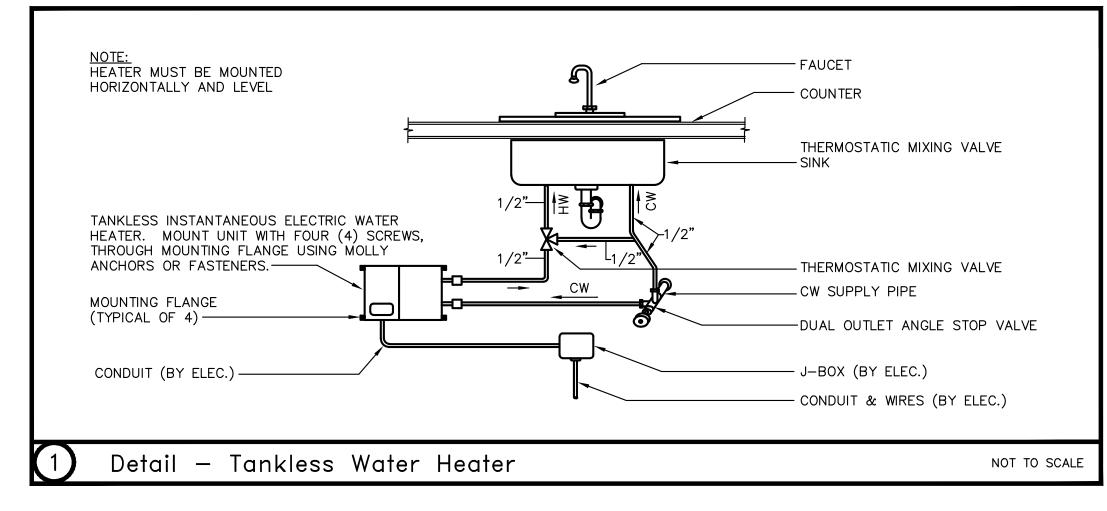
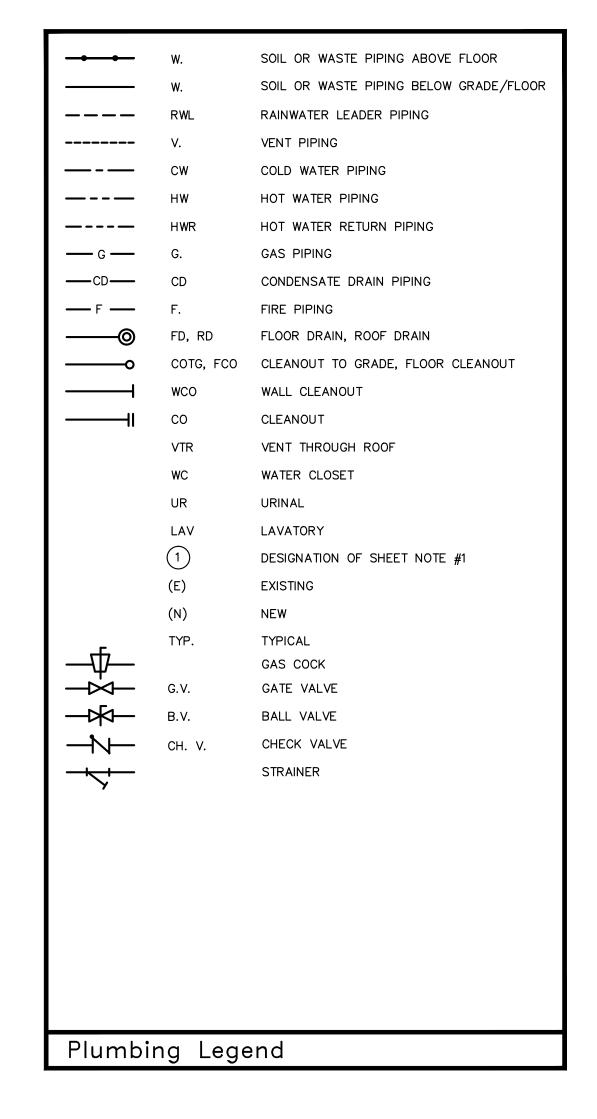
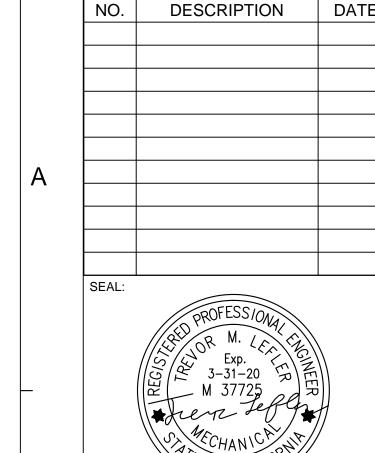


UNIT		MODEL	WATER HEATING CAPACITY			MENT	POWER		
NO.	MFGR.	NO.	GРM	TEMP. RISE	QTY.	KW (EA.)	VOLTAGE	PHASE	REMARKS
EWH-1	CHRONOMITE	M-20L/208MM	0.5	57 ° F.	1	4.16	208	1	
EWH-2	CHRONOMITE	M-20L/208MM	0.5	57 ° F.	1	4.16	208	1	
EWH-3	CHRONOMITE	M-20L/208MM	0.5	57 ° F.	1	4.16	208	1	







REVISION SCHEDULE

CONSULTANT:

LEFLER ENGINEERING, INC. 1651 Second Street San Rafael, CA 94901 (415) 456-4220 (415) 456-1248 fax

