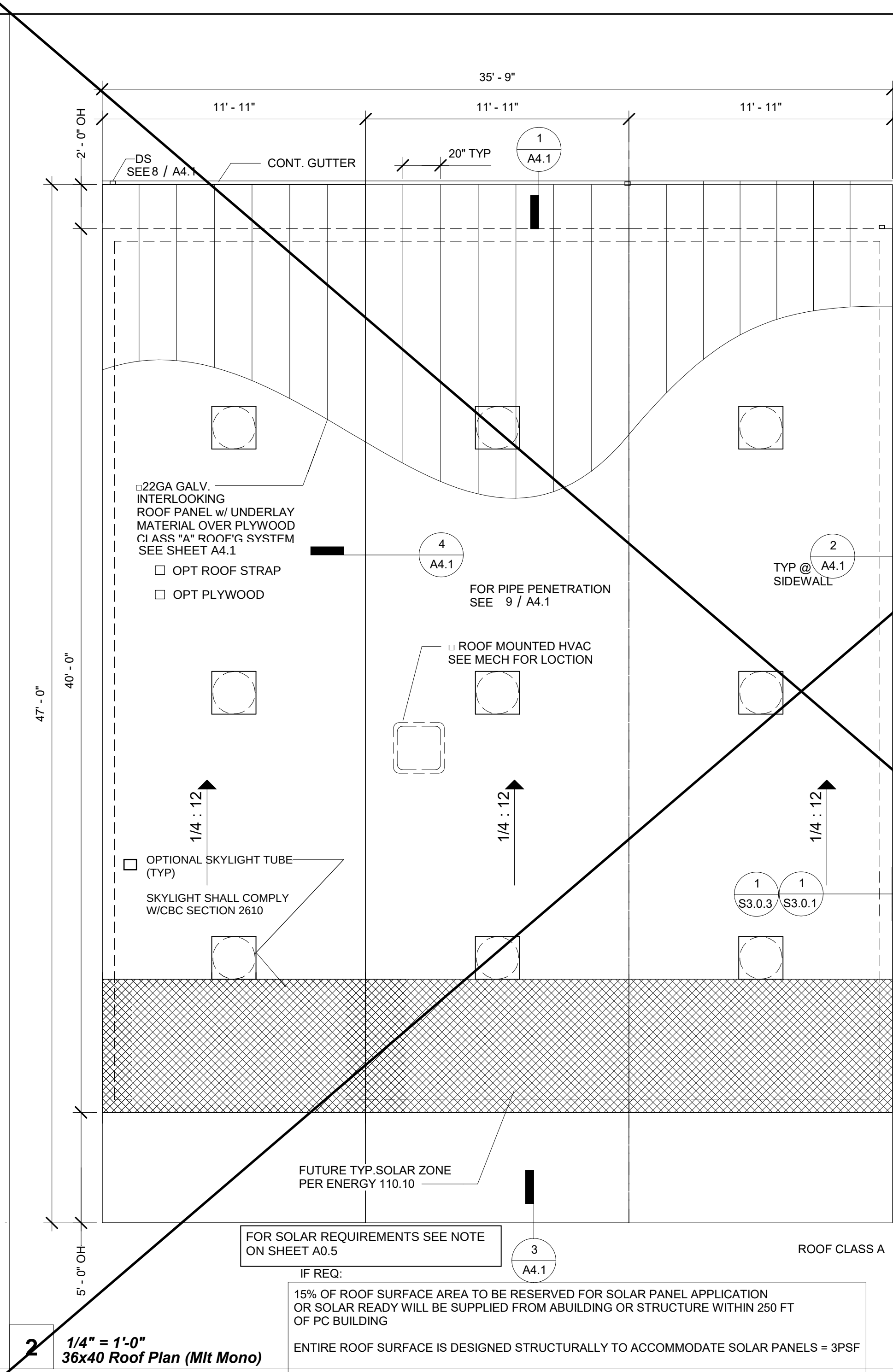
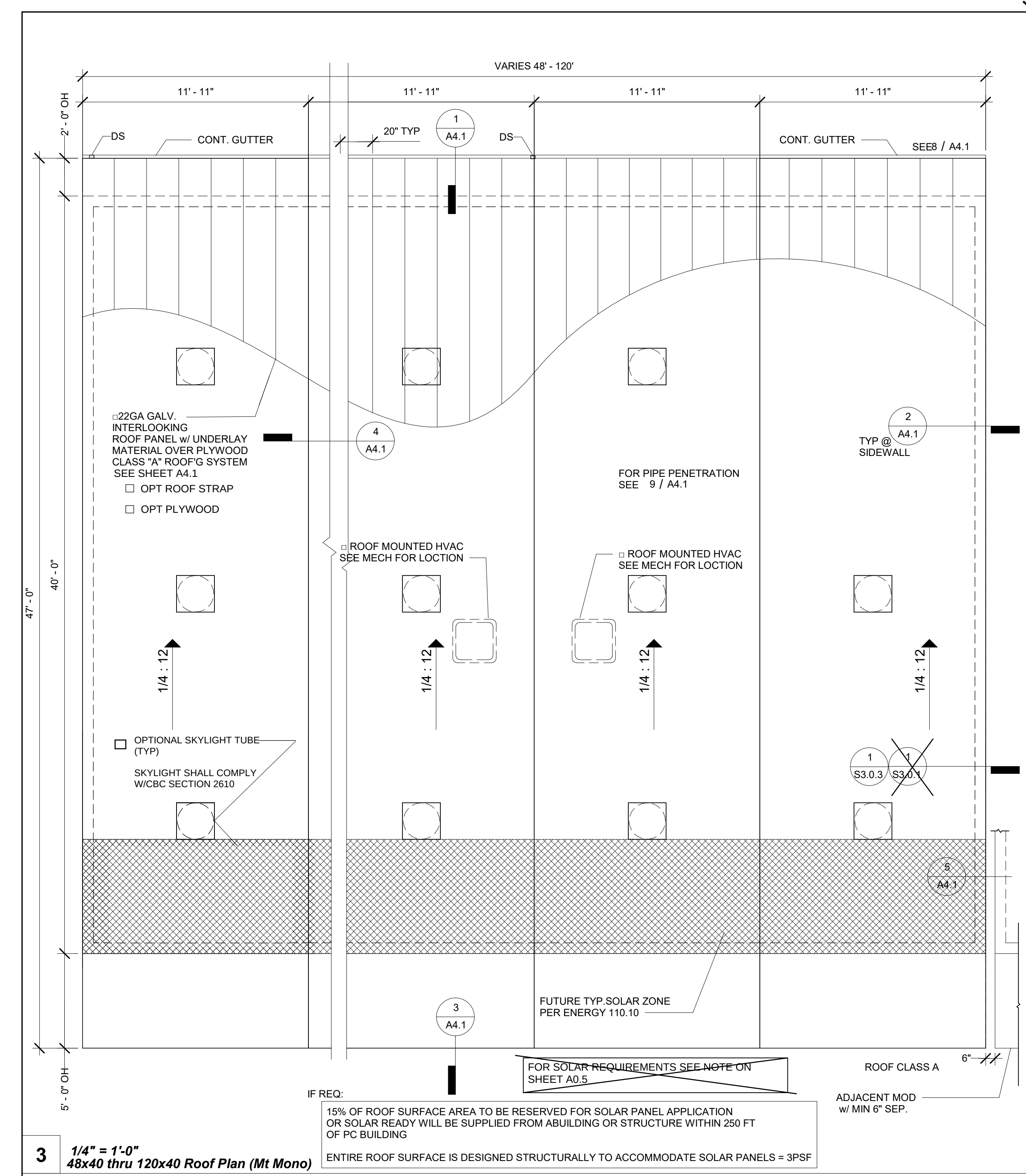
PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

DATE

SHEET NO.
A3.2
BID SET
SHEET OF



Note: For conditioned structures, roofing must be installed IAW 2019 CBC SECTION 1202.3

1202.3 Unvented Attic and Unvented Enclosed Rafter Assemblies

Unvented attics and unvented enclosed roof framing assemblies created by ceilings applied directly to the underside of the roof framing members/rafters and the structural roof sheathing at the top of the roof framing members shall be permitted where all of the following conditions are met:

- The unvented attic space is completely within the building thermal envelope.
- No interior Class I vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
- Where wood shingles or shakes are used, not less than a 1/4-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
- In Climate Zones 14 and 16, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.

See the California Energy Code, Figure 100.1-A — California Climate Zones.

4.1. [HCD 1 & HCD 2] In Climate Zones 14 and 16, a Class I or Class II vapor retarder shall be installed on the indirectly conditioned space side of all insulation in an unvented attic with air-permeable insulation, for condensation control.

5. Insulation shall be located in accordance with the following:

5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing. No insulation shall be required when roof tiles, wood shingles or wood shakes, or any other roofing system using battens and no continuous underlayment is installed. A continuous underlayment shall be considered to exist if sheathing, roofing paper or any continuous layer having a perm rate of no more than one perm under the dry cup method is present.

5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.

5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with

Item 5.1.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table 1202.3 for condensation control.

5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall be in accordance with the R-values in Table 1202.3 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.

5.2. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

Exceptions:

- Section 1202.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.
- Section 1202.3 does not apply to enclosures in Climate Zones 14 and 16 that are humidified beyond 35 percent during the three coldest months.

TABLE 1202.3
INSULATION FOR CONDENSATION CONTROL

CLIMATE ZONE	MINIMUM R-VALUE OF AIR-IMPERMEABLE INSULATION*
2B and 3B tile roof only	0 (none required)
1, 2A, 2B, 3A, 3B, 3C	R-5
4C	R-10
4A, 4B	R-15
5	R-20
6	R-25
7	R-30
8	R-35

* Contributor to, but does not supersede, thermal resistance requirements for attic and roof assemblies in the California Energy Code.

NOTE: PER CBC 1015.6, - EXCEPTION, GUARDRAILS ARE NOT REQUIRED WHERE PERMANENT FALL RESTRAINT ANCHORAGE DEVICES ARE AFFIXED & SHALL BE PLACED NOT MORE THAN 10FT FROM THE ROOF EDGE.

ROOFS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 7A AND CHAPTER 15. ROOFS SHALL HAVE A ROOFING ASSEMBLY INSTALLED IN ACCORDANCE WITH ITS LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

* IF ROOF MOUNTED UNIT IS APPLIED

PV AREA FOR FIRE ACCESS REQ (PER IR 16-8)

3.2.1 General Requirements: A PV System shall be typically considered equipment. There is typically not an occupancy group classification, building area limitation, or type of construction assignment to a PV system.

a) PV equipment supported by non-combustible framing installed in locations dedicated for building frontage used for area increases per California Building Code (CBC), Chapter 5, Section 506, shall be limited in size and may be allowed on a case by case basis. Maximum area that may be allowed for such systems shall not exceed 1/3 of the horizontal projected area of each frontage.

b) Open sided PV systems and framing that are non-combustible and without use underneath may be considered equipment and may be placed next to DSA IR 16-8 Solar Photovoltaic and Thermal (updated 01-25-17) Systems Review and Approval Requirements Page 11 of 19 property lines. Signs may be required on or near the system prohibiting any use or storage underneath the equipment.

c) Combustible PV systems and framing and those with use underneath such as for assembly or parking, may need to comply with 2022 CBC, Table 602. These structures may include those that do and that do not have a roof underneath the PV system.

d) PV systems (both the frame and the array) shall not be placed in fire department access roads. (Per Title 24 CCR, Division 1, Chapter 1, Section 3.05 and 2022 CBC Chapter 5, Section 503.)

e) Access to a public way or safe dispersal area shall not be obstructed by the system or system framing. (CBC 1027.6 and 442.3)

f) PV systems that cover a lunch area or similar (occupant load less than 50), that are not used for assembly purposes shall be considered equipment. Playgrounds would also fall into this category regardless of total occupant load.

g) Any PV system that is installed above an assembly use (i.e. Group A-3 or A-5 occupancy classification) shall be considered an open sided building structure and all or portions of CBC provisions apply on a case by case basis. Such areas might include an outdoor amphitheater, bleacher or grandstand seating with concentrated occupant loads and heavy use.

h) Fire Department concern for the installation of roof mounted PV systems will be addressed by DSA review to the State Fire Marshal Solar Photovoltaic Installation Guideline available at: <http://osfm.fire.ca.gov/pdf/reports/solarphotovoltaicguideline.pdf>

i) When a PV system, without riser framework, is installed directly on a rated roof assembly with a required classification greater than "Class C" found in CBC, Chapter 15, and f

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123412 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/04/2024

R&S TAVARES ASSOCIATES
DESIGN & CONSULTING PROJECT
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ARCHITECT
MANNY D. FROST
03380
03/31/24
STATE OF CALIFORNIA
02/16/24
RST/22088

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CLIENT

Class Leasing
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Voice (951) 943-1908 Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024

Revision Schedule

Description Date

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE

PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
**ROOF PLAN MONO
SLOPE (STANDING
SEAM)**

PROJECT NUMBER

22088

DRAWN BY

rMc/SC

CHECKED BY

RH/RT

DATE

SHEET NO.

A4.0.1
BID SET

SHEET OF

Clip - 2" Sliding (Low)

Note:

- Specify SSR System
- Clip fasteners must be ordered separately
- 1 1/2" requirement in each direction

PART #	SSR SYSTEM	HEIGHT	WEIGHT EACH	PRICED PER EACH
HW-2122	Double Lok®	3 1/2"	50W	✓

12

DOUBLELOK CLIP [HW-2122]

DOUBLE-LOK PANEL (PREPUNCHED)

TRI-BEAD TAPE SEALER [HW-504] CONT. ACROSS PANEL OVER PRE-PUNCHED HOLES

NOTE: APPLY TRI-BEAD TAPE SEALER OVER THE NOTCHED PORTION OF THE MALE LEGS

BACK-UP PLATE [HW-7769] 18" PANEL

1/4-14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] (9) PER 18" PANEL

1/4-14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1] (2) PER CLIP W/O PLYWOOD SEE DETAIL 7I- NOTE: 1/4-14 x 1 3/4 SELF-DRILLER W/ WASHER [FASTENER #1F] (2) PER CLIP W/ PLYWOOD

3/4" SHEATHING OPTIONS SEE DETAILS 1.2,3.4, & 5/A4.1 ALSO SHEETS S3.0.1 TO S3.0.4.*

RIGID INSULATION SEE 1/A4.1 APPLIED WITH ADHESIVE PER ESR-1023 (OR EQUAL)

PURLIN @ 5'-0" o.c.

UPPER PANEL

LOWER PANEL

1/4 - 14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] (2) PER ENDLAP

TRIPLE BEAD TAPE SEALER [HW-504]

1/4 - 14 x 1 LONG-LIFE 'TYPE AB' SELF-TAPPER W/ WASHER [FASTENER #2B] (9) PER ENDLAP

WISE GRIP ○ LOCKING PLIERS

PANEL INSTALLATION SEQUENCE

1'-6"

0'-3"

1'-2 1/2"

1

3

2

9

4

5

6

FASTENER SEQUENCE @ ENDLAP

18" DOUBLE-LOK 22GA STANDING SEAM PANEL BY MBCL

	NEG	POS
t	= 0.0299"	= 0.0299"
S _x	= 0.1846 IN ⁴	= 0.2154 IN ⁴
I _x	= 0.2718 IN ⁴	= 0.4968 IN ⁴
F _y	= 50 KSI	= 50 KSI

FOR ALL METAL ROOFING SYSTEMS USE OR EQUAL

* PLYWOOD UNDERLAY IS USED PER S3.0.1 & S3.0.2 CONDITIONS AND IS OPTIONAL AT THE METAL DECK CONDITIONS PER S3.0.3 & S3.0.4

14 6" = 1'-0" FLASHING @ ROOF HIGH SIDE

13 6" = 1'-0" FLASHING @ ROOF LOW SIDE

12 6" = 1'-0" ROOF FLASHING

11 6" = 1'-0" ROOF FLASHING @ SIDEWALL

10 6" = 1'-0" ROOF CAP @ MODLINE

4 1/2"

1 3/4"

5"

1"

5"

0.030" GALV. STL. FLASHING @ HIGH END OF ROOF

5"

3/4"

1 1/2"

5"

VARIES UP TO 12"

1 1/2"

5"

1"

10A 6" = 1'-0" FLASHING @ MODLINE WALL

5A

9 3" = 1'-0" Pipe Penetration Standing Seam

8 3" = 1'-0" Downspout Mount1

7

6 3" = 1'-0" Gutter and Strap1

TRI-BEAD TAPE SEALER [HW-504]

1/4-14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] @ 24" O.C.

DOUBLE-LOK PANEL

EXPANSION JOINT TRIM [SF-?] (6" MAX.)

FASTENERS

TRI-BEAD TAPE SEALER [HW-504]

EXPANSION JOINT CLEAT [SF-?]

1/4-14 x 1 1/4 LONG-LIFE SELF-DRILLER W/ WASHER [FASTENER #1E] @ 24" O.C.

DOUBLE-LOK PANEL

2 x 4 x 16 GA. ANGLE

12-14 x 1 PANCAKE HEAD SELF-DRILLER [FASTENER #12A] (1) PER CONN.

2" STANDOFF RAKE SUPPORT ANGLE [HW-7664]

1/4-14 x 1 1/4 SHOULDER TEK-2 SELF-DRILLER [FASTENER #5] @ 24" O.C. (CENTER IN SLOT)

SEAM

T-JOINT FLASHING

MIN 4"x4" CENTERED OVER INTERSECTION

PIPE PENETRATION

CONT BEAD OF SEALANT

STAINLESS STEEL CLAMPING RING

FIELD FABRICATED MTL HOOD

PRE-MOLDED PIPE FLASHING

MEMBRANE

ADHESIVE

FSTNR @ 12" o/c

3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4

PLAN VIEW @ TPO SEAM

DOWNSPOUT BRACKET, FST'N BOT/MID/TOP

DOWNSPOUT

DOWNSPOUT

SHT'H'G AND EXT SIDING

HSS COLUMN

Col Per Struc

SHT'H'G AND EXT FINISH

SLIDING CLIP

DOUBLE-LOK PANEL (PREPUNCHED) 18"

TRIPLE BEAD TAPE SEALER CONT. ACROSS PANEL [HW-502]

BACKUP PLATE 18"

1/4-14 x 1 SELF-DRILLER W/ WASHER [FASTENER #1] (2 PER CLIP)

PURLIN MIN. 16 GA. METAL AT 5'-0" O.C. MAX.

6 1/2"

5"

135.00°

3"

3/4"

4 3/4"

5 3" = 1'-0" Roof @ Mateline Std'g Seam w/ 6" Sep

4 3" = 1'-0" Roof @ Standing Seam Mateline

3 3" = 1'-0" Roof @ Endwall Std'g Seam (High End)

2 3" = 1'-0" Roof @ Standing Seam Sidwall

1 3" = 1'-0" Roof @ Endwall Std'g Seam (Low End)

CONT STRIP OF QUICK SEAM FLASH SEALANT

FASTENER w/ NEOPRENE WASHER @ 36" o/c

0.036" GALV FLASHING (FIELD INSTALLED)

CLIP PER STANDING SEAM MNFR SPEC

(2) SHOT PINS @ EA CLIP

22GA STANDING SEAM ROOF PAN

MEMBRANE

ADHESIVE

OPT. 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4 TRUSS

6" SEP.

NOTE: SEE DETAIL 5A/-

FASTENER w/ NEOPRENE WASHER @ 36" o/c

0.018" GALV FLASHING CAP @ ML SEE 10 / A4.1

0.030" GALV FLASHING @ ML SEE10A / A4.1

22GA STANDING SEAM ROOF PAN

MEMBRANE

ADHESIVE

PLYWOOD OPTIONAL

TRUSS

1 1/4 HOT DIPPED GALV ROOF NAIL @ 4" o/c MAX

0.030" GALV FLASHING @ HIGH END SEE12 / A4.1

0.018" GALV FLASHING @ HIGH END SEE14 / A4.1

22GA STANDING SEAM ROOF PAN

MEMBRANE

ADHESIVE

SLOPE

OPTIONAL 3/4" SHEATHING SEE SHEET S3.0.1 TO STUCCO STOP

(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX

FRAMING PER STRUCT

FASTEN PER S0.1

EXT FINISH

0.030" GALV FLASHING @ SIDE WALL SEE11 / A4.1

CLIP PER STANDING SEAM MNFR SPEC

22GA STANDING SEAM ROOF PAN

(2) SHOT PINS @ EA CLIP

MEMBRANE

ADHESIVE

SLOPE

OPTIONAL 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4

STUCCO STOP

(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX

TRUSS

EXT FINISH

SHTH, FASTEN PER S0.1

0.018" GUTTER

GUTTER STRAP

0.030" GALV FLASHING @ LOW SIDE SEE11 / A4.1

1 1/4 HOT DIPPED GALV ROOF NAIL @ 4" o/c MAX

22GA STANDING SEAM ROOF PAN

MEMBRANE

ADHESIVE

SLOPE

RIGID INSULATION APPLIED WITH ADHESIVE PER ESR-1023(OR EQUAL)

OPT. 3/4" SHEATHING SEE SHEET S3.0.1 TO S3.0.4

RIGID INSULATION R-5/1" @ CZ 3-15, R-10/2" @ CZ 1-2, & R-15/4" @ CZ 16

STUCCO STOP

(1)#10 STSMS (PAN HEAD) @ 6" o/c MAX

FASTENER w/ NEOPRENE WASHER

FRAMING PER STRUCT

EXT FINISH

SHTH, FASTEN PER S0.1

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123412 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/04/2024

R&S TAVARES ASSOCIATES
DESIGN & CONSULTING PROJECT MEET
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ARCHITECT
MANNY D. FROST
03380
03/31/24
STATE OF CALIFORNIA
02/16/24
RST1422088

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CLIENT

Class Leasing
1651 Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024

Revision Schedule		
#	Description	Date

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ROOF DETAILS
(STANDING SEAM)

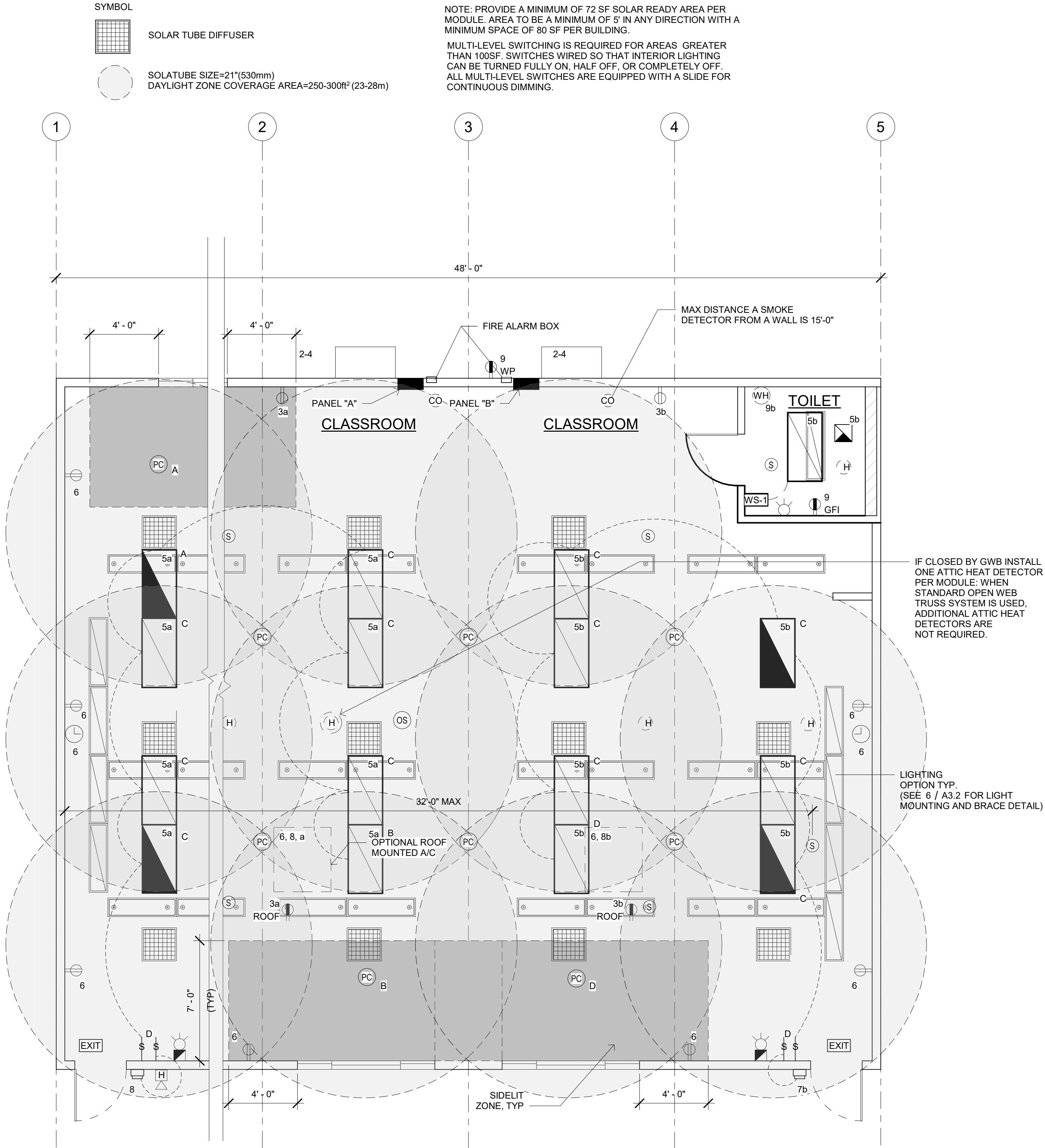
PROJECT NUMBER
22088

DRAWN BY
rMc/SC

CHECKED BY
RH/RT

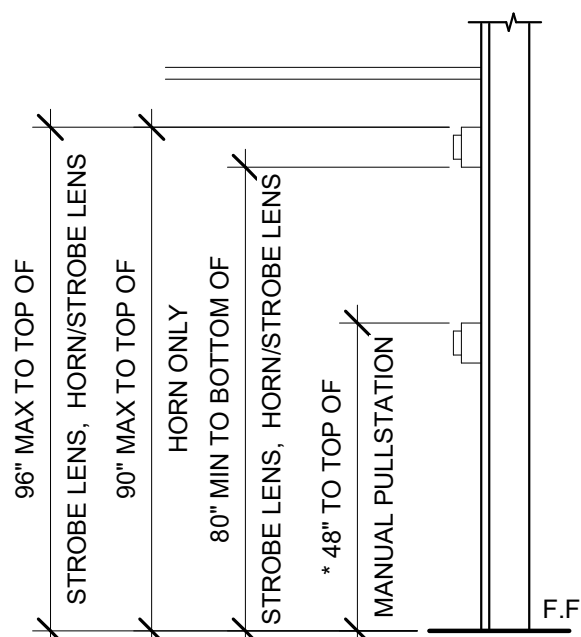
DATE

SHEET NO.
A4.1
BID SET
SHEET OF



3 1" = 1'-0" ELEV. @ WORKSTATION

4 1" = 1'-0" MOUNTING ELEV.



* PROVIDE MIN 30"x48" CLR FLOOR SPACE FOR PERPENDICULAR APPROACH AT EACH LOCATION

THE SWITCH OR SWITCHES INSTALLED IN EMERGENCY LIGHTING CIRCUITS SHALL BE SO ARRANGED THAT ONLY AUTHORIZED PERSONNEL WILL HAVE CONTROL OF EMERGENCY LIGHTING. (CEC art. 700.20)

GENERAL GROUNDING NOTES

EACH BUILDING SHALL BE GROUNDING SEPARATELY WITH A 3/4" ROUND X 8 FEET COPPERCLAD STEEL GROUND ROD. WHERE ROCK BOTTOM IS FOUND, DRIVE ROD AT 45 DEGREES MAXIMUM FROM THE VERTICAL OR HAVE IT BURIED IN A TRENCH 30" DEEP MINIMUM.

