

LEGEND

X

(E)

(N)

M

MSP

ACD

CB

- MODULE STRING ID

- EXISTING

- NEW

- UTILITY METER

- MAIN SERVICE PANEL

- AC DISCONNECT

- COMBINER BOX

LC

SP

JB

SCT

BAT

ICD

BUL

- LOAD CENTER

- SUBPANEL

- JUNCTION BOX

- STRING CENTER TAP

- CONDUIT

- ENERGY STORAGE

- INTERCONNECTION DEVICE

- BACK UP LOADS PANEL

ADHESIVE FASTENED SIGNS:

• ANSI Z535.4-2011 PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR SUITABLE FONT SIZES, WORDS, COLORS, SYMBOLS, AND LOCATION REQUIREMENTS FOR LABELS. NEC 110.21(B)(1).

• THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. NEC 110.21(B)(3).

• ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT.

• ALL LABELS AND MARKINGS FOR PHOTOVOLTAIC SYSTEMS WILL BE REFLECTIVE AND MEET ALL REQUIREMENTS.

⚠

WARNING

⚠

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS

TERMINALS ON BOTH THE LINE AND

LOAD SIDES MAY BE ENERGIZED

IN THE OPEN POSITION

LABEL LOCATION:
COMBINER BOX/ EMT
ENCLOSURES/ AC DISCONNECT/
MAIN SERVICE PANEL
PER CODE: NEC 2017, 690.13(B)

EMERGENCY RESPONDER

SOLAR PV SYSTEM EQUIPPED

WITH RAPID SHUTDOWN


TURN RAPID SHUTDOWN

SWITCH TO THE "OFF"

POSITION TO SHUT

DOWN THE ENTIRE PV

SYSTEM



LABEL LOCATION:
RAPID SHUTDOWN (AC DISCONNECT)
PER CODE: NEC 690.56 (C)(1) &
NFPA1 11.12.2.1.1.1, 11.12.2.1.4
SHALL BE REFLECTIVE, WITH ALL
LETTERS CAPITALIZED AND HAVING A
MINIMUM HEIGHT OF 3/8 IN. (9.5 MM), IN
WHITE ON RED BACKGROUND.

WARNING: PHOTOVOLTAIC

POWER SOURCE

LABEL LOCATION:
CONDUIT/ RACEWAY/ ENCLOSURES/
COMBINER BOX/ AC DISCONNECT
PER CODE: NEC2017, 690.31(G)(3)(4)

PHOTOVOLTAIC

AC DISCONNECT

LABEL LOCATION:
AC DISCONNECT/ BREAKER/
POINTS OF CONNECTION
PER CODE: NEC2017, 690.13(B)

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT

60.8 A

NOMINAL OPERATING AC VOLTAGE

240 V

LABEL LOCATION:
AC DISCONNECT
PER CODE: NEC2017, 690.54

RAPID SHUTDOWN

SWITCH FOR

SOLAR PV SYSTEM

LABEL LOCATION:
RAPID SHUTDOWN
(AC DISCONNECT)
PER CODE: NEC 690.58 (C)(3)

! WARNING !

INVERTER OUTPUT CONNECTION. DO NOT

RELOCATE THIS OVERCURRENT DEVICE.

! WARNING !

EQUIPMENT FED BY MULTIPLE SOURCES.

