UPS SYSTEM REPLACEMENT FOR:

FIRE STATION 2 COMMUNICATION CENTER

STOCKTON, CALIFORNIA

GENERAL NOTES

1. ON-SITE VERIFICATION OF ALL DIMENSIONS AND DETAILS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR FOR HIS INDIVIDUAL WORK. THE OWNER OR ARCHITECT SHALL BE NOTIFIED IF ANY DISCREPANCIES ARE FOUND PRIOR TO COMMENCING ANY WORK. THE RESPONSIBILITY FOR WORK COMPLETED WITHOUT PROPER NOTIFICATION SHALL BE BORNE BY THE INDIVIDUAL CONTRACTOR INVOLVED.
2. THE CONTRACT DOCUMENTS INDICATE THE EXTENT AND APPROXIMATE LOCATION OF ELEMENTS OF THE BUILDING AND SITE. ALL CONDITIONS, LOCATIONS, DEVICES AND ELEMENTS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING THE WORK.
3. ALL WORK PERFORMED IN CONNECTION WITH THESE CONTRACT DOCUMENTS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ALL APPLICABLE STATE AND LOCAL CODES, ORDINANCES, AND ZONING REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THIS PROJECT SHALL COMPLY WITH TITLE 24, 2019 CBC, CMC, CPC, CFC, CEC BASED ON THE 2019 CALIFORNIA ENERGY STANDARDS.
4. IT SHALL BE UNDERSTOOD THAT THE INTENT OF THESE CONSTRUCTION DOCUMENTS IS TO CONSTRUCT THE FACILITY IN ACCORDANCE WITH THE APPLICABLE CODES AND ORDINANCES. SHOULD ANY CONDITION BE UNCOVERED OR DEVELOP DURING THE EXECUTION OF THESE DOCUMENTS, WHICH IS NOT DEFINED HEREIN, THE CONTRACTOR SHALL CEASE WORK AND NOTIFY THE ARCHITECT AT ONCE.
5. THE TYPICAL DETAILS SHOWN IN THESE PLANS SHALL APPLY IN ALL SIMILAR CASES UNLESS SPECIFICALLY NOTED OTHERWISE. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS INDICATED FOR OTHER SIMILAR WORK AND, OR APPLICABLE INDUSTRY PRACTICE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF INSTALLATION, INSPECTION, AND FINAL APPROVAL OF ALL UTILITIES.
7. VERIFY ALL DIMENSIONS, EXISTING CONDITIONS, AND METHODS OF CONSTRUCTION PRIOR TO START OF ANY WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
8. IT IS NOT THE INTENT OF THESE CONTRACT DOCUMENTS TO SEPARATE THE WORK INTO SUBTRADE DIVISIONS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO DIVIDE THE WORK AND ORGANIZE ALL WORK AS REQUIRED TO COMPLETE THE WORK AS INTENDED BY THESE DOCUMENTS.
9. SITE DEVELOPMENT AND GRADING SHALL PROVIDE ACCESS TO PRIMARY ENTRANCES AND NORMAL PATHS OF TRAVEL, AND SHALL INCORPORATE PEDESTRIAN RAMPS, CURB RAMPS, ETC. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12, OR AS NOTED ON THESE CONSTRUCTION DOCUMENTS. ANY PATH OF TRAVEL SHALL BE CONSIDERED A RAMP IF IT'S SLOPE IS GREATER THAN 1 FT. RISE IN 20 FT. RUN (5%)
10. EACH PARKING FACILITY WHERE PARKING IS PROVIDED FOR THE PUBLIC, GUESTS OR EMPLOYEES SHALL PROVIDE ACCESSIBLE PARKING AND LOADING STALLS DESIGNATED SPECIFICALLY FOR HANDICAPPED PERSONS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF WORK. HE SHALL BE RESPONSIBLE FOR THE LOCATION AND PRESERVATION OF ALL SUCH FACILITIES IN THE AREA OF CONSTRUCTION, AND SHALL NOTIFY UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION (UNDERGROUND SERVICE ALERT 1-800-227-2600)
12. EACH PARKING SPACE RESERVED FOR PERSONS WITH PHYSICAL DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE, CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR OCCUPANT IN WHITE ON A BLUE BACKGROUND. THE SIGN SHALL NOT BE SMALLER THAN 70 SQ. IN. IN AREA AND, WHEN POSTED IN A PATH OF TRAVEL, SHALL BE A MINIMUM HEIGHT OF 80 INCHES FROM THE BOTTOM OF THE SIGN TO THE PARKING SPACE FINISH GRADE, UON. IN ADDITION, A SIGN, AS SPECIFIED IN TITLE 24 ACCESSIBILITY STANDARDS, SHALL BE POSTED IN A CONSPICUOUS PLACE, AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES, OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE. SAID SIGNS SHALL BE NOT LESS THAN 17 INCHES X 22 INCHES IN SIZE WITH LETTERING NOT LESS THAN 1 INCH HIGH.
13. PROVIDE A CLEAR AND LEVEL LANDING ON EACH SIDE OF AN EXIT DOOR. THE LANDING SHALL BE 48 INCHES IN LENGTH WHERE THE DOOR SWINGS AWAY FROM THE LANDING, AND 60 INCHES IN LENGTH IN THE DIRECTION OF DOOR SWING AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN THE CLOSED POSITION.
14. GENERAL DEMOLITION: WHENEVER EXISTING FACILITIES OR MATERIALS ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF WORK COVERED BY THE DRAWINGS AND SPECIFICATIONS, SAID FACILITIES AND MATERIALS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SAID FACILITIES OR MATERIALS SHALL BE EQUAL TO OR BETTER THAN THE ORIGINAL FACILITIES OR MATERIALS. THE FINISH PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY AND ITS AGENTS.
15. NO WORK SHALL COMMENCE AT THE PROJECT SITE BEFORE A BUILDING PERMIT IS FULLY EXECUTED AND AVAILABLE FOR POSTING AT THE JOB SITE.
16. CONSTRUCTION LIMITS: CONTRACTOR AND SUB-CONTRACTORS, WORKERS AND OTHER PERSONNEL RELATED TO THIS SCOPE OF WORK, SHALL BE CONFINED WITH THE AREAS DESIGNATED AS CONSTRUCTION LIMITS AS INDICATED BY THESE DRAWINGS AND RELATED AREAS. AREAS BEYOND THIS SCOPE OF WORK SHALL BE OFF LIMITS, AND THEIR USE SHALL BE PROHIBITED WITHOUT PRIOR AUTHORIZATION OF SAN JOAQUIN COUNTY. THE GENERAL CONTRACTOR SHALL VERIFY THESE LIMITS AND BE RESPONSIBLE TO INFORM THE APPROPRIATE PERSONNEL AND ENFORCE THESE LIMITS.
17. PROVIDE CONTINUOUS 16GA. X REQUIRED WIDTH (6" MIN.) FLAT BACKING STRAP AT WALLS WITH WALL MOUNTED EQUIPMENT, CASEWORK, AND/OR ACCESSORIES - TYPICAL UNLESS OTHERWISE NOTED.
18. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS AND THE EXISTING FIELD CONDITIONS, AND SHALL AT ONCE REPORT TO THE ARCHITECT ANY ERROR, INCONSISTENCY, OR OMISSION HE MAY DISCOVER. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK AT ANY TIME WITHOUT APPROVED CONTRACT DOCUMENTS OR WHERE REQUIRED, APPROVED SHOP DRAWINGS, PRODUCT LITERATURE, DATA, SAMPLES OR INSTALLATION INSTRUCTIONS.
19. THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT, WHERE APPLICABLE, FOR ANY WORK DONE WITHIN THE RIGHT-OF-WAY OR EASEMENTS FROM THE AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL NOTIFY THE OWNER 48 HOURS IN ADVANCE OF COMMENCEMENT OF THE WORK OR AS REQUIRED BY SAID PERMITS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, FITTING, OR PATCHING THAT MAY BE REQUIRED TO COMPLETE THE INTENT OF THESE CONSTRUCTION DOCUMENTS, TO MAKE IT'S SEVERAL PARTS FIT TOGETHER PROPERLY. THE CONTRACTOR SHALL PATCH ARCHITECTURAL FINISHES AS NECESSARY TO ACCOMPLISH WORK DEFINED IN STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. EXISTING FIELD CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND ACCEPTED AS CONDITIONS OF THIS SCOPE OF WORK.
21. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH PG&E AND/OR SERVICE PROVIDER FOR ANY NEW SERVICE INSTALLATIONS. THE CONTRACTOR SHALL COORDINATE THE SHUT DOWN OF THE FACILITIES WITH THE OWNER FOR AS MINIMAL DURATION AS POSSIBLE. INTERCEPT THE EXISTING SERVICE CONDUIT, EXTEND IT TO NEW TRANSFORMERS AND PAD (TO BE INSTALLED BY CONTRACTOR) AND EXTEND SECONDARY CONDUITS TO THE NEW SWITCHBOARD. COORDINATE WITH THE OWNER TO VERIFY LOCATION, PROVIDE TRAFFIC BARRIER POSTS PER PG&E REQUIREMENTS.
22. CONTRACTOR SHALL FLUSH ALL WATER, SEWER, AND DRAIN LINES PRIOR TO HOOK UP.
23. DIMENSIONS SHALL BE MEASURED TO FACE OF FRAMING, U.O.N. DO NOT SCALE DRAWINGS.
24. PROVIDE 2% SLOPE AWAY FROM THE BUILDING FOR 10'-0" AT FRONT AND SIDES.
25. NO DRAINAGE ACROSS OR ONTO ADJACENT PROPERTY. PROVIDE 2% SLOPE AWAY FROM THE BUILDING FOR 10'-0" AT FRONT AND SIDES.
26. DO NOT SCALE THE DRAWINGS.
27. SUBSTITUTIONS OR CHANGES AFFECTING THE APPROVED DRAWINGS, SPECIFICATIONS OR DSA REGULATED ITEMS SHALL BE MADE BY ADDENDA OR SUBMITTED AS; DSA 140 APPLICATION FOR APPROVAL OF CONSTRUCTION CHANGE DOCUMENT - CCD CATEGORY A/B, AS PER SECTION 4-338, PART 1 TITLE 24, CCR, AND INTERPRETATION OF REGULATION (IR) A-6.