Brokaw Design

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Accessibility Improvements

Fortuna Veterans Memorial Building

County of Humboldt

1426 Main Street Fortuna, CA 95540

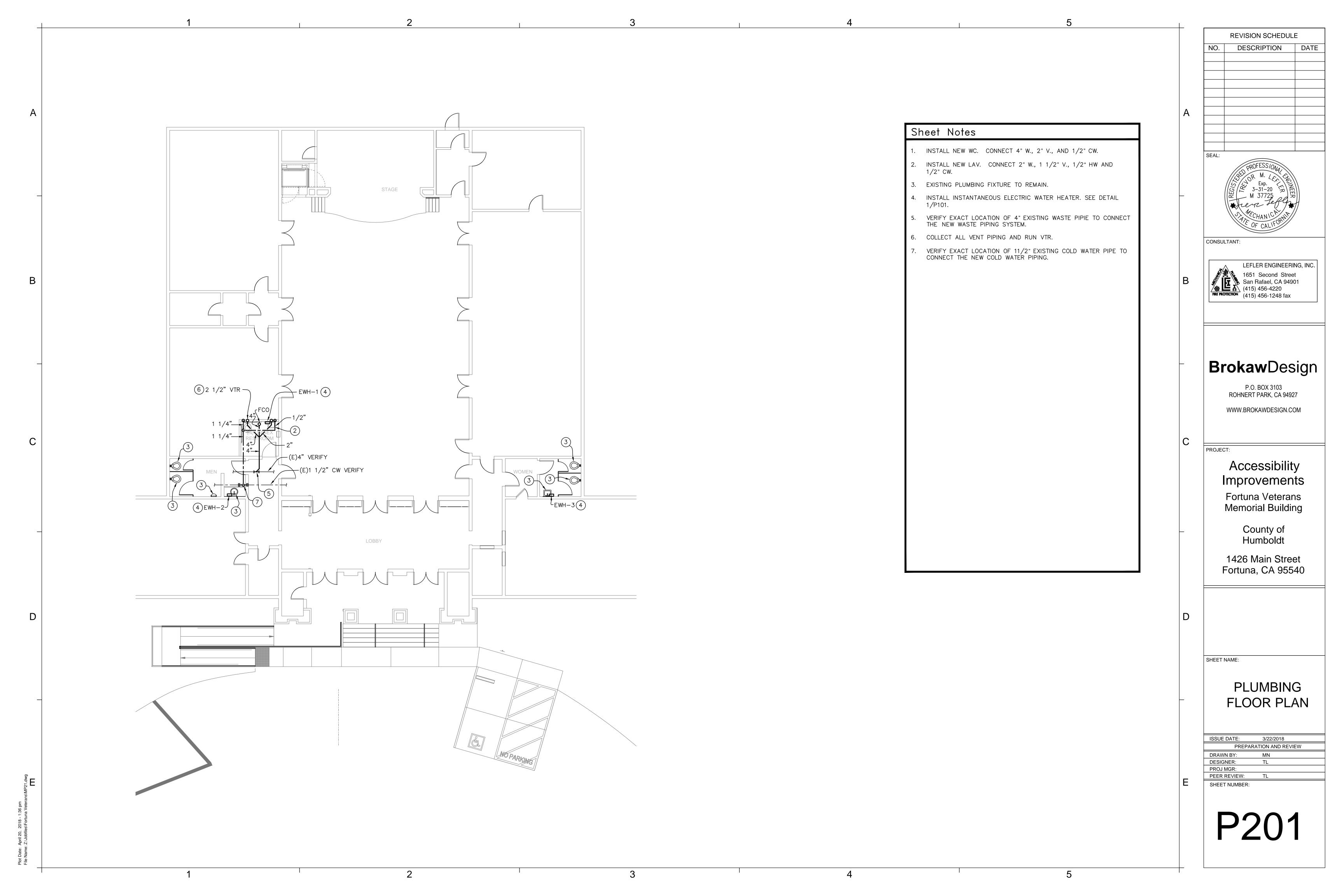
PLUMBING SCHEDULES AND LEGEND

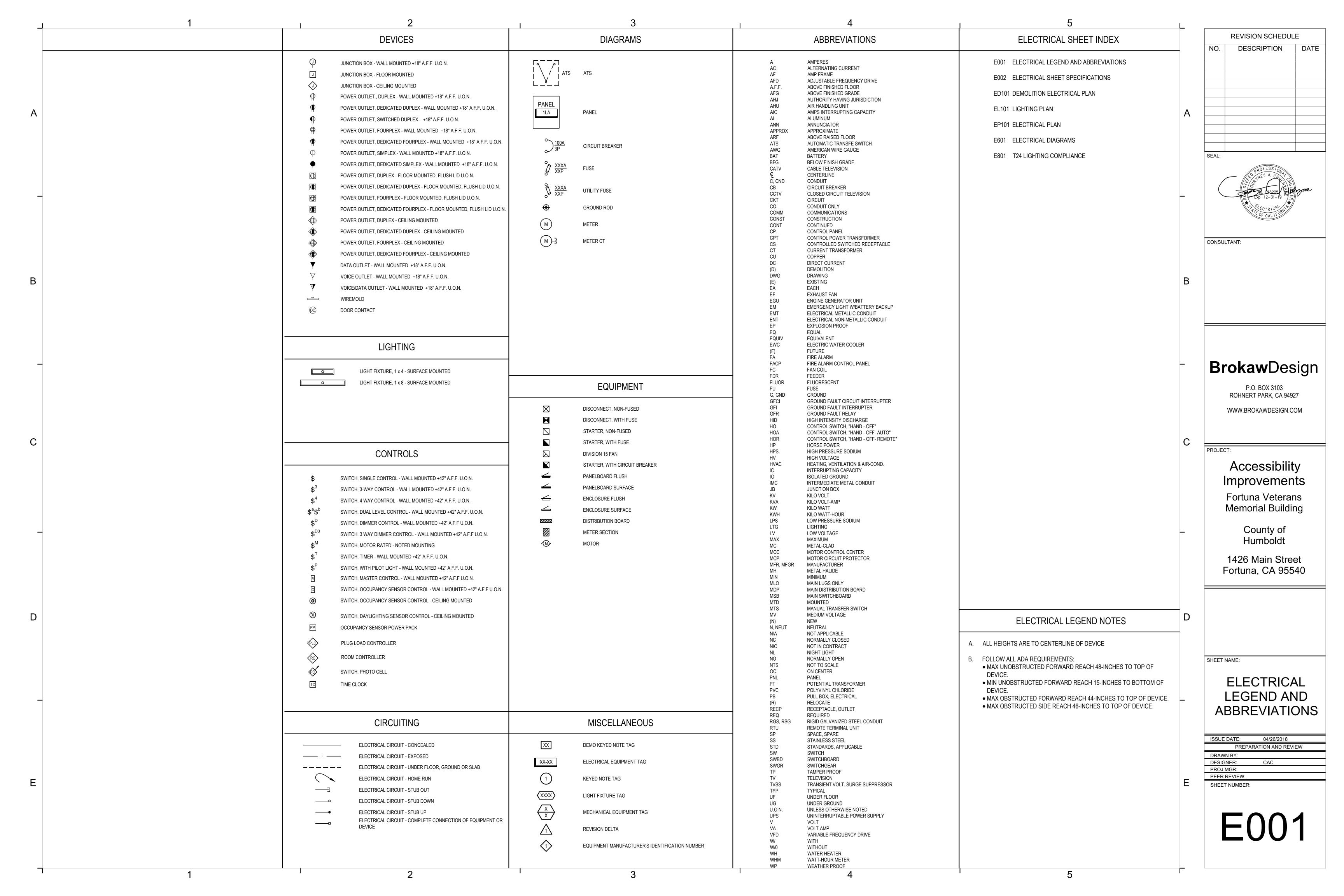
ISSUE DATE: PREPARATION AND REVIEW DESIGNER: PROJ MGR: PEER REVIEW:

SHEET NUMBER:

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- 1.07- MATERIALS
- A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

1.08 - ACCEPTABLE MANUFACTURERS

- A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be the best of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
- B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Owner's Representative. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

1.09 - DELIVERY, STORAGE AND HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
- B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner. D. This Contractor shall personally, or through an authorized representative, check all materials upon
- receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

1.10 - SCHEDULING/SEQUENCING

A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with any special handling charges, shall be borne by this Contractor

- b. Indoor Feeders from Building Switchboard to House Panel:
- Shall be Conduit with THHN or THWN Cu Conductors.
- c. House Panel Branch Circuits Shall be Conduit with THHN or THWN Cu Conductors. Minimum #12 AWG for power wiring.

Sized as shown on Single Line Diagram.

- d. Apartment Branch Circuits
- Copper Conductors MC Cable, Romex or Conduit and Wire are acceptable.
