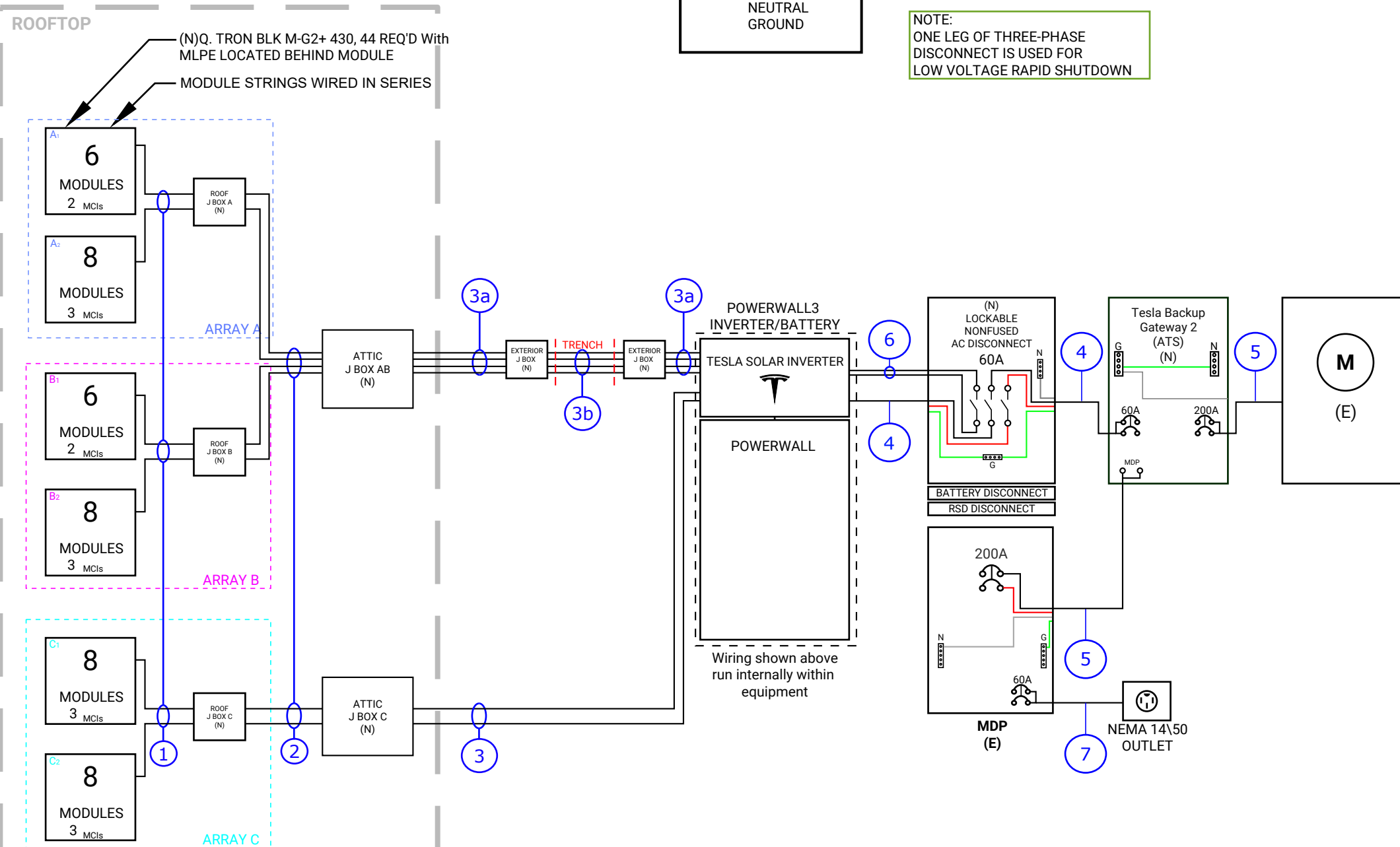


GENERAL ELECTRICAL NOTES

1. Equipment shall be new unless otherwise noted.
2. Equipment shall be listed unless otherwise noted.
3. Equipment shall be installed providing adequate working space in compliance with NEC.
4. Copper conductors shall be used and shall have insulation rating 600v, 90°C unless otherwise noted.
5. Conductors shall be sized in accordance with the NEC and ampacity shall be derated for temperature increase, conduit fill & voltage drop.
6. All conductors shall be installed in approved conduits. Conduits shall be adequately supported in accordance with the NEC.
7. AC Disconnect is optional, however it may be required by the utility.
8. Exposed non-current carrying metal parts shall be grounded in accordance with the NEC.
9. All work shall comply with the NEC and all applicable local electrical code requirements.
10. Contractor will provide labeling in accordance with the NEC, Article 110, 225, 690, and 705.