TESTING FOR RESISTANCE TO GROUND, IF RESISTANCE EXCEEDS 25 OHMS INSTALL ADDITIONAL GROUND RODS SEPARATED AT LEAST 6 FEET, UNTIL RESISTANCE REDUCES TO 25 OHMS OR LESS. GROUND TEST MUST BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND ALL GROUNDING SHALL BE IN ACCORDANCE WITH CEC ARTICLE 250

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA-APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE EXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

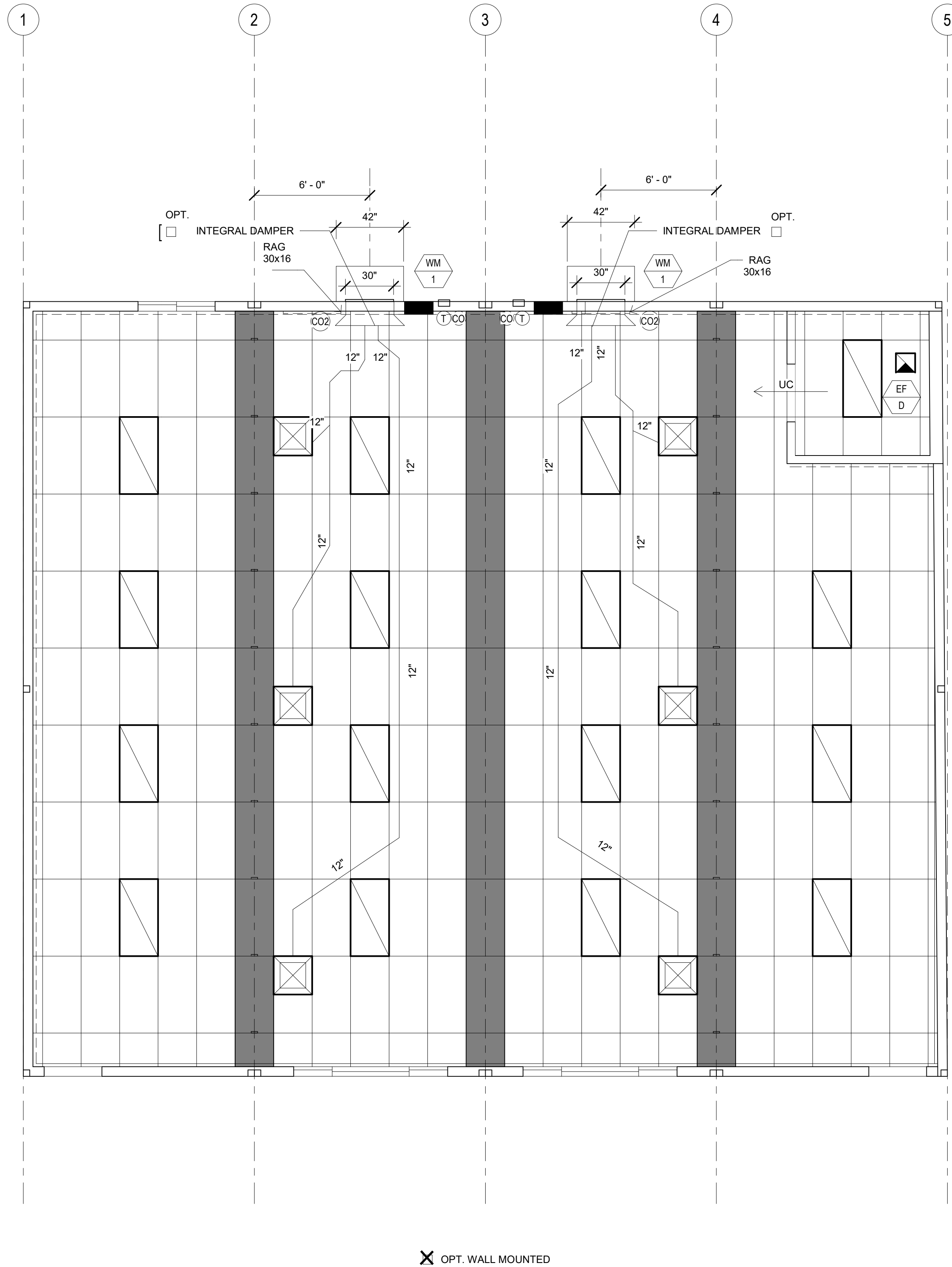
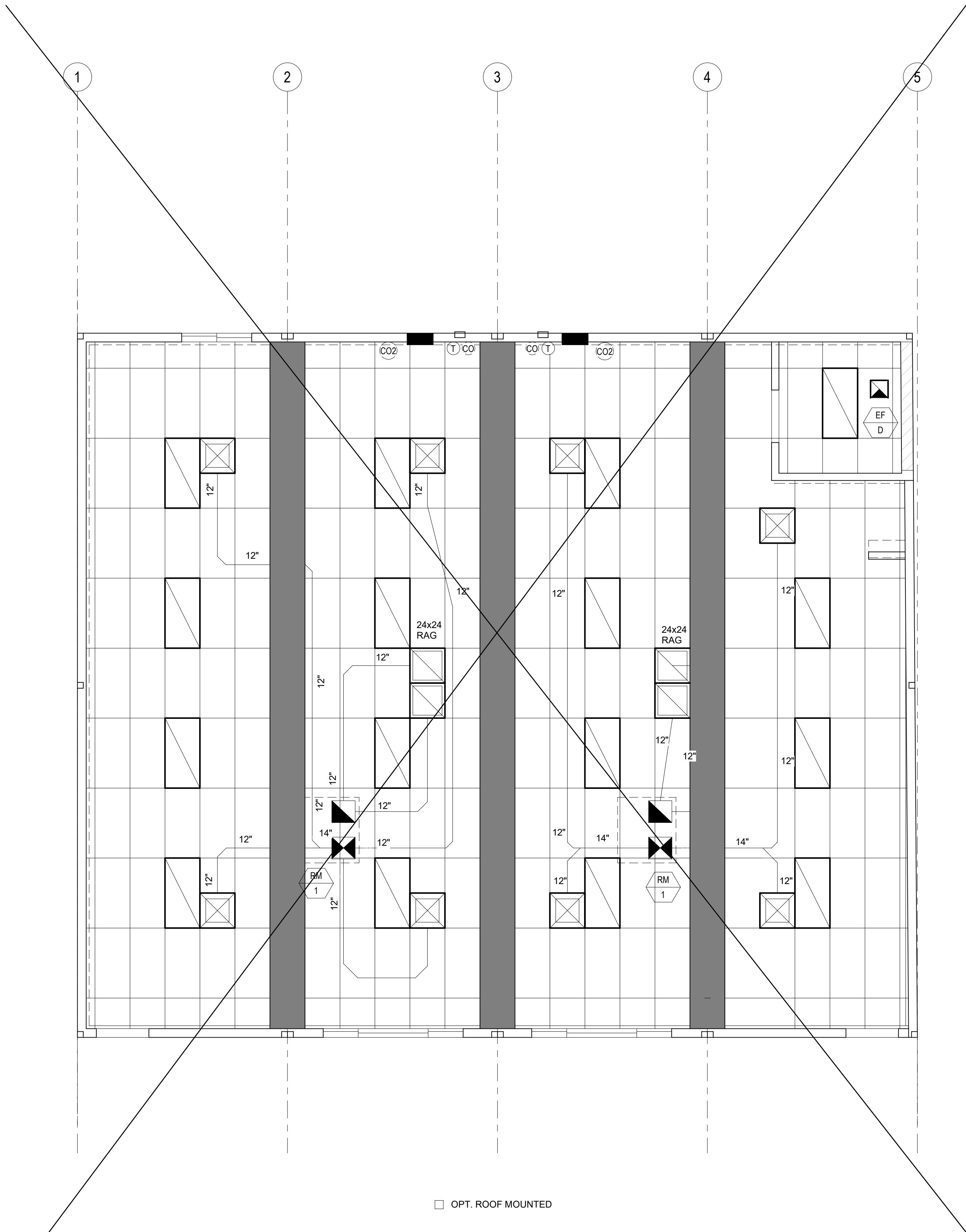
- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF



PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP

DIV. OF THE STATE ARCHITECT

APP: 04-123412 INC:

REVIEWED FOR

SS ☒ FLS ☒ ACS ☒

DATE: 04/04/2024

R&S TAVARES ASSOCIATES

DESIGN & CONSULTING PROJECT MEY

11590 W BERNARDO COURT, SUITE 100

SAN DIEGO, CA 92127

WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL

MANNY D. FROST

63380

03/31/24

STATE OF CALIFORNIA

02/16/24

RST122088

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CLIENT

Class Leasing

1651 Juanita Street, San Jacinto, CA 92583

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ORIGINAL PC STATE AGENCY APPROVAL

APPROVED

DIV. OF THE STATE ARCHITECT

APP: 04-123059 PC

REVIEWED FOR

SS ☒ FLS ☒ ACS ☒ CG ☒

DATE: 02/20/2024

Revision Schedule

#	Description	Date
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PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE

PC 2022 CBC: 24' x 40' EXPANDABLE TO 120' x 40'

SHEET TITLE

MECHANICAL CEILING PLAN 48x40 thru 120x40

PROJECT NUMBER

22088

DRAWN BY

rMc/SC

CHECKED BY

RH/RT

DATE

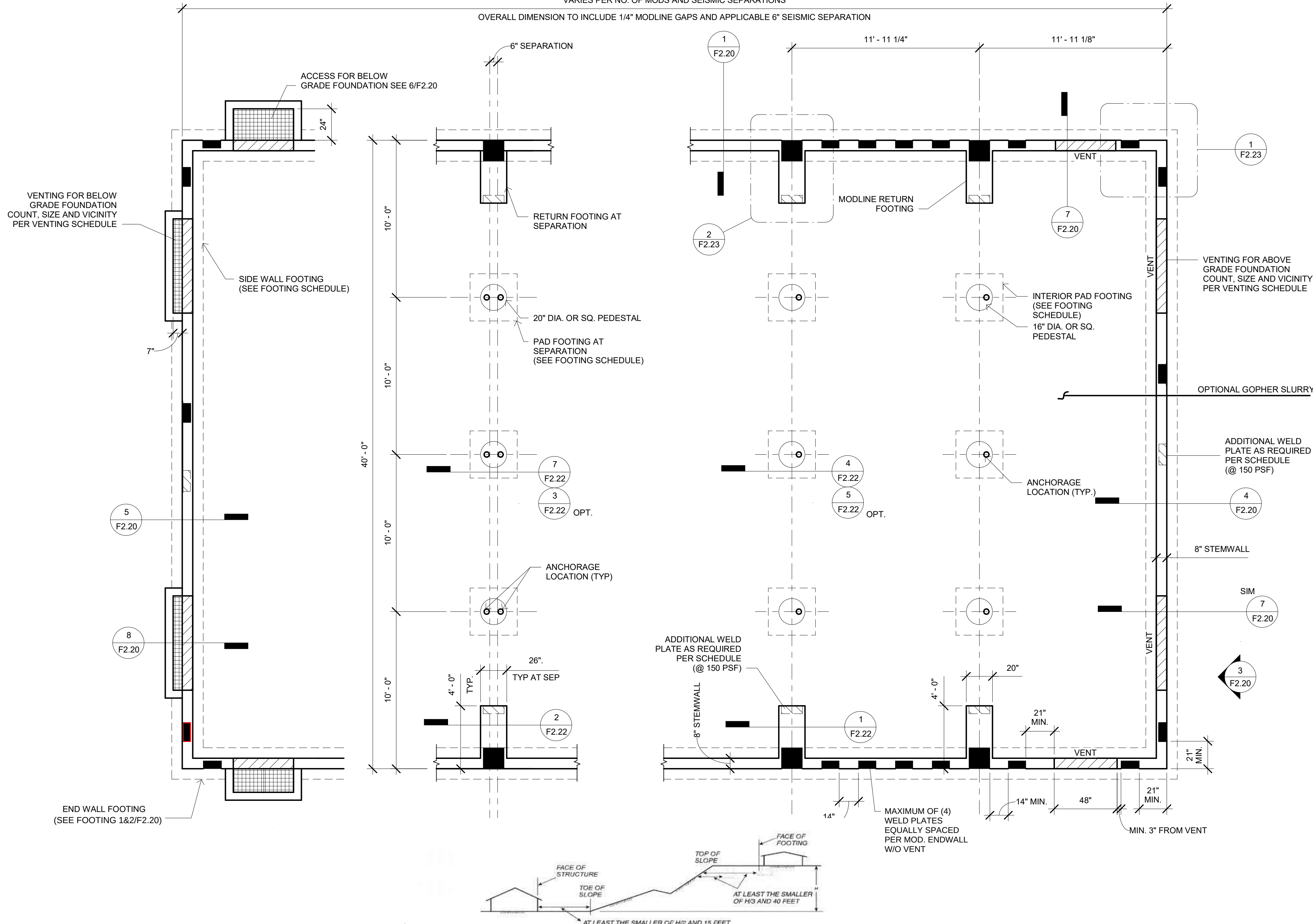
SHEET NO.

M7.1

BID SET

SHEET OF

VENTILATION PLAN AND SCHEDULE		
VENT "A" 7.83' W x 0.42' H	= 3.26 SF	
VENT "B" 2.83' W x 1.50' H	= 4.25 SF ACCESS	
VENT "C" 4.00' W x 0.42' H	= 1.8 SF	
VENT A2=5.55 SF		
VENT C2=2.83 SF		
VENT AREA REQ = $\frac{960}{150}$ SF = 6.4 SF		
VENT AREA AVAIL = (2) 3.26 SF + (1) 4.25 SF = 10.77 SF		
NET AREA AVAIL = $0.6 \cdot 10.77$ SF = 6.5 SF		
VENT AREA REQ = $\frac{1440}{150}$ SF = 9.6 SF		
VENT AREA AVAIL = (4) 3.26 SF + (1) 4.25 SF = 18.962 SF		
NET AREA AVAIL = $0.6 \cdot 18.962$ SF = 11.377 SF		
VENT AREA REQ = $\frac{1920}{150}$ SF = 12.8 SF		
VENT AREA AVAIL = (6) 3.26 SF + (1) 4.25 SF = 23.82 SF		
NET AREA AVAIL = $0.6 \cdot 23.82$ SF = 14.29 SF		
VENT AREA REQ = $\frac{2400}{150}$ SF = 16 SF		
VENT AREA AVAIL = (6) 3.26 SF + (1) 4.25 SF + (2) 1.8 = 27.153 SF		
NET AREA AVAIL = $0.6 \cdot 27.15$ SF = 16.3 SF		
VENT AREA REQ = $\frac{2880}{150}$ SF = 19.2 SF		
VENT AREA AVAIL = (2) 5.55 SF + (1) 4.25 SF + (2) 2.83 = 32.1 SF		
NET AREA AVAIL = $0.6 \cdot 32.1$ SF = 19.258 SF		
VENT AREA REQ = $\frac{3360}{150}$ SF = 22.4 SF		
VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF = 37.52 SF		
NET AREA AVAIL = $0.6 \cdot 37.52$ SF = 22.51 SF		
VENT AREA REQ = $\frac{3840}{150}$ SF = 25.6 SF		
VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (2) 2.833 = 37.52 SF		
NET AREA AVAIL = $0.6 \cdot 37.52$ SF = 25.91 SF		
VENT AREA REQ = $\frac{4320}{150}$ SF = 28.8 SF		
VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (4) 2.833 = 48.86 SF		
NET AREA AVAIL = $0.6 \cdot 48.86$ SF = 29.314 SF		
VENT AREA REQ = $\frac{4800}{150}$ SF = 32 SF		
VENT AREA AVAIL = (6) 5.55 SF + (1) 4.25 SF + (6) 2.833 = 54.52 SF		
NET AREA AVAIL = $0.6 \cdot 54.52$ SF = 32.71 SF		



- NOTES:
- THE FOUNDATION DESIGN CONSIDERS AN ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF FOR LOCATIONS THAT DO NOT REQUIRE A SOILS INVESTIGATION REPORT.
 - DISTRICT SHALL BE RESPONSIBLE IN ISSUING AND CONTRACTING A SOILS INVESTIGATION THROUGH A QUALIFIED GEOTECHNICAL ENGINEER FOR LOCATIONS DEEMED QUALIFIED BY CBC 1803A.2. WELD PLATES SHALL BE PLACED PER PLAN AT 21" MINIMUM FROM BUILDING CORNERS AND 14" MINIMUM FROM ADJACENT WELD PLATE. WELD PLATES WITHIN 21" FROM VENT SHALL REQUIRE REINFORCEMENT HAIRPINNED AROUND THE ANCHOR BOLT CLOSEST TO THE VENT. SEE DETAIL 1/F2.23
 - FOUNDATION OVERALL CONSIDERS A 1/4" GAP AT EVERY MODLINE AND 6" SEISMIC SEPARATION GAP WHEN APPLICABLE.
 - SIZE OF UNDER-FLOOR VENTILATION CONSIDERS A RATIO OF 1:150 FOR THE TOTAL AREA OF OPENINGS TO CRAWL SPACE AREA. CRAWL SPACE AREAS FITTED WITH A VAPOR BARRIER IN ACCORDANCE WITH IBC, 1203.3.2 SHALL BE PERMITTED A RATIO ADJUSTMENT TO 1:1500. VENTILLATION OPENING SHALL BE COVERED WITH CORROSION RESISTANT WIRE WITH THE LEAST DIMENSION NOT GREATER THAN 1/8".
 -
 -
 -

FOOTING SCHEDULE (WOOD FLOOR)				
DESIGN FLOOR LIVE LOAD	SIDEWALL FOOTING	ENDWALL FOOTING	INTERIOR PAD FOOTING	PAD FOOTING @ SEPARATION
☐ 50 + 15 PSF	12" WIDE (2) #5 CONT T&B	14" WIDE (3) #5 CONT T&B	3' - 0" SQ (3) #5 EW	3' - 8" SQ (4) #5 EW
☐ 100 PSF	12" WIDE (2) #5 CONT T&B	16" WIDE (3) #5 CONT T&B	3' - 4" SQ (3) #5 EW	4' - 2" SQ (4) #5 EW
☐ 150 PSF	14" WIDE (2) #5 CONT T&B	16" WIDE (3) #5 CONT T&B	4' - 0" SQ (4) #5 EW	4' - 8" SQ (4) #5 EW

FOOTING SCHEDULE (CONCRETE FLOOR)				
DESIGN FLOOR LIVE LOAD	SIDEWALL FOOTING	ENDWALL FOOTING	INTERIOR PAD FOOTING	PAD FOOTING @ SEPARATION
☒ 50 + 15 PSF	12" WIDE (2) #5 CONT T&B	14" WIDE (3) #5 CONT T&B	3' - 2" SQ (3) #5 EW	4' - 0" SQ (4) #5 EW
☐ 100 PSF	12" WIDE (2) #5 CONT T&B	16" WIDE (3) #5 CONT T&B	3' - 6" SQ (3) #5 EW	4' - 6" SQ (4) #5 EW
☐ 150 PSF	14" WIDE (2) #5 CONT T&B	16" WIDE (3) #5 CONT T&B	4' - 2" SQ (4) #5 EW	4' - 10" SQ (5) #5 EW

SYMBOLS LEGEND		
	L6x4x3/8, 14" LONG WELD PLATE PER SCHEDULE BELOW (SEE 6 / F2.23)	
	ADDITIONAL WELD PLATES (FOR 150 PSF OPTION)	
	16"x16"x3/8" WELD PLATE, SEE DETAIL#4 / F2.23	
	UNDER FLOOR VENTILATION, SEE VENTILATION SCHEDULE	

WELD PLATE SCHEDULE			
	L6x4x3/8, 14" LONG		16x3/8 SQ PL
	≤ 100 PSF	150 PSF	≤ 150 PSF
EACH SIDEWALL	3	4	-
EACH MODLINE	-	2	2
EACH END-WALL	24x40	5	7
	36x40	6	7/10
	48x40	7	10/13
	60x40	9	12
	72x40	10	14
	84x40	12	17
	96x40	13	19
	108x40	15	21
	120x40	16	23

PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123412 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/04/2024

DESIGN & CONSULTING PROJECT MEET
11590 W BERNARD COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ARCHITECT
MANNY D. FRIEDL
63380
03/31/24
STATE OF CALIFORNIA
02/16/24
RST#22088

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CLIENT

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Voice (951) 943-1908 Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024

