

KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL LODI UNIFIED SCHOOL DISTRICT 4600 ACAMPO RD, ACAMPO, CA 95220

ABBREVIATIONS

& L @ Ø ⊥ # R	And Angle At Centerline Diameter or Round Perpendicular Pound or Number Plate
A.C. A.D. ADJ. AGGR. ALUM./AL. ARCH. ASPH. AUTO. A.V.	Asphalt Concrete Acoustical Area Drain Adjustable Aggregate Aluminum Architectural Asphalt Automatic Auto Visual
B BD. BLDG. BLK. BLKG. BM. BOT. B.S.	Bolt Board Building Block Blocking Beam Bottom Both Sides
CAB. C.B. CB. CEM. CER. C.G.S. C.I. C.J. C.L. CLG. CLKG. CLR. C.M.P. C.M.U. CNTR. COL. CONC. CONN. CONSTR. CONT. CORR.	Cabinet Catch Basin Chalkboard Cement Ceramic Corner Gaurd Cast Iron Construction Joint/Control Joint Ceiling Calking Clear Corrugated Metal Pipe Concrete Masonry Unit Counter Column Concrete Connection Construction Continuous Corridor
d DBL. DET. D.F. D.I. DSA. DIM. DIM.PT. DN. DP. D.P. DR. D.S. DWG.	Pennyweight (Nails) Double Detail Drinking Fountain Drain Inlet Diameter Dimension Dimension Point Down Deep Damp Proofing Door Downspout Drawing
E. (E)EXST. EA. E.J. EL. ELEC. EMER. ENCL. EQ. EQPT. E.W.C. EXP. EXT.	East Existing Each Expansion Joint Elevation Electrical Emergency Enclosure Equip Equipment Electric Water Cooler Expansion Exterior
F.A. F.B. F.D. FDN. F.F.E. F.H.M.B. F.H.M.S. FIN. FL. F.L. FLASH'G F.O.C. F.O.F. F.O.S. F.R.P. F.S. FT. FTG. FURR. FURT.	Fire Alarm Fiberboard Floor Drain Foundation Finish Flat Head Machine Bolt Flat Head Machine Screw Finish Floor Fusible Link Flashing Face of Concrete/Curb Face of Finish Face of Studs Fiberglass Reinforced Plastic Full Size Foot/Feet Footing Furring Future
GA. GALV. G.B. GL. GND. GR. GYP. G.I. G.S.M. GYP. GYP.BD.	Gauge Galvanized Grab Bar Glass/Glazing Ground Grade Gypsum Galvanized Iron Galvanized Sheet Metal Gypsum Gypsum Board
HDR. HDWD. HOR. H.B. HR. HOT.	Header Hardwood Horizontal Hose Bib Hour (Fire Rating) Height
I.D. IN. INFO. INSUL. INT.	Inside Diameter Inch Information Insulation Interior
JAN. JST. JT.	Janitor Joist Joint
K.P. KIT. LAM. LAV. LKR. LT.WT. L.V.	Kickplate Kitchen Laminate Lavatory Locker Light Weight Louver Vent
MAX. M.B. MAT'L. MECH. MEMB. MEZZ. MFR. MH. MIN. MIR. MISC. MTD. MET.	Maximum Machine Bolt Material Mechanical Membrane Mezzanine Manufacturer Manhole Minimum Mirror Miscellaneous Mounted Metal
(N) N. N.I.C. NO./# NOM. N.T.S.	New North Not in Contract Number Nominal Not to Scale
O/ O.A. OBS. O.C. O.D. OFF.	Over Overall Obscure On Center Outside Diameter Office
PRGST. PERF. P.LAM. PLAS. PLYWD. P.M. P.M.F. PR. PRE-FAB PROJ. P.T.D. P.T.D.R. PTN. P.T.R.	Precast Perforated Plastic Laminate Plaster Plywood Pressed Metal Pressed Metal Frame Pair Prefabricated Project Paper Towel Dispenser Paper Towel Dispenser Receptacle Partition Paper Towel Receptacle
R. RAD. R.B. R.D. R.E. REFR. RGTR. REINF. REQ. RET. RM. R.O. RWD. R.W.L. R.H.W.S.	Riser Radius Rubber Base Roof Drain Rim Elevation Refrigerator Register Reinforced Required Return Room Rough Opening Redwood Rain Water Leader Round Head Wood Screw
S. S.D. SECT. SHR. SHT. SHTG. SIM. S.M. S.M.S. S.N.D. S.N.R. SPEC. SQ. S.R.V. S.SK. SST. ST. STD. STL. STOR. STR.L. SUSP. SYM. SHT.VN.L.	South Soap Dispenser Section Shower Sheet Sheeting Similar Sheet Metal Sheet Metal Screw Sanitary Napkin Dispenser Sanitary Napkin Receptacle Specification Square Semi Rigid Vinyl Service Sink Stainless Steel Street Standard Steel Storage Structural Suspended Symmetrical Sheet Vinyl
T. TB. T.B. T.A.G. TEL. THK. THRES. THRU. T.O.C. T.O.P. T.O.W. T.P.D. TYP.	Toilet Taskboard Towel Bar Tongue & Groove Telephone Thick Threshold Through Top of Curb Top of Pavement Top of Wall Toilet Paper Dispenser Typical
U.O.N. UR.	Unless Otherwise Noted Urinal
V.C.T. VERT. V.F.	Vinyl Composition Tile Vertical Vinyl Fabric
W. W. W.C. WD. W.H. WID. WSC. W.W.M. WDW. WT. YD.	West With Water Closet Wood Water Heater Without Wainscot Welded Wire Mesh Window Weight Yard

SYMBOL LEGEND

SHEET NUMBERING SYSTEM 	STRUCTURAL GRID INDICATOR (Center of Framing)
ROOM NAME AND NUMBER REFERENCE 	STRUCTURAL GRID INDICATOR (Face of Framing)
KEYNOTE REFERENCE 	MATCH LINE
SHEET NOTE REFERENCE 	CENTERLINE
DETAIL REFERENCE 	PROPERTY LINE
BUILDING SECTION REFERENCE 	WORK POINT, CONTROL POINT OR DATUM
STOREFRONT, WINDOW OR LOUVER REFERENCE 	WINDOW (PLAN VIEW)
DOOR REFERENCE 	REVISION
CEILING TYPE REFERENCE 	RADIUS
WALL TYPE REFERENCE 	CASEWORK REFERENCE
EXTERIOR FINISH REFERENCE 	METAL SHELVING REFERENCE
	LABORATORY CASEWORK REFERENCE
	MUSIC CASEWORK REFERENCE
	ACOUSTICAL PANEL REFERENCE
	SIGN REFERENCE

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DRAWING SET CONTAINS 71 SHEETS

CONTRACTOR SHALL KEEP A COPY OF TITLE 24, PARTS 1-5 ON THE SITE AT ALL TIMES.
TITLE 24, PART 1, SECTION 4.317(c):

"THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS A CONSTRUCTION CHANGE DOCUMENT, OR SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH REPAIR WORK."

NOTES:

- ALL NEW WORK SHALL CONFORM TO THE 2016 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS.
- CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR FIRE AND LIFE-SAFETY PORTIONS OF THE APPROVED PLANS AND SPECIFICATIONS AFTER THE WORK HAS BEEN APPROVED SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT AS REQUIRED IN SECTION 4-338, PART 1, CAC, AND SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK. ALL CONSTRUCTION CHANGE DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO DSA IN COMPLIANCE WITH DSA INTERPRETATION OF REGULATIONS IA A-6. CONSTRUCTION CHANGE DOCUMENTS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24, AND NO WORK SHALL COMMENCE UNTIL APPROVED BY DSA.
- A DSA "CERTIFIED PROJECT 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 4-343, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)
- A DSA CERTIFIED INSPECTOR WITH CLASS 3 IS REQUIRED FOR THIS PROJECT (IR A-7)
- AN LEA TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- GRADING PLANS, DRAINAGE IMPROVEMENT, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- ADDENDA SHALL BE APPROVED BY DSA.
- PROJECT DEMOLITION AND CONSTRUCTION SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33.

PROJECT TEAM

OWNER

LODI UNIFIED SCHOOL DISTRICT
1305 E. VINE STREET
LODI, CA 95240
CONTACT: JOE PATTY
PHONE: (209) 712-6363
EMAIL: jpatty@lodiusd.net

ARCHITECTURAL

HENRY + ASSOCIATES ARCHITECTS
730 HOWE AVE, SUITE 450
SACRAMENTO, CA 95825
CONTACT: STEPHEN HENRY
PHONE: (916) 921-2112
EMAIL: stephen@henry-architects.com

ELECTRICAL

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100 HOWE AVENUE, SUITE 235N
SACRAMENTO, CA 95825
CONTACT: SINISHA GLISIC
PHONE: (916) 923-4400
EMAIL: SGlisic@mneilsengineering.com

FOOD SERVICE

AMD FOOD SERVICE DESIGN
P.O. BOX 163
GARDEN VALLEY, CA 95633
CONTACT: ART DAVIS
PHONE: (530) 333-4606
EMAIL: art@amdfoodservicedesign.com

MECHANICAL

CAPITAL ENGINEERING CONSULTANTS INC
11020 SUN CENTER DRIVE, SUITE 100
RANCHO CORDOVA, CA 95670
CONTACT: MICHAEL MINGE
PHONE: (916) 851-3500
EMAIL: mminge@capital-engineering.com

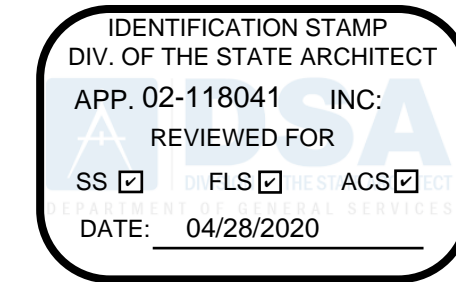
STRUCTURAL

BARRISH PELHAM, a DEGENKOLB Company
428 J STREET, SUITE 500
SACRAMENTO, CA 95814
CONTACT: GREG RICHARDS
PHONE: (916) 418-9100
EMAIL: GRichards@degenkolb.com

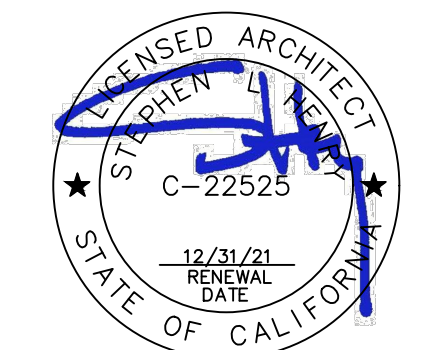
PROJECT DESCRIPTION

BUILDING A

- Modernization and renovate existing kitchen
- modernization staff restroom



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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

COVER SHEET

CONSULTANT

MATERIAL LEGEND

	EARTH		WOOD TRIM
	GRAVEL/AGGREGATE BASE		STEEL
	SAND OR PLASTER		TILE
	CONCRETE		BATT INSULATION
	BLOCKING		BRICK
	FRAMING (CONTINUOUS)		GYPSUM BOARD
	PLYWOOD		FIRTEX

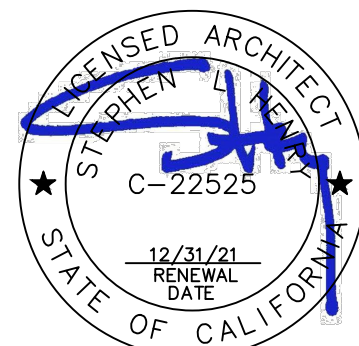
APPLICABLE CODES

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24 CCR, PART 1 - 2016 BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR, PART 2 - 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC)
(based on 2015 IBC as amended by CA)
TITLE 24 CCR, PART 3 - 2016 CALIFORNIA ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA)
TITLE 24 CCR, PART 4 - 2016 CALIFORNIA MECHANICAL CODE (CMC) (2015 IAPMO UMC, AS AMENDED BY CA)
TITLE 24 CCR, PART 5 - 2016 CALIFORNIA PLUMBING CODE (CPC) (2015 IAPMO UPC, AS AMENDED BY CA)
TITLE 24 CCR, PART 6 - 2016 CALIFORNIA ENERGY CODE
TITLE 24 CCR, PART 9 - 2016 CALIFORNIA FIRE CODE (CFC) (2015 IFC, AS AMENDED BY CA)
TITLE 24 CCR, PART 11 - 2016 CALIFORNIA GREEN BUILDING STDS CODE
TITLE 24 CCR, PART 12 - CALIFORNIA REFERENCED STANDARDS
(partial list - see CBC Ch. 35 and CFC Ch. 80)
2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)
2013 NFPA 17, DRY CHEMICAL EXTINGUISHING SYSTEMS
2013 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2016 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2013 NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION
2016 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS
2016 NFPA 72, NATIONAL FIRE ALARM CODE (CA AMENDED); See UL Std 1971 for "Visual Devices"
2016 NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVE
2015 NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
2005 UL 300, GLASS HOOD FIRE SUPPRESSION SYSTEMS
2003 UL 464, AUDIBLE SIGNAL APPLIANCES
1999 UL 521, HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
2012 ICC 300, BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS (ICC300-2012)

CS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC.
REVIEWED FOR
SS ☐ FLS ☐ ACS ☐
DATE: 04/28/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



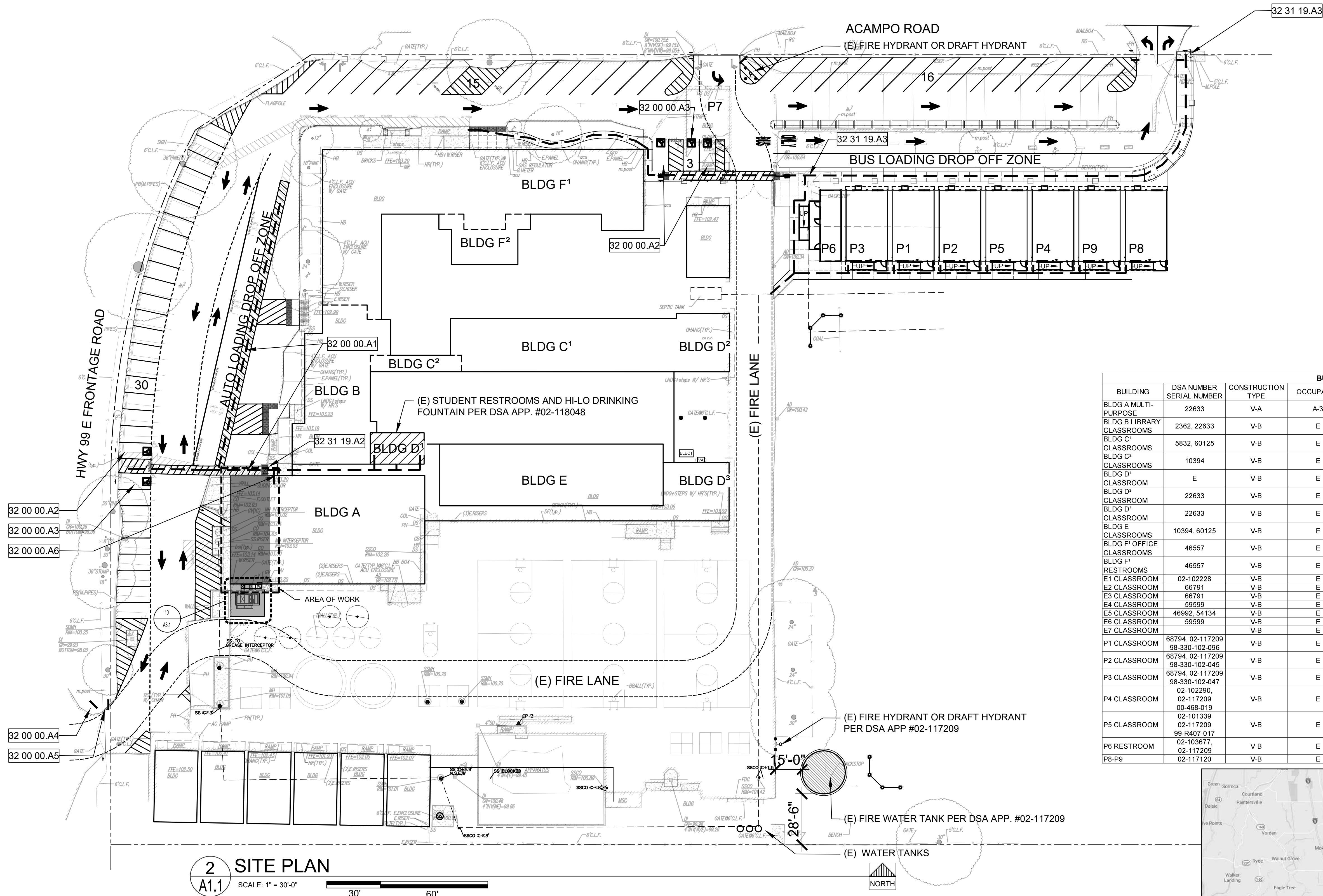
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

VICINITY MAP
BUILDING DATA
SITE PLAN

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

A1.1



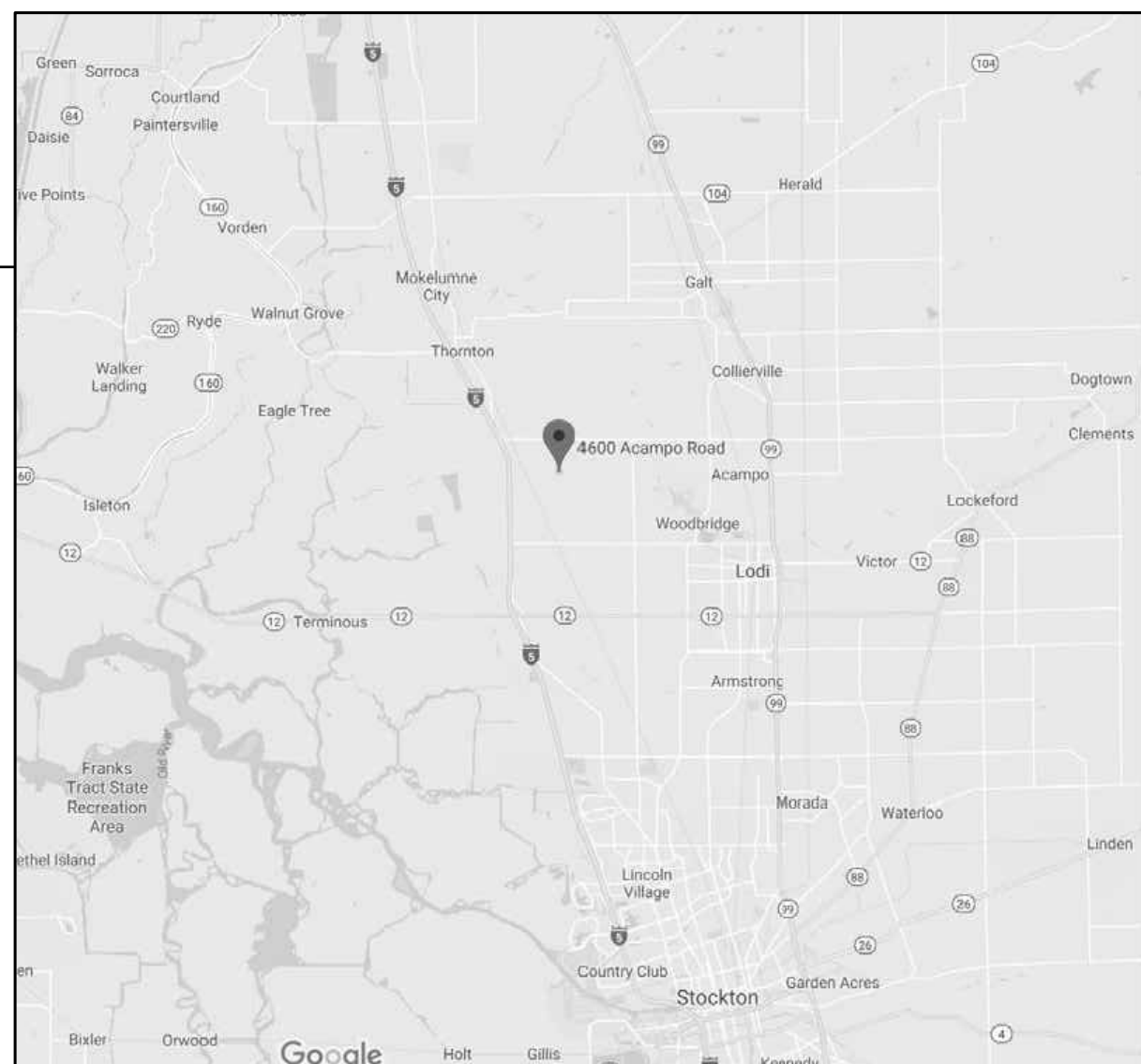
2 SITE PLAN
A1.1 SCALE: 1" = 30'-0"
KEYNOTES

- 32 00 00 EXTERIOR IMPROVEMENTS
32 00 00.A1 Existing accessible path of travel shown dashed. There are no ramps existing or required along the designated P.O.T.
32 00 00.A2 Existing accessible parking stall per 02-117209
32 00 00.A3 Existing accessible van parking stall per 02-117209
32 00 00.A4 Existing tow away sign per 02-117209
32 00 00.A5 Existing stop sign per 02-117209
32 00 00.A6 Existing end of accessible path of travel this project
- 32 31 19 ORNAMENTAL METAL FENCE
32 31 19.A2 Existing ornamental metal gate and fence - see 11/A8.1

EXISTING P.O.T AFFIDAVIT

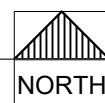
- Path of travel (P.O.T.) as indicated is a barrier free access without any abrupt vertical changes exceeding 1/2" at 1:2 Maximum slope, except that level changes do not exceed 1/4" vertical (11B-303 & 11B-403.4).
- P.O.T. is a minimum of 48" wide (11B-403.5.1Ex3), slip resistant surface with 5% max. slope in direction of travel and 1:48 max. cross slope (11B-403.3).
- Passing spaces (11B-403.5.3) of 60"x60" min. are located not more than 200' apart.
- Walks with continuous gradients have level areas 60" in length (11B-403.7) and spaced not more than 400' apart.
- P.O.T. is free of overhanging obstructions to 80" min above walking surface (11B-307.4) and protruding objects (11B-307) greater than 4" projection from wall above 27".
- There are no changes in elevation over 4" at the edge of walk or landing unless identified by a guardrail, a handrail, or a warning curb of at least 6" in height above the walk (11B-303.5).
- There are no gratings that occur along the P.O.T. If gratings are installed along the P.O.T. then they require to have 1/2" max. grid openings in the direction of the P.O.T. (11B-302.3).
- All gates along the P.O.T. comply with 11B-404 and shall have 24" min. strike side clearance on the pull side, 10" tall smooth surface at the gate bottom and be equipped with lever hardware.

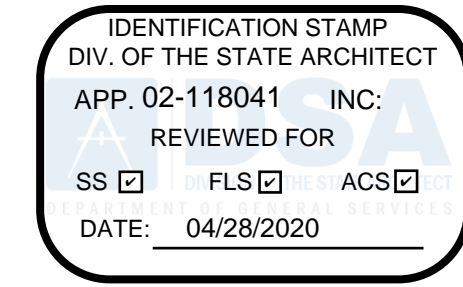
BUILDING DATA							
BUILDING	DSA NUMBER	CONSTRUCTION	OCCUPANCY	SQUARE	FIRE	CERTIFIED	RELO MFR
PURPOSE	SERIAL NUMBER	TYPE		FOOTAGE	SPRINKLERED		
BLDG A MULTI-PURPOSE	22633	V-A	A-3	6360	No	Y	
BLDG B LIBRARY	2362, 22633	V-B	E	3600	No	Y	
CLASSROOMS							
BLDG C' CLASSROOMS	5832, 60125	V-B	E	3864	No	Y	
BLDG C' CLASSROOMS	10394	V-B	E	469	No	Y	
BLDG D' CLASSROOM	E	V-B	E	522	No	Y	
BLDG D' CLASSROOM	22633	V-B	E	960	No	Y	
BLDG D' CLASSROOM	22633	V-B	E	960	No	Y	
BLDG E CLASSROOMS	10394, 60125	V-B	E	6020	No	Y	
BLDG F' OFFICE CLASSROOMS	46557	V-B	E	8533	No	Y	
BLDG F' RESTROOMS	46557	V-B	E	964	No	Y	
E1 CLASSROOM	02-102228	V-B	E	960	No	Y	
E2 CLASSROOM	66791	V-B	E	960	No	Y	
E3 CLASSROOM	66791	V-B	E	960	No	Y	
E4 CLASSROOM	66791	V-B	E	960	No	Y	
E5 CLASSROOM	46992, 54134	V-B	E	960	No	Y	
E6 CLASSROOM	59599	V-B	E	960	No	Y	
E7 CLASSROOM	59599	V-B	E	960	No	Y	
P1 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P2 CLASSROOM	98-330-102-096	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P3 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P4 CLASSROOM	98-330-102-045	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P5 CLASSROOM	68794, 02-117209	V-B	E	960	No	Y	PACESETTER INDUSTRIES
P6 RESTROOM	02-102290, 02-117209	V-B	E	960	No	Y	American Modular PC 02-101837
P8-P9	00-468-019	V-B	E	960	No	Y	American Modular PC 02-101837
	02-101339	V-B	E	960	No	Y	American Modular PC 02-101837
	02-117209	V-B	E	960	No	Y	American Modular PC 02-101741
	99-R407-017	V-B	E	960	No	Y	American Modular PC 02-101741
	02-103677, 02-117209	V-B	E	960	No	Y	American Modular PC 02-101741
	02-117210	V-B	E	960 x 2 = 1920	No	Y	American Modular PC 02-101741



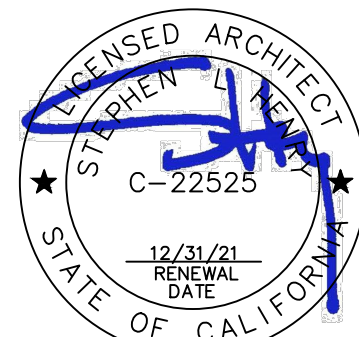
HOUSTON MIDDLE SCHOOL
4600 ACAMPO ROAD, ACAMPO, CA 95220

1 VICINITY MAP
A1.1 NO SCALE





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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

ENLARGED FLOOR PLAN
REFLECTED CEILING PLAN

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

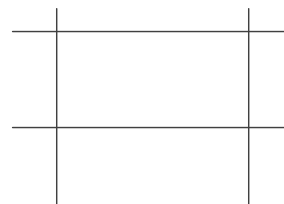
A2.2

KEYNOTES

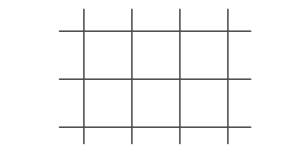
(NOT ALL KEYNOTES ARE USED ON SHEET)

0300	CONCRETE	03	room identification sign per dtt. 2/A0.1
0300.A1	concrete slab on grade - replace where removed	.04	ADA Tactile exit sign per dtt. 3/A0.1
0300.A2	concrete footing	.06	self-illuminating exit
0300.A4	expansion joint	.07	assistive listening system per detail
0300.A5	splash block	7/A0.1	
0300.A6	Concrete curb	.08	Monument sign
0400	MASONRY	.09	Building sign
0400.A1	concrete masonry wall	.10	Dedication plaque
0500	METALS	2100.A5	toilet partition
0500.A2	corrugated structural metal roof deck	2100.A6	urinal partition
0500.A3	metal pipe bollard concrete fill		toilet accessories:
0500.A4	metal pipe bollard removable	.01	paper towel dispenser
0500.A5	metal pipe hand rail - 1.5" diameter	.02	toilet paper dispenser
0500.A6	metal roof access ladder with security door	.03	sanitary napkin dispenser
0500.A7	metal louver	.04	soap dispenser
0500.B1	rolled channel (structural support grid)	.05	mirror
0500.B2	metal furring channel	.09	trash receptacle
0600	WOOD, PLASTICS AND COMPOSITES	.10	grab bar
0600.A1	wood framing - see structural	.11	toilet seat cover, toilet tissue dispenser
0600.A2	frame opening for new door, window, or HVAC	.12	toilet seat cover, sanitary napkin disposal, & toilet tissue dispenser
0600.A3	in-fill frame door/window/duct opening	.13	sanitary napkin disposal
0600.A4	in-fill frame roof opening where equipment was removed	.14	paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.B2	folding panel partition
0600.A6	wood joist	2100.B3	fire extinguisher
0600.A7	wood trusses	.01	Provide UL Rated Class K 2A:K per spec.
0600.A8	2 x 4 furred wall	.02	Provide UL Rated Class K 10B:C per spec.
0600.A9	blocking	2100.B2	metal shelving
0600.B1	exterior wood wall sheathing	2100.B3	metal lockers
0600.B2	exterior wood roof sheathing	2100.B4	knox box
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110	EQUIPMENT
0600.C1	wood trim	2110.A1	projection screen
0600.C2	wood hand rail	2110.A2	refrigerator
0700	THERMAL AND MOISTURE PROTECTION	2110.A3	microwave (owner furnished, contractor installed)
0700.A1	insulation	2110.A4	Type I kitchen Exhaust hood - w/ Fire System Remote Pull Station - see FS Sheets
.01	R-13 batt/blanket (3.5" thick)	2100.A5	Food Service Equipment shown w/ light line - sheet FS Sheets.
.02	R-21 batt/blanket (6.5" thick)	2120	FURNISHINGS
.03	R-30 batt/blanket (10" thick)	2120.A1	window coverings & track
.04	R-38 batt/blanket (12" thick)	2120.A2	plastic laminate casework
.05	board insulation (2" thick)	.01	ada accessible sink base cabinet
.06	board insulation tapered cricket	.02	plastic laminate countertop with 4" backsplash casework
0700.B1	Standing seam roofing system	2120.A3	
0700.B2	single ply membrane roofing system	2200	PLUMBING
.01	extend roofing up and over parapet wall	2200.A1	plumbing equipment
.02	walk pad	.01	sink
.03	Parapet Wall Flashing	.02	lavatory
0700.B3	built up roofing	.03	toilet
0700.B4	modified bitumen roofing	.04	urinal
0700.B5	composition shingle roofing	.05	drinking fountain
0700.C1	galvanized sheet metal	.06	mop sink
.01	two piece Fry Springlok flashing system	.07	water heater
.02	parapet cap flashing	.08	Roof drain/Overflow Combo Unit
.03	valley flashing	.09	Floor drain - slope floor to drain 2% max. slope
.04	duct penetration	2300	HVAC
0700.D1	sealant	2300.A1	mechanical equipment - see mechanical drawings
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	2300.A2	ceiling register
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	2300.A3	mechanical duct
0800	OPENINGS	2300.A4	Condensate Line
0800.A1	door and frame	2300.A5	kitchen exhaust fan
0800.A3	door frame	2600	ELECTRICAL
0800.A4	roll up door	2600.A1	electrical equipment
0800.A5	window	2600.A2	light fixture
0800.A6	storefront window system	3200	SITEWORK
0800.A7	access door	3200.A1	gas meter assembly
0800.A8	extruded alum. corner	3200.A2	water meter box
0800.A9	Roof hatch	3200.A3	backflow assembly
0900	FINISHES	3200.A4	fire hydrant
0900.A1	vinyl composition tile flooring and base	3200.A5	trench drain
0900.A2	resilient sheet flooring and base	3200.A6	area drain
0900.A3	carpet and base	3200.A7	drain inlet
0900.A4	base	3200.B1	decomposed granite
0900.A5	ceramic tile	3200.B2	aggregate base rock
0900.B1	gypsum board	3200.B3	concrete paving
0900.B2	wainscot	3200.B4	asphalt paving
0900.B3	vinyl wall covering	3200.B5	concrete curb
0900.B4	vinyl wall covering wrapped tackboard panels	3200.B6	concrete mow strip
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.B7	trash enclosure
0900.B6	SS wall panels per food service	3200.C1	line paint striping
0900.C1	suspended acoustical ceiling system	3200.C2	fire lane striping
0900.C2	glued or stapled on acoustical tile	3200.C3	game line striping
0900.D1	cement plaster wall finish	3200.D1	ada accessible car parking stall
.01	Expansion Screed	3200.D2	ada accessible van parking stall
.02	4" soffit vent screed	3200.D3	ada accessible ramp per civil
0900.D2	exterior panel wall system	3200.D4	truncated domes
0900.D3	Metal Siding/Soffits	3200.D5	ada accessible path of travel
2100	SPECIALTIES	3200.D6	ada accessible restrooms (men's and women's)
2100.A1	display case	3200.D7	ada accessible restrooms (girl's and boy's)
2100.A2	marker board	3200.D8	ada accessible drinking fountain
2100.A3	TV/monitor bracket	3200.E1	chain link fence
2100.A4	signs:	.01	single 3'-0" wide swing gate
.01	parking lot entrance sign "towaway" per Civil	.02	pair 6'-0" wide swing gate
.02	ADA accessible parking stall sign per Civil	.03	single 3'-0" wide swing gate
		.04	pair 6'-0" wide swing gate
		3200.E3	ornamental metal fence
		3200.F1	reconfigure (e) irrigation and sprinklers
		3200.F2	sod turf landscaping planting area - patch & repair
		3200.F3	remove (e) trees
		3200.F4	remove (e) ada parking symbol

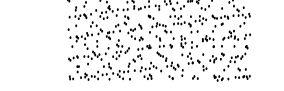
REFLECTED CEILING PLAN LEGEND



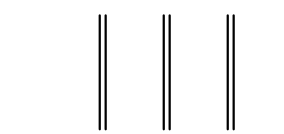
SUSPENDED ACOUSTICAL PANEL CEILING
(SEE DETAILS ON SHEETS A8.3 THROUGH A8.8)



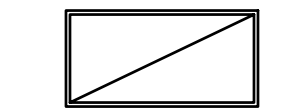
APPLIED ACOUSTICAL TILE GLUED ON GYPSUM
WALLBOARD, ATTACHED TO 2X4 @ 24" O.C. STRIPPING
@ UNDERSIDE OF ROOF FRAMING



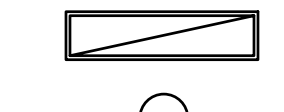
LATH and PLASTER, GYPSUM WALLBOARD OR SPRAY
ON ACOUSTICAL TREATMENT (SEE PLAN)



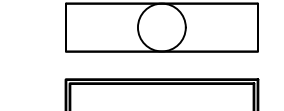
EXPOSED ROOF JOISTS AND INSULATION PAINT



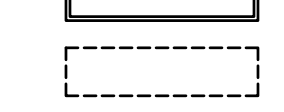
RECESSED LIGHT FIXTURE



RECESSED LIGHT FIXTURE



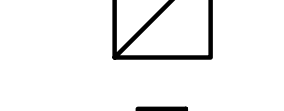
RECESSED LIGHT FIXTURE



SURFACE MOUNTED LIGHT FIXTURE



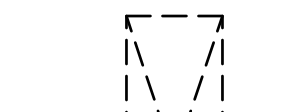
SURFACE MOUNTED LIGHT FIXTURE



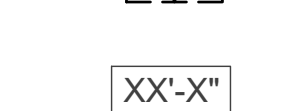
SUSPENDED LIGHT FIXTURE



SUPPLY AIR REGISTER



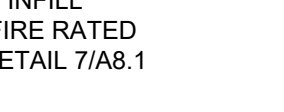
RETURN AIR REGISTER



EXHAUST AIR REGISTER



CEILING OR WALL MOUNTED EXIT SIGN. SEE
ELECTRICAL DRAWINGS & SPECIFICATIONS



ACCESS DOOR - NOT ALL ACCESS DOORS MAY BE
SHOWN ON ARCHITECTURAL DRAWINGS, COORDINATE
LOCATIONS WITH MECHANICAL AND ELECTRICAL
REQUIREMENTS - SEE DETAIL 11/A8.3.1 FOR
ATTACHMENT

LEGEND



SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE
AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X6 WOOD
STUDS @ 16" O.C. INTERIOR HATCH INDICATES FULL DEPTH AND FULL
HEIGHT INSULATION AT INTERIOR WALLS AND THERMAL BATT INSULATION
AT EXTERIOR WALLS



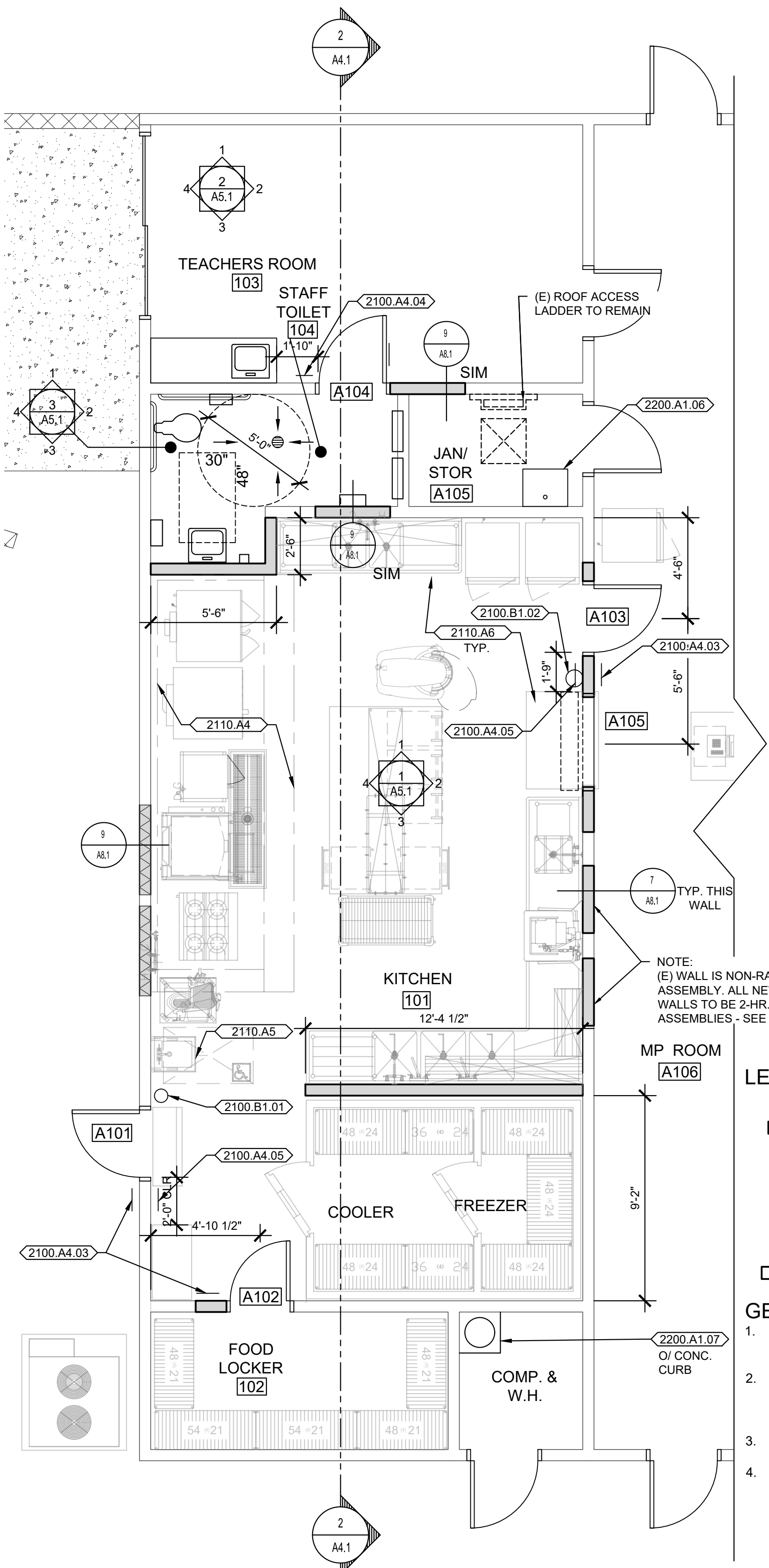
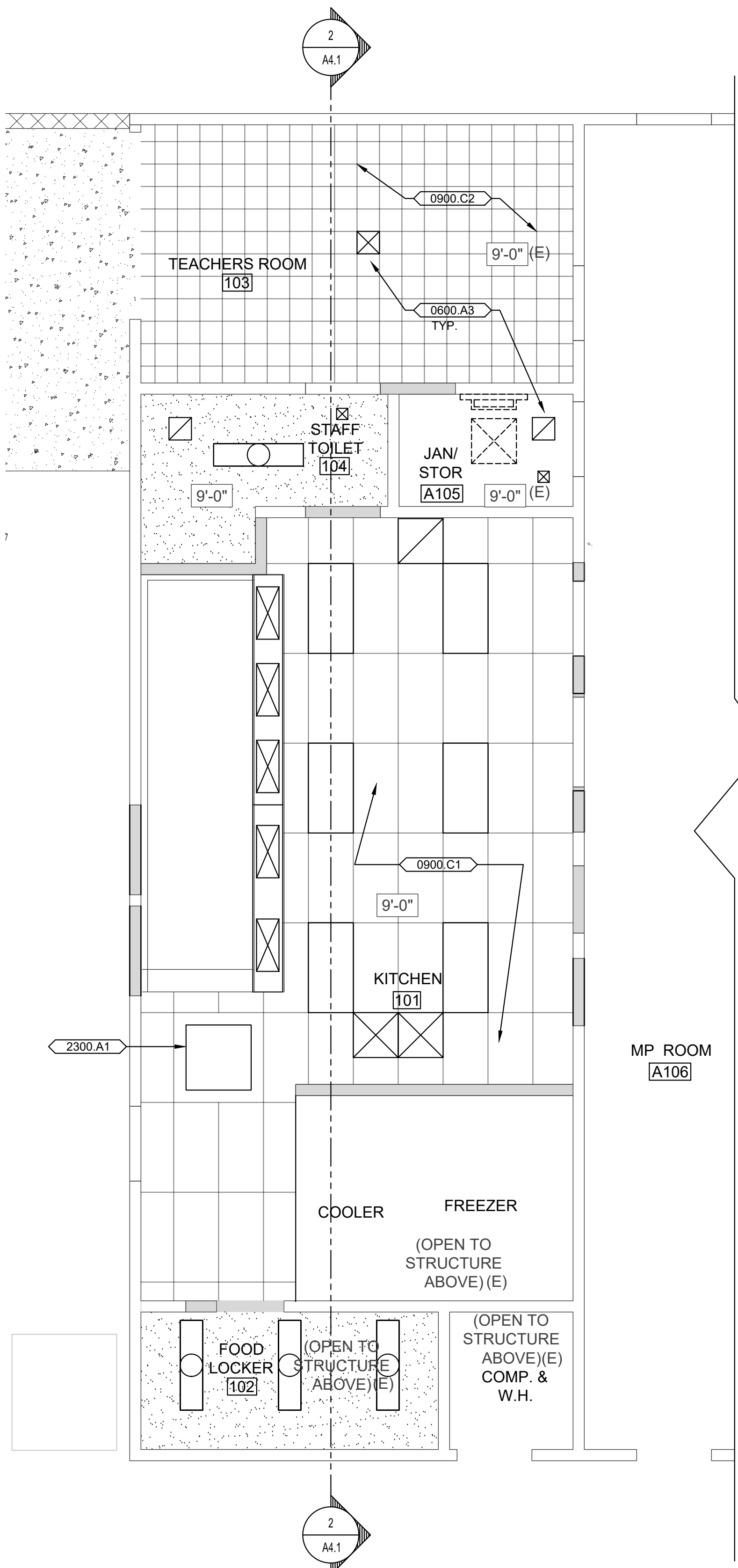
CONSECUTIVE NUMBERING
CONVENTION FOR
INTERIOR ROOM ELEVATIONS



WINDOW (PLAN VIEW)

GENERAL NOTES

- ALL EXTERIOR WALLS, JANITOR ROOM, KITCHEN, AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE STRUCTURAL FOUNDATION PLAN.
- FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL.
- CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
- SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.



(SEE SHEET A0.1 FOR DISABLED ACCESSIBLE FIXTURES AND ACCESSORIES MOUNTING HEIGHTS, LOCATIONS AND REQUIREMENTS)

2 REFLECTED CEILING PLAN

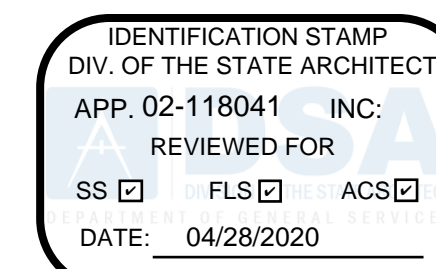
SCALE: 1/4" = 1'-0"



1 ENLARGED FLOOR PLAN

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





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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

ROOF PLAN
ROOF WELL PLAN

CONSULTANT

PROJECT NO.
19-32-050DATE
04/10/2020DRAWN
SLHCHECKED
SLH

SCALE

CADFILE

UPDATED

SHEET NO.

A2.3

KEYNOTES

(NOT ALL KEYNOTES ARE USED ON SHEET)

0300 CONCRETE
0300.A1 concrete slab on grade - replace where removed
0300.A2 concrete footing
0300.A4 expansion joint
0300.A5 splash block
0300.A6 Concrete curb

0400 MASONRY
0400.A1 concrete masonry wall

0500 METALS
0500.A2 corrugated structural metal roof deck
0500.A3 metal pipe bollard concrete fill
0500.A4 metal pipe bollard removable
0500.A5 metal pipe hand rail - 1.5" diameter
0500.A6 metal roof access ladder with security door
0500.A7 metal louver
0500.B1 rolled channel (structural support grid)
0500.B2 metal furring channel

0600 WOOD, PLASTICS AND COMPOSITES
0600.A1 wood framing - see structural
0600.A2 frame opening for new door, window, or HVAC
0600.A3 in-fill frame door/window/duct opening
0600.A4 in-fill frame roof opening where equipment was removed
0600.A5 wood post
0600.A6 wood joist
0600.A7 wood trusses
0600.A8 2 x 4 furred wall
0600.A9 blocking
0600.B1 exterior wood wall sheathing
0600.B2 exterior wood roof sheathing
0600.B3 wood framed and sheathed cricket - use fire retardant treated wood
0600.C1 wood trim
0600.C2 wood hand rail

0700 THERMAL AND MOISTURE PROTECTION
0700.A1 insulation
.01 R-13 batt/blanket (3.5" thick)
.02 R-21 batt/blanket (6.5" thick)
.03 R-30 batt/blanket (10" thick)
.04 R-38 batt/blanket (12" thick)
.05 board insulation (2" thick)
.06 board insulation tapered cricket
0700.B1 Standing seam roofing system
0700.B2 single ply membrane roofing system
.01 extend roofing up and over parapet wall
.02 walk pad
.03 Parapet Wall Flashing
0700.B3 built up roofing
0700.B4 modified bitumen roofing
0700.B5 composition shingle roofing
0700.C1 galvanized sheet metal
.01 two piece Fry Springlok flashing system
.02 parapet cap flashing
.02 valley flashing
.03 splash pan
.05 scupper
.06 gutter
.07 downspout
.08 22 GA GSM Siding/Soffit
.09 22 GA GSM Corner Guard
0700.C2 vent
.01 roof vent - typ. of 4
.02 pipe vent
.03 hot vent
.04 duct penetration
0700.D1 sealant
.01 remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical
.02 remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical

0800 OPENINGS
0800.A1 door and frame
0800.A3 door frame
0800.A4 roll up door
0800.A5 window
0800.A6 storefront window system
0800.A7 access door
0800.A8 extruded alum. corner
0800.A9 Roof hatch

0900 FINISHES
0900.A1 vinyl composition tile flooring and base
0900.A2 resilient sheet flooring and base
0900.A3 carpet and base
0900.A4 base
0900.A5 ceramic tile
0900.B1 gypsum board
0900.B2 wainscot
0900.B3 vinyl wall covering
0900.B4 vinyl wall covering wrapped tackboard panels
0900.B5 fiberglass reinforced plastic panels (FRP)
0900.B6 SS wall panels per food service
0900.C1 suspended acoustical ceiling system
0900.C2 glued or stapled on acoustical tile
0900.D1 cement plaster wall finish
.01 Expansion Screed
.02 4" soffit vent screed
0900.D2 exterior panel wall system
0900.D3 Metal Siding/Soffits

2100 SPECIALTIES
2100.A1 display case
2100.A2 marker board
2100.A3 TV/monitor bracket
2100.A4 signs
.01 parking lot entrance sign "towaway" per Civil
.02 ADA accessible parking stall sign per Civil§200.F4

2300 HVAC
2300.A1 mechanical equipment - see mechanical drawings
2300.A2 ceiling register
2300.A3 mechanical duct
2300.A4 Condensate Line
2300.A5 kitchen exhaust fan
2300.B1 gas meter assembly
2300.A2 water meter box
2300.A3 backflow assembly
2300.A4 fire hydrant
2300.A5 trench drain
2300.A6 area drain
2300.A7 drain inlet
2300.B1 decomposed granite
2300.B2 aggregate base rock
2300.B3 concrete paving
2300.B4 asphalt paving
2300.B5 concrete curb
2300.B6 concrete mow strip
2300.B7 trash enclosure

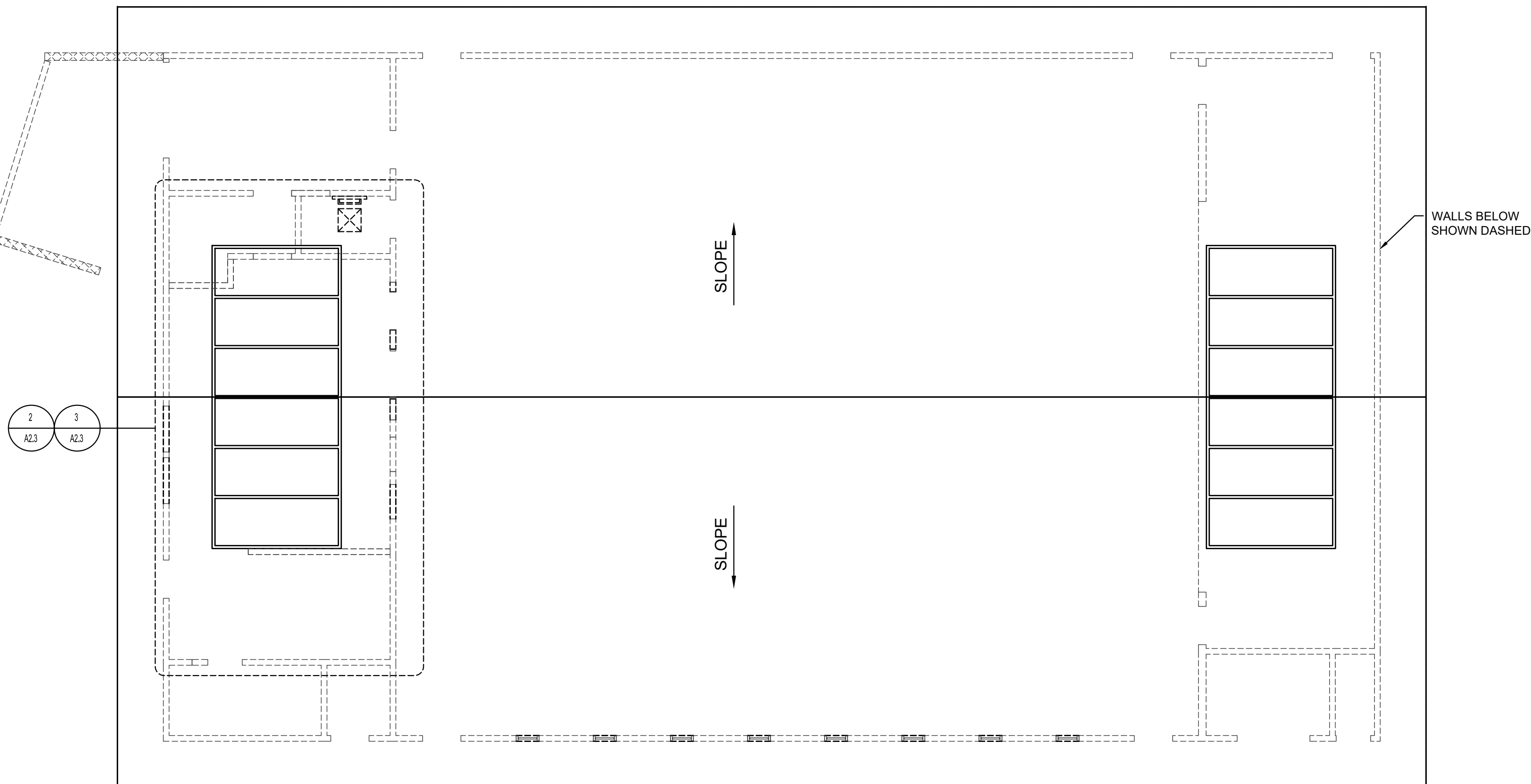
2300 ELECTRICAL
2300.A1 electrical equipment
2300.A2 light fixture
2300.A3 SITEWORK
2300.A1 gas meter assembly
2300.A2 water meter box
2300.A3 backflow assembly
2300.A4 fire hydrant
2300.A5 trench drain
2300.A6 area drain
2300.A7 drain inlet
2300.B1 decomposed granite
2300.B2 aggregate base rock
2300.B3 concrete paving
2300.B4 asphalt paving
2300.B5 concrete curb
2300.B6 concrete mow strip
2300.B7 trash enclosure

2300 line paint striping
2300.C1 fire lane striping
2300.C2 game line striping
2300.D1 ada accessible car parking stall
2300.D2 ada accessible van parking stall
2300.D3 ada accessible ramp per civil
2300.D4 truncated domes
2300.D5 ada accessible path of travel
2300.D6 ada accessible restrooms (men's and women's)
2300.D7 ada accessible restrooms (girl's and boy's)
2300.D8 ada accessible drinking fountain
2300.E1 chain link fence
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
2300.E2 chain link fence with vinyl slats
.01 single 3'-0" wide swing gate
.02 pair 6'-0" wide swing gate
2300.E3 ornamental metal fence
2300.F1 reconfigure (e) irrigation and sprinklers
2300.F2 sod turf landscaping planting area - patch & repair
2300.F3 remove (e) trees
2300.F4 remove (e) ada parking symbol

DEMOLITION NOTES

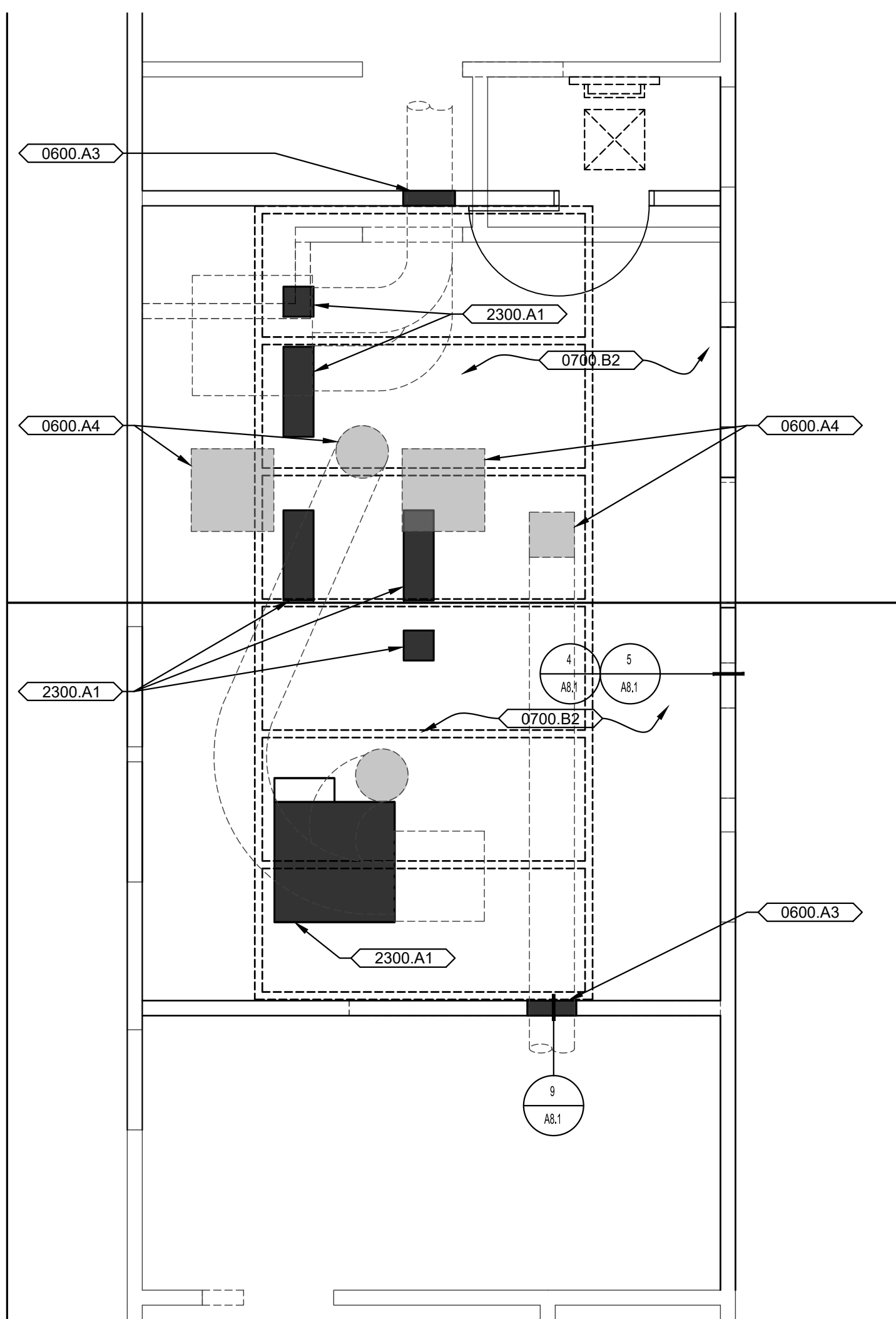
(NOT ALL DEMOLITION NOTES ARE USED ON SHEET)

1 REMOVE RESTROOM ACCESSORIES
2 REMOVE TOILET PARTITIONS
3 REMOVE PLUMBING FIXTURES
4 REMOVE ELECTRICAL
5 REMOVE DOOR & FRAME
6 REMOVE WINDOW
7 REMOVE WALL FINISHES TO STUDS
8 REMOVE CEILING FINISHES TO JOISTS
9 REMOVE INSULATION
10 REMOVE WALLS INCLUDING CONCRETE CURB
11 SAWCUT AND REMOVE CONCRETE SLAB
12 REMOVE HVAC EQUIPMENT
13 REMOVE HVAC DUCT / SHEET METAL / PANELS
14 REMOVE CHAIN LINK FENCE & GATES
15 SAWCUT AND REMOVE CONCRETE CURB
16 BEAD BLAST (E) SLAB, IN PREPARATION FOR EPOXY FLOOR FINISH PATCH & REPAIR SLAB
17 REMOVE (E) FLOOR & BASE FINISHES
18 REMOVE (E) ROOFING MATERIAL
19 REMOVE (E) ROLL-UP DOOR & FRAME
20 REMOVE (E) POCKET DOOR & FRAME
21 REMOVE (E) FOOD SERVICE EQUIPMENT
22 REMOVE (E) HOOD
23 REMOVE (E) WALK-IN REF/FREEZER
24 REMOVE (E) CASEWORK



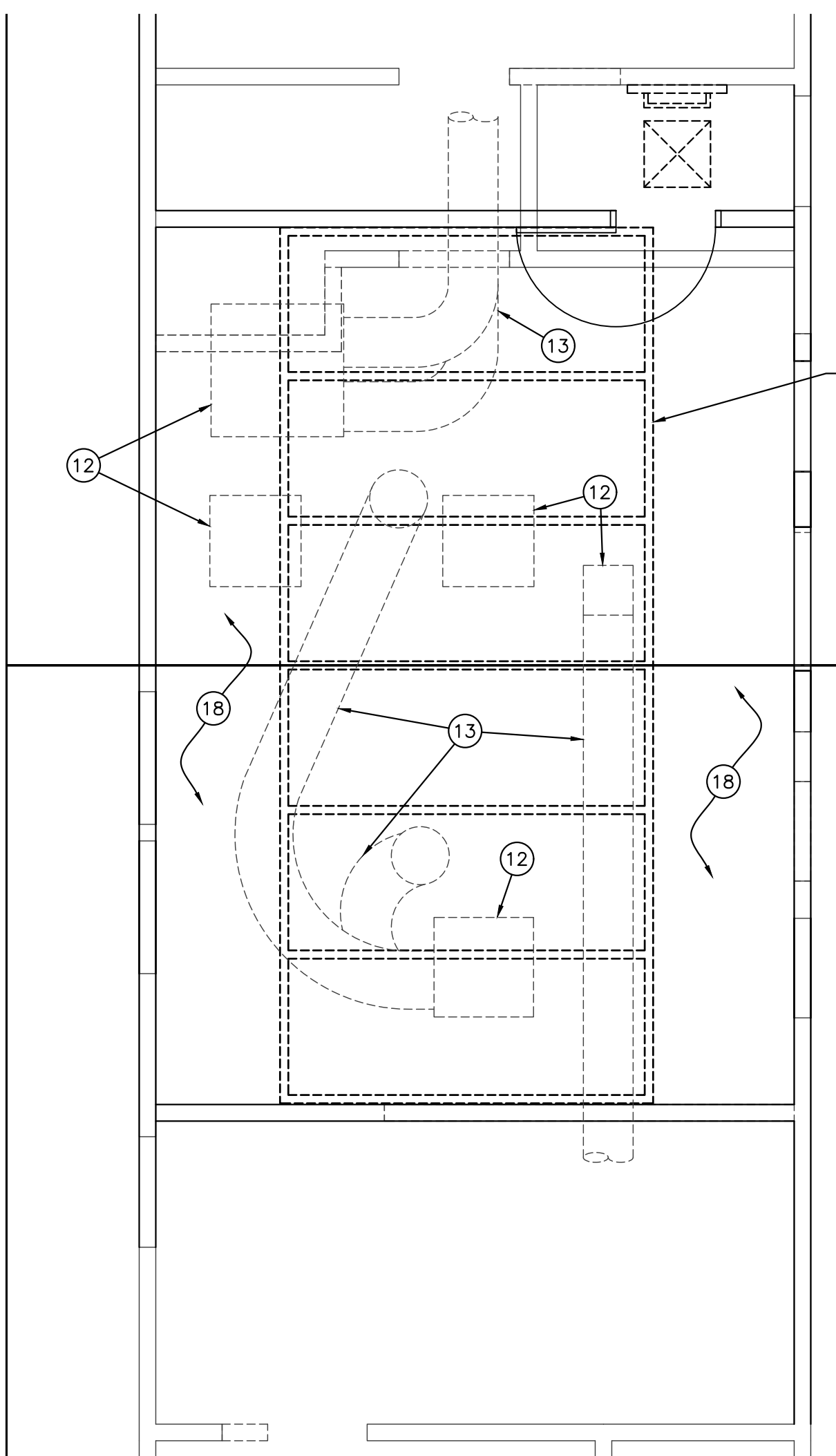
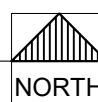
1 ROOF PLAN - BUILDING A

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



3 ROOF WELL PLAN - BUILDING A

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

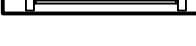
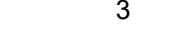
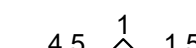


2 ROOF WELL DEMOLITION PLAN - BUILDING A

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



LEGEND



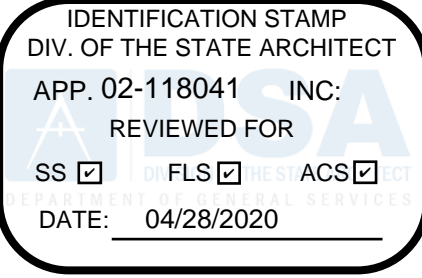
SEE STRUCTURAL DRAWINGS FOR STUD SIZE AND SPACING. WHERE SIZE AND SPACING NOT INDICATED, PROVIDE WOOD STUD WALL: 2X8 WOOD STUDS @ 16" O.C. INTERIOR HATCH INDICATES FULL DEPTH AND FULL HEIGHT INSULATION AT INTERIOR WALLS AND THERMAL BATT INSULATION AT EXTERIOR WALLS

CONSECUTIVE NUMBERING CONVENTION FOR INTERIOR ROOM ELEVATIONS

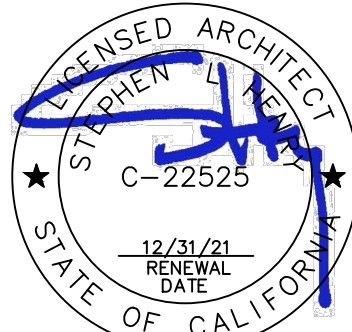
WINDOW (PLAN VIEW)

GENERAL NOTES

- ALL EXTERIOR WALLS, JANITOR ROOM, KITCHEN, AND TOILET ROOM WALLS TO HAVE 6" HIGH CONCRETE CURB. SEE STRUCTURAL FOUNDATION PLAN.
- FIRE BLOCKING SHALL BE PROVIDED IN CONTINUOUS CONCEALED SPACES OF PLUMBING WALLS, STUD WALLS, PARTITIONS, ETC. AT CEILING AND FLOOR LEVELS AND AT 10'-0" INTERVALS ALONG THE LENGTH AND HEIGHT OF THE WALL.
- CONNECT RAINWATER LEADERS & DOWNSPOUTS PER CIVIL AND PLUMBING.
- SLOPE FLOOR IN WET AREAS TO FLOOR DRAINS. MINIMUM SLOPE SHALL BE ONE PERCENT (1%). ARROWS INDICATE SLOPE DIRECTION, RECESS SLABS AS REQUIRED TO ACCOMMODATE FINISHES AND SLOPE.



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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

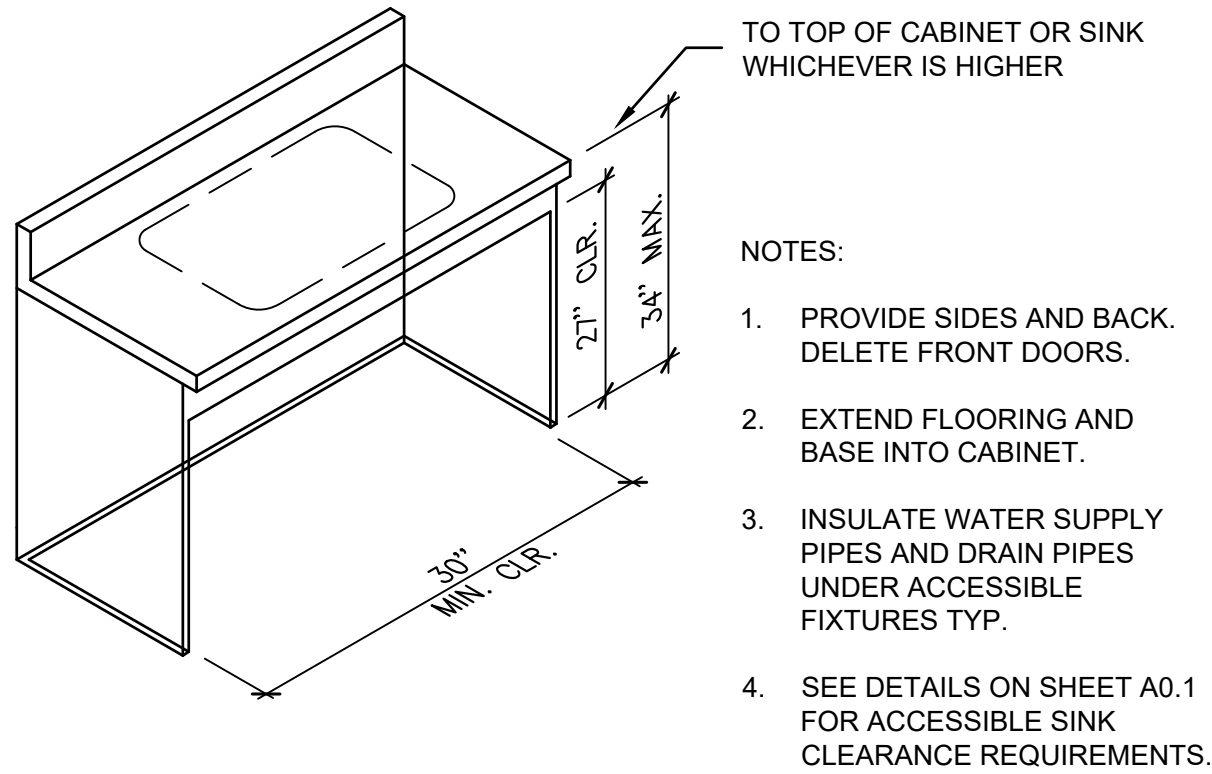
DOOR SCHEDULE
FINISH SCHEDULE

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

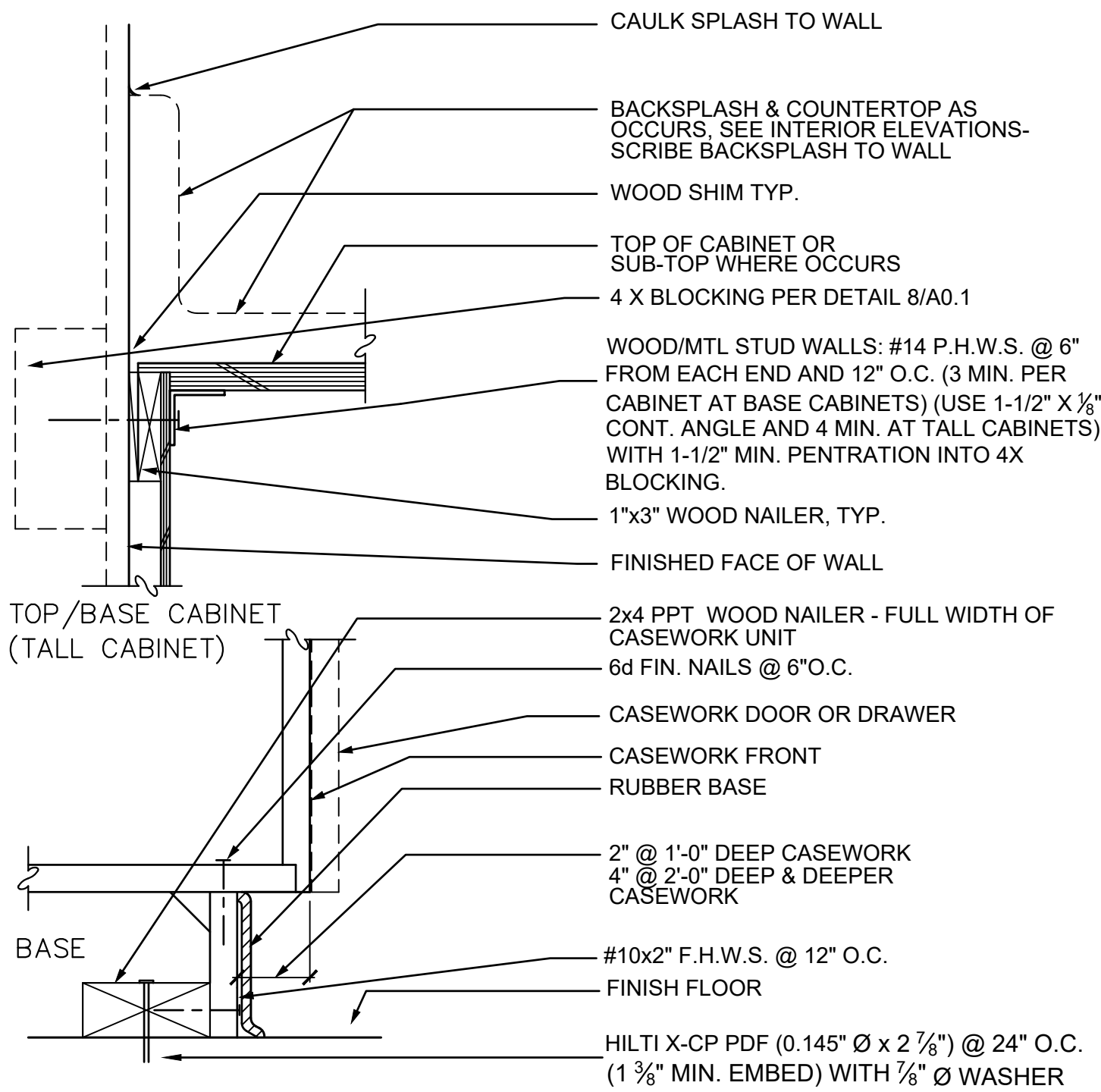
A3.1

DOOR SCHEDULE															DOOR TYPES	
DOOR MARK/TYPE	DOOR SIZE WIDTH X HEIGHT	DOOR TYPE	CONSTRUCTION	FINISH	GLAZING	FIRE RATING	HARDWARE GROUP	FRAME		DETAILS				DOOR LEGEND		
								MATERIAL	FINISH	HEAD	JAMB	SILL	DOOR NOTES			
BUILDING A															<div>WD T S P F E</div> <div>WOOD TEMPERED SAFETY STAIN PAINT FACTORY FINISH EXISTING</div> <div>FG HM SC PM AL T CLR SS</div> <div>FIBER GLASS HOLLOW METAL SOLID CORE WOOD PREFINISHED METAL ALUMINUM TEMPERED CLEAR STAINLESS STEEL</div>	<div><div><div><div></div></div><div>LOUVER WHERE OCCURS</div></div><div><div><div></div></div><div>LOUVER WHERE OCCURS</div></div><div><div><div></div></div><div>10" Clr. Min.</div></div><div>A</div></div> <div><div><div></div></div><div>OVERHEAD COILING COUNTER DOOR</div><div>B</div></div>
A101	3'-0" X 7'-0"	A	HM	P	-	-	01	HM	P	4/A8.2	5/A8.2	6/A8.2	1, 2, 3, 6			
A102	3'-0" X 7'-0"	A	HM	P	-	-	03	HM	P	2/A8.2	2/A8.2	6/A8.2	3, 6			
A103	3'-0" X 7'-0"	A	HM	P	-	90-Min.	04	HM	P	2/A8.2	2/A8.2	6/A8.2	3, 6			
A104	3'-0" X 7'-0"	A	HM	P	-	-	02	HM	P	2/A8.2	2/A8.2	6/A8.2	4, 5			
A105	4'-0" X 4'-0"	B	SS	-	-	90-Min.	05	SS	-	7/A8.2	8/A8.2	9/A8.2	14, 16			
DOOR NOTES																
														1. EXTERIOR DOORS SHALL BE WEATHER STRIPPED AND ALL JOINTS AND PENETRATIONS SHALL BE CHALKED AND SEALED.	WHERE REQUIRED BY HARDWARE GROUP), WITH MAXIMUM DOOR OPENING EFFORT OF 5 LBS. AT EXTERIOR AND AT INTERIOR DOORS AND ARE EQUIPPED WITH SINGLE-EFFORT, NON-GRASPING TYPE HARDWARE (I.E.LEVER) CENTERED BETWEEN 34" & 44" ABOVE FLOOR. 2016 CBC, SECTIONS 11B-404.2.5, 11B-404.2.7, 11B-404.2.9.	11. UNDERCUT DOOR FOR 1/2" MIN. CLEARANCE.
														2. PROVIDE TACTILE EXIT SIGN PER DETAIL 3/A0.1		12. UNDERCUT DOOR 1" FOR VENTILATION
														3. PROVIDE ROOM IDENTIFICATION SIGN PER DETAIL 2/A0.1.	7. REQUIRED EXIT DOORS TO BE EQUIPPED WITH PANIC HARDWARE	13. DOOR EQUIPPED WITH ELECTRONIC ACCESS CONTROL SYSTEM
														4. PROVIDE TOILET ROOM IDENTIFICATION SIGN PER DETAIL 2/A0.1	8. PROVIDE 1'-6" WIDE X 1'-0" HIGH LOUVER	14. PROVIDE POWER FOR ELECTRIC MOTOR OPERATION. VERIFY SWITCH LOCATION.
														5. PROVIDE TOILET ROOM DOOR SYMBOLS PER DETAIL 2/A0.1.	9. ALL EXTERIOR DOOR GLAZING SHALL BE DOUBLE PANE INSULATING GLASS.	15. SEE ORNAMENTAL METAL FENCE DETAILS.
														6. ALL DOORS INTERIOR AND EXTERIOR SHALL HAVE 1/2" MAXIMUM HIGH THRESHOLD (ABOVE FLOOR AND LANDING ON BOTH SIDES &	10. FLOOR DOOR STOPS TO BE LOCATED SO AS NOT TO CAUSE A TRIPPING HAZARD AND 4" MAX. FOR WALL.	16. RATED OVERHEAD COILING COUNTER DOOR TO BE EQUIPPED W/ AUTOMATIC CLOSURE ACTIVATED BY CENTRAL FIRE ALARM SYSTEM. SEE SPECIFICATION SECTION 08 33 13 FOR ADDITIONAL REQUIREMENTS.



1 ACCESSIBLE CASEWORK

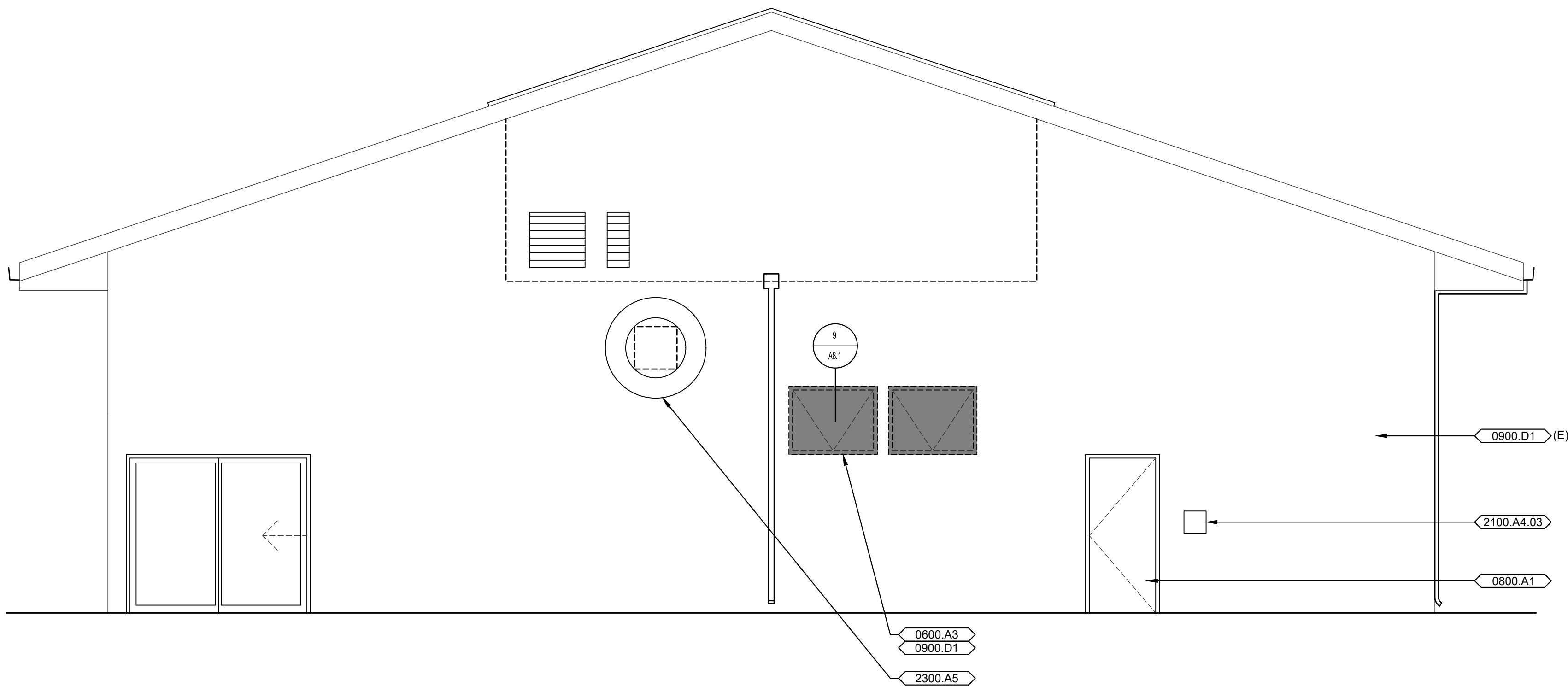
SCALE: 1/2"=1'-0"



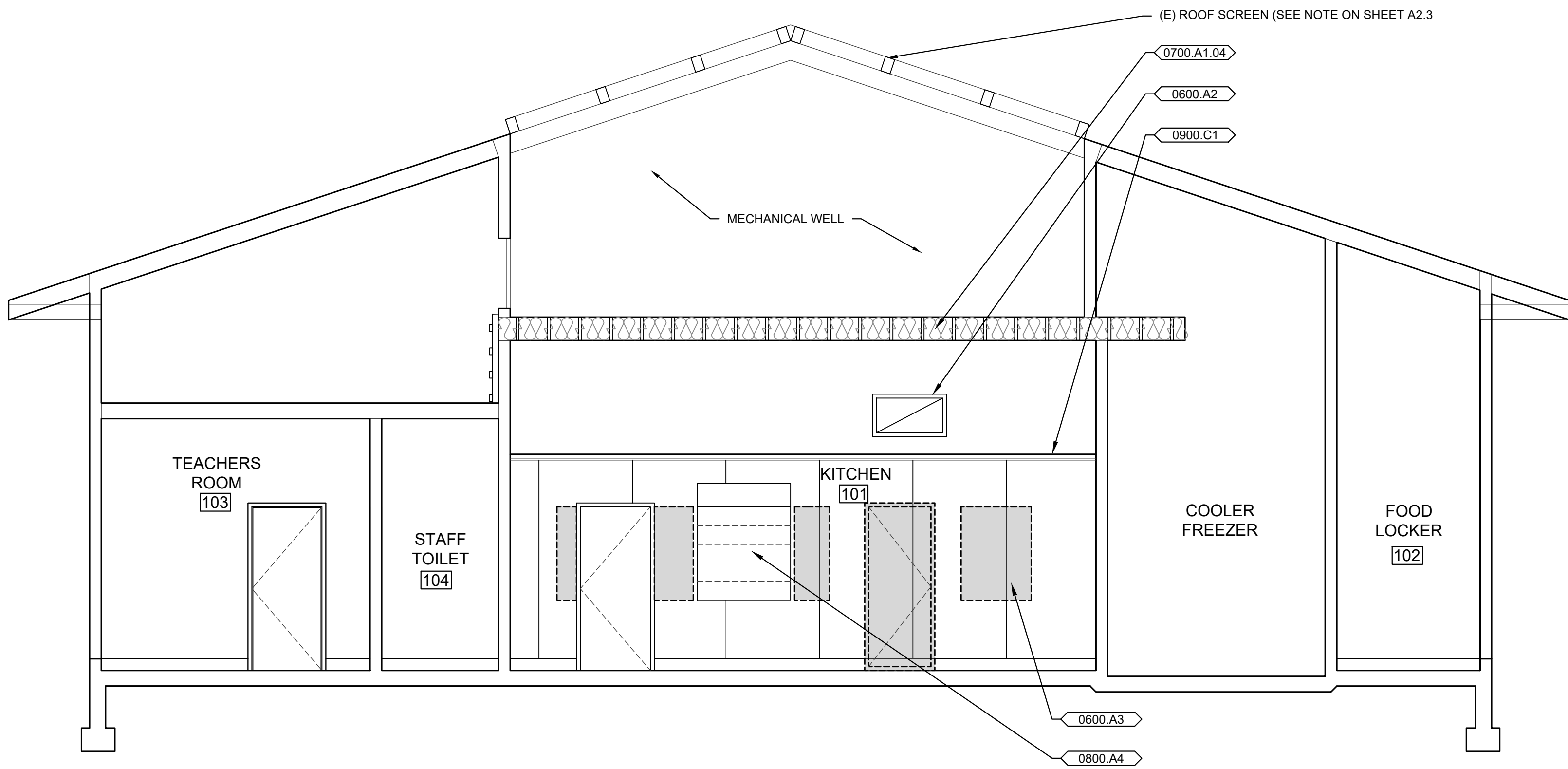
2 CABINET ANCHORAGE

SCALE: 3/8"=1'-0"

CASEWORK SCHEDULE																								
(KEY)	CABINET NUMBER	W.I. NUMBER*	SIZE (INCHES)			FINISH								NOTES										
			WIDTH	HEIGHT	DEPTH	CASEWORK				COUNTERTOP FINISH														
						PLASTIC LAMINATE				PLASTIC LAMINATE														
	154A	154	36	34	24	●				●				1, 2, 3										
	222A	222	30	34	24	●				●				1, 3										



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

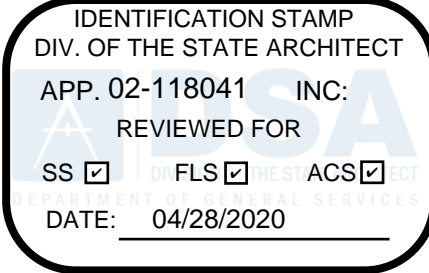


2 BUILDING SECTION (FOOD SERVICE EQUIPMENT NOT SHOWN)
SCALE: 1/4" = 1'-0"

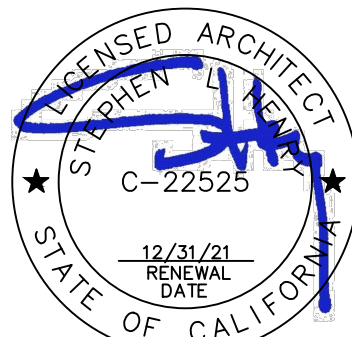
KEYNOTES

(NOT ALL KEYNOTES ARE USED ON SHEET)

0300	CONCRETE					.03	room identification sign per dtl. 2/A0.1
0300.A1	concrete slab on grade - replace where removed					.04	restroom identification sign per dtl. 2/A0.1
0300.A2	concrete footing					.05	ADA Tactile exit sign per dtl. 3/A0.1
0300.A4	expansion joint					.06	self-illuminating exit
0300.A5	splash block					.07	assistive listening system per detail 7/A0.1
0300.A6	Concrete curb	2100.A5				.08	Monument sign
0400	MASONRY	2100.A6				.09	Building sign
0400.A1	concrete masonry wall	2100.A7				.10	Dedication plaque
0500	METALS						toilet partition
0500.A2	corrugated structural metal roof deck						urinal partition
0500.A3	metal pipe bollard concrete fill						toilet accessories:
0500.A4	metal pipe bollard removable					.01	paper towel dispenser
0500.A5	metal pipe hand rail - 1.5" diameter					.02	toilet paper dispenser
0500.A6	metal roof access ladder with security door					.03	sanitary napkin dispenser
0500.A7	metal louver					.04	soap dispenser
0500.B1	rolled channel (structural support grid)					.05	mirror
0500.B2	metal furring channel					.09	trash receptacle
0600	WOOD, PLASTICS AND COMPOSITES	2100.A8				.10	grab bar
0600.A1	wood framing - see structural	2100.B1				.11	toilet seat cover, toilet tissue dispenser
0600.A2	frame opening for new door, window, or HVAC					.12	toilet seat cover, sanitary napkin disposal, & toilet tissue dispenser
0600.A3	in-fill frame door/window/duct opening					.13	sanitary napkin disposal
0600.A4	in-fill frame roof opening where equipment was removed					.14	paper towel dispenser/ waste receptacle
0600.A5	wood post	2100.B2					folding panel partition
0600.A6	wood joist	2100.B3					fire extinguisher
0600.A7	wood trusses	2100.B4				.01	Provide UL Rated Class K 2A-K per spec.
0600.A8	2 x 4 furred wall	2110				.02	Provide UL Rated Class K 10B-C per spec.
0600.A9	blocking	2110.A1					metal shelving
0600.B1	exterior wood wall sheathing	2110.A2					metal lockers
0600.B2	exterior wood roof sheathing	2110.A3					knox box
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A4					EQUIPMENT
0600.C1	wood trim	2100.A5					projection screen
0600.C2	wood hand rail	2100.A6					refrigerator
0700	THERMAL AND MOISTURE PROTECTION						microwave (owner furnished, contractor installed)
0700.A1	insulation						Type I kitchen Exhaust hood - w/ Fire System Remote Pull Station - see FS Sheets
.01	R-13 batt/blanket (3.5" thick)	2120					Food Service Equipment shown w/ light line - sheet FS Sheets.
.02	R-21 batt/blanket (6.5" thick)	2120.A1					
.03	R-30 batt/blanket (10" thick)	2120.A2					
.04	R-38 batt/blanket (12" thick)						
.05	board insulation (2" thick)						
.06	board insulation tapered cricket						
0700.B1	Standing seam roofing system	2120.A3					
0700.B2.	single ply membrane roofing system						
.01	extend roofing up and over parapet wall	2200					
.02	walk pad	2200.A1					
.03	Parapet Wall Flashing						
0700.B3	built up roofing						
0700.B4	modified bitumen roofing						
0700.B5	composition shingle roofing						
0700.C1	galvanized sheet metal						
.01	two piece Fry Springlok flashing system						
.02	parapet cap flashing						
.02	valley flashing						
.03	splash pan						
.05	scupper						
.06	gutter						
.07	downspout	2300					
.08	22 GA GSM Siding/Soffit	2300.A1					
.09	22 GA GSM Corner Guard						
0700.C2	vent	2300.A2					
.01	roof vent - typ. of 4	2300.A3					
.02	pipe vent	2300.A4					
.03	hot vent	2300.A5					
.04	duct penetration						
0700.D1	sealant	2600					
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	2600.A1					
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install backer rod and sealant - typical	2600.A2					
0800	OPENINGS	3200					
0800.A1	door and frame	3200.A1					
0800.A3	door frame	3200.A2					
0800.A4	roll up door	3200.A4					
0800.A5	window	3200.A5					
0800.A6	storefront window system	3200.A6					
0800.A7	access door	3200.A7					
0800.A8	extruded alum. corner	3200.B1					
0800.A9	Roof hatch	3200.B2					
0900	FINISHES	3200.B3					
0900.A1	vinyl composition tile flooring and base	3200.B4					
0900.A2	resilient sheet flooring and base	3200.B5					
0900.A3	carpet and base	3200.B6					
0900.A4	base	3200.B7					
0900.A5	ceramic tile						
0900.B1	gypsum board	3200.C1					
0900.B2	wainscot	3200.C2					
0900.B3	vinyl wall covering	3200.C3					
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D1					
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.D2					
0900.B6	SS wall panels per food service	3200.D3					
0900.C1	suspended acoustical ceiling system	3200.D4					
0900.C2	glued or stapled on acoustical tile	3200.D5					
0900.D1	cement plaster wall finish	3200.D6					
.01	Expansion Screed	3200.D7					
.02	4" soffit vent screed	3200.D8					
0900.D2	exterior panel wall system	3200.E1					
0900.D3	Metal Siding/Soffits	3200.E2					
2100	SPECIALTIES						
2100.A1	display case	3200.E3					
2100.A2	marker board	3200.F1					
2100.A3	TV/monitor bracket	3200.F2					
2100.A4	signs:						
.01	parking lot entrance sign "towaway" per Civil	3200.F3					
.02	ADA accessible parking stall sign per Civil	3200.F4					



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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

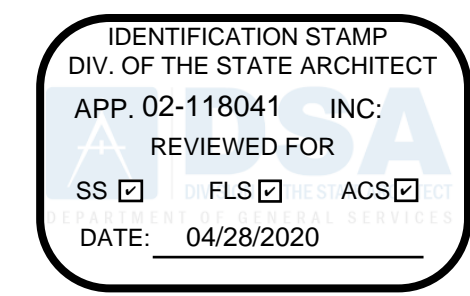
EXTERIOR ELEVATION
BUILDING SECTION

CONSULTANT

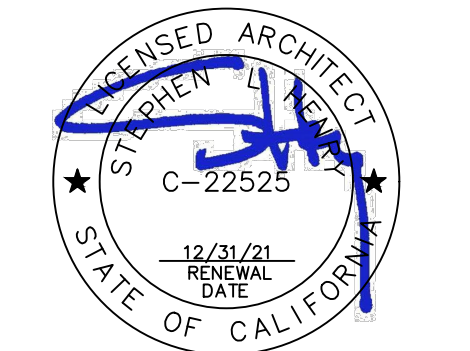
PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		

SHEET NO.

A4.1



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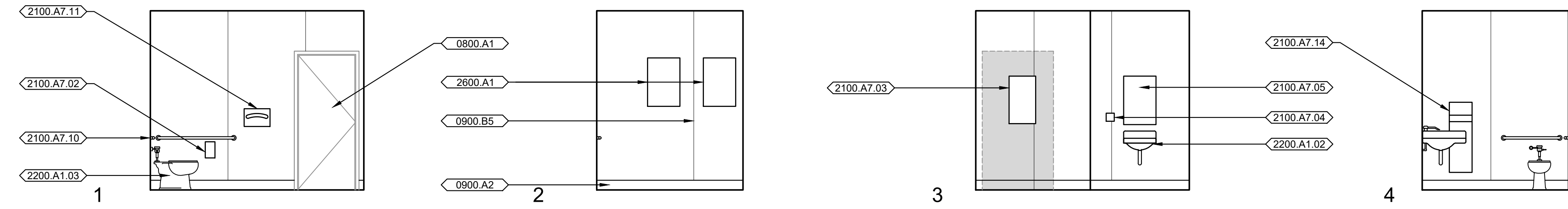
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL
INTERIOR ELEVATIONS

CONSULTANT		
PROJECT NO. 19-32-050	REVISIONS	BY
DATE 04/10/2020		
DRAWN SLH		
CHECKED SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO. A5.1		

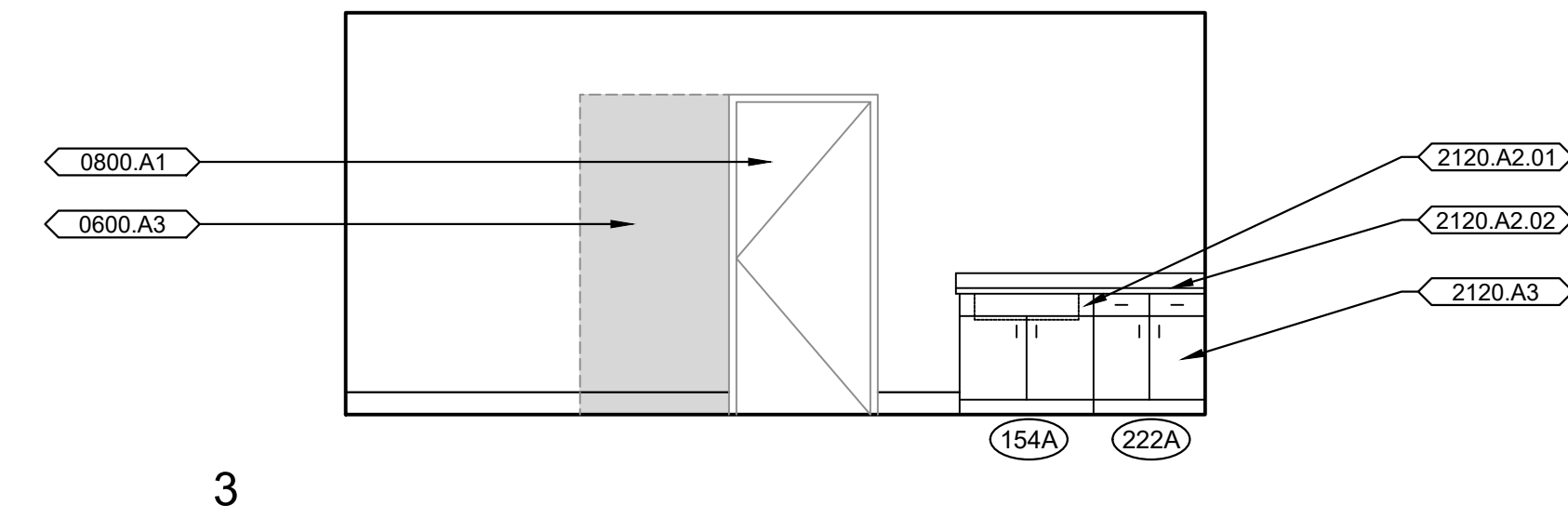
KEYNOTES

(NOT ALL KEYNOTES ARE USED ON SHEET)

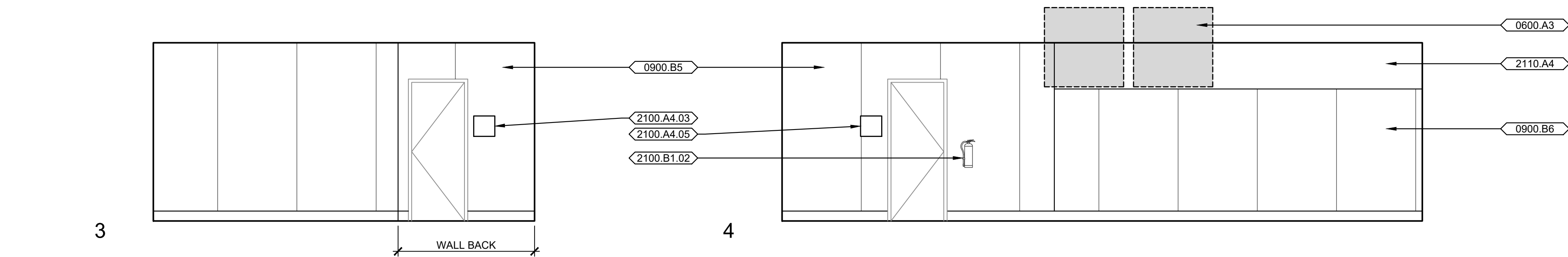
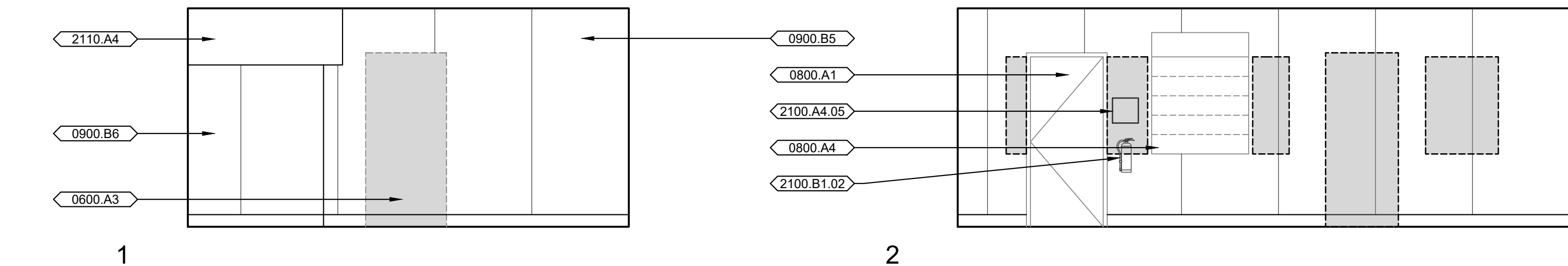
0300	CONCRETE	03	room identification sign per dtl. 2/A0.1
0300.A1	concrete slab on grade - replace where removed	.04	restroom identification sign per dtl. 2/A0.1
0300.A2	concrete footing	.05	ADA Tactile exit sign per dtl. 3/A0.1
0300.A4	expansion joint	.06	self-illuminating exit
0300.A5	splash block	.07	assistive listening system per detail 7/A0.1
0300.A6	Concrete curb	.08	Monument sign
		.09	Building sign
		.10	Dedication plaque
0400	MASONRY	2100.A5	toilet partition
0400.A1	concrete masonry wall	2100.A6	urinal partition
		2100.A7	toilet accessories:
		.01	paper towel dispenser
0500	METALS	.02	toilet paper dispenser
0500.A2	corrugated structural metal roof deck	.03	sanitary napkin dispenser
0500.A3	metal pipe bollard concrete fill	.04	soap dispenser
0500.A4	metal pipe bollard removable	.05	mirror
0500.A5	metal pipe hand rail - 1.5" diameter	.09	trash receptacle
0500.A6	metal roof access ladder with security door	.10	grab bar
0500.A7	metal louver	.11	toilet seat cover, toilet tissue dispenser
0500.B1	rolled channel (structural support grid)	.12	toilet seat cover, sanitary napkin disposal, & toilet tissue dispenser
0500.B2	metal furring channel	.13	sanitary napkin disposal
		.14	paper towel dispenser/ waste receptacle
0600	WOOD, PLASTICS AND COMPOSITES		folding panel partition
0600.A1	wood framing - see structural	2100.A8	fire extinguisher
0600.A2	frame opening for new door, window, or HVAC	2100.B1	.01 Provide UL Rated Class K 2A-K per spec.
0600.A3	in-fill frame door/window/duct opening		.02 Provide UL Rated Class K 10B-C per spec.
0600.A4	in-fill frame roof opening where equipment was removed	2100.B2	metal shelving
0600.A5	wood post	2100.B3	metal lockers
0600.A6	wood joist	2100.B4	knox box
0600.A7	wood trusses		
0600.A8	2 x 4 furred wall	2110	EQUIPMENT
0600.A9	blocking	2110.A1	projection screen
0600.B1	exterior wood wall sheathing	2110.A2	refrigerator
0600.B2	exterior wood roof sheathing	2110.A3	microwave (owner furnished, contractor installed)
0600.B3	wood framed and sheathed cricket - use fire retardant treated wood	2110.A4	Type I kitchen Exhaust hood - w/ Fire System Remote Pull Station - see FS Sheets
0600.C1	wood trim	2100.A5	Hand Sink - See Detail E/FS8.2
0600.C2	wood hand rail	2100.A6	Food Service Equipment mounting w/ light line - sheet FS Sheets.
0700	THERMAL AND MOISTURE PROTECTION		
0700.A1	insulation	2120	FURNISHINGS
.01	R-13 batt/blanket (3.5" thick)	2120.A1	window coverings & track
.02	R-21 batt/blanket (6.5" thick)	2120.A2	plastic laminate casework
.03	R-30 batt/blanket (10" thick)		.01 ada accessible sink base cabinet
.04	R-38 batt/blanket (12" thick)		.02 plastic laminate countertop with 4" backsplash casework
.05	board insulation (2" thick)	2120.A3	
.06	board insulation tapered cricket	2200	PLUMBING
0700.B1	Standing seam roofing system	2200.A1	plumbing equipment
0700.B2	single ply membrane roofing system		.01 sink
.01	extend roofing up and over parapet wall		.02 lavatory
.02	walk pad		.03 toilet
.03	Parapet Wall Flashing		.04 urinal
0700.B3	built up roofing		.05 drinking fountain
0700.B4	modified bitumen roofing		.06 mop sink
0700.B5	composition shingle roofing		.07 water heater
0700.C1	galvanized sheet metal		.08 Roof drain/Overflow Combo Unit
.01	two piece Fry Springlok flashing system		.09 Floor drain - slope floor to drain 2% max. slope
.02	parapet cap flashing	2300	HVAC
.03	valley flashing	2300.A1	mechanical equipment - see mechanical drawings
.04	splash pan	2300.A2	ceiling register
.05	scupper	2300.A3	mechanical duct
.06	gutter	2300.A4	Condensate Line
.07	downspout	2300.A5	kitchen exhaust fan
.08	22 GA GSM Siding/Soffit		
.09	22 GA GSM Corner Guard	2600	ELECTRICAL
0700.C2	vent	2600.A1	electrical equipment
.01	roof vent - typ. of 4	2600.A2	light fixture
.02	pipe vent	3200	SITEWORK
.03	hot vent	3200.A1	gas meter assembly
.04	duct penetration	3200.A2	water meter box
0700.D1	sealant	3200.A3	backflow assembly
.01	remove (e) sealant from (e) doors and (e) windows, install (n) sealant - typical	3200.A4	fire hydrant
.02	remove (e) sealant and backer pod from (e) concrete wall panel joint - install (n) backer rod and sealant - typical	3200.A5	trench drain
		3200.A6	area drain
0800	OPENINGS	3200.A7	drain inlet
0800.A1	door and frame	3200.B1	decomposed granite
0800.A3	door frame	3200.B2	aggregate base rock
0800.A4	roll up door	3200.B3	concrete paving
0800.A5	window	3200.B4	asphalt paving
0800.A6	storefront window system	3200.B5	concrete curb
0800.A7	access door	3200.B6	concrete mow strip
0800.A8	extruded alum. corner		
0800.A9	Roof hatch	3200.B7	trash enclosure
0900	FINISHES	3200.C1	line paint striping
0900.A1	vinyl composition tile flooring and base	3200.C2	fire lane striping
0900.A2	resilient sheet flooring and base	3200.C3	game line striping
0900.A3	carpet and base	3200.D1	ada accessible car parking stall
0900.A4	base	3200.D2	ada accessible van parking stall
0900.A5	ceramic tile	3200.D3	ada accessible ramp per civil
0900.B1	gypsum board	3200.D4	truncated domes
0900.B2	wainscot	3200.D5	ada accessible path of travel
0900.B3	vinyl wall covering	3200.D6	ada accessible restrooms (men's and women's)
0900.B4	vinyl wall covering wrapped tackboard panels	3200.D7	ada accessible restrooms (girl's and boy's)
0900.B5	fiberglass reinforced plastic panels (FRP)	3200.D8	ada accessible drinking fountain
0900.B6	SS wall panels per food service	3200.E1	chain link fence
0900.C1	suspended acoustical ceiling system	.01	single 3'-0" wide swing gate
0900.C2	glued or stapled on acoustical tile	.02	pair 6'-0" wide swing gate
0900.D1	cement plaster wall finish	.01	single 3'-0" wide swing gate
.01	Expansion Screed	.02	pair 6'-0" wide swing gate
.02	4" soffit vent screed		ornamental metal fence
0900.D2	exterior panel wall system	3200.E2	reconfigure (e) irrigation and sprinklers
0900.D3	Metal Siding/Soffits	3200.E3	sod turf landscaping planting area - patch & repair
		3200.F1	remove (e) trees
2100	SPECIALTIES	3200.F2	remove (e) ada parking symbol
2100.A1	display case		
2100.A2	marker board		
2100.A3	TV/monitor bracket		
2100.A4	signs:		
.01	parking lot entrance sign "towaway" per Civil	3200.F3	
.02	ADA accessible parking stall sign per Civil	3200.F4	



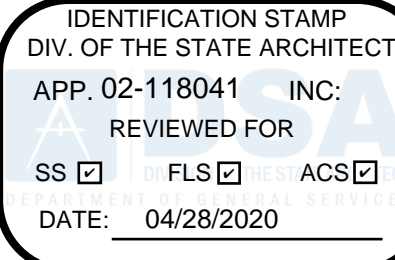
3 RESTROOM INTERIOR ELEVATIONS (SEE SHEET A0.1 FOR DISABLED ACCESSIBLE FIXTURES AND ACCESSORIES MOUNTING HEIGHTS, LOCATIONS AND REQUIREMENTS)
A5.1 SCALE: 1/4" = 1'-0"



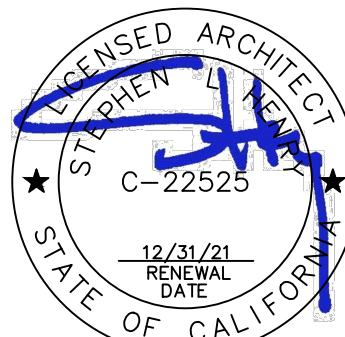
2 TEACHERS ROOM INTERIOR ELEVATIONS
A5.1 SCALE: 1/4" = 1'-0"



1 KITCHEN INTERIOR ELEVATIONS (FOOD SERVICE EQUIPMENT NOT SHOWN)
A5.1 SCALE: 1/4" = 1'-0"



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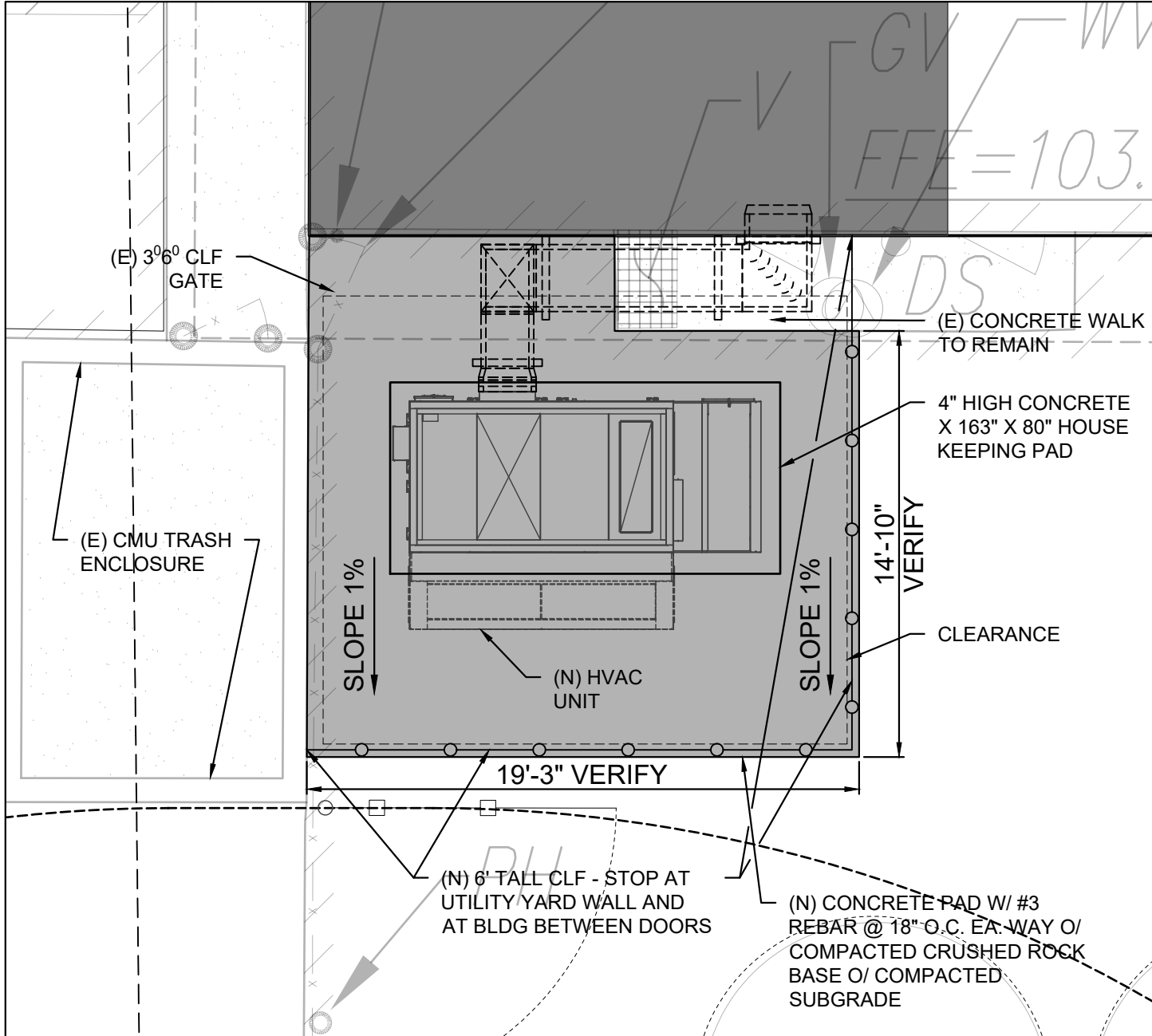
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

DETAILS

CONSULTANT

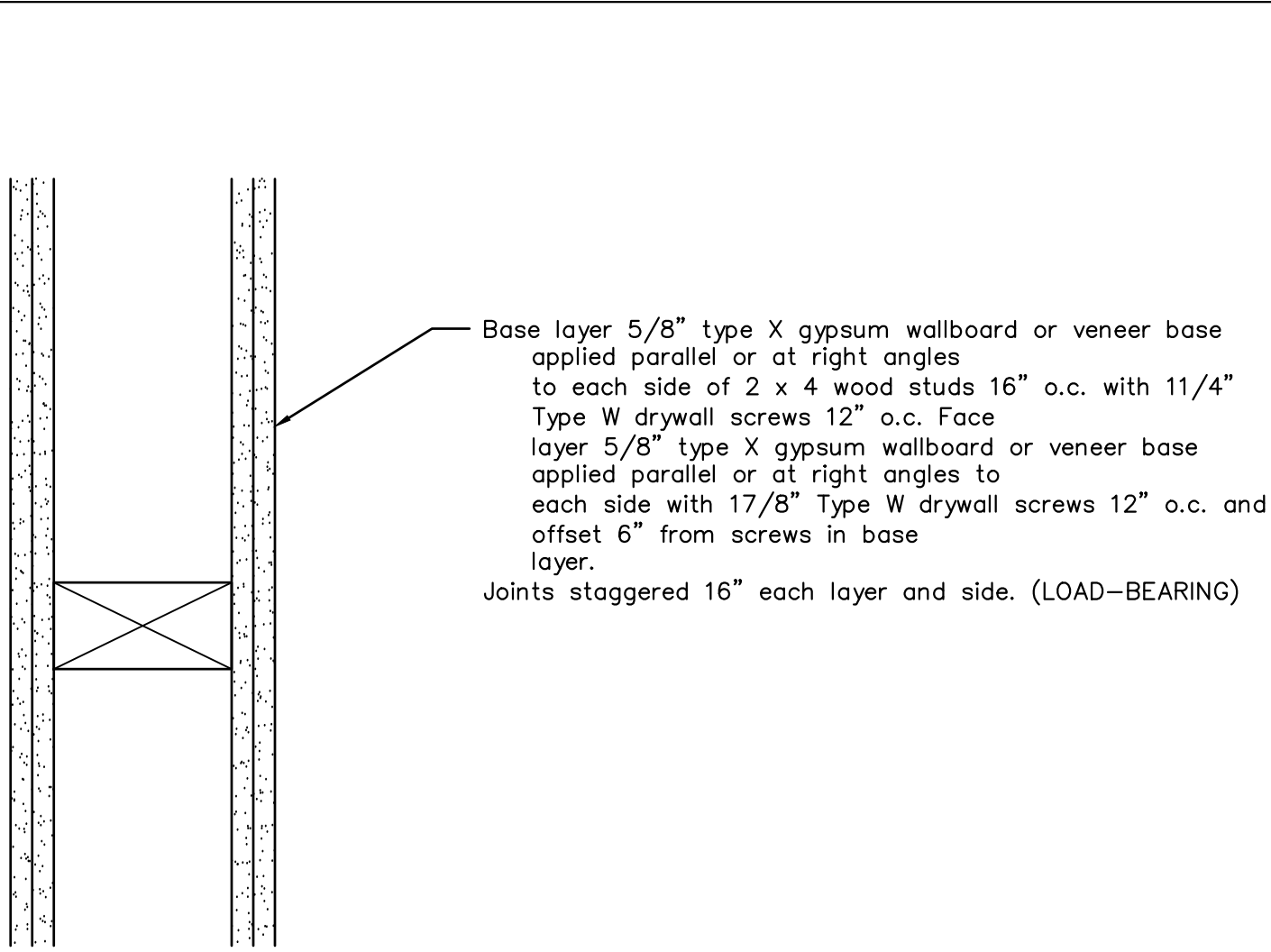
PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
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SLH		
SCALE		
CADFILE		
UPDATED		
SHEET NO.		

A8.1



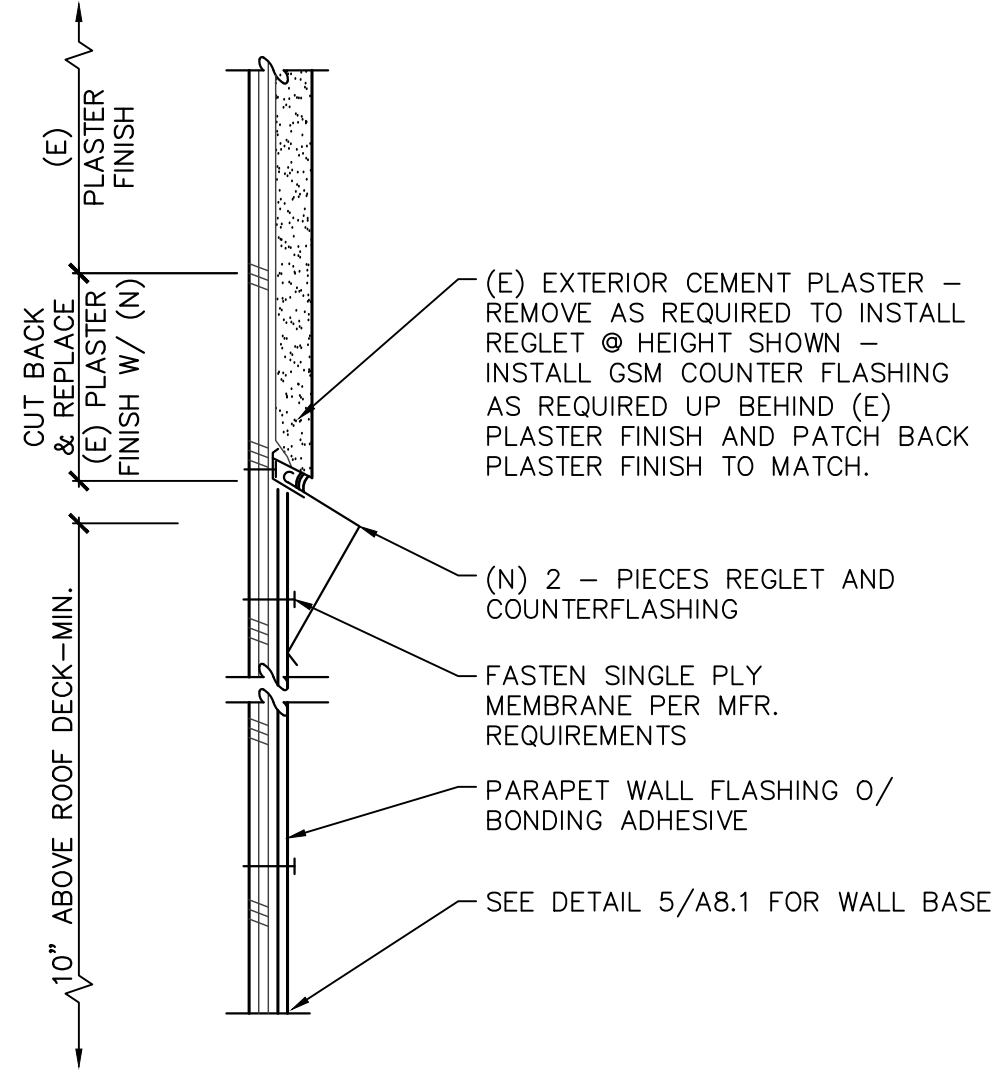
10 HVAC UNIT ENCLOSURE

SCALE: 3/16" = 1'-0"



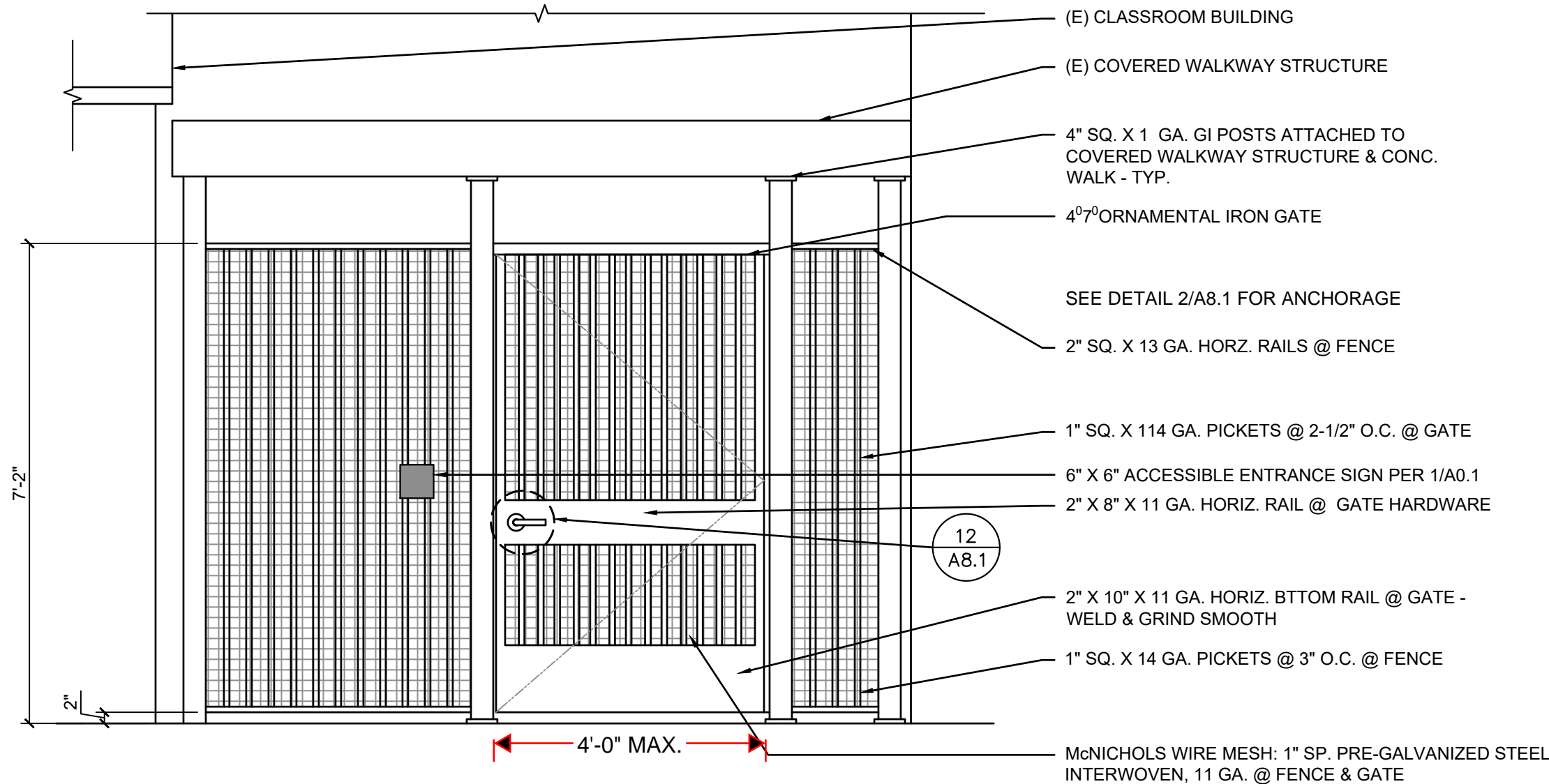
7 2-HR. FIRE RATED WALL

SCALE: 3" = 1'-0"



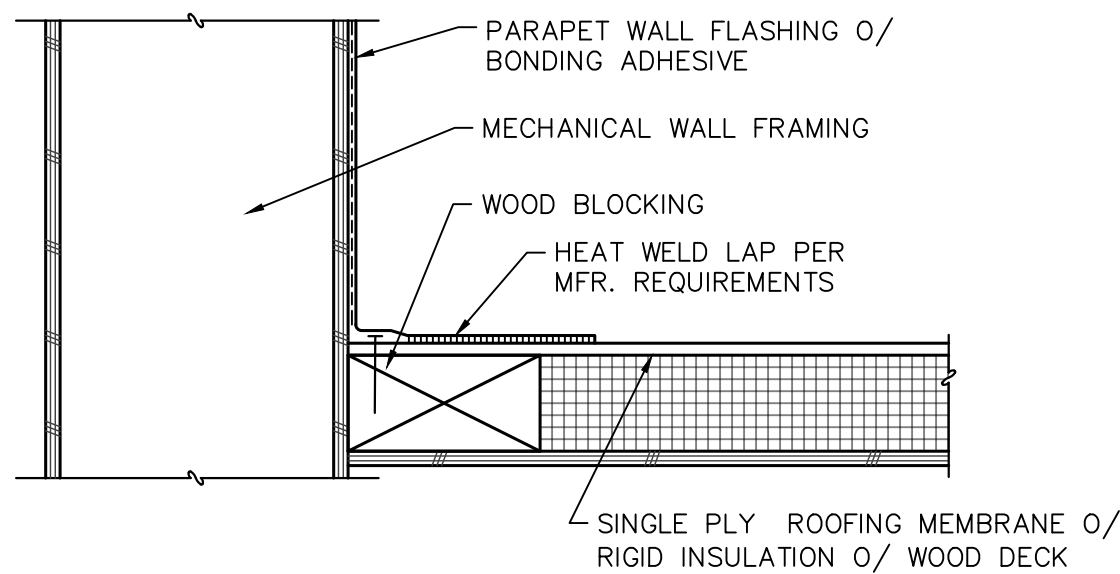
4 CEM. PLASTER TO PARAPET WALL FLASHING

SCALE: N.T.S.