- Min #14 AWG for power wiring. See Panel schedules for wire sizes. e. Connections to devices from "through_feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
- f. Neutral conductor identified by white outer covering braid, with different tracers of "EZ"
- numbering tags used where more than one neutral conductor is contained in a single unit. g. Neatly arrange and "marlin" wired in panels and other equipment with "T and B Ty-rap" or
- approved equal plastic type strapping. h. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags.

Properties:

- a. Copper 90% conductivity. Solid copper for conductors smaller than No. 10 AWG. Stranded copper for conductors No. 10 AWG and larger. No conductors smaller than No. 12 AWG,
- b. Insulation type: #12 to #1/0 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils).
- c. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color coded as follows:
- Voltage Phasing A Phase B Phase C Phase Neutral 120/240 1p3w Red Black Blue 120\208 3p 4w Red White Black 208 3w Red Black Blue

5. Concrete pull boxes and hand holes for power, lighting, controls and telecommunications shall be pre-cast concrete boxes, sized as indicated on the drawing or per NEC requirements. Pull boxes shall be equipped with a concrete cover for non traffic rated locations OR cast-in frame, galvanized steel, adjustable, high impact traffic cover (H-20 load rated), lifting lugs, and conduit knock-outs. Knockout location and sizes shall be coordinated with the duct bank for each location. Cover shall be engraved with the words -"POWER". "LIGHTING", "CONTROLS", "COMM/DATA", "TELEPHONE" or similar as applicable.

