

ABBREVIATIONS

& ∠ @ A.B. A.C. ADD'L A.F.F. ALUM. APPROX.	AND ANGLE AT ANCHOR BOLT ASPHALTIC CONCRETE ADDITIONAL ABOVE FINISH FLOOR ALUMINUM APPROXIMATE	LAV. LBS. LVT MAX. MECH. MFR. MIN. MISC. MTL.	LAVATORY POUND LUXURY VINYL TILE MAXIMUM MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS METAL
BLDG. BLK'G. BTM.	BUILDING BLOCKING BOTTOM	(N) N.I.C. NO., # N.T.S.	NEW NOT IN CONTRACT NUMBER NOT TO SCALE
C.L. CLG. CLR. C.J. CMU COL. CONC. CONT. C.W.	CENTER LINE CEILING CLEAR CONTROL JOINT CONCRETE MASONRY UNIT COLUMN CONCRETE CONTINUOUS COLD WATER	O.C. O.D. O/ ± P.LAM. PLYWD. PSI P.M. P.T.R. P.T.	ON CENTER OUTSIDE DIAMETER OVER PLUS OR MINUS PLASTIC LAMINATE PLYWOOD POUNDS PER SQUARE INCH PRESS METAL PENETRATION THRU ROOF PRESSURE TREATED
DBL. DEMO. DEPT. D.F. DIA., Ø DIM. DIST. DTL. DWG. DS.	DOUBLE DEMOLITION DEPARTMENT DRINKING FOUNTAIN DIAMETER DIMENSION DISTRICT DETAIL DRAWING DOWNSPOUT	R.D. REINF. REQ'D. REV. R.O. RWD.	ROOF DRAIN REINFORCED REQUIRED REVISIONS ROUGH OPENING REDWOOD
(E) EA. ELECT. ELEV. EQ. EQUIP. E.W. ETC. EXP. E.J. EXT.	EXISTING EACH ELECTRICAL ELEVATION EQUAL EQUIPMENT EACH WAY ET CETERA EXPANSION EXPANSION JOINT EXTERIOR	SCHED. SIM. S.M. SPEC'S. SQ. FT. S.STL. STD. STL STRUCT. S.T.S.M.S.	SCHEDULE SIMILAR SHEET METAL SPECIFICATIONS SQUARE FEET STAINLESS STEEL STANDARD STEEL STRUCTURAL SELF TAPPING SHEET METAL SCREW SANITARY SEWER
F.D. F.E. FDTN. F.A. FLR. F.O.S. FT.	FLOOR DRAIN FIRE EXTINGUISHER FOUNDATION FINISHED FLOOR FLOOR FACE OF STUD FOOT OR FEET	T & G T.O.C. T.O.F. T.O.M. T.O.P. T.O.W. TYP.	TONGUE & GROOVE TOP OF CONCRETE/CURB TOP OF FRAMING TOP OF MASONRY TOP OF PLATE/PARAPET TOP OF WALL TYPICAL
GA. GALV. G.C. G.I. GLB GYP. BD.	GAUGE GALVANIZED GENERAL CONTRACTOR GALVANIZED IRON GLUE LAMINATED BEAM GYPSUM BOARD	U.O.N.	UNLESS OTHERWISE NOTED
H.B. H.M. HORIZ. HR. HSS HT. HVAC	HOSE BIB HOLLOW METAL HORIZONTAL HOUR HOLLOW STRUCTURAL SECTION HEIGHT HEATING VENTILATION AIR CONDITIONING	V.I.F. VCT VTR. W/ WD. W.H. WT. W.W.F.	VERIFY IN FIELD VINYL COMPOSITE TILE VENT THRU ROOF WITH WOOD WATER HEATER WEIGHT WELDED WIRE FABRIC
I.D. INFO.	INSIDE DIAMETER INFORMATION		
J-BOX JT.	JUNCTION BOX JOINT		

SYMBOLS LEGEND

	SECTION NUMBER		ROOM NUMBER
	SHEET WHERE SECTION IS DRAWN		WINDOW TYPE
	DETAIL NUMBER		DOOR NUMBER
	SHEET WHERE DETAIL IS DRAWN		HARDWARE GROUP
	ELEVATION NUMBER		KEYNOTE
	SHEET WHERE ELEVATION IS DRAWN		EQUIPMENT NUMBER
	LOCATION NUMBER		REVISION NUMBER
	DATUM, WORK OR CONTROL NUMBER		
	GRID LINE NUMBER		

SOLANO COMMUNITY COLLEGE
BUILDING 1800B ELECTRICAL UPGRADES

4000 SUISUN VALLEY ROAD
FAIRFIELD CA 94534

GENERAL NOTES

- ALL WORK IS NEW UNLESS SPECIFICALLY NOTED AS EXISTING. ALL WORK SHALL BE BY G.C. UNLESS SPECIFICALLY NOTED BY OWNER, BY OTHERS, OR BY N.I.C.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO HIS BID TO DETERMINE ACTUAL JOB SITE CONDITIONS AND REQUIRED EXTENT OF WORK FOR THIS PROJECT
- CONTRACTOR SHALL VERIFY OWNER REQUIREMENTS FOR WORK HOURS, ETC. WITH PROJECT MANAGER PRIOR TO BIDDING AND COMMENCEMENT OF WORK. CONTRACTOR SHALL COMPLY WITH ALL OWNER REQUIREMENTS
- CONTRACTOR SHALL PROVIDE A JOB SITE PHONE & EMAIL WITHIN (5) WORKING DAYS AND INFORM ARCHITECT OF PHONE NUMBER AT CONSTRUCTION KICK-OFF MEETING. G.C. SHALL MAINTAIN A COMPUTER W/ EMAIL CAPABILITIES ON SITE AT ALL TIMES
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND NOTING ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS PRIOR TO BIDDING THE PROJECT. CONTRACTOR SHALL CONTACT ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH RELATED WORK. OTHERWISE, CONTRACTOR IS RESPONSIBLE FOR CORRECTIONS AT NO EXTRA COST TO OWNER
- G.C. SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL FINISH MATERIALS & EQUIPMENT AS SPECIFIED HEREIN. ANY DEVIATION IN COST DUE TO SHIPPING DELAYS, MATERIAL UPGRADES, SHALL BE BORN BY THE G.C. ALL MATERIALS NOT IDENTIFIED AS PROBLEMS PRIOR TO BID, SHALL BE THE RESPONSIBILITY OF THE G.C. TO SUPPLY AS NOTED ON THE BID FORM
- ALL DEMOLITION IS INCLUDED IN THE BASE BID. CONTRACTOR SHALL PROVIDE ALL DEMOLITION NECESSARY TO COMPLETE ALL NEW WORK AS INDICATED ON THE PLANS
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL ADJACENT WORK AND SHALL COORDINATE WITH ALL OTHER TRADES SO AS TO FACILITATE THE GENERAL PROGRESS OF THE WORK. EACH TRADE SHALL AFFORD ALL OTHER TRADES EVERY REASONABLE OPPORTUNITY FOR THE INSTALLATION OF THEIR WORK AND FOR THE STORAGE OF THEIR MATERIAL
- GENERAL CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND QUANTITIES OF ITEMS TO BE REMOVED/REPLACED OR TO BE REINSTALLED PRIOR TO SUBMITTAL OF BID. G.C. SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES PRIOR TO THE BID DUE DATE FOR FURTHER CLARIFICATION - AS DEFINED IN BID INSTRUCTIONS
- G.C. WILL BE HELD RESPONSIBLE FOR COMPLETION OF ENTIRE WORK IN A MANNER/INTENT FOR THIS TYPE OF PROJECT REGARDLESS OF QUANTITIES SHOWN IN PLANS
- ANY EXISTING ITEMS SHOWN WITHOUT NOTATION FOR REMOVAL SHALL BE PROTECTED THROUGHOUT DEMOLITION AND RENOVATIONS. G.C. WILL BE REQUIRED TO REPLACE ANY/ALL ITEMS TO REMAIN THAT ARE DAMAGED BY WORK AT NO ADDITIONAL COST TO OWNER AND ALSO AT A QUALITY LEVEL EQUAL TO OR EXCEEDING THE ORIGINAL CONDITIONS
- ITEMS SHOWN TO BE REMOVED SHALL BE DISPOSED OF PROPERLY BY THE G.C. UNLESS OTHERWISE NOTED

NOTES

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE CONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS.

SHOULD ANY CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE THESE DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

INSPECTOR

A 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 4-342, PART 1, TITLE 24, CCR. CLASS 3 INSPECTOR REQUIRED.

DEFERRED APPROVALS

- NONE

OWNER

SOLANO COMMUNITY COLLEGE DISTRICT
4000 SUISUN VALLEY ROAD
FAIRFIELD CA 94534
CONTACT: KRIS BRIDGES
DIRECT: (916) 713-6917
Email: kristoffer.bridges@solano.edu

ARCHITECT

HMR ARCHITECTS
2130 21st STREET
SACRAMENTO CA 95818
(916) 736-2724
CONTACT: GRANT WATKINS
Email: grantw@hmrarchitects.com

ELECTRICAL ENGINEER

WHITTINGTON ELECTRIC
1940 INDUSTRIAL DR
AUBURN CA 95603
(530) 823-3055
CONTACT: NATHAN BAER
Email: nathan@whittingtonelectric.com

BASE SCOPE OF WORK

- PROJECT DOES NOT ADD OR SUBTRACT ANY BUILDING AREA NOR CHANGE THE EXISTING USE OF THE PREMISES. ALL RATED ASSEMBLIES SHALL BE MAINTAINED AS PREVIOUSLY CONSTRUCTED. ANY ALTERATIONS TO ANY AREAS AFFECTING RATED ASSEMBLIES SHALL BE CONSTRUCTED TO MEET OR EXCEED EXISTING REQUIREMENTS
- PROJECT SCOPE IS TO ADD TRANSFORMERS AND PANELS, AS WELL AS RE-DISTRIBUTE LOADS IN CLASSROOM BUILDING 1800B.

PROJECT CODE DATA

DSA NUMBERS	APP #02-122860 FILE # 48-C1
CODE	2022 CBC

CONSTRUCTION SHALL COMPLY WITH TITLE 24, CALIFORNIA CODE REGULATIONS, INCLUDING THE FOLLOWING:

2022 CALIFORNIA ADMINISTRATIVE CODE, CCR, TITLE 24, PART 1
2022 CALIFORNIA BUILDING CODE, VOL. 1 & 2, CCR, TITLE 24, PART 2
2022 CALIFORNIA RESIDENTIAL CODE, CCR, TITLE 24, PART 2.5
2022 CALIFORNIA ELECTRICAL CODE, CCR, TITLE 24, PART 3
2022 CALIFORNIA MECHANICAL CODE, CCR, TITLE 24, PART 4
2022 CALIFORNIA PLUMBING CODE, CCR, TITLE 24, PART 5
2022 CALIFORNIA ENERGY CODE, CCR, TITLE 24, PART 6
2022 CALIFORNIA FIRE CODE, CCR, TITLE 24, PART 9
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, CCR, TITLE 24, PART 11
2022 CALIFORNIA EXISTING BUILDING CODE, CCR, TITLE 24, PART 10
STATE FIRE MARSHAL REGULATIONS, CCR, TITLE 19, PUBLIC SAFETY

NFPA 13:	INSTALLATION OF SPRINKLER SYSTEMS,	2022 EDITION
NFPA 14:	INSTALLATION OF STANDPIPE & HOSE SYSTEMS,	2019 EDITION
NFPA 17:	DRY CHEMICAL EXTINGUISHING SYSTEMS,	2021 EDITION
NFPA 20:	STATIONARY PUMPS FOR FIRE PROTECTION,	2019 EDITION
NFPA 24:	PRIVATE FIRE MAINS & THEIR APPURTENANCES,	2022 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE,	2022 EDITION
NFPA 2001:	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS,	2018 EDITION

OCCUPANCY CLASSIFICATION AND USE: B

BUILDING CONSTRUCTION TYPE: III-B

NUMBER OF STORIES: ONE STORY

BUILDING AREA IN SQUARE FEET: 27,145 SF

FIRE SPRINKLERED: NO

FIRE ALARM: YES

YEAR BUILDING WAS CONSTRUCTED: 1972

IS THE BLDG. IN A HIGH FIRE HAZARD SEVERITY ZONE: NO

FIRE SAFETY CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH CFC AND CBC CHAPTER 33

INDEX TO DRAWINGS

SHEET NUMBER	DESCRIPTION
A0.0 A5.1 A1.0	ARCHITECTURAL COVER SHEET OVERALL SITE PLAN FLOOR PLAN AND DETAILS ELECTRICAL ELECTRICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES OVERALL FIRST FLOOR PLAN - ELECTRICAL POWER PLAN - WEST POWER PLAN - EAST PARTIAL ONE-LINE POWER DIAGRAM AND LOAD CALCULATIONS PANEL SCHEDULES PANEL SCHEDULES PANEL SCHEDULES ELECTRICAL DETAILS
E0.1 E1.0 E2.1 E2.2 E3.1 E4.1 E4.2 E4.3 E5.1	
TOTAL SHEET COUNT = 12	

VICINITY MAP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-122860 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☐
DATE: 01/07/2025

HMRARCHITECTS

2130 21st Street
Sacramento, CA 95818
T 916 736 2724

SCOTT CAMERON PLUMBER
No. 24706
REN. 12/31/25

DSA #02-122860
FILE #48-C1

BUILDING 1800B
ELECTRICAL
UPGRADES

SOLANO COMMUNITY
COLLEGE

4000 SUISUN VALLEY RD.
FAIRFIELD, CA 94534

REVISIONS

NO.	DESCRIPTION	DATE
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COVER SHEET

DECEMBER 11, 2024

DRAWN BY:
GW
CHECKED BY:
KID
JOB NO:
24035

A0.0

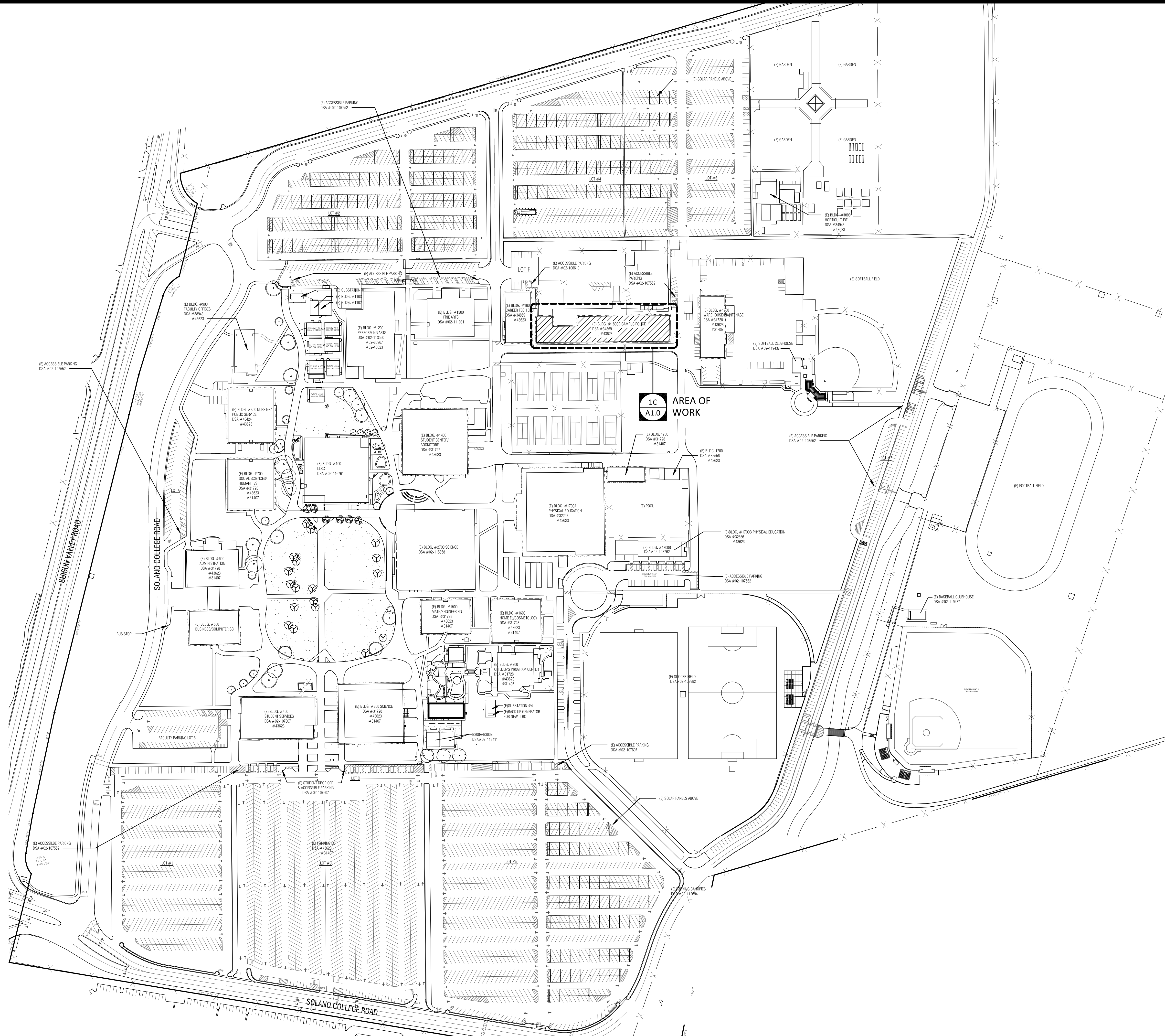
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E:\SOLANO CC\24035 BUILDING 1800 ELEC UPGRADES\SCC_A0.0 COVER SHEET.DWG

12/11/2024 2:34 PM GRANTW
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1D
AS1

SOLANO CC OVERALL SITE PLAN

FILE:

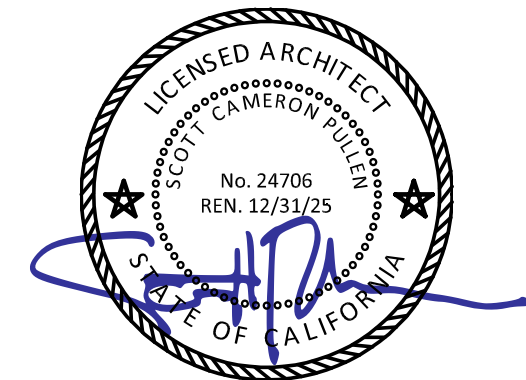


SCALE: 1/128" = 1'-0"

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DIV. OF THE STATE ARCHITECT
APP: 02-122860 INC:
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DSA #02-122860
FILE #48-C1

