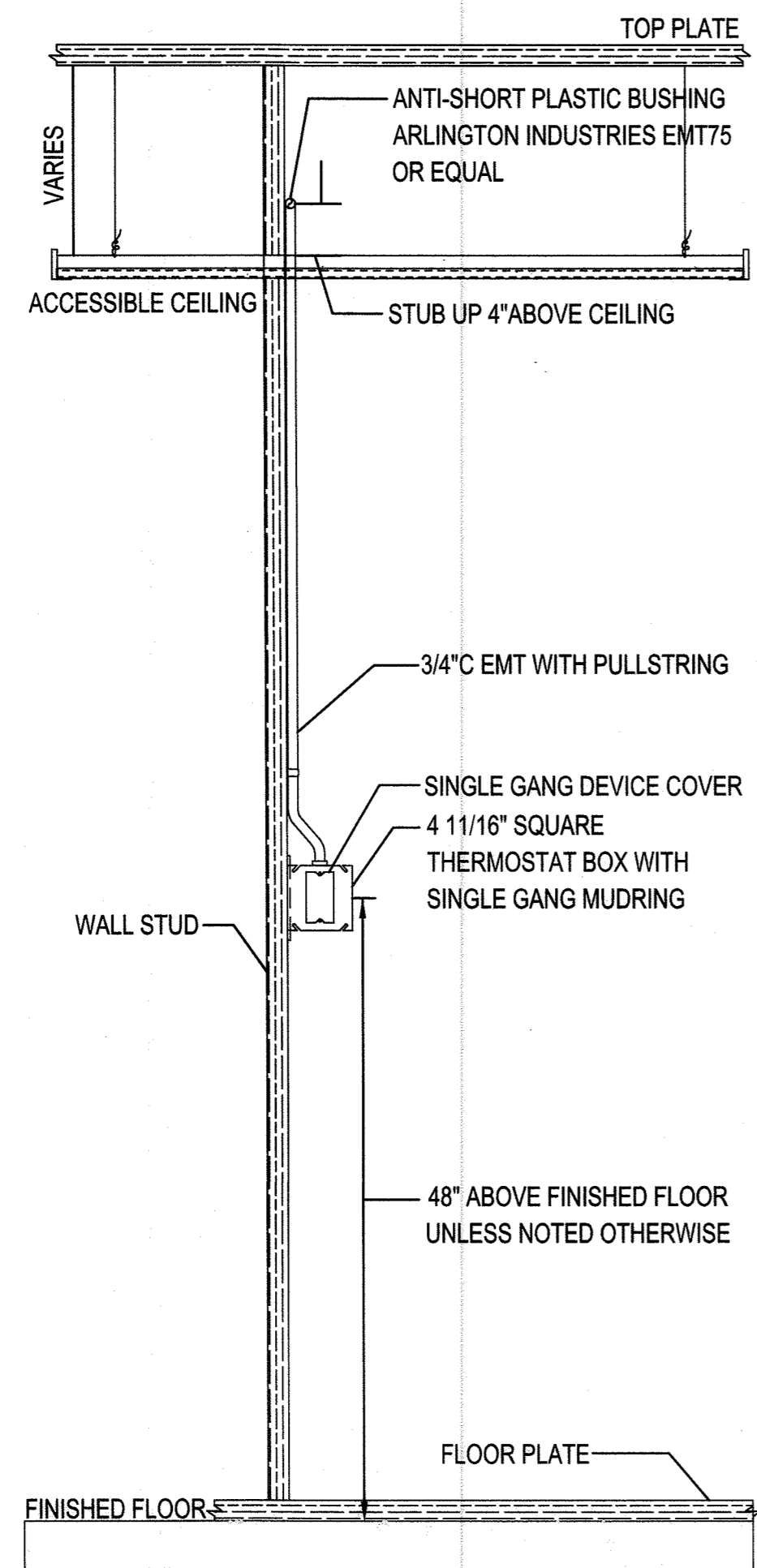


EXISTING SERVICE IS 1200 AMPS 208/120 VOLT 3 PHASE. NO SERVICE UPGRADE REQUIRED

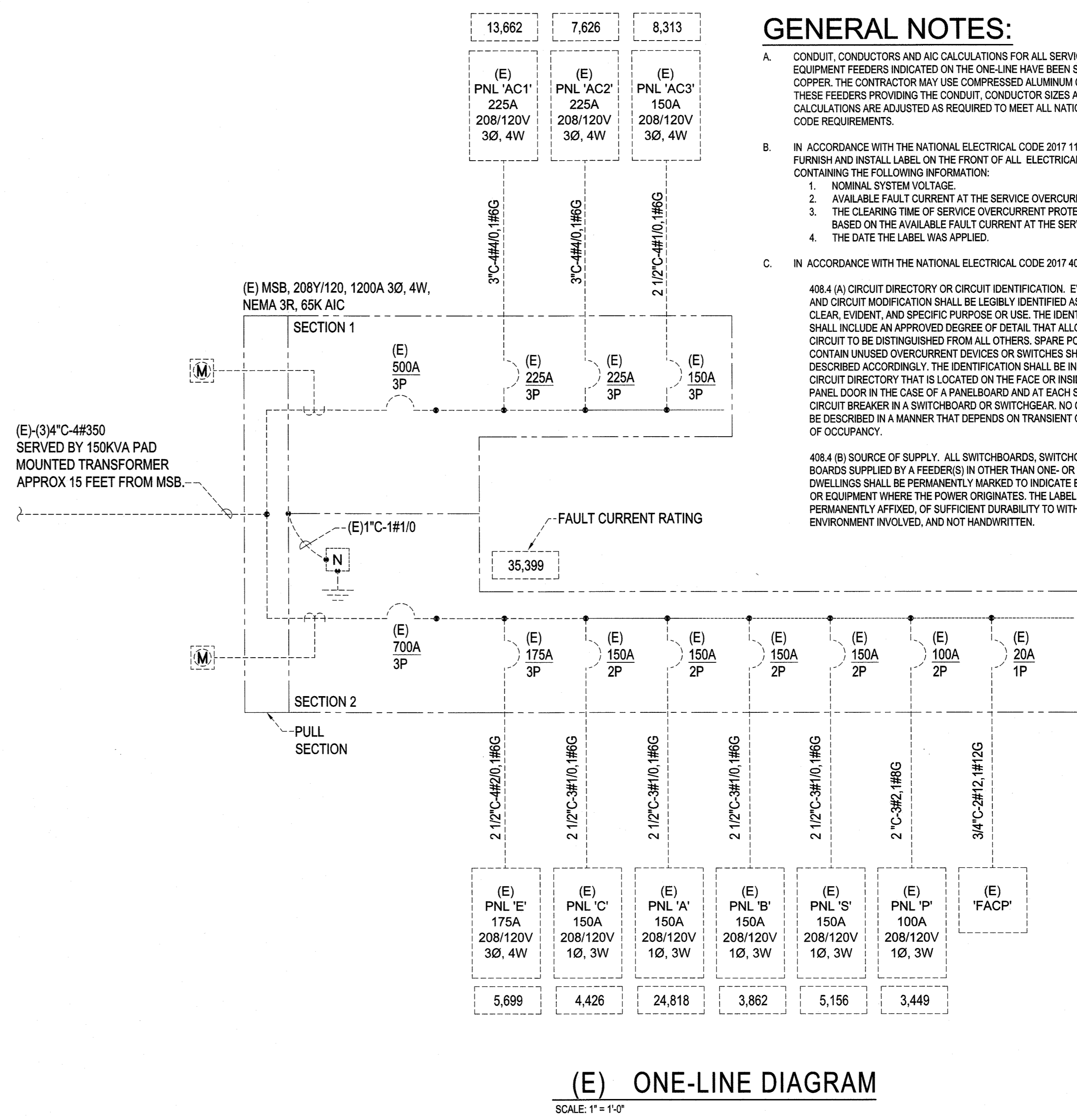
**ELECTRICAL LOAD SUMMARY (MSB)**

LOAD TYPE	VOLTAGE	CONNECTED LOAD (KVA)									TOTAL CONNECTED LOAD		TOTAL DEMAND LOAD	
		LIGHTING	RECEP	MOTORS	KITCHEN	HVAC	ELEC HEAT	WATER HEAT	MISC	EXST	KVA	AMPS	KVA	AMPS
EXISTING MAXIMUM DEMAND - DECEMBER 2019	120/208Y										60.0	166.7	0.0	0.0
ADDITIONAL 25% OF EXISTING DEMAND NEC 220.87	120/208Y										15.0	41.7	0.0	0.0
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 23	120/208Y					-2.3					-2.3	-6.5	-2.3	-6.5
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 22	120/208Y					-2.3					-2.3	-6.5	-2.3	-6.5
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 20	120/208Y					-3.5					-3.5	-9.7	-3.5	-9.7
REMOVED: ROOFTOP UNIT OVER ENT. #5	120/208Y					-23.6					-23.6	-65.6	-23.6	-65.6
REMOVED: CONDENSING UNIT OUTSIDE RM 14	120/208Y					-25.0					-25.0	-69.4	-25.0	-69.4
REMOVED: CONDENSING UNIT OUTSIDE MENS RR	120/208Y					-6.3					-6.3	-17.5	-6.3	-17.5
