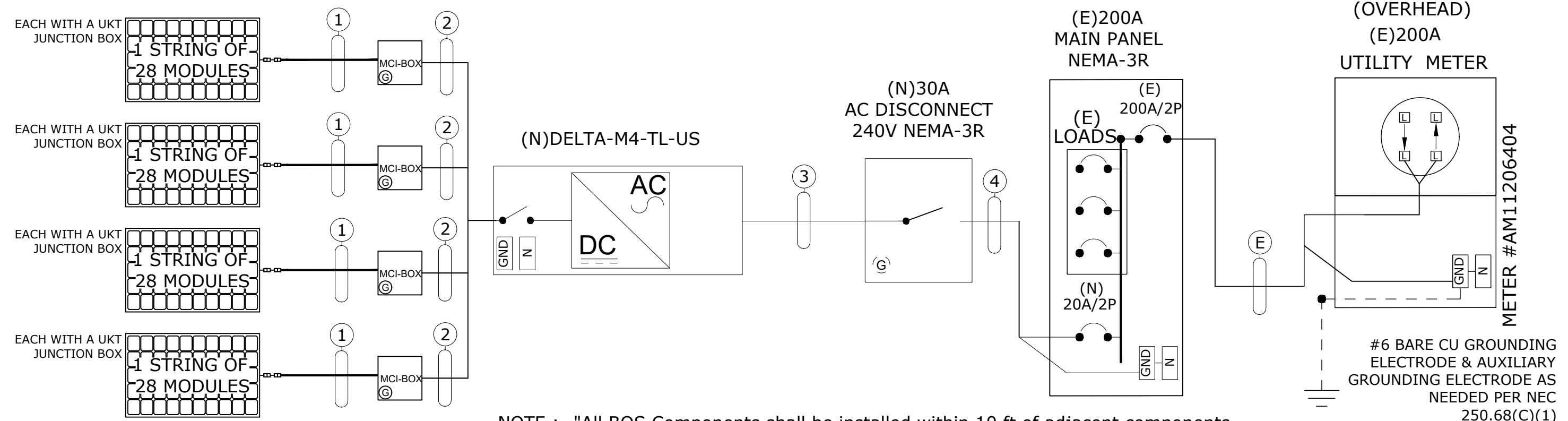


WIRE TAG #	CONDUIT	WIRE QTY	WIRE GAUGE:	WIRE TYPE	TEMP RATING:	WIRE AMP	TEMP DE-RATE:	CONDUIT FILL:	WIRE OCP:	TERMINAL 75°C RATING:	STRING WATTAGE / OPERATING VOLTAGE = STRING AMPS x NEC: = MAX AMPS	MAX. SYSTEM VOLTAGE	GRND SIZE	GRND WIRE TYPE
1	Open Air	2	#10	PV WIRE	90°	40	x 0.96	x 1	= 38.40A	35 A	1260 / 380 = 3.32 x 1.25 = 4.14 A	480	#6	SBC
2	3/4" EMT	2	#10	THWN-2	90°	40	x 0.96	x 1	= 38.40A	35 A	1260 / 380 = 3.32 x 1.25 = 4.14 A	480	#10	THWN-2
3	3/4" EMT	3	#10	THWN-2	90°	40	x 0.96	x 1	= 38.40A	35 A	/ = 16 x 1.25 = 20.00 A	240	#10	THWN-2
4	3/4" EMT	3	#10	THWN-2	90°	40	x 0.96	x 1	= 38.40A	35 A	/ = 16 x 1.25 = 20.00 A	240	#10	THWN-2