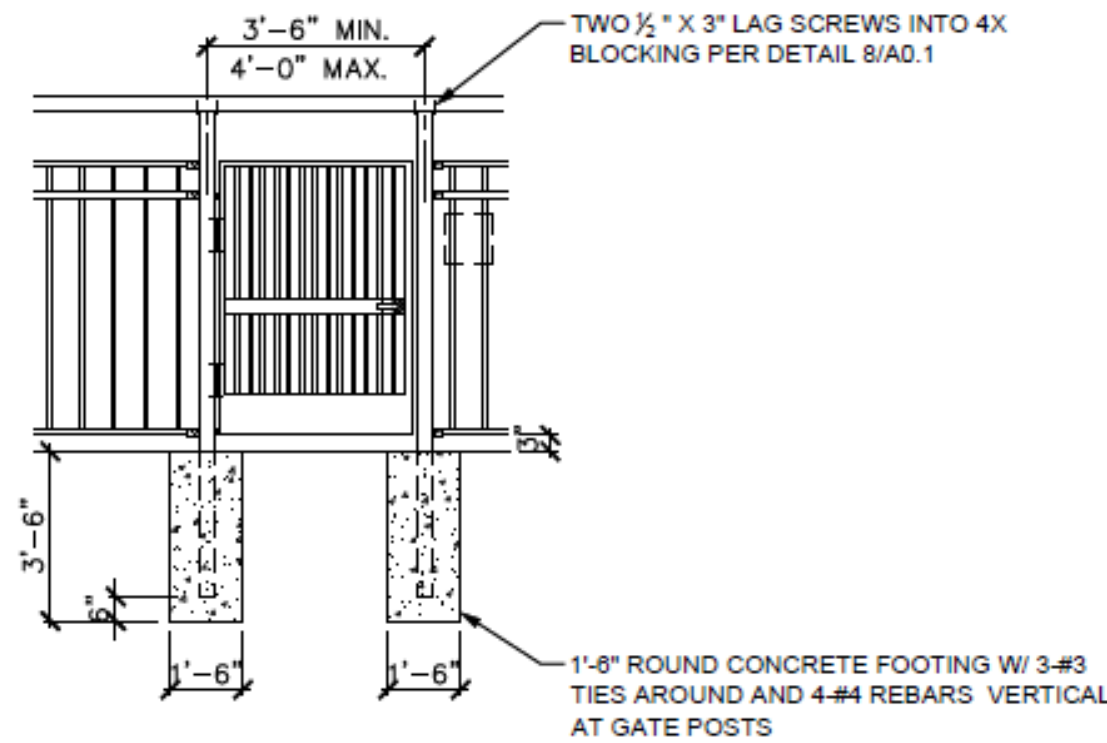
11 ORNAMENTAL FENCE & GATE

SCALE: 1/2" = 1'-0"



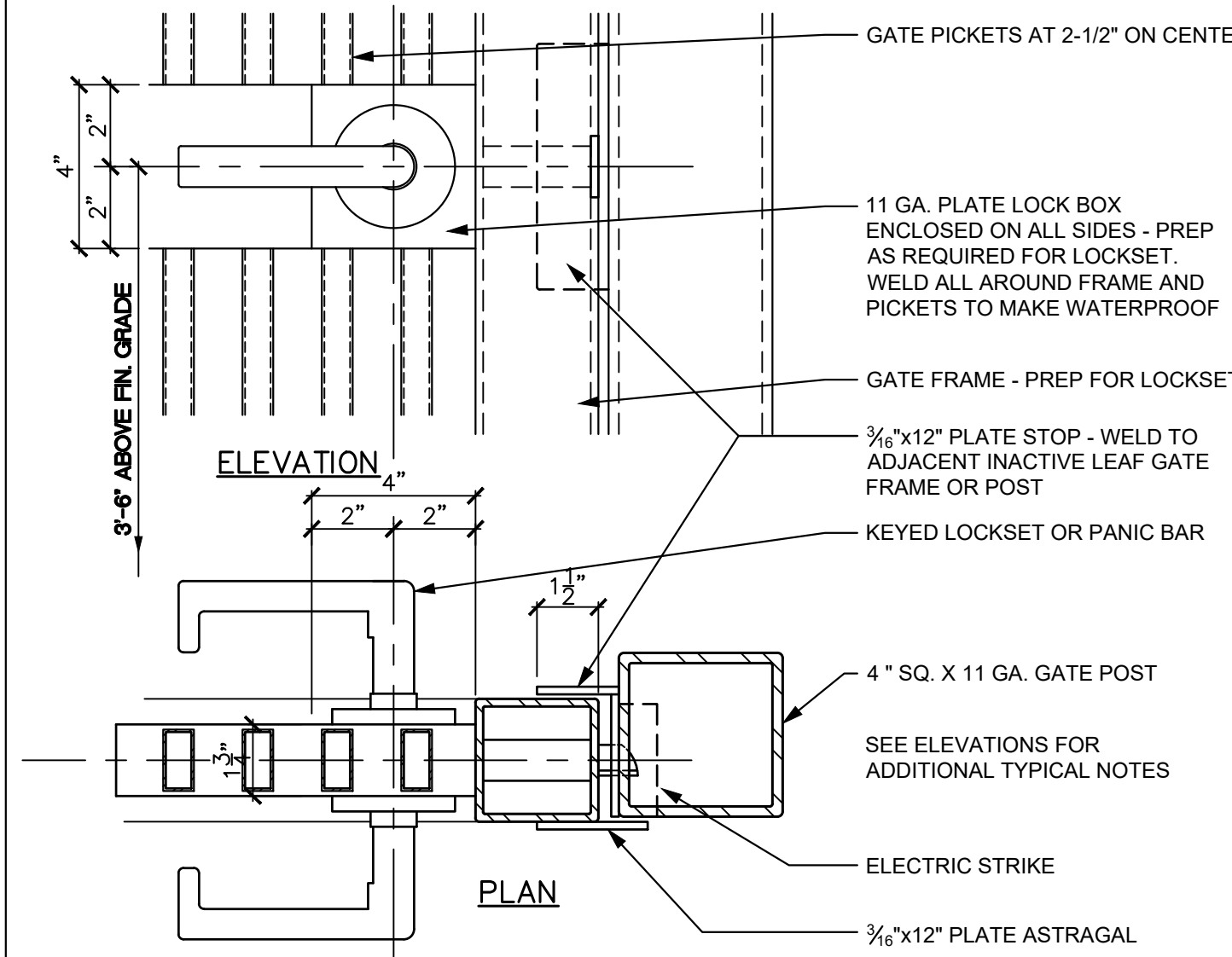
5 ROOF DECK @ PARAPET

SCALE: 3" = 1'-0"



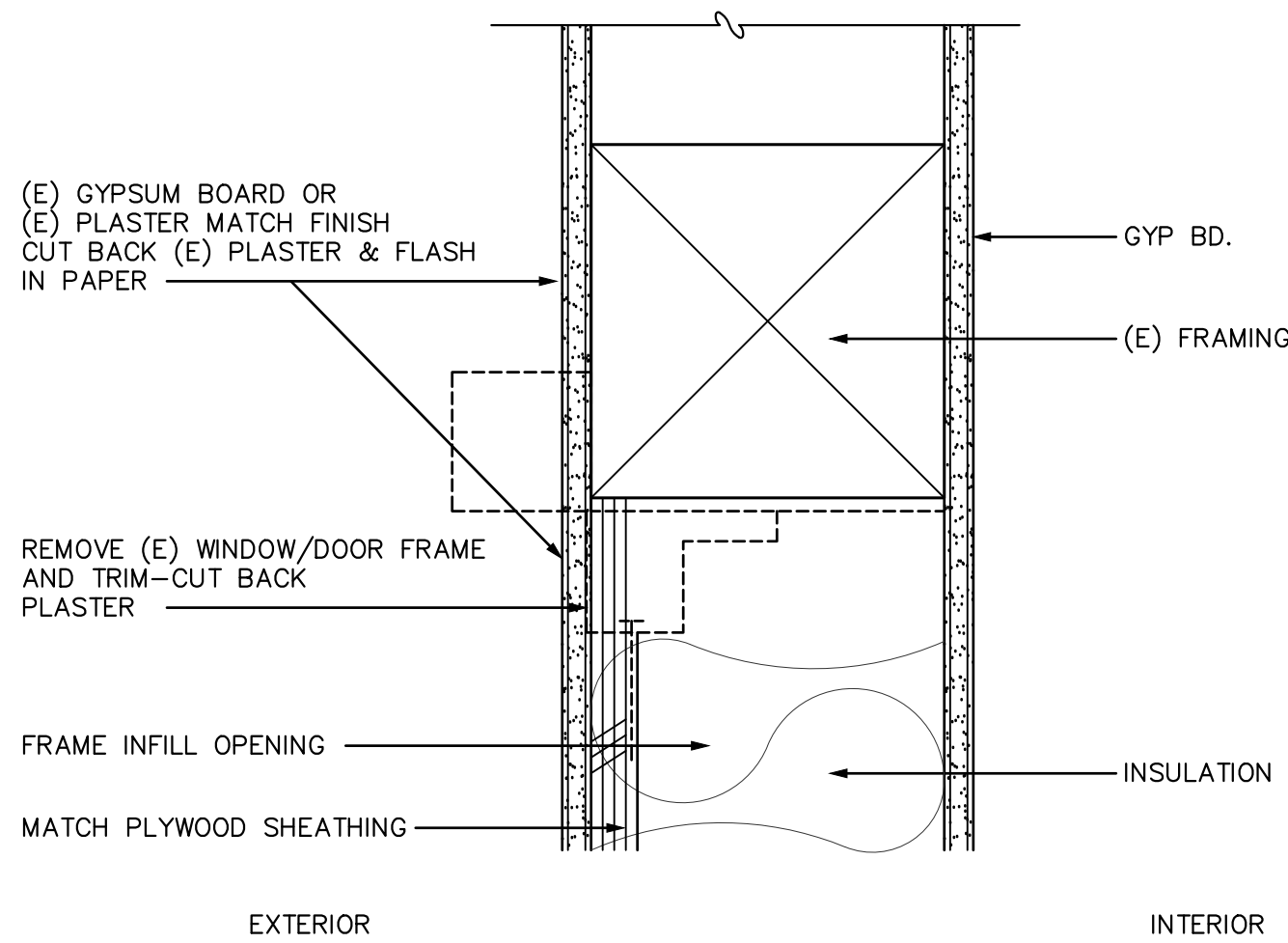
2 GATE ANCHORAGE

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



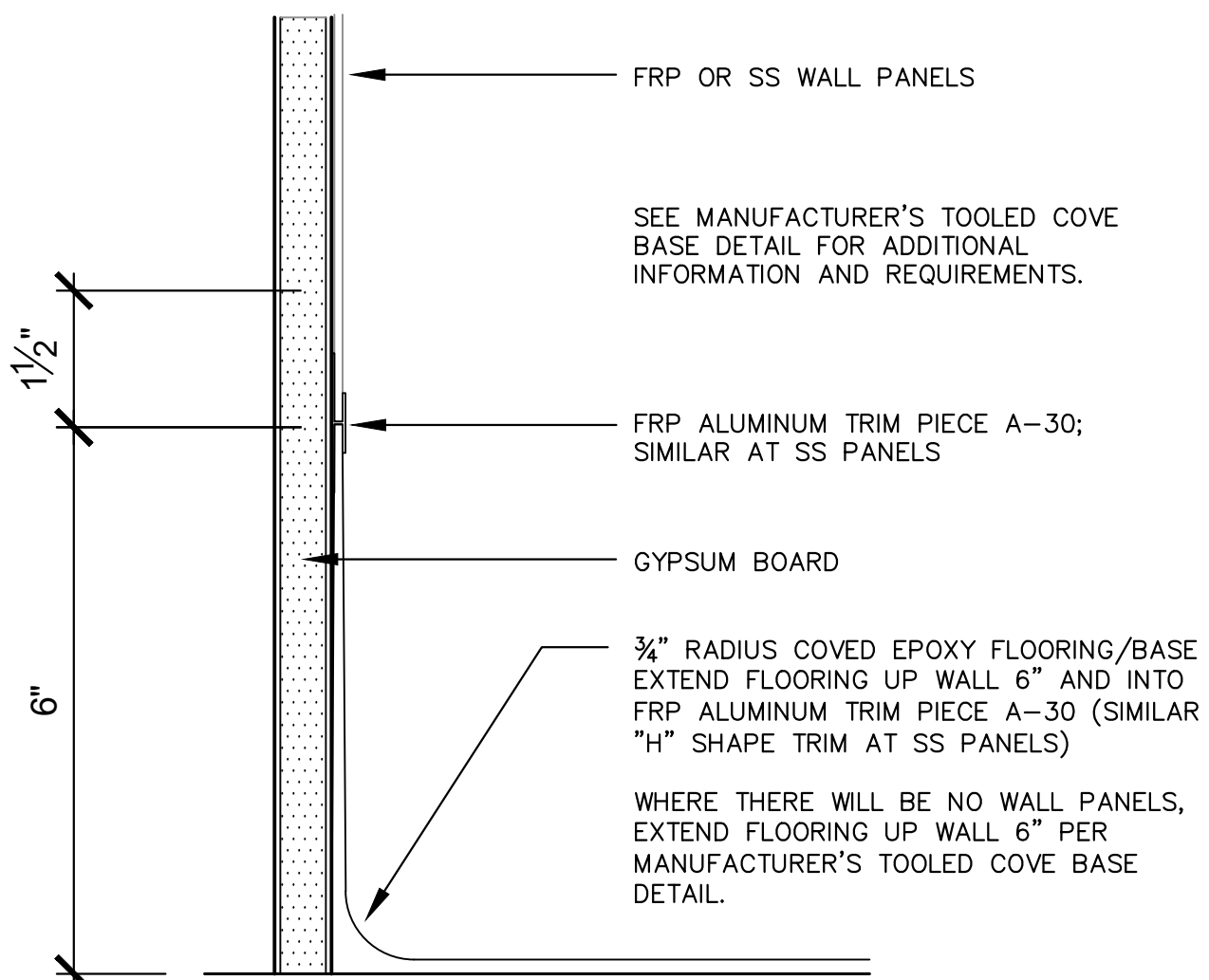
12 GATE LOCK BOX @ SINGLE GATES

SCALE: 3" = 1'-0"



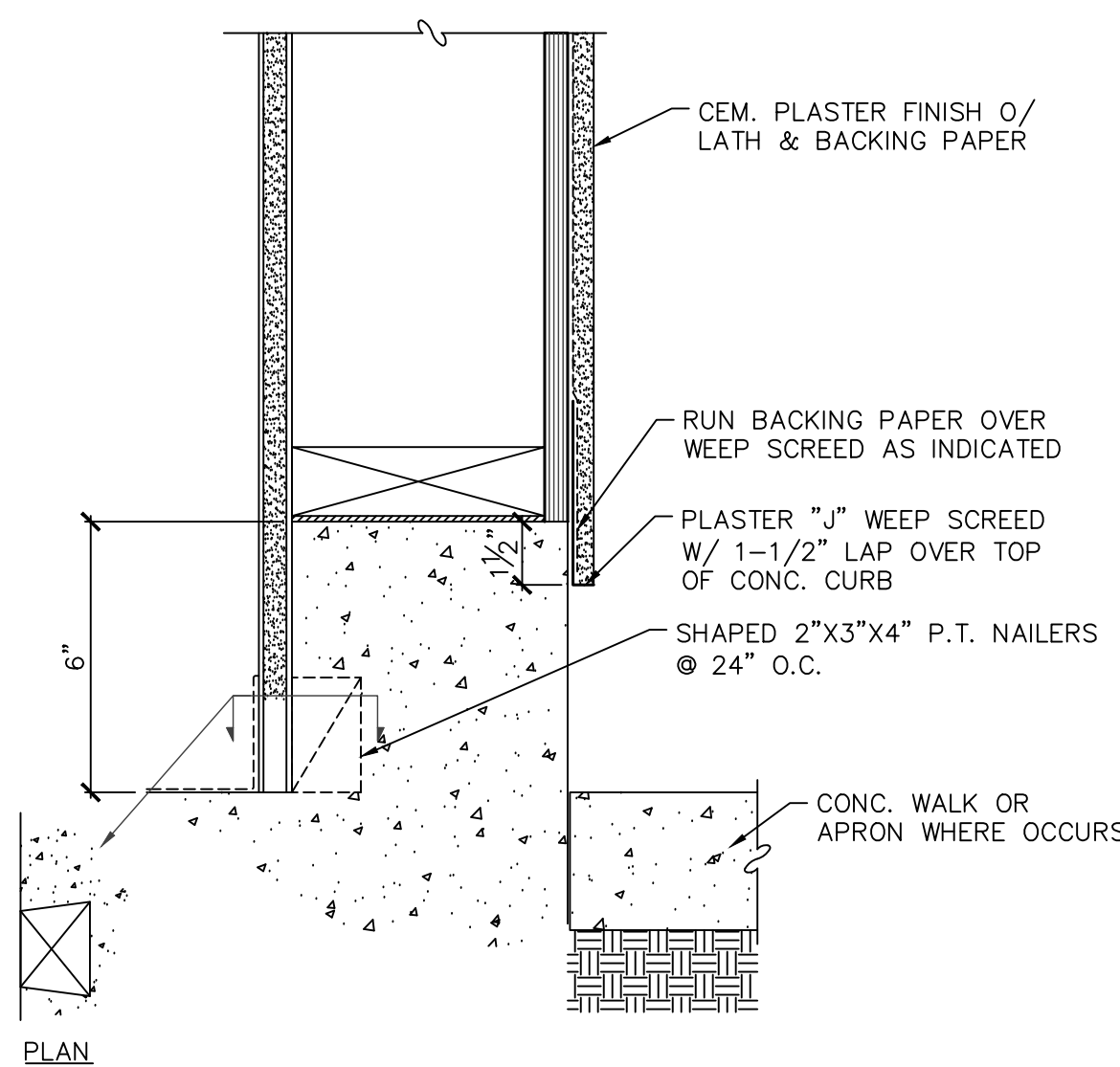
9 WALL INFILL

SCALE: 3" = 1'-0"



6 FIBERGLASS REINFORCED PANEL/STAINLESS STEEL PANEL

SCALE: 3" = 1'-0"

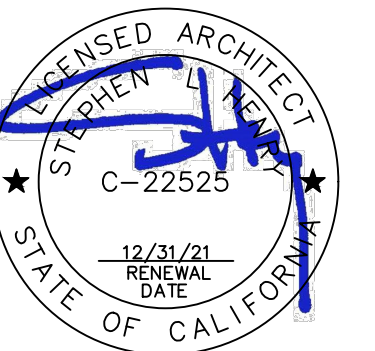


3 CURB @ EXTERIOR WALL

SCALE: 3" = 1'-0"

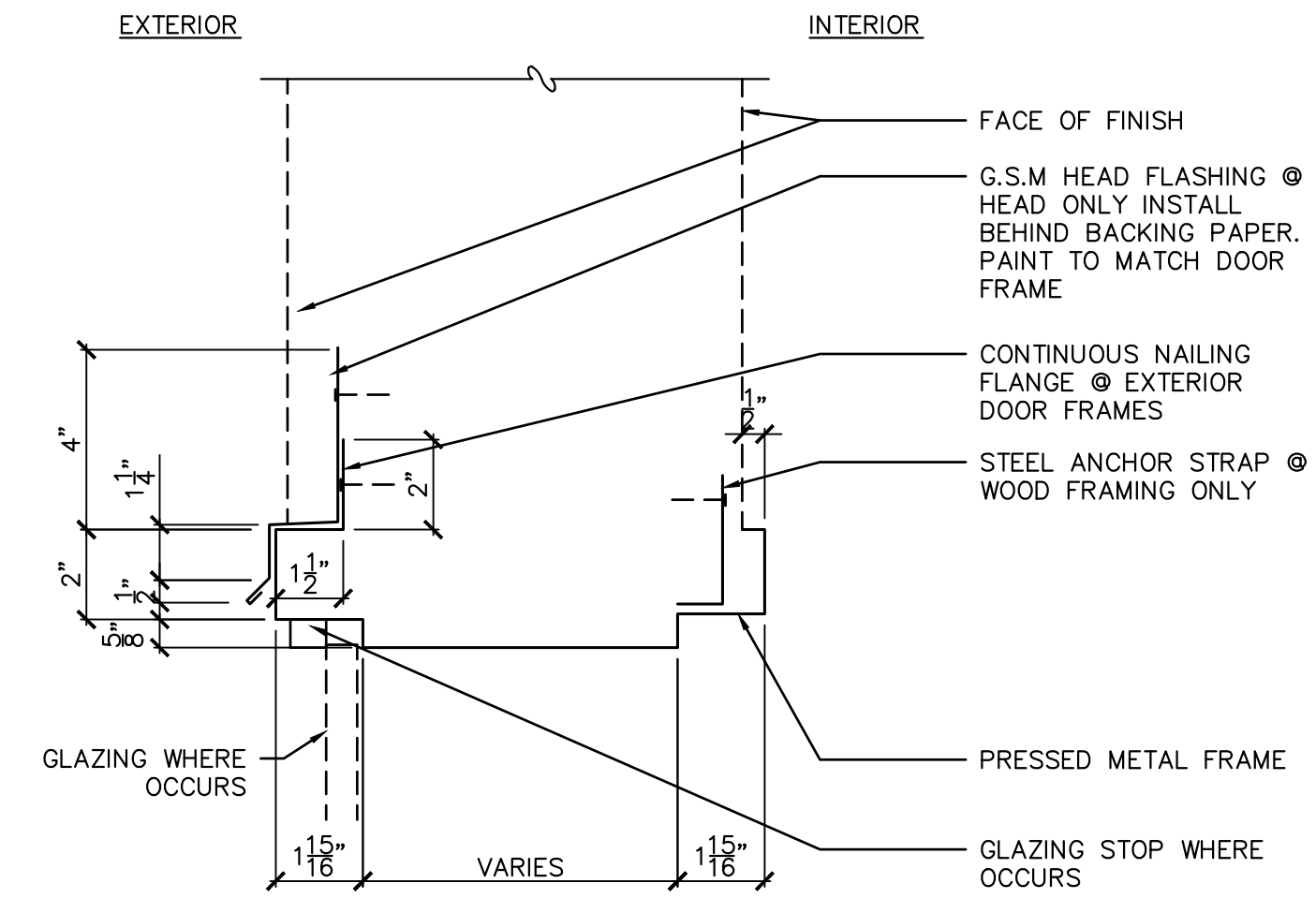


**HENRY+
ASSOCIATES
ARCHITECTS**

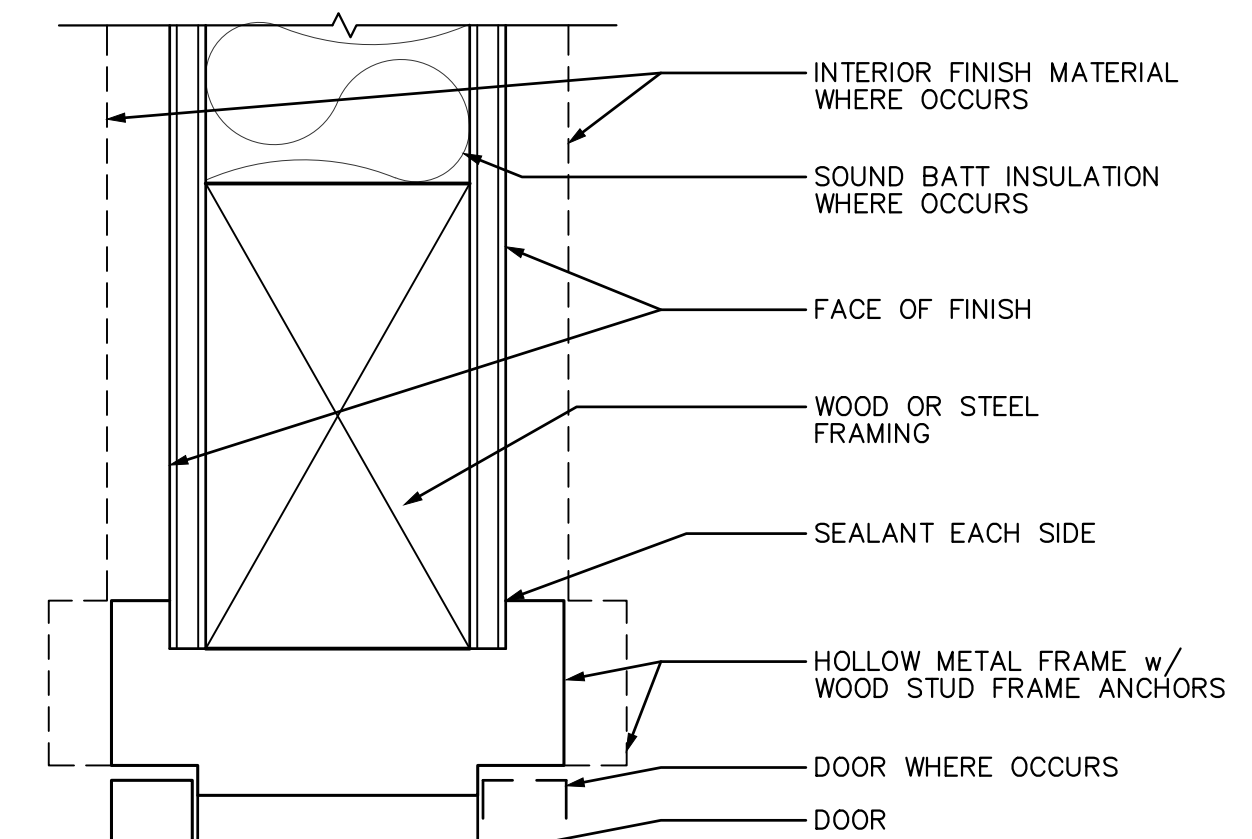



DETAILS

1 OF 71 SHEETS



SCALE: 3" = 1'-0"



NOTE: SEE DETAIL  FOR SIMILAR FRAME DIMENSIONS

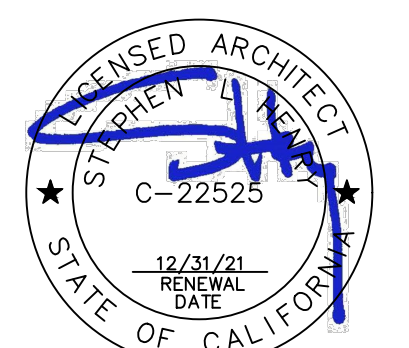
SCALE: 3" = 1'-0"



SCALE: 3" = 1'-0"

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DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC.
REVIEWED FOR
SS ☐ FLS ☐ ACS ☐
DATE: 04/28/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



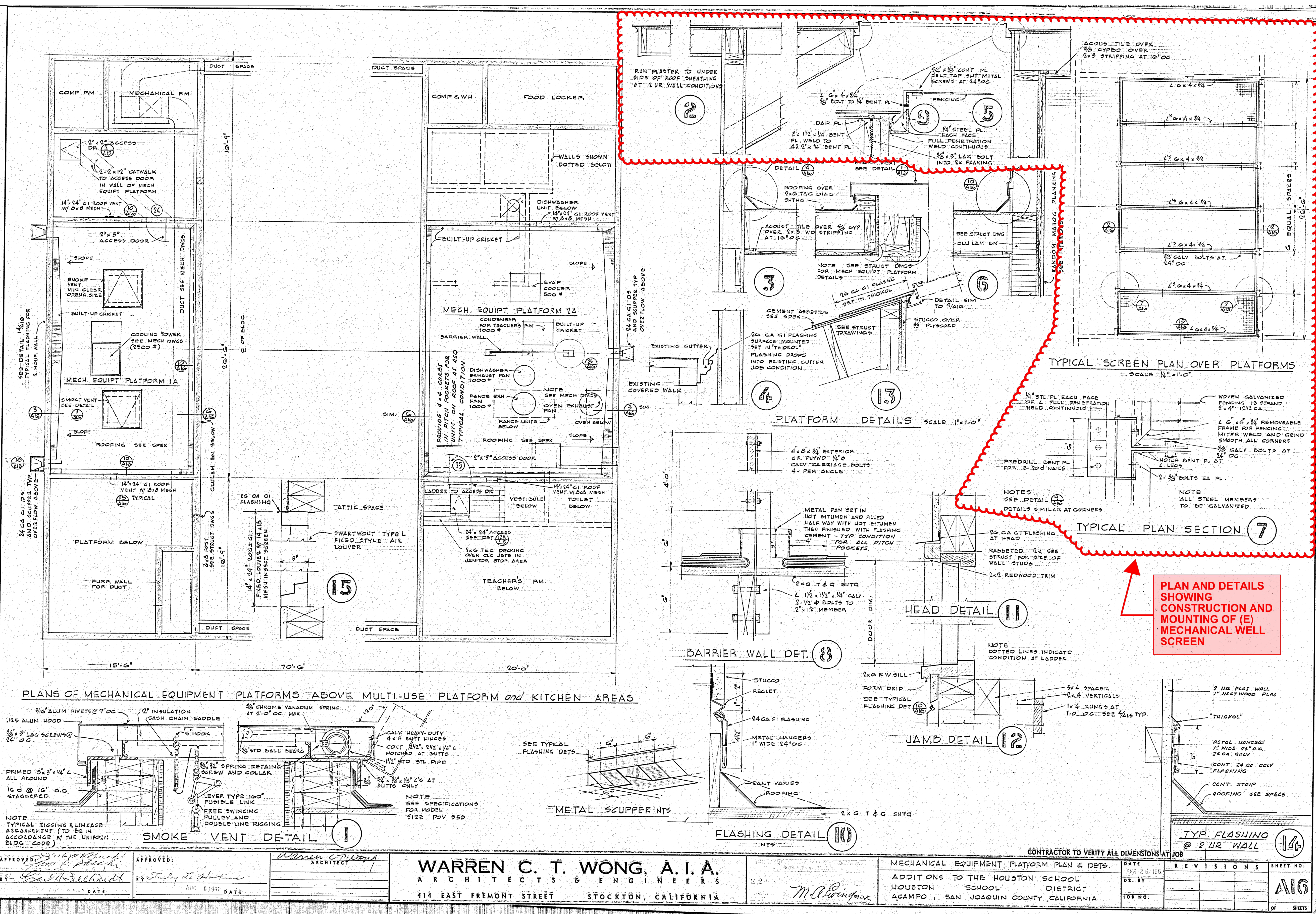
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

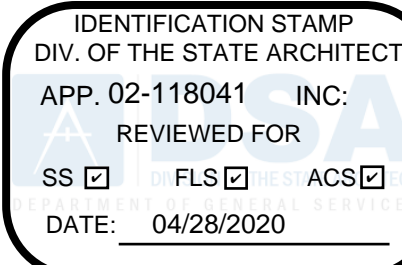
ARCHIVE DRAWING -
EXISTING MECHANICAL
WELL SCREEN

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
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04/10/2020		
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SHEET NO.		

A8.2.1





730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

CONSULTANT

PROJECT NO.	REVISIONS	BY
19-32-050		
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SHEET NO.		

A8.3

1. CEILING SYSTEM GENERAL NOTES:

1.01 Ceiling system components shall comply with ASTM C635-07 and Section 5.1 of ASTM E580-10a.

1.02 The ceiling grid system must be rated heavy duty as defined by ASTM C635-08.

1.03 Ceiling systems. The following ceiling system(s) is/are part of the scope of this project:

Manufacturer's Name: Certainteed Ceilings.

Product Evaluation Report Type and Number: ICC-ES Evaluation Report ESR-3336.

Manufacturer's Model Number - Main Runners: 9/16" Elite Narrow Stab System

-ES 12-12-19
15/16" Classic Stab System
-CS 12-12-20

Manufacturer's catalog number - Cross Runners: 9/16" Elite Narrow Stab System

-ES 2-12-19
-ES 4-12-19
15/16" Classic Stab System
-CS 2-12-20
-CS 4-12-20

1.04 Seismic Wall Clip: Manufacturer's Model Number Certainteed CTSPC-2

1.05 Ceiling panels shall not support any light fixtures, air terminals or devices.

1.06 For ceiling installations utilizing acoustical tile panels of mineral or glass fiber, it is not mandatory to provide 3/4" clearance between the acoustical tile panels and the wall on the sides of the ceiling which are free to slip. For all other ceiling panel types, provide 3/4" clearance between the ceiling panel and the wall on the sides of the ceiling free to slip.

• **MATERIALS:**
2.01 Ceiling wire shall be Class 1 zinc coated (galvanized) carbon steel conforming to ASTM A641-09a. Wire shall be #12 gage (0.106" diameter) with soft temper and minimum tensile strength = 70 ksi.
2.02 Galvanized sheet steel (including that used for metal stud and track compression struts/post) shall conform to ASTM A653-11, or other equivalent sheet steel listed in Section A2.1 of the North American Specification for the Design of Cold-Formed Steel Structural Members 2012, including supplement, dated 2014 (AISI S100-12). Material 43 mil (18 gage) and lighter shall have minimum yield strength of 33 ksi. Material 54 mil (16 gage) and heavier shall have a minimum yield strength of 50 ksi.

2.03 Electrical metallic tube (EMT) shall be ANSI C80.3/UL 797 carbon steel with G90 galvanizing. EMT shall have minimum yield strength (Fy) of 30 ksi and minimum ultimate strength (Fu) of 48 ksi.

• **ATTACHMENT OF HANGER AND BRACING WIRES:**
3.01 Separate all ceiling hanger and bracing wires at least six (6) inches from all unbraced ducts, pipes, conduit, etc.
3.02 Hanger and bracing wires shall not attach to or bend around obstructions including but not limited to: piping, ductwork, conduit and equipment.
3.03 Hanger wires that are more than one (horizontal) in six (vertical) out of plumb shall have counter-sloping wires.
3.04 Slack safety wires shall be considered hanger wires for installation and testing requirements.
3.05 Hanger and bracing wire anchorage to the structure shall be installed in such a manner that the direction of the anchorage aligns closely with the direction of the wire. (e.g. bracing wire ceiling clips must be bent as shown in the details and rotated as required to align closely with the direction of the wire, screw eyes in wood must be installed so they align closely with the direction of the wire, etc.)

• **FASTENERS AND WELDING:**
4.01 Sheet metal screws shall comply with ASTM C1513-10, ASME B18.6.4-98 (R2005). Penetration of screws through joined material shall not be less than three exposed threads.
4.02 Expansion anchors shall be: **[Not applicable to project]**
4.03 Power-Actuated Fasteners shall be: **[Not applicable to project]**
4.04 If not otherwise specified in the evaluation report, power-actuated fasteners installed in steel shall be installed so the entire pointed end of the fastener is driven through the steel member.
4.05 Power-actuated fasteners in concrete are not permitted for bracing wires.

4.06 Concrete reinforcement and prestressing tendons shall be located by non-destructive means prior to installing post - installed anchor.
4.07 Welding shall be in accordance with AWS D1.3 using E60XX series electrodes.

• **TESTING:** All field testing must be performed in the presence of the project inspector.

5.01 Post-installed anchors in concrete used to support hanger wires shall be tested at a frequency of 10 percent. Power actuated fasteners in concrete shall be field tested for 200 lbs. in tension. All other post-installed anchors in concrete shall be tested in accordance with CBC Section 1910A.5.

5.02 Post-installed anchors in concrete used to attach bracing wires shall be tested at a frequency of 50 percent in accordance with CBC Section 1910A.5.

• **LIGHT FIXTURES:**

6.01 All light fixtures shall be positively attached to the ceiling suspension systems by mechanical means to resist a horizontal force equal to the weight of the fixture. A minimum of two screws or approved fasteners are required at each light fixture, per ASTM E580, Section 5.3.1.

6.02 Surface-mounted light fixtures shall be attached to the main runner with at least two positive clamping devices. The clamping device shall completely surround the supporting ceiling runner and be made of steel with a minimum thickness of #14 gage. Rotational spring catches do not comply. A #12 gage slack safety wire shall be connected from each clamping device to the structure above. Provide additional supports when light fixtures are eight (8) feet or longer or exceed 56 lb. Maximum spacing between supports shall not exceed eight (8) feet.

6.03 Not used.

6.04 Light fixtures weighing less than or equal to 10 lb. shall have a minimum of one (1) #12 gage slack safety wire connected from the fixture housing to the structure above.

6.05 Light fixtures weighing greater than 10 lb. but less than or equal to 56 lbs. may be supported directly on the ceiling runners, but they shall have a minimum of two (2) #12 gage slack safety wires connected from the fixture housing at diagonal corners to the structure above.

Exception: All light fixtures greater than two by four feet weighing less than 56 lbs. shall have a #12 gage slack safety wire at each corner.

6.06 All Light fixtures weighing greater than 56 lb. shall be independently supported by not less than four (4) taut #12 gage hanger wires (one at each corner) attached from the fixture housing to the structure above or other approved hangers. The four (4) taut #12 gage wires or other approved hangers, including their attachment to the structure above, shall be capable of supporting four (4) times the weight of the fixture.

• **SERVICES WITHIN THE CEILING:**

7.01 All flexible sprinkler hose fitting mounting brackets, ceiling-mounted air terminals or other services shall be positively attached to the ceiling suspension systems by mechanical means. Screws or approved fasteners are required. A minimum of two attachments are required at each component.

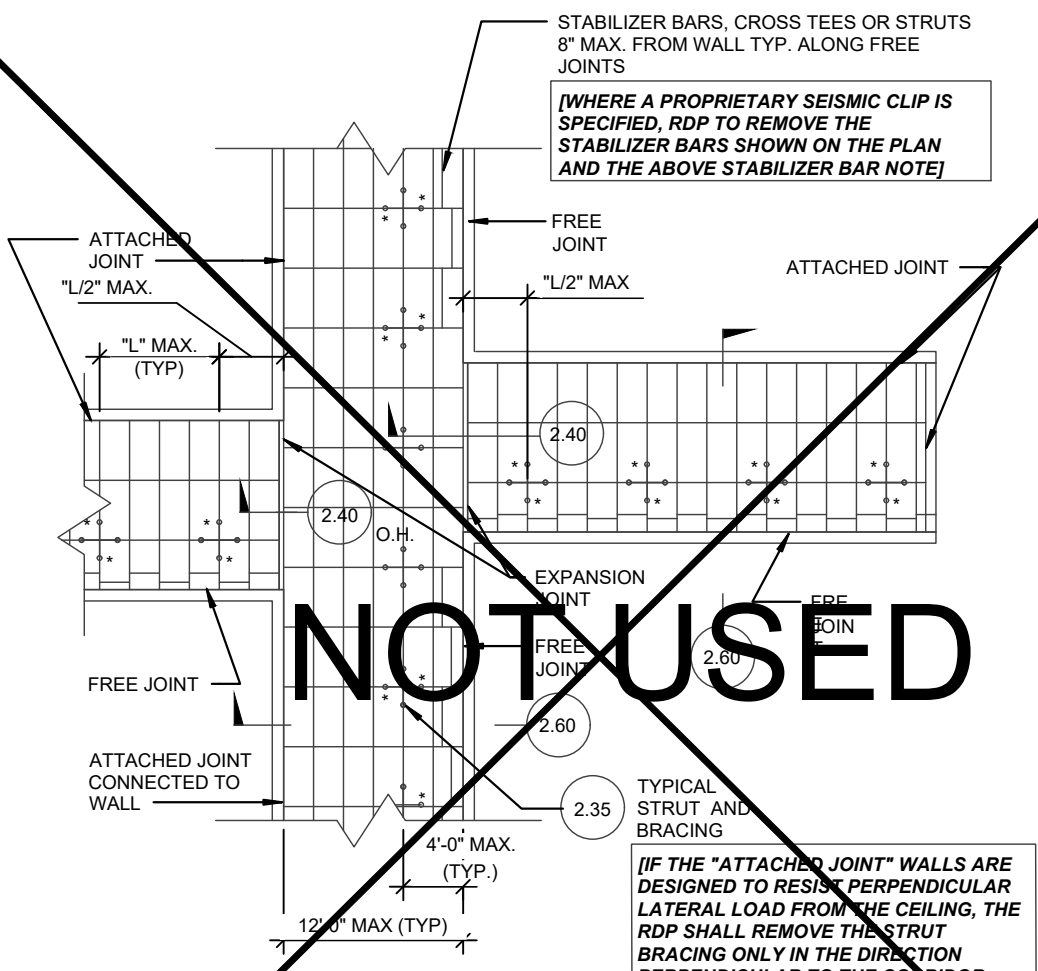
7.02 Ceiling-mounted air terminals or other services weighing less than or equal to 20 lb. shall have one (1) #12 gage slack safety wire attached from the terminal or service to the structure above.

7.03 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 20 lb. but less than or equal to 56 lb. shall have two (2) #12 gage slack safety wires (at diagonal corners) connected from the terminal or service to the structure above.

7.04 Flexible sprinkler hose fittings, ceiling-mounted air terminals or other services weighing more than 56 lb. shall be supported directly from the structure above by not less than four (4) taut #12 gage hanger wires attached from the terminal or service to the structure above or other approved hangers.

• **OTHER DEVICES WITHIN THE CEILING:**

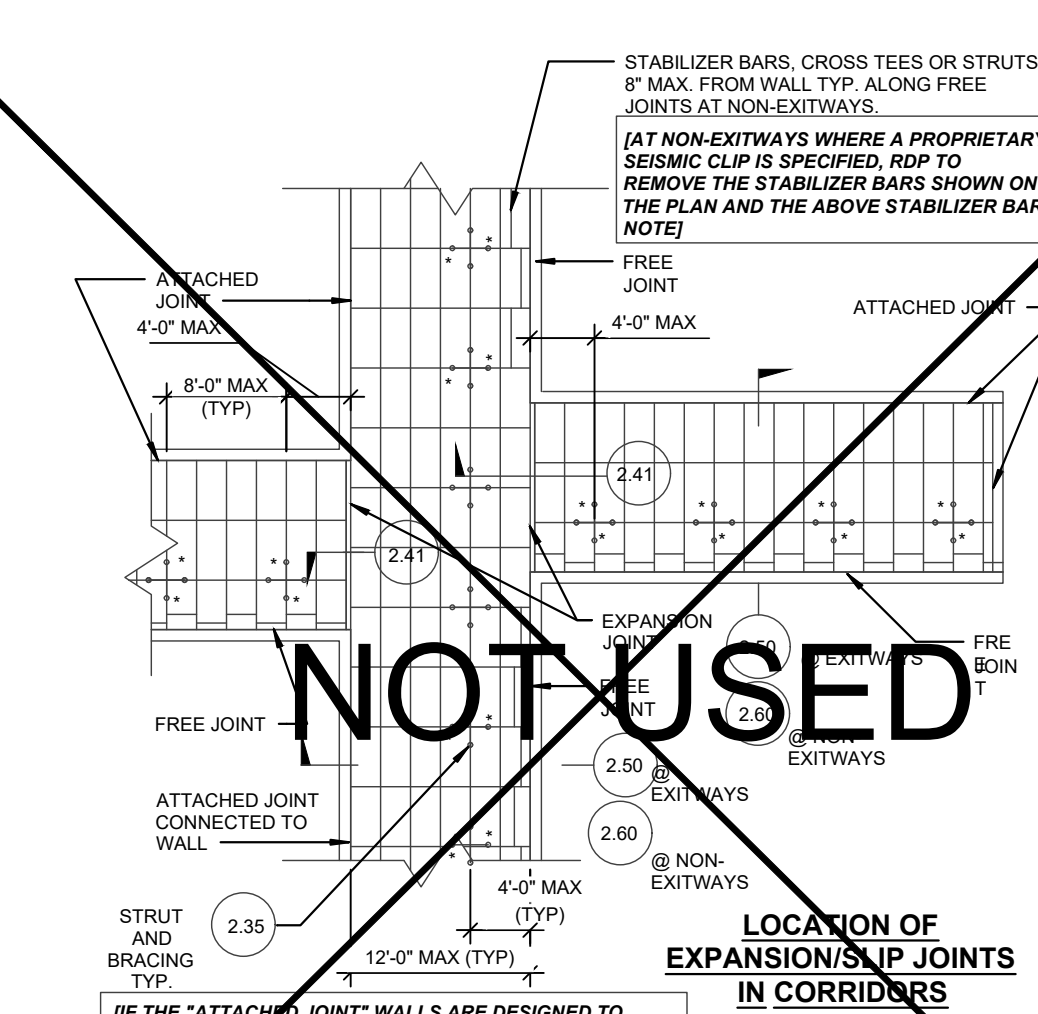
8.01 All lightweight miscellaneous devices, such as strobe lights, occupancy sensors, speakers, exit signs, etc., shall be attached to the ceiling grid. In addition, devices weighing more than 10 lbs. shall have a #12 gage slack safety wire anchored to the structure above. Devices weighing more than 20 lb. shall be supported independently from the structure above.



2.30 SUSPENDED ACOUSTICAL CEILING-CORRIDOR CEILING PLAN (SCHOOLS)
SCALE: N.T.S.

NOTES:
1. "L" MAX. BRACE ASSEMBLY SPACING PER CEILING PLAN DETAIL, FOR EXAMPLE, WHERE 8' X 12' SPACING IS SPECIFIED, USE "L" = 8'.

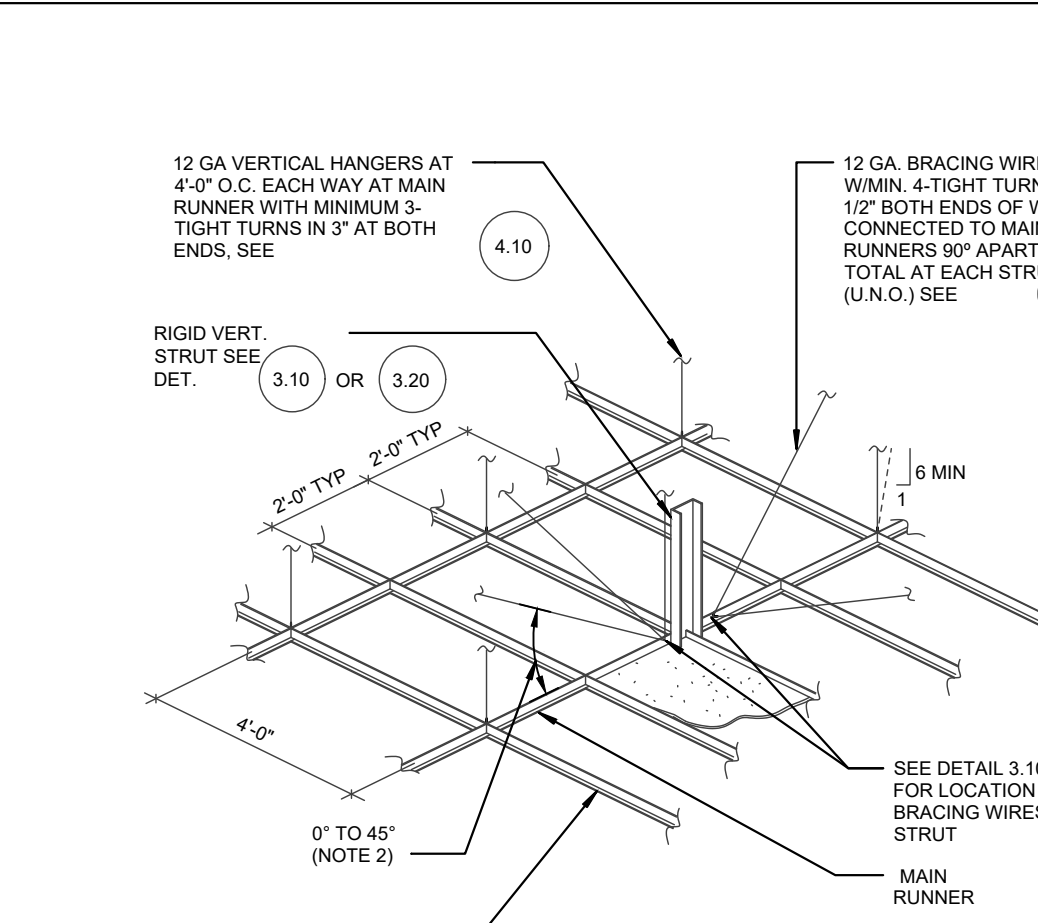
2.30 SUSPENDED ACOUSTICAL CEILING-CORRIDOR CEILING PLAN (SCHOOLS)
SCALE: N.T.S.



2.31 SUSPENDED ACOUSTICAL CEILING-CORRIDOR CEILING PLAN (ESSENTIAL SERVICE BUILDINGS)
SCALE: N.T.S.

NOTES:
1. "L" MAX. BRACE ASSEMBLY SPACING PER CEILING PLAN DETAIL, FOR EXAMPLE, WHERE 8' X 12' SPACING IS SPECIFIED, USE "L" = 8'.

2.31 SUSPENDED ACOUSTICAL CEILING-CORRIDOR CEILING PLAN (ESSENTIAL SERVICE BUILDINGS)
SCALE: N.T.S.



2.35 SUSPENDED CEILING - SUSPENSION AND BRACING ASSEMBLY
SCALE: N.T.S.

NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS

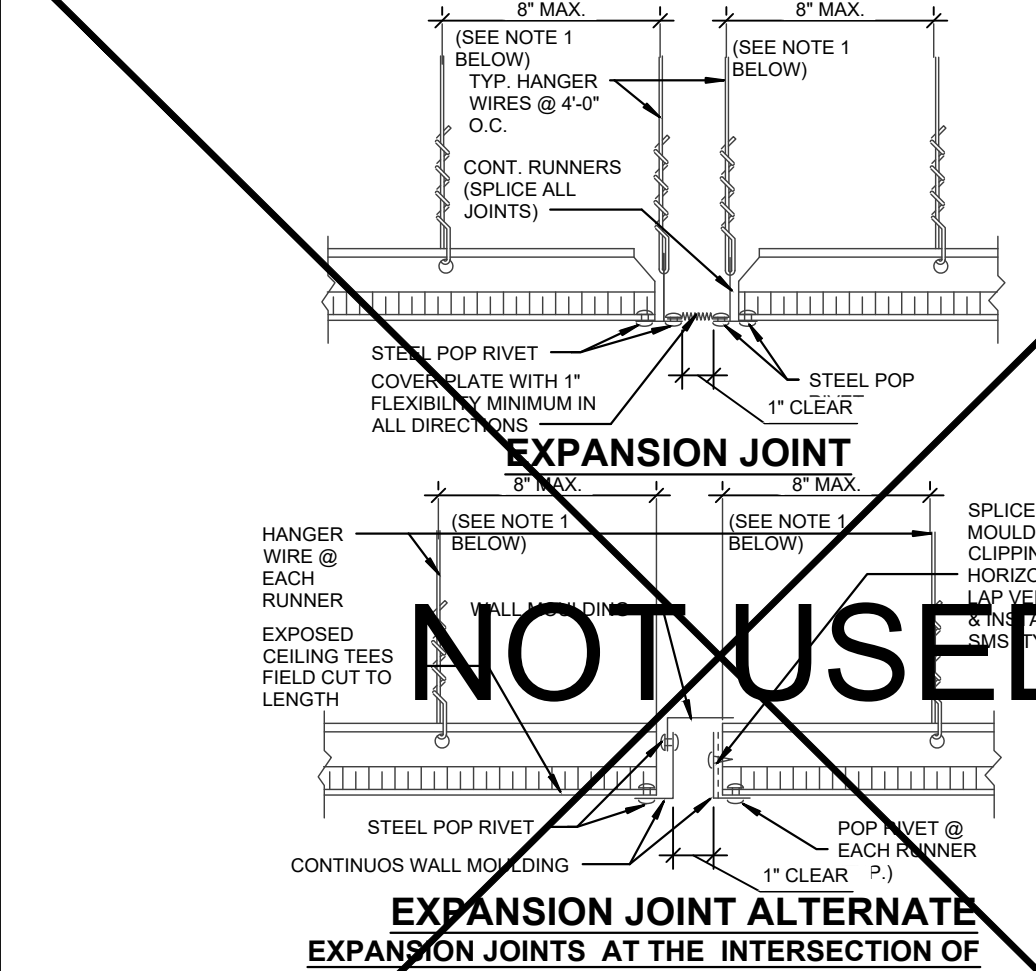
SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS

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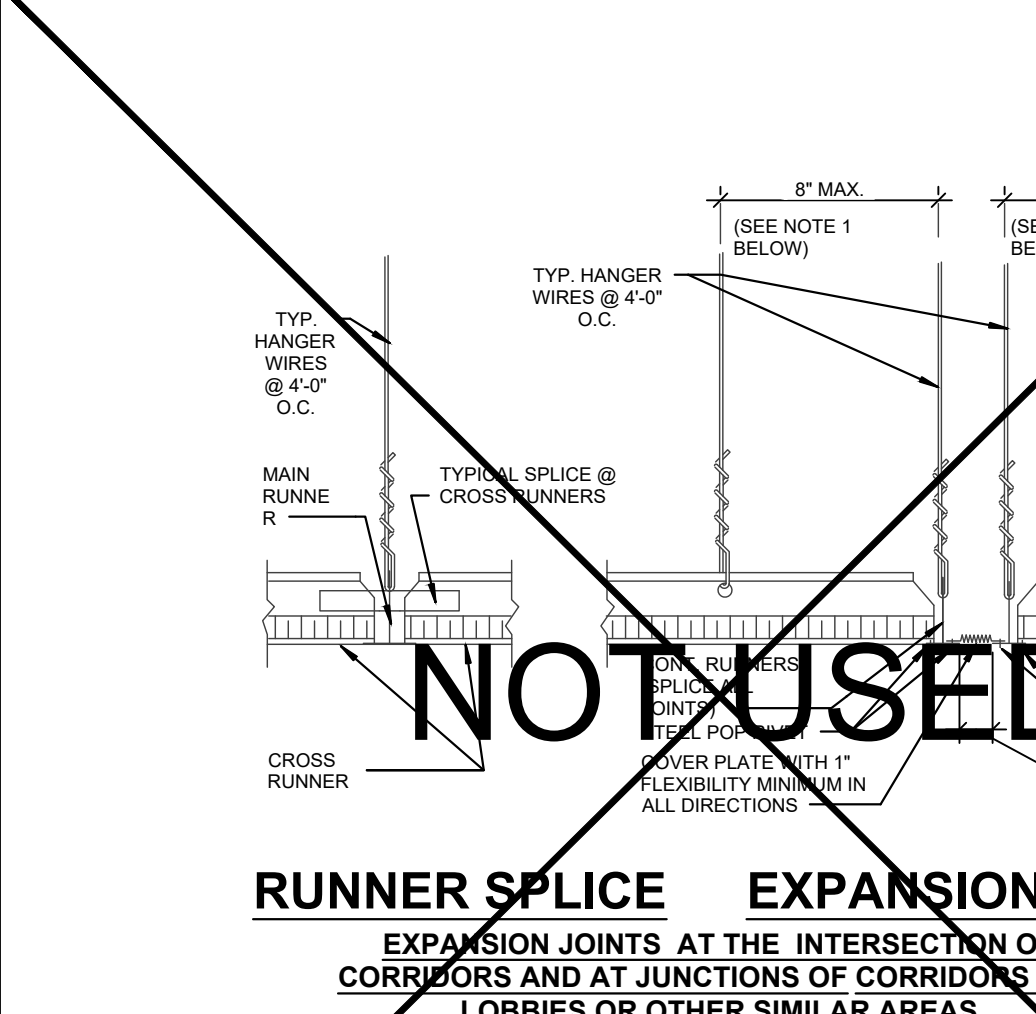
SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS



2.40 SUSPENDED ACOUSTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS
SCALE: N.T.S.

NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

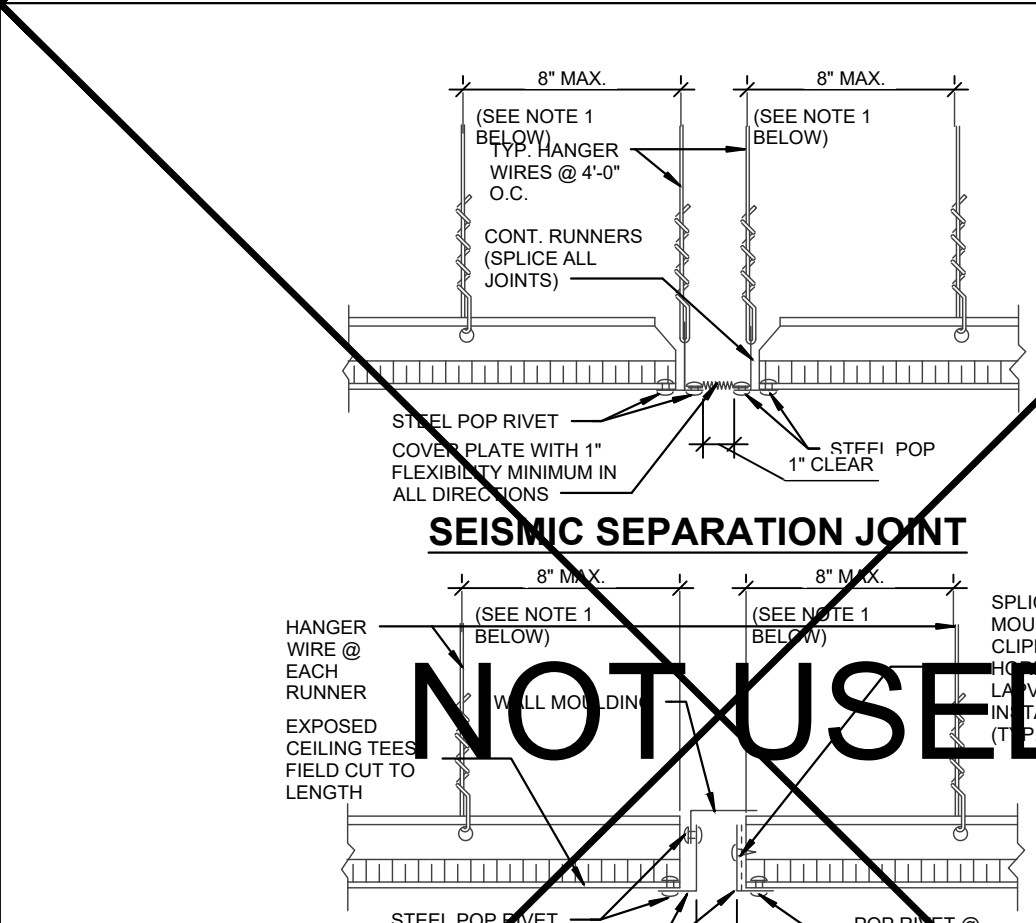
2.40 SUSPENDED ACOUSTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS
SCALE: N.T.S.



2.41 SUSPENDED ACOUSTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS (ESSENTIAL SERVICE BUILDINGS)
SCALE: N.T.S.

NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

2.41 SUSPENDED ACOUSTICAL CEILING - EXPANSION JOINT AT INTERSECTIONS (ESSENTIAL SERVICE BUILDINGS)
SCALE: N.T.S.



2.45 SUSPENDED ACOUSTICAL CEILING - SEISMIC SEPARATION JOINT
SCALE: N.T.S.

NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS. FOR THE PERIMETER OF THE CEILING AREA, PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.

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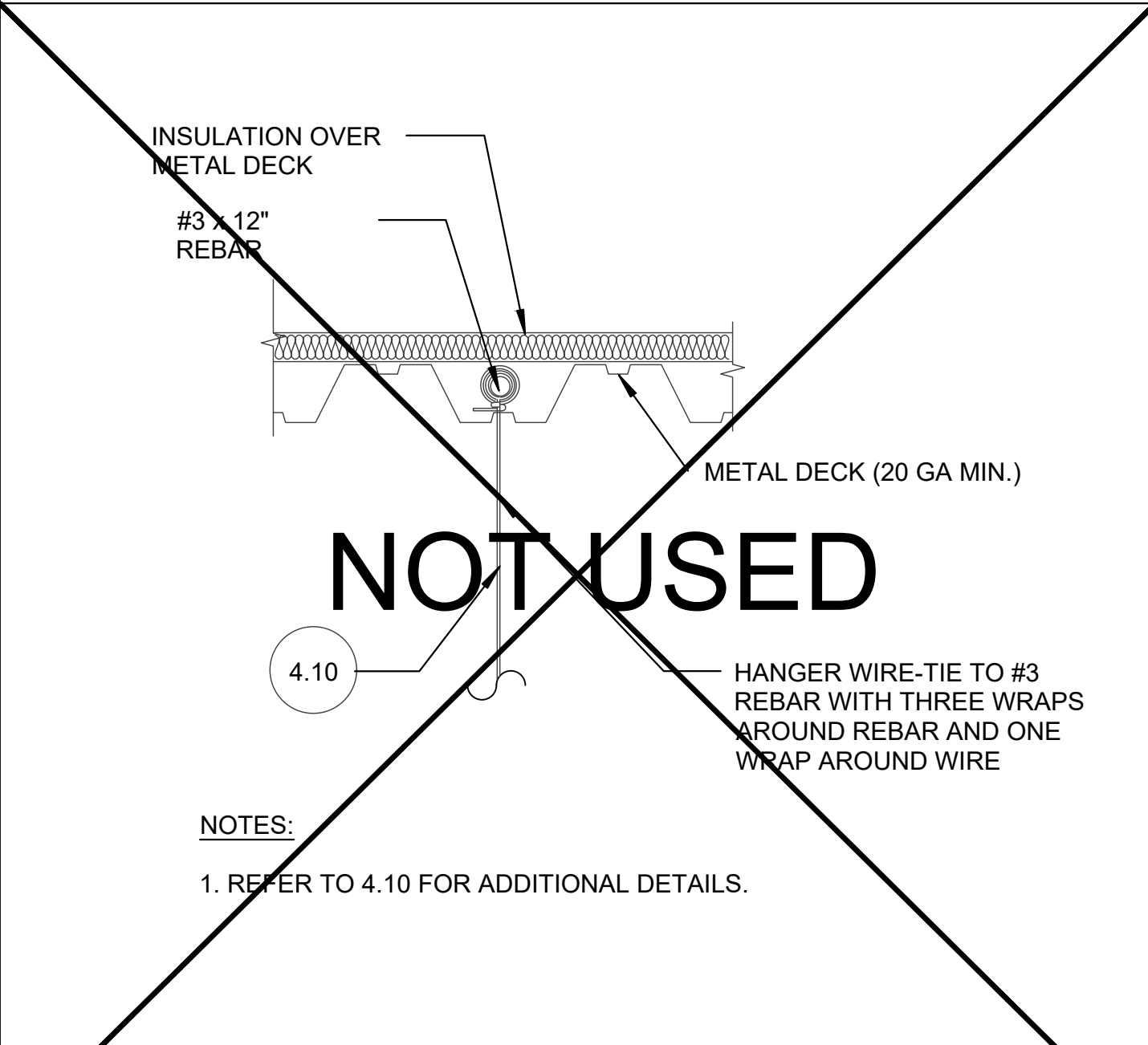
NOTES:
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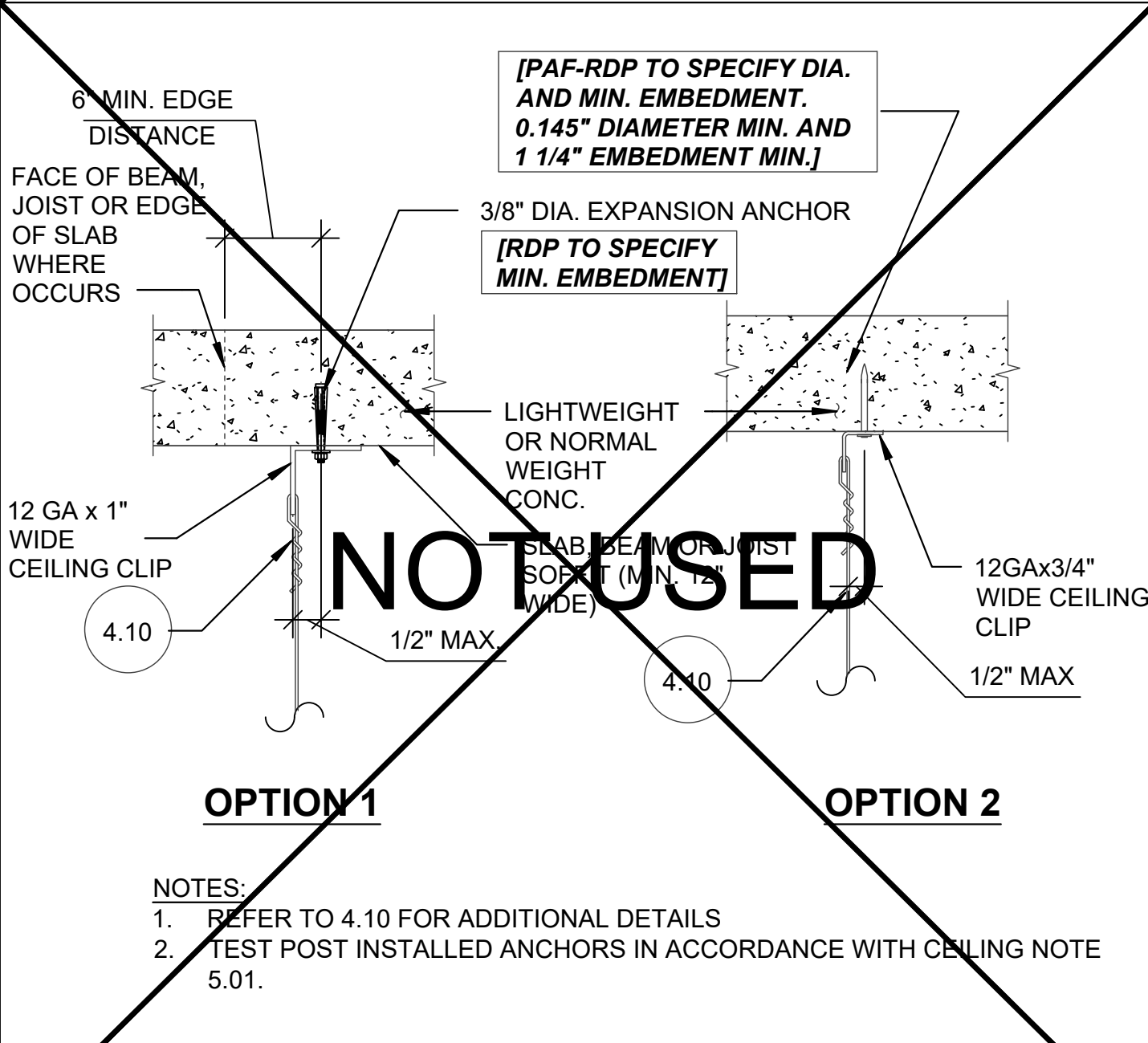
STRUCTURAL CONDITION OF FLOOR/ ROOF ABOVE	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
METAL DECK	4.20	4.30
CONCRETE OVER	4.21	4.31
CONCRETE SLAB, BEAM, OR JOIST	4.22	4.32
STRUCTURAL	4.23	4.33
METAL STUD	4.24	4.34
SAWN	4.25, 4.29	4.35
WOOD I	4.26	4.36, 4.37
WOOD CHORD	4.27, 4.29	4.38, 4.29
OPEN WEB STEEL	4.28, 4.29	4.39, 4.29

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8 FOR SUSPENDED ACOUSTICAL CEILING DETAILS

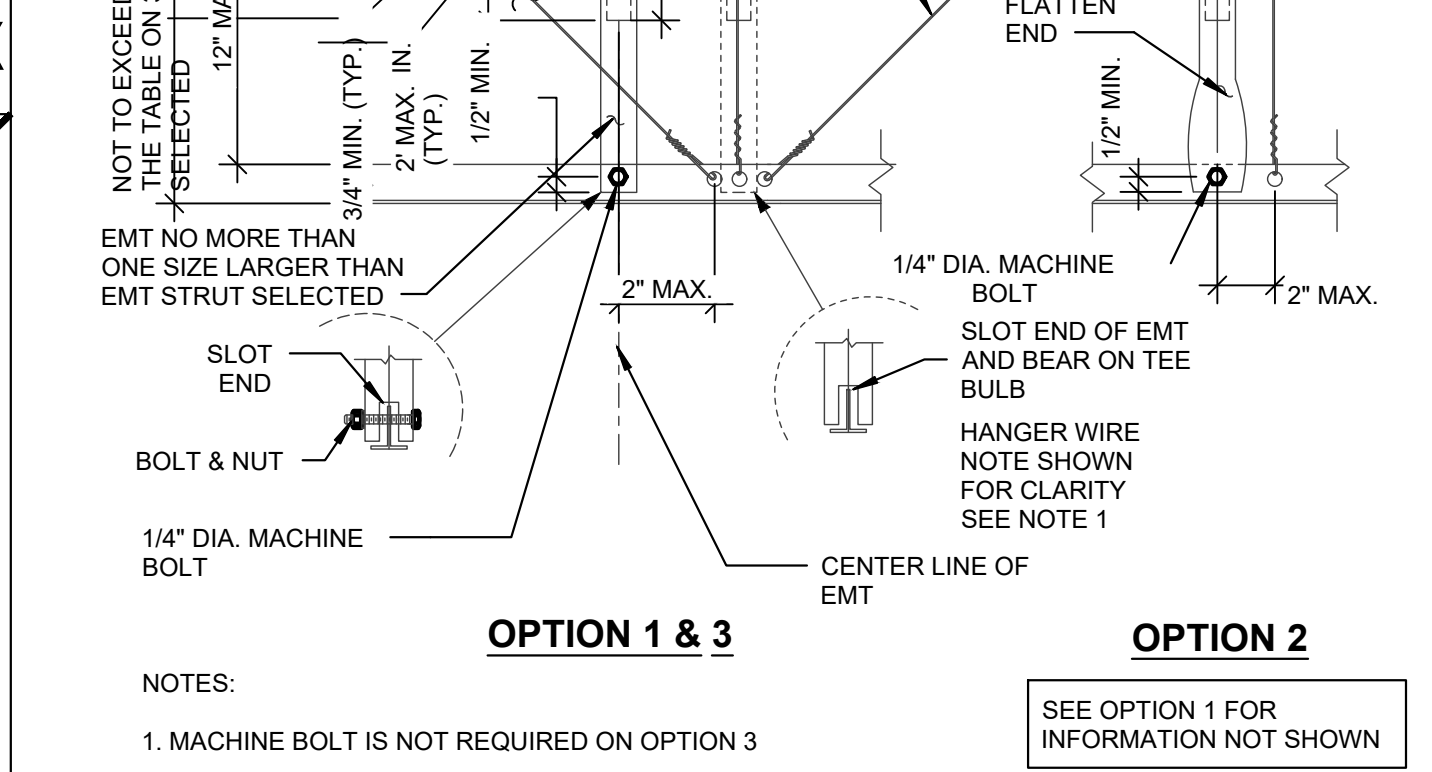
4.11 HANGER AND BRACING WIRE CONNECTION MATRIX
SCALE: N.T.S.



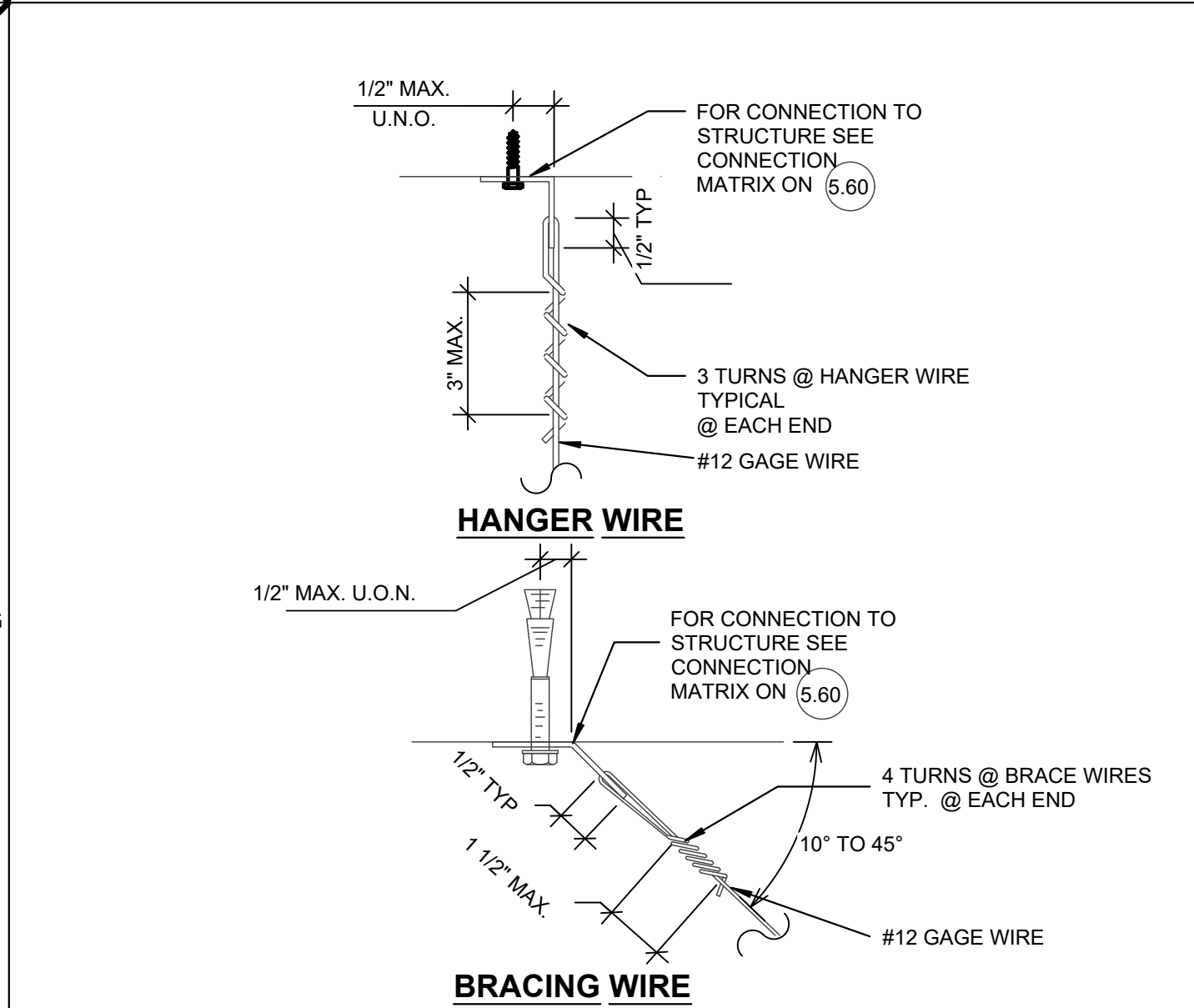
4.20 HANGER WIRE CONNECTION TO METAL DECK
SCALE: N.T.S.



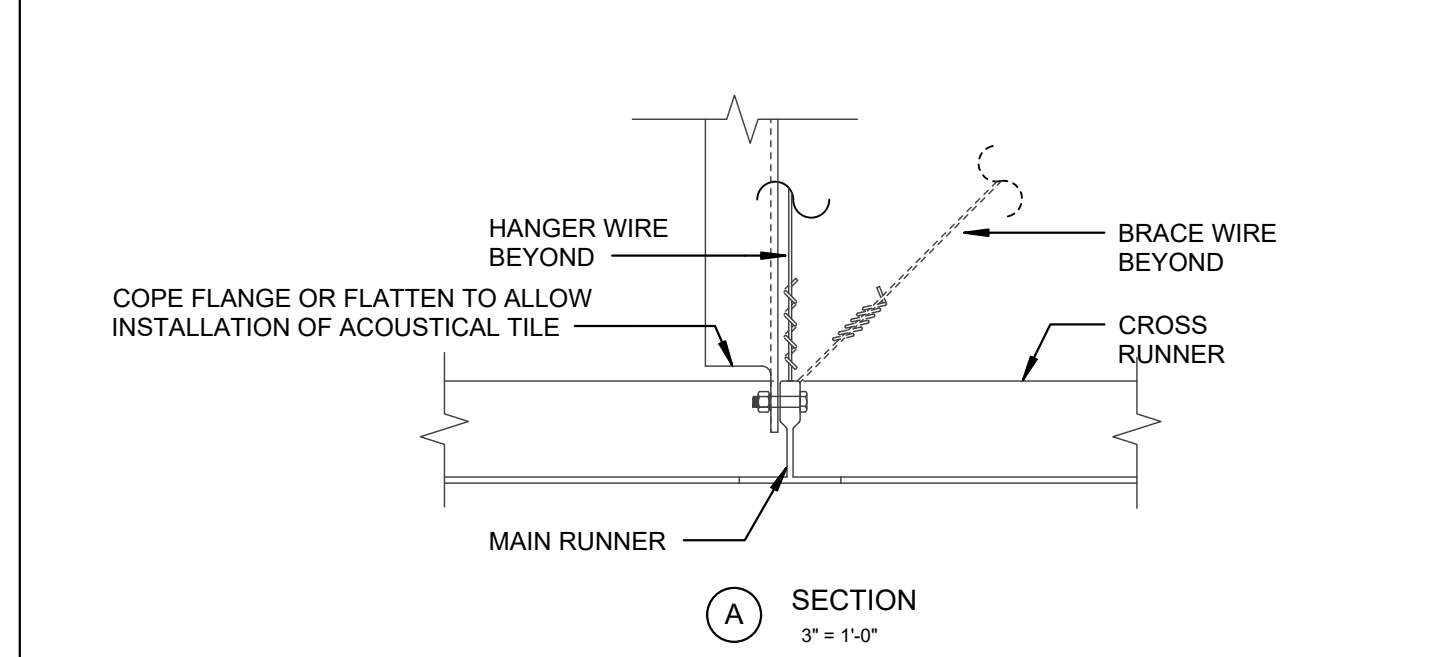
4.22 HANGER WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST
SCALE: N.T.S.



3.20 SUSPENDED ACOUSTICAL CEILING - EMT TYPE STRUT
SCALE: N.T.S.



4.10 HANGER AND BRACING WIRE CONNECTION - TYP. WIRE TURNS
SCALE: N.T.S.

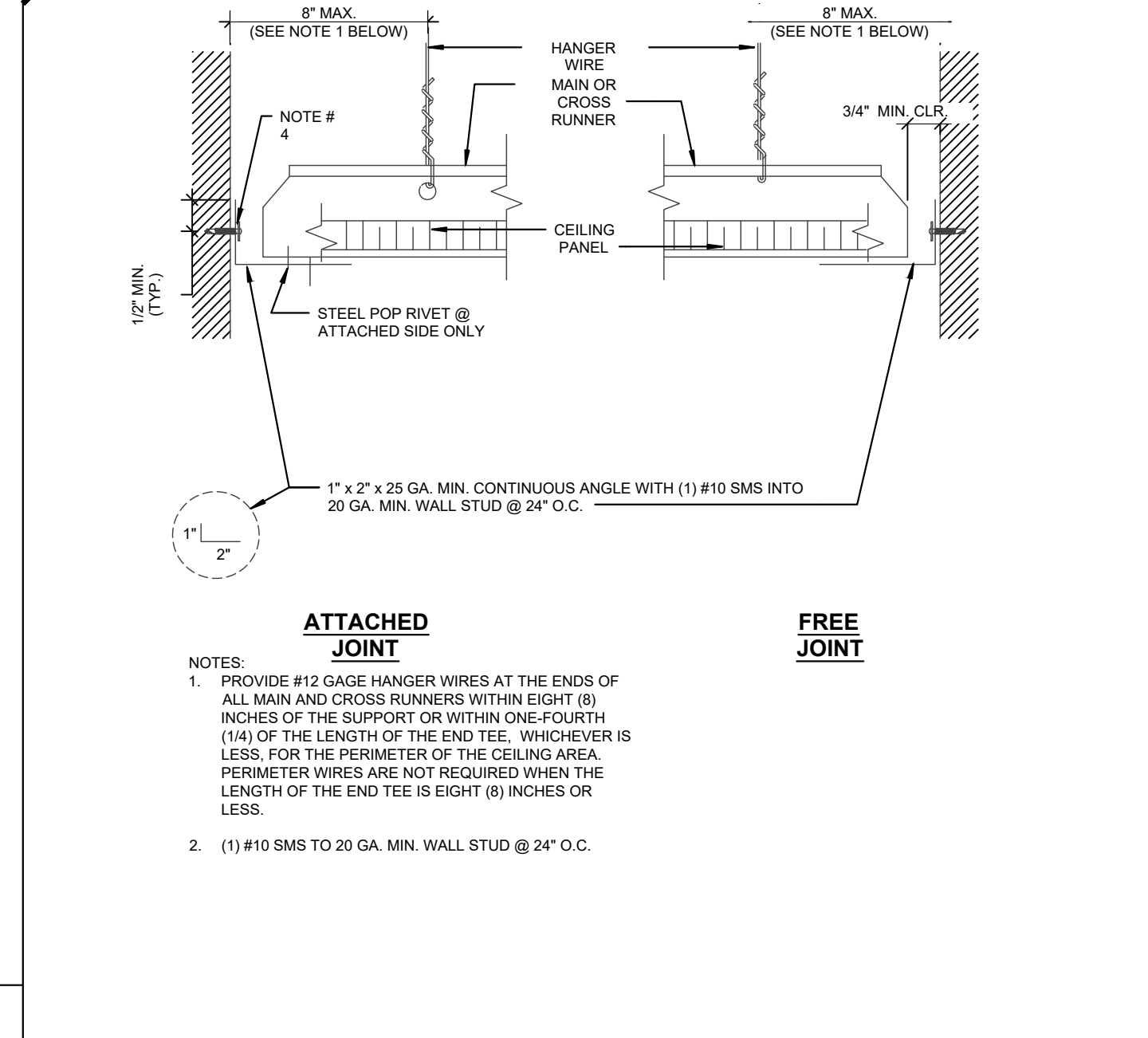


SUSPENDED ACOUSTICAL CEILING - CHANNEL TYPE STRUT
SCALE: N.T.S.

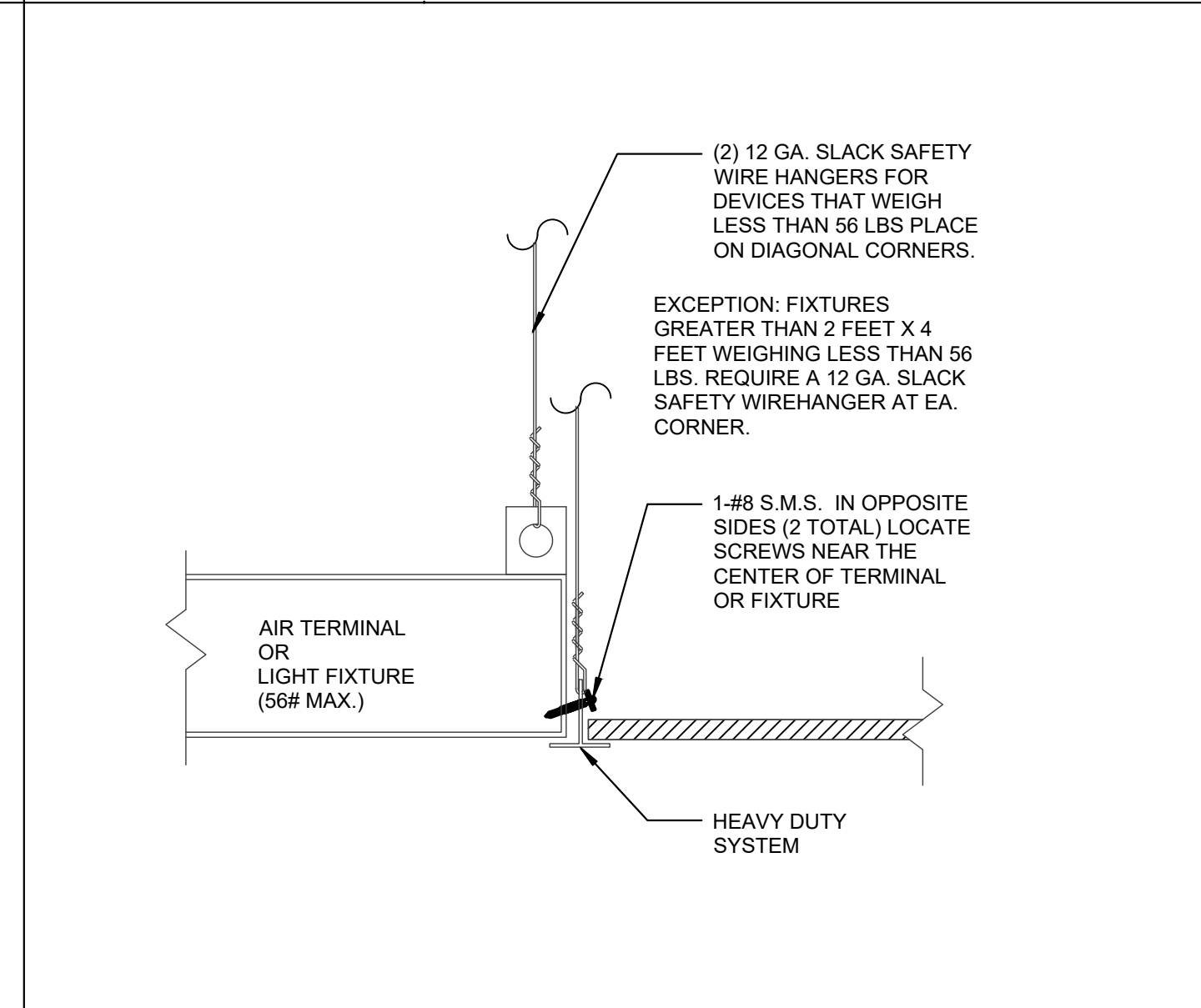
COMPRESSION STRUT TABLE	
EMT COMPRESSION STRUT	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	4'-7"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	7'-5"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"
CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

3.21 COMPRESSION STRUT TABLE
SCALE: N.T.S.

2.50 TYPICAL CEILING SECTION AT EXITWAY CORRIDORS
(ESSENTIAL SERVICE BUILDINGS)
SCALE: N.T.S.



2.60 CEILING PERIMETER
SCALE: N.T.S.



SUSPENDED ACOUSTICAL CEILING - LIGHT FIXTURES/AIR TERMINAL SUPPORT DETAIL
SCALE: N.T.S.



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HENRY+
ASSOCIATES
ARCHITECTS

REGISTERED ARCHITECT
STEPHEN J. HENRY
C-22525
12/31/21
RENEWAL
DATE
STATE OF CALIFORNIA

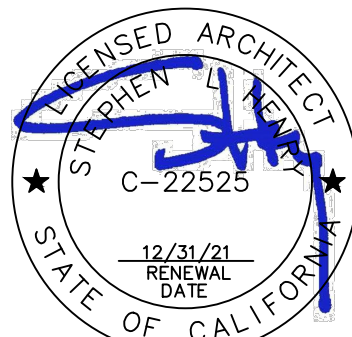
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL
INTERIOR DETAILS

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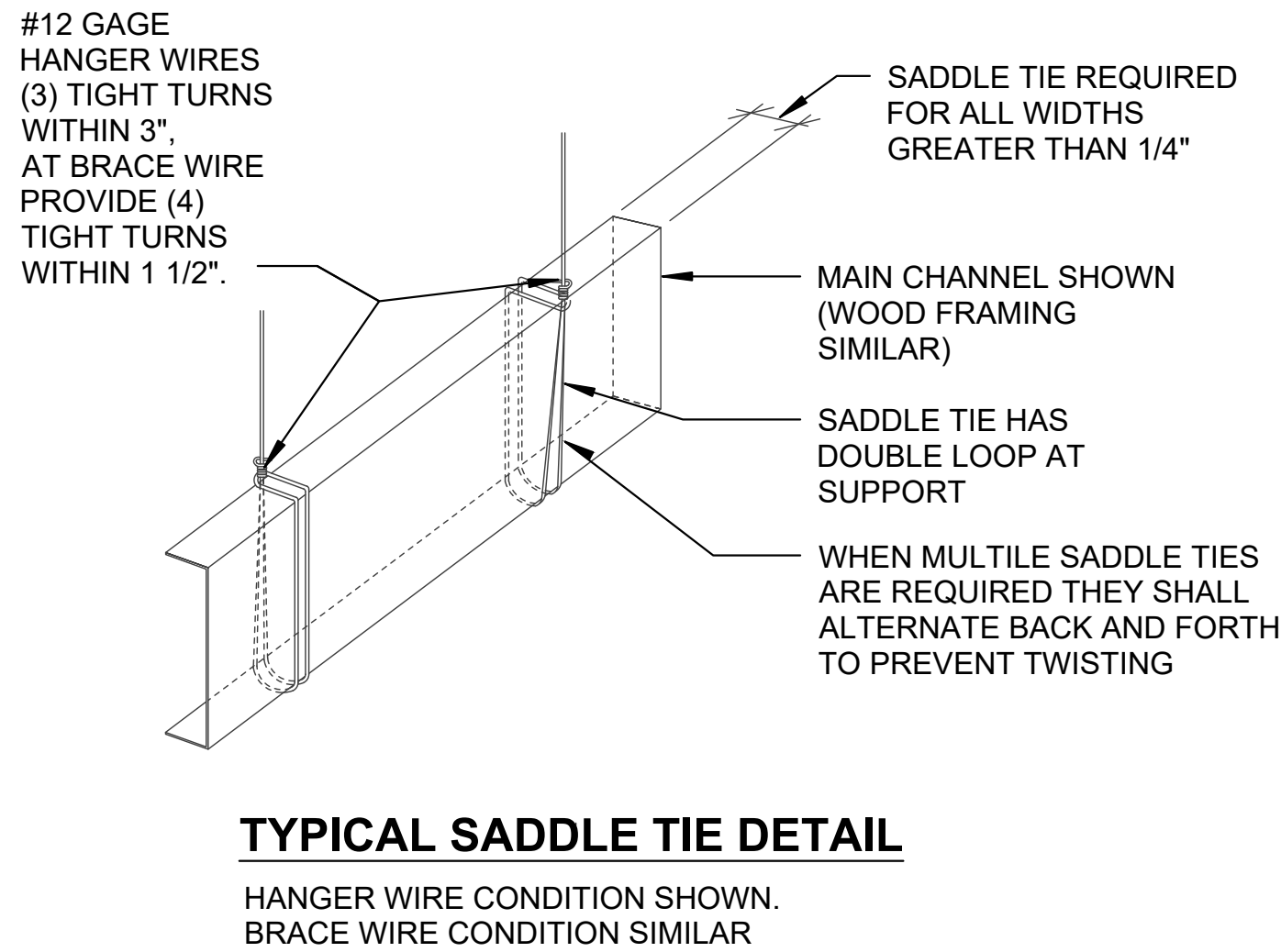
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

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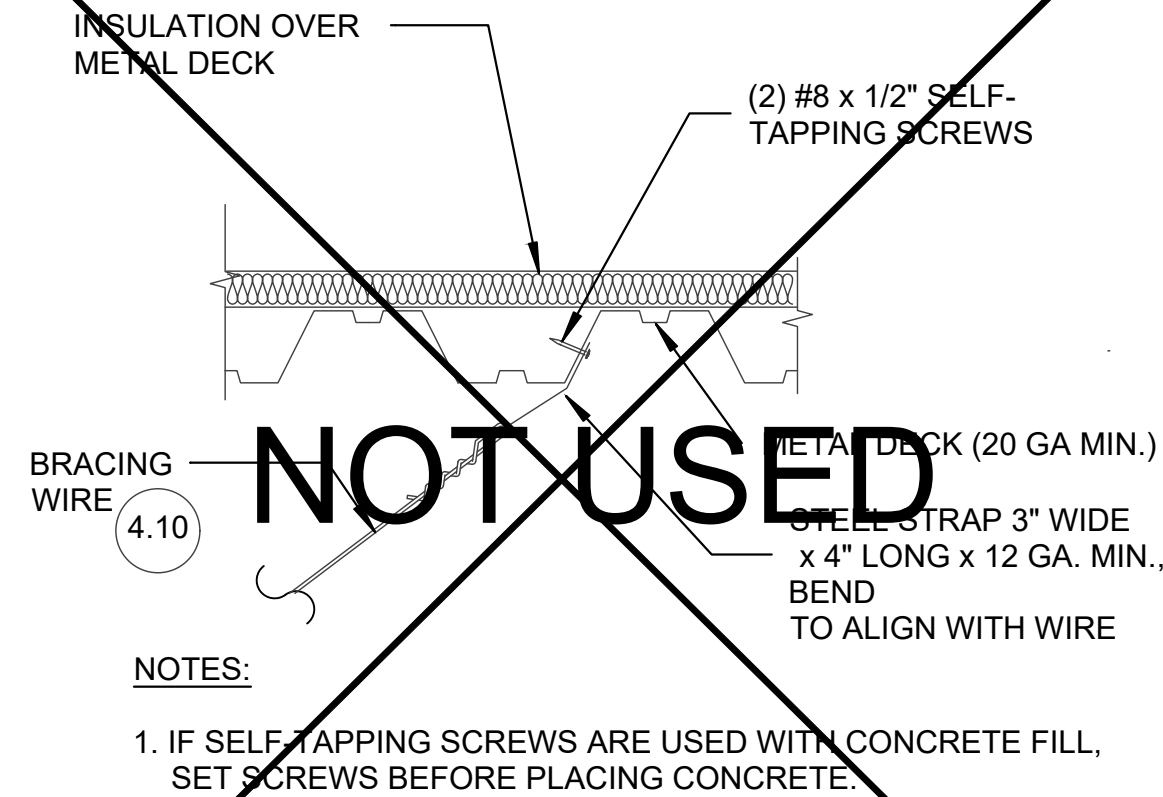
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SHEET NO.		

A8.5



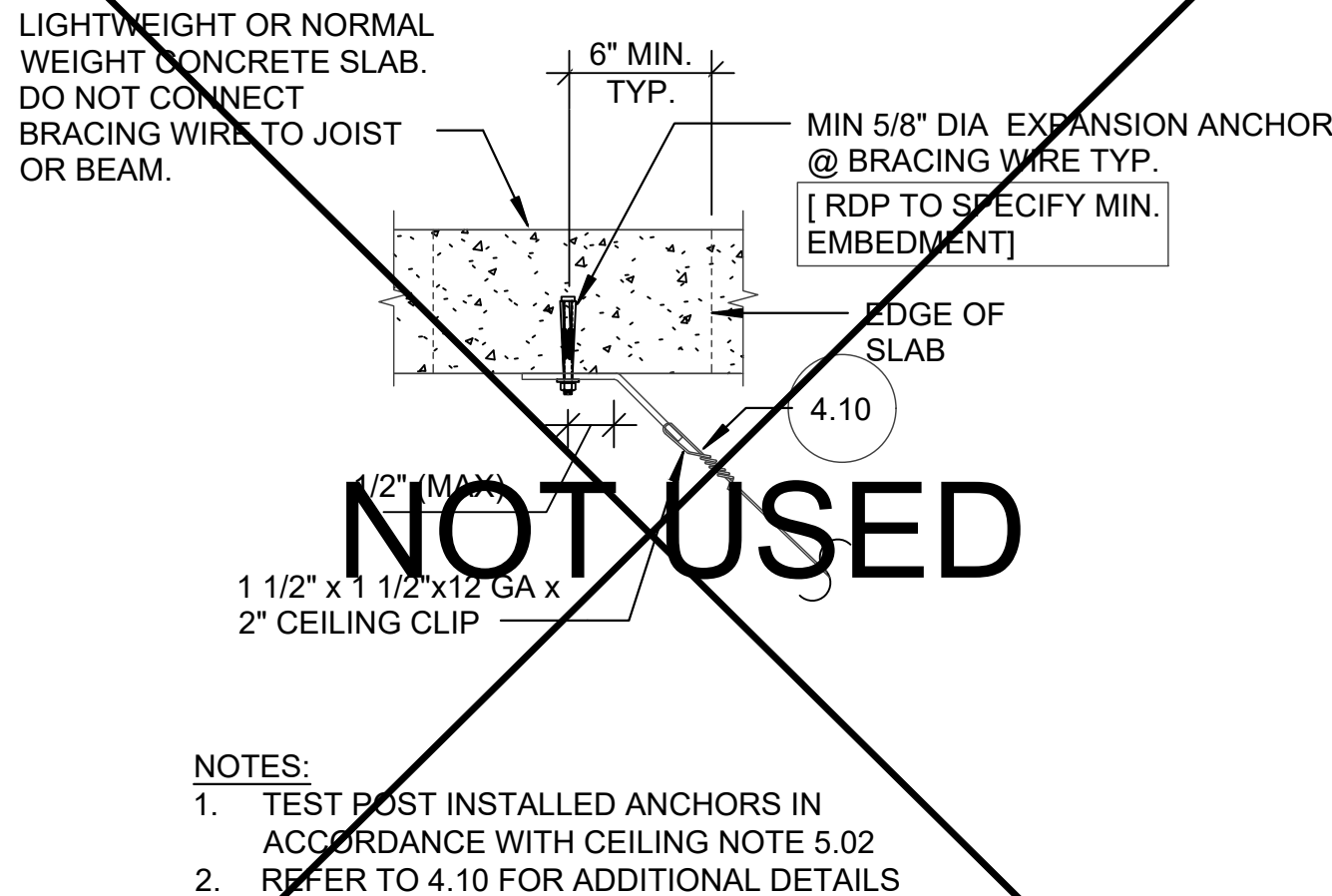
4.29 TYPICAL SADDLE TIE DETAIL

SCALE: N.T.S.



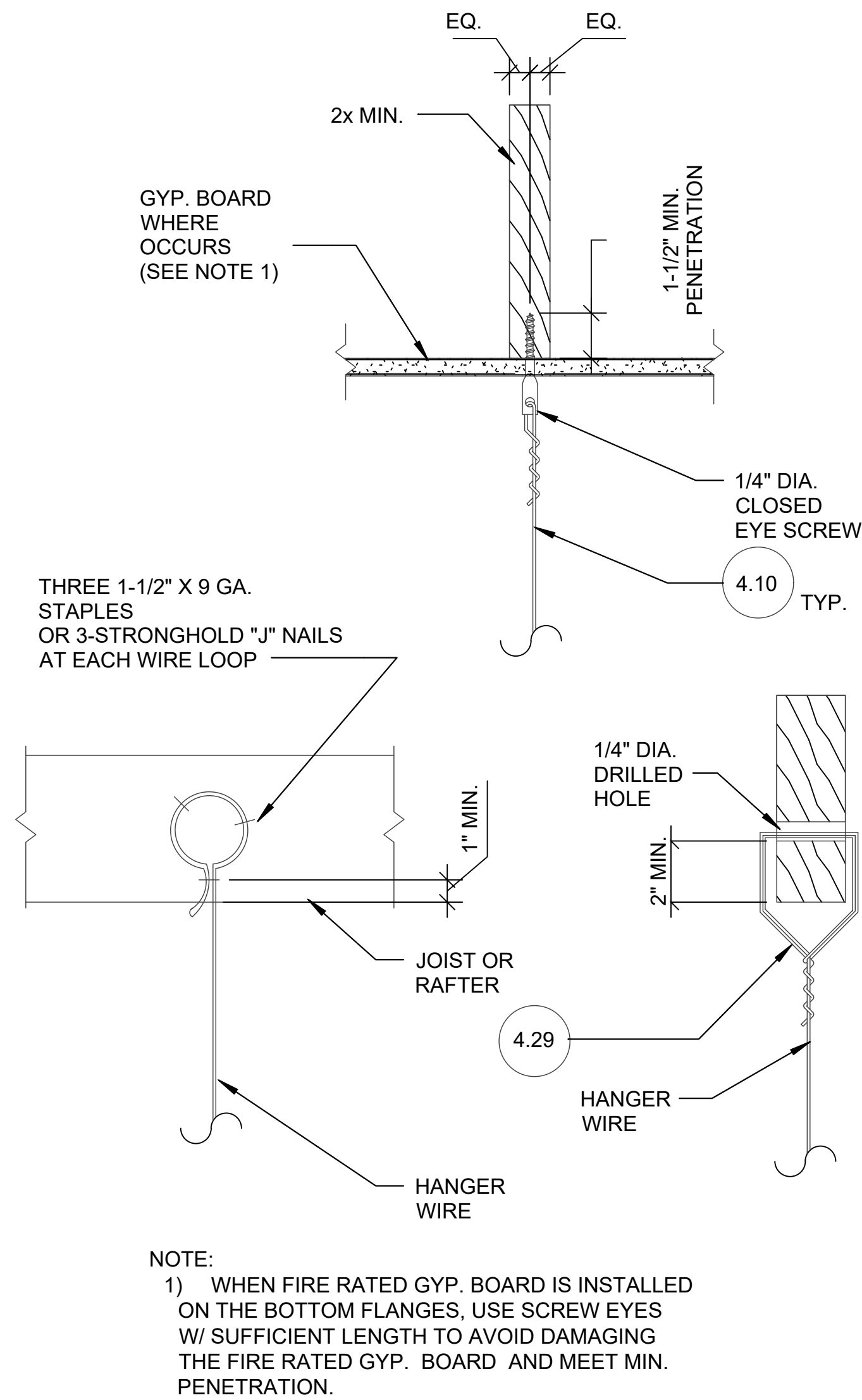
4.30 BRACING WIRE CONNECTION AT METAL DECK

SCALE: N.T.S.



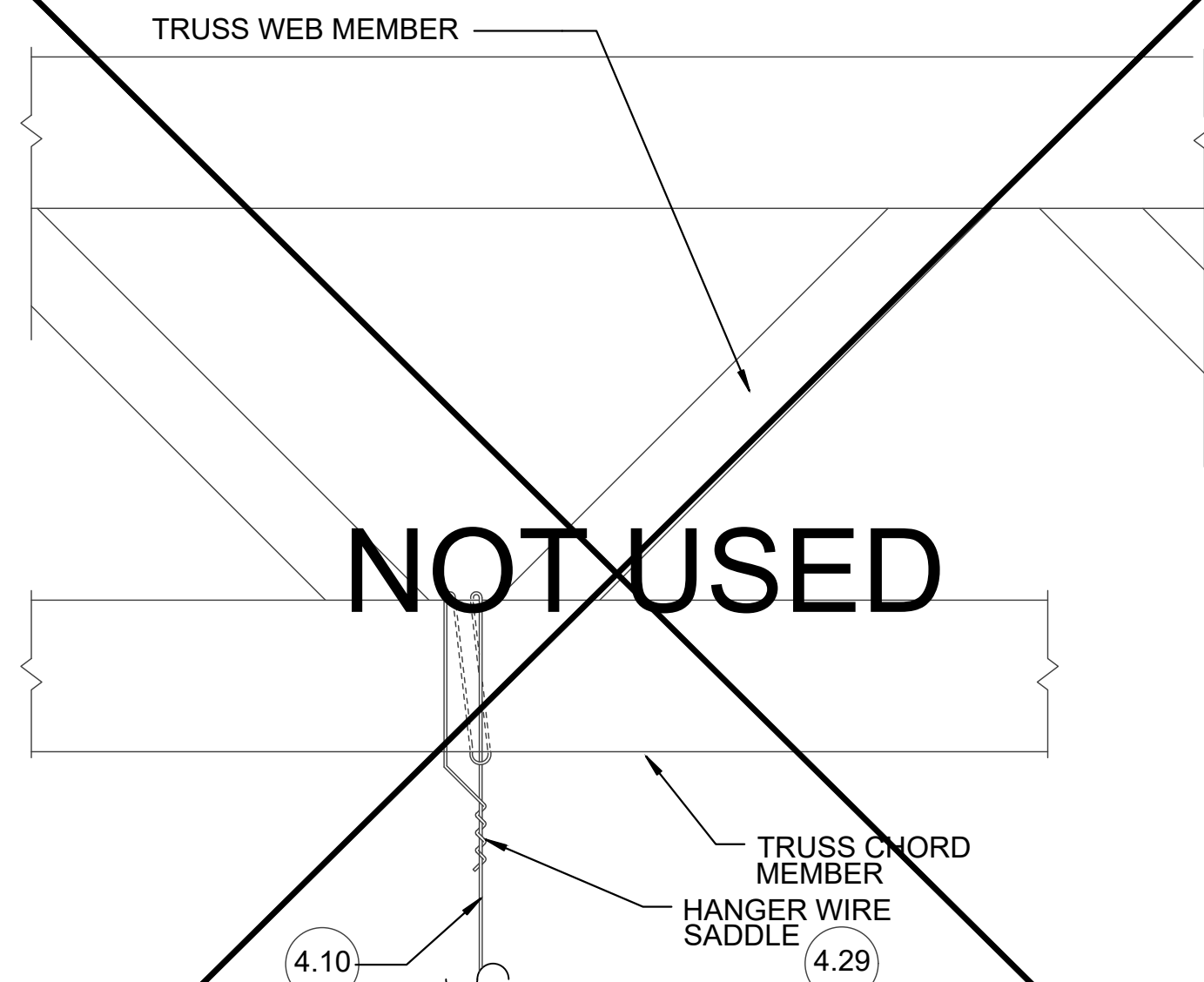
4.32 BRACING WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST

SCALE: N.T.S.



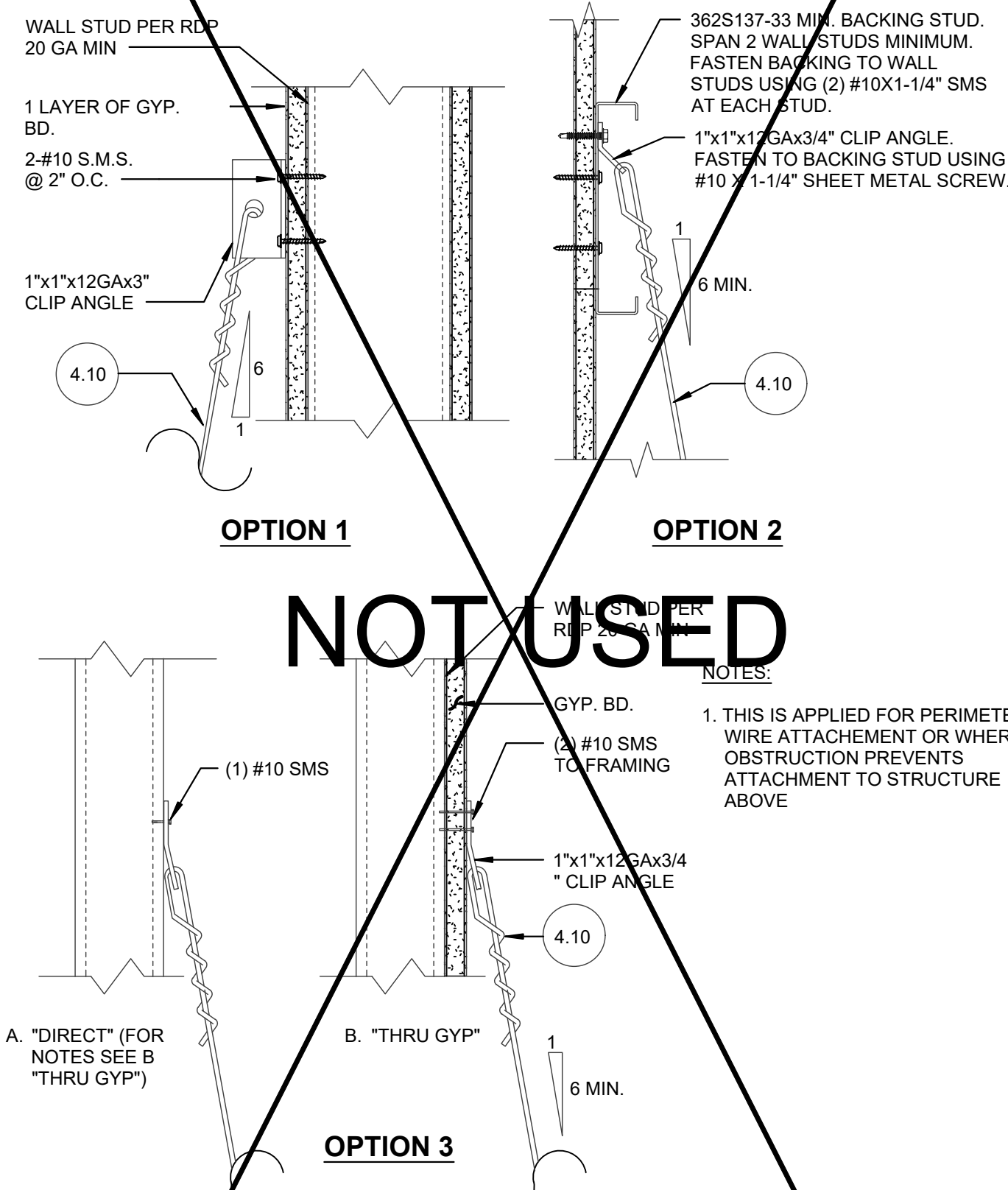
4.25 HANGER WIRE CONNECTION TO SAWN TIMBER

SCALE: N.T.S.



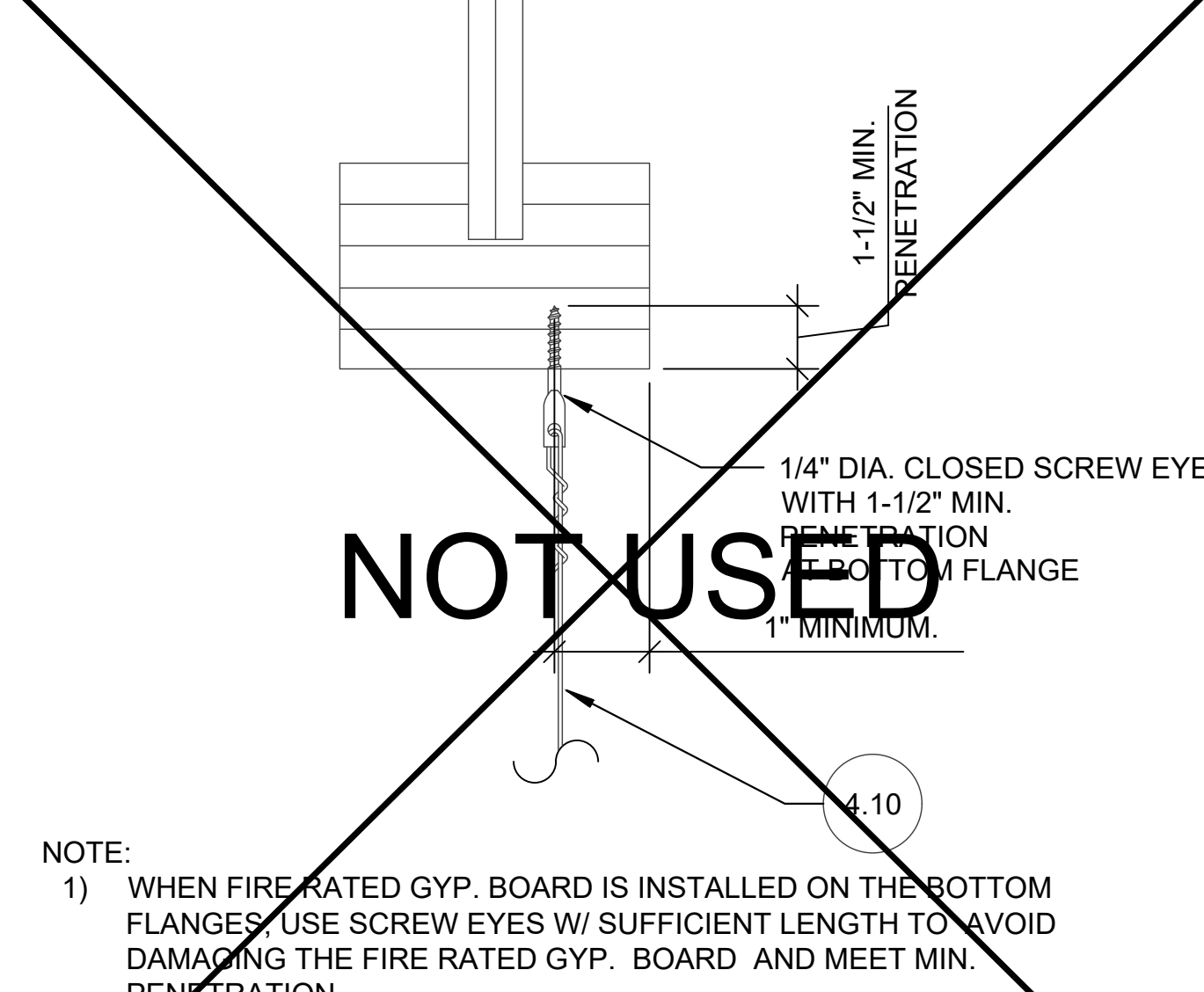
4.27 HANGER WIRE CONNECTION TO WOOD CHORD TRUSS

SCALE: N.T.S.



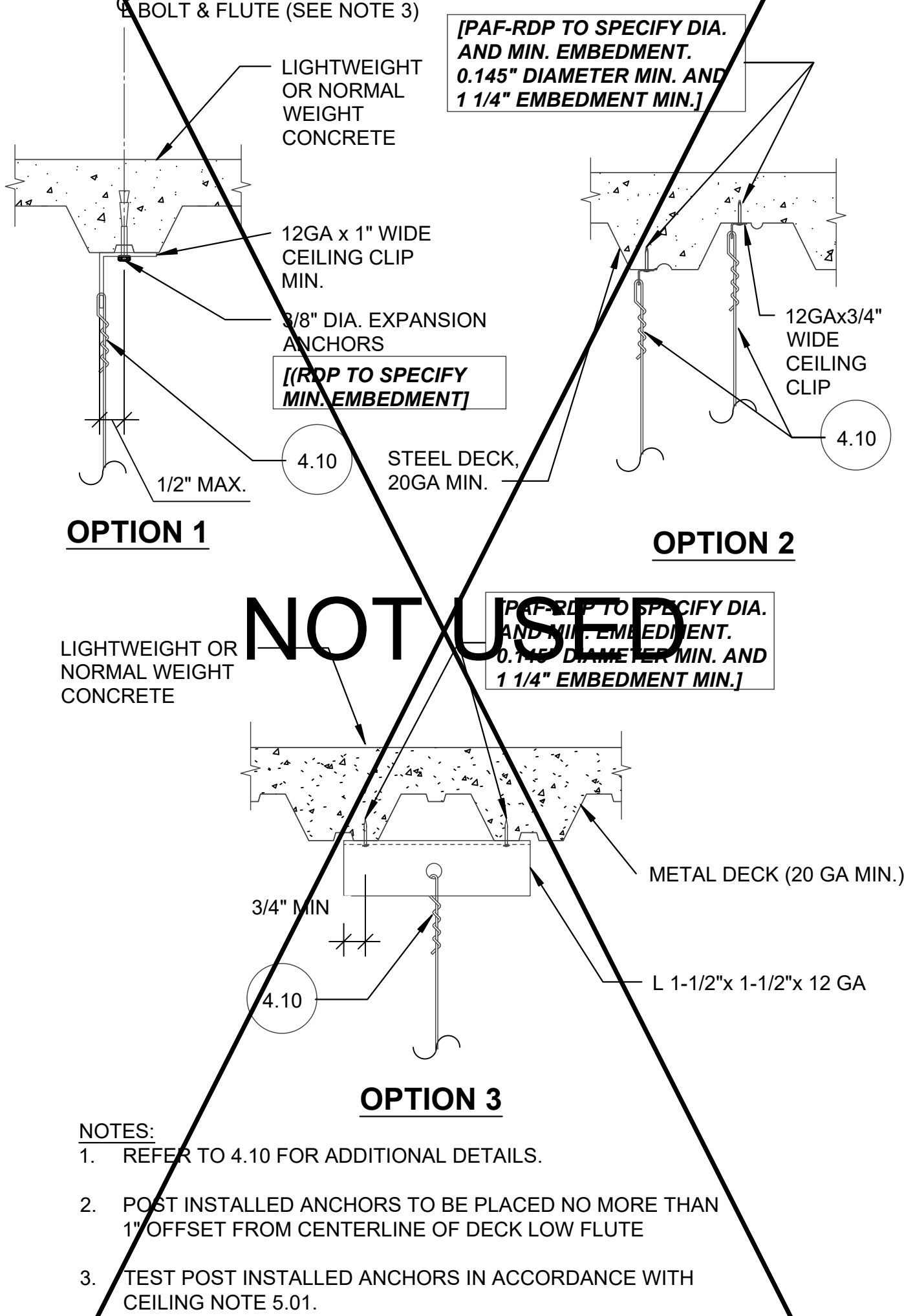
4.24 HANGER WIRE CONNECTION TO METAL STUD

SCALE: N.T.S.