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NO.	DESCRIPTION	DATE
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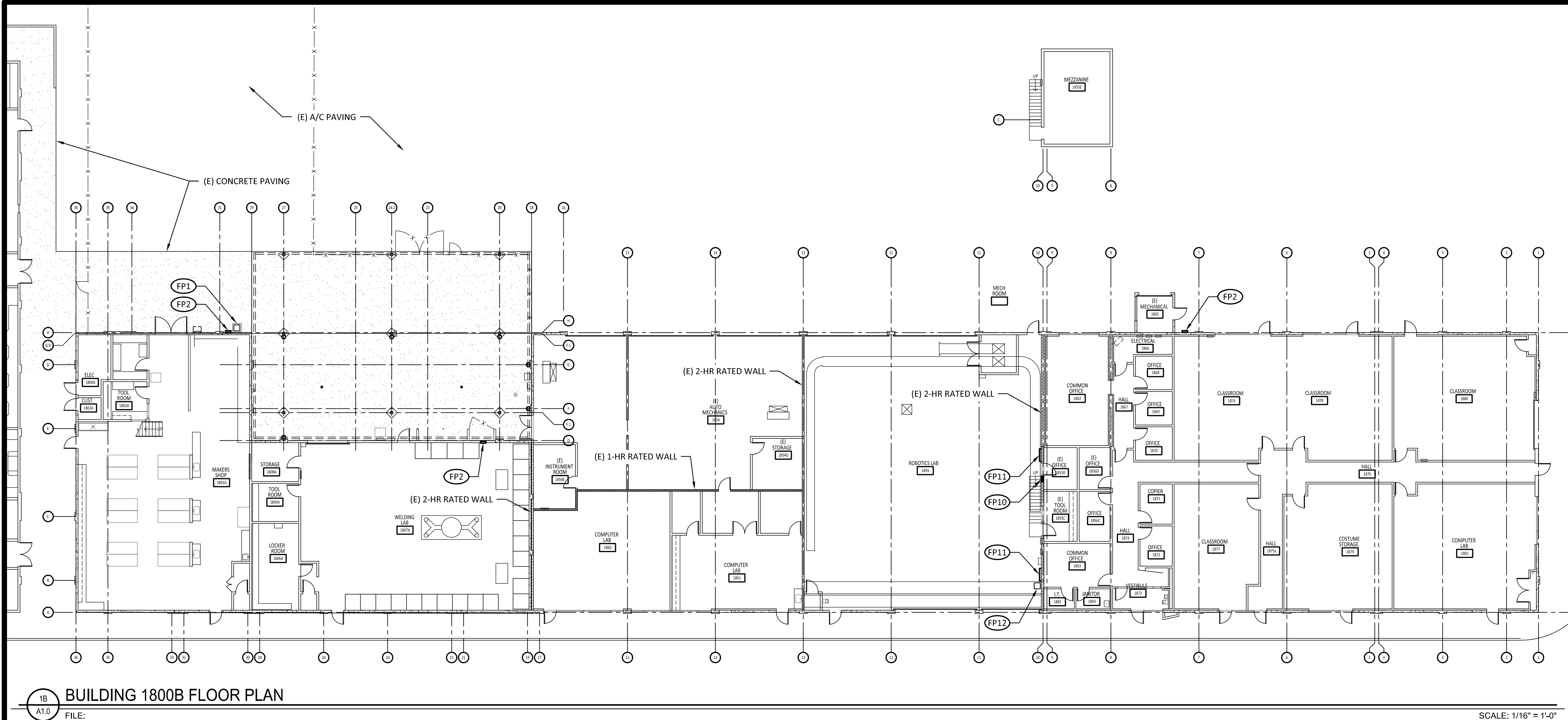
OVERALL SITE PLAN

DECEMBER 11, 2024

DRAWN BY:
GW
CHECKED BY:
YD
JOB NO:
24035

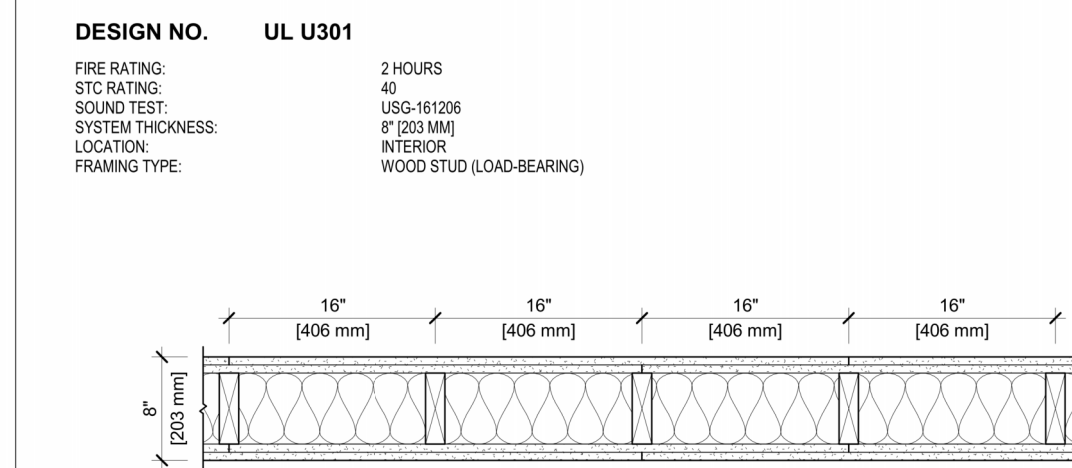
AS1

1/6/2025 1:02 PM GRANTV
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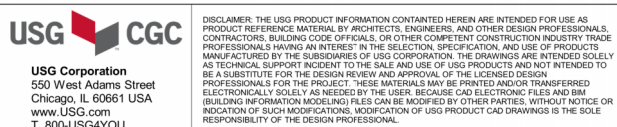
1B
A1.0 BUILDING 1800B FLOOR PLAN
FILE:

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



DESIGN NO. UL U301
FIRE RATING: 2 HOURS
STC RATING: 45
SOUND TEST: USC-10126
SYSTEM THICKNESS: 8 1/2" (213 MM)
LOCATION: INTERIOR
FRAMING TYPE: WOOD STUD (LOAD-BEARING)

ASSEMBLY REQUIREMENTS:
GYPSUM PANELS: TWO LAYERS 5/8" (15.9 MM) SHEETROCK® ECGSMART GYPSUM PANEL (UL TYPE ULX™)
WOOD STUDS: 2" x 4" (51 X 140 MM) WOOD STUDS 16" (406 MM) O.C.
INSULATION: 5-1/2" (140 MM) FIBERGLASS INSULATION
GYPSUM PANELS: TWO LAYERS 5/8" (15.9 MM) SHEETROCK® ECGSMART GYPSUM PANEL (UL TYPE ULX™)



UL U301

W-P-2-04

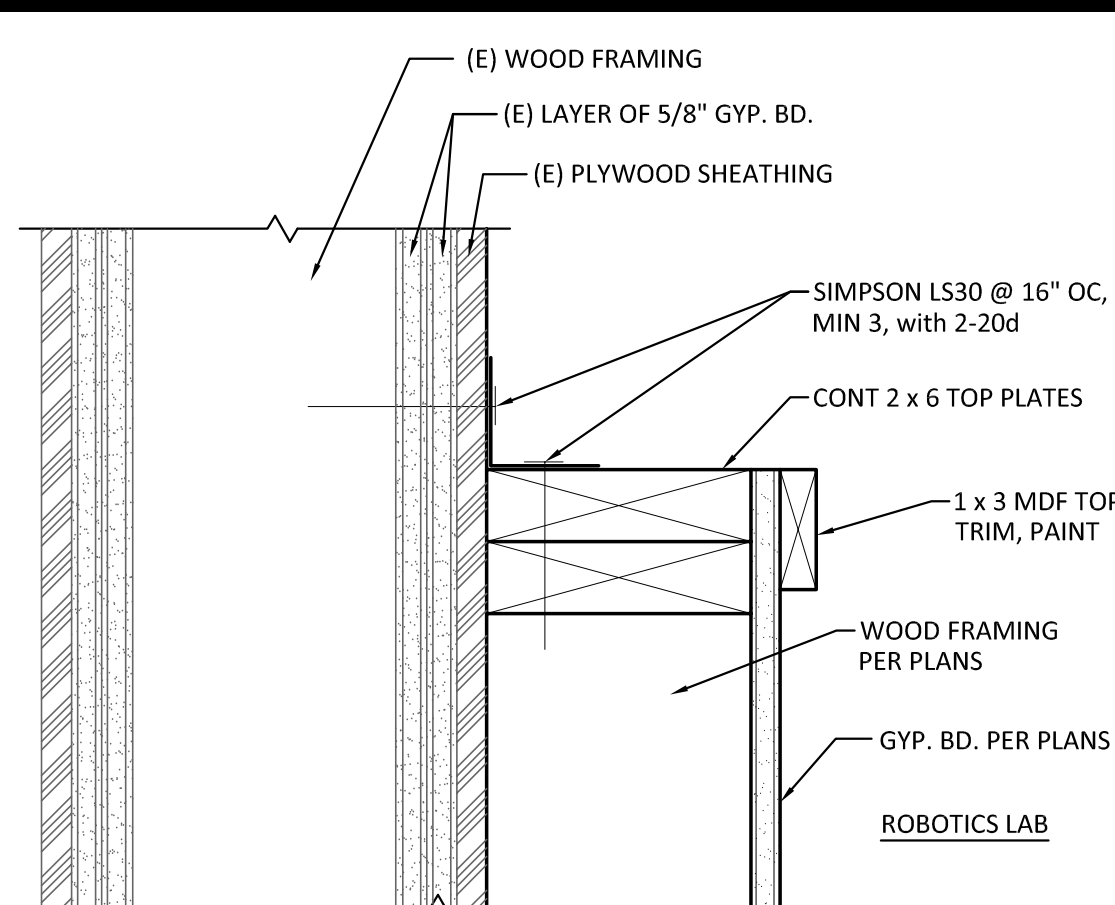
GENERAL WALL NOTES:
1. REFER TO APPLICABLE CODES REQUIREMENTS TO ENSURE COMPLIANCE PRIOR TO CONSTRUCTION.
2. FOR THE MOST UP-TO-DATE DETAILS, INCLUDING CONSTRUCTION VARIATIONS, REFER TO THE PUBLISHED DESIGN.
3. WHERE DESIGN NO. INDICATES "PER", THE FIRE RATING IS BASED ON LABORATORY TEST DATA OF THE REFERENCED SIMILARLY CONSTRUCTED ASSEMBLIES.
4. STUD SIZE AND INSULATION THICKNESS ARE MINIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
5. STUD AND FASTENER SPACINGS ARE MAXIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
6. PANEL ORIENTATION SHALL BE AS SPECIFIED IN THE PUBLISHED DESIGN.
7. FIRE RATINGS ARE FROM BOTH SIDES UNLESS OTHERWISE STATED.
8. FIRE RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, INCREASE STUD MATERIAL THICKNESS, DECREASE STUD SPACING, DECREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH.
9. WHERE ACoustICAL PERFORMANCE IS PROVIDED IN AN ESTIMATED RANGE, THE VALUES ARE BASED ON LABORATORY TEST DATA OF SIMILARLY CONSTRUCTED ASSEMBLIES.
10. SOUND RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH, INCREASE STUD MATERIAL THICKNESS, INCREASE STUD SPACING, INCREASE FASTENER SPACING, INCREASE INSULATION THICKNESS UP TO CAVITY DEPTH. MODIFICATIONS MUST NOT EXCEED LIMITATIONS OF FIRE RATING.

ISSUE RECORD:
10/05/2021 11:56:21 PM

SHEET INFORMATION:

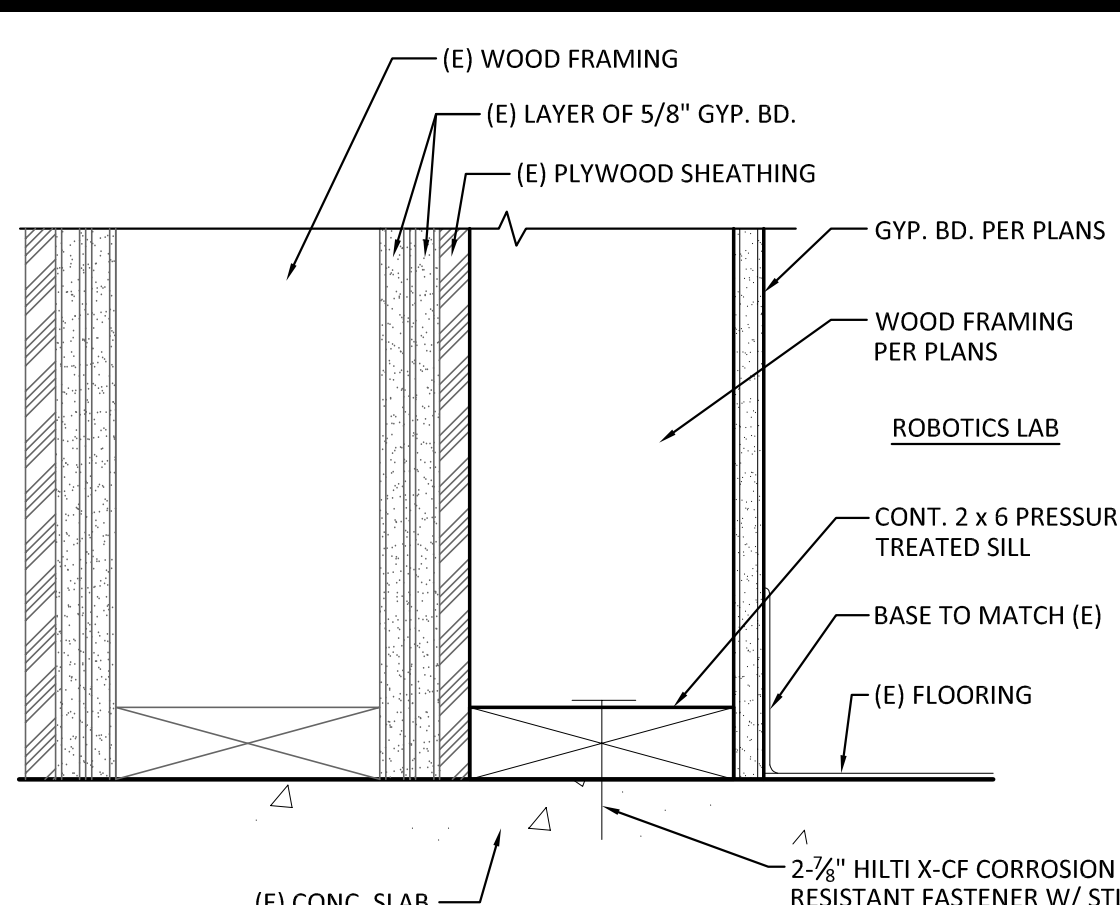
W-P-2-04

SCALE: NTS



3D
A1.0 WALL TOP CONNECTION

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



4D
A1.0 FURRING WALL AT (E) WOOD WALL

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

FLOOR PLAN KEYNOTES

BASE SCOPE

FP1 CONCRETE HOUSEKEEPING PAD FOR TRANSFORMER. SAWCUT EXISTING CONCRETE FOR NEW PAD. SEE 5C A1.0

FP2 NEW PANEL LOCATION, SEE E-SHEETS

ADD ALTERNATE SCOPE

FP10 DEMO EXISTING ELECTRICAL PANEL, INTERNAL COMPONENTS, AND CONDUITS THAT ENTER FROM ABOVE. THEN INFILL WALL OPENING TO MAINTAIN (E) 2 HOUR RATING. SEE UL LISTING 1D A1.0

FP11 REPLACEMENT PANEL TO BE INSTALLED IN NEW FURRED WALL. SEE WALL LEGEND AND 5D A1.0

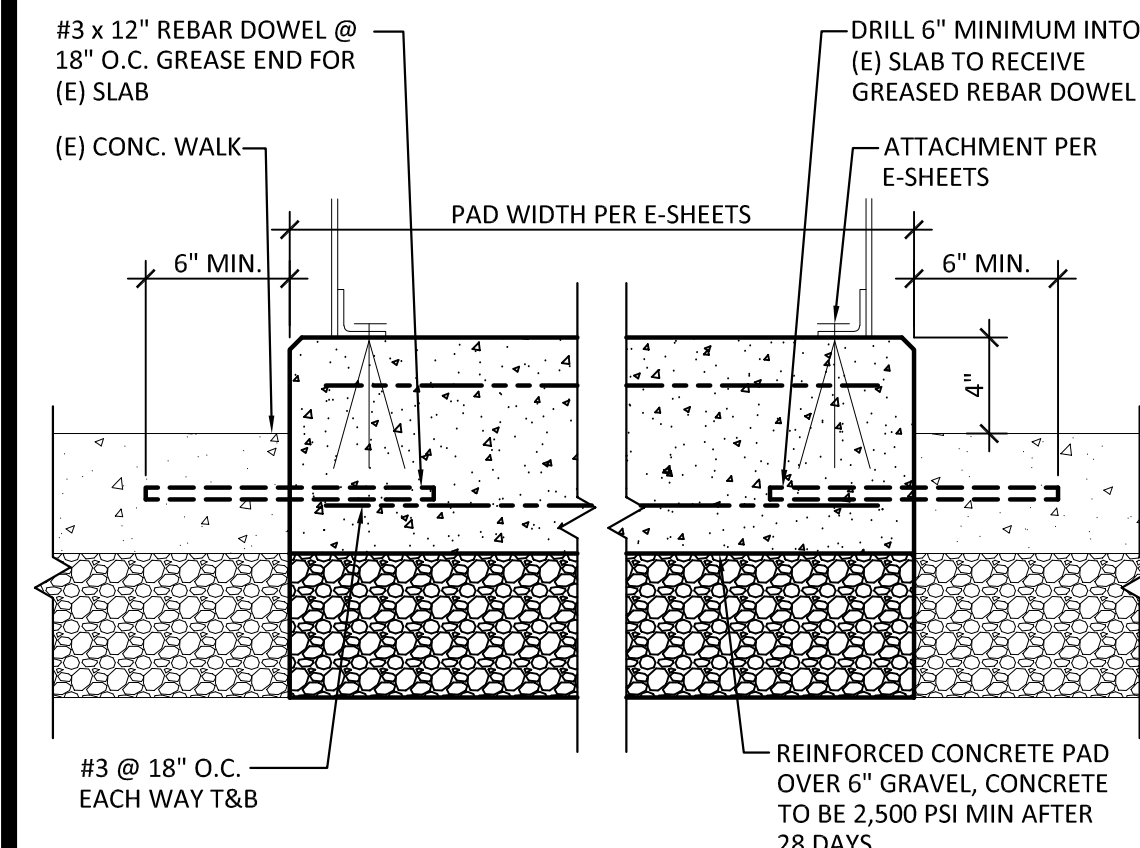
FP12 NEW TRANSFORMER MOUNTED TO (E) SLAB

WALL LEGEND

- (E) FRAMED WALLS
- (E) CONCRETE EXTERIOR WALLS
- (E) 1-HOUR RATED WALLS
- (E) 2-HOUR RATED WALLS
- 2 x 6 @ 16" O.C. FURRED WALL WITH 5/8" GYP BD

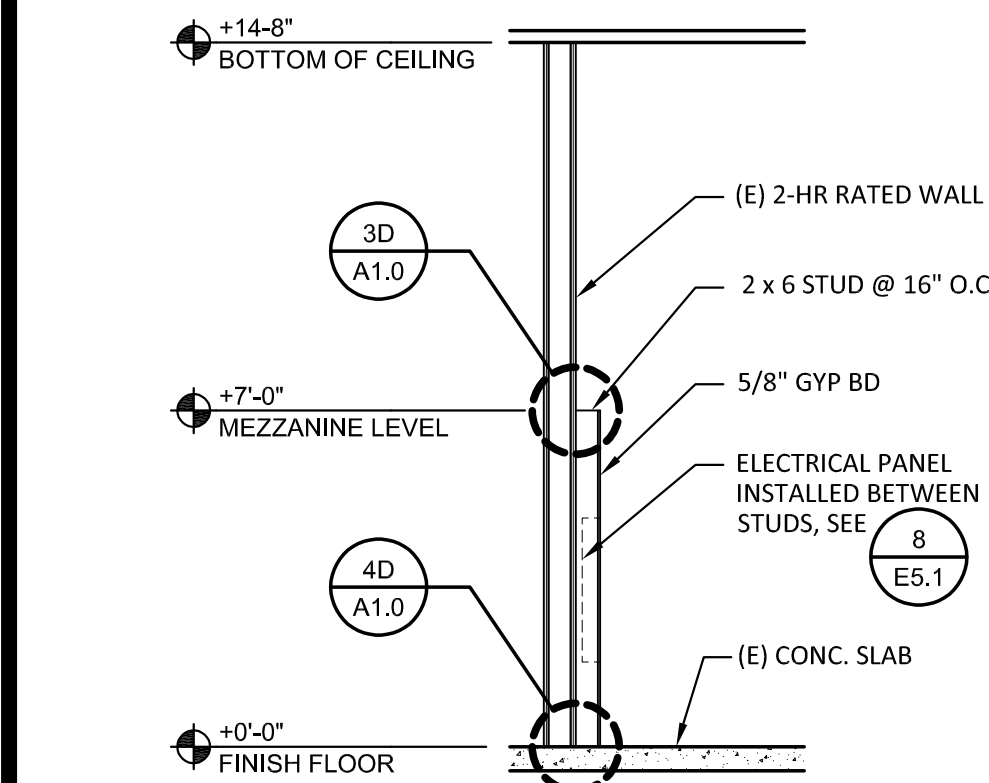
GENERAL NOTES

- GC TO MAINTAIN EXISTING WALL RATINGS. SEE ELECTRICAL FOR CONDUIT PENETRATIONS.
- REPAIR AND/OR TOUCH UP FINISHES AT ELECTRICAL WORK.



