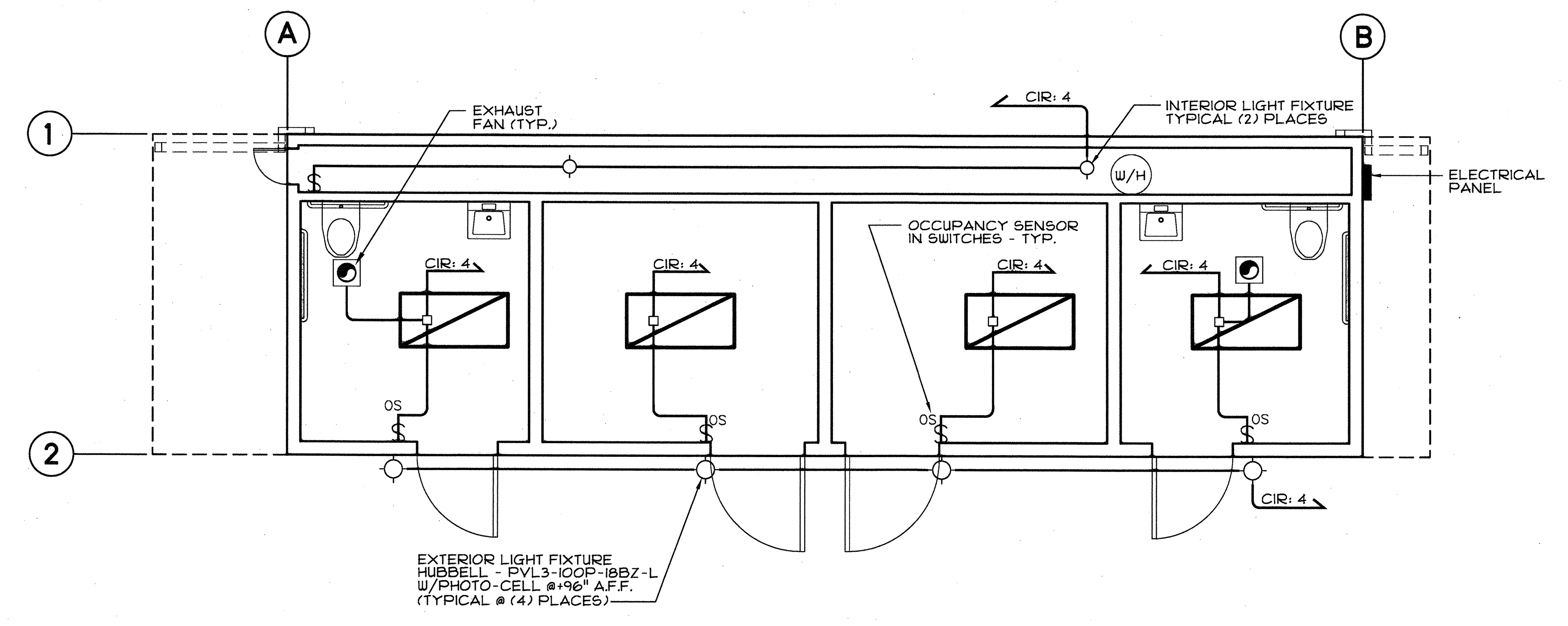
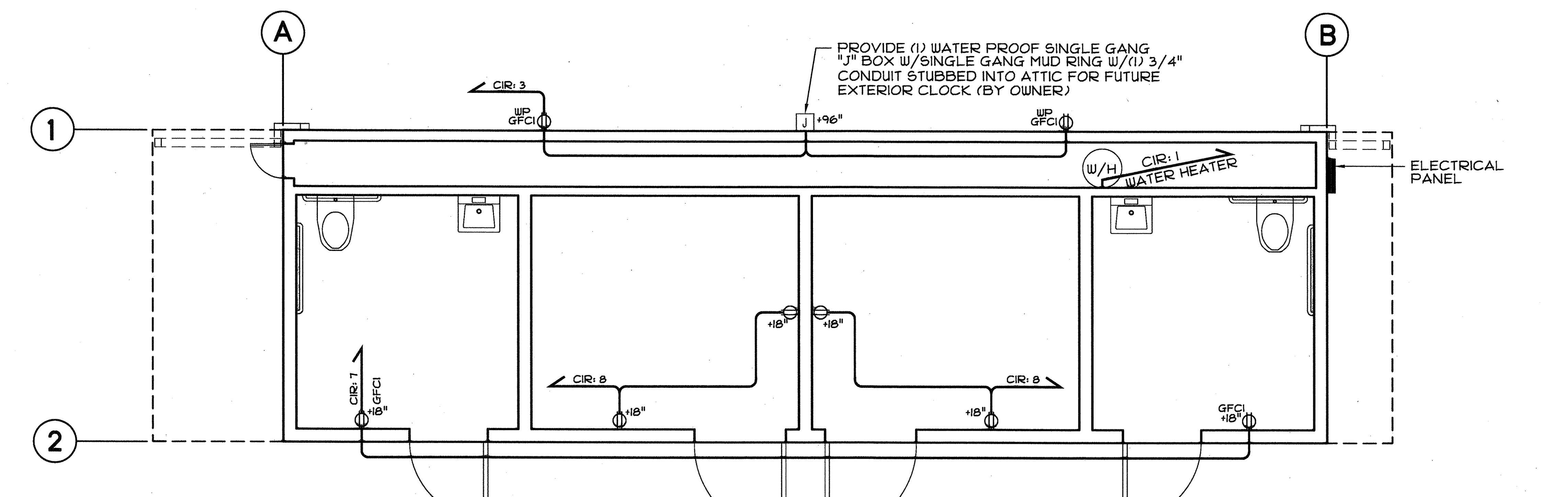