LEGEND

(N)	NEW
(E)	EXISTING
(O)	NEW BY OTHERS
	NEUTRAL
	GROUND



NOTE: NO MORE THAN 3 MODULES PER MCI RAPID SHUTDOWN DEVICE, AND NO MORE THAN FIVE PER STRING

PANEL MODEL: Q. TRON BLK M-G2+ 430, QTY 44 REQ'D, 430W
 INVERTER TYPE: 1707000-xx-y, QTY 1 REQ'D, 11500W, 240V
 11.500 kW-AC/ 18.920 kW-DC

MPPT Voltage Range	DC Voltage range	MPPT Min/Max	Absolute Min/Max
150	60	5	2
480	550	11	13

PV LEAD	ELECTRICIAN
SITE FLOOD PLANE: ZONE X	

WIRING SCHEDULE

TAG	CONDUIT SIZE	CONDUCTOR	NEUTRAL	GROUND	NOTES
1	NONE	#10 PV Wire	NONE	#6 Bare CU	(Mfg.supplied cabling within array)
2	NONE	10/2 MC	NONE	10 AWG	Roof J Boxes to Attic J Boxes
3	3/4" EMT or EQUIV	#10 THWN-2	NONE	#10 THWN-2	Attic J box C to Inverter
3a	1" EMT or EQUIV	#10 THWN-2	NONE	#10 THWN-2	Attic J Box AB to Ext. J Box; Ext. J Box to Inverter
3b	1" Sch. 80 PVC emerging from grade; 1" Sch. 40 PVC below grade	#10 THWN-2	NONE	#10 THWN-2	Trench between Ext. J Boxes
4	1" PVC or EQUIV	#6 THWN-2	#6 THWN-2	#10 THWN-2	Inverter to Disco to ATS
5	2" PVC or EQUIV	4/0 AL THWN-2	4/0 AL THWN-2	#6 THWN-2	Meter to ATS to MDP
6	1" PVC or EQUIV	#12 THWN-2	NONE	#10 THWN-2	Low Voltage Rapid Shutdown
7	1" PVC or EQUIV	#6 THWN-2	#6 THWN-2	#10 THWN-2	MDP to NEMA Outlet

NOTE:
ONE LEG OF THREE-PHASE DISCONNECT IS USED FOR LOW VOLTAGE RAPID SHUTDOWN



18.92 KW DC PV SYSTEM
CROCKER SOLAR PROJECT
 74 Oakridge Duncan Rd, Fuquay-Varina, NC 27526
LINE DIAGRAM

REVISION LIST

#	REV. DATE	DESC.

DATE: **September 3, 2024**
 DRAWN BY: **JPN**

Sheet No.
E-01

**PV SYSTEM DISCONNECT/
COMBINER BOX
BREAKER PANELS**

WARNING
TURN OFF PHOTOVOLTAIC
AC DISCONNECT PRIOR TO
WORKING INSIDE PANEL

NEC 110.27(C) & OSHA 1910.145(f)(7)

**PHOTOVOLTAIC SYSTEM
AC DISCONNECT**
OPERATING VOLTAGE [] VOLTS
OPERATING CURRENT [] AMPS

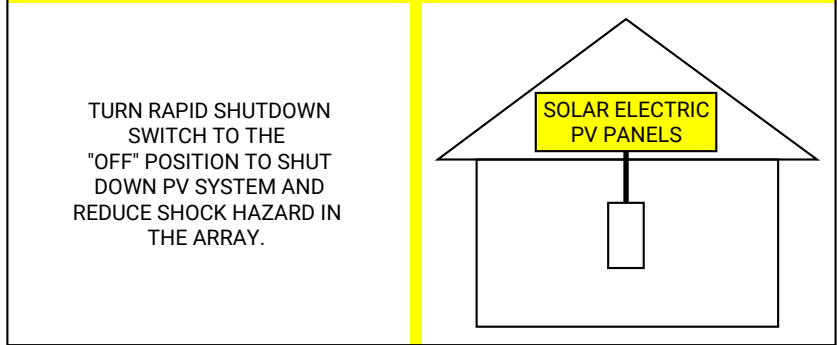
**RAPID SHUTDOWN
PV ARRAY**

SERVICE DISCONNECT

**MAIN PHOTOVOLTAIC SYSTEM
DISCONNECT**

NEC 690.13(B)

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**



IFC 605.11.3(1) & NEC 690.12(D)