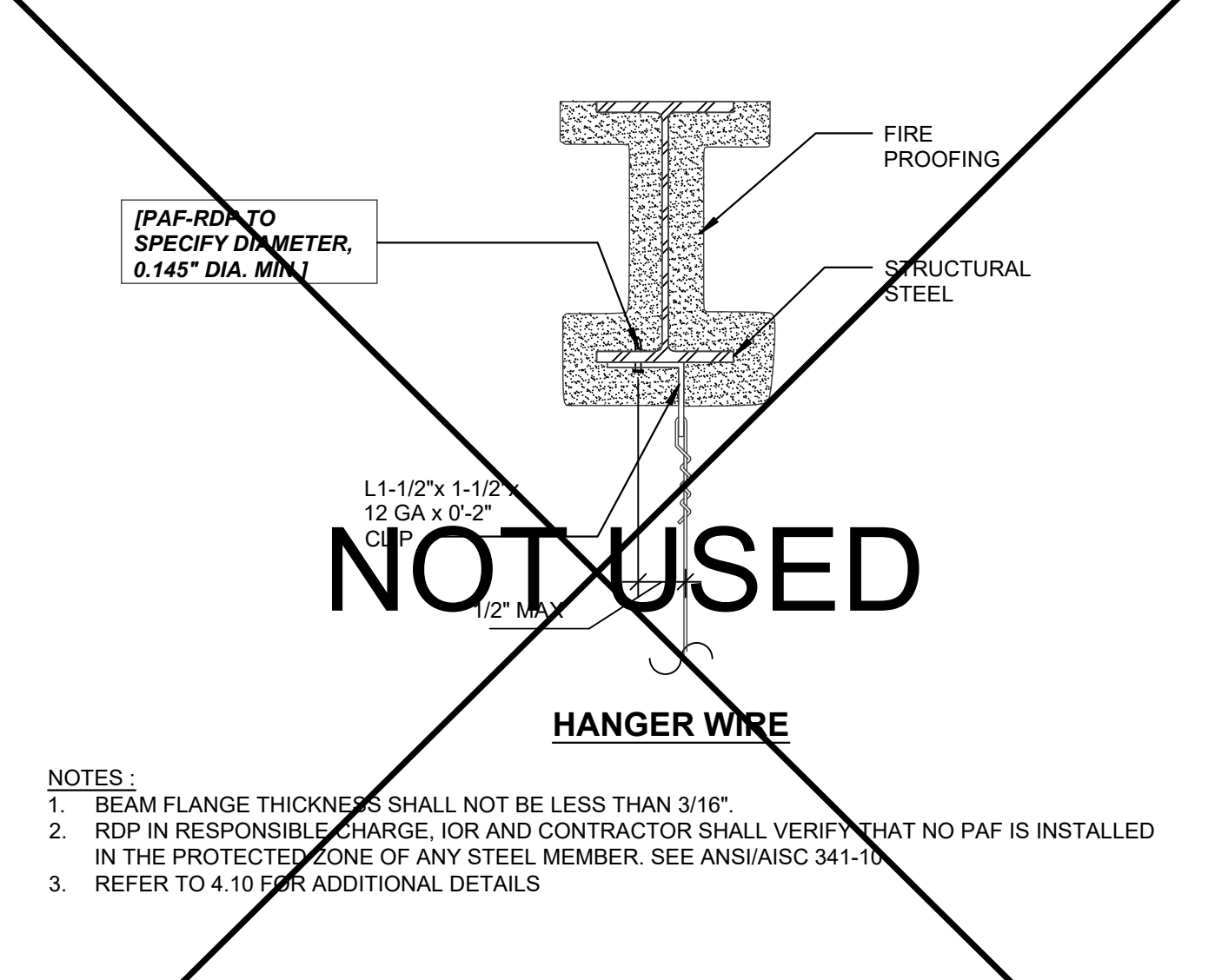
4.26 HANGER WIRE CONNECTION TO WOOD I-JOIST

SCALE: N.T.S.



4.21 HANGER WIRE CONNECTION TO CONCRETE OVER METAL DECK

SCALE: N.T.S.

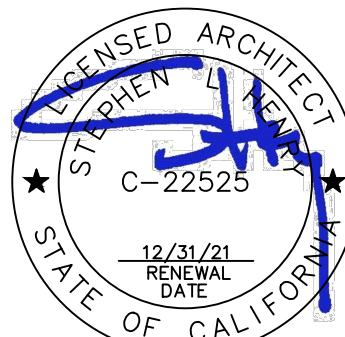


4.23 HANGER WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.

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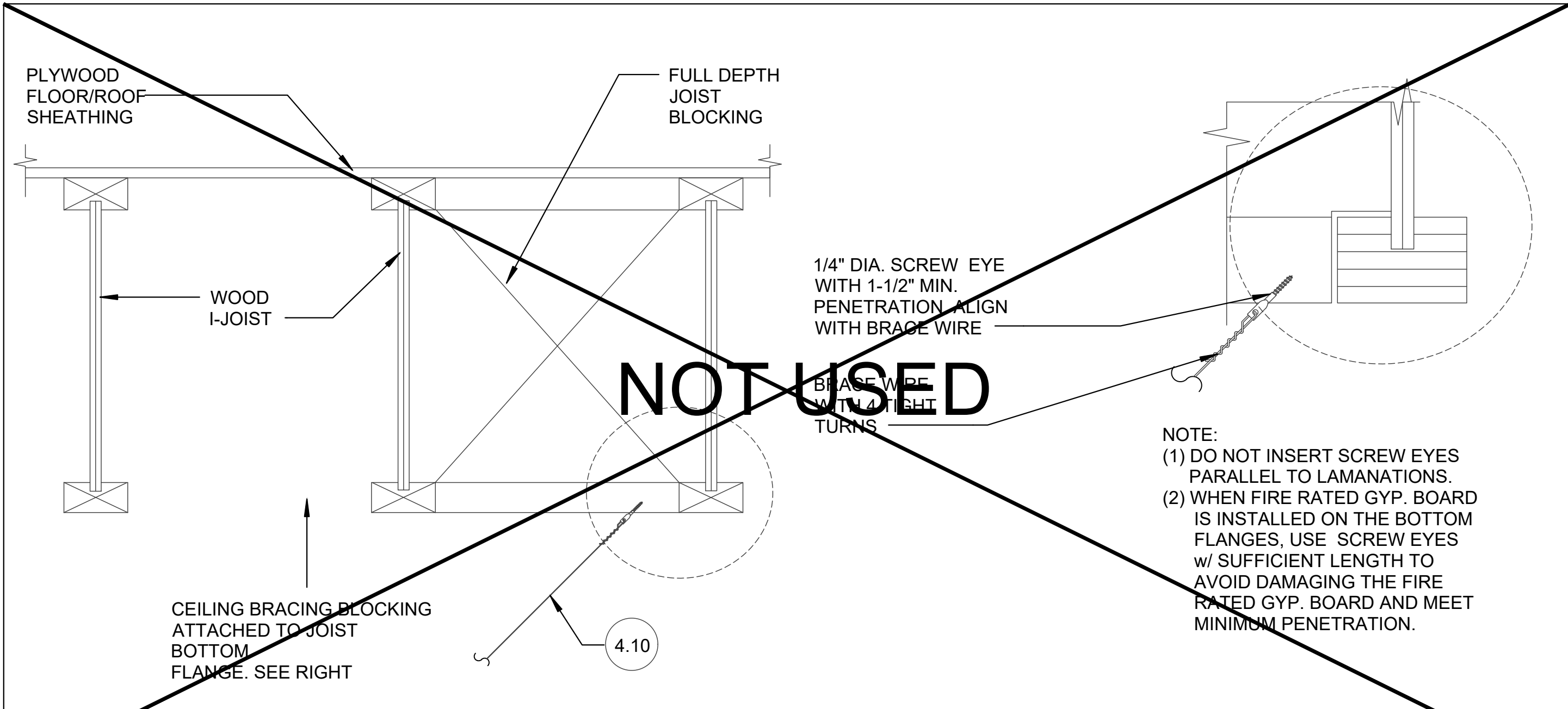
KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

INTERIOR DETAILS

CONSULTANT

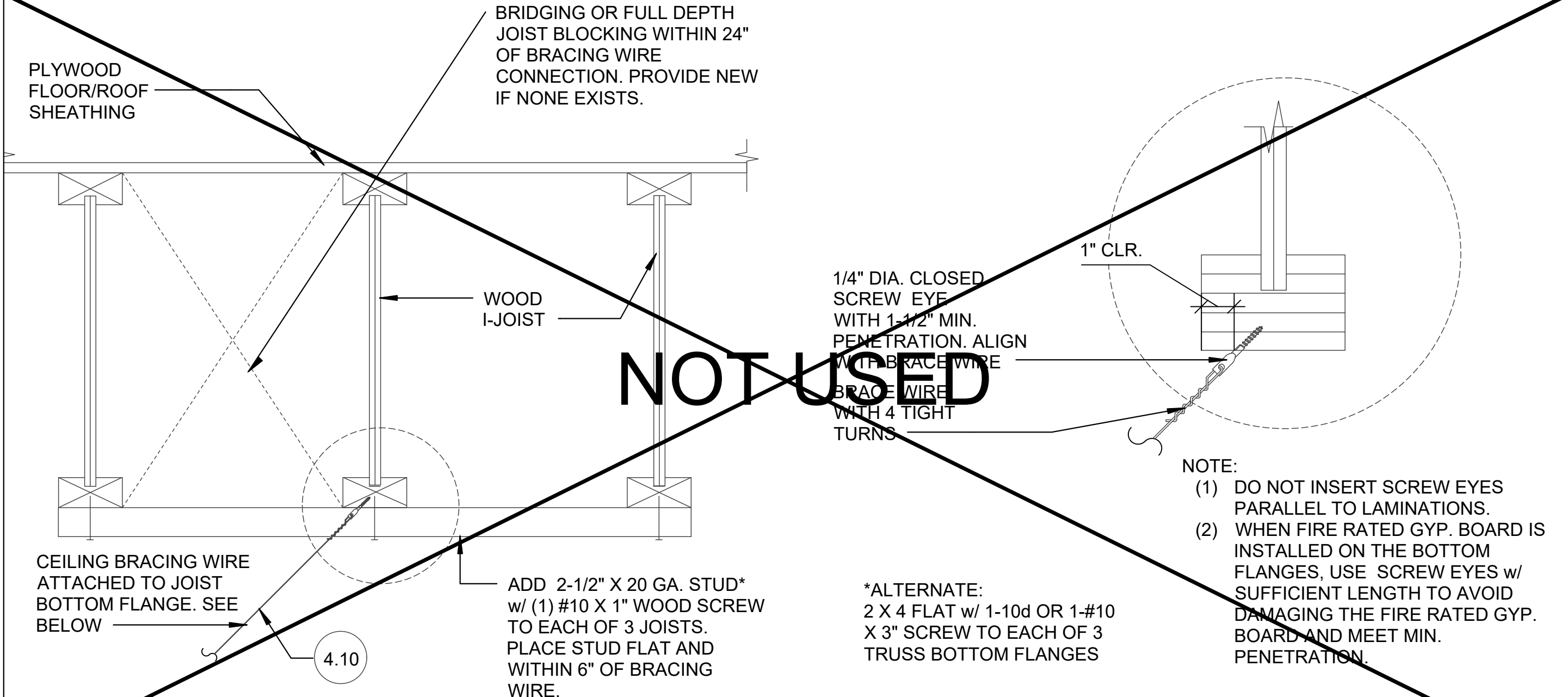
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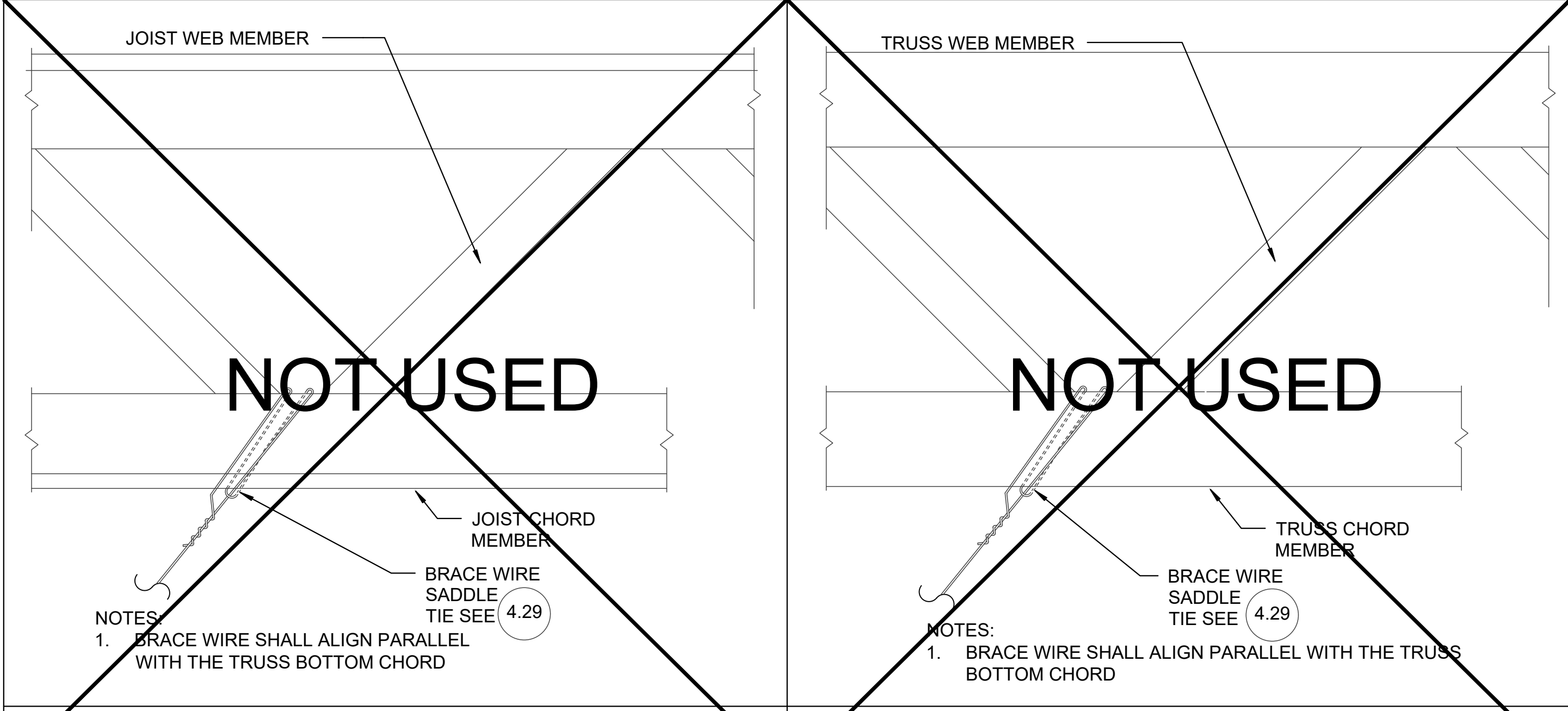
4.36 BRACING WIRE CONNECTION TO WOOD I-JOIST

SCALE: N.T.S.



4.37 BRACING WIRE CONNECTION TO WOOD I-JOIST

SCALE: N.T.S.

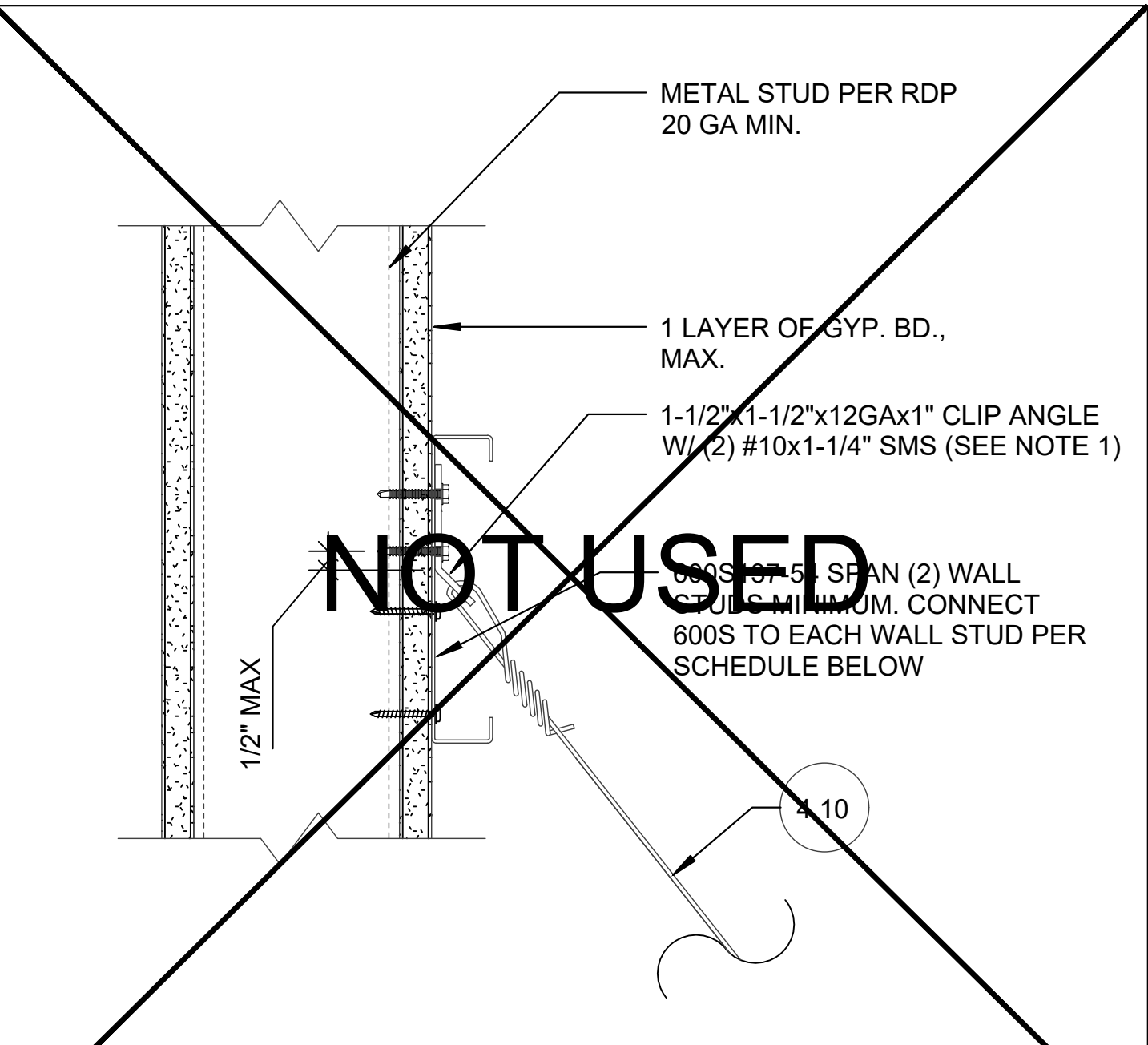


4.39 BRACING WIRE CONNECTION TO OPEN-WEB STEEL JOIST

SCALE: N.T.S.

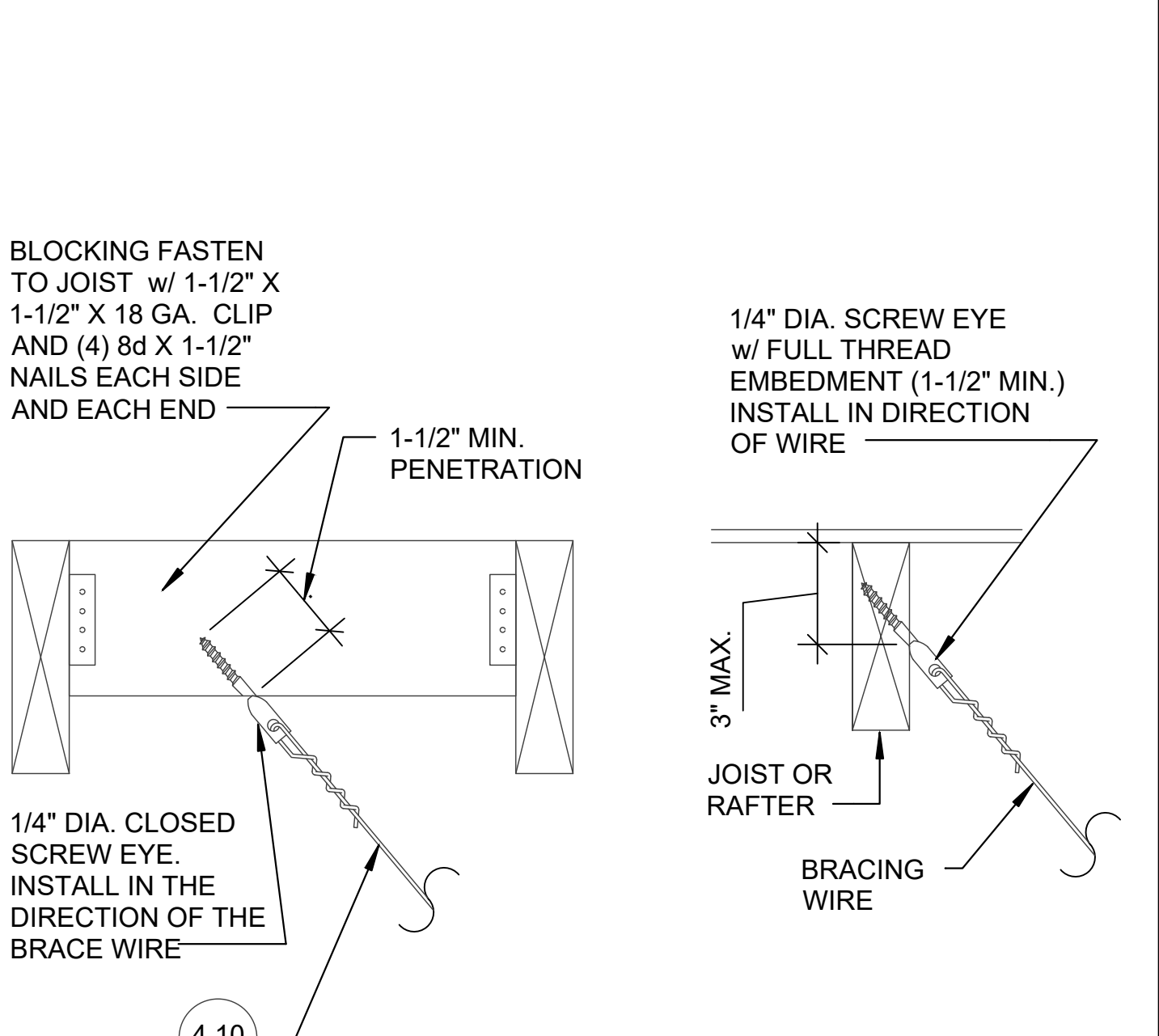
4.38 BRACE WIRE CONNECTION TO WOOD CHORD TRUSS

SCALE: N.T.S.



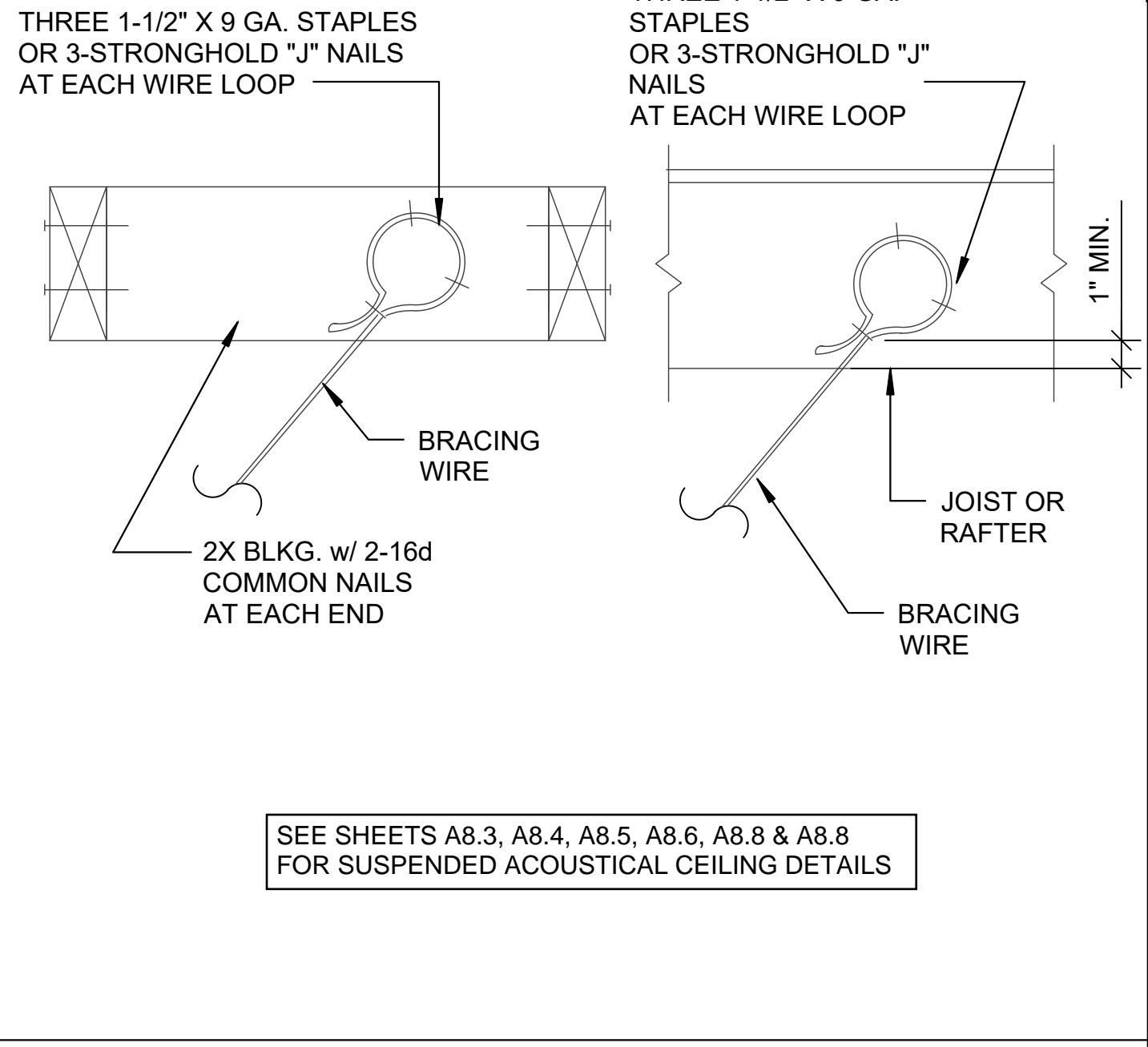
4.34 BRACING WIRE CONNECTION TO METAL STUD WALL

SCALE: N.T.S.



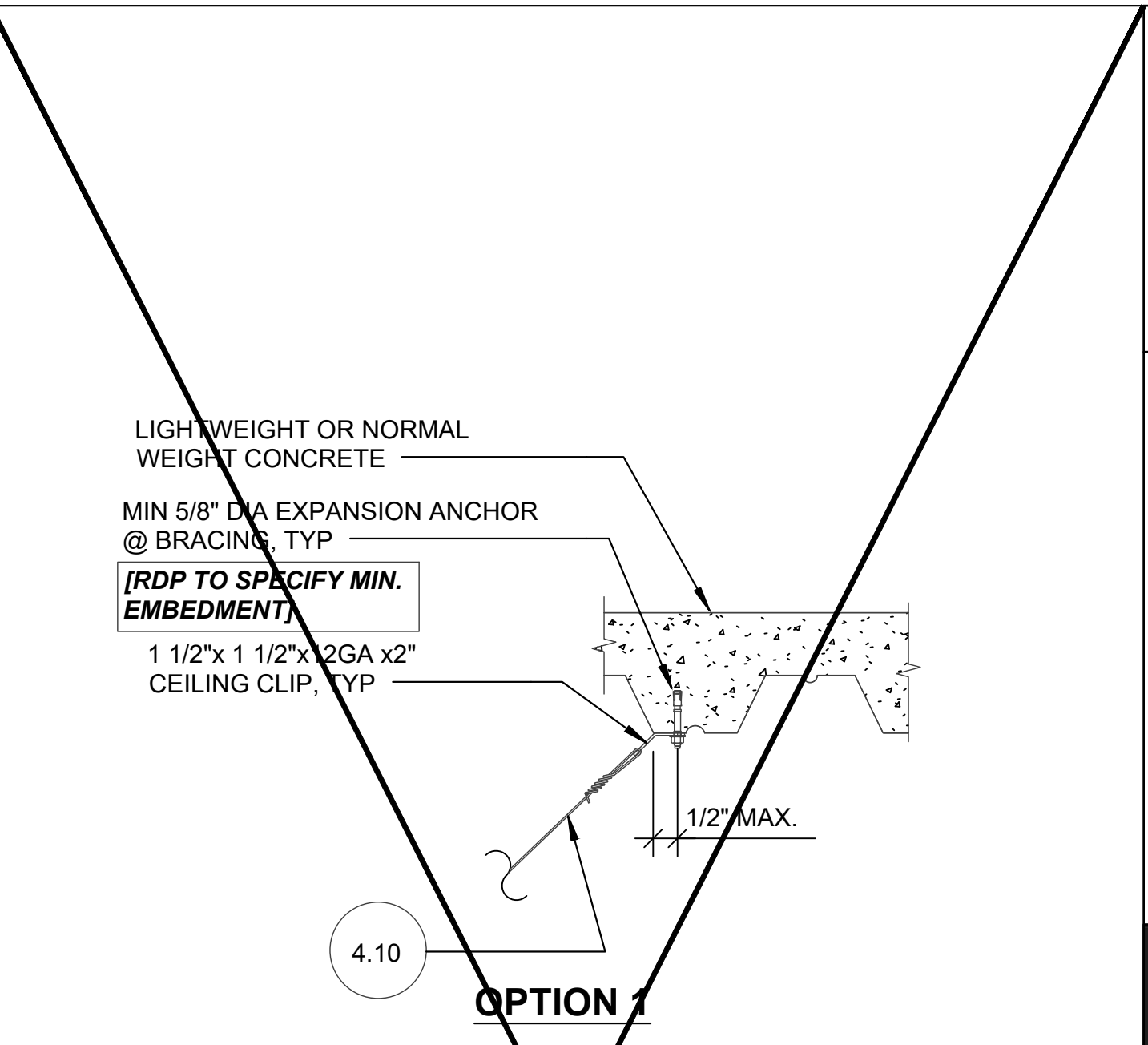
4.35 BRACING WIRE CONNECTION TO STUD WALL

SCALE: N.T.S.



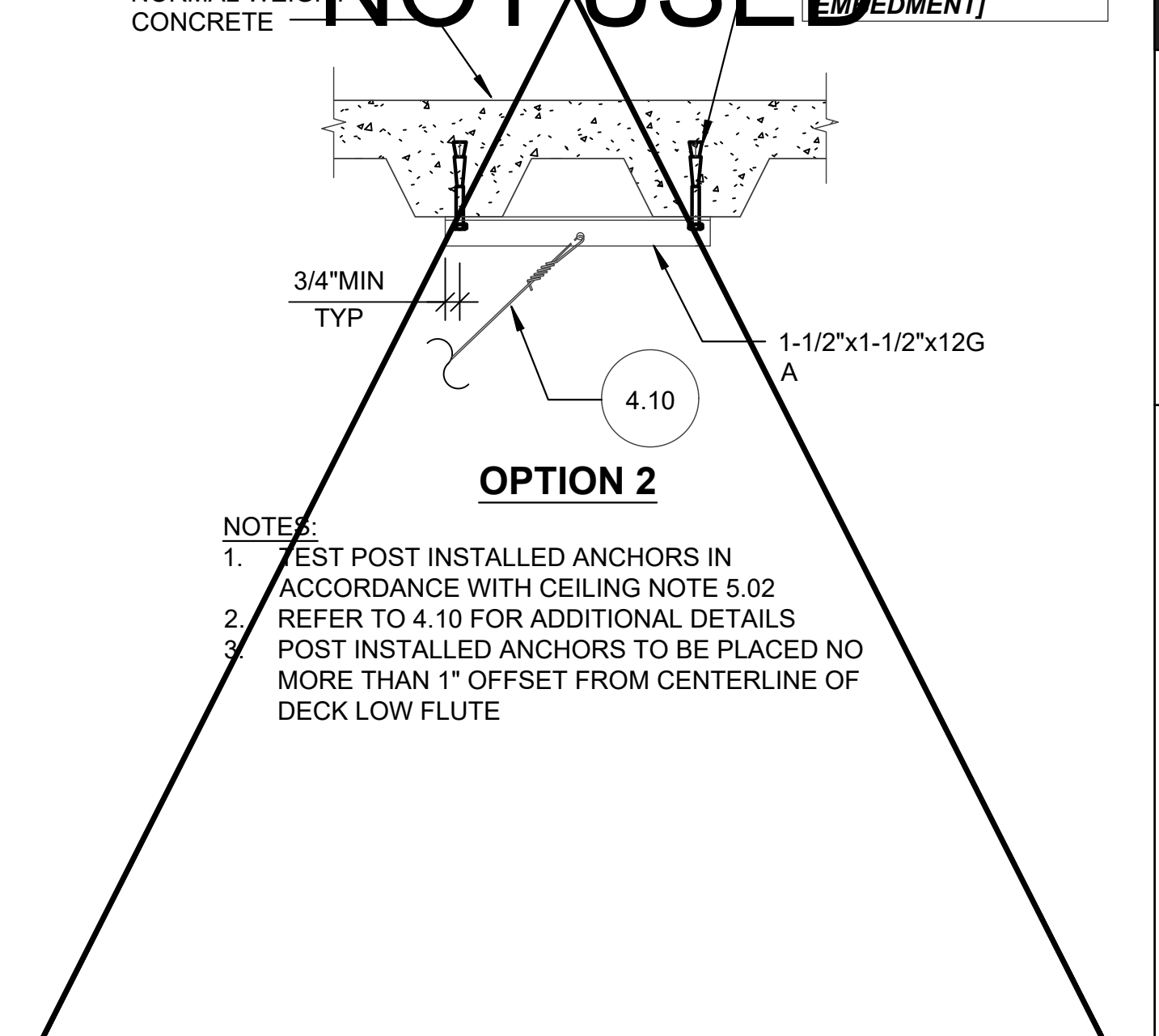
4.33 BRACING WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.



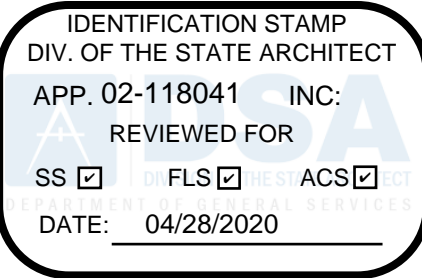
4.31 BRACING WIRE CONNECTION TO CONCRETE AT METAL DECK

SCALE: N.T.S.

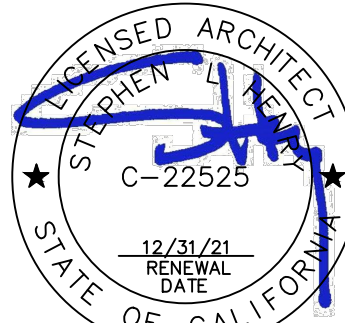


4.33 BRACING WIRE CONNECTION TO STRUCTURAL STEEL

SCALE: N.T.S.



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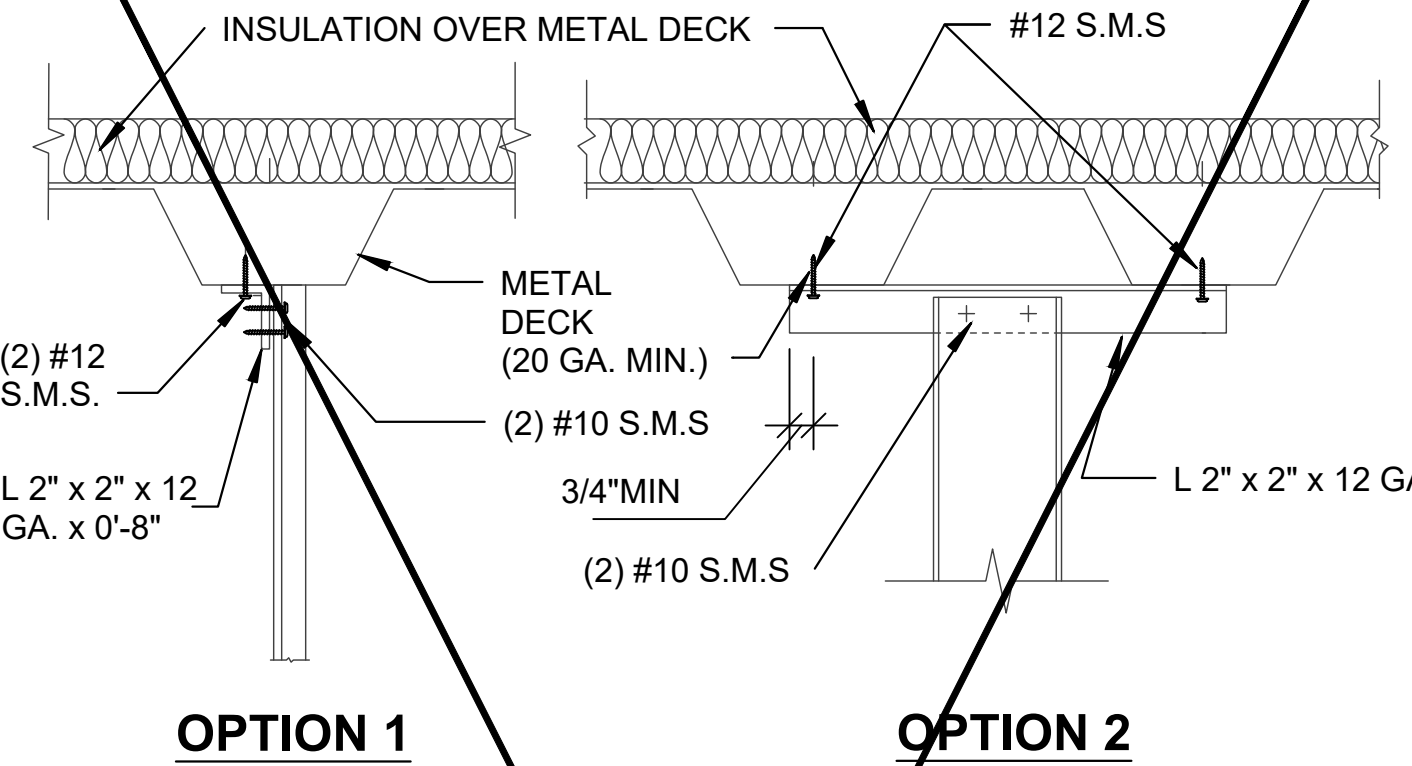
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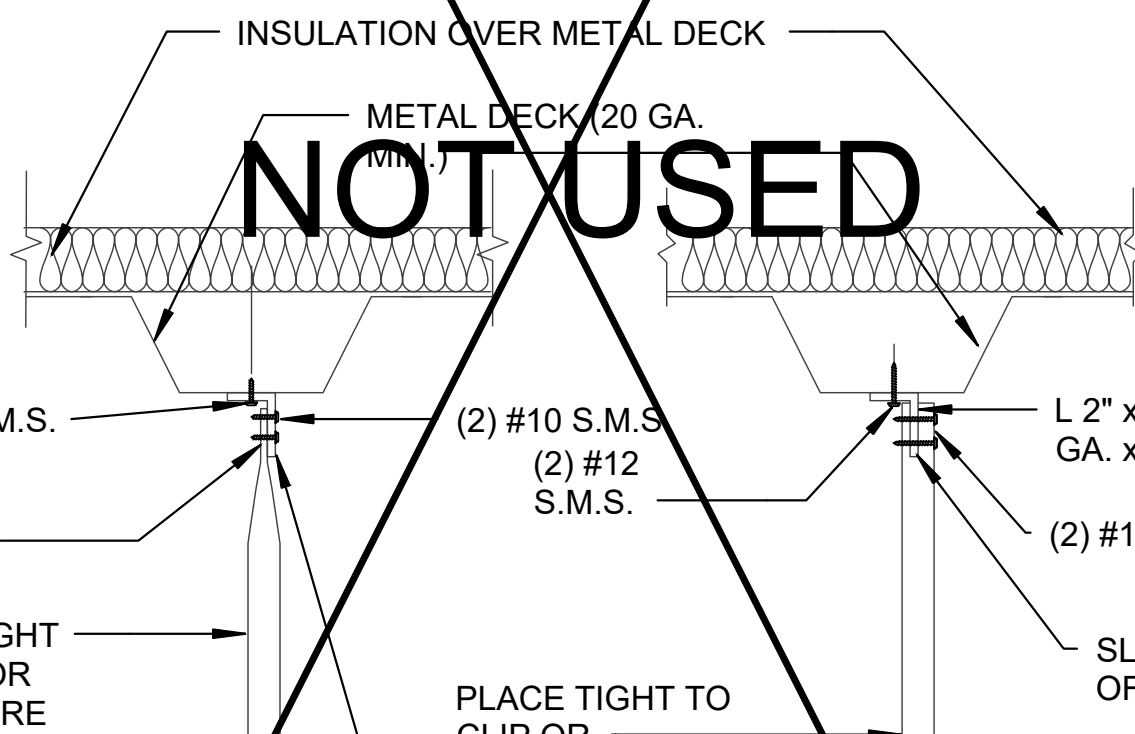
STRUCTURAL OF FLOOR / ROOF CONDITION ABOVE COMPRESSION STRUT	APPLICABLE DETAIL
METAL DECK	5.20
CONCRETE OVER METAL DECK	5.21
CONCRETE SLAB, BEAM OR JOIST	5.30
STRUCTURAL STEEL	5.40
SAWN TIMBER WITH GYPSUM BOARD	5.50
SAWN TIMBER WITHOUT GYPSUM BOARD	5.60

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8
FOR SUSPENDED ACOUSTICAL CEILING DETAILS

5.10 COMPRESSION STRUT CONNECTION TO STRUCTURE-CONNECTION MATRIX
SCALE: N.T.S.



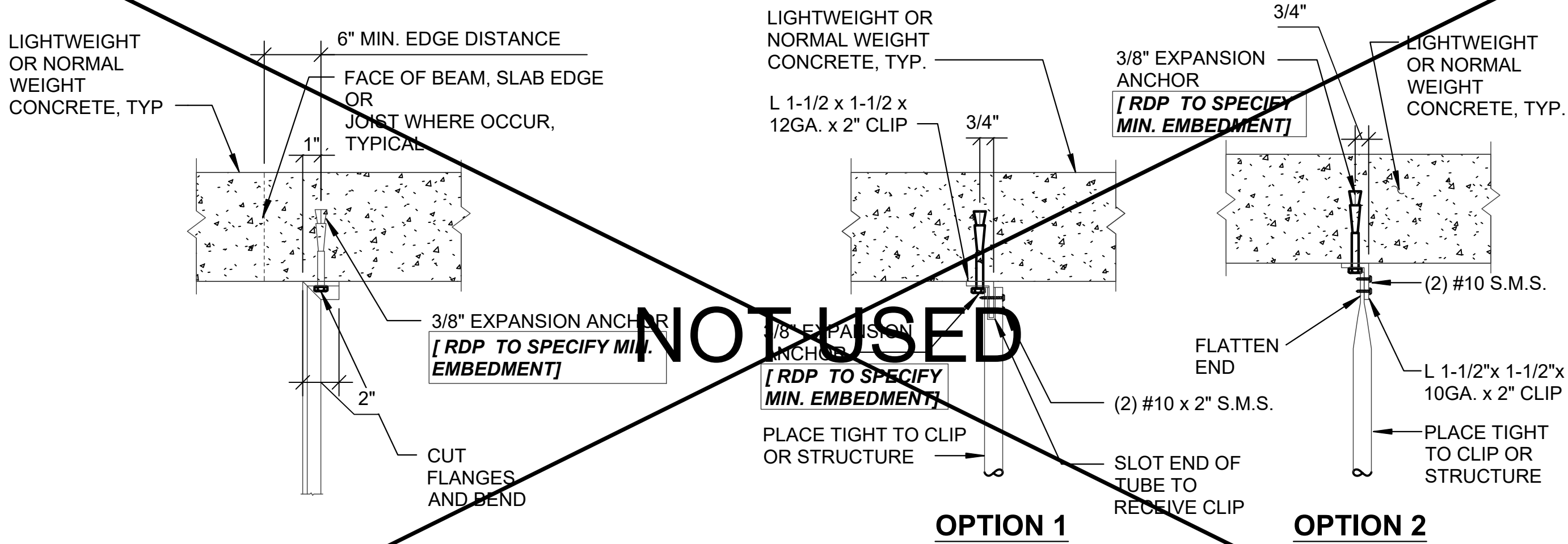
CHANNEL STRUT



TUBE STRUT

5.20 STRUT CONNECTION TO METAL DECK
SCALE: N.T.S.

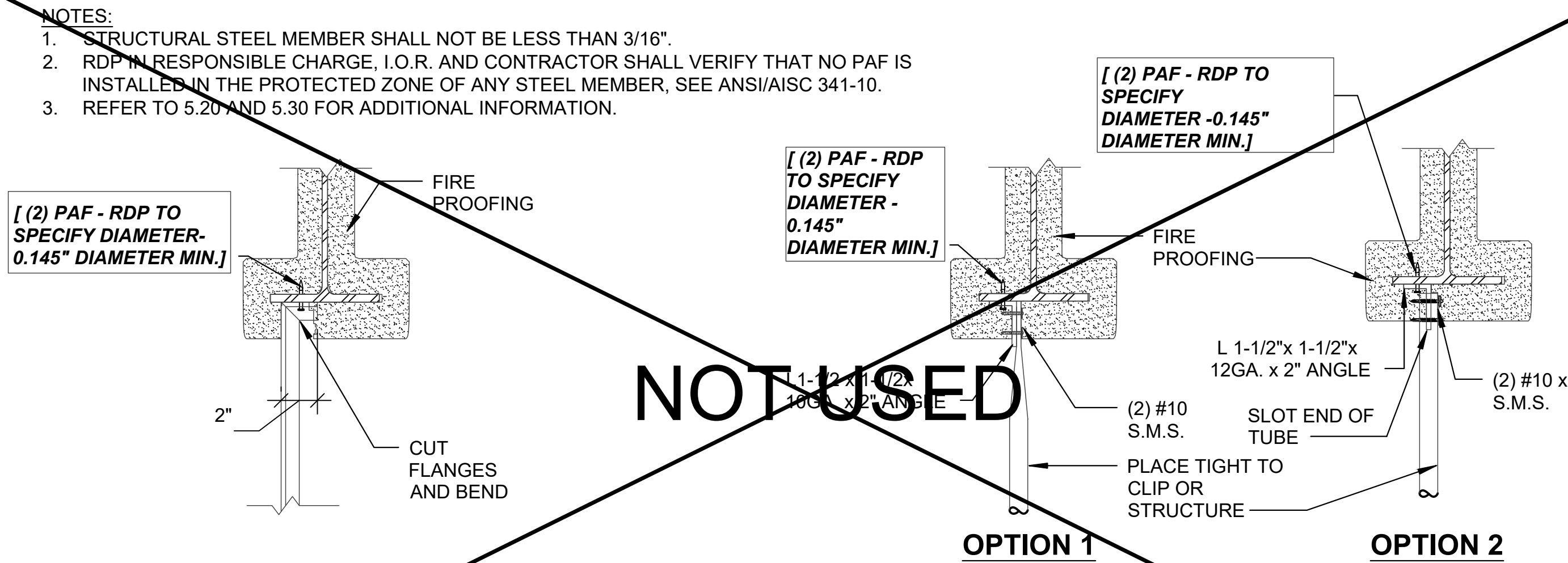
5.21 STRUT CONNECTION TO CONCRETE OVER METAL DECK
SCALE: N.T.S.



CHANNEL STRUT

TUBE STRUT

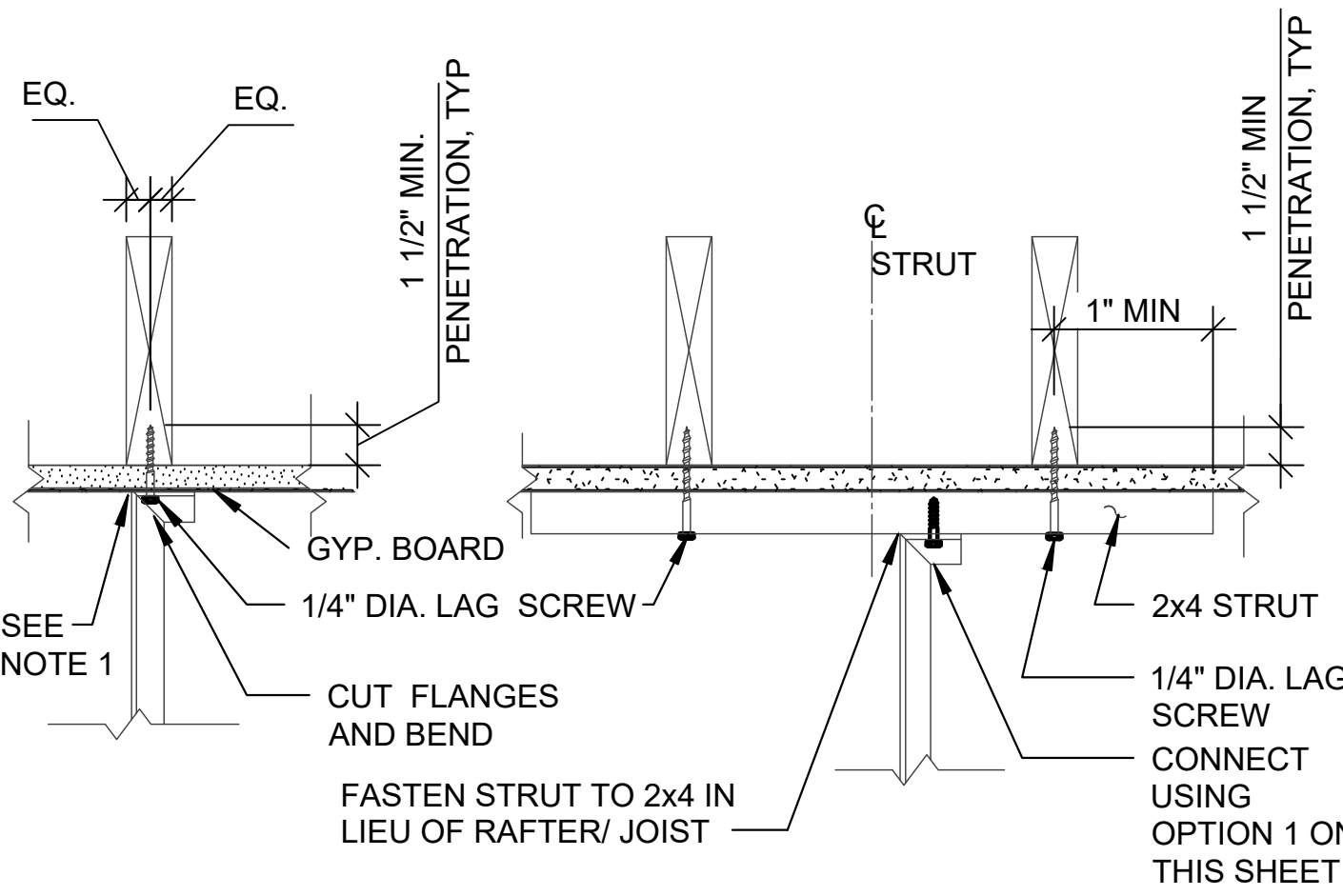
5.30 STRUT CONNECTION TO CONCRETE SLAB, BEAM, JOIST SOFFIT
SCALE: N.T.S.



CHANNEL STRUT

TUBE STRUT

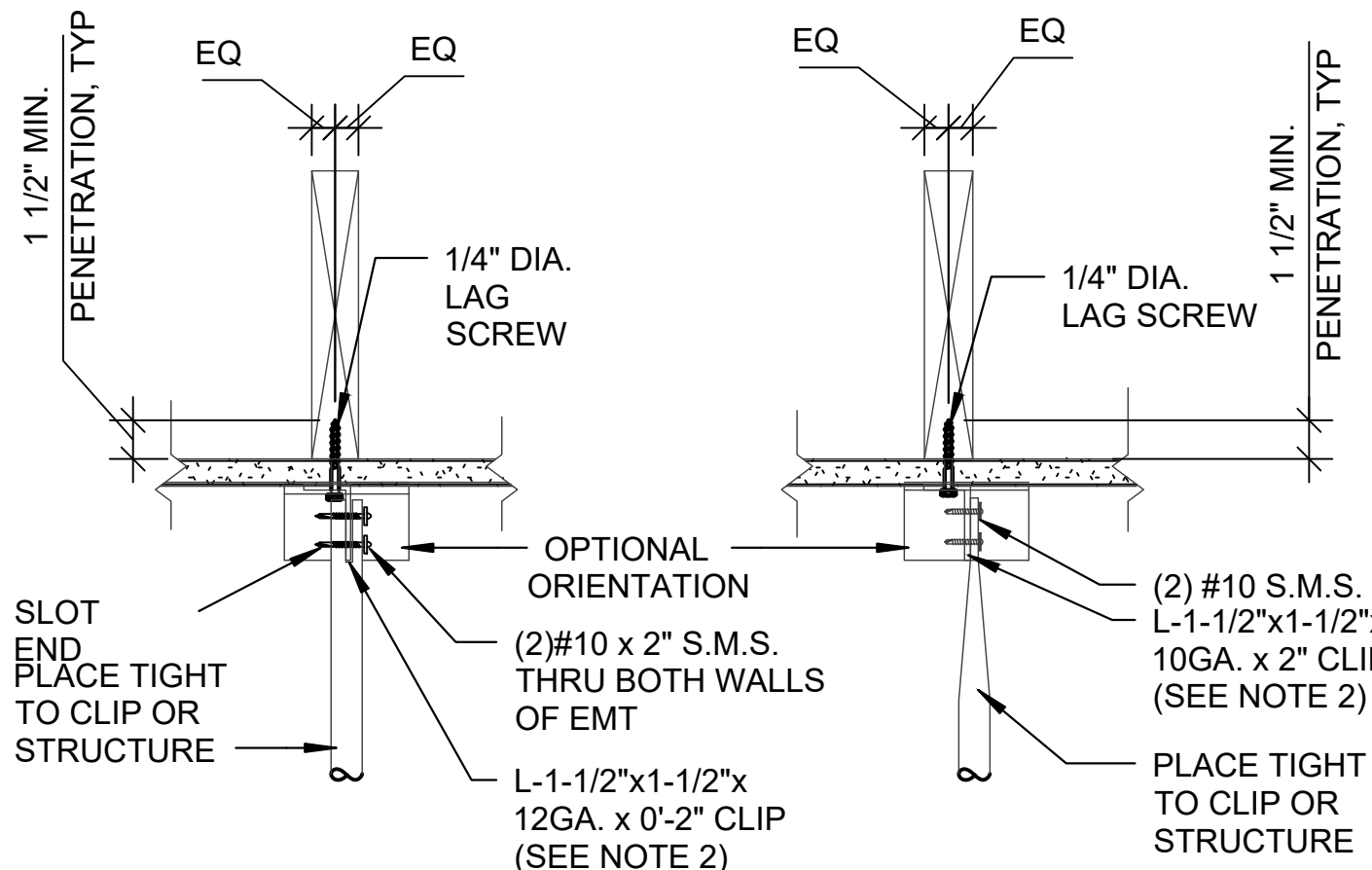
5.40 STRUT CONNECTION TO STRUCTURAL STEEL
SCALE: N.T.S.



OPTION 1

OPTION 2

CHANNEL STRUT



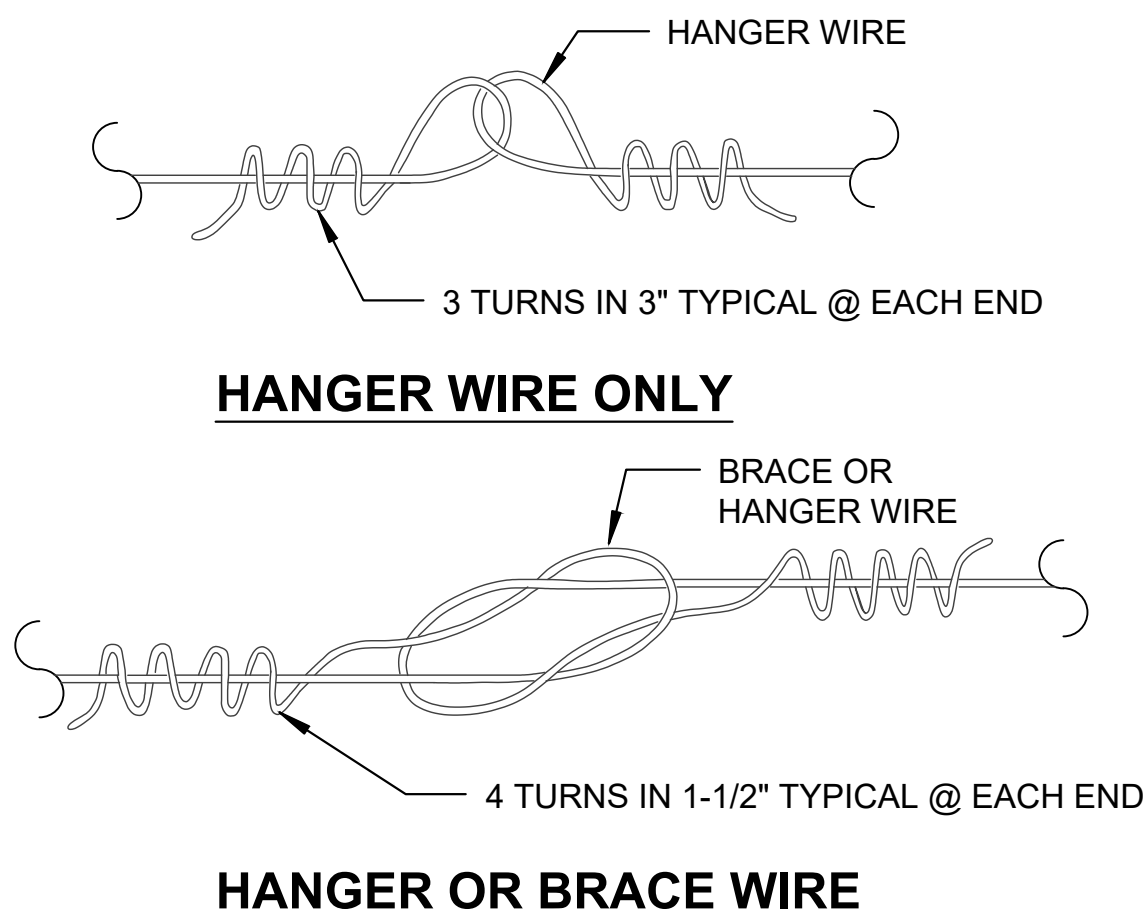
OPTION 1

OPTION 2

TUBE STRUT

- NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF THE WOOD MEMBER.
 2. FOR ANGLE ORIENTED IN THE STANDARD POSITION, VERTICAL LEG TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.

5.50 STRUT CONNECTION TO SAWN TIMBER WITH GYPSUM BOARD
SCALE: N.T.S.



HANGER WIRE ONLY

HANGER OR BRACE WIRE

- NOTES:
- WIRE SPLICES ARE SHOWN LOOSELY TIED FOR
ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN
TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.

6.10 CEILING WIRE SPLICES
SCALE: N.T.S.

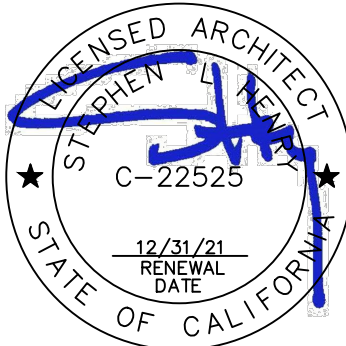
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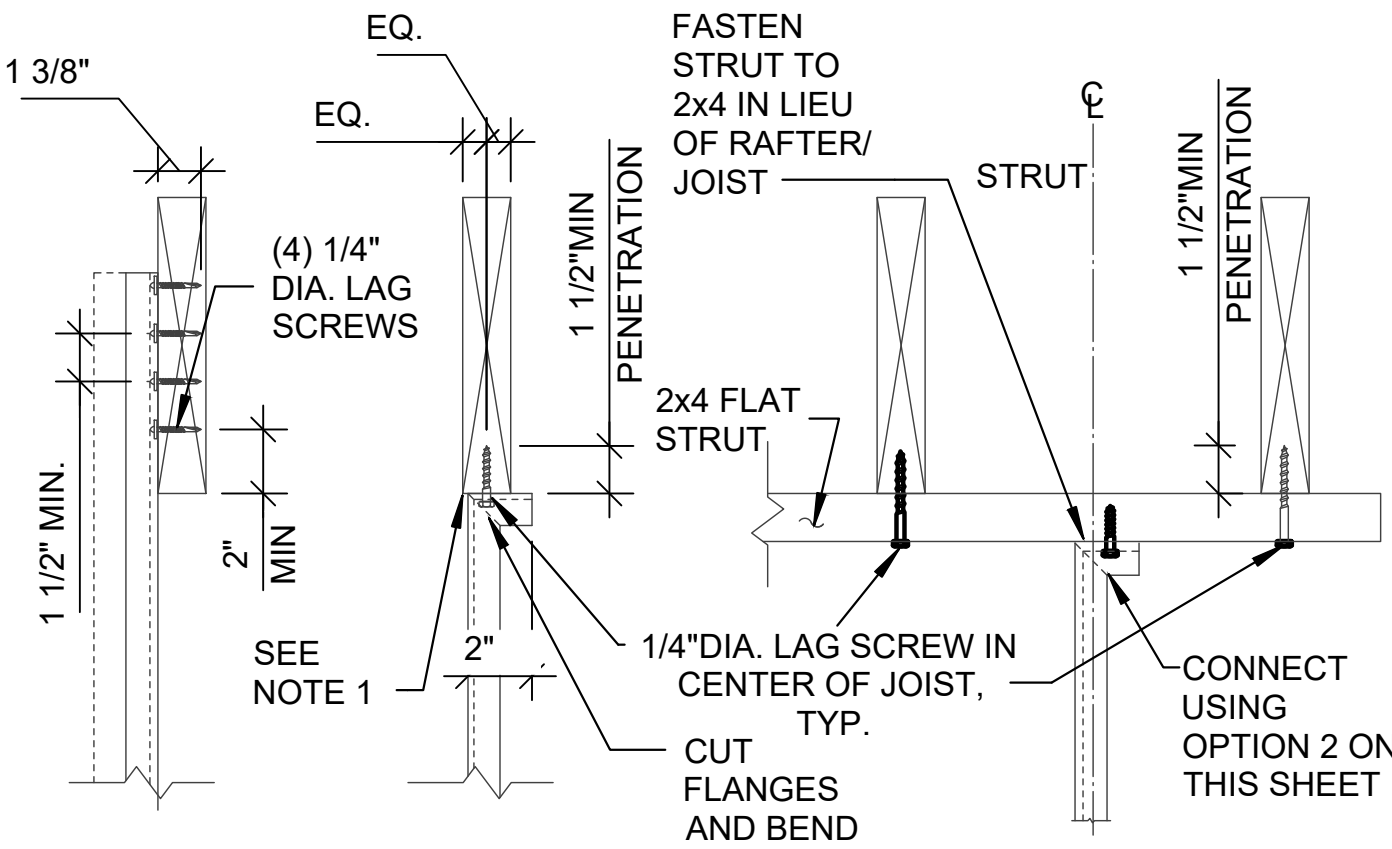
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A8.8

NOTES:

1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. SEE PAGE 5.50 FOR ADDITIONAL INFORMATION.

SEE SHEETS A8.3, A8.4, A8.5, A8.6, A8.8 & A8.8
FOR SUSPENDED ACOUSTICAL CEILING DETAILS

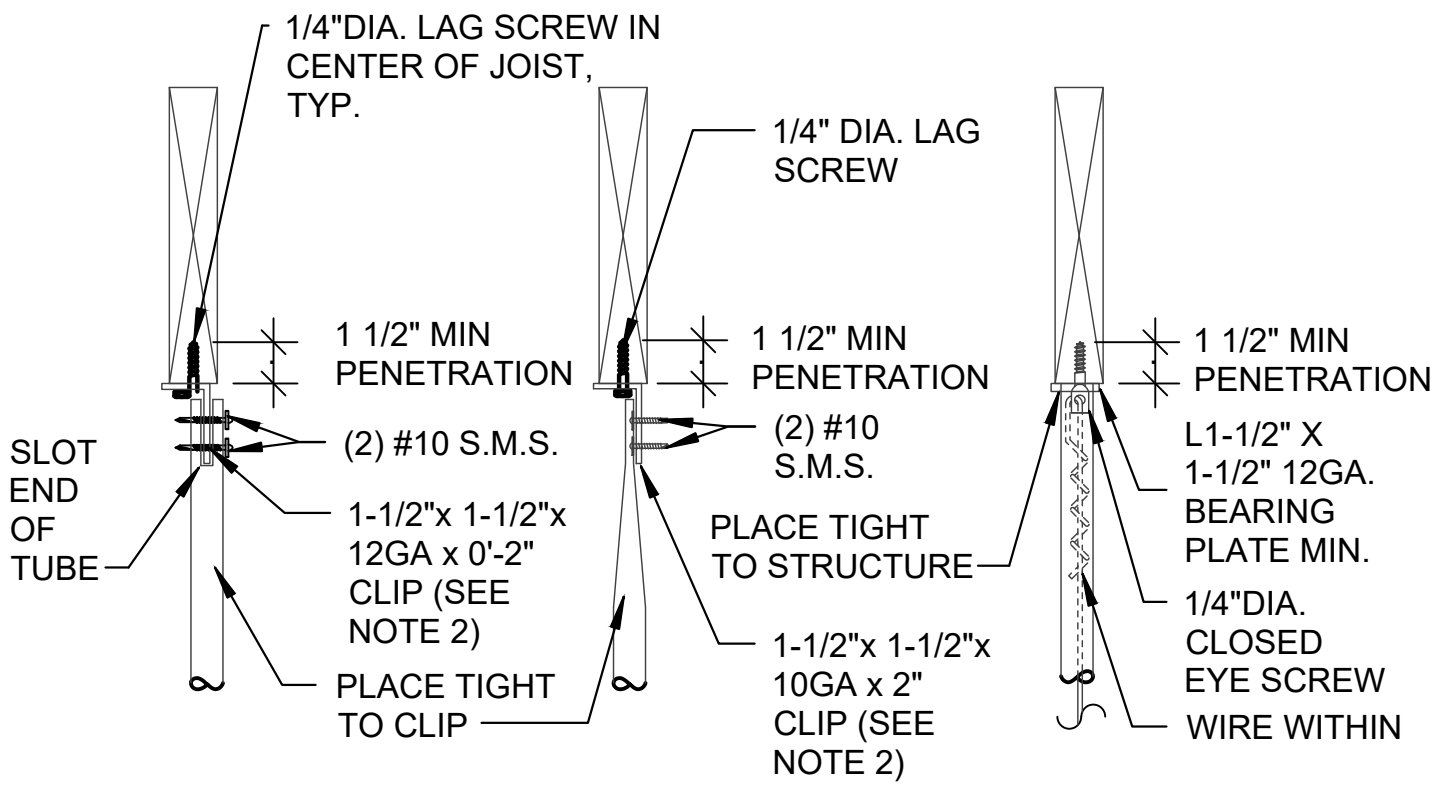


OPTION 1

OPTION 2

OPTION 3

CHANNEL STRUT



OPTION 1

OPTION 2

OPTION 3

TUBE STRUT

5.60 STRUT CONNECTION TO SAWN TIMBER WITHOUT GYPSUM BOARD
SCALE: N.T.S.

◆ Bolt and Washer Notes

- Provide washers under heads and nuts of all bolts and lags bearing against wood.
- Installation of bolts, lags, screws and washers shall be in accordance with Title 24 Section 2304.10.
- Washers shall be square plate steel or rolled malleable iron:
 - $\frac{1}{2}" \phi$ bolt ----- $2" \times 2" \times \frac{1}{4}"$ or $2\frac{1}{2}" \phi \times \frac{1}{4}"$
 - $\frac{3}{8}" \phi$ bolt ----- $2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{1}{4}"$ or $2\frac{3}{4}" \phi \times \frac{3}{8}"$
 - $\frac{1}{2}" \phi$ bolt ----- $2\frac{3}{4}" \times 2\frac{3}{4}" \times \frac{3}{8}"$ or $3" \phi \times \frac{1}{2}"$
 - $\frac{5}{8}" \phi$ bolt ----- $3\frac{1}{2}" \times 3\frac{1}{2}" \times \frac{3}{8}"$ or $3\frac{1}{2}" \phi \times \frac{5}{8}"$
 - $1" \phi$ bolt ----- $3\frac{3}{4}" \times 3\frac{3}{4}" \times \frac{3}{8}"$ or $4" \phi \times \frac{1}{2}"$
 - Sill $\frac{1}{2}" \phi$ ABs ----- $3" \times 3" \times \frac{1}{4}"$, UNO.
- All exposed washers shall be malleable iron, UNO. Upset (rolled) threads are not permitted.
- Refer to Shear Wall Diagram & Legend for plate washer requirements at wood shear wall sill plate anchor bolts.
- All bolts, nuts and washers in contact with pressure treated wood shall be hot dipped galvanized.

◆ Drilled-In Anchors — Installation & Testing

- Anchors shall be installed in accordance with the recommendations given in the ICC Reports listed below and the manufacturer's instructions.
 - To Concrete Hilti Kwik Bolt-TZ (KB-TZ), ESR-1917
 - To CMU Hilti Kwik Bolt 3 (KB-3), ESR-1385Epoxy Anchors:
 - To Concrete Hilti HIT-HY 200, ESR-3187
 - To CMU Hilti HIT-HY 70, ESR-2692
- Anchors shall be tested per all applicable requirements of the 2016 CBC & Evaluation Report (ICC-ES, ESR, IAPMO UES, etc.)
- The following criteria apply for the acceptance of installed anchors.
 - Hydraulic Ram Method: The anchor should have no observable movement after 15 seconds at the applicable test load. For wedge type anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.
 - Torque Wrench Method: The applicable test for torque must be reached within 10 turns of the nut.
- All anchors used in structural applications shall be tested. 50% of all anchors used in non-structural applications shall be tested per CBC Section 1910A.5. If any anchor fails the test, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then resume initial testing frequency.
- When installing drilled-in anchors in existing concrete or masonry, do not cut or damage existing reinforcing bars.
- The testing of the anchors shall be done by the testing laboratory and a report of the test results shall be submitted to DSA and the Architect / Structural Engineer.
- Substitution of an alternative manufacturer is subject to the approval of the Structural Engineer of Record and DSA.
- Test expansion anchors to values listed below. Contact Structural Engineer for epoxy anchor test values and procedures.
- Test equipment (including torque wrenches) is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
- Testing shall occur at a minimum of 24 hours after the installation of the anchors.
- All tests shall be performed in the presence of a Special Inspector per CBC Section 1910A.5.
- Test proof loads for repair conditions are not part of these documents and will require a separate approval by the Structural Engineer of Record and DSA.

Concrete Anchors				CMU Anchors			
Expansion Anchors	Minimum Embed *	Torque Proof Load		Expansion Anchors	Minimum Embed	Torque Proof Load	
Hilti Kwik Bolt TZ ICC No. ESR-1917 May 1, 2019	(in)	(ft-lb)		Hilti Kwik Bolt 3 ICC No. ESR-1385 February 1, 2020	(in)	(ft-lb)	
$\frac{3}{8}" \phi$	2 $\frac{1}{4}"$	25		$\frac{3}{8}" \phi$	2 $\frac{1}{2}"$	25	
$\frac{1}{2}" \phi$	3 $\frac{3}{8}"$	40		$\frac{1}{2}" \phi$	3 $\frac{1}{2}"$	15	
$\frac{5}{8}" \phi$	4 $\frac{1}{2}"$	60		$\frac{5}{8}" \phi$	4"	65	
$\frac{3}{4}" \phi$	5 $\frac{1}{2}"$	110		$\frac{3}{4}" \phi$	4 $\frac{3}{8}"$	120	
* - UNO on plans							

◆ Inspection Notes

- General:** In addition to the inspections required by the current CBC the owner shall employ a Special Inspector during construction of the following types of work. All special inspections shall be performed in accordance to Chapter 17A of the current CBC. Submit the name of all Special Inspectors to the Division of the State Architect for approval prior to starting work requiring special inspection.
- Refer to Chapter 17A for additional requirements of the Special Inspector.
- Special Inspector:** All Special Inspectors shall have a minimum of 3 years experience in the specific material / trade being inspected.
- Earthwork:** A representative of the Geotechnical Engineer of Record shall be present during the grading, excavation and foundation construction.
- Specific materials / trades requiring special inspection:** See "Structural Tests and Inspections" sheet and all applicable sections of the project specifications.
 - Concrete - During the placing of reinforcing steel and inserts, during the taking of test specimens, and during the placing of all reinforced concrete including batch plant inspection.

◆ Carpentry Notes

- Use DF No. 1 at 4x and smaller UNO. Use DF Select Structural at 6x and larger, UNO. Maximum moisture content = 19%, typical.
- All SP used for wall, roof and flooring is to be Structural 1, UNO.
- Center ABs on 2x sill $\frac{1}{2}$ s equal to or less than 2x6. Place ABs @ 2x4" from exterior face @ 2x8 sills. Use 2 rows of ABs at 2x4" from ea edge @ sills > 2x8. For 'shot' sills see details.
- All wood sills to be pressure treated douglas fir. Sill plate anchor bolts are to be #16S4 or #16, cut threads. Use $\frac{3}{4}" \times \frac{1}{2}"$ long bolts (18" at curbs) w/4" max projection & 8" min embed below T.O. slab. Bolts to be placed no more than 12" or less than 4x4" from ends of sill pieces & not over 4'-0"cc between bolts. Holes over $\frac{1}{2}$ the $\frac{1}{2}$ E width and notches in sills are considered ends. Use 2-anchor bolts minimum per sill E.
- All studs shall be 2x6 @ 16"cc UNO.
- Provide continuous 2x stud width blocking between studs at mid-height of stud or so spaced that the unbraced length of studs does not exceed 10'-0". Provide blocking in all walls at ceiling lines.
- Where wood studs or nailer abut steel, concrete or masonry, fasten to some with $\frac{3}{8}" \phi$ bolts at 4'-0"cc. Use 8" long bolts in concrete or masonry. If heads of bolts will be exposed, use welded studs in place of bolts for wood to steel connections. Dap 1" maximum on 3x and larger as required (no dap allowed on 2x's). Provide SPIN min at all nailers, typ UNO.
- Lap wall plates at corners and intersections.
- Provide 2x solid blocking between joists or rafters over supports.
- For roof joists or rafters, 8x4" deep or deeper, provide 2x3 cross-briding at not over 10'-0"cc (8'-0"cc preferred). For floor joists 4x4" deep or deeper, provide X-briding at not over 8'-0"cc. Alternate metal X-briding is acceptable.
- Bolt holes in wood or steel shall be $\frac{1}{8}"$ larger than bolt diameter.
- All bolts, expansion anchors and lag screws shall be provided with metal washers under the nuts which bear on wood. Lag screws and wood screws shall be screwed and not driven into place. All bolts and lag screws shall be tightened on installation and retightened before closing in or completion of the job.
- Provide shaped and dapped pieces as shown on drawings. Dap 1" max on 3x and larger members (no dap allowed on 2x members).
- Window and door frames shall be firmly secured in place to blocking between jambs and rough openings at top, bottom and at a maximum interval of 24" between. Nail blocking to rough frame with 16d finish nails at 8"cc staggered, set $\frac{1}{2}"$.
- All cabinets, lockers, etc. shall be firmly secured in place by 4-8d minimum nails per stud thru plywood back except if cabinets are wall hung, #14 wood screws shall be used in place of nails penetrating the studs 2" minimum. See Architectural drawings for additional anchorage details.
- All joist hangers are to be face-mounted typical, UNO on plans or details. See 9/S0.2.
- Installation of bolts, lags, screws and washers shall be in accordance with Ch. 10 of the AF&PA National Design Specifications.
- Nails, timber rivets, wood screws, lag screws and washers in contact with pressure treated or fire retardant treated wood shall be hot dipped galvanized minimum.
- All other fasteners in contact with pressure treated or fire retardant treated wood are permitted to have mechanically deposited zinc coating, Class 55 min.
- Connectors in contact with pressure treated or fire retardant treated wood shall comply with manufacturer's recommendations. In absence of manufacturer recommendations, type G185 zinc coated galvanized steel min.
- All bolted connections, including sill plate AB's & holdown AB's shall be retightened immediately prior to installation of finishes.

◆ Nailing Notes

- All nails for structural work shall be common wire nails unless noted otherwise.
- Nails shall be spaced not less than 11 diameters on center. Edge or end distances shall not be less than 6 diameters. Nail holes shall be sub- drilled where necessary to prevent splitting of wood. Sub-drill not to exceed $\frac{3}{4}$ of the shank diameter.
- Where plaster or gyp. bd., ceilings occur, ceiling stripping nails shall be annular grooved shanks, "stronghold" or approved equal. Use 2-16d min at each contact.
- Nailing not noted on this sheet or on details elsewhere, shall be a minimum of 2 nails at each contact using 8d nails thru 1x's and 16d thru 2x's.
- Minimum nailing shall be:
 - Studs and posts @ top and bottom to bearing:
 - 2x6 & smaller ----- 2-8d TN, ea side or 3-16d end nails
 - 2x8 ----- 3-8d TN, ea side or 4-16d end nails
 - 2x10 & larger ----- 4-8d TN, ea side or 5-16d end nails
 - 3x6 (sub-drill) ----- 3-8d TN, ea side or 4-20d end nails
 - 3x8 & larger (sub-drill) ----- 4-8d TN, ea side or 5-20d end nails
 - Joists or rafters:
 - to side of stud up to 8" ----- 3-16d
 - each additional 4" ----- 1-16d additional
 - to bearing ----- 2-10d TN, ea side
 - at laps (12" minimum) ----- 4-16d
 - Blocking:
 - to joists, rafters or blkg ----- 2-10d TN, ea side, ea end
 - to bearings ----- 2-10d TN, ea side, ea end,
 - to studs ----- 2-10d TN or 2-16d ea end
 - Sheathing:
 - floor - $\frac{3}{4}"$ plywood ----- 10d at 6"cc at edges of sheets and over all walls (SPPN), 10d at 10"cc at all interior contacts (SPIN)
 - wall - $\frac{1}{2}"$ plywood ----- 10d at 6"cc at edges of sheets and holdown studs (SPPN), 10d at 12"cc at all interior contacts (SPIN)
 - roof - $\frac{1}{2}$ or $\frac{3}{8}"$ plywood ----- 10d at 6"cc at edges of sheets and over all walls (SPPN) 10d at 12"cc at all interior contacts (SPIN)
 - Ribbons and ledgers to studs:
 - 1x ribbons ----- 2-8d ea stud
 - 2x ribbons ----- 2-8d ea stud
 - 2x ledgers ----- 2-16d ea stud
 - 3x ledgers ----- 2-40d ea stud
 - Double top plates:
 - upper plate to lower plate ----- 16d at 16"cc staggered
 - corner or intersection ----- 3-16d
 - Minimum plate laps:
 - 4'-0" ----- 12-16d ea side
 - Multiple studs:
 - stagr for over 4" widths ----- 16d @ 12"cc
 - Built-up beams:
 - 1" or less ----- 16d at 12"cc stagr
 - more than 10" ----- $\frac{1}{2}"$ dia bolts at 24"cc
 - Double joists:
 - not blocked apart ----- 16d at 12"cc stagr
 - blocked apart with 2x ----- blocked apart with 2x
 - blocking at 24"cc ----- 2-20d ea end, ea block
 - T&G decking:
 - nail each 2x T&G board to each bearing contact with 1-16d straight nail and 1-16d slant nail thru tongue.
- At metal strap ties, fill all holes with nails UNO. Use nail size & type as specified in allowable load table in the most current Simpson catalog. Where two sizes are given, use larger size. All nails exposed to weather shall be hot dipped galvanized.
- All nails driven into pressure treated wood shall be hot dipped galvanized.

◆ Concrete & Reinforcing Steel Notes

- Concrete construction shall conform to ACI 318-14.
- Concrete shall be as follows:
 - Class A: Use in foundations and other concrete of the like nature where minimum thickness equals or exceeds 8". f'c = 3500 psi @ 28 days max agg size = 1 $\frac{1}{2}"$ max w/c ratio = 0.55 entrained air = 3-5% slump = 3 $\frac{1}{2}" \pm 1"$
 - Class B: Use in structural concrete where minimum thickness is less than 8", excluding slab on grade. f'c = 3500 psi @ 28 days max agg size = 1" max w/c ratio = 0.55 entrained air = 3-5% slump = 4" $\pm 1"$
 - Class C: Use in interior slab on grade. f'c = 4000 psi @ 28 days max agg size = 1" max w/c ratio = 0.45 slump = 4" $\pm 1"$ include specified water-repellant admixture
- Cement shall conform to ASTM C-150, type I or II.
- Concrete Aggregate: Natural sand and aggregate shall conform to ASTM C-33.
- Reinforcing steel shall conform to ASTM A615 Grade 60, UNO.
- Welding of reinforcing steel shall conform to AWS D1.4 using proper low hydrogen electrodes. Tack welding to rebar is strictly prohibited.
- Reinforcing steel shall be fabricated and installed according to Manual of Standard Practice of Reinforced Concrete Construction by the Concrete Reinforcing Steel Institute.
- Wire fabric shall conform to ASTM A-185.
- Dimensions shown below for location of reinforcing are to the face of reinforcing and denote clear coverage. Concrete coverage shall be as follows UNO on drawings.
 - Concrete deposited directly against ground ----- 3"
 - except slabs ----- 3"
 - Concrete exposed to ground but placed in forms ----- 2"
 - Slabs on the ground ----- position in center of slab
 - Not exposed to weather nor in contact with earth:
 - elevated slabs, walls and joists ----- $\frac{3}{4}"$ beams, girders and columns (main bars, ties and spirals) ----- 1 $\frac{1}{2}"$
- Lap splices in concrete: 74 bar dia, 36" min, unless otherwise shown for #6 bars and smaller. 93 bar dia min for #7 and larger bars. Splices in adjacent bars shall be at least 5'-0" apart. Bars may be wired together at splices or laps.
- General:
 - No pipes or ducts shall be placed in concrete slabs or walls unless specifically detailed on the Structural drawings.
 - Refer to Architectural, Structural, Civil, Electrical and Mechanical drawings for all molds, grooves, ornaments clips, and grounds to be cast in concrete.
- The exposed concrete face at a horizontal construction joint shall be kept continuously moist from time of initial set until placing of concrete. Thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean, hard aggregate solidly embedded, or by an approved method that will ensure equal bond, such as green cutting. If contact surface becomes coated with earth, sawdust, etc, after being cleaned, rechip entire surface.
- Remove all debris from the forms before placing any concrete.
- Reinforcing dowels, bolts, anchors sleeves etc. to be embedded in concrete shall be securely positioned before placing concrete. Obtain approval of all affected trades prior to placing concrete.
- Maximum free fall on concrete should be 4'-0". If necessary, provide openings in forms to reduce fall.
- Walls shall be placed in horizontal layers of 2'-0".
- No wood spreaders or wood stakes allowed in areas to be concreted.
- Drill through steel columns and beams to pass continuous reinforcing (1"ø max).
- Concrete mix design shall be prepared by an independent laboratory approved by the school district.
- Welded wire mesh shall be lap spliced two squares minimum in each direction.
- Notify the Structural Engineer 48 hours prior to placing concrete.
- Reinforcing steel not specifically detailed shall be per ACI 315-17 Detailing Manual.
- All rebar to be welded shall be provided with mill certificates showing chemical analysis and shall be continuously inspected by a qualified special welding inspector. All preheating and welding shall be done by welders certified to weld reinforcing bars in accordance with ANSI/AWS D1.4-11 standards. Use only A706 grade rebar for applications involving welded rebar.

◆ Remodeling and Addition Notes

- It shall be the Contractor's responsibility to make himself familiar with all existing conditions, any existing building plans, and all site conditions which may affect his work. He shall ascertain the extent of demolition work required to complete the structure per new plans and be responsible for its safe completion.
- When existing building plans are available, the Contractor shall keep a full set of such plans at the job site during construction. If any existing conditions are discovered which deviate from these plans or from the new plans, the Contractor shall notify the Architect and Structural Engineer for instruction prior to proceeding with work in the affected area.
- The Contractor shall match existing heights, lines, materials, and conditions unless noted otherwise on new plans.
- The intent of these drawings and specifications is that the work of the alteration, rehabilitation or reconstruction is to be in accordance with Title 24, California Code of Regulations. Should any existing conditions be discovered which is not covered by the contract documents when the finished work will not comply with Title 24, California Code of Regulations, a change order, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work.

◆ Symbols Legend

Sheet Numbering System:

S2.2.1

Discipline designation

Drawing type designation

Sheet number beyond zero

Building unit designation

Miscellaneous Symbols:

Work point, control point or datum

Detail and Elevation Callout:

Indicates that detail 2 will be found on sheet S4.1

Indicates that detail 2 will be found on the same sheet

Section or elevation indicating that Detail 2 will be found on Sheet S3.1. Arrow indicates viewing direction

Structural Grid Identifier:

Grid at face of framing

Grid at center of framing

Material Legend:

Indicates a continuous wood member in section

Indicates solid wood blocking in section

Indicates earth

Indicates gravel/aggregate base

Indicates plywood

Indicates metal

Indicates sand

Indicates concrete

The following represents a permanent address numbering system. Details and sections may be used together on the same sheet.

13	9	5	1
14	10	6	2
15	11	7	3
16	12	8	4

Details

D	A
E	B
F	C

Building Sections and Wall Framing Elevations

◆ Design Criteria

- Building Code ----- 2016 California Building Code
- VERTICAL LOADS:
 - Roof Dead Load = 20 psf
 - Roof Live Load = 20 psf (Reducible)

◆ Foundation Notes

- The Contractor shall give the Division of the State Architect and the Structural Engineer a minimum of 48 hours notice before the reinforcing and/or forms are placed in excavated footings.
- Footings shall bear on firm, dry undisturbed soil, depths indicated on plans shall be the minimum depth of footing.
- Excavations shall be cleared of all debris. Standing water shall be removed.
- All foundations are shown and dimensioned as being formed. Foundations may be placed in neat excavations provided footings are increased 1" in width at each vertical face, for a total increase of 2" in width overall.
- At the discretion of the Contractor, foundations can be over-excavated in order to place lean mix concrete to facilitate debris and standing water removal.
- Contractor has the option to use threaded rod (fy=36ksi min) w/dbl nuts @ holdowns and sill bolts. Embedment of holdown bolt is considered as the length projection below the lowest construction joint.
- Construction joints in foundation shall not occur, except as approved in writing by the Structural Engineer and DSA.
- Soils Report by: **Terracon** File No: NA 185174 Dated: December 14, 2018
- Bearing soil is classified as **dense silty sand** with an estimated allowable soil pressure of 2000 psf for total load (including wind and seismic).

◆ General Notes

- All construction shall conform to 2016, Title 24 of the California Code of Regulations and all other applicable codes and regulations.
- General Notes, Plan Notes and Typical Details shown are typical and shall apply unless noted otherwise in the contract documents.
- If conflicting information is shown on construction documents, the most restrictive requirement shall apply.
- Overall wall dimensions are typically from $\frac{1}{2}$ of wall to $\frac{1}{2}$ of wall at steel framed buildings and from face of wall to face of wall at wood framed, concrete tilt-up and CMU buildings.
- Contractor shall verify all dimensions and elevations on the job including existing construction.
- Prior to fabrication, shop drawings shall be submitted to the Structural Engineer for review.

Shop drawings: Contractor agrees that shop drawing submittals processed by the Engineer are not change orders and that the purpose of shop drawing submittals by the Contractor is to demonstrate to the Engineer that the Contractor understands the design intent by indicating which material he intends to furnish and install and by detailing the fabrication and installation method he intends to use.
- Contractor shall verify all dimensions, elevations and property lines etc., on the job.
- Contractor shall notify the Architect and Structural Engineer where a conflict occurs on any of the contract drawings or documents. Contractor is not to order material or construct any portion of the building that is in conflict, until conflict is resolved with the affected parties.
- Contractor shall be responsible for the design and construction of all foundation and temporary bracing.
- Contractor shall be responsible for the design and construction of all shoring and temporary bracing.

◆ Abbreviations

abv	above	jt	joint
AFF	Above Finish Floor	jst	joist
addl	additional	JH	Joist Hanger
agg	aggregate		
alt	alternate	ksi	Kips per Square Inch
AB	Anchor Bolt	LS	Lag Screw
&	and	lw	light weight
L	angle	long	longitudinal
LLH	Long Leg Horizontal	LLV	Long Leg Vertical
at	at		
bm	beam	MB	Machine Bolt
blw	below	mfr	manufacture/d/r
btwn	between	max	maximum
blk	block	Mech	Mechanical
blkg	blocking	mtl	metal
bot	bottom		minimum
B.O.	Bottom Of (Conc, Ftg, etc)		
BF	Braced Frame	NA	Neutral Axis
brcg	bracing	(N)	new
blgd	building	NC	No Camber
		nwt	nominal
CBC	California Building Code	NTS	normal weight
C	Camber	#	Not To Scale
CIP	Cast In Place	opening	number/pounds
cig	ceiling		
¢	center line		
cc	center to center		
ccrd	centered		
chnl	channel		
clr	clear		
colmn	column		
CJP	Complete Joint Penetration		
conc	concrete		
CMU	Concrete Masonry Unit		
CTUP	Concrete Tilt-up Panel		
cnct	connection		
cntr	Construction/Cold Joint		
ctsk	continuous contractor countersink		
diag	diagonal		
DS	Diagonal Sheathing		
ø	diameter		
din	dimension		
dbl	double		
dn	Douglas Fir		
dwgs	down drawings		
ea	each		
EF	Each Face		
EW	Each Way		
E.O.	Edge Of (Conc, Ftg, etc)		
Elec	Electric/al		
elev	elevation		
embed	embedment		
EN	End Nail		
eq	equal		
equip	equipment		
(E)	existing		
EJ	Expansion Joint		
ext	exterior		
F.O.	Face Of (Conc, Ftg, etc)		
FF	Finish Floor		
fir	floor		
ft	foot/feet		
fkg	footing		
fdn	foundation		
frrmg	framing		
ga	gage		
galv	galvanized		
GT	Girder Truss		
GL	glu-lam		
grade	grade		
gyp	gypsum wall board		
hgr	hanger		
HWS	Headed Welded Stud		
hdr	header		
ht	height		
HSB	High Strength Bolt		
HD	Holdown		
HSS	Hollow Structural Shope		
horiz	horizontal		
info	information		
ID	Inside Diameter		
int	interior		
thk	thick		
thrd	threaded		
thru	through		
TN	Toe Nail		
T&G	Tongue and Groove		
T&B	Top and Bottom		
TFJH	Top Flange Joist Hanger		
T.O.	Top Of (Conc, Ftg, etc)		
tran	transverse		
TWS	Threaded Welded Stud		
typ	typical		
UNO	Unless Noted Otherwise		
vert	vertical		
wt	weight		
WWF	Welded Wire Fabric		
w/	with		
WS	Wood Screw		
WP	Work Point		

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC.
REVIEWED FOR
SS ☐ FLS ☐ ACS ☐
DATE: 04/28/2020

FILE NO. 39-50 APP NO. 02-118041

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Phone: 916.921.2112
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HENRY+ ASSOCIATES
ARCHITECTS

REGISTERED ARCHITECT
STEPHEN A. HENRY
C-22525
12/31/21
RENEWAL
DATE

STATE OF CALIFORNIA

KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

GENERAL NOTES

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
BRENDAN J. RYAN
C-4455
STRUCTURAL
STATE OF CALIFORNIA
4/10/2020

PROJECT NO.
19-32-050

DATE
04/10/2020

DRAWN
GG

CHECKED
GIR

SCALE
AS NOTED

CADFILE

UPDATED

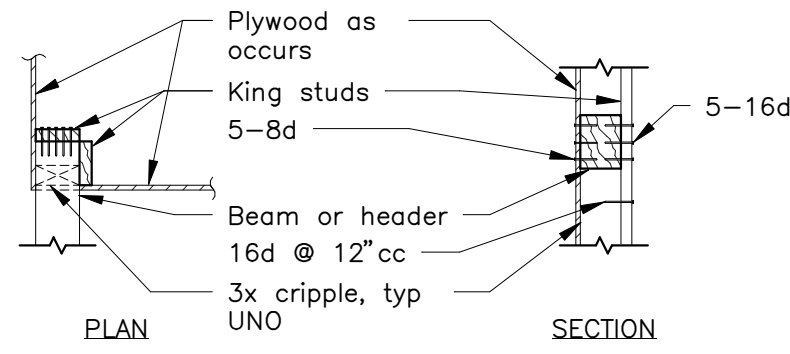
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REVISIONS

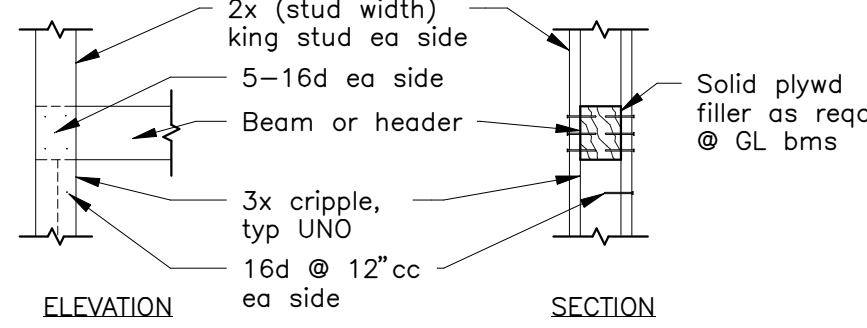
BY

S0.1

OF 7 SHEETS

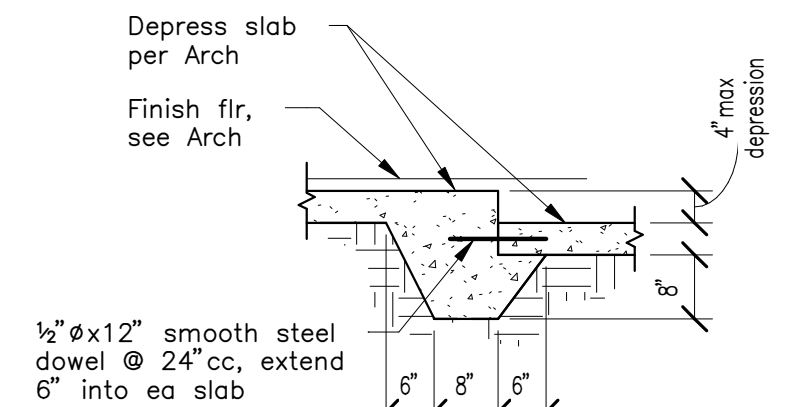


AT CORNER OF WALL

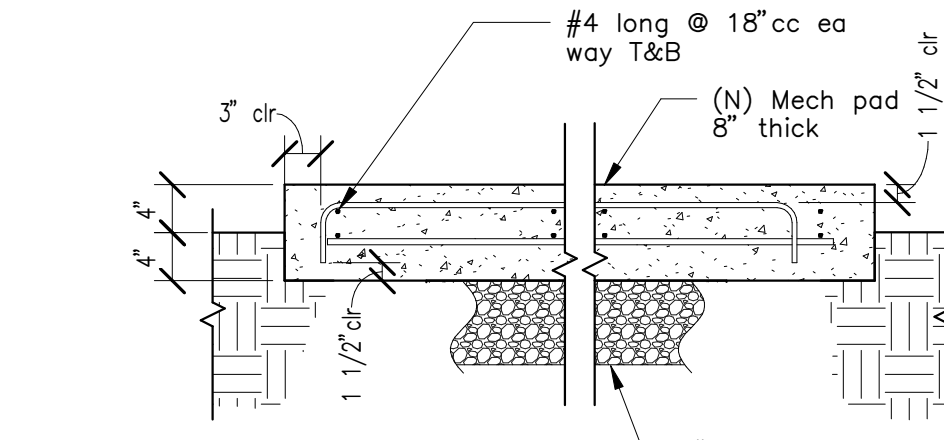


PERPENDICULAR TO WALL

13
S0.2



14
S0.2



NOTE: Coord mech pad size w/Mech

15
S0.2

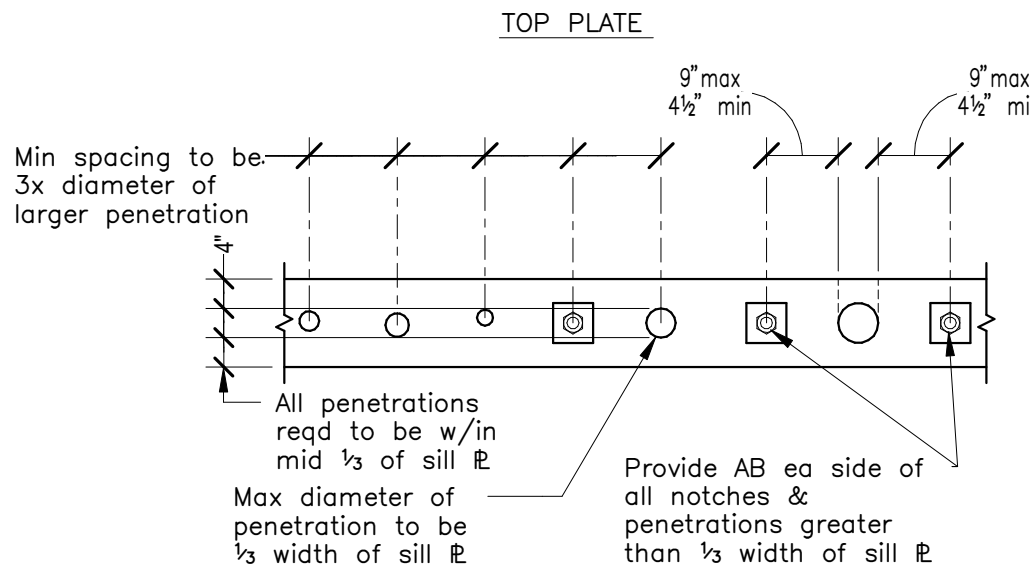
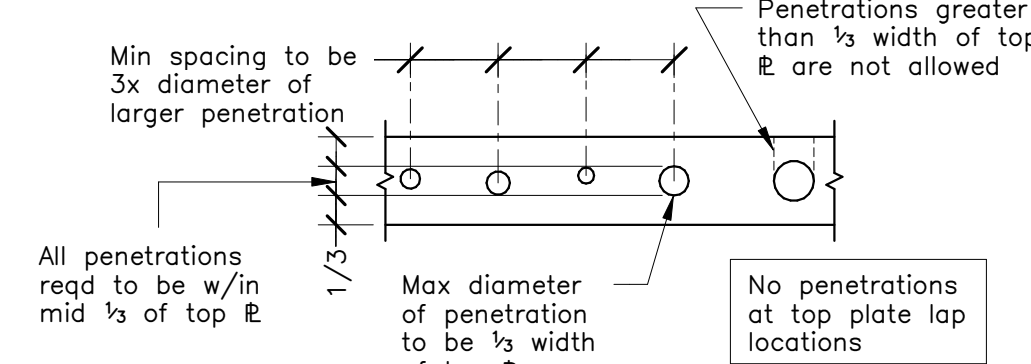
Mechanical Unit Pad

Joist Size	Hanger
2x4	LUS24
2x6, 8	LUS26
2x10, 12, 14	LUS210
3x8	HU38
3x10	HU310
3x12	HU312
4x6	HUS46
4x8	HUS48
4x10	HUS410
4x12	HUS412
6x8	HU68 MAX
6x10	HU610 MAX
6x12	HU612 MAX

- Notes:
1. Fill all holes in hanger with nails, UNO. Use nail size & type as specified in catalog.
 2. Use SIMPSON hangers, or approved equal.
 3. Where double joists occur, use similar "LUS", "HU" or "HUS" hanger.
 4. At angled connections, use skewed joist hangers conforming with table, typ UNO.

9
S0.2

Joist Hanger Schedule



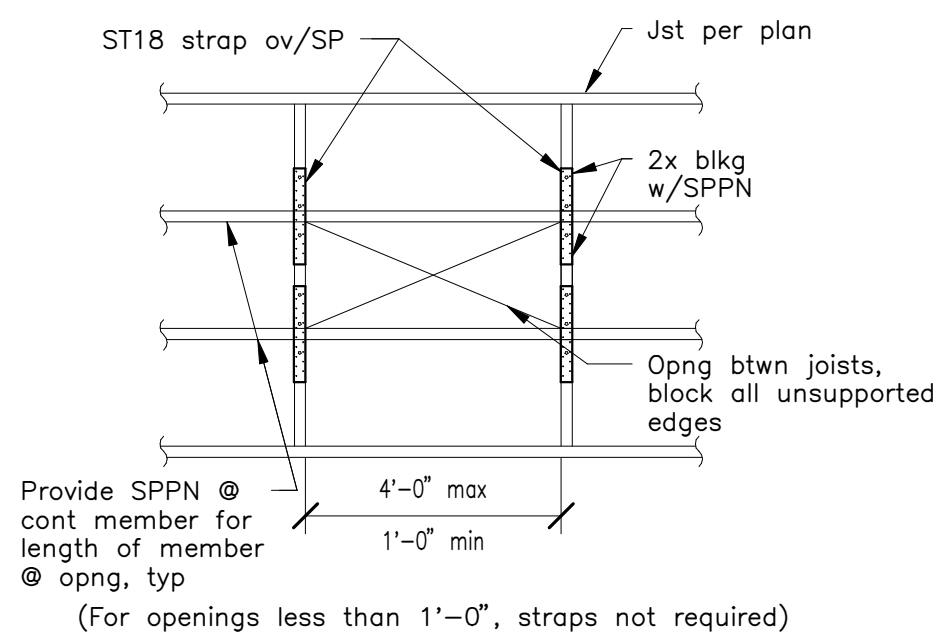
Bored holes in studs & wall fls not exceeding one third of the stud or fl width shall be located on the center-line of the member being penetrated & at a minimum spacing of 12" & 12" from end of stud or wall fl. Bored holes at studs to occur @ 3 max consecutive studs.

Any other conditions requiring holes must be specifically detailed on the contract documents. Contact the S.E.O.R. if detail is required & provide sketch of proposed penetration indicating size and location of hole.

NOTCHES IN STRUCTURAL MEMBERS ARE NOT ALLOWED

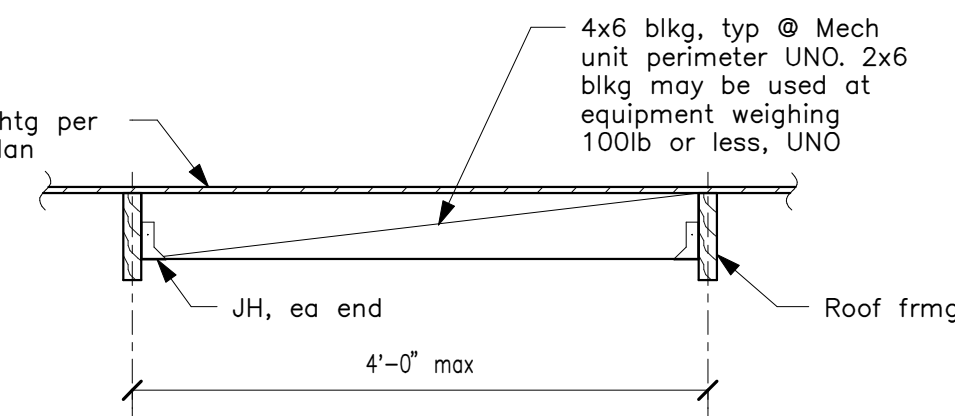
10
S0.2

Holes Thru Structural Members



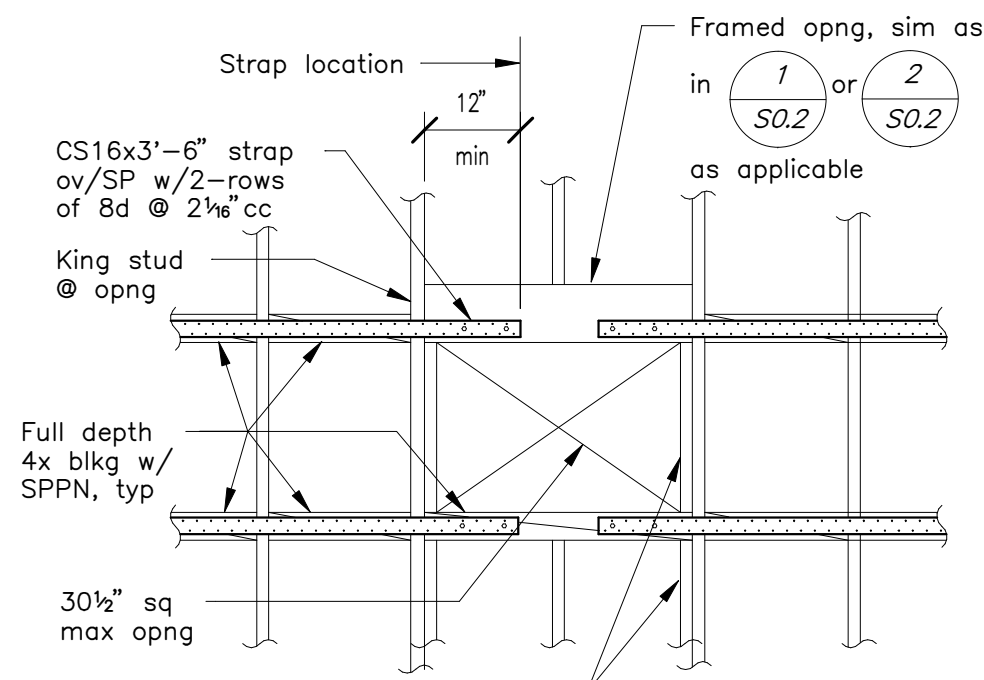
11
S0.2

Roof Opening



12
S0.2

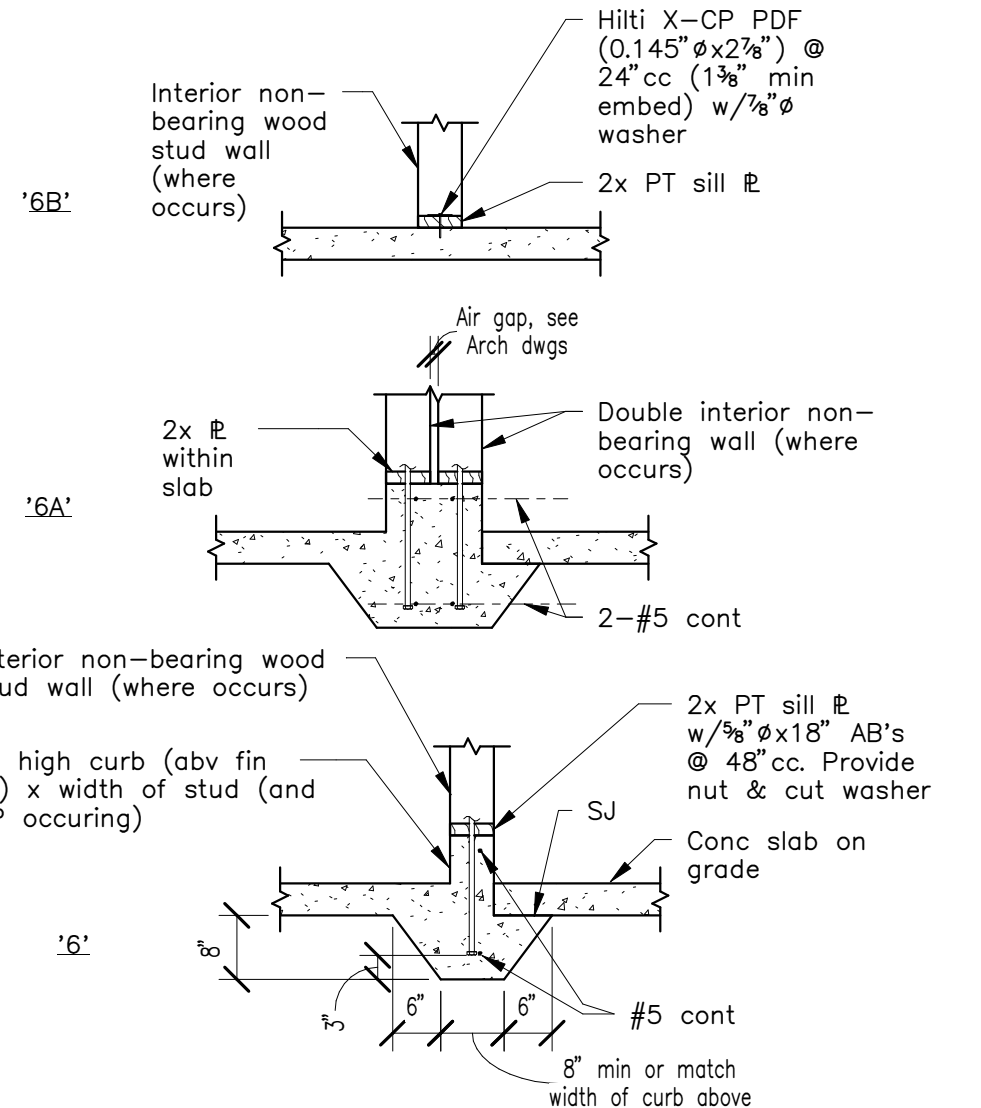
Blocking at MEP



- Notes:
1. All ducts through shear walls will be framed as shown, typ.
 2. Provide SPPN around entire opng & w/SPPN @ cont king stud.
 3. Blocking & strapping not required @ holes that are contained w/in one stud bay, no bigger than 36 in., & only on shear wall w/SPPN @ 6" cc. For opngs greater than those noted or openings on shear walls w/SPPN less than 6" cc, blocking & straps required.

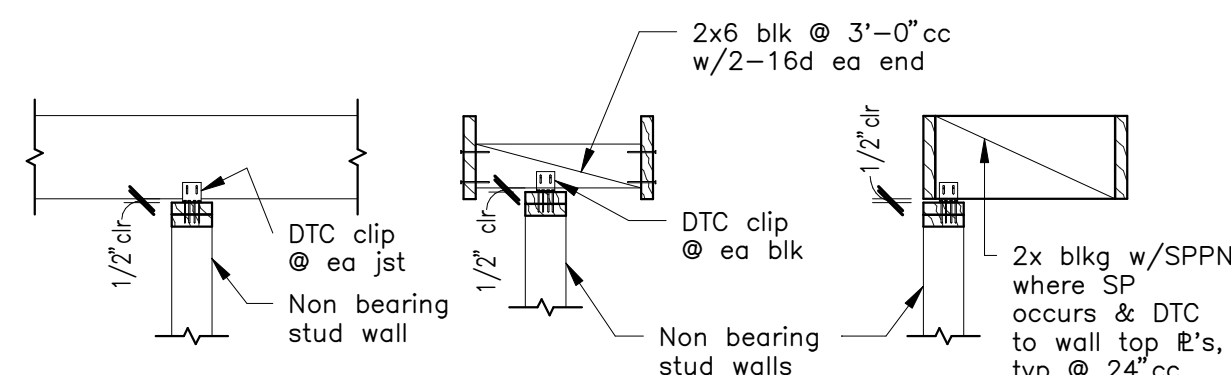
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S0.2

Shear Wall Opening



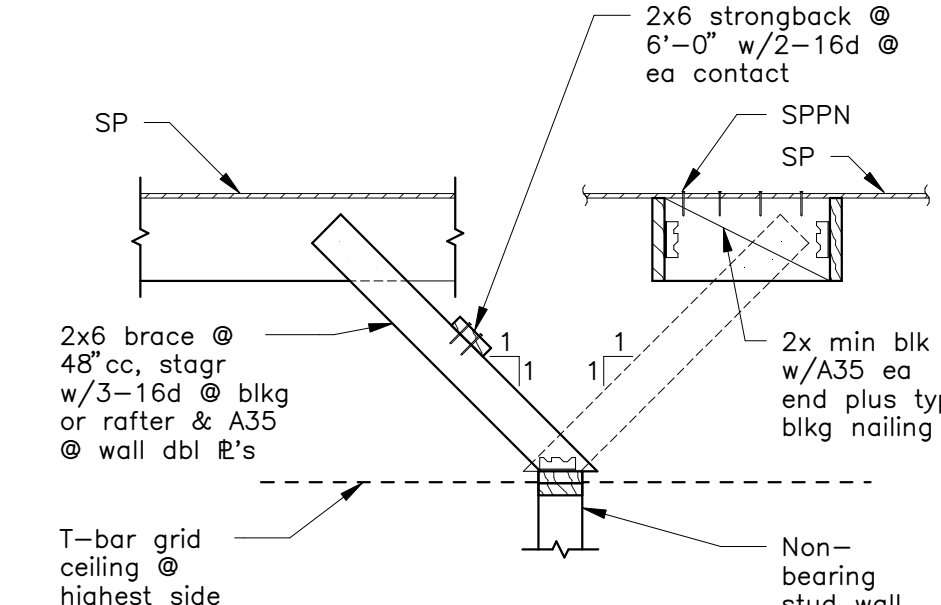
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S0.2

Non-Structural Sill Plate



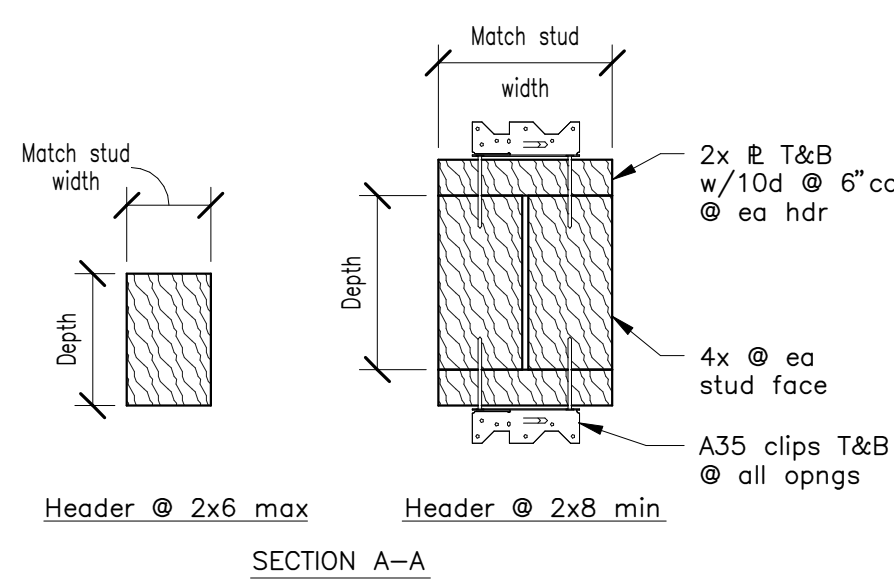
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S0.2

Non-Bearing Wall to Joists



8
S0.2

Partial Height Stud Wall @ T-Bar Ceiling

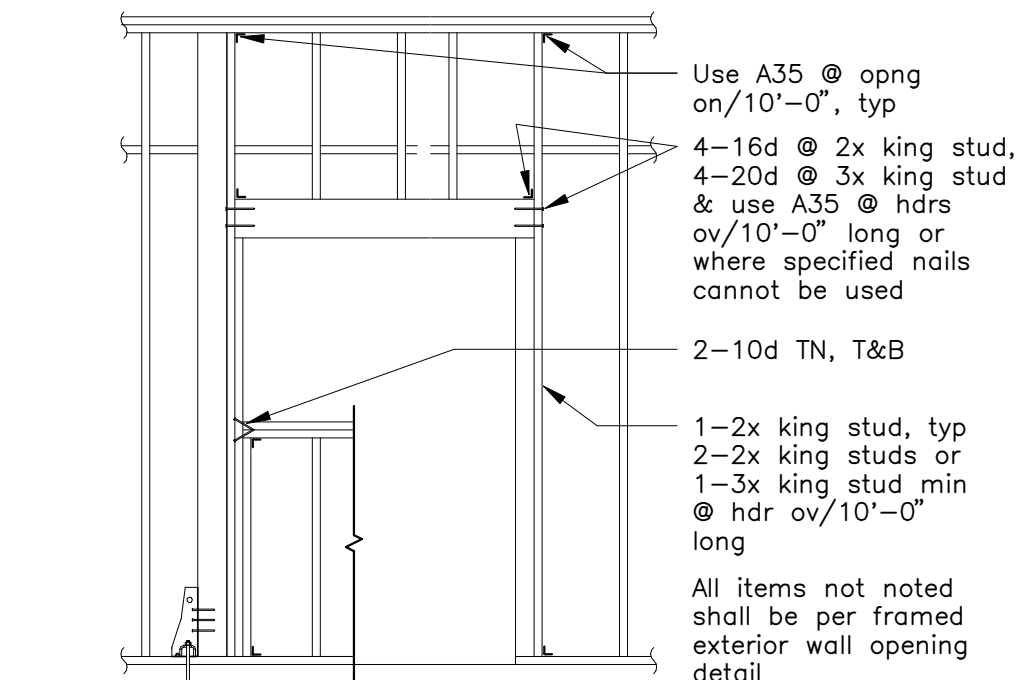


Headers are solid, one piece, same width as studs up to 2x6. Header depth is 6" up to 4'-0" span & 10" up to 8'-0" span, UNO.

2x stud, typ UNO
Double 2x sub-sill @ opng above floor
2-16d TN, T&B
Nail as a multiple stud
See typ holdown detail
Note: See plans & details for opngs > 8'-0" UNO

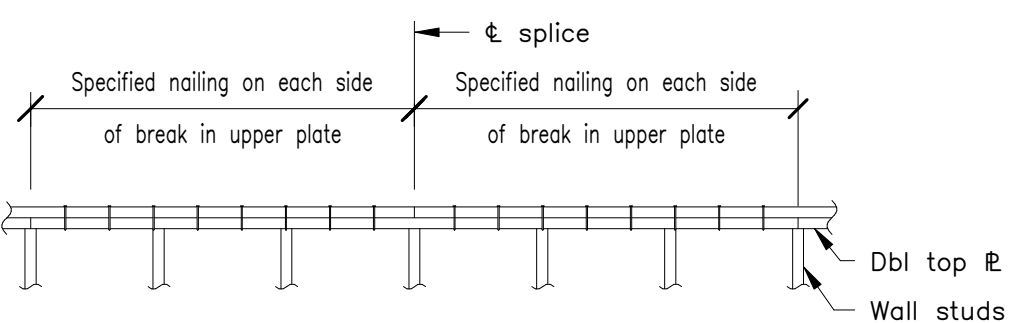
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S0.2

Framed Exterior Wall Openings



2
S0.2

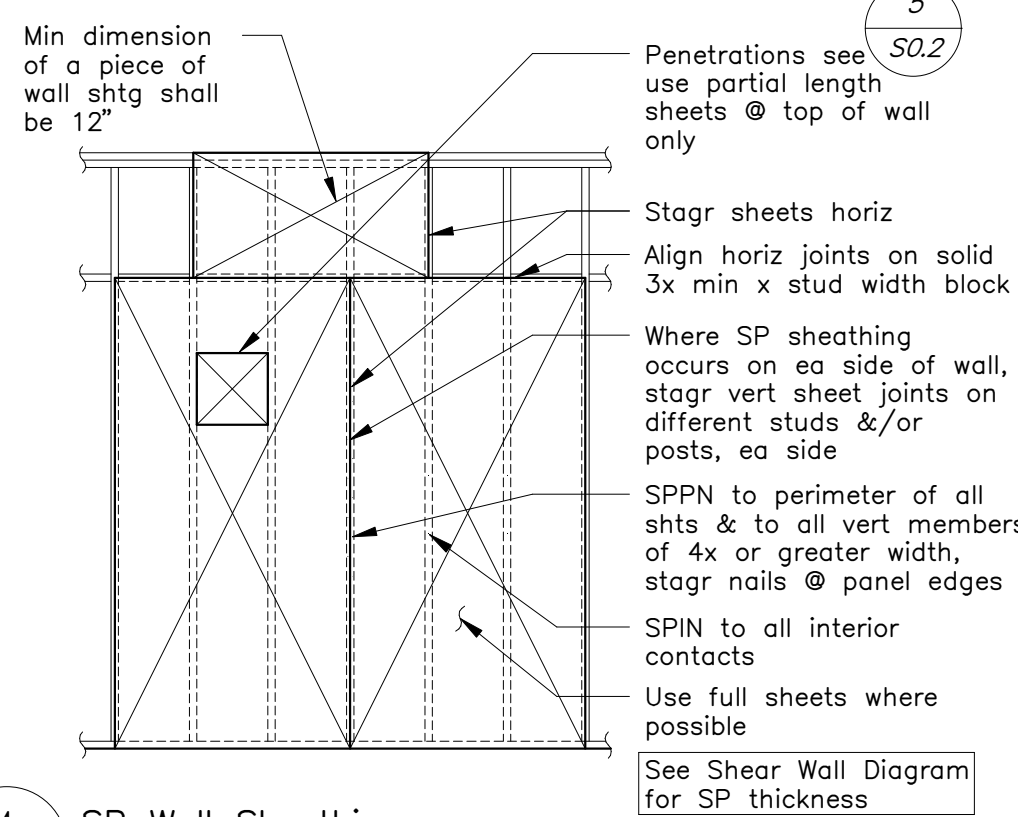
Framed Interior Wall Openings



- Notes:
1. Splices to occur only over center line of stud.
 2. When upper fl is a 3x or greater, nail upward thru 2x bot fl.