Revision Schedule

#	Description	Date
---	-------------	------

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
CONCRETE
FOUNDATION
PLAN

PROJECT NUMBER
22088

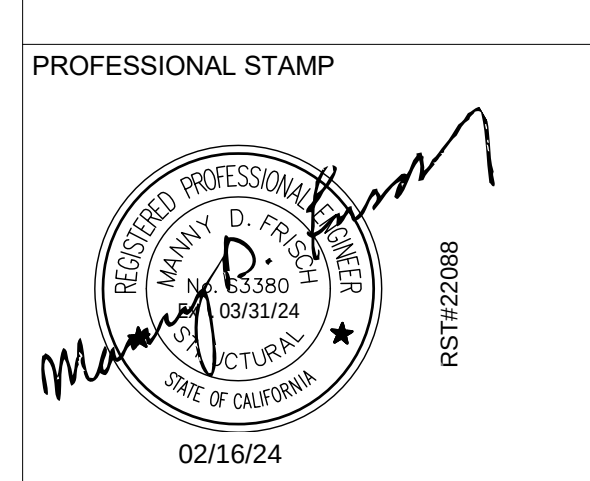
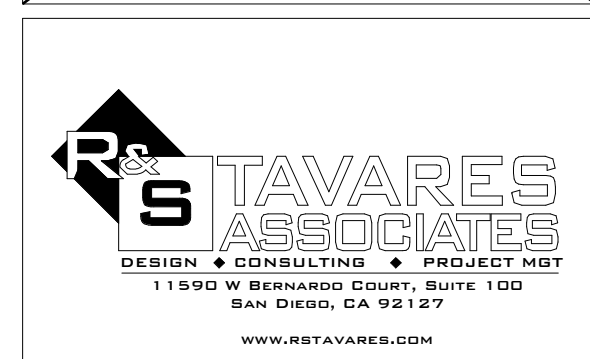
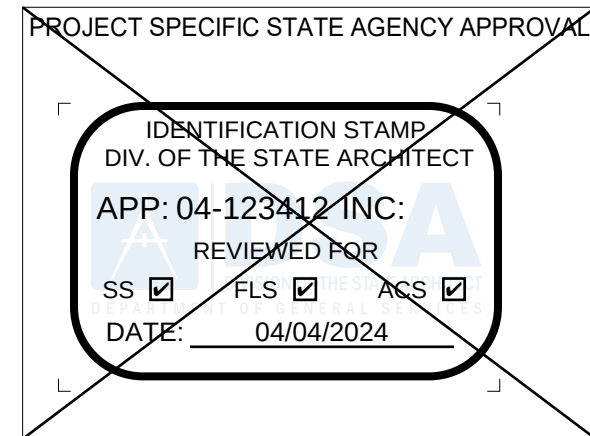
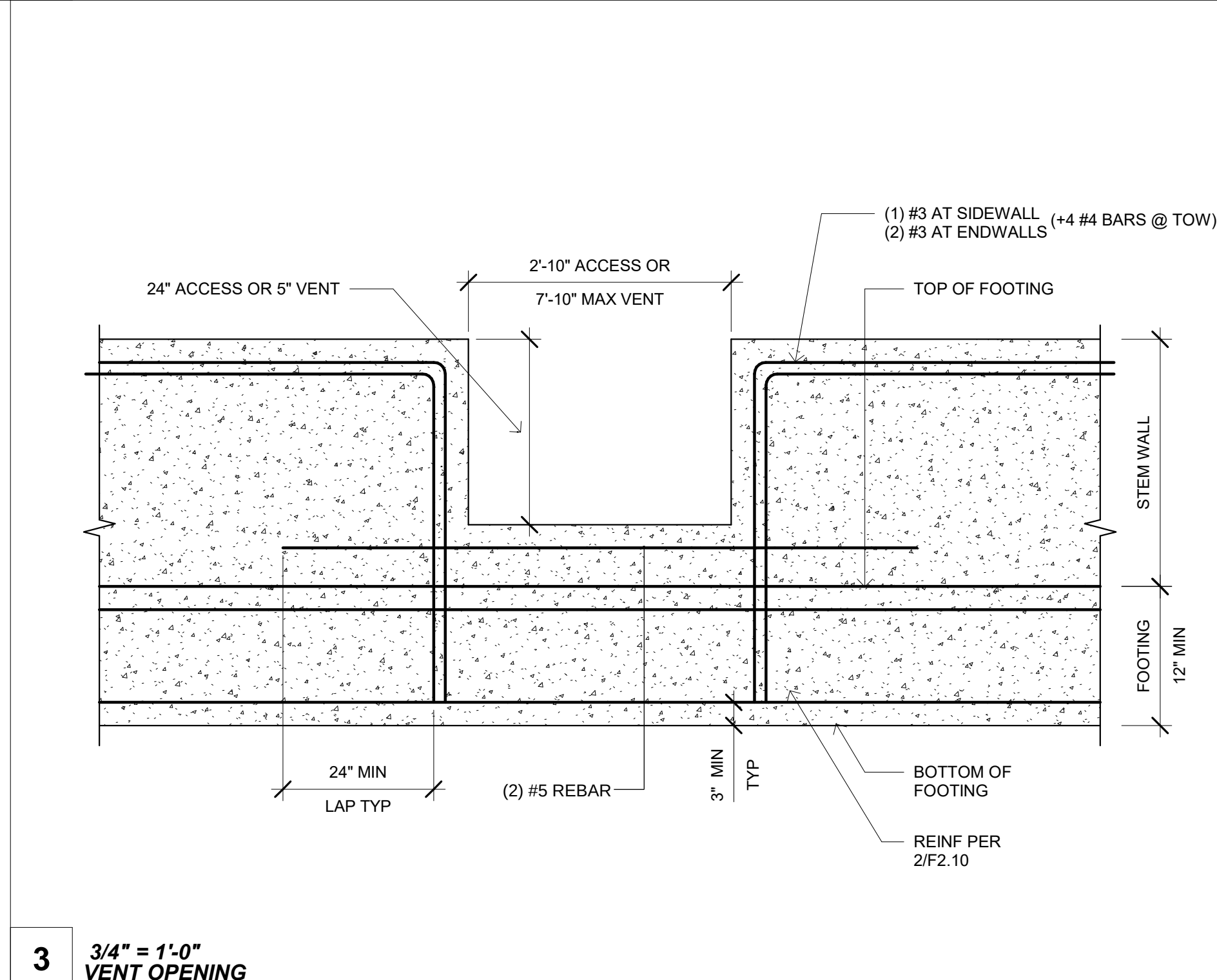
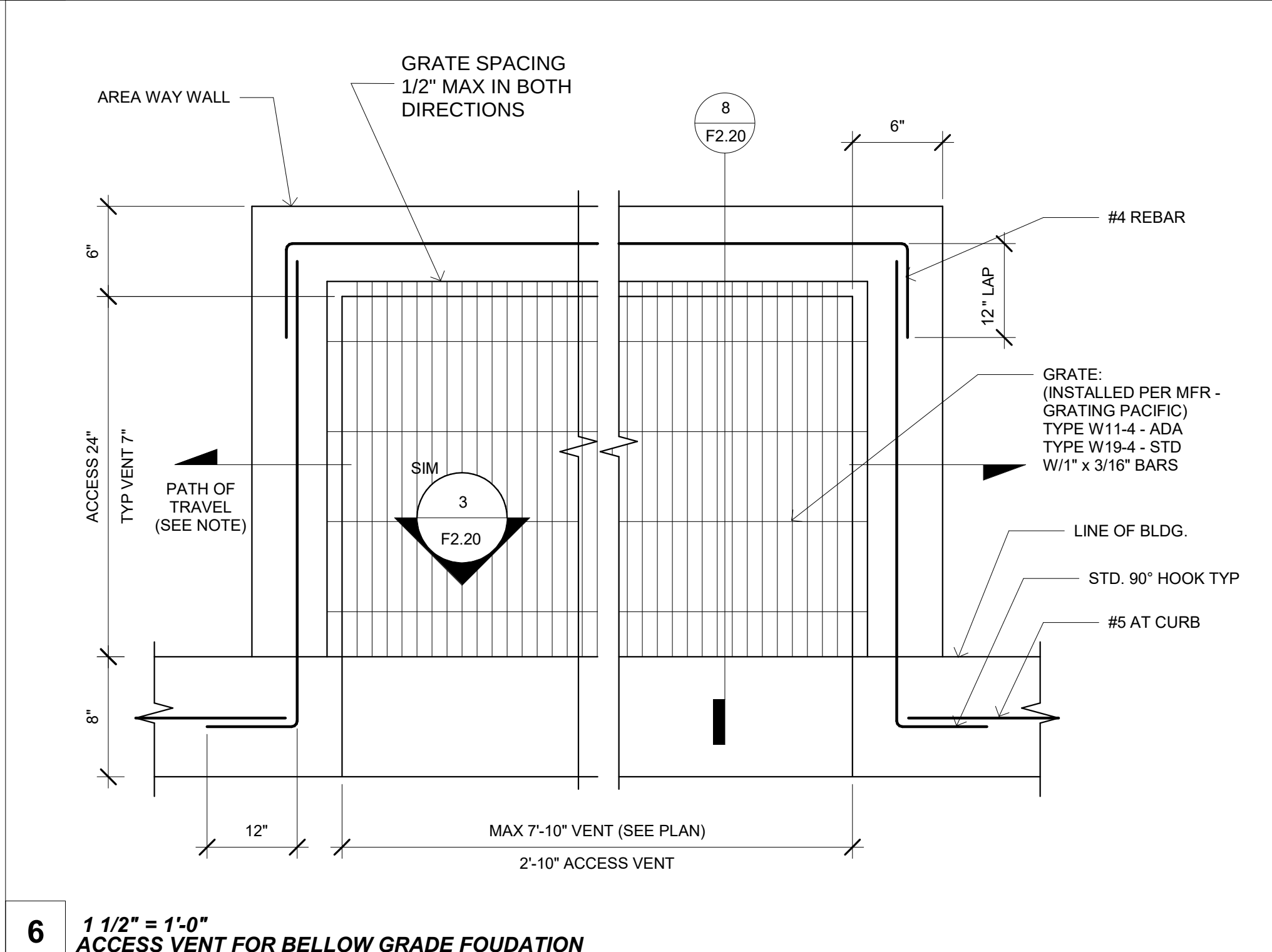
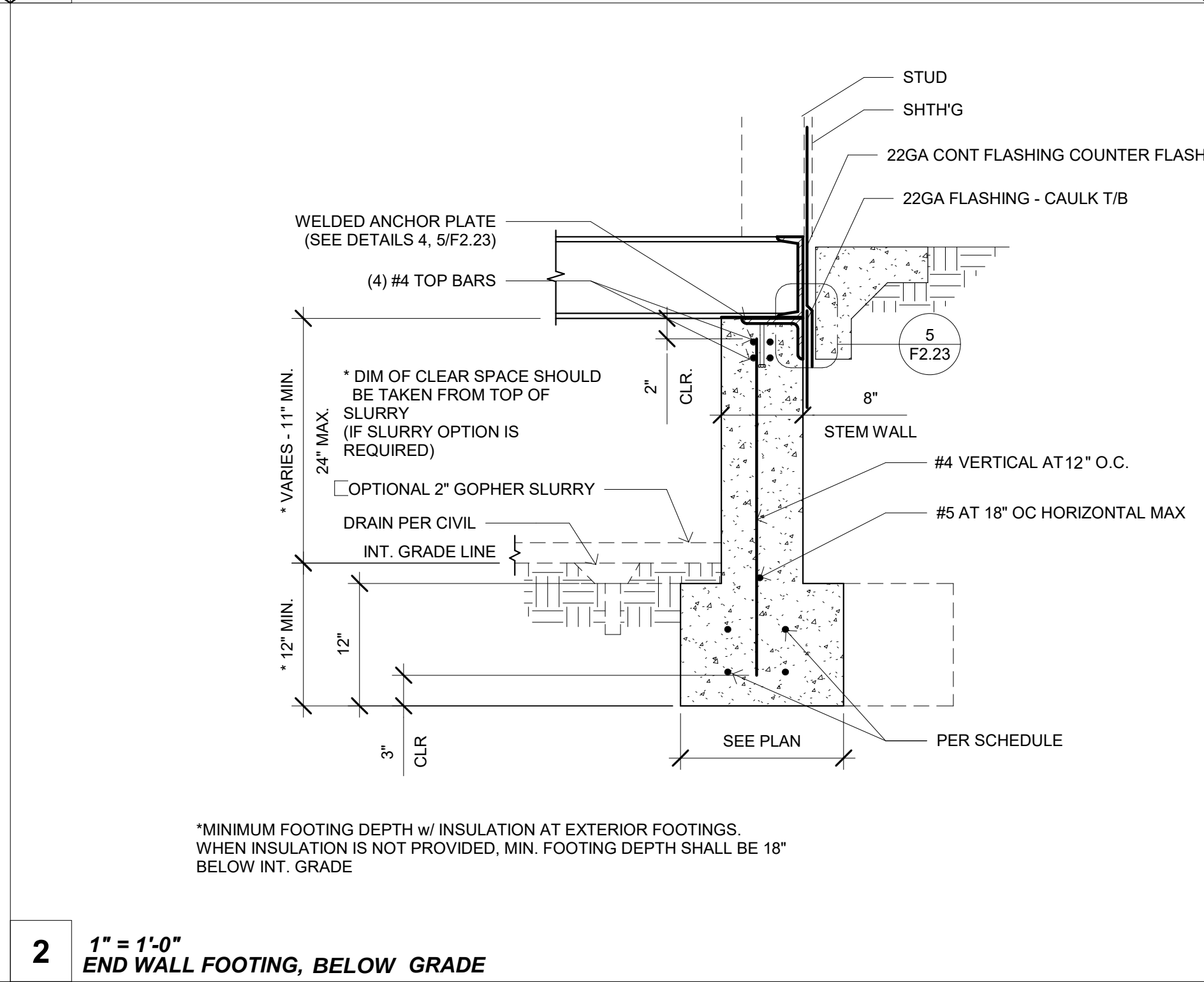
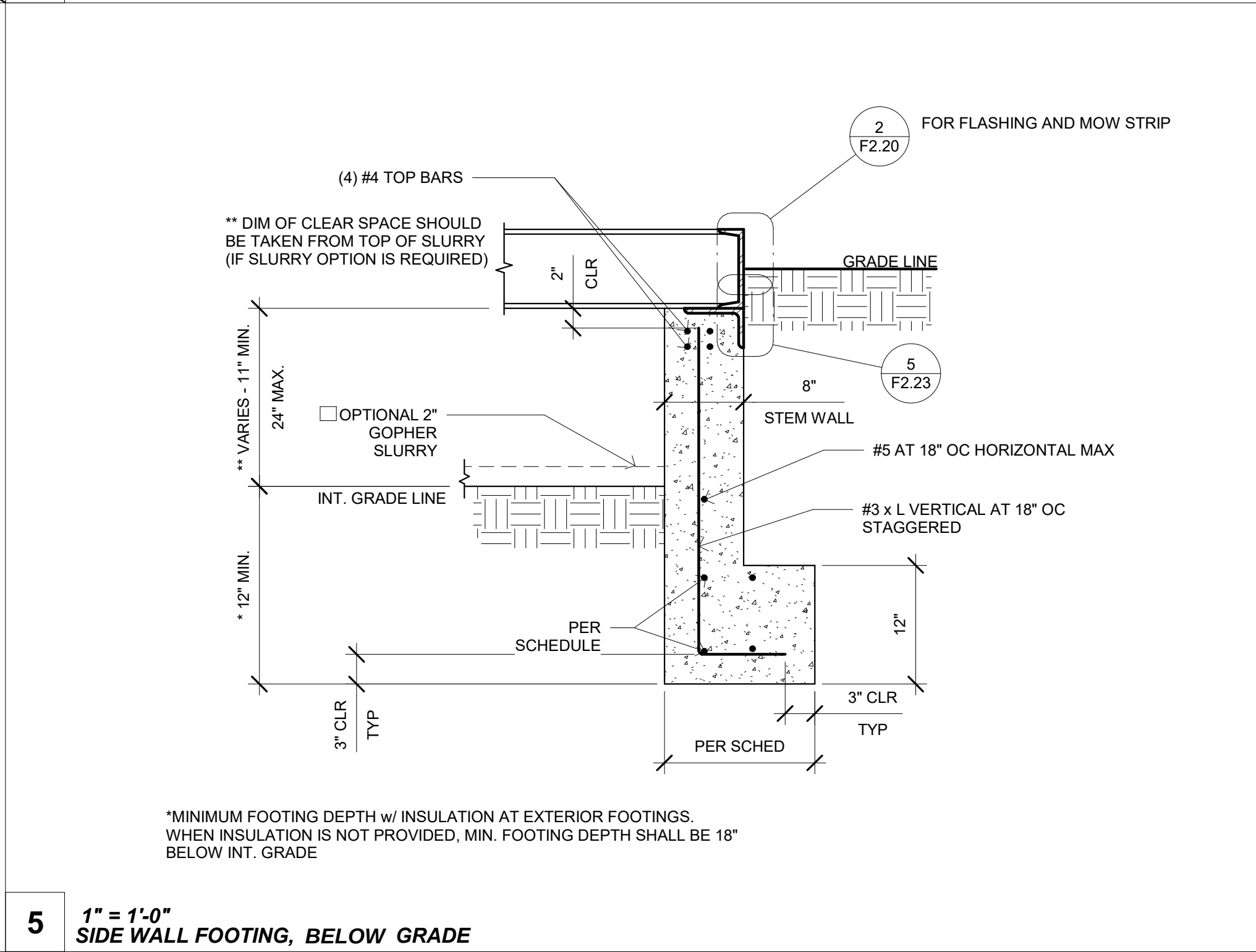
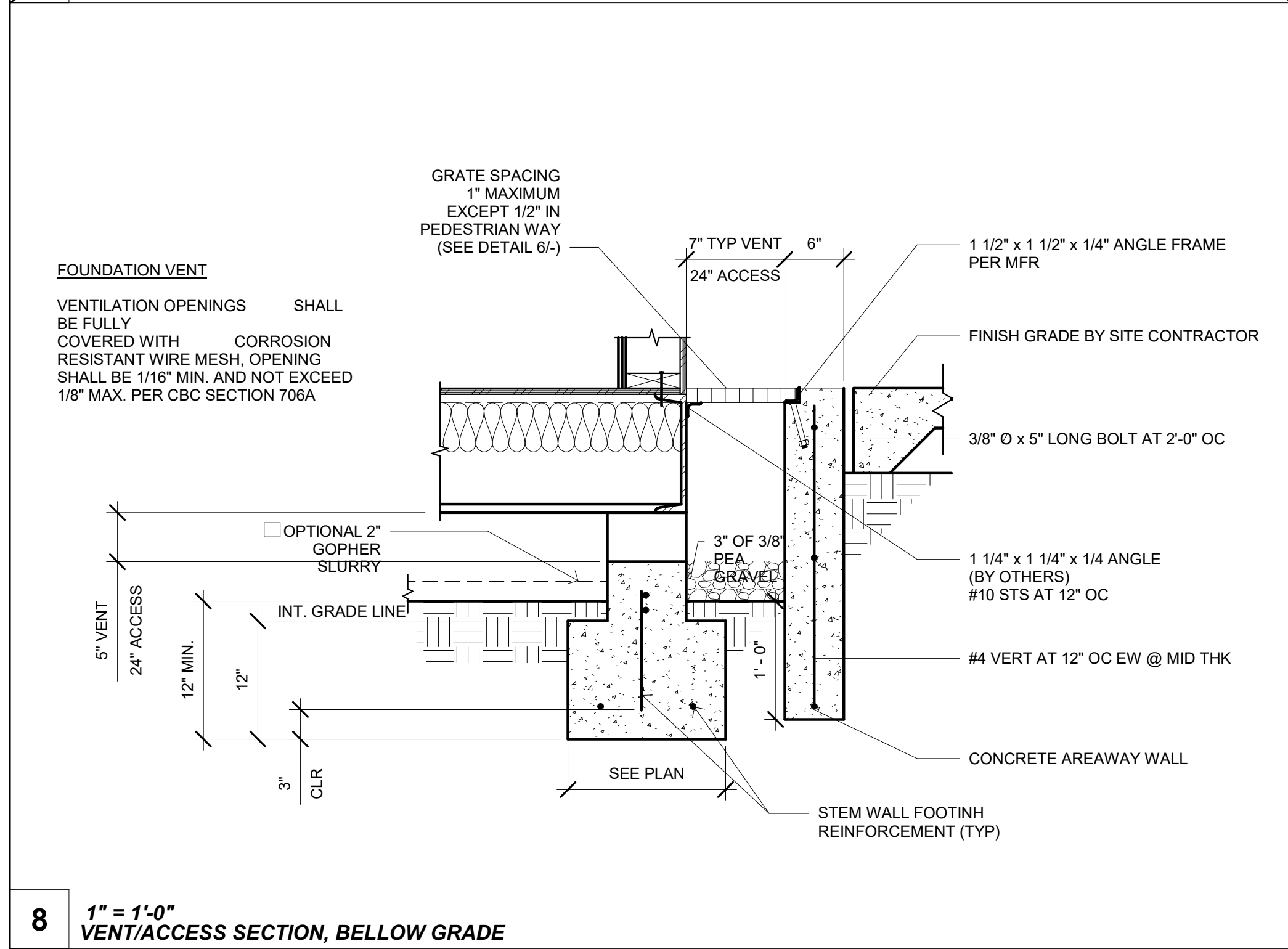
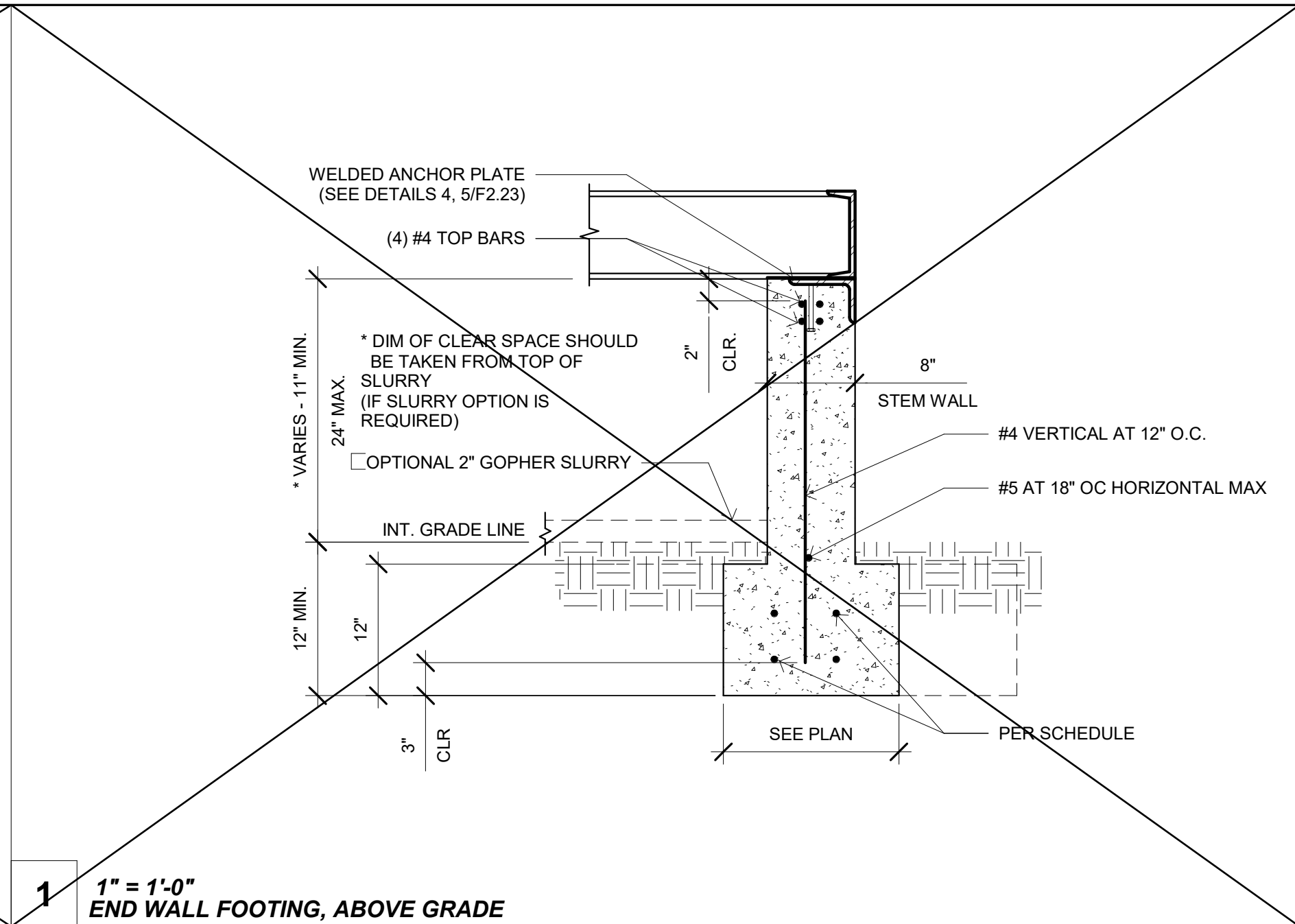
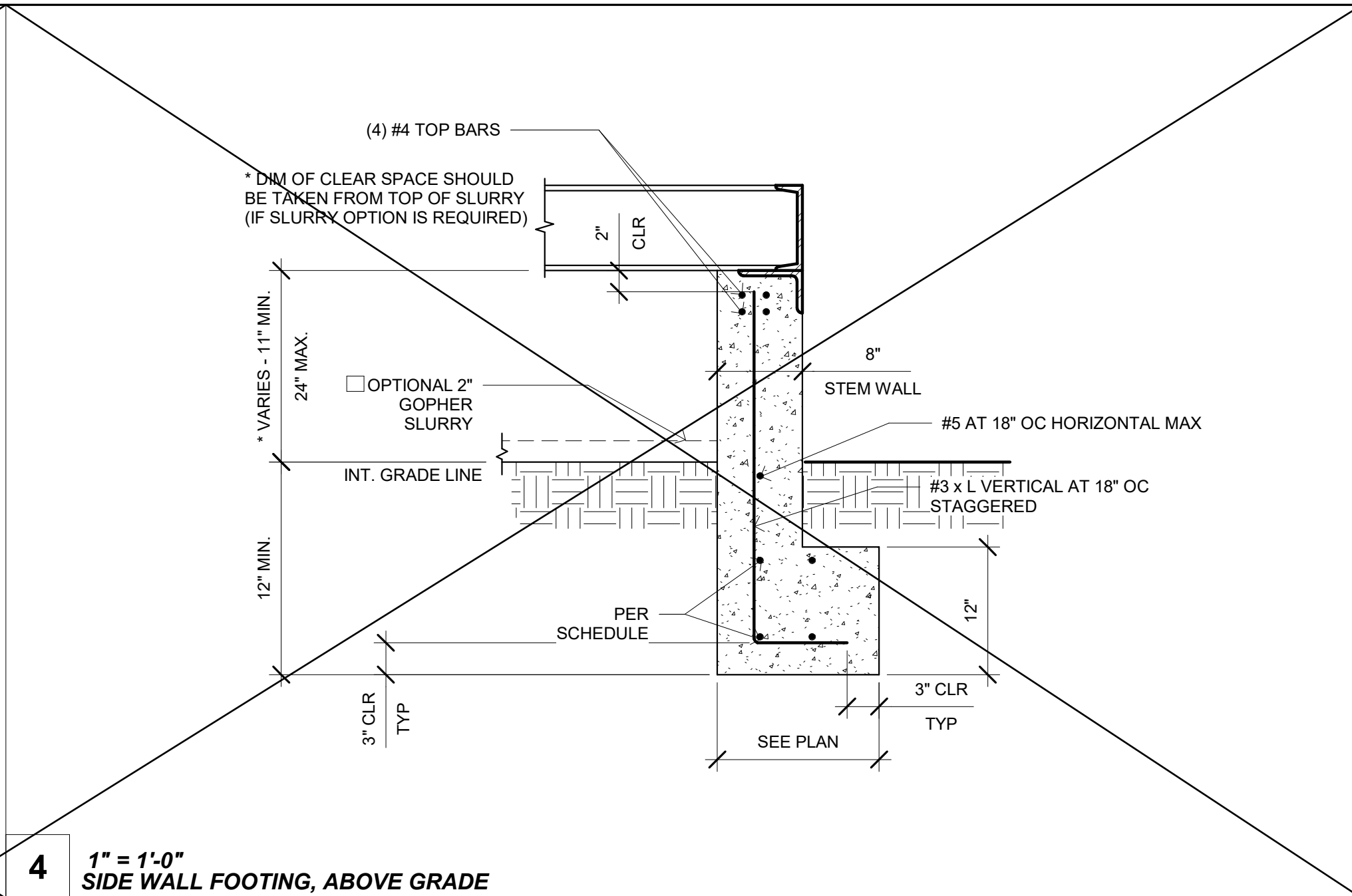
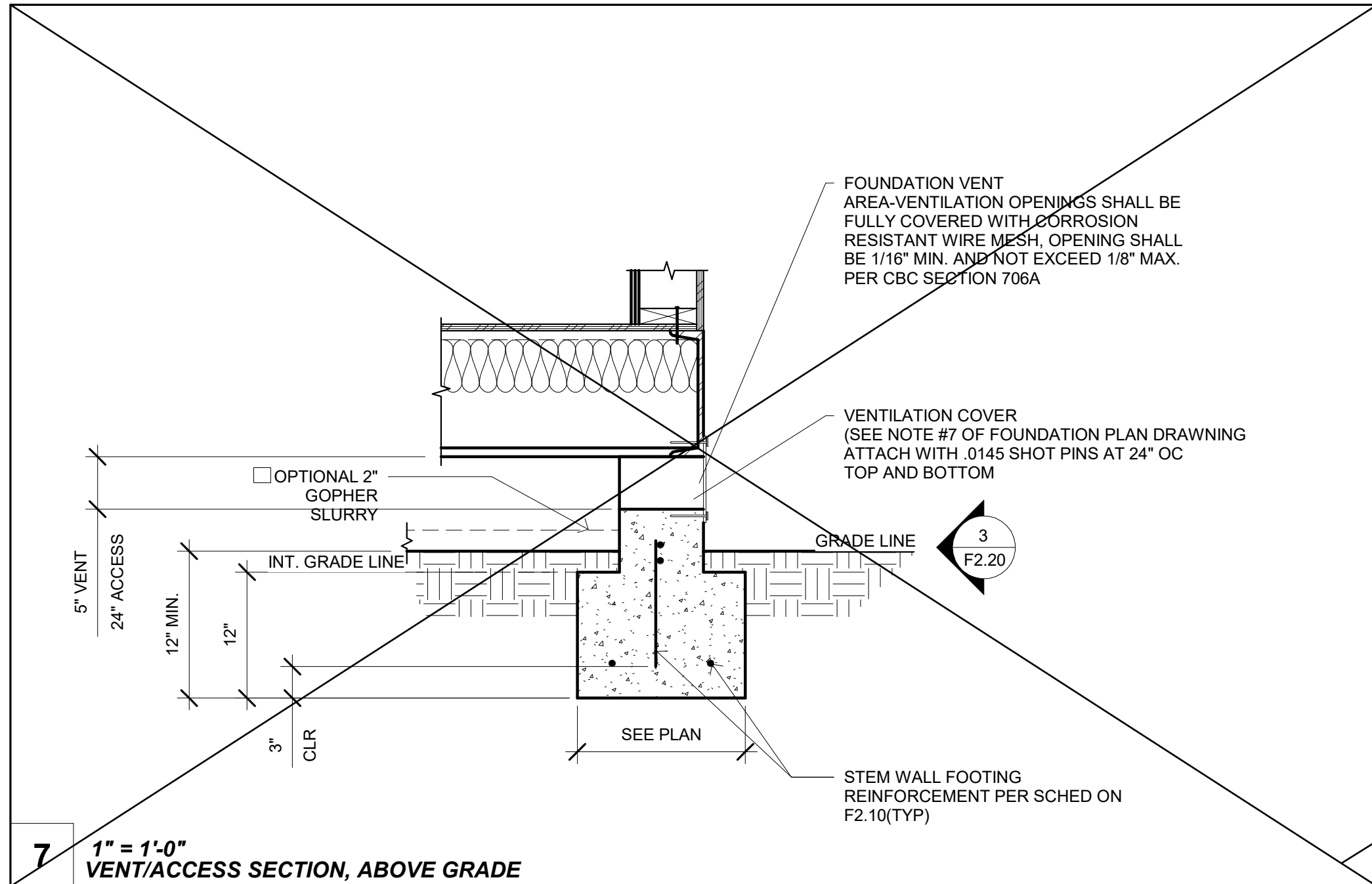
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JA/RT

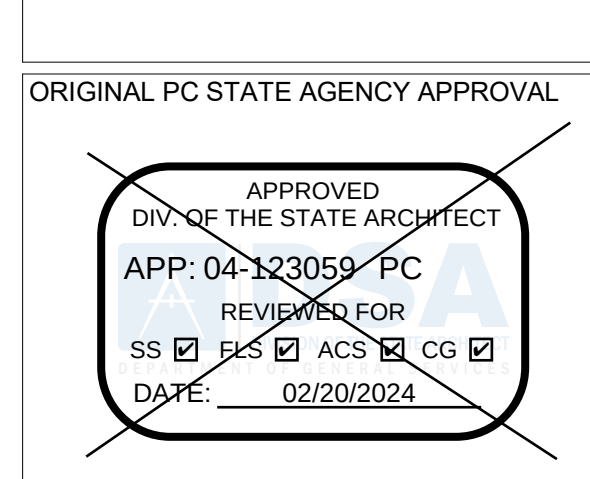
DATE

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BID SET

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Revision Schedule		
#	Description	Date