REMOVED: CONDENSING UNIT OUTSIDE WOMENS RR	120/208Y					-6.3					-6.3	-17.5	-6.3	-17.5
REMOVED: AIR HANDLING UNIT ABOVE LOUNGE	120/208Y					0.0					0.0	0.0	0.0	0.0
REMOVED: AIR HANDLING UNIT ABOVE LOUNGE	120/208Y					0.0					0.0	0.0	0.0	0.0
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 101	120/208Y					-2.3					-2.3	-6.5	-2.3	-6.5
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 101	120/208Y					-2.3					-2.3	-6.5	-2.3	-6.5
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 101	120/208Y					-2.7					-2.7	-7.4	-2.7	-7.4
REMOVED: ROOFTOP UNIT OVER FAMILY HIST 065	120/208Y					0.0					0.0	0.0	0.0	0.0
REMOVED: ROOFTOP UNIT OVER FAMILY HIST 065	120/208Y					0.0					0.0	0.0	0.0	0.0
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 58	120/208Y					-3.7					-3.7	-10.2	-3.7	-10.2
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 59	120/208Y					-2.8					-2.8	-7.9	-2.8	-7.9
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 60	120/208Y					-1.0					-1.0	-2.8	-1.0	-2.8
REMOVED: OUTDOOR UNIT/INDOOR UNIT RM 62	120/208Y					-2.0					-2.0	-5.5	-2.0	-5.5
INSTALLED: CU-1 OUTSIDE MENS RR	120/208Y					11.2					11.2	31.2	11.2	31.2