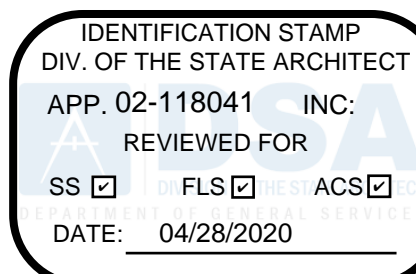
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S0.2

Wall Plate Splice



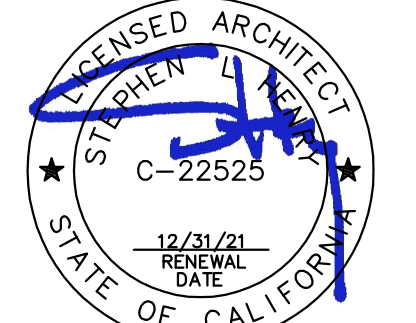
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S0.2

SP Wall Sheathing



FILE NO. 39-50 APP NO. 02-118041

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Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

TYPICAL WOOD
FRAMING DETAILS

CONSULTANT

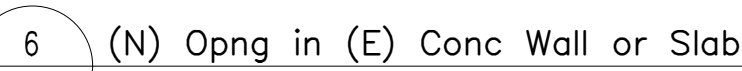
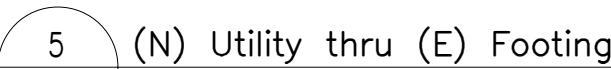
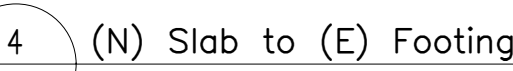
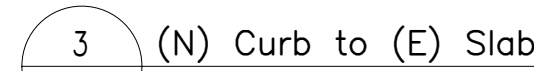
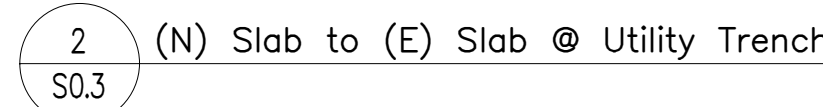
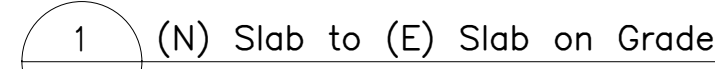
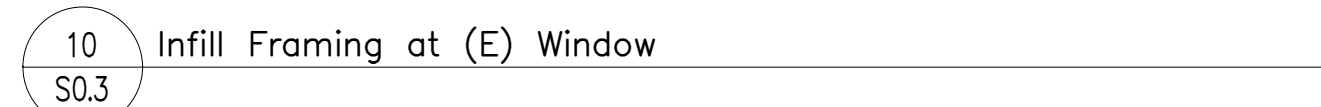
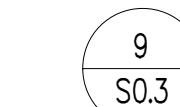
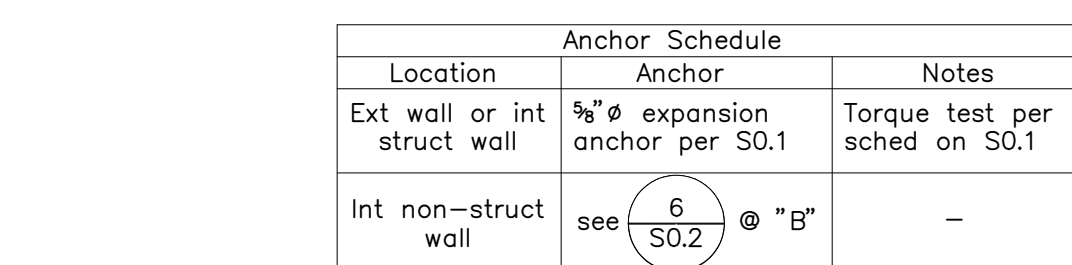
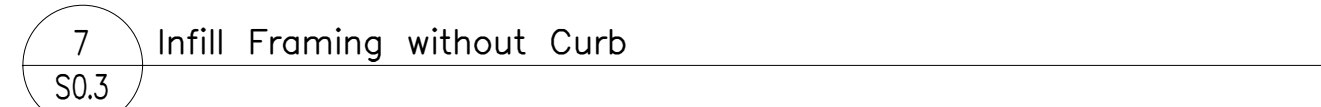
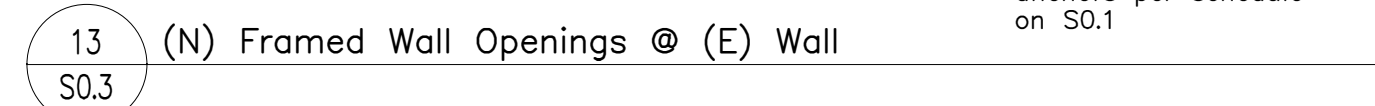
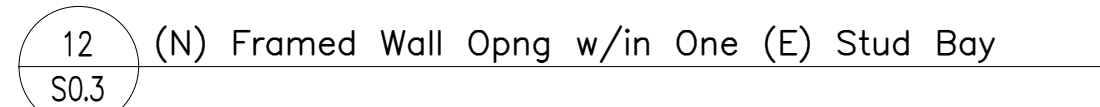
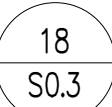
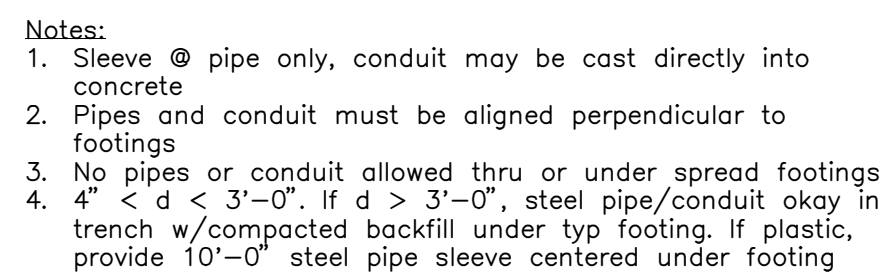


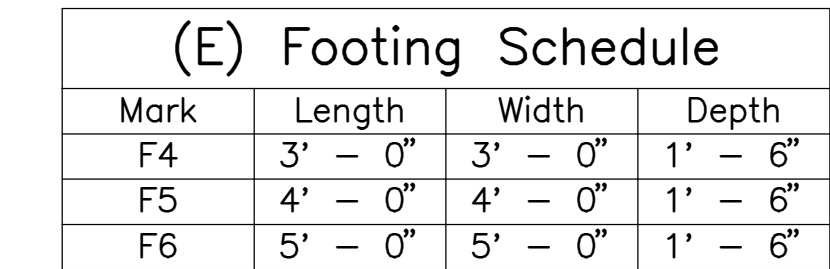
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19-32-050		
DATE	04/10/2020	
DRAWN	GG	
CHECKED	GIR	
SCALE	AS NOTED	
CADFILE		
UPDATED		

SHEET NO.

S0.2

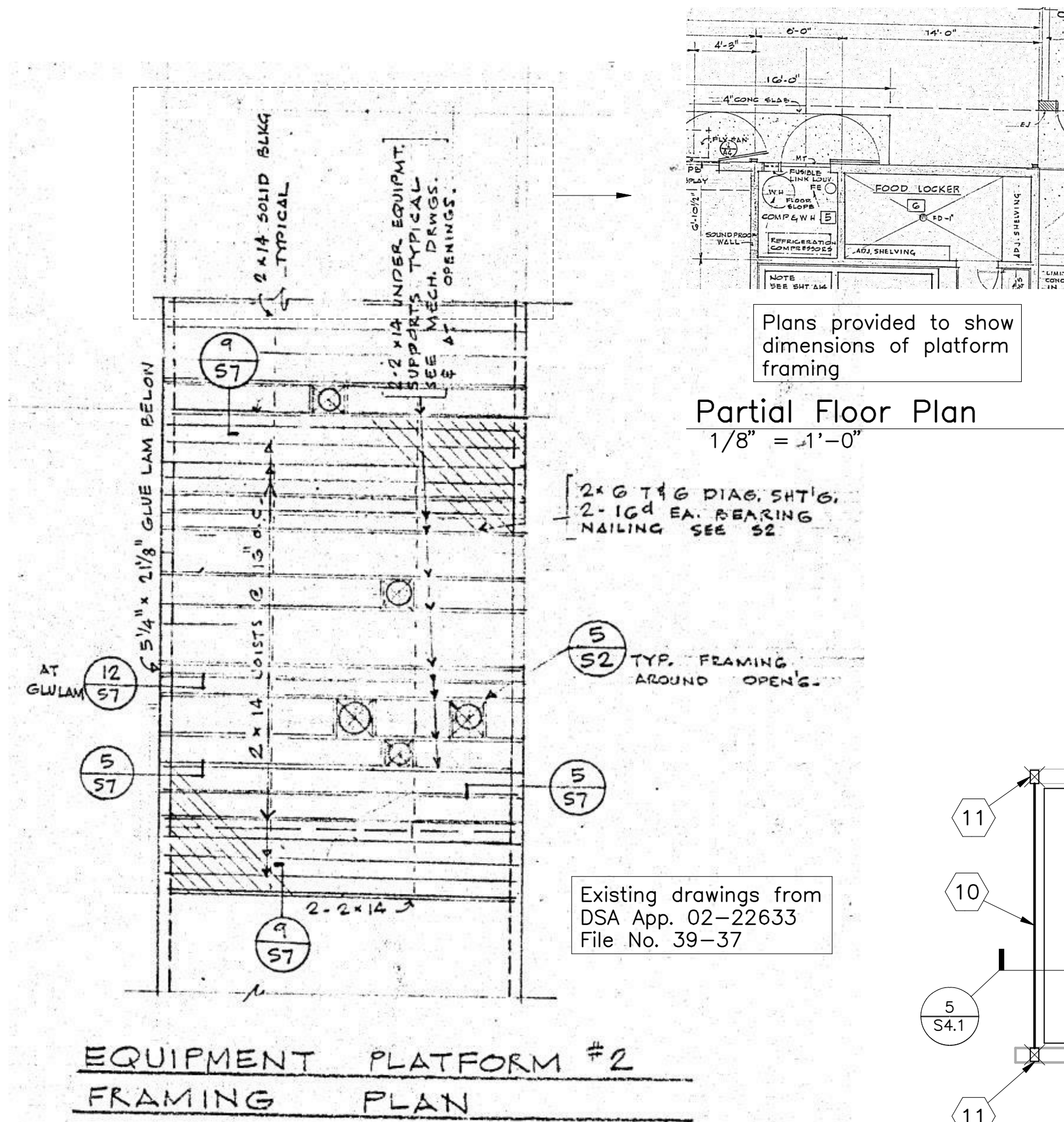
OF 7 SHEETS



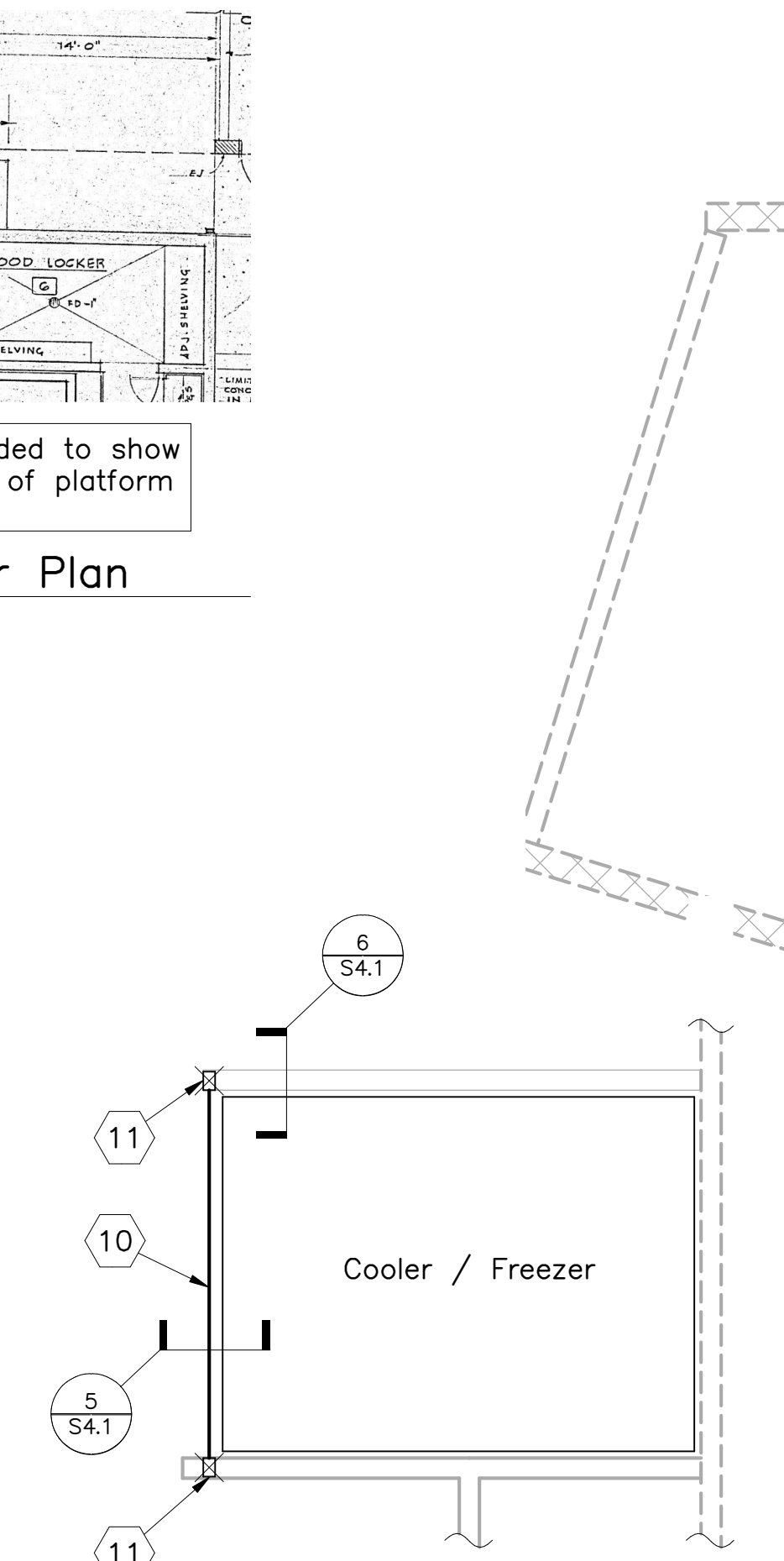


Mark	Length	Width	Depth
F4	3' - 0"	3' - 0"	1' - 6"
F5	4' - 0"	4' - 0"	1' - 6"
F6	5' - 0"	5' - 0"	1' - 6"

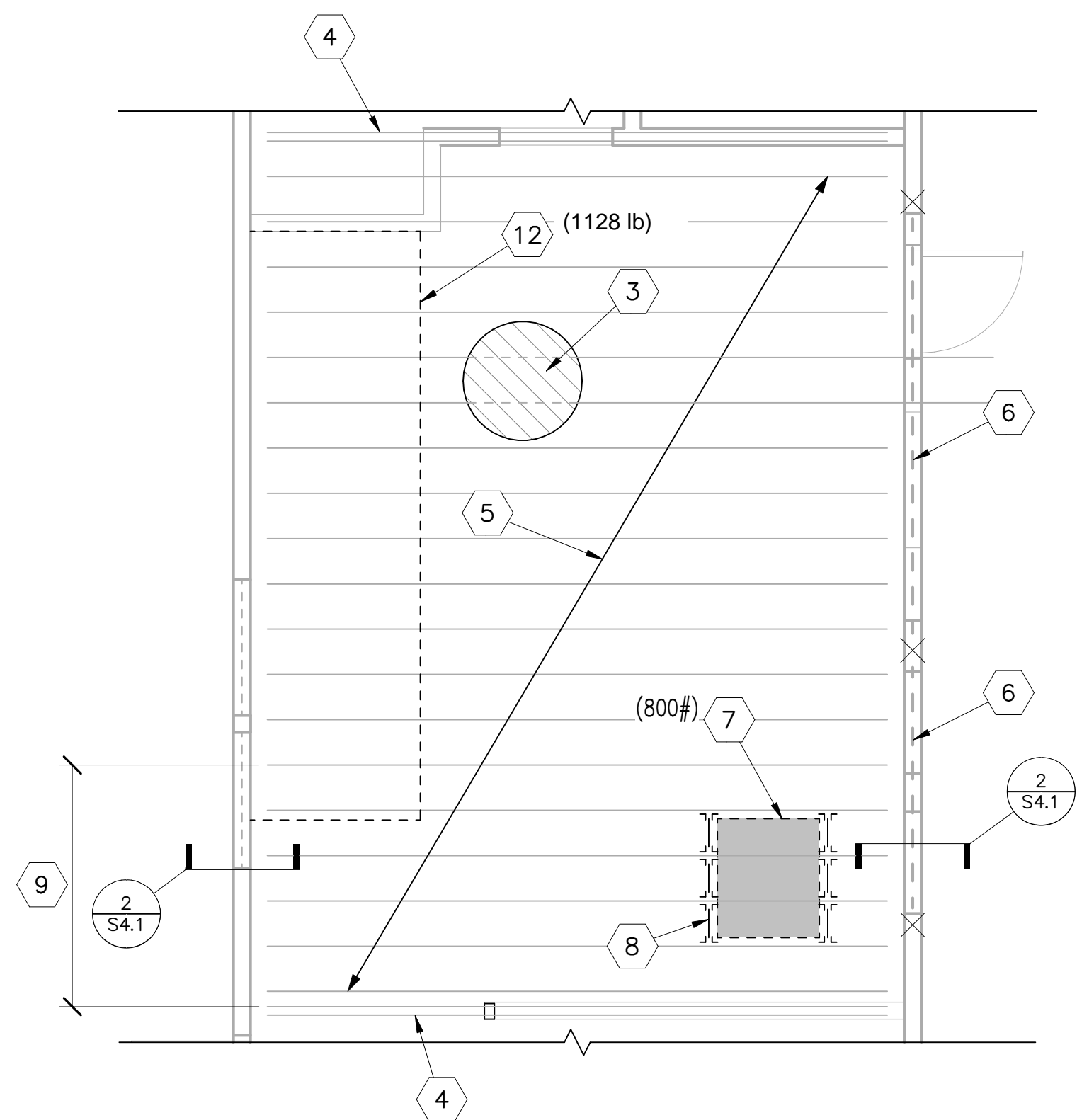
- 1 (N) 6" high concrete curb
- 2 (E) ¾" SP @ exterior face of wall
- 3 (E) ¾" SP each side of wall
- 4 (N) Wall infill. See detail 7-10/S0.3
- 5 Provide opening in wall to pass HVAC duct. See detail 5/S0.2
- 6 Fasten (N) post to (E) sill PL w/LTP4 on each side. Provide 3-16d T.N. @ each 2x stud attached to post
- 7 (N) Approx. 7'-0"x14'-0"x8" thick mechanical pad. See detail 15/S0.2, coord specific location relative to (E) building w/Mech dwgs



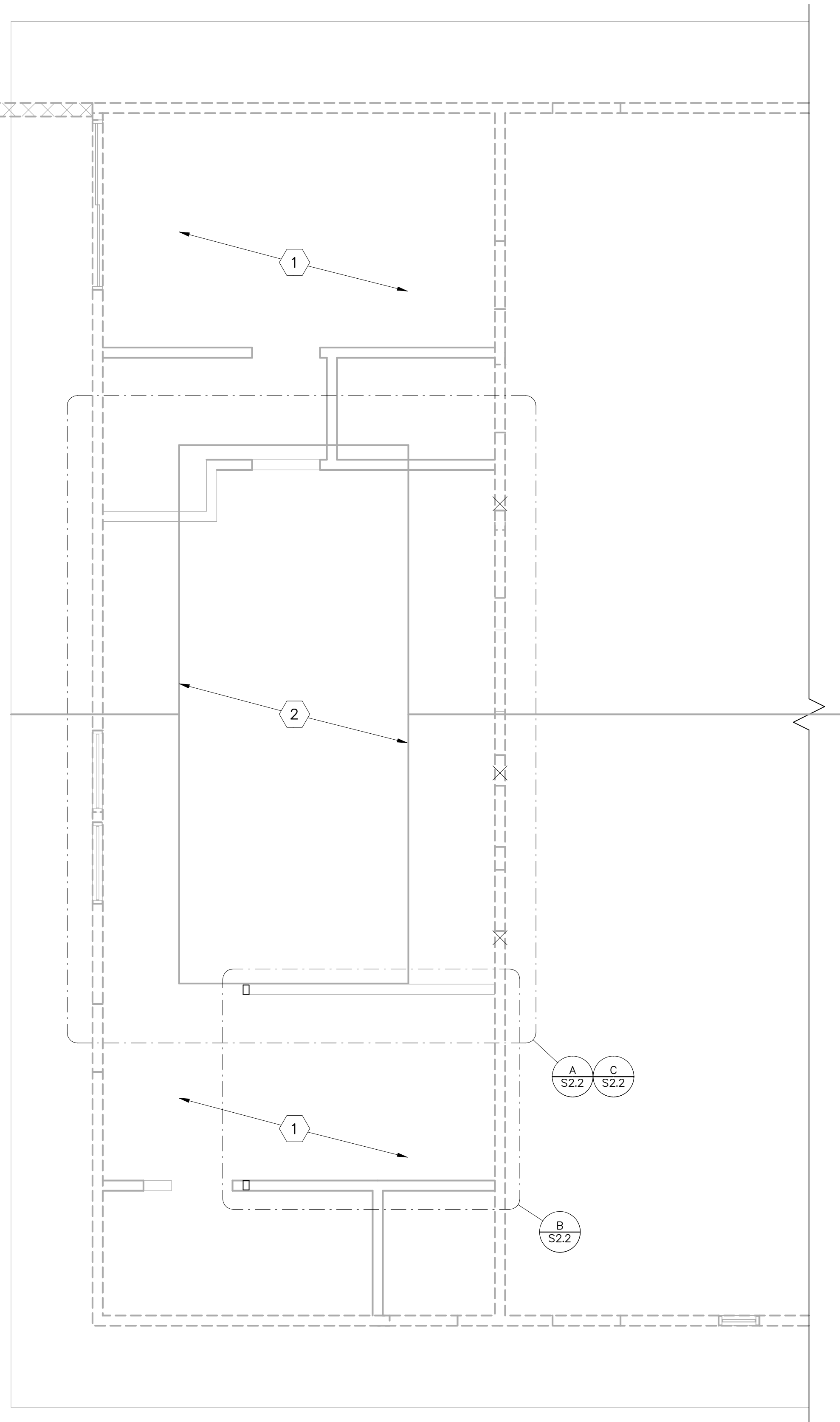
C S2.2 Equipment Framing Plan
1/8" = 1'-0"



B S2.2 Roof Framing Plan
1/4" = 1'-0"



A S2.2 Platform Framing Plan
1/4" = 1'-0"



Roof Framing Plan
1/4" = 1'-0"



Roof Framing Legend and Notes

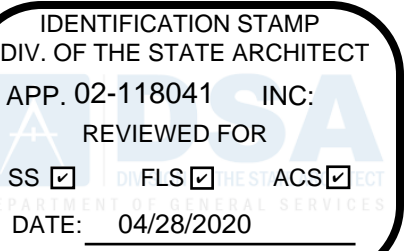
- (E) Bearing stud wall extending beyond platform
- (E) Bearing stud wall extending to bottom of roof
- (E) Non-bearing or parapet wall extending beyond roof
- (E) Non-bearing wall extending to bottom of roof
- (E) Beam or header @ roof level
- (E) Beam or header below roof level

Notes:

- All roof openings are not shown. See Arch, Mech, Elec & 14/S0.3 for roof framing. Place Mech & Elec units as to avoid cutting frame for openings.
- Opening in stud walls to be framed per 13/S0.3.
- Framing hardware is from Simpson Catalog C2019.
- All joists, beams, etc... are to have full bearing @ E's, beams & all hardware.
- Framing for Mech Units: 4x beams shown are in addition to the typical joist framing. Provide 4x6 min blk between joists and beams under the ends of units and attach blk with a joist hanger to each end.

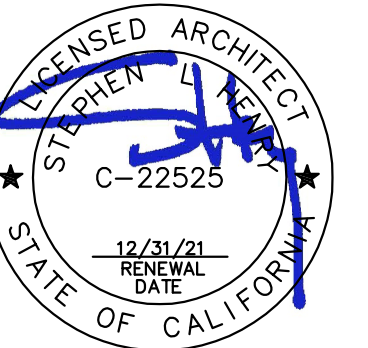
Roof Framing Plan Sheet Notes

- (E) Roof framing to remain, unaltered
- (E) Platform framing
- (E) 2x6 T&G diagonal sheathing
- (E) 2-2x14
- (E) 2x14 roof joists @ 16"cc
- (E) GL5 1/4x21 1/8, blw
- (N) Mechanical unit, max weight shown in parentheses
- Provide 4x6 blk @ unit perimeter. Provide JH @ ea end to (E) roof joist. Provide anchorage per 3/S4.1
- Reinforce joist connection at bearing wall per S4.1
- (N) 4x12 to restrain front freezer wall, T.O. bm @ T.O. freezer (+8'-4")
- (N) 4x6 Post
- (N) Kitchen hood max weight in parentheses



FILE NO. 39-50 APP NO. 02-118041

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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

PARTIAL ROOF
FRAMING PLAN

CONSULTANT

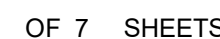


PROJECT NO.	REVISIONS	BY
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


SHEET NO.

S2.2




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











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DIFFUSER, REGISTER & GRILLE SCHEDULE						
SYMBOL	DESCRIPTION	KRUEGER	METALAIRE	NAIOLR	TITUS	TUTTLE & BAILEY
 CD	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER BEVEL FRAME 2" DROP	1240 FRAME 21 - 1"	9000-2	7500-S	MCD BORDER TYPE 6	SQD-SB
 CD-2	MODULAR CORE SURFACE MOUNT CEILING DIFFUSER FLAT FRAME	1240 FRAME 22	9000-1	7500-B	MCD BORDER TYPE 1	SQD-SF
 CR	CEILING RETURN WITH " EGG CRATE CORE SURFACE MOUNT	EGC-5	CC5D	61 EC-S	MODEL 50 F BORDER TYPE 1	CRE500-SF
 CRL	CEILING RETURN WITH " EGG CRATE CORE IN 24x24 PANEL FOR T-BAR CEILING	EGC-5TB	CC5D-TBD	61 EC-L	MODEL 50 F BORDER TYPE 3	CRE500-LT
 S *	DOUBLE DEFLECTION SUPPLY GRILLE WITH VERTICAL FRONT BARS, 2" SPACING	880 V	V 4004 S	61 DV	300 RS	T54
NOTES: <div>1. ALL SYMBOLS NOTED MAY NOT BE USED. REFER TO PLANS FOR SIZE AND QUANTITY.</div> <div>2. ALL SUPPLY AIR DIFFUSERS ARE 4 WAY BLOW UNLESS SHOWN OTHERWISE.</div> <div>3. FURNISH ALL PRODUCTS OF A SINGLE MANUFACTURER.</div> <div>ALUMINUM REGISTERS FOR SHOWERS AND DAMP AREAS</div> <div>4. COORDINATE DIFFUSER TYPE WITH REFLECTED CEILING PLAN.</div> <div>5. OPPOSED BLADE DAMPERS ARE NOT REQUIRED AT DIFFUSERS, REGISTERS OR GRILLES.</div> <div>6. PROVIDE MANUAL AIR DAMPERS AT EACH BRANCH DUCT TO A SINGLE DIFFUSER, REGISTER OR GRILLE.</div>						

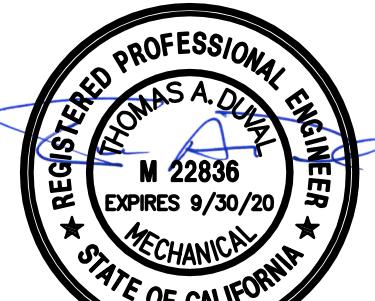
MECHANICAL GENERAL NOTES	
1.	ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES AND INDUSTRY STANDARDS.
2.	VERIFY EXACT LOCATION OF ALL (E) EQUIPMENT, DUCTWORK, DIFFUSERS, REGISTERS AND GRILLES. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN (E) SYSTEMS AND DRAWINGS.
3.	COORDINATE EXACT LOCATION OF EQUIPMENT AND ALL PENETRATIONS THROUGH ROOF, FLOORS AND WALLS WITH ARCHITECTURAL STRUCTURAL SYSTEMS PRIOR TO COMMENCING WORK.
4.	COORDINATE EXACT SIZE AND ROUTING OF DUCTWORK WITH ARCHITECTURAL PLANS, STRUCTURE AND EQUIPMENT PRIOR TO COMMENCING WORK.
5.	SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
6.	FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DUFFUSER.
7.	FLEXIBLE DUCTWORK CONNECTIONS TO CEILING DIFFUSERS ARE LIMITED TO 5' MAXIMUM LENGTH.
8.	ALL DUCTWORK, CEILING DIFFUSERS/REGISTERS/GRILLES, EQUIPMENT, PIPING ETC., ARE NEW U.O.N. (SHOWN HEAVY). (E) DUCTWORK, PIPING ETC. IS SHOWN LIGHT. SEE LEGEND.
9.	(E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN CROSSED ("X") OUT, SEE LEGEND, COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
10.	WHERE INLET DUCT DIAMETER AND DIFFUSER NECK SIZE ARE THE SAME (I.E. 9"Ø & 9x9) CONTRACTOR SHALL OVERSIZE THE SHEET METAL PLENUM TO ACCOMMODATE THE ROUND DUCT CONNECTION.
11.	THERMOSTATS AND ROOM TEMPERATURE SENSORS SHALL BE INSTALLED AT 48" ABOVE FINISHED FLOOR (TO TOP OF DEVICE), DO NOT INSTALL THERMOSTATS AND ROOM TEMPERATURE SENSORS ABOVE CASEWORK, SHELVING OR OTHER OBSTRUCTIONS OVER 24" IN DEPTH AND 34" IN HEIGHT.

MECHANICAL LEGEND		
SYMBOL	ABBREVIATION	DESCRIPTION
	ABV	ABOVE
	ABC	ABOVE CEILING
	AF	ABOVE FLOOR
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	AD , AP	ACCESS DOOR , ACCESS PANEL
	AC	AIR CONDITIONING
	APD	AIR PRESSURE DROP, INCHES WATER COLUMN
	AB	ANCHOR BOLT
	BDD	BACK DRAFT DAMPER
	BF	BELOW FLOOR
	BHP	BRAKE HORSE POWER
	BTU(H)	BRITISH THERMAL UNITS (PER HOUR)
	CC	CENTER TO CENTER
	CLG	CEILING
	CEF	CEILING EXHAUST FAN
	CLR	CLEAR
	CONC	CONCRETE
	CD	CONDENSATE DRAIN
	CONN	CONNECT OR CONNECTION
	CONT	CONTINUATION
	CONTR	CONTRACTOR
	CFM	CUBIC FEET OF AIR FLOW PER MINUTE
	DPR	DAMPER
	"F	DEGREES FAHRENHEIT
	-	DIAMETER , PHASE
	DL	DOOR LOUVER
	DN	DOWN
	DB	DRY BULB (DEGREES FAHRENHEIT)
	EP	ELECTRICAL PANEL
	EL	ELEVATION
	ENT	ENTERING
	EDB	ENTERING DRY BULB
	EW	ENTERING WATER
	EWT	ENTERING WATER TEMPERATURE
	EWB	ENTERING WET BULB
	EVAP	EVAPORATOR
	EC	EVAPORATIVE COOLER
	EA	EXHAUST AIR
	EAD	EXHAUST AIR DAMPER
	EF	EXHAUST FAN
	(E), EXIST	EXISTING
	(E)	EXISTING TO BE REMOVED
	ESP	EXTERNAL STATIC PRESSURE
	FPM	FEET PER MINUTE
	FD	FIRE DAMPER
	FS	FIRE/SMOKE DAMPER
	FC	FLEXIBLE CONNECTION
	FLR	FLOOR
		FLOW IN DIRECTION OF ARROW
	FLV	FLOW LIMITING VALVE
	FA	FROM ABOVE
	FB	FROM BELOW
	FLA	FULL LOAD AMPS
	GALV	GALVANIZED
	GI	GALVANIZED IRON
	GA	GAUGE
	HTG	HEATING

PIPING, DUCTWORK & ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE	
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2016 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.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 PREAPPROVED INSTALLATION GUIDE (e.g., SMACNA OR OSHPD OPM), 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 RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.	
MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):	
MP  MD  PP  E	OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS
MP  MD  PP  E	OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVED (OPM #) #0052-13
MP  MD  PP	OPTION 3: SHALL COMPLY WITH THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION (2009), INCLUDING ANY ADDENDA. FASTENERS AND OTHER ATTACHMENTS NOT SPECIFICALLY IDENTIFIED IN THE SMACNA SEISMIC RESTRAINT MANUAL, OSHPD EDITION, ARE DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS. THE DETAILS SHALL ACCOUNT FOR THE APPLICABLE SEISMIC HAZARD LEVEL ____ AND CONNECTION LEVEL ____ FOR THE PROJECT AND CONDITIONS.

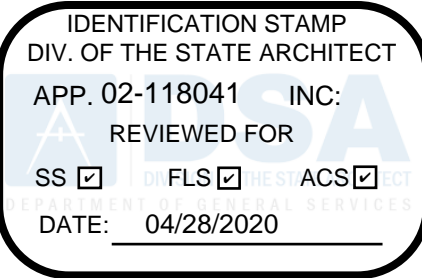
MECHANICAL LEGEND cont'd		
SYMBOL	ABBREVIATION	DESCRIPTION
	KW	KILOWATTS
	KWH	KILOWATT HOUR
	LDB	LEAVING DRY BULB IN DEGREES FAHRENHEIT
	LWB	LEAVING WET BULB IN DEGREES FAHRENHEIT
	LRA	LOCKED ROTOR AMPERES
	LVR	LOUVER
	MAD, MD	MANUAL AIR DAMPER
	MAV	MANUAL AIR VENT
	MFR	MANUFACTURER
	MAX	MAXIMUM
	MIN	MINIMUM
	MCC	MOTOR CONTROL CENTER
	(N)	NEW
	OA	OUTSIDE AIR
	OAD	OUTSIDE AIR DAMPER
	OD	OUTSIDE DIAMETER
	OV	OUTLET VELOCITY
	OH	OVERHEAD
	POC	POINT OF CONNECTION
	LBS	POUNDS
	RG	REFRIGERANT GAS PIPING
	RS	REFRIGERANT SUCTION PIPING
	RL	REFRIGERANT LIQUID PIPING
	RA	RETURN AIR
	RAD	RETURN AIR DAMPER
	RPM	REVOLUTIONS PER MINUTE
	RLA	RUNNING LOAD AMPERES
	SM	SHEET METAL
	SD	SMOKE DAMPER
	SKD	SMOKE DETECTOR
	SQFT	SQUARE FEET
	SQIN	SQUARE INCHES
	SP	STATIC PRESSURE
	SPD	STATIC PRESSURE DROP
	SA	SUPPLY AIR
	SF	SUPPLY FAN
	TCP	TEMPERATURE CONTROL PANEL
	TCV	TEMPERATURE CONTROL VALVE
	T	THERMOSTAT, "X" INDICATES DEVICE CONTROLLED. 48" AFF (TO TOP OF STAT)
	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
	TA	TO ABOVE
	TB	TO BELOW
	TP	TOTAL PRESSURE
	TSP	TOTAL STATIC PRESSURE
	TYP	TYPICAL
	UG	UNDERGROUND
	UCD	UNDER CUT DOOR
	UON	UNLESS OTHERWISE NOTED
	WPD	WATER PRESSURE DROP
	W	WATTS
	WT	WEIGHT
	WB	WET BULB
	WMS	WIRE MESH SCREEN
	WP	WORKING PRESSURE

MEP COMPONENT ANCHORAGE NOTE	
ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.	
1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (e.g. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. 3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND 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 ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.	
THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. A. 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. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTION SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.	
FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.	

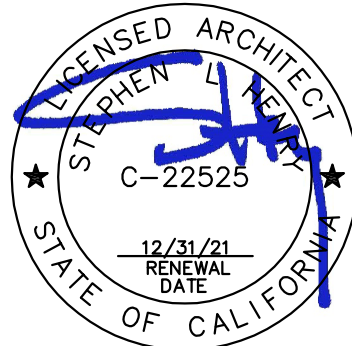


DATE SIGNED: 04/10/2020

FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL LEGENDS,
SCHEDULE AND NOTES

CONSULTANT



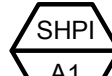

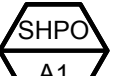
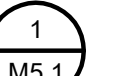
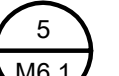
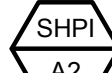
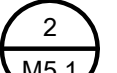

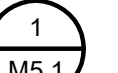
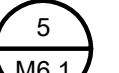
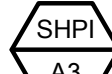
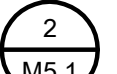
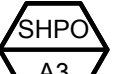
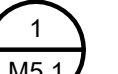
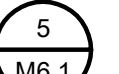
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AIR CONDITIONING (MAKE-UP AIR) UNIT SCHEDULE																																		
UNIT	SERVES	"TRANE" MODEL NO. U.N.O.	NOM. TONS	CFM	MIN. O.A. (CFM)	ESP (IN. W.G.)	DX COOLING				GAS HEATING			AC UNIT ELECTRICAL DATA										EFFICIENCY		OPERATING WEIGHT (LBS.)					MOUNTING DETAIL	CONTROL DIAGRAM	NOTES	
							LOW CFM (66%)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EVAP.		INPUT (MBH)	OUTPUT (MBH)	HX EDB (°F)	VOLT/PH	SUPPLY FAN		COMPRESSOR		COND. FAN		COMB. FAN	MCA	MOCP	SEER (EER)	AFUE (TE)	AC UNIT	ROOF CURB	PWR. EXH. ECON.	TOTAL				
										EDB (°F)	EWB (°F)					BHP	FLA	QTY	RLA	LRA	QTY	FLA												FLA
<div>AC A2</div>	KITCHEN A101	OADG010B1-DAB10AF00	10	3210	3210	1.0	NA	143.1	143.1	101	72	200.0	160.0	28	208/3	1.5	-	2	19.6 16.1	136 110	2	4.2 EA.	-	58.2	70	(12.4)	80	2961	600	NA	2561	<div>1, 2, 3 M5.3</div>	<div>4 M6.1</div>	<div>1</div> <div>2</div> <div>3</div> <div>4</div>
<div>NOTES:</div> <div><div>①</div>UNITS SELECTED AT 101 F DB / 72 F WB SUMMER AMBIENT, 28 F DB WINTER AMBIENT AIR TEMPERATURES. COOLING CAPACITIES SCHEDULED ARE NET SENSIBLE & NET TOTAL CAPACITIES.</div> <div><div>②</div>PROVIDE UNIT WITH EXPANDED METAL CONDENSER COIL GUARDS, HINGED ACCESS DOORS, AND 2" THICK MERV 8 DISPOSABLE PLEATED MEDIA FILTER(S). THE ESP SCHEDULED ABOVE INCLUDES AIR PRESSURE DROP THRU FILTER(S), DIGITAL SCROLL COMPRESSOR, 10:1 TURNDOWN MODULATING GAS HEAT, MODULATING HOT GAS REHEAT, 2-POSITION CLASS 1A OUTSIDE AIR DAMPER, DIRECT-DRIVE PLENUM SUPPLY FAN, AND 2" DOUBLE WALL CONSTRUCTION.</div> <div><div>③</div>PROVIDE "MICROMETL" STRUCTURALLY CALCD 14" TALL STANDARD CURB.</div> <div><div>④</div>UNIT SHALL OPERATE IN 100% OSA MODE. FACTORY CONTROLS SHALL MODULATE MECHANICAL HEATING AND COOLING CAPACITY AS REQUIRED TO MAINTAIN THE FOLLOWING DISCHARGE AIR TEMPERATURE SETPOINTS: HEATING MODE = 70 degF, COOLING MODE = 76 degF. INTERLOCK AC-A2 TO RUN ONLY WHEN KITCHEN HOOD EXHAUST FAN KEF-A1 IS SWITCHED ON.</div>																																		

SPLIT SYSTEM AC UNIT SCHEDULE																							
UNIT	LOCATION	"JCI" MODEL NO. (INDOOR UNIT)	CFM	FAN FLA	MCA	VOLT/PH	OPER. WT. (LBS.)	MOUNTING DETAIL	UNIT	"PCI" MODEL NO. (OUTDOOR UNIT)	TOTAL COOLING CAPACITY (MBH)	COMPRESSOR		MCA	MOCP	FAN FLA	VOLT/PH	SEER	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES	
												RLA	LRA										
 SHPI A1	TEACHERS ROOM A103	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	 2 M5.1	 SHPO A1	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5, 7	
 SHPI A2	KITCHEN A101	DHR36NKB21S	826 TO 1180	0.38	1.5	208/ 1 PH	97	 2 M5.1	 SHPO A2	DHR36CSB21S	39.0	-	-	29.0	45.0	-	208/ 1 PH	16.0	225	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5, 6	
 SHPI A3	FOOD LOCKER A102	DHX18NWB21S	335 TO 559	0.38	-	208/ 1 PH	35	 2 M5.1	 SHPO A3	DHX18CSB21S	18.0	7.2	14.0	16.0	25.0	0.36	208/ 1 PH	20.0	125	 1 M5.1	 5 M6.1	1, 2, 3, 4, 5	
NOTES: 1. PROVIDE WITH FACTORY FILTERS. 2. PROVIDE WITH FACTORY HARD WIRED STAT. 3. PROVIDE WITH WASHABLE FILTER. 4. INDOOR FAN COIL POWERED BY CONDENSING UNIT, REFER TO MRF'S INSTALLATION DATA. 5. PROVIDE "REFCO" MODEL GOBI CONDENSATE PUMP, 120V/3PH/60HZ, 16 WATT POWER CONSUMPTION, 5.0 AMPS ALARM RELAY, 3.17 GAL/HR CAPACITY, 65FT MAX. VERTICAL HEAD. INSTALL PUMP ON WALL BRACKET BELOW INDOOR UNIT. 6. PROVIDE INDOOR UNIT WITH "S&P" INLINE CENTRIFUGAL DUCT FAN (IOAF-A2) MODEL PV-125 AT 60 CFM, 115V. PROVIDE WITH VARIABLE SPEED CONTROLLER LOCATED ADJACENT TO FAN. PROVIDE WITH "S&P" FILTER BOX MODEL FB6 AT 60 CFM. SEE OUTSIDE AIR FAN SCHEDULE BELOW. 7. PROVIDE INDOOR UNIT WITH "S&P" INLINE CENTRIFUGAL DUCT FAN (IOAF-A1) MODEL PV-125X AT 125 CFM, 115V. PROVIDE WITH VARIABLE SPEED CONTROLLER LOCATED ADJACENT TO FAN. PROVIDE WITH "S&P" FILTER BOX MODEL FB6 AT 125 CFM. SEE OUTSIDE AIR FAN SCHEDULE BELOW.																							

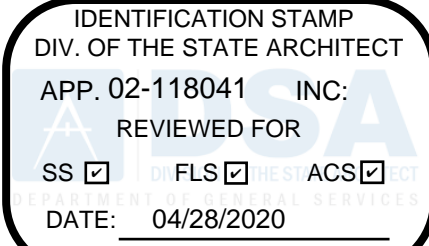
EXHAUST FAN SCHEDULE															
UNIT	LOCATION	"GREENHECK" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	RPM	HP (WATTS)	VOLT/PH	FLA	SONES	OPER. WT. (LBS.)	MOUNTING DETAIL	CONTROL DIAGRAM	NOTES
<div>CEF A1</div>	STAFF TOILET A104	S-A190	125	0.38	E	CE	1400	(46)	120/1	1.3	1.5	20	<div>2 M5.2</div>	<div>6 M6.1</div>	<div>1</div> <div>8</div> <div>9</div>
<div>CEF A2</div>	JAN/ STOR A105	SP-B150	75	0.45	E	CE	724	(128)	120/1	1.7	1.5	15	<div>2 M5.2</div>	<div>6 M6.1</div>	<div>1</div> <div>7</div> <div>9</div>
<div>KEF A1</div>	KITCHEN A101	CUBE-220HP-20	4010	1.30	E	WE	999	2.0	208/3	7.5	17.3	150	<div>1 M5.2</div>	<div>3 M6.1</div>	<div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div>
<div>NOTES:</div> <div><div><div>1. PROVIDE WITH BACKDRAFT DAMPER.</div><div>2. PROVIDE WITH INVERTER DUTY MOTOR.</div><div>3. CONTROL FAN WITH WALL SWITCH.</div></div><div><div>4. (E) AC-1 TO TURN ON WHEN KEF-A1 TURNS ON.</div><div>5. SIDE WALL MOUNTED EXHAUST FAN.</div><div>6. PROVIDE WITH MOTOR STARTER.</div></div><div><div>7. INTERLOCK TO RUN WITH LIGHTS</div><div>8. INTERLOCK TO RUN WITH SHPI/SHPO-A1.</div><div>9. PROVIDE WITH SPEED CONTROLLER.</div></div></div> <div>LEGEND: DUTY: S-SUPPLY, R-RETURN, E-EXHAUST, C-CIRCULATION STYLE: RE-ROOF EXHAUST, WE-WALL EXHAUST, CE-CEILING</div>															

EXISTING AC-UNIT SCHEDULE (FOR INFORMATION ONLY)											
UNIT	LOCATION	"TRANE" MODEL NO.	CFM	MIN. O.A. (CFM)	VOLT/PH	CONDENSER		EVAP. STANDARD		CONTROL DIAGRAM	
						QUANTITY	HP	QUANTITY	HP		
EXISTING AC/1	GRADE MOUNTED, SERVES MP ROOM A106	YCH301C3LOBA	9,000	800	208/3	2	1.0	1	7.5	<div><div>3</div><div>M6.1</div></div>	INTERLOCK WITH KEF-A1. WHEN KEF-A1 IS SWITCHED ON, (E) AC-1 SHALL BE INTERLOCKED TO RUN, IF NOT ALREADY RUNNING, TO PROVIDE KITCHEN HOOD EXHAUST MAKE-UP TRANSFER AIR. TCC SHALL RE-BALANCE (E) AC-1 OSA DAMPER MIN. POSITION FOR 800 CFM.

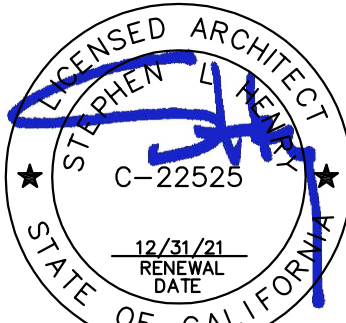
OUTSIDE AIR FAN SCHEDULE											
UNIT	LOCATION	"S&P" MODEL NO.	CFM	SP (IN. W.G.)	DUTY	STYLE	VOLT/PH	WATTS	OPER. WT. (LBS.)	CONTROL DIAGRAM	NOTES
IOAF A1	TEACHERS ROOM A103	PV-125X	125	0.01	OUTSIDE AIR	INLINE	120/1	58	7	5 M6.1	1
IOAF A2	KITCHEN A105	PV-125	60	0.01	OUTSIDE AIR	INLINE	120/1	58	7	5 M6.1	1
NOTES: 1. INTERLOCK TO RUN WITH ASSOCIATED SPLIT SYSTEM UNIT. SEE SPLIT SYSTEM AC UNIT SCHEDULE ABOVE.											



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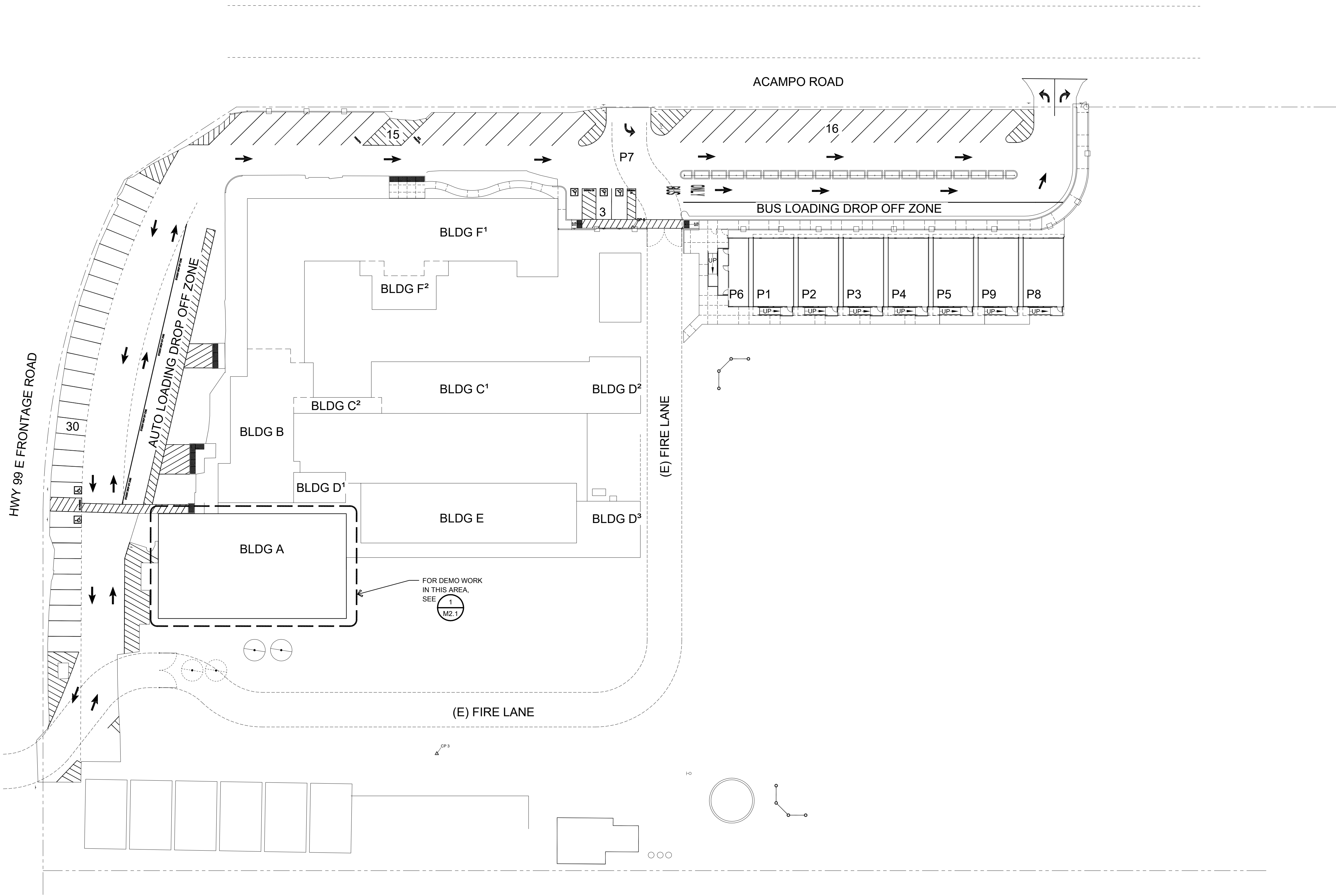
KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
SCHEDULES



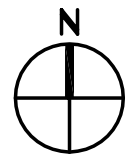
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MECHANICAL DEMOLITION SITE PLAN
SCALE : 1" = 30'-0"

1
M1.1

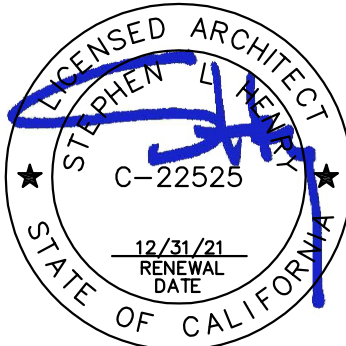


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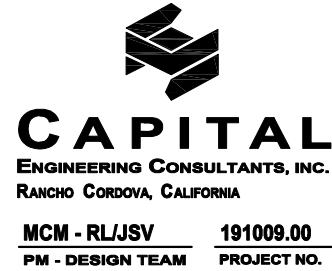
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KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
DEMOLITION SITE PLAN

CONSULTANT

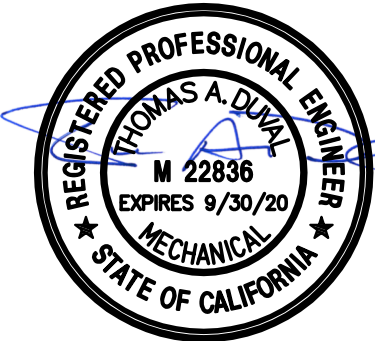


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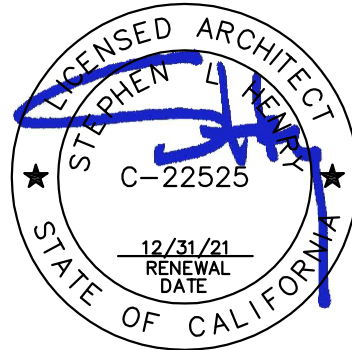
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KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
SITE PLAN

CONSULTANT

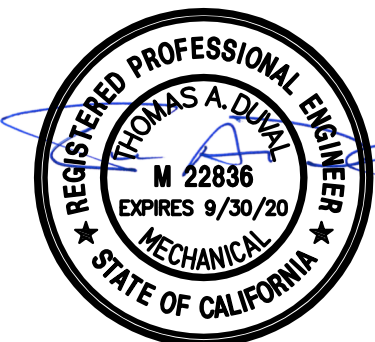


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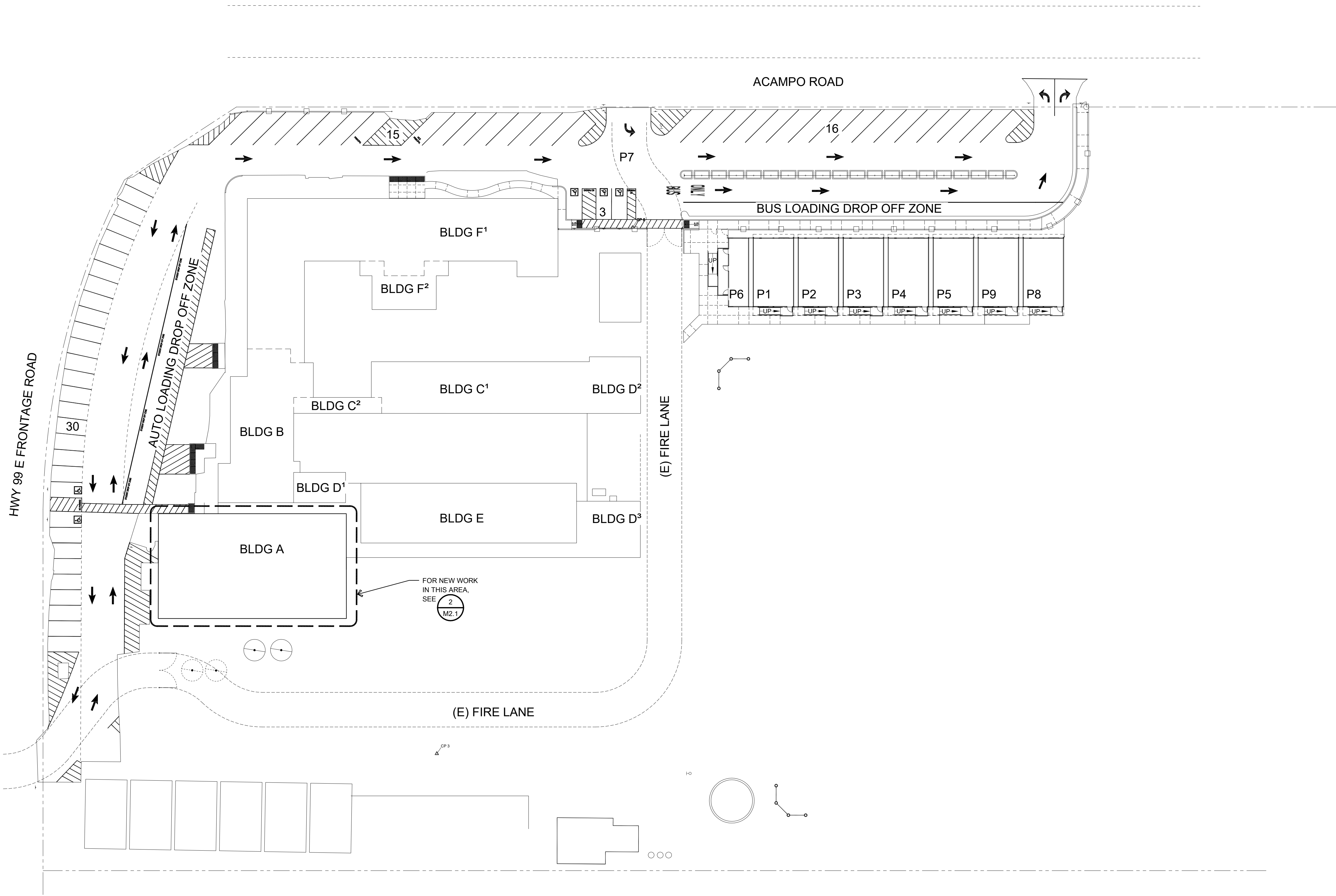
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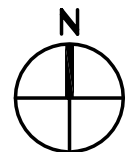
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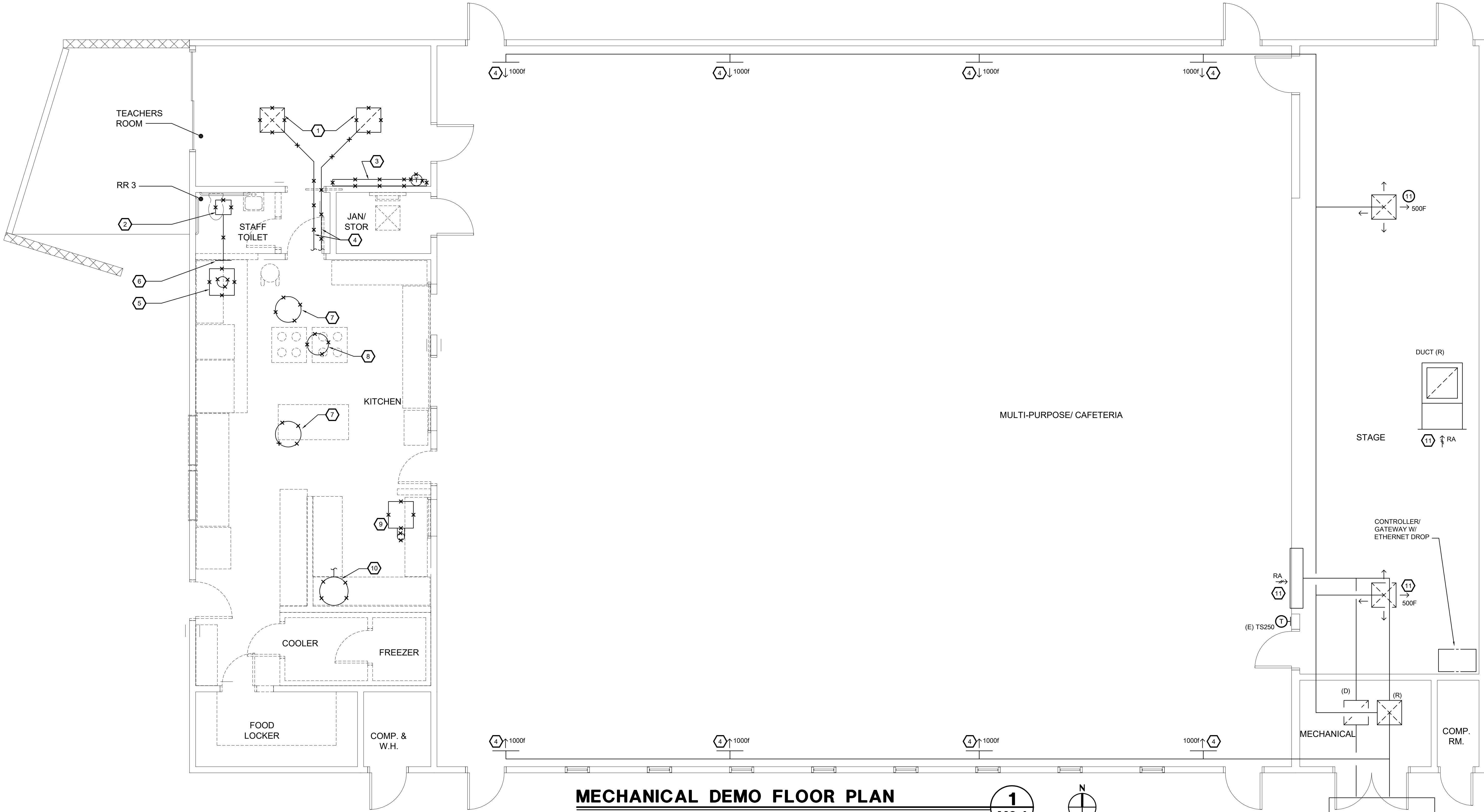
MECHANICAL SITE PLAN

SCALE : 1" = 30'-0"

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MECHANICAL DEMO FLOOR PLAN

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

DEMOLITION GENERAL NOTES

1. -

DEMOLITION SHEET NOTES

1. REMOVE GRILLE, DUCTWORK, ASSOCIATED EQUIPMENT, STAT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

2. REMOVE CEILING EXHAUST FAN, DUCTWORK AND SUPPORTS. PREPARE FOR NEW EXHAUST FAN AND DUCTWORK.

3. REMOVE RADIANT HEATER AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

4. TAKE PRE-DEMOLITION AIR FLOW READINGS IN MULTI-PURPOSE/ CAFETERIA. PROVIDE AIRFLOW READINGS TO ARCHITECT.

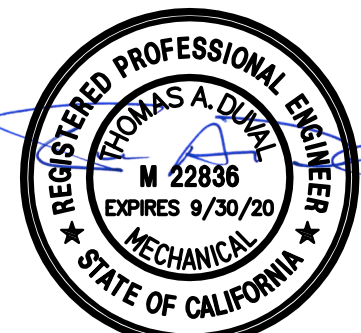
5. REMOVE HOOD, DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

6. REMOVE EF EYEBROW, DUCTWORK, EXHAUST FAN AND SUPPORTS. PREPARE FOR NEW EYEBROW OPENING FOR NEW LARGER SIZED EXHAUST FAN. EYEBROW LOCATED IN PLATFORM ABOVE.

7. REMOVE GRILLE(S), DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
8. REMOVE HOOD, DUCTWORK AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

9. REMOVE "CARRIER" UNIT HEATER, FLUE AND SUPPORT. PATCH OPENINGS TO MATCH EXISTING SURFACES.

10. REMOVE DISHWASHER HOOD, EXHAUST DUCT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

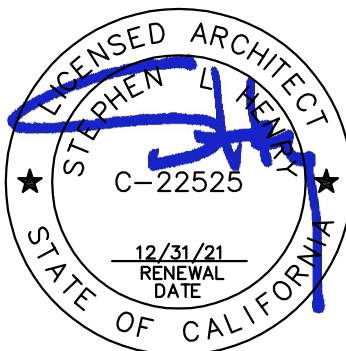


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KITCHEN RENOVATION
JOE SERNA SCHOOL
MECHANICAL DEMO FLOOR
PLAN

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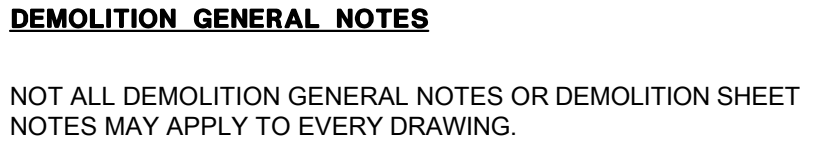
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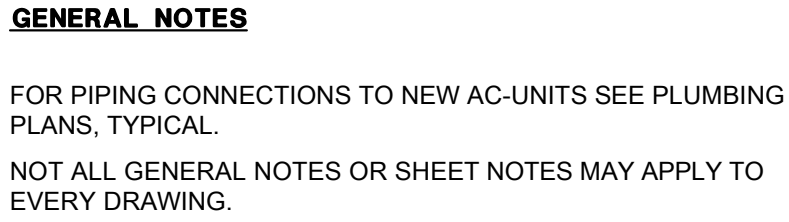
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- ## **DEMOLITION SHEET NOTES**
- 1 REMOVE CAF/02, CURB AND DUCTWORK. PATCH OPENINGS TO MATCH EXISTING SURFACES.
 - 2 REMOVE LOUVER, DUCTWORK, ASSOCIATED EQUIPMENT AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
 - 3 LOUVER AND ASSOCIATED DUCTWORK TO REMAIN.
 - 4 REMOVE EXHAUST FAN, CURB, DUCTWORK IN SPACE AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.
 - 5 REMOVE GRILLE(S), DUCTWORK AND SUPPORTS. REMOVE ASSOCIATED EVAP. COOLER EQUIPMENT AND CURB ON ROOF. PATCH OPENINGS TO MATCH EXISTING SURFACES.
 - 6 REMOVE UTILITY EXHAUST FAN, CURB, DUCTWORK IN SPACE AND SUPPORTS. PATCH OPENINGS TO MATCH EXISTING SURFACES.

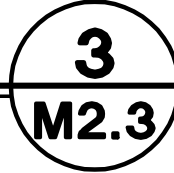
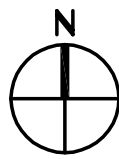
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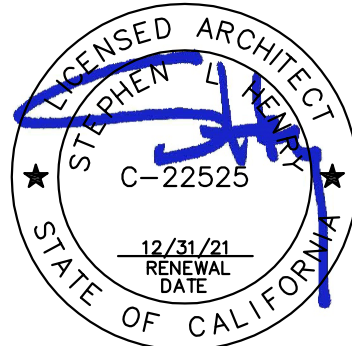


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KITCHEN RENOVATION JOE SERNA SCHOOL

MECHANICAL ENLARGED PLATFORM PLANS

CONSULTANT



CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RL/JSV	191009.00
PM - DESIGN TEAM	PROJECT NO.

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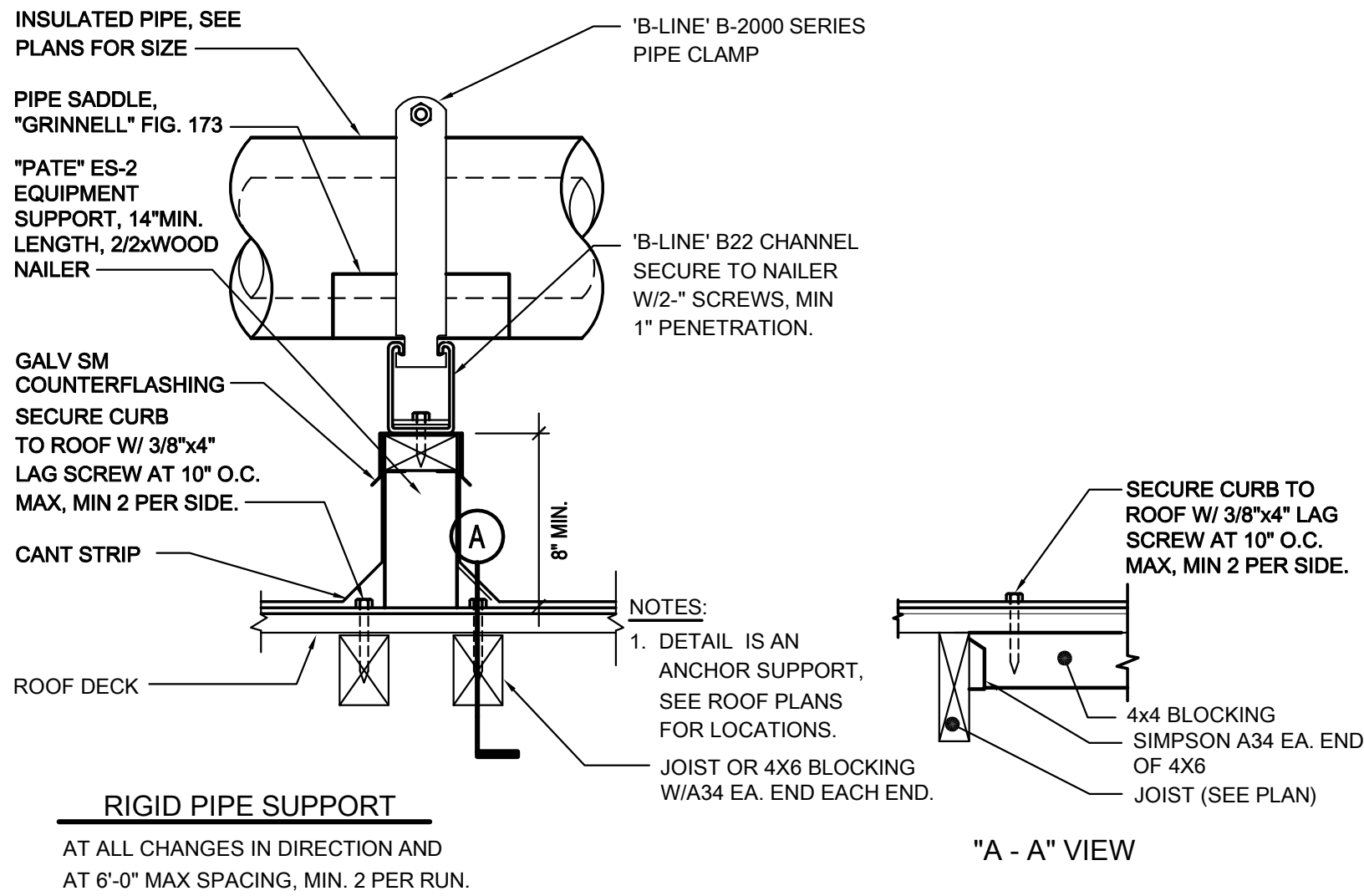
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OF SHEETS

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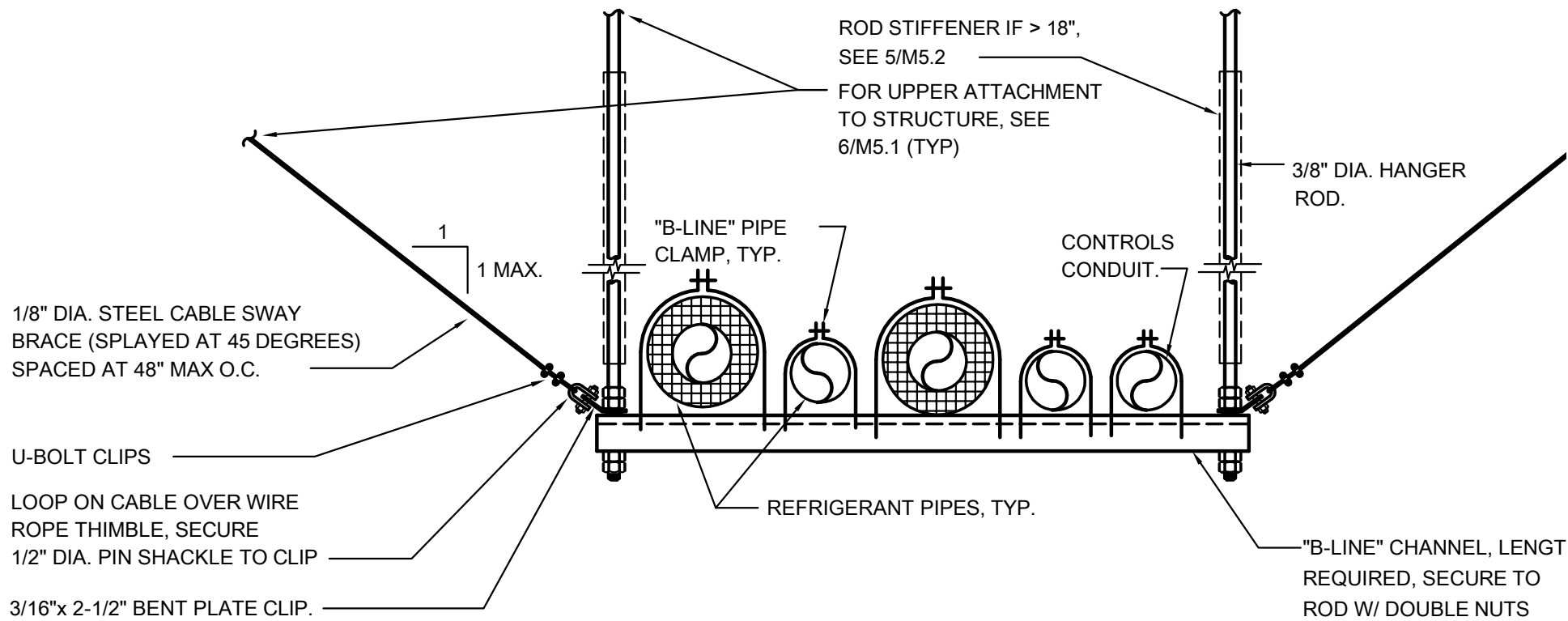
STEEL PIPE, NOMINAL SIZE OF PIPE (IN.)	SPACING OF SUPPORTS (FT.)	NOMINAL SIZE OF TUBING SMOOTH-WALL (IN. O.D.)	SPACING OF SUPPORTS (FT.)
1/2	6	1/2	4
3/4 OR 1	8	5/8 OR 3/4	6
1 1/4 OR LARGER (HORZ.)	10	7/8 OR 1 (HORZ.)	8
1 1/4 OR LARGER (VERT.)	EVERY FLOOR LEVEL	1 OR LAGER (VERT.)	EVERY FLOOR LEVEL



REFRIGERANT PIPE AT PLATFORM DETAIL

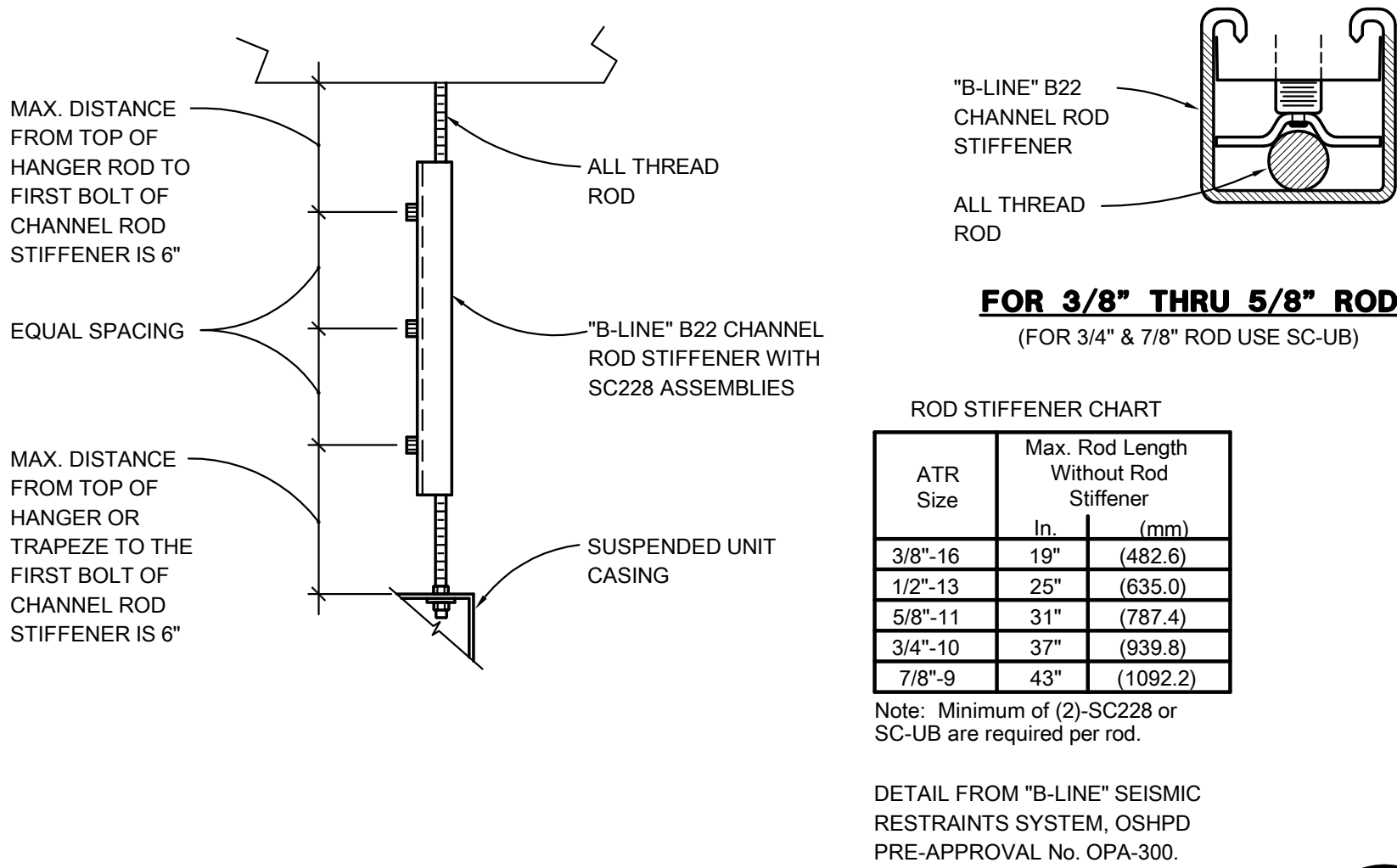
SCALE : NONE

COORDINATE ROUTING OF ROOF MOUNTED PIPING AND CONDUITS TO ROUTE ON SAME SUPPORT.



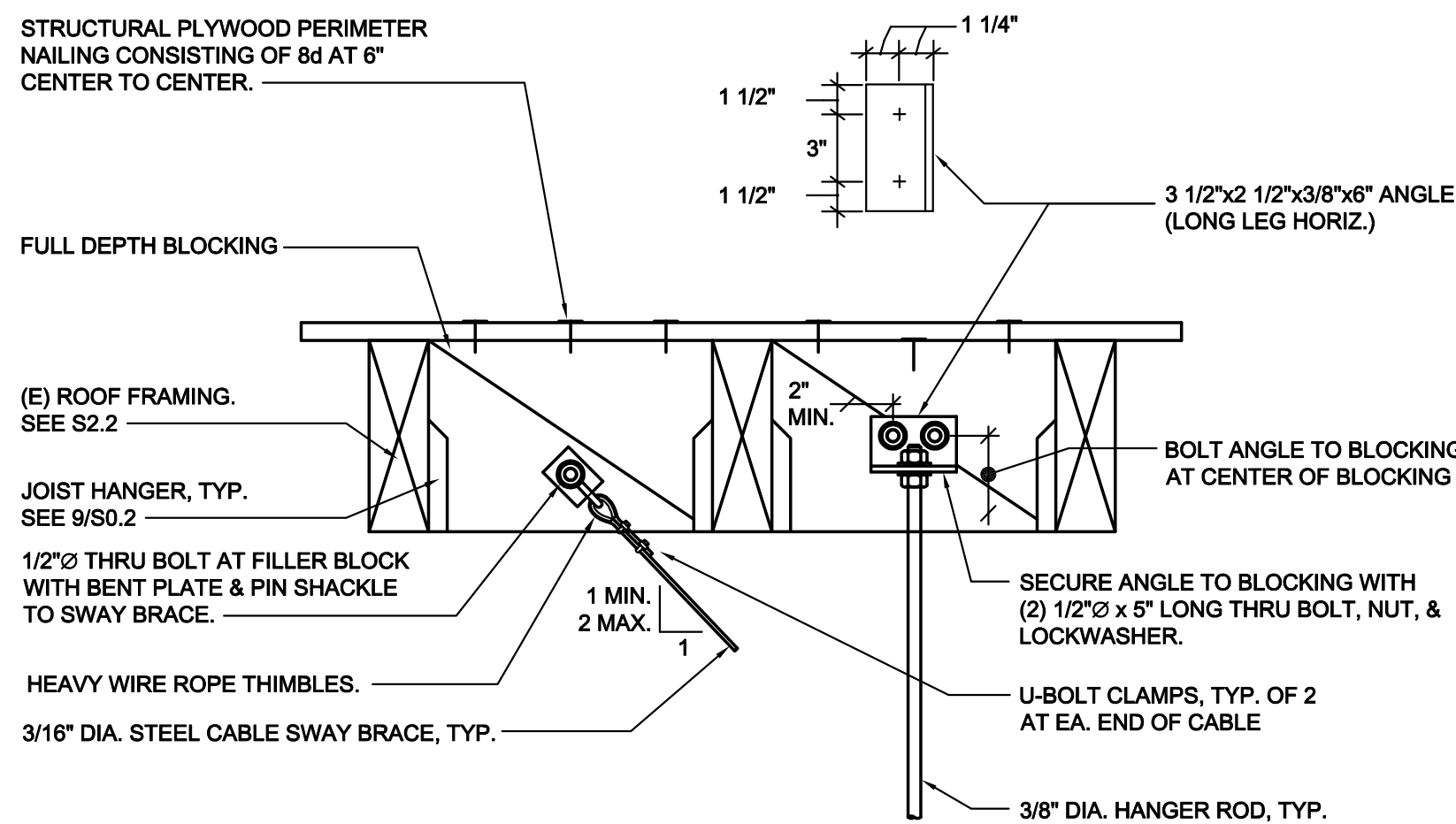
REFRIGERANT PIPING SUPPORT

SCALE : NONE



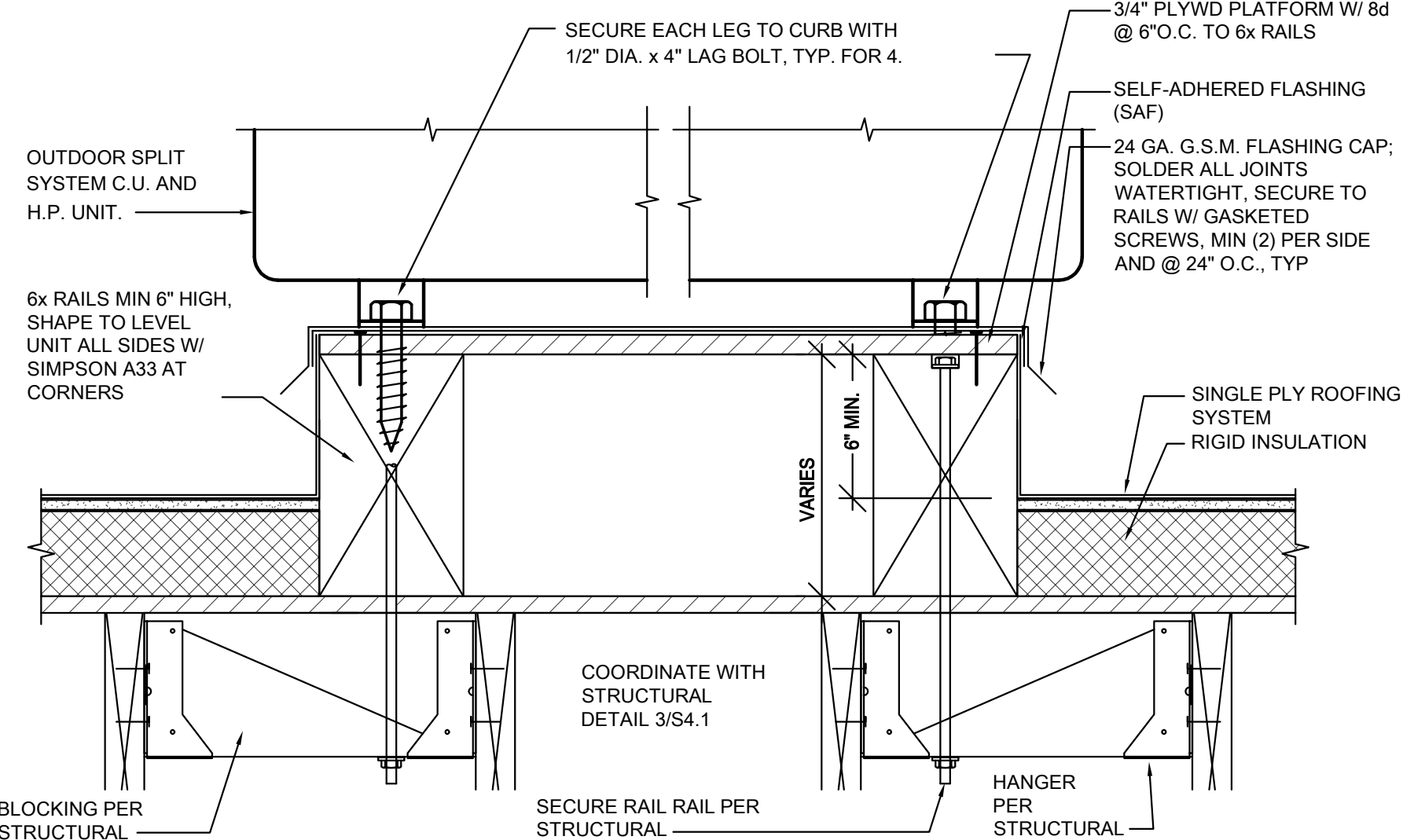
ROD STIFFENER DETAIL

SCALE : NONE



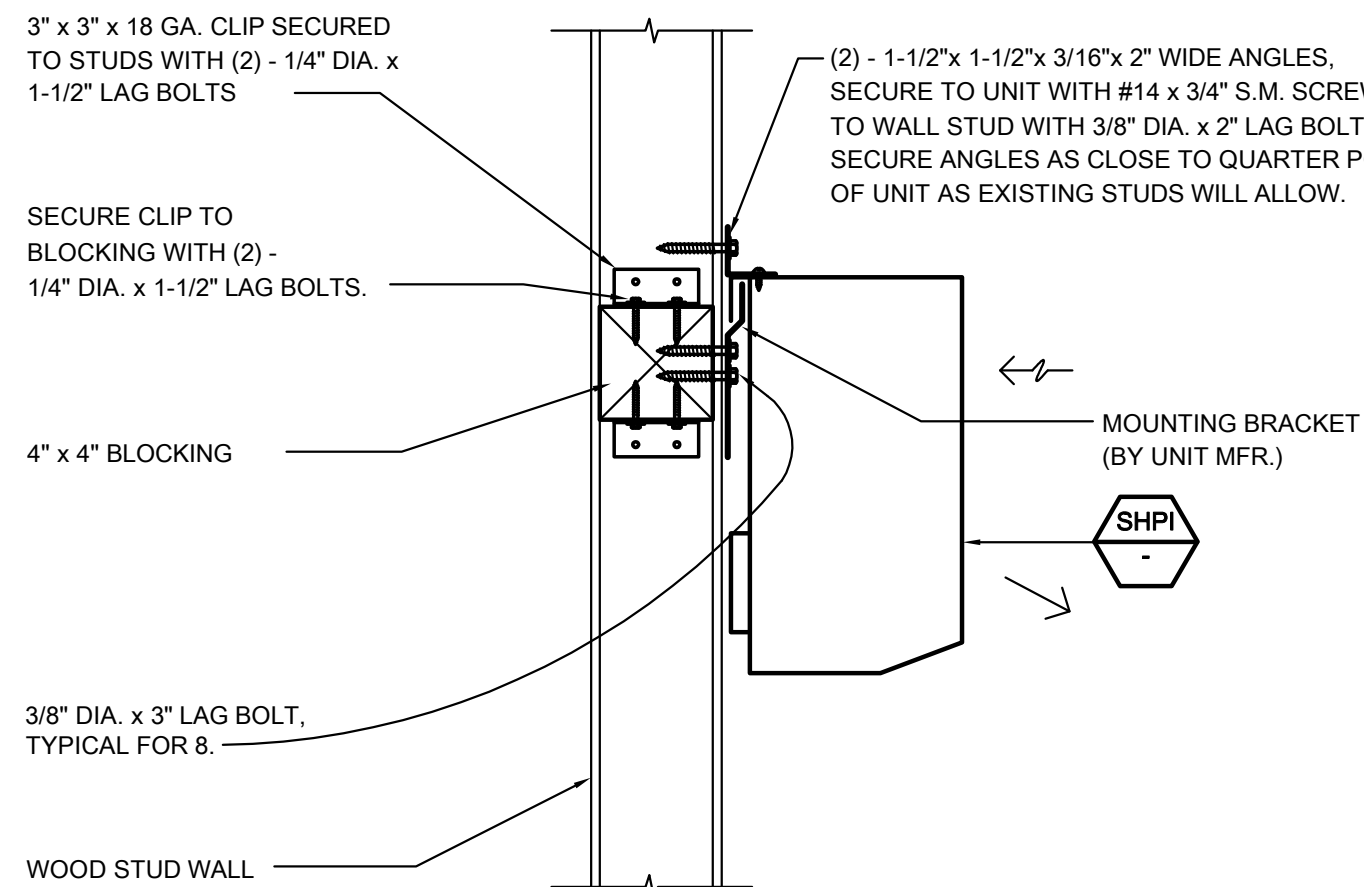
HANGER ROD/CABLE UPPER ATTACHMENT

SCALE : NONE



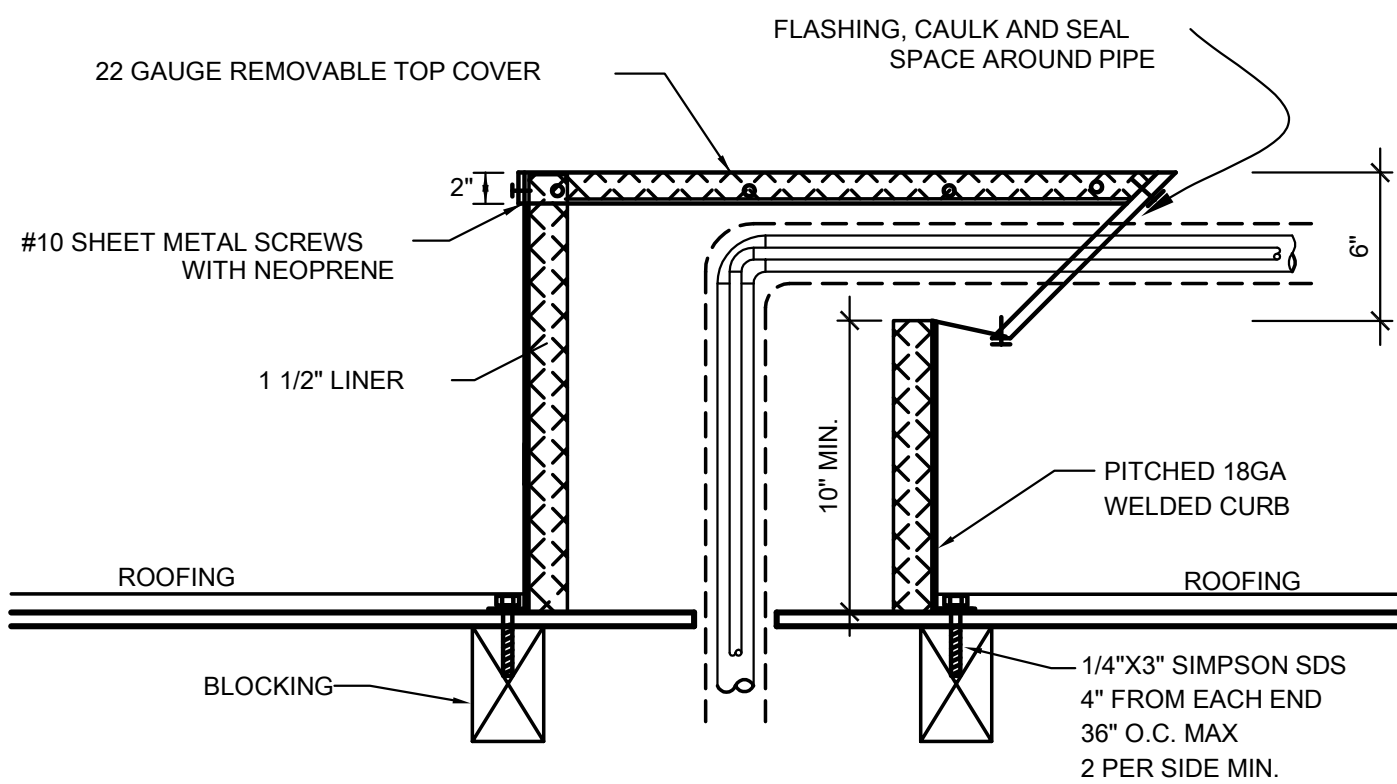
SPLIT HEAT PUMP OUTDOOR UNIT MTG.

SCALE : NONE



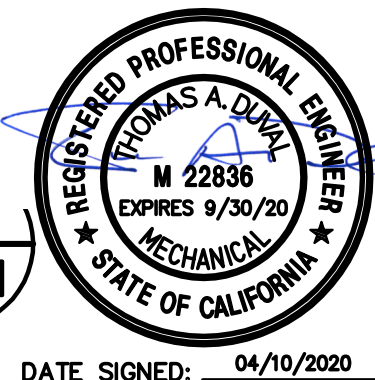
INDOOR SPLIT SHPI UNIT MOUNTING

SCALE : NONE



PIPE THRU ROOF SAFE DETAIL - WOOD

SCALE : NONE

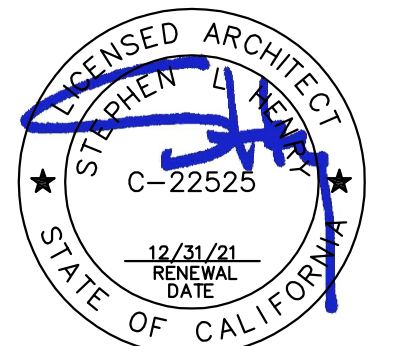


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Fax: 916.921.2212



KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
DETAILS

CONSULTANT

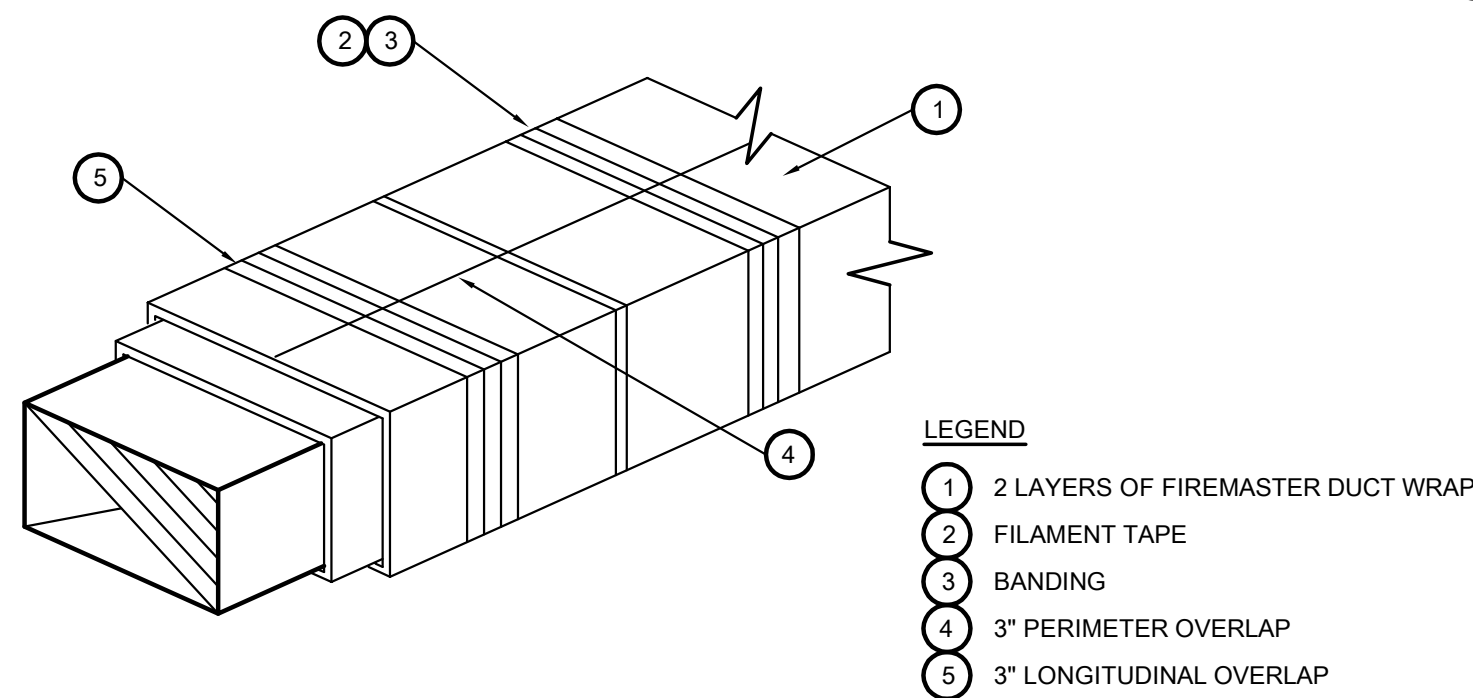
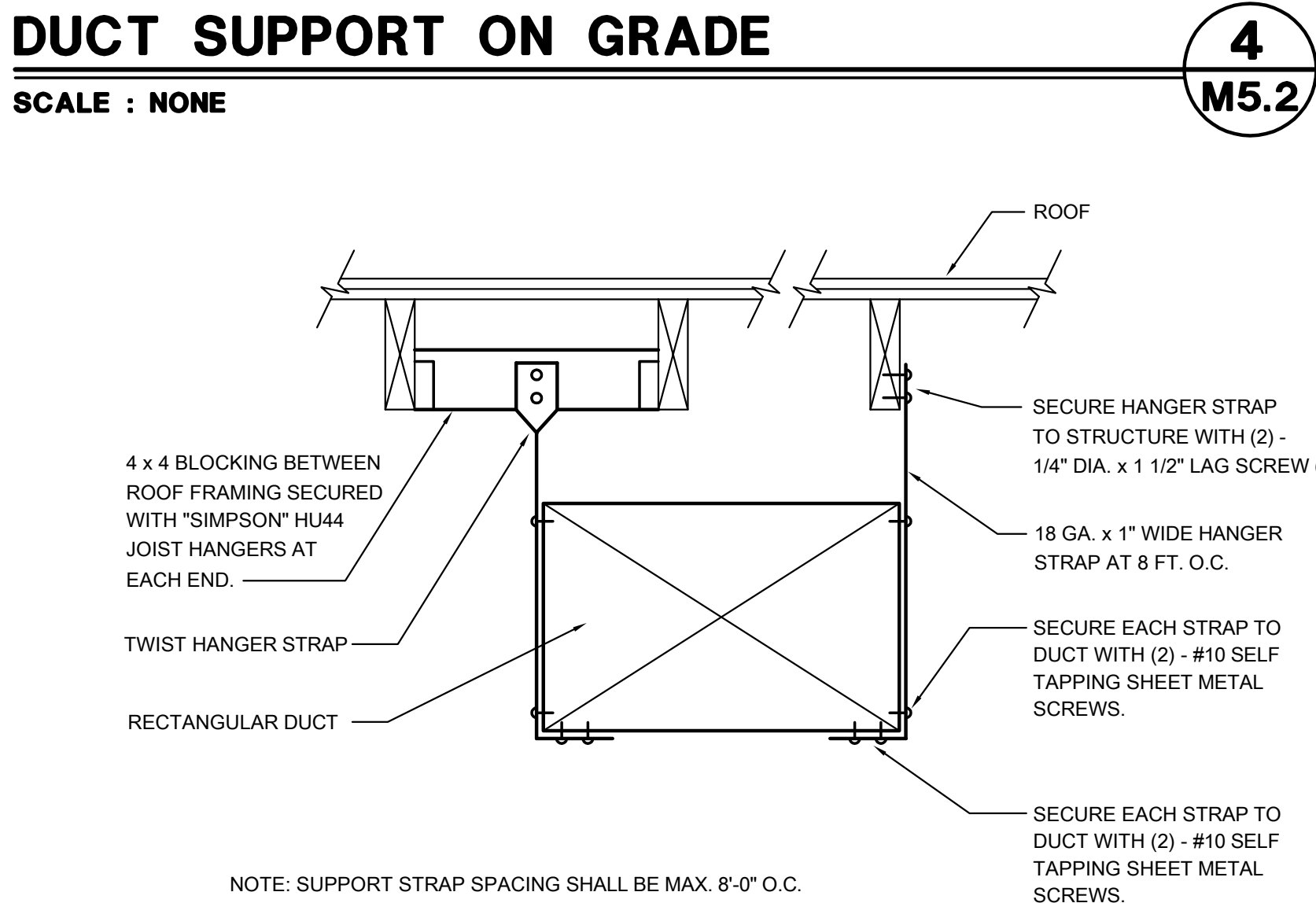
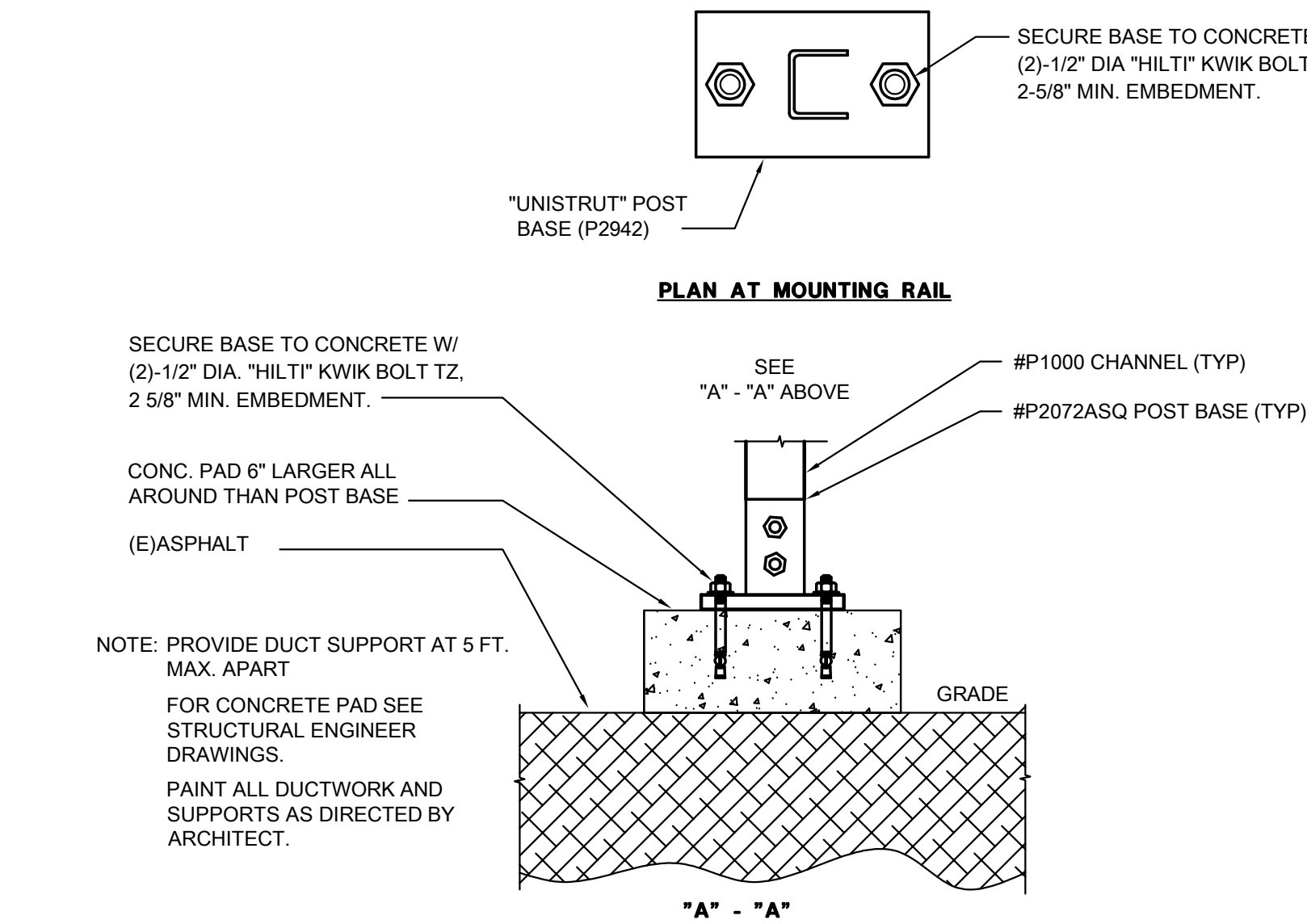
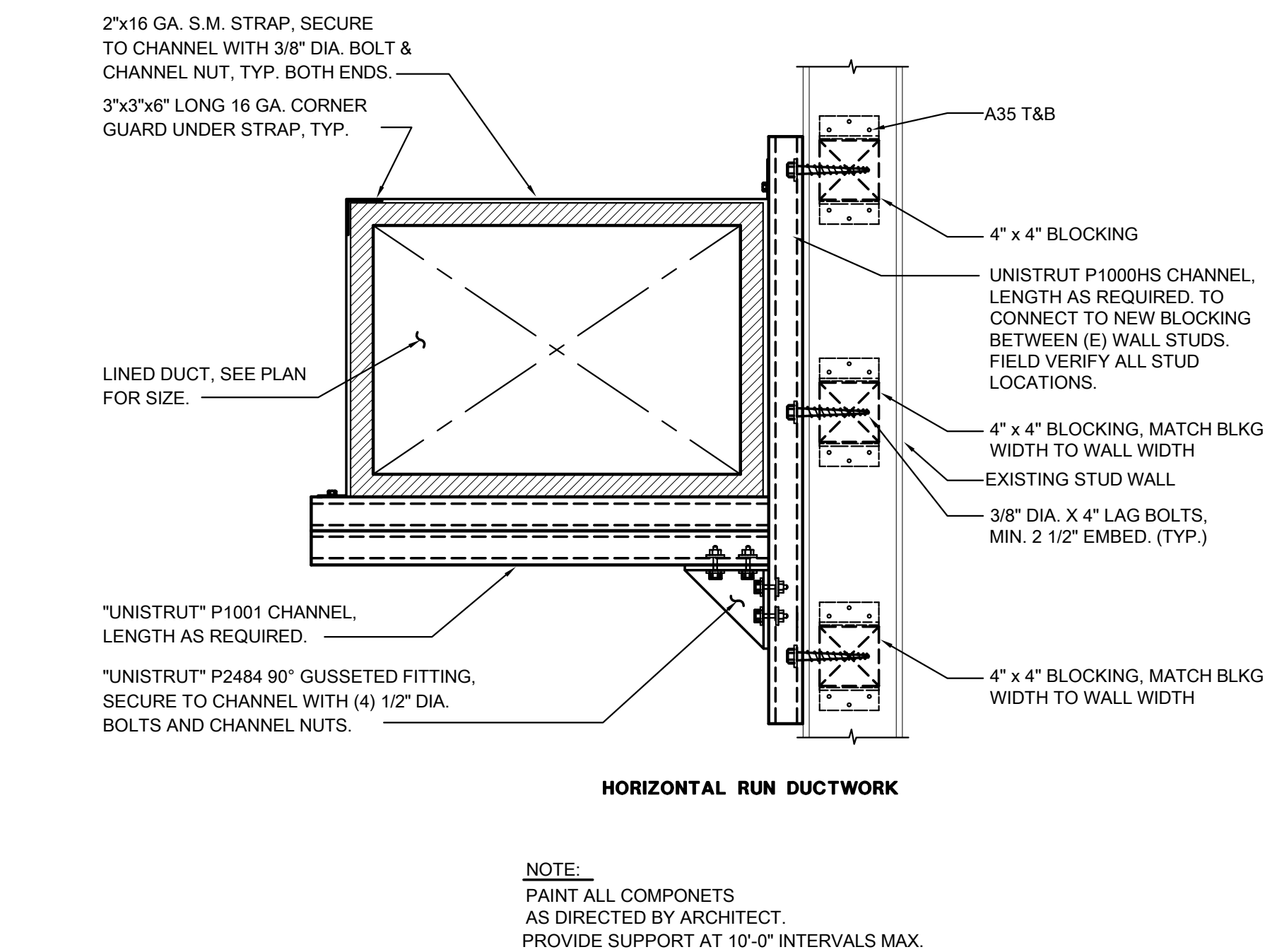


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OF SHEETS

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FIREMASTER GREASE DUCT SYSTEM: COMPONENTS INCLUDE:

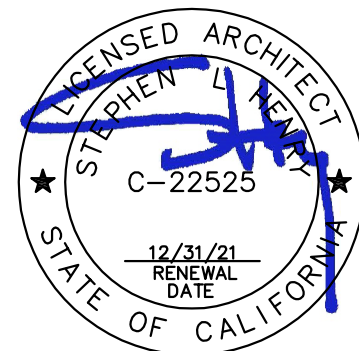
1. FIREMASTER DUCT WRAP: UL-1479, ASTM E-814, ASTM E-2336, 1-1/2" THICK
2. 3M FIRE BARRIER 2000 SILICONE SEALANT
3. FILAMENT TAPE & BANDING MATERIAL
4. LISTED IN ACCORDANCE WITH CMC 507.3.5

NOTE: DETAIL FOR REFERENCE ONLY.
COMPLETE INSTALLATION SHALL BE PER MANUFACTURERS INSTRUCTIONS.



An identification stamp from the Division of the State Architect. It contains the following text: "IDENTIFICATION STAMP", "DIV. OF THE STATE ARCHITECT", "APP. 02-118041", "INC:", "REVIEWED FOR", "SS" with a checked box, "FLS" with a checked box, "ACS" with a checked box, and "DATE: 04/28/2020".

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION JOE SERNA SCHOOL

MECHANICAL DETAILS

CONSULTANT



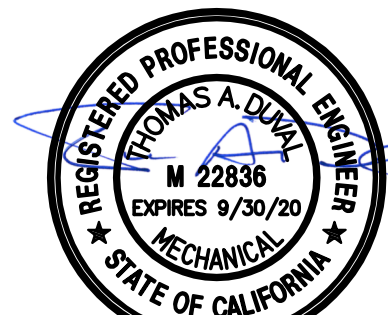
CAPITAL
ENGINEERING CONSULTANTS, INC.
RANCHO CORDOVA, CALIFORNIA

MCM - RL/JSV	191009.00
PM - DESIGN TEAM	PROJECT NO.

PROJECT NO. 19-32-050	REVISIONS	BY
DATE 04/10/2020		
DRAWN RL		
CHECKED TD		
SCALE AS NOTED		
CADFILE		
UPDATED		
SHEET NO.		

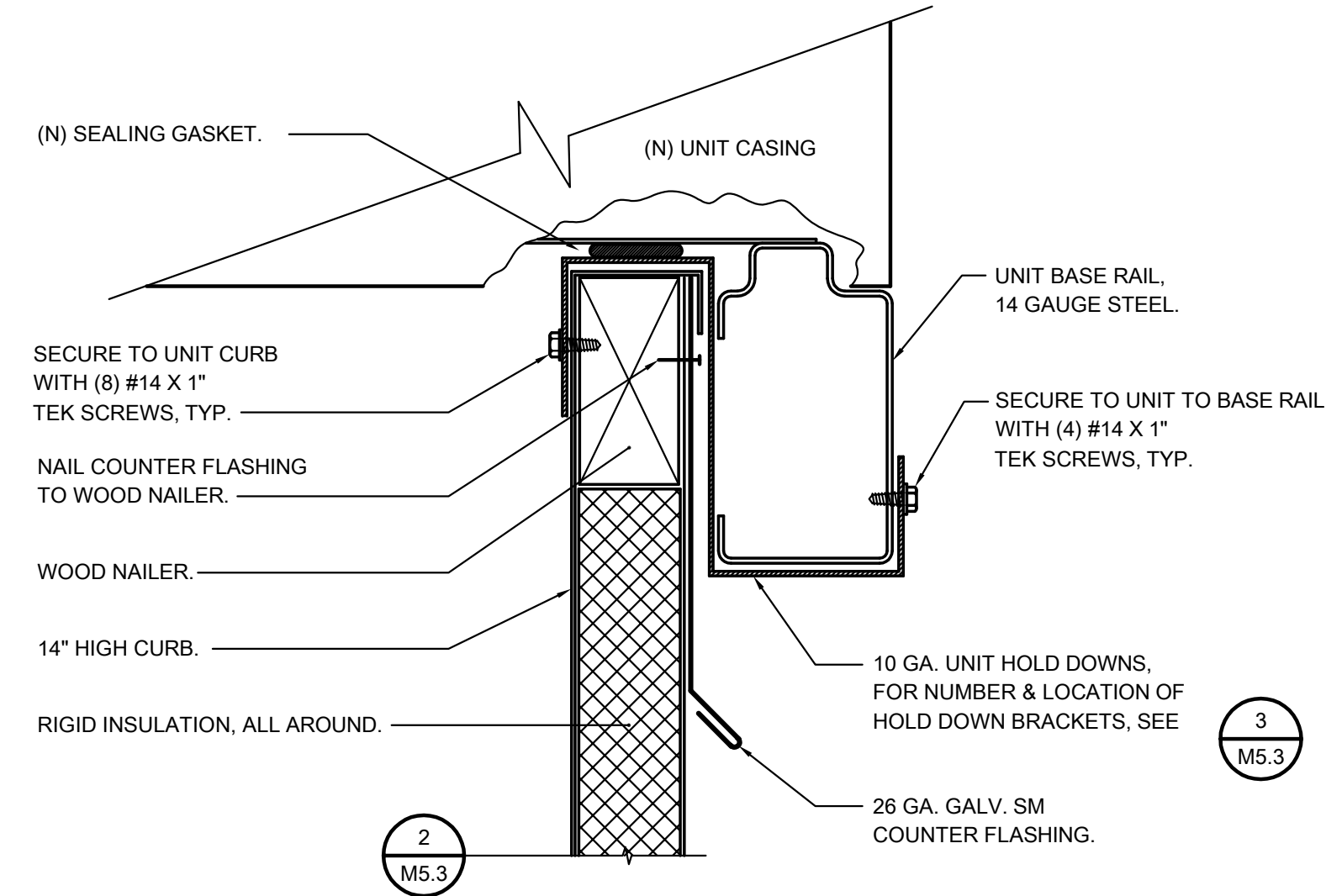
M5.2

OF SHEETS



DATE SIGNED: 04/10/2020

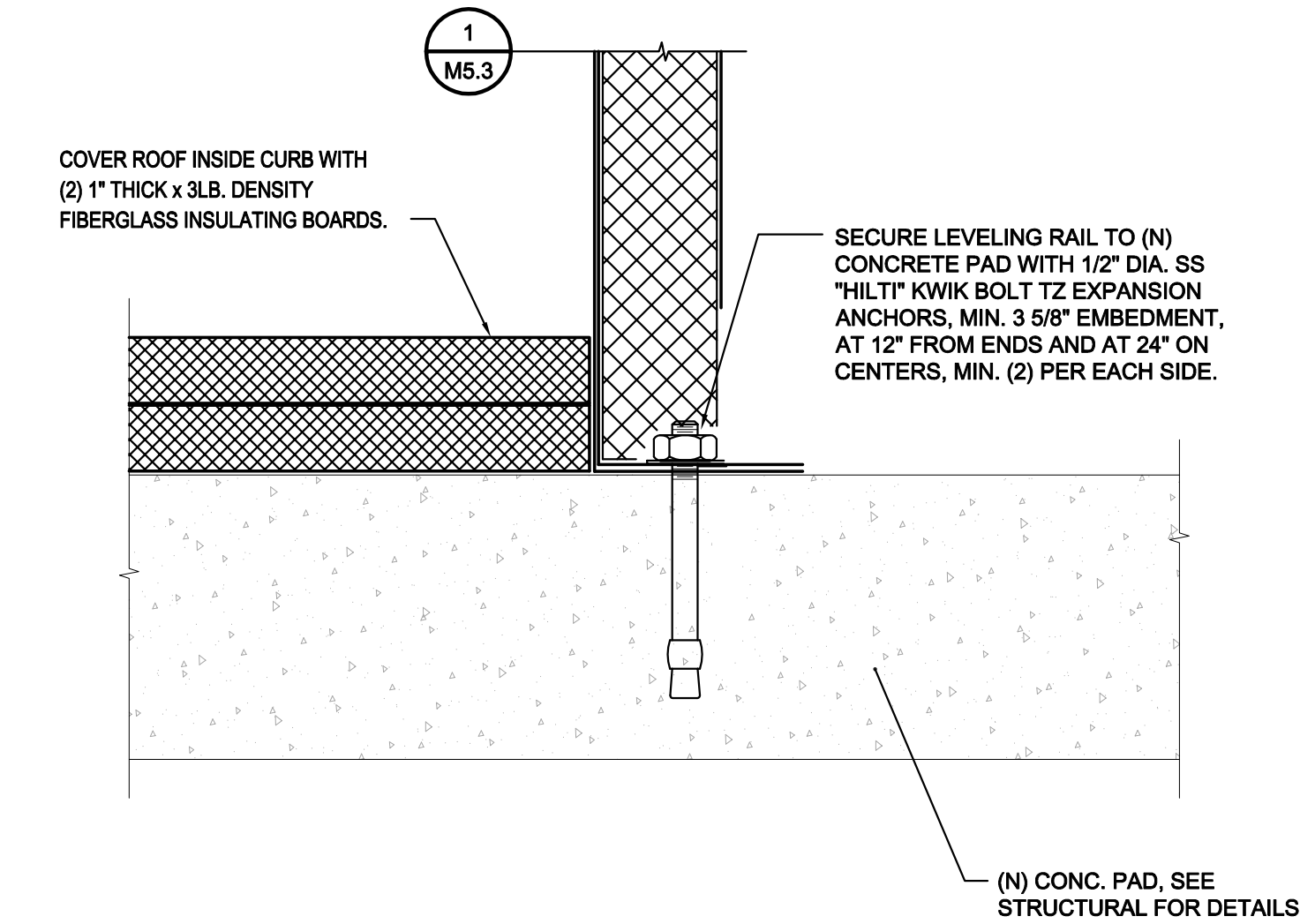
QC	
INI	%



AC UNIT TO CURB MOUNTING

SCALE : NONE

1 M5.3

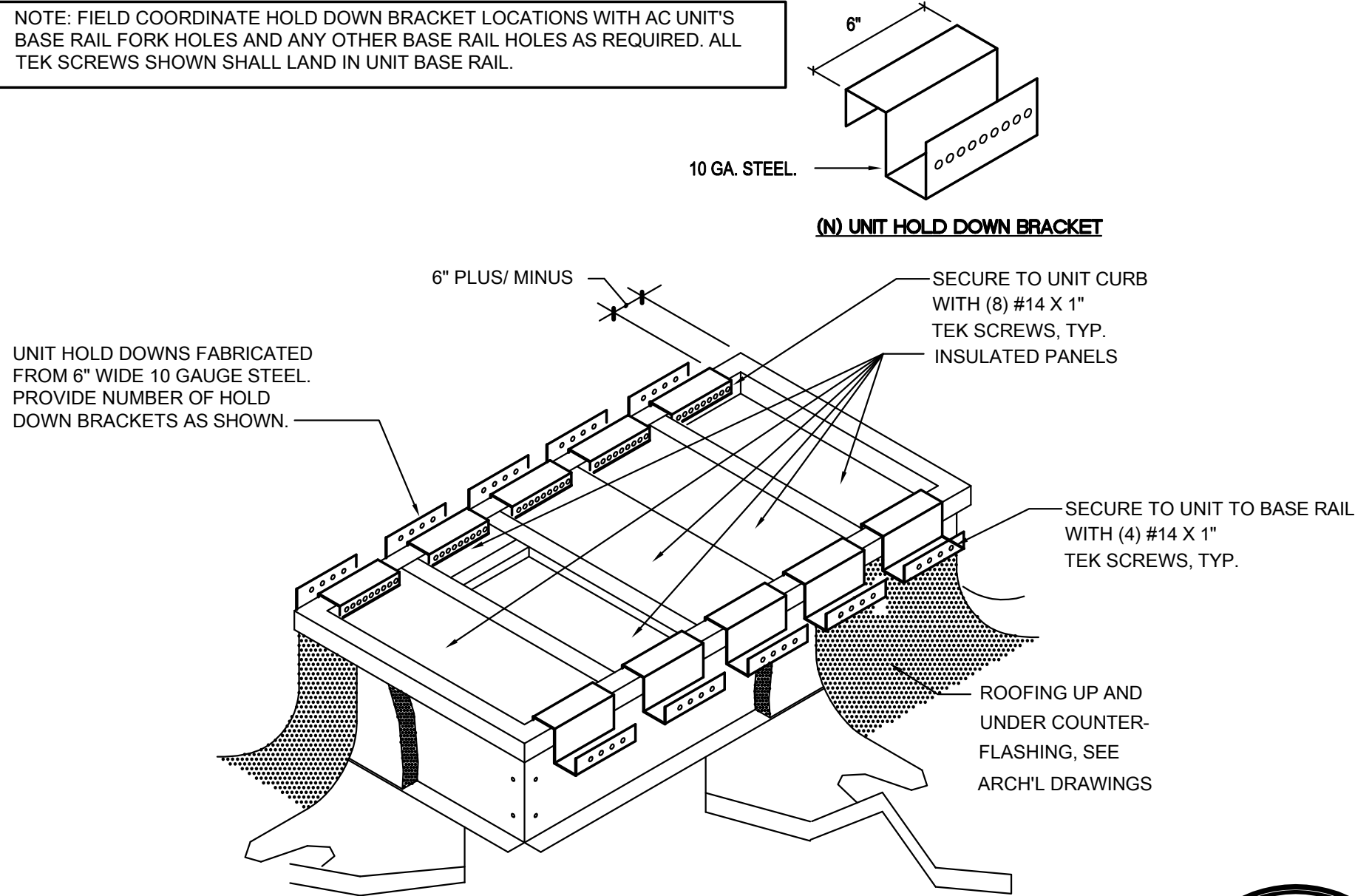


CURB TO CONCRETE PAD MOUNTING

SCALE : NONE

2 M5.3

NOTE: FIELD COORDINATE HOLD DOWN BRACKET LOCATIONS WITH AC UNIT'S BASE RAIL FORK HOLES AND ANY OTHER BASE RAIL HOLES AS REQUIRED. ALL TEK SCREWS SHOWN SHALL LAND IN UNIT BASE RAIL.