ABBREVIATIONS

ACOUS	ACOUSTICAL	MTD	MOUNTED
ACT	ACOUSTICAL CEILING TILE	MTL	METAL
AD	AREA DRAIN	NIC	NOT IN CONTRACT
ADJ	ADJUSTABLE	NO	NUMBER
AFF	ABOVE FINISH FLOOR	NTS	NOT TO SCALE
ALT	ALTERNATE	O.P.	OVERFLOW PIPE
ARCH	ARCHITECT	OA	OVERALL
B.O.	BOTTOM OF	OC	ON CENTER
BD	BOARD	OD	OUTSIDE DIAMETER
BET	BETWEEN	OPG	OPENING
BLKG	BLOCKING	OPP	OPPOSITE
BM	BEAM	PERM	PERIMETER
BOT	BOTTOM	PG	PAINT GRADE
BRKT	BRACKET	PLAM	PLASTIC LAMINATE
BUR	BUILT UP ROOF	PLAS	PLASTER
C.G.	CORNER GUARD	PR	PAIR
CAB	CABINET	PT	PAINT
CALK	CAULKING	R	RISER
CER	CERAMIC	RAD	RADIUS
CJ	CONTROL JOINT	RCP	REFLECTED CEILING PLAN
CLOS	CLOSET	RD	ROOF DRAIN
CLR	CLEAR	REF	REFRIGERATOR
CO	CASED OPENING	REINF	REINFORCED
COL	COLUMN	REQD	REQUIRED
CONT	CONTINUOUS	RESIL	RESILIENT
CPT	CARPET	RO	ROUGH OPENING
CT	CERAMIC TILE	RTU	ROOF TOP UNIT (MECH)
CTR	CENTER	SAFB	SOUND ATTENUATION FIBER BATT
DIA	DIAMETER	SC	SCUPPER
DIM	DIMENSION	SCD	SEE CIVIL DRAWINGS
DN	DOWN	SCHED	SCHEDULE
DR	DOOR	SEAL	SEALANT
DS	DOWN SPOUT	SECT	SECTION
DWG	DRAWING	SED	SEE ELECTRICAL DRAWINGS
(E)	EXISTING	SF	SQUARE FOOT
EA	EACH	SFPD	SEE FIRE PROTECTION DRAWINGS
ELEV	ELEVATION	SHT	SHEET
EMER	EMERGENCY	SIM	SIMILAR
ENCL	ENCLOSURE	SLD	SEE LANDSCAPE DRAWINGS
EOS	EDGE OF SLAB	SMD	SEE MECHANICAL DRAWINGS
EQ	EQUAL	SPD	SEE PLUMBING DRAWINGS
EW	EACH WAY	SPEC	SPECIFICATION
F.O.	FACE OF	SQ	SQUARE
FA	FIRE ALARM	SS	STAINLESS STEEL
FAP	FIRE ANNUNCIATOR PANEL	SSD	SEE STRUCTURAL DRAWINGS
FD	FLOOR DRAIN	STD	STANDARD
FE	FIRE EXTINGUISHER	STL	STEEL
FEC	FIRE EXTINGUISHER CABINET	STOR	STORAGE
FH	FIRE HYDRANT	SUSP	SUPSPENDED
FIN	FINISH	SYM	SYMMMETRICAL
FRP	FIBER-REINFORCED PLASTIC	T	TREAD
FT	FOOT OR FEET	THK	THICK
FUR	FURRING	THR	THRESHOLD
G.S.M.	GALVANIZED SHEET METAL	TO	TOP OF
GAL	GALLON	TYP	TYPICAL
GALV	GALVANIZED	UC	UNDERCUT
GB	GRAB BAR	UNFIN	UNFINISHED
GC	GENERAL CONTRACTOR	UNO	ULNESS NOTED OTHERWISE
GL	GLASS	UON	UNLESS OTHERWISE NOTED
GND	GROUND	VCT	VINYL COMPOSITION TILE
GWB	GYPSUM BOARD	VIF	VERIFY IN FIELD
H.W.H.	HOT WATER HEATER	VTR	VENT TERMINATION PIPE
HDWD	HARDWOOD	VWC	VINYL WALL COVERING
HM	HOLLOW METAL	W/	WITH
HT	HEIGHT	W/O	WITHOUT
ID	INSIDE DIAMETER	WC	WATERCLOSET
INSUL	INSULATION	WIN	WINDOW
INT	INTERIOR	WP	WATERPROOF
JST	JOIST	WSCT	WAINSCOT
JT	JOINT	WT	WEIGHT
LAM	LAMINATE		
LAV	LAVATORY		
LDG	LANDING		
LT	LIGHT		
MEMB	MEMBRANE		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MO	MASONRY OPENING		

CONTACTS

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APPLICABLE CODES

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

TITLE 24 CCR, PART 1 - 2019 BUILDING STANDARDS ADMINISTRATIVE CODE

TITLE 24 CCR, PART 2 - 2019 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2015 IBC, AS AMENDED BY CA)

TITLE 24 CCR, PART 3 - 2019 CALIFORNIA ELECTRICAL CODE (CEC) (2014 NEC, AS AMENDED BY CA)

TITLE 24 CCR, PART 4 - 2019 CALIFORNIA MECHANICAL CODE (CMC) (2012 IAPMO UMC, AS AMENDED BY CA)

TITLE 24 CCR, PART 5 - 2019 CALIFORNIA PLUMBING CODE (CPC) (2011 IAPMO UPC, AS AMENDED BY CA)

TITLE 24 CCR, PART 6 - 2019 CALIFORNIA ENERGY CODE

TITLE 24 CCR, PART 9 - 2019 CALIFORNIA FIRE CODE (CFC) (2012 IFC, AS AMENDED BY CA)

TITLE 24 CCR, PART 11 - 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

TITLE 24 CCR, PART 12 - 2019 CALIFORNIA REFERENCED STANDARDS (PARTIAL LIST - SEE CBC CH. 35 AND CFC CH. 80)

2016 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)