D. Main Switchboard:

- 4. The switchboard shall be constructed of National Electrical Code (NEC) gauge steel. 5. All connections between bus bars shall be of a bolted type using Belleville washers. Clamps will not be accepted. All bus bars shall be accurately formed, and all holes shall be made in a manner which will permit bus bars and connections to be fitted into place without being forced.
- 6. The design of all current_carrying devices or parts of the switchboard shall conform to the standard specified in the related sections of Underwriters' Laboratories, Inc. (UL) No. UL_891 and National Electric Manufacturer's Association (NEMA) Standard PB_2, except as these characteristics may be modified herein.
- 7. Bus bars, connection bars and wiring on the back of the switchboard shall be arranged so that
- maximum accessibility is provided for cable connections from the front. 8. Ampere ratings for rectangular bus bars shall be in accordance with the temperature rise standard of
- National Electric Manufacturer's Association (NEMA) and the Underwriters' Laboratories, Inc. (UL). 9. The enclosure shall be chemically cleaned by parkerizing, bonderizing or phoshorizing as a unit after all welding has been completed. The enclosure shall then be painted with a rust_resisting primer
- coat of paint and shall be finished with a coat of light gray/ wall color baked enamel. 10. Each section shall be bussed for the full connected load of that section. Extend bussing to spare circuit breaker "Spaces." Drill busses for future circuit breakers, and provide breaker connector
- hardware as required. 11. Provide copper bus bars on Panels and connections with silver_plated contact surfaces. Aluminum Bus bars may be substituted in the Main Switchboard and Apartment Panels only.
- 12. The contact surfaces and studs of all devices to which bus connections are made shall also have silver plated surfaces. 13. Locate ground bus, with a cross_section equal to at least 25 percent of the capacity of the main bus rating, in the back of the switchboard and extend bus throughout the length of the switchboard

- B. Lighting Systems: 1. The interior and exterior lighting systems shall be checked for proper local controls and operation of entire installation, including the operation of the low voltage lighting control system. Power Distribution System:
- 1. Tests: Test main switchboard, distribution boards, and panelboards for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches
- 2. Test each individual circuit at each panelboard with equipment connected for proper operation. Inspect the interior of each panel.
- 3. Check verification of color coding, tagging, numbering, and splice make up. 4. Verify that all conductors associated with each circuit are in same conduit.
- 5. Demonstrate that all lights, jacks, switches, outlets, and equipment operate satisfactorily and as called for.