1 ELECTRICAL LIGHTING PLAN

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



NOTES:
1. SEE ARCHITECTS DRAWINGS FOR FIRE ALARM DEVICES DIMENSIONS AND NOTES NOT SHOWN
2. ENVIROPLEX TO PROVIDE ROUGH-IN FOR FIRE ALARM DEVICES. J-BOXES WITH CONDUIT STUBS TO ATTIC

11 ELECTRICAL POWER & SIGNAL PLAN

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

13

PANEL SCHEDULE: "A"
MOUNTING: SURFACE NEMA-1 VOLTS: 120/240
PANEL: 125A PHASE: 1ϕ
MAIN BREAKER: 125A WIRE: 3W

DESCRIPTION	LOAD	BRKR		MAIN 125 A B		BRKR	LOAD	DESCRIPTION
10 GAL. ELEC. WATERHEATER	1350	20/1	1		2	20/1	600	LIGHTING-A
OUTLETS	540	20/1	3		4	20/1	400	EXTERIOR LIGHTING
			5		6			
OUTLETS	360	20/1	7		8	20/1	540	OUTLETS
			9		10			
FIRE ALARM	180	20/1	11		12			

LEG A: 1950 W
LEG B: 2020 W
TOTAL: 3970 W AMPS = 17

7 ELECTRICAL PANEL SCHEDULE

1. FIRE ALARM: FURNISHED BY OWNER AND SHALL CONFORM TO THE CALIFORNIA BUILDING CODE SECTION 907.2.3 AND CALIFORNIA ELECTRICAL CODE ARTICLE 760.
2. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY D.S.A.
3. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE PROJECT INSPECTOR.
4. ALARMS/EMERGENCY WARNING SYSTEMS/ACCESSIBILITY. IF EMERGENCY WARNING SYSTEMS ARE PROVIDED, THEY SHALL INCLUDE BOTH AUDIBLE ALARMS AND VISUAL ALARMS COMPLYING WITH NFPA 72 AND CHAPTER 9, SECTIONS 907.9.1 AND 907.9.2