2013 NFPA 14, INSTALLATION OF STANDPIPE AND HOSE 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 PROTECTIVES

2015 NFPA 2001, CLEAN AGENT FIRE EXTINGUISHING SYSTEMS

2005 UL 300, CLASS I HOOD FIRE SUPPRESSION SYSTEMS

2003 UL, 464, AUDIBLE SIGNAL APPLIANCES

1999 UL 521, HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

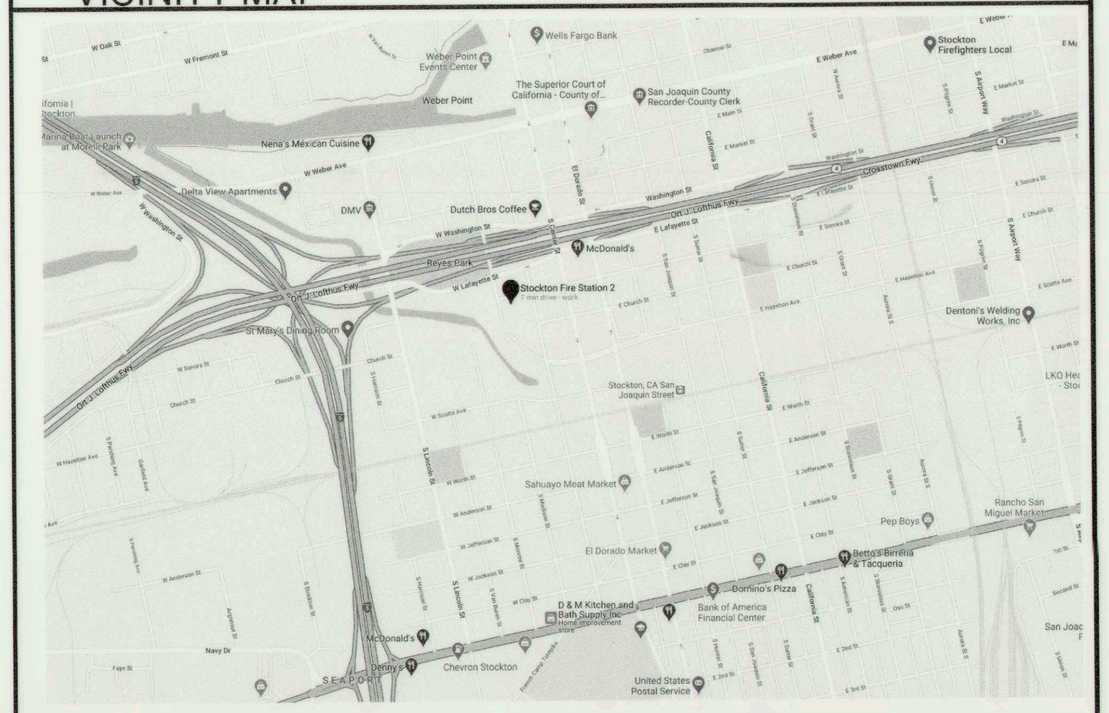
PROJECT DATA

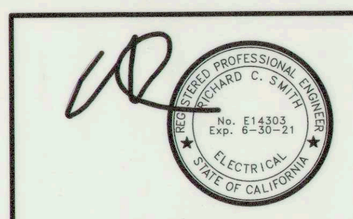
REFERENCE	DESCRIPTION	INTERPRETATION
DESCRIPTION		
SCOPE	UPS SYSTEM REPLACEMENT	
LOCATION	FIRE STATION 2 COMMUNICATION CENTER	
ZONING		
APN		
SPECIAL USE PERMIT	OCCUPANCY "U", OCCUPANT LOAD 0.	
GENERAL INFORMATION		
	1ST FLOOR AREA	2420
	2ND FLOOR AREA	N/A
	TOTAL BUILDING AREA	2420
	ACTUAL BUILDING HEIGHT	14'
	ACTUAL NUMBER OF STORIES	1 STORIES

SHEET INDEX

CS	COVER SHEET
E1	ELECTRICAL INFORMATION
E2	ELECTRICAL PLAN
E3	ONE LINE DIAGRAM , ELECTRICAL DETAILS

VICINITY MAP





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FS2 COMMUNICATION CENTER UPS REPLACEMENT

COVER SHEET

110 W SONORA STREET
STOCKTON, CA 95203

REV. NO.	DESCRIPTION	DATE	BY	APRVD
	PLAN ISSUE SET	3.17.21	RCS	RCS

SCALE: AS SHOWN
DRWN: RCS
ENG: RCS
CHK: RCS
03/17/21

Approver
11/8/21

SHEET NO. 1
CS
OF 4 SHEETS
PROJECT NO. F022001

path://john/17/4

K:\2020\FS2\FS 2 UPS REPLACEMENT rev 4.rvt

5419C

260500 ELECTRICAL WORK FOR COMMON RESULTS:

1. ELECTRICAL INSTALLATION SHALL COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, INCLUDING THE FOLLOWING:
TITLE 24, CCR, PART 2, 2019 CBC
TITLE 24, CCR, PART 3, 2019 CEC
TITLE 24, CCR, PART 4, 2019 CMC
TITLE 24, CCR, PART 9, 2019 CFC
TITLE 24, CCR, PART 6, 2019 CALIFORNIA ENERGY CODE
TITLE 24, CCR, PART 11, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
ALL APPLICABLE LOCAL CODES

2. ELECTRICAL CONTRACTOR IS REMINDED THIS PROJECT IS A REMODEL OF THE EXISTING FACILITY THAT REQUIRES 24 HOUR OPERATION. ALL OUTAGES ARE TO BE SCHEDULED WITH THE CITY PER THEIR REQUIREMENTS.

3. CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, LICENSES, ETC. REQUIRED TO CARRY ON AND COMPLETE THE WORK.

4. PROVIDE ALL LABOR, MATERIALS, TOOLS, PLANT EQUIPMENT, TRANSPORTATION AND PERFORM ALL OPERATIONS NECESSARY FOR ANY REASONABLE INCIDENTAL TO PROPER EXECUTION AND COMPLETION OF ALL "ELECTRICAL WORK" WHETHER SPECIFICALLY MENTIONED OR NOT; ALL AS INDICATED, SPECIFIED HEREIN, AND/OR IMPLIED THEREBY TO CARRY OUT THE APPARENT INTENT THEREOF.

5. ALL MATERIALS SHALL BE NEW AND LISTED WITH THE UNDERWRITERS' LABORATORIES, INC., SHALL MEET THEIR REQUIREMENTS AND SHALL BEAR THEIR LABEL WHEREVER STANDARDS HAVE BEEN ESTABLISHED AND LABEL SERVICE IS REGULARLY FURNISHED BY THAT AGENCY.

6. ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH THE SIZE AND LOCATIONS OF EQUIPMENT ARE SHOWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION AT THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT AND INSTALLING HIS WORK TO AVOID INTERFERENCE WITH OTHER TRADES.

7. WORK SHOWN ON THE DRAWINGS TO BE INSTALLED UNDERGROUND SHALL BE INSTALLED AT LEAST 24" BELOW GRADE UNLESS OTHERWISE NOTED. BACKFILL IN 6" THICK, PROPERLY MOISTENED LAYERS, SOLIDLY PACKED AND IRON TAMPED TO A DENSITY NOT LESS THAN THAT OF ADJACENT, UNDISTURBED EARTH. RESTORE SURFACES, ROADWAYS, WALKS, CURBS, WALLS AND EXISTING UNDERGROUND INSTALLATIONS TO ORIGINAL CONDITION IN AN ACCEPTABLE MANNER.

8. ALL ELECTRICAL EQUIPMENT EXPOSED TO THE WEATHER SHALL BE LISTED FOR EXTERIOR USE.

9. ALL U.L. LISTED EQUIPMENT SHALL BE INSTALLED AS PER THEIR LISTING OR LABELING.

10. IN LOCATIONS WHERE ELECTRICAL EQUIPMENT WOULD BE EXPOSED TO PHYSICAL DAMAGE, ENCLOSURES OR GUARDS SHALL BE SO ARRANGED AND OF SUCH STRENGTH AS TO PREVENT SUCH DAMAGE.

11. CONFLICTS BETWEEN SPECIFICATIONS AND PLANS:

a. ANY CONFLICT BETWEEN ELECTRICAL SPECIFICATIONS AND ELECTRICAL PLANS; OR BETWEEN ELECTRICAL PLANS AND PLANS OF ANOTHER DISCIPLINE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND A RESOLUTION RECEIVED PRIOR TO PROCUREMENT OR INSTALLATION OF THE ITEM IN QUESTION.

b. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT RECEIVING ANY RESOLUTION TO THE CONFLICT HE/SHE DOES SO AT HIS/HER OWN RISK AND SHALL RECTIFY THE WORK TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER OR ENGINEER.

260500.02. SUBMITTALS:

1. PROVIDE THE FOLLOWING SUBMITTALS FOR REVIEW AND APPROVAL. EACH SHALL BE SUBMITTED SEPARATELY TO AVOID DELAYS IN THE REVIEW OF ONE SUBMITTAL IN HOLDING UP REVIEW OF THE REMAINDER.

a. UPS.
b. PANEL BOARDS.
f. BASIC ELECTRICAL MATERIALS.

260500.03. WORKING CLEARANCES FOR ELECTRICAL SWITCHGEAR:

1. PROVIDE WORKING SPACES FOR ELECTRICAL PANELS AND SWITCHGEAR TO COMPLY WITH CEC 110.26.

2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES INVOLVED TO ENSURE THE CLEARANCES REQUIRED BY ITEM 1 ABOVE ARE PROVIDED.

260526. GROUNDING:

1. GROUND AND BOND ALL EQUIPMENT AS REQUIRED BY GOVERNING CODES AND SPECIFICALLY INCLUDING SWITCHBOARD, PANELBOARDS, MOTOR CASES, METAL PIPING SYSTEMS, STRUCTURAL STEEL, ETC.

2. PROVIDE GROUND WIRES IN ALL FEEDERS AND BRANCH CIRCUITS, SIZE PER CEC TABLE 250.122

3. ALL GROUND WIRES SHALL BE INSULATED GROUND WIRES.

260529. INSTALLATION OF SUPPORT SYSTEMS

1. RACEWAYS, CABLE ASSEMBLIES, BOXES, CABINETS, AND FITTINGS SHALL BE SECURELY FASTENED IN PLACE PER CEC ARTICLE 300.11. SUPPORT WIRES THAT DO NOT PROVIDE SECURE SUPPORT SHALL NOT BE PERMITTED AS THE SOLE SUPPORT. SUPPORT WIRES AND ASSOCIATED FITTINGS THAT PROVIDE SECURE SUPPORT AND THAT ARE INSTALLED IN ADDITION TO THE CEILING GRID SUPPORT WIRES SHALL BE PERMITTED AS THE SOLE SUPPORT. WHERE INDEPENDENT SUPPORT WIRE ARE USED, THEY SHALL BE SECURED AT BOTH ENDS. CABLES AND RACEWAYS SHALL NOT BE SUPPORTED BY CEILING GRIDS.