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DATE

Accessibility **Improvements**

Fortuna Veterans **Memorial Building**

1426 Main Street

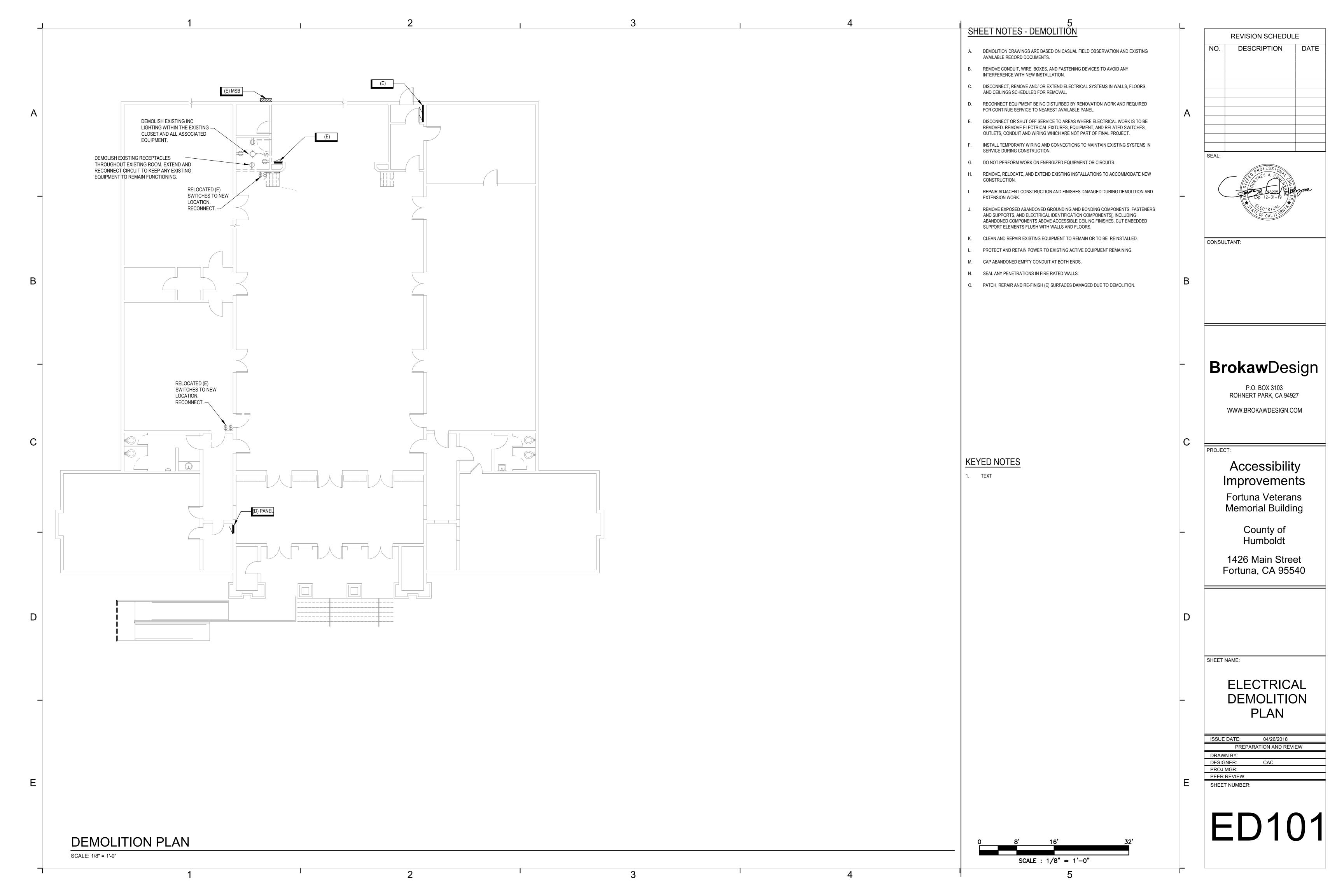
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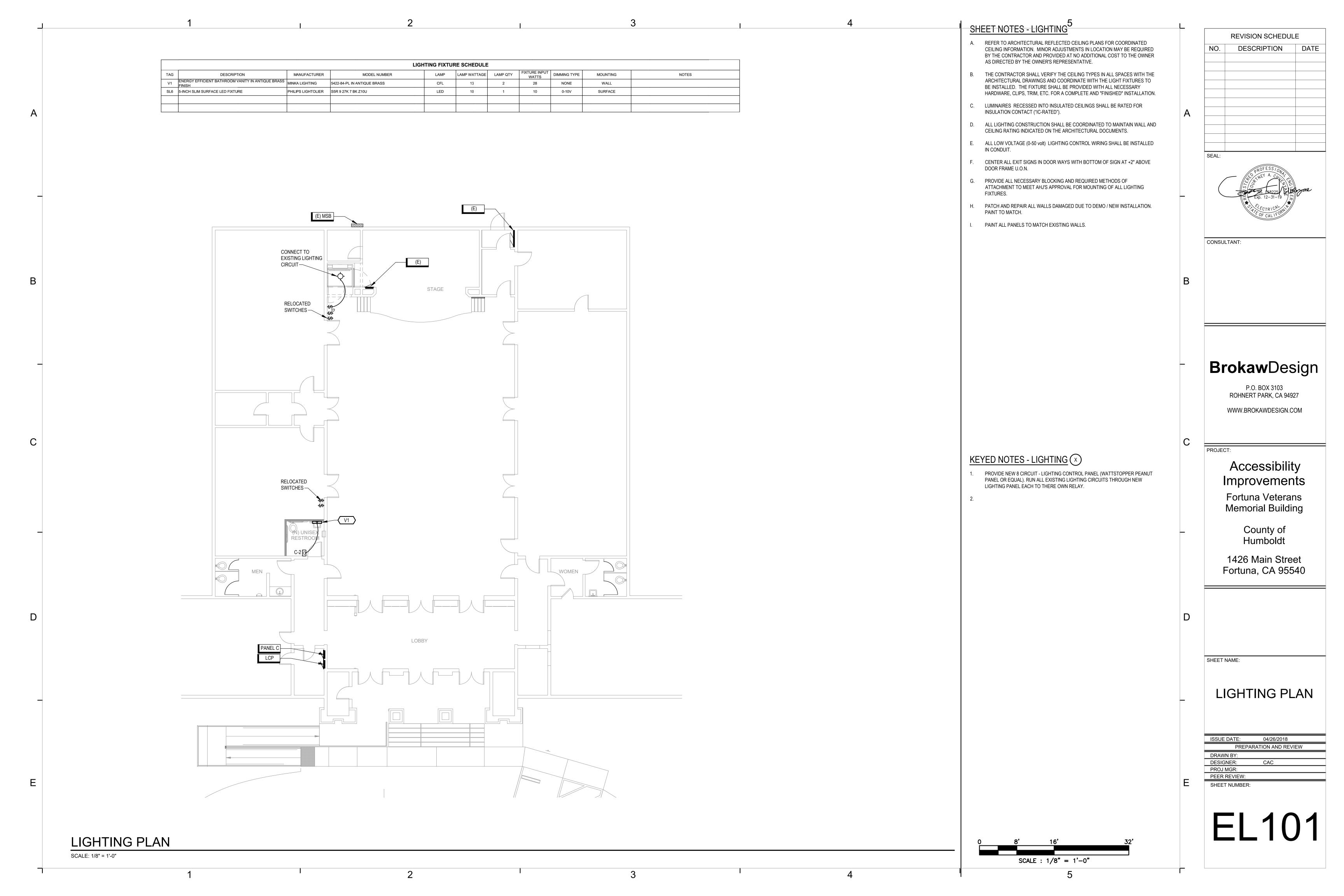
ELECTRICAL SHEET **SPECIFICATION**