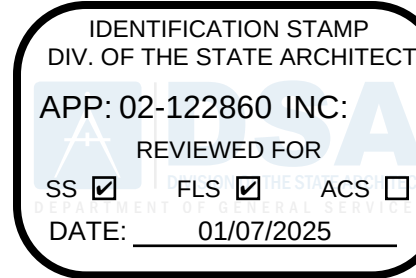
5C
A1.0 HOUSEKEEPING PAD

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



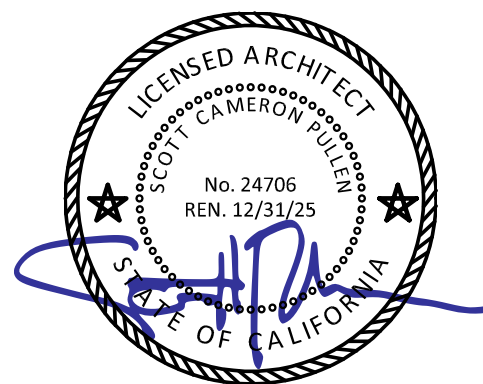
5D
A1.0 FURRED WALL AT ELECTRICAL PANEL

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



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DSA #02-122860
FILE #48-C1

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REVISIONS

NO.	DESCRIPTION	DATE
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FLOOR PLAN AND DETAILS

DECEMBER 11, 2024

DRAWN BY: GW
CHECKED BY: KID
JOB NO: 24035

A1.0

12/13/2024 1:03 PM NBAER
C:\P424-006 SOLANO CC BLDG 1800 ELECTRICAL IMPROVEMENTS\CAD\024-006_E01.DWG

ABBREVIATIONS					
Δ	DELTA	GC	GENERAL CONTRACTOR	OC	ON CENTER
@	AT	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	OCP	OVERCURRENT PROTECTION
2W,3W,4W	2 WIRE, 3 WIRE, 4 WIRE	GFP	GROUND FAULT PROTECTION	OL	THERMAL OVERLOAD RELAY
A, AMPS	AMPERES	HOA	HAND-OFF-AUTO	OFCl	OWNER FURNISHED CONTRACTOR INSTALLED
AC	ALTERNATING CURRENT	HP	HORSEPOWER	OFOI	OWNER FURNISHED OWNER INSTALLED
A/C	AIR CONDITIONER	HV	HIGH VOLTAGE	OS	OCCUPANCY SENSOR
AF	AMPERE FRAME	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	P	POLE
AFF	ABOVE FINISHED FLOOR	HZ	HERTZ	PA	PUBLIC ADDRESS
AHJ	AUTHORITY HAVING JURISDICTION	IMC	INTERMEDIATE METAL CONDUIT	PB	PULLBOX
AHU	AIR HANDLING UNIT	ISO	ISOLATED	PC	PHOTOCELL
AIC	AMPERE INTERRUPTING CAPACITY	JB	JUNCTION BOX	PF	POWER FACTOR
AL	ALUMINUM	KCMIL	THOUSAND CIRCULAR MILS	PFB	PROVISION FOR FUTURE BREAKER
ARCH	ARCHITECT	KO	KNOCK-OUT	PH	PHASE
AT	AMPERE TRIP	KVA	KILOVOLT AMPERE	PNL	PANEL
ATS	AUTOMATIC TRANSFER SWITCH	KVAR	KILOVOLT AMPERE REACTIVE	PT	POTENTIAL TRANSFORMER
AUX	AUXILIARY	KW	KILOWATT	PVC	POLYVINYL CHLORIDE
AV	AUDIO VISUAL	KWH	KILOWATT HOUR	(R)	REMOVE
AWG	AMERICAN WIRE GAUGE	LB	ELBOW	RCPT	RECEPTACLE
BC	BARE COPPER	LCD	LIQUID-CRYSTAL DISPLAY	(RE)	RELOCATE EXISTING
BLDG	BUILDING	LCP	LIGHTING CONTROL PANEL	RLA	RUNNING LOAD AMPS
BMS	BUILDING MANAGEMENT SYSTEM	LED	LIGHT-EMITTING DIODE	RM	ROOM
C	CONDUIT	LF	LINEAR FEET	RMC	RIGID METAL CONDUIT
CAB	CABINET	LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT	RF	RADIO FREQUENCY
CB	CIRCUIT BREAKER	LRC	LOCKED-ROTOR CURRENT	SF	SQUARE FOOT/FEET
CEC	CALIFORNIA ELECTRICAL CODE	LT	LIGHT	SM	SHEET METAL
CKT	CIRCUIT	LTS	LIGHTS	SMS	SHEET METAL SCREW
CLG	CEILING	LTG	LIGHTING	SP	SPARE
CO	CONDUIT ONLY	LV	LOW VOLTAGE	SPD	SURGE PROTECTION DEVICE
CT	CURRENT TRANSFORMER	MAX	MAXIMUM	SPKR	SPEAKER
CU	COPPER	MC	METAL CLAD CABLE	SS	STAINLESS STEEL
dB	DECIBEL	MCA	MINIMUM CIRCUIT AMPACITY	STD	STANDARD
DC	DIRECT CURRENT	MCB	MAIN CIRCUIT BREAKER	SW	SWITCH
DDC	DIRECT DIGITAL CONTROL	MCC	MOTOR CONTROL CENTER	SWBD	SWITCHBOARD
DIA	DIAMETER	MCM	THOUSAND CIRCULAR MILS	SWGR	SWITCHGEAR
DISC	DISCONNECT	MDP	MAIN DISTRIBUTION PANEL	TEMP	TEMPORARY
DIST	DISTRIBUTION	MECH	MECHANICAL	TER	TELEPHONE EQUIPMENT ROOM
DN	DOWN	MFR	MANUFACTURER	TP	TAMPER PROOF
(E)	EXISTING	MIN	MINIMUM	TR	TELECOM ROOM
EA	EACH	MISC	MISCELLANEOUS	TV	TELEVISION
EC	ELECTRICAL CONTRACTOR	MLO	MAIN LUGS ONLY	TYP	TYPICAL
EL	EVENING LIGHT	MOCP	MAXIMUM OVERCURRENT PROTECTION	UC	UNDER CABINET
ELEC	ELECTRICAL	MSB	MAIN SWITCHBOARD	UF	UNDERFLOOR
EM	EMERGENCY	MT	EMPTY CONDUIT W/ PULL LINE	UG	UNDERGROUND
EMT	ELECTRICAL METALLIC TUBING	MTD	MOUNTED	UL	UNDERWRITERS LAB
ENCL	ENCLOSURE	MTG	MOUNTING	UON	UNLESS OTHERWISE NOTED
EQUIP	EQUIPMENT	MTS	MANUAL TRANSFER SWITCH	UPS	UNINTERRUPTIBLE POWER SUPPLY
(ER)	EXISTING RELOCATED	(N)	NEW	UTIL	UTILITY
(F)	FUTURE	N	NEUTRAL	V	VOLT
FA	FIRE ALARM	NA	NON-AUTOMATIC	VA	VOLT-AMPERE
FACP	FIRE ALARM CONTROL PANEL	N/A	NOT APPLICABLE	VAC	VOLTAGE, ALTERNATING CURRENT
FATC	FIRE ALARM TERMINAL CABINET	NC	NORMALLY CLOSED	VDC	VOLTAGE, DIRECT CURRENT
FBO	FURNISHED BY OTHERS	NEC	NATIONAL ELECTRICAL CODE	VFD	VARIABLE FREQUENCY DRIVE
FC	FOOTCANDLE	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION	W	WATT
FLA	FULL LOAD AMPERES	NF	NON-FUSIBLE	W/	WITH
FLEX	FLEXIBLE	NIC	NOT IN CONTRACT	W/O	WITHOUT
FLR	FLOOR	NIES	NOT INCLUDED IN ELECTRICAL SCOPE	WW	WIREWAY
FMC	FLEXIBLE METAL CONDUIT	NL	NIGHT LIGHT	WP	WEATHER PROOF
FT	FOOT OR FEET	NO	NORMALLY OPEN	WR	WEATHER RESISTANT
FURN	FURNITURE	NTS	NOT TO SCALE	XFMR	TRANSFORMER
FVNR	FULL VOLTAGE NON-REVERSING			Y	WYE
G	GROUND				
GA	GAUGE				
GALV	GALVANIZED				

MEP COMPONENT ANCHORAGE NOTE

All mechanical, plumbing, and electrical components shall be anchored and installed per the details on the DSA-approved construction documents. The following components shall be anchored or braced to meet the force and displacement requirements prescribed in the 2022 CBC Sections 1617A.1.18 through 1617A.1.26 and ASCE 7-16 Chapters 13, 26, and 30:

- All permanent equipment and components.
- Temporary, movable or mobile equipment that is permanently attached (e.g., hard wired) to the building utility services such as electricity, gas or water. "Permanently attached" shall include all electrical connections except plugs for 110/220 volt receptacles having a flexible cable.
- Temporary, movable or mobile equipment which is heavier than 400 pounds or has a center of mass located 4 feet or more above the adjacent floor or roof level that directly support the component is required to be restrained in a manner approved by DSA.

The following mechanical and electrical components shall be positively attached to the structure but need not demonstrate design compliance with the references noted above. These components shall have flexible connections provided between the component and associated ductwork, piping, and conduit. Flexible connections must allow movement in both transverse and longitudinal directions:

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

The anchorage of all mechanical, electrical and plumbing components shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and acceptance by DSA. The project inspector will verify that all components and equipment have been anchored in accordance with the above requirements.

RECEPTACLES AND OUTLET SYMBOLS

- ⦿ DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +18" AFF UON.
- ⦿ DUPLEX RECEPTACLE, GFCI TYPE, NEMA 5-20R, MOUNT AT+18" AFF UON.
- ⦿ QUADPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +18" AFF UON
- ⦿ QUADPLEX RECEPTACLE; GFCI TYPE, NEMA 5-20R, MOUNT AT +18" AFF UON.
- ⦿ SINGLEPLEX RECEPTACLE - NEMA 5-20R. +18" AFF. UNLESS NOTED OTHERWISE.
- ⦿ SPECIAL RECEPTACLE. SEE PLANS FOR SPECIFIC TYPE.

RECEPTACLE AND OUTLET SUBSCRIPTS:
A - MOUNTED ABOVE COUNTER, SEE ARCHITECT DRAWINGS
WP - WEATHER PROOF
1,2,3... - NUMBER DENOTES CIRCUIT

- ⦿ JUNCTION BOX, SIZE AS INDICATED OR REQUIRED PER CODE

- POWER STRIP

TELECOM/DATA SYMBOLS

- ⚡ TELEPHONE/DATA OUTLET, 4-11/16" SQUARE x 2-7/8" DEEP BOX WITH 2-DEVICE RING AND PLATE. MOUNT AT +18" AFF UON. STUB 1" CONDUIT WITH INSULATED BUSHING INTO ACCESSIBLE CEILING SPACE.
- ⚡ SINGLE DATA OUTLET, 4-11/16" SQUARE x 2-7/8" DEEP BOX WITH 2-DEVICE RING AND PLATE. MOUNT AT +18" AFF UON. STUB 1" CONDUIT WITH INSULATED BUSHING INTO ACCESSIBLE CEILING SPACE.
- ⚡ 2 DUAL DATA OUTLET, 4-11/16" SQUARE x 2-7/8" DEEP BOX WITH 2-DEVICE RING AND PLATE. MOUNT AT +18" AFF UON. STUB 1" CONDUIT WITH INSULATED BUSHING INTO ACCESSIBLE CEILING SPACE.
- ⚡ 4 QUAD DATA OUTLET, 4-11/16" SQUARE x 2-7/8" DEEP BOX WITH 2-DEVICE RING AND PLATE. MOUNT AT +18" AFF UON. STUB 1" CONDUIT WITH INSULATED BUSHING INTO ACCESSIBLE CEILING SPACE.
- ⚡ TELEPHONE OUTLET, 4-11/16" SQUARE x 2-7/8" DEEP BOX WITH 2-DEVICE RING AND PLATE. MOUNT AT +18" AFF UON. STUB 3/4" CONDUIT WITH INSULATED BUSHING INTO ACCESSIBLE CEILING SPACE.

- TELEPHONE/DATA PLYWOOD BACKBOARD.

- ⦿ EZ PATH, UL SYSTEM #W-L-3377. STI SERIES 22, 33, OR 44. SEE DETAILS.

- J—J— J-HOOK CABLE SUPPORT PRIMARY PATHWAY. SEE DETAILS.

- S—S— J-HOOK CABLE SUPPORT SECONDARY PATHWAY. SEE DETAILS.

TELECOM/E DATA SUBSCRIPTS:
A - MOUNTED ABOVE COUNTER, SEE ARCHITECT DRAWINGS
W - WALL MOUNTED AT +48" AFF.

GENERAL ELECTRICAL NOTES

- WHERE PROVIDED, THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATION DETAILS ARE FOR REFERENCE ONLY. THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 Pa) OF WATER OR AS OTHERWISE PERMITTED IN CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR THE LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION SHALL BE SUBMITTED FOR OSHPD FDD REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRE-STRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
- CONTRACTOR SHALL PERFORM POWER SYSTEM STUDY OF NEW AND MODIFIED ELECTRICAL DISTRIBUTION EQUIPMENT ACCORDING TO DIVISION 26 SPECIFICATIONS.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

Piping, ductwork, and electrical distribution systems shall be braced to comply with the forces and displacements prescribed in ASCE 7-16 Section 13.3 as defined in ASCE 7-16 Sections 13.6.5, 13.6.6, 13.6.7, 13.6.8; and 2022 CBC, Sections 1617A.1.24, 1617A.1.25 and 1617A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a preapproved installation guide (e.g., HCAI OPM for 2013 CBC or later), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start of and during the hanging and bracing of the distribution systems. The Structural Engineer of 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 HCAI (OSHPD) Preapproval (OPM #) # _____, as included in these drawings with project-specific notes and details.

SHEET INDEX

SHEET NO.	DESCRIPTION
E0.1	SHEET INDEX, SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES
E1.1	OVERALL FLOOR PLAN - ELECTRICAL
E2.1	POWER PLAN - WEST
E2.2	POWER PLAN - EAST
E3.1	PARTIAL ONE-LINE POWER DIAGRAM AND LOAD CALCULATIONS
E4.1	PANEL SCHEDULES
E4.2	PANEL SCHEDULES
E4.3	PANEL SCHEDULES
E5.1	ELECTRICAL DETAILS

ELECTRICAL EQUIPMENT SYMBOLS

- ⦿ MOTOR, NIES, PROVIDE CONNECTION AS REQUIRED.
- ⦿ EQUIPMENT, NIES, CONNECT AS REQUIRED.
- ⦿ FUSED DISCONNECT SWITCH, HEAVY DUTY, EXTERNALLY OPERATED. PROVIDE FUSES SIZED AS INDICATED OR PER MANUFACTURER REQUIREMENTS
- ⦿ CIRCUIT BREAKER DISCONNECT, HEAVY DUTY, EXTERNALLY OPERATED.
- ⦿ NON-FUSED DISCONNECT, HEAVY DUTY, EXTERNALLY OPERATED.
- ⦿_{OL} MOTOR RATED DISCONNECT SWITCH WITH OVERLOAD PROTECTION AS NECESSARY.
- ELECTRICAL PANELBOARD - SURFACE MOUNTED. SEE PANEL SCHEDULE.
- ELECTRICAL PANELBOARD - FLUSH MOUNTED. SEE PANEL SCHEDULE.
- SWITCHBOARD
- TERMINAL CABINET - SURFACE MOUNTED. SIZE AND TYPE AS NOTED.
- TERMINAL CABINET - FLUSH MOUNTED. SIZE AND TYPE AS NOTED.

RACEWAY AND WIRING SYMBOLS

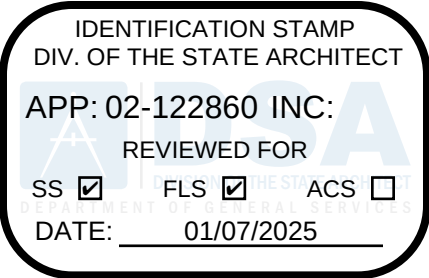
- BRANCH CIRCUIT WITHOUT CROSS HATCHES INDICATES 3/4" CONDUIT WITH 2 #12 AWG AND 1 #12 AWG GROUND, UON.
- BRANCH CIRCUIT WITH STRAIGHT CROSS HATCHES INDICATE NUMBER OF #12 AWG CONDUCTORS. CURVED HATCH INDICATES NUMBER OF #12 AWG GROUNDING ELECTRODE. 3/4" CONDUIT, UON.
- BRANCH CIRCUIT HOMERUN TO PANELBOARD INDICATED.
- CONDUIT RUN UNDERGROUND OR UNDERFLOOR
- EXISTING CONDUIT RUN. FIELD VERIFY ROUTING.
- EXISTING CONDUIT TO BE REMOVED OR ABANDONED. REMOVE WIRES. COORDINATE WITH OWNER.

GENERAL ELECTRICAL SYMBOLS

- ① NUMBERED SHEET NOTE TAG
- ⦿ MECHANICAL EQUIPMENT TAG. SEE MECH EQUIPMENT SCHEDULE AND DRAWINGS.
- ① E0.1 PLAN OR DETAIL REFERENCE TAG. TOP VALUE DENOTES DETAIL NUMBER. BOTTOM VALUE DENOTES SHEET.
- ⚠ REVISION TAG
- ☁ REVISION CLOUD
- 1-HOUR FIRE WALL SEPARATION
- 2-HOUR FIRE WALL SEPARATION
- CORRD — ROOM NAME
1234 — ROOM NUMBER

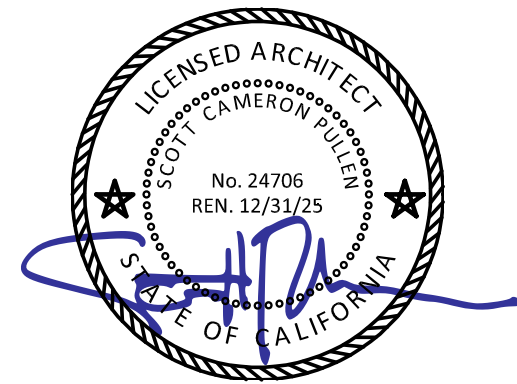
ADD ALTERNATE #1 GENERAL NOTES

- THE PURPOSE OF THIS ADD ALTERNATE IS TO MODERNIZE ELECTRICAL DISTRIBUTION EQUIPMENT EITHER THROUGH A COMPLETE REPLACEMENT OF EQUIPMENT OR, WHERE COMPATIBLE A RETROFIT OF EQUIPMENT INTERIORS.
- IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING DIMENSIONS, FEEDERS, BUSSING, OVERCURRENT PROTECTIVE DEVICES, AND BRANCH CIRCUITING AND UTILIZE THIS INFORMATION TO ENSURE COMPATIBILITY OF CONTRACTOR PROVIDED REPLACEMENT EQUIPMENT.
- MODERNIZATION OF EQUIPMENT SHALL BE IN KIND WITHOUT PROVISION FOR ADDITIONAL ELECTRICAL LOADS BEYOND THAT OF THE EXISTING EQUIPMENT.