2. FURNISH ALL NECESSARY FOUNDATIONS, SUPPORTS, BACKING, ETC., FOR ALL ELECTRICAL ENCLOSURES, CONDUITS AND EQUIPMENT.

3. ATTACH ALL BOXES, CABINETS, ETC. TO WOOD WITH WOOD OR LAG SCREWS, TO METAL WITH MACHINE SCREWS OR BOLTS AND TO CONCRETE WITH EXPANSION ANCHORS AND MACHINE SCREWS OR BOLTS.

2. RIGID STEEL CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT GREATER THAN 10 FT, ELECTRICAL METALLIC TUBING AT INTERVALS NOT GREATER THAN 5 FT.

3. A SUPPORT SHALL BE PROVIDED NOT MORE THAN 3 FT. FROM ANY CHANGE IN DIRECTION. ADDITIONAL SUPPORTS TO THOSE SPECIFIED ABOVE SHALL BE INSTALLED WHERE REQUIRED TO SUIT JOB CONDITIONS AND TO PROVIDE A SECURE INSTALLATION. ALL HANGERS AND SUPPORTS SHALL BE THE PRODUCTS OF ONE MANUFACTURER.

260533. PULL OR JUNCTION BOXES:

1. INSTALL WHERE INDICATED, OR AS REQUIRED BY CODE, PULL BOXES AND JUNCTION BOXES OF SUFFICIENT SIZE AND CAPACITY TO FACILITATE ALL WIRING. BOXES SHALL BE SIZED TO PROPERLY ACCOMMODATE ALL CONDUCTORS ENTERING SAME.

2. BOXES SHALL BE OF THE SHAPE AND SIZE BEST SUITED FOR THE PARTICULAR APPLICATION AND SHALL BE SUPPORTED DIRECTLY TO STRUCTURAL MEMBERS, FRAMING OR BLOCKING BY MEANS OF SCREWS, ANCHORS, BOLTS OR EMBEDDED IN MASONRY.

A. SWITCH AND RECEPTACLE BOX SHALL BE ONE PIECE DRAWN OR STAMPED STEEL BOXES MINIMUM SIZE SHALL BE FOUR INCHES (4") SQUARE. BOXES SHALL BE FITTED WITH FLUSH DEVICE COVERS, PLASTER RINGS, OR TILE SWITCH RINGS IN MASONRY IN AREA WHERE EXPOSED WIRING IS PERMISSIBLE, BOXES SHALL BEFITTED WITH SURFACE TYPE COVERS.

F. BOXES FOR SPECIAL EQUIPMENT SHALL BE SUITABLE FOR THE PARTICULAR EQUIPMENT.

G. BOXES SHALL BE LOCATED AND PLACED ACCORDING TO ARCHITECTURAL AND STRUCTURAL REQUIREMENTS.

260550. WIRING METHODS: LINE VOLTAGE SYSTEMS (120V AND ABOVE);

1. ALL WIRING SHALL BE INSTALLED IN CONDUITS. CONDUITS SHALL BE RUN CONCEALED IN WALLS AND CEILINGS WHERE FEASIBLE. ALL CONDUITS INSTALLED SURFACE ON WALL SHALL BE PAINTED TO MATCH WALL FINISH. MOUNT EXTERIOR CONDUITS ON WALL ON GALVANIZED UNISTRUTS. ALL SURFACE CONDUIT INSTALLATION/ RUNS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

2. ALL CONDUITS RUN WITHIN INTERIOR FINISHED SPACES SUCH AS OFFICES, BREAKROOM, RESTROOM ETC. SHALL BE RUN CONCEALED.

3. ALL CONDUITS RUN IN DEDICATED ELECTRICAL AND MECHANICAL ROOMS SHALL BE RUN EXPOSED.

4. MINIMUM CONDUIT SIZE SHALL BE 1/2" ABOVE GRADE AND 3/4" UNDERGROUND.

5. MINIMUM ACCEPTABLE CONDUITS ARE:

A. GALVANIZED RIGID STEEL - FOR USE ON:
(1) EXTERIOR WALL SURFACES.

B. GALVANIZED STEEL EMT FOR USE:
(1) CONCEALED IN INDOOR FINISHED SPACES.
(2) EXPOSED INSIDE ELECTRICAL & MECHANICAL ROOMS.

C. LIQUID TIGHT STEEL FLEX:
(1) FOR FINAL CONNECTION TO OUTDOOR EQUIPMENT. LENGTH SHALL NOT EXCEED 36".

D. FLEXIBLE STEEL CONDUIT:
(1) FOR INDOOR FINAL CONNECTION TO RECESSED LIGHT FIXTURES. LENGTH SHALL NOT EXCEED 72".
(2) FOR INDOOR FINAL CONNECTION TO HVAC EQUIPMENT. LENGTH SHALL NOT EXCEED 36".

E. "PVC" SCHEDULE 40:
(1) FOR CONDUITS RUN UNDERGROUND AND FOR UNDER BUILDING SLAB.
(2) CONDUIT STUBUPS THROUGH THE FLOOR OR GRADE SHALL BE IN PVC WRAPPED RIGID STEEL CONDUIT. PVC WRAPPING SHALL EXTEND 6" ABOVE FINISHED FLOOR OR GRADE.
(3) NOT PERMITTED FOR WIRING ABOVE FINISHED FLOOR INSIDE BUILDINGS

F. ALUMINUM CONDUITS, IMC CONDUITS OR ALUMINUM FITTINGS ARE NOT APPROVED FOR USE ON THIS PROJECT.

G. ALL CONDUIT FITTINGS SHALL BE MALLEABLE IRON/STEEL.

H. COUPLING:
(1) EMT COUPLING - APPLETON TWC-CS SERIES
(2) EMT CONNECTOR - APPLETON TW-CSI SERIES
(3) FLEX CONDUIT CONNECTOR - T&B "TITE BITE", INSULATED
(4) LIQUID TIGHT FLEX CONDUIT CONNECTOR - APPLETON "STB" SERIES UP TO 2", "ST" SERIES OVER 2".

I. RIGID STEEL CONDUIT CONNECTED TO BOXES AND CABINETS SHALL BE FITTED WITH TWO LOCKNUTS AND INSULATING BUSHING, OA "A" SERIES. PROVIDE GROUNDING BUSHING OZ "BL" SERIES WHERE LOCKNUTS AND BUSHING IS NOT USED. CONDUITS CONNECTED TO BOXES EXPOSED TO WEATHER/MOISTURE SHALL BE FITTED WITH WATERTIGHT SEALING HUBS OF STEEL OR MALLEABLE IRON WITH SEALING RING AND INSULATED THREAT, T & B 370 SERIES.

J. TYPE NM AND NMC CABLES SHALL NOT BE USED ON THIS PROJECT.

K. THE PROJECT DRAWINGS ARE LAID OUT USING SOLID CONDUITS AND CABLES PULLED THROUGH SUCH CONDUITS. MC CABLES MAY BE UTILIZED AS DESCRIBED BELOW, WITH RESTRICTIONS NOTED.

(1) PRIOR APPROVAL OF OWNER/ARCHITECT OR ENGINEER REQUIRED.

(2) MC CABLES SHALL BE AS MANUFACTURED BY SOUTHWIRE TYPE EZ-MC DURACLAD TYPE WITH LIGHT WEIGHT STEEL ARMOR AND INSULATED GREEN GROUNDING CONDUCTORS OR APPROVED EQUAL.

(3) SHALL BE USED FOR BRANCH CIRCUITS ONLY AS NOTED BELOW.

(a) CANNOT BE USED ANYWHERE EXPOSED.

(b) LIGHTING: VERTICAL DROPS IN WALL FOR LIGHT SWITCHES FORM JBOX IN CEILING. HORIZONTAL RUNS IN CEILING SHALL BE IN SOLID STEEL CONDUITS.

(c) POWER RECEPTACLES:

(1) FOR UNDERGROUND HOMERUNS: SOLID CONDUIT VERTICAL RISER IN WALL FROM UNDERGROUND CONDUIT TO FIRST RECEPTACLE JBOX. THEN HORIZONTAL RUNS WITHIN WALLS TO OTHER RECEPTACLE BOXES IN MC CABLE.
(2) FOR OVERHEAD HOMERUNS: VERTICAL DROPS FROM JBOX IN CEILING THEN HORIZONTAL RUNS WITHIN WALLS TO OTHER RECEPTACLES. HORIZONTAL RUNS IN CEILING SHALL BE IN SOLID STEEL CONDUITS.

(d) NO OTHER USE IS PERMITTED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ARCHITECT OR ENGINEER.

(4) ALL FITTINGS AND TERMINATIONS FOR THE MC CABLING SYSTEM SHALL BE METAL AND SUITABLE AND LISTED FOR SUCH USE.

(5) ALL SUPPORTS, ATTACHMENTS SPACING SHALL BE PER CEC 330.30.

(6) FOR MULTI-WIRE BRANCH CIRCUITS SUCH CABLES SHALL HAVE MULTIPLE NEUTRALS, ONE FOR EACH CIRCUIT.