PRE-CHECK (PC) DOCUMENT

Code: 2022 CBC

A separate project application for construction is required

PROJECT TITLE

PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE

CONCRETE
FOUNDATION
DETAILS

PROJECT NUMBER

22088

DRAWN BY

rMc/SC

CHECKED BY

JA/RT

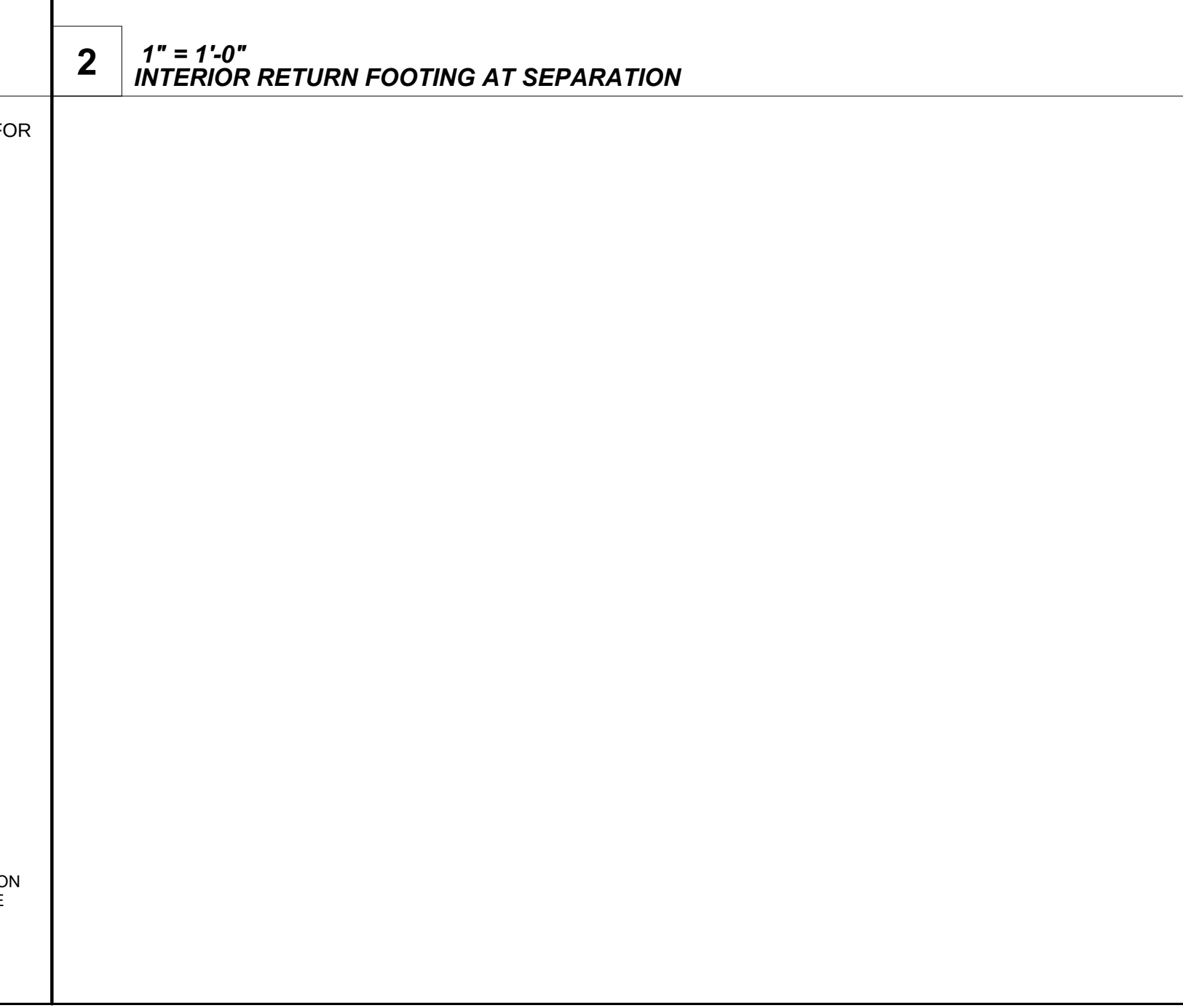
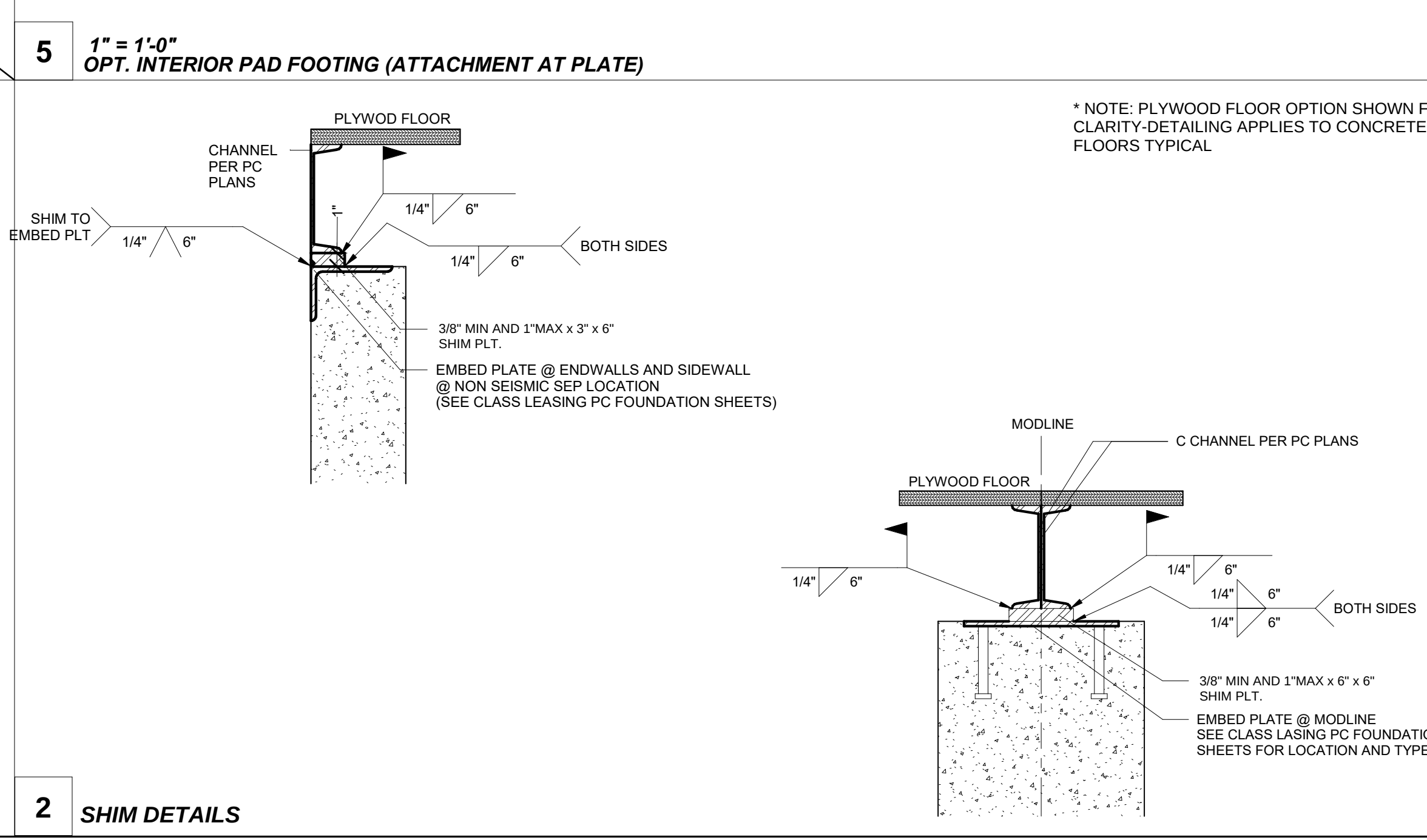
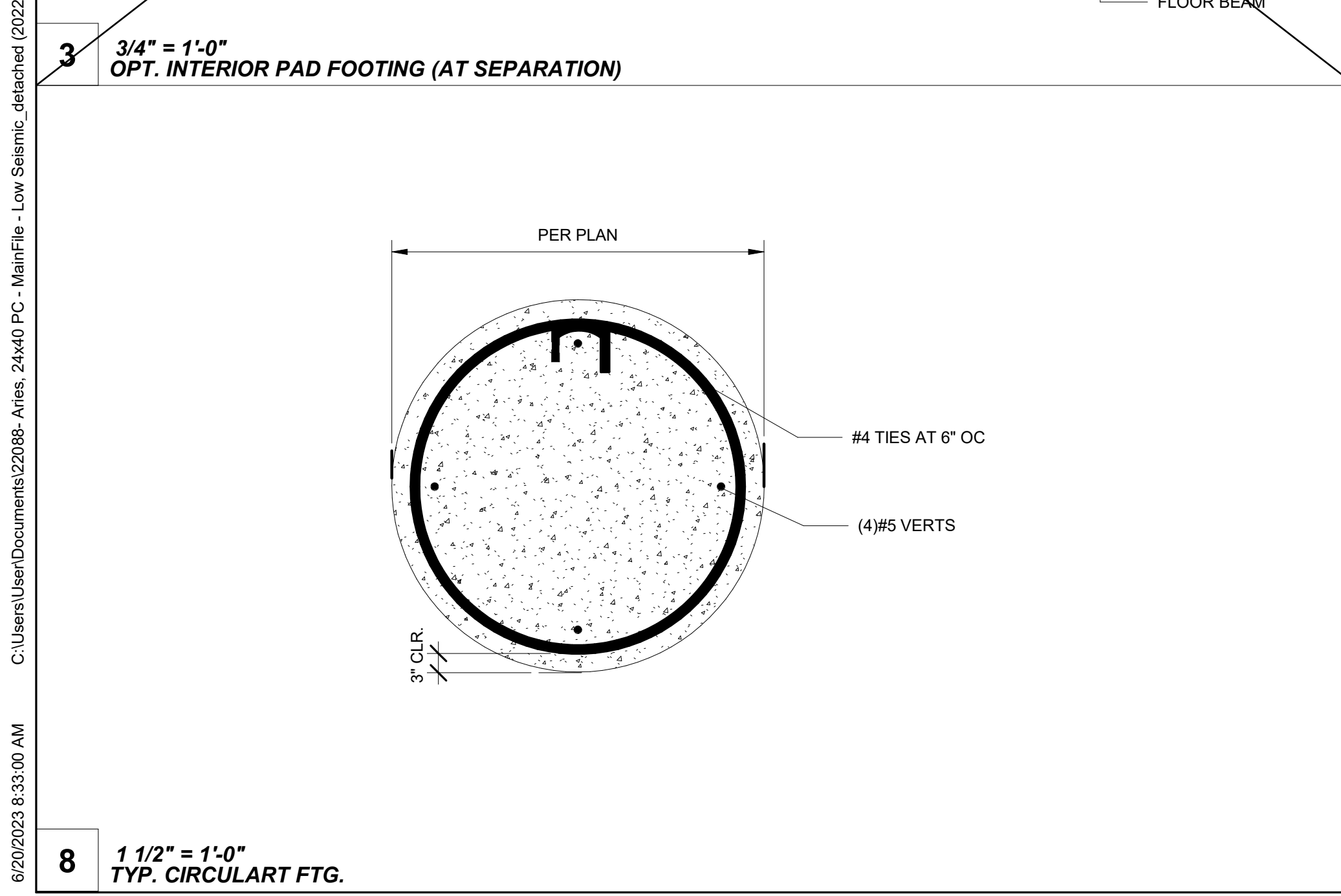
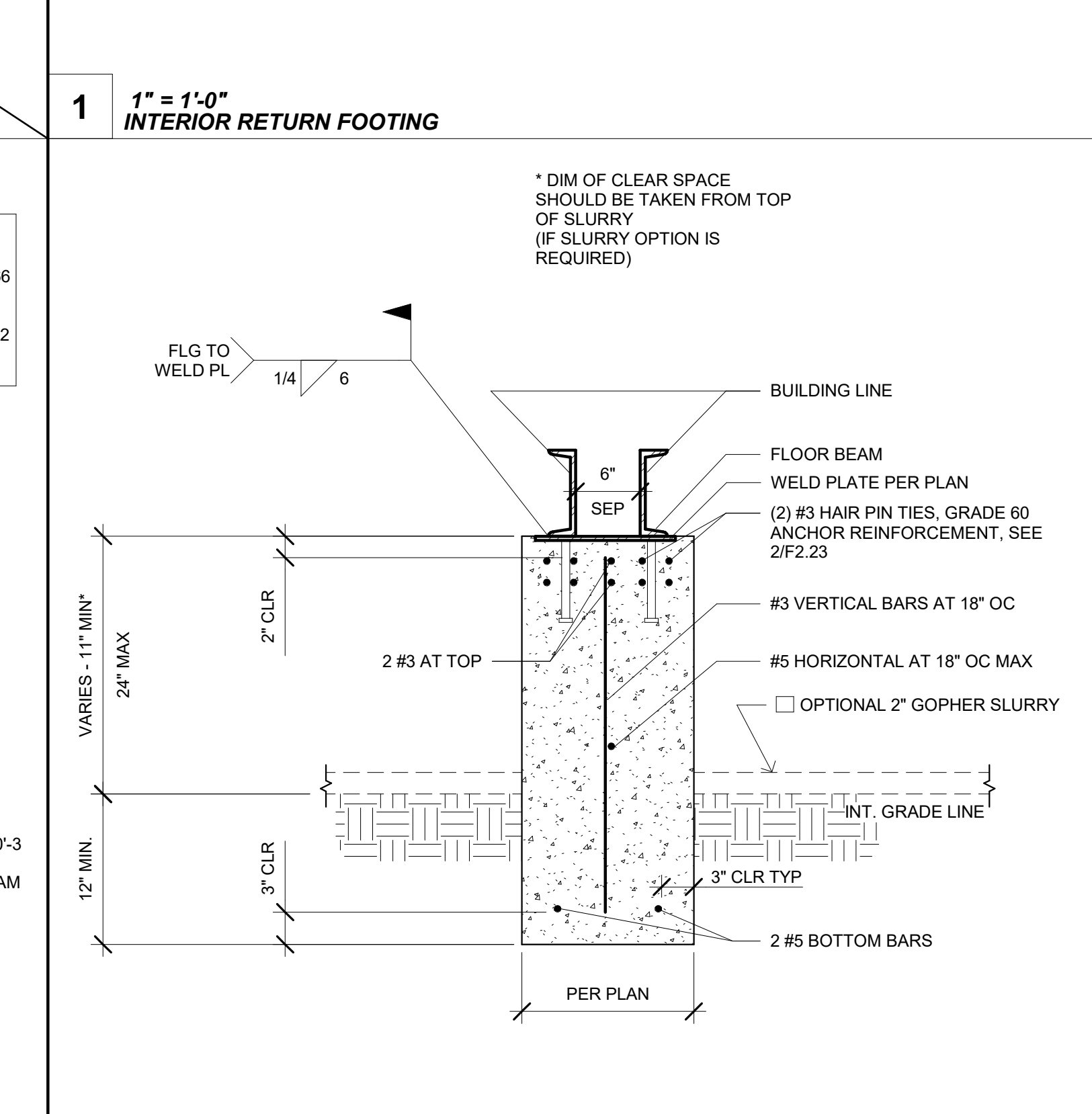
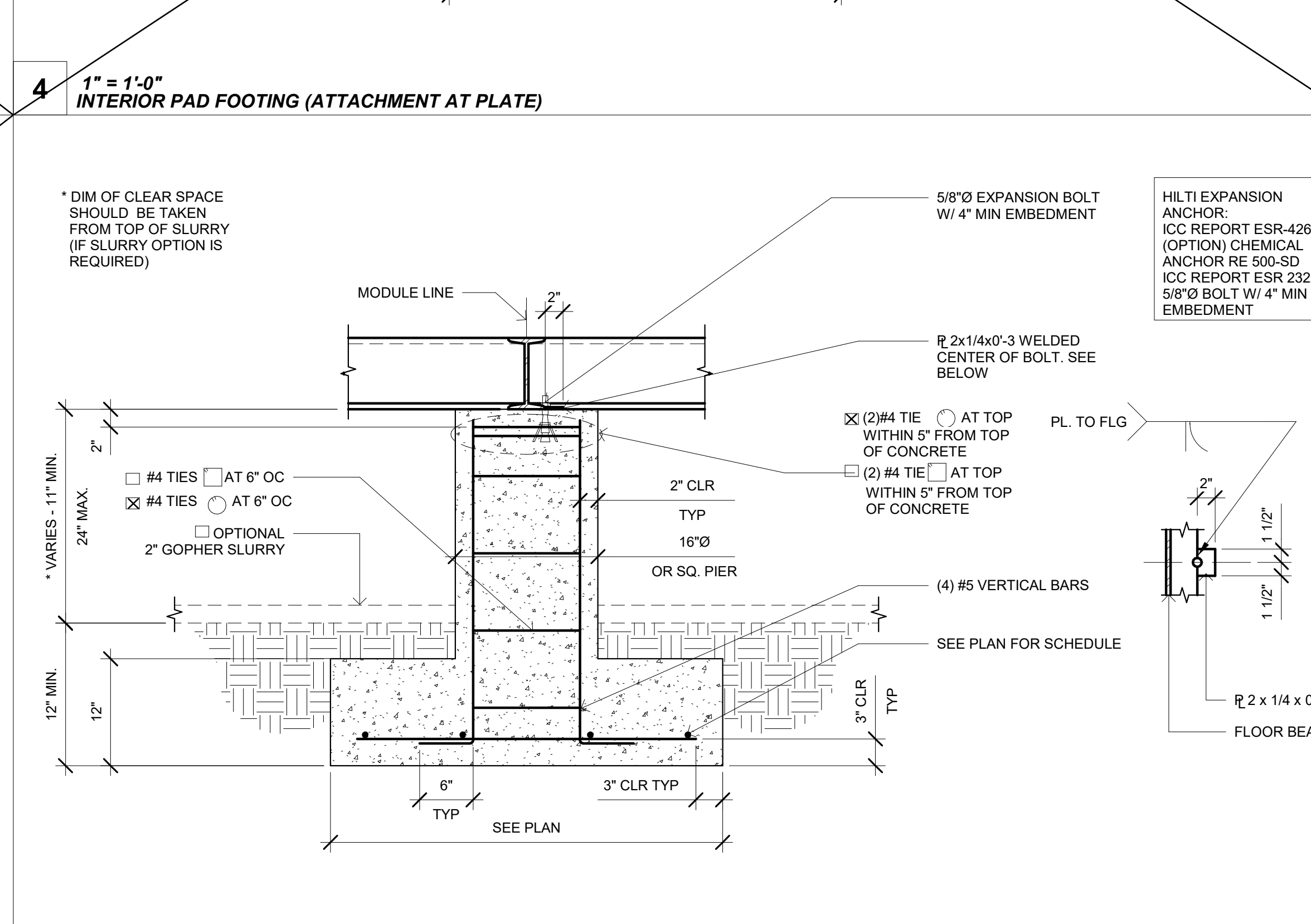
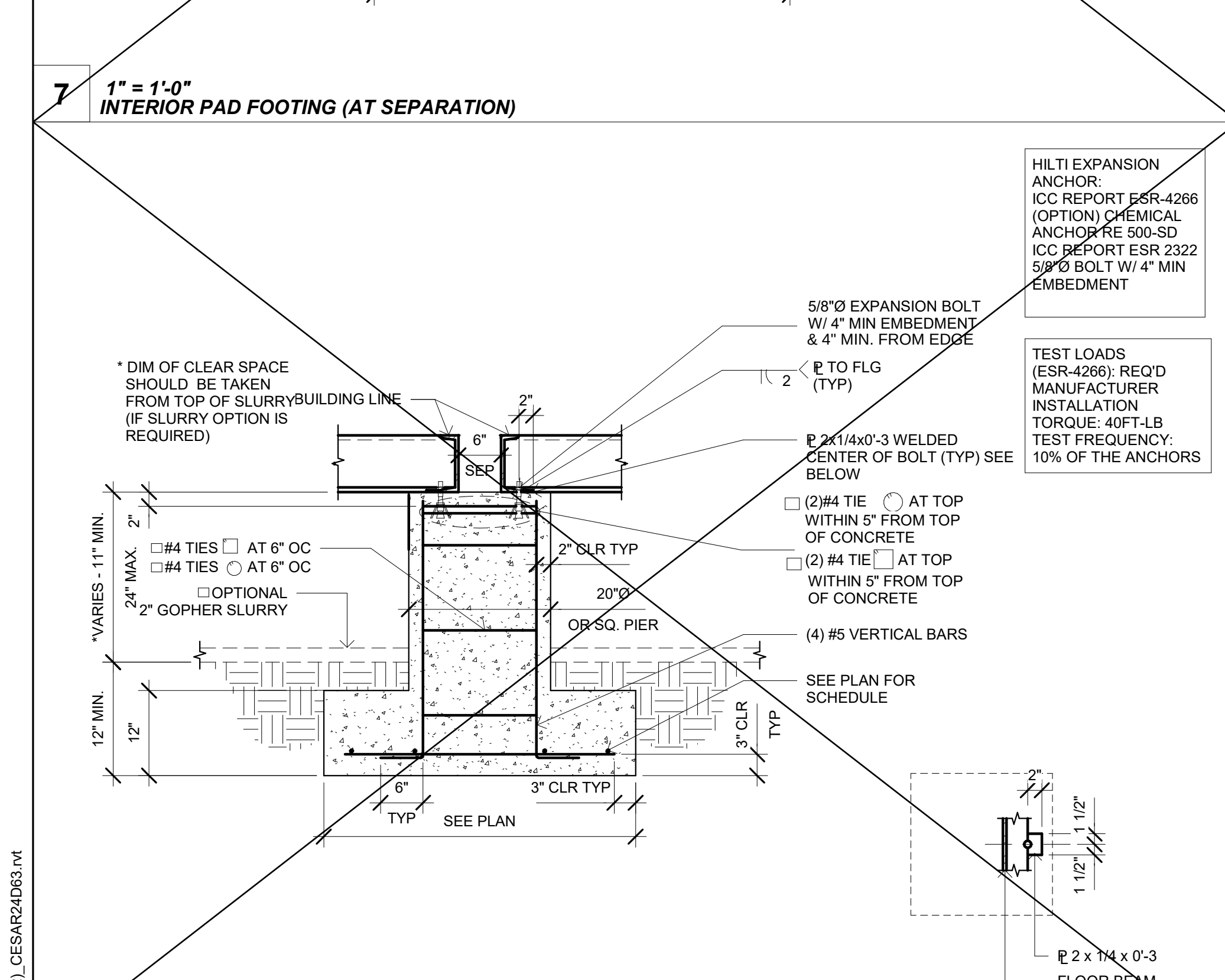
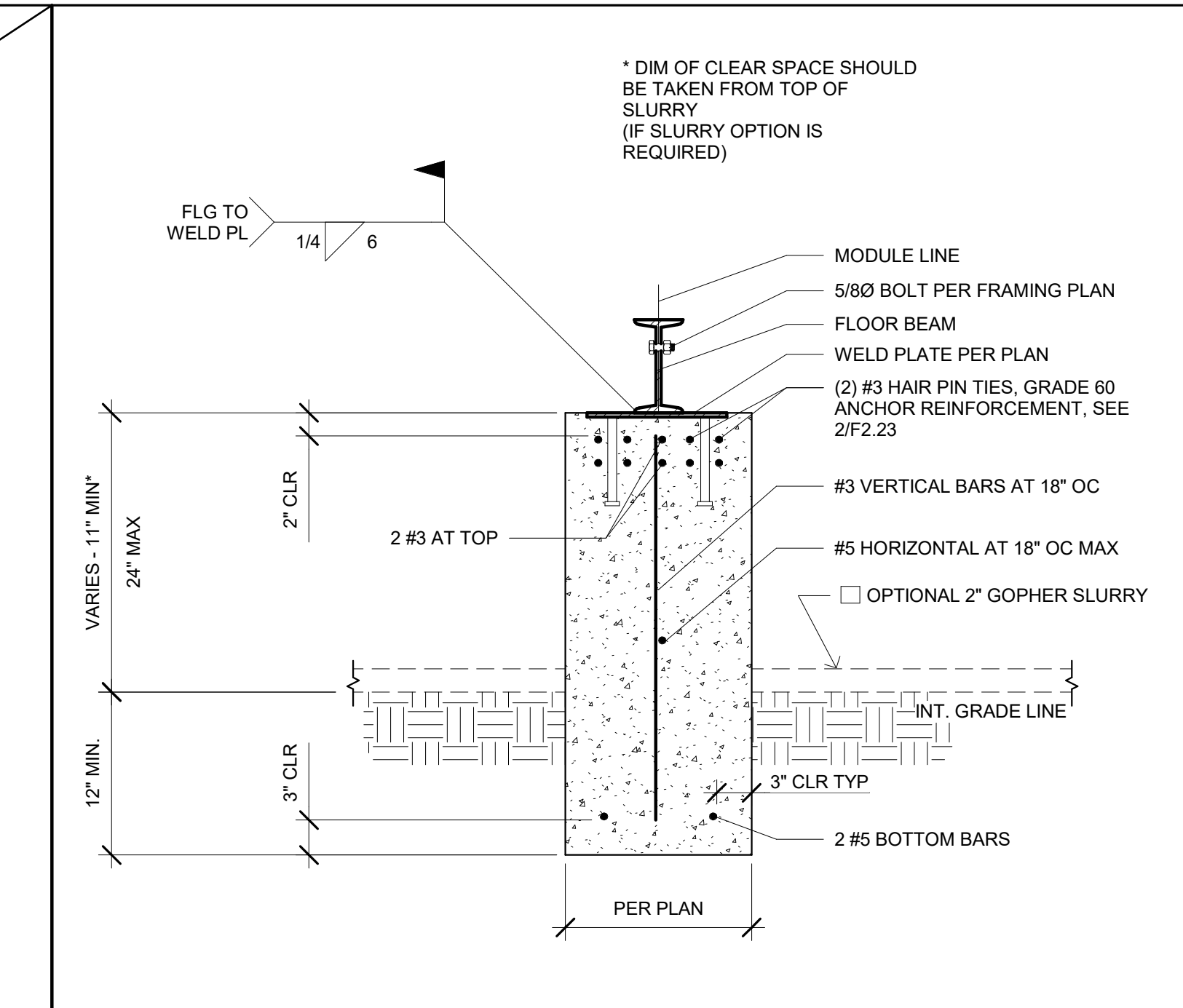
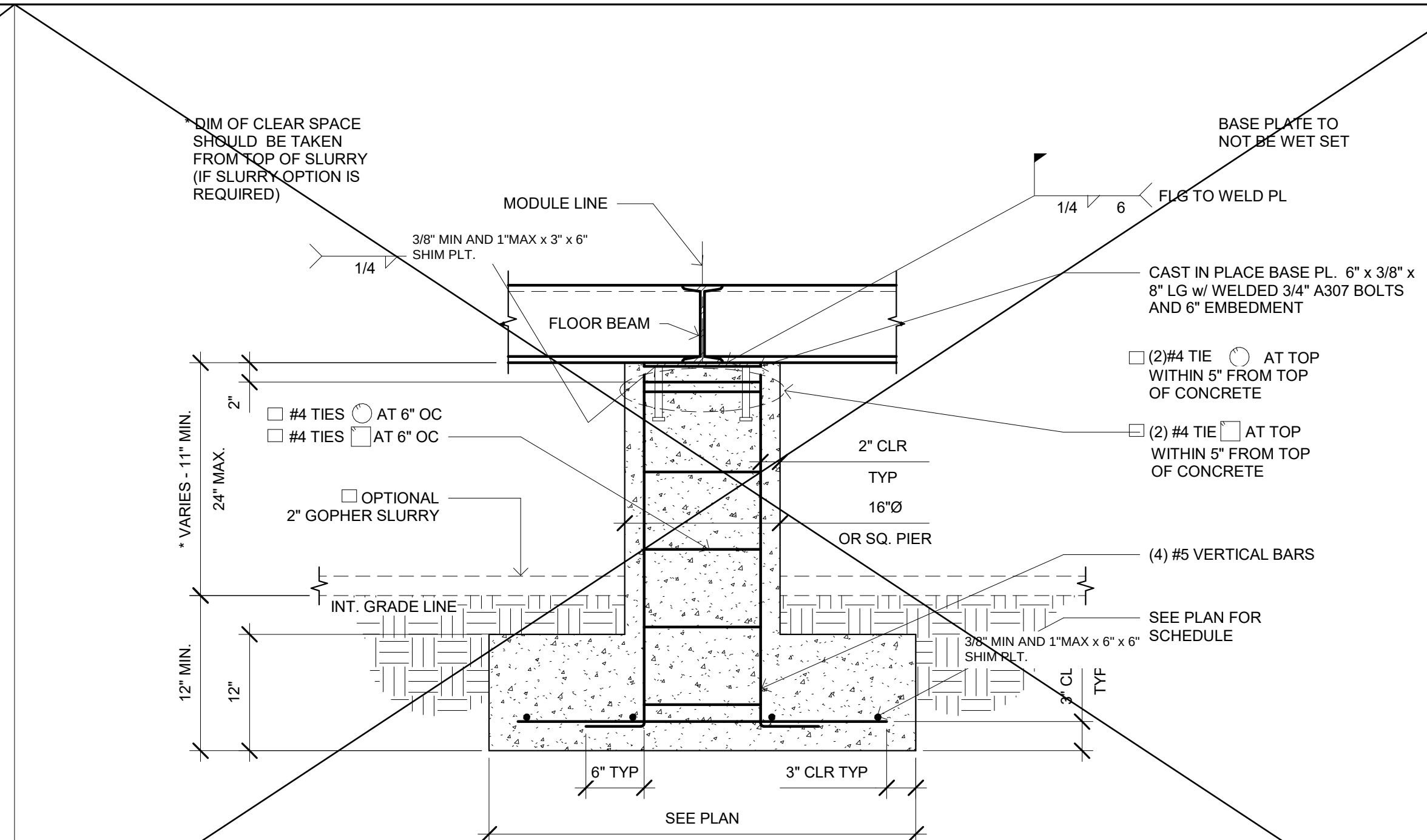
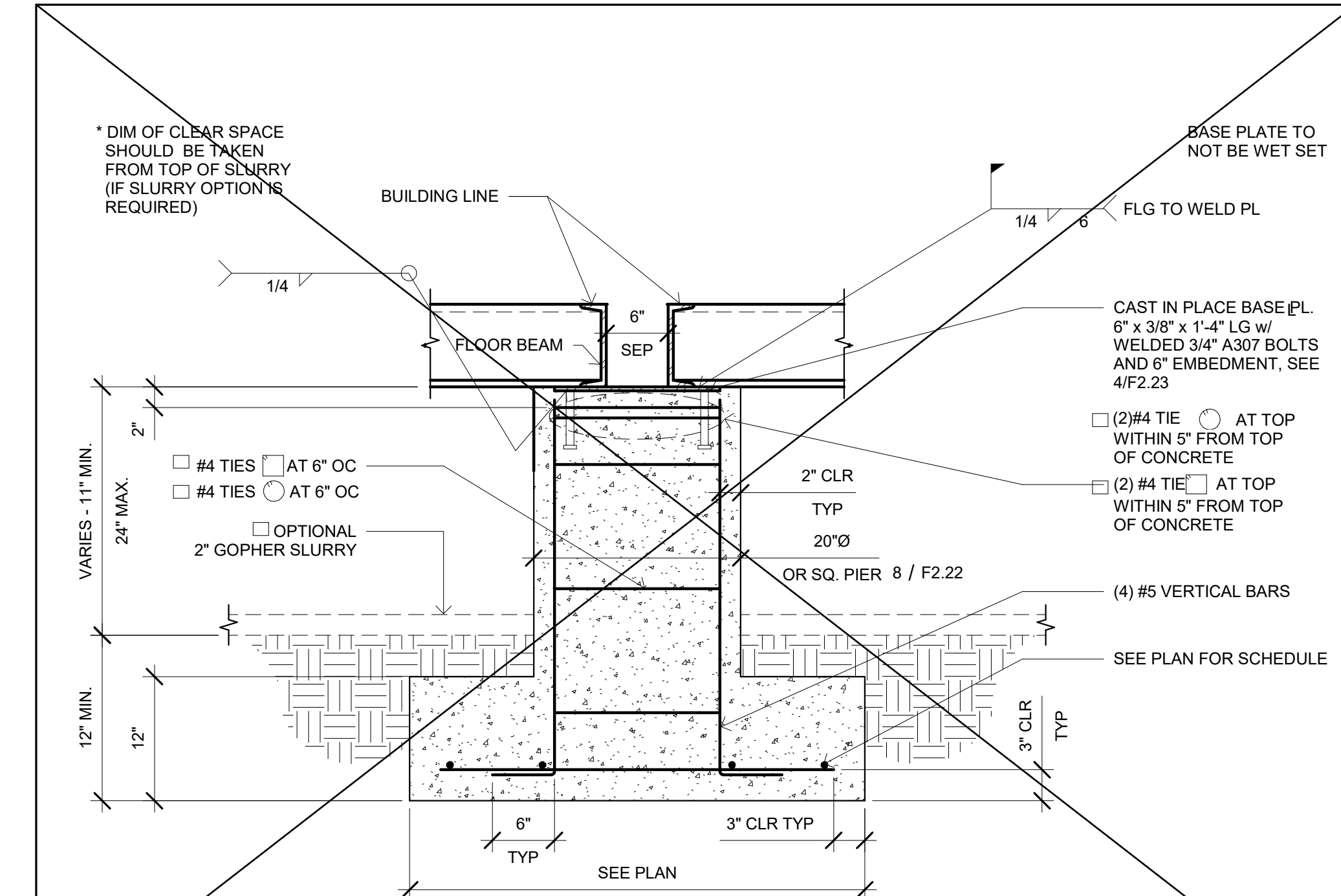
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F2.20
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6/20/2023 8:33:00 AM



PROJECT SPECIFIC STATE AGENCY APPROVAL

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-123412 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/04/2024

R&S TAVARES ASSOCIATES
DESIGN & CONSULTING PROJECT MEET
11590 W BERNARDO COURT, SUITE 100
SAN DIEGO, CA 92127
WWW.RSTAVARES.COM

PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ARCHITECT
MANNY D. FROST
13380
03/21/24
STATE OF CALIFORNIA
02/16/24
RST1422088

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CLIENT

Class Leasing
1651 Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024

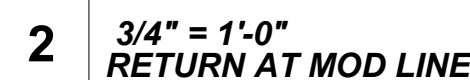
Revision Schedule		
#	Description	Date

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'

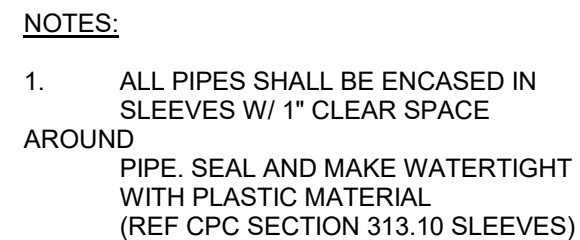
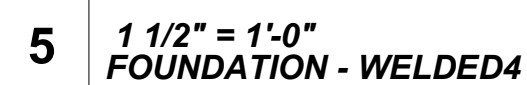
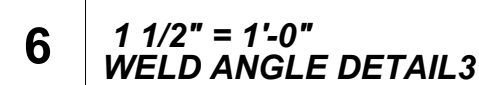
SHEET TITLE
CONCRETE FOUNDATION DETAILS

PROJECT NUMBER	22088
DRAWN BY	rMc/SC
CHECKED BY	JA/RT
DATE	
SHEET NO.	F2.22 BID SET
SHEET	OF



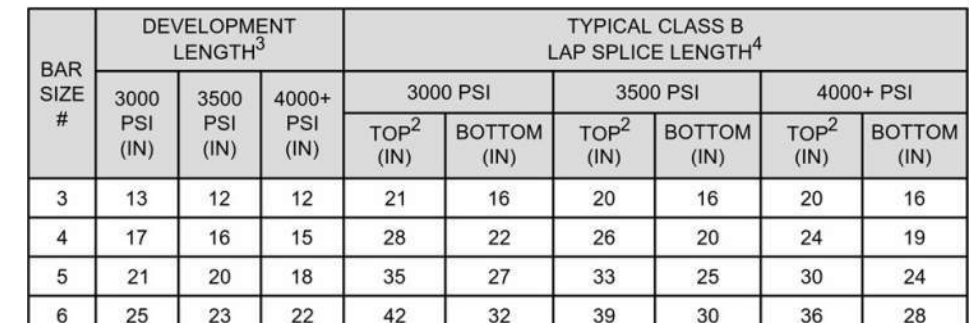
"FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT (STRUCTURAL ENGINEER), SUBJECT TO THE APPROVAL OF THE DIVISION OF THE STATE ARCHITECT. IN SUCH CASE THE MINIMUM FORMWORK SHOWN ON THE DRAWINGS IS MANDATORY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE."