INVERTER SPECS	DELTA MID-CIRCUIT INTERRUPTER	DISCONNECTS	MODULE SPECS	ASHRAE AMBIENT TEMPERATURE SPECS	SERVICE INFO
INVERTER: DELTA-M4-TL-US QTY: 1 VOLTAGE: 240 WATTAGE: 4000 CEC EFF: 98%	MAX OUTPUT POWER : 505W QTY: 4 SYSTEM OPERATING VOLTAGE : 600V NUMBER OF INPUT CIRCUIT : 1 RATED OUTPUT CURRENT : 12A	MAKE: EATON DG221NRB QTY: 1 RATED CURRENT: 30A MAX RATED VOLTAGE: 240V	MODULE TYPE: QTY: WATTAGE: TIMBERLINE-SOLAR-45W 112 45W Voc: 10.9V Isc: 5.14A Imp: 4.89A Vpmax: 9.03V	High Temp: 2% Avg. 34.2° C DISTANCE ABOVE ROOF: 1" EXTREME: MIN -1.4° C NO TEMP ADDER PER 310.15(B)(3)(C)	MSP LOC: LEFT MSP VOLTAGE: 120/240V MSP GROUND: (N)ROD SERVICE TYPE: OVERHEAD

UTILITY HAS 24-HR UNRESTRICTED ACCESS TO ALL PHOTOVOLTAIC SYSTEM COMPONENTS LOCATED AT THE SERVICE ENTRANCE.  
 CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE LISTED AS SUNLIGHT RESISTANT PER NEC ARTICLE 300.6 (C) (1) AND ARTICLE 310.10 (D).  
 CONDUCTORS EXPOSED TO WET LOCATIONS SHALL BE SUITABLE FOR USE IN WET LOCATIONS PER NEC ARTICLE 310.10 (C).



NOTE :- "All BOS Components shall be installed within 10 ft of adjacent components"


	JOB NUMBER: P-004656	OWNER:	DESCRIPTION:	STAMP:	<b>PV-5</b> PAGE NAME: <b>SINGLE-LINE DIAGRAM</b> SCALE: NTS DATE: 9/10/2022
	UTILITY: ENERGY	ELIZABETH BRYANT, 5006 N DERBIGNY ST NEW ORLEANS, LA 70117	ELIZABETH BRYANT, RESIDENCE 5.04 kWDC ROOF SOLAR SYSTEM PRODUCTION: 5,445kWH		
	RACKING: NAIL FLASHING	ACCOUNT NUMBER : 131154130	DESIGNED BY:		
	MODULES: (112) SOLARSHINGLE TIMBERLINE SOLAR 45W	ENERQUAL	REV:		
	MCI: (4) MCI DELTA RAPID SHUTDOWN SYSTEM				
INVERTER: (1) DELTA M4-TL-US					

GROUNDING NOTES	
1	ALL EQUIPMENT SHALL BE PROPERLY GROUNDED PER THE REQUIREMENTS OF NEC ARTICLES 250 & 690
2	INSTALLER SHALL CONFIRM THAT MOUNTING SYSTEM HAS BEEN EVALUATED FOR COMPLIANCE WITH UL 2703 "GROUNDING AND BONDING" WHEN USED WITH PROPOSED PV MODULE.
3	PV MODULES SHALL BE GROUNDED TO MOUNTING RAILS USING MODULE LUGS OR RACKING INTEGRATED GROUNDING CLAMPS AS ALLOWED BY LOCAL JURISDICTION. ALL OTHER EXPOSED METAL PARTS SHALL BE GROUNDED USING UL-LISTED LAY-IN LUGS.
4	GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLOR CODED GREEN, OR MARKED GREEN IF #4AWG OR LARGER
5	AC SYSTEM GROUNDING ELECTRODE CONDUCTOR (GEC) SHALL BE A MINIMUM SIZE #8AWG WHEN INSULATED, #6AWG IF BARE WIRE.
6	IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE A VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.

EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC ARTICLE 690.45, AND BE A MINIMUM OF #10AWG WHEN NOT EXPOSED TO DAMAGE, AND #6AWG SHALL BE USED WHEN EXPOSED TO DAMAGE

**NOTES :**

- MATING CONNECTORS SHALL COMPLY WITH NEC 690.33.
- SOLAR EDGE SYSTEM MEETS REQUIREMENTS FOR PHOTOVOLTAIC RAPID SHUTDOWN SYSTEM (PVRSS), AS PER NEC 690.12(B).
- THE SPECIFIED OPTIMIZER CAN BE SUBSTITUTED WITH A P400, P405, P505, P401, OR P485. THESE OPTIMIZERS HAVE AN INPUT VOLTAGE WINDOW WIDE ENOUGH TO ACCOMMODATE THE OUTPUT VOLTAGE RANGE OF THE MODULE AT THE DESIGN TEMPERATURES, HAVE A MAX INPUT CURRENT RATING THAT IS ABOVE THE MAX OUTPUT CURRENT OF THE MODULE, AND A MAX POWER INPUT THAT IS ABOVE THE RATED POWER OUTPUT OF THE MODULE.
- DC PV CONDUCTORS ARE NOT SOLIDLY-GROUNDED. NO DC PV CONDUCTOR SHALL BE WHITE- OR GRAY-COLORED
- ALL METAL ENCLOSURES, RACEWAYS, CABLES AND EXPOSED NONCURRENT-CARRYING METAL PARTS OF EQUIPMENT SHALL BE GROUNDED TO EARTH AS REQUIRED BY NEC 250.4(A) AND PART III OF ARTICLE 250 AND EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO NEC 690.45. THE GROUNDING ELECTRODE SYSTEM SHALL ADHERE TO NEC 690.47(A) AND NEC 250.169. THE DC GROUNDING ELECTRODE SHALL BE SIZED ACCORDING TO NEC 250.166 AND INSTALLED IN COMPLIANCE WITH NEC 250.64.
- MAX DC VOLTAGE OF ARRAY FIXED BY THE INVERTER AT 380V REGARDLESS OF TEMPERATURE. THE MAX DC VOLTAGE OF THE MODULE AT -15°C IS 53.2V (-15°C - 25°C) X -0.138V/C + 47.7V = 53.2V).
- POINT-OF-CONNECTION IS ON THE SUPPLY SIDE OF SERVICE DISCONNECT, INSIDE PANELBOARD ENCLOSURE USING UNUSED TERMINALS, TERMINALS THAT ARE SUITABLE FOR DOUBLE LUGGING, OR USING OTHER LOCALLY-APPROVED METHODS AND HARDWARE, IN COMPLIANCE WITH NEC 705.12(A). THE PANELBOARD SHALL HAVE SUFFICIENT SPACE TO ALLOW FOR ANY TAP HARDWARE AS REQUIRED BY NEC 110.3 AND NEC 312.8(A)
- PV SYSTEM DISCONNECT SHALL BE A VISIBLE KNIFE-BLADE TYPE DISCONNECT THAT IS ACCESSIBLE AND LOCKABLE BY THE UTILITY. THE DISCONNECT SHALL BE LOCATED WITHIN 10 FT OF UTILITY METER. DISCONNECT SHALL BE GROUPED IN ACCORDANCE WITH NEC 230.72.

	JOB NUMBER: P-004656	OWNER:	DESCRIPTION:	STAMP:	<h1>PV-5.1</h1>
	UTILITY: ENTERGY	ELIZABETH BRYANT, 5006 N DERBIGNY ST NEW ORLEANS, LA 70117	ELIZABETH BRYANT, RESIDENCE 5.04 kWDC ROOF SOLAR SYSTEM		
	RACKING: NAIL FLASHING	ACCOUNT NUMBER : 131154130	PRODUCTION: 5,445kWH		
	MODULES: (112)SOLARSHINGLE TIMBERLINE SOLAR 45W	DESIGNED BY:	REV:		
	MCI: (4) MCI DELTA RAPID SHUTDOWN SYSTEM	ENERQUAL			
INVERTER: (1) DELTA M4-TL-US				SCALE: NTS	DATE: 9/10/2022