6. CONDUCTORS SHALL BE COPPER CONDUCTORS TYPE THHN/THWN UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.

7. ALL DEVICES, CONDUITS, RACEWAYS AND CABLES SHOWN ARE NEW TO BE PROVIDED UNLESS OTHERWISE NOTED.

8. FLASH AND COUNTERFLASH ALL ITEMS PASSING THROUGH THE ROOF.

9. THE OWNER RESERVES THE RIGHT TO RELOCATE ALL LIGHTING, OUTLETS AND SWITCHES BEFORE THEY ARE ROUGHED IN AT NO EXTRA COST.

10. SEPARATION OF WIRING OF DIFFERENT VOLTAGE CLASSIFICATIONS:

A. WIRING FOR DIFFERENT VOLTAGE CLASSIFICATIONS SHALL BE INSTALLED IN ENTIRELY SEPARATE RACEWAYS/CONDUITS SYSTEM AND ENCLOSURES/BOXES.

CLASSIFICATION 1 - 0 TO 30V
CLASSIFICATION 2 - 100 TO 250V
CLASSIFICATION 3 - 251 TO 500V

B. PARTICULAR ATTENTION SHALL BE PAID TO THE WIRING FOR

1. ROOF TOP CONVENIENCE OUTLETS FOR SERVICING ROOF TOP EQUIPMENT.

2. LINE VOLTAGE CONTROLS FOR ROOF TOP HVAC AND OTHER REQUIREMENTS.

C. DISCONNECTS SHALL NOT BE USED AS THROUGH RACEWAYS FOR WIRING NOT DIRECTLY SERVING THE DISCONNECTS. SERVICING OUTLETS SHALL NOT BE MOUNTED ON DISCONNECTS.

260551. INSTALLATION OF RACEWAYS AND FITTINGS

1. CONCEAL RACEWAYS WITHIN CEILINGS, WALLS, AND FLOORS EXCEPT WHERE EXPOSED RACEWAYS ARE SPECIFICALLY PERMITTED.

2. WHERE CONDUIT IS ALLOWED TO BE EXPOSED, INSTALL THE CONDUIT PARALLEL WITH OR AT RIGHT ANGLES TO STRUCTURAL MEMBERS, WALLS, AND LINES OF THE BUILDING.

3. INSTALL WHERE INDICATED, OR AS REQUIRED BY CODE, PULLBOXES AND JUNCTION BOXES OF SUFFICIENT SIZE TO FACILITATE WIRING. BOXES SHALL BE SIZED TO PROPERLY ACCOMMODATE ALL CONDUCTORS ENTERING SAME.

4. DO NOT INSTALL CONDUIT OR TUBING WHICH HAS BEEN CRUSHED OR DEFORMED.

5. RUN CONDUCTORS OF SAME CIRCUIT IN SAME CONDUIT. RUN CONDUCTORS OF DIFFERENT VOLTAGE SYSTEMS IN SEPARATE CONDUITS.

6. INSTALL NO CONDUCTORS UNTIL WORK WHICH MIGHT CAUSE DAMAGE TO SUCH CONDUCTORS OR THE CONDUIT HAS BEEN COMPLETED.

7. KEEP ALL CONDUITS AT LEAST SIX INCHES AWAY FROM THE COVERING ON HOT WATER OR STEAM PIPES.

8. CAP RACEWAY ENDS DURING CONSTRUCTION. CLEAN OR REPLACE CONDUITS IN WHICH WATER OR FOREIGN MATTER HAVE ACCUMULATED, TO THE SATISFACTION OF THE ARCHITECT.

9. CONDUITS SHALL BE SUPPORTED WITH STRAPS, WITH GALVANIZED MALLEABLE SPLIT RING AND ROD FOR INDIVIDUAL RUNS OR WITH KINDORF OR UNISTRUT CHANNEL SUPPORTS FOR MULTIPLE RUNS. DISTANCE BETWEEN SUPPORTS SHALL NOT EXCEED 10 FEET. CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF ONE ANOTHER.

10. CONDUITS CONNECTED TO BOXES AND CABINETS SHALL BE FITTED WITH TWO LOCKNUTS AND INSULATED BUSHING, OA "A" SERIES.

11. CONDUITS NOT CONNECTED WITH LOCKNUTS AND BUSHINGS SHALL BE FITTED WITH GROUNDING BUSHING, OZ "BL" SERIES, U. L. APPROVED AND BONDED.

12. CONDUIT STRAPS FOR INDIVIDUAL RUNS SHALL BE SECURED BY TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION ANCHORS ON SOLID CONCRETE OR MASONRY, MACHINE SCREWS OR BOLTS ON METAL SURFACES AND WOOD SCREWS ON WOOD CONSTRUCTION. THE USE OF NAILS TO ANCHOR STRAPS ON WOOD CONSTRUCTION IS PROHIBITED. STRAPS SHALL BE TWO HOLE MALLEABLE IRON OR SNAP-TYPE STEEL WITH RIBBED BACK, GALVANIZED OR CADMIUM PLATED. THE USE

13. PLACEMENT OF ALL BOXES SHALL BE GOVERNED BY APPLICABLE ARCHITECTURAL AND STRUCTURAL REQUIREMENTS.

14. CONDUIT FITTINGS: EXCEPT WHERE OTHERWISE NOTED, CONDUIT FITTINGS SHALL BE APPLETON OR APPROVED EQUAL. UNILETS SHALL BE MALLEABLE IRON AND FITTED WITH COVERS AND GASKETS.

15. TELEPHONE AND SIGNAL CONDUIT BENDS WHERE REQUIRED SHALL HAVE A RADIUS OF TEN TIMES THE CONDUIT TRADE SIZE.

16. PROVIDE PULL TAPE IN ALL EMPTY CONDUITS.

260553. NAMEPLATES & IDENTIFICATION:

1. INSTALL ENGRAVED NAMEPLATES FOR EACH PANELBOARD, CABINET, DISCONNECT, ETC. NAMEPLATES SHALL BE SECURELY FASTENED TO THE EQUIPMENT WITH #4 PHILLIPS ROUND HEAD CADMIUM PLATED SELF-TAPPING SCREWS, BRASS BOLT.

2. PROVIDE CIRCUIT LABEL INDICATING PANEL AND CIRCUIT NUMBER ON EACH COVERPLATE FOR EACH RECEPTACLE AND LIGHT SWITCH, MOTION SENSOR SWITCH. SUCH LABEL SHALL BE SELF ADHESIVE WHITE TAPE WITH BLACK LETTERS MADE ON A LABEL MAKER.

3. ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES PER CALIFORNIA ENERGY CODE SECTION 130.5(d)(3).

260573. ARC FLASH HAZARDS:

1. PROVIDE WARNING LABEL ON ELECTRICAL EQUIPMENT OF POSSIBLE ARC FLASH HAZARDS PER C.E.C. 110.16.

260800. TESTING:

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE FREE FROM SHORT CIRCUITS AND IMPROPER GROUNDS. TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDS BEFORE ANY FIXTURES OR EQUIPMENT ARE CONNECTED AND WHERE SUCH TESTS INDICATE FAULTY INSULATION OR OTHER DEFECTS, THEY SHALL BE LOCATED, REPAIRED AND RETESTED AT THE CONTRACTOR'S EXPENSE. PROVIDE ALL INSTRUMENTS TO MAKE SUCH TESTS.

2. DEMONSTRATE TO THE OWNER AND THE ARCHITECT, THAT THE ENTIRE INSTALLATION IS COMPLETE, IN PROPER OPERATING CONDITION AND THAT THE CONTRACT HAS BEEN PROPERLY AND FULLY EXECUTED.

260800.01. CERTIFICATE OF COMPLETION:

1. ACCEPTANCE OF THE CONTRACT FOR THIS WORK INCLUDES THIS GUARANTEE: THE CONTRACTOR GUARANTEES THAT HE HAS PERFORMED THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR AGREES TO REPLACE OR REPAIR, AS NEW ANY DEFECTIVE WORK, MATERIALS, OR PART WHICH MAY APPEAR WITHIN ONE YEARS (1) OF FINAL ACCEPTANCE, IF, IN THE OPINION OF THE ARCHITECT OR THE OWNER, THE DEFECT IS DUE TO WORKMANSHIP OR MATERIAL.

260800.02. WARRANTIES, GUARANTEES, CERTIFICATES, ETC.:

1. WARRANTIES, GUARANTEES, CERTIFICATES, ETC. THAT ARE FURNISHED AND AVAILABLE FOR EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED UNDER THIS SECTION SHALL BE PROPERLY FILLED OUT AS OF DATE OF ACCEPTANCE OF THE WORK BY THE OWNER AND SHALL BE DELIVERED TO THE ARCHITECTS.

260811. OPERATIONS AND MAINTENANCE (O&M) MANUALS:

1. PROVIDE AS-BUILT DRAWINGS.

A. UPON COMPLETION OF WORK COVERED BY THIS CONTRACT, PROVIDE AS-BUILT PLANS UPON WHICH SHALL BE SHOWN ALL CHANGES OF FEEDERS, PANELS, CIRCUITS, LIGHT FIXTURES, ETC., FOR THIS PROJECT AND INSTALLED UNDER THIS CONTRACT, WHICH ARE NOT IN ACCORD WITH THESE DRAWINGS FOR THE WORK.

