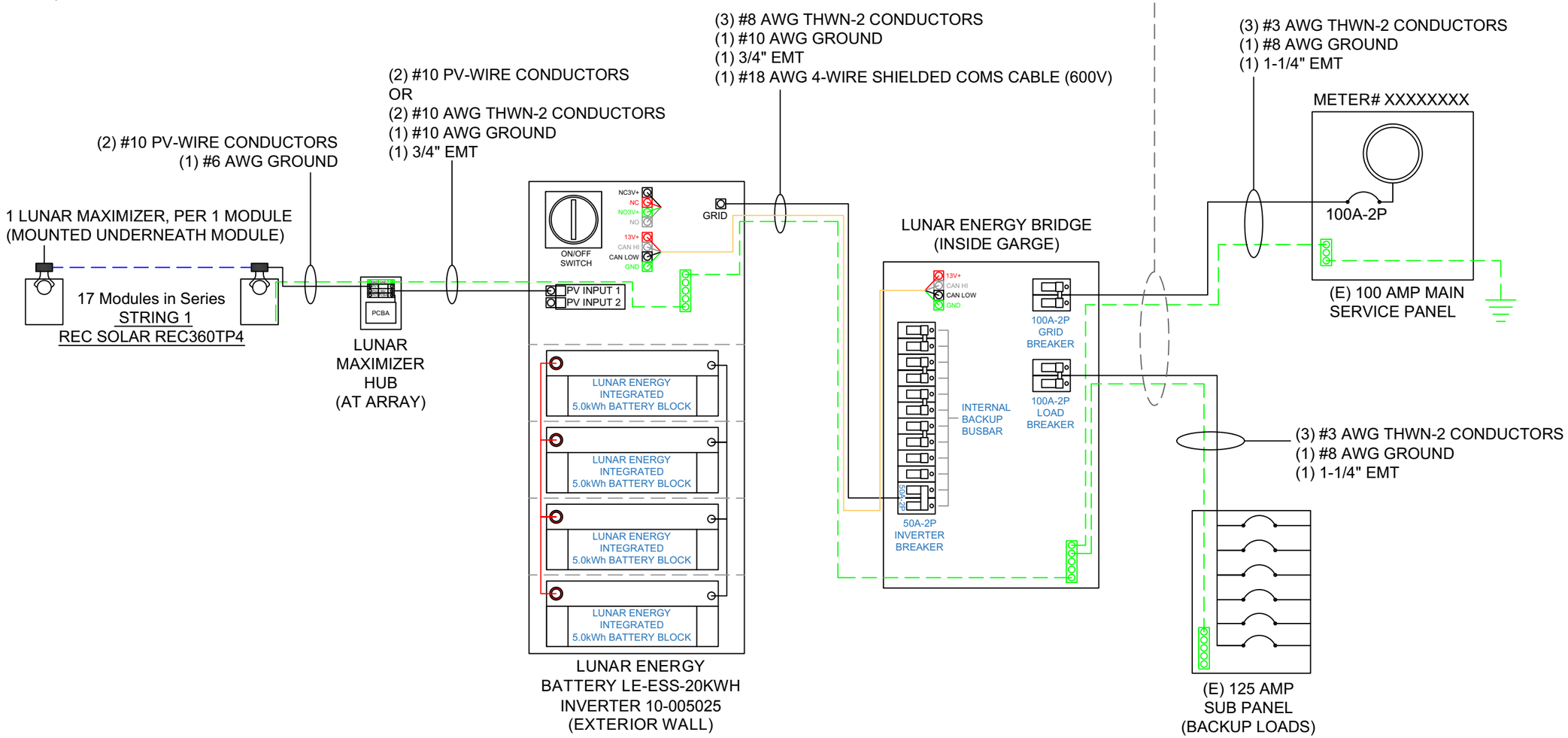
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Updated 2025/09/24



"Producers storage device(s) will not cause the Host Load to exceed its normal peak demand. Normal peak demand is defined as the highest amount of power required from the Distribution System by Producers complete facilities without the influence or use of the energy storage device(s)."

CONTRACTOR:

Reviewed for Code Compliance
City of San Jose , Building Division
☒ Building ☐ Electrical
☐ Plumbing ☐ Mechanical

Date:

SITE ADDRESS:

REVISION:

REV:	DESCRIPTION:	DATE:
A	PLAN CHECK CMMNTS 1	10/07/24

SCALE: N/A

DATE: 14-Oct-24

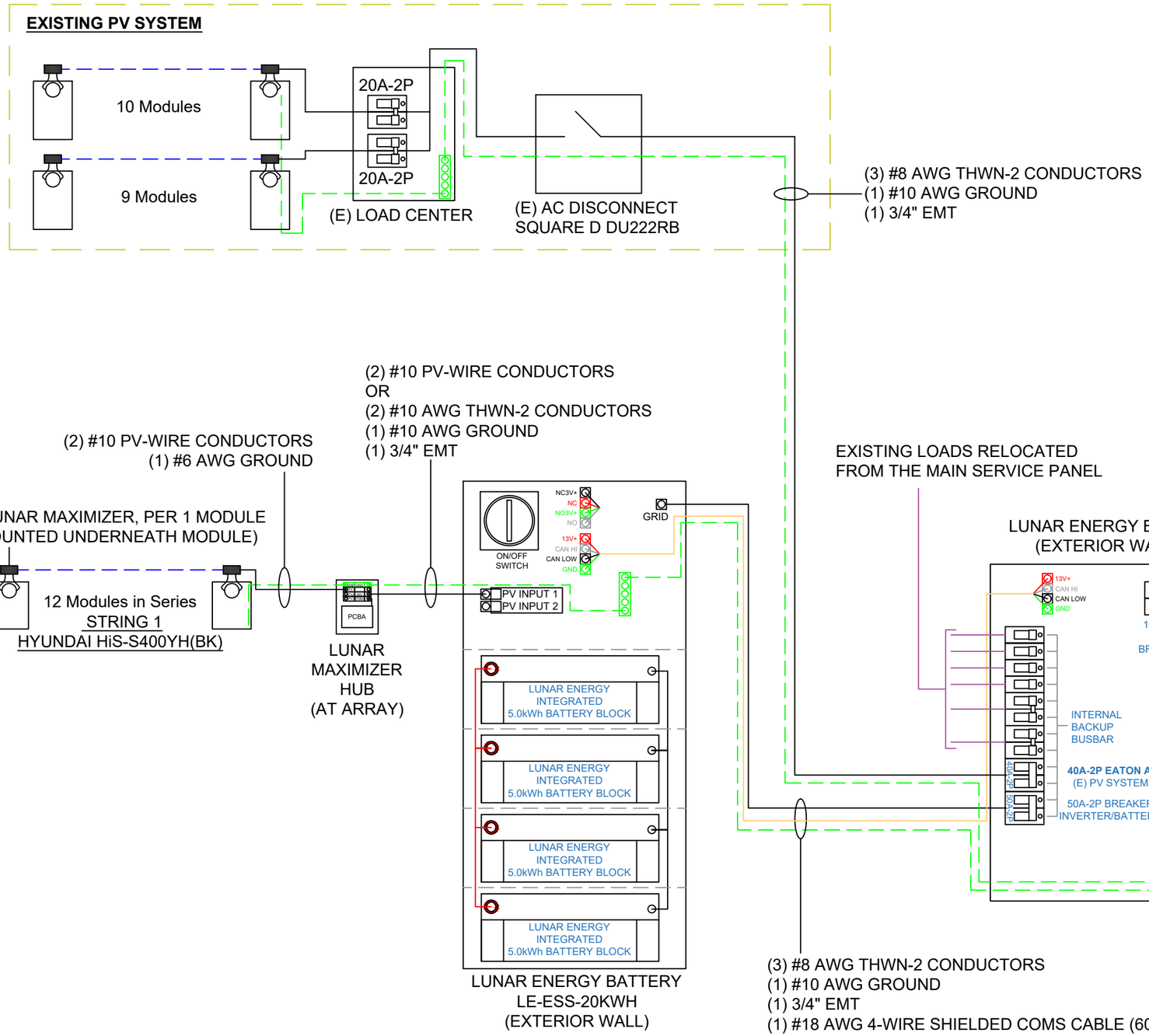
TITLE: ELECTRICAL 1

E1

AC-coupled PV in Backup

ALL (E) LOAD BREAKERS IN THE MAIN SERVICE PANEL ARE TO BE RELOCATED INTO THE (N) LUNAR ENERGY BRIDGE BUSBAR LEAVING ONLY A (N) 100AMP BREAKER THAT FEEDS THE LUNAR ENERGY BRIDGE IN THE MAIN SERVICE PANEL .

GENERATION INTERCONNECTION COMPLIES WITH 705.12(B)(3)(3)



"Producers storage device(s) will not cause the Host Load to exceed its normal peak demand. Normal peak demand is defined as the highest amount of power required from the Distribution System by Producers complete facilities without the influence or use of the energy storage device(s)."

CIRCUITS FOR BACKUP WILL BE RELOCATED INTO THE LUNAR ENERGY BRIDGE BACKUP BUSBAR. IF ALL CONDUCTORS WILL BE IN THE SAME 1-1/4" CONDUIT THEN IT MUST BE LESS THAN 24" IN LENGTH, OTHERWISE CONDUIT FILL AND WIRE SIZE MUST BE ACCOUNTED FOR PER CIRCUIT AND CONDUIT.