■■■
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DSA #02-122860

FILE #48-C1
■■■

**BUILDING 1800
ELECTRICAL
UPGRADES**

**SOLANO COMMUNITY
COLLEGE**

**4000 SUISUN VALLEY RD.
FAIRFIELD, CA 94534**
■■■

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REVISIONS

NO.	DESCRIPTION	DATE
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**ELECTRICAL SYMBOLS,
ABBREVIATIONS, AND
GENERAL NOTES**

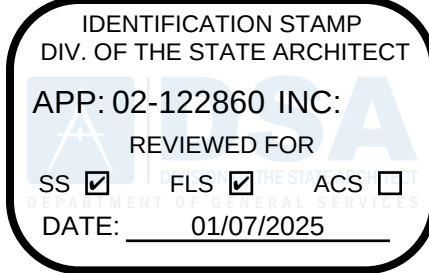
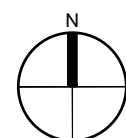
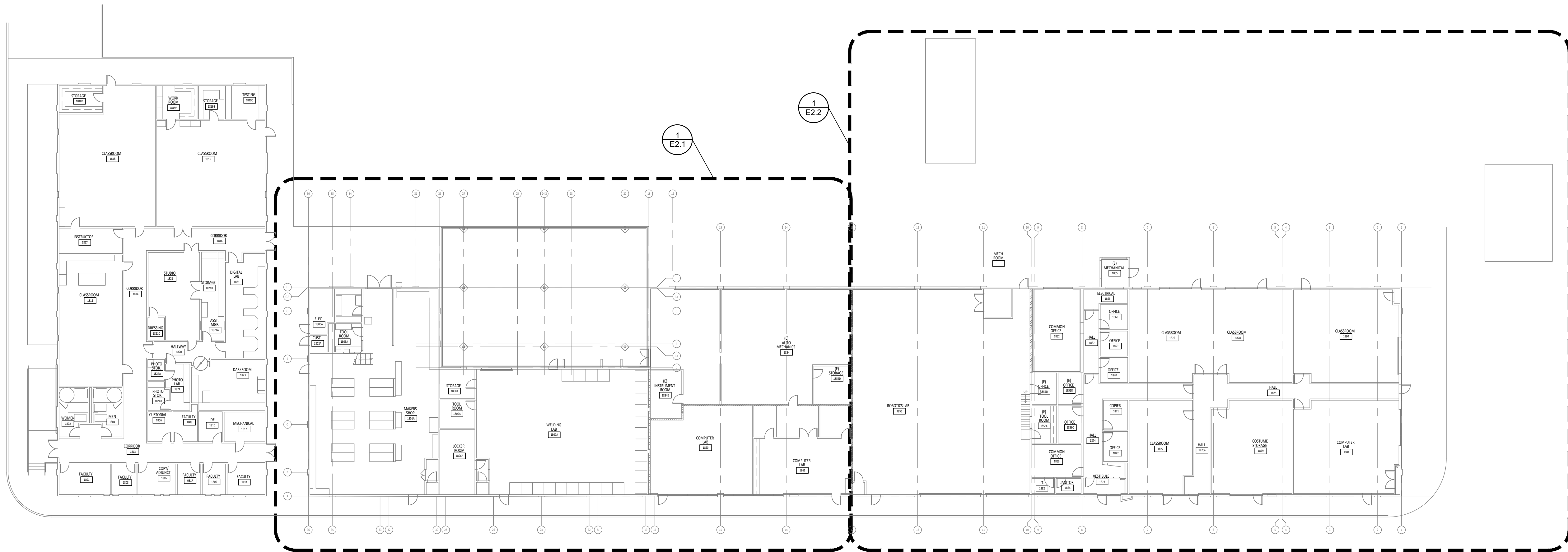
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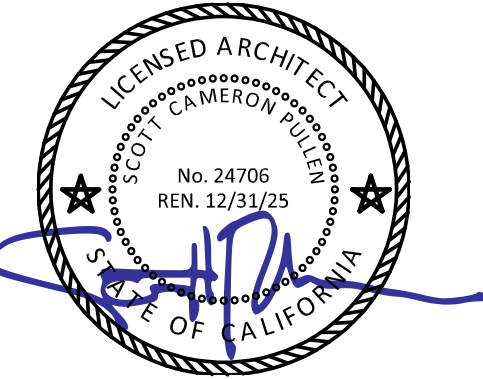
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1 OVERALL FIRST FLOOR PLAN - ELECTRICAL
SCALE: 1" = 20'-0"



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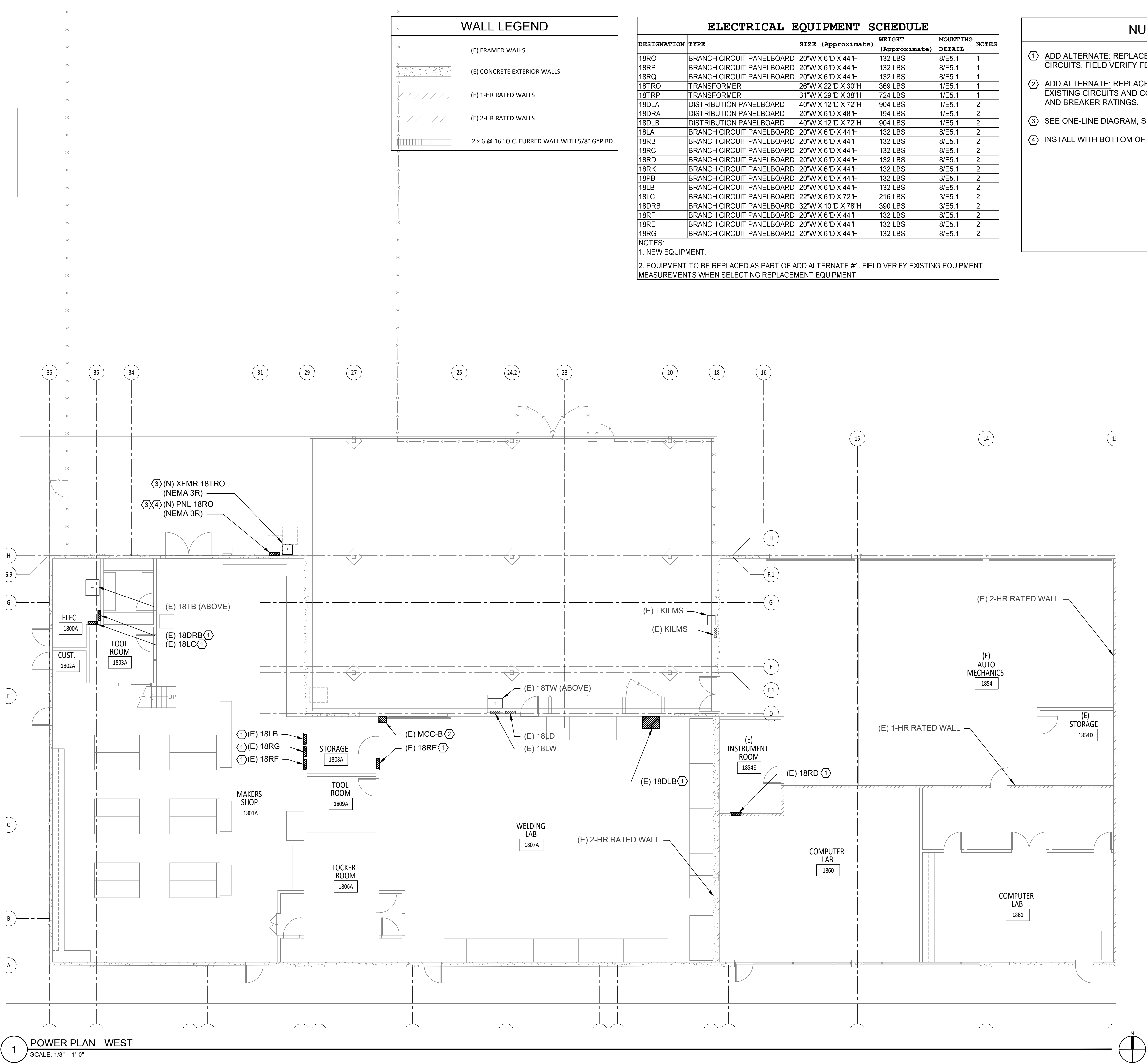
OVERALL FIRST FLOOR PLAN -
ELECTRICAL

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WALL LEGEND

	(E) FRAMED WALLS
	(E) CONCRETE EXTERIOR WALLS
	(E) 1-HR RATED WALLS
	(E) 2-HR RATED WALLS
	2 x 6 @ 16" O.C. FURRED WALL WITH 5/8" GYP BD

ELECTRICAL EQUIPMENT SCHEDULE

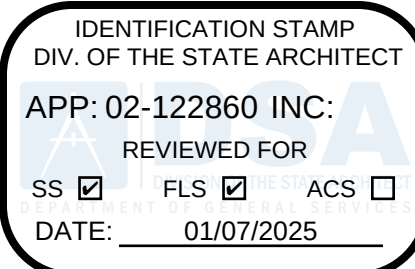
DESIGNATION	TYPE	SIZE (Approximate)	WEIGHT (Approximate)	MOUNTING DETAIL	NOTES
18RO	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	1
18RP	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	1
18RQ	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	1
18TRO	TRANSFORMER	26"W X 22"D X 30"H	369 LBS	1/E5.1	1
18TRP	TRANSFORMER	31"W X 29"D X 38"H	724 LBS	1/E5.1	1
18DLA	DISTRIBUTION PANELBOARD	40"W X 12"D X 72"H	904 LBS	1/E5.1	2
18DRA	DISTRIBUTION PANELBOARD	20"W X 6"D X 48"H	194 LBS	1/E5.1	2
18DLB	DISTRIBUTION PANELBOARD	40"W X 12"D X 72"H	904 LBS	1/E5.1	2
18LA	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RB	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RC	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RD	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RK	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18PB	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	3/E5.1	2
18LB	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18LC	BRANCH CIRCUIT PANELBOARD	22"W X 6"D X 72"H	216 LBS	3/E5.1	2
18DRB	BRANCH CIRCUIT PANELBOARD	32"W X 10"D X 78"H	390 LBS	3/E5.1	2
18RF	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RE	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2
18RG	BRANCH CIRCUIT PANELBOARD	20"W X 6"D X 44"H	132 LBS	8/E5.1	2

NOTES:

1. NEW EQUIPMENT.
2. EQUIPMENT TO BE REPLACED AS PART OF ADD ALTERNATE #1. FIELD VERIFY EXISTING EQUIPMENT MEASUREMENTS WHEN SELECTING REPLACEMENT EQUIPMENT.

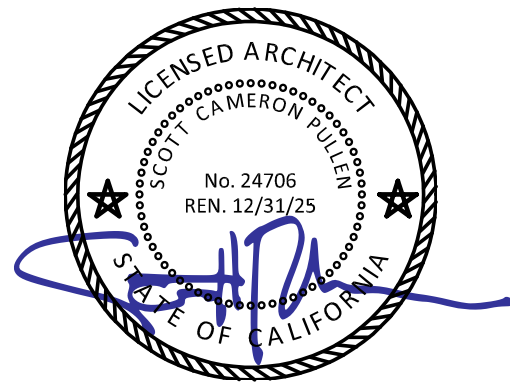
NUMBERED SHEET NOTES

1. ADD ALTERNATE: REPLACE PANELBOARD IN KIND. RECONNECT TO ALL EXISTING CIRCUITS. FIELD VERIFY FEEDER ENTRY LOCATIONS, SIZES, AND BREAKER RATINGS.
2. ADD ALTERNATE: REPLACE MOTOR CONTROL CENTRE IN KIND. RECONNECT TO ALL EXISTING CIRCUITS AND CONTROLS. FIELD VERIFY FEEDER ENTRY LOCATIONS, SIZES, AND BREAKER RATINGS.
3. SEE ONE-LINE DIAGRAM, SHEET E3.1.
4. INSTALL WITH BOTTOM OF PANEL AT +26" AFF MAX.



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FILE #48-C1

**BUILDING 1800
ELECTRICAL
UPGRADES**

**SOLANO COMMUNITY
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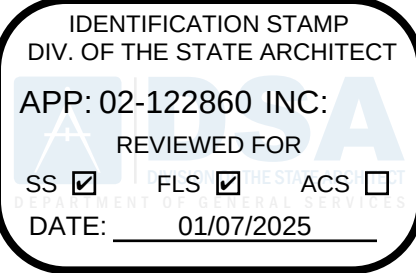
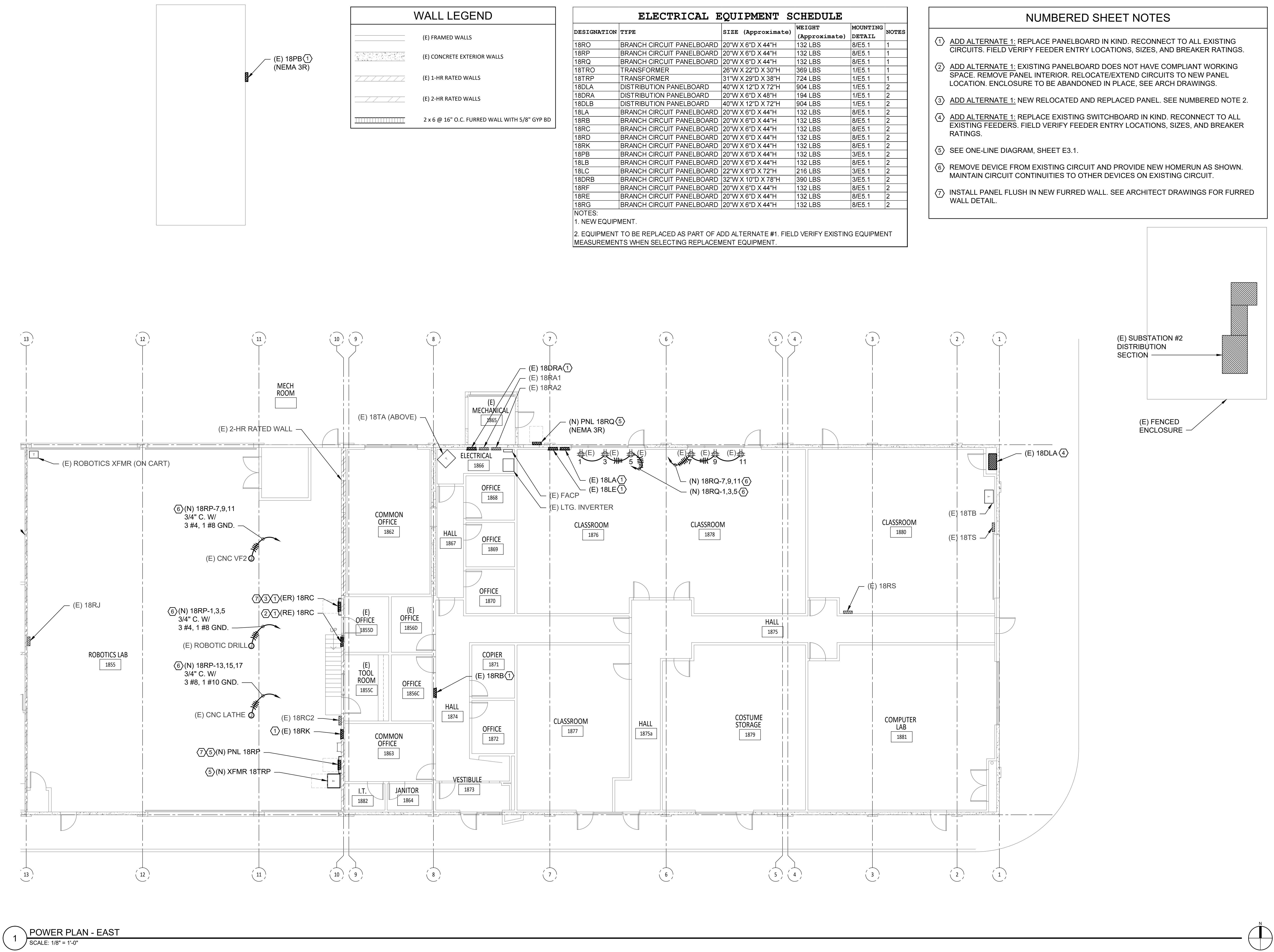
POWER PLAN - WEST