2 FIRE PROTECTION

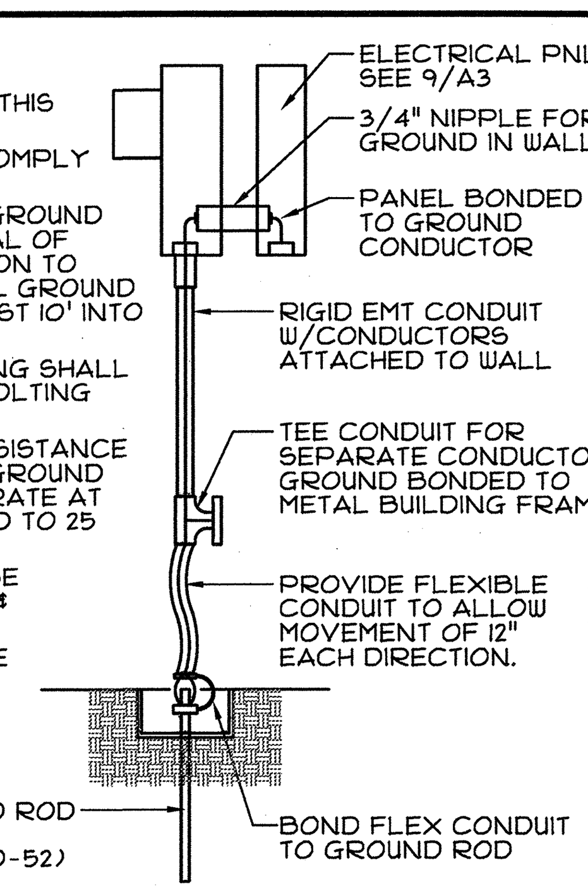
- DUPLEX RECEPTACLE @+15" MIN. A.F.F. (TO BOTTOM OF BOX) (UNLESS OTHERWISE NOTED)
- PROGRAMMABLE DIGITAL THERMOSTAT FOR HVAC UNIT @+48" MAX. A.F.F. (TO TOP OF OPERABLE PART)
- J — JUNCTION BOX (SIZE AND INSTALLATION HEIGHT AS NOTED)
- H — WATER PROOF BELL BOX UNDER EAVE @+9'-4" (U.O.N.) FOR FUTURE FIRE ALARM AUDIBLE WARNING DEVICE SEE NOTE NO. 1 OF FIRE PROTECTION
- P — JUNCTION BOX @+48" A.F.F. (TO TOP OF BOX) FOR FUTURE FIRE ALARM PULL STATION - SEE NOTE NO. 1 OF FIRE PROTECTION ABOVE
- V — JUNCTION BOX @+90" (U.O.N.) FOR FUTURE FIRE ALARM HORN/STROBE DEVICE - SEE NOTE NO. 1 OF FIRE PROTECTION ABOVE
- I — JUNCTION BOX @+48" A.F.F. (TO TOP OF BOX) (U.O.N.) FOR FUTURE INTERCOM
- EXTERIOR INCANDESCENT LIGHT FIXTURE @ +96" A.F.F. (U.O.N.)
- S — LIGHT SWITCH (@+48" MAX. A.F.F TO TOP OF BOX).
- S^{OS} — LIGHT SWITCH WITH OCCUPANCY SENSOR (@+48" MAX A.F.F. TO TOP OF BOX).
- OS — CEILING MOUNT OCCUPANCY SENSOR
- HT — OPTIONAL JUNCTION BOX IN ATTIC FOR FUTURE HEAT DETECTOR (DEVICES AND INTERCONNECTING CONDUITS BY OTHERS @ SITE)
- S — OPTIONAL JUNCTION BOX IN ATTIC FOR FUTURE SMOKE DETECTOR (DEVICES AND INTERCONNECTING CONDUITS BY OTHERS @ SITE)

4 ELECTRICAL LEGEND

1. CERTIFIED LUMINARIES/BALLASTS.
2. INDEPENDENT CONTROL WITHIN ENCLOSED AREAS.
3. MANUAL SWITCHING READILY ACCESSIBLE.
4. REDUCTION OF LIGHTING LOAD TO AT LEAST 50% VIA (2) SWITCHES OR (1) MULTI-LEVEL SWITCH.
5. SEPARATE SWITCHING OF DAYLITE AREAS.
6. TANDEM WIRING OF (4) LAMP LUMINARIES.