3 $\frac{3}{4}" = 1'-0"$
MANDATORY MINIMUM FORMWORK (UNLESS FULLY FORMED)



STANDARD HOOKS FOR STIRRUPS AND TIE REINFORCEMENT	
BAR SIZE, No.	MINIMUM FINISHED BEND DIAMETER ^(b)
3 THROUGH 5	4d _b
6 THROUGH 8	6d _b

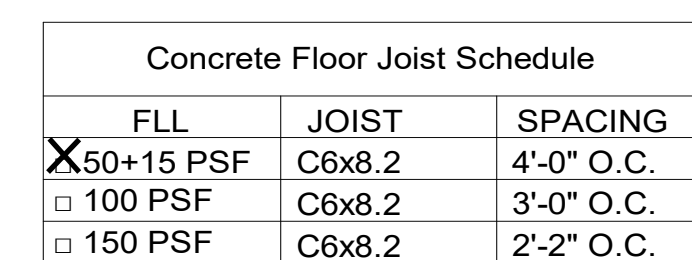
(b) MEASURED ON INSIDE OF BAR



BAR SIZE #	DEVELOPMENT LENGTH ³			TYPICAL CLASS B LAP SPLYCE LENGTH ⁴					
	3000 PSI (N)	3500 PSI (N)	4000+ PSI (N)	3000 PSI		3500 PSI		4000+ PSI	
				TOP ² (N)	BOTTOM (N)	TOP ² (N)	BOTTOM (N)	TOP ² (N)	BOTTOM (N)
3	13	12	12	21	16	20	16	20	16
4	17	16	15	28	22	26	20	24	19
5	21	20	18	35	27	33	25	30	24
6	25	23	22	42	32	39	30	36	28

NOTES:

1. THE ABOVE TABLE IS BASED ON GRADE 60 STEEL
2. TOP BARS ARE ANY BARS WITH MORE THAN 12" OF CONCRETE PLACED BELOW.
3. DEVELOPMENT LENGTH IS CALCULATED FOR TYP. BARS - $\Psi_t = 1.0$
4. LAP SPLICES IN ADJACENT BARS SHALL BE STAGGERED, UNLESS OTHERWISE NOTED.



Column Schedule			
HT	No Plaster Walls	Plaster Walls	w/ Parapet, 18" max
□ 9'	5x5X1/4	5x5X1/4	6x6X1/4
□ 10'	6x6X1/4	6x6X1/4	6x6X1/4
			3x3X3/16 mid-span column

BH-36 METAL DECK PROPERTIES & PROFILE					
PLAN DESIGNATION	DECK TYPE	MINIMUM EFFECTIVE PROPERTIES			DECK PROFILE
		S_x IN ² /FT	S_y IN ² /FT	I_x IN ⁴ /FT	
	1"12" 18GA BH-36 GALV DECK (90° WELD)	0.311	0.329	0.287	0.313

NOTE:

1. STEEL DECKING: APMK UDE EN 60329

2. EFFECTIVE FUSION WELD = 1/4" VISION, FUSION WELD

3. IDEAL LAP ATTACHMENT TO BE BUTT JOINT PACKED 3/4" ON EITHER SIDE WHEN WELDED

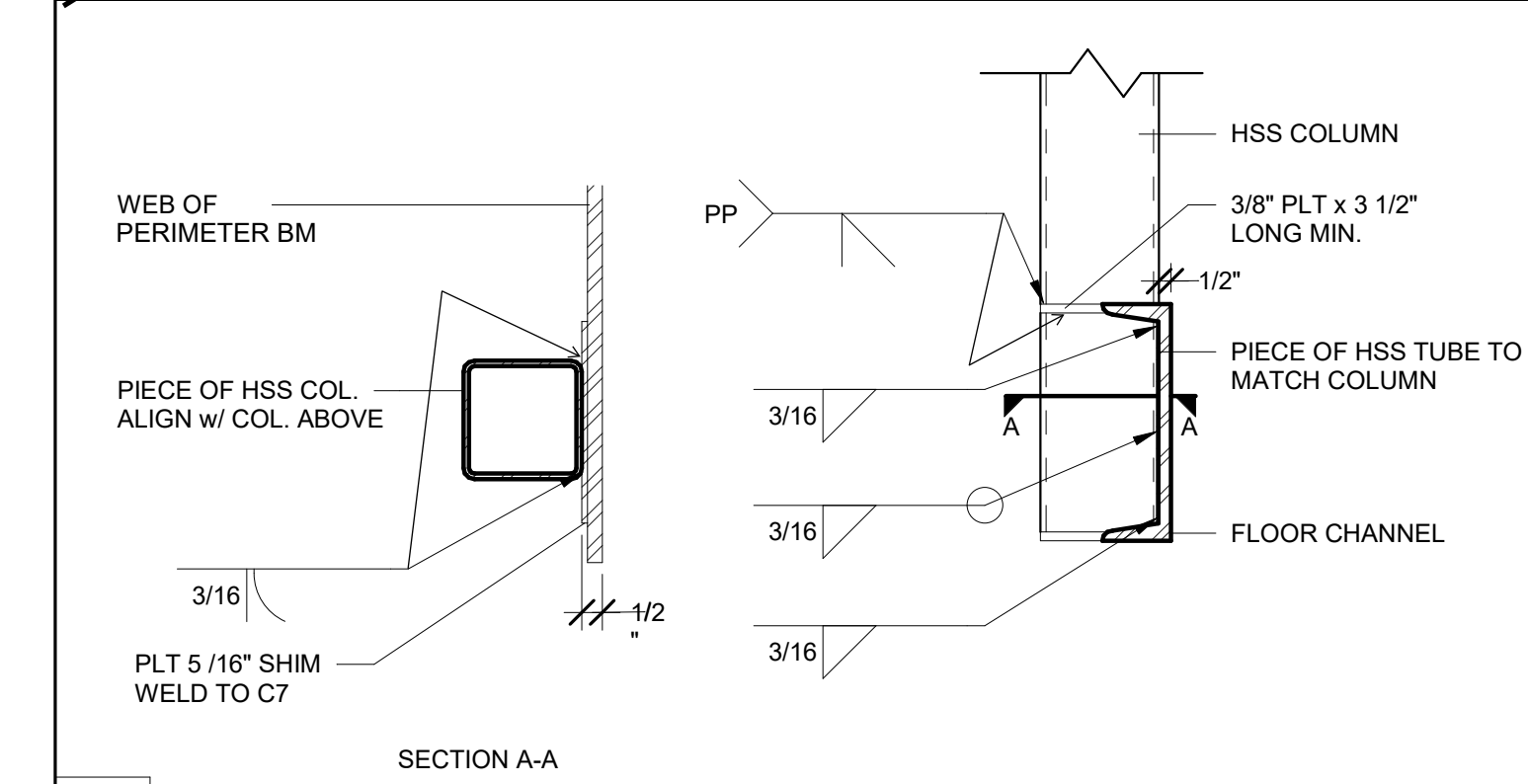
4. IDEAL LAP ATTACHMENT TO BE BUTT JOINT BUTT OR BUTT-GROOVE WHEN SPOURED

C:\Users\User\Documents\RS\H20132 - Class Leasing, PC 24x40 to 120x40 HS, detached_CESAR24D63.rvt

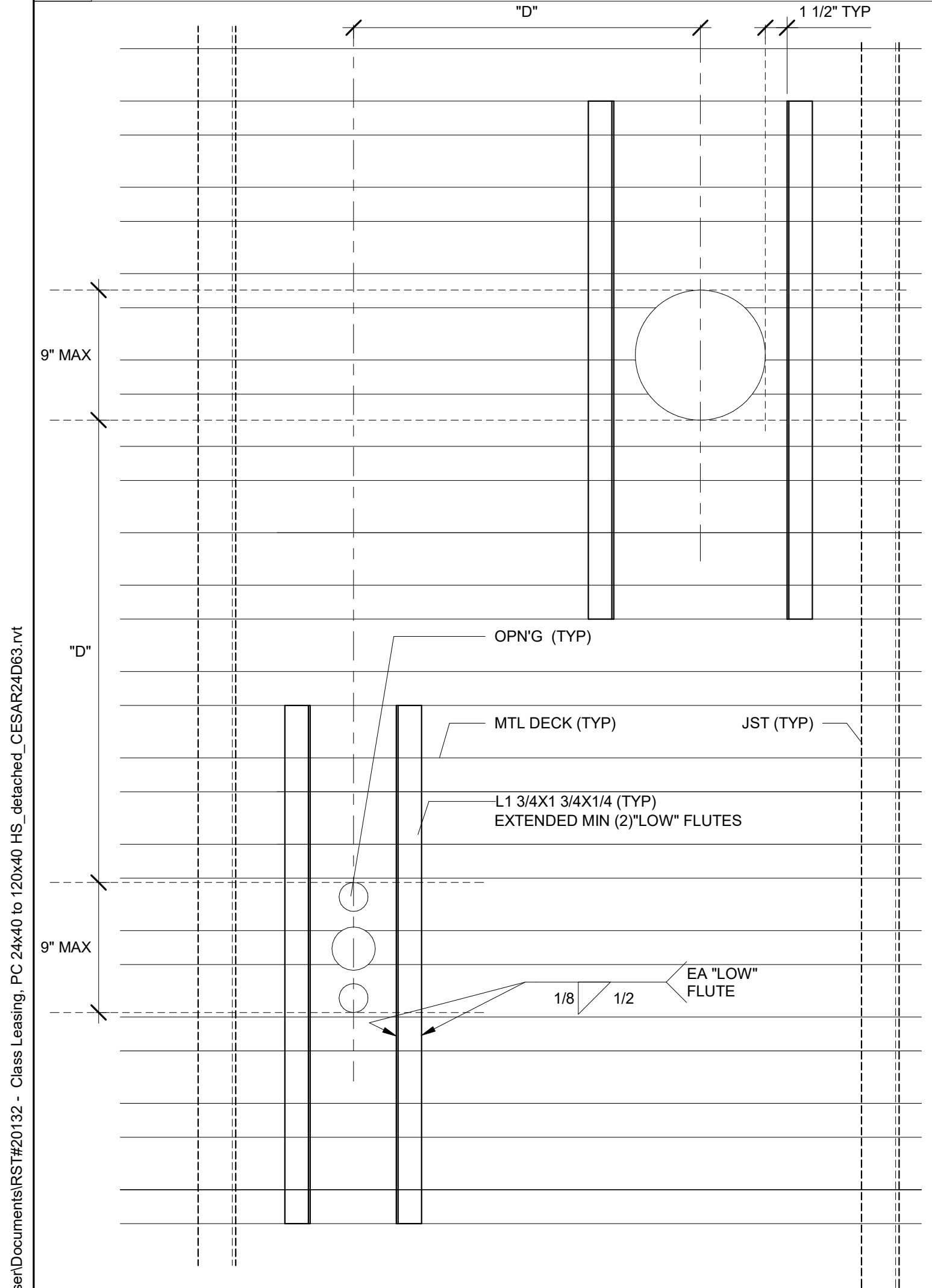
6/6/2021 1:52:34 AM

BH-36 METAL DECK PROPERTIES & PROFILE					
PLAN DESIGNATION	DECK TYPE	MINIMUM EFFECTIVE PROPERTIES			
		S_x IN ² /FT	S_y IN ² /FT	I_x IN ⁴ /FT	I_y IN ⁴ /FT
1-1/2"-18GA BH-36 GALV DECK (36" WIDE)		0.311		0.287	0.313
NOTE: AISC STEEL DECKING: (APMO USR ER #0329)		- SIDE LAP ATTACHMENT TO BE BUTT PUNCHED @ 24" O.C. WHEN WELDED - SIDE LAP ATTACHMENT TO BE #10 BOSTS @ 24" O.C. WHEN SCREWED			

20 1 1/2" = 1'-0"
BH-36 Metal Deck Properties & Profile

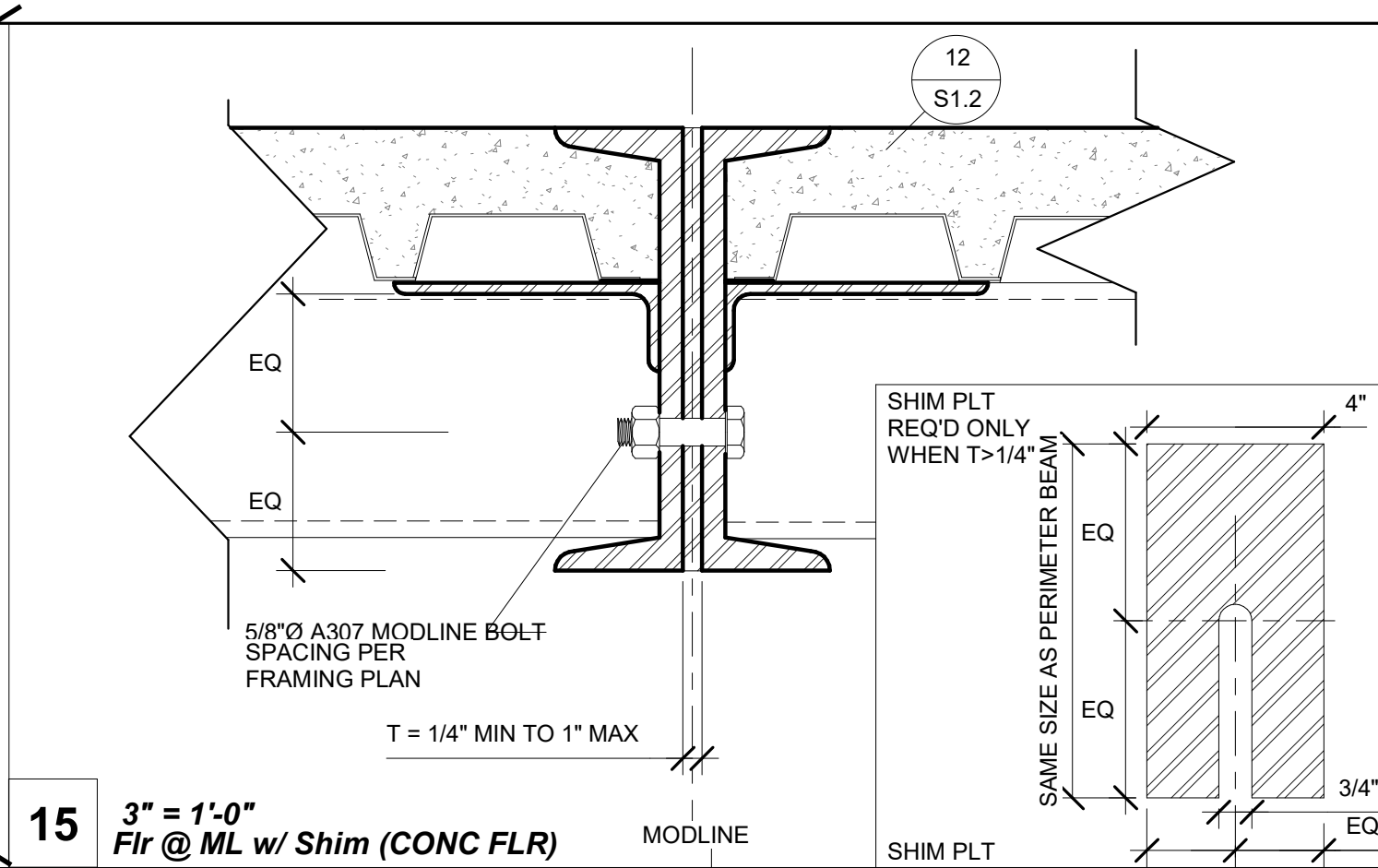


7 1 1/2" = 1'-0"
Mid-Span Column Connection

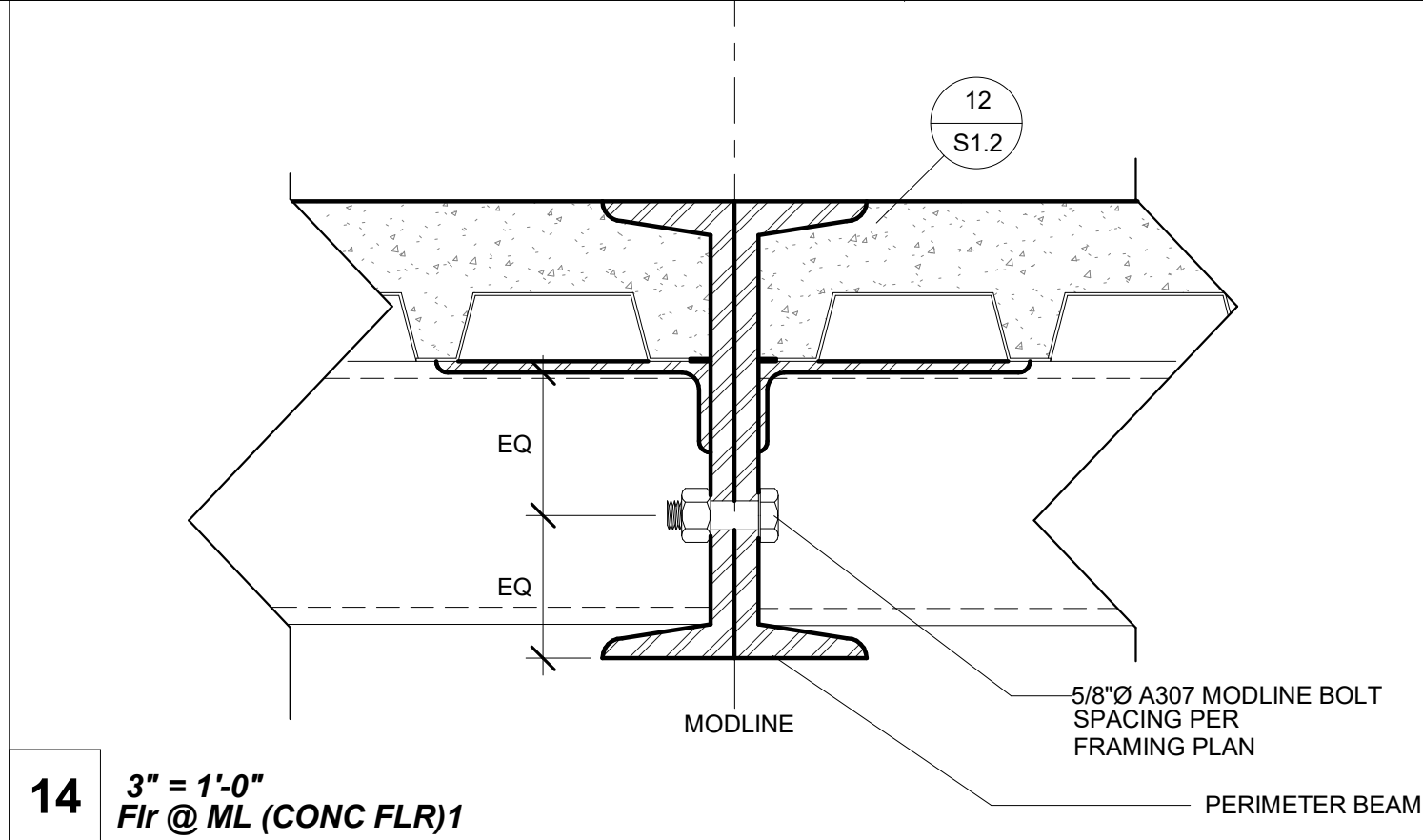


- THIS DETAIL IS FOR USE ONLY FOR OPENINGS OR OPENING GROUPS THAT ARE 0'-9" OR SMALLER.
- OPENINGS 2'-0" OR LESS NOT OCCURRING IN THE LOWER FLUTE DO NOT REQUIRE REINFORCING AND MAY BE CORED THRU THE CONCRETE.
- IF "D" IS LESS THAN 32" THEN THE GROUP OF OPENINGS MUST BE BLOCKED OUT WITH ADDITIONAL FRAMING.
- PRIOR TO CONCRETE POUR, BLOCK OUT THE OPENINGS. AFTER THE CONCRETE HAS BEEN CURED THE DECK MAY BE CUT.

16 1 1/2" = 1'-0"
Typ Deck Penetrations (CONC FLR)

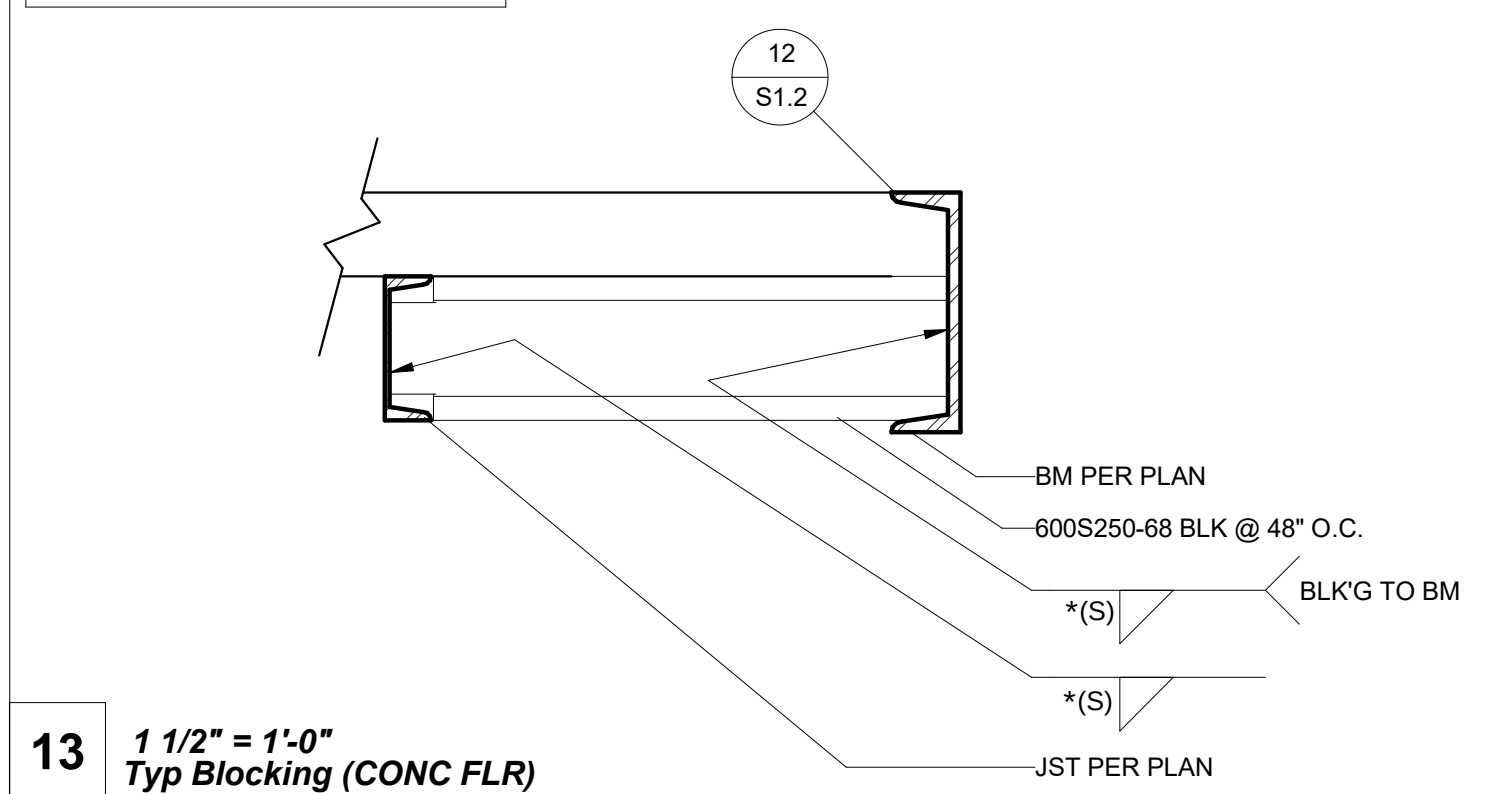


15 3" = 1'-0"
Flr @ ML w/ Shim (CONC FLR)