INSTALLED: CU-2 OUTSIDE WOMENS RR	120/208Y					11.2					11.2	31.2	11.2	31.2
INSTALLED: CU-3 OUTSIDE RM 15	120/208Y					19.3					19.3	53.6	19.3	53.6
INSTALLED: CU-4 OUTSIDE RM 19	120/208Y					3.6					3.6	10.1	3.6	10.1
INSTALLED: CU-5 OUTSIDE RM 101	120/208Y					3.6					3.6	10.1	3.6	10.1
INSTALLED: CU-6 OUTSIDE RM 19	120/208Y					3.6					3.6	10.1	3.6	10.1
INSTALLED: CU-7 OUTSIDE RM 18	120/208Y					3.6					3.6	10.1	3.6	10.1
INSTALLED: FC-4 INSIDE RM 006	120/208Y					0.9					0.9	2.5	0.9	2.5
INSTALLED: FC-5 INSIDE RM 101	120/208Y					0.9					0.9	2.5	0.9	2.5
INSTALLED: FC-6 INSIDE RM 201	120/208Y					0.9					0.9	2.5	0.9	2.5
INSTALLED: FC-7 INSIDE RM 201	120/208Y					0.9					0.9	2.5	0.9	2.5
INSTALLED: AH-1 ABOVE RM 027	120/208Y					7.3					7.3	20.2	7.3	20.2
INSTALLED: AH-2 ABOVE RM 027	120/208Y					7.3					7.3	20.2	7.3	20.2
INSTALLED: AH-3 INSIDE RM 201	120/208Y					7.2					7.2	20.0	7.2	20.0
<b>TOTAL</b>	120/208Y	0.0	0.0	0.0	0.0	-4.6	0.0	0.0	0.0	0.0	70.4	195.5	-4.6	-12.8



ELECTRICAL CONTRACTOR RESPONSIBLE FOR INSTALLATION OF THERMOSTAT BOX ROUGH-IN  
TYPICAL DETAIL - ACTUAL INSTALLATION MAY VARY