CONTRACTOR:

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LUNAR ENERGY SERVICES
755 RAVENDALE DR.
MOUNTAIN VIEW, CA 94043
CSL: 1119266
CLASS: C10

CLIENT:

SITE ADDRESS:

REVISION:

REV:	DESCRIPTION:	DATE:

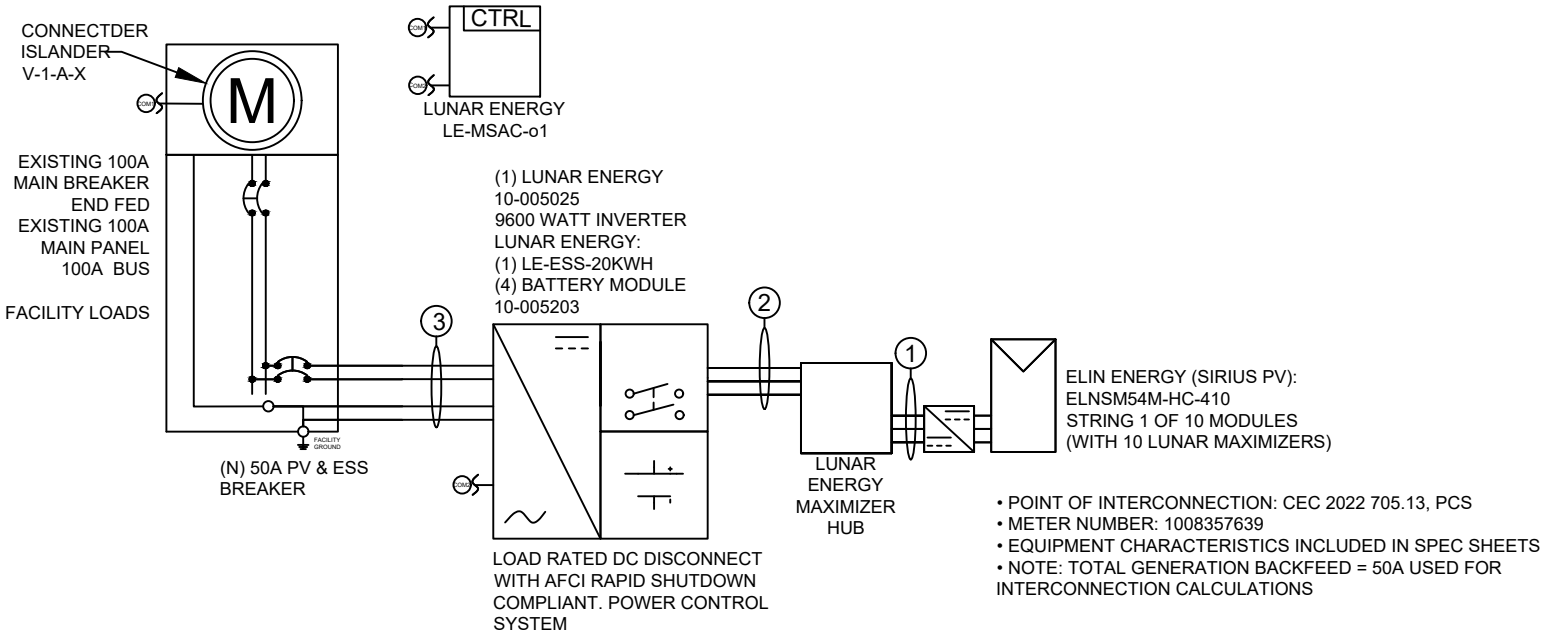
SCALE: N/A

DATE: 6-May-25

TITLE: ELECTRICAL 1

E1

Meter Socket Adapter

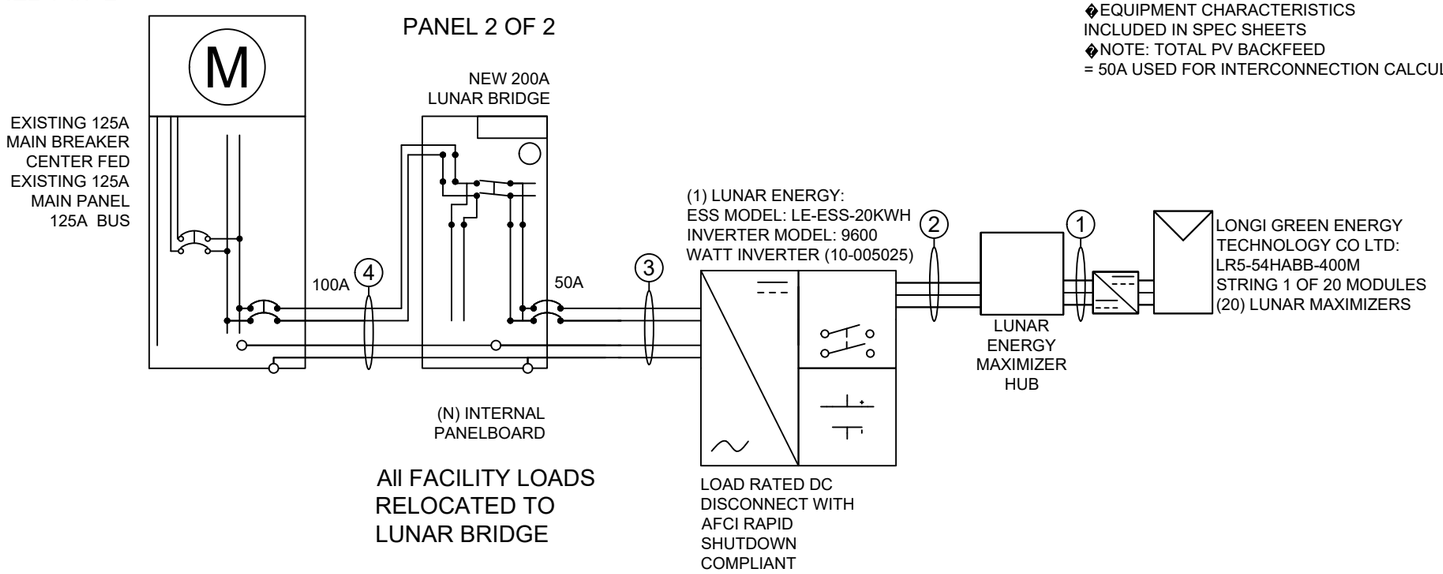


CONDUIT SCHEDULE					
TAG	**CIRCUIT DESCRIPTION**	**CONDUCTOR**	**NEUTRAL**	**GROUND**	**CONDUIT**
COM	Communication Wire	(1) 14 AWG	N/A	N/A	Open Air
1	Inverter Input	(2) 10 AWG (PV WIRE)	N/A	6 AWG (BARE)	Open Air
2	Inverter Input	(2) 10 AWG THHN/THWN-2	N/A	8 AWG THHN/THWN-2	3/4 EMT
3	Inverter Output	(2) 8 AWG THHN/THWN-2	(1) 8 AWG THHN/THWN-2	8 AWG THHN/THWN-2	3/4 EMT

PRODUCERS STORAGE DEVICE(S) WILL NOT CAUSE THE HOST LOAD TO EXCEED ITS NORMAL PEAK DEMAND. NORMAL PEAK DEMAND IS DEFINED AS THE HIGHEST AMOUNT OF POWER REQUIRED FROM THE DISTRIBUTION SYSTEM BY PRODUCERS COMPLETE FACILITIES WITHOUT THE INFLUENCE OR USE OF THE ENERGY STORAGE DEVICE(S).

PANEL 1 OF 2

PANEL 2 OF 2