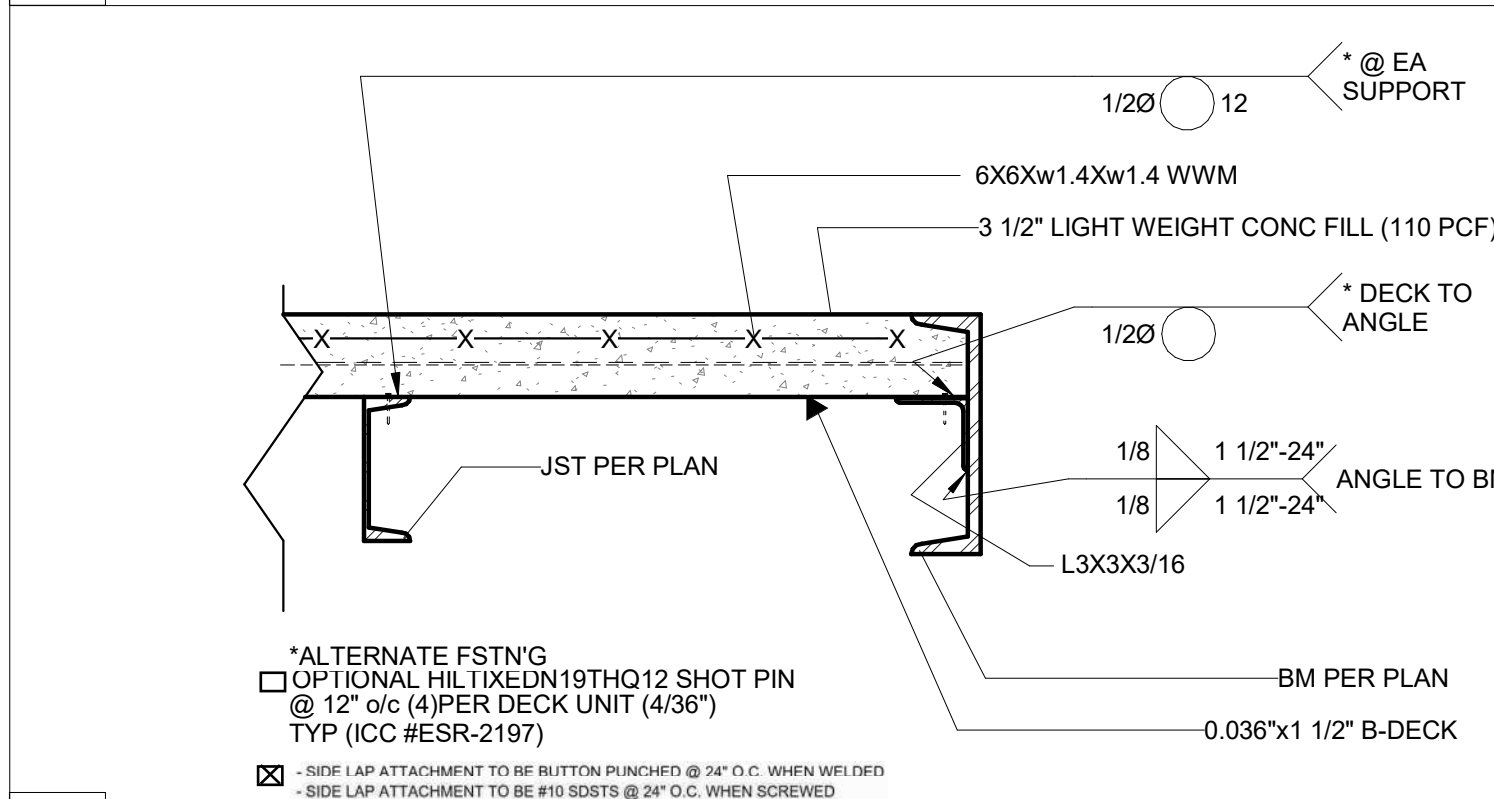


14 3" = 1'-0"
Flr @ ML (CONC FLR)1

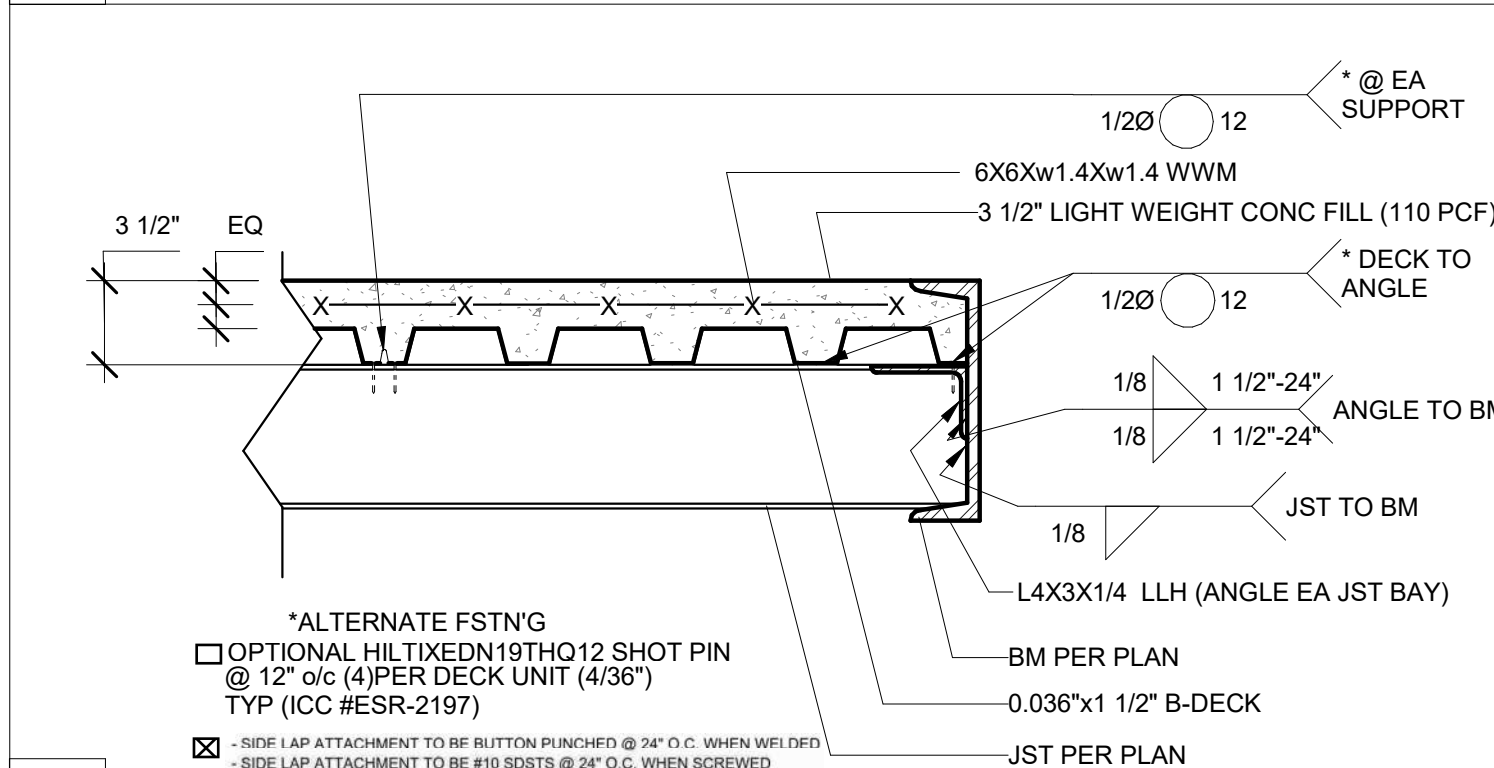
* SIZE OF WELD (S) = THICKNESS OF THINNER MATERIAL



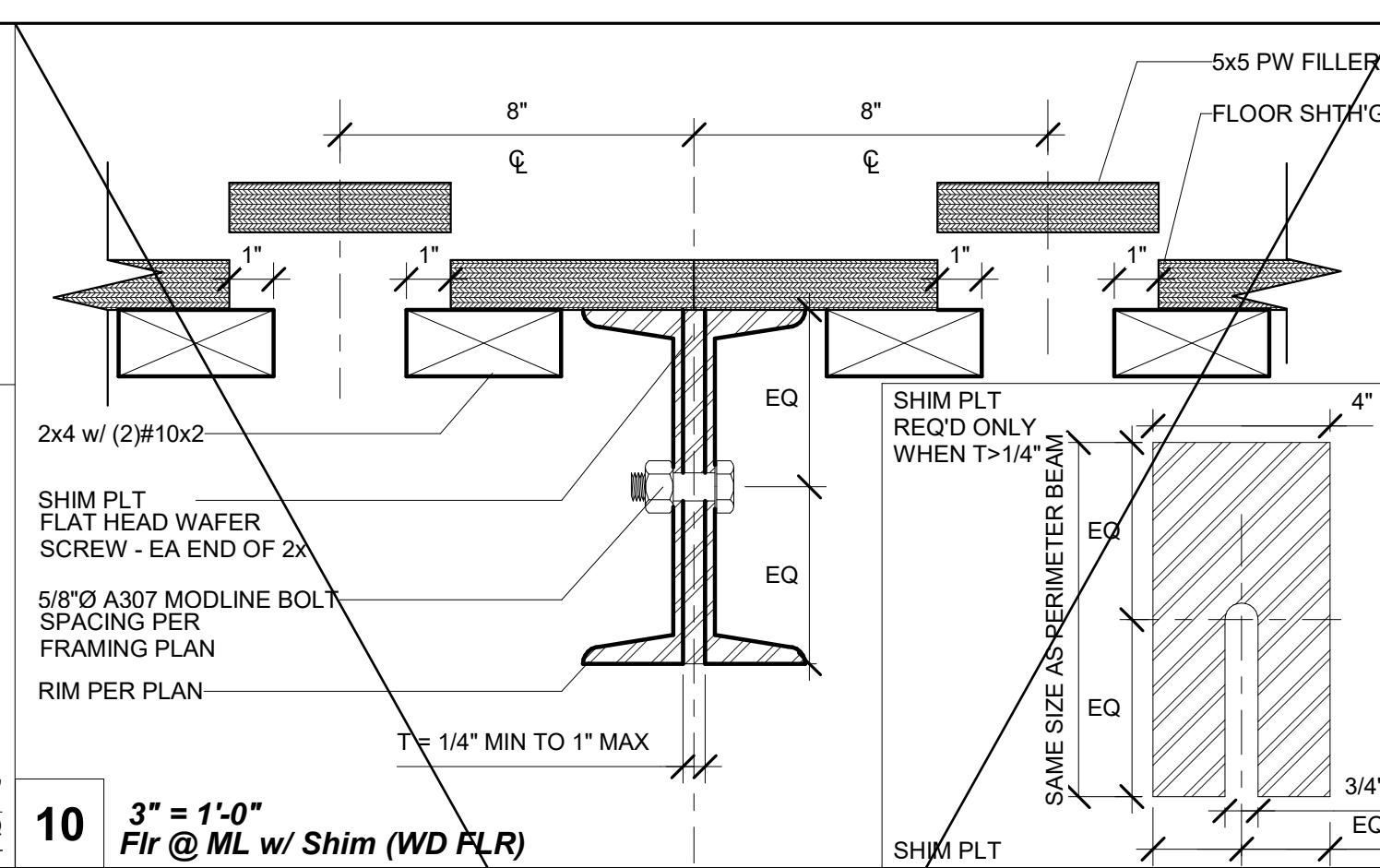
13 1 1/2" = 1'-0"
Typ Blocking (CONC FLR)



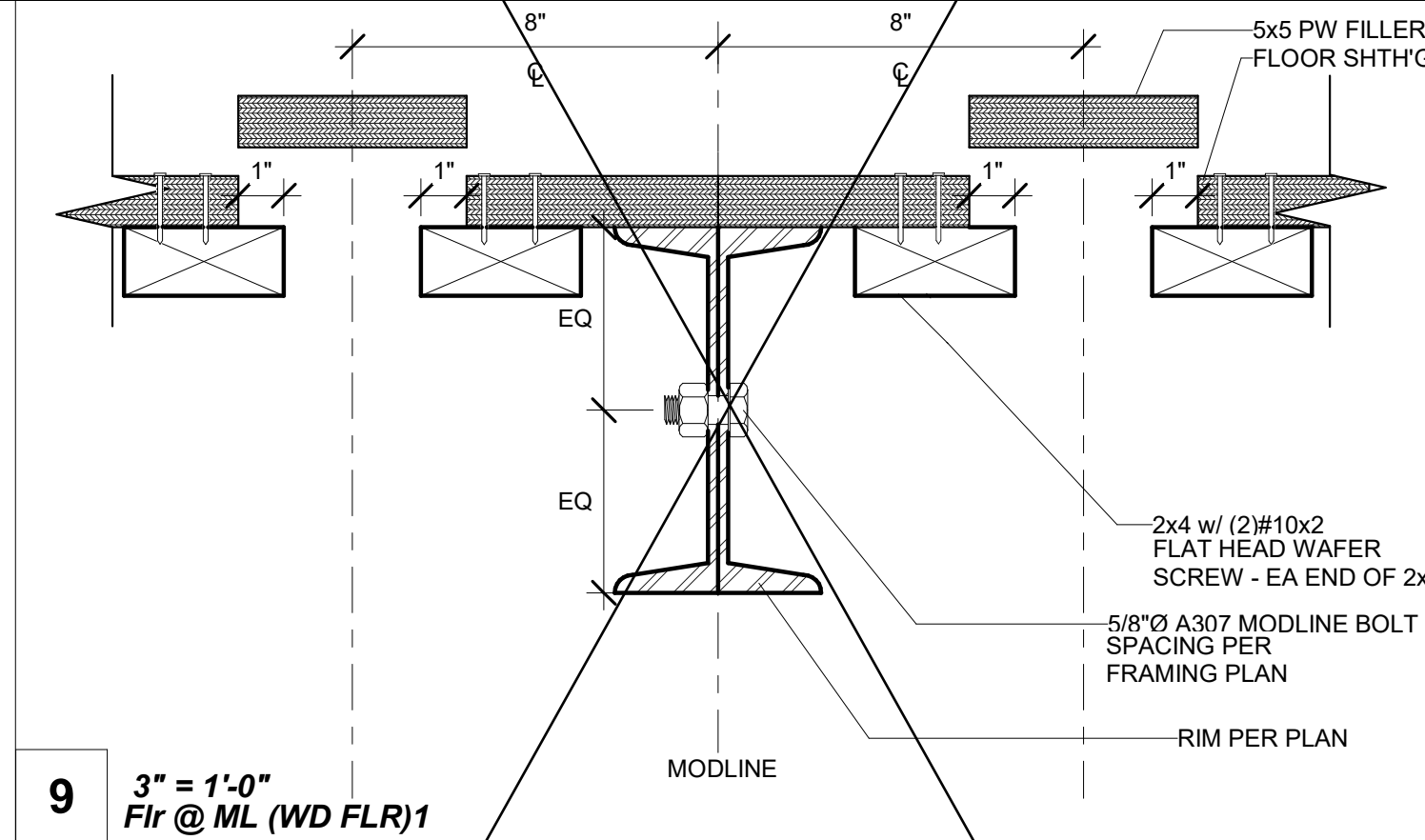
12 1 1/2" = 1'-0"
Typ End Beam Connection @ Rim (CONC FLR)



11 1 1/2" = 1'-0"
Typ Side Beam Connection @ Rim (CONC FLR)

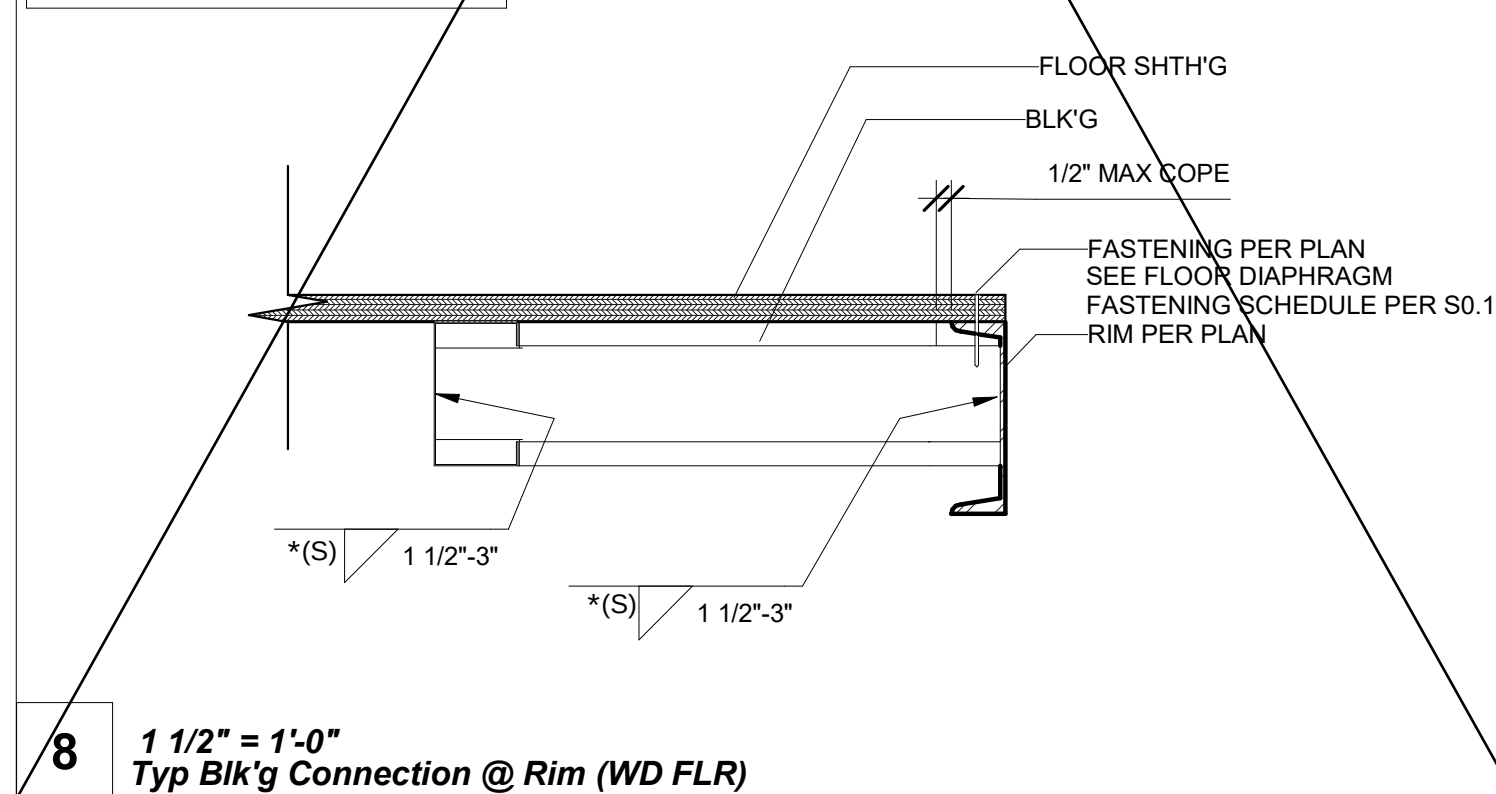


10 3" = 1'-0"
Flr @ ML w/ Shim (WD FLR)

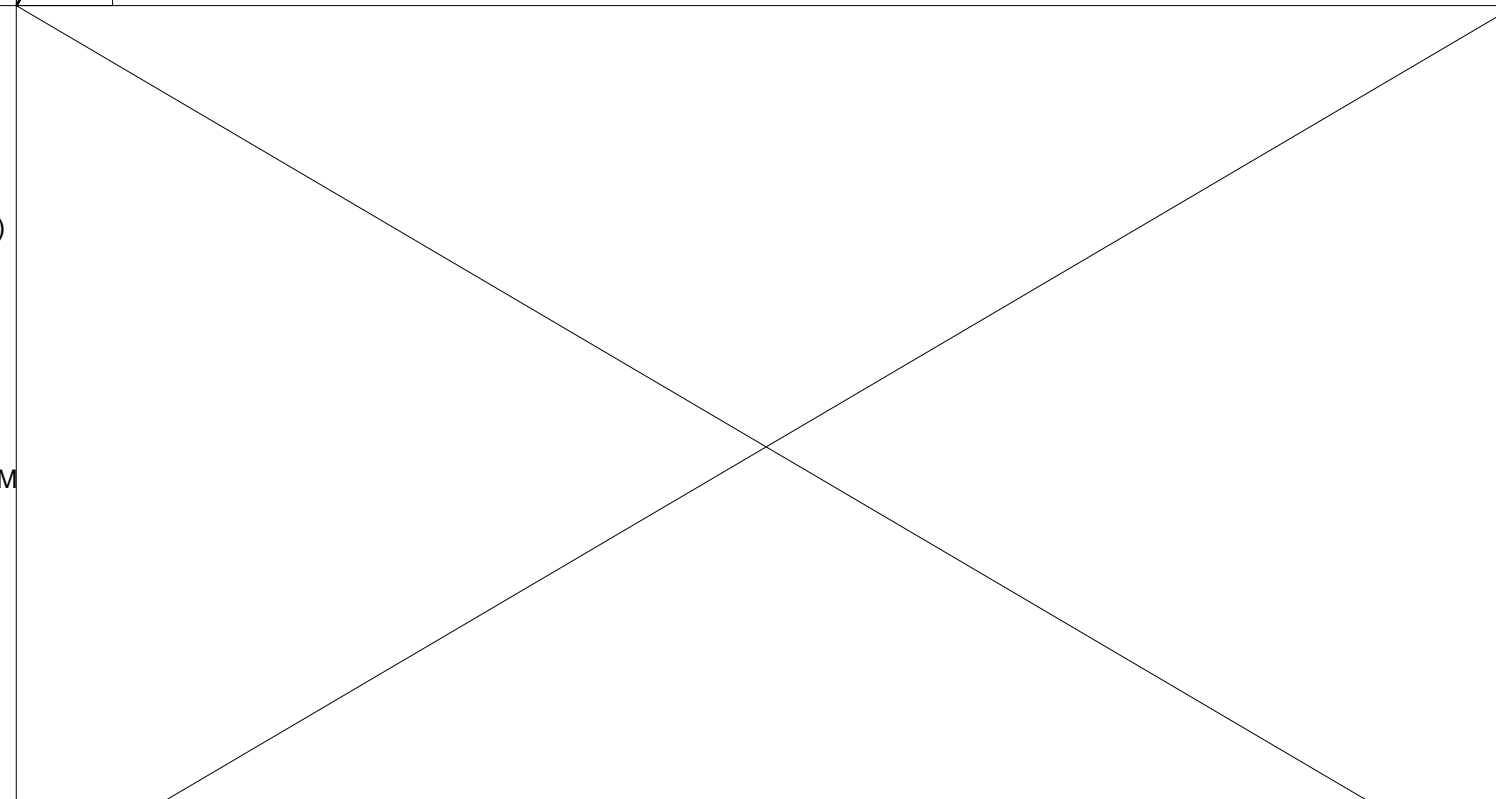


9 3" = 1'-0"
Flr @ ML (WD FLR)1

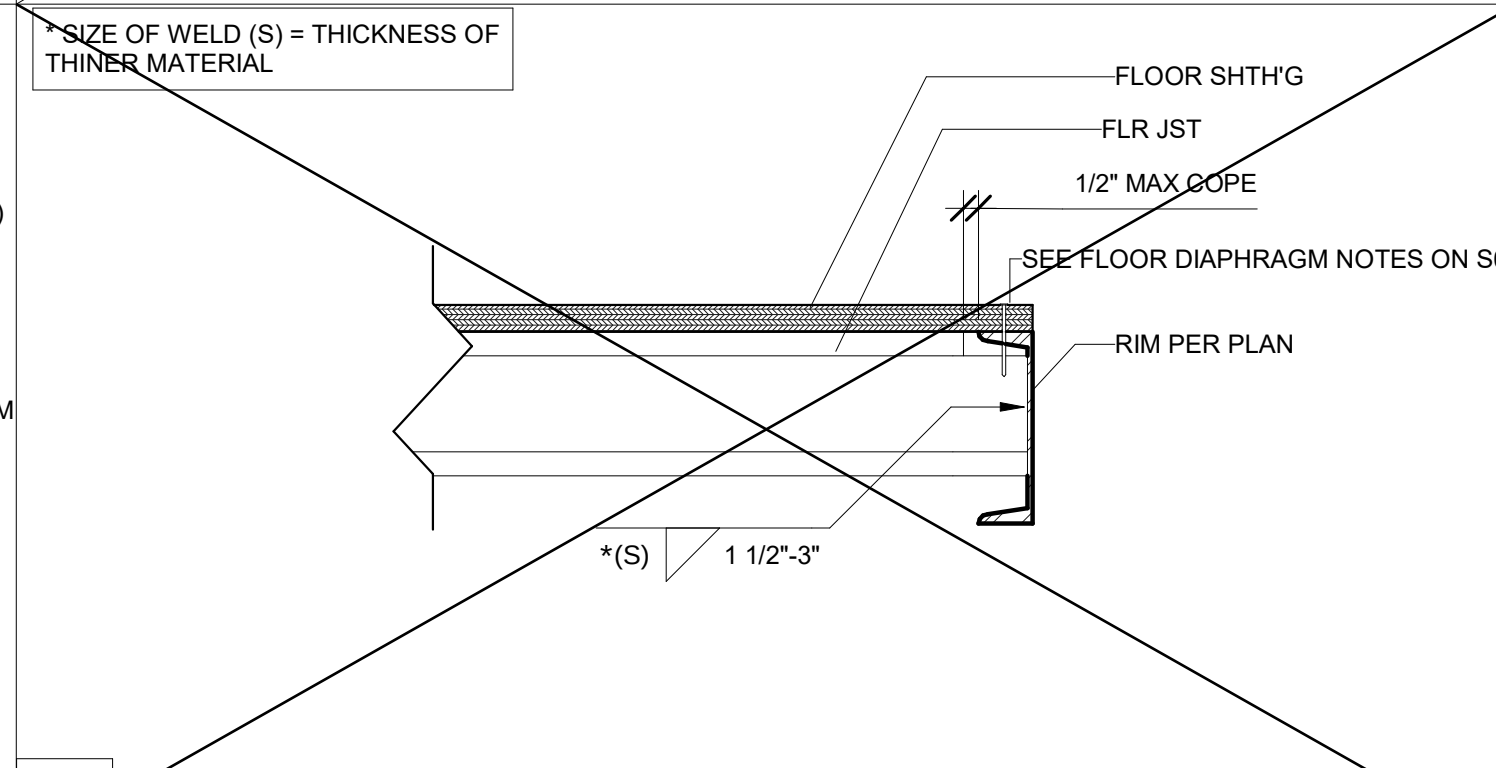
* SIZE OF WELD (S) = THICKNESS OF THINNER MATERIAL



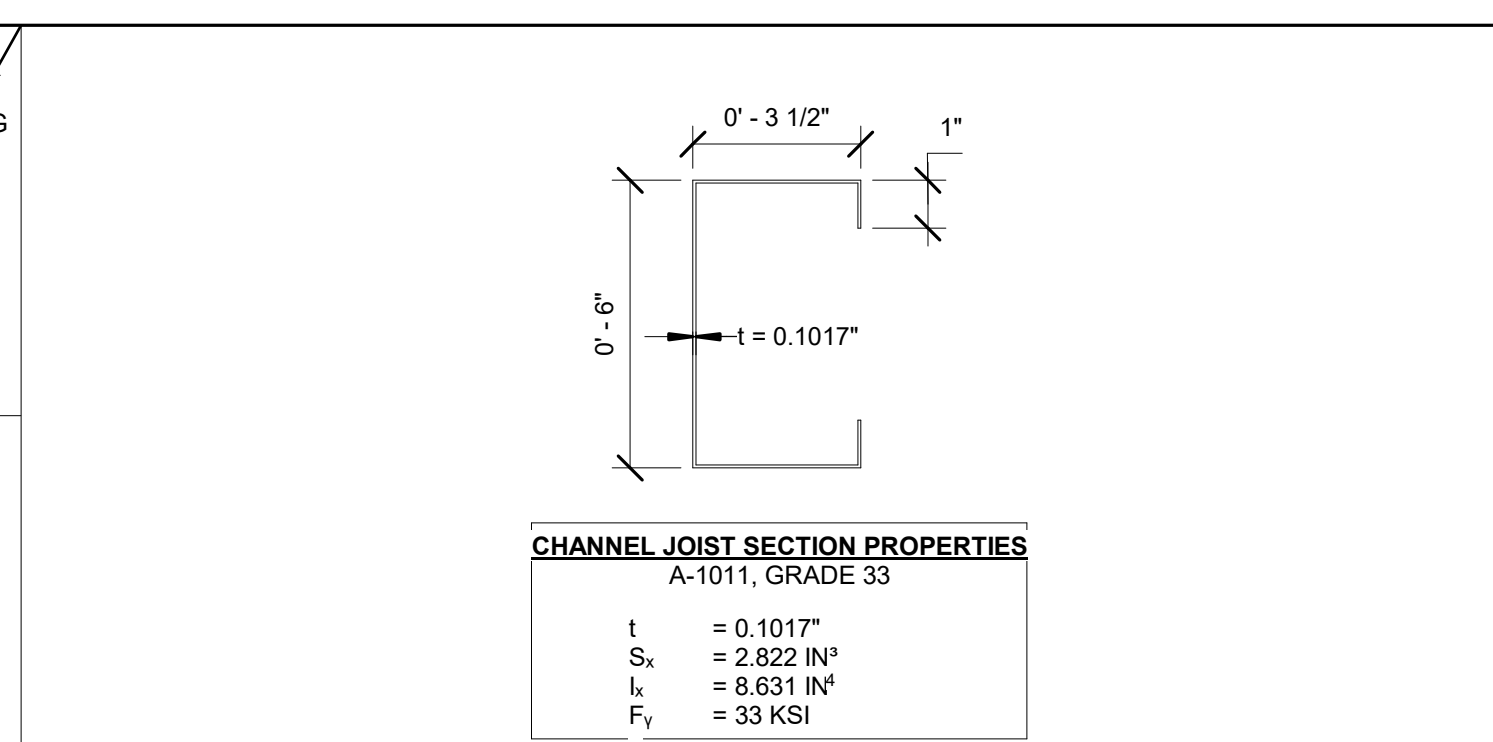
8 1 1/2" = 1'-0"
Typ Blk'g Connection @ Rim (WD FLR)



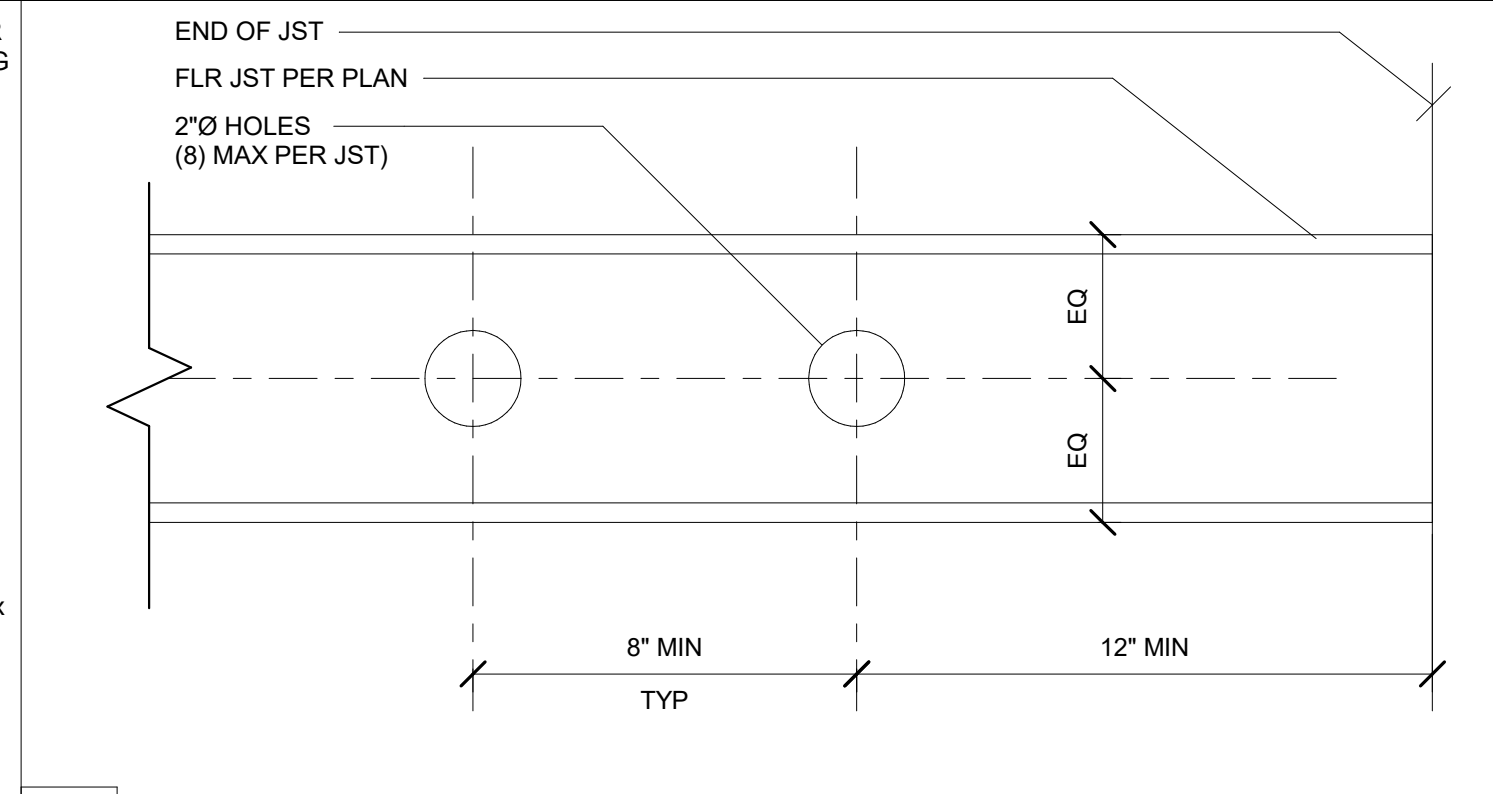
12 1 1/2" = 1'-0"
Typ End Beam Connection @ Rim (CONC FLR)