TOTAL RATING OF ALL OVERCURRENT DEVICES

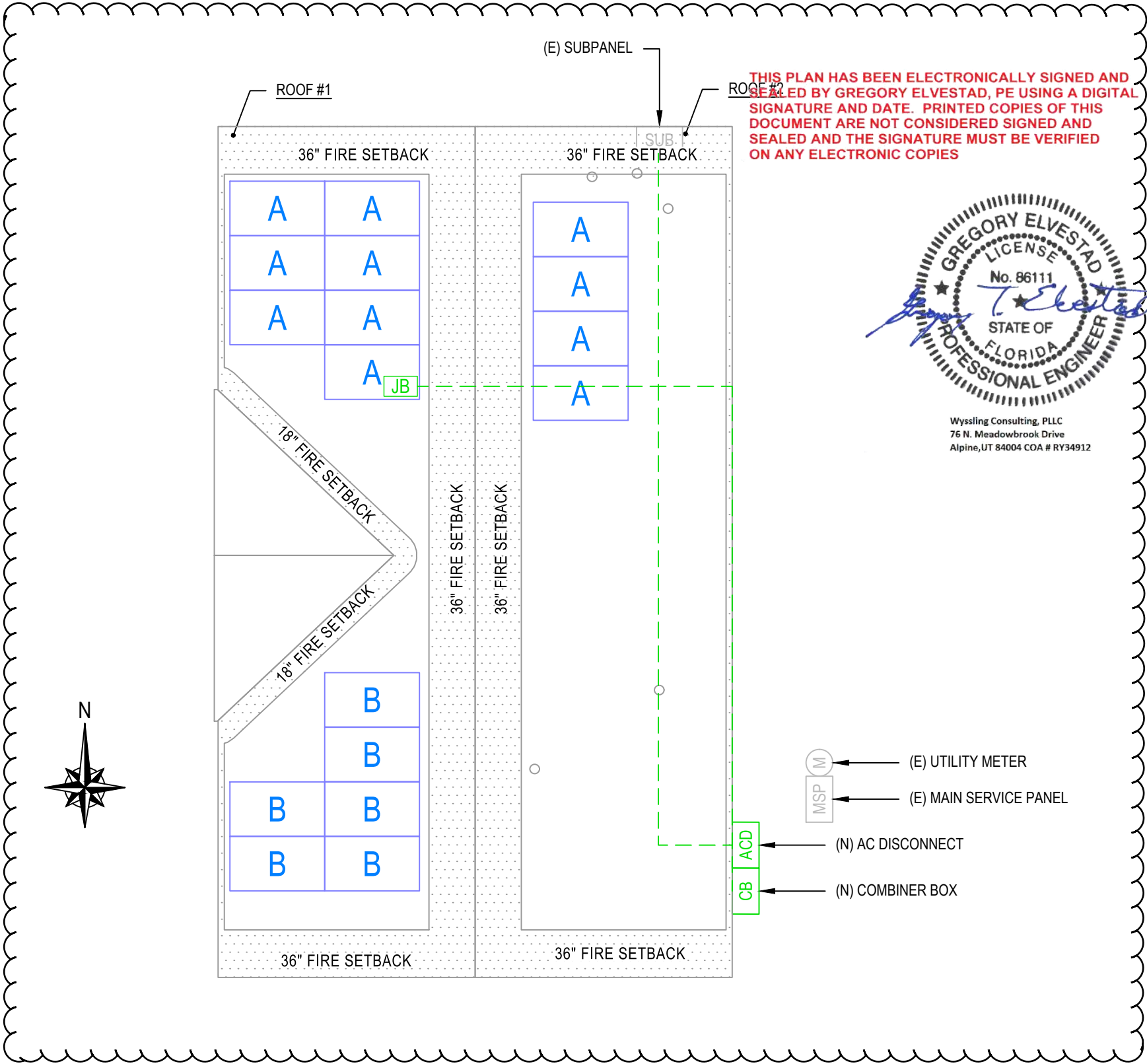
EXCLUDING MAIN SUPPLY OVERCURRENT

DEVICE SHALL NOT EXCEED AMPACITY OF


BUSBAR.

LABEL LOCATION:
POINT-OF-INTERCONNECTION OR AT
MAIN SERVICE DISCONNECT (MSP)
PER CODE: NEC 705.12(B)(2)(3)(b)

LABEL LOCATION:
ANY ELECTRICAL PANEL THAT IS FED BY
BOTH THE UTILITY AND THE PHOTOVOLTAIC
SYSTEM (AC DISCONNECT, MSP)
PER CODE: NEC 705.12(B)(2)(3)(C)