All FACILITY LOADS
RELOCATED TO
LUNAR BRIDGE

◆POINT OF INTERCONNECTION::CEC 2022 705.12(B)(3)(3),
GATEWAY FEEDER BREAKER AT OPPOSITE END OF
CENTER-FED PANELBOARD
◆METER NUMBER: 1011172114
◆EQUIPMENT CHARACTERISTICS
INCLUDED IN SPEC SHEETS
◆NOTE: TOTAL PV BACKFEED
= 50A USED FOR INTERCONNECTION CALCULATIONS

GENERAL NOTES:

SUPPLY OF ESS SHALL BE EQUAL TO OR GREATER THAT THE
LARGEST SINGLE BACKUP LOAD PER 2022 CEC 710.15(A)

CONDUIT SCHEDULE					
TAG	**CIRCUIT DESCRIPTION**	**CONDUCTOR**	**NEUTRAL**	**GROUND**	**CONDUIT**
1	Inverter Input	(2) 10 AWG (PV WIRE)	N/A	10 AWG (BARE)	Open Air
2	Inverter Input	(2) 10 AWG THHN/THWN-2	N/A	10 AWG THHN/THWN-2	3/4 EMT
3	Inverter Output	(2) 6 AWG THHN/THWN-2	(1) 6 AWG THHN/THWN-2	8 AWG THHN/THWN-2	3/4 EMT
4	Panel Feeder	(2) 3 AWG THHN/THWN-2	(1) 3 AWG THHN/THWN-2	8 AWG THHN/THWN-2	1 EMT

MODULE CHARACTERISTICS	
LONGI GREEN ENERGY TECHNOLOGY CO LTD: LR5-54HABB-400M	400 W
OPEN CIRCUIT VOLTAGE	37.05 V
MAX POWER VOLTAGE	30.94 V
SHORT CIRCUIT CURRENT	14.88 A

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CUSTOMER RESIDENCE:

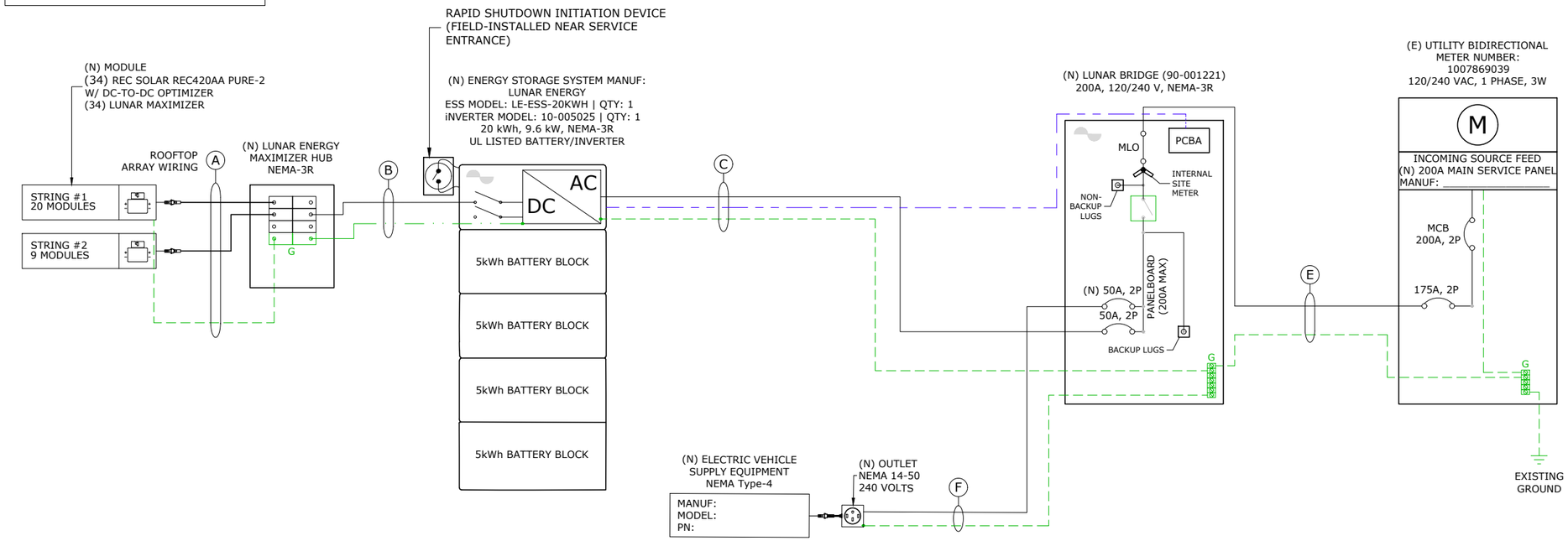
PROJECT NUMBER:

ELECTRICAL

REV: A1 10/29/2024

PAGE PV-4.0

"PRODUCERS STORAGE DEVICE(S) WILL NOT CAUSE THE HOST LOAD TO EXCEED ITS NORMAL PEAK DEMAND. NORMAL PEAK DEMAND IS DEFINED AS THE HIGHEST AMOUNT OF POWER REQUIRED FROM THE DISTRIBUTION SYSTEM BY PRODUCERS COMPLETE FACILITIES WITHOUT THE INFLUENCE OR USE OF THE ENERGY STORAGE DEVICE(S)."



LINE/POWER
GROUND
CTs / CAN CABLE

WIRE AND CONDUIT SCHEDULE				
TAG	WIRE GAUGE (AWG)	QTY	DESCRIPTION	CONDUIT/CABLE SIZE & TYPE
A	#10	2	PV WIRE	FREE AIR
	#6	1	EGC: Bare CU	
B	#10	2	THHN/THWN-2	3/4" EMT
	#10	1	EGC: THHN/THWN-2	
C	#8	3	THHN/THWN-2	3/4" EMT
	#10	1	EGC: THHN/THWN-2	
D	#2/0	3	THHN/THWN-2	2" EMT
	#6	1	EGC: THHN/THWN-2	
E	#8	3	THHN/THWN-2	3/4" EMT
	#10	1	EGC: THHN/THWN-2	

DESIGN INTERCONNECTION COMPLIANCE
MAIN SERVICE PANEL: NEC 705.11
LUNAR BRIDGE: NEC 705.12 (2)(3)(C)

ELECTRICAL NOTES

1. PROPER LISTING EXPECTED FOR CONDITIONS OF USE ON ALL LUGS, FITTINGS, CRIMPS, ETC.
2. ALL CONDUIT BEND RADII TO CONFORM TO THE NEC MINIMUM BEND RADII REQUIREMENTS.
3. MINIMUM CLEARANCE SHALL BE MAINTAINED PER NEC FOR ALL NEW EQUIPMENT TO BE INSTALLED.
4. EXISTING GROUNDING ELECTRODE SYSTEM MUST MEET NEC AND LOCAL UTILITY REQUIREMENTS.
5. COPPER CONDUCTORS SHALL BE USED UNLESS SPECIFIED.
6. EQUIVALENT SPECIFICATION ON CABLES AND ELECTRICAL EQUIPMENT SPECIFIED ARE ACCEPTABLE.

INSTALLATION NOTES

- LUNAR BATTERY OUTPUT BREAKER SHALL BE INSTALLED WITH LUNAR ENERGY HOLD DOWN OR EATON BRHDK125 HOLD DOWN KIT. BREAKER MUST BE LOCATED IN THE BOTTOM 2 ROWS OF THE LOAD TRAY (LEFT OR RIGHT).
- INTERCEPT THE (E) FEEDER WIRE OF THE GARAGE SUBPANEL AND RELOCATE IT TO THE BACKUP LUGS OF THE LUNAR BRIDGE.
- FEED (N) LUNAR BRIDGE FROM THE (E) MAIN SERVICE PANEL.
- CONDUIT AND CONDUCTORS SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY FIELD CONDITIONS.