OCTOBER 18, 2024

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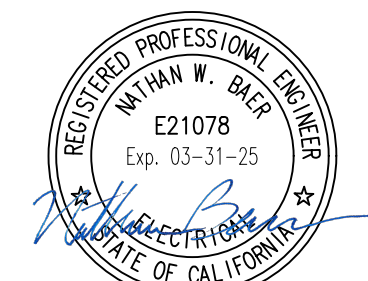
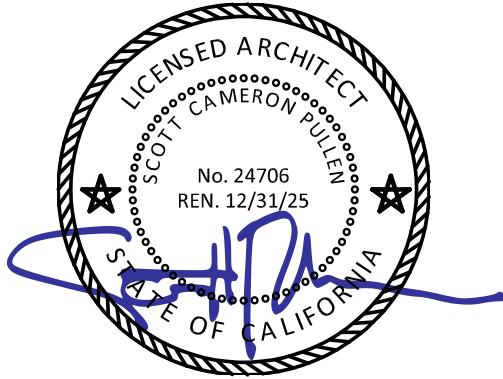
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BUILDING 1800
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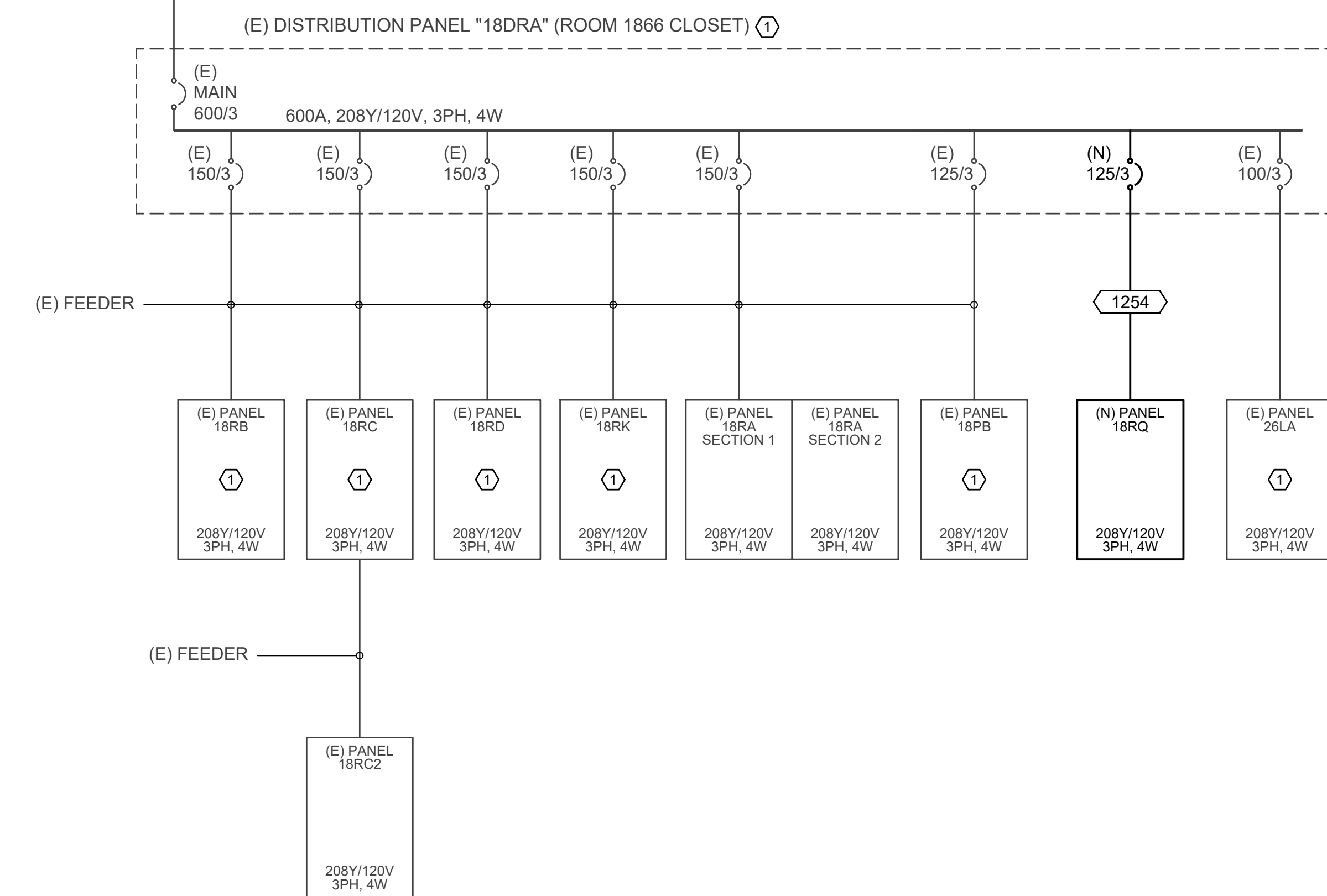
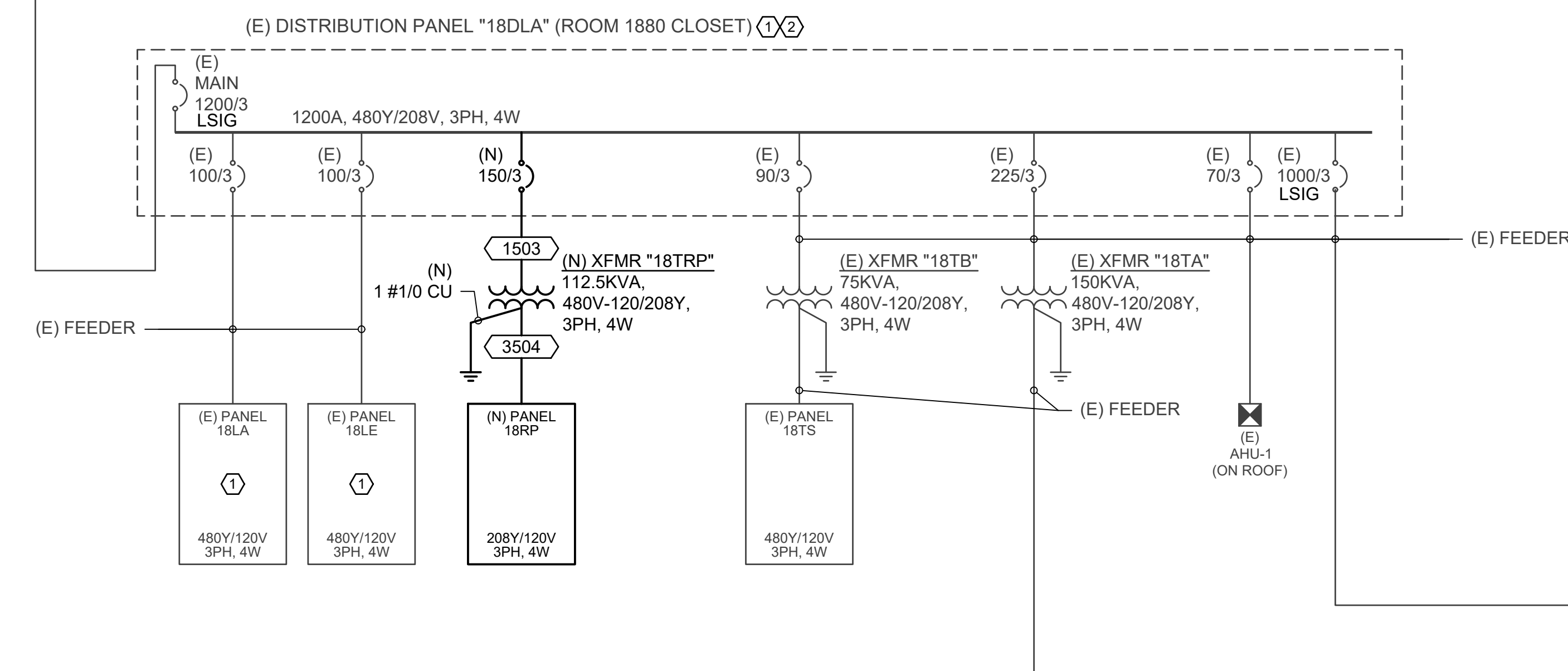
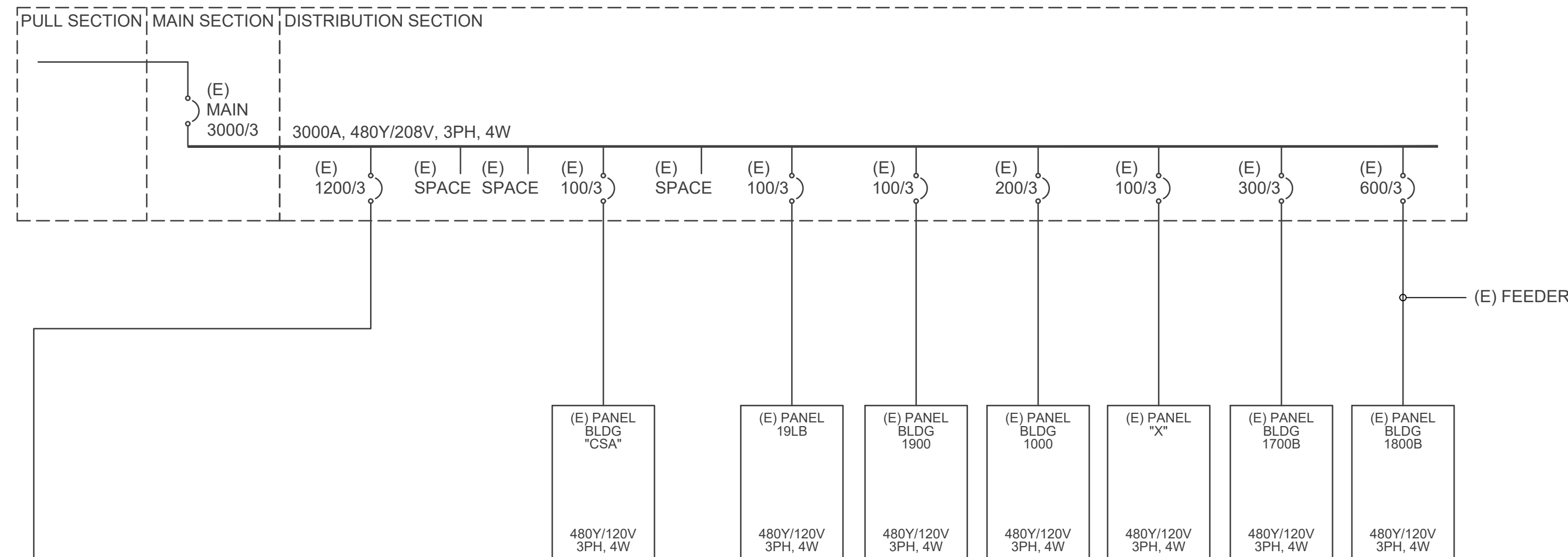
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POWER PLAN - EAST

OCTOBER 18, 2024

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E2.2



PANEL "18DLA" LOAD CALCULATION		
<u>EXISTING LOADS:</u>		
MAXIMUM DEMAND LOAD [2]	=	95.8 KVA
25% MAXIMUM DEMAND LOAD	=	23.9 KVA
<u>REMOVED LOADS</u>		
ROBOTIC DRILL	=	30.0 KVA
CNC - VF-2yt	=	25.2 KVA
CNC - ST-20Y	=	14.4 KVA
SEWING MACHINES	=	7.2 KVA
<u>ADDED LOADS:</u>		
PANEL 18RO [1]	=	36.0 KVA
PANEL 18RP	=	69.6 KVA
PANEL 18RQ	=	7.2 KVA
25% OF LARGEST MOTOR LOAD (0.25 X 10 KVA)	=	2.5 KVA
NOTES:		
1. FUTURE LOAD CALCULATED AT 80% OF OCP RATING		
2. BASED UPON 30-DAY AMMETER RECORDING PROVIDED BY SACRAMENTO ENGINEERING CONSULTANTS. PERFORMED 2023-09-06 TO 2023-10-12.		
TOTAL LOAD	=	158.2 KVA
	@ 480V, 3PH =	190.3 Amps
THEREFORE THE EXISTING 1200 AMP PANEL, OVERCURRENT PROTECTIVE DEVICE AND FEEDER HAVE CAPACITY FOR THE ADDED ELECTRICAL LOAD.		

COPPER FEEDER SCHEDULE							
TAG	FEEDER DESCRIPTION	NO. OF SETS	CONDUIT SIZE	PHASE WIRES	NEUTRAL	GROUND	NOTES
603	60A, 3W	1	3/4"	3 #6	-	1 #10	-
1503	150A, 2W	1	1-1/2"	3 #1/0	-	1 #6	-
1254	125A, 4W	1	1-1/2"	3 #1	1 #1	1 #1/0	-
3504	350A, 4W	1	3"	3 #500 MCM	1 #500 MCM	1 #1/0	-

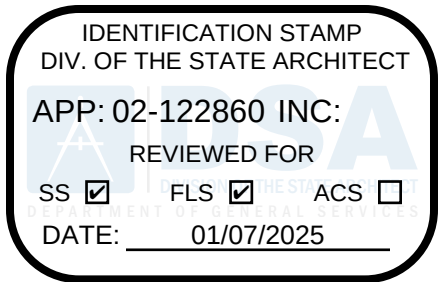
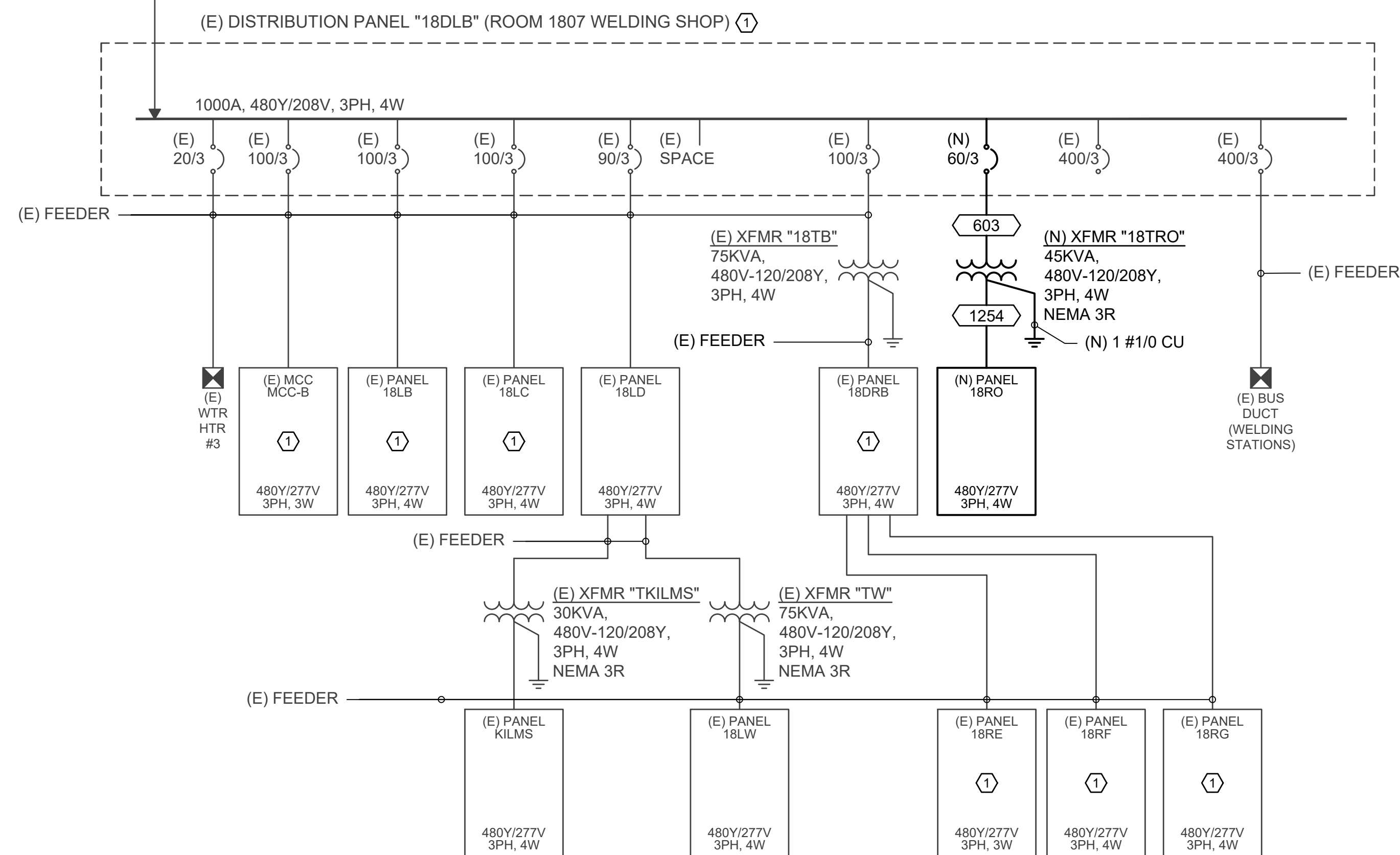
GENERAL NOTES:

- ALL CONDUIT SIZES ARE FOR METALLIC CONDUIT. ADJUST CONDUIT TRADE SIZE TO MEET CEC FILL REQUIREMENTS WHEN USING RNC.
- ALUMINUM FEEDERS OVER 100A ARE ACCEPTABLE. ADJUST WIRE AND CONDUIT SIZES TO MEET AMP. REQUIREMENTS

NUMBERED SHEET NOTES	
①	<u>ADD ALTERNATE 1</u> : EQUIPMENT TO BE REPLACED IN KIND. CONTRACTOR TO FIELD VERIFY EQUIPMENT AND ENSURE THAT REPLACEMENT IS COMPATIBLE.
②	<u>ADD ALTERNATE 1</u> : TEXT SHOWN BOLD INDICATES REQUIREMENTS FOR NEW EQUIPMENT AND NOT EXISTING CONDITION.

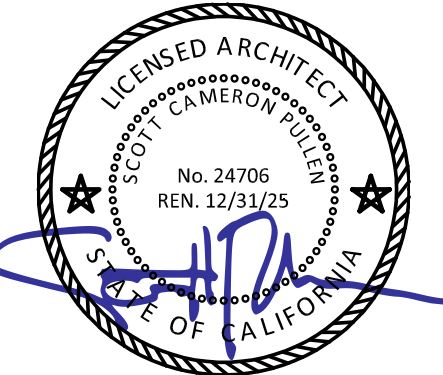
DISTRIBUTION PANEL "18DLB" LOAD CALCULATION		
REMOVED LOADS		
ROBOTIC DRILL	=	30.0 KVA
CNC - VF-20Yt	=	25.2 KVA
CNC - ST-20Y	=	14.4 KVA
ADDED LOADS:		
PANEL 18RO [1]	=	36.0 KVA
NOTES:		
1. FUTURE LOAD CALCULATED AT 80% OF OCP RATING		
NET LOAD CHANGE	=	-33.6 KVA
	@ 480V, 3PH =	-40.4 Amps
THEREFORE THE EXISTING 1000 AMP DISTRIBUTION PANELBOARD, OVERCURRENT PROTECTIVE DEVICE AND FEEDER HAVE CAPACITY FOR THE ADDED ELECTRICAL LOAD.		

DISTRIBUTION PANEL "18DRA" LOAD CALCULATION			
<u>REMOVED LOADS</u>			
SEWING MACHINES	=		7.2 KVA
<u>ADDED LOADS:</u>			
PANEL 18RQ	=		7.2 KVA
NET LOAD CHANGE	=		0.0 KVA
	@ 208V, 3PH =		0.0 Amps
THEREFORE THE EXISTING 600 AMP DISTRIBUTION PANELBOARD, OVERCURRENT PROTECTIVE DEVICE AND FEEDER HAVE CAPACITY FOR THE ADDED ELECTRICAL LOAD.			



HMRARCHITECT

2130 21st Street
Sacramento, CA 95818
T 916 736 2724



DSA #02-122860
FILE #48-C1

**BUILDING 1800
ELECTRICAL
UPGRADES**

**SOLANO COMMUNITY
COLLEGE**

4000 SUISUN VALLEY RD.
FAIRFIELD, CA 94534

[illegible]

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WRITTEN CONSENT OF HMR ARCHITECTS

PARTIAL ONE-LINE DIAGRAM - REMODEL AND LOAD CALCULATIONS

OCTOBER 18, 2024

DRAWN BY:
NB

CHECKED BY:
NB

JOB NO.
24035

E3.1

Existing Panel:			18DRA			Volts: 120/208Y			Main: LUGS ONLY				
Location: ELEC RM 1866			Phases: 3			Bus Rating: 600A							
Supply From:			Wires: 4			A/C Rating:							
Mounting: Flush													
Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Kkt #	Kkt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
PANEL 18RB			A	150	3	1	2	150	3	A			PANEL 18RC
-			B	-	-	3	4	-	-	B			-
-			C	-	-	5	6	-	-	C			-
PANEL 18RD			A	150	3	7	8	150	3	A			PANEL 18RK
-			B	-	-	9	10	-	-	B			-
-			C	-	-	11	12	-	-	C			-
PANEL 18RA			A	150	3	13	14	125	3	A			OUTSIDE SPRAY BOOTH PANEL
-			B	-	-	15	16	-	-	B			-
-			C	-	-	17	18	-	-	C			-
SPACE			A			19	20	100	3	A			BUILDING 2600 PR
SPACE			B			21	22	-	-	B			-
SPACE			C			23	24	-	-	C			
SPACE			A			25	26			A			SPACE
SPACE			B			27	28			B			SPACE
SPACE			C			29	30			C			SPACE
SPACE			A			31	32			A			SPACE
SPACE			B			33	34			B			SPACE
SPACE			C			35	36			C			SPACE
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			
												SEE LOAD CALCULATION.	

Notes:
1. Add Alternate #1. See Plans.