**THERMOSTAT ROUGH-IN DETAIL**  
SCALE: 1" = 1'-0"



**(E) ONE-LINE DIAGRAM**  
SCALE: 1" = 1'-0"

**GENERAL NOTES:**

- A. CONDUIT, CONDUCTORS AND AIC CALCULATIONS FOR ALL SERVICE, PANEL AND EQUIPMENT FEEDERS INDICATED ON THE ONE-LINE HAVE BEEN SIZED BASED ON COPPER. THE CONTRACTOR MAY USE COMPRESSED ALUMINUM CONDUCTORS FOR THESE FEEDERS PROVIDING THE CONDUIT, CONDUCTOR SIZES AND AIC CALCULATIONS ARE ADJUSTED AS REQUIRED TO MEET ALL NATIONAL ELECTRICAL CODE REQUIREMENTS.
- B. IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE 2017 110.16 (A) AND (B): FURNISH AND INSTALL LABEL ON THE FRONT OF ALL ELECTRICAL EQUIPMENT CONTAINING THE FOLLOWING INFORMATION:
  1. NOMINAL SYSTEM VOLTAGE.
  2. AVAILABLE FAULT CURRENT AT THE SERVICE OVERCURRENT DEVICES.
  3. THE CLEARING TIME OF SERVICE OVERCURRENT PROTECTIVE DEVICES BASED ON THE AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT.
  4. THE DATE THE LABEL WAS APPLIED.
- C. IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE 2017 408.4 (A) AND (B):
  - 408.4 (A) CIRCUIT DIRECTORY OR CIRCUIT IDENTIFICATION. EVERY CIRCUIT AND CIRCUIT MODIFICATION SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. THE IDENTIFICATION SHALL INCLUDE AN APPROVED DEGREE OF DETAIL THAT ALLOWS EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. SPARE POSITIONS THAT CONTAIN UNUSED OVERCURRENT DEVICES OR SWITCHES SHALL BE DESCRIBED ACCORDINGLY. THE IDENTIFICATION SHALL BE INCLUDED IN A CIRCUIT DIRECTORY THAT IS LOCATED ON THE FACE OR INSIDE OF THE PANEL DOOR IN THE CASE OF A PANELBOARD AND AT EACH SWITCH OR CIRCUIT BREAKER IN A SWITCHBOARD OR SWITCHGEAR. NO CIRCUIT SHALL BE DESCRIBED IN A MANNER THAT DEPENDS ON TRANSIENT CONDITIONS OF OCCUPANCY.
  - 408.4 (B) SOURCE OF SUPPLY. ALL SWITCHBOARDS, SWITCHGEAR, AND PANEL BOARDS SUPPLIED BY A FEEDER(S) IN OTHER THAN ONE- OR TWO-FAMILY DWELLINGS SHALL BE PERMANENTLY MARKED TO INDICATE EACH DEVICE OR EQUIPMENT WHERE THE POWER ORIGINATES. THE LABEL SHALL BE PERMANENTLY AFFIXED, OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED, AND NOT HANDWRITTEN.

Architect / Engineer:  
**P.C. Architects Inc.**  
Dennis B. Patten, AIA  
P.O. Box 217  
St. George, UT 84771  
(435) 673-6579

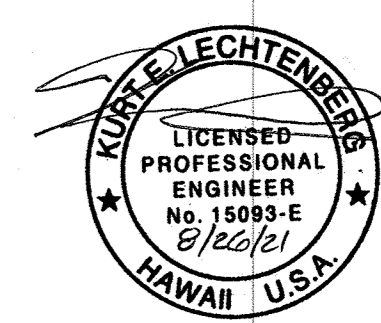
Expiration date of license: 04/30/22

This work was prepared by me or under my supervision. Construction of this project will be under my observation.

**KALIHI RE-ROOF AND HVAC REFURBISHMENT**  
HONOLULU, HAWAII WEST STAKE  
TMK: 1-3-005:17  
1120 Kahlili St. (1723 Beekley St.) Honolulu, HI 96819

Project Name:  
**THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS**

Owner:



**MUSGROVE ENGINEERING, P.A.**  
234 S. Whisperwood Way  
Boise, ID 83719  
208.384.0585  
645 West 25th Street  
Idaho Falls, ID 83402  
208.523.2862  
www.musgrovepa.com  
PROJECT NO. 21-302

1	09-01-2021	BID SET	Description

Sheet Title:  
**SINGLE-LINE AND ELECTRICAL DETAILS**

Sheet:  
**E200**

21302\_E200 ONE-LINE DIAGRAM.dwg - 12/28/2020