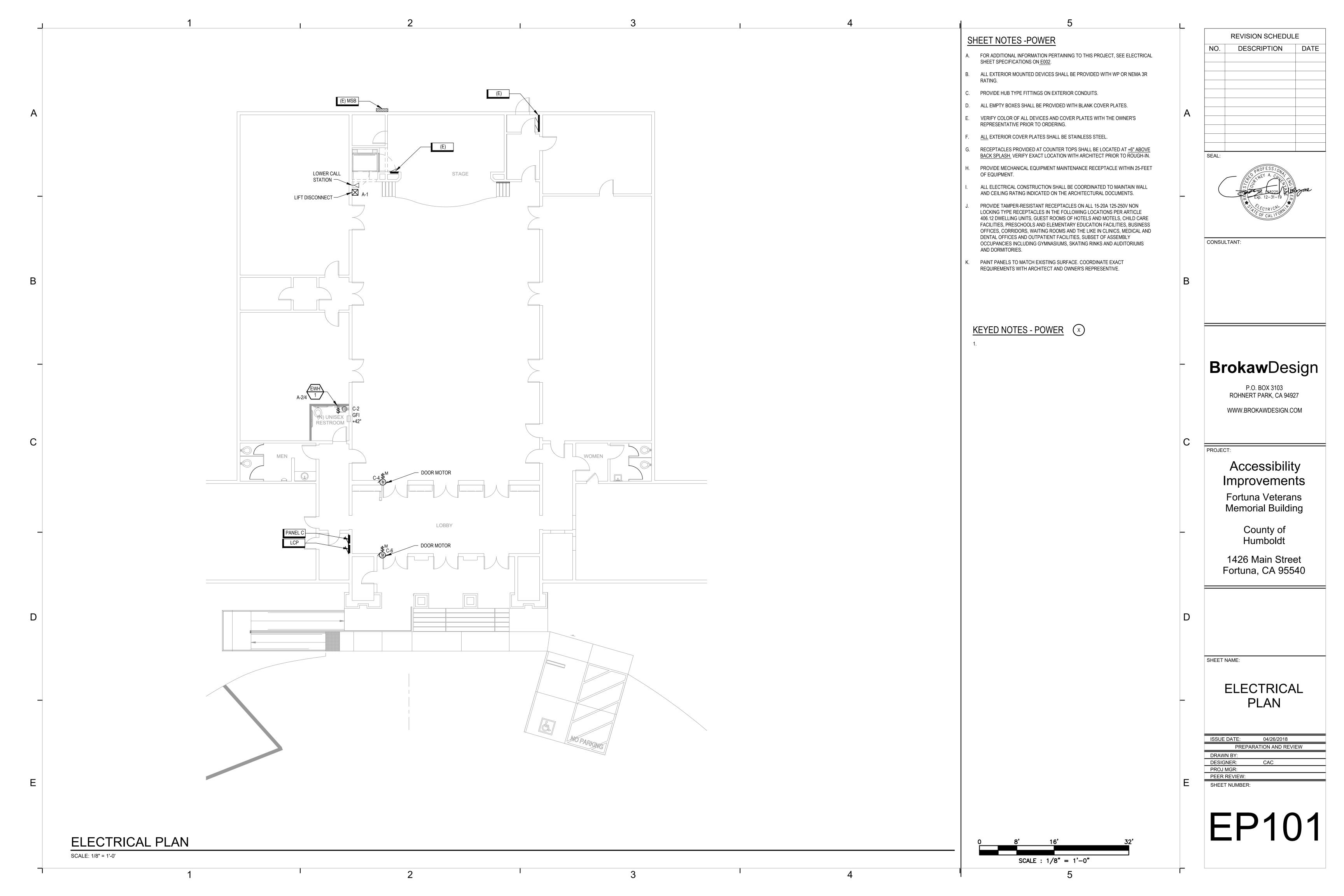
ISSUE DATE: 04/26/2018 PREPARATION AND REVIEW

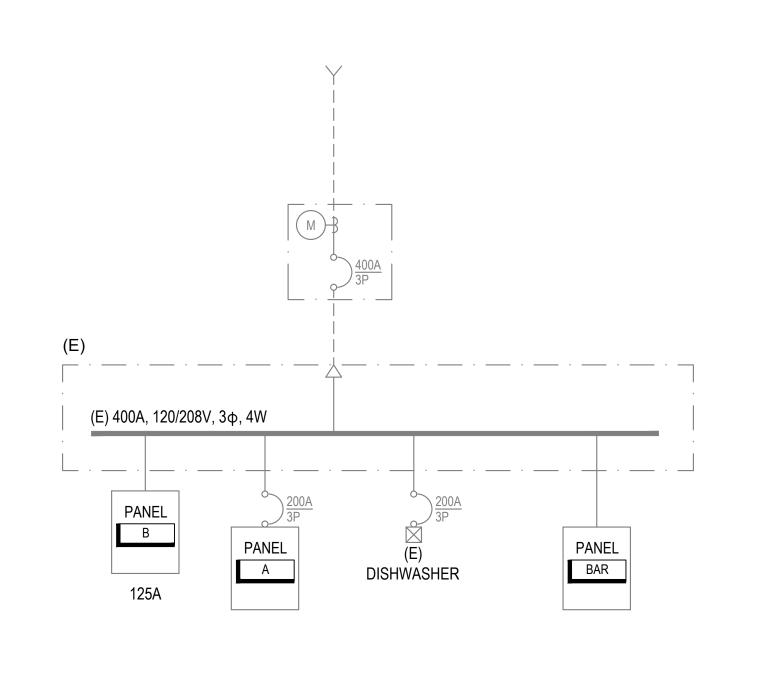
DRAWN BY: DESIGNER: CAC PROJ MGR: PEER REVIEW:

SHEET NUMBER:









(E) PEAK DEMAND PER PG&E RECORDS (2017-2018) IS 10.88KW.