Existing Panel:

18RB

Location:

1874

Supply From:

Mounting:

Flush

Volts:

120/208Y

Phases:

3

Wires:

4

Mains:

150A

Bus Rating:

225A

A/C Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
SPARE			A	20	1	1	2	20	1	A			SPARE
SPARE			B	20	1	3	4	20	1	B			SPARE
SPARE			C	20	1	5	6	20	1	C			SPARE
RECPTS 1856D, 1856C			A	20	1	7	8	20	1	A			SPARE
SPARE			B	20	1	9	10	20	1	B			SPARE
RECPTS 1856C			C	20	1	11	12	20	1	C			SPARE
SPARE			A	20	1	13	14	20	1	A			SPARE
SPARE			B	20	1	15	16	20	1	B			SPARE
SPARE			C	20	1	17	18	20	2	C			SPARE
SPARE			A	20	1	19	20	-	-	A			SPARE
SPARE			B	20	1	21	22	20	1	B			SPARE
SPARE			C	20	1	23	24	20	1	C			SPARE
SPARE			A	20	1	25	26	50	1	A			SPARE
SPARE			B	20	2	27	28	50	1	B			SPARE
SPARE			C	-	-	29	30	-	1	C			SPARE
SPARE			A	30	2	31	32	20	3	A			SPARE
			B	-	-	33	34	-	-	B			-
SPACE			C	-	-	35	36	-	-	C			-
SPARE			A	20	3	37	38	90	3	A			SPARE
-			B	-	-	39	40	-	-	B			-
-			C	-	-	41	42	-	-	C			-

Notes:

1. No load change.

2. Add Alternate #1. See Plans.

18RC			120/208Y			200A							
Location: ROOM 1855			Volts: 3			Bus Rating: 225A							
Supply From:			Phases: 3			A/C Rating:							
Mounting: Flush			Wires: 4										
Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Circuit Breaker Pole	Ckt #	Ckt #	Circuit Breaker Amp	Circuit Breaker Poles	Phase	Load Type	Load (VA)	Load Description
RECPTS E. & N. WALL			A	20	1	1	2	20	1	A			HYD CORD DROP
GARAGE DOOR RCPT			B	20	1	3	4	20	1	B			HYD CORD DROP
RECPTS 1855 C & D			C	20	1	5	6	20	1	C			HYD CORD DROP
EXIT LIGHTS			A	20	1	7	8	20	1	A			FANUC CORD REEL
SPARE			B	20	1	9	10	20	1	B			FANUC CORD REEL
SPARE			C	20	1	11	12	20	1	C			FANUC CORD REEL
RECEPT TV			A	20	1	13	14	20	1	A			RECPTS E. & S. WALL
RECEPT AUDIO & VIS.			B	20	1	15	16	20	1	B			RECPT S. WALL JAN.
RECEPT AUDIO & VIS.			C	20	1	17	18	20	1	C			LIGHTS
CORD DROPS			A	20	3	19	20	20	1	A			LIGHTS
-			B	-	-	21	22	30	2	B			WALL HEATER
-			C	-	-	23	24	-	-	C			-
CORD DROPS			A	20	1	25	26	100	3	A			PANEL 18RC2
CORD DROPS			B	20	1	27	28	-	-	B			-
CORD DROPS			C	20	1	29	30	-	-	C			-
ROBERT DRILL 45 KVA TO 480V			A	60	3	31	32	70	3	A			VF2 CNC
-			B	-	-	33	34	-	-	B			-
-			C	-	-	35	36	-	-	C			-
PWR DROP MACH UP			A	20	1	37	38	20	1	A			CORD REEL 28
PWR DROP MACH UP			B	20	1	39	40	20	1	B			SHUNT
P			C	20	1	41	42	20	1	C			DROP 51

Notes:
1. No load change.
2. Add Alternate #1. See Plans.

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amps Pole	Ckt #	Ckt #	Circuit Breaker Amps Poles	Phase	Load Type	Load (VA)	Load Description
LAB VOLT TRAINER TURNED OFF			A	20 3	1	2	30 3	A			
-			B	- -	3	4	- -	B			
-			C	- -	5	6	- -	C			
LAB VOLT TRAINER TURNED OFF			A	20 3	7	8	30 3	A			
-			B	- -	9	10	- -	B			
-			C	- -	11	12	- -	C			
LAB VOLT TRAINER TURNED OFF			A	20 3	13	14	30 3	A			
-			B	- -	15	16	- -	B			
-			C	- -	17	18	- -	C			
LAB VOLT TRAINER TURNED OFF			A	20 3	19	20	30 3	A			
-			B	- -	21	22	- -	B			
-			C	- -	23	24	- -	C			
30 AMP RECEPT. NOTHING			A	30 3	25	26	30 3	A			
PLUGGED IN			B	- -	27	28	- -	B			
-			C	- -	29	30	- -	C			
			A		31	32		A			
			B		33	34		B			
			C		35	36		C			
			A		37	38		A			
			B		39	40		B			
			C		41	42		C			

Notes:
1. No load change.
2. Panel to remain as existing.

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amps Pole	Ckt #	Circuit Breaker Amps Poles	Phase	Load (VA)	Load Description
RCPTS			A	20 1 1	2	20 1 A			REF RECPT
RCPTS			B	20 1 3	4	20 1 B			EXIST. LOAD
RCPTS			C	20 1 5	6	20 1 C			WALL RECPT
RCPTS			A	20 1 7	8	20 1 A			EXIST. LOAD
RCPTS			B	20 1 9	10	20 1 B			EXIST. LOAD
RCPTS			C	20 1 11	12	20 1 C			EXIST. LOAD
CLASSRM 1860 RECPTS			A	20 1 13	14	20 1 A			CLASSRM 1861 RECPTS
CLASSRM 1860 RECPTS			B	20 1 15	16	20 1 B			CLASSRM 1861 RECPTS
CLASSRM 1860 RECPTS			C	20 1 17	18	20 1 C			CLASSRM 1861 RECPTS
EXIST. LOAD			A	20 1 19	20	20 1 A			EXIST. LOAD
CLASSRM 1860 RECPTS			B	20 1 21	22	30 2 B			SMOG & DYNO MACHINE
EXIST. LOAD			C	20 1 23	24	- - C			-
EXIST. LOAD			A	20 1 25	26	20 1 A			EXIST. LOAD
EXIST. LOAD			B	20 2 27	28	20 1 B			EXIST. LOAD
EXIST. LOAD			C	- - 29	30	20 1 C			EXIST. LOAD
EXIST. LOAD			A	20 1 31	32	40 3 A			SPARE DISCONNECT
EXIST. LOAD			B	20 1 33	34	- - B			-
EXIST. LOAD			C	20 1 35	36	- - C			-
DRILL PRESS			A	20 3 37	38	20 1 A			CLASSRM 1861 RECPTS
-			B	- - 39	40	20 1 B			EXIST. LOAD
-			C	- - 41	42	20 1 C			EXIST. LOAD

Notes:

- No load change.
- Add Alternate #1. See Plans.

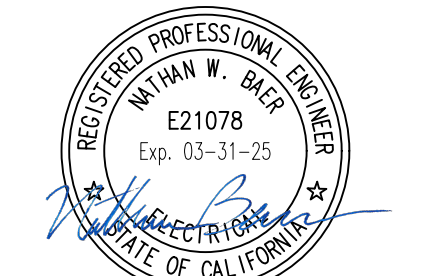
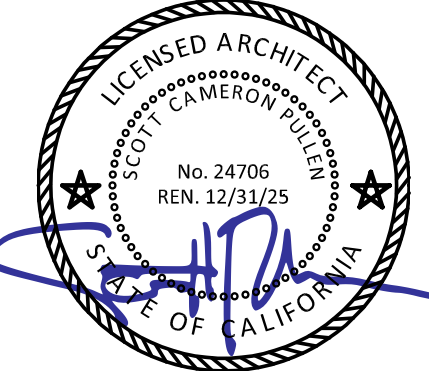
Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amps Pole	Ckt #	Ckt #	Circuit Breaker Amps Poles	Phase	Load Type	Load (VA)	Load Description
EXIST. LOAD			A	20 1	1	2	20 1	A			EF-2
EF-8			B	20 1	3	4	20 1	B			EF-11
SPARE			C	20 1	5	6	20 1	C			SPARE
EXIST. LOAD			A	20 1	7	8	20 1	A			EXIST. LOAD
EF-1			B	20 1	9	10	20 1	B			EF-3
EXIST. LOAD			C	20 1	11	12	20 1	C			EXIST. LOAD
EXIST. LOAD			A	20 1	13	14	20 1	A			SPARE
SPARE			B	20 1	15	16	20 1	B			EXIST. LOAD
EXIST. LOAD			C	20 1	17	18	20 1	C			EXIST. LOAD
EXIST. LOAD			A	20 1	19	20	20 1	A			EXIST. LOAD
EXIST. LOAD			B	20 1	21	22	20 1	B			EXIST. LOAD
EXIST. LOAD			C	20 1	23	24	20 1	C			EXIST. LOAD
EXIST. LOAD			A	20 1	25	26	20 3	A			SPARE
EXIST. LOAD			B	20 3	27	28	- -	B			-
-			C	- -	29	30	- -	C			-
-			A	- -	31	32	20 1	A			EXIST. LOAD
EXIST. LOAD			B	30 1	33	34	- -	B			-
EXIST. LOAD			C	30 1	35	36	- -	C			-
					37	38		A			
			B		39	40		B			
			C		41	42		C			

Notes:

1. No load change.
2. Add Alternate #1. See Plans.



2130 21st Street
Sacramento, CA 95818
T 916 736 2724



DSA #02-122860

FILE #48-C1



BUILDING 1800 ELECTRICAL UPGRADES

SOLANO COMMUNITY
COLLEGE

4000 SUISUN VALLEY RD.
FAIRFIELD, CA 94534



REVISIONS

NO.	DESCRIPTION	DATE
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PANEL SCHEDULES

OCTOBER 18, 2024

DRAWN BY:
NB

CHECKED BY:
NB

JOB NO.
24035

E4.1

Existing Panel:

18PB (NEMA 3R)

Location: OUTSIDE PAINT BOOTH

Supply From: Surface

Mounting: Surface

Volts: 120/208Y

Phases: 3

Wires: 4

Mains: 125A

Bus Rating: 125A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
PAINT BOOTH			A	30	3	1	2	20	30	A			PAINT BOOTH
-			B	-	-	3	4	-	-	B			-
-			C	-	-	5	6	-	-	C			-
PAINT BOOTH			A	20	2	7	8	20	1	A			PAINT BOOTH
-			B	-	-	9	10	20	1	B			PAINT BOOTH
SPACE			C			11	12			C			SPACE
SPACE			A			13	14			A			SPACE
SPACE			B			15	16			B			SPACE
SPACE			C			17	18			C			SPACE
SPACE			A			19	20			A			SPACE
SPACE			B			21	22			B			SPACE
SPACE			C			23	24			C			SPACE
SPACE			A			25	26			A			SPACE
SPACE			B			27	28			B			SPACE
SPACE			C			29	30			C			SPACE
			A			31	32			A			
			B			33	34			B			
			C			35	36			C			
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			

Notes:

1. No load change.
2. Add Alternate #1. See Plans.

Existing Panel:

18DLB

Location: 1807A

Supply From: Floor

Mounting: Floor

Volts: 277/480Y

Phases: 3

Wires: 4

Mains: MAIN LUGS ONLY

Bus Rating: 1000A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
WATER HEATER #3			A	20	3	1	2	100	3	A			EX. FAN CONTRL MCC B
-			B	-	-	3	4	-	-	B			-
-			C	-	-	5	6	-	-	C			-
PANEL 18LB			A	100	3	7	8	100	3	A			PANEL 18LC
-			B	-	-	9	10	-	-	B			-
-			C	-	-	11	12	-	-	C			-
OUTSIDE PANEL 18LD			A	90	3	13	14	PFB	3	A			SPACE
-			B	-	-	15	16	-	-	B			-
-			C	-	-	17	18	-	-	C			-
75 KVA XFMR 18TB FOR			A	100	3	19	20	PFB	3	A			SPACE
PANEL 18DRBE			B	-	-	21	22	-	-	B			-
-			C	-	-	23	24	-	-	C			-
SPARE			A	400	3	25	26	400	3	A			BUS DUCT
-			B	-	-	27	28	-	-	B			-
-			C	-	-	29	30	-	-	C			-
			A			31	32			A			
			B			33	34			B			
			C			35	36			C			
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			

Notes:

1. Add Alternate #1. See Plans.

SEE LOAD CALCULATION.

Existing Panel:

18LD (NEMA 3R)

Location: EXT. WELDING SHOP

Supply From: Surface

Mounting: Surface

Volts: 120/208Y

Phases: 3

Wires: 4

Mains: 100A

Bus Rating: 225A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
RECEPTACLE BELOW PANEL			A	30	3	1	2	20	3	A			SPARE
-			B	-	-	3	4	-	-	B			-
-			C	-	-	5	6	-	-	C			-
30 KVA KILM XFMR			A	100	3	7	8	100	3	A			75 KVA XFMR TW
-			B	-	-	9	10	-	-	B			-
-			C	-	-	11	12	-	-	C			-
SPARE			A	30	3	13	14			A			SPACE
-			B	-	-	15	16			B			SPACE
-			C	-	-	17	18			C			SPACE
SPACE			A			19	20			A			SPACE
SPACE			B			21	22			B			SPACE
SPACE			C			23	24			C			SPACE
SPACE			A			25	26			A			SPACE
SPACE			B			27	28			B			SPACE
SPACE			C			29	30			C			SPACE
			A			31	32			A			
			B			33	34			B			
			C			35	36			C			
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			

Notes:

1. No load change.
2. Panel to remain as existing.

Existing Panel:

18RA SECTION 1

Location: 1866

Supply From: Flush

Mounting: Flush

Volts: 120/208Y

Phases: 3

Wires: 4

Mains: MAIN LUGS ONLY

Bus Rating: 225A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
RECPTS OFFICE 1862			A	20	1	1	2	20	1	A			RECPTS RM 1863, 1864
RECPTS OFFICE 1862			B	20	1	3	4	20	1	B			1856C, 1863, 1856D, 1863
RECPTS OFFICE 1862			C	20	1	5	6	20	1	C			RECPTS RM 1862, 1863
RECPTS OFFICE 1876			A	20	1	7	8	20	1	A			RECPTS OFFICE 1877
RECPTS OFFICE 1876			B	20	1	9	10	20	1	B			RECPTS OFFICE 1877
RECPTS OFFICE 1876			C	20	1	11	12	20	1	C			RECPTS OFFICE 1877
RECPTS OFFICE 1876			A	20	1	13	14	20	1	A			RECPTS OFFICE 1877
OUTSIDE RECPTS.			B	20	1	15	16	20	1	B			RECPTS OFFICE 1879
RECPTS OFFICE 1878			C	20	1	17	18	20	1	C			RECPTS OFFICE 1879
RECPTS OFFICE 1878			A	20	1	19	20	20	1	A			RECPTS OFFICE 1879
RECPTS OFFICE 1878			B	20	1	21	22	20	1	B			RECPTS OFFICE 1879
RECPTS OFFICE 1880			C	20	1	23	24	20	1	C			RECPTS OFFICE 1881
RECPTS OFFICE 1880			A	20	1	25	26	20	1	A			RECPTS OFFICE 1881
RECPTS OFFICE 1880			B	20	1	27	28	20	1	B			RECPTS OFFICE 1881
RECPTS OFFICE 1880			C	20	1	29	30	20	1	C			RECPTS OFFICE 1881
RECPTS OFFICE 1880			A	20	1	31	32	20	1	A			RECPTS OFFICE 1881
RECPTS OFFICE 1880			B	20	1	33	34	20	1	B			RECPTS OFFICE 1881
RECPTS OFFICE 1880			C	20	1	35	36	20	1	C			RECPTS OFFICE 1881
RECPTS OFFICE 1880			A	20	1	37	38	20	1	A			RECPTS OFFICE 1881
RECPTS HALLWAY			B	20	1	39	40	20	1	B			1866, 1868, 1870 RCPS
RECPTS RM 1871, 1872			C	20	1	41	42	20	1	C			1866, 1868, 1870 RCPS

Notes:

1. No load change.
2. Panel to remain as existing.

Existing Panel:

18LB

Location: ROOM 1801A

Supply From: Flush

Mounting: Flush

Volts: 277/480Y

Phases: 3

Wires: 4

Mains: MAIN LUGS ONLY

Bus Rating: 100A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
AC UNIT			A	40	3	1	2	20	3	A			SURFACE GRINDER
-			B	-	-	3	4	-	-	B			-
-			C	-	-	5	6	-	-	C			-
AC UNIT			A	40	3	7	8			A			SPACE
-			B	-	-	9	10			B			SPACE
-			C	-	-	11	12			C			SPACE
SPACE			A			13	14			A			SPACE
SPACE			B			15	16			B			SPACE
SPACE			C			17	18			C			SPACE
SPACE			A			19	20			A			SPACE
SPACE			B			21	22			B			SPACE
SPACE			C			23	24			C			SPACE
SPACE			A			25	26			A			SPACE
SPACE			B			27	28			B			SPACE
SPACE			C			29	30			C			SPACE
SPACE			A			31	32			A			
SPACE			B			33	34			B			
SPACE			C			35	36			C			
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			

Notes:

1. No load change.
2. Add Alternate #1. See Plans.

Existing Panel:

18RA SECTION 2

Location: 1866

Supply From: Flush

Mounting: Flush

Volts: 120/208Y

Phases: 3

Wires: 4

Mains: MAIN LUGS ONLY

Bus Rating: 225A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
FACP RM 1866			A	20	1	43	44	20	1	A			VIDEO PROJ RM 1881
SPARE			B	20	1	45	46	20	1	B			VIDEO PROJ RM 1880
SPARE			C	20	1	47	48	20	1	C			VIDEO PROJ RM 1879
AHU-1 LTS - RCPT			A	20	1	49	50	20	1	A			VIDEO PROJ RM 1879B
SPARE			B	20	1	51	52	20	1	B			VIDEO PROJ RM 1878
AHU-1 CONTROL			C	20	1	53	54	20	1	C			VIDEO PROJ RM 1877
ACCESS CARD READ			A	20	1	55	56	20	1	A			VIDEO PROJ RM 1876
SPARE			B	20	1	57	58	20	1	B			VIDEO PROJ RM 1861
SPARE			C	20	1	59	60	20	1	C			VIDEO PROJ RM 1860
DUCT DETECTORS			A	20	1	61	62	20	1	A			VAV CONTROL PWR
SPARE			B	20	1	63	64	20	1	B			CEF-1 JAN. EXH. FAN
SPARE			C	20	1	65	66	20	1	C			SPARE
DUCT DETECTORS			A	20	1	67	68	20	1	A			SAC-1 RM 1882 AC
SPARE			B	20	1	69	70	20	2	B			SCU-ROOF AC UNIT IDF MINI SPLIT
SPARE			C	20	1	71	72	-	-	C			-
SPARE			A	20	1	73	74	30	2	A			TEMP POWER RECPT.
SPARE			B	20	1	75	76	-	-	B			-
SPARE			C	20	1	77	78	100	2	C			ICE TRAILER
SPARE			A	20	1	79	80	-	-	A			-
SPARE			B	20	1	81	82	20	1	B			SPACE
SPARE			C	20	1	83	84	20	1	C			SPACE

Notes:

1. No load change.
2. Panel to remain as existing.

Existing Panel:

18LC

Location: ROOM 1800A

Supply From: Surface

Mounting: Surface

Volts: 277/480Y

Phases: 3

Wires: 4

Mains: MAIN LUGS ONLY

Bus Rating: 100A

AIC Rating:

Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
LIGHTS MACH SHOP			A	20	1	1	2	20	1	A			LIGHTS WELD SHOP
LIGHTS MACH SHOP			B	20	1	3	4	20	1	B			LIGHTS WELD SHOP
LIGHTS MACH SHOP			C	20	1	5	6	20	1	C			LIGHTS WELD SHOP
LIGHTS WELD BOOTH			A	20	1	7	8	20	1	A			LIGHTS 1803,06,09, ME
LIGHTS ON ROOF			B	20	1	9	10	20	1	B			SPARE
SPARE			C	20	1	11	12	20	1	C			
SPARE			A	20	1	13	14	20	3	A			CHWP PUMP
SPARE			B	20	1	15	16	-	-	B			-
SPARE			C	20	1	17	18	-	-	C			-
SPARE			A	20	3	19	20	20	3	A			SPARE
-			B	-	-	21	22	-	-	B			-
-			C	-	-	23	24	-	-	C			-
WATER HEATER			A	20	3	25	26			A			SPACE
-			B	-	-	27	28			B			SPACE
-			C	-	-	29	30			C			SPACE
SPACE			A	-	-	31	32			A			SPACE
			B			33	34			B			
			C			35	36			C			
			A			37	38			A			
			B			39	40			B			
			C			41	42			C			