NOTES:
FOR MOUNTING OF CURB TO CONCRETE PAD SEE DETAIL M5.1
INSTALL CLIPS PRIOR TO SETTING UNIT ON CURB.

TYP. AC "HOLD DOWN"

SCALE : NONE

3 M5.3

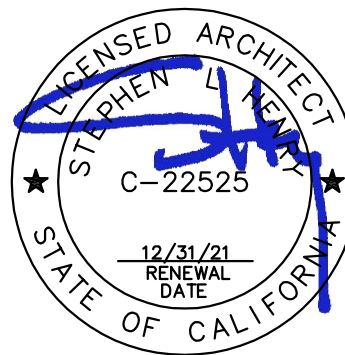


DATE SIGNED: 04/10/2020

FILE NO. 39-50 APP NO. 02-118041

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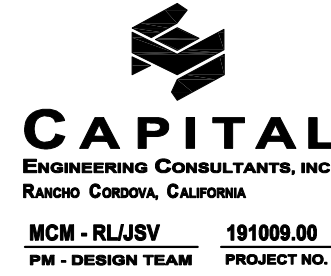
730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
DETAILS

CONSULTANT



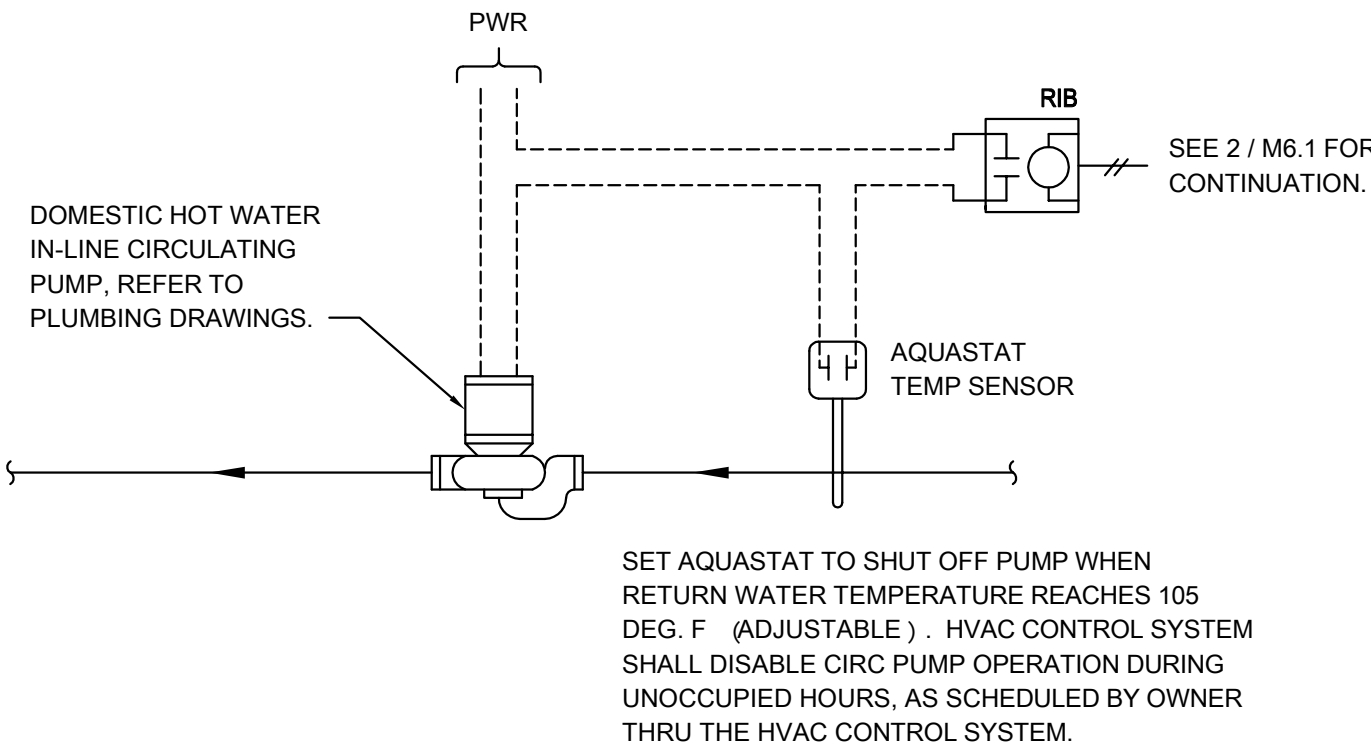
PROJECT NO.	REVISIONS	BY
19-32-050		
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04/10/2020		
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CADFILE		
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SHEET NO.

M5.3

OF SHEETS

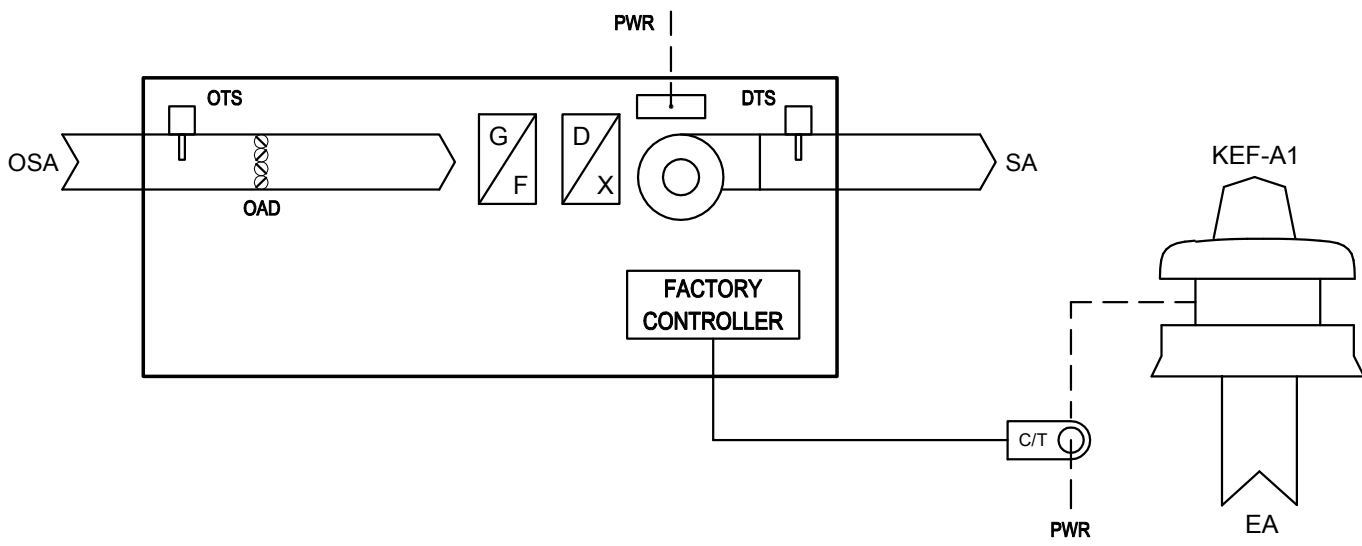
QC	
INI	%



DHW CIRC PUMP CONTROL DIAGRAM

SCALE : NONE

7
M6.1



GENERAL:
WHEN KITCHEN HOOD EXHAUST FAN KEF-A1 IS SWITCHED ON, THEN AC-A2 SHALL BE ENABLED BY IT'S OWN INTERNAL CONTROLS TO PROVIDE TEMPERED MAKE-UP AIR. INTERNAL CONTROLS SHALL OPEN THE OUTSIDE AIR DAMPER TO 100% AND STAGE MECHANICAL HEATING OR COOLING AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT (70 degF IN HEATING, 76 degF IN COOLING). WHEN KEF-A1 IS SWITCHED OFF, THEN AC-A2 SHALL BE DISABLED BY IT'S OWN INTERNAL CONTROLS. THE OUTSIDE AIR DAMPER SHALL MODULATE FULLY CLOSED WHENEVER AC-A2 IS DISABLED.

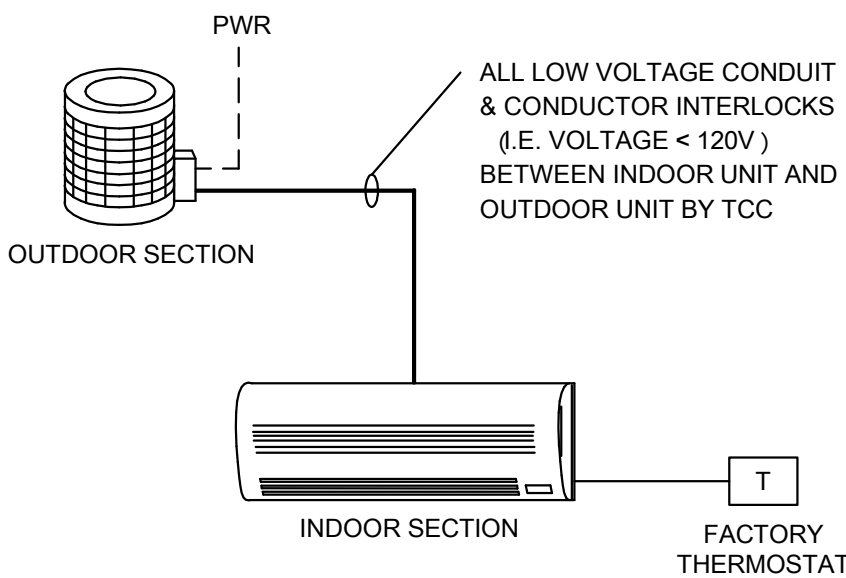
SEQUENCE OF OPERATION

AC-A2 CONTROL DIAGRAM

SCALE : NONE

(100% OSA MAKE-UP AIR UNIT)

4
M6.1



SEQUENCE OF OPERATION

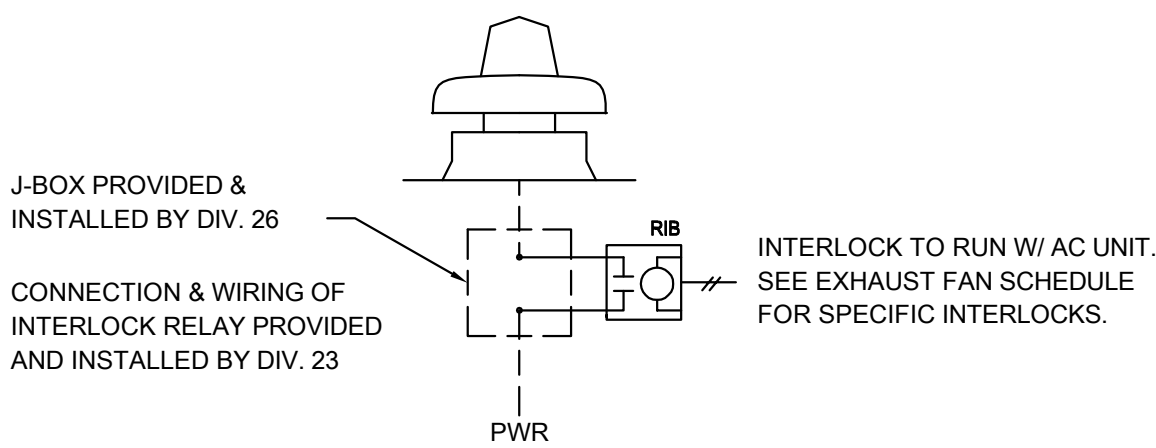
CONTROL HARDWARE AND LOGIC FOR THE SPLIT SYSTEM SHALL BE THE RESPONSIBILITY OF THE UNIT MANUFACTURER. TCC SHALL INSTALL THE FACTORY PROVIDED CONTROL PACKAGE AS REQUIRED FOR PROPER UNIT OPERATION.

RESPECTIVE OUTSIDE AIR FAN SHALL BE INTERLOCKED TO RUN WITH SPLIT SYSTEM. SEE SPLIT SYSTEM AC UNIT SCHEDULE FOR SPECIFIC INTERLOCKS.

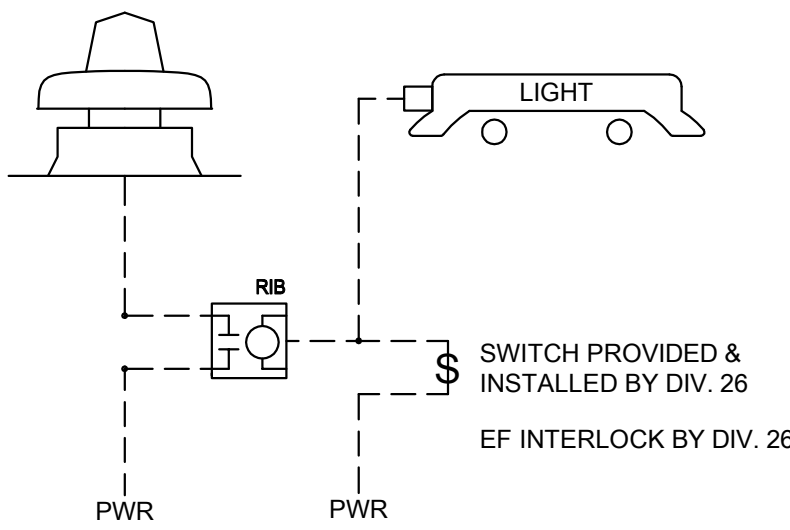
SHPI/SHPO CONTROL DIAGRAM

SCALE : NONE

5
M6.1



EF INTERLOCK W/ AC UNIT

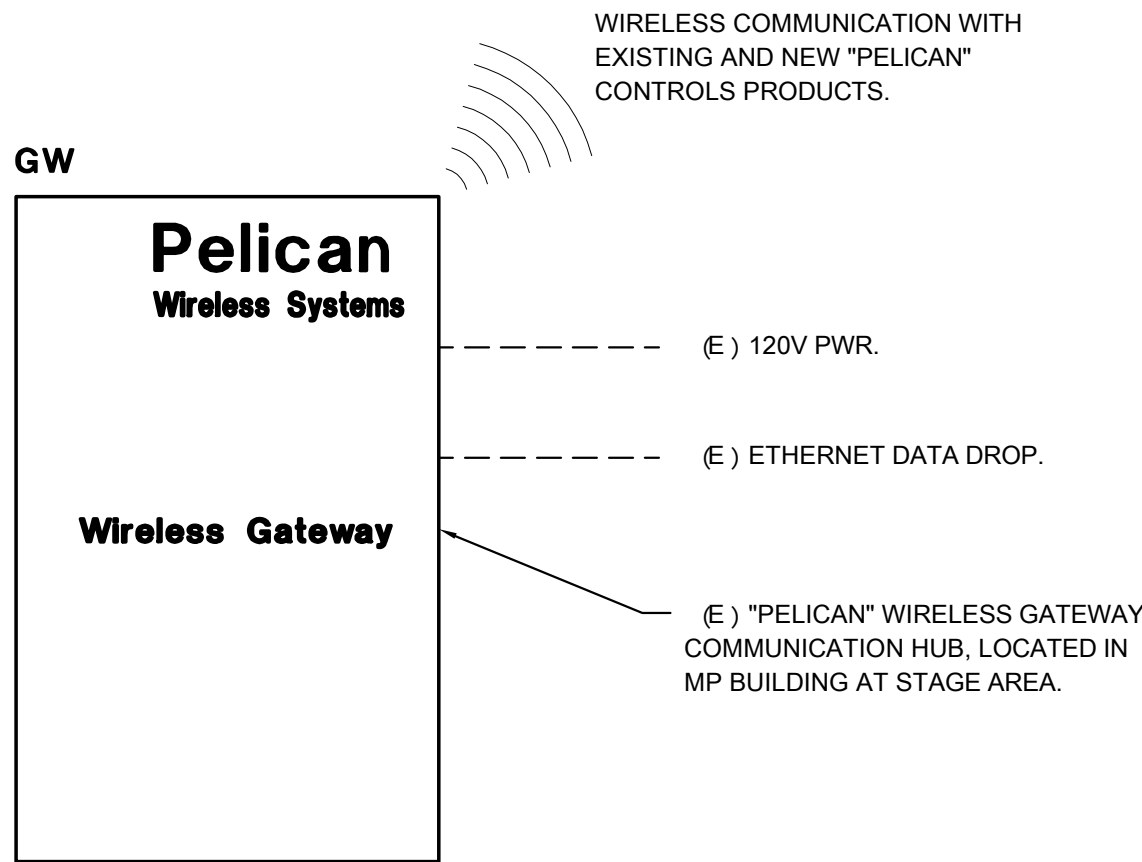


EF CONTROL W/ LIGHTS

CEF CONTROL DIAGRAMS

SCALE : NONE

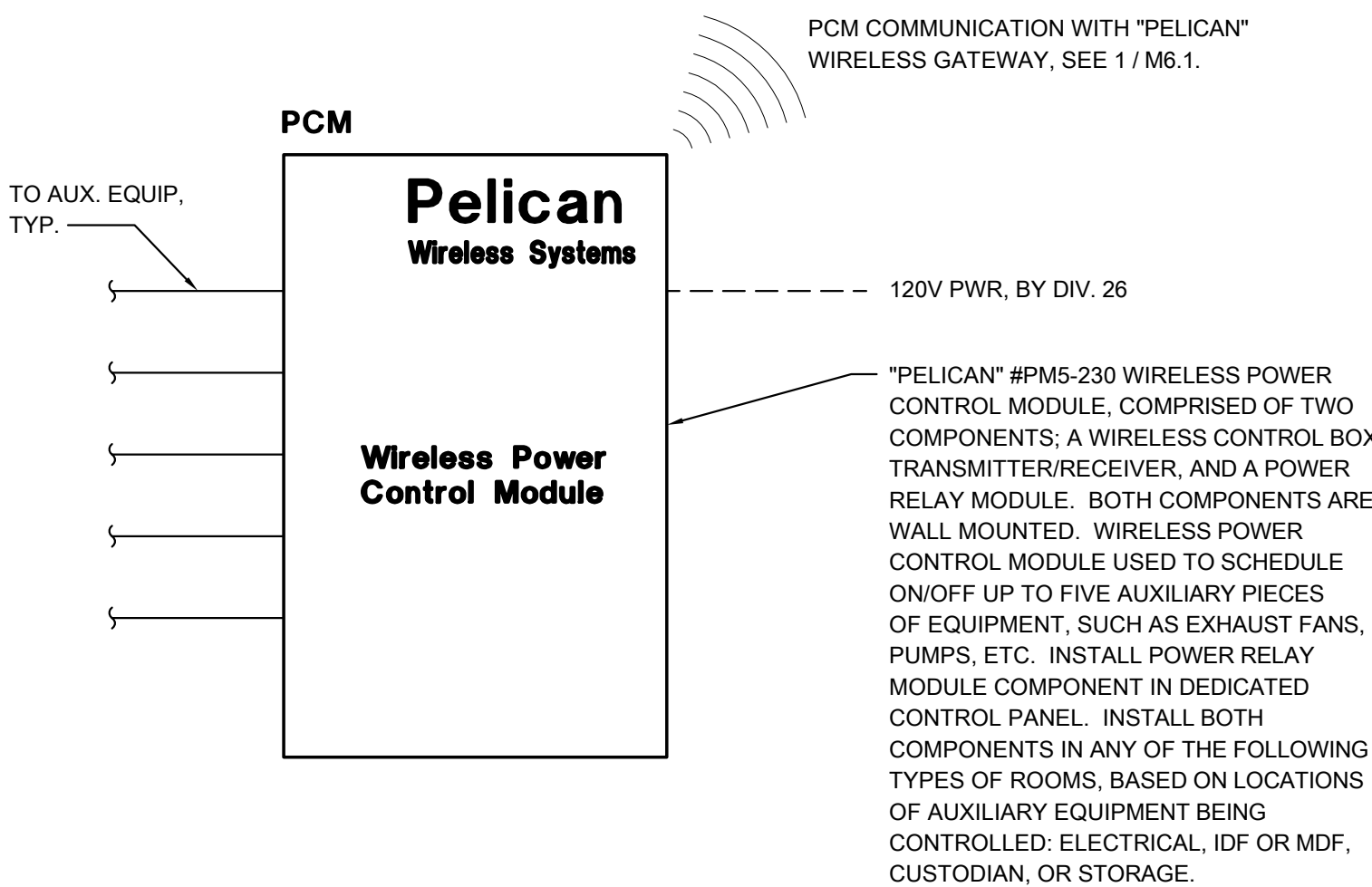
6
M6.1



(E) WIRELESS GATEWAY

SCALE : NONE

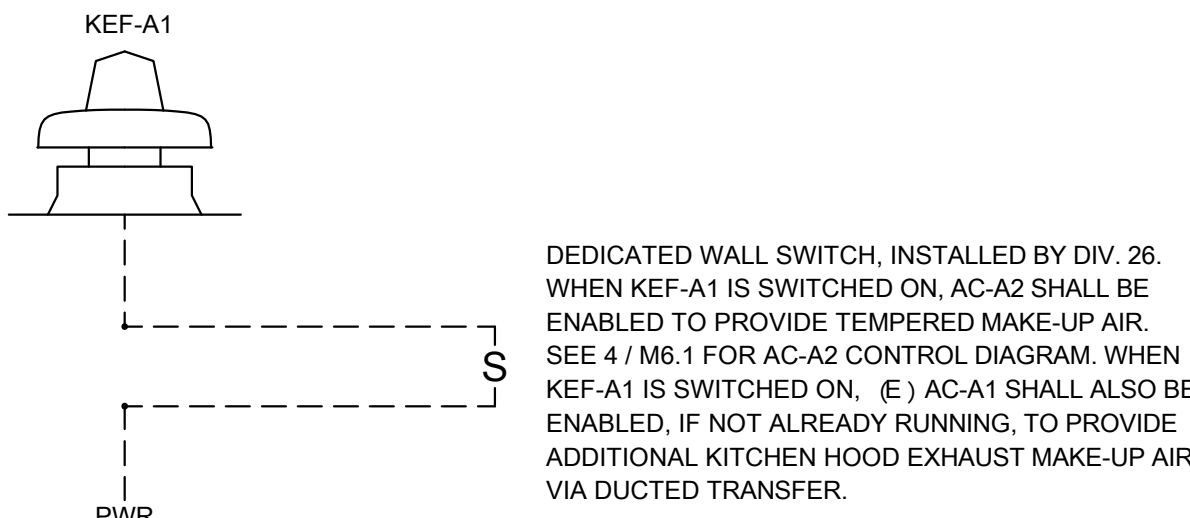
1
M6.1



WIRELESS POWER CONTROL MODULE

SCALE : NONE

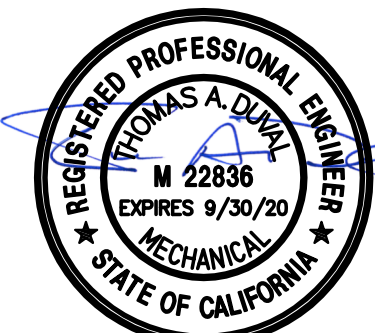
2
M6.1



KEF-A1 CONTROL DIAGRAM

SCALE : NONE

3
M6.1

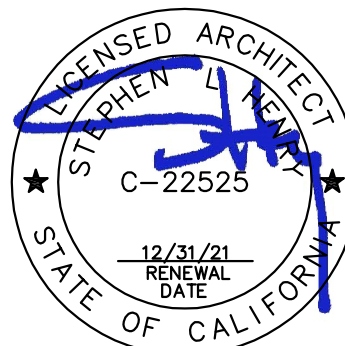


DATE SIGNED: 04/10/2020

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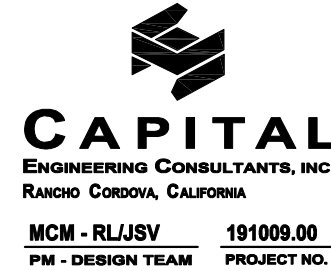
730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
JOE SERNA SCHOOL

MECHANICAL
CONTROLS

CONSULTANT



PROJECT NO.	REVISIONS	BY
19-32-050		
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04/10/2020		
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SHEET NO.

M6.1

OF SHEETS

5.1 MECHANICAL CONTROLS

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.301 Schema Version: rev 20190401	Report Generated: 2020-04-03 13:15:02

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CABuilding Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-03 13:15:02

² If total filter pressure drop (SPa) is greater than 1 in WC, or 245 Pascal then enter it and total fan pressure drop across the fan (SPf) for system.

***Footnotes:** System CFM should include both mechanical and natural ventilation for the core system.

***1** Air filtration requirements apply to the following three system types per [§20.10C\(14\)](#) : 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.

***2** Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.

***3** See [ASHRAE](#) [Table 4.2.4.2](#) and [Table 4.1](#).

***4** For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the [California Building Code](#).

***5** [§20.10C\(2\)](#) requires systems serving rooms that are required by [§19.01C\(1\)](#) to have lighting occupancy sensing controls to also have occupancy sensing controls for ventilation. Occupancy sensing controls that require lighting occupancy sensing controls include 2500' or smaller multipurpose rooms less than 1,000 SF, classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless exempt by [§19.01C\(1\)](#).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))									
O1	O2	O3	O4	O5	O6	O7	O8	O9	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Heating Mode			Cooling Mode			Design Efficiency
			Efficiency Unit	Minimum Efficiency Required per Tables 10.2 / 10.20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 10.2 / 10.20	Design Efficiency	
AC-MP1	65,000 and 135,000		AFUE	0.81	0.8	EEER	12.9	12	
SHF_A1	65,000		HSPF	8.2	7.7	SEER	13.0	16	
SHF_A2	65,000		HSPF	8.2	7.7	SEER	13.0	15	
SHF_A3	65,000		HSPF	8.2	7.7	SEER	13.0	15	

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-03 13:15:02

*Notes: (COM) with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with [§140.4\(d\)](#);

VENTILATION AND INDOOR AIR QUALITY		
<p><i>This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(a)(38) for all nonresidential, high-rise residential and hotel/motel 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></p>		
01	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	<input type="checkbox"/>	Check this box if the project included new or altered high rise residential dwelling units.
03	<input type="checkbox"/>	Check the 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 or Hotel/ Motel Ventilation Systems		

STATE OF CALIFORNIA			
Mechanical Systems			
NRCC-MCH-E		CALIFORNIA ENERGY COMMISSION	
CERTIFICATE OF COMPLIANCE		NRCC-MCH-E	
Project Name:	Serna Kitcher Renovation	Report Page:	(Page 9 of 12)
Project Address:	4620 E Gil	Date Prepared:	4/3/2020

K. TERMINAL BOX CONTROLS
This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)
This section does not apply to this project.

M. COOLING TOWERS
This section does not apply to this project.

5. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION


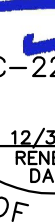

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks.

Yes ☐ No ☒ The building is/will be under construction and can be found online at https://www.energy.gov/files/d24/2013standards/2013_compliance/Nonresidential_Documents/NRCI/

		Form/Title	Field Inspection	
Yes	No		Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCI-MCH-01-E - Must be submitted for all buildings	<input type="checkbox"/>	<input type="checkbox"/>

Registration Number:	Registration Date/Time:	Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2020-04-03 13:15:02



FILE NO. 39-50 APP NO. 02-118041		
<div>IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT APP. 02-118041 INC: REVIEWED FOR SS <input checked="" type="checkbox"/> FLS <input checked="" type="checkbox"/> ACS <input checked="" type="checkbox"/> DATE: 04/28/2020</div>		
730 Howe Avenue, Suite 450 Sacramento, CA 95825 Phone: 916.921.2112 Fax: 916.921.2212		
<div> HENRY+ASSOCIATES ARCHITECTS</div>		
<div></div>		
KITCHEN RENOVATION JOE SERNA SCHOOL		
T-24 DOCUMENTATION		
SULTANT		
<div> CAPITAL ENGINEERING CONSULTANTS, INC. RAJESH CHANDRA, CALIFORNIA MCM - RLUSV 191009.00 PM - DESIGN TEAM PROJECT NO.</div>		
SUBJECT NO. 9-32-050	REVISIONS	BY
RECEIVED 4/10/2020		
APPROVED BY RL		
CHECKED BY D		
FILED AS NOTED		
FILE		
RECEIVED		
PROJECT NO.		
M7.1		
OF		SHEETS

I:\30181919\1004 0061200 Drawings\1206 AutoCAD Project Files\MT 2.dwg - April 10, 2020 01:38 PM - Richard J. Lopez



<div style="display: flex; justify-content: space-between;"> <div> CA BUILDING ENERGY EFFICIENCY RATING SYSTEM (BES) FORM 1.0-16 CERTIFICATE OF COMPLIANCE Water Heating System General Information <small>Issued: _____</small> <small>Joe Serra School</small> </div> <div style="text-align: right;"> CA BUILDING ENERGY EFFICIENCY RATING SYSTEM (BES) FORM 1.0-16 NRCC-PUB-22-016 Water Heating System General Information <small>(Page 1 of 1)</small> <small>Issued: _____</small> <small>12/12/2019</small> </div> </div>			
A. GENERAL INFORMATION/SYSTEM INFORMATION			
01	Water Heater System Name: _____		
02	Water Heater System Configuration: _____		
03	Water Heater System Type: Domestic Hot Water		
04	Building Type: Residential		
05	Total Number of Water Heaters in System: 1		
06	Central DHW Distribution Type: _____		
07	Dwelling Unit DHW Distribution Type: _____		
B. WATER HEATER INFORMATION			
<i>Each water heater type requires a separate compliance document.</i>			
01	Water Heater Type: Large Storage - Gas		
02	Fuel Type: Gas		
03	Manufacturer Name: AO Smith		
04	Model Number: 477-129		
05	Number of Identical Water Heaters: 1		
06	Installed Water Heater System Efficiency: 61% LE		
07	Required Minimum Efficiency: 61%		
08	Standby Loss Percent or Standby Loss Total: _____		
09	Rated Input: 170,000		
10	First Energy: NA		
11	Water Heater Tank Storage Volume: NA		
12	Exterior Insulation on Water Heater: NA		
13	Valves of Supplemental Storage: NA		
14	Internal Insulation on Supplemental Storage: NA		
15	Exterior Insulation on Supplemental Storage: NA		
C. COMPLIANCE CLAIMS AND WORKSHEETS			
Check box if worksheet is finished.			
<i>For printed instructions on the use of the use of the Energy Standard compliance documents, refer to the 2016 Nonresidential Manual Note. The Enforcement Agency may require all compliance documents to be incorporated into the building files.</i>			
YES	NO	Doc/Worksheet	File
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-22-016	Certificate of Compliance, Declaration, Required on plans for all submittals.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-21-010	Certificate of Installation, Required on plans for all submittals.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-21-010	Certificate of Installation, required on central systems in high-rise residential, hotel/motel application.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-21-010	Certificate of Installation, required on single dwelling unit systems in high-rise residential, hotel/motel application.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-21-014	Certificate of Installation, required on BEES verified central systems in high-rise residential, hotel/motel application.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-PUB-22-014	Certificate of Installation, required on BEES verified single dwelling unit systems in high-rise residential, hotel/motel application.
<input type="checkbox"/>	<input type="checkbox"/>	NRCC-STH210-010	Certificate of Installation, required on any solar water heating.

WATER HEATING SYSTEM GENERAL INFORMATION (FOR CALIFORNIA AND HAWAII ONLY) CERTIFICATE OF COMPLIANCE		CALIFORNIA ENERGY COMMISSION MISC-119-C14 (Page 2 of 2)
Water Heating System General Information See Series School		Issue Date: 12/15/2019
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
I, hereby, the (this) Certificate of Compliance documentation is accurate and complete.		
Documentation Author Name:	Aaron Wintersmith	Documentation Author Signature:
Company:	Capital Engineering	Signature Date:
Address:	11020 Sun Center DR #500	EXC 100 (Continue on back of certificate)
City/County:	Rancho Caliente CA 95129	Phone:
		916-851-3500
RESPONSOR'S PROJECT 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 (each) 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 (unacceptable design). 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 title 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 the 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 department at occupancy.		
Responsible Design Name:	Thomas A Doud	Responsible Design Signature:
Company:	Capital Engineering	Issue Date:
Address:	11020 Sun Center Dr #100	EXC H 22836
City/County:	Rancho Caliente CA 95129	Phone:
		916-851-3500

DATE SIGNED: 04/10/2020

QC
INI %



GREASE INTERCEPTER SCHEDULE

UNIT	LOCATION	"JENSEN" MODEL NO.	GALLONS	DETAIL	NOTES
	MP BLDG	JP1000EPE-G	1000		COORDINATE ELEVATIONS AT SITE. PROVIDE GRADE RINGS NECESSARY. H=20 FRAME AND MANHOLE COVER TO BE FLUSH WITH GRADE.

GREASE INTERCEPTER SIZING CALCULATION

ITEM #	PLUMBING FIXTURE	FIXTURE QTY	DFU/FIXTURE	DFU TOTAL
1	3 COMP SINK (TO FS)	1	4	4
2	2 COMP SINK (TO FS)	0	3	0
3	PRE-RINSE SINK	1	2	2
4	PREP SINK	1	2	2
5	HAND SINK	1	2	2
6	SERVICE SINK	1	3	3
7	2" FLOOR SINK	1	2	2
8	3" FLOOR SINK	0	3	0
9	4" FLOOR SINK	0	4	0
10	FLOOR DRAIN	4	2	8
11	FLOOR TROUGH	1	4	4
12	DISHWASHERS - TO SANITARY SEWER	0	-	-
13	GLASSWASHERS*	0	-	-
			TOTAL	27


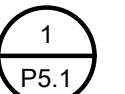
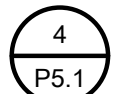
CPC 2016 TABLE 1014.3.6 GRAVITY GREASE INTERCEPTER SIZING

DFU	8	21		90	172	216	307	342	428	576
INTERCEPTOR VOLUME [GALLONS]	500	750		1250	1500	2000	2500	3000	4000	5000

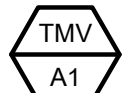
NOTES:

- IT IS RECOMMENDED NOT TO CONNECT DISHWASHERS & GLASSWASHERS TO THE GREASE INTERCEPTOR. LARGE QUANTITIES OF HOT SOAPY WATER FROM DISHWASHERS & GLASSWASHERS MAY MELT AND EMULSIFY OILS INSIDE THE GREASE INTERCEPTOR REDUCING EFFECTIVENESS OF THE INTERCEPTOR.


GAS WATER HEATER SCHEDULE

UNIT	LOCATION	"AO SMITH" MODEL NO.	STORAGE CAPACITY GALLONS	BTUH INPUT	RECOVERY GALLONS □ 100°F RISE	MAX. TEMP SETTING	GAS CONN	ELECTRICAL REQ'S	WEIGHT [BULL]□	PIPING DETAIL	MOUNTING DETAIL	NOTES
	BLDG A KITCHEN	BTH-199	100	199,900	235	140	3/4"	120VAC 1PH 15AMP	1200			PROVIDE INTAKE AND EXHAUST VENT TO OUTSIDE. DRAIN PAN AND PLATFORM TO RAISE WATER HEATER TO SLOPE DRAIN FROM PAN TOWARDS DRAIN. WATER HEATER MUST BE WIRED TO A 120VAC 60HZ ON A SEPARATE CIRCUIT AND BREAKER. PROVIDE ACID NEUTRALIZING KIT ON CD.

TEMPERATURE MIXING VALVE

UNIT	LOCATION	"POWERS" MODEL NO.	OUTLET SIZE	PSI DROP □ GIVEN GPM	MIN. GPM	NOTES
	BLDG A KITCHEN	LFMM434HL	1½"OUTLET	5 PSI □ 56GPM	.5	KITCHEN OUTPUT TEMP SET FOR 120°F

HEAT TRACE CABLE SCHEDULE

UNIT	LOCATION	MANUF □ MODEL NO.	REGULATED TEMPERATURE	VOLTAGE	AMP/FT.	AMP CB	mA-GFPE RATING
	FREEZER	RAYCHEM XL-TRACE	40°F	120V/1Ø	.119	15	30

BASIS OF DESIGN: RAYCHEM - HEAT TRACE SYSTEM HTC-J1 AT -20F MIN AMBIENT TEMP. RAYCHEM ECW-GF ELECTRONIC ADJUSTABLE SETPOINT THERMOSTAT WITH BUILT IN GFEP. MUST HAVE SETPOINT CAPABILITY OF AT LEAST 40°F. LOCATE CONTROLLER CLOSE TO HEAT TRACE. COORDINATE EXACT LOCATION AT SITE.

NOTES:

- SEE INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.
- PROVIDE DIAGRAM & LAYOUT FOR APPROVAL. SEE SPECIFICATIONS FOR MORE INFORMATION.



ProSet FIRESTOP WALL PENETRATOR GUIDE

Penetrators through Masonry & Gypsum Walls



Recommended drawing numbers are shown below
Other options may be available

Pressure Pipe and PVC/ABS Pipe - All sleeves are 8" long— Consult factory for other options

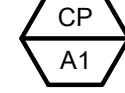
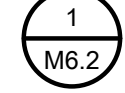
Size	Type of Wall	Copper	Steel	PVC	PVC Pressure	PVC/ABS DWV	Other
1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Multiple Pipes
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1003-ax
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	Chilled Water
3/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1000-a
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Glass Pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1015-a
1"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Waterproof
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Thru-pipe
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1017-g
1 1/4"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	Optional Wall
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	Sleeve Fasteners
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	For Gypsum Walls
1 1/2"	CONCRETE	A-1010-a	A-1010-a	A-1011-a	A-1011-a	A-1011-a	A-1012-f and
	BLOCK	A-1010-g	A-1010-g	A-1011-g	A-1011-g	A-1011-g	A-1013-f or
	GYPSUM	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1012-f or 13-f	A-1014-f and
2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1015-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	polypropylene
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Acid waste pipe
2 1/2"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	C-9049-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	C-9049-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	Polyethylene
3"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1011-a
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	A-1011-g
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1012-f or
4"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	C-9049-a	A-1013-f
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	C-9049-g	Insulated pipe
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	C-9049-f	A-1004-a
5"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	A-1010-ai
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	Refrigeration
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	A-1003-a
6"	CONCRETE	A-1014-a	A-1014-a	A-1015-a	A-1015-a	N.A	
	BLOCK	A-1015-g	A-1015-g	A-1015-g	A-1015-g	N.A	
	GYPSUM	A-1014-f	A-1014-f	A-1015-f	A-1015-f	N.A	

Plumbing Fixture Wall Openings: 1-1/2" Lavatory and Sink Sub Outs: Use ProSet P-90 PVC Pipe. See drawing No. C-8112-f
Wall Outlet 3" or 4" Water Closets See ProSet Drawing No. C-4492-a and C-4492-bhc
ProSet Systems, Inc., 1355 Capital Circle Lawrenceville, GA 30043-5866 1-800-262-5355 FAX (770) 339-1784

EXPANSION TANK SCHEDULE

UNIT	LOCATION	"AMTROL" MODEL NO.	TANK VOLUME GALLONS	MAX. ACCEPT. VOLUME	DETAIL	NOTES
	BLDG A KITCHEN	THERM-X-TROL ST-12	4.4	3.21		3/4"NPTM CONNECTION. 11"DIA. OPERATING WEIGHT 40LBS

CIRCULATING PUMP SCHEDULE

UNIT	LOCATION	"BLG" MODEL NO.	GPM	FT OF HEAD	WATTS	VOLTAGE	CONTROLS	NOTES
	BLDG A KITCHEN	NBF-12U	5	8.0	55	115V/1Ø		9.5 LBS. 0.48FLA. CONNECT TO BMS

GWH-A1 WATER HEATER SIZING

GAS TANK TYPE- KITCHEN

SYMBOL	FIXTURE NAME	QTY	USER HW TEMP	GPH EACH □ USER TEMP	GPH EACH □ WH TEMP	GPH TOTAL PER ITEM
LAV	COMMERCIAL - LAVATORY	1.00	120.00	6.00	4.59	4.59
S-3	STAFF SINK	1.00	105.00	10.00	5.88	5.88
P4	HAND SINK	2.00	105.00	6.00	3.53	7.06
SS-1	SERVICE SINK	1.00	110.00	20.00	12.94	12.94
P7	POT FILLER/TILT SKILLET	1.00	120.00	6.00	4.59	4.59
DIPPER WELL	HOT FOOD STATION	0.00	120.00	6.00	4.59	0.00
P11	PREP SINK	1.00	120.00	45.00	34.41	34.41
SINGLE POT SINK	SINGLE POT SINK	0.00	120.00	30.00	22.94	0.00
DOUBLE POT SINK	DOUBLE POT SINK	0.00	120.00	60.00	45.88	0.00
P13/P14	TRIPLE POT SINK	1.00	120.00	90.00	68.82	68.82
P14	PRE-RINSE UNIT	1.00	120.00	45.00	34.41	34.41
CAN WASH UNIT	CAN WASH UNIT	0.00	120.00	45.00	34.41	0.00
P12	WAREWASHER - HOBART AM15VLT	1.00	140.00	29.60	29.60	29.60
HOSE REEL	HOSE REEL	0.00	120.00	20.00	15.29	0.00
					TOTAL GPH	202.31

INLET TEMP	55.00		TANK VOL	100	GALLONS
WH TEMP	140.00		±1ST HR RECOV	343.99	GALLONS
TEMP DIFF	85.00	1MBH □		1000	BTUH
WATER HEATER EFFICIENCY	0.970				
GPH USAGE DIVERSITY FACTOR	1.00				
GPH WITH DIV FACTOR □TOTAL GPH X FACTOR	202.31				
GAS INPUT □	GPH X TEMP DIFF X 8.33LBS/GAL X 1BTU/LB°F / WATER HEATER EFF				
□	147,672.87	BTUH			
□	147.67	MBH			
USE □	200.00	MBH			
	273.99	GPH RECOVERY EQUIV □ CONSTANT EFF □ TEMP DIFF ABV			

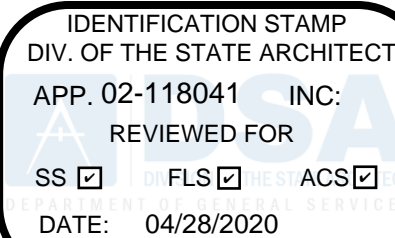
NOTES:□

- USER TEMP ABV IS ASSUMED WARMEST BEARABLE BY USER OR BY FUNCTION.
- WARNING: PER ASHRAE CHAPTER 50 FIGURE 9, IT TAKES ABT 10 MINS TO CAUSE 3RD DEGREE BURNS USING 120F HOT WATER. FOR 140F HOTWATER, IT ONLY TAKES ABOUT 5 SECONDS TO DO SAME DAMAGE. PLEASE LIMIT HOT WATER TEMP THRU USE OF THERMOSTATIC MIXING VALVES OR USE OF INTEGRAL LIMITING DEVICE IF AVAILABLE.
- 1ST HR RECOVERY BASED FROM 0.7DWH TANK VOLUME □PERFORMANCE GPH

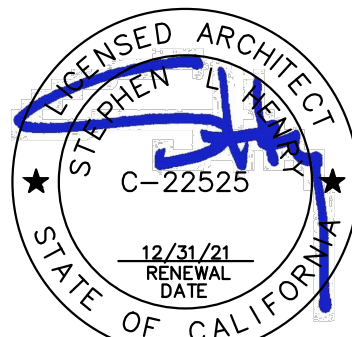


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FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION
JOE SERNA SCHOOL

PLUMBING EQUIPMENT
SCHEDULES

CONSULTANT



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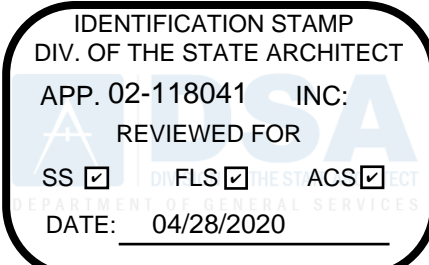
PLUMBING FIXTURE SPECIFICATION □ CONNECTION SCHEDULE													
ADA	SYMBOL	FIXTURE	FIXTURE MANUFACTURER AND MODEL No.	FAUCET OR VALVE MANUFACTURER AND MODEL No.	TRIM MANUFACTURER AND MODEL No.	REMARKS	VENT	WASTE		COLD WATER		HOT WATER	
								BRANCH	OUTLET	BRANCH	OUTLET	BRANCH	OUTLET
	WC-1	WATER CLOSET FLOOR MOUNTED FLUSH VALVE ACCESSIBLE	"AMERICAN STANDARD" MADERA EL NO. 3461.001, 1.28 GPF FLOOR MOUNTED, ELONGATED, SIPHON JET ACTION 1-1/2" TOP SPUD, 16-1/2" RIM HEIGHT.	"SLOAN" ROYAL 111 HET 1.28, ADA COMPLIANT, 1.28 GPF MANUAL □	SEAT: "CHURCH" MODEL 295SSCT OR "BEMIS" MODEL 1955SSCT. PROVIDE WITH SELF- SUSTAINING CONCEALED CHECK HINGES, ONE PIECE STAINLESS STEEL POST HINGES, WHITE COLOR.	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. WHERE USED FOR CBC ACCESSIBLE WATER CLOSETS, THE FLUSH VALVE HANDLE SHALL BE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET ENCLOSURE.	2"	4"	4"	1-1/2"	1"	--	--
	L-1	LAVATORY WALL MOUNTED HOT AND COLD WATER STD/ACCESSIBLE	"AMERICAN STANDARD" LUCERNE NO. 0355.012, WALL HUNG, VITREOUS CHINA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FRONT OVERFLOW, CONCEALED ARM RECESS, 4" CENTERS, 20" □18" D SHAPED BOWL.	"MOEN" 8886 NEWER VERSION FAUCET, TWO-HANDLE ADA METERING FAUCET, CHROME PLATED SOLID BRASS CONSTRUCTION, 4" CENTERSET, VANDAL RESISTANT, 0.5GPM MAX. PROVIDE AASE 1070 TMV. ADJUST OUTLET WATER TEMPERATURE TO COMFORTABLE TEMPERATURE OR NO MORE THAN 110° F.	ADA COMPLIANT. LAVATORY GRID DRAIN WITH 1-1/4" OFFSET TAILPIECE, INTEGRAL PERFORATED GRID NO. 7723.018, CHROME FINISH. MOUNT P-TRAP FLUSH TO WALL. CARRIER: "J R SMITH" 0700 OR ZURN Z1231	MOUNT AT HEIGHT INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONCEALED ARMS AND FLOOR SUPPORT, WITH FEET OF SUPPORT SECURELY ANCHORED TO FLOOR. IN ADDITION ANCHOR TOP OF SUPPORT TO WALL CONSTRUCTION.	1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	MS-1	SERVICE SINK WALL MOUNTED HOT AND COLD WATER JANITORS	"AMERICAN STANDARD" 7695.00, ENAMELED INSIDE CAST IRON.	"CHICAGO" MODEL 897-CP WALL MOUNTED POLISHED CHROME FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE AND 3/4" MALE THREADED HOSE OUTLET.	PROVIDE CONNECTION TO CLEANING EQUIPMENT	AS PART OF ROUGH-IN FOR FAUCET, PROVIDE SUITABLE BLOCKING FOR TOP BRACE. PROVIDE CAP WITH FLANGE ON SIDES ADJACENT TO WALLS.	2"	3"	3"	3/4"	3/4"	3/4"	3/4"
	S-1	SINK COUNTER MOUNTED HOT AND COLD WATER ADMIN/CONF./NURSE	"ELKAY" MODEL LRAD191965, 19" FRONT TO BACK, 19" WIDE □ 6-1/2" DEPTH OVERALL. 18 GAUGE STAINLESS STEEL, LEDGE BACK WITH SELF- RIM. PROVIDE SINGLE FAUCET HOLE. PROVIDE REAR DRAIN LOCATION. PROVIDE SLOT AT FAUCET FOR VANDAL RESISTANT PINS.	"CHICAGO" ECAST MODEL 50-E35ABCP□VAVVP□ GOOSENECK FAUCET, 1.5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR AND RIGID/SWING FAUCET. PROVIDE VANDAL RESISTANT PIN IN FAUCET, ARRANGED TO MATE WITH SLOT IN SINK.	"ELKAY" MODEL LKAD35, OFFSET CRUMB CUP STRAINER WITH REMOVABLE BASKET AND P-TRAP. INSTALL P-TRAP FLUSH TO WALL.		1-1/2"	2"	1-1/2"	3/4"	1/2"	3/4"	1/2"
	FD	FLOOR DRAIN	GENERAL SERVICE FD - ZURN MODEL Z-415, OR EQUAL, WITH TYPE "B" STRAINER FOR EXPOSED CONCRETE AND TYPE "S" STRAINER FOR TILE FLOOR. PROVIDE BRONZE TRIM. FD IN COMPOSITION TYPE FLOORS - ZURN MODEL Z-415, OR EQUAL, WITH TYPE SL STRAINER. FD IN RESINOUS/EPOXY TYPE FLOORS - ZURN MODEL Z-415BL, OR EQUAL, NICKEL BRONZE WITH ADJUSTABLE STRAINER.				2"	2"	2"	-	-	-	-
	TP	TRAP PRIMER	MIFAB "M-500" SERIES, REQUIRES 3PSI DROP TO ACTIVATE.				-	-	-	1/2"	1/2"	-	-
	TP-2	TRAP PRIMER	SIOUX CHIEF 695-ES01 ELECTRONIC TRAP PRIMER. 120VAC 9.2WATTS.			SEE DETAIL 1/P5.2	-	-	-	1/2"	1/2"	-	-
	WHA	WATER HAMMER ARRESTOR	SEE SPECIFICATIONS										
	HB	HOSE BIBB	INTERIOR WALL MOUNTED - ACORN MODEL 8121CP-LF WOODFORD MODEL 24PC, OR EQUAL. ROOF MOUNTED - WOODFORD MODEL RHMC-MS, OR EQUAL.	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND REMOVABLE KEY HANDLE.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	3/4"	3/4"	-	-
	WH	WALL HYDRANT	EXTERIOR WALL MOUNTED RECESSED WOODFORD MODEL B75 SWIVEL INLET OR EQUAL.	WITH INTEGRAL VACUUM BREAKER PROTECTED, CARTRIDGE OPERATED HOSE VALVE WITH LOCK SHIELD BONNET AND LOOSE KEY OPERATION.		SET HEIGHT AT 18" ABOVE FINISHED FLOOR	-	-	-	3/4"	3/4"	-	-
	FS	FLOOR SINK	KITCHEN - ZURN MODEL Z-1751, OR EQUAL, 12 INCH □12 INCH □B INCH DEEP, 14 GA. TYPE 304 STAINLESS STEEL GRATE, SEDIMENT BUCKET. PROVIDE FUSION JOINT P-TRAP TO MATCH PIPING SYSTEM. SEE FOOD SERVICE PLANS FOR MORE FS GRATE INFORMATION. KITCHEN COOLER/FREEZER LOCATIONS - ZURN MODEL Z-1940KC-23, OR EQUAL, 6 INCH □12 INCH □7-3/4 INCH DEEP, CAST IRON BODY WITH WHITE ACID RESISTING INTERIOR, NICKEL BRONZE FRAME AND GRATE, SEDIMENT BUCKET. PROVIDE FUSION JOINT P-TRAP TO MATCH PIPING SYSTEM. MECHANICAL SPACES - ZURN MODEL ZN-1901-KC-2, OR EQUAL, 12 INCH □12 INCH □B INCH DEEP, A.R.E. INTERIOR WITH NICKEL BRONZE RIM, HALF GRATE AND DOME STRAINER. OTHER APPROVED EQUAL MANUFACTURERS INCLUDE: JAY R. SMITH, WATTS □MIFAB.	PROVIDE SEEPAGE PAN AND CLAMPING COLLAR.		COORDINATE □PROVIDE GRATES AS REQUIRED PER KITCHEN DRAWINGS				-	-	-	-
GENERAL NOTES: 1. WATER SUPPLIES AND STOPS: A. PROVIDE 85 PERCENT IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION, FOR EACH CONNECTION TO FAUCETS, STOPS, HOSE BIBBS, ETC. EACH FIXTURE, EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRS WITHOUT SHUTTING OFF WATER MAINS. B. PROVIDE ALL WATER SUPPLIES TO FIXTURES WITH COMPRESSION SHUT-OFF STOPS WITH THREADED BRASS NIPPLES AT PIPE CONNECTION AND LOCK SHIELD LOOSE KEY. PROVIDE COMBINATION FIXTURES WITH COMPRESSION STOP AND IPS INLET ON EACH WATER SUPPLY FITTING. PROVIDE LOOSE KEY HANDLE FOR EACH STOP. C. PROVIDE 1/2 INCH RISER TUBES WITH REDUCING COUPLING FOR ALL FIXTURES, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION 22 40 00. 2. PIPE, PLUMBING FITTINGS, FIXTURES, SOLDER AND FLUX SHALL COMPLY WITH LEAD FREE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCTS LISTED AND LABELED AS COMPLYING WITH NSF 61, ANNEX G, OR PROVIDE OTHER EVIDENCE OF COMPLIANCE WITH THE CALIFORNIA HEALTH AND SAFETY CODE SECTION 116875. PROVIDE PRODUCT SUBMITTAL INFORMATION PROVING COMPLIANCE WITH LEAD FREE REQUIREMENTS. ALSO SEE GENERAL NOTE 22 ON SHEET P0.1 AND SPECIFICATION SECTIONS, 22 00 50, 22 10 00 AND 22 40 00.													

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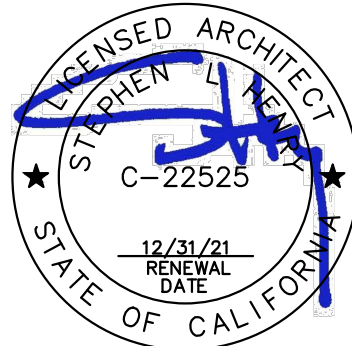


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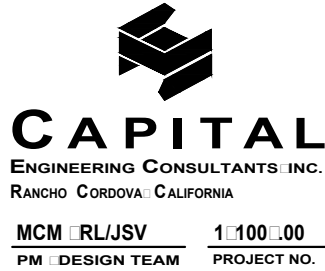
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KITCHEN RENOVATION
JOE SERNA SCHOOL

PLUMBING FIXTURE
SCHEDULE

CONSULTANT



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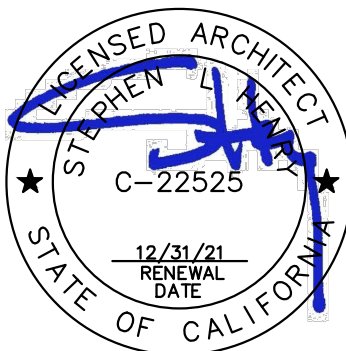
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APP. 02-118041 INC.
REVIEWED FOR
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DATE: 04/28/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
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KITCHEN RENOVATION
JOE SERNA SCHOOL
PLUMBING SITE PLAN

CONSULTANT

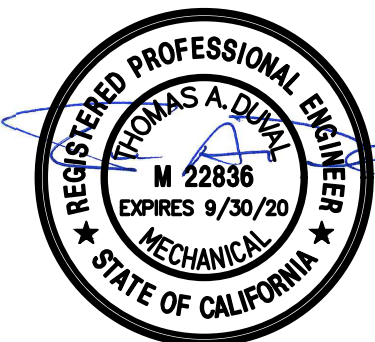


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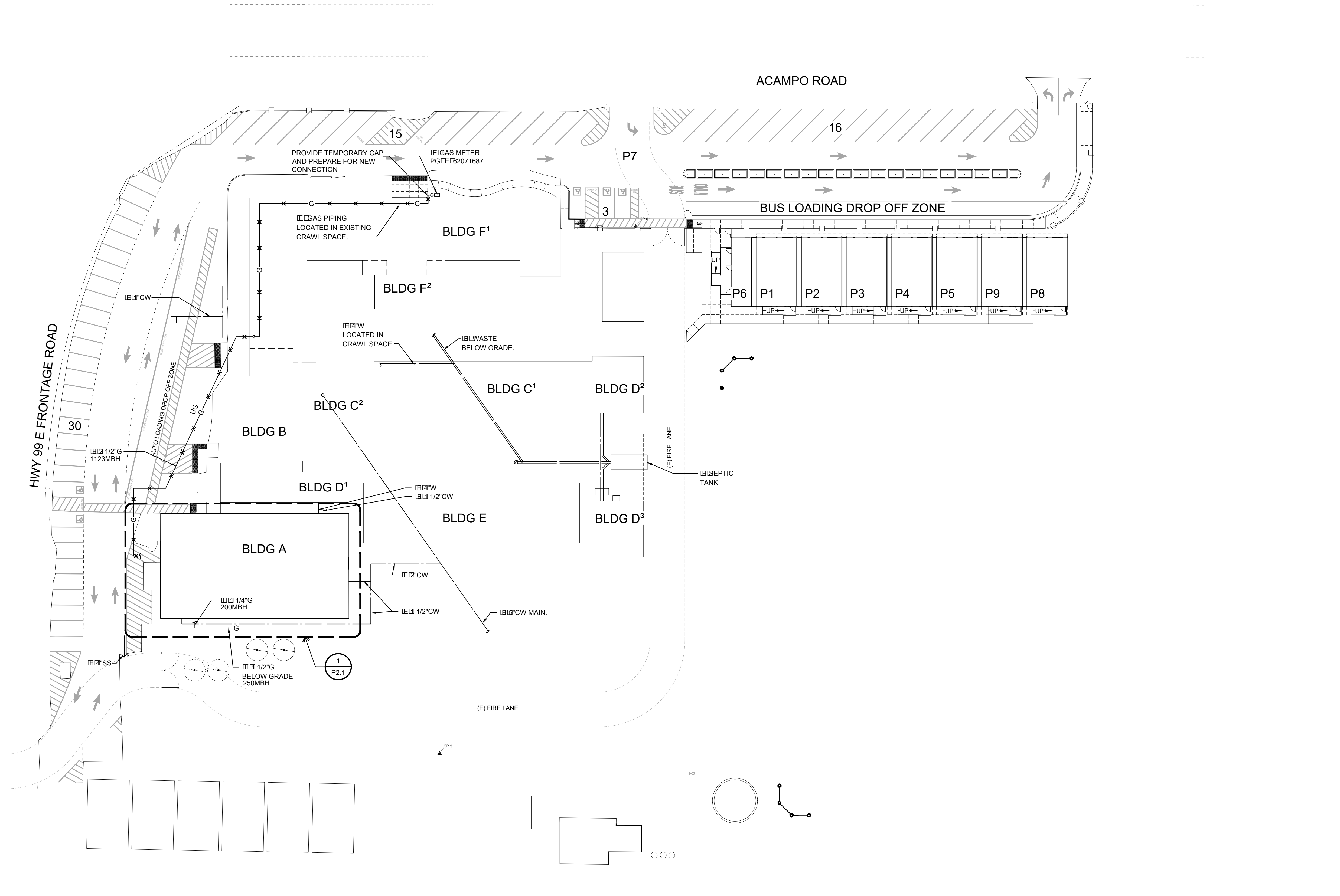
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PLUMBING SITE PLAN

SCALE : 1" = 30'-0"

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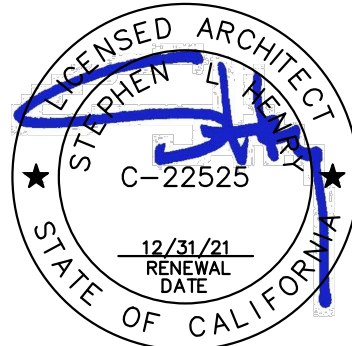


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KITCHEN RENOVATION
JOE SERNA SCHOOL

PLUMBING SITE PLAN

CONSULTANT

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ENGINEERING CONSULTANTS INC.
RANCHO CORDOVA, CALIFORNIA
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PM DESIGN TEAM PROJECT NO.

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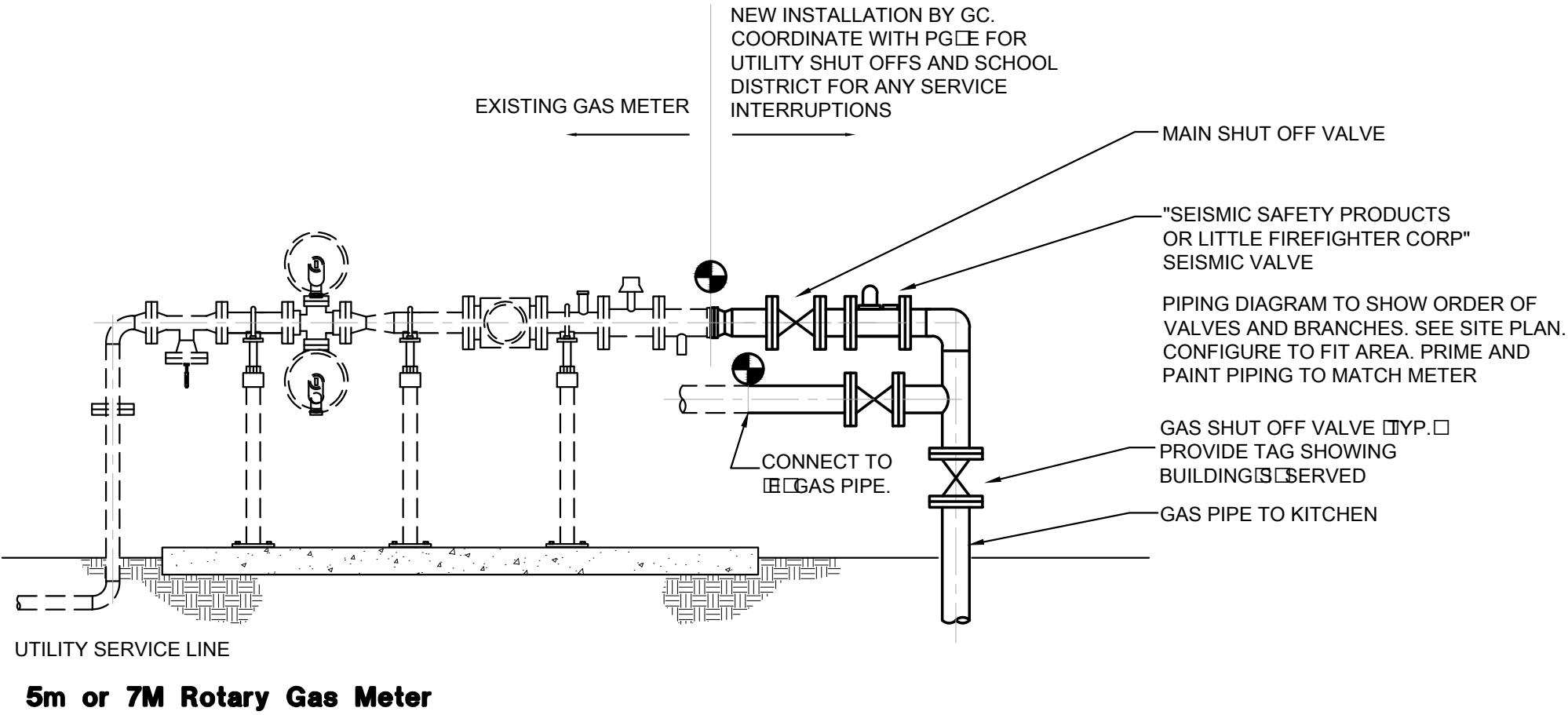
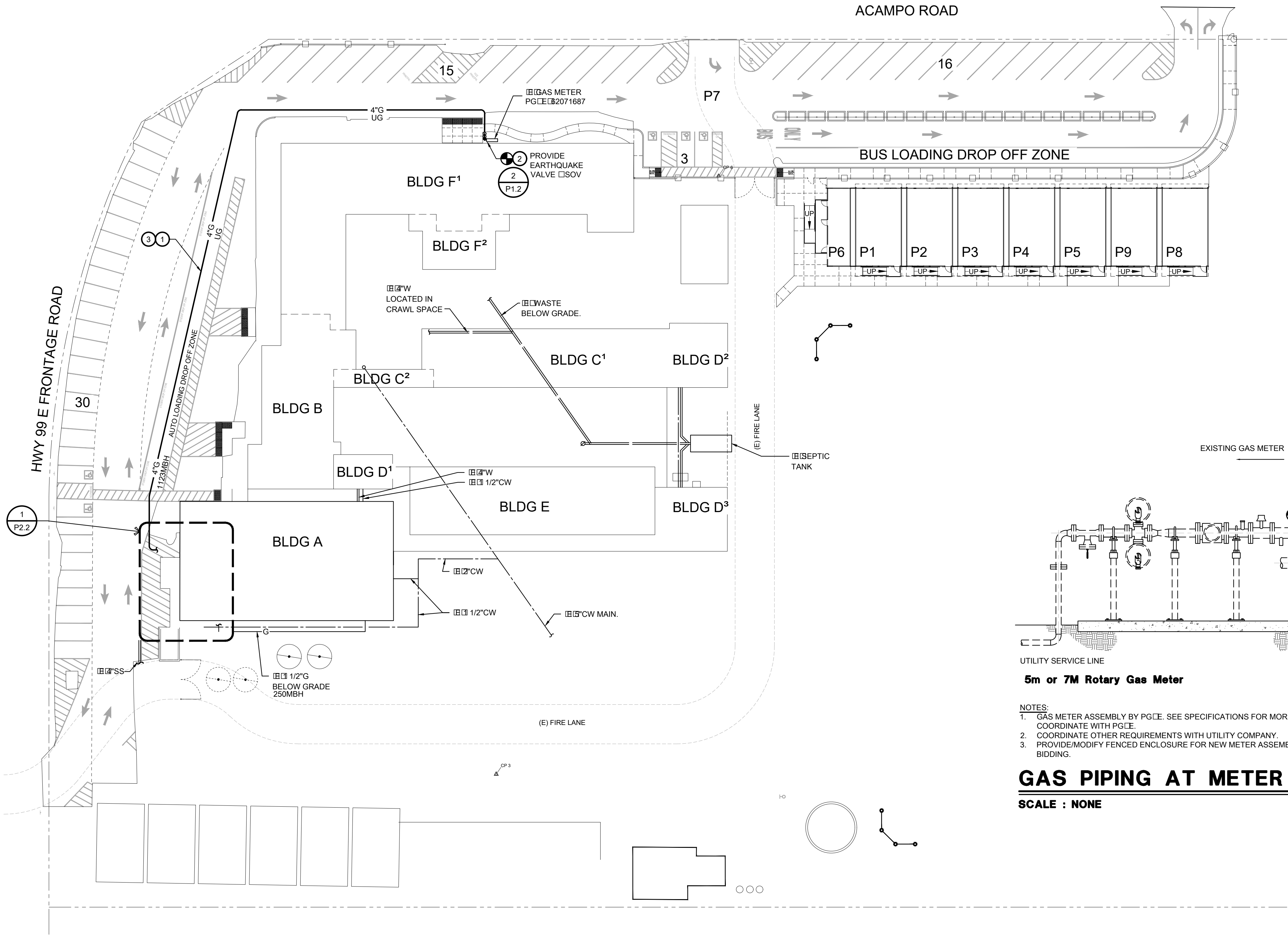
OF SHEETS

CONSTRUCTION SHEET NOTES:

1. SITE PLAN INTENDED TO SHOW SITE GAS SYSTEM ONLY. REFER TO CIVIL, LANDSCAPE ARCHITECTURAL DRAWINGS FOR INFORMATION REGARDING GRADING, PAVING, LANDSCAPE AND OTHER UTILITIES AT SITE. COORDINATE ALL LOCATIONS AMONGST TRADES.
2. FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AT SITE. REROUTE ANY PIPING THAT MAY CONFLICT WITH NEW CONSTRUCTION. COORDINATE AMONGST TRADES.
3. PROVIDE TEMPORARY UTILITIES TO FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION. COORDINATE PHASING WITH SCHOOL DISTRICT.
4. SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION, OTHER SOILS INFORMATION AND OTHER INSTALLATION REQUIREMENTS.

CONSTRUCTION KEYNOTES:

1. INSTALL TRACER WIRE WITH WARNING TAPE OR DETECTABLE WARNING TAPE BURIED ABOVE ALL GAS LINES INSTALLED UNDERGROUND. SEE SPECIFICATIONS FOR OTHER INSTALLATION REQUIREMENTS.
2. VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
3. VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES, BUILDING COMPONENTS OR ANY OBJECT IN GENERAL, THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE NEW OR EXISTING PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH.



- NOTES:
1. GAS METER ASSEMBLY BY PG&E. SEE SPECIFICATIONS FOR MORE INFORMATION. EXACT ASSEMBLY CONFIGURATION MAY VARY. COORDINATE WITH PG&E.
 2. COORDINATE OTHER REQUIREMENTS WITH UTILITY COMPANY.
 3. PROVIDE/MODIFY FENCED ENCLOSURE FOR NEW METER ASSEMBLY. PROVIDE SHOP DRAWINGS. FIELD VERIFY DIMENSIONS PRIOR TO BIDDING.

GAS PIPING AT METER

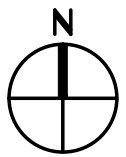
SCALE : NONE

2
P1.2

PLUMBING SITE PLAN

SCALE : 1" = 30'-0"

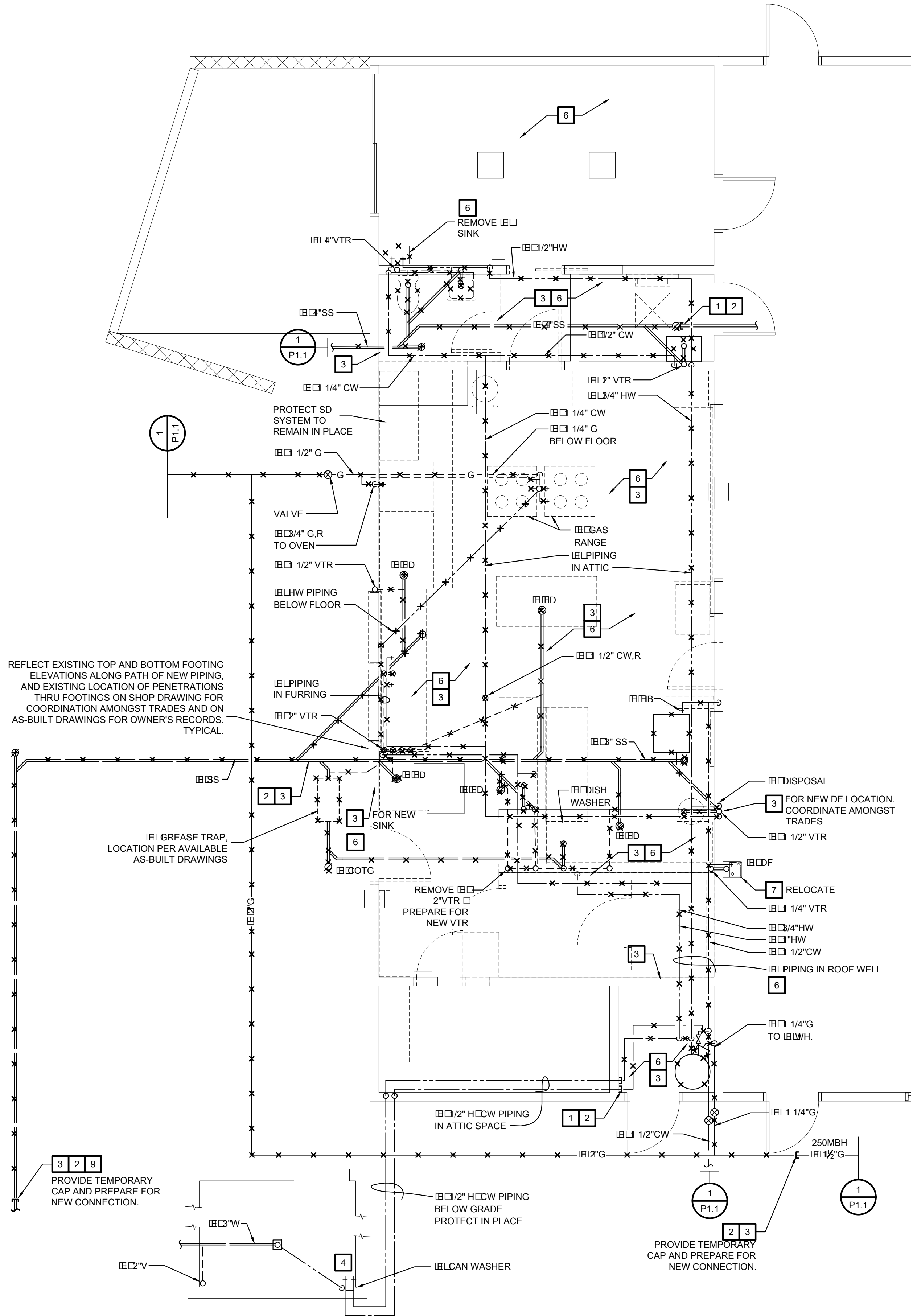
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P1.2



DATE SIGNED: 04/10/2020

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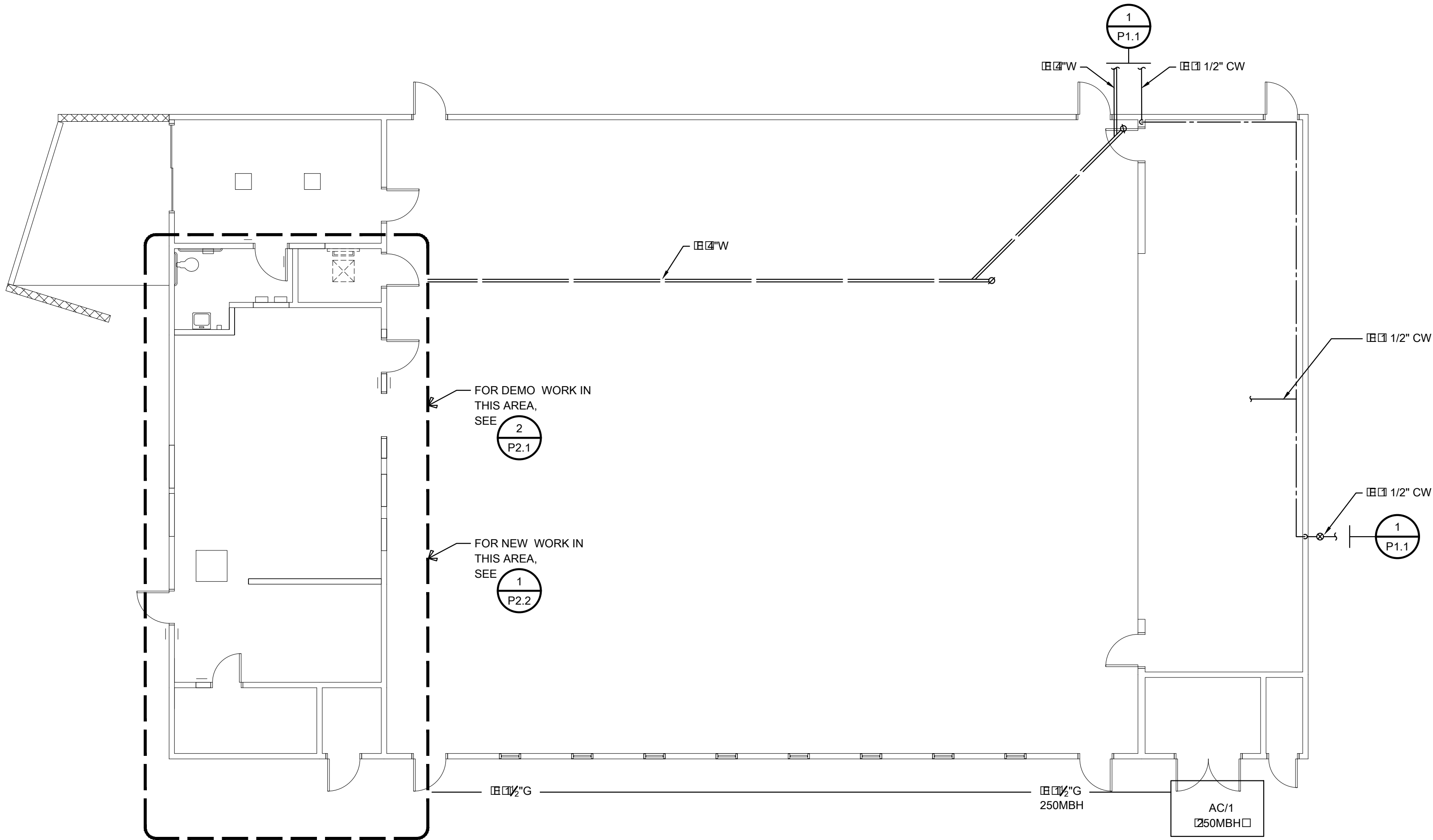
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PLUMBING DEMO FLOOR PLAN

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

2
P2.1



PLUMBING FLOOR PLAN

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

1
P2.1



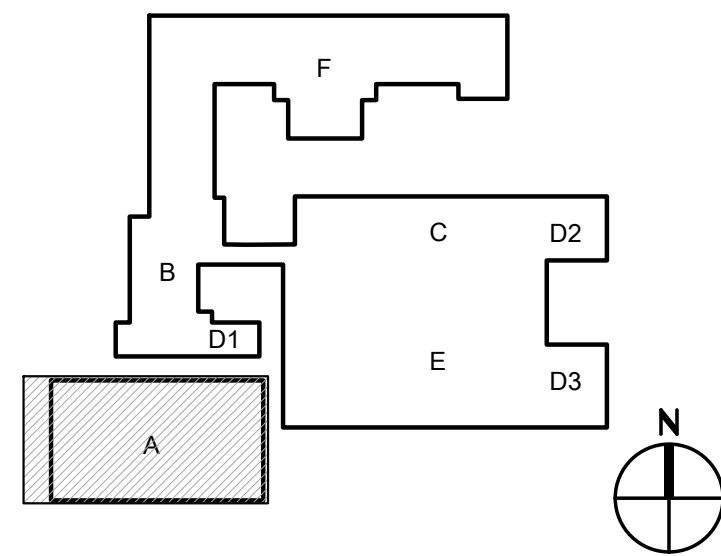
DEMO KEYNOTES:

- 1 PROVIDE TEMPORARY CAP ON PIPING. PREPARE FOR RECONNECTION TO NEW PIPE
- 2 VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
- 3 VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. PREPARE AREA FOR NEW WORK. REROUTE PIPING IF REQUIRED. REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH. SEE PLUMBING SHEET P2.2 FOR NEW PIPING.
- 4 PROTECT FIXTURE TO REMAIN IN PLACE DURING DEMO/CONSTRUCTION WORK. PROVIDE TEMPORARY UTILITIES WHEN NEEDED. COORDINATE SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- 5 REMOVE EXISTING PLUMBING FIXTURE/EQUIPMENT. UNLESS SHOWN OTHERWISE, CAP UNUSED PIPING ABOVE, BELOW OR BEHIND ARCHITECTURAL FINISHES. SEE ARCHITECTURAL SHEETS FOR MORE INFORMATION
- 6 REMOVE ALL UNUSED EXISTING WASTE, VENT, WATER, CONDENSATE DRAIN GAS PIPING ABOVE GROUND WITHIN WORK AREA. CAP BEHIND ARCHITECTURAL FINISH. FIELD VERIFY LOCATION.
- 7 CAREFULLY REMOVE AND SALVAGE EXISTING DRINKING FOUNTAIN WITH BOTTLE FILLER FOR REINSTALLATION AT A DIFFERENT LOCATION.
- 8 REMOVE VTR. PATCH ROOF TO MATCH EXISTING.
- 9 CLEAN AND FLUSH EXISTING SEWER SYSTEM TO REMAIN.

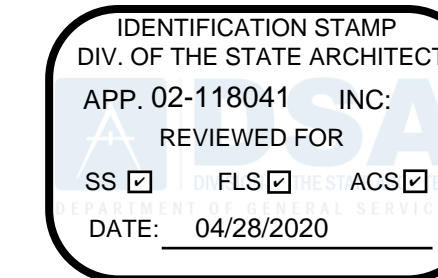
DEMO SHEET NOTES:

1. EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY. PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
2. CONTRACTOR TO REMOVE ALL PIPING NOT CONNECTED TO PLUMBING FIXTURES. REFLECT ON AS-BUILT DRAWINGS.
3. CONTRACTOR SHALL REFLECT EXISTING AND/OR ABANDONED PIPING ON THE AS-BUILT DRAWINGS IF FOUND DIFFERENTLY FROM DESIGN PLANS FOR OWNER'S REFERENCE AND RECORD KEEPING.
4. PATCH ALL UNUSED ROOF PENETRATIONS TO MATCH EXISTING. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
5. PROVIDE SLAB DEMOLITION WORK AS NECESSARY TO REMOVE, REPLACE, REROUTE OR ADD UNDERGROUND PIPING. PATCH BACK TO MATCH SURROUNDING FLOOR/PAVEMENT.

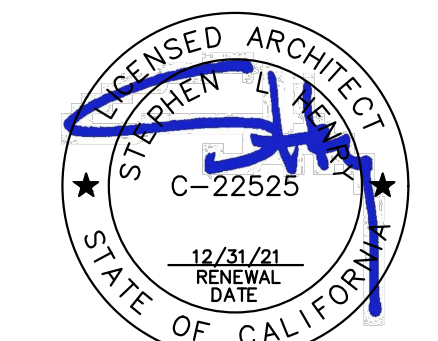
KEYPLAN:



FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION
JOE SERNA SCHOOL

PLUMBING FLOOR PLAN &
DEMO FLOOR PLAN

CONSULTANT



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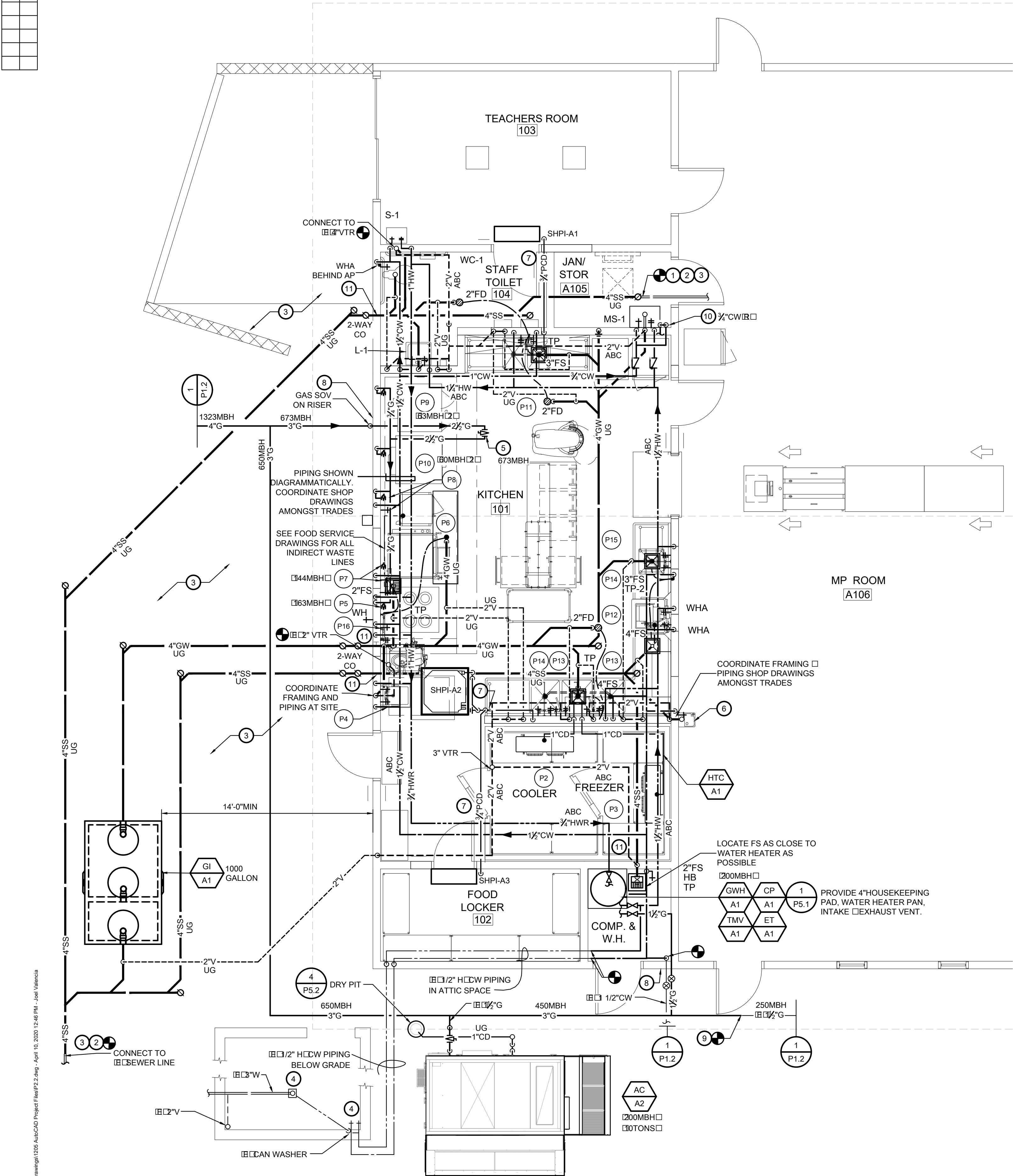
P2.1

OF SHEETS



DATE SIGNED: 04/10/2020

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ENLARGED PLUMBING FLOOR PLAN

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

1
P2.2



PLUMBING SCHEDULE								
PLUM. NO.	ITEM. NO.	DESCRIPTION	QTY.	WATER		WASTE		GAS
				CONN. SIZE		CONN. SIZE		
				C.W.	H.W.	DIR.	INDIR.	BTU/HR (x1,000)
P2	2	WALK-IN REFRIGERATOR CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	1"	-
P3	3	WALK-IN FREEZER CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	1"	-
P4	4	WALL MOUNTED HAND SINK FAUCET W/ 1/2" INLET 4" CENTER	1EA.	1/2"	1/2"	1 1/2"	-	-
P5	6	OPEN BURNER RANGE W/ OVEN	1EA.	-	-	-	-	163
P6	7	FLOOR TROUGH	1EA.	-	-	4"	-	-
P7	8	TILT SKILLET W/ FILLER	1EA.	1/2"	1/2"	-	-	144
P8	9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	3/4"	-	-	3/4"	60 EA.
P9	10	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	63 EA.
P10	10.1	DOUBLE STACK CONVECTION OVEN GAS	2EA.	-	-	-	-	60 EA.
P11	12	PREP SINK FAUCET W/ 1/2" INLET 8" CENTER	1EA.	1/2"	1/2"	-	2"	-
P12	23	WARE WASHER, HIGH TEMP	1EA.	1/2"	1/2"	-	1 1/2"	-
P13	26	POTWASH SINK FAUCET W/ 3/4" INLET 8" CENTER	2EA.	3/4"	3/4"	-	2"	-
P14	27	PRE-RINSE FAUCET W/ 1/2" INLET 8" CENTER	2EA.	1/2"	1/2"	-	2"	-
P15	34	SCRAP SINK	1EA.	-	-	-	2"	-

- NOTES:
- SEE FOOD SERVICE DRAWINGS FOR EXACT UTILITY STUB LOCATION AND FOR OTHER PLUMBING REQUIREMENTS.
 - SEE FLOOR PLAN, PLUMBING FIXTURE SCHEDULE OR PIPE SIZE SCHEDULE BELOW FOR MINIMUM PIPE SIZING REQUIREMENT.

WATER SUPPLY FIXTURE UNITS 3.4 PSI/100FT COPPER L			
PIPE SIZE	HW	CW F TANK	CW F VALVE
1/2"	1	1	0
3/4"	6	6	0
1"	13	13	0
1 1/4"	26	26	0
1 1/2"	46	51	12
2"	119	175	76
2 1/2"	245	406	270
3"	406	719	666
4"	840	1668	1668

GAS PIPE TABLE 1216.2(1) INLET PRESSURE 2PSI 0.5WATER COLUMN DROP, SPGR 0.6	
PIPE SIZE	LL<800FT (MBH)
1/2"	19
3/4"	39
1"	74
1 1/4"	152
1 1/2"	228
2"	438
2 1/2"	699
3"	1240
4"	2520

- NOTES:
- PIPING SIZES SHALL BE PER ABOVE TABLE, PER AS SHOWN ON PLUMBING FLOOR PLANS OR PLUMBING FIXTURE SCHEDULE. SHOULD DISCREPANCIES ARISE, THE LARGEST OF WHICH SHALL PREVAIL.

CONSTRUCTION SHEET NOTES

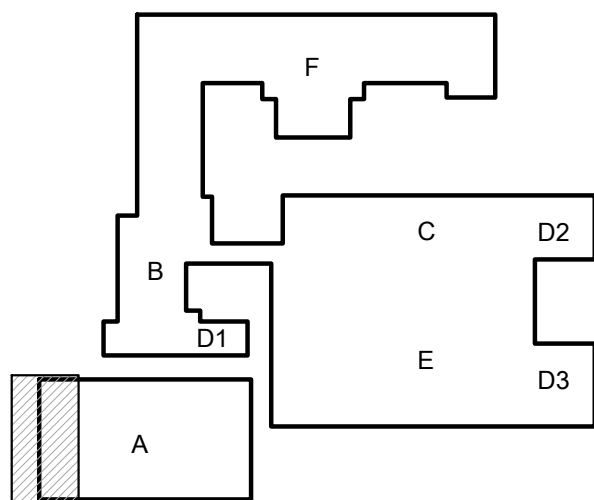
- ALL FINISH FLOOR ELEVATIONS BE BASED FROM CIVIL GRADING DRAWINGS. PLEASE REFER TO CIVIL DRAWINGS FOR MORE INFORMATION. BFF VALUES ARE ALL BASED FROM FINISH FLOOR ELEVATION INSIDE BUILDING. COORDINATE EXACT ELEVATIONS THRU SHOP DRAWINGS AND AT SITE.
- CONNECT WASTE, VENT COLD WATER LINES TO ALL NEW FIXTURES. SEE FIXTURE SCHEDULE FOR BRANCH AND FIXTURE OUTLET/INLET CONNECTION SIZES.
- HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 2' TOWARD THE POINT OF DISPOSAL UNLESS IMPRACTICAL DUE TO BUILDING'S STRUCTURAL FEATURES, OR EXISTING UPSTREAM/DOWNSTREAM PIPE DEPTH. IN SUCH CONDITIONS, PIPE CAN BE SLOPED AT NO LESS THAN 1'. REFLECT ALL CHANGES ON THE AS-BUILT DRAWINGS.
- EXISTING PLUMBING LAYOUT BASED FROM AVAILABLE RECORD DRAWINGS OF UNKNOWN ACCURACY. EXISTING PIPING ESPECIALLY THOSE CONCEALED AND/OR UNDERGROUND MAY HAVE BEEN INSTALLED DIFFERENTLY THAN SHOWN HEREWITH. CONTRACTOR SHALL INVESTIGATE EXISTING PIPE ROUTE, ELEVATION, SIZE AND CONDITION, THRU VISUAL OBSERVATIONS, POT-HOLING, RADAR INSPECTION OR OTHER MEANS NECESSARY. PRIOR TO ANY NEW PIPE INSTALLATION. REFLECT ALL FINDINGS ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES. REFLECT EXISTING ROUTE, ELEVATION AND OTHER OBSERVATIONS ON AS-BUILT DRAWING IF DIFFERENT FROM SHOWN HEREWITH.
- ADJUST ALL PIPE ELEVATIONS IF NECESSARY. COORDINATE BETWEEN TRADES AT SITE THROUGH SHOP DRAWINGS.
- CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF ALL PLUMBING SYSTEMS AS INSTALLED IN THE JOB SITE. AS-BUILT DRAWINGS SHALL INCLUDE BUT NOT LIMITED TO: UNDERGROUND PIPE ELEVATIONS, PIPE SIZES, AND ANY INFORMATION THAT MAY CLARIFY HOW THE SYSTEMS HAVE BEEN INSTALLED. AS-BUILT DRAWINGS SHALL BE IN HARD COPY AND DIGITAL BDF FORMAT.
- SEE PREVIOUS AS-BUILT DRAWINGS FOR CONTINUATION OF EXISTING PLUMBING UTILITIES OUTSIDE OF THIS PROJECT'S SCOPE.
- SEE GEOTECH REPORT FOR TRENCHING REQUIREMENTS, GROUND WATER ELEVATION, PIPE CORROSION AND OTHER SOILS INFORMATION.
- SLOPE ALL PUMPED CONDENSATE DRAIN LINES TOWARDS GRAVITY CD.
- PROVIDE TEMPORARY UTILITIES TO ALL FIXTURES TO REMAIN IN SERVICE DURING CONSTRUCTION PERIOD. COORDINATE ALL SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- INSTALL ALL TRAP PRIMERS UPSTREAM OF ACTIVATING FIXTURE WATER SOURCE. SEE TP INSTALLATION INSTRUCTIONS FOR MORE INFORMATION. LOCATE ACCESS PANELS ON THE SAME SIDE OF WALL WHERE ACTIVATING FIXTURE IS LOCATED.

CONSTRUCTION KEYNOTES:

- CONNECT TO EXISTING PIPE. COORDINATE AMONGST TRADES.
- VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPE. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REFLECT ON AS-BUILT DRAWING IF DIFFERENT FROM HEREWITH.
- VERIFY EXACT LOCATION OF ALL BUILDING COMPONENTS THAT MAY OBSTRUCT PATH OF NEW PIPING. REFLECT VERIFIED INFORMATION ON SHOP DRAWINGS FOR COORDINATION AMONGST TRADES PRIOR TO ANY PIPE INSTALLATION. REROUTE PIPING IF REQUIRED, REFLECT ON AS-BUILT DRAWINGS IF DIFFERENT FROM HEREWITH.
- PROTECT FIXTURE TO REMAIN IN PLACE DURING DEMO/CONSTRUCTION WORK. PROVIDE TEMPORARY UTILITIES WHEN NEEDED. COORDINATE SERVICE INTERRUPTIONS WITH SCHOOL DISTRICT.
- GAS SOLENOID VALVE ABV ACCESS PANEL. SEE FOOD SERVICE DRAWINGS.
- REINSTALL SALVAGED DRINKING FOUNTAIN. COORDINATE FRAMING AND ELECTRICAL REQUIREMENTS AT SITE.
- SLOPE PUMPED CD TO GRAVITY CD. SPILL CD DN TO APPROVED RECEPTOR. TYPICAL.
- PROVIDE GAS SOV SIGN ON WALL.
- MATCH EXISTING PIPE SIZE
- PROVIDE NEW 3/4" WALL HYDRANT FOR ROOF WELL. PROVIDE 3/4" CW RISER FROM CEILING SPACE TO WALL HYDRANT AT ROOF WELL. PROVIDE SOV ON RISER ABOVE WALL HYDRANT.
- IF REQUIRED, REUSE EXISTING PENETRATIONS THRU STRUCTURAL COMPONENTS IF AVAILABLE WHEN POSSIBLE OR ROUTE PIPE AROUND/ABOVE/BELOW STRUCTURAL COMPONENTS WHEN POSSIBLE. SEE STRUCTURAL DRAWINGS FOR DETAILS FOR MORE INFORMATION ON PENETRATIONS THRU OR ADJACENT TO STRUCTURAL COMPONENTS. TYPICAL.

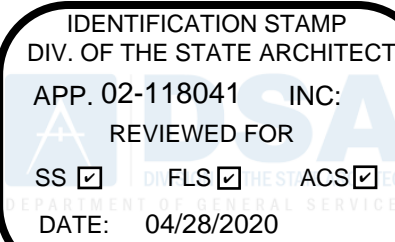
GAS
SHUT-OFF

KEYPLAN:



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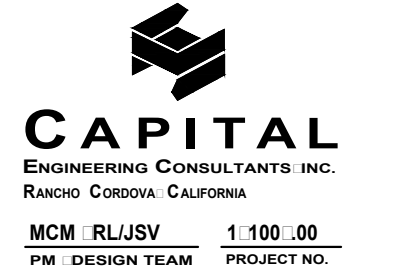
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KITCHEN RENOVATION
JOE SERNA SCHOOL

PLUMBING
ENLARGED FLOOR PLAN

CONSULTANT

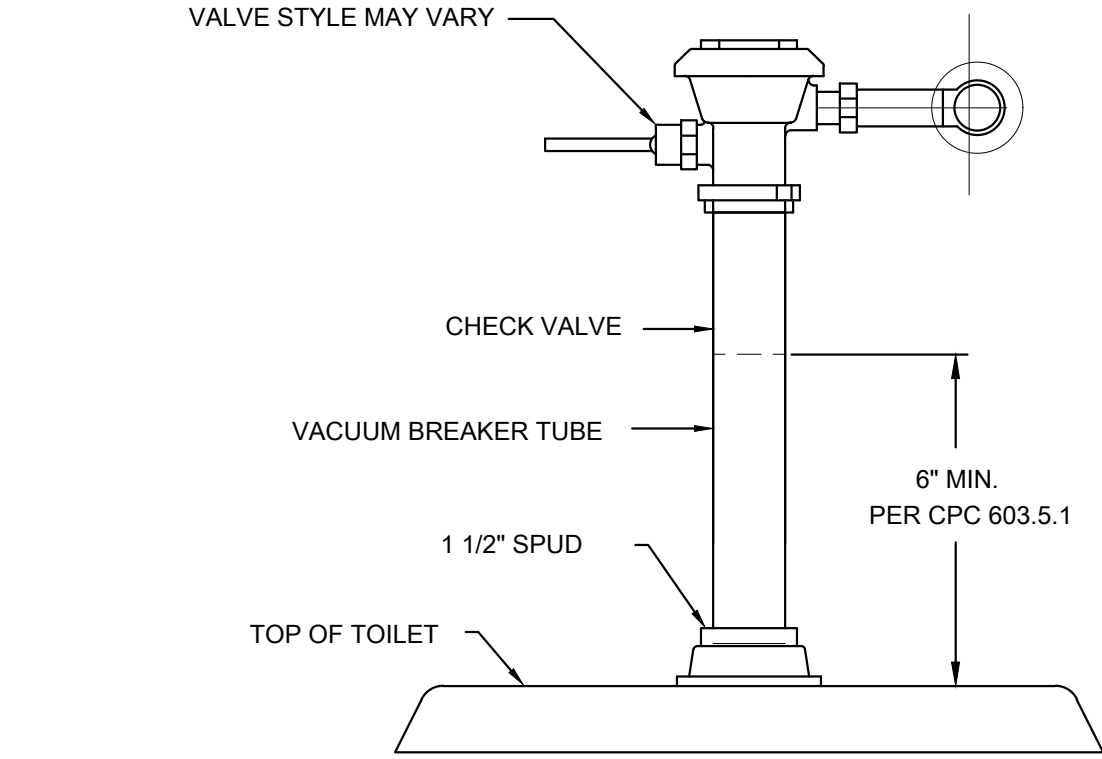


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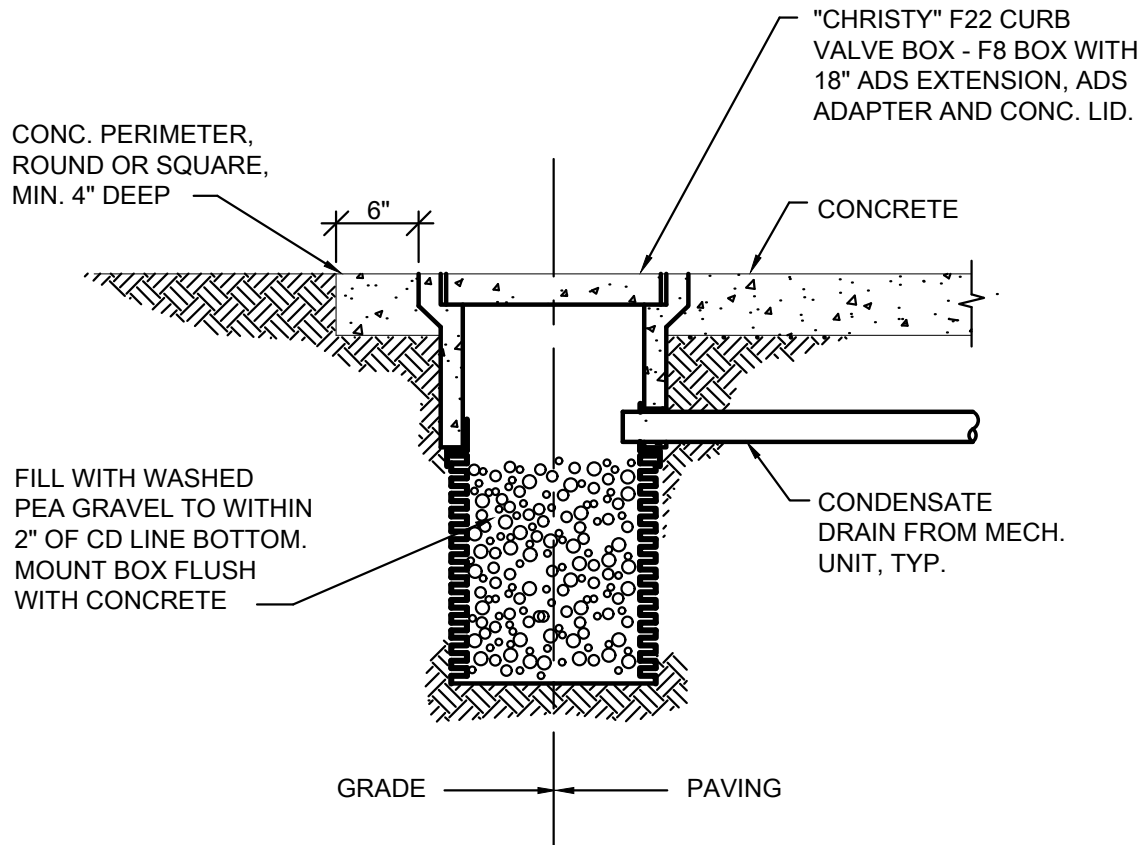
NOTES:
 INSTALL FLUSH VALVE PER MANUFACTURER'S INSTRUCTIONS.
 VERIFY ROUGH IN OF WATER SUPPLY TO ALLOW FOR PROPER VALVE INSTALLATION.

FLUSH VALVE INSTALLATION

SCALE : NONE

2

P5.2



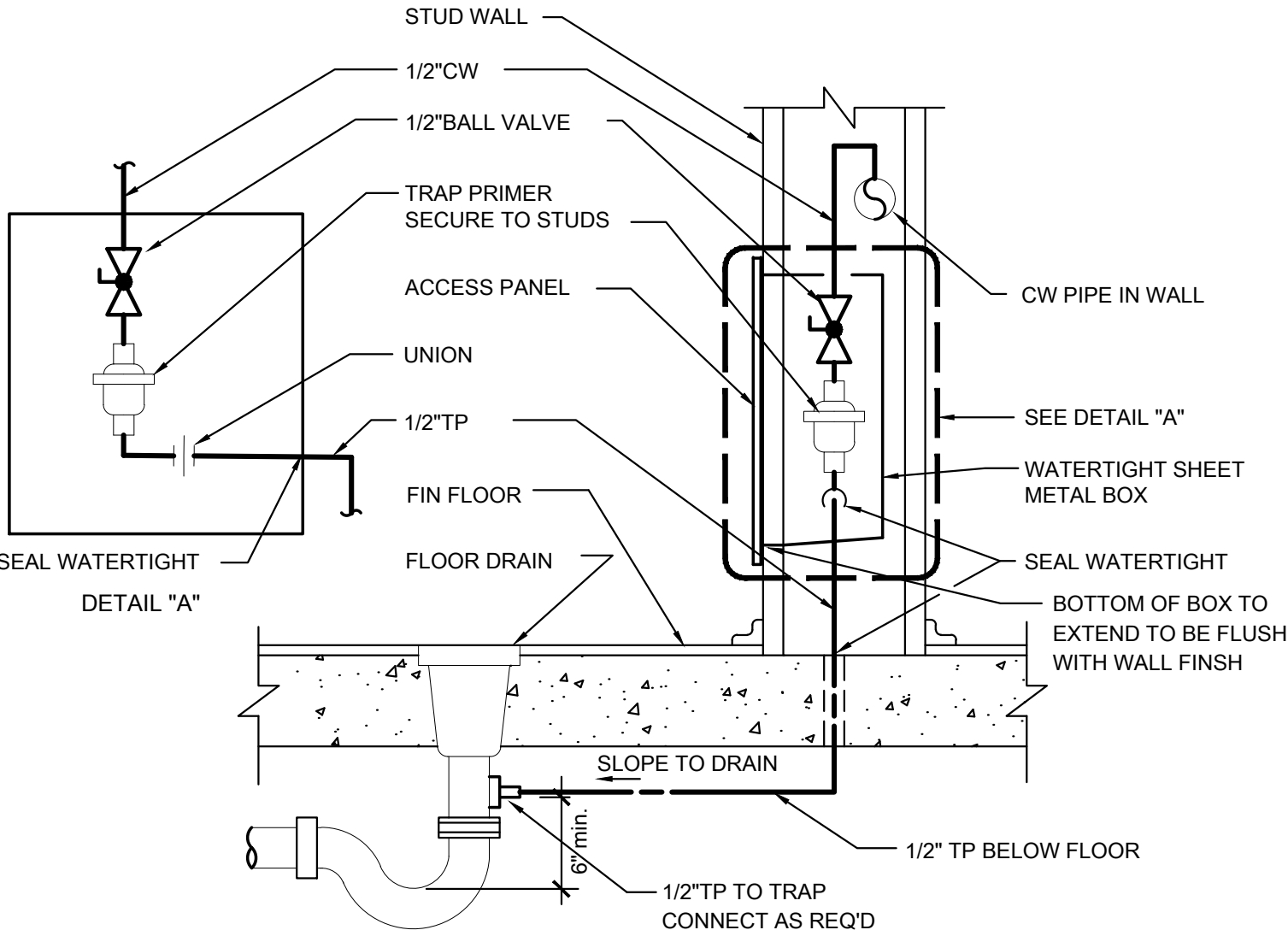
NOTE:
 ROUTE CONDENSATE DRAIN THRU WALL
 AS LOW AS POSSIBLE AND BELOW
 GRADE AS SOON AS POSSIBLE.

DRY PIT

SCALE : NONE

4

P5.2

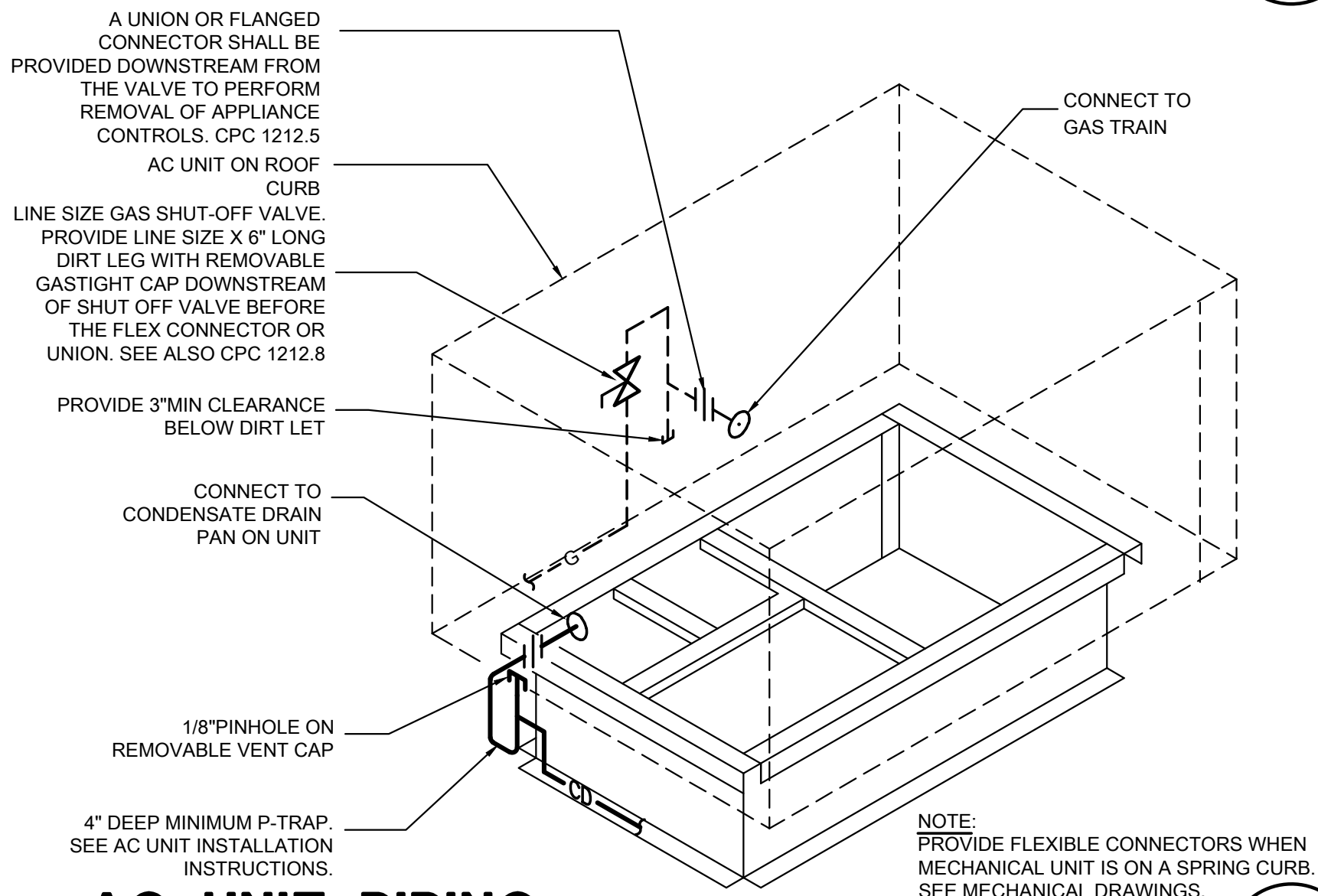


TRAP PRIMER TO FLOOR DRAIN

SCALE : NONE

1

P5.2



AC UNIT PIPING

SCALE : NONE

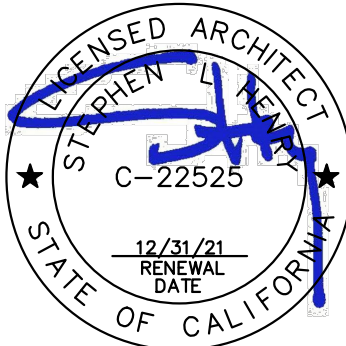
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FILE NO. 39-50 APP NO. 02-118041

IDENTIFICATION STAMP
 DIV. OF THE STATE ARCHITECT
 APP. 02-118041 INC.
 REVIEWED FOR
 SS ☒ FLS ☒ ACS ☒
 DATE: 04/28/2020

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KITCHEN RENOVATION
 JOE SERNA SCHOOL

PLUMBING
 DETAILS

CONSULTANT



CAPITAL
 ENGINEERING CONSULTANTS INC.
 RANCHO CORDOVA, CALIFORNIA

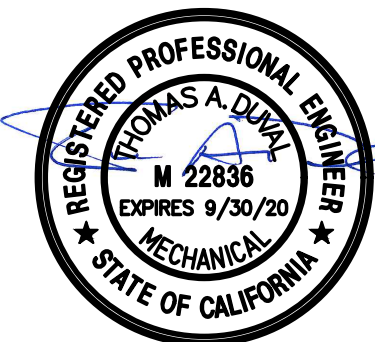
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UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.

ABBREVIATIONS			
A	AMPERES	MAX.	MAXIMUM
AC	ALTERNATING CURRENT	MDF	MAIN DISTRIBUTION FRAME
A.F.F.	ABOVE FINISHED FLOOR	MIN.	MINIMUM
AWG	AMERICAN WIRE GAUGE	N	NEUTRAL
BKR	BREAKER	(N)	NEW
C	CONDUIT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CKT.BKR	CIRCUIT BREAKER	N.I.C.	NOT IN CONTRACT
CD	CANDELA	PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
CKT	CIRCUIT	(R)	REMOVE
C.O.	CONDUIT ONLY, WITH PULL WIRE	(RE)	RELOCATE EXISTING
(E)	EXISTING	RCPT.	RECEPTACLE
EM	EMERGENCY	S.M.S	SHEET METAL SCREW
(ER)	EXISTING RELOCATED	SWBD	SWITCHBOARD
EMT	ELECTRICAL METALLIC CONDUIT	SYS	SYSTEM
(F)	FUTURE	TYP.	TYPICAL
FACP	FIRE ALARM CONTROL PANEL	UG	UNDERGROUND
FAPS	FIRE ALARM POWER SUPPLY	UL	UNDERWRITERS LABORATORY
GA.	GAUGE	V	VOLT
GND	GROUND	VA	VOLT-AMPERES
GFI	GROUND FAULT CIRCUIT INTERRUPTER	W	WATT
HP	HORSEPOWER	WP	WEATHER PROTECTED
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	XFMR	TRANSFORMER
LTG.	LIGHT		

LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER	VOLTAGE	LAMP	MOUNTING	REMARK NOTE No.
	CATALOG NO.	DESCRIPTION	DESCRIPTION		
A	VISIONEERING-VISCOR	120 VOLT	LED, 52 WATTS,	T-BAR	①
	LRT-A-C29-2X4-LED-8-40K-063L-P04-X5	TROFFER - KITCHEN	4000K, 80 CRI		
B	CERTOLUX	120 VOLT	LED, 22 WATTS,	SURFACE	
	VRSE-3556-24-LED-8-40K-24L	SURFACE, VANDAL	4000K, 80 CRI		
LUMINAIRE SCHEDULE REMARK NOTES:					
① REFER TO PLANS FOR BATTERY OPERATED EMERGENCY DRIVER.					

September 13, 2016

MEP Component Anchorage Note
All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA approved construction documents. Where no detail is indicated, the following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2016 CBC, Sections 1616A.1.18 through 1616A.1.26 and ASCE 7-10 Chapter 13, 26 and 30.

- All permanent equipment and components.
- Temporary or movable equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water.
- Movable equipment which is stationed in one place for more than 8 hours and 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 are required to be anchored with temporary attachments.

The following mechanical and electrical components shall be positively attached to the structure, but the attachment need not be detailed on the plans. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit.

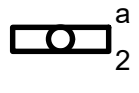

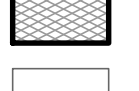


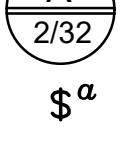
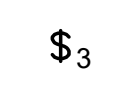



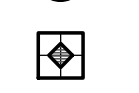



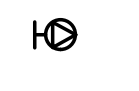
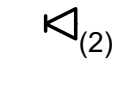





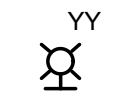


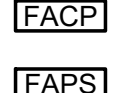
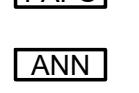


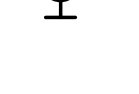

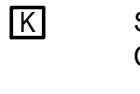

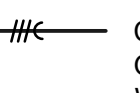





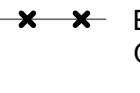

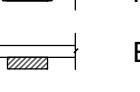
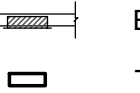


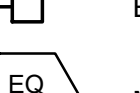
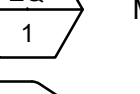

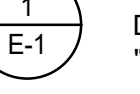
- Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
- Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

For those elements that do not require details on the approved drawings, the installation shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and the DSA District Structural Engineer. 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 7-10 Section 13.3 as defined in ASCE 7-10 Section 13.6.5.6, 13.6.7, 13.6.8, and 2016 CBC, Sections 1616A.1.24, 1616A.1.25 and 1616A.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., SMACNA or OSHPD OPM), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.


Mechanical Piping (MP), Mechanical Ducts (MD), Plumbing Piping (PP), Electrical Distribution Systems (E):
MP ☐ MD ☐ PP ☐ E ☒ Option 1: Detailed on the approved drawings with project specific notes and details.