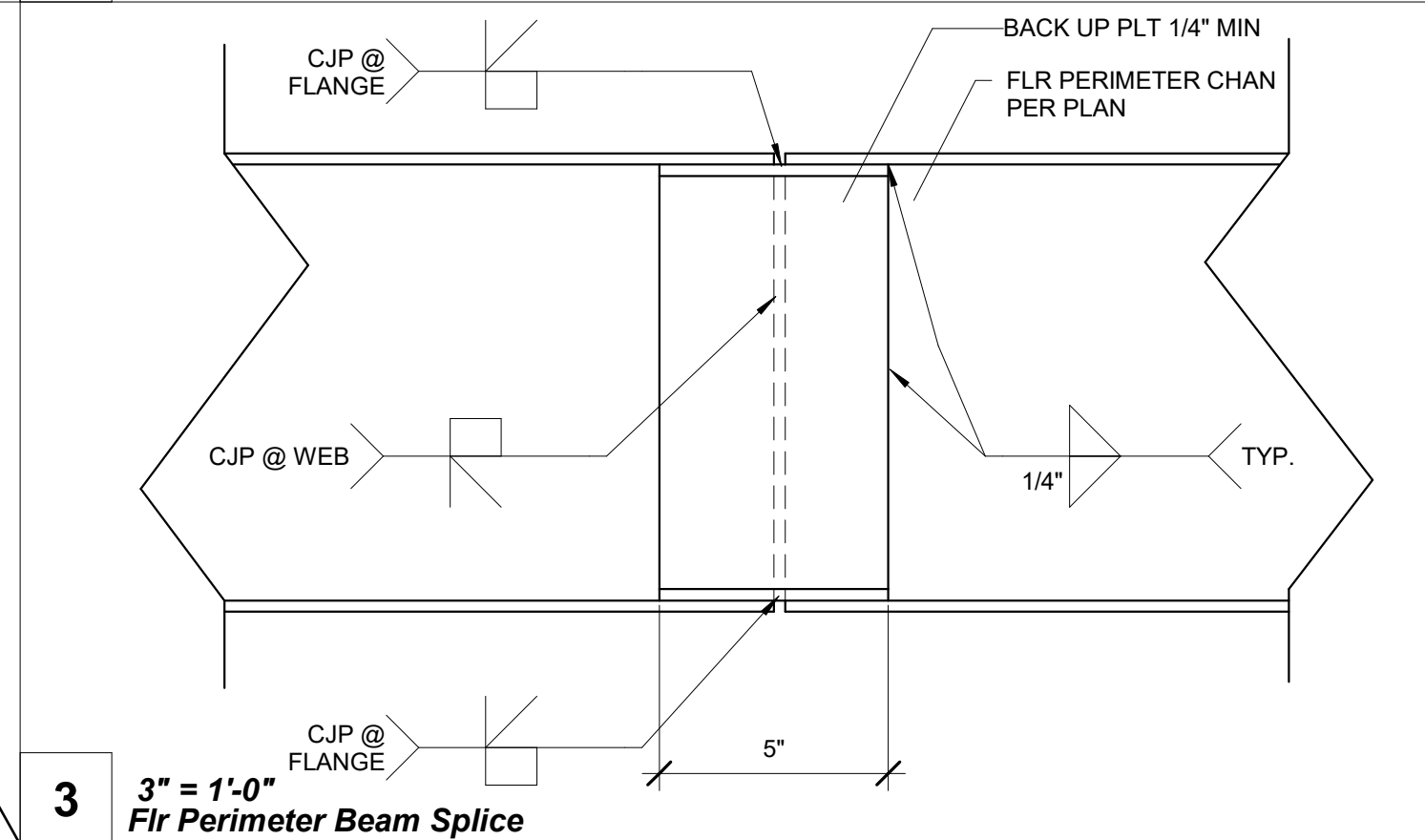
6 1 1/2" = 1'-0"
Typ Joist Connection @ Rim (WD FLR)



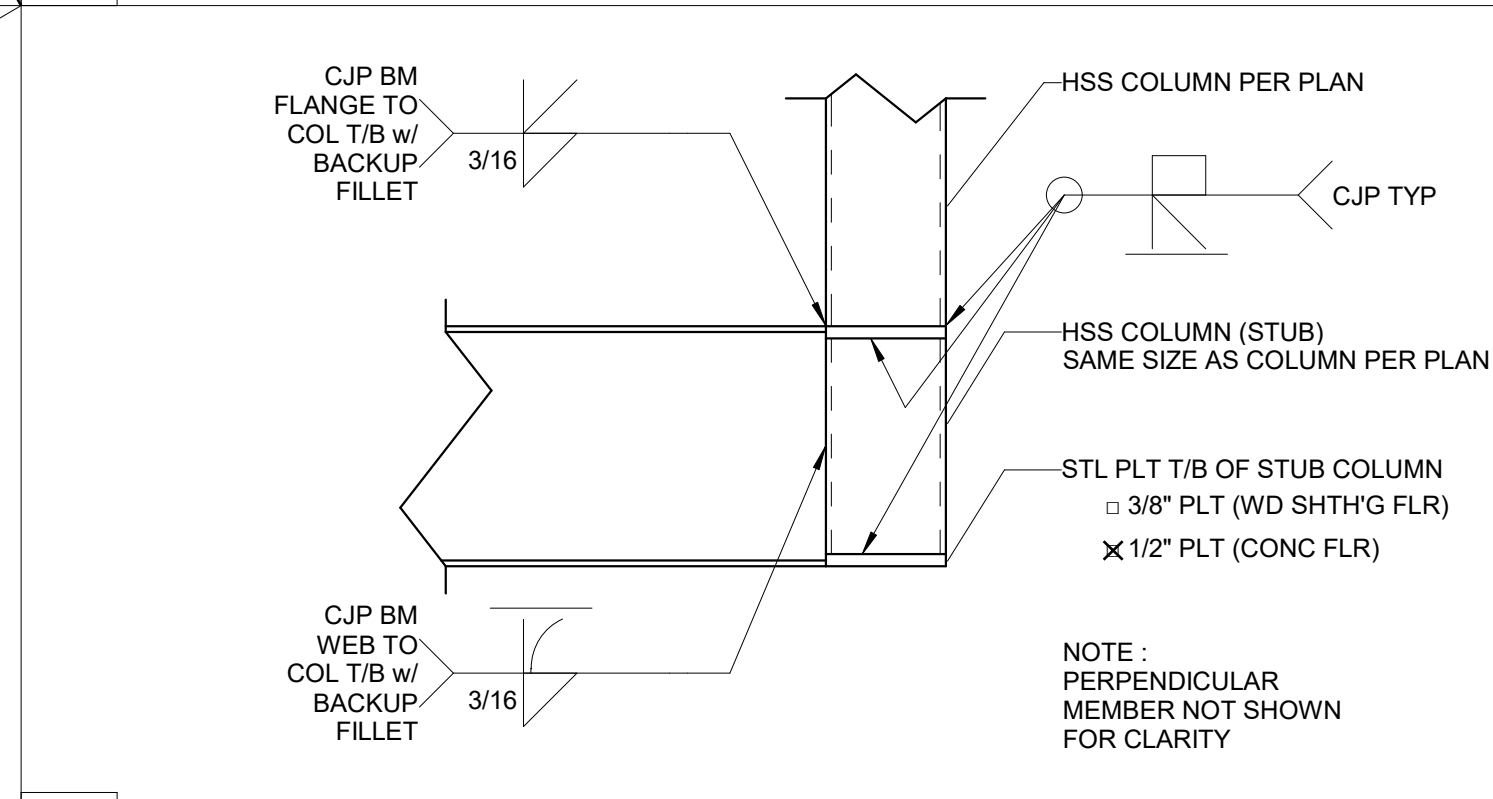
5 3" = 1'-0"
Channel Joist Section Properties (600S350-97)



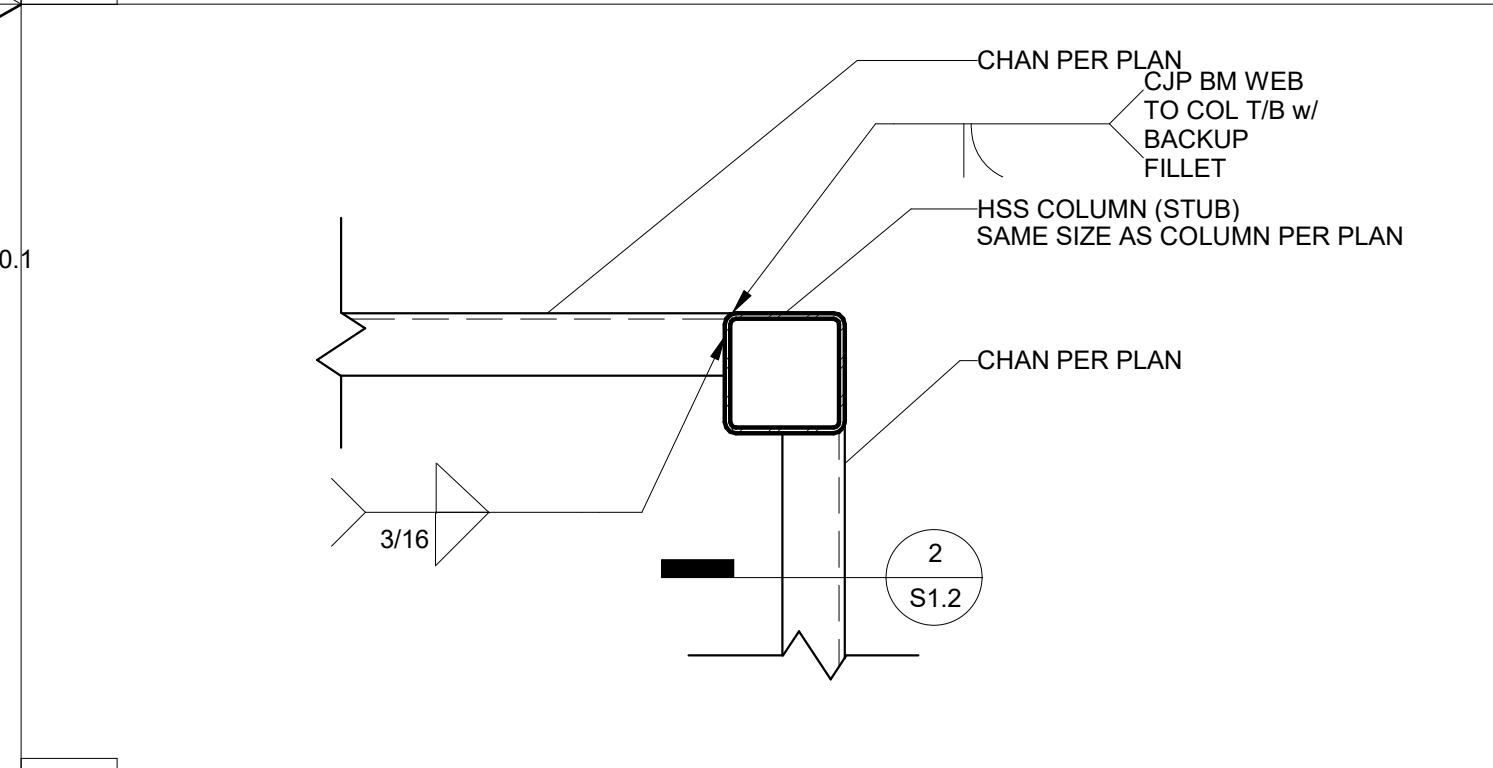
4 3" = 1'-0"
Elevation - Allowable Jst Holes



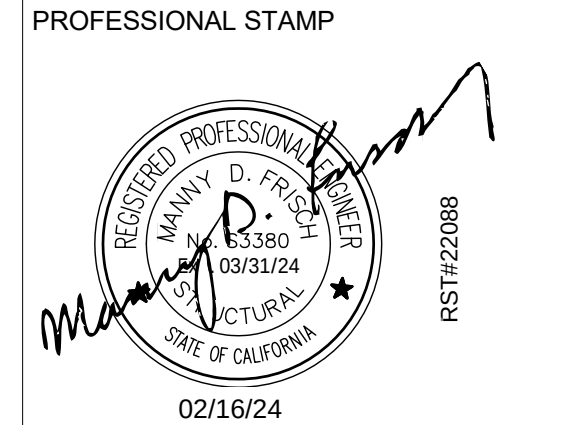
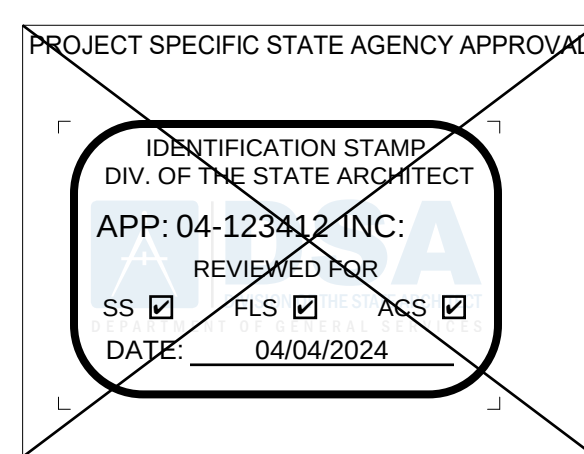
3 3" = 1'-0"
Flr Perimeter Beam Splice



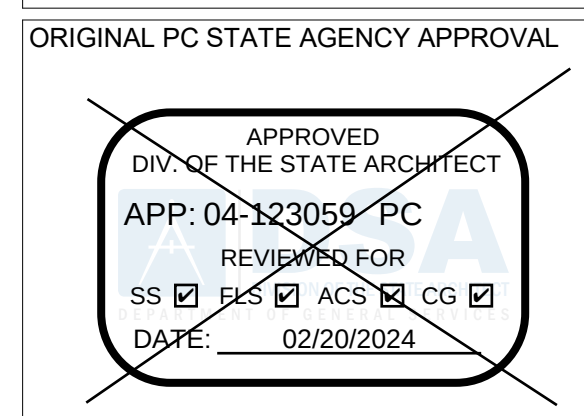
2 1 1/2" = 1'-0"
Typ Flr Bm to Column Connection



1 1 1/2" = 1'-0"
Typ Corner Connection



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Revision Schedule		
#	Description	Date

PRE-CHECK (PC) DOCUMENT
Code: 2022 CBC
A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC:24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
STRUCTURAL
DETAILS
(FLOOR)

PROJECT NUMBER
22088

DRAWN BY
rMc/SC

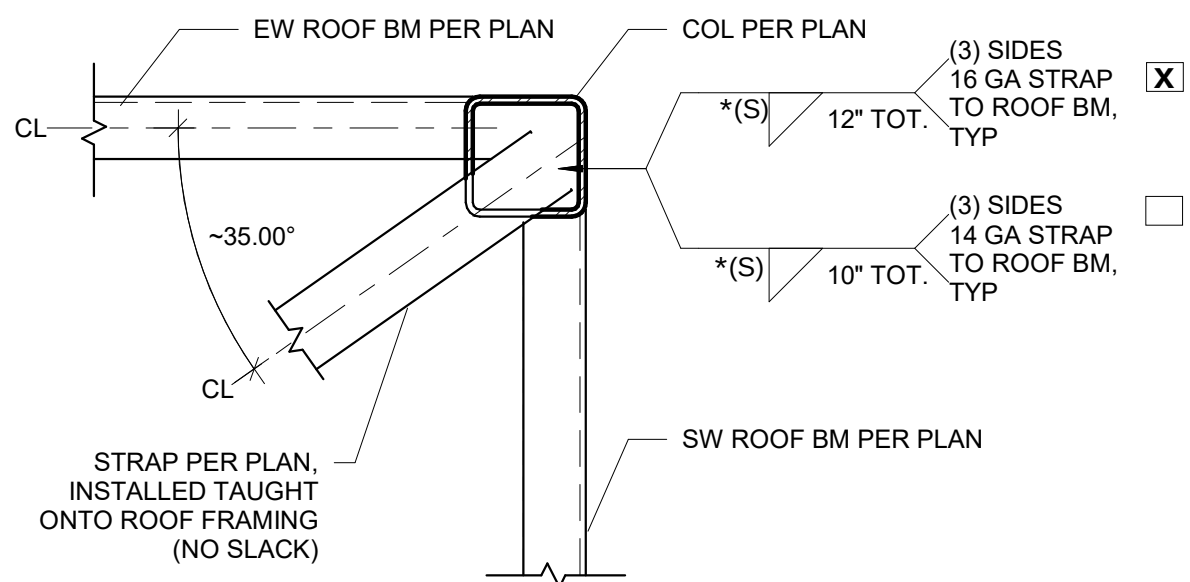
CHECKED BY
JA/RT

DATE

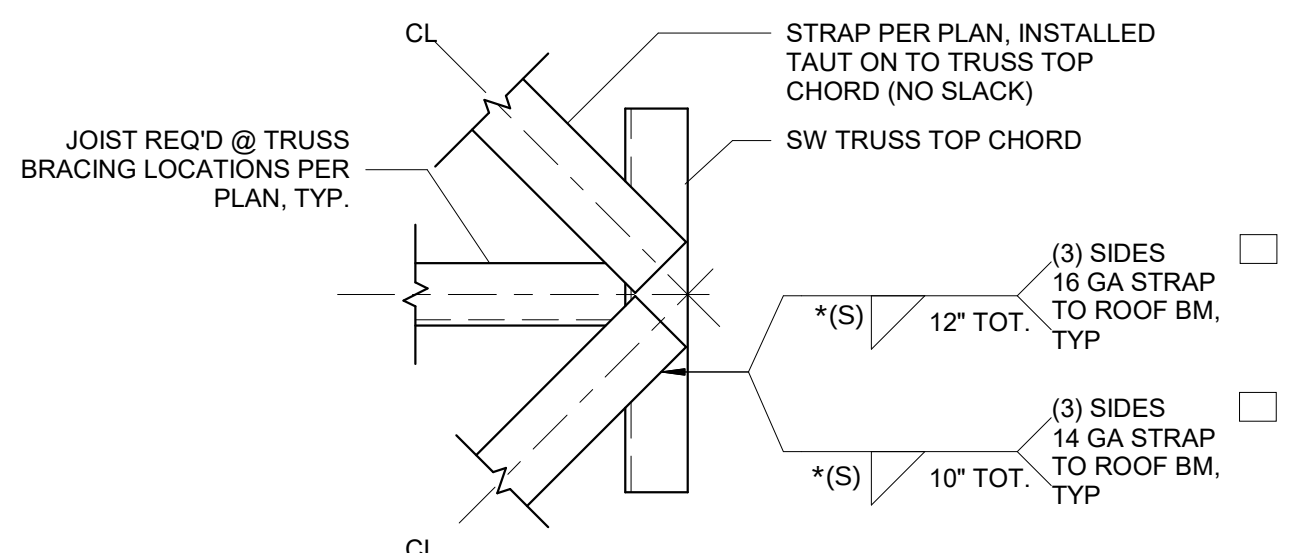
SHEET NO.
S1.2
BID SET
SHEET OF

8.3 REQUIRED PHOTOVOLTAIC (PV) SYSTEMS ENERGY REVIEW

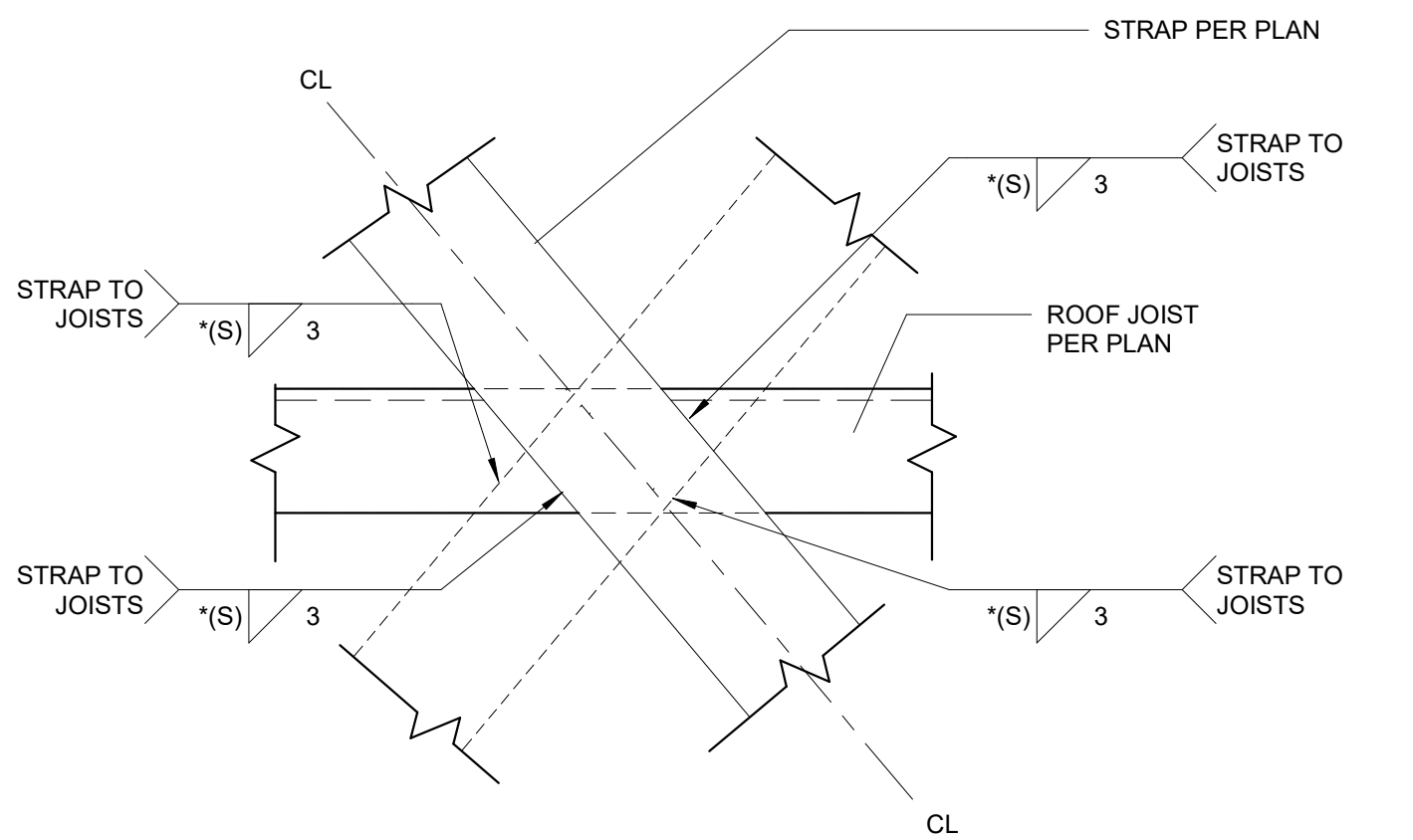
WHEN A PV SYSTEM IS REQUIRED PER THE CALIFORNIA ENERGY CODE FOR A PC CONFIGURATION, THE SYSTEM POWER REQUIREMENTS SHALL BE CLEARLY DELINEATED ON THE PC PLANS IN THE DESIGN INFORMATION SECTION FOR THE PC. SEE SECTION 1.7 ABOVE FOR DESIGN AND SUBMITTAL REQUIREMENTS OF THE PV SYSTEM.



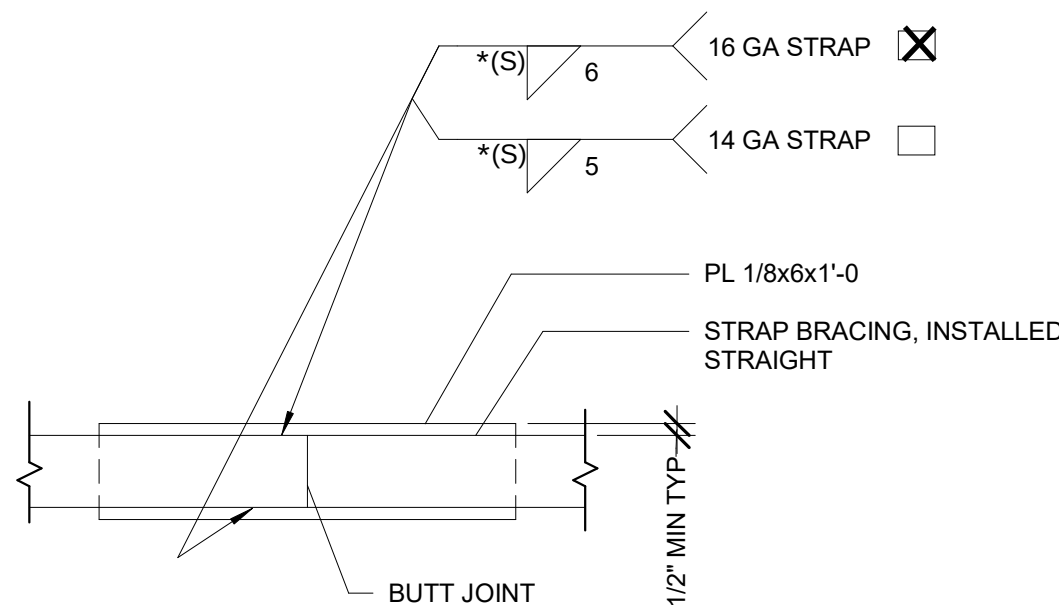
* SIZE OF WELD (S) = THICKNESS OF THINNER MATERIAL



* SIZE OF WELD (S) = THICKNESS OF THINNER MATERIAL



* SIZE OF WELD (S) = THICKNESS OF THINER MATERIAL



* SIZE OF WELD (S) = THICKNESS OF THINNER MATERIAL

PROFESSIONAL STAMP



02/16/24

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 **Class
Leasing**

1651 Juanita Street, San Jacinto, CA 92583
Voice (951) 943-1908 Fax (951) 943-5768

ORIGINAL PC STATE AGENCY APPROVAL

~~APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-123059 PC
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒ CG ☒
DATE: 02/20/2024~~

Revision Schedule		
#	Description	Date

PRE-CHECK (PC) ALTERNATE DOCUMENT

CODE: 2019 CBC

A separate project application for construction is required

PROJECT TITLE	PC 2022 CBC:24' x 40' EXPANDABLE TO 120' x 40'
---------------	--

SHEET TITLE

MONO SLOPE
ROOF FRM'G PLAN
CROSS-STRAP
OPT.

PROJECT NUMBER
22088

DRAWN BY MJM

DATE	06/07/2021
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SHEET NO.