Notes:

1. No load change.

2. Add Alternate #1. See Plans.

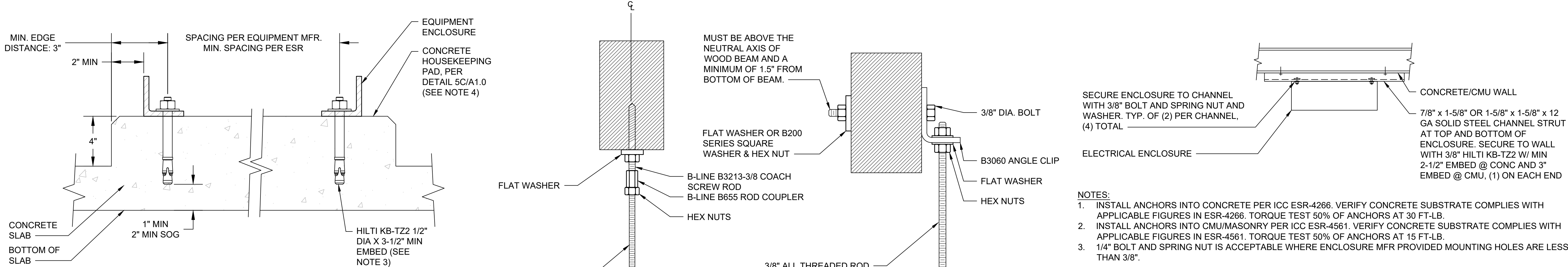
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C:\P424-006 SOLANO CC BLDG 1800 ELECTRICAL IMPROVEMENTS\CAD\24-006_E41.DWG

Existing Panel:				18DRB																			
Location:				MECH RM 1800A				Volts:				120/208Y				Mains:				MAIN LUGS ONLY			
Supply From:				Surface				Phases:				3				Bus Rating:				225A			
Mounting:				Surface				Wires:				4				AIC Rating:							
Load Description		Load (VA)	Load Type	Phase	Circuit Amp	Breaker Pole	Ckt #	Ckt #	Circuit Amps	Breaker Poles	Phase	Load Type	Load (VA)	Load Description									
NIGHT LIGHTING				A	20	1	1	2	20	1	A			NIGHT LIGHTING									
NIGHT LIGHTING				B	20	1	3	4	20	1	B			BMS CONTROL									
RECEPTACLE				C	20	1	5	6	20	1	C			CLOCK RECTIFIER									
F.A. PANEL				A	20	2	7	8	20	1	A			EXIST LOAD									
-				B	-	-	9	10	20	1	B			CHWP CONTROL									
PANEL 18RF				C	150	3	11	12			C			PANEL 18RG									
-				A	-	-	13	14			A			-									
-				B	-	-	15	16			B			-									
PANEL 18LE				C	150	3	17	18			C			SPACE									
-				A	-	-	19	20			A			SPACE									
-				B	-	-	21	22			B			SPACE									
#1 COMPRESSOR				C	-	-	23	24			C			SPACE									
-				A	-	-	25	26			A			SPACE									
-				B	-	-	27	28			B			SPACE									
SPACE				C	-	-	29	30			C			SPACE									
-				A	-	-	31	32			A			-									
-				B	-	-	33	34			B			-									
-				C	-	-	35	36			C			-									
-				A	-	-	37	38			A			-									
-				B	-	-	39	40			B			-									
-				C	-	-	41	42			C			-									
Notes: 1. No load change. 2. Add Alternate #1. See Plans.																							

Existing Panel: 18RG													
Location: ROOM 1801A				Volts: 120/208Y				Mains: 225A					
Supply From: Flush				Phases: 3				Bus Rating: 225A					
Mounting: Flush				Wires: 4				AIC Rating:					
Load Description	Load (VA)	Load Type	Phase	Circuit Breaker Amp	Pole	Ckt #	Ckt #	Circuit Breaker Amps	Poles	Phase	Load Type	Load (VA)	Load Description
RECPT MILL MACHINE			A	20	1	1	2	20	1	A			RECPT RADIAL DRILL
SPARE			B	20	1	3	4	20	1	B			RECPT MILL MACHINE
SPARE			C	20	1	5	6	20	1	C			RECPT MILL MACHINE
LATHE			A	20	3	7	8	50	3	A			LATHE
-			B	-	-	9	10	-	-	B			-
-			C	-	-	11	12	-	-	C			-
LATHE			A	20	3	13	14	30	3	A			LATHE
-			B	-	-	15	16	-	-	B			-
-			C	-	-	17	18	-	-	C			-
LATHE			A	20	3	19	20	20	1	A			EXIST. LOAD
-			B	-	-	21	22	20	1	B			EXIST. LOAD
-			C	-	-	23	24	20	1	C			EXTERIOR RCPT
LATHE			A	20	3	25	26	20	3	A			LATHE
-			B	-	-	27	28	-	-	B			-
-			C	-	-	29	30	-	-	C			-
HOMOGENIZER			A	20	3	31	32	20	1	A			MILL MACHINE
-			B	-	-	33	34	20	1	B			MILL MACHINE
-			C	-	-	35	36	20	1	C			MILL MACHINE
GRINDER			A	20	1	37	38	20	1	A			GRINDER
GRINDER			B	20	1	39	40	20	1	B			GRINDER
DISC SANDER			C	20	1	41	42	20	1	C			GRINDER

New Panel														18RO (NEMA 3R)													
Location:				OUTSIDE RM 1801A				Volts:				120/208Y				Mains:				125A MCB							
Supply From:				18DLB V IA XFMR 18TR0				Phases:				3				Bus Rating:				125A							
Mounting:				Surface				Wires:				4				AIC Rating:				22,000A							
Load Description			Load (VA)		Load Type	Phase	Circuit Breaker		Ckt #		Circuit Breaker		Ckt #		Phase	Load Type	Load (VA)		Load Description								
							Amp	Pole			Amps	Poles															
SPARE						A	20	1	1	2	20	1	A						SPARE								
SPARE						B	20	1	3	4	20	1	B						SPARE								
SPARE						C	20	1	5	6	20	1	C						SPARE								
SPARE						A	20	1	7	8	20	1	A						SPARE								
SPARE						B	20	1	9	10	20	1	B						SPARE								
SPARE						C	20	1	11	12	20	1	C						SPARE								
SPARE						A	20	1	13	14	20	1	A						SPARE								
SPARE						B	20	1	15	16	20	1	B						SPARE								
SPARE						C	20	1	17	18	20	1	C						SPARE								
SPARE						A	20	1	19	20	20	1	A						SPARE								
SPARE						B	20	1	21	22	20	1	B						SPARE								
SPARE						C	20	1	23	24	20	1	C						SPARE								
SPACE						A	PFB	1	25	26	PFB	1	A						SPACE								
SPACE						B	PFB	1	27	28	PFB	1	B						SPACE								
SPACE						C	PFB	1	29	30	PFB	1	C						SPACE								
SPACE						A	PFB	1	31	32	PFB	1	A						SPACE								
SPACE						B	PFB	1	33	34	PFB	1	B						SPACE								
SPACE						C	PFB	1	35	36	PFB	1	C						SPACE								
SPACE						A	PFB	1	37	38	PFB	1	A						SPACE								
SPACE						B	PFB	1	39	40	PFB	1	B						SPACE								
SPACE						C	PFB	1	41	42	PFB	1	C						SPACE								
Load Type			Connected Load (kVA)		Demand Multiplier				Demand Load				Connected Load kVA/Phase														
1 - Receptacles			0.00 x		CEC 220.44 =				0.00 kVA				Phase A: 0.00 kVA														
2 - Continuous (Lighting)			0.00 x		1.25 =				0.00 kVA				Phase B: 0.00 kVA														
3 - Non-Continuous			0.00 x		1.00 =				0.00 kVA				Phase C: 0.00 kVA														
4 - Motor			0.00 x		1.00 =				0.00 kVA				Total Demand Load														
5 - Largest Motor			0.00 x		1.25 =				0.00 kVA				0.00 kVA														
													0.00 Amps														
Notes:																											
1. 42 space panel board.																											

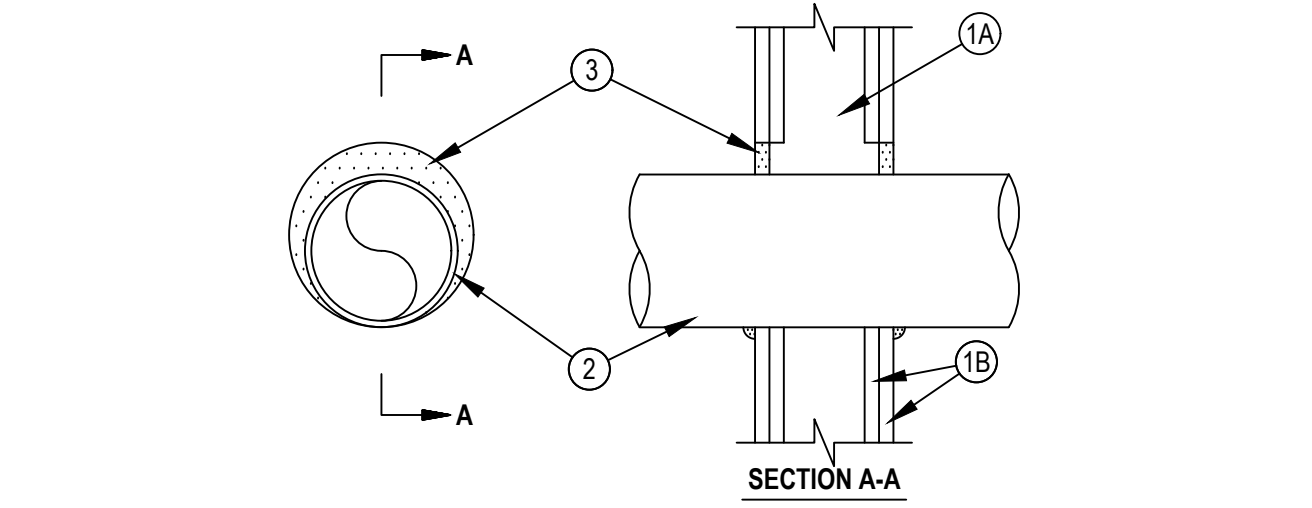
Existing Panel:				18RF									
Location: ROOM 1801A				Volts: 120/208Y				Mains: 225A					
Supply From: Flush				Phases: 3				Bus Rating: 225A					
Mounting:				Wires: 4				AIC Rating:					
Load Description	Load (VA)	Load Type	Phase	Circuit Amp	Breaker Pole	Ckt #	Ckt #	Circuit Amps	Breaker Poles	Phase	Load Type	Load (VA)	Load Description
RCPT E. WALL			A	20	1	1	2	20	1	A			RCPT W. WALL
RCPT E. WALL JAN.			B	20	1	3	4	20	1	B			RCPT W. WALL
RCPT S. WALL EM LTG			C	20	1	5	6	20	1	C			RCPT W. WALL, VEND
RCPT DISCHARGE MA			A	20	1	7	8	20	1	A			RCPT UPSTAIRS
RCPT TOOL ROOM			B	20	1	9	10	20	1	B			RCPT EREEL, AC RPST
RCPT E. WALL, GRIND			C	20	1	11	12	20	1	C			RCPT FOR TV
SHAPER			A	20	3	13	14	30	3	A			GRINDER TOOL BITS
-			B	-	-	15	16	-	-	B			-
-			C	-	-	17	18	-	-	C			-
3D PRINTER			A	20	1	19	20	20	3	A			GRINDER
3D PRINTER			B	20	1	21	22	-	-	B			-
CENTRIFUGE			C	20	1	23	24	-	-	C			-
3D PRINTER			A	20	1	25	26	40	3	A			BAND SAW
3D PRINTER			B	20	1	27	28	-	-	B			-
-			C	30	2	29	30	-	-	C			-
-			A	-	-	31	32	20	3	A			LATHE
CENTRIFUGE			B	20	2	33	34	-	-	B			-
-			C	-	-	35	36	-	-	C			-
-			A	20	3	37	38	20	1	A			SPARE
-			B	-	-	39	40	20	1	B			SPARE
-			C	-	-	41	42			C			SPARE



- NOTES:
1. INSTALL ANCHORS PER ICC ESR-4266. VERIFY CONCRETE SUBSTRATE COMPLIES WITH APPLICABLE FIGURES IN ESR-4266.
 2. QUANTITY OF FASTENERS AND LOCATIONS SHALL BE IN ACCORDANCE WITH EQUIPMENT MFR REQUIREMENTS. MINIMUM (4) ANCHORS PER EQUIPMENT.
 3. DRY LOCATIONS: CARBON STEEL, INSTALLATION TORQUE: 50 FT-LBS. OUTDOOR/WET LOCATIONS: STAINLESS STEEL, INSTALLATION TORQUE: 40 FT-LBS
 4. PROVIDE HOUSEKEEPING PAD IN OUTDOOR LOCATIONS.

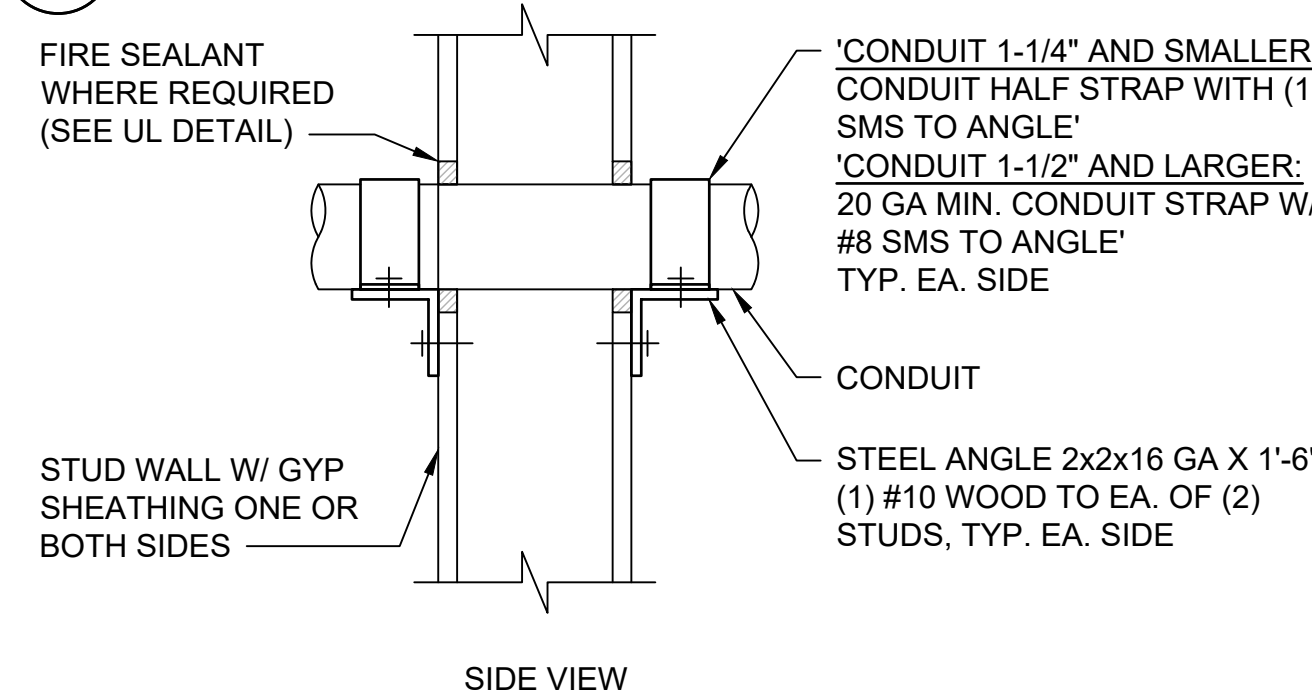
1 TYPICAL ELECTRICAL EQUIPMENT FASTENING
SCALE: NONE

U.L. System No. W-L-1054	
ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Items 1 and 3)	F Rating — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 and 2 Hr (See Items 1 and 3)
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr
	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft

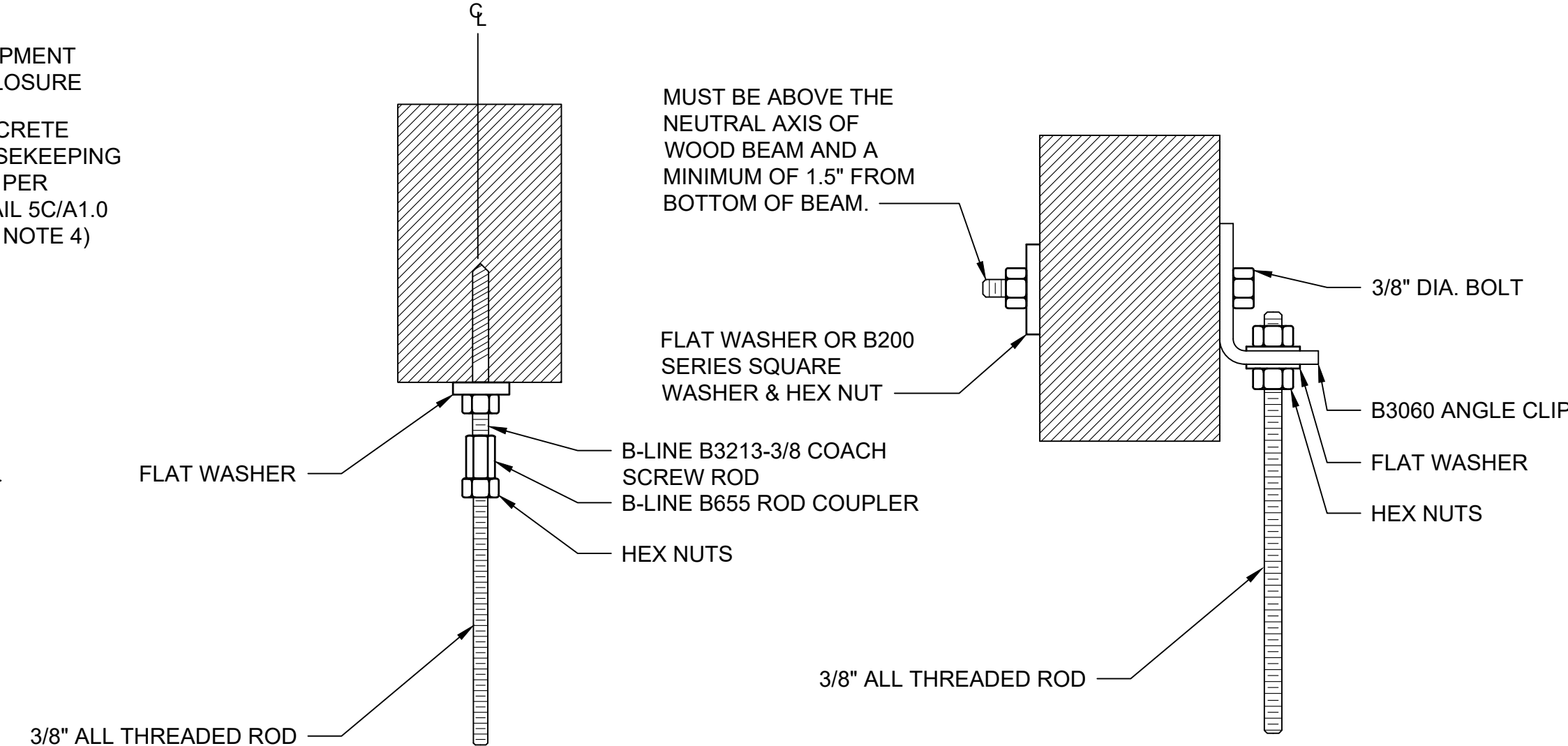


1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
- A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
- B. Gypsum Board — 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.
- The F Rating of the firestop system is equal to the fire rating of the wall assembly.
2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. Pipe may be installed with continuous point contact. Pipe, conduit or tubing may be installed at an angle not greater than 45 degrees from perpendicular. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
- A. Steel Pipe — Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe — Nom 30 in. diam (or smaller) cast or ductile iron pipe.
- C. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or 6 in. diam steel conduit.
- D. Copper Tubing — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe — Nom 6 in. diam (or smaller) regular (or heavier) copper pipe.
3. Fill, Void or Cavity Material — Sealant — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant
- *Bearing the UL Classification Mark