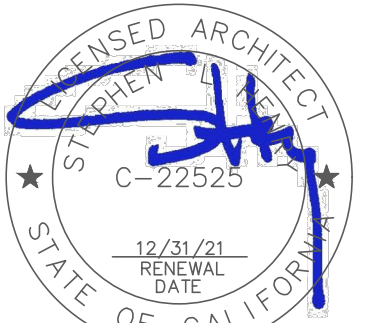
ELECTRICAL SYMBOL LIST	
	ENCLOSED LUMINAIRE - SURFACE MOUNTED (LETTER "a" DENOTES SWITCH FUNCTION, NUMBER "2" DENOTES CIRCUIT NUMBER - TYPICAL FOR ALL LUMINAIRES UNLESS NOTED OTHERWISE).
	ENCLOSED LUMINAIRE - CEILING LAY-IN
	EMERGENCY ENCLOSED LUMINAIRE
	EXISTING LUMINAIRE TO REMAIN
	EXISTING LUMINAIRE TO BE REMOVED
	LUMINAIRE DESIGNATION WITH LAMP QUANTITY AND WATTAGE. SEE LUMINAIRE SCHEDULE.
	SINGLE POLE TOGGLE SWITCH, +45" A.F.F. - "a" LETTER DENOTES SWITCH FUNCTION, TYPICAL FOR ALL SWITCHES UNLESS NOTED OTHERWISE
	THREE-WAY TOGGLE SWITCH
	DIMMER SWITCH
	OCCUPANCY SENSOR SWITCH WITH MANUAL OVERRIDE - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
	DIMMER SWITCH WITH INTEGRAL OCCUPANCY SENSOR - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
	OCCUPANCY AREA SENSOR SWITCH
	LIGHTING ROOM CONTROLLER - MOUNTED IN ACCESSIBLE CEILING AREA, UNLESS NOTED OTHERWISE
	JUNCTION BOX - SIZE AS REQUIRED BY CODE
	DUPLEX CONVENIENCE OUTLET - NEMA 5-20R +18" A.F.F. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (LETTER "A" SHOWN ADJACENT TO OUTLET DESIGNATES MOUNTED HORIZONTALLY ABOVE COUNTER).
	QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R
	SPECIAL RECEPTACLE AS SHOWN ON PLANS
	DATA OUTLET - FLUSH IN WALL +18" A.F.F. NUMBER IN PARENTHESIS INDICATES NUMBER OF DATA JACKS.
	FIRE ALARM HEAT DETECTOR - CEILING MOUNTED. "AC" INDICATE THAT DETECTOR IS MOUNTED IN ACCESSIBLE ABOVE CEILING / ATTIC SPACE. "194" INDICATE HIGH TEMPERATURE HEAT DETECTOR.
	FIRE ALARM SMOKE DETECTOR - CEILING MOUNTED. THE DEFAULT TYPE IS PHOTOELECTRIC
	FIRE ALARM AUDIBLE DEVICE, +90" A.F.F. UNLESS OTHERWISE NOTED. DEFAULT DEVICE IS A SPEAKER.
	FIRE ALARM AUDIO / VISUAL DEVICE, +80" A.F.F. DEFAULT AUDIO DEVICE IS A SPEAKER. "YY" INDICATES STROBE CANDELA RATING.
	VISUAL FIRE ALARM DEVICE +80" A.F.F. - WALL MOUNTED (LAMP, SIGNAL LIGHT, INDICATOR LAMP, STROBE), "YY" = CANDELA RATING
	FIRE ALARM MONITOR MODULE
	END OF LINE RESISTOR
	MASTER FIRE ALARM CONTROL PANEL
	REMOTE FIRE ALARM POWER SUPPLY
	FIRE ALARM REMOTE ANNUNCIATOR PANEL - FLUSH MOUNTED
	SPEAKER - WALL MOUNTED, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT.
	CLOCK OUTLET - WALL MOUNTED REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT.
	SECURITY SYSTEM KEYPAD AND OUTLET BOX +45" A.F.F. UNLESS NOTED. PROVIDE 3/4" CONDUIT STUB. SEE NOTE 4.
	SECURITY SYSTEM DOOR OR WINDOW CONTACT. PROVIDE 1/2" CONDUIT STUB.
	CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" CONDUIT. TYPICAL FOR ALL CONDUITS.
	FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
	CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
	EXISTING CONDUIT AND WIRING
	EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
	PANELBOARD - SURFACE MOUNTED
	PANELBOARD - FLUSH MOUNTED
	EXISTING PANELBOARD - SURFACE MOUNTED
	EXISTING PANELBOARD - FLUSH MOUNTED
	TERMINAL CABINET
	SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
	EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, FUSED WITH FUSE SIZE TO MATCH EQUIPMENT NAMEPLATE
	EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, NON-FUSIBLE
	MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
	DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
	DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER
SYMBOL LIST NOTES:	
<ol style="list-style-type: none">EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.ELECTRICAL OUTLET BOXES MOUNTED ON OPPOSITE SIDES OF FIRE-RATED WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES PER CBC 2016, WHETHER SHOWN ON THE PLANS OR NOT.VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.	

PROJECT DESCRIPTION		
THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO PROVIDE POWER FOR NEW KITCHEN EQUIPMENT, NEW HVAC EQUIPMENT, NEW LIGHTING, IN RENEWED KITCHEN. EXISTING FIRE ALARM, DATA, INTRUSION AND VOICE SYSTEMS WILL BE REVISED AND ADJUSTED TO CONFIRM TO RENEWED KITCHEN.		
SHOULD ANY CONDITIONS DEVELOP, NOT COVERED BY THE CONTRACT DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH ALL REQUIRED CODES, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO, AND APPROVED BY, THE AGENCY BEFORE PROCEEDING WITH THE WORK.		

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DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC:
REVIEWED FOR
SS ☐ FLS ☐ ACS ☐
DATE: 04/28/2020


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Sacramento, CA 95825
Phone: 916.921.2112
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 HENRY+ ASSOCIATES ARCHITECTS

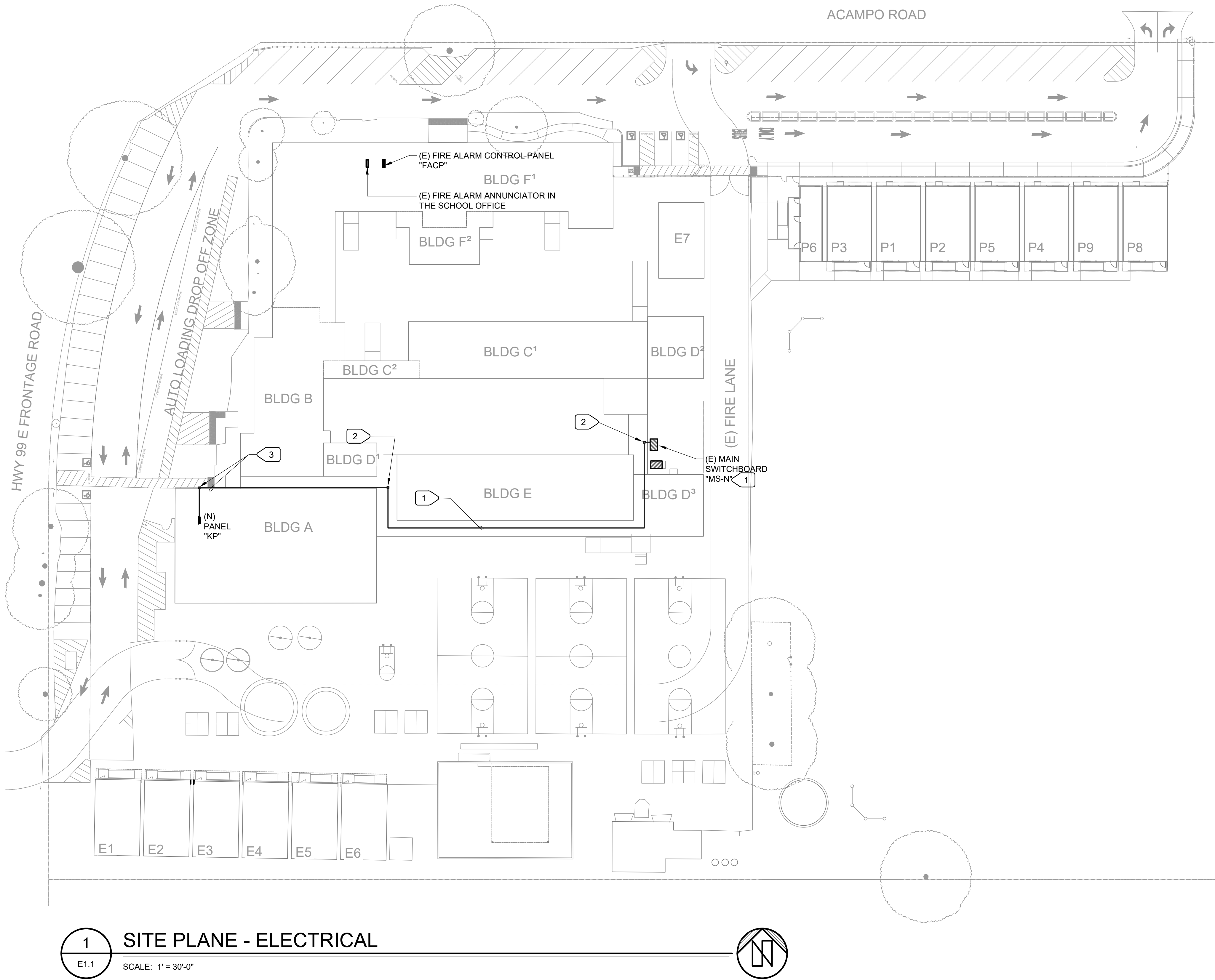


KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

SYMBOLS, NOTES,
ABBREVIATIONS,
SCHEDULES

CONSULTANT

04/09/2020

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SCALE		
CADFILE		
UPDATED		
SHEET NO.		
E0.1		
OF 68 SHEETS		



NUMBERED NOTES:

- 1 REFER TO ONE LINE DIAGRAM - POWER 1/E3.0 FOR CONDUIT AND CONDUCTOR SIZES, AND NEW CIRCUIT BREAKER. RUN CONDUITS ON ROOF / EXTERIOR WALLS. PROVIDE CONDUIT SUPPORT PER 1/E5.0. INSTALL BREAKER IN (E) SPACE. PROVIDE ALL HARDWARE AND TRIM PIECES FOR COMPLETE INSTALLATION. COORDINATE EXACT CONDUIT ROUTE WITH ARCHITECT BEFORE ROUGH IN.
- 2 PROVIDE NEMA 4X ENCLOSURE WITH SCREW COVER 18"x18"x6". ENCLOSURE TO BE USED AS PULLBOX. MOUNT ENCLOSURE ON ROOF PER 1/E5.0.
- 3 PROVIDE NEMA 3R ENCLOSURE 18"x18"x6" WITH SCREW COVER. MOUNT ON WALL SUCH THAT MIDDLE OF BOX IS LEVELED WITH TOP OF COVERED WALKWAY. CONTINUE CONDUIT FROM COVERED WALKWAY STRAIGHT TO NEW BOX. CONTINUE CONDUIT FROM BACK OF THE BOX, THROUGH WALL IN ATTIC SPACE ABOVE TEACHER LOUNGE TO (N) PANEL "KP". COORDINATE EXACT ROUTE BEFORE ROUGH IN.

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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL
SITE PLAN
ELECTRICAL

CONSULTANT



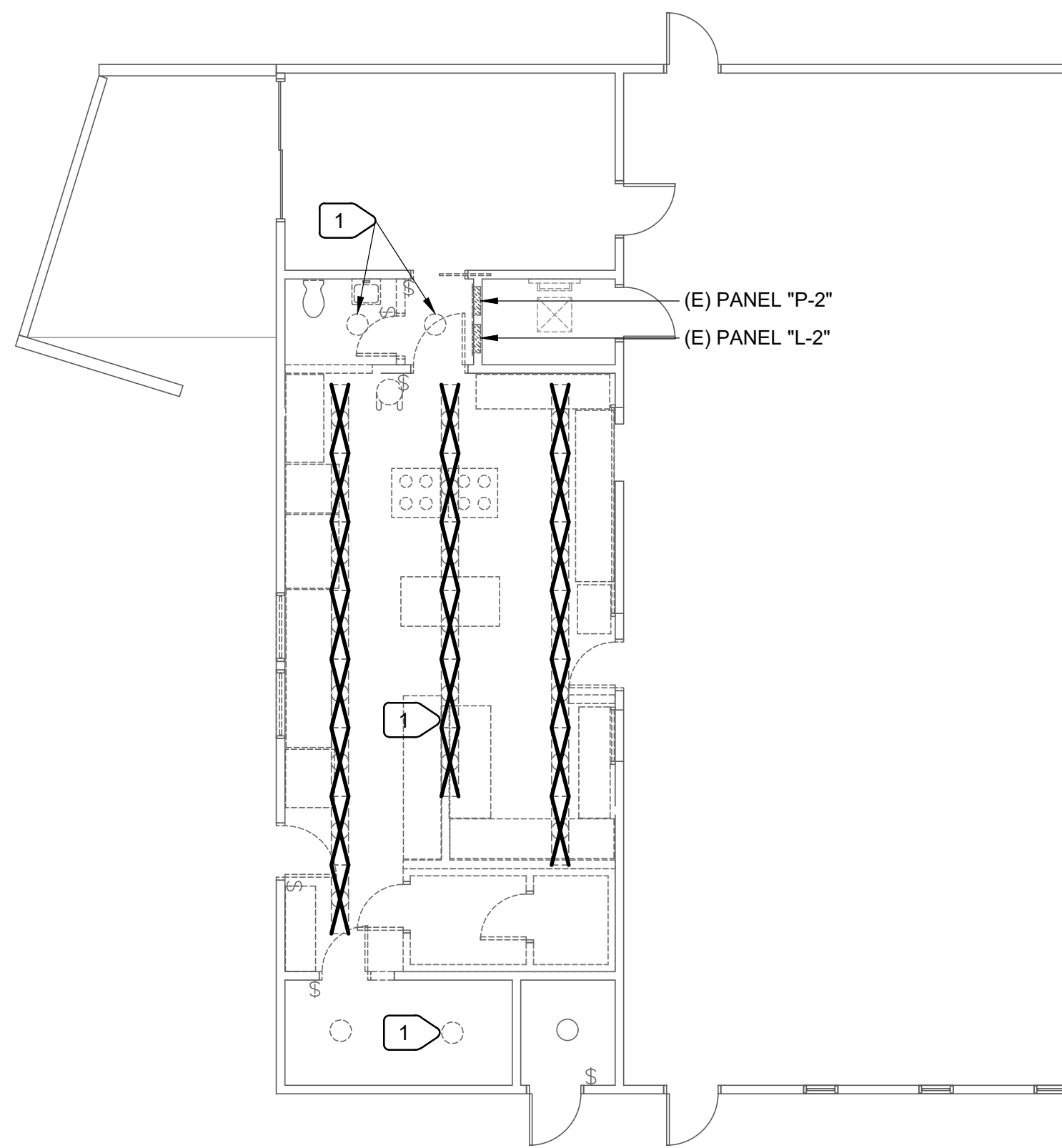
04/09/2020

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SHEET NO.

E1.1

OF 68 SHEETS

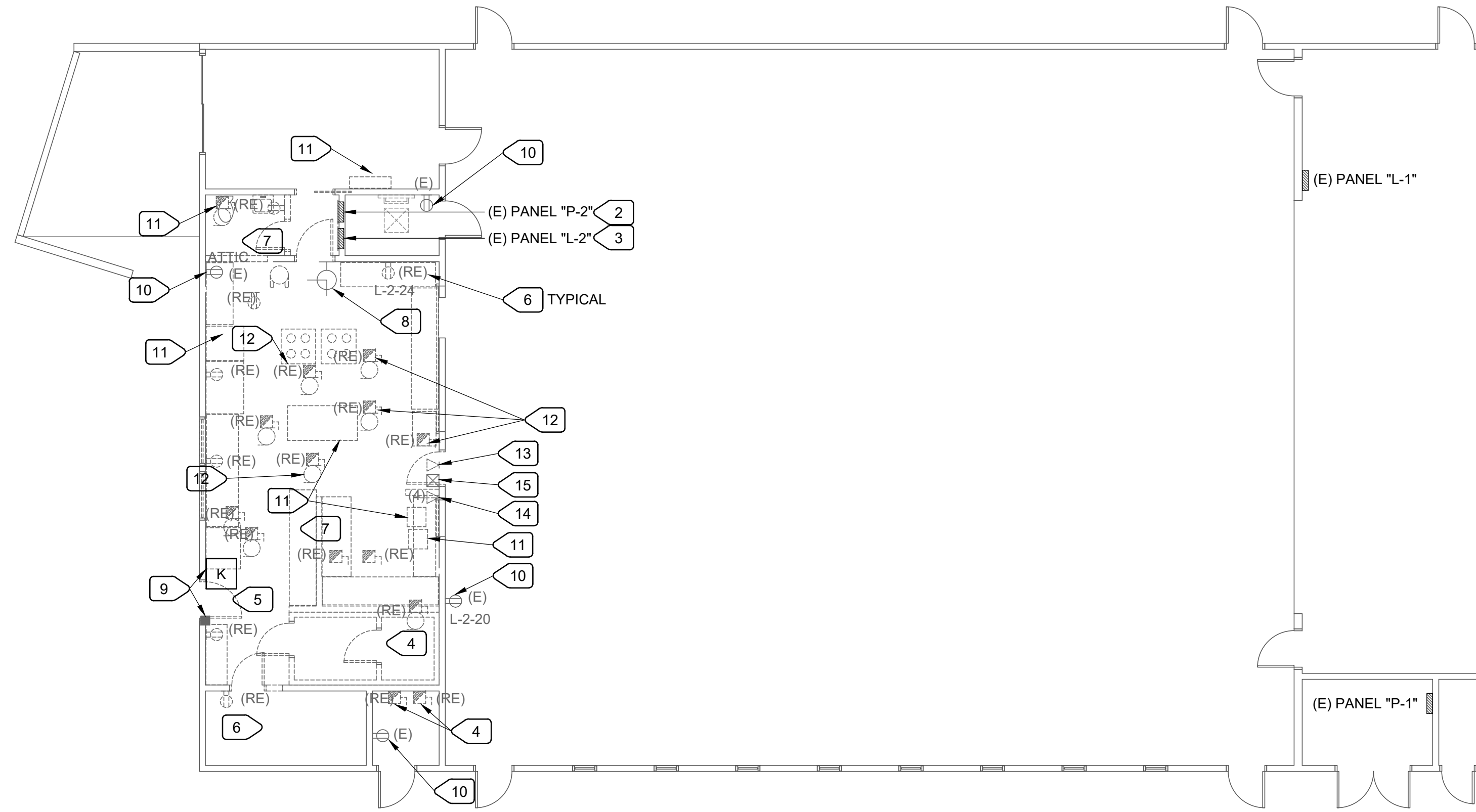


1
E2.0

PARTIAL FLOOR PLAN -
LIGHTING DEMOLITION

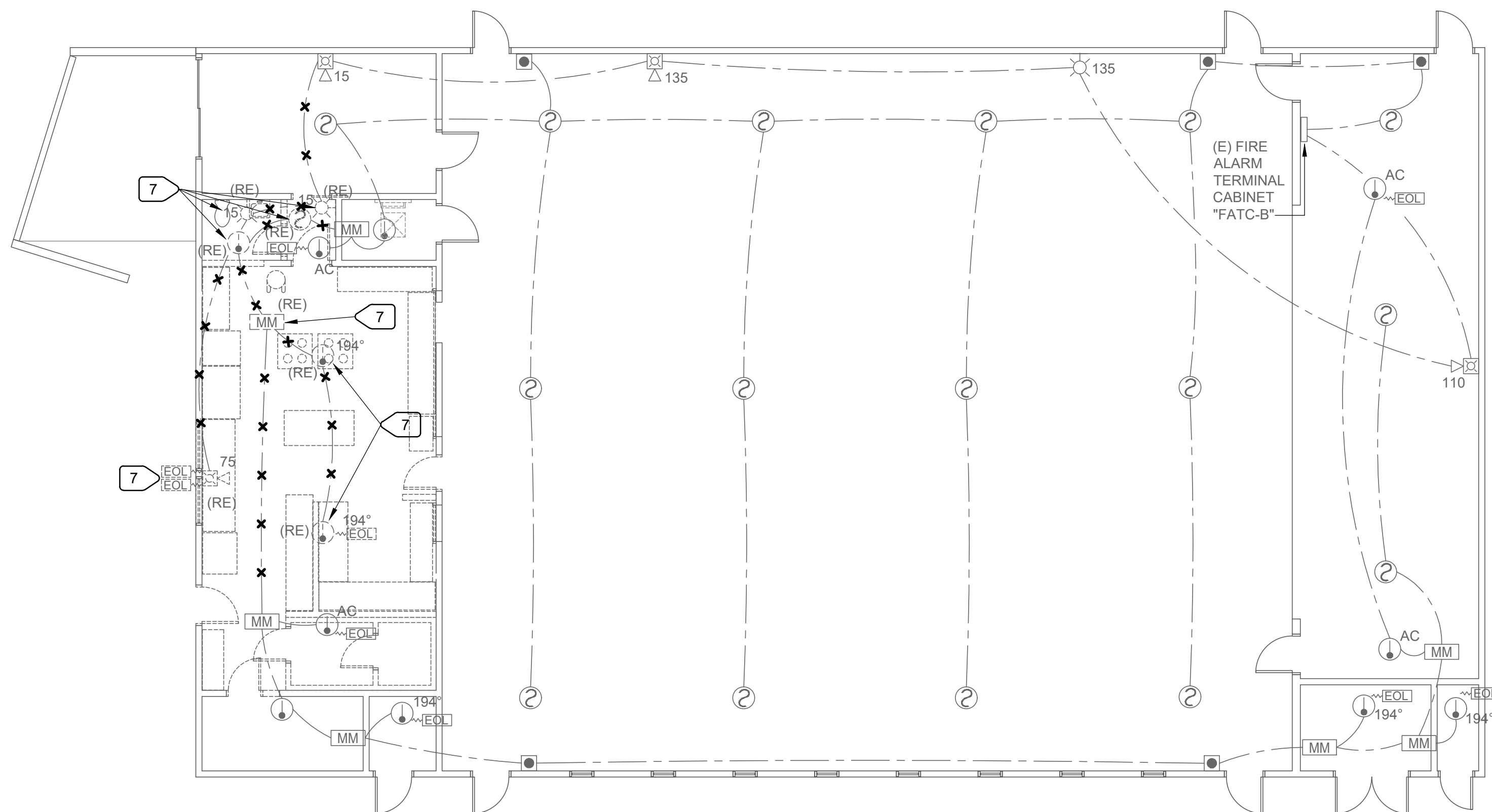
SCALE : 1/8" = 1'-0"

N



2 FLOOR PLAN - ELECTRICAL DEMOLITION

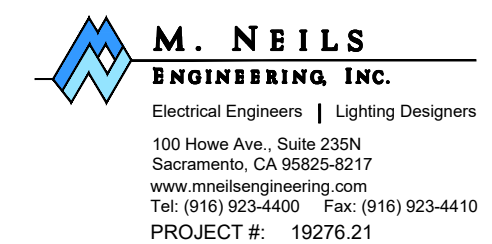
E2.0 SCALE : 1/8" = 1'-0"



3 FLOOR PLAN - FIRE ALARM DEMOLITION

E2.0 SCALE : 1/8" = 1'-0"

- ## NUMBERED NOTES:
- | | |
|----|--|
| 1 | REMOVE LIGHTS IN THIS SPACE. REMOVE ASSOCIATED SWITCHES. REMOVE WIRING BACK TO PANEL "L-2". INSURE THAT REMAINING LIGHTS CIRCUIT CONTINUITY. |
| 2 | DISCONNECT PANEL "P-2" AND REMOVE. REMOVE PANEL FEEDER BACK TO PANEL "P-1". PROTECT CIRCUITS NOT SCHEDULED FOR DEMOLITION, FOR RECONNECTION TO (N) PANEL. |
| 3 | DISCONNECT PANEL "L-2" AND REMOVE. REMOVE PANEL FEEDER BACK TO PANEL "L-1". PROTECT CIRCUITS NOT SCHEDULED FOR DEMOLITION, FOR RECONNECTION TO (N) PANEL. |
| 4 | DISCONNECT FREEZER AND REFRIGERATOR. REMOVE WIRING BACK TO SOURCE. DISCONNECT AND REMOVE ASSOCIATED CONTROLS. |
| 5 | DISCONNECT FLY FAN, REMOVE WIRING BACK TO SOURCE. |
| 6 | REMOVE ALL RECEPTACLES IN KITCHEN, STAFF TOILET, RESTROOM AND FOOD LOCKER, TYPICAL. |
| 7 | REMOVE FIRE ALARM DEVICES. REMOVE FIRE ALARM WIRING BACK TO REMAINING DEVICE. |
| 8 | DISCONNECT CLOCK AND PROTECT FOR REINSTALLATION. PROTECT CLOCK WIRING. |
| 9 | INTRUSION ALARM KEYPAD AND DOOR CONTACT. DISCONNECT AND PROTECT FOR REINSTALLATION. INTRUSION ALARM WIRING IS RUN IN SURFACE MOUNTED RACEWAY. REMOVE RACEWAY, BUT PROTECT WIRING FOR REINSTALLATION. |
| 10 | PROTECT RECEPTACLE. INSURE THAT POWER CKT. IS RECONNECTED TO (N) PANEL "KP1". ADJUST AS REQUIRED. |
| 11 | DISCONNECT EXHAUST FAN, RADIANT HEATER, HOOD, AND REMOVE WIRING BACK TO SOURCE. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION. COORDINATE. |
| 12 | DISCONNECT HVAC UNITS AT MECHANICAL PLATFORM. REMOVE WIRING BACK TO SOURCE. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION. COORDINATE. |
| 13 | SPEAKER CONNECTED TO LAN, DISCONNECT AND PROTECT FOR REUSE. PROTECT DATA CABLE FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION. |
| 14 | (4) DATA OUTLET, REMOVE OUTLET BUT PROTECT DATA CABLES FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION. |
| 15 | WIRELESS GATEWAY, INTELLIGATE. DISCONNECT AND PROTECT FOR REUSE. PROTECT SENSORS ASSOCIATED WITH THE GATEWAY FOR REUSE. COORDINATE WITH THE OWNER IT DEPARTMENT BEFORE DEMOLITION. |



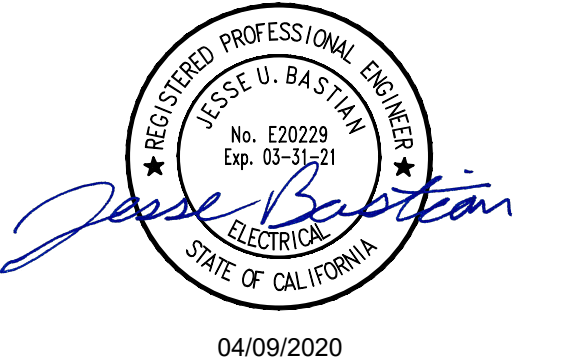
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KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

ELECTRICAL DEMOLITION

CONSULTANT

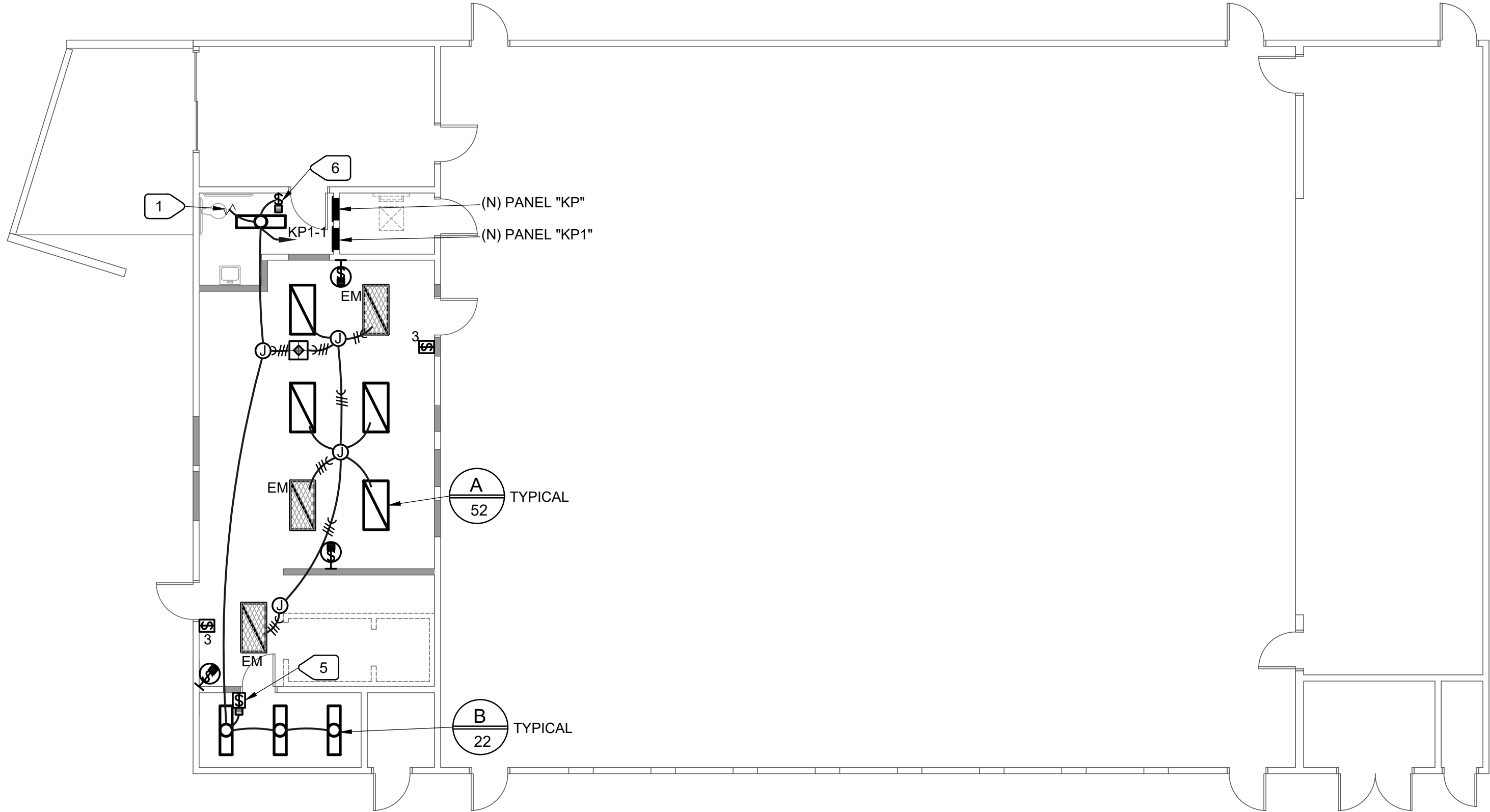


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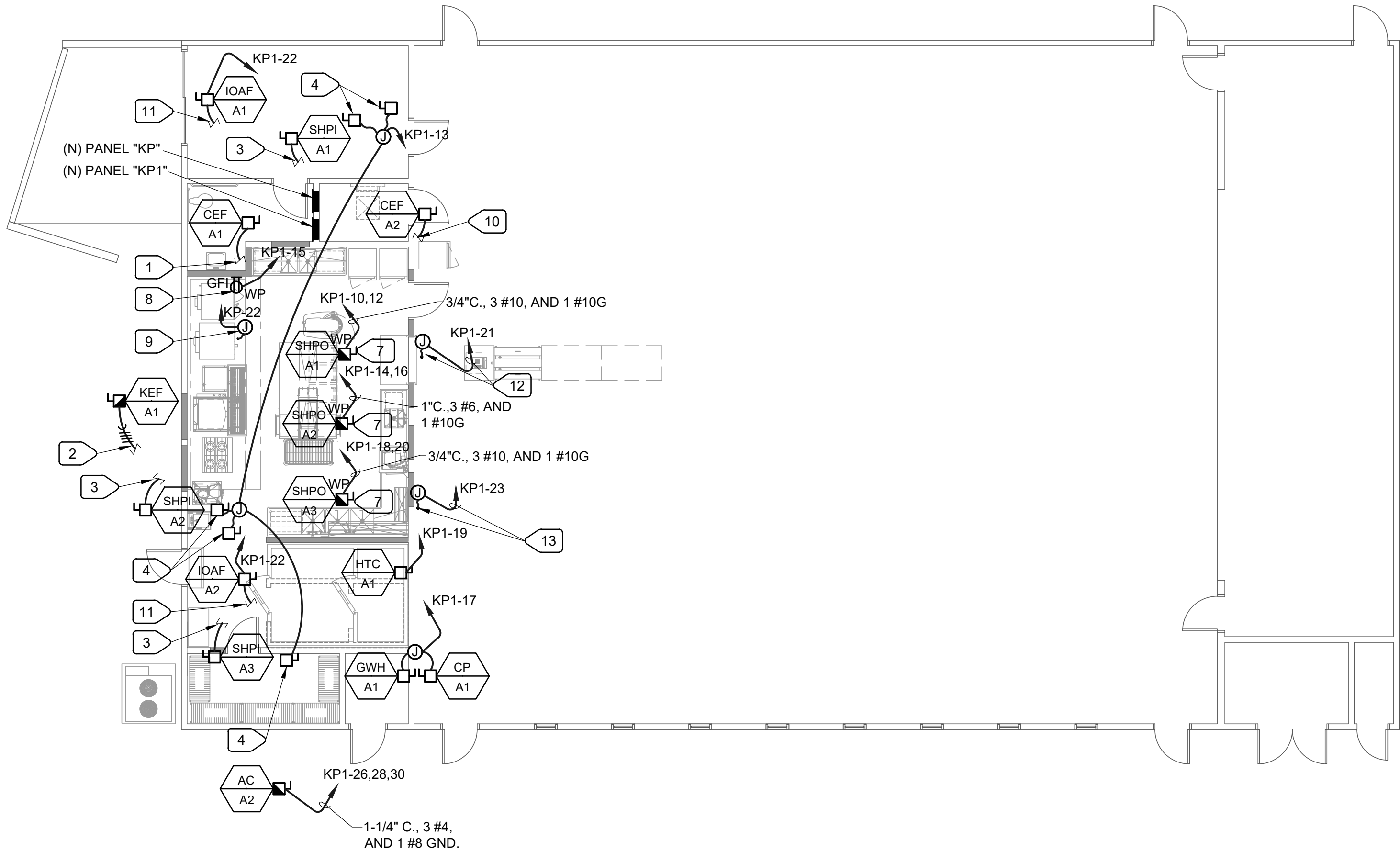
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Apr 09, 2020 - 3:00pm
UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.



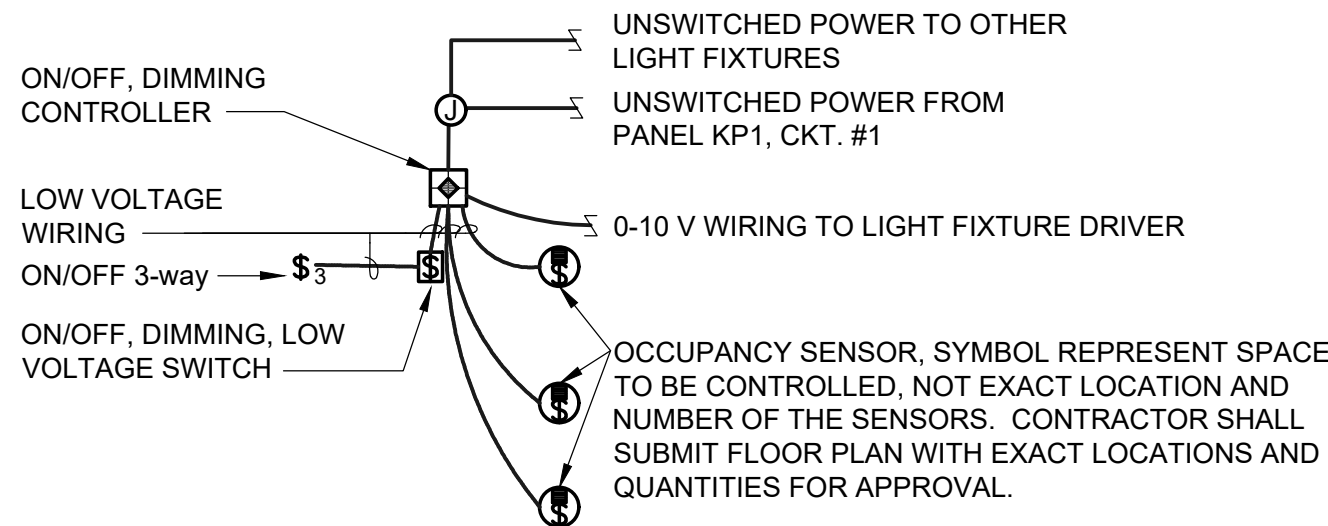
1 FLOOR PLAN - LIGHTING
E2.1 SCALE : 1/8" = 1'-0"



2 FLOOR PLAN - POWER
E2.1 SCALE : 1/8" = 1'-0"

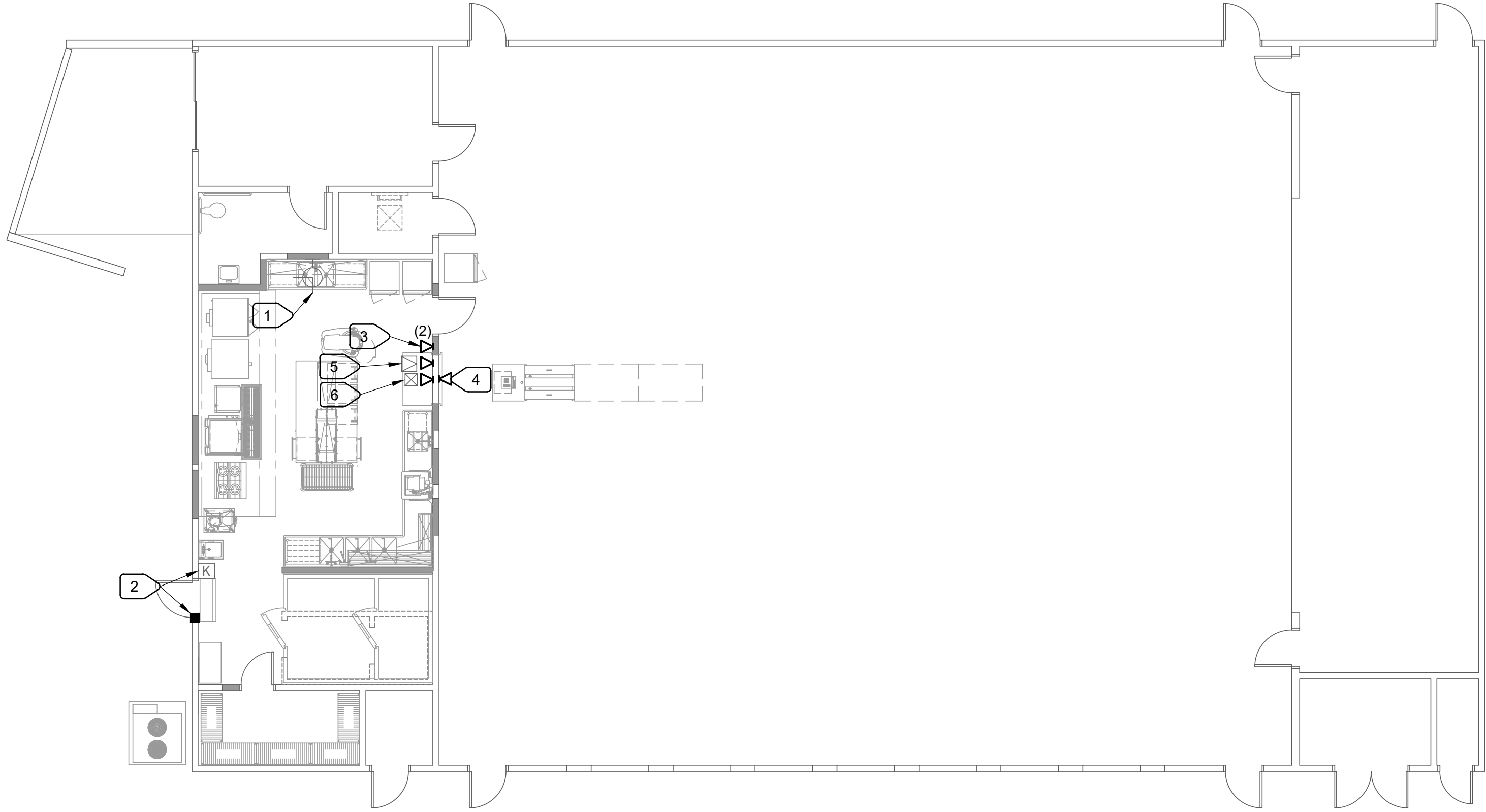
NUMBERED NOTES:

- 1 CONNECT EXHAUST FAN INTO LIGHTING CKT. SUCH THAT FAN SWITCHES WITH LIGHT IN R.R.
- 2 CONNECT VIA EXHAUST HOOD (FANS CONTROLLER SUPPLY) EH3; REFER TO 1/E2.3 AND FOOD SERVICE PLANS.
- 3 INDOOR SPLIT SYSTEM UNIT POWERED FROM ASSOCIATED OUTDOOR SPLIT SYSTEM UNIT. PROVIDE CONDUIT, CONDUCTORS, AND CONNECT PER MANUFACTURER REQUIREMENTS.
- 4 PROVIDE FOR AND CONNECT CONDENSATE PUMP AND CENTRIFUGAL DUCT FAN. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
- 5 PROVIDE LINE VOLTAGE DIMMER / ON-OFF SWITCH WITH OCCUPANCY SENSOR.
- 6 PROVIDE LINE VOLTAGE ON-OFF SWITCH WITH OCCUPANCY SENSOR.
- 7 MOUNTED ON ROOF. REFER TO MECHANICAL PLANS.
- 8 ROOF MOUNTED FOR MAINTENANCE. PROVIDE IN WP ENCLOSURE WITH WHILE-IN-USE COVER.
- 9 PROVIDE FOR AND CONNECT AUTOMATIC GAS SHUTDOWN. RUN THROUGH FIRE ALARM RELAY MODULE; REFER TO 2/E3.0. COORDINATE WITH PLUMBING CONTRACTOR BEFORE ROUGH IN.
- 10 CONNECT FAN INTO (E) LIGHTING CKT. SUCH THAT FAN SWITCHES WITH LIGHT.
- 11 PROVIDE CONDUIT/CONDUCTORS FROM FAN TO ASSOCIATED SPLIT SYSTEM. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.
- 12 PROVIDE FOR AND CONNECT OVERHEAD MOTORIZED ROLL UP DOOR. INSTALL SWITCH PROVIDED WITH THE DOOR. COORDINATE EXACT LOCATION WITH THE ARCHITECT PRIOR TO ROUGH IN. DOOR SHALL BE CONNECTED SUCH THAT IT ROLLS DOWN IN CASE OF FIRE ALARM. REFER TO MANUFACTURER INSTRUCTIONS AND FIRE ALARM PLAN FOR ADDITIONAL REQUIREMENTS.
- 13 PROVIDE FOR AND CONNECT FIRE/SMOKE DAMPER. REFER TO 3/E4.0 DIAGRAM FOR CONNECTION.

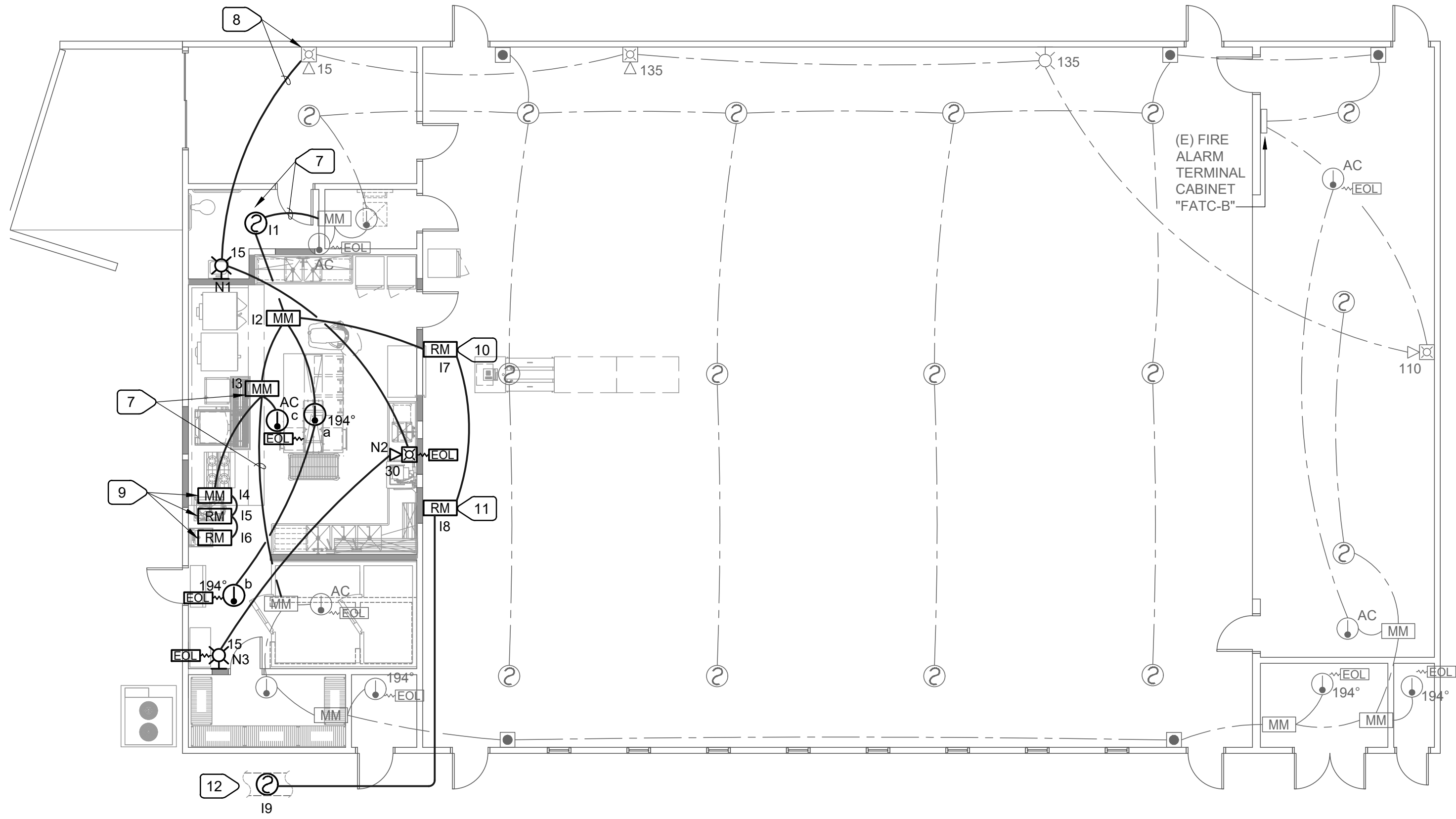


3 LIGHTING SWITCHING DIAGRAMS
E2.1 N.T.S.

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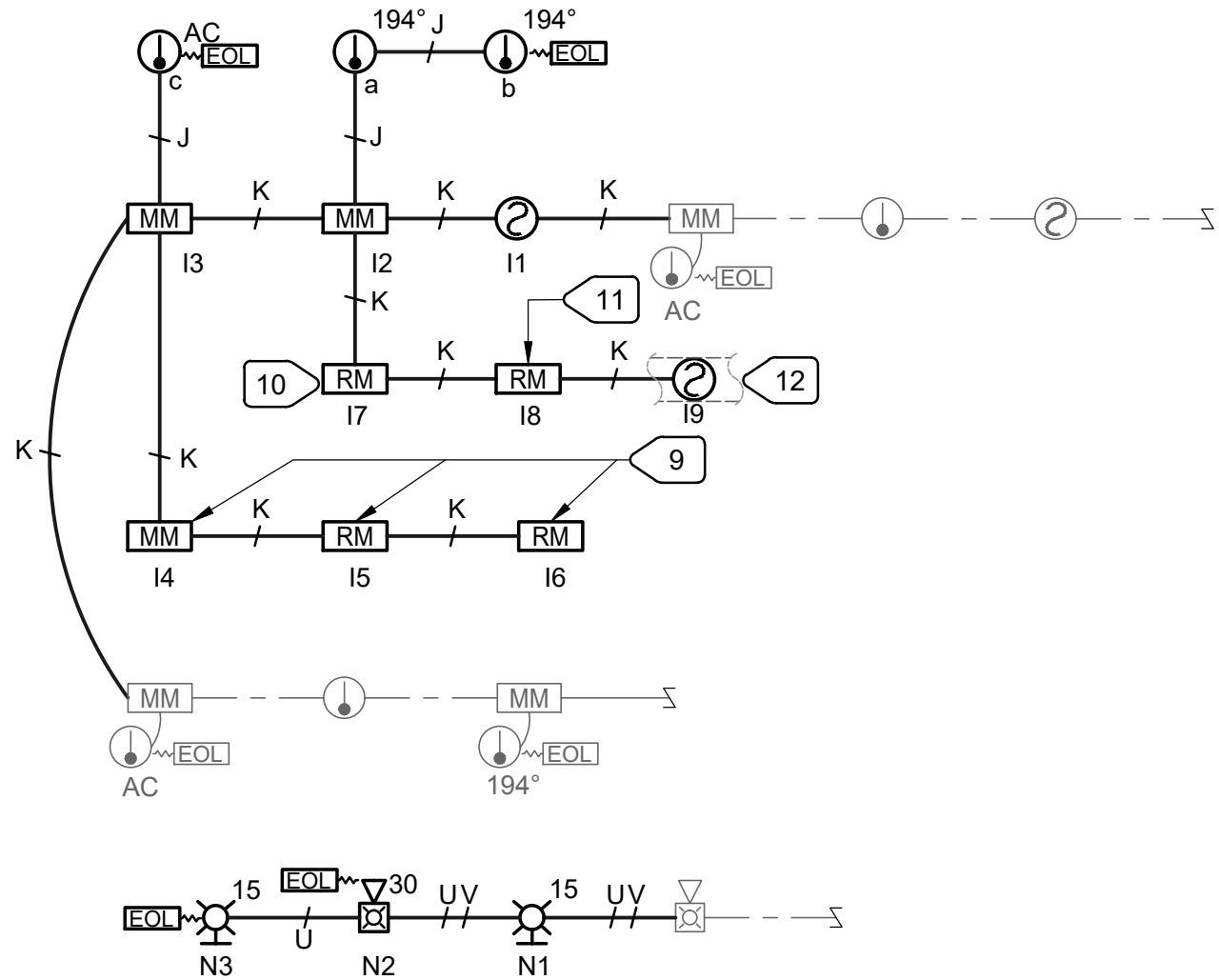
1 FLOOR PLAN - SIGNAL
E2.2 SCALE : 1/8" = 1'-0"



2 FLOOR PLAN - FIRE ALARM
E2.2 SCALE : 1/8" = 1'-0"

NUMBERED NOTES:

- REINSTALL (E) SALVAGED CLOCK. REUSE (E) CLOCK CABLE. ADJUST AS REQUIRED. LOCATE CLOCK SUCH THAT IT IS VISIBLE FROM ENTIRE KITCHEN AREA.
- REINSTALL (E) INTRUSION ALARM KEY PAD. PROVIDE (N) INTRUSION ALARM DOOR CONTACTS (CONTACTS TO MATCH EXISTING ON SITE). REUSE (E) SALVAGED CABLES TO CONNECT INTO (E) INTRUSION ALARM CIRCUIT IN THE BUILDING. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS.
- PROVIDE DATA/VOICE OUTLET WITH (1) DATA JACK AND (1) VOICE JACK. JACKS SHALL BE PANDUIT CJ6X88TG, BEIGE FOR DATA AND BLUE FOR VOICE. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACKS. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AT 48"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK. JACK SHALL BE PANDUIT CJ6X88TG, BEIGE COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AT 18"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK FOR SALVAGED SPEAKER. JACK SHALL BE PANDUIT CJ6X88TG, GREEN COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AND SPEAKER AT 84"A.F.F.
- PROVIDE DATA OUTLET WITH (1) DATA JACK FOR SALVAGED WIRELESS GATEWAY. JACK SHALL BE PANDUIT CJ6X88TG, WHITE COLOR. COORDINATE WITH OWNER'S IT DEPARTMENT LABELING SCHEME. REUSE (E) SALVAGED DATA CABLES TO CONNECT (N) JACK. PULL (E) CABLES BACK TO POINT WHERE THEY ENTER KITCHEN, PROVIDE 3/4" CONDUIT, AND PULL IN (E) CABLES THROUGH (N) CONDUITS. MOUNT OUTLET AND GATEWAY AT 84"A.F.F.
- CONNECT (N) DEVICES INTO (E) INITIATION CKT.; REFER TO DEMOLITION PLAN.
- CONNECT (N) DEVICES INTO (E) NOTIFICATION CKT.; REFER TO DEMOLITION PLAN.
- PROVIDE FOR HOOD FIRE SUPPRESSION SYSTEM (MONITORING, MECHANICAL CONTROLS, AND GAS SHUTDOWN); REFER TO DIAGRAM 2/E3.0.
- PROVIDE SET OF CONTACTS FOR CLOSING OVERHEAD MOTORIZED ROLL UP DOOR UPON FIRE ALARM CONDITION AT THE FIRE ALARM SYSTEM.
- FOR FIRE/SMOKE DAMPER, REFER TO 3/E4.0.
- PROVIDE FOR (N) AC UNIT. PROVIDE TEST SWITCH AND INSTALL AS INSTRUCTED IN FIELD. COORDINATE WITH MECHANICAL BEFORE ROUGH IN.



- NOTE: 1. REMOVED IS ONE SPEAKER
2. ADDED IS ONE SPEAKER OF SAME WATTAGE AS REMOVED SPEAKER
3. REMOVED ARE (2) 15cd STROBES AND (1) 75cd STROBE.
4. ADDED ARE (2) 15cd STROBES AND (1) 30cd STROBE.
5. LOAD ON (E) VISUAL NOTIFICATION CIRCUIT IS LESSER, AND ON AUDIO NOTIFICATION CIRCUIT IS NOT CHANGED; THEREFORE (E) BATTERIES ARE ADEQUATE FOR REQUIRED POWER BACKUP.
6. NOTIFICATION CIRCUITS REMOVED WIRING IS EQUAL TO ADDED WIRING; THEREFORE NO CHANGES IN VOLTAGE DROP.

3 FIRE ALARM RISER DIAGRAM

N.T.S.

FIRE ALARM CABLE SCHEDULE

J	NON-ADDRESABLE INITIATION	2#14 THWN
K	DATA	2 CONDUCTORS, 18AWG, - WEST PENN D980
U	NOTIFICATION - VISUAL (STROBE)	2#12 THWN
V	NOTIFICATION - AUDIBLE (SPEAKER)	1 PAIR, 12AWG, SHIELDED, WEST PENN 60994B

CONSULTANT

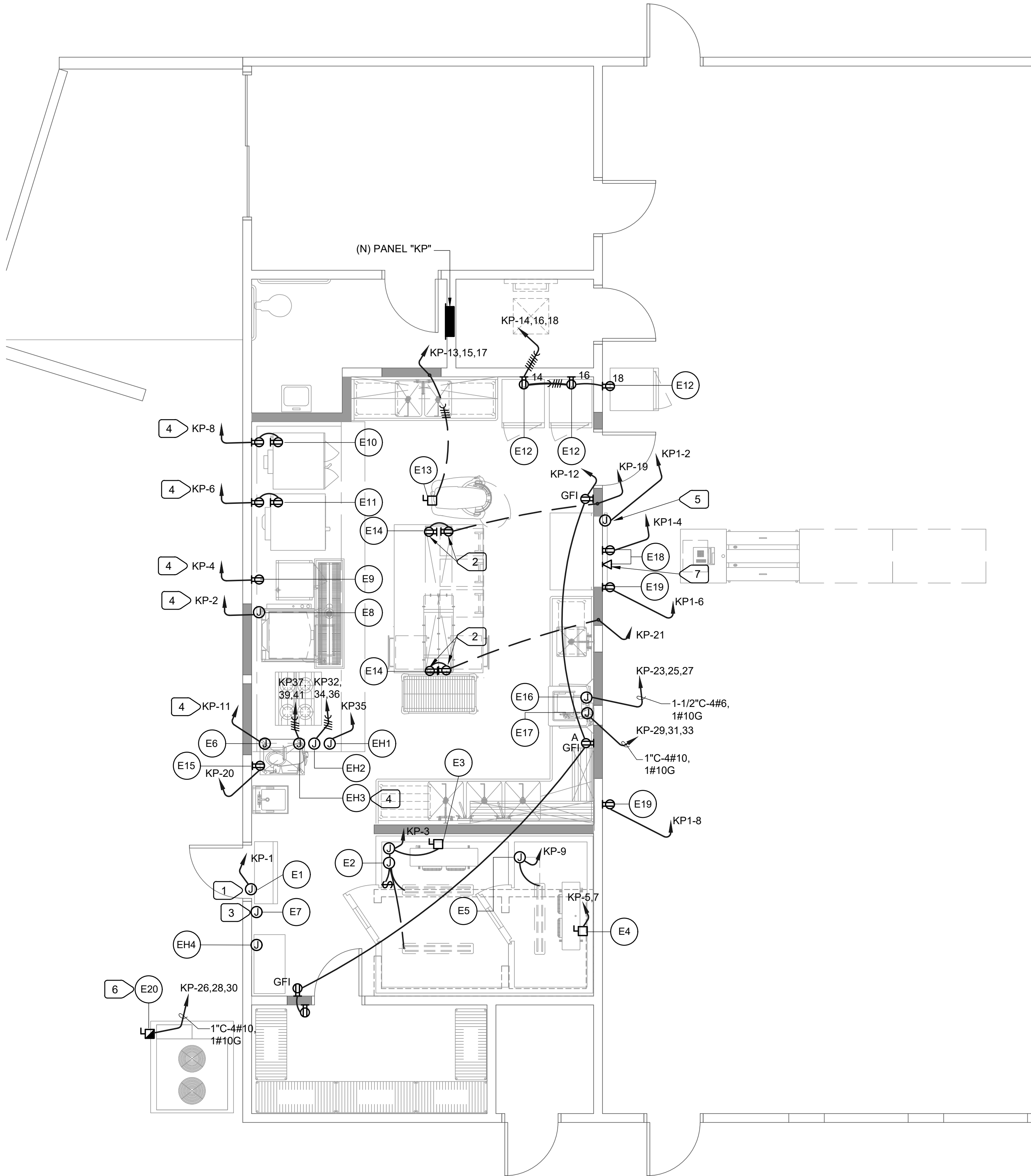
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PROJECT NO.	REVISIONS	BY
19-32-050		
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04/10/2020		
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E2.2

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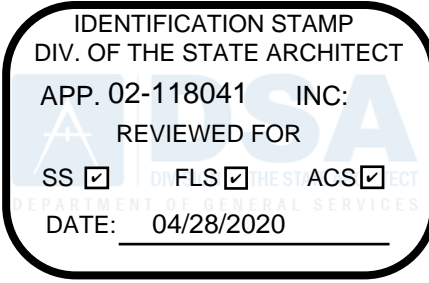


1
E2.3
PARTIAL FLOOR
PLAN - KITCHEN POWER
SCALE : 1/4" = 1'-0"

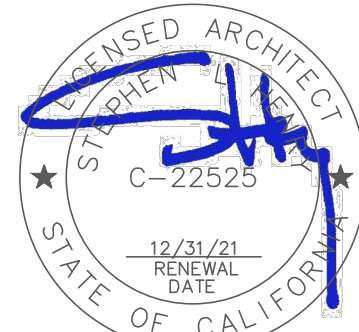
KITCHEN EQUIPMENT ELECTRICAL SCHEDULE													
ITEM	DESCRIPTION	QTY.	VOLT.	PH	DIRECT	PLUG	NEMA	LOAD		OUTLET HEIGHT	REMARKS	NOTE(S)	
								AMPS. DRAW	HP				
E1	AIR CURTAIN	1EA.	120	1	X	-	-	9	-	+86	PROVIDE J-BOX IN WALL INSTALL DOOR LIMIT SWITCH FOR INSTANT ON/OFF SWITCH		
E2	WALK-IN REFRIGERATOR (BOX)	1EA.	120	1	X	-	-	2.0	-	+88"	(2) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. CONTRACTOR TO PROVIDE ALL INTERCONNECTIONS.	①	
E3	WALK-IN REFRIGERATOR (COIL)	1EA.	115	1	X	-	-	1.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN REFRIGERATOR. SEE DETAIL H/FS7.1		
E4	WALK-IN FREEZER (COIL)	1EA.	208	1	X	-	-	12.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL H/FS7.1	②	
E5	WALK-IN FREEZER (BOX)	1EA.	120	1	X	-	-	5.0	-	+88"	(1) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P. 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	①	
E6	FIRE SYSTEM AT ANSUL CONTROL AUTOMAN PANEL	1EA.	120	1	X	-	-	20	-	+104"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION 120V/1-20AMP @ ANSUL CONTROL	④	
E7	FIRE SYSTEM (REMOTE PULL STATION)	1EA.	-	-	X	-	-	-	-	+48"	PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX (REMOTE PULL) SEE MANUAL PULL DETAIL 2/FS5.3	⑤	
E8	TILT SKILLET	1EA.	120	1	X	-	-	9.0	-	+25"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	④	
E9	STEAMER, CONVECTION (2) COMPARTMENT	2EA	120	1	-	X	5-15P	1.0	-	+30" +12"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)	④	
E10	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	6.0	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④	
E11	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	7.2	-	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④	
E12	MOBILE WARMING CABINET	3EA.	120	1	-	X	5-20P	16.7	-	+68"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 10' CORD (NEMA 5-15P)		
E13	MIXER	1EA.	208	3	X	-	-	10.0	-	53"	PROVIDE J-BOX OUT OF FLOOR CONNECT TO UNIT ELECTRICAL CONNECTION		
E14	CHEFS COUNTER	2EA.	120	1	X	-	-	15EA	-	+34"	PROVIDE DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MTD. ON COUNTER TOP (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 6 DCO OUTLETS)		
E15	SLICER	1EA	120	1	-	X	5-15P	4.0	-	+30"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)		
E16	HIGH TEMP WAREWASHER (TANK HEAT/MOTORS)	1EA.	208	3	X	-	-	24.9	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION		
E17	HIGH TEMP WAREWASHER (BOOSTER HEATER)	1EA.	208	3	X	-	-	20.4	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION		
E18	CASHER STATION (DATA) AND (POWER) VERIFY W/ DISTRICT FURNISHED POS UNIT	2EA.	120	1	-	X	-	20	-	+0"	PROVIDE (2) FLUSH IN WALL. MTD DATA PLUGS (2) FLUSH IN WALL ELECTRICAL OUTLETS (VERIFY W/ DISTRICT POS REQ.)		
E19	MILK COOLER	2EA.	120	1	-	X	5-15P	8.2	-	+18"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH CORD AND PLUG SET (NEMA 5-15P)		
E20	REMOTE REFRIGERATION	1EA.	208	3	X	-	-	17.9	-	+18"	PROVIDE J-BOX CONNECT TO UNIT ELECTRICAL CONNECTION UNIT TO BE LOCATED ON ROOF.		
WALK-IN REFRIGERATION ELECTRICAL (MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE)										ELECTRICAL KEYNOTES:			
1. - THE ELECTRICAL CONTRACTOR SHALL INSTALL AND INTER WIRE LIGHT SWITCHES AND FIXTURES REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND MAKE FINAL CONNECTIONS.										① INTERCONNECT TEMP ALARM WITH MECHANICAL ALARM SYSTEM			
2. - THE FOOD SERVICE EQUIPMENT CONTRACTOR SHALL INSTALL THE PRESSURE RELIEF PORT, DOOR HEATERS, DRAIN LINE HEATERS AND TEMPERATURE ALARM SYSTEM. INTER WIRING AND FINAL CONNECTIONS BY THE ELECTRICAL CONTRACTOR.										② DRAIN LINE HEATER CONNECTED TO COIL. F.S.ELECTRICAL CONTRACTOR TO PROVIDE AND CONNECT TO COIL			
3. - THE ELECTRICAL CONTRACTOR SHALL INTERWIRE THE TIME CLOCK ON THE CONDENSING UNIT TO THE DEFROST RELAY ON THE UNIT EVAPORATOR LOCATED IN THE FREEZER COMPARTMENT.										③ 120V/1 PHASE FOR LIGHTS TO ONE PRE-WIRED CONN. POINT ON HOOD FOR LIGHTS PRE-WIRED BY FACTORY. ELECTRICAL CONTRACTOR TO CONNECT HOOD LIGHTS AT (2) HOODS			
4. - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM WITH ALL CONDUIT IN SO FAR AS POSSIBLE MOUNTED ON THE EXTERIOR CEILING OF THE WALK-IN ASSEMBLY. PENETRATIONS AND ESCUTCHEON PLATES SHALL BE FURNISHED AND INSTALLED BY THE FOOD SERVICE CONTRACTOR. FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR SEALING THE <u>INSIDE</u> OF CONDUITS WHICH PENETRATE THE CEILING OR WALL.										④ ELECTRICAL CONTRACTOR TO PROVIDE INTERLOCK WIRING FROM FIRE ALARM SYSTEMS TO ELEC. SHUNT TRIP BREAKERS.			
										⑤ ELECTRICAL CONTRACTOR TO PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX @ +48" AFF. W/ EMPTY CONDUIT TO +2" ABOVE CEILING.			
										⑥ ELECTRICAL CONTRACTOR TO INSTALL WALL MOUNTED ENERGY MANAGEMENT CONTROL PANEL PROVIDED BY HOOD MANUFACTURE FOR HOOD LIGHTS AND FAN CONTROLS			
										⑦ ELECTRICAL CONTRACTOR TO INTERCONNECT POWER FROM HOOD CONTROL PANEL LOCATED ON WALL WITH EXHAUST DVC-111 DEMAND CONTROL.			

EXHAUST HOOD ELECTRICAL SCHEDULE													
ITEM	DESCRIPTION	QTY.	VOLT.	PH	DIRECT	PLUG	NEMA	WATT	LOAD AMPS. DRAW	HP	OUTLET HEIGHT	REMARKS	NOTE(S)
EH1	EXHAUST HOOD (ENERGY MANAGEMENT SYSTEM LIGHTS)	1EA.	120	1	X	-	-	-	15	-	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.2 FOR ELECTRICAL CONNECTION)	3
EH2	EXHAUST HOOD (FANS CONTROLLER EXHAUST)	1EA.	208	3	X	-	-	-	10.2	3	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.2 FOR ELECTRICAL CONNECTION)	
EH3	EXHAUST HOOD (FANS CONTROLLER SUPPLY)	1EA.	208	3	X	-	-	-	6.1	2	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FSS.14 FOR ELECTRICAL CONNECTION)	4
EH4	TOUCH SCREEN USER INTERFACE MOUNT +48" AFF. RECESSED IN WALL	1EA.										CONNECT TO ENERGY MANAGEMENT SYSTEM IN UTILITY CABINET AT END OF HOOD ITEM 5 WITH CAT5 CABLE (NO POWER REQUIRED AT THIS LOCATION)	7

NUMBERED NOTES:	
1	CONNECT VIA MICRO SWITCH FURNISHED BY OTHERS, INSTALLED BY ELECTRICAL CONTRACTOR.
2	MOUNT ON THE COUNTER. REFER TO KITCHEN EQUIPMENT ELECTRICAL SCHEDULE.
3	OCTAGONAL BOX FOR MANUAL PULL STATION FOR ANSUL SYSTEM. PROVIDE 3/4"C.O. FROM BOX TO ANSUL SYSTEM. REFER TO KITCHEN EQUIPMENT ELECTRICAL SCHEDULE. COORDINATE WITH KITCHEN CONTRACTOR BEFORE ROUGH IN.
4	CONNECTED TO SHUNT TRIP CKT. BRKR. REFER TO 2/E3.0.
5	PROVIDE FOR AND CONNECT ROLL UP DOOR. PROVIDE ALL APPURTENANCES AS REQUIRED BY DOOR MANUFACTURER. LOCATE DOOR CONTROLS AS DIRECTED IN FIELD.
6	LOCATED ON THE ROOF.
7	REFER TO FLOOR PLAN - SIGNAL.

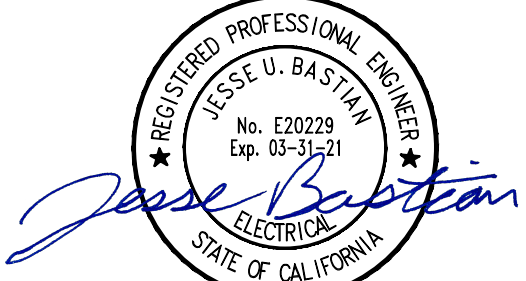


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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL
PARTIAL FLOOR PLAN -
KITCHEN EQUIPMENT
POWER

CONSULTANT



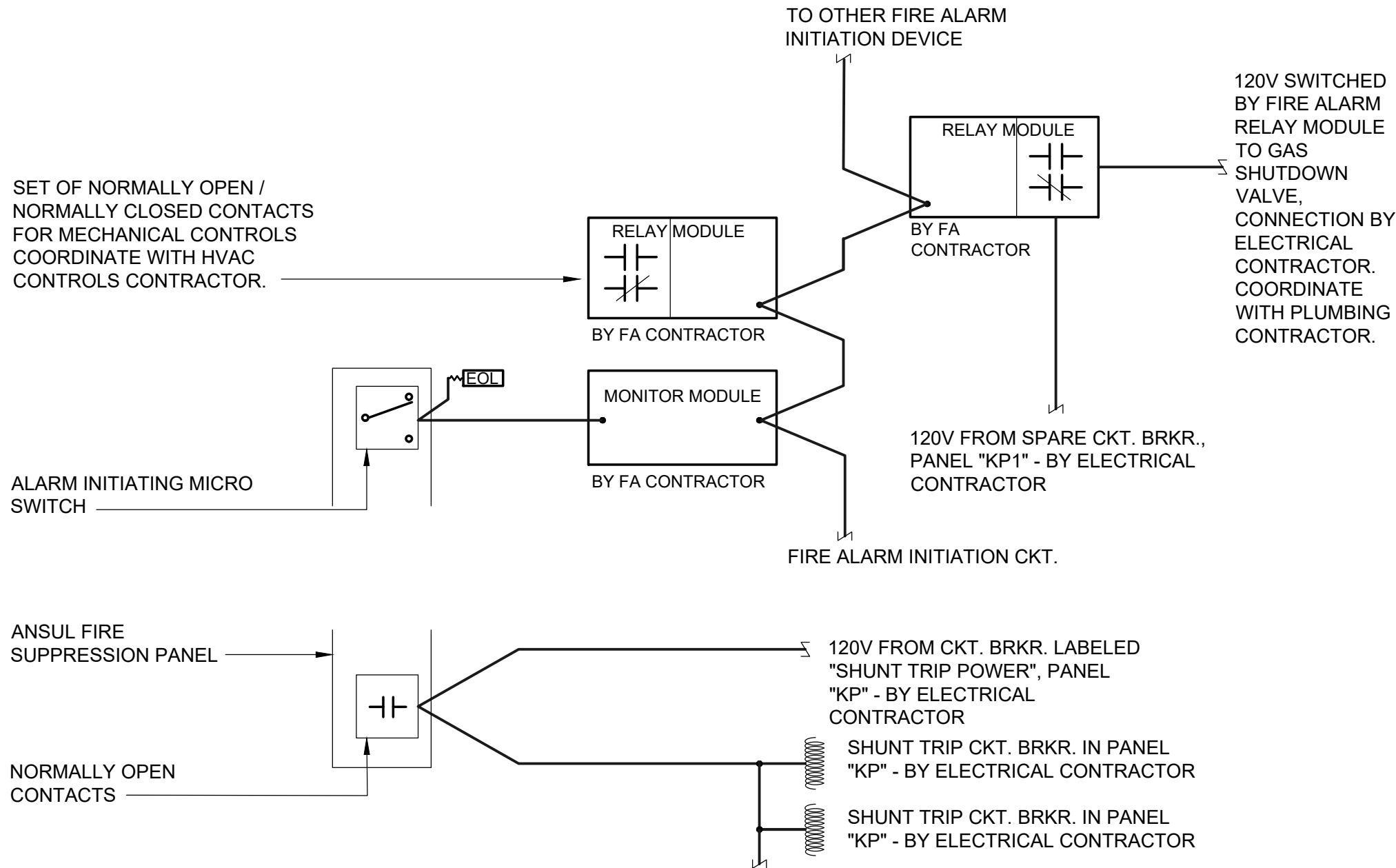
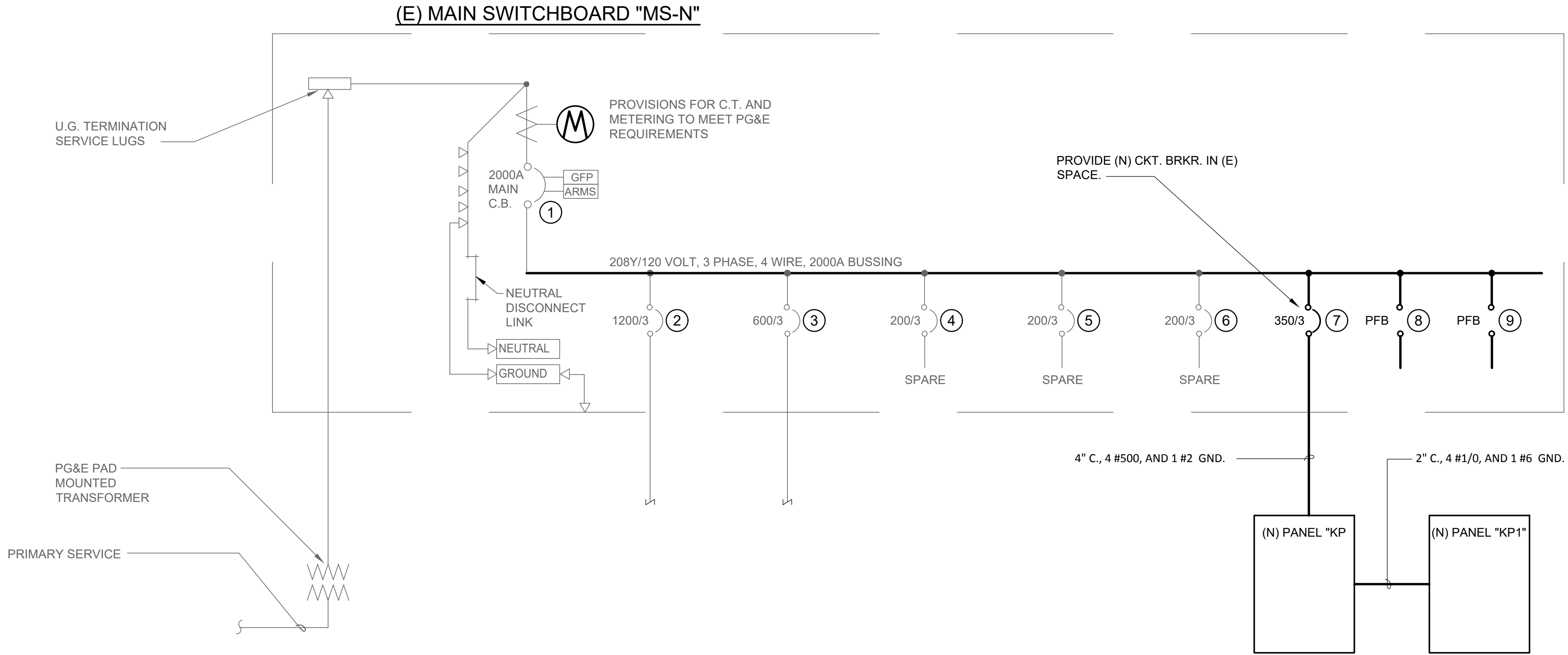
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1 ONE LINE DIAGRAM - POWER

E3.0 N.T.S.

2 FIRE SUPPRESSION SYSTEM - EQUIPMENT SHUTDOWN DIAGRAM

E3.0 N.T.S.

NEW PANEL "KP " SCHEDULE									
POWER SOURCE: MAIN SWITCHBOARD "MS-N"					LOCATION: SEE PLANS				
TYPE:	BUS: 400	MAIN BKR: 350A SUB FD: 150A	VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES			MOUNTING: FLUSH		REMARKS: _k AIC MIN. SYMM.	
LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED	
AIR CURTAIN	1.1	20/1	1	A	2	20/1 (1.)	1.1	TILT SKILET	
WALK-IN REFRIGERATOR	0.3	20/1	3	B	4	20/1 (1.)	0.5	STEAMER CONVECTION	
WALK-IN FREEZER	1.3	20/2	5	C	6	20/1 (1.)	1.7	CONVECTION OVEN	
WALK-IN FREEZER	1.3		7	A	8	20/1 (1.)	1.7	CONVECTION OVEN	
WALK-IN FREEZER	0.6	20/1	9	B	10	20/1	0.5	SHUNT TRIP POWER	
ANSUL SYSTEM	0.6	20/1	11	C	12	20/1	1.0	CONV. RECEPTACLES	
MIXER	1.2	20/3	13	A	14	20/1	2.0	MOBILE WARMING CAB.	
	1.2		15	B	16	20/1	2.0	MOBILE WARMING CAB.	
	1.2		17	C	18	20/1	2.0	MOBILE WARMING CAB.	
CHEFS COUNTER RECEPT	1.0	20/1	19	A	20	20/1	0.5	SLICER	
CHEFS COUNTER RECEPT	1.0	20/1	21	B	22	20/1	0.5	GAS SHUTDOWN	
HIGH TEMP. WASHER	3.0	45/3	23	C	24	20/1		SPARE	
	3.0		25	A	26		2.2		
	3.0		27	B	28	30/3	2.2	REMOTE REFRIGERATION	
HIGH TEMP. WASHER	2.5	30/3	29	C	30		2.2		
	2.5		31	A	32		1.3		
	2.5		33	B	34	20/3	1.3	EXHAUST HOOD	
EXHAUST HOOD	1.8	20/1	35	C	36		1.3		
EXHAUST HOOD	1.2	20/3 (1.)	37	A	38		19.3		
	1.2		39	B	40	150/3	18.6	PANEL "KP1"	
	1.2		41	C	42		15.2		
<u>NOTE(S):</u>									
1. PROVIDE SHUNT TRIP CKT. BRKR.						PHASE A =		39.4	kVA
2.						PHASE B =		35.4	kVA
3.						PHASE C =		35.0	kVA
						TOTAL =		109.8	kVA
						TOTAL =		304.6	Amperes

NEW PANEL "KP1" SCHEDULE									
POWER SOURCE: PANEL "KP"					LOCATION: SEE PLANS				
TYPE:	BUS: 250	MAIN BKR 150A SUB FD: NA	VOLTAGE: 120/208 VOLT, 3 PHASE, 4 WIRES			MOUNTING: FLUSH		REMARKS: _k AIC MIN. SYMM.	
LOAD SERVED		kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
LIGHTING		0.8	20/1	1	A	2	20/1	0.5	ROLL UP DOOR
EXISTING LOAD		1.1	20/1	3	B	4	20/1	0.6	P.O.S. RECEPTACLE
EXISTING LOAD		1.1	20/1	5	C	6	20/1	1.2	MILK COOLER
EXISTING LOAD		1.1	20/1	7	A	8	20/1	1.2	MILK COOLER
EXISTING LOAD		1.1	20/1	9	B	10	25/2	2.1	SHPO-A1
EXISTING LOAD		1.1	20/1	11	C	12		2.1	
COND. PUMPS/DUCT FANS		1.9	20/1	13	A	14	45/2	3.7	SHPO-A2
ROOF RECEPTACLE		0.8	20/1	15	B	16		3.7	
GWH / CP - A1		0.8	20/1	17	C	18	25/2	2.1	SHPO-A3
HTC-A1 (1.)		1.2	20/1	19	A	20		2.1	
OVREHED DOOR		0.5	20/1	21	B	22	20/1	1.9	IOAF
FIRE SMOKE DAMPER		0.1	20/1	23	C	24	20/1		SPARE
SPARE			20/1	25	A	26	70/3	6.8	AC A-2
SPARE			20/1	27	B	28		6.8	
SPARE			20/1	29	C	30		6.8	
SPARE			20/1	31	A	32	20/1		SPARE
SPARE			20/1	33	B	34	20/1		SPARE
SPARE			20/1	35	C	36	20/1		SPARE
SPACE			PFB	37	A	38	PFB		SPACE
SPACE			PFB	39	B	40	PFB		SPACE
SPACE			PFB	41	C	42	PFB		SPACE
<u>NOTE(S):</u>							PHASE A = 19.3 kVA		
1. 30mA GFI BREAKER							PHASE B = 18.6 kVA		
2.							PHASE C = 15.3 kVA		
3.							TOTAL = 53.2 kVA		
							TOTAL = 147.8 Amperes		

FILE NO. 39-50 APP NO. 02-118041

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APP. 02-118041 INC.
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 04/28/2020

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HENRY+
ASSOCIATES
ARCHITECTS

REGISTERED ARCHITECT
STEPHEN J. BASTIAN
C-22525
12/31/21
RENEWAL
DATE
STATE OF CALIFORNIA

KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

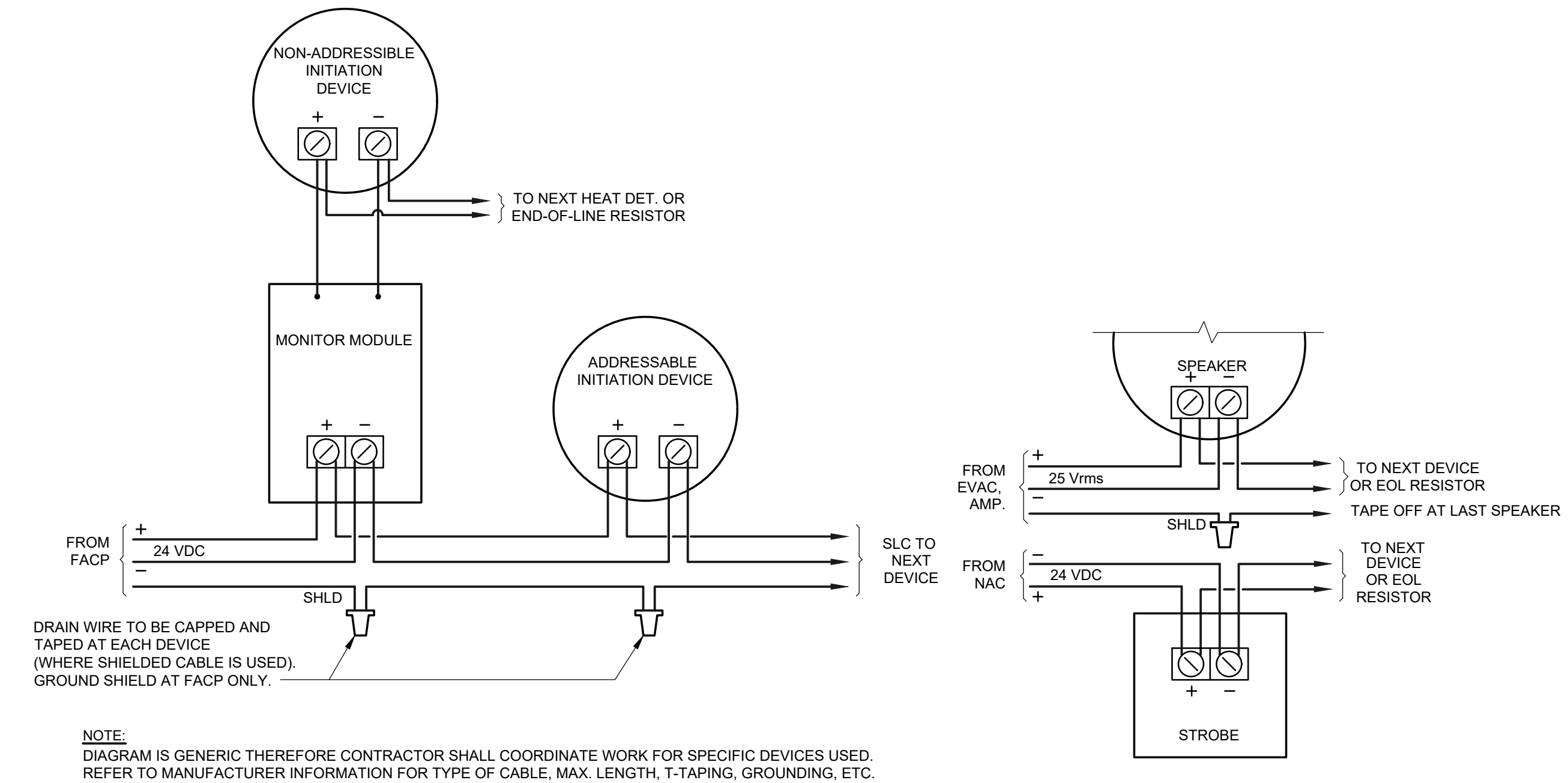
PANEL SCHEDULES
ONE LINE DIAGRAMS

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER
JESSE U. BASTIAN
No. E202229
Exp. 03-31-21
ELECTRICAL
STATE OF CALIFORNIA
04/09/2020

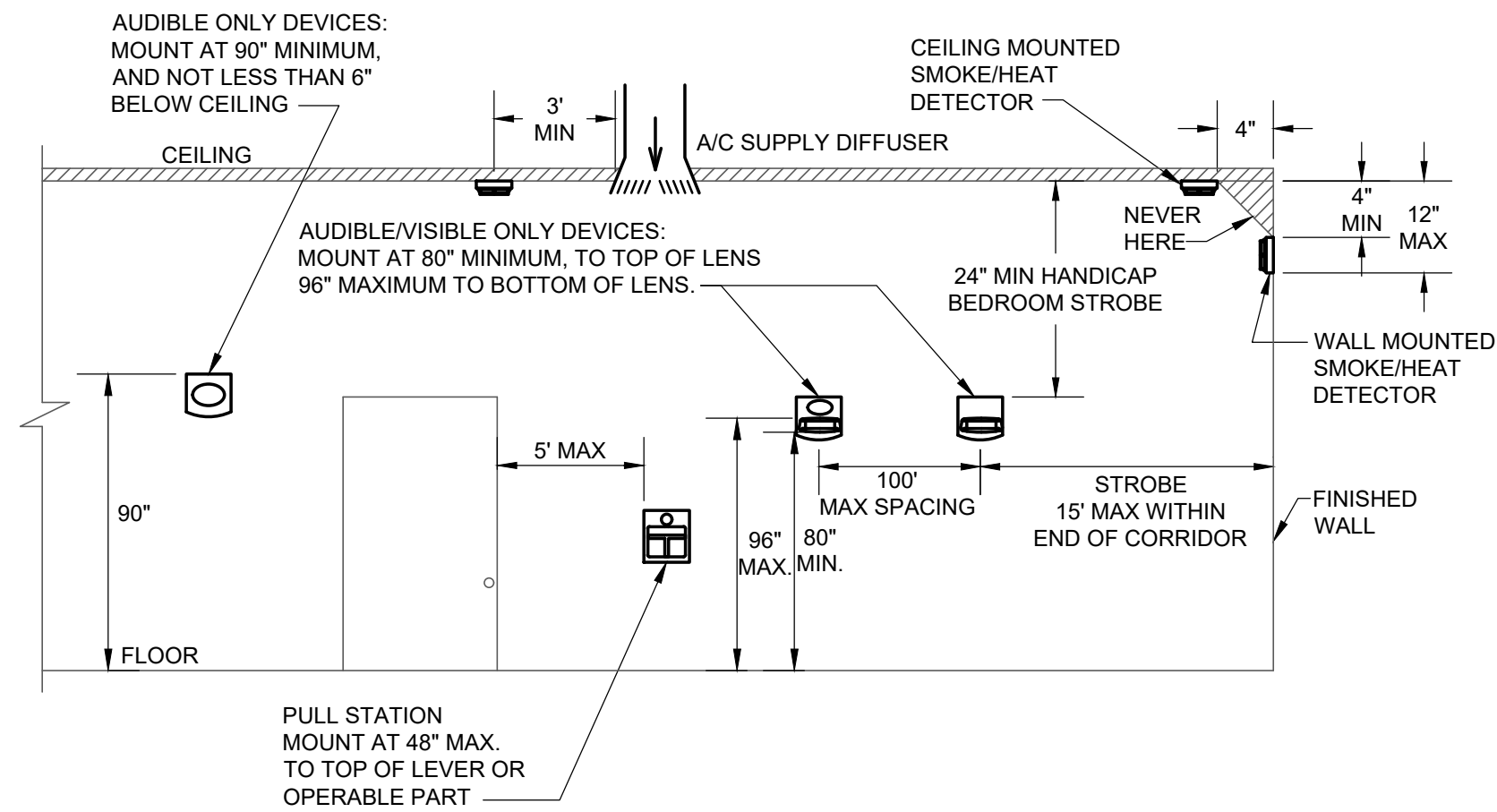
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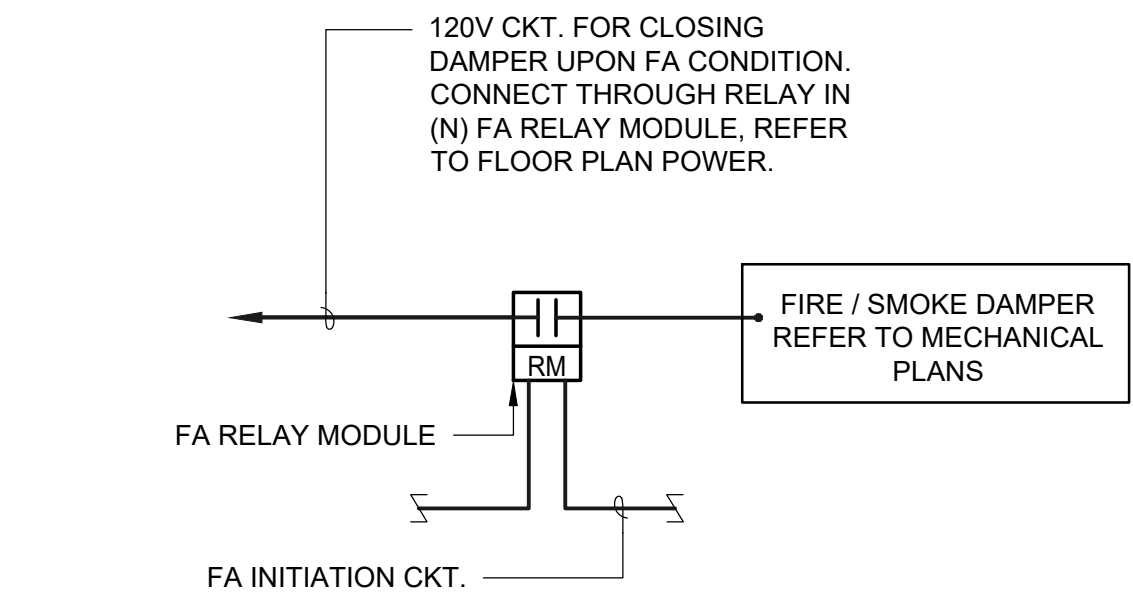
1 FIRE ALARM DEVICES DIAGRAM

E4.0 N.T.S.



2 APPLIANCE ELEVATION DETAIL

E4.0 NO SCALE



3 (E) FIRE / SMOKE DAMPER DIAGRAM

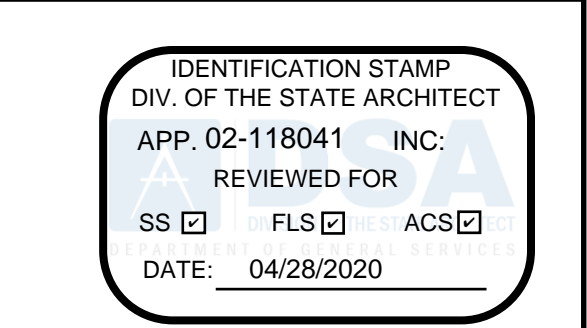
E4.0 NO SCALE

FIRE ALARM SEQUENCE OF OPERATION MATRIX										
	FACP ALARM	FACP TROUBLE	ALARM SIGNAL OFF-SITE	TROUBLE SIGNAL OFF-SITE	ACTIVATE AUDIO/VISUAL THROUGHOUT	ALARM RECEIPT CAPABILITY DURING ABNORMAL CONDITIONS	SHUT OFF GAS SUPPLY TO KITCHEN	SHUT OFF POWER TO DEVICES UNDER KITCHEN HOOD	SEND SIGNAL TO MECHANICAL CONTROLS TO INITIATE REQUIRED ACTIONS BY MECHANICAL CONTROLS	ANNUNCIATE ALARM AT REMOTE ANNUNCIATOR
AREA SMOKE DETECTOR	X		X		X					X
HEAT DETECTORS	X		X		X					X
DUCT DETECTOR	X		X		X				X	X
KITCHEN HOOD FIRE SUPPRESSION SYSTEM	X		X		X		X	X	X	X
POWER FAILURE		X			X					X
NOTIFICATION CIRCUIT CLASS B										
OPEN WIRE		X			X					
GROUNDING WIRE		X			X	R				
SHORTED WIRES		X			X					
SIGNALING LINE CIRCUIT CLASS B										
OPEN WIRE		X			X					
GROUNDING WIRE		X			X	R				
WIRE TO WIRE (SHORT & OPEN)		X			X					
WIRE TO WIRE (SHORT & GROUND)		X			X					
OPEN & GROUND		X			X					
LOSS OF CARRIER		X			X					
NOTE: BLANK MEANS NOT APPLICABLE R = REQUIRED ACTION										

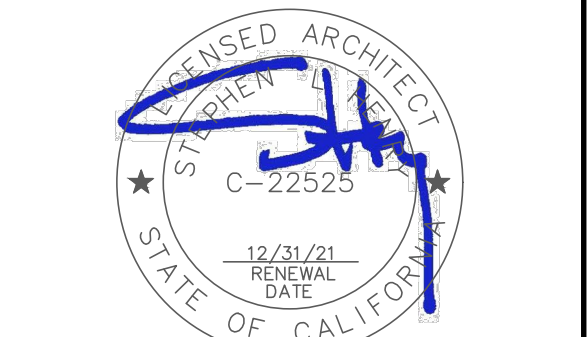
FIRE ALARM GENERAL NOTES	
1.	REVISE EXISTING FIRE ALARM IN MODERNIZED PORTION OF THE BUILDING.
2.	(E) FIRE ALARM CONTROL PANEL IS CAPABLE OF AUTOMATICALLY TESTING SMOKE DETECTORS AND PRINTING A REPORT OF THE TEST.
3.	(E) FIRE ALARM CONTROL PANEL INCLUDES AUTOMATIC DIALING CAPABILITY FOR SENDING A SUPERVISORY SIGNAL, A TROUBLE SIGNAL, AND AN ALARM SIGNAL TO AN APPROVED SUPERVISING OFF-SITE MONITORING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER UUF (CENTRAL STATION) OR UJJS (REMOTE AND PROPRIETARY) BY UL, OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. DIALER SHALL BE CAPABLE OF "GRABBING" A PHONE LINE FOR AN ALARM SIGNAL IF PHONE LINE IS ALREADY IN USE.
4.	UPON COMPLETION OF FIRE ALARM SYSTEM REVISION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE WITH THE LOCAL FIRE MARSHALL AND THE PROJECT INSPECTOR OF RECORD AS WITNESSES.
5.	THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, CALIFORNIA ELECTRICAL CODE, ARTICLE 760, AND THE CALIFORNIA FIRE CODE.
6.	REVISION TO THE FIRE ALARM SYSTEM SHALL HAVE AUTOMATIC INITIATION DEVICES, AND FULL COVERAGE.
7.	PROVIDE "FIRE WATCH" DURING CONSTRUCTION WHEN EXISTING FIRE ALARM SYSTEM IF TURNED OFF, OR OFF LINE.
8.	THE FIRE ALARM WIRING SHALL BE RUN IN CONDUITS.
9.	DO NOT START INSTALLATION OF THE FIRE ALARM SYSTEM UNTIL DETAILED PLANS, SPECIFICATIONS AND CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
10.	PER NFPA 72 2016, SECTIONS 10.6.5.2.2 AND 10.6.5.2.3, CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE IDENTIFIED AS "FIRE ALARM / ECS CIRCUIT", AND THE DISCONNECTING MEANS FOR THE CIRCUIT SHALL HAVE A RED MARKING, BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL AND SHALL BE MECHANICALLY PROTECTED. LOCATION OF THE DISCONNECT SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. THE CIRCUITS FOR FIRE ALARM SYSTEMS SHALL BE DEDICATED TO FIRE ALARM EQUIPMENT.
11.	A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM THE APPROVED PLANS, INCLUDING THE SUBSTITUTION OF DEVICES, SHALL BE APPROVED BY THE DEPARTMENT OF STATE ARCHITECTS.
12.	13. A FIRE ALARM ACCEPTANCE TEST OF ALL DEVICES AND APPLIANCES, INCLUDING THE BACKUP BATTERY(IES), SHALL BE PERFORMED. ALL MANUFACTURER OPERATING RANGES SHALL BE MET. TESTING OF THE SUPERVISING STATION SIGNALS, AS WELL AS RELAY TO THE APPROPRIATE RESPONDING AGENCY, SHALL BE INCLUDED IN THE ACCEPTANCE TESTING. THE PROJECT INSPECTOR SHALL WITNESS THE ACCEPTANCE INSPECTION AND SHALL SIGN AS THE AHJ REPRESENTATIVE ON THE "SYSTEM RECORD OF COMPLETION" AT SECTION 12.3 (NFPA 72, FIGURE 7.8.2(a)). ALL SUPPLEMENTARY RECORDS SHALL BE ATTACHED AS APPLICABLE. THE PROJECT INSPECTOR SHALL VERIFY THAT THE FIRE ALARM SYSTEM IS IN SERVICE PRIOR TO COMPLETION OF THE "SYSTEM RECORD OF COMPLETION" FORM. ALL ORIGINAL DECONTAMINATION SHALL BE RETAINED IN THE REQUIRED DOCUMENTATION CABINET (NFPA 72, 7.7.2).
13.	A CERTIFICATE OF COMPLIANCE SHALL BE PREPARED BY THE INSTALLER AND GIVEN TO THE CALIFORNIA STATE FIRE MARSHAL UPON COMPLETION OF THE INSTALLATION.

FIRE ALARM EQUIPMENT SCHEDULE			
SYMBOL	CATALOG NO.	DESCRIPTION	CSFM LISTING No.
	WHEELLOCK LSPSTR	SPEAKER/STROBE, WALL MOUNTED	7125-0785:0175
	WHEELLOCK LST	STROBE, WALL MOUNTED	7125-0785:0169
	EST SIGA-PS	SMOKE PHOTOELECTRIC DETECTOR	7272-1657:0126
	EST-HRS	HEAT DETECTOR - FIXED TEMP 135° AND RATE-OF RISE	7270-1657:0125
	EDWARDS SIGNALING 282B-PL	HEAT DETECTOR - FIXED TEMP 194° AND RATE-OF RISE	7270-1657:0109
	EDWARDS SIGA-SD	DUCT DETECTOR	3242-1657:0223
	EST SIGA-MM1	MONITOR MODULE	7300-1657:0121
	EST SIGA-CR	RELAY MODULE	7300-1657:0121
	EST3X	(E) FIRE ALARM CONTROL PANEL W/ VOICE EVACUATION CAPABILITIES	
	EST E-RLED-C	(E) REMOTE ANNUNCIATOR	
	FIRE LITE FCPS-24FS6	(E) FIRE ALARM POWER SUPPLY	

FILE NO. 39-50 APP NO. 02-118041

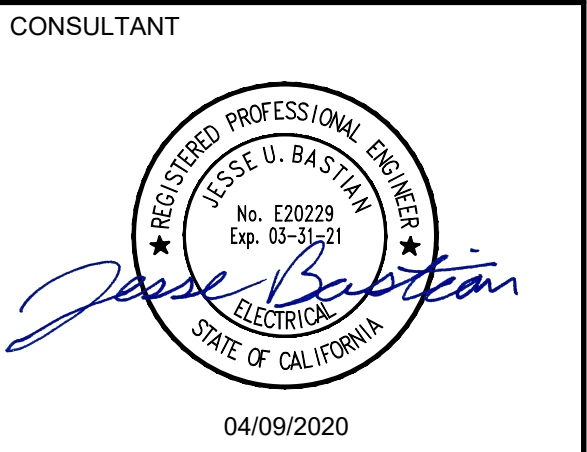


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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

FIRE ALARM DETAILS,
DIAGRAMS, MATRIX



PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
CHECKED		
SLH		
SCALE		
CADFILE		
UPDATED		

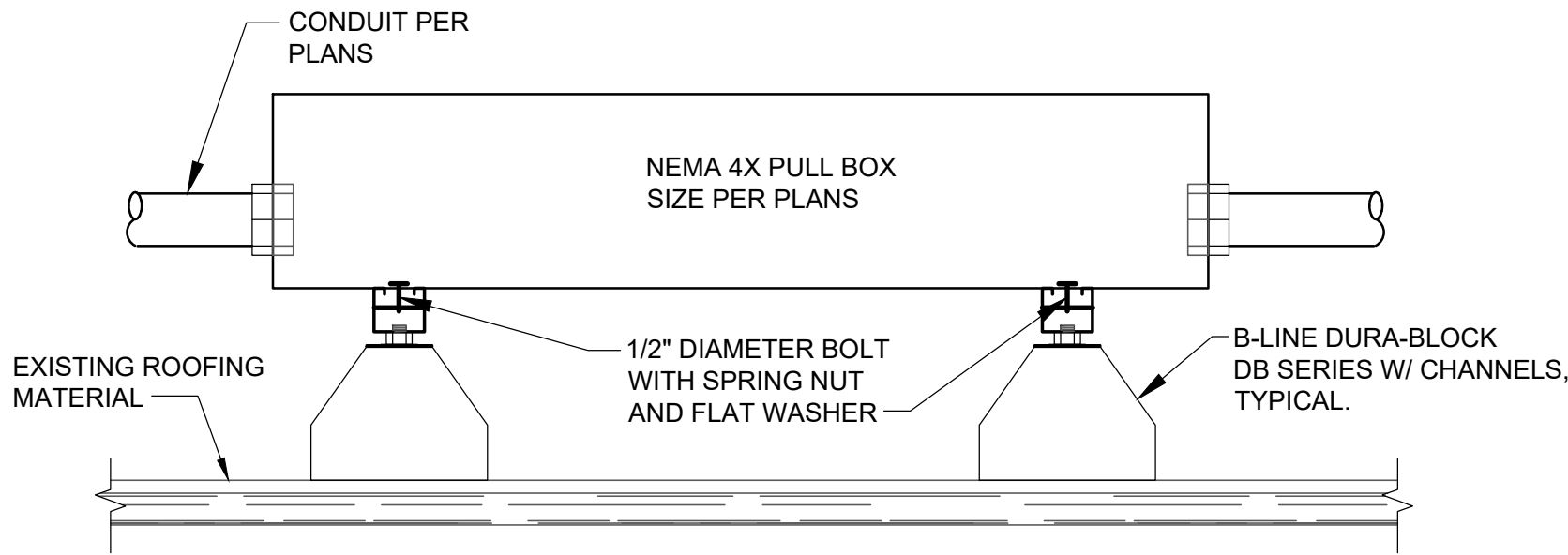
SHEET NO.

E4.0

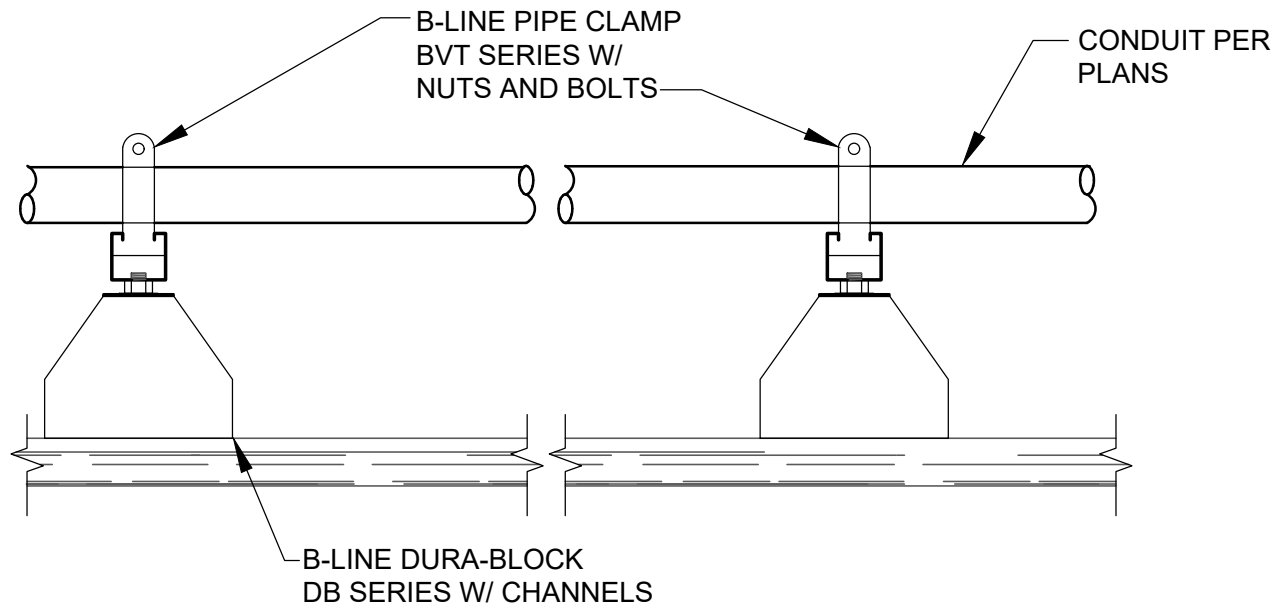
OF 68 SHEETS

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PROJECT #: 19276.21

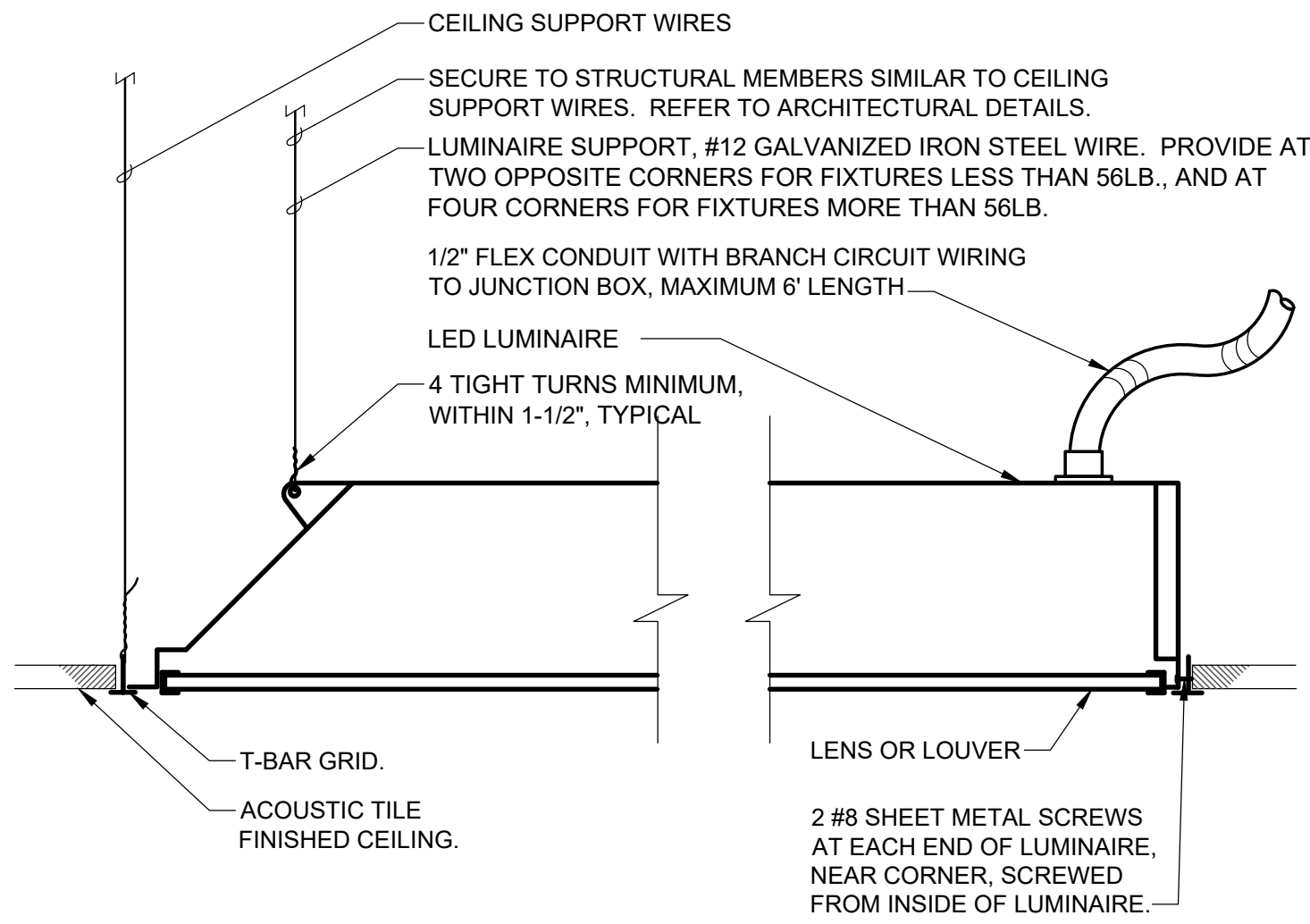
UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.



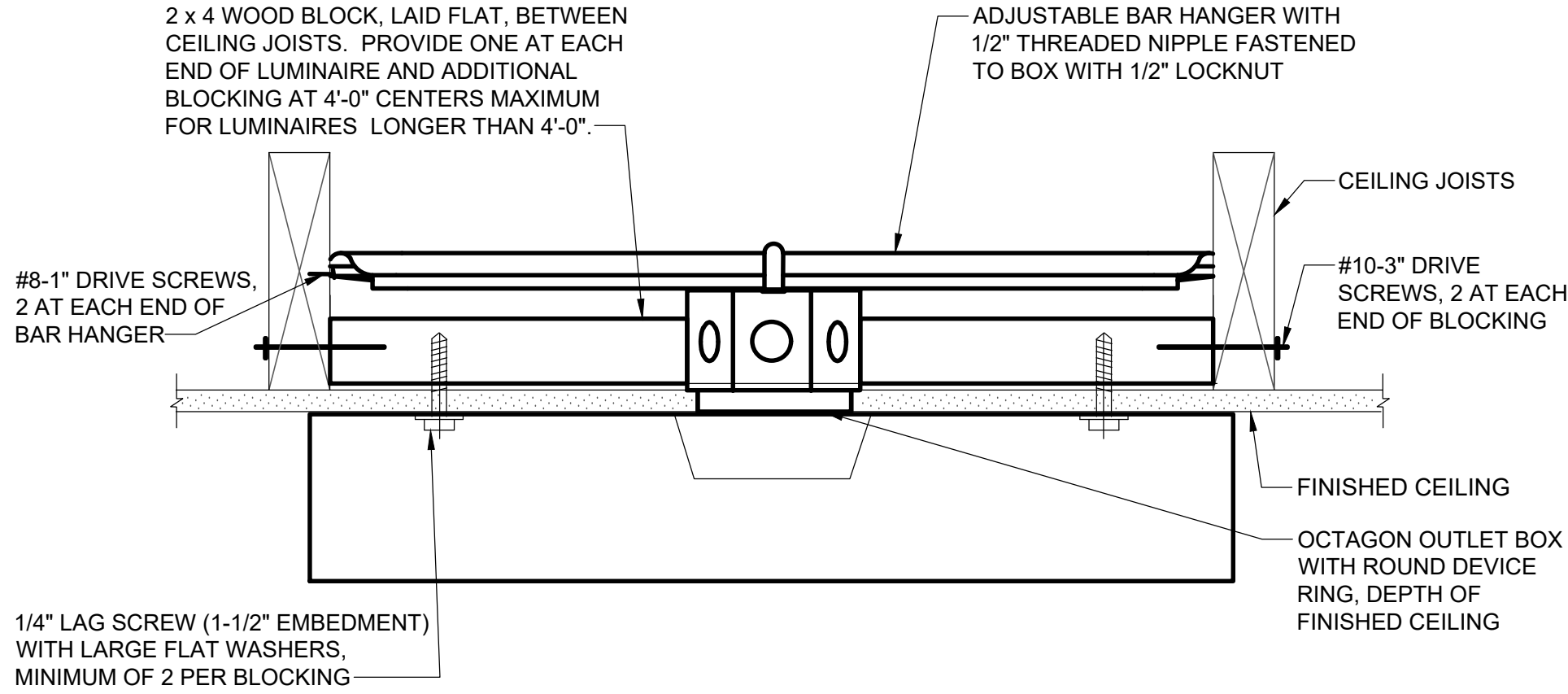
1 CONDUIT & PULLBOX ON ROOF
E5.0 NO SCALE



2 PANELBOARD MOUNTING DETAIL
E5.0 NO SCALE

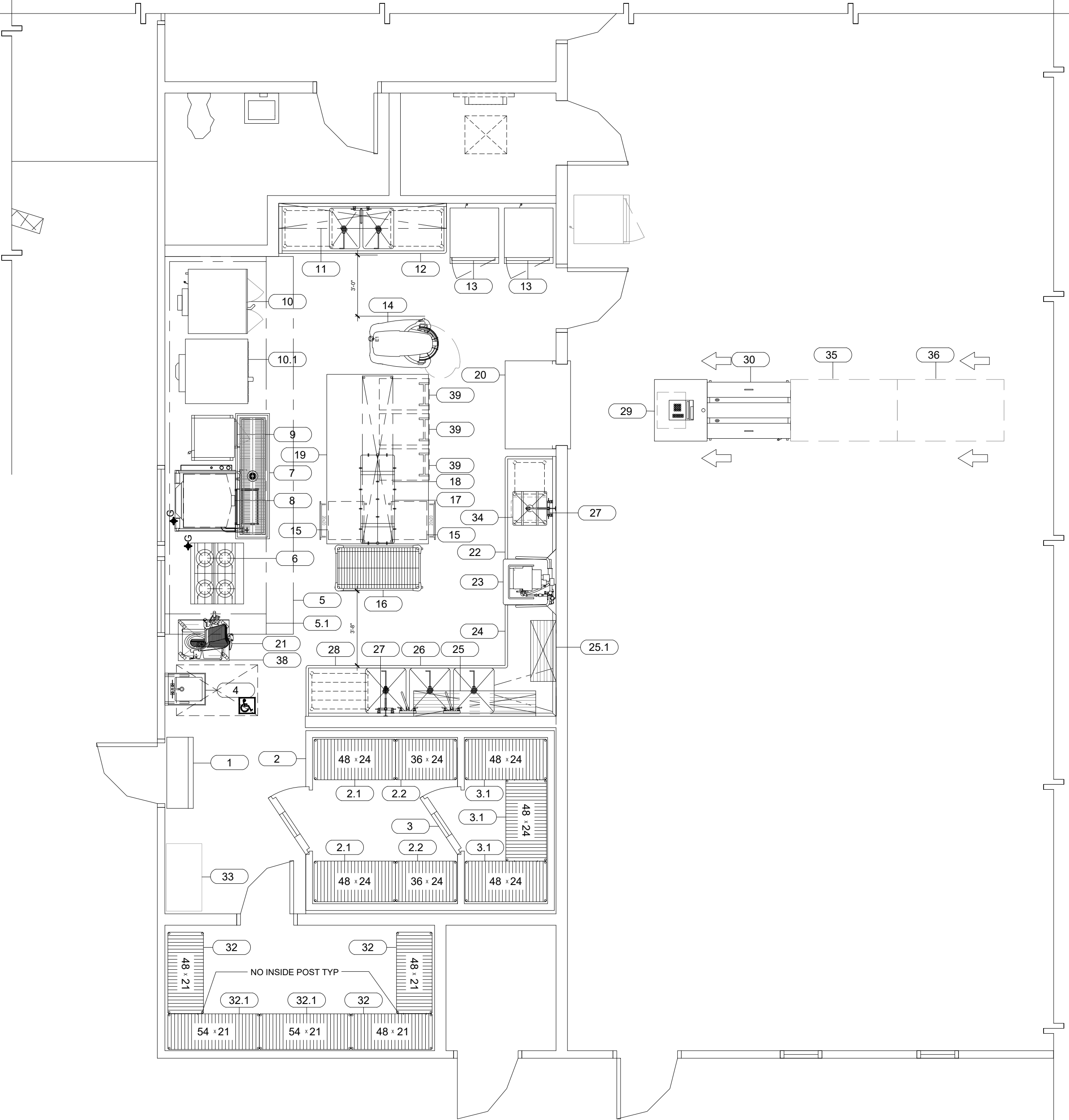


3 LAY-IN LUMINAIRE MOUNTING DETAIL
E5.0 NO SCALE



4 SURFACE LUMINAIRE MOUNTING DETAIL
E5.0 NO SCALE

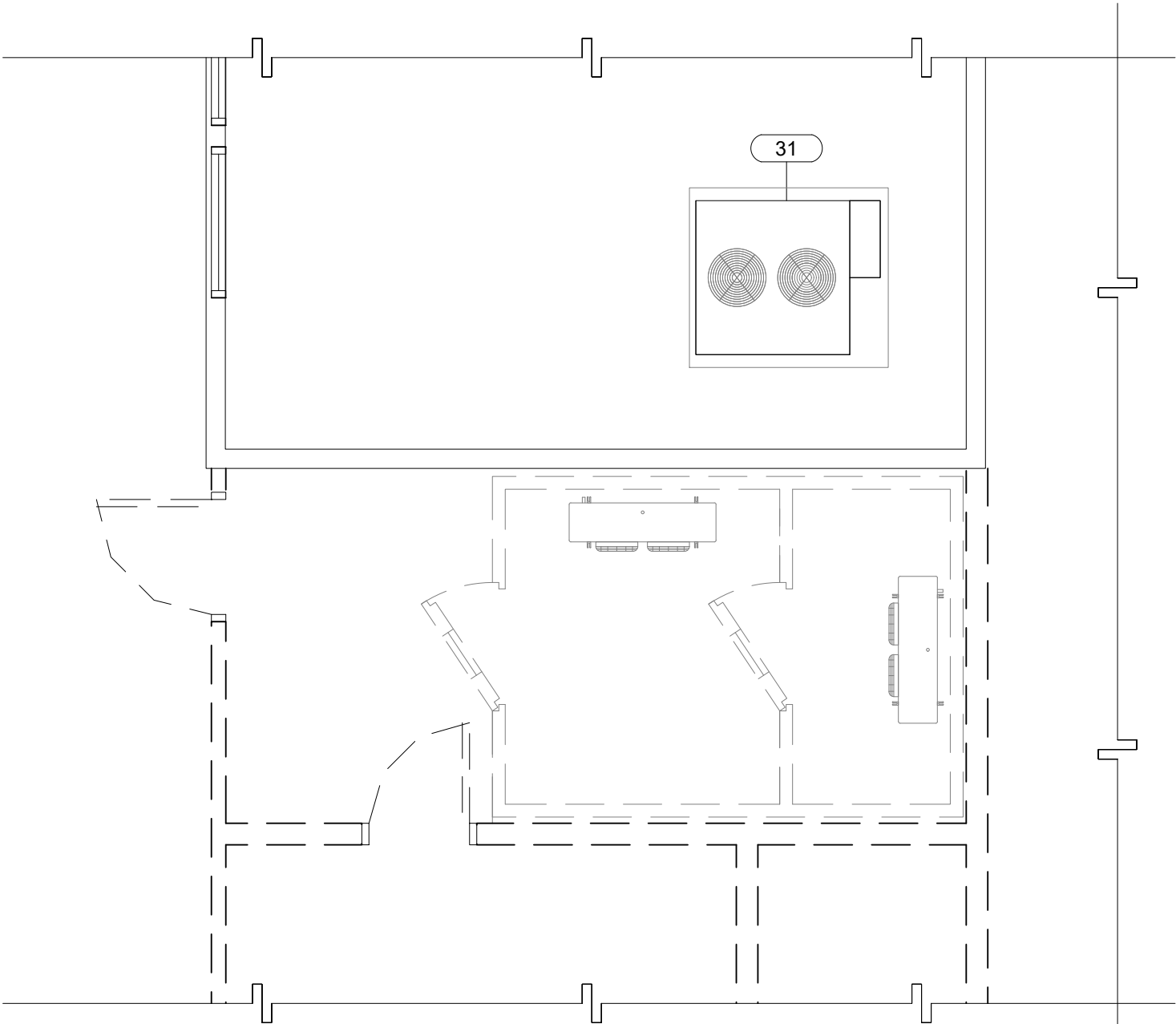
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SCALE		
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FOODSERVICE EQUIPMENT FLOOR PLAN

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

1
FS1.1



FOODSERVICE EQUIPMENT PARTIAL ROOF PLAN

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

2
FS1.1

EQUIPMENT SCHEDULE						
ITEM NO	STAT	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	WEIGHTS (LBS.)
1	CFCI	1	AIR CURTAIN, UNHEATED	MARS AIR SYSTEMS	HV242-1U*	120
2	CFCI	1	WALK-IN REFRIGERATOR	DURACOLD	FABRICATED ITEM	8.5 LBS PER SQ.FT. OF 4" PANEL
2.1	CFCI	2	COLD STORAGE SHELVING	METRO	A2448NK3	31
2.2	CFCI	2	COLD STORAGE SHELVING	METRO	A2436NK3	28
3	CFCI	1	WALK-IN FREEZER	DURACOLD	FABRICATED ITEM	8.5 LBS PER SQ.FT. OF 4" PANEL
3.1	CFCI	3	COLD STORAGE SHELVING	METRO	A2448NK3	31
4	CFCI	1	HAND SINK W/ WRIST HANDLES FAUCET W/SPLASH GUARDS	EAGLE GROUP	YAMD-HSAP-14-0001-00	85
5	CFCI	2	EXHAUST HOOD (TYPE 1) AND S/S WALL LINING	CAPTIVE AIRE	ND-2-PSP-F	564
5.1	CFCI	1	FIRE SYSTEM (UL300)	ANSUL	R-102	
6	OFCI	1	OPEN BURNER RANGE W/ OVEN	IMPERIAL	IR-4-S18	600
7	CFCI	1	FLOOR TROUGH W/ADA GRATE	EAGLE	FT-1872-SG	55
8	CFCI	1	TILT SKILLET W/ELEC TILT, W/LEFT HAND BRACKET FAUCET	VULCAN	VG30-BPDOV-1	645
9	OFCI	1	STEAMER, CONVECTION (2) COMPARTMENT	ACCUTEMP	N61201E DBL	560
10	OFCI	1	CONVECTION OVEN DOUBLE STACK	MONTAGUE	HX2-63A	1205
10.1	CFCI	1	CONVECTION OVEN DOUBLE STACK	BLODGETT	DFG200 DOUBLE	1130
11	CFCI	1	WALL SHELF	CUSTOM	FABRICATED ITEM	47
12	CFCI	1	PREP SINK	CUSTOM	FABRICATED ITEM	225
13	OFCI	2	MOBILE WARMING & HOLDING CABINET	CRESCOR	H138S1834C2K	326
14	OFCI	1	MIXER	HOBART	HL600	916
15	CFCI	2	THREE STACK UTENSIL DRAWER UNIT	CUSTOM	FABRICATED ITEM	36
16	CFCI	1	MOBILE POT AND PAN STORAGE SHELVING	METRO	N556MC	118
17	CFCI	1	TABLE MOUNTED POT RACK	EAGLE GROUP	TM60PR	64
18	CFCI	1	DOUBLE TABLE MOUNTED OVERSHELF	CUSTOM	FABRICATED ITEM	55
19	CFCI	1	CHEFS COUNTER	CUSTOM	FABRICATED ITEM	475
20	CFCI	1	SERVING COUNTER	CUSTOM	FABRICATED ITEM	35
21	OFCI	1	SLICER	HOBART	EDGE 12	85
22	CFCI	1	SOILED DISHTABLE	CUSTOM	FABRICATED ITEM	47
23	OFCI	1	WAREWASHER, DOOR TYPE, HIGH TEMP VENTLESS	HOBART	AM15VLT-2	494
24	CFCI	1	CLEAN DISHTABLE	CUSTOM	FABRICATED ITEM	42
25	CFCI	1	TUBULAR WALL MTD. DRAINAGE SHELVF	ADVANCE TABCO	DT-6R-72	46
25.1	CFCI	1	TUBULAR WALL MTD. DRAINAGE SHELVF	ADVANCE TABCO	DT-6R-36	23
26	CFCI	1	THREE COMP. SINK W/ DRAIN STRAINER FPS-610A	CUSTOM	FABRICATED ITEM	225
27	CFCI	2	PRE-RINSE FAUCET, BACKSPLASH MOUNT	FISHER	13390	12
28	CFCI	1	SOILED DISHTABLE	CUSTOM	FABRICATED ITEM	47
29	OFCI	1	CASHIER STATION VERIFY UTILITY REQUIREMENTS			
30	OFCI	1	MILK COOLER	BEVERAGE AIR	SMF58	458
31	CFCI	1	REMOTE REFRIGERATION	COOLTEC	CRS-4	800
32	CFCI	3	DRY STORAGE SHELVING	METRO	A2148NC	28
32.1	CFCI	2	DRY STORAGE SHELVING	METRO	A2154NC	16
33	OFCI	1	DESK			
34	CFCI	1	SCRAP SINK W/ DRAIN STRAINER FPS-610A	CUSTOM / DRAIN STRAINER	FABRICATED ITEM	51
35	OFCI	1	SERVING LINE	AMBIENT		
36	OFCI	1	SERVING LINE	AMBIENT		
37			SPARE			
38	CFCI	1	MOBILE SLICER CART	CADDY CORPORATION	T-243-A	95
39	OFCI	3	INGREDIENT BIN	CAMBRO	IB44148	30

FOODSERVICE DRAWING SHEET LIST

FS1.1- FOODSERVICE EQUIPMENT FLOOR AND PARTIAL ROOF PLAN
FS2.1- FOODSERVICE EQUIPMENT PLUMBING PLAN
FS3.1- FOODSERVICE EQUIPMENT ELECTRICAL AND PARTIAL ROOF PLAN
FS4.1- FOODSERVICE EQUIPMENT MECHANICAL AND BLOCKING PLAN
FS4.2- FOODSERVICE EQUIPMENT MECHANICAL SCHEDULE
FS5.1- FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN
FS5.2- FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN
FS5.3- FOODSERVICE EQUIPMENT EXHAUST HOOD FIRE SYSTEM
FS6.1- FOODSERVICE EQUIPMENT WALK-IN REFRIG. DETAILS
FS6.2- FOODSERVICE EQUIPMENT WALK-IN REFRIG. DETAILS
FS7.1- FOODSERVICE EQUIPMENT REMOTE REFRIGERATION
FS7.2- FOODSERVICE EQUIPMENT REMOTE REFRIGERATION
FS8.1- FOODSERVICE EQUIPMENT DETAILS
FS8.2- FOODSERVICE EQUIPMENT DETAILS
FS9.1- FOODSERVICE EQUIPMENT ELEVATIONS

NOTES:

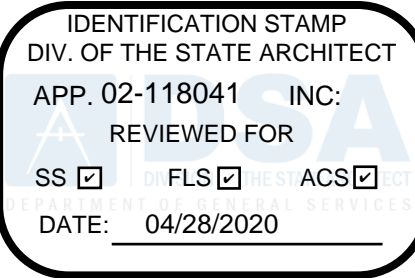
- THE KITCHEN HOOD FIRE SUPPRESSION SYSTEM SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 EDITION OF THE NFPA 17A. (UL 300 SYSTEM)
- INSTALLATION OF THE FIRE SUPPRESSION SYSTEM SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED BY DEPT. OF STATE ARCHITECT.
- UPON COMPLETION OF THE SYSTEM IT SHALL BE TESTED IN THE PRESENCE OF THE STATE FIRE MARSHAL.