B. ALL SYMBOLS AND DESIGNATIONS USED IN PREPARING "AS-BUILT" DRAWINGS SHALL MATCH THOSE USED IN CONTRACT DRAWINGS.

2. PROVIDE OF OPERATION AND MAINTENANCE MANUAL FOR POWER, AND LIGHTING SYSTEMS.

3. SCAN BOTH "AS-BUILT" PLANS AND O&M MANUAL ON TO A CD AND PROVIDE (3) COPIES OF THE CD TO OWNER PRIOR TO RELEASE OF FINAL PAYMENT.

262417. PANELBOARDS:

1. UNITS SHALL BE FLUSH OR SURFACE MOUNTED AS INDICATED ON THE PANEL SCHEDULE, WITH THE NUMBER AND SIZE OF BREAKERS AS INDICATED ON THE PANEL SCHEDULE. SINGLE POLE, TWO POLE, AND THREE POLE BREAKERS SHALL BE BOLT-ON TYPE. MULTIPLE POLE BREAKERS SHALL HAVE COMMON INTERNAL TRIP CONNECTION. SINGLE POLE BREAKERS SHALL NOT BE TIED AT HANDLES TO FORM MULTIPLE POLE BREAKERS. THE PANEL DOORS SHALL BE DOOR-IN-DOOR CONSTRUCTION AND SHALL HAVE FLUSH TYPE LOCKS, ALL LOCKS SHALL BE KEYED ALIKE AND HAVE TYPEWRITTEN DIRECTORIES INDICATING FIXTURES, EQUIPMENT, OR OUTLETS SERVICE BY EACH BREAKER. PANELS SHALL HAVE COPPER BUSSING.

262726. WIRING DEVICES:

1. UNITS SHALL BE EQUAL TO THE DEVICES SET FORTH HEREIN, IN STANDARD COLORS (BROWN, WHITE, GREY, BEIGE OR IVORY) AS SELECTED BY THE ARCHITECT:

A. WIRING DEVICES	LEVITON #	HUBBELL #	P & S #
SINGLE POLE SWITCH, 15A	1201-2	HBL1201	PS15AC1
DOUBLE POLE SWITCH, 15A	1202-2	HBL1202	PS15AC2
THREE WAY SWITCH, 15A	1203-2	HBL1203	PS15AC3
DUPLEX CONV. OUTLET, 15A	5262	HBL5262	5262
DUPLEX CONV. OUTLET, 20A	5362	HBL5362	5362
DUPLEX CONV. GFI OUTLET, 15A	6599	GF15	1595L
DUPLEX CONV. GFI OUTLET, 20A	6899	GF15	2095L

2. THE CONTROLLED OUTLET SHALL HAVE PERMANENT UNIQUE MARKING PROVIDED BY THE MANUFACTURER OF THE RECEPTACLE.

3. THE MOUNTING HEIGHTS OF LIGHT SWITCHES, RECEPTACLES AND CONTROLS SHALL BE MAXIMUM 48" MEASURED TO THE TOP OF BOXES OR MINIMUM 16" TO THE BOTTOM OF BOXES. SEE "LEGEND" FOR ACTUAL MOUNTING HEIGHTS OF DEVICES. VERIFY HEIGHT WITH ARCHITECT WHERE AN ACTUAL MOUNTING HEIGHT IS NOT CALLED OUT ON PLANS.

4. SINGLE RECEPTACLE SERVED BY INDIVIDUAL 20A BRANCH CIRCUIT DEDICATED TO THE OUTLET SHALL BE 20A RATED PER CEC 210.21(B)(1). ALL OTHERS SHALL BE 15A RATED.

262726.02. DEVICE PLATES:

1. ALL DEVICE PLATES FOR INDOOR USE SHALL BE NYLON.

2. ALL DEVICE BOXES WHICH ARE INSTALLED IN FIRE RATED WALL ASSEMBLY AND IS PROVIDED WITH A FIRE-STOPPING PUTTY PAD SHALL HAVE A BRUSHED STAINLESS STEEL COVERPLATE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PUTTY PAD.

3. DEVICE COVERS FOR SURFACE MOUNTED BOXES SHALL BE 1/2" RAISED STEEL PLATES.

4. DEVICE COVERS FOR DEVICES LOCATED IN DAMP LOCATIONS SHALL COMPLY WITH CEC 406.9(A).

5. DEVICE COVERS FOR DEVICES LOCATED IN WET LOCATIONS SHALL COMPLY WITH CEC 406.9(B).

ELECTRICAL LEGEND

ELECTRICAL POWER

- ALL LINE VOLTAGE WIRING IN CONDUIT, SEE GENERAL NOTES
  TICKS = # OF #12 WIRE, SHORT = HOT, LONG = NEUTRAL, DOT = GROUND, UNLESS NOTED OTHERWISE
- 120V OUTLET, +18" TO BOTTOM OF BOX
  - S = SIGN
  - F = FLOOR
  - GFI = GROUND FAULT INTERUPTER
- COUNTER OUTLET
- QUADRUPLEX OUTLET
- HALF SWITCHED OUTLETS
- OUTLETS ON EMERGENCY SYSTEMS
- SD — DUCT SMOKE DETECTOR
- J — JUCTION BOX
- S — MOTOR / DISCONNECT
- PANELBOARD
- TRANSFORMER / SWITCHBOARD AS NOTED

DRAFTING NOTATIONS

- N## — KEY NOTE, SEE SCHEDULE
- N## — EQUIPMENT TAG, SEE SCHEDULE
- A / E-2 — REFERENCE TO A DETAIL VIEW "A" ON SHEET E-2
- NEW ELECTRICAL
- EXISTING ELECTRICAL OR DEMOLISHED WHERE NOTED
- (e) (E) — EXISTING DEVICE, TO REMAIN IN OPERATION
- (r) (R) — REMOVE DEVICE, KEEP REMAINDER OF CIRCUIT IN OPERATION
- (RR) — REMOVE, RELOCATE AND RECONNECT DEVICE ON EXISTING CIRCUIT, EXTEND CIRCUIT

ONE LINE DIAGRAM

- BUS / SWITCHBOARD
- PANEL
- GROUND
- M — METER
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- DRY TYPE TRANSFORMER
- P — MOTOR
- CR1 — RELAY
  - CR# = CONTROL RELAY
  - TDR = TIME DELAY RELAY
  - M = MOTOR STARTER
  - CONTACTOR RELAY
  - ETM = ELAPSE TIME METER
- CONTACT (OPEN)
- CONTACT (CLOSED)
- VFD — VARIABLE FREQ. DRIVE
- MOTOR OVERLOAD HEATER
- R — INDICATOR LIGHT (R) RED, (W) WHITE
- ANTENNA
- 50/3 — CIRCUIT BREAKER 50 AMP RATED, 3 POLE
- GFI = GROUND FAULT INTERRUPTER
  AFCI = ARC FAULT CIRCUIT INTERRUPTER
- DISCONNECT, RATED TO POWER SOURCE VOLTAGE AND AMPERAGE RATING FOR FUSE OR AS NOTED
- 60 — FUSE, SIZE = 60 AMPS
- AUTOMATIC TRANSFER SWITCH
- G / 50/3 — ENGINE DRIVEN GENERATOR RATING AS NOTED AGAINST THE UNIT.
- DRAW OUT DEVICE
- 52 — ANSI RELAY

REV. NO.	DESCRIPTION	DATE	BY	APRVD
	PLAN ISSUE SET	3.17.21	RCS	RCS

REGISTERED PROFESSIONAL ENGINEER RICHARD C. SMITH No. E14303 Exp. 6-30-21 ELECTRICAL STATE OF CALIFORNIA

HCS Engineering inc. 50 years
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