S3.0.3

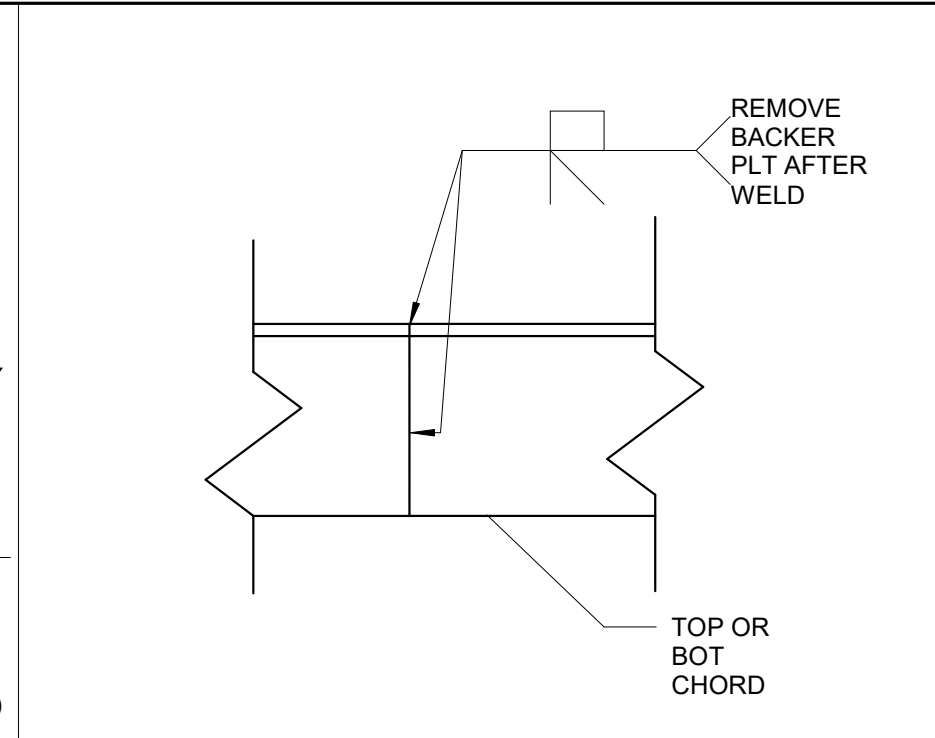
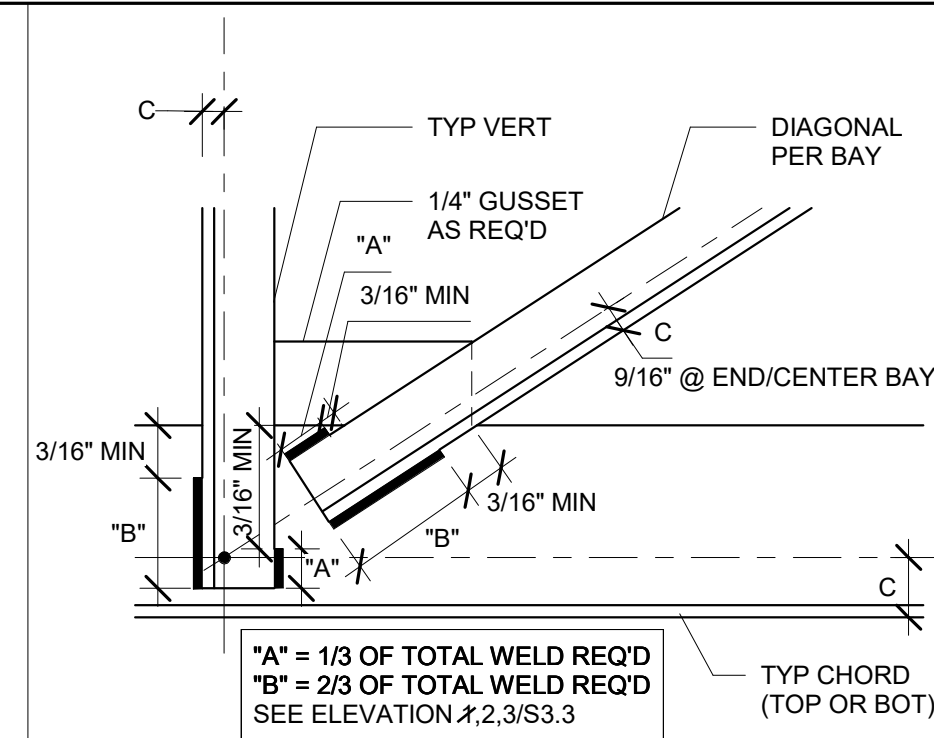
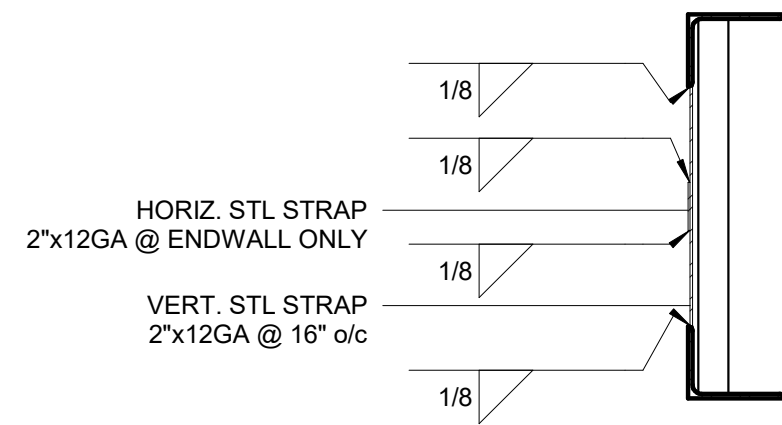
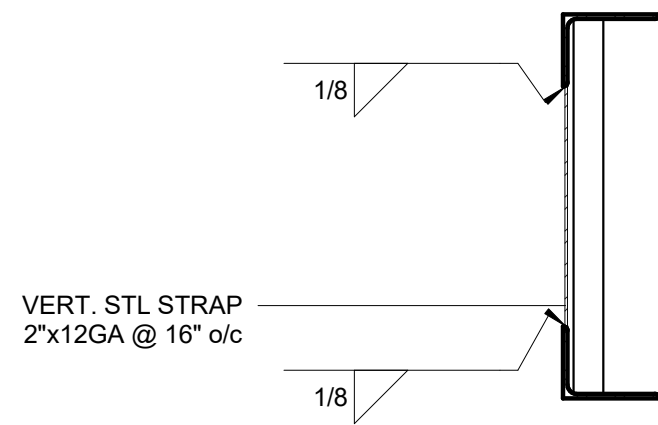
BID SET

SHEET OF

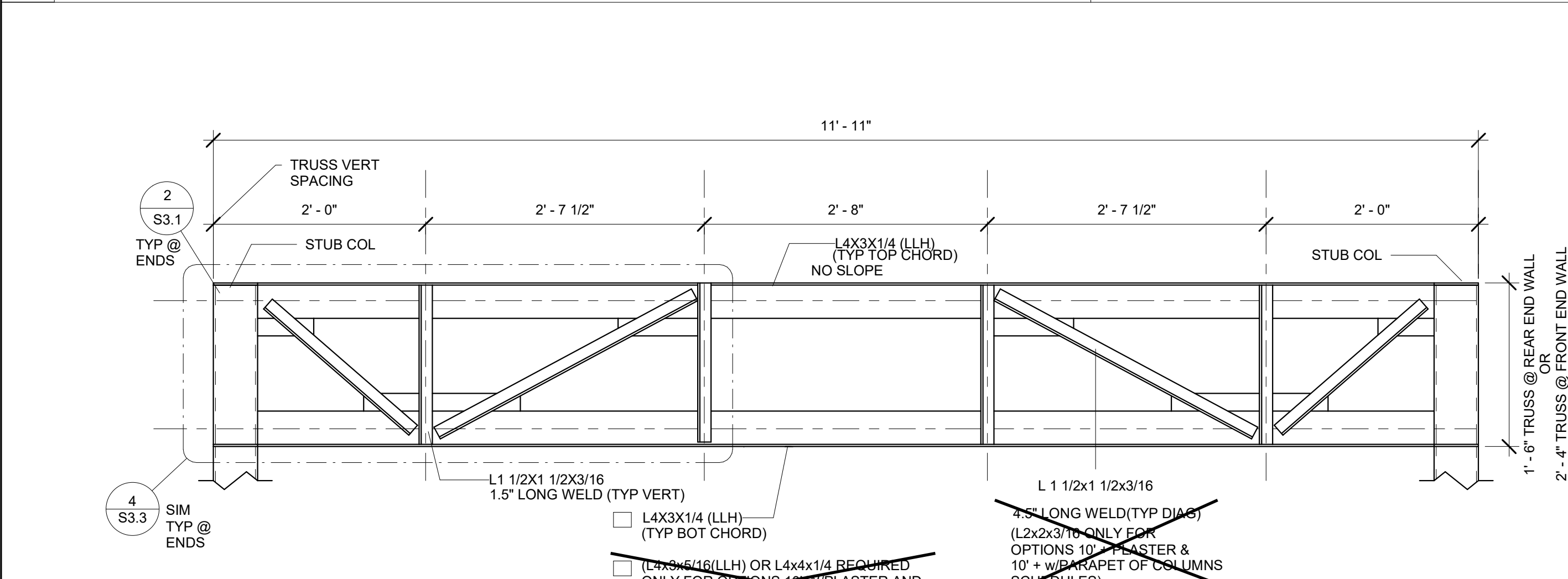
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MA/2022/22088 - Class Leasing, 24x40 to 120x40 High Seismic 2022 PC/REV/22088- 2022.09 updated S3.3 with truss cross-section detail and call outs- source 20093.vrt

TABLE A-SECTION CENTROID	
SECTION	CENTROID C
L4X3 (LLV)	1 1/4"
L4X3 (LLH)	3/4"
L2X2X3/16	9/16"
L1.5X1.5X3/16	7/16"

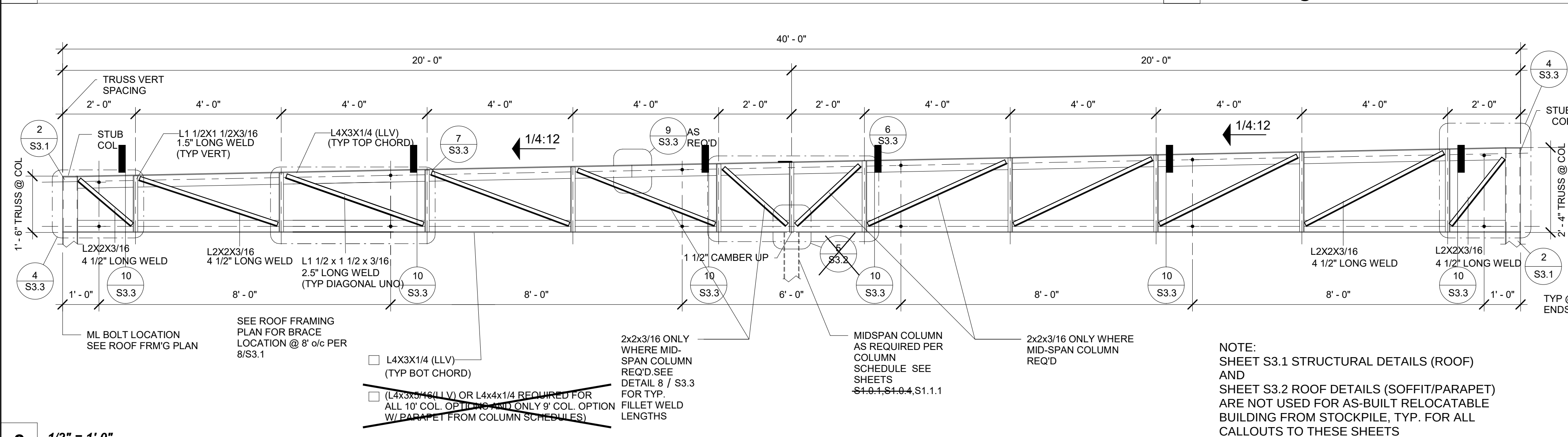
NOTE: SEE DETAIL 8 / S3.3



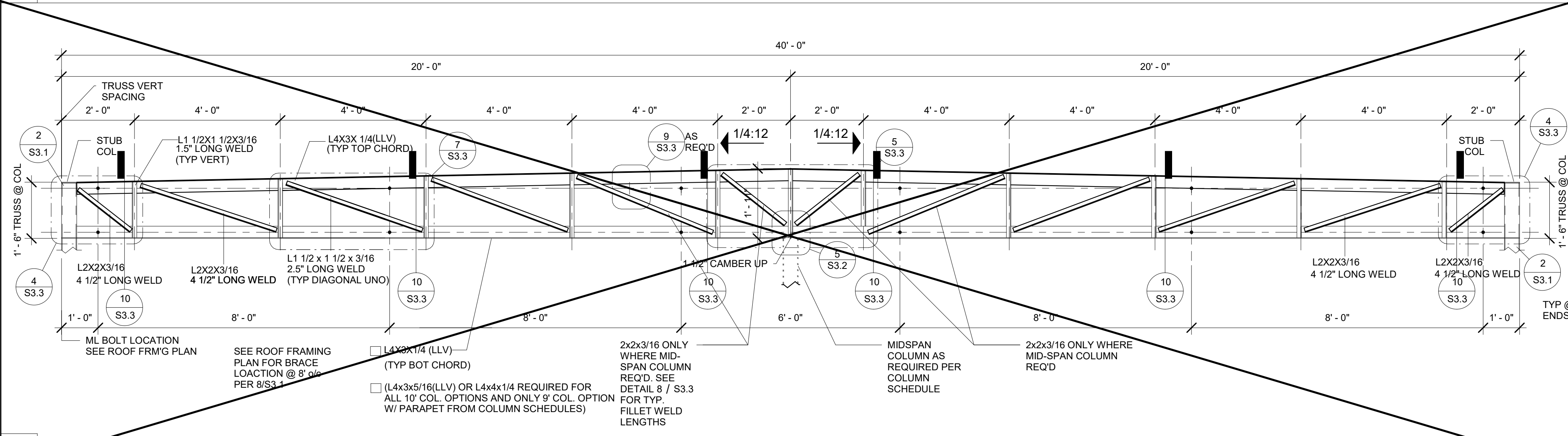
12 1/2" = 1'-0"
TABLE A - SECTION CENTROID



3 1" = 1'-0"
End Wall Truss

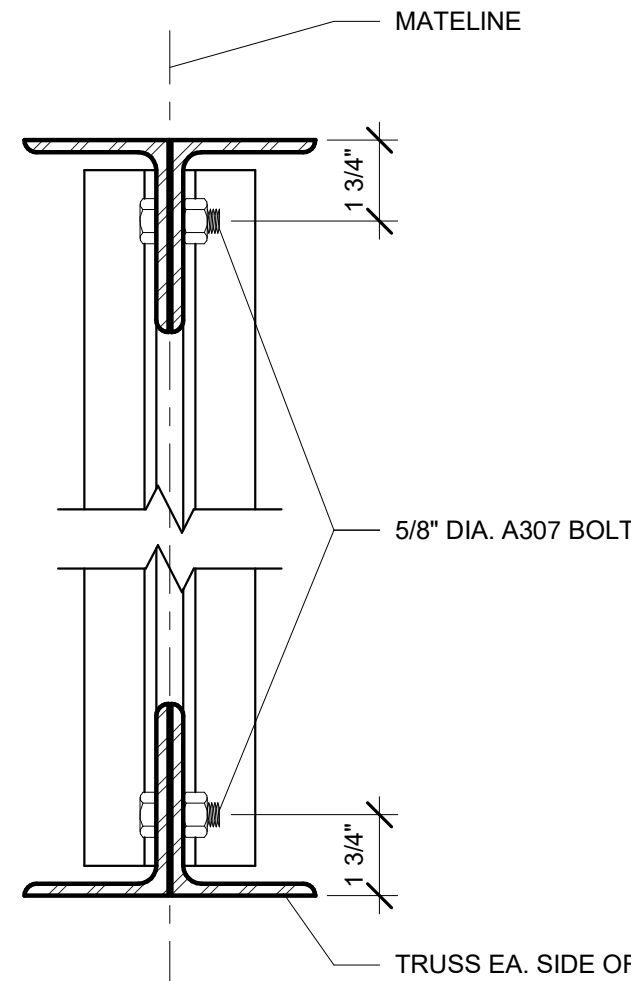


2 1/2" = 1'-0"
Mono Truss

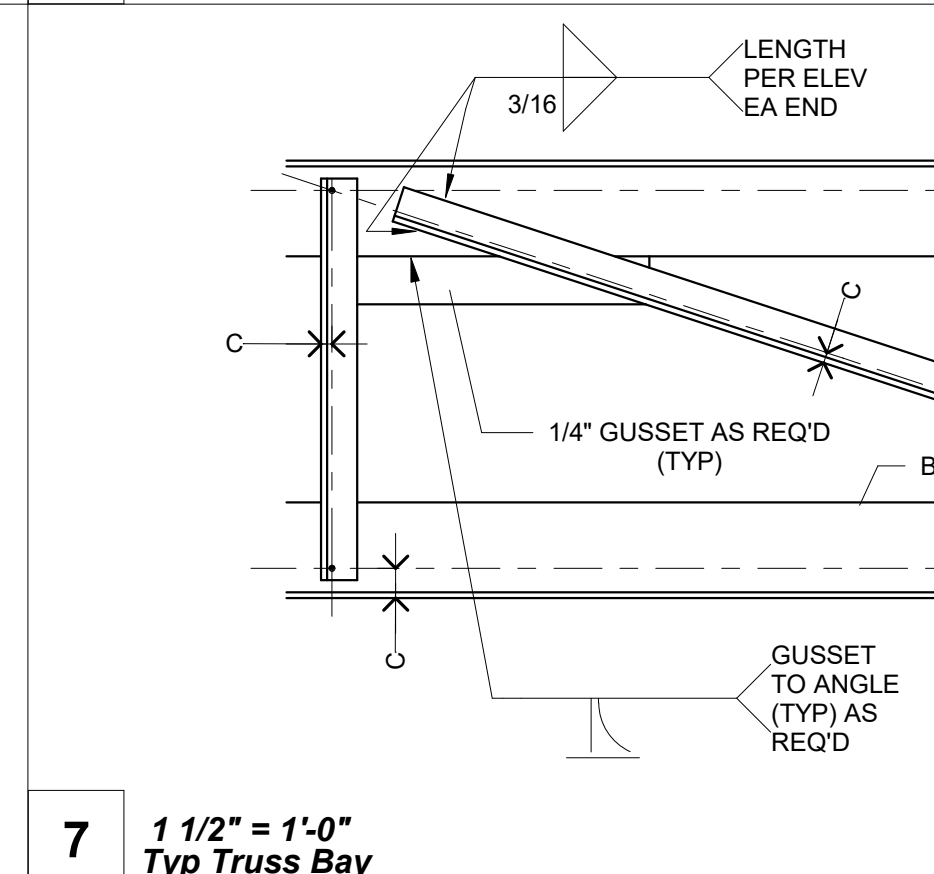


1 1/2" = 1'-0"
Dual Truss

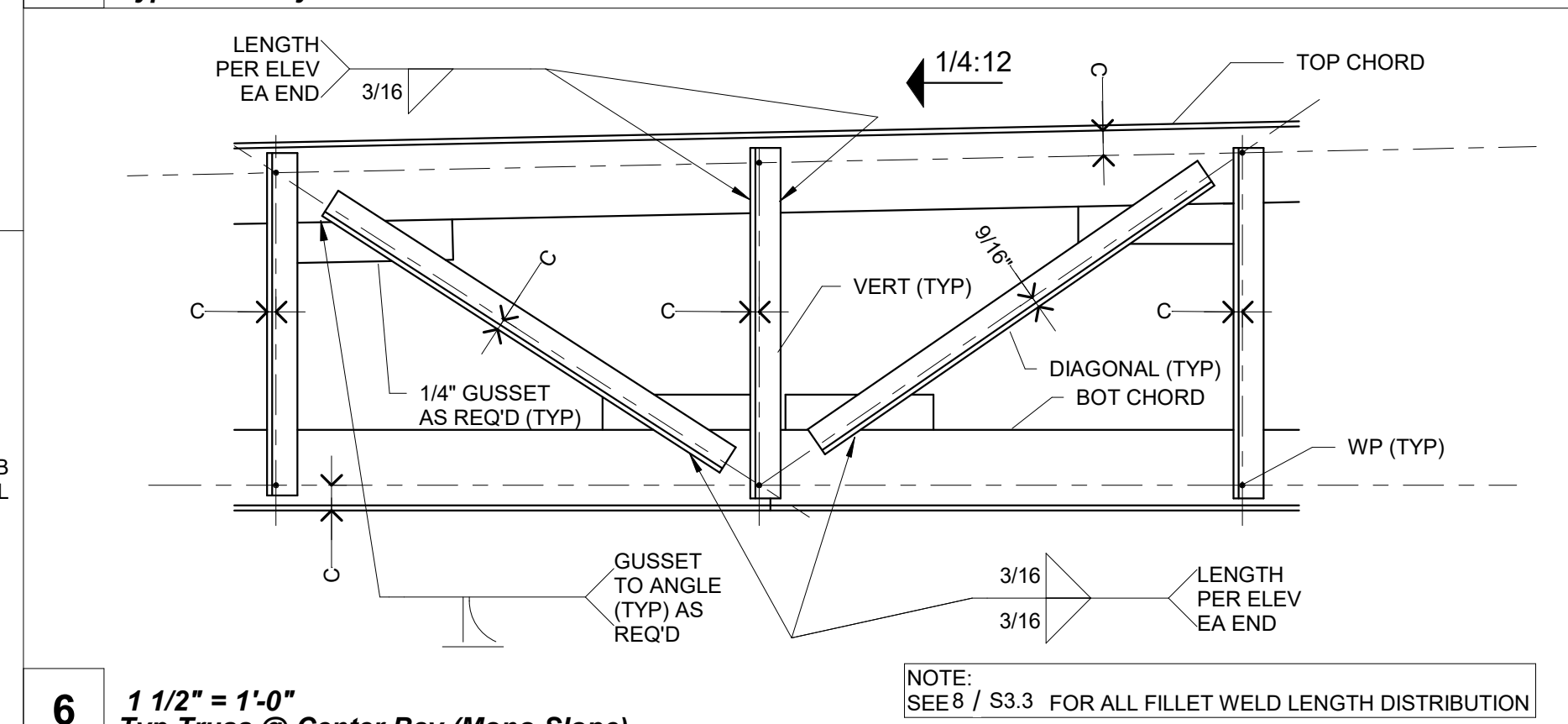
10 3" = 1'-0"
TRUSS CONN. @ MATELINE



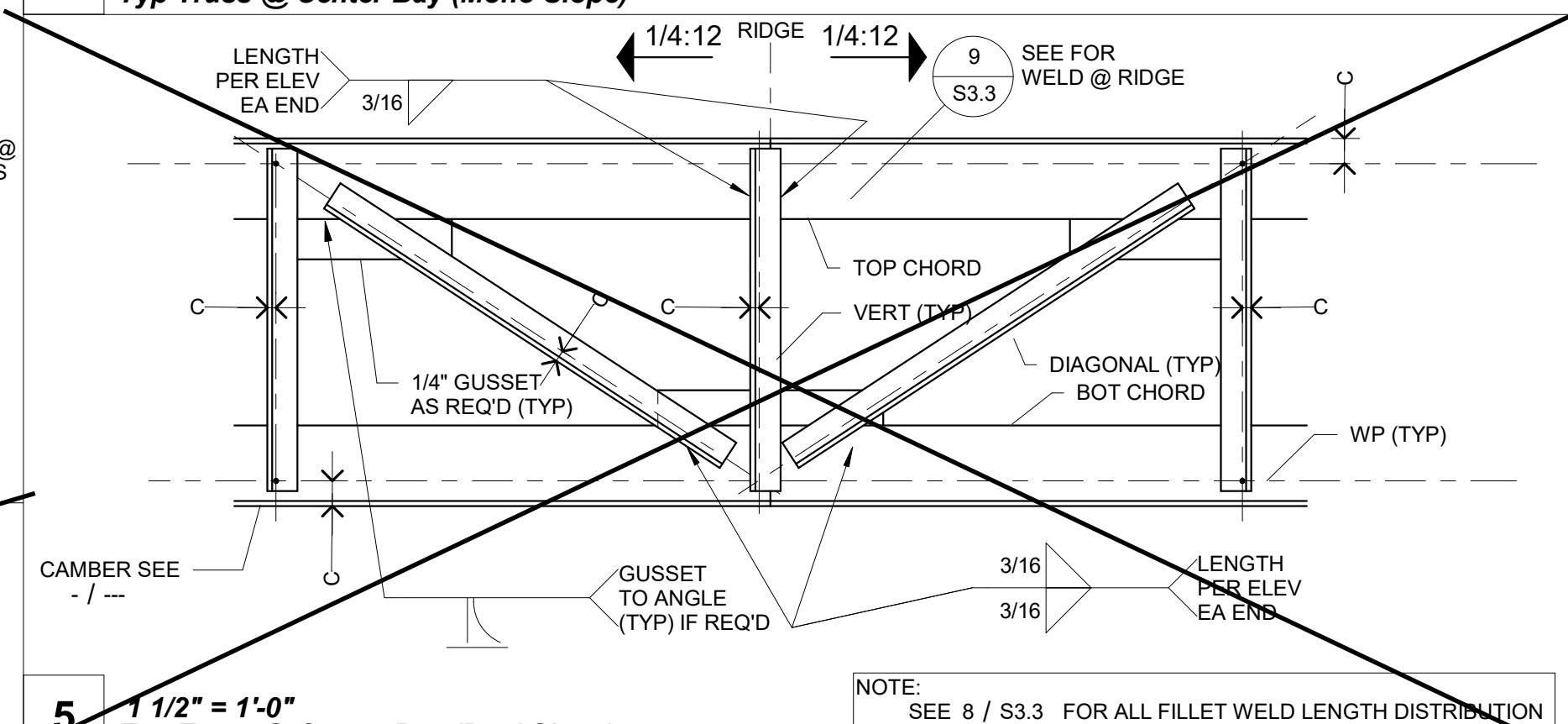
8 3" = 1'-0"
Typ Fillet Weld Lengths



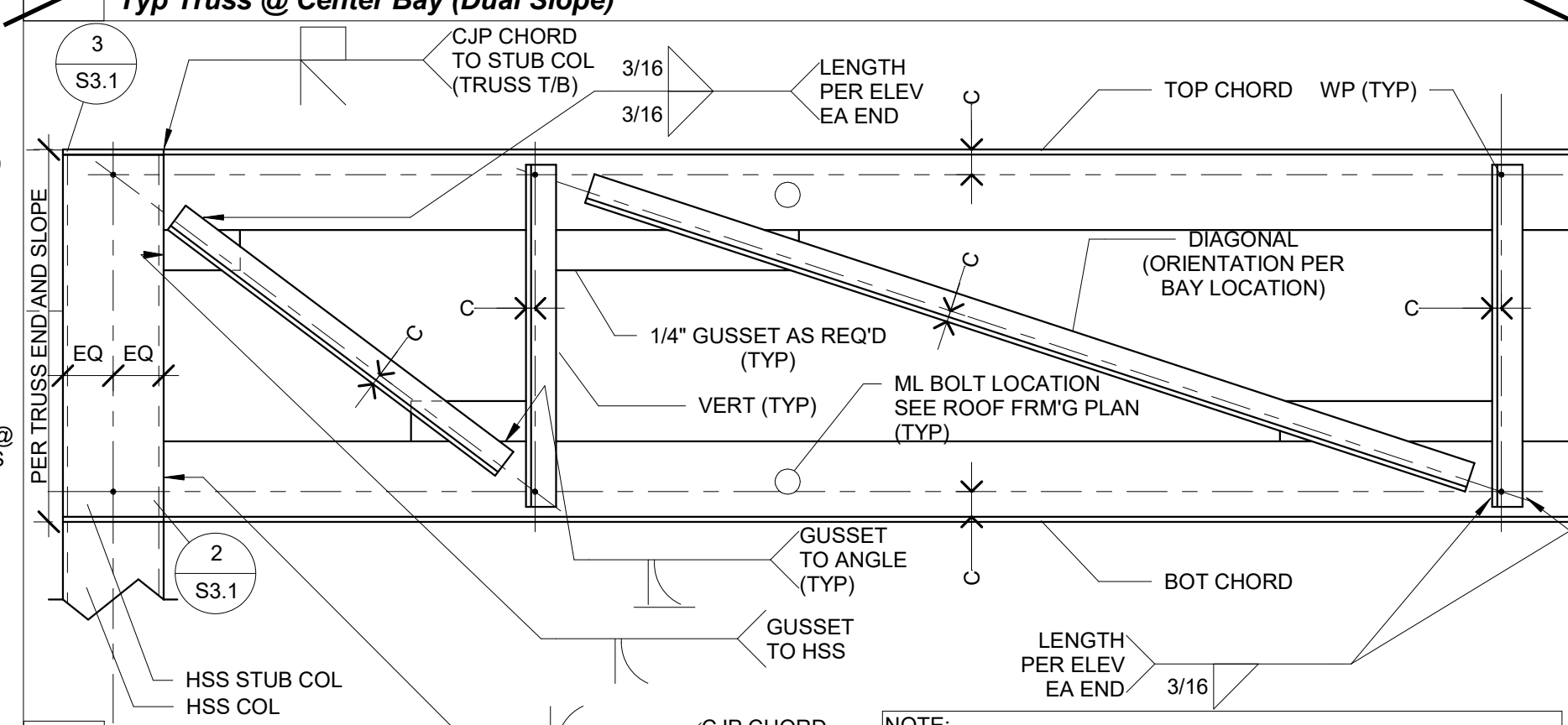
7 1 1/2" = 1'-0"
Typ Truss Bay



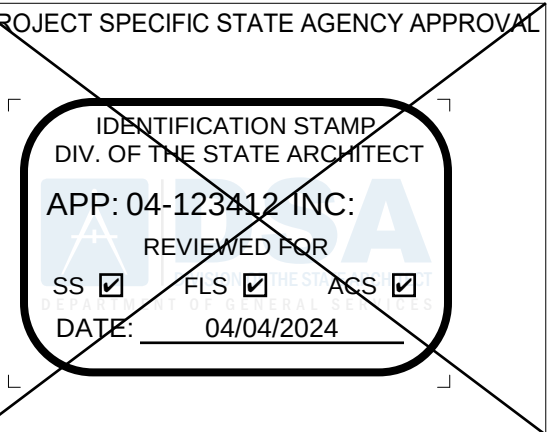
6 1 1/2" = 1'-0"
Typ Truss @ Center Bay (Mono Slope)



5 1 1/2" = 1'-0"
Typ Truss @ Center Bay (Dual Slope)



4 1 1/2" = 1'-0"
Typ End Bay to Stub Conn



PROFESSIONAL STAMP

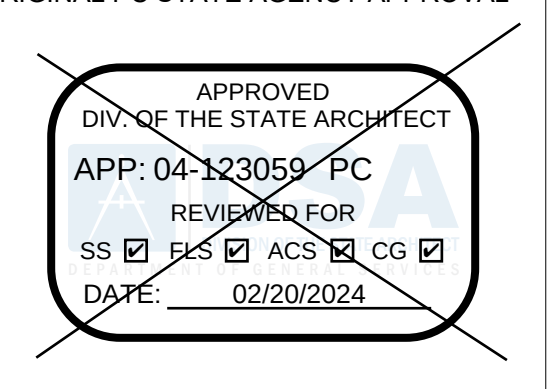


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ORIGINAL PC STATE AGENCY APPROVAL



Revision Schedule

Description Date

PRE-CHECK (PC) DOCUMENT
CODE: 2022 CBC

A separate project application for construction is required

PROJECT TITLE
PC 2022 CBC: 24' x 40'
EXPANDABLE TO
120' x 40'

SHEET TITLE
ROOF PERIMETER
TRUSS

PROJECT NUMBER

22088

DRAWN BY

rMc/SC

CHECKED BY

RH/RT

DATE

SHEET NO.

S3.3
BID SET
SHEET OF