NOTES:

- REFER TO ARCH. DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS
- *All work shall conform to the California Building Code, California Electrical Code, California Mechanical and Plumbing Codes, California Health and Safety Code. ALL FOOD SERVICES EQUIPMENT SHALL MEET AND BE INSTALLED PER THE REQUIREMENTS OF THE CALIFORNIA HEALTH AND SAFETY CODE DIVISION 22 AND ALL LOCAL CODES AND ORDINANCES.*

FOODSERVICE EQUIPMENT LEGEND

SYMBOL/ABBREVIATION	DESCRIPTION	SYMBOL	DESCRIPTION
OFCI	OWNER FURNISH / CONTRACTOR INSTALLED		ACCESSIBLE CLEARANCES AND SYMBOL 30"x48" MIN CLEARANCE
OFOI	OWNER FURNISH / OWNER INSTALLED		OUTLINE OF (N) FOODSERVICE EQUIPMENT
CFCI	CONTRACTOR FURNISH CONTRACTOR INSTALLED		OUTLINE OF (E) FOODSERVICE EQUIPMENT
(E), EXIST	EXISTING FOODSERVICE EQUIPMENT		FOODSERVICE EQUIPMENT BELOW EQUIPMENT TOP
(N), NEW	NEW FOODSERVICE EQUIPMENT		FOODSERVICE EQUIPMENT ABOVE EQUIPMENT TOP
(F)	FUTURE FOODSERVICE EQUIPMENT		MOBILE FOODSERVICE EQUIPMENT
	BUILDING WALLS (SEE ARCH. DWGS.)		F.E.C. (PROVIDE TYPE "K" AND 2A:10BC (MINIMUM)) FIRE EXTINGUISHER & CABINET REFER TO ARCH. DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS
	WALK-IN COOLER/ FREEZER INSULATED WALLS	FS.01	SHEET NUMBER
	KEY / SHEET NOTE		WATER HEATER (SEE PLUMBING ENG. DWG.)
	ITEM NUMBER SYMBOL (SEE EQUIPMENT SCHEDULE FOR DESCRIPTION)		ELEVATION INDICATOR SYMBOL
KITCHEN	ROOM/ AREA NAME AND ROOM NUMBER		
	COLUMN GRIDS WITH COLUMN INDICATORS		
	STORAGE SHELVING SIZES (Width x Length)		



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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

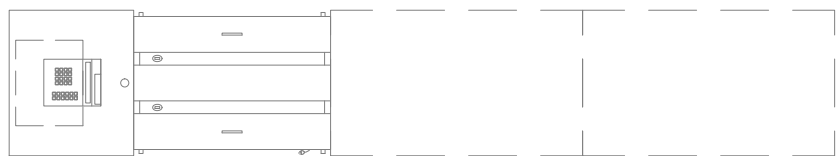
FOODSERVICE EQUIPMENT
FLOOR PLAN

CONSULTANT



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FS1.1



1
FS2.1

FS2.1

3/4 GRATE W/
OPEN 1/4 FOR
DRAIN PIPES SET ON
TOP OF FLOOR SINK
SEE FS2.1 PLAN
FOR GRATE ARRANGEMENT

GRATE VIEW

TYPICAL FLOOR
SINK W/ DOME
STRAINER

PLAN VIEW

REMOVABLE GRATE
FOR ACCESS TO
CLEAN DOME STRAINER

NO GAP BETWEEN
SINK AND FLOOR

SECTION

NOTE:
FLOOR SINK DETAIL IS FOR REFERENCE ONLY. FOR
FLOOR SINK TYPE AND SIZE REFER TO PLUMBING PLANS.

2
FS2.1

FS2.1

3/4 GRATE W/ OPEN 1/4 FOR DRAIN PIPES SET ON TOP OF FLOOR SINK. SEE FS2.0 FLOOR PLAN FOR GRATE ARRANGEMENT

GRATE VIEW

TYPICAL FLOOR SINK W/DOME STRAINER.

PLAN VIEW

2"

2"

EQUIPMENT BASE TO BE NOTCHED AROUND FLOOR SINK

MIN. 1" AIR GAP TO FLOOR SINK TOP RIM.

6" H. EQUIP. BASE

REMOVABLE GRATE FOR ACCESS TO CLEAN DOME STRAINER.

FLUSH WITH FLOOR.

G.C. TO GROUT IN GAP BETWEEN SINK & FLOOR.

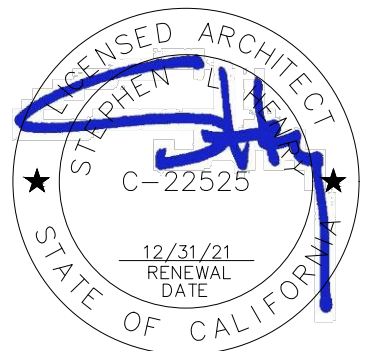
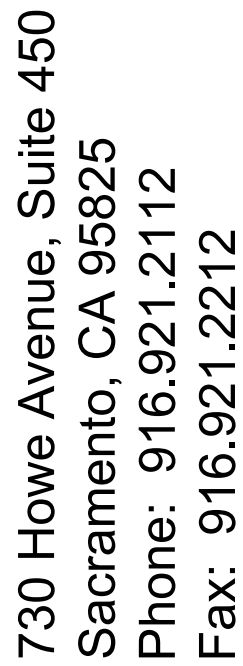
SECTION

NOTE:
FLOOR SINK DETAIL IS FOR REFERENCE ONLY.
FOR FLOOR SINK TYPE AND SIZE REFER TO PLUMBING DIVISION PLANS.

3
FS2.1

FS2.1

FILE NO. 39-50 APP NO. 02-118041



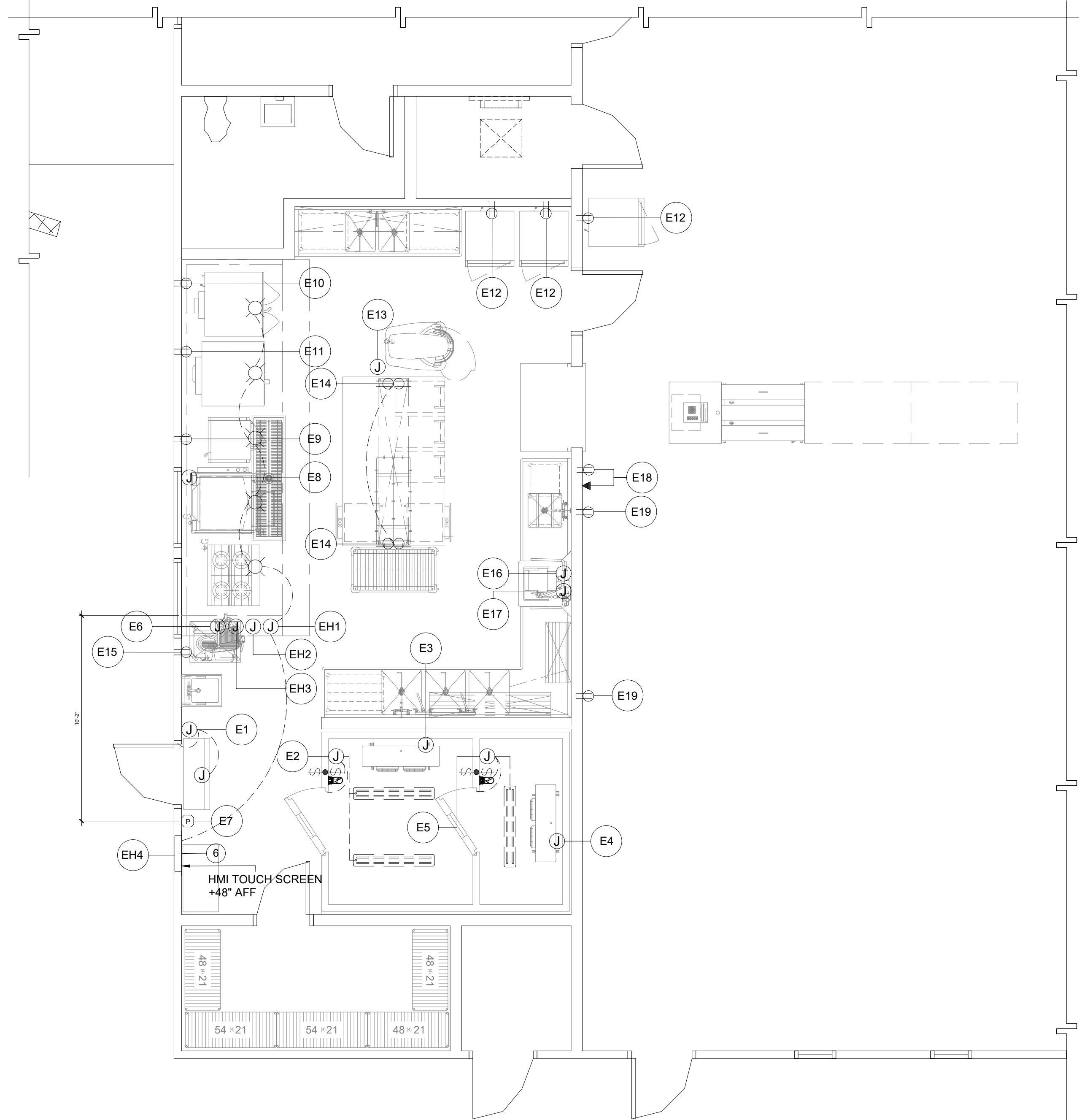
FOODSERVICE EQUIPMENT PLUMBING PLAN



FS2.1

OF XX SHEETS

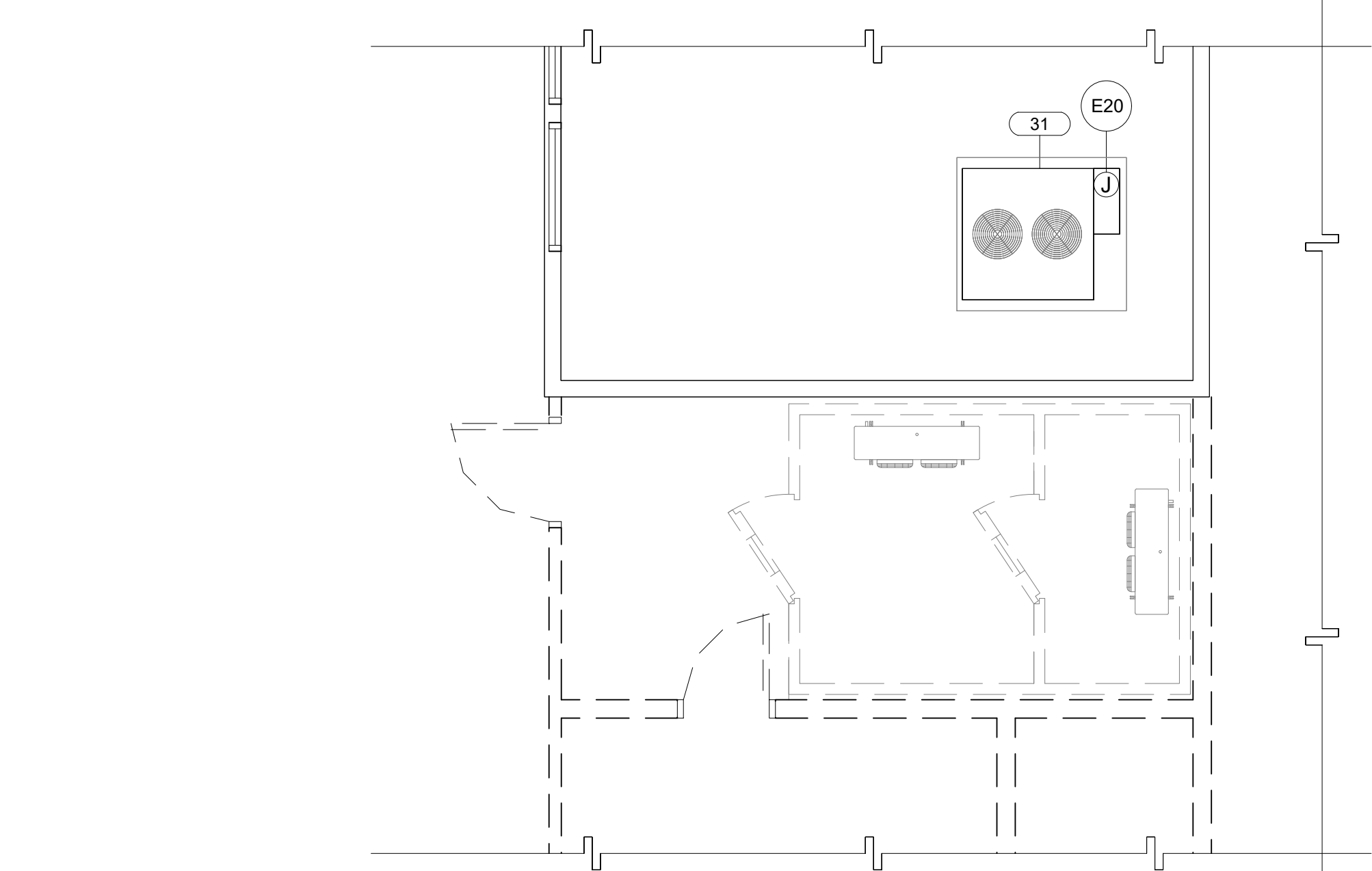
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FOODSERVICE EQUIPMENT ELECTRICAL PLAN

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

1
FS3.1



FOODSERVICE EQUIPMENT ELECTRICAL PARTIAL ROOF PLAN

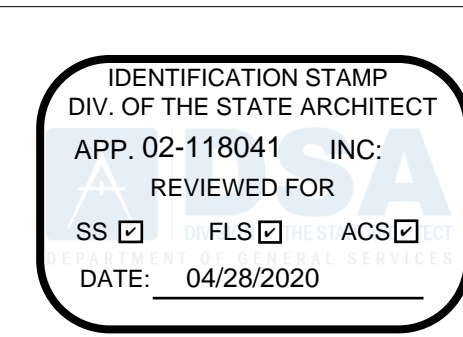
SCALE : 1/4" = 1'-0"

2
FS3.1

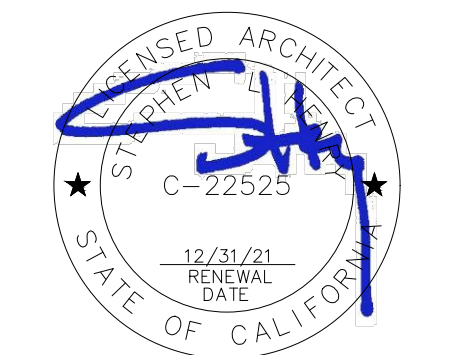
ELECTRICAL SCHEDULE															
ELEC. NO.	ITEM NO.	DESCRIPTION	QTY.	VOLT.	PH	DIRECT PLUG	NEMA	LOAD			OUTLET HEIGHT	REMARKS	NOTE(S)		
								WATT	AMPS. DRAW	HP					
E1	1	AIR CURTAIN	1EA.	120	1	X	-	-	9	-	+86	PROVIDE J-BOX IN WALL INSTALL DOOR LIMIT SWITCH FOR INSTANT ON/OFF SWITCH BY F.S.E.C SEE DETAIL B/ FS8.2			
E2	2	WALK-IN REFRIGERATOR (BOX)	1EA.	120	1	X	-	-	2.0	-	+88"	(2) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. CONTRACTOR TO PROVIDE ALL INTERCONNECTIONS.	①		
E3	2	WALK-IN REFRIGERATOR (COIL)	1EA.	115	1	X	-	-	1.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN REFRIGERATOR. SEE DETAIL I/FS7.1			
E4	3	WALK-IN FREEZER (COIL)	1EA.	208	1	X	-	-	12.8	-	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL I/FS7.1	②		
E5	3	WALK-IN FREEZER (BOX)	1EA.	120	1	X	-	-	5.0	-	+88"	(1) 39W LED CLG. MTD. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P. 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	①		
E6	5.1	FIRE SYSTEM AT ANSUL CONTROL AUTOMAN PANEL	1EA.	120	1	X	-	-	20	-	+104"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION 120V/1-20AMP @ ANSUL CONTROL	④		
E7	5.1	FIRE SYSTEM (REMOTE PULL STATION)	1EA.	-	-	X	-	-	-	-	+48"	PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX (REMOTE PULL) SEE MANUAL PULL DETAIL 2/FS5.3	⑤		
E8	8	TILT SKILLET	1EA.	120	1	X	-	-	9.0	-	+25"	PROVIDE J-BOX IN WALL. CONNECT TO UNIT ELECTRICAL CONNECTION	④		
E9	9	STEAMER, CONVECTION (2) COMPARTMENT	2EA.	120	1	-	X	5-15P	1.0	-	+30" +12"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)	④		
E10	10	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	-	6.0	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④		
E11	10.1	CONVECTION OVEN DOUBLE STACK	2EA.	120	1	-	X	5-15P	-	7.2	+24" +66"	PROVIDE DUPLEX RECEPTACLE FLUSH WITH STAINLESS STEEL WALL LINING UNIT PROVIDED WITH CORD (NEMA 5-15P)	④		
E12	13	MOBILE WARMING CABINET	3EA.	120	1	-	X	5-20P	16.7	-	+68"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 10' CORD (NEMA 5-15P)			
E13	14	MIXER	1EA.	208	3	X	-	-	10.0	-	+6"	PROVIDE J-BOX OUT OF FLOOR CONNECT TO UNIT ELECTRICAL CONNECTION			
E14	19	CHEFS COUNTER	2EA.	120	1	X	-	-	15EA	-	+34"	PROVIDE DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MTD. ON COUNTER TOP (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 6 DCO OUTLETS)			
E15	21	SLICER	1EA.	120	1	-	X	5-15P	4.0	-	+30"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH 6' CORD (NEMA 5-15P)			
E16	23	HIGH TEMP WAREWASHER (TANK HEAT/MOTORS)	1EA.	208	3	X	-	-	24.9	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION			
E17	23	HIGH TEMP WAREWASHER (BOOSTER HEATER)	1EA.	208	3	X	-	-	20.4	-	+18"	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION			
E18	29	CASHIER STATION (DATA) AND (POWER) VERIFY W/ DISTRICT FURNISHED POS UNIT	2EA.	120	1	-	X	-	20	-	+0"	PROVIDE (2) FLUSH IN WALL. MTD DATA PLUGS (2) FLUSH IN WALL. ELECTRICAL OUTLETS (VERIFY W/ DISTRICT POS REQ.)			
E19	30	MILK COOLER	2EA.	120	1	-	X	5-15P	-	8.2	-	+18"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH CORD AND PLUG SET (NEMA 5-15P)		
E20	31	REMOTE REFRIGERATION	1EA.	208	3	X	-	-	17.9	-	+18"	PROVIDE J-BOX CONNECT TO UNIT ELECTRICAL CONNECTION UNIT TO BE LOCATED ON ROOF.			
WALK-IN REFRIGERATION ELECTRICAL (MINIMUM REQUIREMENTS UNLESS NOTED OTHERWISE)											ELECTRICAL KEYNOTES:				
<div>1. - THE ELECTRICAL CONTRACTOR SHALL INSTALL AND INTER WIRE LIGHT SWITCHES AND FIXTURES REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND MAKE FINAL CONNECTIONS.</div> <div>2. - THE FOOD SERVICE EQUIPMENT CONTRACTOR SHALL INSTALL THE PRESSURE RELIEF PORT, DOOR HEATERS, DRAIN LINE HEATERS AND TEMPERATURE ALARM SYSTEM. INTER WIRING AND FINAL CONNECTIONS BY THE ELECTRICAL CONTRACTOR.</div> <div>3. - THE ELECTRICAL CONTRACTOR SHALL INTER WIRE THE TIME CLOCK ON THE CONDENSING UNIT TO THE DEFROST RELAY ON THE UNIT EVAPORATOR LOCATED IN THE FREEZER COMPARTMENT.</div> <div>4. - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM WITH ALL CONDUIT IN SO FAR AS POSSIBLE MOUNTED ON THE EXTERIOR CEILING OF THE WALK-IN ASSEMBLY. PENETRATIONS AND ESCUTCHEON PLATES SHALL BE FURNISHED AND INSTALLED BY THE FOOD SERVICE CONTRACTOR. FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR SEALING THE INSIDE OF CONDUITS WHICH PENETRATE THE CEILING OR WALL.</div>											① INTERCONNECT TEMP ALARM WITH MECHANICAL ALARM. SYSTEM VERIFY WITH ELECTRICAL				
											② DRAIN LINE HEATER CONNECTED TO COIL. F.S.E.C TO PROVIDE AND CONNECT TO COIL				
											③ 120V/1 PHASE FOR LIGHTS TO ONE PRE-WIRED CONN. POINT ON HOOD FOR LIGHTS PRE-WIRED BY FACTORY. E.C TO CONNECT HOOD LIGHTS AT (2) HOODS				
											④ ELECTRICAL CONTRACTOR TO PROVIDE INTERLOCK WIRING FROM FIRE PROTECTION SYSTEMS TO ELEC. SHUNT TRIP BREAKERS.				
											⑤ ELECTRICAL CONTRACTOR TO PROVIDE EMPTY FLUSH MTD. OCTAGONAL BOX @ +48" AFF. W/ EMPTY CONDUIT TO +2" ABOVE CEILING.				
											⑥ E.C TO INSTALL WALL MOUNTED ENERGY MANAGEMENT CONTROL PANEL PROVIDED BY HOOD MANUFACTURE FOR HOOD LIGHTS AND FAN CONTROLS				
											⑦ E.C. TO INTERCONNECT POWER FROM HOOD CONTROL PANEL LOCATED ON WALL WITH EXHAUST DVC-1111 DEMAND CONTROL				

EXHAUST HOOD ELECTRICAL SCHEDULE														
ELEC. NO.	ITEM NO.	DESCRIPTION	QTY.	VOLT.	PH	DIRECT PLUG	NEMA	LOAD			OUTLET HEIGHT	REMARKS	NOTE(S)	
								WATT	AMPS. DRAW	HP				
EH1	5	EXHAUST HOOD (ENERGY MANAGEMENT SYSTEM LIGHTS)	1EA.	120	1	X	-	-	15	-	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)	③	
EH2	5	EXHAUST HOOD (FANS CONTROLLER EXHAUST)	1EA.	208	3	X	-	-	10.2	3	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)		
EH3	5	EXHAUST HOOD (FANS CONTROLLER SUPPLY)	1EA.	208	3	X	-	-	6.1	2	+86	PROVIDE J-BOX IN WALL CONNECT TO UNIT ELECTRICAL CONNECTION (REFER TO FS5.2 FOR ELECTRICAL CONNECTION)	④	
EH4		TOUCH SCREEN USER INTERFACE MOUNT +48" AFF. RECESSED IN WALL	1EA.	-	-	-	-	-	-	-	-	CONNECT TO ENERGY MANAGEMENT SYSTEM IN UTILITY CABINET AT END OF HOOD ITEM 5 WITH CAT-5 CABLE (NO POWER REQUIRED AT THIS LOCATION)	⑦	

FILE NO. 39-50 APP NO. 02-118041



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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT
ELECTRICAL PLAN

CONSULTANT

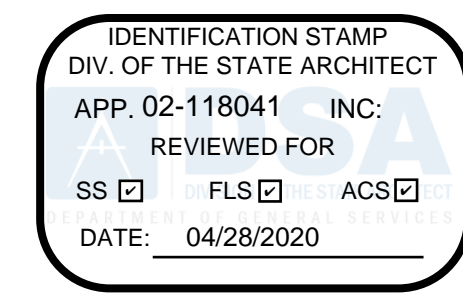


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KITCHEN RENOVATION
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FOODSERVICE EQUIPMENT
MECHANICAL PLAN

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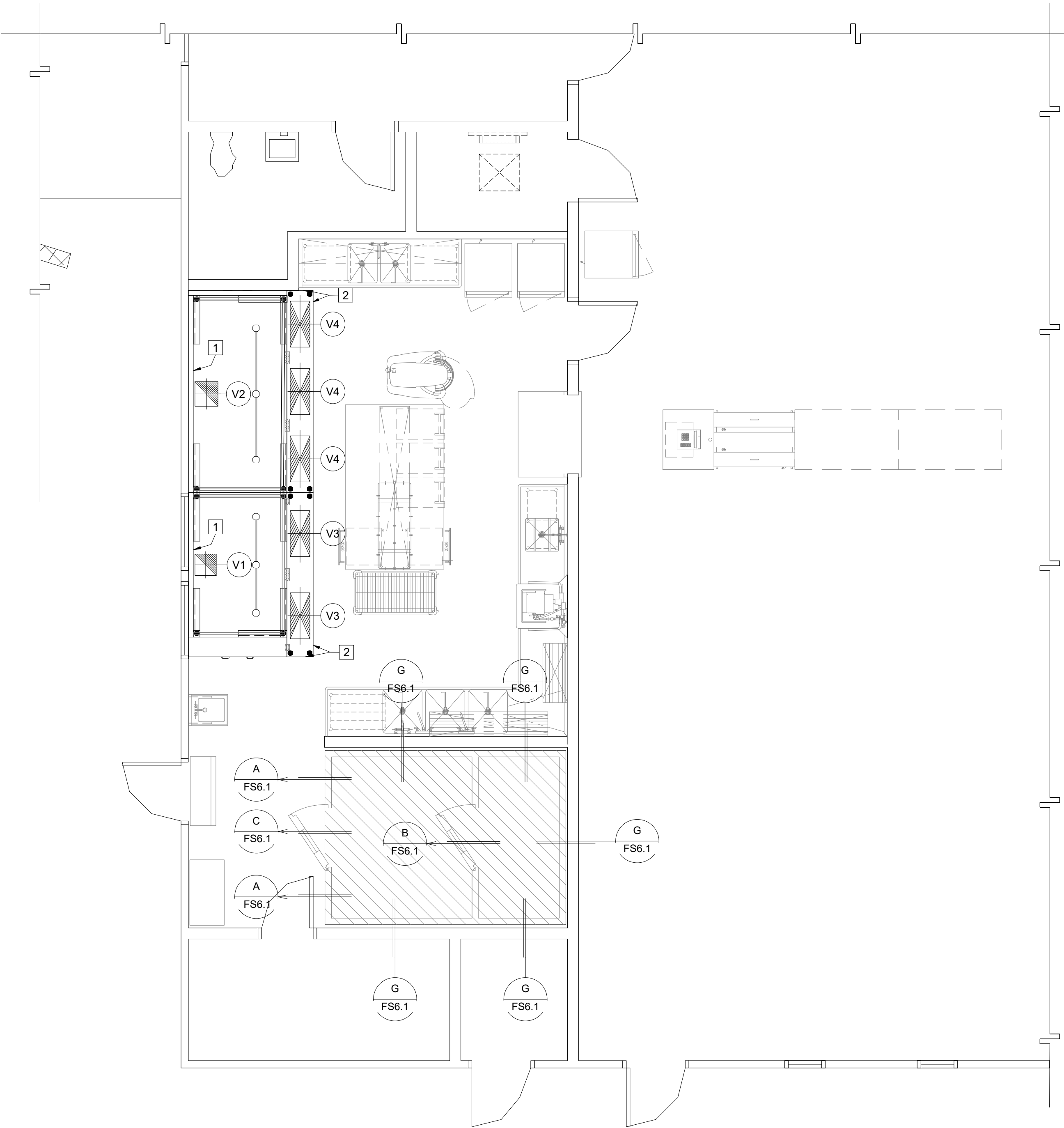


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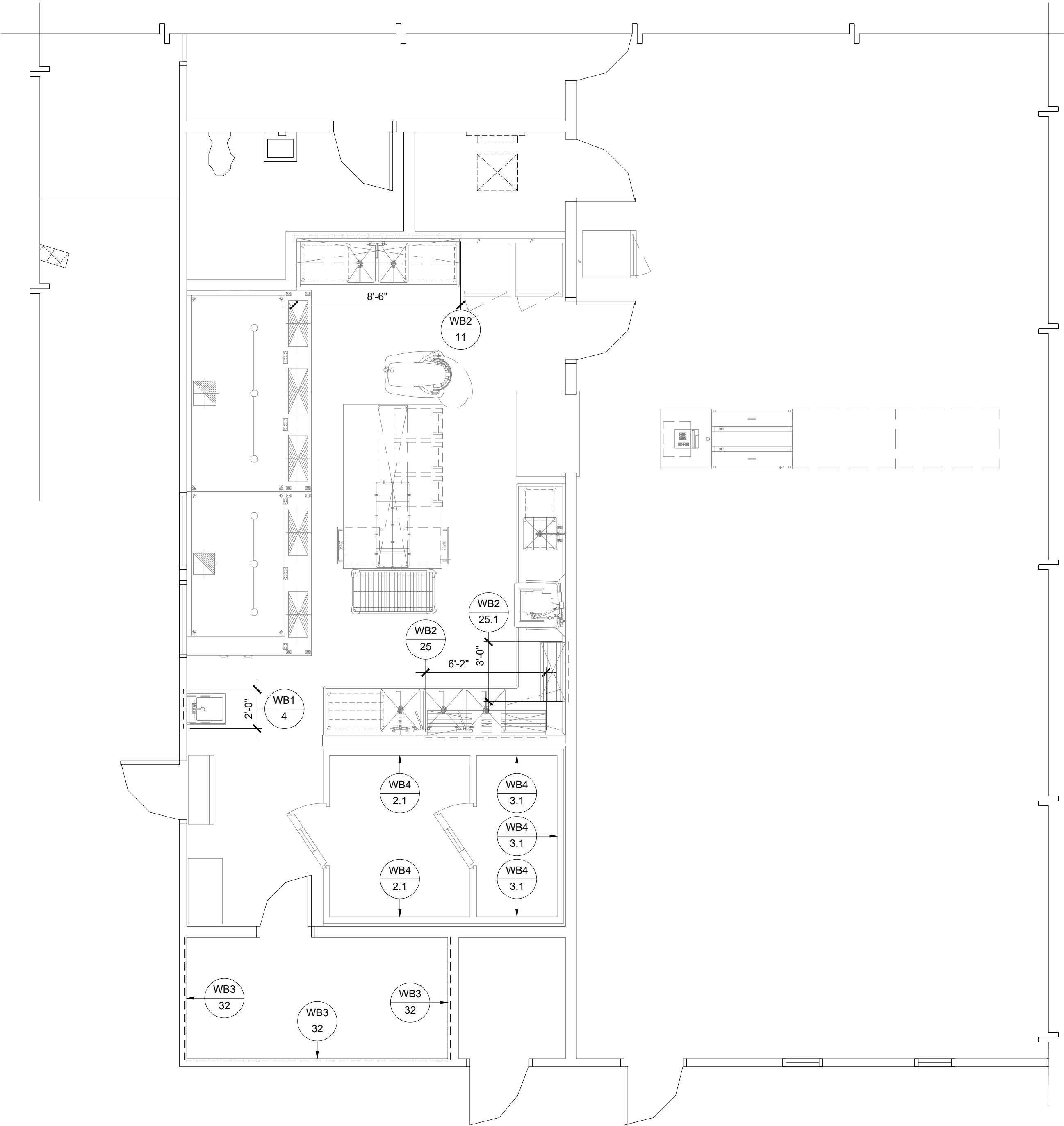
OF XX SHEETS



FOODSERVICE EQUIPMENT MECHANICAL PLAN

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

1
FS4.1



FOODSERVICE EQUIPMENT BLOCKING PLAN

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

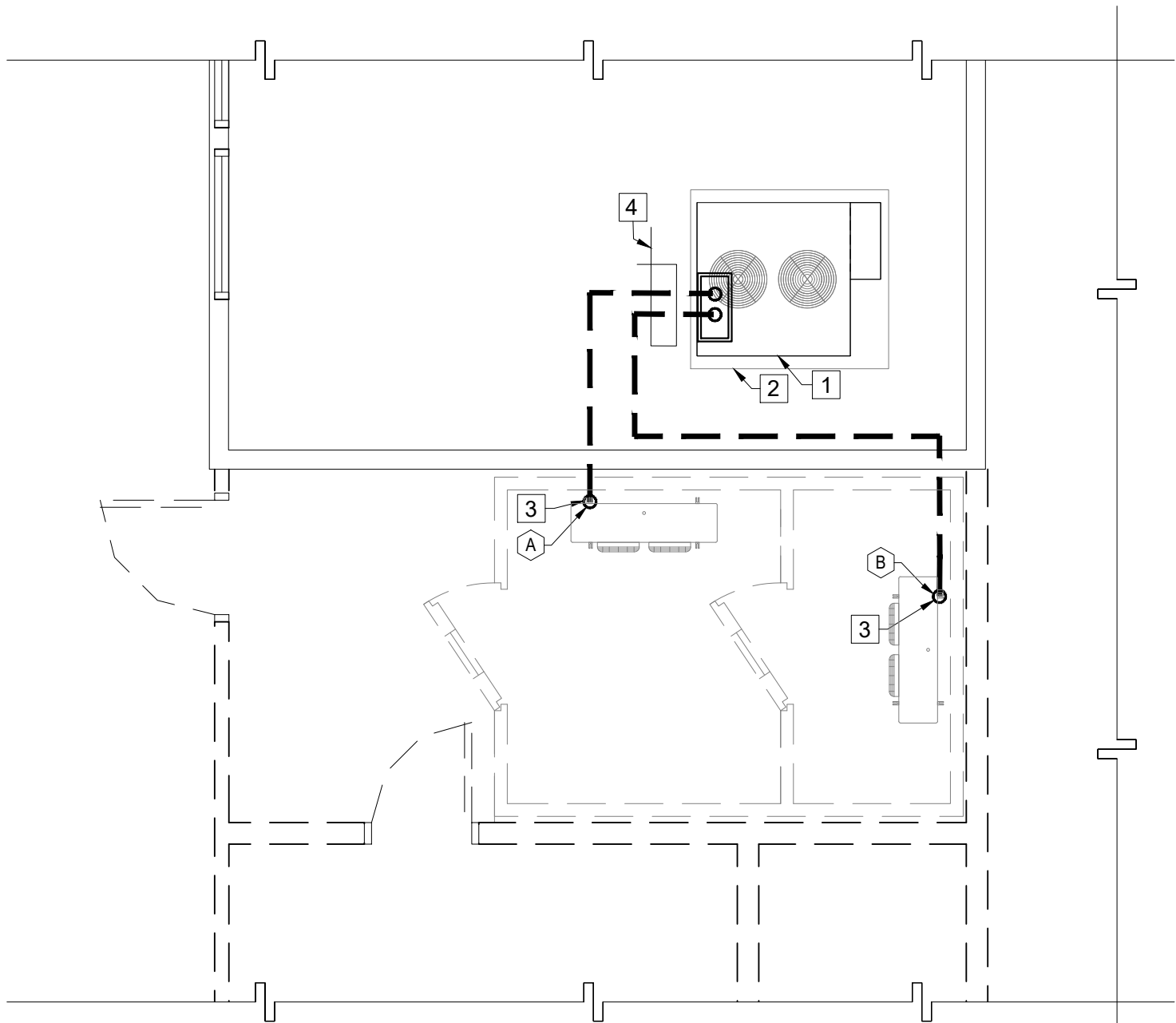
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MECHANICAL & REFRIGERATION SHEET NOTES

- 1 18 GA. STAINLESS STEEL WALL LINING PANELS (MINIMUM WIDTH TO BE 36") WITH 1" MINERAL WOOL BLANKET AND WIRE MESH BACKING OR CERAMIC FIBER BLANKET AND WIRE MESH BACKING SPACED OUT 1" ON NON-COMBUSTIBLE SPACERS WALL LINING TO MEET THE REQUIREMENTS OF NFPA-96 AND LOCAL CODES. WALL LINING SHALL BE FABRICATED WITH VERTICAL FLUTES EVERY 6" AS SHOWN G/FS8.1
- 2 CLOSURE SKIRTING REFER 5/FS5.1

MECHANICAL LEGEND

ABREV/SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
F.S.E.C	FOODSERVICE EQUIPMENT CONTRACTOR		ROUND DUCT CONNECTION
M.C.	MECHANICAL CONTRACTOR		CONCRETE CURB
S.F.	STAINLESS STEEL FABRICATOR		CONCRETE DEPRESSION
G.C.	GENERAL CONTRACTOR		WALL BACKING NO. / EQUIPMENT ITEM NO. REFER TO 2/FS4.2
E.C.	ELECTRICAL CONTRACTOR		WALL BACKING
CFM	CUBIC FEET PER MINUTE		REMOTE COMPRESSOR (ON REFRIGERATION RACK)
SP	STATIC PRESSURE		REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEETS FS7.1 & FS7.2)
1	SHEET NOTE SYMBOL (SEE SHEET NOTES FS4.1)		REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
	EXHAUST DUCT CONNECTION		REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
	SUPPLY DUCT CONNECTION		
V/#	VENTILATING SCHEDULE REFERENCE REFER TO FS4.2 FOR SCHEDULE		
	VENT TO ROOF		



MECHANICAL ROOF PLAN

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

1
FS4.2

VENTILATING REQUIREMENTS										
DUCT NO.	ITEM NO.	DESCRIPTION	ITEM QTY.	RISER SIZE					OUTLET HEIGHT	REMARKS
				ROUND	WIDTH	LENG.	CFM	S.P.-WC"		
V1	5	EXHAUST DUCT EXHAUST HOOD #1	1EA.		13"	13"	1760	-0.642"	+108"	MAKE DUCT CONNECTION AT HOOD COLLAR REFER TO 1/FS5.1 FOR EXHAUST HOOD DETAILS
V2	5	EXHAUST DUCT EXHAUST HOOD #2	1EA.		14"	15"	2250	-0.716"	+108"	
V3	5	SUPPLY DUCT EXHAUST HOOD #1	2EA.		12"	28"	704	0.187"	+108"	
					12"	28"	704	0.187"	+108"	
V4	5	SUPPLY DUCT EXHAUST HOOD #2	3EA.		12"	28"	600	0.139"	+108"	
					12"	28"	600	0.139"	+108"	

COOKING EXHAUST HOOD NOTES

1. - EACH AREA CONTAINING COOKING EXHAUST HOOD(S) WILL HAVE 80% MECHANICAL MAKE-UP AIR PROVIDED IN THE VOLUME OF THE AIR BEING EXHAUSTED.
2. - MAKE-UP AIR SHALL BE DELIVERED IN THE PROXIMITY OF THE EXHAUST HOOD(S) IN A MANNER NOT TO CREATE UNDUE AIR TURBULENCE IN THE WORKING AREAS.
3. - COOKING HOOD(S) EXHAUST AND MAKE-UP AIR SYSTEM(S) WILL BE CONNECTED BY AN ELECTRICAL INTER-LOCKING SWITCH.
4. - MAKE-UP AIR INTAKE MUST CLEAR AIR EXHAUST DISCHARGE BY A MINIMUM OF TEN (10) FEET, OR AS REQUIRED BY CODE(S).
5. - LOCATION OF COOKING HOOD EXHAUST DUCT(S) AND MAKE-UP AIR SYSTEM DUCT(S) ARE TO BE VERIFIED AT THE JOB SITE.
6. - IF REQUIRED BY LOCAL CODE(S), MAKE-UP AIR SYSTEM(S) SHALL BE CAPABLE OF DELIVERING TEMPERED AIR AT 70 DEGREES F...
7. - CONNECTING DUCTS FROM THE EXHAUST VENTILATORS TO THE EXHAUST AND/OR MAKE-UP AIR FANS SHALL BE SUPPLIED AND INSTALLED WITH ALL FINAL CONNECTIONS.
8. - PERFORMANCE TESTING FOR THE OPERATION OF THE TYPE 1 EXHAUST HOOD PER U.M.C. IS REQUIRED
9. - EXTRACTOR HOODS SHALL COMPLY TO THE C.M.C 2013, NFPA-96, U.L., N.S.F., AND ALL LOCAL CODES AN ORDINANCES.

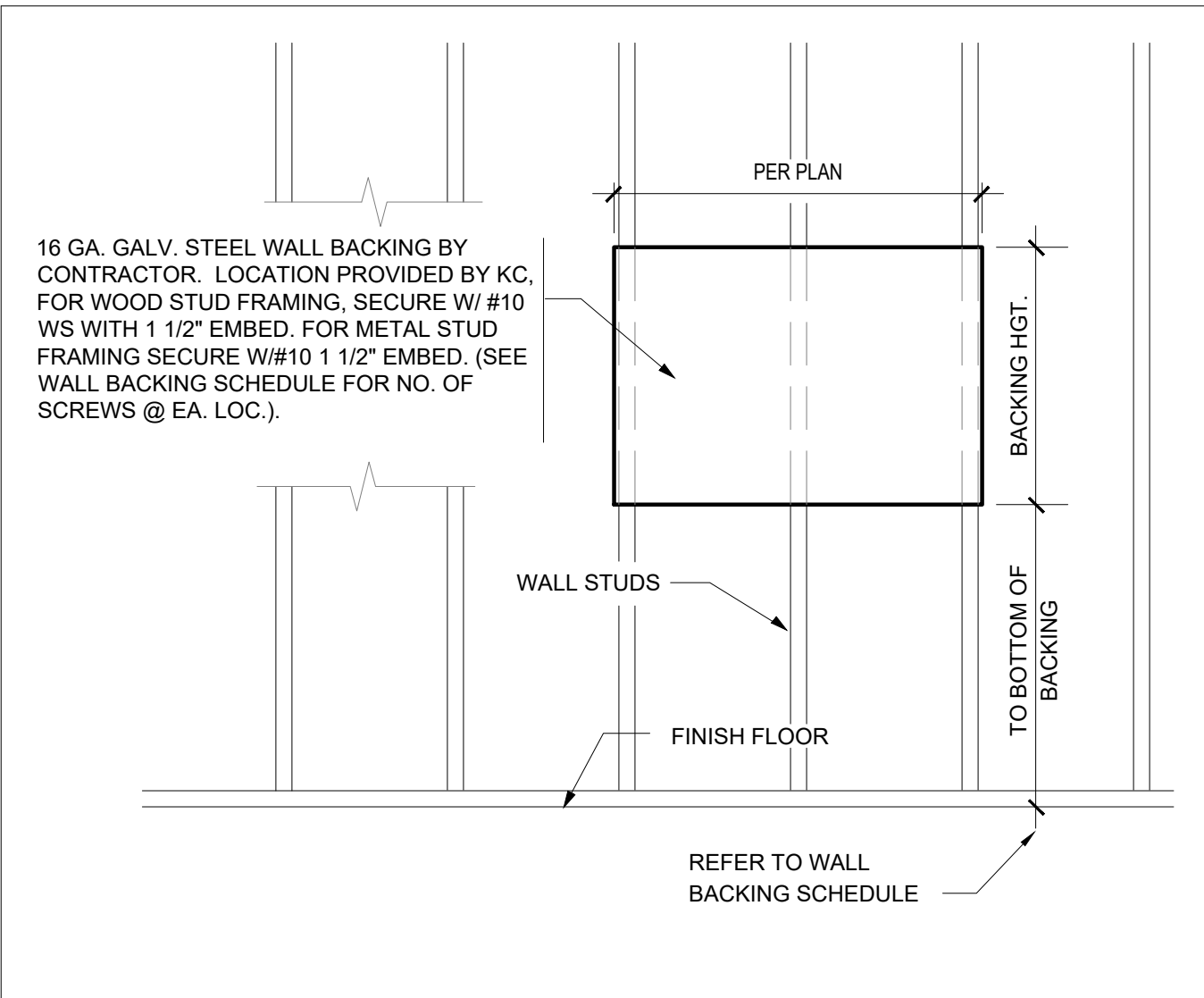
WALL BACKING NOTES

1. - WALL BACKING TO BE 16 GAUGE GALV. STEEL IN LENGTH AND HEIGHT AS SHOWN ON DRAWINGS.
2. - ALL WALL BACKING TO BE IN FURNISHED AND INSTALLED BY CONTRACTOR
3. - FOOD SERVICE EQUIPMENT CONTRACTOR IS TO FURNISH CONTRACTOR WITH DETAILED DRAWINGS SHOWING ALL WALL BACKING LOCATION AND SIZE.
4. - WALL BACKING AS SHOWN IS MINIMUM, EXTEND BACKING TO NEXT STUD EACH DIRECTION AS NECESSARY

WALL BACKING SCHEDULE

	APPLICATION	BOTTOM OF BACKING	BACKING HGT.	FASTENERS PER STUD	ANCHORAGE DETAIL
WB1 ITEM	HAND SINK	+12" AFF	24" HIGH	4	E/FS8.2
WB2 ITEM	WALL SHELF	+48" AFF	12" HIGH	4	H/FS8.1
WB3 ITEM	DRY STO. SHELVING	+57"AFF	12" HIGH	2	F/FS8.2
WB4 ITEM	COLD STO. SHELVING	+16"AFF +57"AFF	12" HIGH	2 PER POST BRACKET	G/FS8.2

- NOTES:
1. BACKING TO BE 16 GA. G.I. or C.R.S.
2. REFER TO 2/FS4.1 FOR WALL BACKING LOCATIONS
3. DRY STO. SHELVING, FASTEN SHELVING TO BACKING WITH #14 SMS.
4. COLD STO. SHELVING, 18GA G.I. STRAP FOAMED IN WALL BY MANUFACTURER. FASTEN SHELVING TO STRAP WITH #14 SMS.



WALL BACKING DETAIL

SCALE : NONE

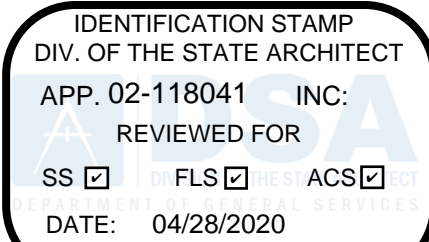
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MECHANICAL & REFRIGERATION SHEET NOTES

- 1 REMOTE REFRIGERATION SYSTEM REFER TO FS7.1 EQUIPMENT LOCATED ON BUILDING ROOF
- 2 REMOTE REFRIGERATION EQUIPMENT PLATFORM REFER TO E/FS7.1
- 3 REFRIGERATION LINES STUB-DOWN FROM ABOVE, PENETRATE CEILING OF WALK-IN TO EVAP COIL SEE DETAIL D/FS7.2
- 4 REFRIGERATION LINES RUN ABOVE CEILING LINE FROM REFRIGERATION RACK TO DROP-DOWN POINT ABOVE WALK-IN REFRIGERATOR / FREEZER COIL (REFRIG. LINE RUN ROUTES SHOWN ARE SCHEMATIC ONLY) REFRIGERATION LINE ROUTES WILL BE FIELD VERIFIED WITH STRUCTURE

FOODSERVICE REFRIGERATION LEGEND

ABREV./SYMB.	DESCRIPTION
	CONDUIT FOR REFRIGERATION LINES (RUN UNDER FLOOR)
	REMOTE COMPRESSOR (ON REFRIGERATION RACK)
	REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEETS FS7.01 & FS7.02)
	REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
	REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
	SELF-CONTAINED REFRIGERATED BASE AND/OR EQUIPMENT
	ACCESS PULL-BOX FOR REFRIG. LINES (IN THE WALL)
	KEYNOTE SYMBOL (SEE SHEET NOTES FS4.02)



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KITCHEN RENOVATION
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FOODSERVICE EQUIPMENT
MECHANICAL SCHEDULE

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CAPRATE FILTERS ARE BUILT IN COMPLIANCE WITH

NSF
UL
IMC

**Caprate #996
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)**

FILTER COLLECTION EFFICIENCY

2" Caprate #996 500 Solo Filter

RESISTANCE VS. AIRFLOW - 2" Caprate #996 500 Solo Filter

RESISTANCE (in 100)

AIRFLOW (cfm)

PARTICLE DIAMETER (µm)

100
90
80
70
60
50
40
30
20
10
0

0.1 1 10 100

0 200 400 600 800 1000

0 0.2 0.4 0.6 0.8 1.0 1.2 1.4

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE 5-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS CONSTRUCTED OF 430 STAINLESS STEEL, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

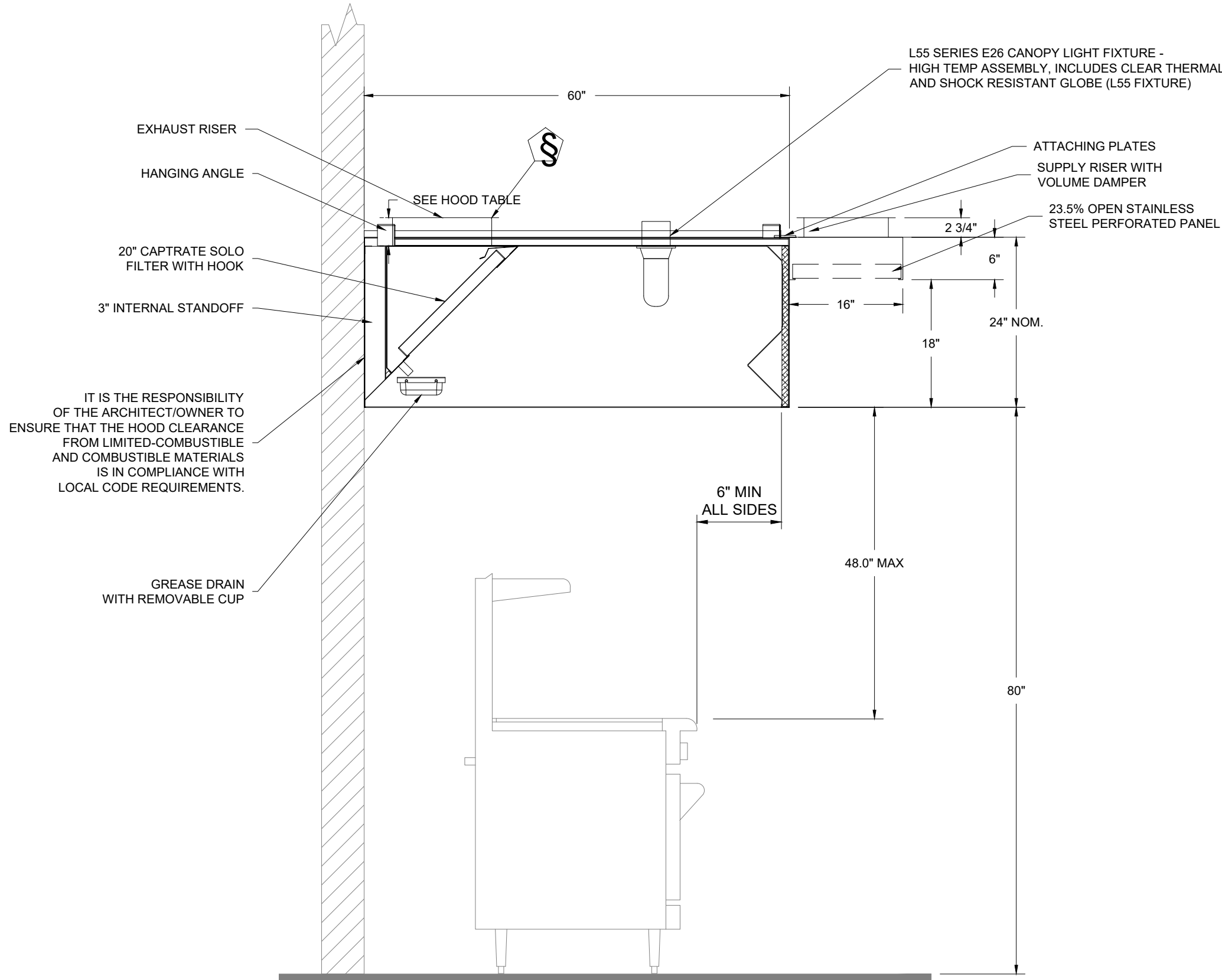
***GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 90% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

FILTER INFORMATION - CAPTRATE GREASE STOP SOLO						
NOMINAL SIZE (H x W)	ACTUAL DIMENSIONS (H x W x D)	FREE AREA (SQ. FEET)	WEIGHT (POUNDS)	VELOCITY (FEET PER MINUTE)	STATIC PRESSURE (WATER GAGE)	
20 x 20	15.5" x 15.5" x 1.78"	11	2.8	100	0.25	
16 x 16	15.5" x 15.5" x 1.78"	7.8	8.9	125	0.50	
16 x 20	15.5" x 19.5" x 1.78"	1.78	9.1	150	0.45	
12 x 16	15.5" x 15.5" x 1.78"	3.9	17.4	175	0.75	
12 x 20	15.5" x 19.5" x 1.78"	1.23	6.8	200	0.90	
12 x 16	11.5" x 15.5" x 1.78"	0.96	5.6	225	1.00	
12 x 20	15.5" x 19.5" x 1.78"	1.00	26.0	250	1.25	
10 x 16	9.5" x 15.5" x 1.78"	0.78	4.6	275	1.50	

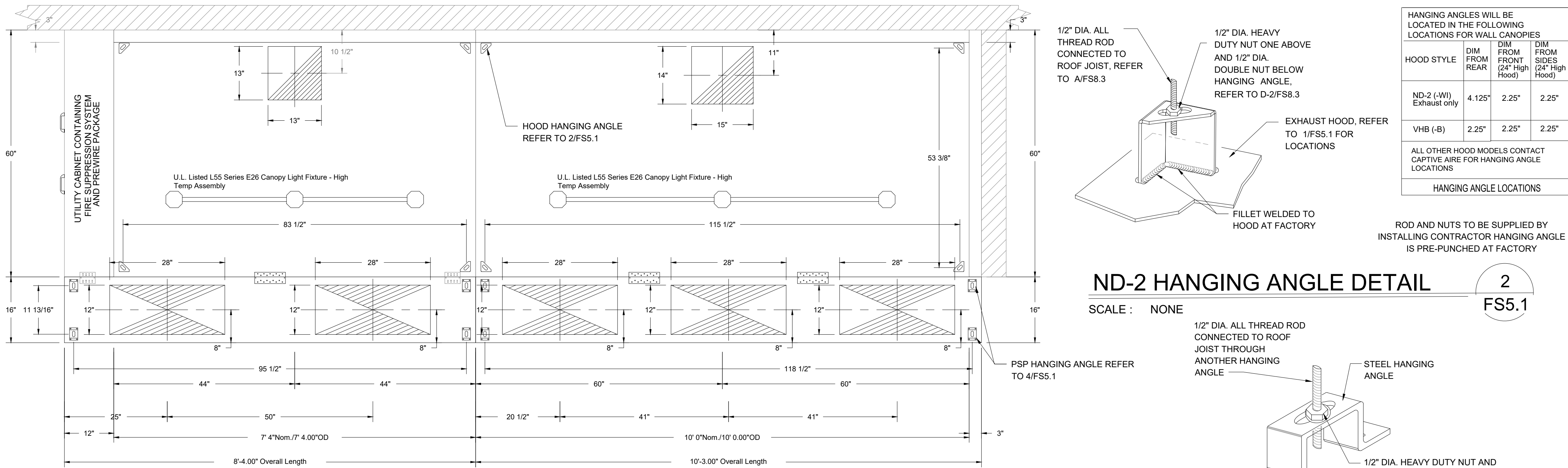
- NFPA #99
- NSF
- ETL Listed
- CALIFORNIA MECHANICAL CODE
- INTERNATIONAL MECHANICAL CODE



1/2 Pint Grease Cup Detail

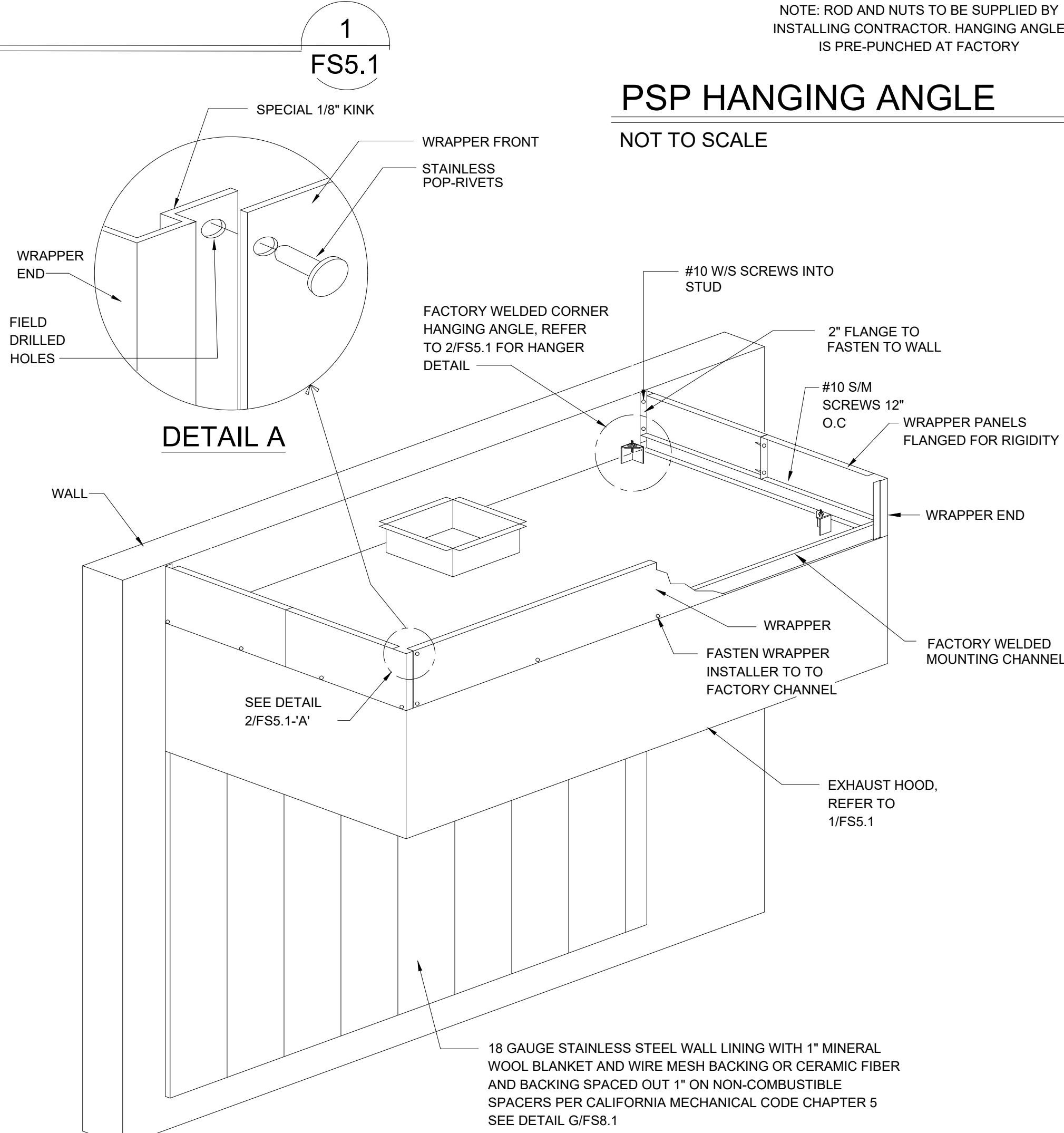


EXHAUST HOOD No.10 - SECTION



PLAN VIEW - Hood #2
10' 0.00" LONG 6024ND-2-PSP-F

SCALE : 3/4" = 1'-0"

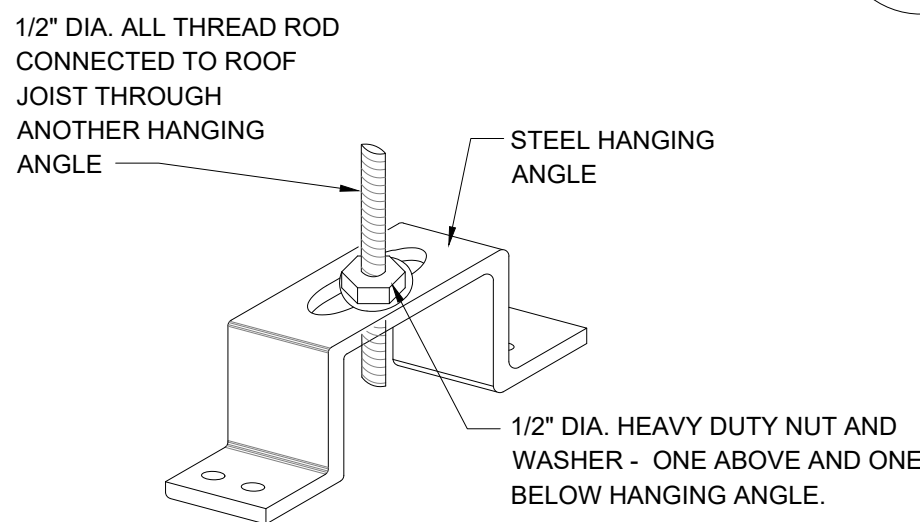


SCALE : NONE

HANGING ANGLES WILL BE LOCATED IN THE FOLLOWING LOCATIONS FOR WALL CANOPIES			
HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24" High Hood)	DIM FROM SIDES (24" High Hood)
ND-2 (-WI) Exhaust only	4.125"	2.25"	2.25"
VHB (-B)	2.25"	2.25"	2.25"
ALL OTHER HOOD MODELS CONTACT CAPTIVE AIRE FOR HANGING ANGLE LOCATIONS			
HANGING ANGLE LOCATIONS			

ROD AND NUTS TO BE SUPPLIED BY
INSTALLING CONTRACTOR HANGING ANGLE
IS PRE-PUNCHED AT FACTORY

SCALE : NONE



NOTE: ROD AND NUTS TO BE SUPPLIED BY
INSTALLING CONTRACTOR. HANGING ANGLE
IS PRE-PUNCHED AT FACTORY

NOT TO SCALE

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	APPLIANCE DUTY	DESIGN CFM/ft	TOTAL EXH. CFM	EXHAUST PLENUM RISER(S)						TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.		
								WIDTH	LENG.	HEIGHT	DIA.	CFM	VEL.			S. P.	END TO END	ROW
1		6024 ND-2-PSP-F	7' 4"	600 Deg.	Heavy	240	1760	13"	13"	4"	1760	1500	-0.642"	1408	304 SS 100%	LEFT	ALONE	
2		6024 ND-2-PSP-F	10' 0"	600 Deg.	Heavy	225	2250	14"	15"	4"	2250	1543	-0.716"	1800	304 SS 100%	RIGHT	ALONE	

HOOD NO.	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WGHGT	
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL			SWITCHES
												TYPE	SIZE	MODEL #			QUANTITY
1		Captrate Solo Filter	5	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO	Left	12"x60"x24"	Ansul R102	3.0/3.0			YES	564 LBS
2		Captrate Solo Filter	7	20"	16"	85% See Filter Spec.	3	L55 Series E26	NO							YES	564 LBS

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)			
							WIDTH	LENG.	DIA.	CFM
1		Front	100"	16"	6"	MUA	12"	28"	704	0.187"
						MUA	12"	28"	704	0.187"
						MUA	12"	28"	600	0.139"
2		Front	123"	16"	6"	MUA	12"	28"	600	0.139"
						MUA	12"	28"	600	0.139"
						MUA	12"	28"	600	0.139"

1. PROVIDE 22 GA. S/S WRAPPER AT ALL OPEN SIDES
2. S/S WRAPPER TO BE INSTALLED FROM TOP OF VAPOR HOOD TO FINISHED CEILING AT ALL OPEN SIDES
3. SEAL ALL GAP WITH SILVER OR GRAY SEALANT

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KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT EXHAUST HOOD PLAN

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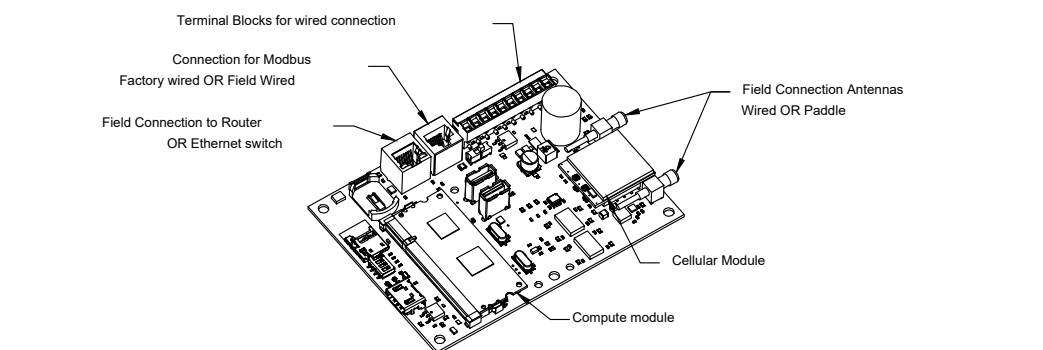
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ELECTRICAL PACKAGE - Job#4025056

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	#	H.P.	VOLT	FLA
1		DCV-1111	Utility Cabinet Left	08 - Ship Loose w/ Prewire	1 Light 1 Fan	Smart Controls DCV	Exhaust	3	3,000	208	10.2
							Supply	3	2,000	208	6.1

All fans must have inverter duty motors, and all conduits from the load side of the VFDs must be separate and dedicated.

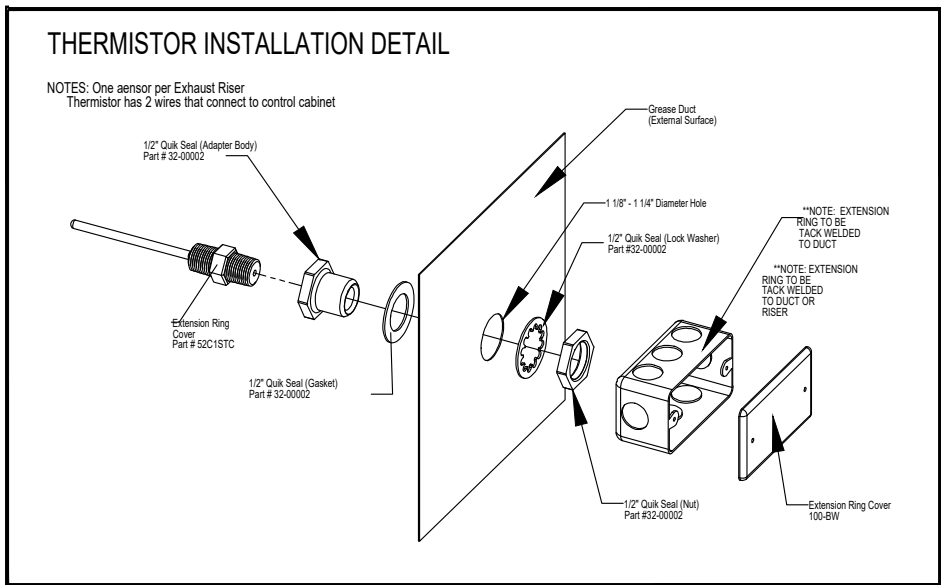
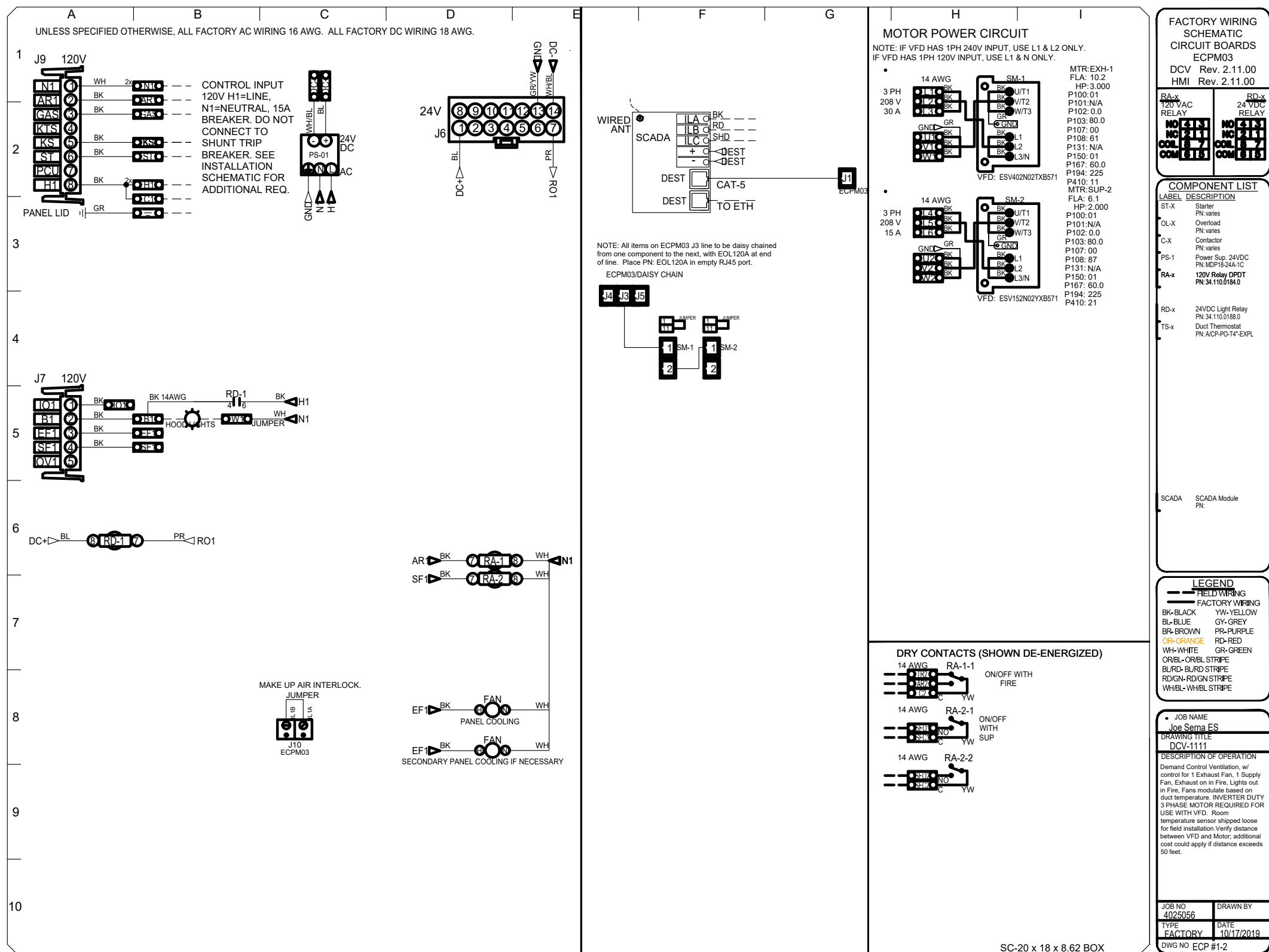
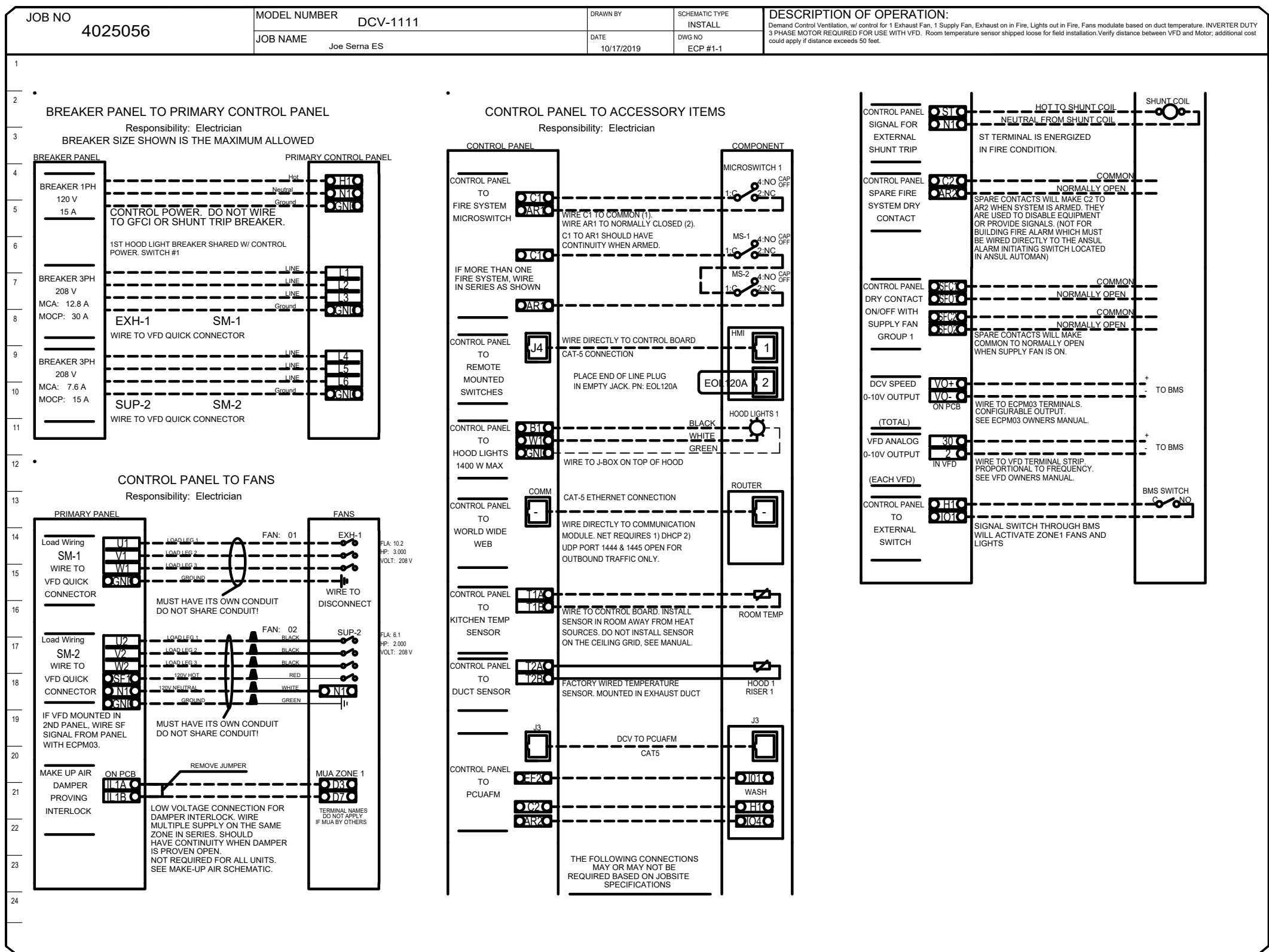


CASlink Monitor and Control

- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR	MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Faults	MONITOR
Fan Power	MONITOR	Fan Status	MONITOR
VFD Faults	MONITOR	PCU Faults	MONITOR
Controller Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Fan Faults	MONITOR	Fine Condition	MONITOR
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Filter Clog Percentages	MONITOR	Fans Button(s)	MONITOR & CONTROL
Fine Condition	MONITOR	Lights Button(s)	MONITOR & CONTROL
CORE Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressures	MONITOR		
Prep Time Button	MONITOR & CONTROL		
Fans Button	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		



CABINET MOUNTED DCV

Room Temperature Sensor
-Install on wall somewhere in the space but not directly under the hood or close to an appliance so that the reading is not affected by it.

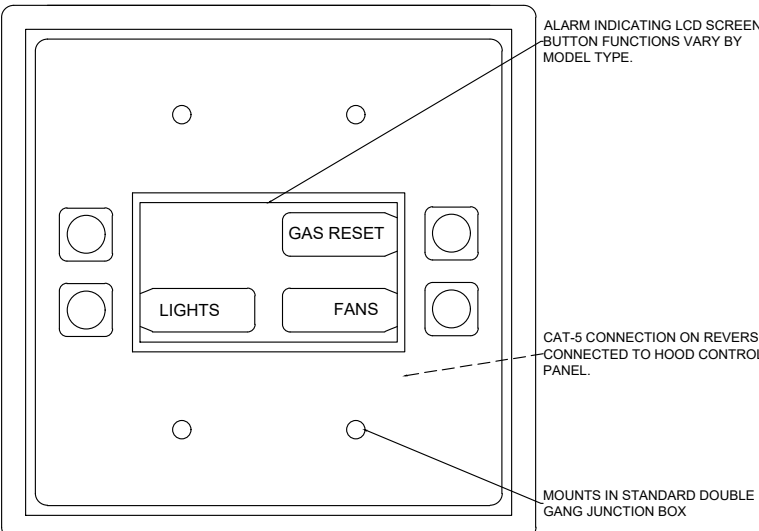
ROOM TEMP SENSOR

TEMPERATURE SWITCH

TYPICAL ENERGY MANAGEMENT SYSTEM

ENERGY MANAGEMENT SYSTEM

TOUCH-SCREEN USER INTERFACE



These products and others are available for demonstration at the Northern CA display center
--For more information or questions Contact--
Captive Aire Systems
1110 Burnett Ave, Suite G, Concord, CA 94520
Phone: (925)962-1999, Fax (925)566-8565
Email reg92@captiveaire.com

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DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC.
REVIEWED FOR
SS ☐ FLS ☐ ACS ☐
DATE: 04/28/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT
EXHAUST HOOD PLAN

CONSULTANT



PROJECT NO.	REVISIONS	BY
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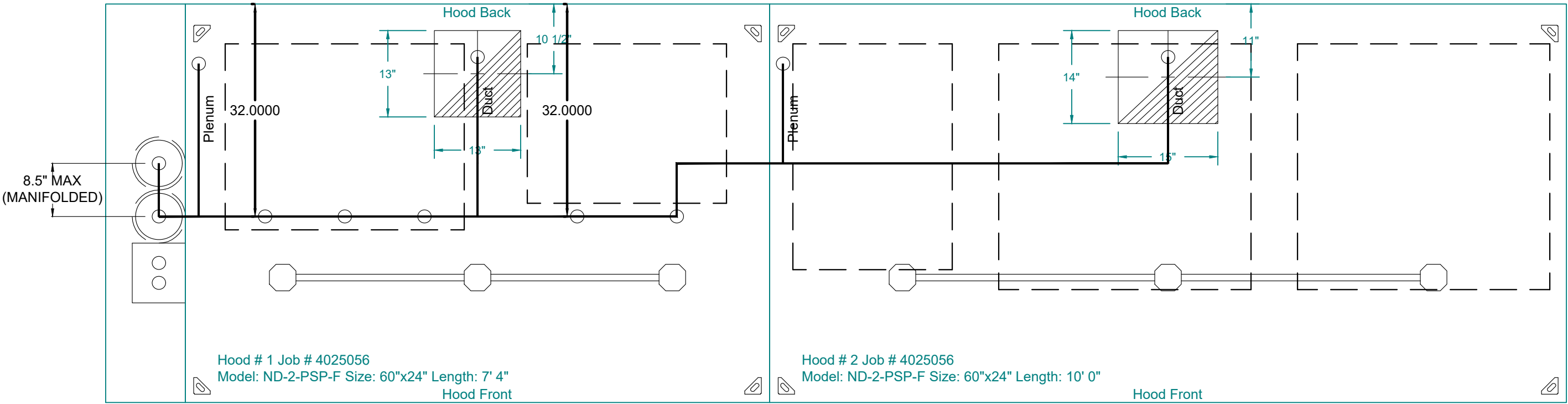
OF XX SHEETS

Fire System Information - Job#4025056

FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		Ansul R102	3.0/3.0	15	Fire Cabinet Left	Left

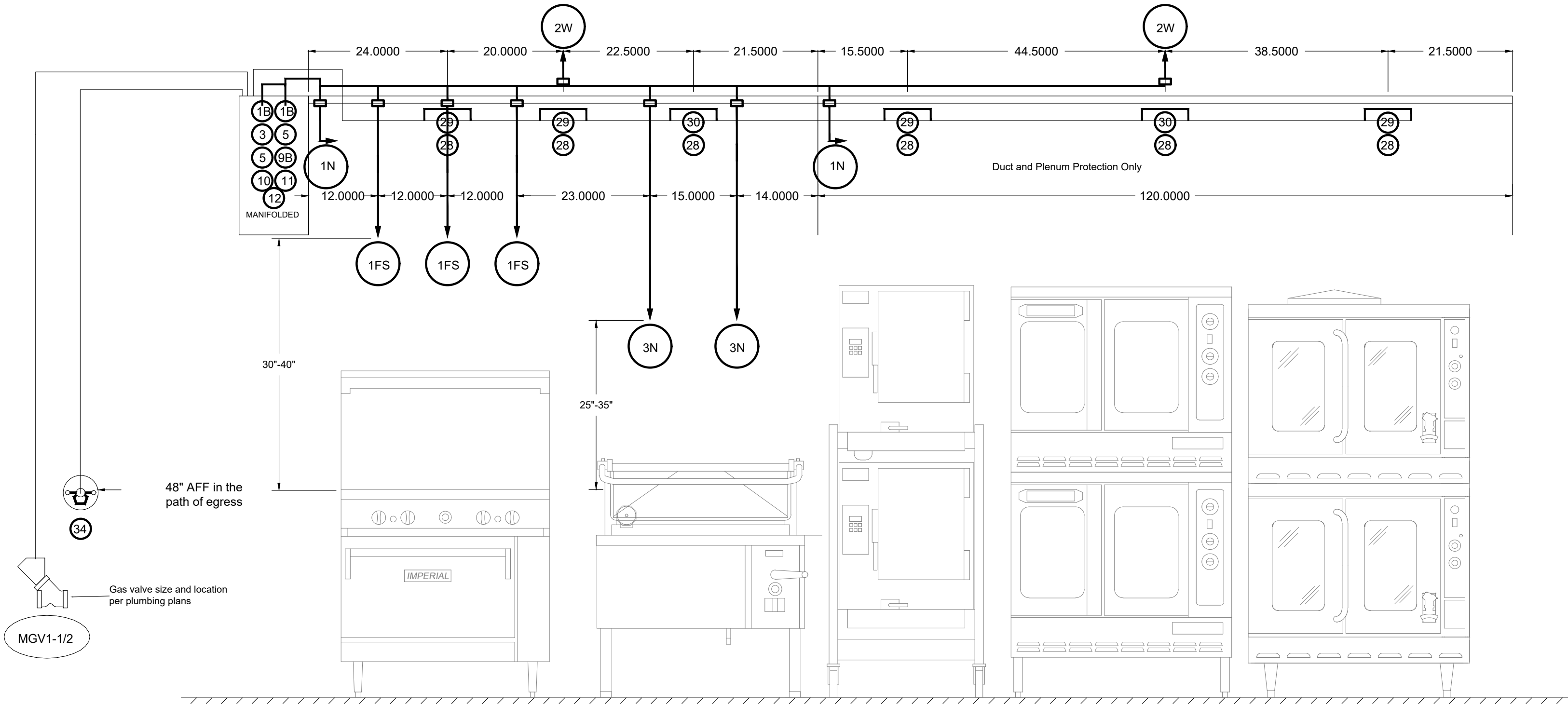
Fire System Parts List Key

FIRE SYSTEM NO.	TAG	KEY NUMBER - PART DESCRIPTION	QTY. BY FACTORY	QTY. BY DIST.
1		0 - 0 - DISC UNION Bursting Disc Union Assembly for Manifold System.	1	0
		0 - 0 - Tank Strap Tank Strap - used for ANSUL Tanks	2	0
		0 - 0 - UCTANKBRACKET Tank Bracket for fire system tank installation in utility cabinets	2	0
		1 - 1 - AT - 3.0 TANK(#1B) - 3.0 Gallon SS Tank (for use with Automan Release, Actuator, or SS Enclosure (UL/ULC)) Macola # 01-429862	2	0
		3 - 3 - ANS-OEM REGULATED RELEASE - Ansul Regulated Mechanical Release/Bracket Assembly, OEM, R-102. Cartridge Detection Included, Ansul Part # 79493	1	0
		5 - 5 - LIQ-3.0 AGENT - Ansulex Low PH Wet Chemical Agent, 3 Gallon (UL) 79372	0	2
		9 - 9 - DT-CART Double Tank Nitrogen Cartridge	0	1
		10 - 10 - TLINK LINK - Test Link (1 test link) Ansul Part # 24916, Macola # 20-24916	0	1
		11 - 11 - MICRO-SDA MICROSWITCH KIT- Includes 2 switches and Mounting Hardware, Single Dual Electric Switch, One Standard Switch, One Alarm Duty Switch Ansul Part # 437155, Macola # 08-437155	1	0
		12 - 12 - HOSE HOSE - Rubber Hose	1	0
		27 - 27 - OPSA-1/2 PULLEY SEAL - 1/2" Hood Seal (UL) Ansul Part # 423253, Macola # 32-79768	5	0
		34 - 34 - RPS-A REMOTE PULL STATION - Red composite (without wire rope) 434618 (Old Macola #06-4835)	1	0
		35 - 35 - PE-LT PULLEY ELBOW - Low Temp. Pulley Elbow, Set Screw Type Ansul Part # 415670, Macola # 11-415671	5	0
		36 - 36 - PE-HT PULLEY ELBOW - High Temp Pulley Elbow, Compression Type, Ansul Part # 423251, Macola # 10-45771	4	0



FIRE SYSTEM - PLAN VIEW

SCALE : 3/4" = 1'-0"



FIRE SYSTEM - ELEVATION VIEW

SCALE : 3/4" = 1'-0"

FIRE SYSTEM NOTES

GENERAL
CUSTOMER RESPONSIBLE FOR ADDITIONAL LABOR AND PARTS CHANGES AS A RESULT OF COOKING EQUIPMENT LAYOUT CHANGES OR MISINFORMATION AFTER RELEASE OF ORDER.
CUSTOMER RESPONSIBLE FOR ADDITIONAL TRIPS BY FIRE SYSTEM DISTRIBUTOR DUE TO JOB SITE DELAYS.
UNION LABOR CHARGES, IF REQUIRED, ARE EXTRA.

GAS VALVE
MECHANICAL OR ELECTRICAL GAS VALVE IS TO BE INSTALLED BY PLUMBING CONTRACTOR. PLUMBING PERMIT REQUIRED FOR GAS VALVE INSTALLATION.

ELECTRIC SHUT OFF
ELECTRICAL COOKING EQUIPMENT MUST BE SHUT OFF WHEN FIRE SYSTEM IS ACTIVATED. ELECTRICAL CONTRACTOR IS TO PROVIDE SHUT OFF CONTACTS OR SHUNT TRIP BREAKERS. THE DESIGN OF THE FIRE SYSTEM SHALL COMPLY WITH S.M.A.C.N.A. GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS. O.S.H.P.D. APPROVED ANCHORAGE R-0010 SUPPORTS AND BRACING OF PIPE & CONDUIT.

IF APPLICABLE TO LOCAL CODE
EXISTING FIRE ALARM SYSTEM MUST BE INTERCONNECTED TO THE ANSUL SYSTEM.

FIRE SUPPRESSION SYSTEM TEST
THE TEST WILL BE CONDUCTED IN FRONT OF A SYSTEM INSPECTOR WITH A NITROGEN CARTRIDGE WITH BALLOONS COVERING THE SYSTEM NOZZLES. THE TEST WILL BE CONDUCTED SIMULATING THE REMOTE AND AUTOMATIC ACTUATION.

REMOTE PULL STATION
4-0 BOX WITH 1/2" KO'S POSITIONED AS SHOWN WITH TABS IN THE UPPER RIGHT AND LOWER LEFT OF BOX. TO BE 48" ABOVE FINISHED FLOOR 10' EMT. TO BE 12" ABOVE FINISHED DROP CEILING LINE WITHOUT BENDS OR OFFSETS. ONE 4-0 BOX TO BE PROVIDED FOR EACH REMOTE PULL STATION WHEN TWO REMOTE PULLS ARE MOUNTED SIDE BY SIDE. THE DISTANCE BETWEEN CENTERS SHALL BE NO LESS THAN 7".

INSTALLATION/PIPING NOTES
REGULATED RELEASE ASSEMBLY, REGULATED ACTUATOR ASSEMBLY, AND TANK ENCLOSURE MUST BE LOCATED IN AREAS WHERE AIR TEMPERATURE WILL NOT FALL BELOW 32 DEGREES F OR EXCEED 130 DEGREES F.

1. MOUNT THE REGULATED RELEASE ASSEMBLY AND EACH REGULATED ACTUATOR ASSEMBLY REQUIRED BY COMPLETING THE FOLLOWING STEPS:
A. SELECT A RIGID SURFACE FOR MOUNTING THE ENCLOSURE. THE MOUNTING LOCATIONS MUST ALLOW THE REGULATED RELEASE ASSEMBLY AND THE REGULATED ACTUATOR ASSEMBLY TO BE WITHIN THE LIMITATION OF THE ACTUATION AND EXPELLANT GAS LINE LENGTHS AND MUST BE ABLE TO SUPPORT THE WEIGHT OF THE ASSEMBLY. NOTE: WALL MOUNTED SYSTEMS ONLY.
B. DETACH THE COVER FROM THE ENCLOSURE. REMOVE AGENT TANK FROM ENCLOSURE AND THE EXPELLANT GAS LINE HOSE FROM THE TANK/ADAPTOR ASSEMBLY.
C. SECURE ENCLOSURE BOX TO SELECTED MOUNTING LOCATION USING THE FOUR MOUNTING HOLES. USE APPROPRIATE TYPE OF FASTENERS DEPENDING ON THE MOUNTING SURFACE. WALL MOUNTED SYSTEMS.

SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY C.A.S. OR FIRE DISTRIBUTOR.
ALL PIPE FOR 1.5/2.4 GALLON SYSTEM IS 1/4".
ALL PIPE FOR 3.0/3.5 GALLON SYSTEM IS 3/8".
ALL PIPE SHALL BE BLACK IRON SCHEDULE-40.
ALL EXPOSED PIPE SHALL BE CHROME SLEEVED.
NOZZLES SHALL BE A MAXIMUM OF 50" ABOVE SURFACE OF COOKING EQUIPMENT.

NOTES

- FIELD PIPE DROPS AS SHOWN
- SLEEVING, ELBOWS, TEES, AND NOZZLES SUPPLIED BY CAS
- RELOCATE NOZZLES IF FLOW PATTERN IS BLOCKED BY SHELVEING, SALAMANDERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE.

- IF APPLICABLE, PRE-PIPED CHARBROILER DROPS ARE SHIPPED LOOSE.
- FACTORY PIPING EXTENDS A MAXIMUM OF 6" ABOVE THE TOP OF THE HOOD.

- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE, NOT THE OVERALL APPLIANCE SIZE.

- THIS FIRE SYSTEM COMPLIES WITH U.L. 300 REQUIREMENTS

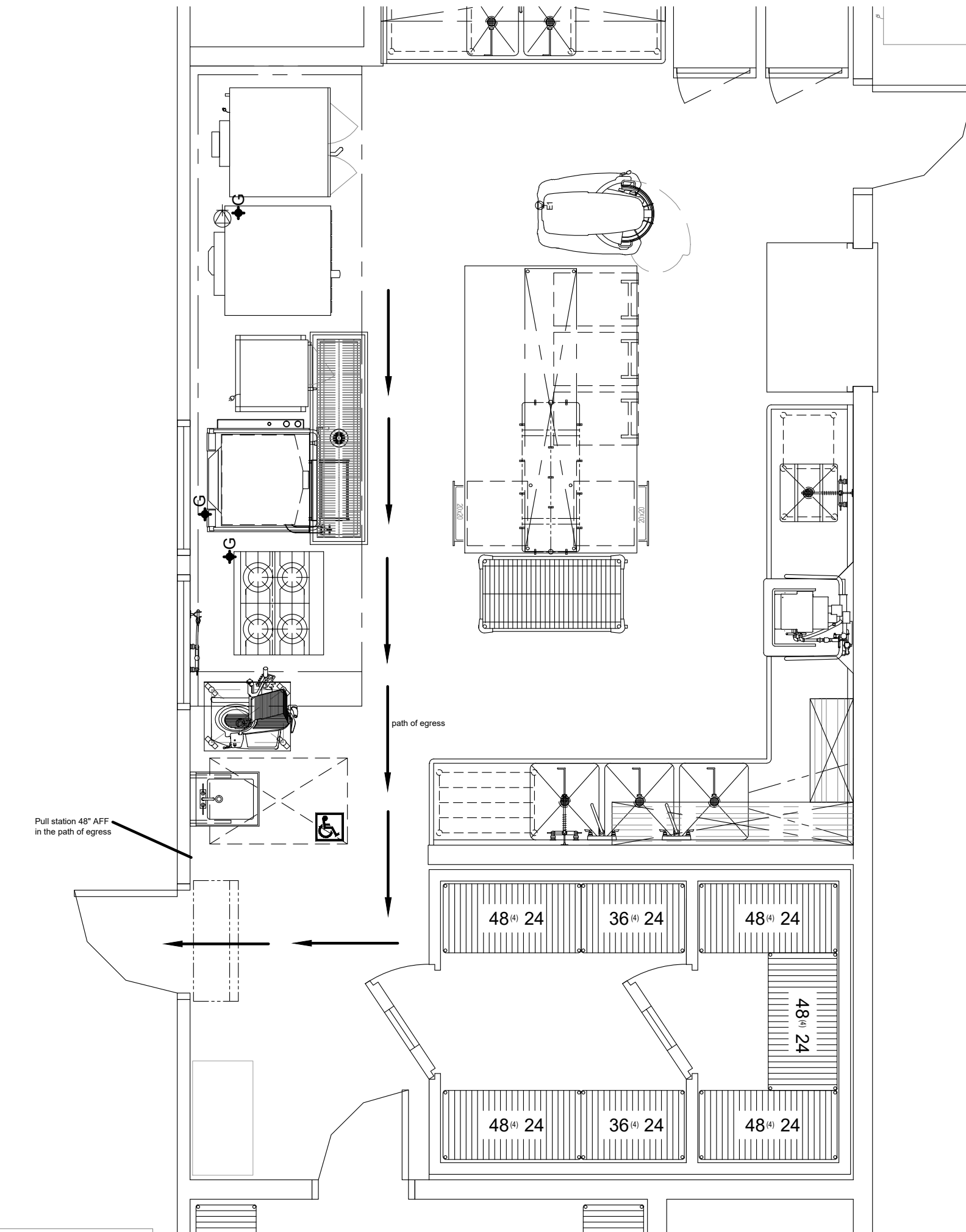
Job #: 4025056

Job Name: Joe Serna ES

System Size: ANSUL-3.0/3.0-MANIFOLD Total FP required: 15
Hood # 1 7' 4.00" Long x 60" Wide x 24" High
Riser # 1 Size: 13" x 13"
Hood # 1 Metal Blow-Off Caps included.
Hood # 2 10' 0.00" Long x 60" Wide x 24" High
Riser # 1 Size: 14" x 15"
Hood # 2 Metal Blow-Off Caps included.

LEGEND - FIRE CABINET ANSUL SYSTEM

- 1A 1.5 GALLON TANK
- 1B 3 GALLON TANK
- 2 OEM AUTOMAN RELEASE
- 3 OEM REGULATED RELEASE
- 4 OEM REGULATED ACTUATOR
- 5 ANSULEX LIQUID AGENT (3 GAL.)
- 6 ANSULEX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (101-20)
- 8 CARTRIDGE (101-10)
- 9 CARTRIDGE (101-30)
- 9A CARTRIDGE (LT-A-101-30)
- 9B DOUBLE TANK CARTRIDGE
- 10 TEST LINK
- 11 DOUBLE MICROSWITCH
- 12 HOSE ASSEMBLY
- 1100 DUCT NOZZLE (430913)
- 2W DUCT NOZZLE (419337)
- 1W NOZZLE ASSEMBLY (419336)
- 1F NOZZLE ASSEMBLY (419333)
- 1N NOZZLE ASSEMBLY (419335)
- 1/2N NOZZLE ASSEMBLY (419334)
- 3N NOZZLE ASSEMBLY (419338)
- 245 NOZZLE ASSEMBLY (419340)
- 230 NOZZLE ASSEMBLY (419339)
- 2120 NOZZLE ASSEMBLY (419343)
- 290 NOZZLE ASSEMBLY (419342)
- 260 NOZZLE ASSEMBLY (419341)
- 28 DETECTOR BRACKET
- 29 LOW TEMP FUSIBLE LINK
- 30 HIGH TEMP FUSIBLE LINK
- MGV MECHANICAL GAS VALVE
- EGV ELECTRICAL GAS VALVE
- 34 REMOTE MANUAL PULL STATION
- S SWIVEL ADAPTOR



PATH OF EGRESS

SCALE : 3/4" = 1'-0"

3
FS5.3

15 FLOWPOINTS USED ON AN 22 FP
UL300 ANSUL R102 6.0 GALLON
SYSTEM

Flowpoint Chart				
Nozzle	FP	QTY	TTL FP	
2W	2	2	4	
1N	1	2	2	
1FS	1	3	3	
3N	3	2	6	
Total			15FP	

System Designed by
Matt Eidson
Ansul Certified Designer
Certificate valid until
9/04/2019



These products and others are available for demonstration at the Northern CA display center
--For more information or questions Contact--
Captive Aire Systems
1110 Burnett Ave, Suite G, Concord, CA 94520
Phone: (925)962-1999, Fax (925)566-8565
Email reg92@captiveaire.com

FILE NO. 39-50 APP NO. 02-118041

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HOUSTON (SERNA) SCHOOL

FOODSERVICE EXHAUST
HOOD FIRE SYSTEM

CONSULTANT



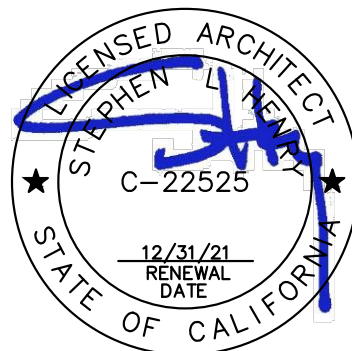
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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT
WALK-IN REFRIG. DETAILS

CONSULTANT



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EXPOSED EXTERIOR

INTERIOR

WALL PANEL TO RECESSED PRE-FAB FLOOR

THRESHOLD DETAIL FOR FREEZER DOOR

THRESHOLD DETAIL FOR REFRIGERATOR DOOR

THRESHOLD DETAIL FOR REFRIGERATOR DOOR

SUPPLEMENTAL LATERAL BRACING AT WALK-IN WALL PANEL

3-WAY INTERIOR & EXTERIOR PRESS SWITCH

3-WAY INTERIOR & EXTERIOR PRESS SWITCH

WALL PANEL AT BUILDING WALL

WALL PANEL AT BUILDING WALL

PRESSURE RELIEF PORT MODEL # 1830 DETAIL

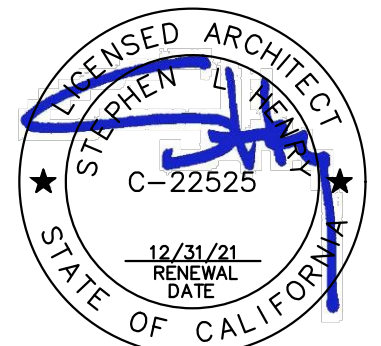
TYPICAL CAM LOCK CONNECTION DETAIL

TYPICAL CAM LOCK CONNECTION DETAIL

MODULARM CORP. MODEL 75 DETAIL

MODULARM CORP. MODEL 75 DETAIL

7330 Howe Avenue, Suite 450
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KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT WALK-IN REFRIG. DETAILS

CONSULTANT



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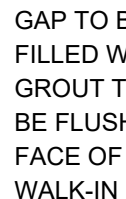
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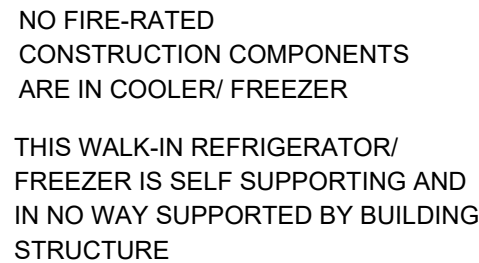
OF XX SHEETS



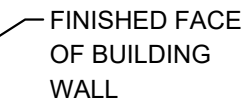
A | DOOR DETAIL



B FLOOR SECTION AT EXT. AND INT. OF REF/FREEZER



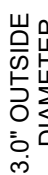
D	VERT. OVERTURN BRACE
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E	VERT. OVERTURN BRACE
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NOTE(S):

1. PROVIDED BY WALK-IN MANUF.



F	2" DIA. DIAL THERMOMETER
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WALK-IN COOLER/FREEZER ANCHORAGE NOTE:

WALK-IN COOLER/FREEZER TYPICAL NOTES:

APPLICATION - WALK-IN COOLER/FREEZER COMBO

4" HARD NOSE TONGUE & GROOVE HIGH DENSITY URETHANE PERIMETER (CFC FREE)
W/ SHT. MTL. FACING FLANGED 1/2" TO 3/4" PERIMETER OF EACH SHEET. CORNERS & T-PANELS
ONE-PIECE CONSTRUCTION W/ 1/2" RADIUS AT ALL INSIDE VERTICAL CORNERS, JOINTS SEALED W/
PVC GASKET AT INT. & EXT. PERIMETER OF PANELS. PANELS RIGID CONNECTION W/ CAM-LOCK
FASTENERS (WALL TO WALL: 48" O.C. MAX.; WALL TO CEILING: 24" O.C. MAX.; WALL TO FLOOR: 24"
O.C. MAX., IF APPLY)

INSULATION - 4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT. LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS SIMILAR TO ASTM E84 THE STEINER TUNNEL TEST) AND CLASS 'A' INTERIOR FINISH IN ACCORDANCE W/ NFPA 101, SECTION 6-2, AND NFPA 255. K-FACTOR NOT TO EXCEED 0.14 BTU/HOUR/SQ. FT./"F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE. UL REPORT (BLBT.R13780) FOR: SURFACE BURNING CHARACTERISTICS

FLOOR - 4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT, LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS INTERIOR FINISH IN ACCORDANCE W/ NFPA 101, 0.14 BTU/HOUR/SQ. FT./ F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE, RESULTS: FLAME SPREAD INDEX 25, SMOKE DEVELOPED INDEX: 400. FLOOR TO BE HEAVY DUTY FOR CARTS AND PALLET JACKS..

FINISH -	WALL INTERIOR -	.040 STUCCO EMBOSSED ALUMINUM WHITE FINISH
	WALL EXTERIOR (EXPOSED TO KITCHEN)	- 22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
	WALL EXTERIOR (UNEXPOSED) -	26GA. STUCCO EMBOSSED GALVANIZED STEEL
	CEILING INTERIOR -	.040 STUCCO EMBOSSED ALUMINUM WHITE FINISH
	FLOOR INTERIOR -	WEARING SURFACE TO BE .1875 ALUM. TREAD PLATE W/ MIN

DOOR(S) -	1EA.	42" X 80" INTERIOR - EXTERIOR - DEAD BOLT - HANDLE - HINGES - CLOSER - HEATER CABLE - VISION PANEL - INT KICKPLATES - EXT KICKPLATES - JAMB GUARDS -	COOLER, FLUSH IN-FITTING DOOR W/ MAGNETIC GASKET 22GA. STAINLESS STEEL - TYPE 304, #4 FINISH 22GA. STAINLESS STEEL - TYPE 304, #4 FINISH NONE K27 W/ INSIDE SAFETY RELEASE & DEAD BOLT LATCH (1) K1245 -SPRING LOADED RACK & PINION NONE 14" x 24" (NON-HEATED) 42" HIGH, DIAMOND TREAD PLATE ALUMINUM 42" HIGH, DIAMOND TREAD PLATE ALUMINUM INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM
-----------	------	---	---

1EA	42" x 80" INTERIOR - 22GA. STAINLESS STEEL - TYPE 304, #4 FINISH DEAD BOLT - NONE HANDLE - K27 W/ INSIDE SAFETY RELEASE & DEAD BOLT LATCH HINGES - (2) K1245 (1) K1248 -SPRING LOADED CLOSER - RACK & PINION HEATER CABLE - (4) SIDES OF DOOR OPENING VISION PANEL - 14" x 24" (HEATED) INT KICKPLATES - 42" HIGH, DIAMOND TREAD PLATE ALUMINUM EXT KICKPLATES - 42" HIGH, DIAMOND TREAD PLATE ALUMINUM JAMB GUARDS - INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM THRESHOLD - THRESHOLD COVER OVER HEATER WIRE
-----	---

ACCESSORIES -	4 EA.	INT. EXT. 3-WAY PRESS SWITCH MOTION SENSOR LIGHT SWITCH, WITH EXT. INDICATING RED LIGHT-FLUSH MTD
	2 EA.	MULTI-MONITOR & AUTOMATIC MODULAR #75LC HI/LO DIGITAL TEMP ALARM W/BATTERY LIGHT CONTROL BACK-UP. REMOTE NOTIFICATION DRY CONTACTS, AUTO LIGHT CONTROL INCLUDING INSIDE ILLUMINATED SWITCH W/PANIC ALARM FEATURE & SENOR LINE (120V, 30MA) ON WALL FACING KITCHEN, PROVIDE SIGN AT EACH FOR COOLER AND FREEZER
	2 EA.	VAPOR PROOF LIGHT FIXTURE - SHIPPED LOOSE
	2 EA.	LED LIGHT FIXTURE KASON #1810L 48" LONG VAPORPROOF LED FIXTURE WITH TWO 5000K COLOR TEMP. 18W LED LAMPS (120V, 36W)
	1 EA.	HEATED AIR VENT (FREEMZ ONLY) - KASON #1832 HI-FLOW 2-WAY HEATED VALVE (120VAC)
	2 EA.	VINYL STRIP CURTAINS
	1 EA.	ROW OF ALUMINUM HAT STYLE BUMPER RAILS ON EXPOSED EXTERIOR (SHIPPED LOOSE)
	1 LOT	INT. COVERED BASE - (TO MATCH INT. WALL PANEL FINISH)
	1 LOT	EXPOSED EXT. COVERED BASE - (TO MATCH EXT. WALL PANEL FINISH)
	CLOSURES -	1 LOT
1 LOT		CEILING ENCLOSURES - (TO MATCH EXT. WALL PANEL FINISH)

WALK-IN REFRIG/FREEZER WT=8.5LBS PER SQ.FT. FOR 4" PANELS

C | TYPICAL SPECIFICATIONS

H

ROOF MOUNT

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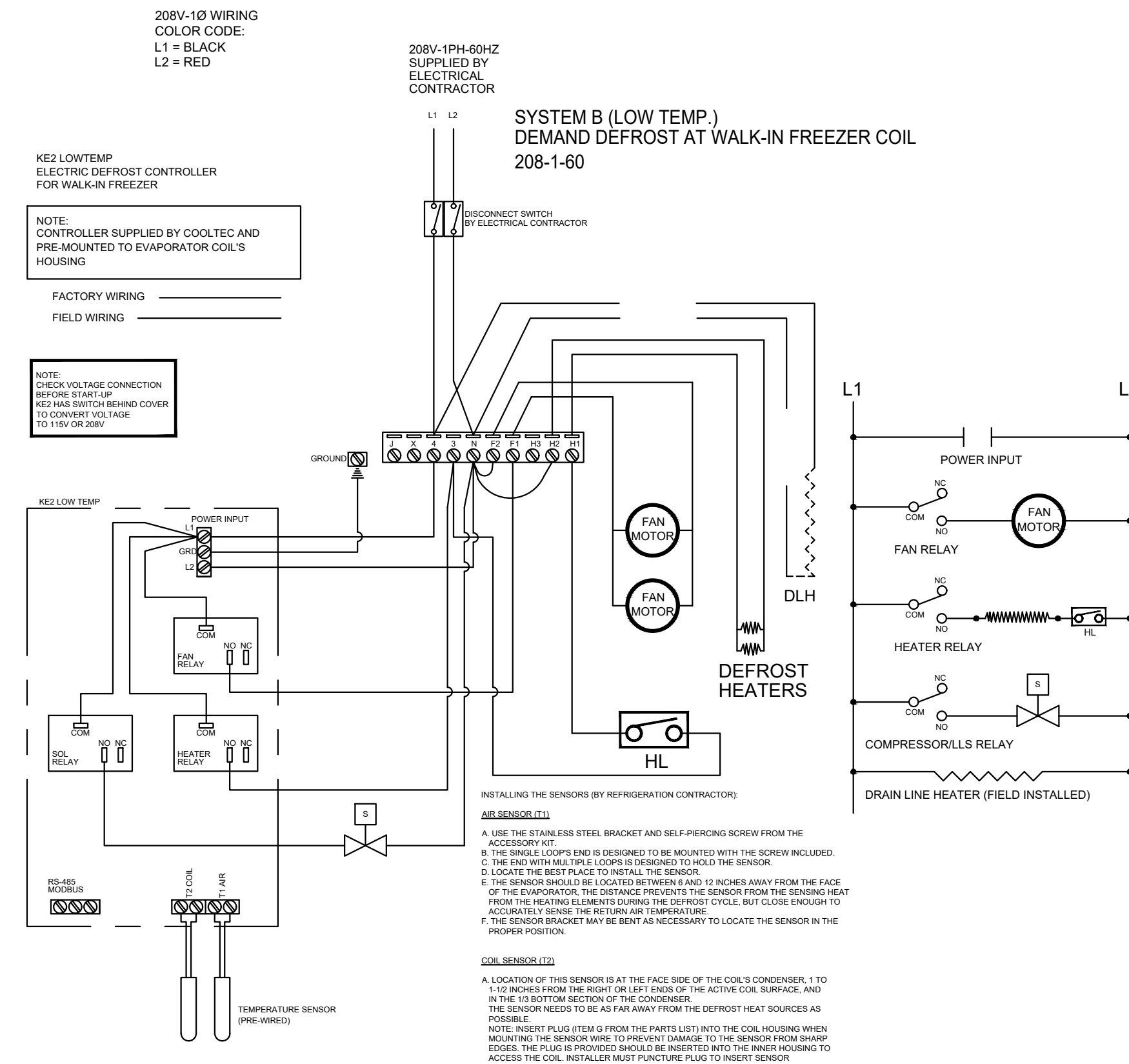
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POWER REQUIRED FOR LOW TEMPERATURE EVAPORATOR COILS. POWER FROM BUILDING; SUPPLIED BY ELECTRICAL CONTRACTOR

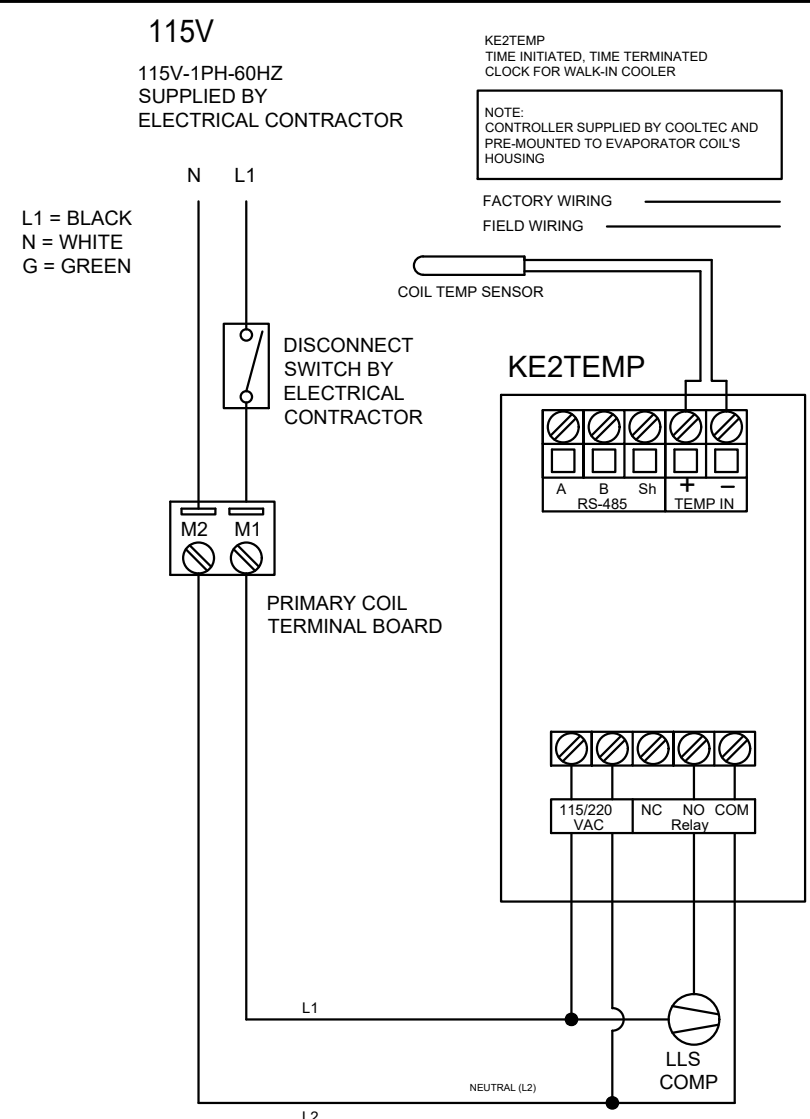
SYSTEM	DEFROST	ITEM #	DESCRIPTION	QUANTITY	MODEL	UNIT COOLER			
						POWER FROM BUILDING			
						EVAP COIL	DRAIN HEATER		
B	D	3	WALK-IN FREEZER	1	LET065BEK	RLA	VOLTAGE	RLA	VOLTAGE
						7.8	208/1	5.0	208/1



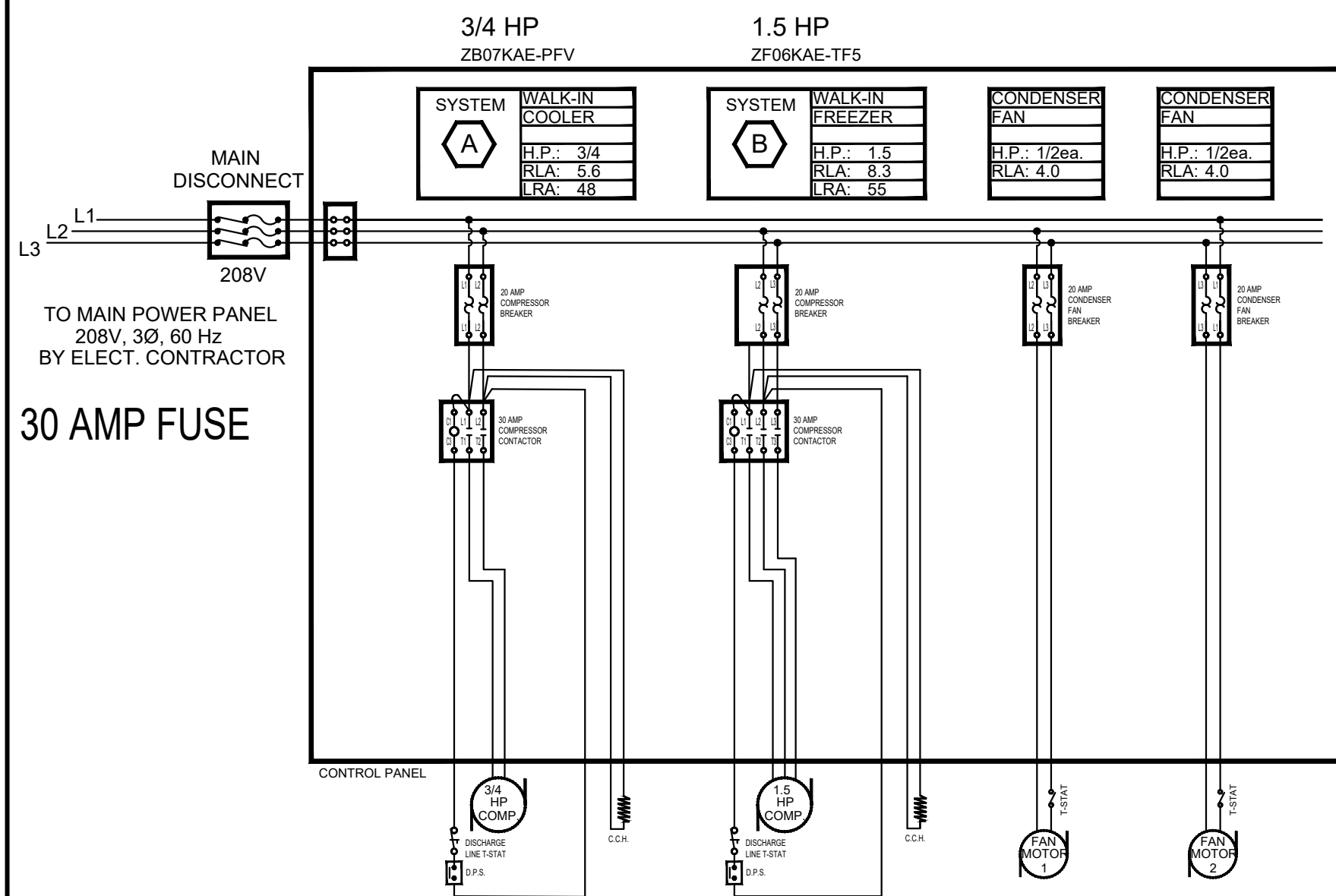
B DEMAND DEFROST- KE2 LOW TEMP
FS7.2 WIRING DIAGRAM FOR FREEZER COIL

POWER REQUIRED FOR MEDIUM TEMPERATURE EVAPORATOR COILS. POWER FROM BUILDING; SUPPLIED BY ELECTRICAL CONTRACTOR

SYSTEM	DEFROST	ITEM #	DESCRIPTION	QUANTITY	MODEL	UNIT COOLER	
						POWER FROM BUILDING	
						RLA	VOLTAGE
A	D	2	WALK-IN COOLER	1	ADT090AEK	1.8	115/1



F DEMAND DEFROST- KE2 MED TEMP
FS7.2 WIRING DIAGRAM FOR COOLER COIL

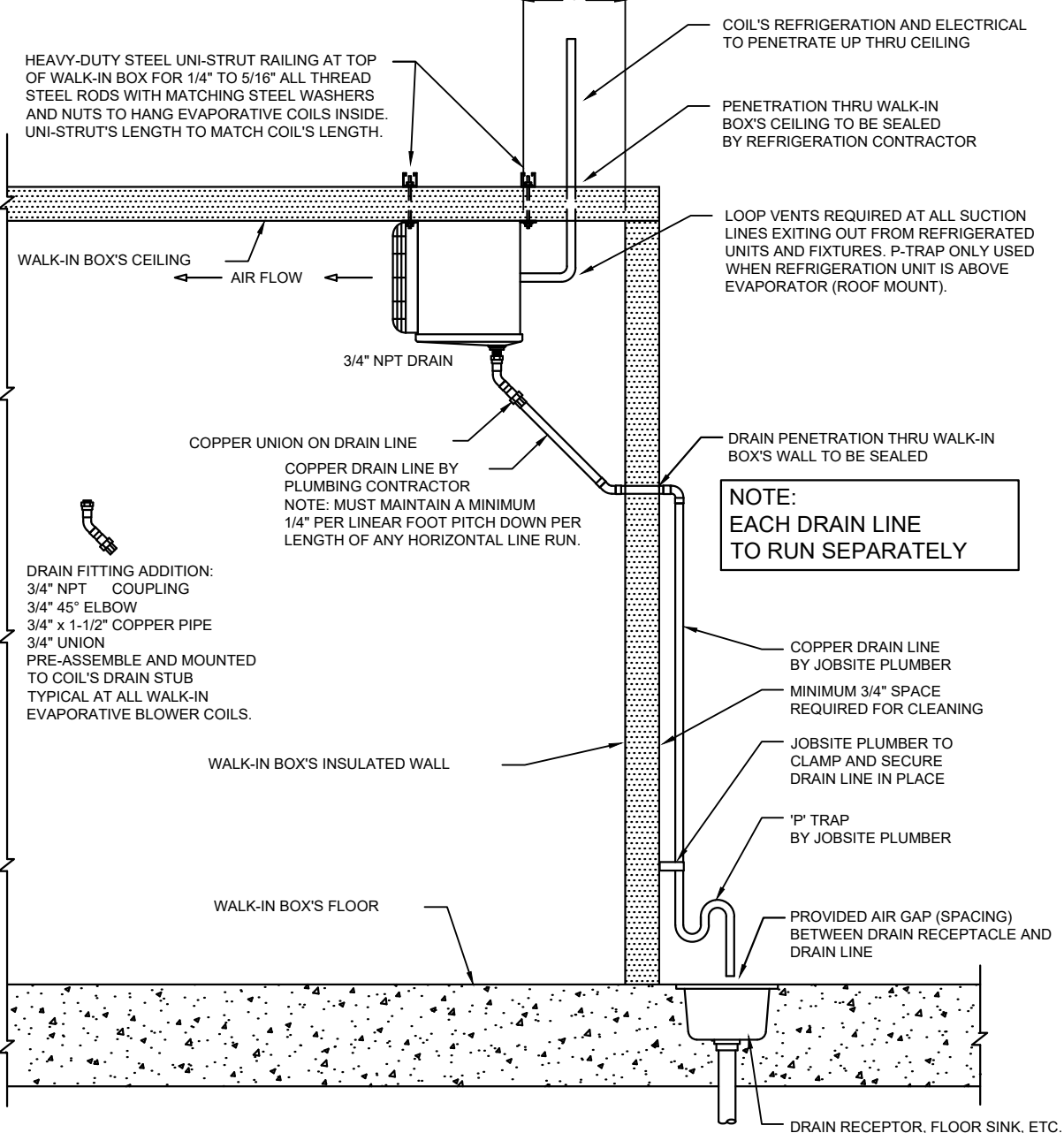
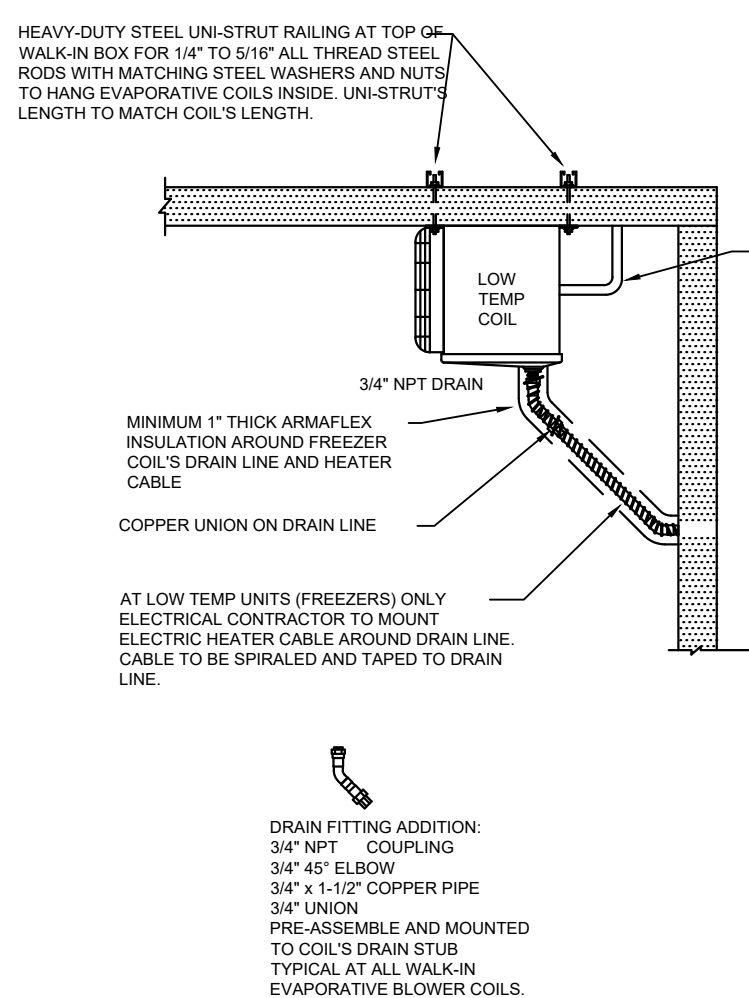


NOTE:
NO DEFROST TIMER AT WALK-IN BOXES.
ELECTRICAL CONTRACTOR TO SUPPLY POWER
FROM BUILDING AND CONNECT TO WALK-IN
COOLER/FREEZER EVAP BLOWER COIL'S
DEMAND DEFROST CONTROL.