FS2 COMMUNICATION CENTER UPS REPLACEMENT

ELECTRICAL INFORMATION

110 W SONORA STREET
STOCKTON, CA 95203

SCALE: AS SHOWN
DRWN: RCS
ENG: RCS
CHK: RCS
06/25/17

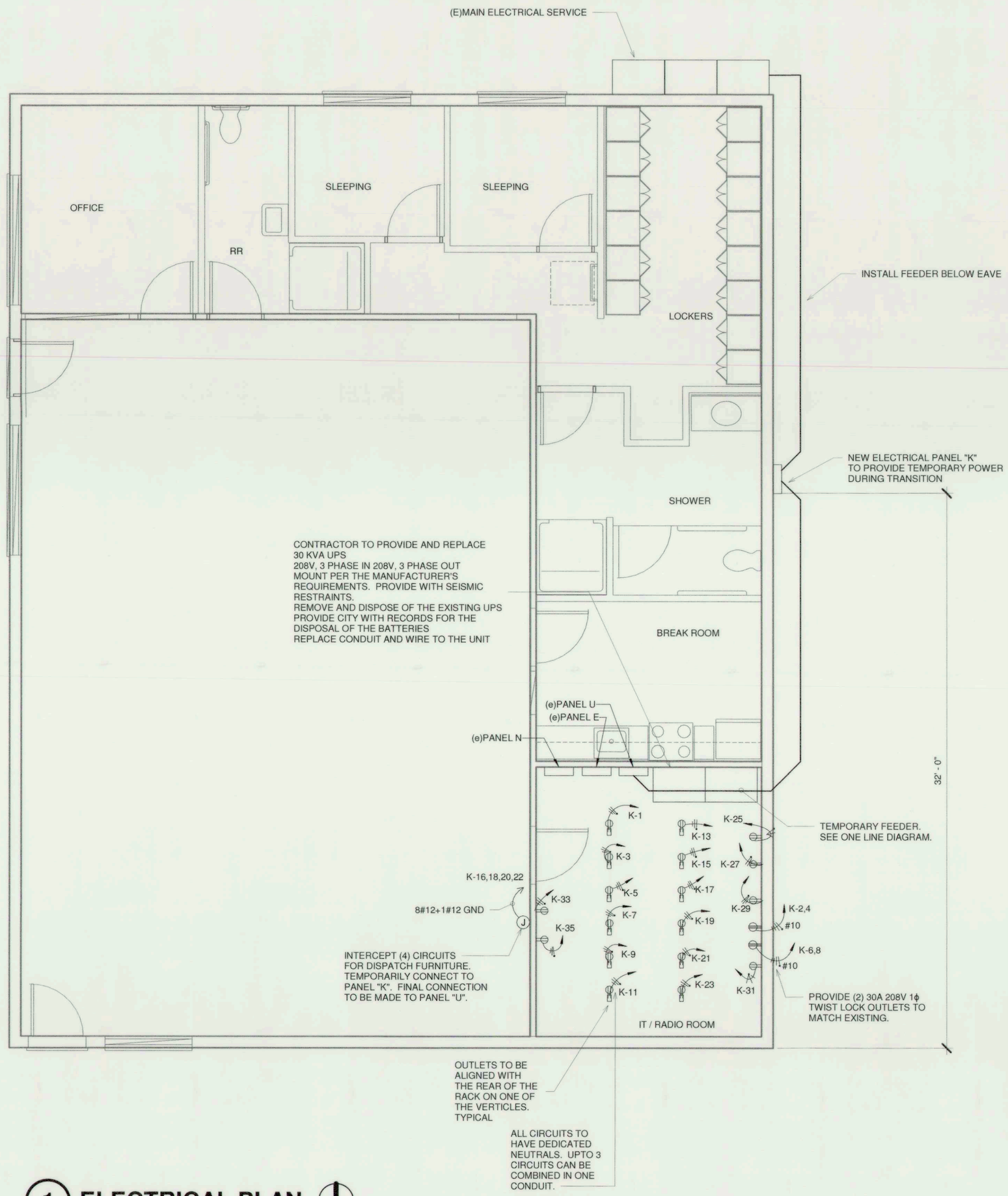
Approver
11/31/21

SHEET NO. 2
E1
OF 4 SHEETS
PROJECT NO. F022001

path://john/17/4

K:\2020\FS2\FS 2 UPS REPLACEMENT rev 4.rvt

5419.1C



1 ELECTRICAL PLAN

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

PHASE 1:
1. THE CONTRACTOR IS TO PROVIDE NEW OUTLETS ON CEILING, POWERED BY NEW PANEL "K" WHICH WILL BE ON GENERATOR POWER.

2. MAKE TEMPORARY CONNECTION TO 4 DISPATCH DESKS AT JUNCTION BOX.

PHASE 2:
3. THE CITY WILL TRANSFER SERVER EQUIPMENT FROM THE PANEL "U" AND PANEL "E" TO THE NEW OUTLETS FED BY PANEL "K".

4. INSTALL TEMPORARY FEEDER (4#2+1#8 GND) TO FEED PANEL "U" FROM PANEL "K".

PHASE 3:
5. THE CONTRACTOR WILL REPLACE THE UPS, PANEL "E", AND PANEL "U".

6. RECONNECT PANEL "U" DIRECTLY FROM UPS AND DEMOLISH TEMPORARY FEEDER.

PHASE 4:
7. THE CITY WILL TRANSFER LOADS BACK TO PANEL "E" AND PANEL "U".

8. RECONNECT DISPATCH FURNITURE TO PANEL "U".

ANTICIPATED WORK FLOW

REGISTERED PROFESSIONAL ENGINEER RICHARD C. SMITH No. E14303 Exp. 6-30-21 ELECTRICAL STATE OF CALIFORNIA

HCS Engineering inc.
50 years
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

FS2 COMMUNICATION CENTER UPS REPLACEMENT

ELECTRICAL PLAN

110 W SONORA STREET
STOCKTON, CA 95203

REV. NO.	DESCRIPTION	DATE	BY	APRVD
	PLAN ISSUE SET	3.17.21	RCS	RCS

SCALE: AS SHOWN
DRWN: RCS
ENG: RCS
CHK: RCS
06/25/17

Approver 11/3/21

SHEET NO. 3
E2
OF 4 SHEETS
PROJECT NO. F022001

path://john/17/4

K:\2020\FS2\FS 2 UPS REPLACEMENT rev 4.rvt

5419.2C

(e)PANEL E

Location:
Supply From:
Mounting: SURFACE
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Mains Type: MLO
Mains Rating: 125 A
MCB Rating: 125 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
E-1	EXIST LOAD	20 A	1	0 VA	0 VA					1	20 A	EXIST LOAD	E-2
E-3	EXIST LOAD	20 A	1			0 VA	0 VA			1	20 A	EXIST LOAD	E-4
E-5	EXIST LOAD	20 A	1					0 VA	0 VA	1	20 A	EXIST LOAD	E-6
E-7	EXIST LOAD	20 A	1	0 VA	0 VA					1	20 A	EXIST LOAD	E-8
E-9	EXIST LOAD	20 A	1			0 VA	0 VA			1	20 A	EXIST LOAD	E-10
E-11	EXIST LOAD	20 A	1					0 VA	0 VA	1	20 A	EXIST LOAD	E-12
E-13	EXISTING AC UNIT	70 A	3	0 VA	0 VA					3	80 A	EXIST AC	E-14
E-15	--	--	--			0 VA	0 VA			--	--	--	E-16
E-17	--	--	--					0 VA	0 VA	--	--	--	E-18
E-19	EXIST LOAD	30 A	2	0 VA	0 VA					3	100 A	Spare	E-20
E-21	--	--	--			0 VA	0 VA			--	--	--	E-22
E-23	EXIST LOAD	20 A	1					0 VA	0 VA	--	--	--	E-24
E-25	Spare	20 A	1	0 VA									E-26
E-27	Spare	20 A	1			0 VA							E-28
E-29	Spare	20 A	1					0 VA					E-30
E-31	Spare	20 A	1	0 VA									E-32
E-33	Spare	20 A	1			0 VA							E-34
E-35	Spare	20 A	1					0 VA					E-36
E-37	Spare	20 A	1	0 VA									E-38
E-39	Spare	20 A	1			0 VA							E-40
E-41	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	E-42
			Total Load:	0 VA		0 VA		0 VA					
			Total Amps:	0 A		0 A		0 A					

Legend:

(e)PANEL U

Location:
Supply From:
Mounting: SURFACE
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 18,000
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 100 A

Notes:
EMERGENCY + UPS POWER

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
U-1	EXISTING LOAD	20 A	1	0 VA	0 VA					1	20 A	EXISTING LOAD	U-2
U-3	EXISTING LOAD	20 A	1			0 VA	0 VA			1	20 A	EXISTING LOAD	U-4
U-5	EXISTING LOAD	20 A	1					0 VA	0 VA	1	20 A	EXISTING LOAD	U-6
U-7	EXISTING LOAD	20 A	1	0 VA	0 VA					1	20 A	EXISTING LOAD	U-8
U-9	EXISTING LOAD	20 A	1			0 VA	0 VA			1	20 A	EXISTING LOAD	U-10
U-11	EXISTING LOAD	20 A	1					0 VA	0 VA	1	20 A	EXISTING LOAD	U-12
U-13	Spare	20 A	1	0 VA									U-14
U-15	Spare	20 A	1			0 VA							U-16
U-17	Spare	20 A	1					0 VA					U-18
U-19	Spare	20 A	1	0 VA									U-20
U-21	Spare	20 A	1			0 VA							U-22
U-23	Spare	20 A	1					0 VA					U-24
U-25	Spare	20 A	1	0 VA									U-26
U-27	Spare	20 A	1			0 VA							U-28
U-29	Spare	20 A	1					0 VA					U-30
U-31	Spare	20 A	1	0 VA									U-32
U-33													U-34
U-35													U-36
U-37													U-38
U-39													U-40
U-41													U-42
			Total Load:	0 VA		0 VA		0 VA					
			Total Amps:	0 A		0 A		0 A					

Legend:

RELABEL CIRCUIT BREAKERS TO MATCH EXISTING

PANEL K

Location:
Supply From:
Mounting: SURFACE
Enclosure: NEMA 3R

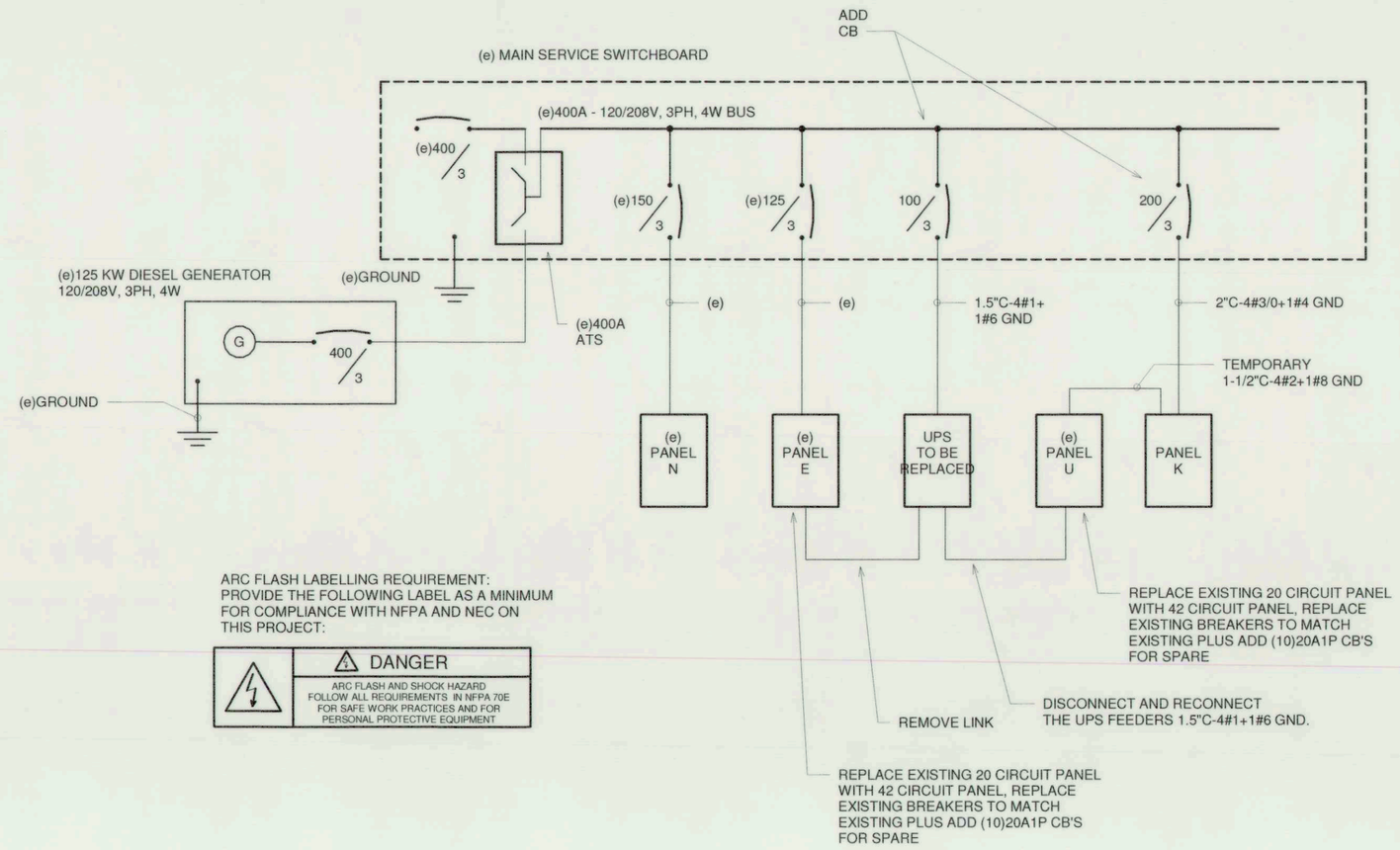
Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MLO
Mains Rating: 200 A
MCB Rating: 200 A

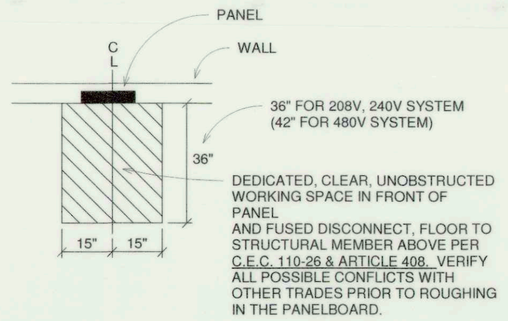
Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
K-1	CEILING OUTLETS	20 A	1	600 VA	1500 VA					2	30 A	TWIST LOCK 30A OUTLET	K-2
K-3	CEILING OUTLETS	20 A	1			600 VA	0 VA			--	--	--	K-4
K-5	CEILING OUTLETS	20 A	1					600 VA	1500 VA	2	30 A	TWIST LOCK 30A OUTLET	K-6
K-7	CEILING OUTLETS	20 A	1	600 VA	0 VA					--	--	--	K-8
K-9	CEILING OUTLETS	20 A	1			600 VA	1500 VA			3	100 A	TEMPORARY FEED TO PANEL "U"	K-10
K-11	CEILING OUTLETS	20 A	1					600 VA	1500 VA	--	--	--	K-12
K-13	CEILING OUTLETS	20 A	1	600 VA	1500 VA					--	--	--	K-14
K-15	CEILING OUTLETS	20 A	1			600 VA	600 VA			1	20 A	WORKSTATION	K-16
K-17	CEILING OUTLETS	20 A	1					600 VA	600 VA	1	20 A	WORKSTATION	K-18
K-19	CEILING OUTLETS	20 A	1	600 VA	600 VA					1	20 A	WORKSTATION	K-20
K-21	CEILING OUTLETS	20 A	1			600 VA	600 VA			1	20 A	WORKSTATION	K-22
K-23	CEILING OUTLETS	20 A	1					600 VA	0 VA	--	--	Space	K-24
K-25	CEILING OUTLETS	20 A	1	600 VA	0 VA					--	--	Space	K-26
K-27	CEILING OUTLETS	20 A	1			600 VA	0 VA			--	--	Space	K-28
K-29	CEILING OUTLETS	20 A	1					600 VA	0 VA	--	--	Space	K-30
K-31	CEILING OUTLETS	20 A	1	600 VA	0 VA					--	--	Space	K-32
K-33	CEILING OUTLETS	20 A	1			600 VA	0 VA			--	--	Space	K-34
K-35	CEILING OUTLETS	20 A	1					600 VA	0 VA	--	--	Space	K-36
K-37	Spare	20 A	1	0 VA	0 VA					--	--	Space	K-38
K-39	Spare	20 A	1			0 VA	0 VA			--	--	Space	K-40
K-41	Spare	20 A	1					0 VA	0 VA	--	--	Space	K-42
			Total Load:	7200 VA		6300 VA		7200 VA					
			Total Amps:	61 A		53 A		61 A					

Legend:



1 ONE LINE DIAGRAM
SCALE: NTS



2 PANEL CLEARANCE
SCALE: NTS

LABELS FOR FEEDERS ORIGINATING WITHIN DISTRIBUTION PANEL/SWITCHBOARDS:

NAME OF PANEL/EQUIPMENT SERVED
FEEDER WIRE SIZE

LABELS AT EQUIPMENT DISCONNECTS:

EQUIPMENT FED
FED FROM PANEL
FEEDER WIRE SIZE
VOLTS / AMPS / PHASES

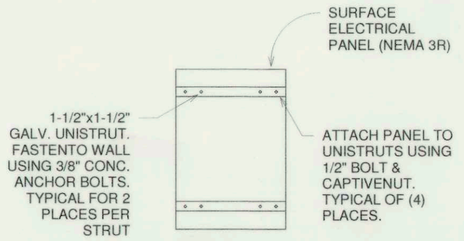
LABELS FOR SWITCHBOARD/DISTRIBUTION PANELS & BRANCH CIRCUIT PANELS:

PANEL NAME
FEED FROM PANEL
FEEDER WIRE SIZE
VOLTS / AMPS / PHASES

NOTES:

1. NAMEPLATES SHALL BE CONSTRUCTED OF ENGRAVED BAKELITE - BLACK BACKGROUND WITH WHITE LETTERS.
2. MINIMUM SIZE TO BE 1"x3".
3. RIVET NAMEPLATES TO ENCLOSURE.
4. FILL-IN UNDERLINED NAMES AND VALUES FOR EACH NAMEPLATE TO INSTALLED.
5. ALL DISCONNECTS, PANELS, AND CIRCUIT BREAKERS INSTALLED UNDER THIS PROJECT SHALL HAVE A NAMEPLATE AS SHOWN HERE.
6. NAMEPLATES FOR EMERGENCY POWER FED EQUIPMENT SHALL HAVE RED BACKGROUND WITH WHITE LETTERS.

3 PANEL LABELS
SCALE: NTS



4 SURFACE PANEL
SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER RICHARD C. SMITH No. E14303 Exp. 6-30-21 ELECTRICAL STATE OF CALIFORNIA

HCS Engineering inc.
50 years
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

REV. NO.	DESCRIPTION	DATE	BY	APRVD
	PLAN ISSUE SET	3.17.21	RCS	RCS

FS2 COMMUNICATION CENTER UPS REPLACEMENT

ELECTRICAL DETAILS & PANEL SCHEDULES

110 W SONORA STREET
STOCKTON, CA 95203

SCALE: AS SHOWN
DRWN: RCS
ENG: RCS
CHK: RCS
08/03/20

Approver

SHEET NO. 4
E3
OF 4 SHEETS
PROJECT NO. F022001