EMT/CONDUIT RACEWAYS

PHOTOVOLTAIC POWER SOURCE

NEC 690.31(D)(2)

NET METER w/ BATTERY

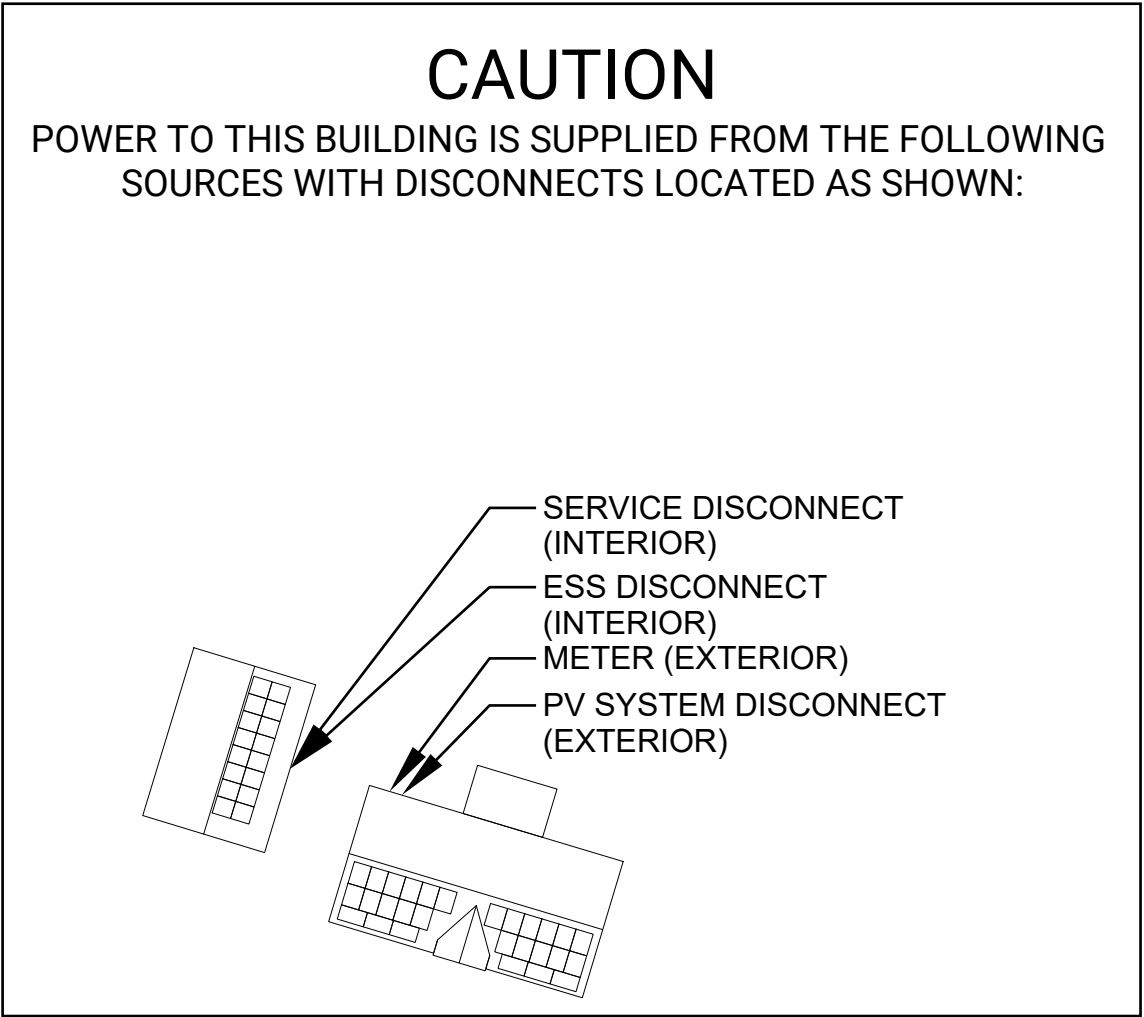
WARNING
THREE POWER SOURCES
SOURCES: UTILITY GRID, BATTERY AND
PV SOLAR ELECTRIC SYSTEM

NEC 705.30(C) and NEC 690.59

ENERGY STORAGE SYSTEMS

**BATTERY
DISCONNECT**

NEC 706.7(E)(2)



SITE FLOOD PLANE:



18.92 KW DC PV SYSTEM
CROCKER SOLAR PROJECT
74 Oakridge Duncan Rd, Fuquay-Varina,
NC 27526

STICKERS

REVISION LIST

#	REV. DATE	DESC.

DATE: September 3, 2024

DRAWN BY: JPN

Sheet No.

E-02