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14.28 KW GRID-TIED PHOTOVOLTAIC SYSTEM
20 kWh ENERGY STORAGE SYSTEM

REV	DESCRIPTION

DRAWN BY: M. Olivas
DATE: 09-11-2024

SHEET NAME: ELECTRICAL SINGLE-LINE DIAGRAM

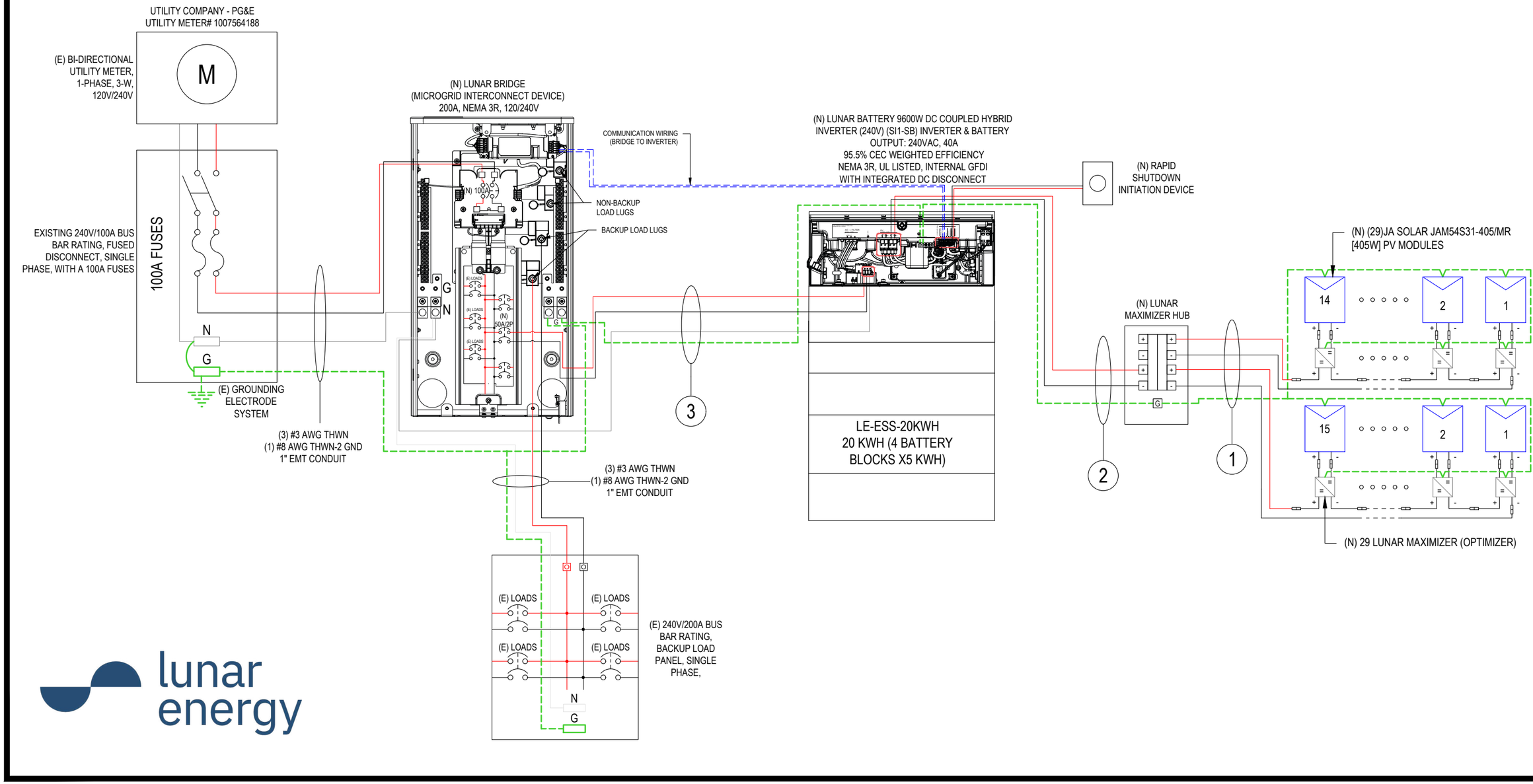
SHEET NUMBER: E-1

PV MODULE RATING @ STC	
MANUFACTURER	JA SOLAR JAM54S31-405/MR [405W]
MAX. POWER-POINT CURRENT (IMP)	12.98 AMPS
MAX. POWER-POINT VOLTAGE (VMP)	31.21 VOLTS
OPEN-CIRCUIT VOLTAGE (VOC)	37.23 VOLTS
SHORT-CIRCUIT CURRENT (ISC)	13.87 AMPS
NOM. MAX. POWER AT STC (PMAX)	405 WATT
MAX. SYSTEM VOLTAGE	1500V
VOC TEMPERATURE COEFFICIENT	-0.275 %/C

INVERTER CHARACTERISTICS - LUNAR BATTERY 9600W DC COUPLED HYBRID INVERTER (240V) (SI1-SB)		
MAX OUTPUT POWER	9600	W
DC INPUT VOLTAGE RANGE	380-450	V
MAX CONTINOUS OUTPUT CURRENT	40	A