4 FIRE RATED STUD WALL CONDUIT PENETRATION DETAIL
SCALE: NONE



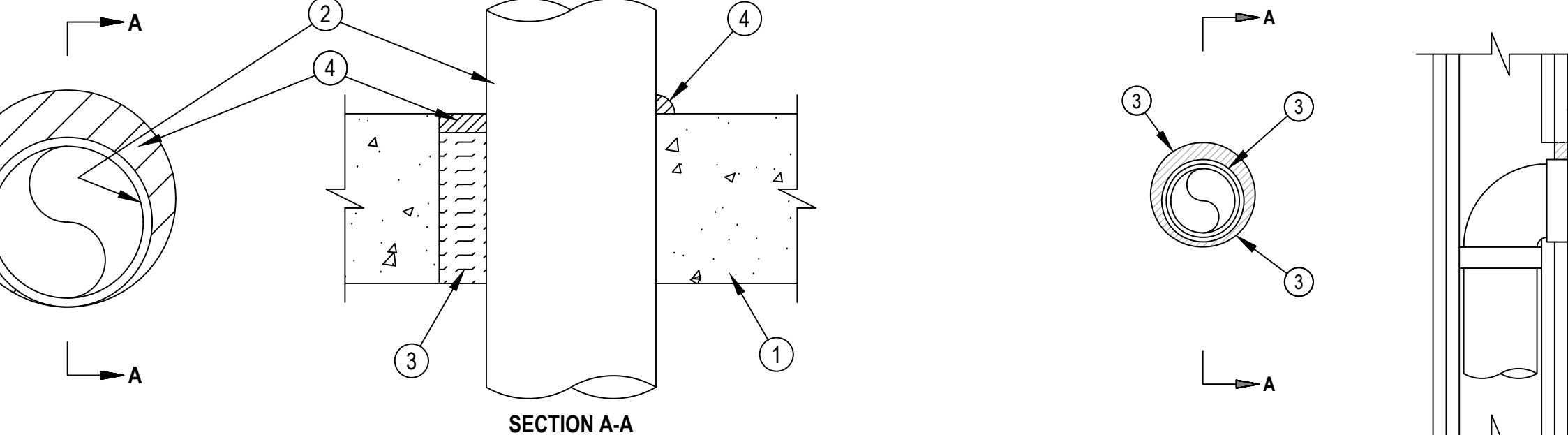
9 CONDUIT SUPPORT DETAIL AT THROUGH PENETRATION
SCALE: NONE



- NOTES:
1. GENERAL SUPPORT DETAIL FOR THREADED ROD CONDUIT SUPPORT HANGERS, SEE DETAIL 11/E5.1.
 2. MAX WT PER ROD: 100 LBS.

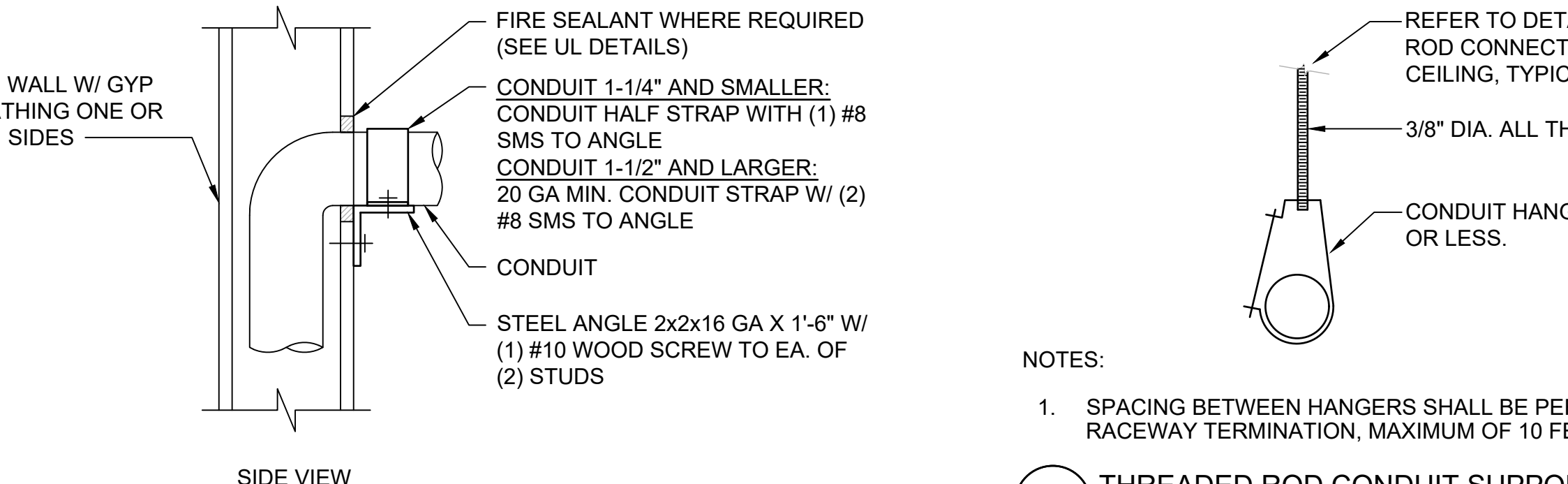
2 THREADED ROD ATTACHMENT TO STRUCTURAL MEMBERS
SCALE: NONE

U.L. System No. C-AJ-1150	
ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 3 Hr
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1 (See Item 4)	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



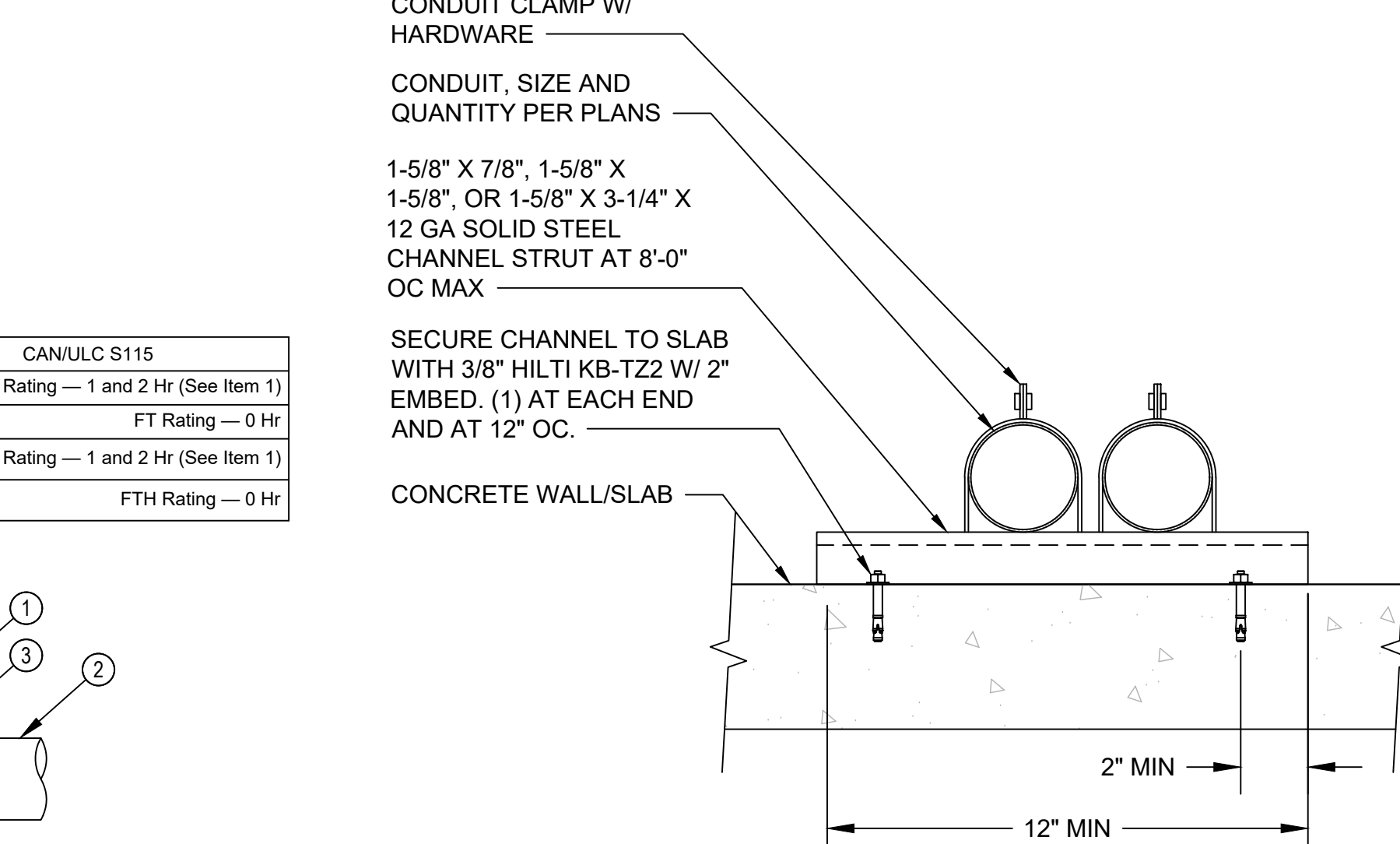
1. FLOOR OR WALL ASSEMBLY — MIN 4-1/2 in. (114 mm) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS *. MAX DIAM OF OPENING IS 8 in. (203 mm).
- SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. THROUGH PENETRANTS — ONE METALLIC PIPE OR CONDUIT TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MIN 0 in. (POINT CONTACT) TO MAX 1-3/8 in. (35 mm). THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:
- A. STEEL PIPE — NOM 6 IN. (152 MM) DIAM (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE.
- B. IRON PIPE — NOM 6 IN. (152 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.
- C. CONDUIT — NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT.
3. PACKING MATERIAL — MIN 4 in. (102 mm) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
4. FILL, VOID OR CAVITY MATERIAL* — SEALANT — MIN 1/4 in. (6 mm) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR AND WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MIN 1/2 in. (13 mm) DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. W RATING APPLIES ONLY WHEN CFS-S SIL GG, CFS-S SIL SL (FLOORS ONLY), CP601S OR CP604 SEALANT IS USED.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP604, CFS-S SIL GG, CFS-S SIL SL (FLOORS ONLY), CP606 OR FS-ONE SEALANT OR FS-ONE MAX INTUMESCENT SEALANT
- * INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

5 FIRE RATED CONCRETE MASONRY WALL CONDUIT PENETRATION DETAIL
SCALE: NONE



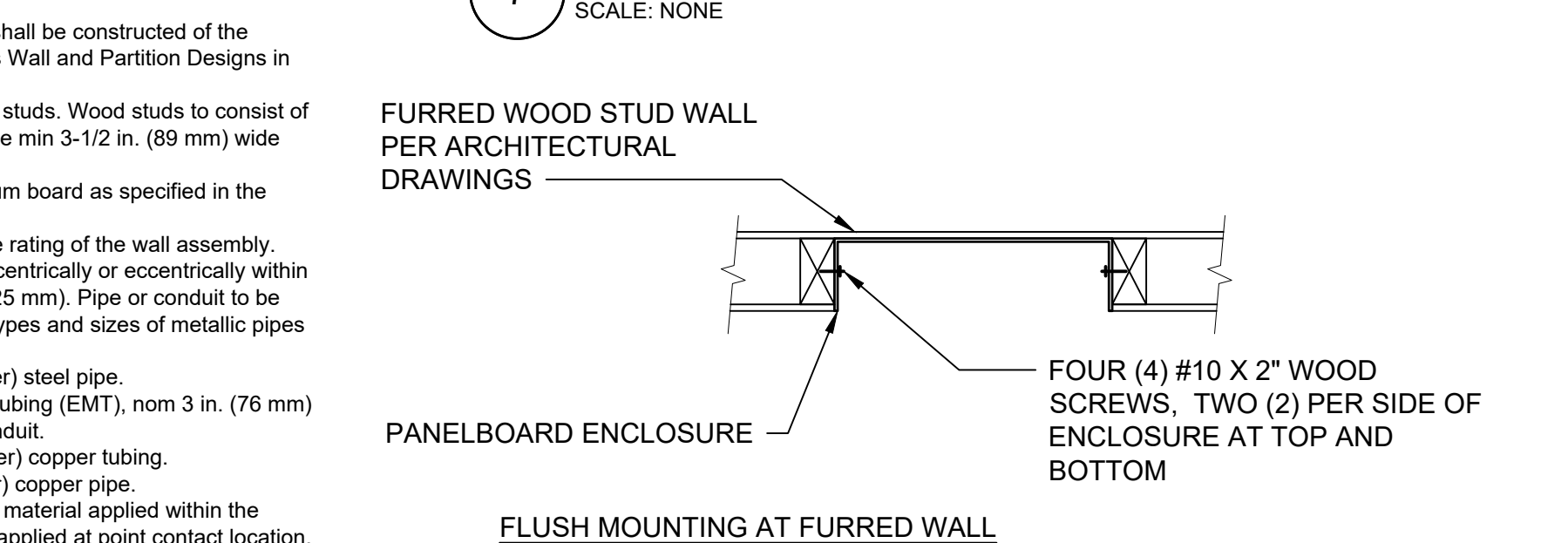
10 CONDUIT SUPPORT DETAIL AT MEMBRANE PENETRATION
SCALE: NONE

3 DISCONNECT AND ELECTRICAL ENCLOSURE MOUNTING DETAIL
SCALE: NONE

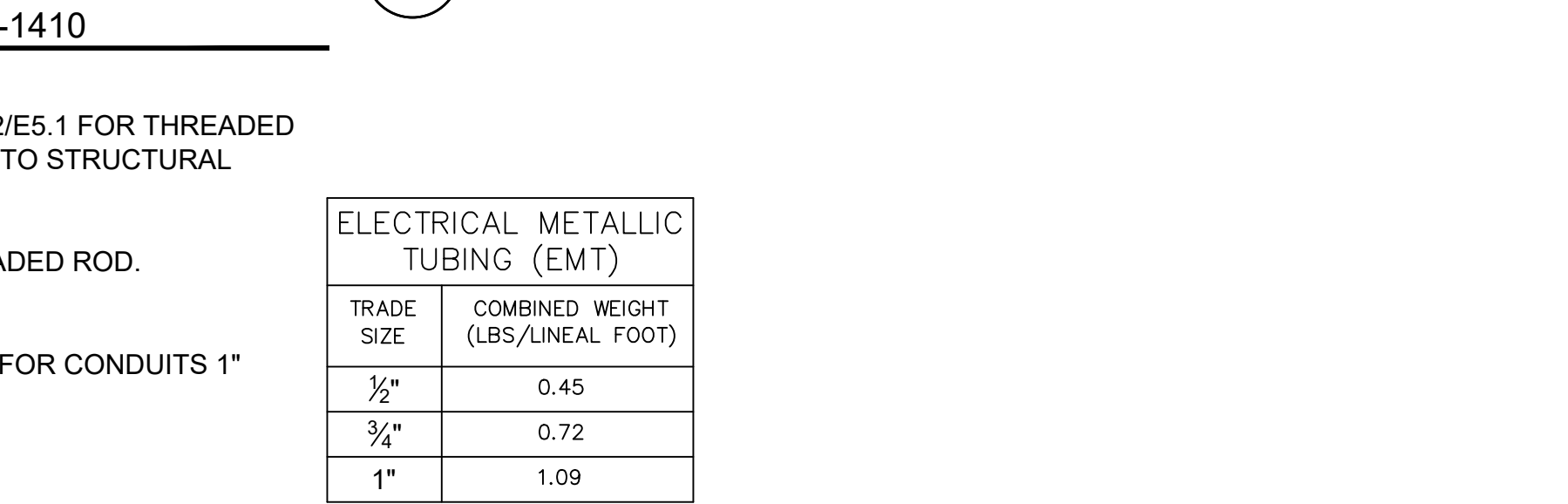


- NOTES:
1. INSTALL ANCHORS PER ICC ESR-4266. VERIFY CONCRETE SUBSTRATE COMPLIES WITH APPLICABLE FIGURES IN ESR-4266. TORQUE TEST 50% OF ANCHORS AT 30 FT-LB.
 2. GENERAL SUPPORT DETAIL FOR SURFACE MOUNTED CONDUIT INSTALLED ON CONCRETE/MASONRY WALLS.

7 CONCRETE/MASONRY WALL CONDUIT SUPPORT (VERTICAL AND HORIZONTAL RUN CONDITIONS)
SCALE: NONE



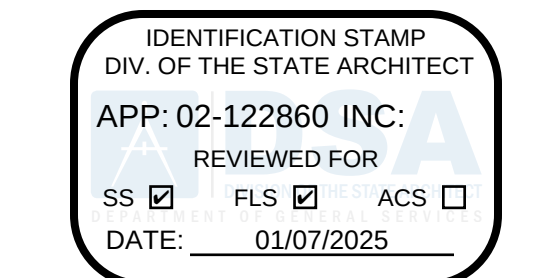
8 PANELBOARD ENCLOSURE MOUNTING DETAIL - WOOD FRAMING
SCALE: NONE



- NOTES:
1. SPACING BETWEEN HANGERS SHALL BE PER CEC REQUIREMENTS, NOT EXCEEDING 3 FEET OF EACH RACEWAY TERMINATION, MAXIMUM OF 10 FEET BETWEEN SUPPORTS.

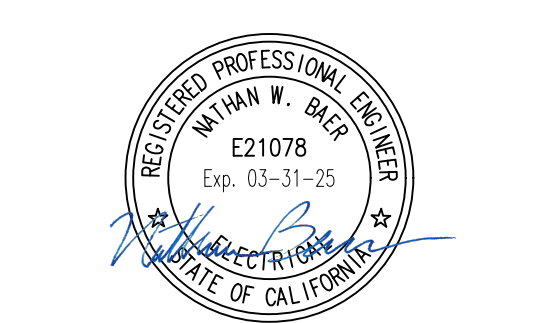
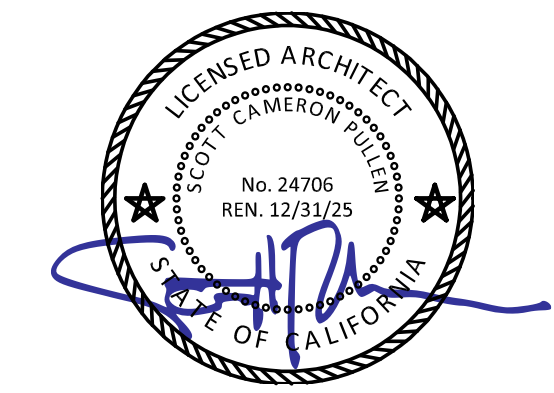
11 THREADED ROD CONDUIT SUPPORT DETAIL
SCALE: NONE

ELECTRICAL METALLIC TUBING (EMT)	
TRADE SIZE	COMBINED WEIGHT (LBS/LINEAL FOOT)
1/2"	0.45
3/4"	0.72
1"	1.09



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DSA #02-122860
FILE #48-C1

BUILDING 1800
ELECTRICAL
UPGRADES

SOLANO COMMUNITY
COLLEGE
4000 SUISUN VALLEY RD.
FAIRFIELD, CA 94534

REVISIONS		
NO.	DESCRIPTION	DATE

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ELECTRICAL DETAILS

OCTOBER 18, 2024

DRAWN BY: NB
CHECKED BY: NB
JOB NO: 24035

E5.1