MAX NEW DEMAND: 10.88KW+5.2KW+2.5KW = 18.58KW OR 51.61 AMPS @208, 3P

							PANE	L SCHED	ULE							
		(E) PANEL	NAME:	Α	VOLTAGE:	208	NEM	IA RATING:			NOTES	:				
		MAINS F	RATING:	200 (A)	PHASE:	3	Α	IC RATING:								
				200 (A)	WIRE:					LC	CATION	:				
CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CK NO
1	12	12	R	LIFT	20/1		1.00	А	2.10		1	Evalua	0	40	10	2
3				SPACE	20/1			В	2.10		20/2	EWH	0	10	10	4
5			0	REFRIGERATOR	20/1		1.00	С			20/1	SPACE				6
7			0	8 DOOR	70/0		7.00	Α	1.50		30/1	BACK RV PLUGS	R			8
9			0	REFRIGERATOR	70/2	-	7.00	В	1.50		30/1	BACK RV PLUGS	R			1
11			Н	HEATING	20/1		1.00	С			00/0	DUIL DUICUTING	L			1
13				SPACE	20/1			Α			60/2	BUILD LIGHTING	L			1.
15			0	WATER HEATER	20/1		1.00	В	1.50		00/0	005555	R			10
17			L	LITES DISH ROOM	20/1		1.00	С	1.50		30/2	COFFEE	R			18
19			R	KITCHEN PLUGS	20/1		1.00	А	1.00		20/1	PLUG - DISHWASHER RM	R			20
21				SPACE	20/1			В	1.00		20/1	PLUG - DISHWASHER RM	R			2
23			R	STAGE RECEP	20/1		1.00	С	1.00		20/1	RANGE FANS	Н			2
25				SPARE	30/1			А	1.00		20/1	RANGE FANS	Н			2
27			R	WEST PLUG	30/2		1.50	В	1.00		30/1	WEST PLUG	R			2
29			R	OUTSIDE RAMP	30/2		1.50	С	1.00		30/1	OUTSIDE	R			3
31			0	ICE MACHINE	50/2		4.80	Α	1.00		20/1	AUD STAGE OLD	R			3
33			0	TICE MACHINE	50/2		4.80	В	2.00		40/2	COMP WAK	0			3
35			Н	EXHAUST FANS	20/1		1.00	С	2.00		40/2	COMP WAR	0			3
37								Α								3
.OADS:							USE LI	<u>EGEND</u>	LOAD TYP	E	BREAK	ER OPTIONS:				
PHASE A:			20.4	(KVA)				H"	HVAC		GFCI - (GROUND FAULT CIRCUIT	INTERR	UPTER		
PHASE B:			23.4	(KVA)			"	L"	LIGHTING		HACR -	HEATING/AIR CONDITION	IING RA	TED		
PHASE C:				(KVA)			"N	Λ"	MOTOR			CK-ON DEVICE				
TOTAL:				(CONNECTED KVA)				O"	OTHER		PA - PA	DLOCK ATTACHMENT				
			155.0	(CONNECTED A)				R"	RECEPTAG	CLE	ST - SH	UNT TRIP				
								P"	PANEL							
							"(C"	COOKING							
							"	E"	EV LOADS							
							"\	N "	WATER HE	EATER						
									-							
NEC DEMAN	ND LOAD					CONN.	DEMAND									
SUMMARY						KVA	FACTOR	KVA								
TYPE "M": N				,			125%		_							
YPE "M": N			AINING)				100%									
YPE "L": L						1.00	125%	1.25]							
TYPE "R": I						10.00	100%	10.00								
YPE "R": I			R 10KV	4)		7.00	50%	3.50								
YPE "H": I	HVAC LOAI	os				4.00	100%	4.00								
YPE "P": F	PANEL LOA	DS					100%]							
	COOKING L						65%		1							
YPE "E": E				,			125%		1							
	WATER HE	ATING LO	ADS				100%		1							
YPE "W":				1		22.00	100%	33.80	1							
	OTHER LO	ADS				J 33.80	100%	ู ออ.ดบ								
	OTHER LO	ADS				33.80 DE	MAND KVA:		-							

							PANE	L SCHED	ULE							
NEW PANEL NAME: LITE "C" WAINS RATING: 60 (A) PHASE:																
				100 (A)	WIRE:					LO	CATION					
CKT NO	PHASE WIRE	NEUT WIRE	USE	DESCRIPTION	BKR SIZE	BKR OPTS	BKR KVA	PHASE:	BKR KVA	BKR OPTS	BKR SIZE	DESCRIPTION	USE	NEUT WIRE	PHASE WIRE	CKT NO
1		*****	L	FLOOD LIGHT IN YARD	20/1	0. 10	1.00	Α	0.50	0.10		RESTROOM	R	12	12	2
3			L	HALL	20/1		1.00	В	1.00		20/1	DOOR MOTOR	М	12	12	4
5			L	HALL / PORCH	20/1		1.00	С	1.00		20/1	DOOR MOTOR	М	12	12	6
7			L	MEN'S HALL	20/1		1.00	Α			20/1					8
9			L	BILLARD	20/1		1.00	В			20/1					10
11					20/1			С			20/1					12
13					20/1			Α			20/1					14
15					20/1			В			20/1					16
17					20/1			С			20/1					18
19					20/1			Α			20/1					20
21					20/1			В			20/1					22
23 .OADS:					20/1			C EGEND	LOAD TYP		20/1	ER OPTIONS:				24
HASE C: OTAL:	` '					"(" " "	M" MOTOR LO - LOCK-ON DEVICE 'O" OTHER PA - PADLOCK ATTACHMENT 'R" RECEPTACLE ST - SHUNT TRIP 'P" PANEL 'C" COOKING 'E" EV LOADS 'W" WATER HEATER									
SUMMARY	ND LOAD			OTOD)		CONN. KVA	DEMAND FACTOR	DEMAND KVA								
TYPE "M": MOTOR. LOADS (LARGEST MOTOR) TYPE "M": MOTOR. LOADS (REMAINING)						0.00	125%	0.00	-							
TYPE "L": LIGHTING LOADS (REMAINING)						2.00	100% 125%	2.00 6.25	_							
TYPE L: LIGHTING LOADS TYPE "R": RECEPTACLES (FIRST 10KVA)						5.00 0.50	100%	0.50	_							
TYPE "R": RECEPTACLES (FIRST TURVA)						0.50	50%	0.50	-							
TYPE "H": HVAC LOADS						-	100%		-							
TYPE "P": PANEL LOADS							100%		-							
TYPE "C": COOKING LOADS							65%		-							
TYPE "C": COOKING LOADS TYPE "E": EV LOADS							125%		1							
		ΔΤΙΝΟ Ι Ο	ADS				100%		+							
YPE "W": WATER HEATING LOADS YPE "O": OTHER LOADS							100%		+							
YPF "O"																
YPE "O":	OTTILINEO					DFI	MAND KVA:	8.75								