A WIRING DIAGRAM
FS7.2

LEGEND
1 FACTORY WIRING
2 FIELD WIRING BY ELECTRICAL CONTRACTOR

G PLATFORM DETAIL
FS7.2



TYPICAL AT LOW TEMP APPLICATION ONLY.
KE2 COIL SENSOR IS INSERTED BETWEEN FINS OF THE CONDENSER COIL, MAKING
CONTACT WITH TWO REFRIGERATION TUBE LINES. THEN THE FINS ARE CRIMPED TO
SECURE THE COIL SENSOR IN PLACE.
COIL SENSOR'S LOCATION IS APPROXIMATELY 1-1/2" FROM END AND AT THE BOTTOM 1/3rd
SECTION OF THE CONDENSER COIL.
UTILIZE INSERT PLUGS INTO THE COIL HOUSING WHEN MOUNTING THE COIL SENSOR AND
CABLE, TO PREVENT DAMAGE TO THE SENSOR'S CABLE FROM SHARP EDGES.

TYPICAL APPLICATION AT MEDIUM AND LOW TEMP UNITS.
KE2 AIR SENSOR AT COIL'S INTAKE SIDE (RETURN AIR)
MOUNTED 6" CLEAR (6" MINIMUM FROM COIL'S CONDENSER AND ELECTRIC DEFROST
HEATERS).
THIS BRACKET CAN BE BENT AWAY FOR DISTANCE REQUIRED.
ATTACH SENSOR MOUNT BRACKET (PART OF KE2 KIT) TO
REAR OF COIL. PLACE AIR SENSOR THRU OPEN LOOP. WRAP AIR SENSOR CABLE AROUND
BRACKET AND USE PLASTIC TIES TO SECURE IN PLACE.
NOTE: AIR SENSOR AND BRACKET SHIPPED LOOSE DURING SHIPMENT TO PREVENT
DAMAGE, AND INSTALLED ON JOBSITE BY REFRIGERATION CONTRACTOR.

E KE2 TEMP
FS7.2 SENSOR MOUNT DETAILS

C WALK-IN'S FREEZER
FS7.2 CONDENSATE DRAIN LINE

D WALK-IN'S COIL MOUNT AND
FS7.2 CONDENSATE DRAIN LINE

QC	
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DATE: 04/28/2020

730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212



KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

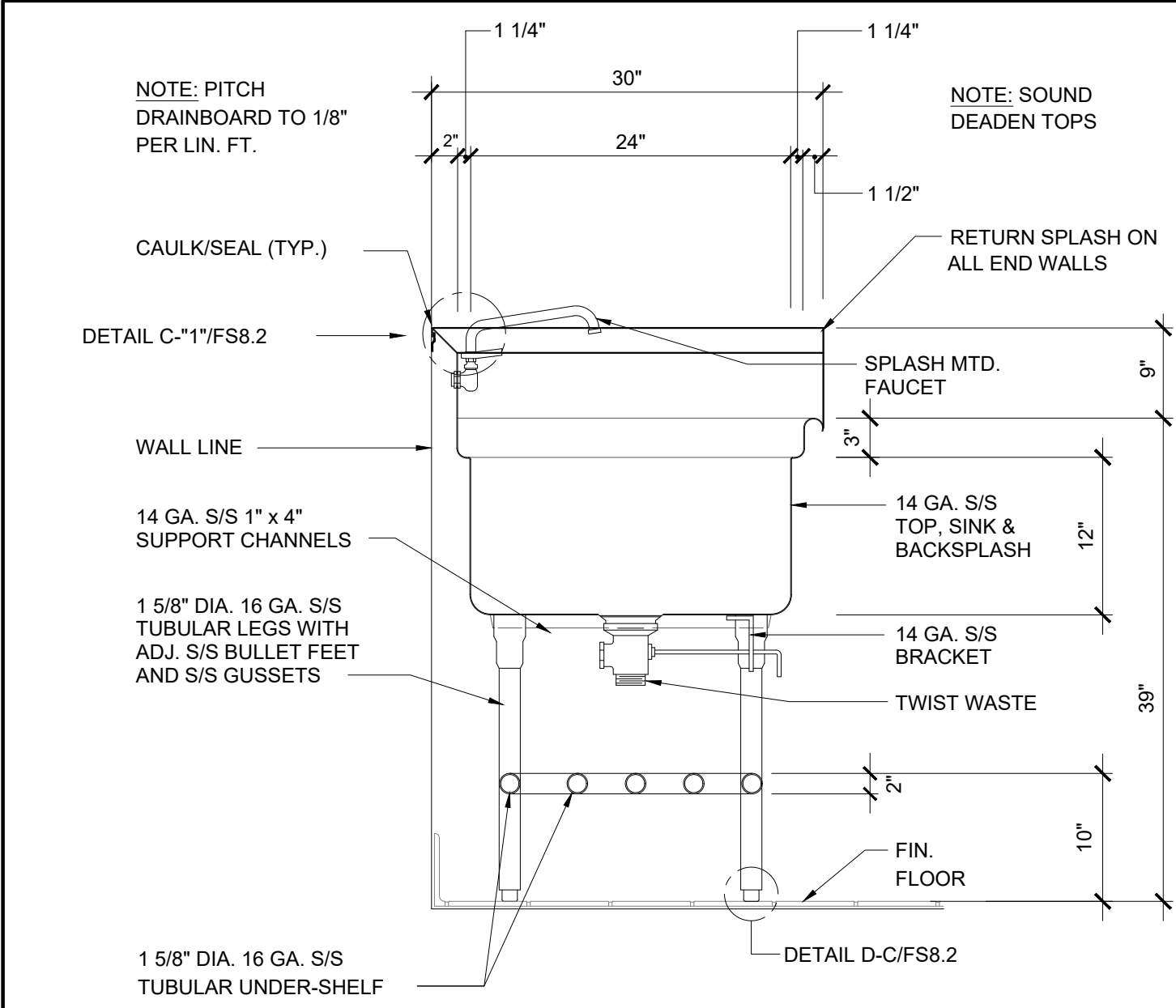
FOODSERVICE EQUIPMENT
DETAILS

CONSULTANT



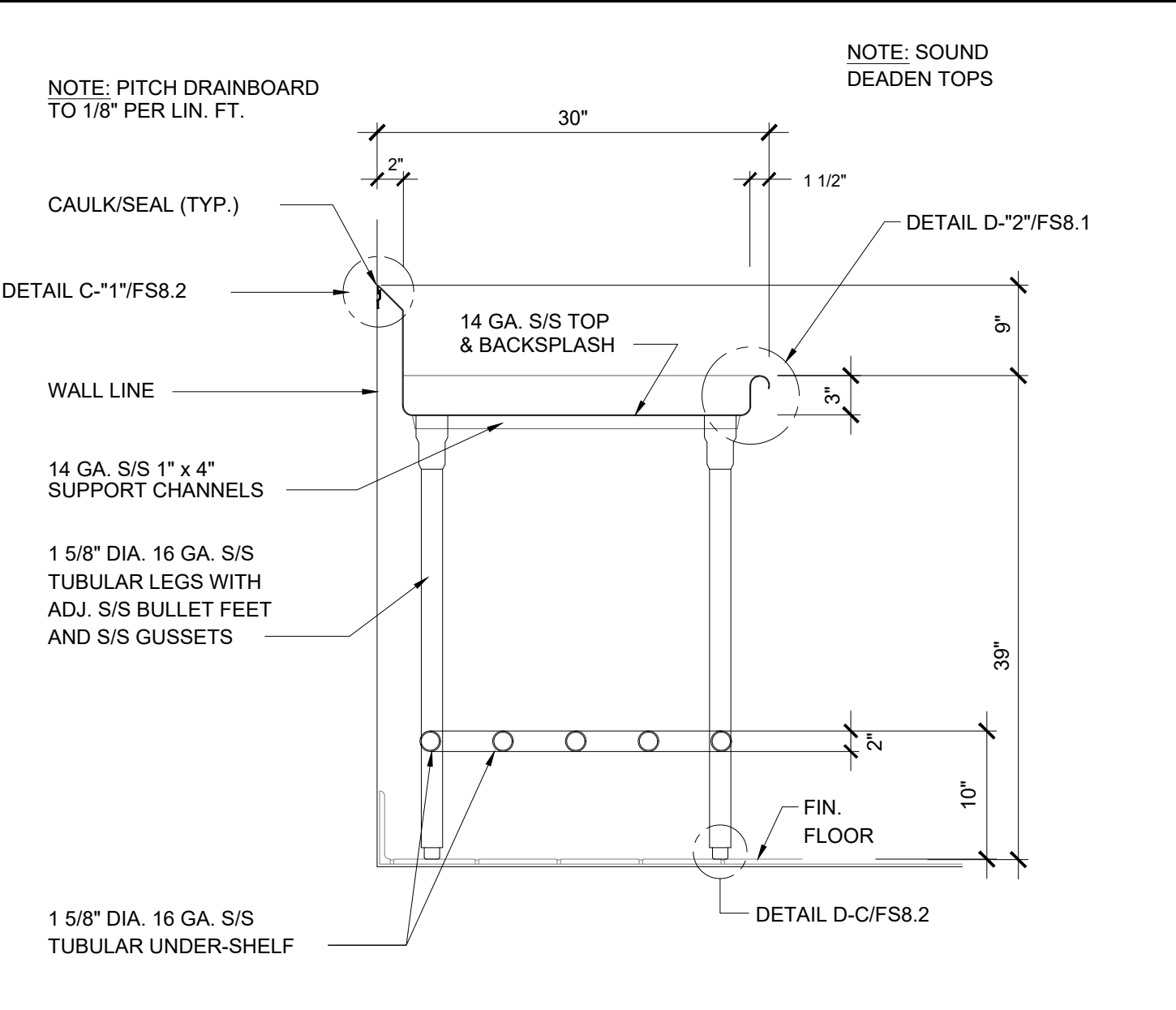
PROJECT NO.	REVISIONS	BY
19-32-050		
DATE		
04/10/2020		
DRAWN		
SLH		
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SCALE		
CADFILE		
UPDATED		
SHEET NO.		

FS8.1



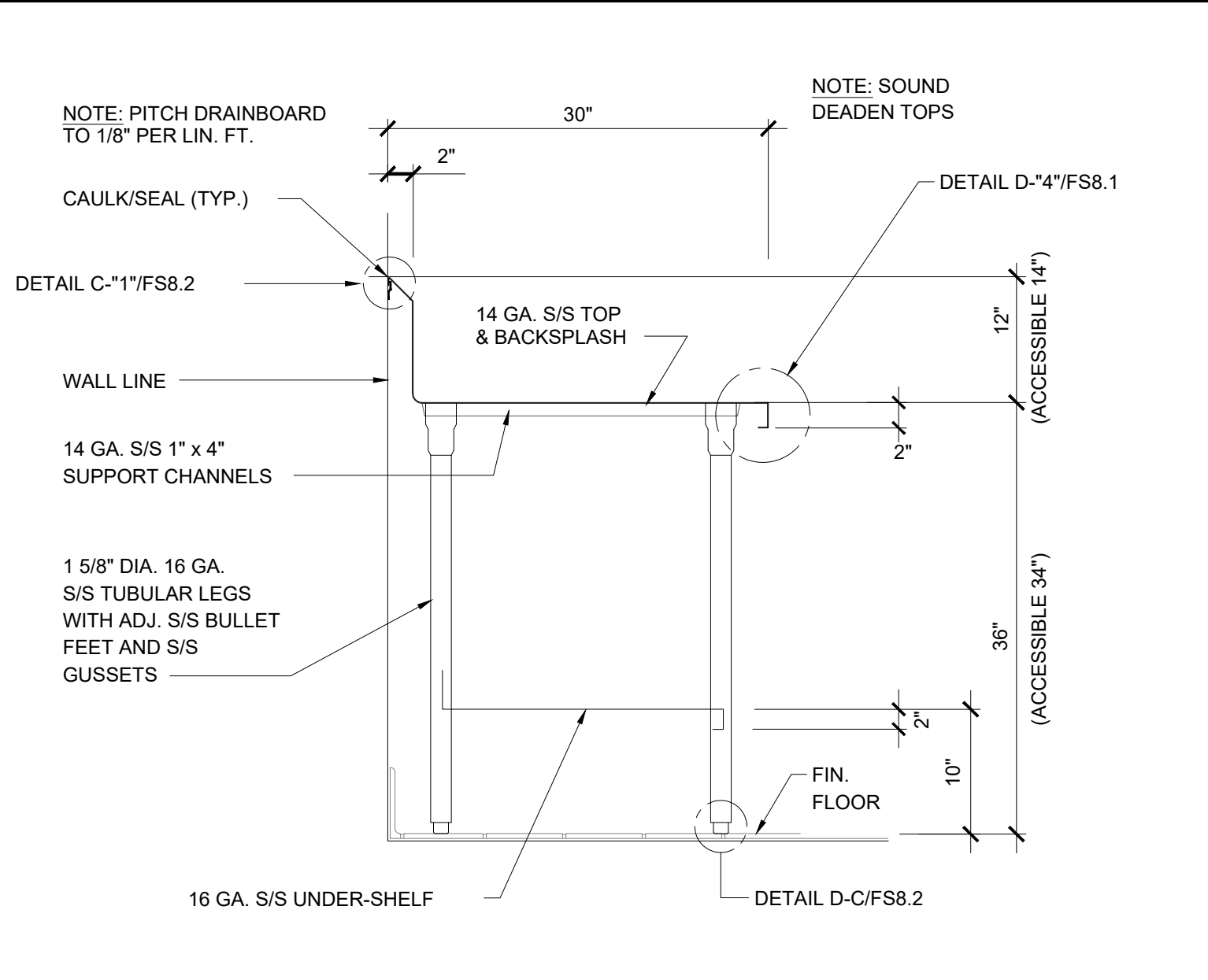
A SECTION AT SINK

NTS



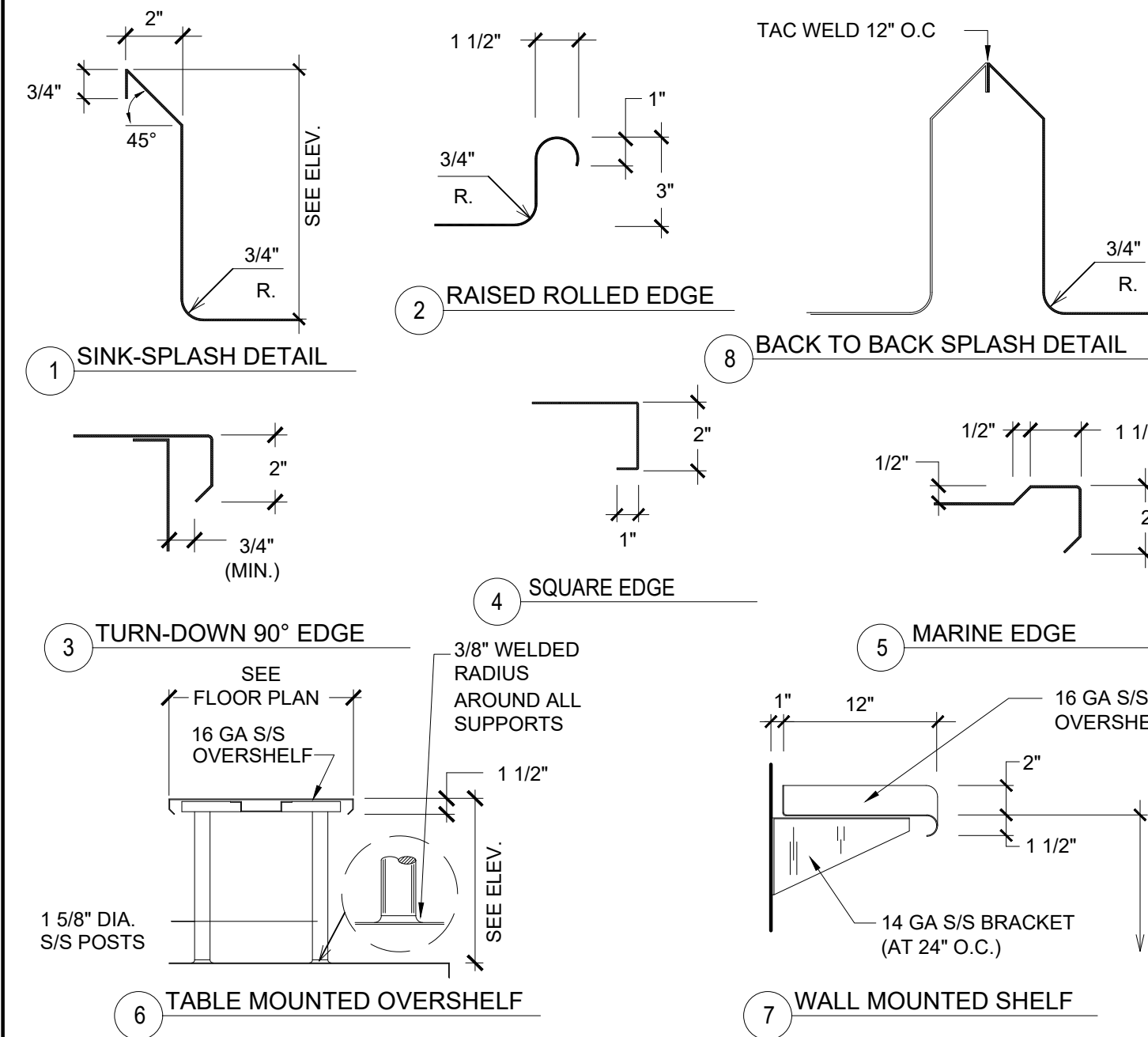
B SECTION AT DISHTABLE

NTS



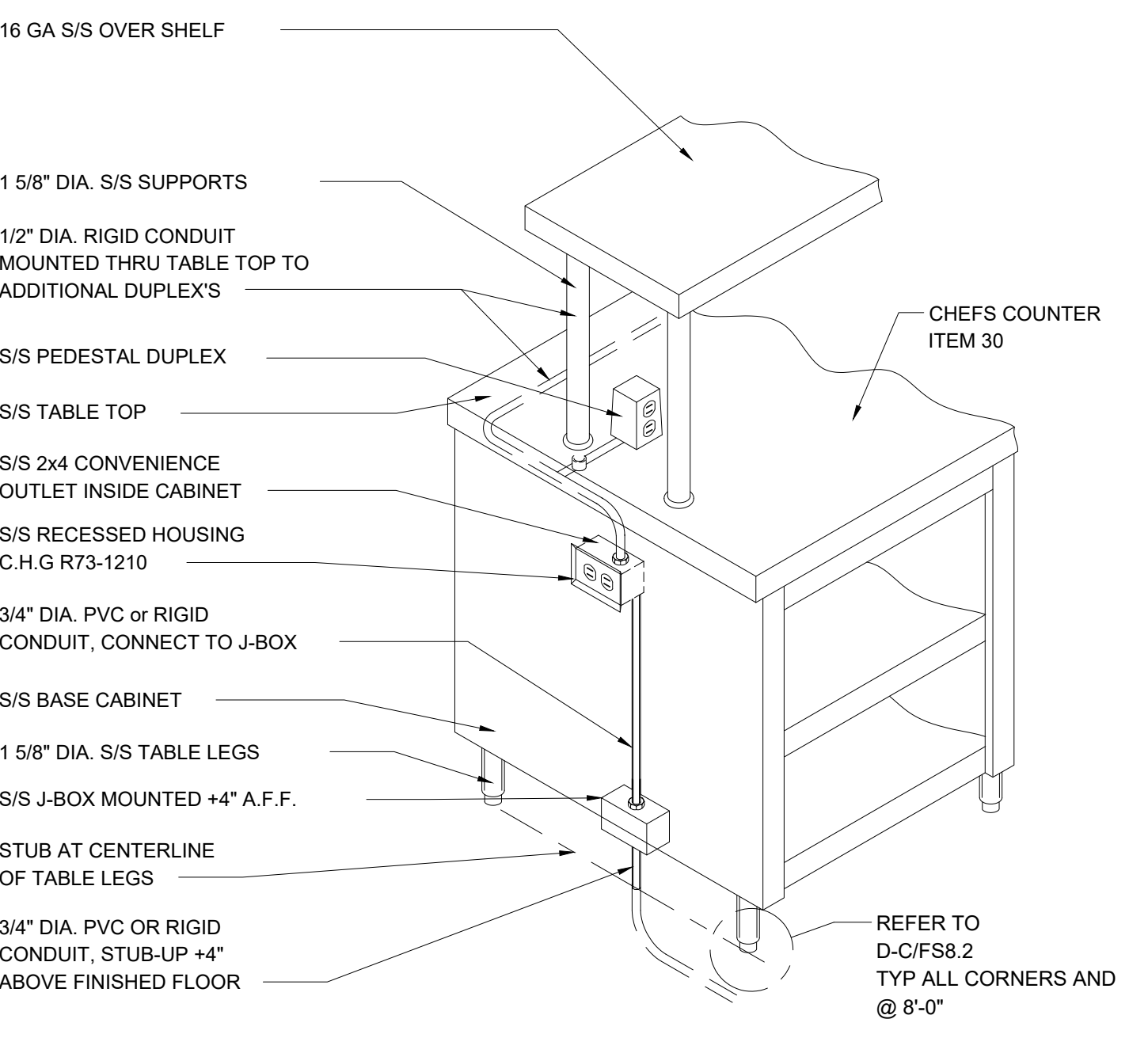
C SECTION AT WORKCOUNTER

NTS



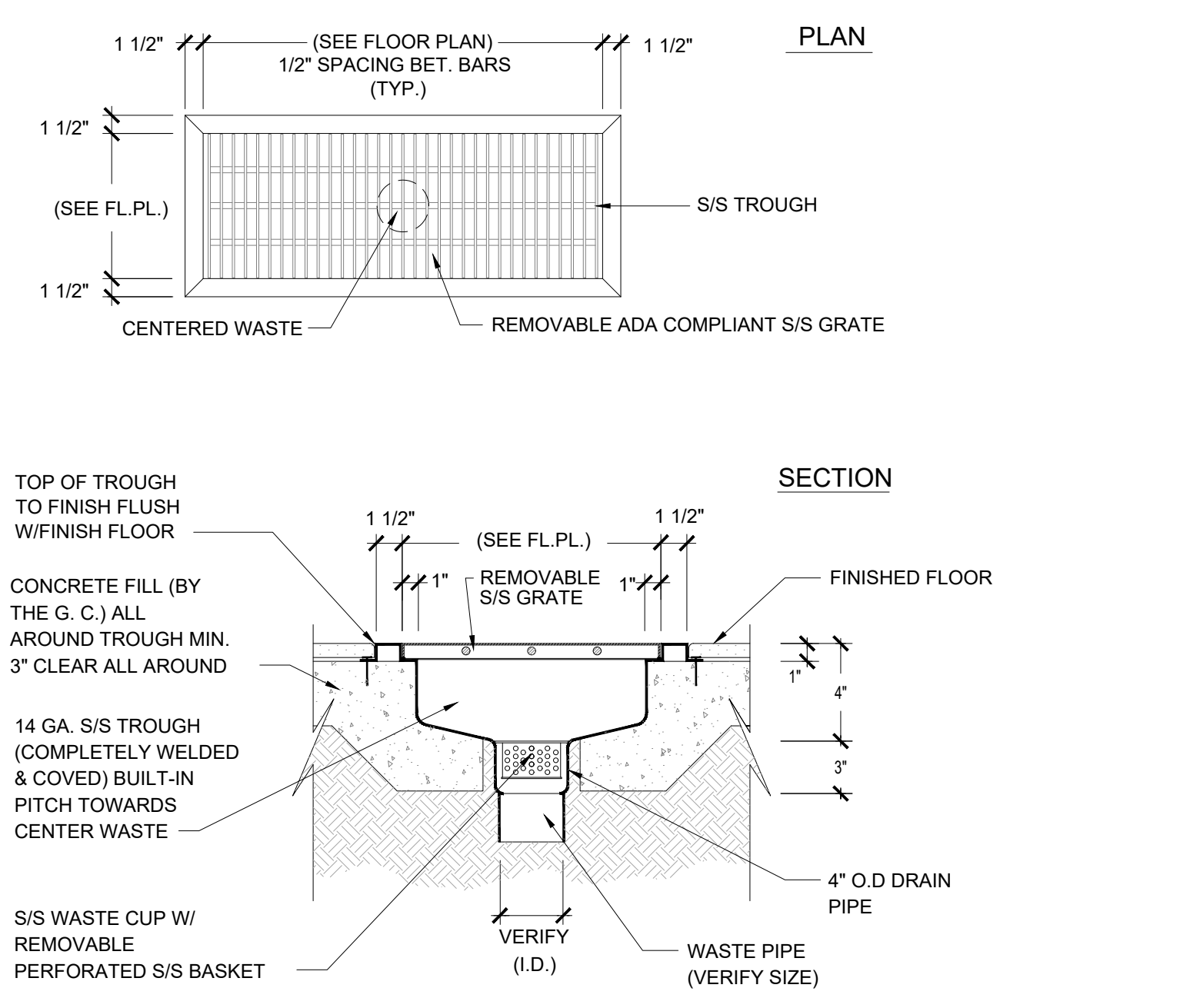
D EDGE/SPLASH/SHELF DETAILS

NTS



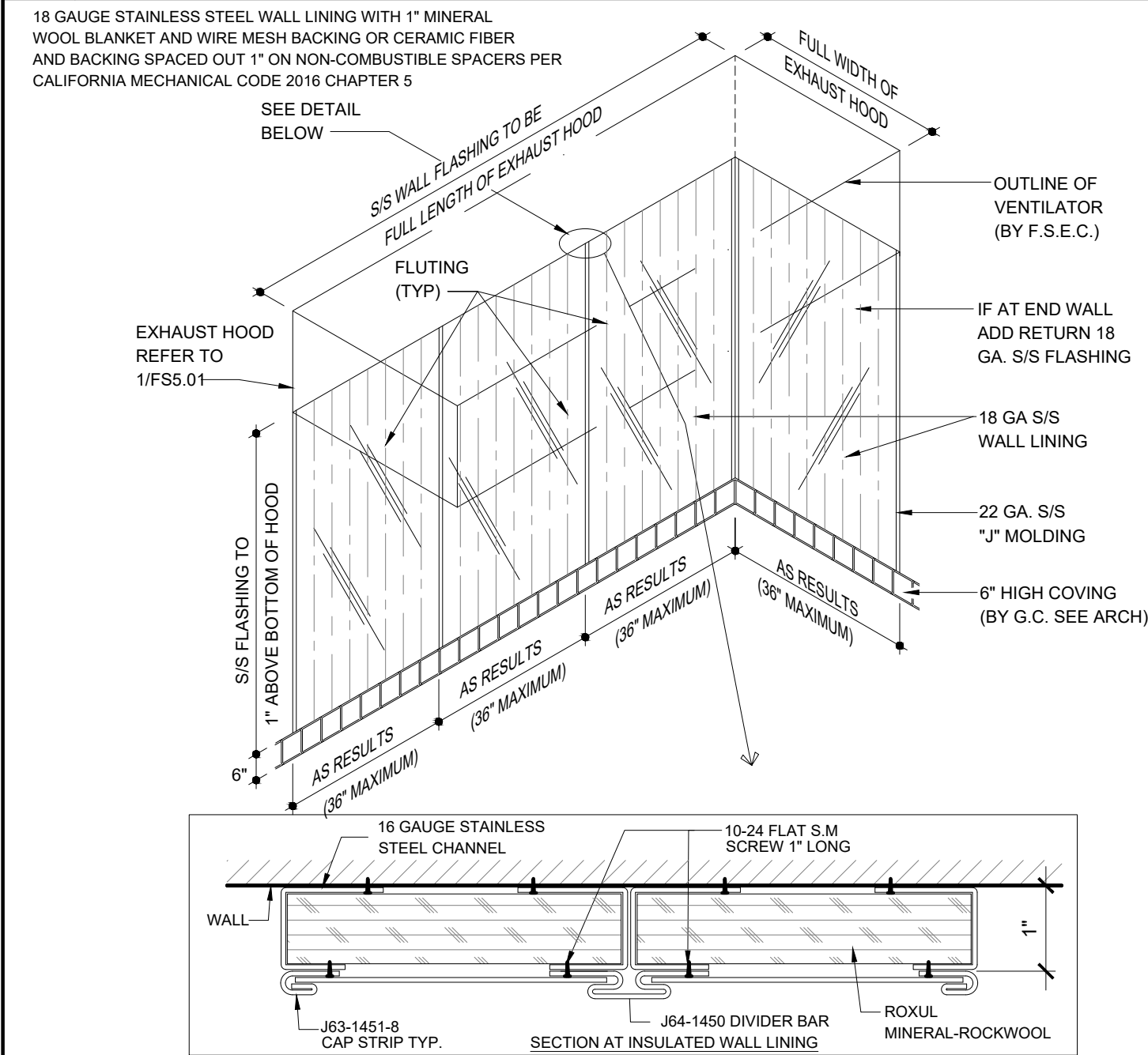
E CHEFS COUNTER & ELEC. DETAIL

NTS



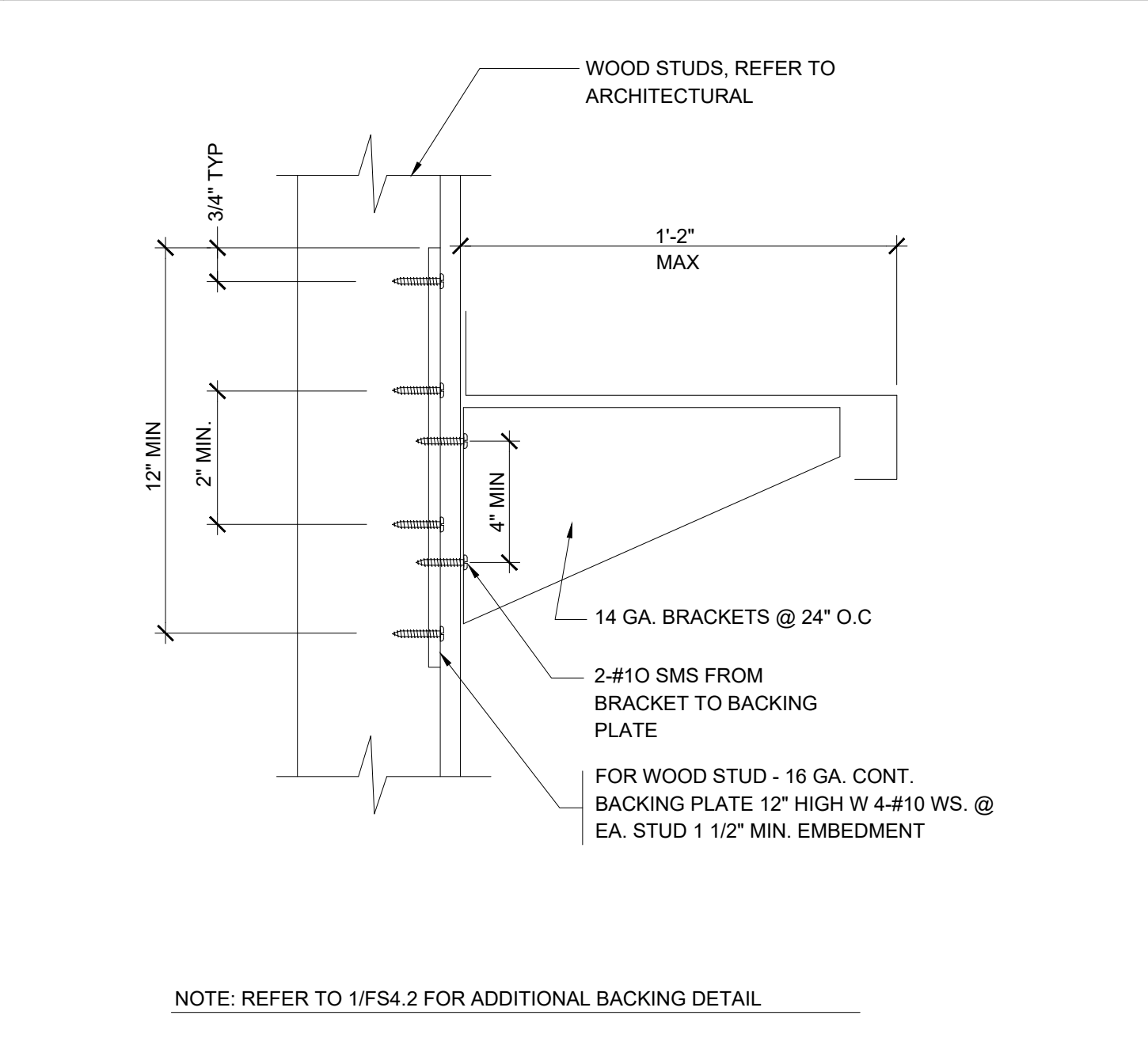
F FLOOR TROUGH W/ADA GRATE

NTS



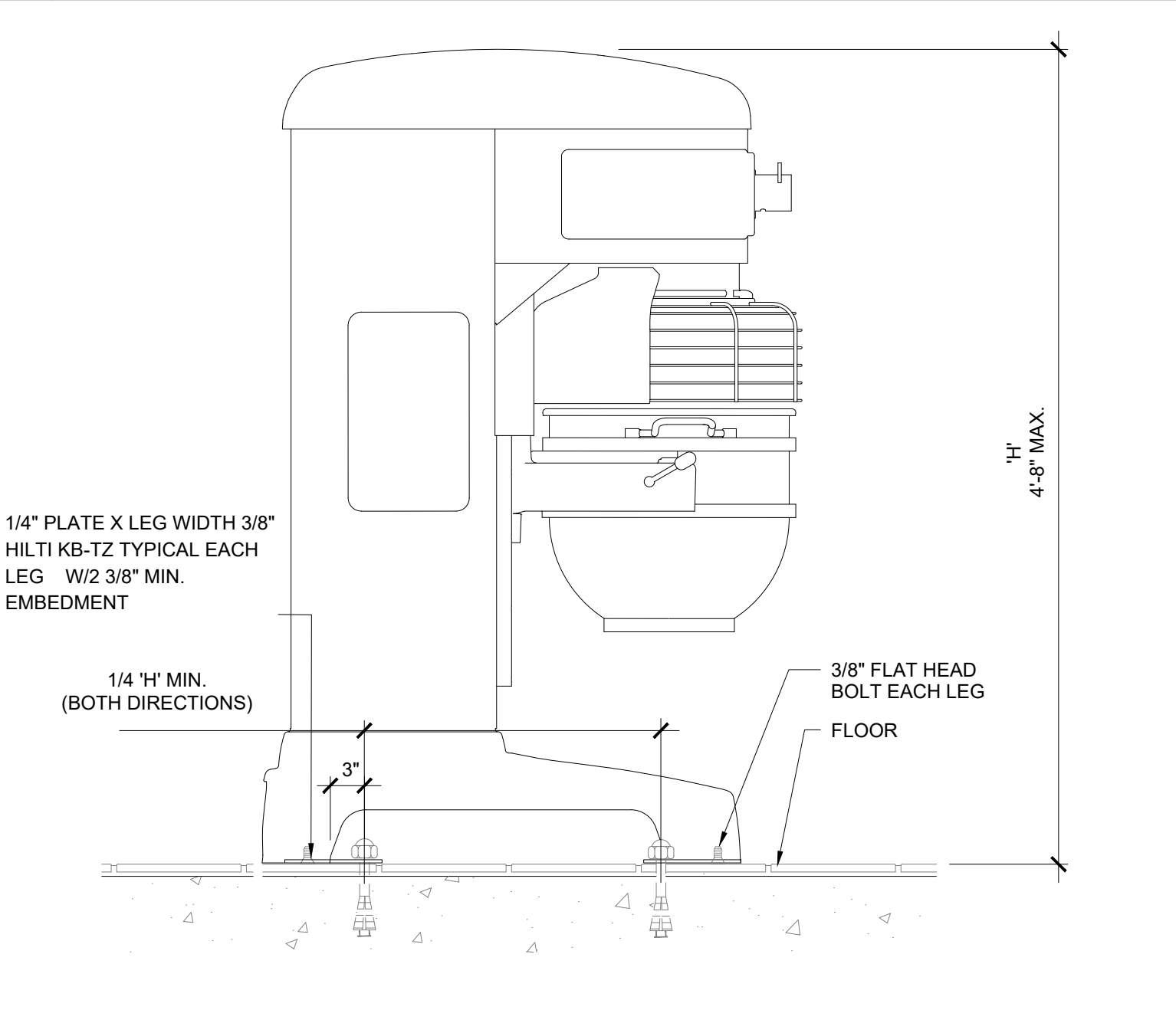
G S/S WALL FLASHING DETAIL

NTS



H WALL MOUNTED SHELF

NTS



I FLOOR MOUNTED MIXER

NTS

QC	
INI	%

FILE NO. 39-50 APP NO. 02-118041

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 02-118041 INC.
REVIEWED FOR
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DATE: 04/28/2020

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KITCHEN RENOVATION
HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT
DETAILS

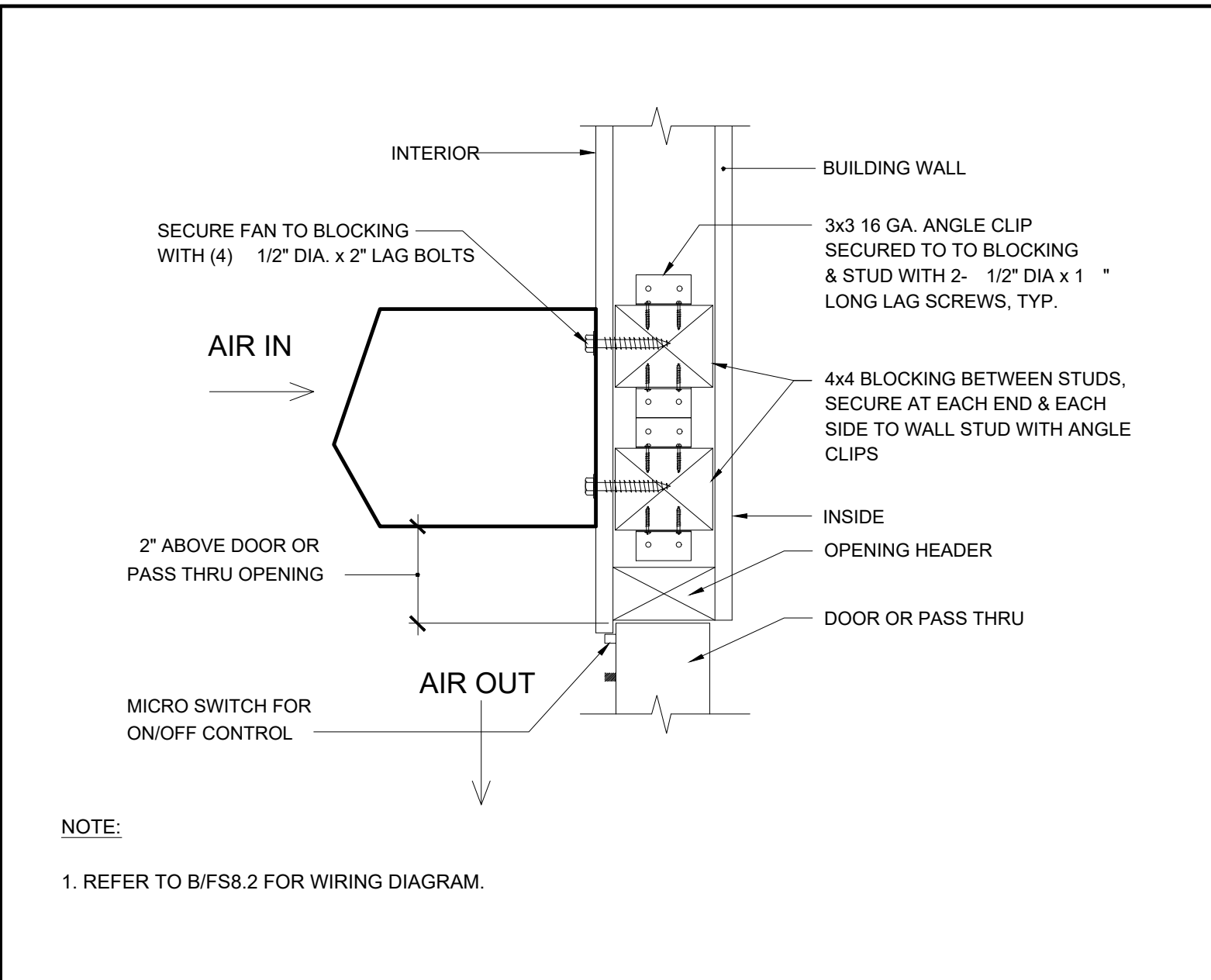
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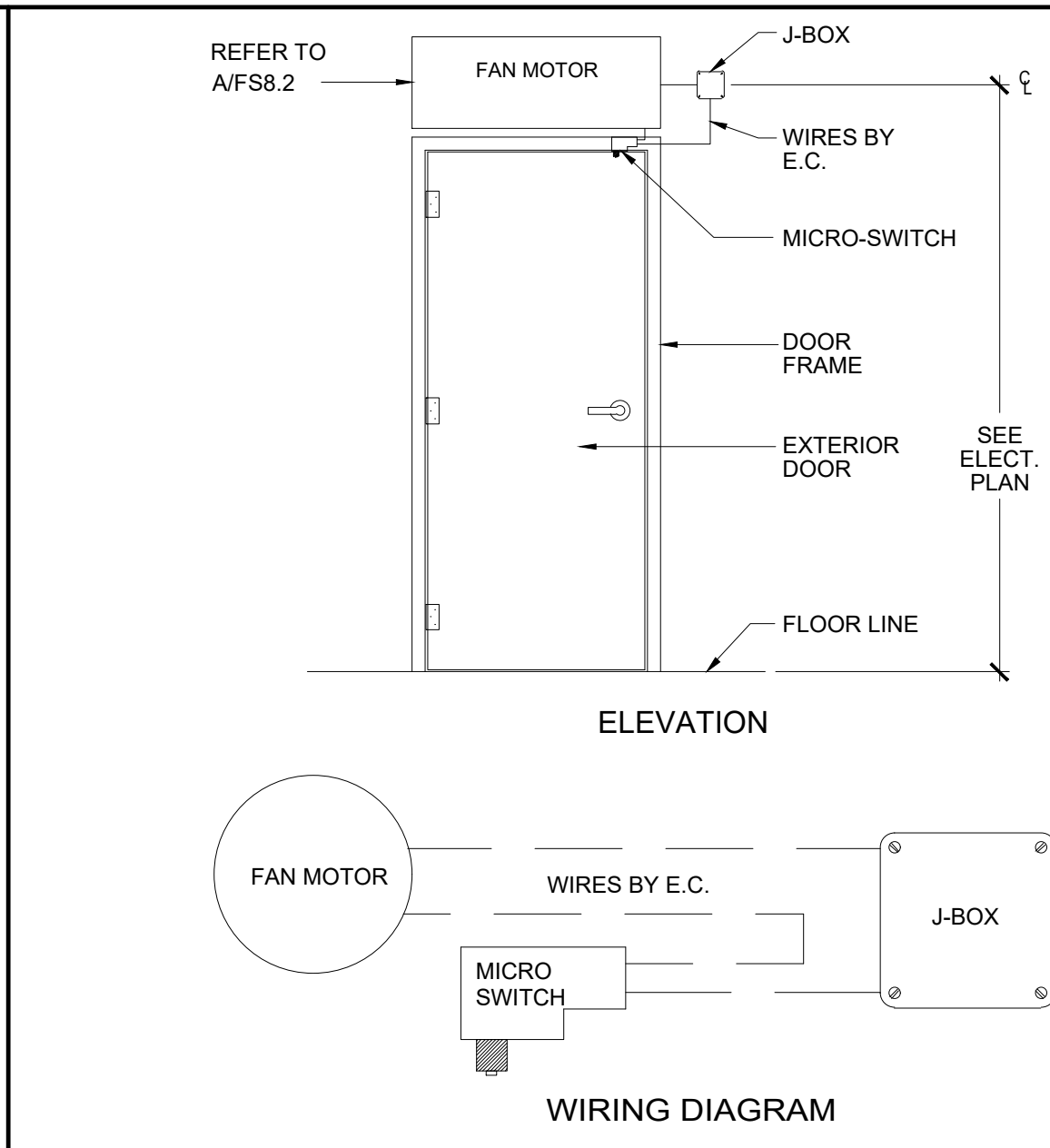
FS8.2

OF XX SHEETS



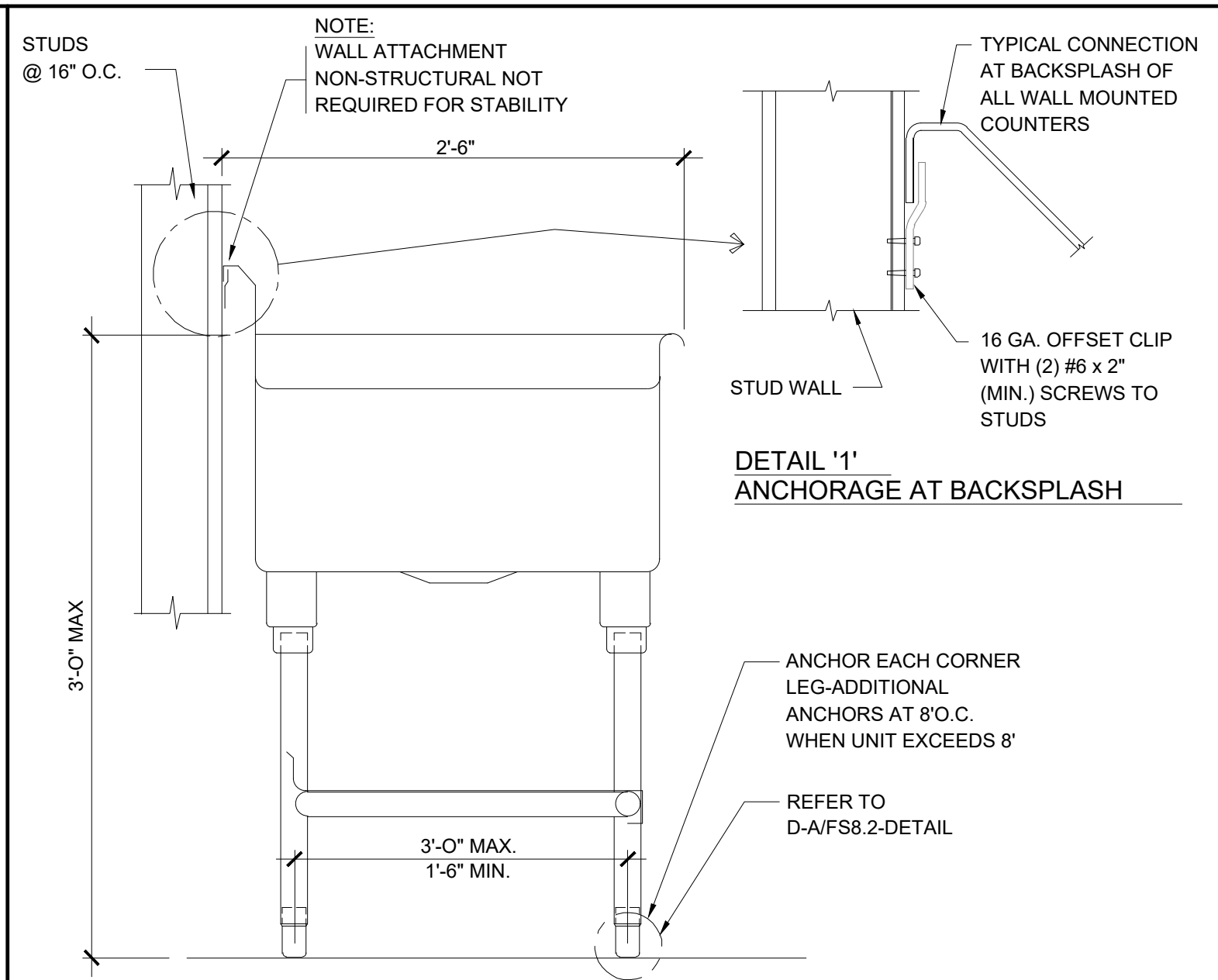
A AIR CURTAIN MOUNTING DETAIL

NTS



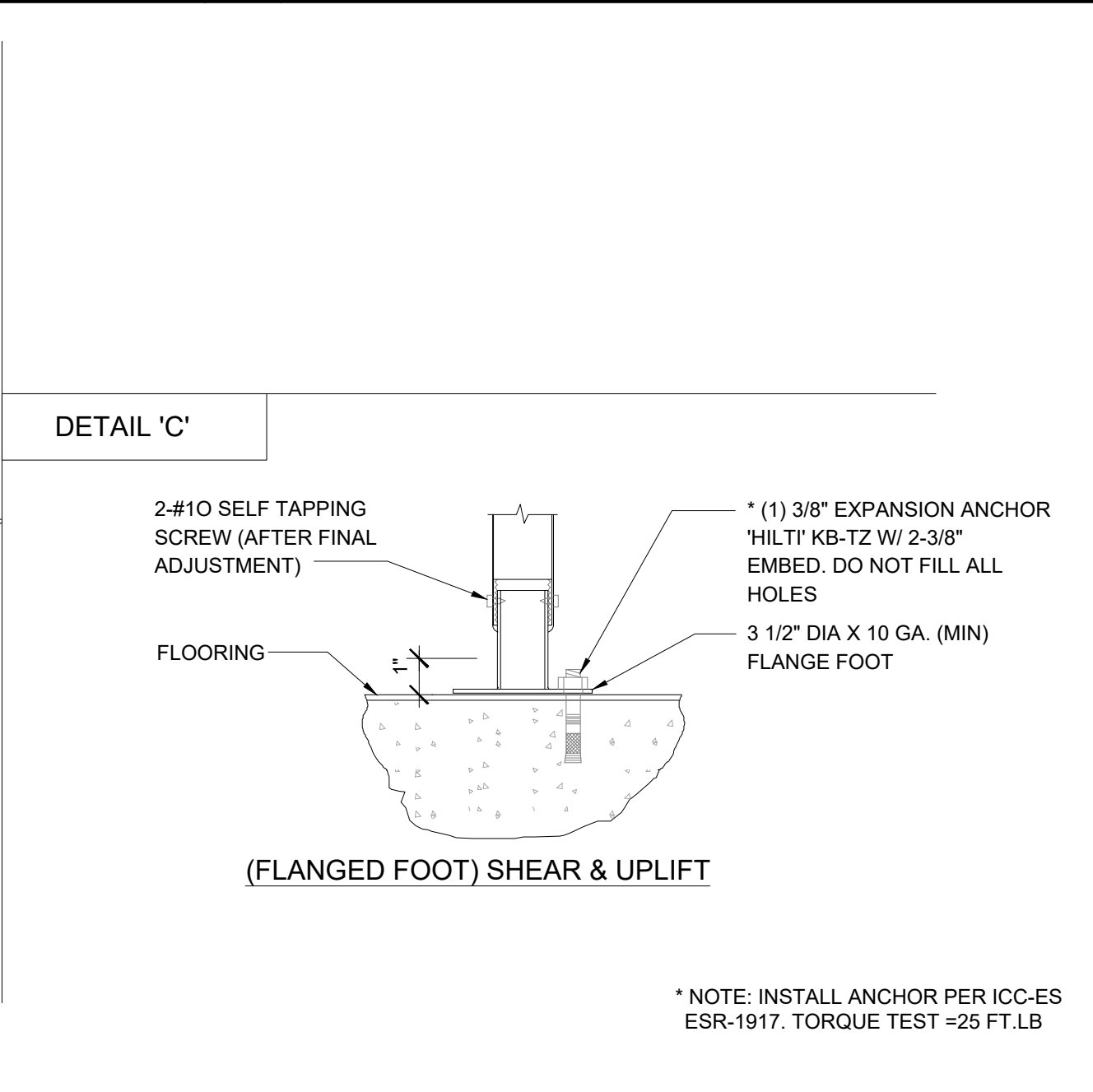
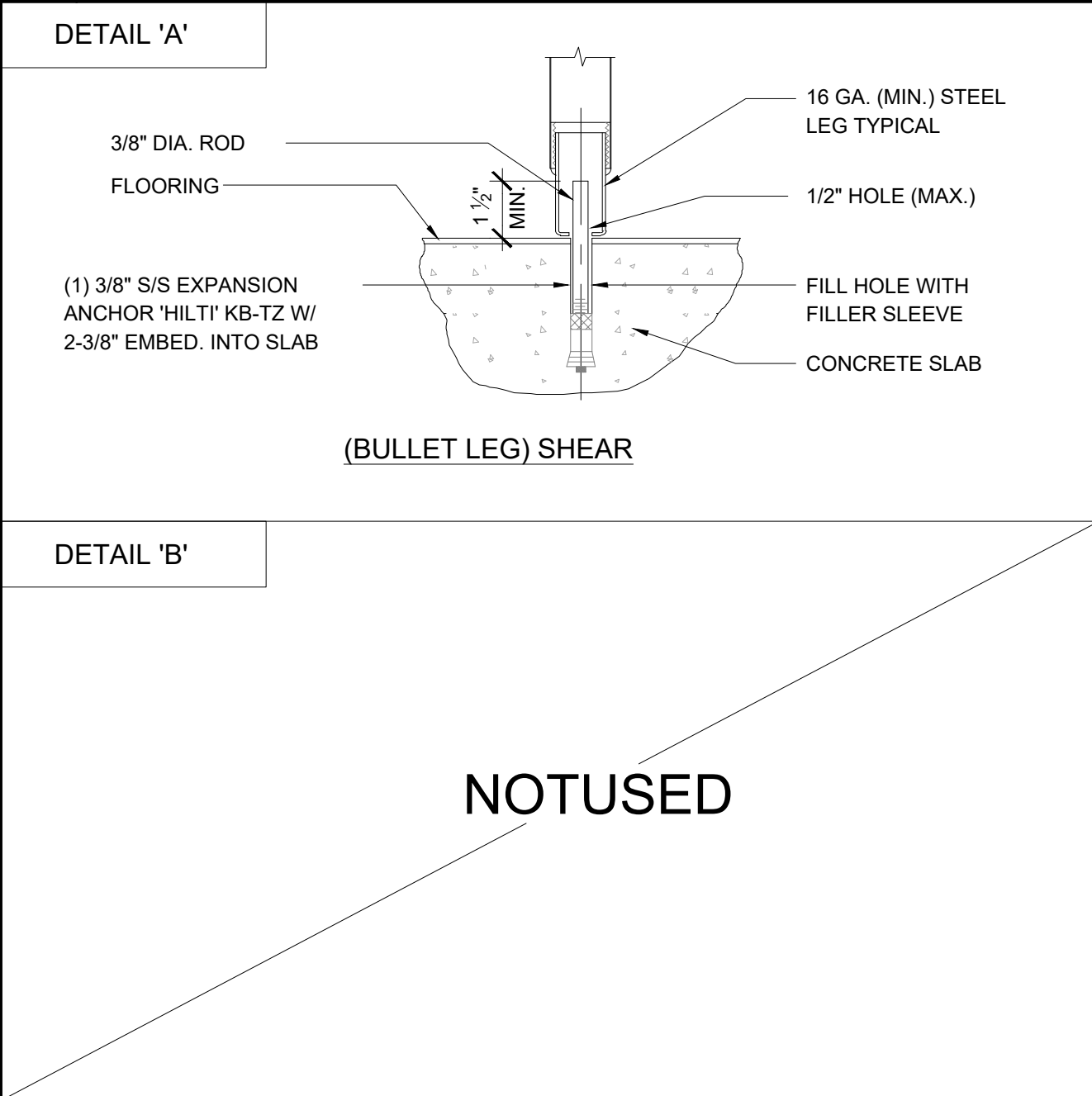
B WALL MTD. AIR CURTAIN MICRO SW.

NTS



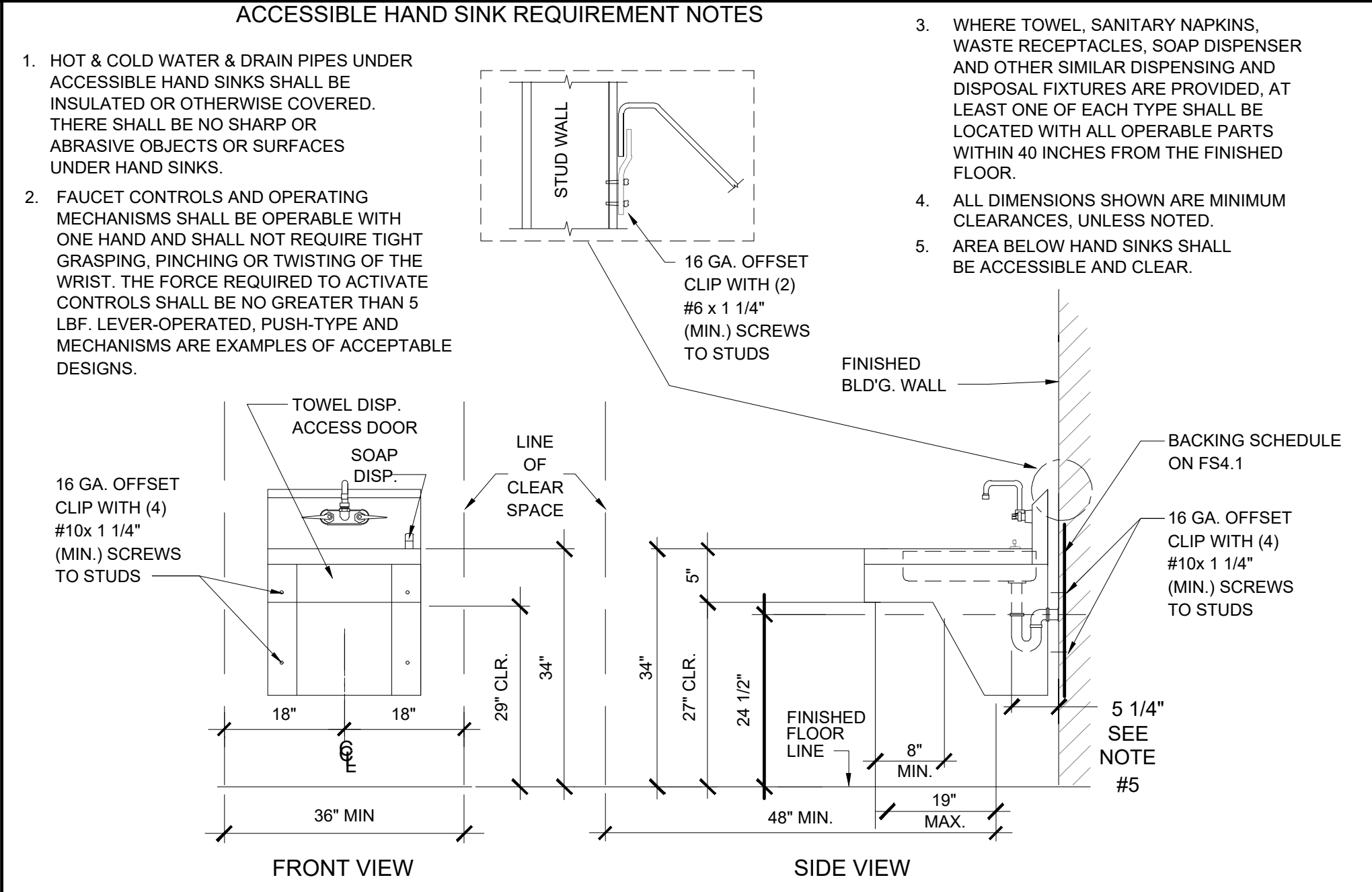
C FLOOR MOUNTED SINK @ WALL

NTS



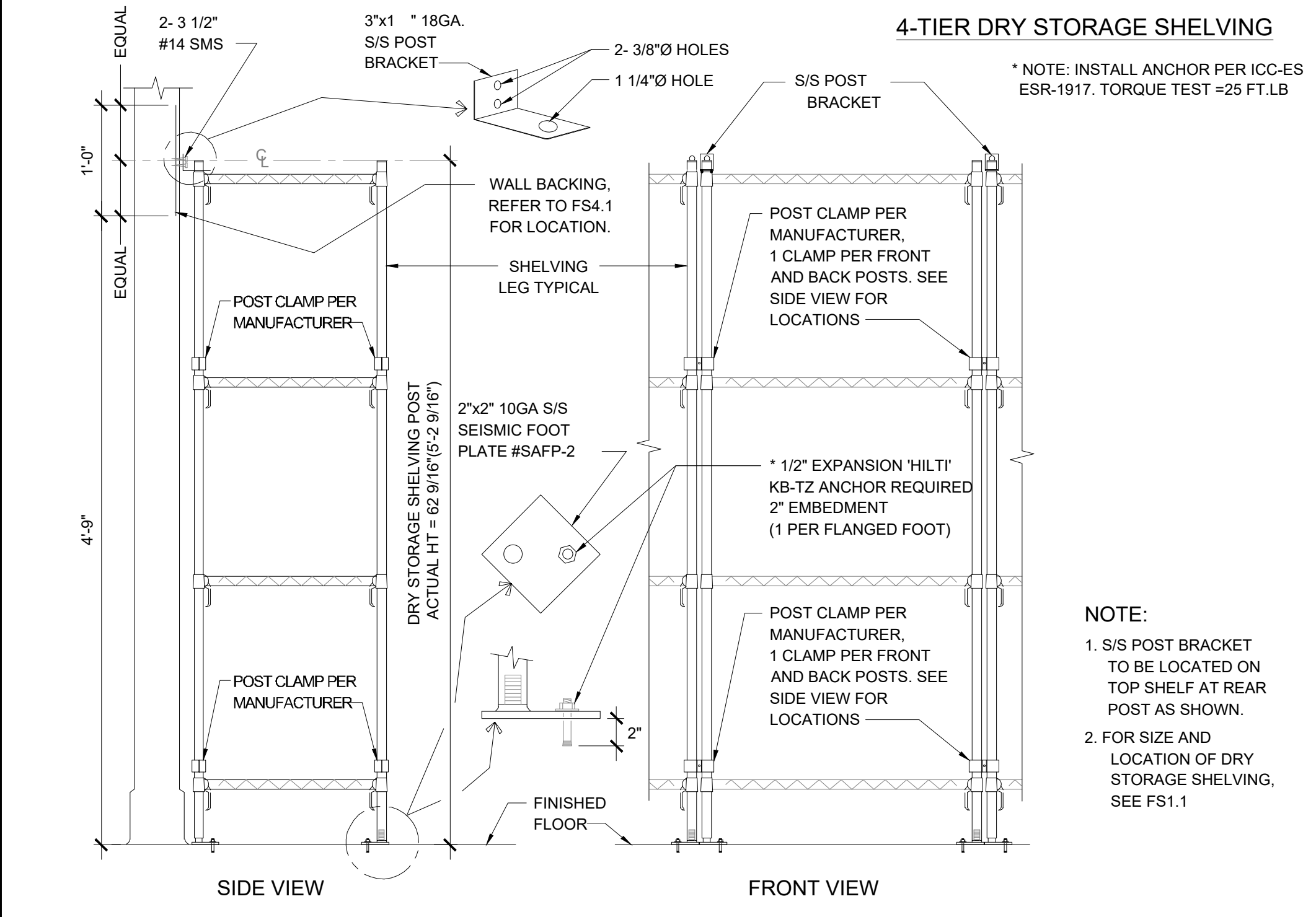
D FOOT ANCHORAGE DETAIL

NTS



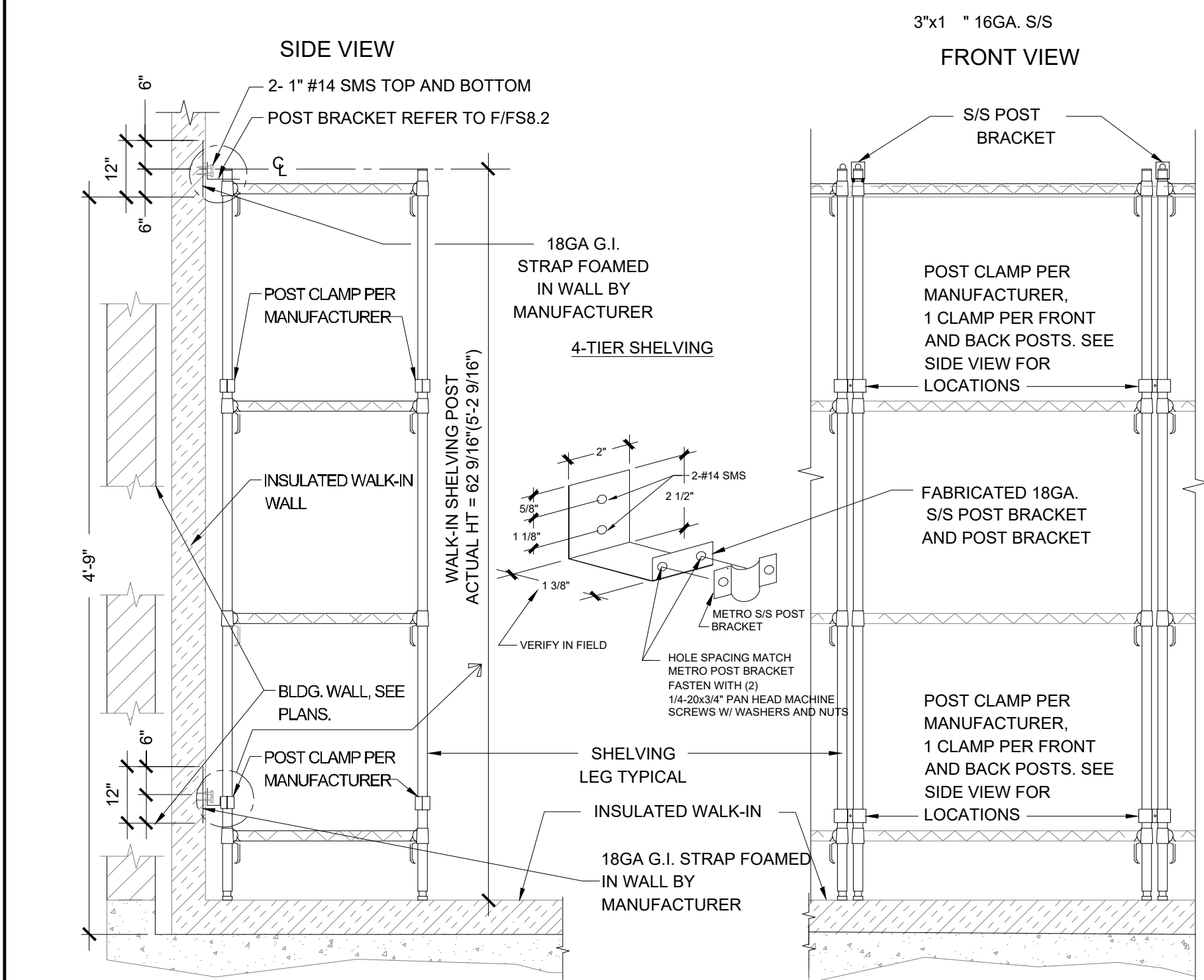
E ACCESSIBLE HAND SINK DETAILS

NTS



F DRY STORAGE SHELVING ATTACHMENT

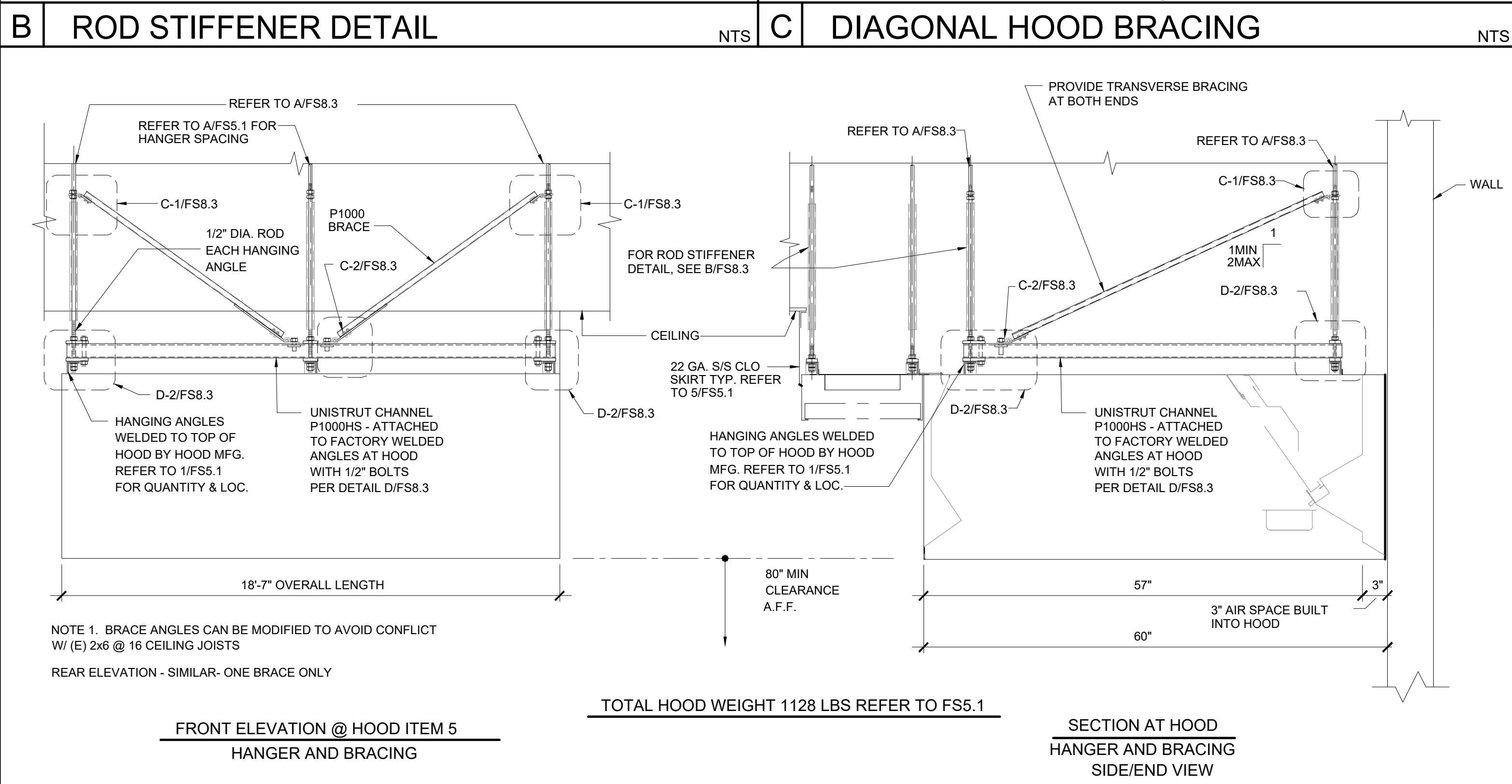
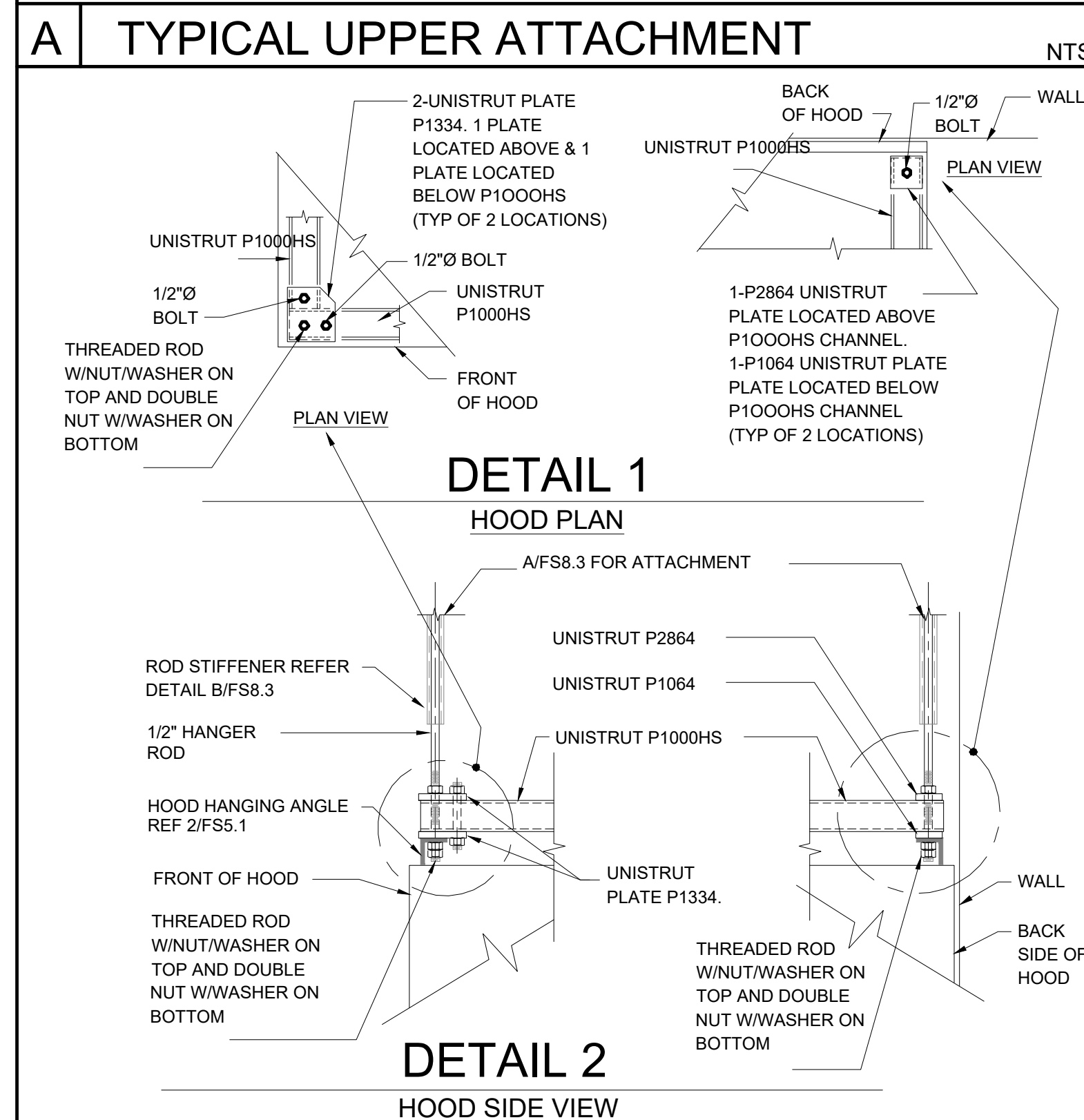
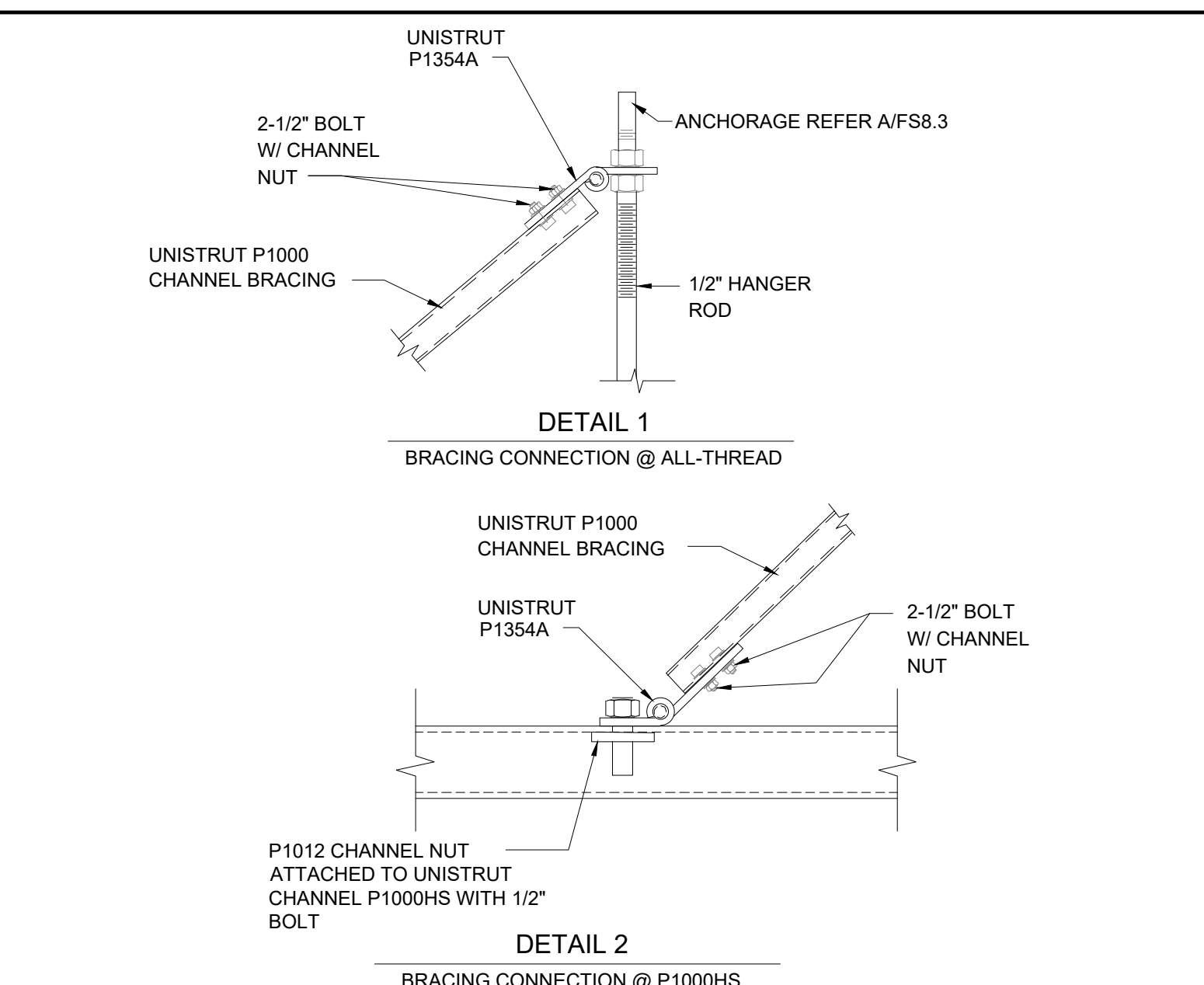
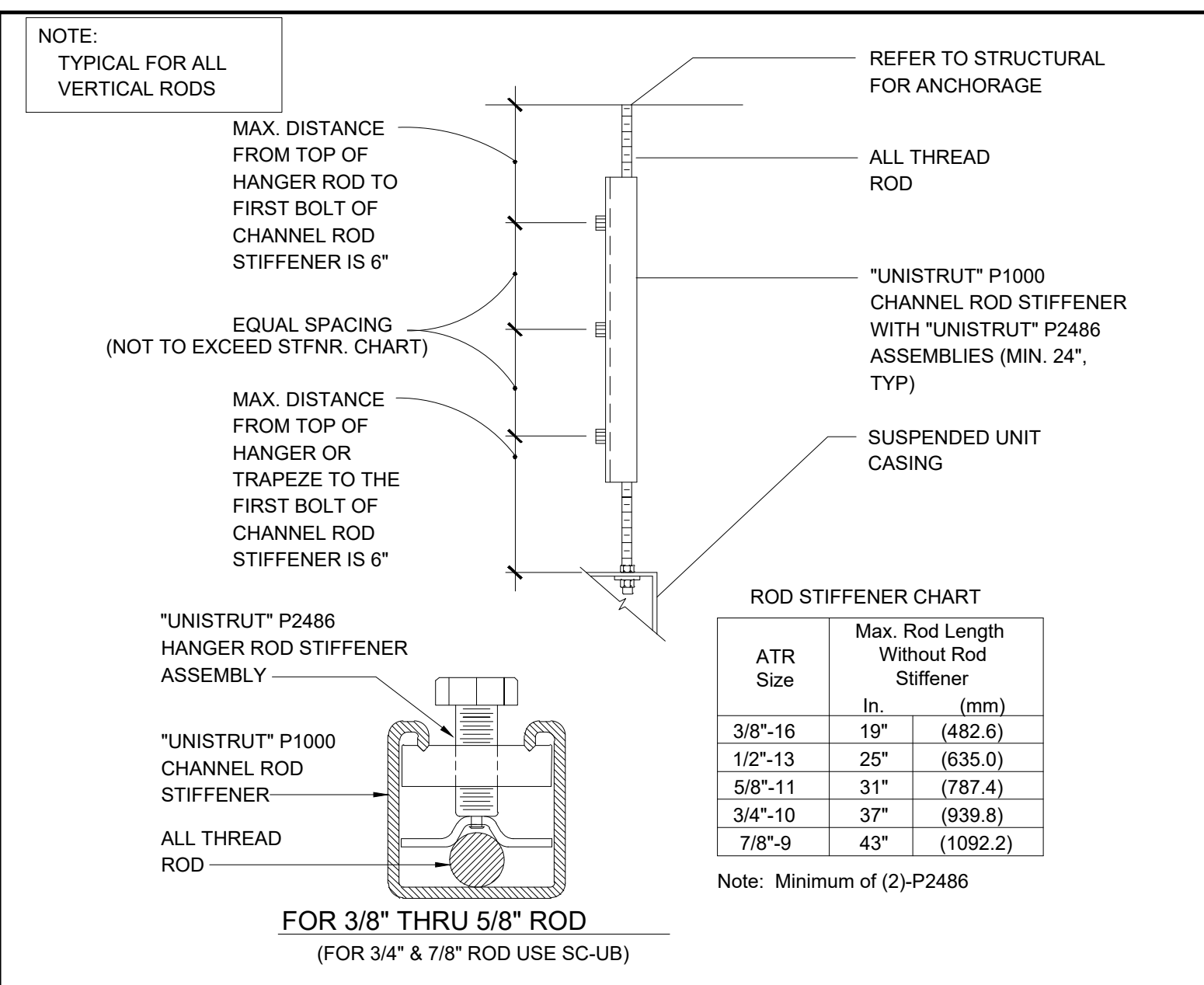
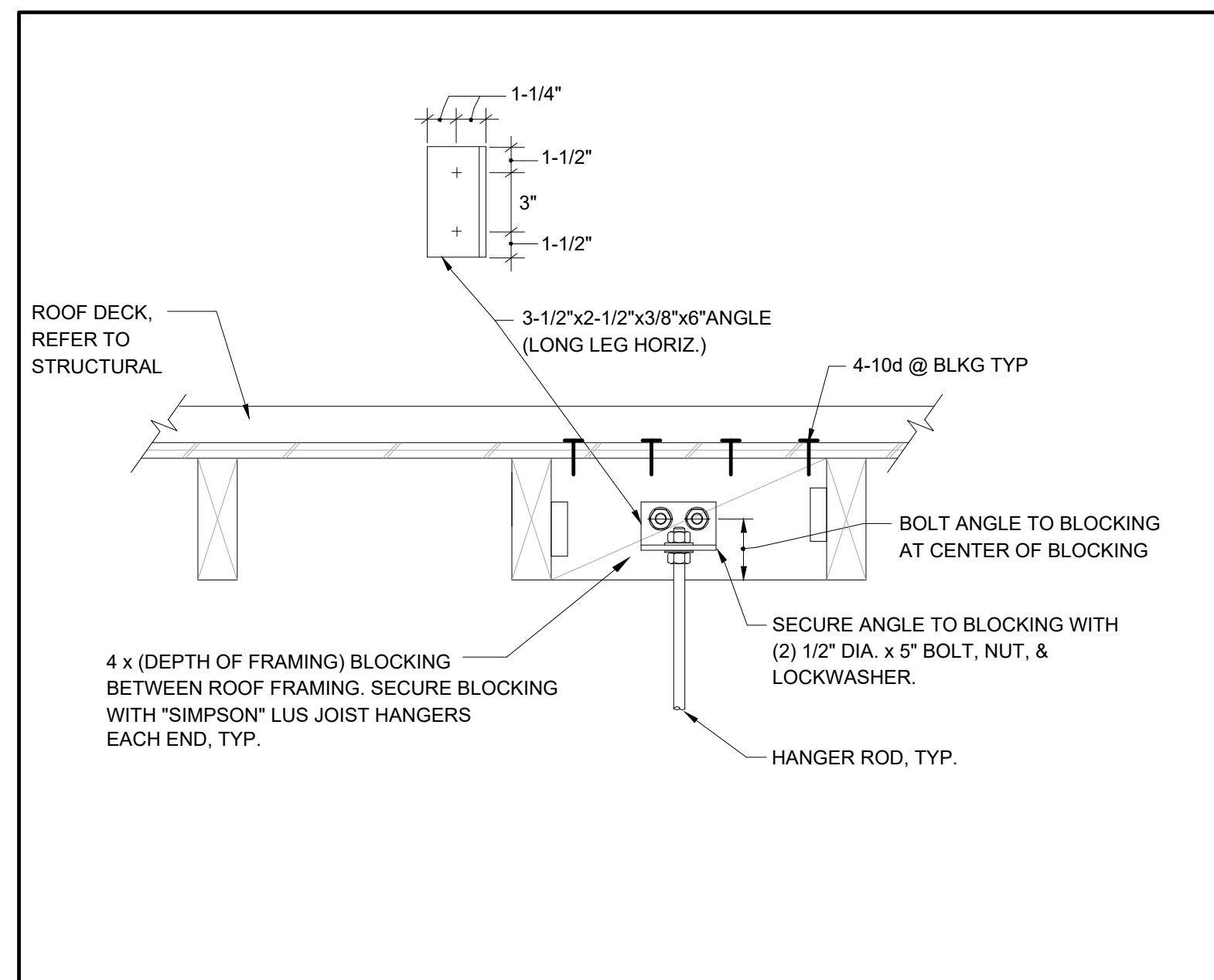
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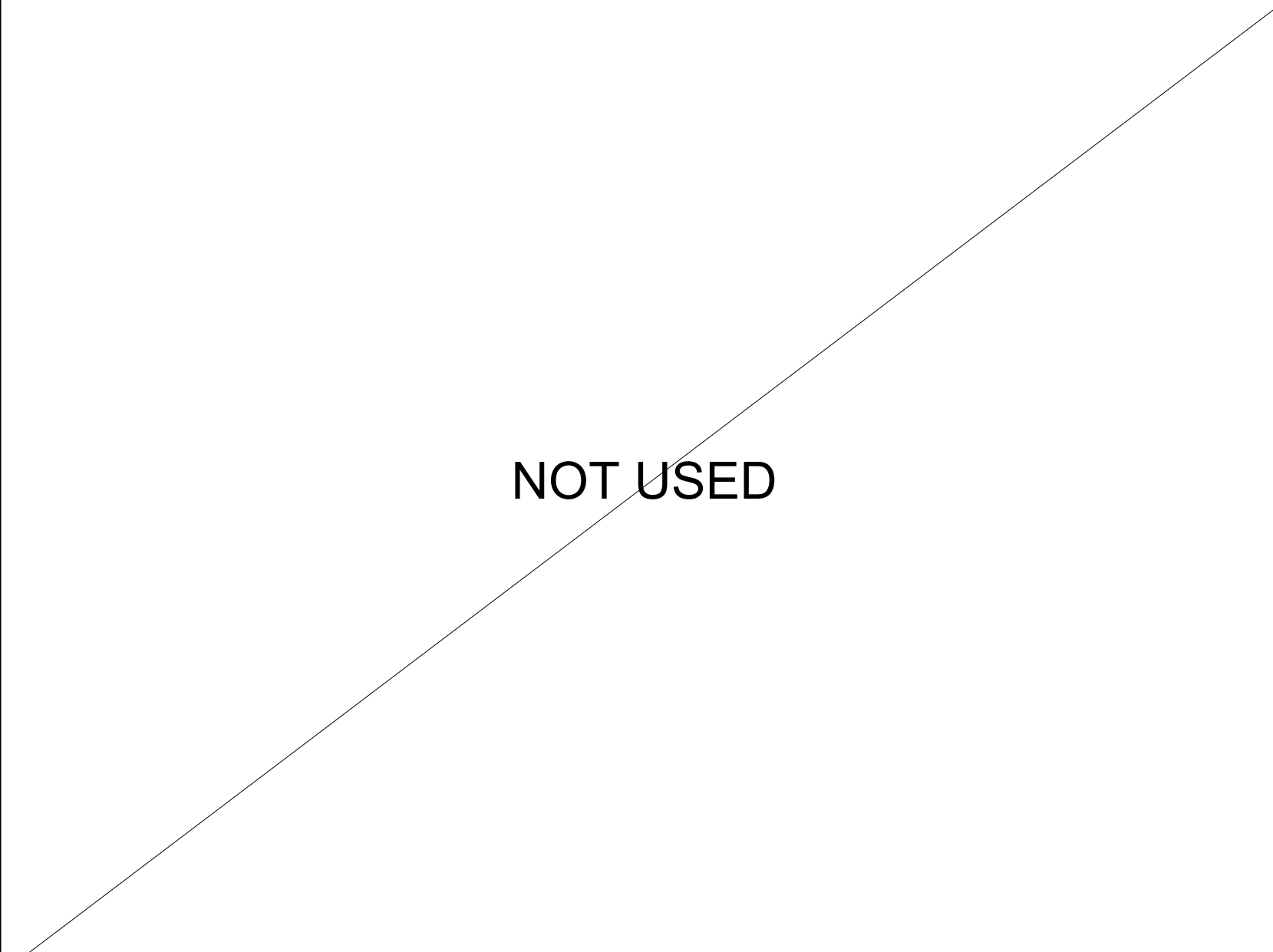
G COLD STORAGE SHELVING ATTACHMENT

NTS

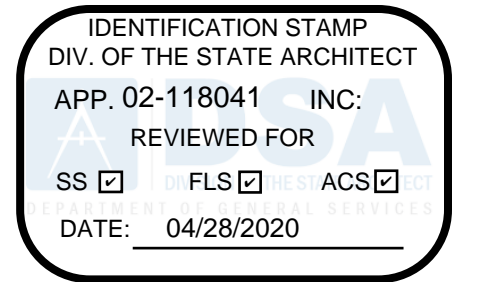
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D	HOOD HANGING SUPPORT		NTS
G	NOT USED		NTS

E	EXHAUST HOOD ATTACHMENT DETAIL
	
H	

NTS



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KITCHEN RENOVATION HOUSTON (SERNA) SCHOOL

FOODSERVICE EQUIPMENT DETAILS

CONSULTANT

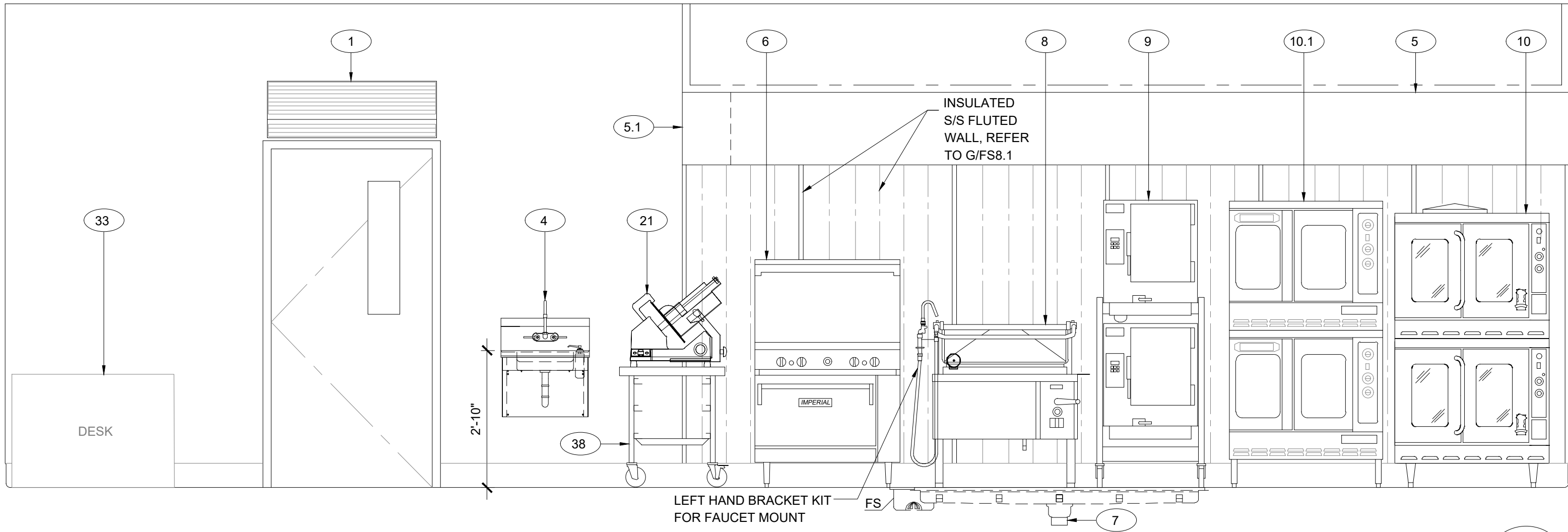


PROJECT NO. 19-32-050	REVISIONS	BY
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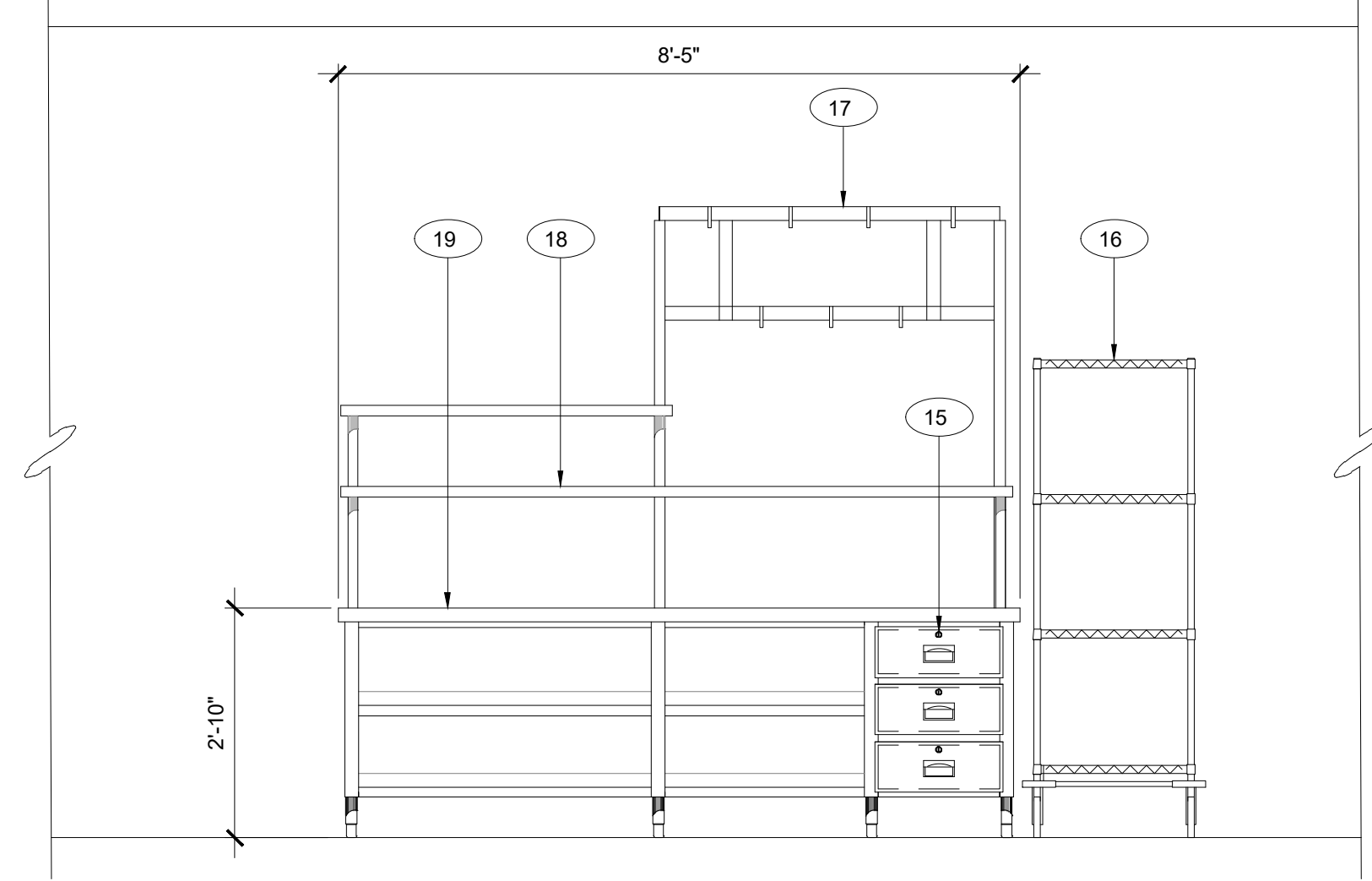
SHEET NO.

FS8.3

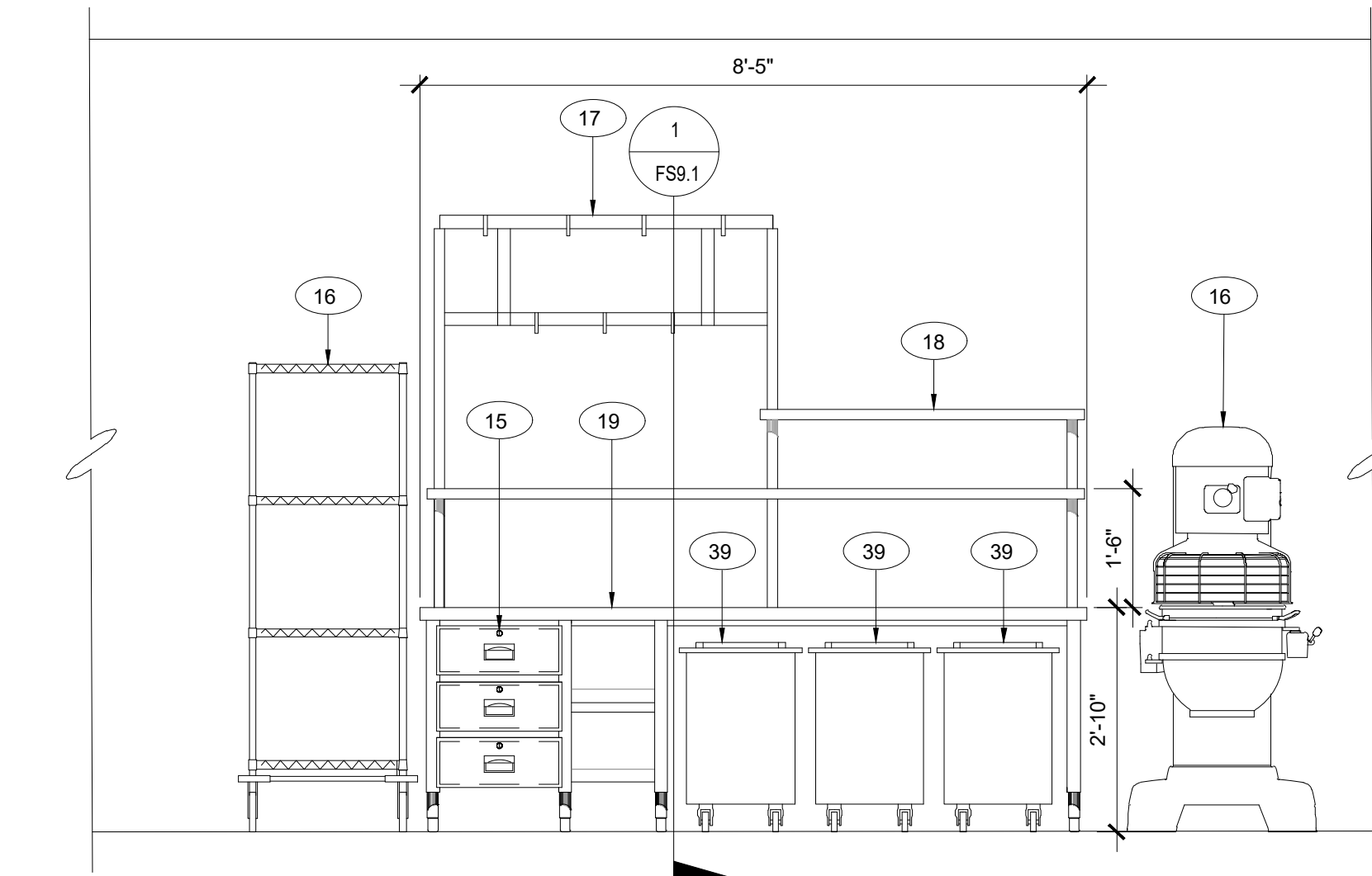
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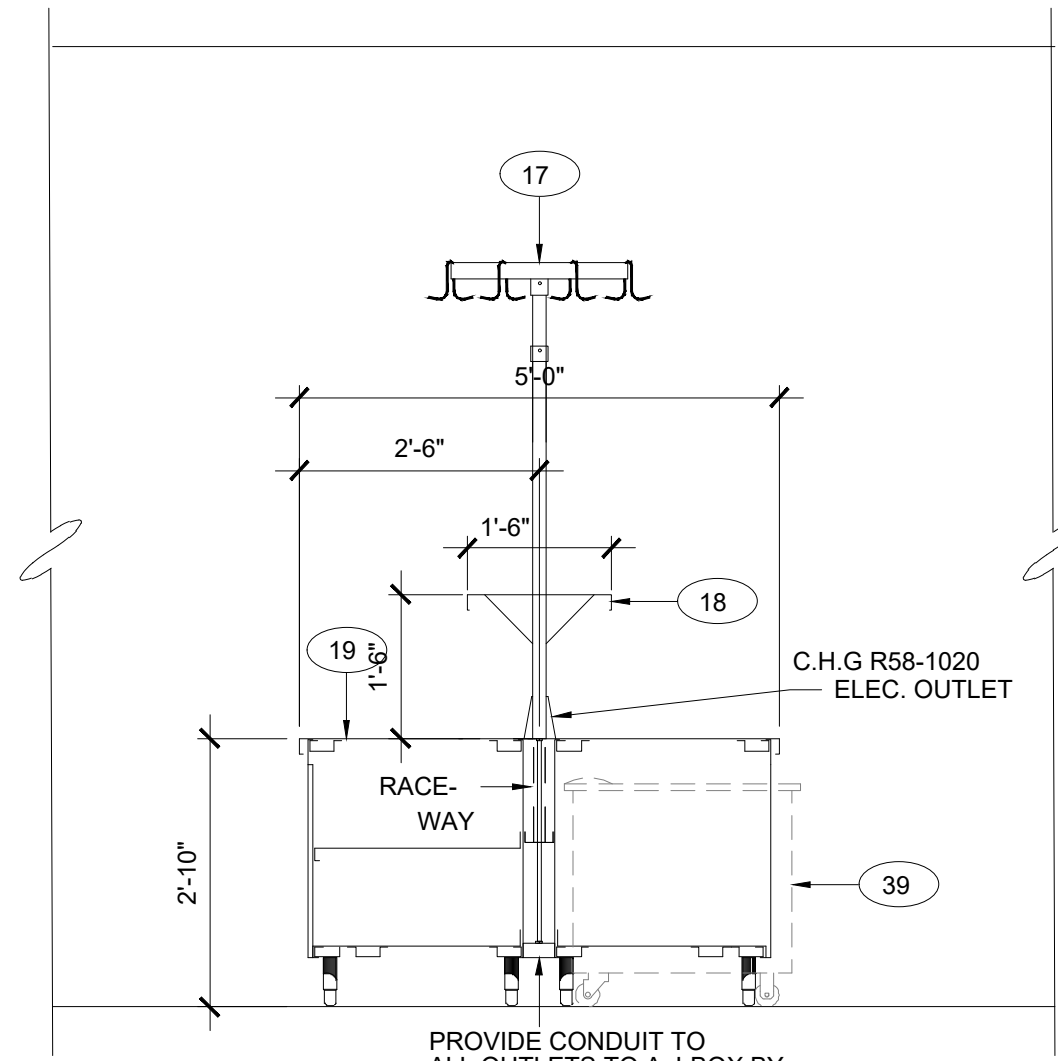
ELEVATIONS
SCALE : 1/2" = 1'-0"
A
FS9.1



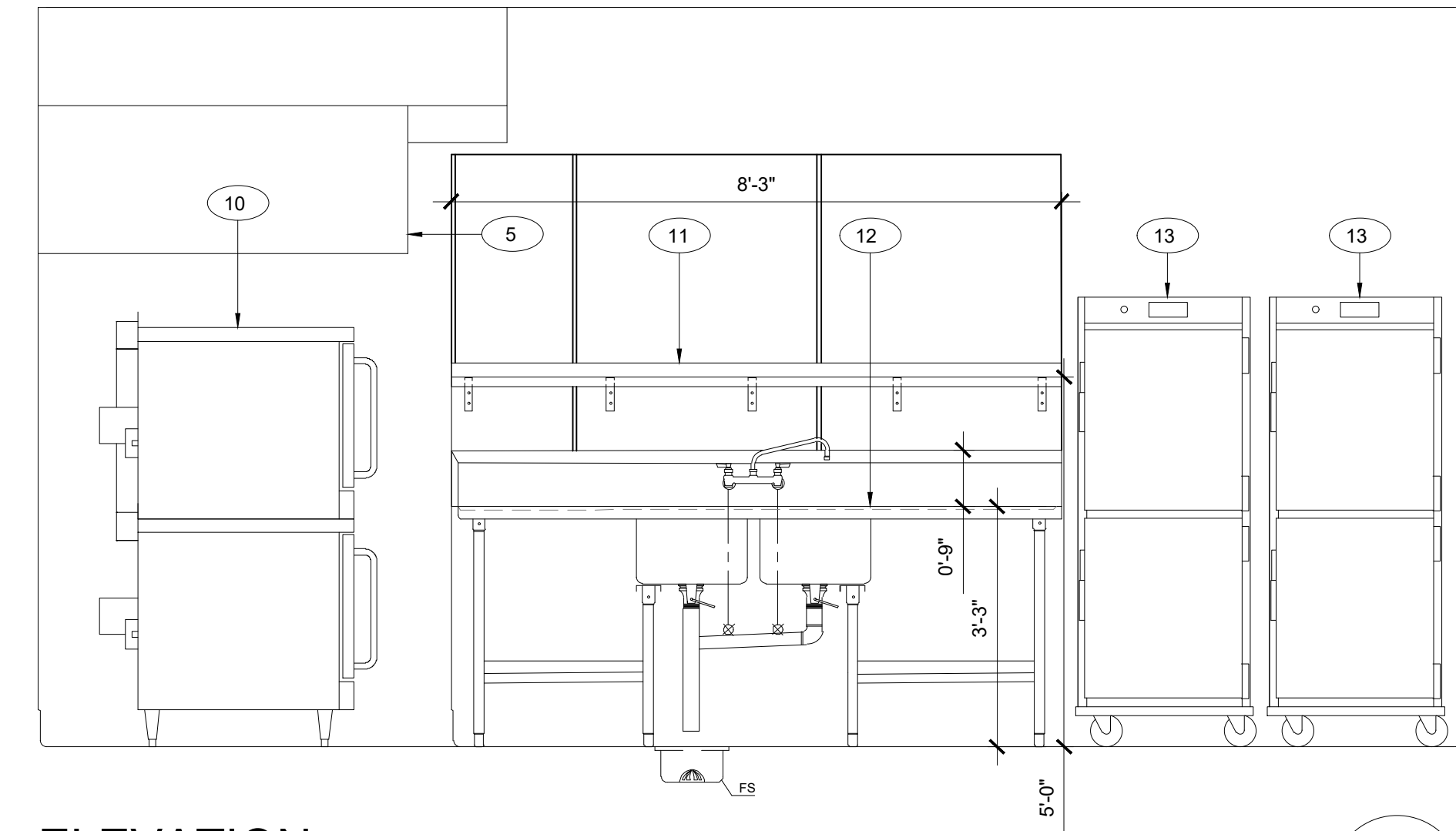
ELEVATION
SCALE : 1/2" = 1'-0"
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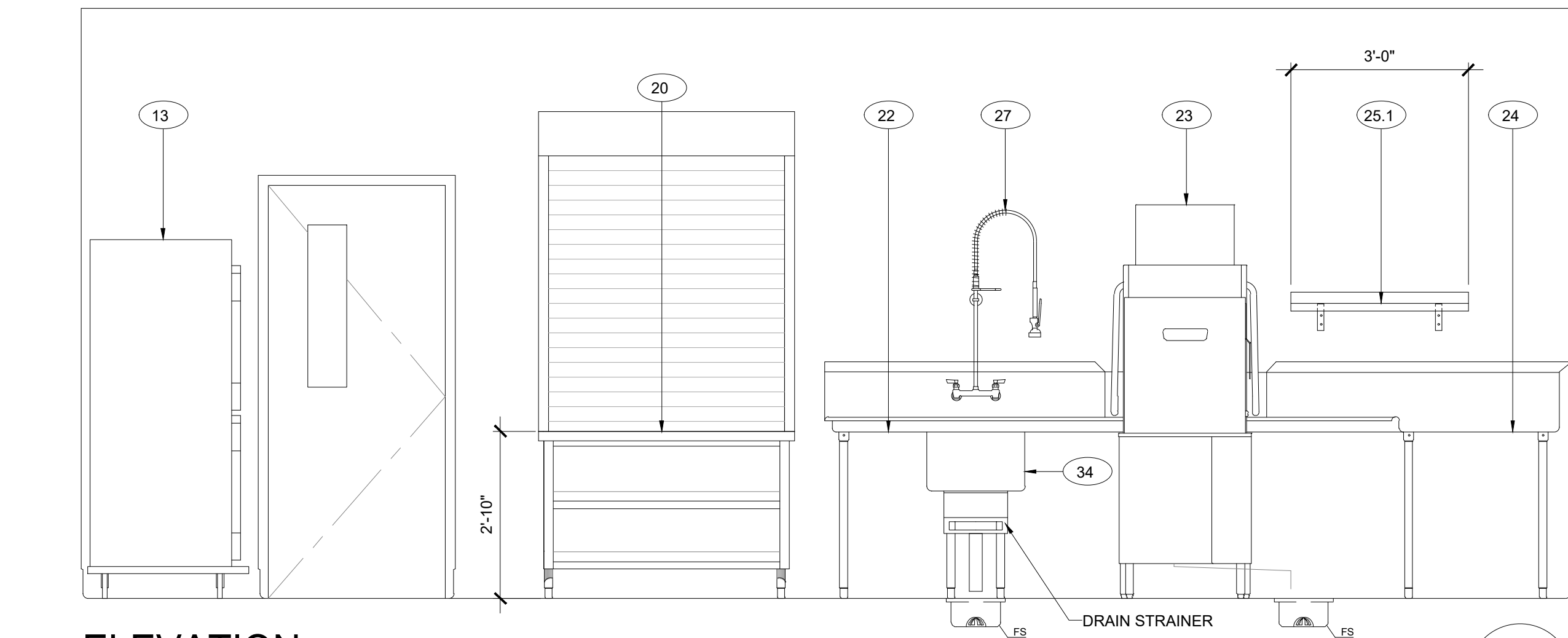
ELEVATION
SCALE : 1/2" = 1'-0"
C
FS9.1



SECTION
SCALE : 1/2" = 1'-0"
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FS9.1

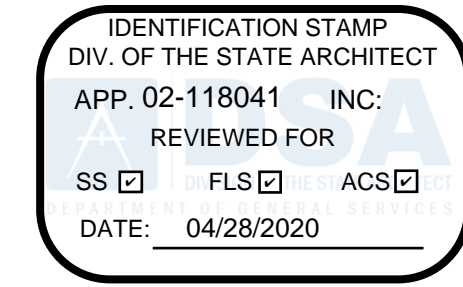


ELEVATION
SCALE : 1/2" = 1'-0"
D
FS9.1



ELEVATION
SCALE : 1/2" = 1'-0"
E
FS9.1

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KITCHEN RENOVATION
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FOODSERVICE EQUIPMENT
ELEVATIONS

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