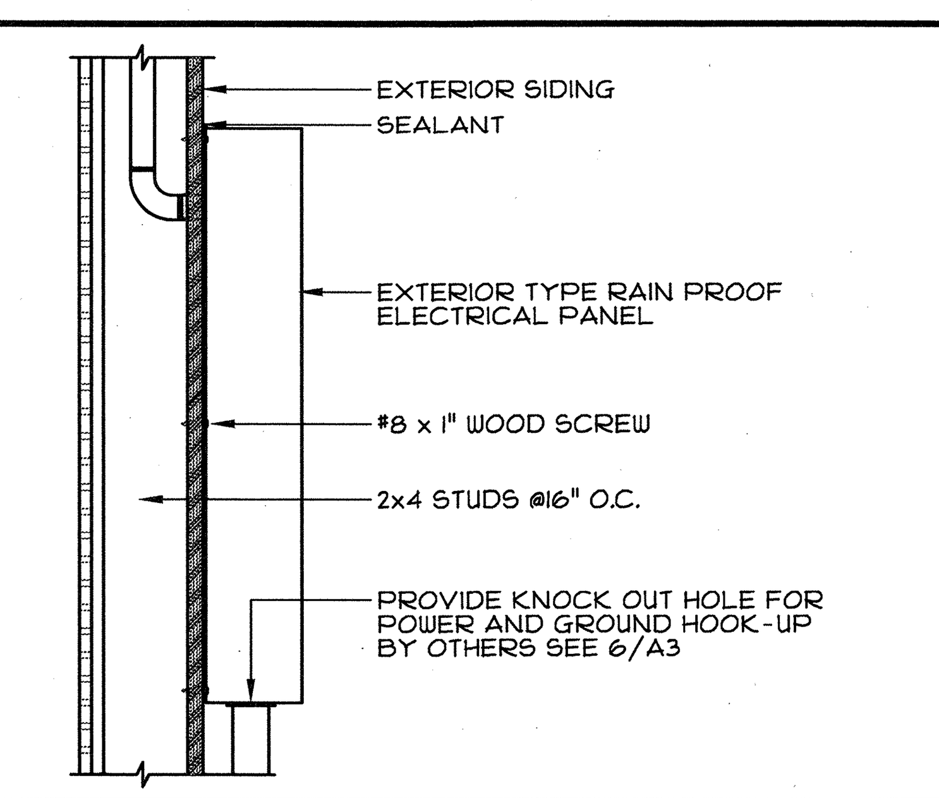
5 ELECTRICAL ENERGY COMPLIANCE

NOTES:
1. METER AND GROUND ARE NOT PART OF THIS CONTRACT TO BE PROVIDED BY OTHERS
2. SIZE OF GROUND CONDUCTOR SHALL COMPLY W/CEC TABLE 250-122
3. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL AND TO METAL OF BUILDING FRAME (CEC. 250-52) IN ADDITION TO THE DETAIL SHOWN BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10' INTO THE SOIL IF AVAILABLE (C.E.C. 250-52)
4. ALL MODULES OF METAL FRAME BUILDING SHALL BE ELECTRICALLY BONDED TOGETHER, BOLTING ONLY IS NOT ACCEPTABLE BONDING.
5. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS W/ CONDUCTORS AS SHOWN, SEPARATE AT LEAST 6'0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS. (C.E.C. 250-52)
6. ELECTRICAL GROUNDING TEST SHALL BE WITNESSED BY THE PROJECT INSPECTOR & RESULTS SENT TO D.S.A..
7. GROUND ROD GROUNDING CLAMP TO BE BUSHING RATED FOR 3 CONNECTIONS



NOTE: GROUND TO BE PROVIDED BY OTHERS

8 ELECTRICAL GROUND



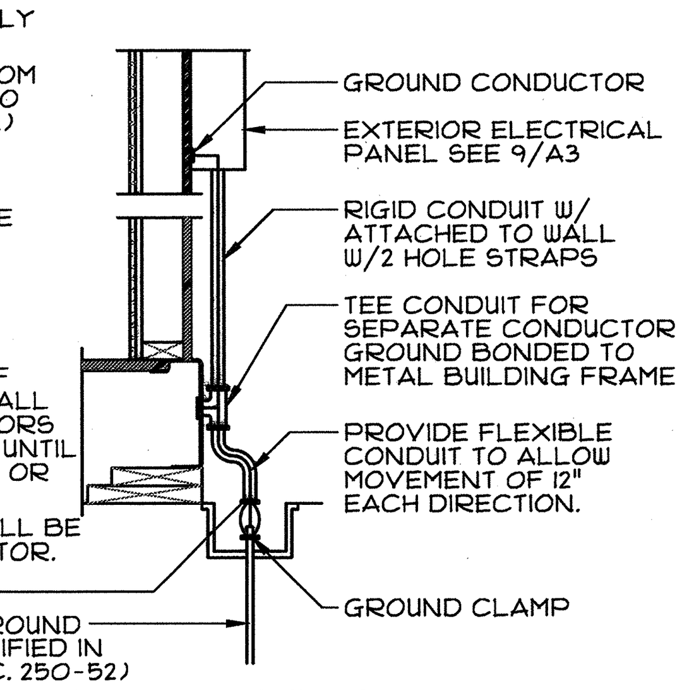
10 ELECTRICAL PANEL INSTALLATION

SCALE: 1"=1'-0"