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Lumio

PROJECT NAME & ADDRESS

PATRICK ROURKE
RESIDENCE
PROJECT # P-0032644
121 SOUTHWEST NATHAN COURT
LAKE CITY, FL 32024

SIGNATURE WITH SEAL

REVISIONS

DESCRIPTION	DATE	REV
REVISED INTERCONNECTION	1/30/23	A

Drawn by: CM
Date: 1/3/2023

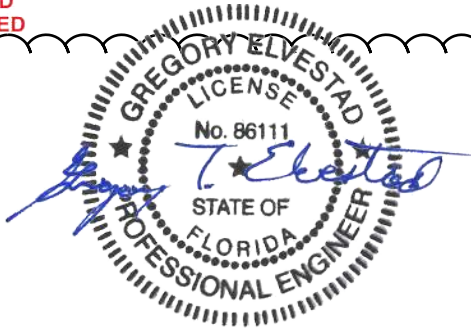
SHEET NAME
STRING LAYOUT & SIGNAGE
SHEET NUMBER
E-1

ID	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	MIN. CONDUCTOR SIZE (AWG)		MIN. DIA CONDUIT SIZE (IN.)	# OF PARALLEL CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	OCPD (A)	MIN. EGC SIZE (AWG)		TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT (A)	MAX. CURRENT (A)	BASE AMP. (A)	DERATED AMP. (A)	TERM. AMP. RATING (A)	LENGTH (FT)	VOLTAGE DROP (%)
1	STRING A	JUNCTION BOX	12	Q CABLE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	13.31	16.64	30	N/A	N/A	53.00	0.47
2	STRING B	JUNCTION BOX	12	Q CABLE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	7.26	9.08	30	N/A	N/A	39.00	0.47
3	JUNCTION BOX	COMBINER BOX	10	THWN-2 COPPER	0.75 LTNM	2	4	20	10	THWN-2 COPPER	0.76	55°C	0.8	13.31	16.64	40	24.3	35	67.00	0.92
4	COMBINER BOX	AC DISCONNECT	10	THWN-2 COPPER	0.75 LTNM	1	3	N/A	10	THWN-2 COPPER	0.96	34°C	1	20.57	25.71	40	38.4	35	5.00	0.11
5	AC DISCONNECT	SUBPANEL	10	THWN-2 COPPER	0.75 LTNM	1	3	30	10	THWN-2 COPPER	0.96	34°C	1	20.57	25.71	40	38.4	35	50.00	1.07

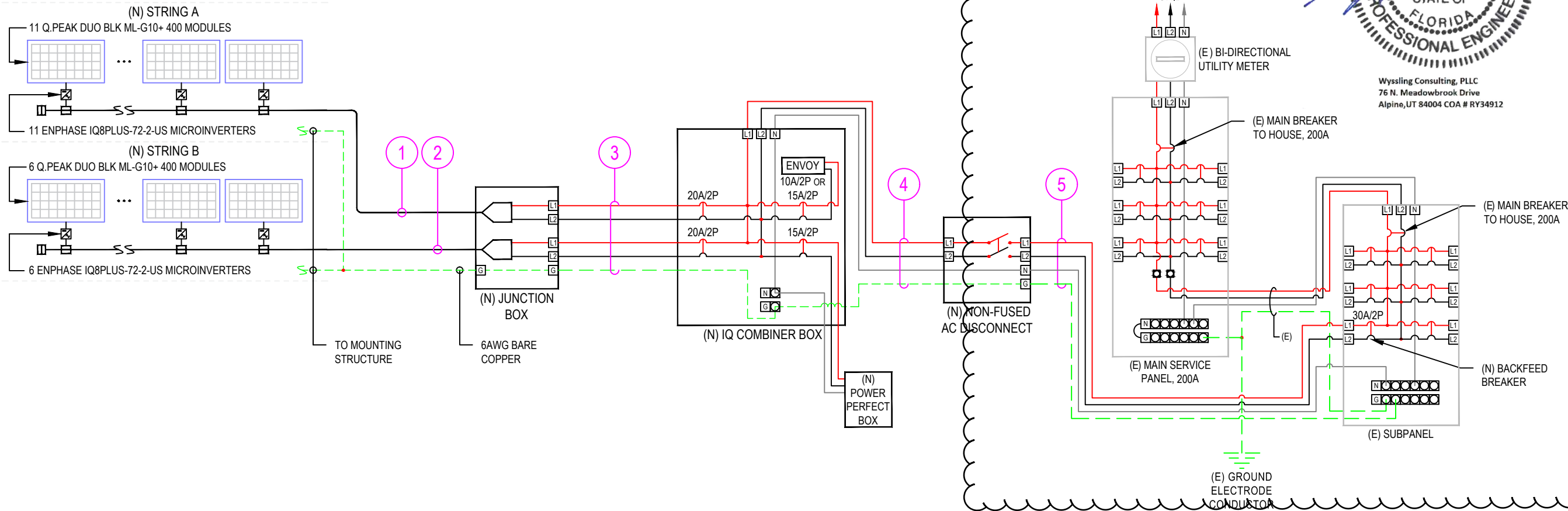
Gregory Elvestad, PE

Digitally signed by Gregory Elvestad, PE
DN: C=US, S=Utah, L=Alpine, O=Wysling Consulting PLLC, OU=Director of Electrical Engineering, CN="Gregory Elvestad, PE", E=gelvestad@wyslingconsulting.com
Reason: I am the author of this document
Location: your signing location here
Date: 2023.01.31 08:47:50-0700
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1 | ELECTRICAL LINE DIAGRAM
E-2 | SCALE: NTS

NOTE:
1. LTNM OR EQUIVALENT TYPE CONDUIT

LEGEND
(E) - EXISTING
(N) - NEW

DESIGN TEMPERATURE SPECIFICATIONS	
RECORD LOW TEMP	-5°C
AMBIENT TEMP. (HIGH TEMP. 2%)	34°C
CONDUIT HEIGHT	1.0"
CONDUCTOR TEMP. RATE (ROOF)	55°C

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Drawn by: CM
Date: 1/3/2023

SHEET NAME
ELECTRICAL LINE
DIAGRAM & CALCS.
SHEET NUMBER
E-2