SYSTEM SIZE:	11.745 KW DC 9.600 KW AC 10.499 KW CEC-AC
MODULE TYPE & AMOUNT:	(29) JA SOLAR JAM54S31-405/MR [405W]
INVERTER+BATTERY:	(01) LUNAR BATTERY 9600W DC COUPLED HYBRID INVERTER (240V) (SI1-SB)
OPTIMIZERS:	(29) LUNAR MAXIMIZER
MID:	(01) LUNAR BRIDGE
BATTERY CAPACITY:	20.0KWh

PRODUCER'S STORAGE DEVICE(S) WILL NOT CAUSE THE HOST LOAD TO EXCEED ITS NORMAL PEAK DEMAND. NORMAL PEAK DEMAND IS DEFINED AS THE HIGHEST AMOUNT OF POWER REQUIRED FROM THE DISTRIBUTION SYSTEM BY PRODUCER'S COMPLETE FACILITIES WITHOUT THE INFLUENCE OR USE OF THE ENERGY STORAGE DEVICE(S).



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REVISIONS		
Description	Date	Rev
Revision	10/24/2024	01

Signature with Seal

Project Name & Address

Initial Design
10/23/2024

Job Code
N/A

Project Number
415L-520TANG

Sheet Name
3-LINE DIAGRAM

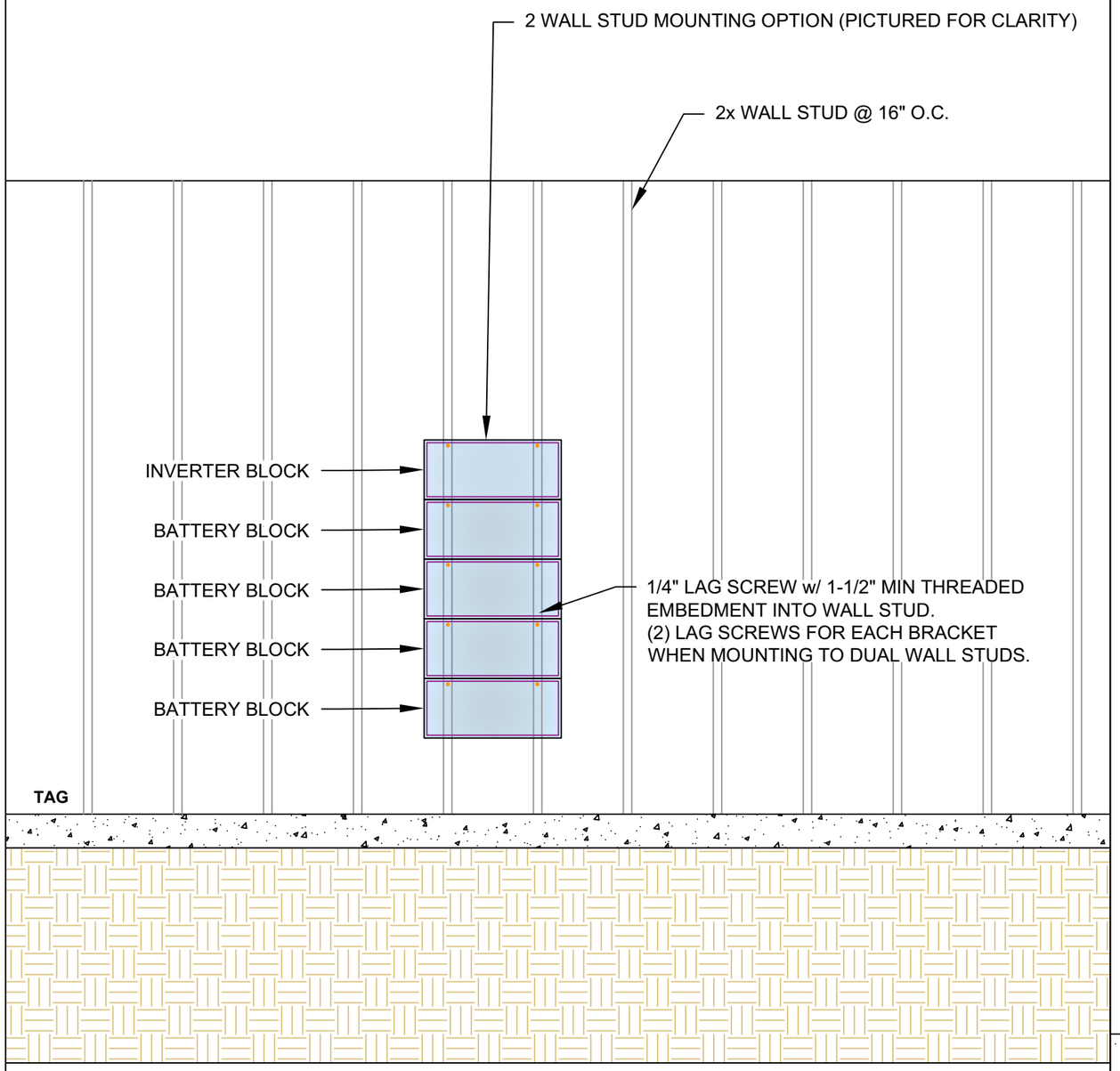
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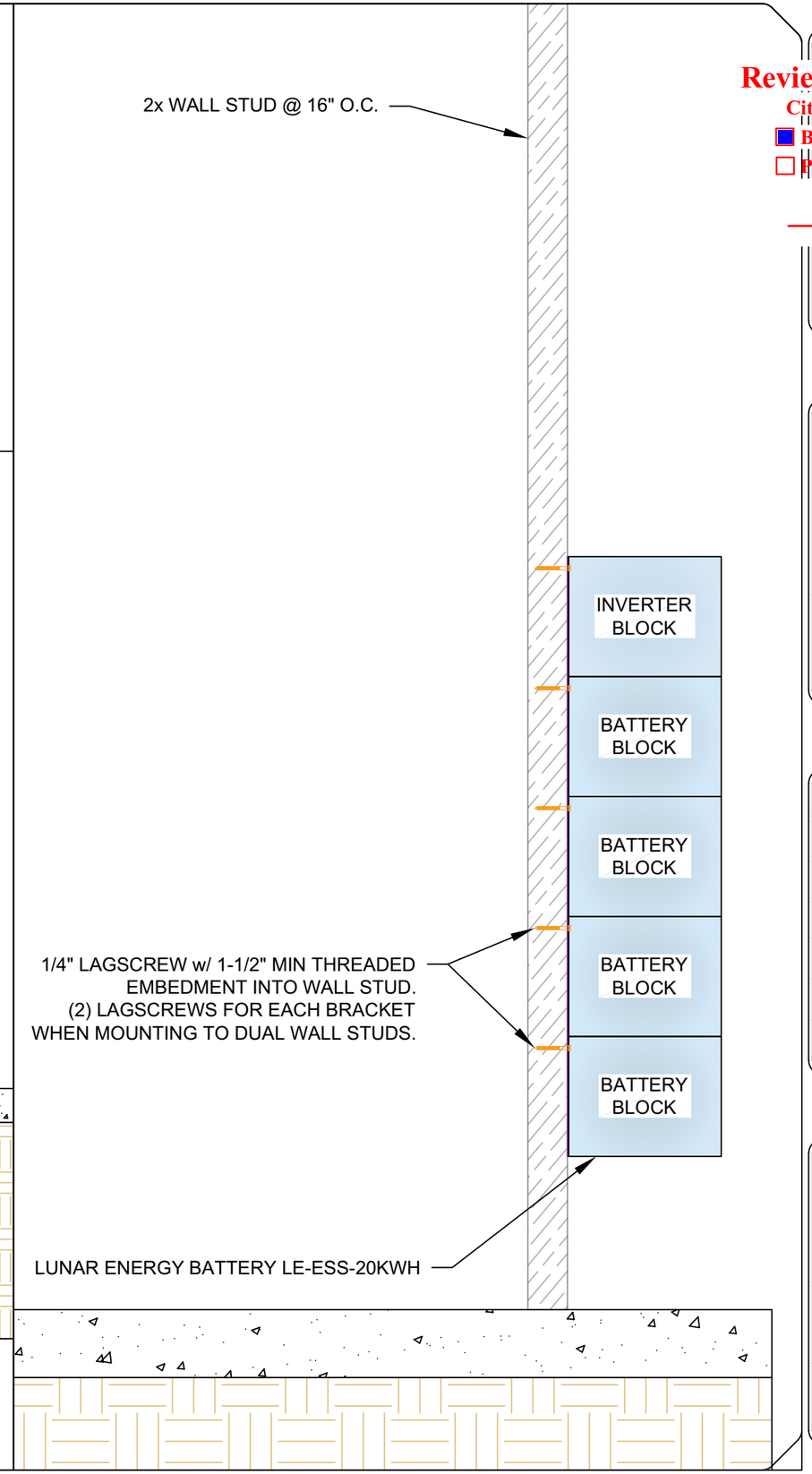
Sheet Number
E 1.1

ESS UNITS SHALL NOT BE INSTALLED WITHIN 36" OF DOORS AND WINDOWS LEADING INTO THE DWELLING

LUNAR ENERGY BATTERY LE-ESS-20KWH

SYSTEM WEIGHT:	499 LBS.
INVERTER BLOCK WEIGHT:	42 LBS.
BATTERY BLOCK WEIGHT:	95 LBS.
ENCLOSURE:	OUTDOOR NEMA-3R





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CONTRACTOR:

Reviewed for Code Compliance
City of San Jose , Building Division
☒ Building ☐ Electrical
☐ Plumbing ☐ Mechanical
Date:

CLIENT:

SITE ADDRESS:

REVISION:

REV:	DESCRIPTION:	DATE:
A	PLAN CHECK CMMNTS 1	10/07/24

SCALE: 1" = 8'

DATE: 14-Oct-24

TITLE: BATTERY MOUNTING DETAIL

S3