REVISION SCHEDULE

NO. DESCRIPTION DATE

SEAL:

SEAL:

CONSULTANT:

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PROJECT:

Accessibility Improvements

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> County of Humboldt

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SHEET NAME:

ELECTRICAL DIAGRAMS

ISSUE DATE: 04/26/2018

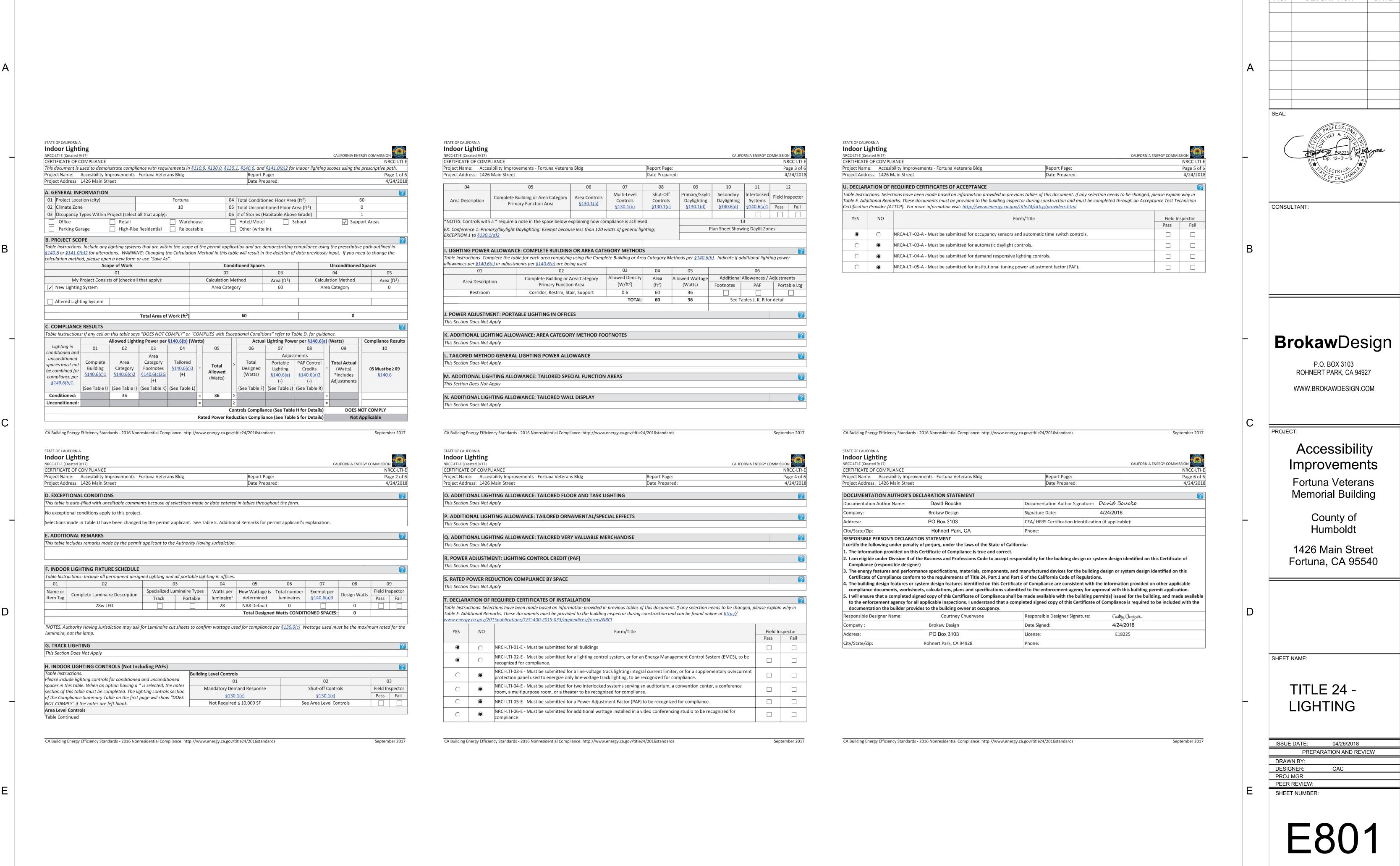
PREPARATION AND REVIEW

DRAWN BY:
DESIGNER: CAC
PROJ MGR:

PEER REVIEW:
SHEET NUMBER:

E601

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REVISION SCHEDULE DESCRIPTION