1. WALL CLOCK (BY OWNERS): PROVIDE SINGLE CLOCK RECEPTACLE 115 VAC (OR EQUAL).
2. ELECTRICAL PANEL: FLUSH MOUNTED W/ HINGED DOORS AND INDEXED CARD HOLDERS CIRCUIT BREAKER(S) WILL HAVE AN APPROPRIATE UL. LABEL LISTING.
3. RECEPTACLES: "LEVITON", "HUBBEL" (OR EQUAL)
4. LIGHT SWITCHES: "LEVITON", "HUBBEL" (OR EQUAL)
5. LIGHTING FIXTURE: 2' x 4' FLUORESCENT LAY-IN TYPE FIXTURES, T-8 W/ REDUCED OUTPUT ELECTRONIC BALLASTS, (4) LAMPS PER FIXTURE MAXIMUM INPUT 128 WATTS. "COOPER", "LITHONIA" (OR EQUAL).
6. ELECTRIC METALLIC TUBING: COUPLINGS AND FLEX CONDUIT GALVANIZED OR SHERARDIZED.
7. CONDUCTORS: COPPER, INSULATED FOR 600 VOLTS, TYPE THHN FOR SIZES #12 TO #6 TYPE THW FOR LARGER SIZES. MINIMUM SIZE #12. LIGHTING & OUTLETS USE MINIMUM SIZE #12, SIZE HVAC WIRING PER LOAD.
8. SEE SHEET A2 FOR HVAC & THERMOSTAT SPECIFICATION.
9. SUPPLEMENTAL ELECTRICAL POWER SYSTEM (OPTIONAL): "UNI-SOLAR" PHOTOVOLTAIC LAMINATE (PVL) SOLAR ELECTRIC ROOF PANELS. FACTORY OR FIELD INSTALLED IN 18'-0" LONG x 15" WIDE x 0.12" THICK FLEXIBLE SHEETS (WT. = 0.75 P.S.F.). ADHESIVE BONDED TO GALV. STANDING SEAM METAL ROOF PANS. SOLAR ELECTRIC SYSTEM SHALL BE INSTALLED WITH ALL NECESSARY COMPONENTS AND EQUIPMENT TO GENERATE SUPPLEMENTAL ELECTRICAL POWER (FLEXIBLE SOLAR PANELS, WIRING, CONDUIT/WIRE WAYS, DISCONNECTS, INVERTER, AND OPTIONAL BATTERY BACKUP, ETC.)
10. ILLUMINATED EXIT SIGNS: IF REQUIRED BY CODE, SHALL BE PROVIDED IN COMPLIANCE W/ C.B.C. 1011 & 1006.
11. MEANS OF EGRESS ILLUMINATION: WHERE (2) OR MORE EXITS ARE REQUIRED, SUCH EXITS SHALL HAVE INTERIOR AND EXTERIOR LANDINGS ILLUMINATED BY FIXTURES CAPABLE OF AUTOMATIC EMERGENCY POWER OF NOT LESS THAN 90 MINUTES. (INCLUDES AISLES, UNENCLOSED STAIRWAYS, CORRIDORS, EXTERIOR EGRESS COMPONENTS AT OTHER THAN LEVEL OF DISCHARGE, LABS, SHOPS, AND WINDOWLESS AREAS WITH STUDENT OCCUPANCY).
12. PROVIDE OCCUPANCY SENSORS OR AUTOMATIC TIMER DEVICE WITH MANUAL OVERRIDE.

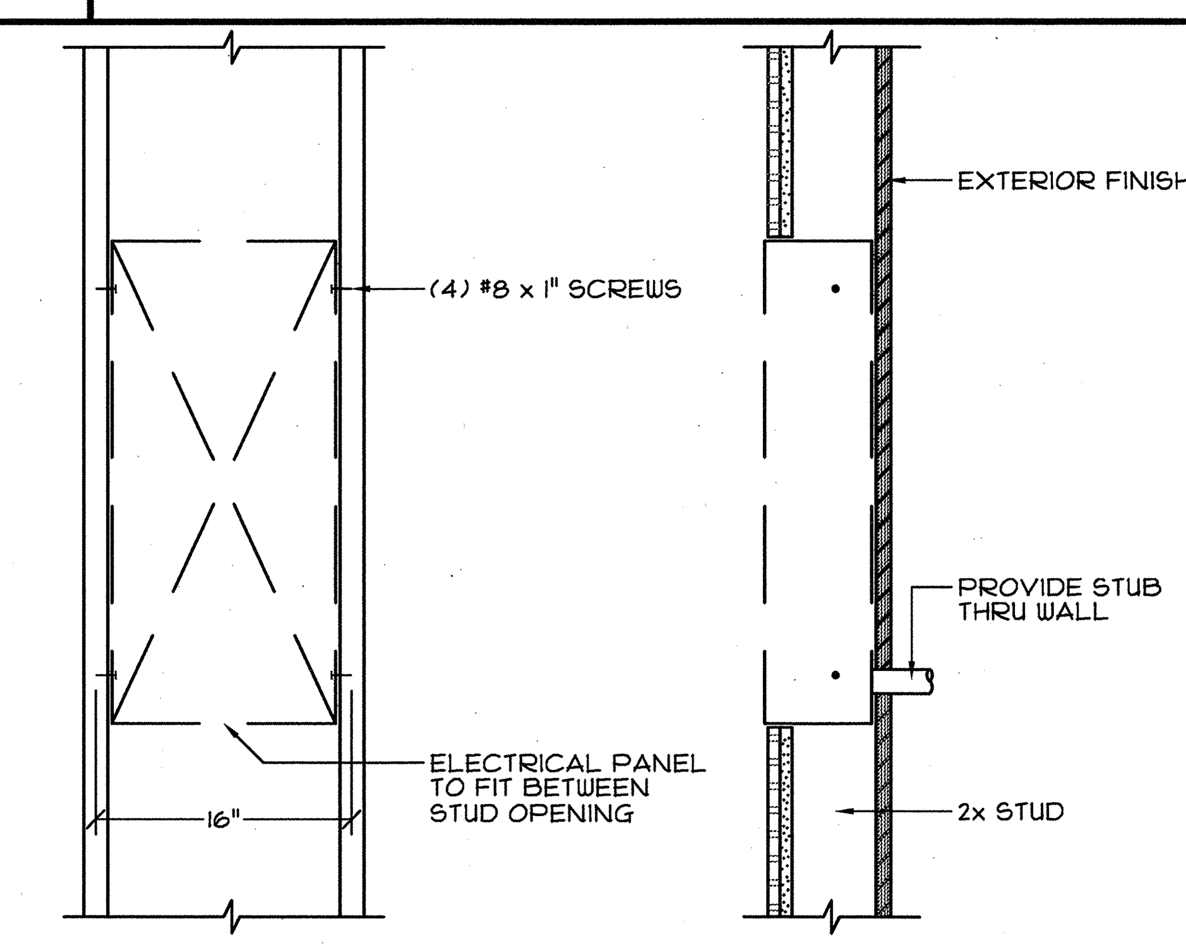
3 ELECTRICAL SPECIFICATIONS

NOTES:
1. SIZE OF CONDUCTORS SHALL COMPLY W/ CEC. TABLE 250
2. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELEC. PANEL AND TO METAL BUILDING FRAME (CEC. 250-52) IN ADDITION TO THE DETAIL SHOWN BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10' INTO THE SOIL IF AVAILABLE (CEC. 250-52)
3. ALL MODULES OF METAL FRAME BUILDING SHALL BE ELECTRICALLY BONDED TOGETHER (BOLTING ONLY IS NOT ACCEPTABLE BONDING.
4. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDTN'L GROUND RODS W/CONDUCTORS AS SHOWN, SEPARATE AT LEAST 6'0" UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS (C.E.C. 250-53).
5. ELECTRICAL GROUNDING TEST SHALL BE WITNESSED BY THE PROJECT INSPECTOR.



NOTE: GROUND TO BE PROVIDED BY OTHERS

6 ELECTRICAL GROUND



9 ELECTRICAL PANEL INSTALLATION

SCALE: 1"=1'-0"

APPROVALS

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REGISTERED PROFESSIONAL ENGINEER ARTHUR ERNEST ROSS No. S2030 EXP. 9/30/13 STRUCTURAL STATE OF CALIFORNIA

THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

ENVIROPLEX, INC.
4777 E. CARPENTER ROAD STOCKTON, CA. 95215, (209) 466-8000

(1) 12x40 RELOCATABLE RESTROOM BUILDINGS FOR LA CANADA COLLEGE SAN MATEO COMMUNITY COLLEGE DISTRICT

ELECTRICAL POWER PLAN, SIGNAL PLAN, LIGHTING PLAN, DETAILS, ELECTRICAL NOTES

PRELIMINARY

REV / DATE:

JOB No.:	12-019
DRAWN BY:	JM
DATE:	07-18-12

THIS MODULAR BLDG. HAS BEEN ENGINEERED BY A REGISTERED STRUCTURAL ENGINEER AND PREVIOUSLY REVIEWED & APPROVED BY THE DIVISION OF THE STATE ARCHITECT, FIRE & LIFE SAFETY AND ACCESS COMPLIANCE SECTION

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