

GENERAL NOTES

1. FIELD VERIFY ALL REQUIREMENTS
2. USE SHEET 100 FOR LOCATION OF 0110022



CONTRACTOR

BIG SUN SOLAR
 PHONE: (214) 950-2000
 LIC. NO.: TERA 42550
UNAUTHORIZED USE OF THE
 COMPANY'S NAME OR LOGO FOR
 ANY OTHER BUSINESS OR
 SERVICE IS STRICTLY FORBIDDEN
 AND WILL BE PROSECUTED.



CHARLES E. MIK
 09110478
 TERA #05195

REVISION / RELEASE

NO.	DESCRIPTION	DATE
01	90% DESIGN	02.12.2029

PROJECT

NEW PV SYSTEM 134,75 MWDC / 96,00 MWAC
COCA - MISSION BRANCH LIBRARY
 3134 ROOSEVELT AVE
 SAN ANTONIO, TX 78214
 APN: 1254170

ENGINEER OF RECORD

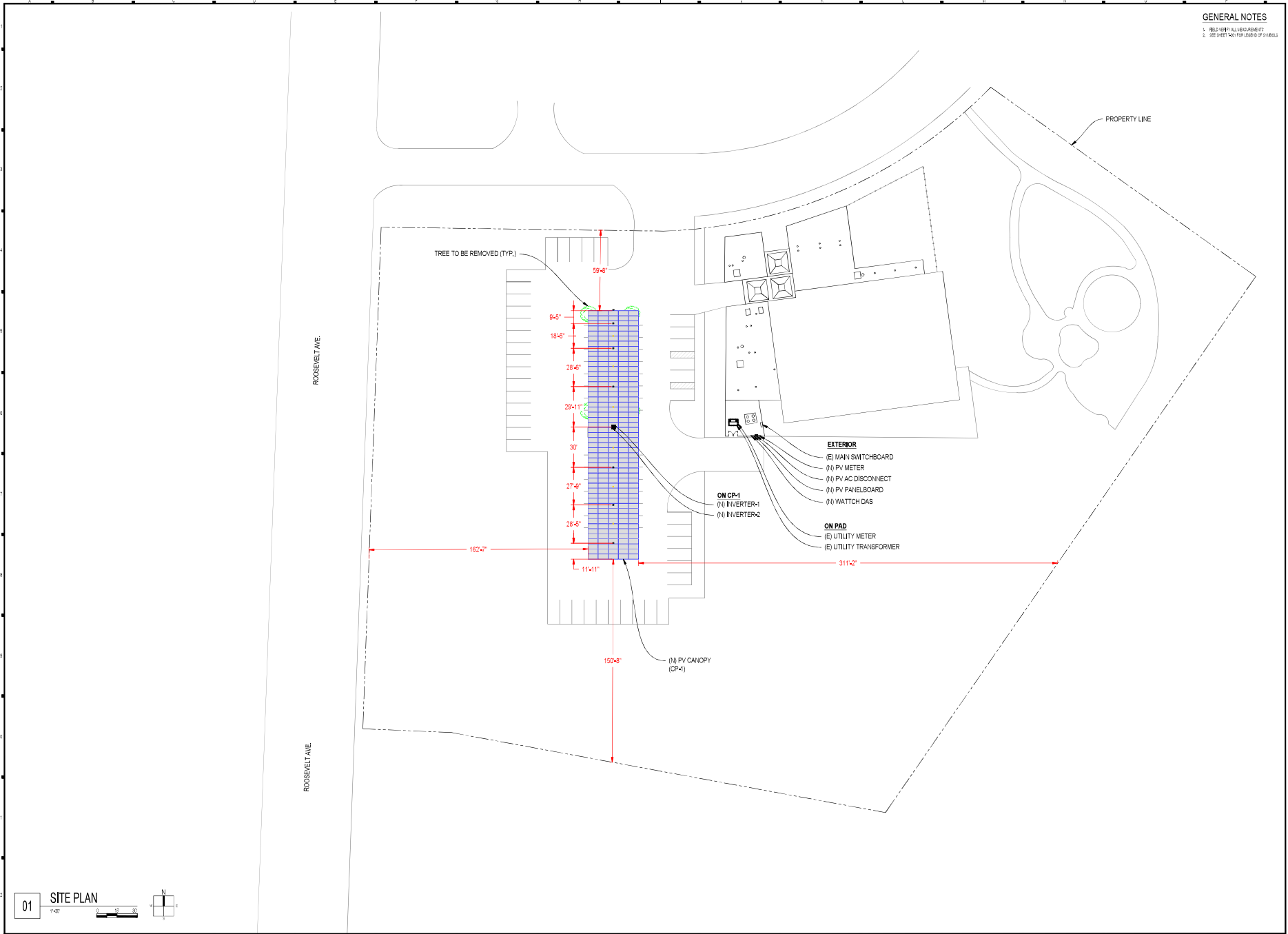


Barun Corp.
 Firm #20326
PAVED FILE BY OUR ARCHIVE

SHEET TITLE: **SITE PLAN**

DATE: 01/23/2025
 DESIGNED BY: P.E.C.
 CHECKED BY: P.E.C.
 SHEET NUMBER:

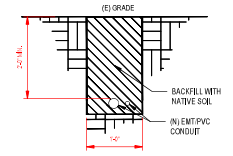
A-101.00



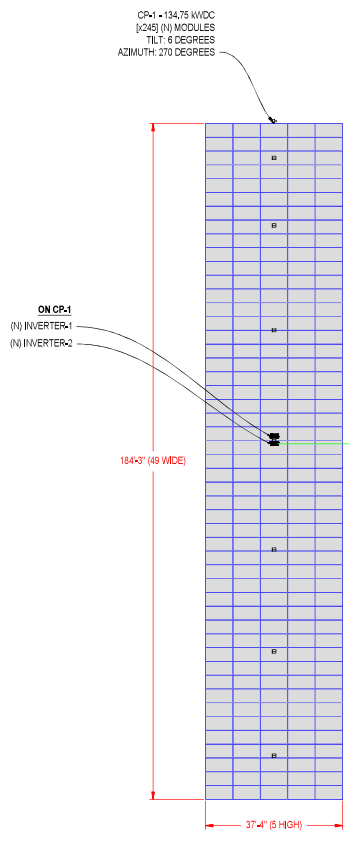
01 SITE PLAN

1"=0'

GENERAL NOTES
 1. FIELD VERIFY ALL MEASUREMENTS
 2. SEE SHEET A-102 FOR LEGEND OF SYMBOLS



02 TRENCH DETAIL (TYP.)
 NOT TO SCALE



CP-1 - 134.75 kWDC
 (249) (N) MODULES
 TILT: 6 DEGREES
 AZIMUTH: 270 DEGREES

ON CP-1
 (N) INVERTER-1
 (N) INVERTER-2

184'-3" (49 WIDE)

37'-4" (6 HIGH)

(N) APPROXIMATE TRENCH PATH
 LINEAR DISTANCE - 95'
 NOTE: TRENCH PATH IS INDICATIVE
 ONLY. SURVEY FOR OBSTRUCTIONS
 PRIOR TO DIGGING.



EXTERIOR
 (E) MAIN SWITCHBOARD
 (N) PV METER
 (N) PV AC DISCONNECT
 (N) PV PANELBOARD
 (N) WATTCH DAS

ON PAD
 (E) UTILITY METER
 (E) UTILITY TRANSFORMER



CONTRACTOR
 BIG SUN SOLAR
 PHONE: 210.850.2000
 LIC. NO.: TELA 42550



CHARLES E. MIK
 09110478
 TELA #05185

REVISION / RELEASE		
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ENGINEER OF RECORD

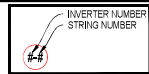
Baron Corp.
 Firm #20326
 POWER LINE & CABLE SERVICES

SHEET TITLE
 ELECTRICAL PLAN
 (SHEET 0)

DATE: 01.17.2028
 DESIGN BY: P.E.C.
 CHECKED BY: P.E.C.
 SHEET NUMBER: A-102.00

01 ELECTRICAL PLAN
 1/16"=1'-0"





CONTRACTOR

PHONE: 210 850-2000
LIC. NO.: TERA 12350
UNLICENSED USE OF THE
STATE OF TEXAS PROFESSIONAL
ENGINEER SEAL IS STRICTLY
PROHIBITED BY LAW.
UNLAWFUL REPRODUCTION,
DAMAGE AND PENALTIES APPLY.



CHARLES E. MIK
09110478
TELE: 855185

REVISION / RELEASE

NO.	DESCRIPTION	DATE
01	90% DESIGN	02.12.2020

PROJECT

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COCA - MISSION BRANCH LIBRARY
3134 ROOSEVELT AVE
SAN ANTONIO, TX 78214
APN: 1254170

ENGINEER OF RECORD



Barun Corp.
Firm #20326
PAVED BY: CUP ARCHITECTS

SHEET TITLE

STRING PLAN
(SHEET 6)

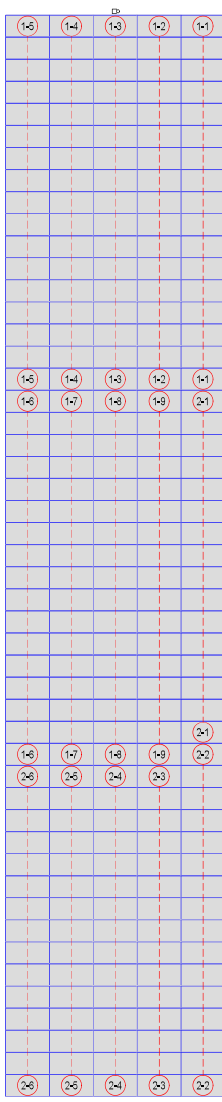
DATE: 01/12/2020

DESIGN BY: P.E.C.

CHECKED BY: P.E.C.

SHEET NUMBER:

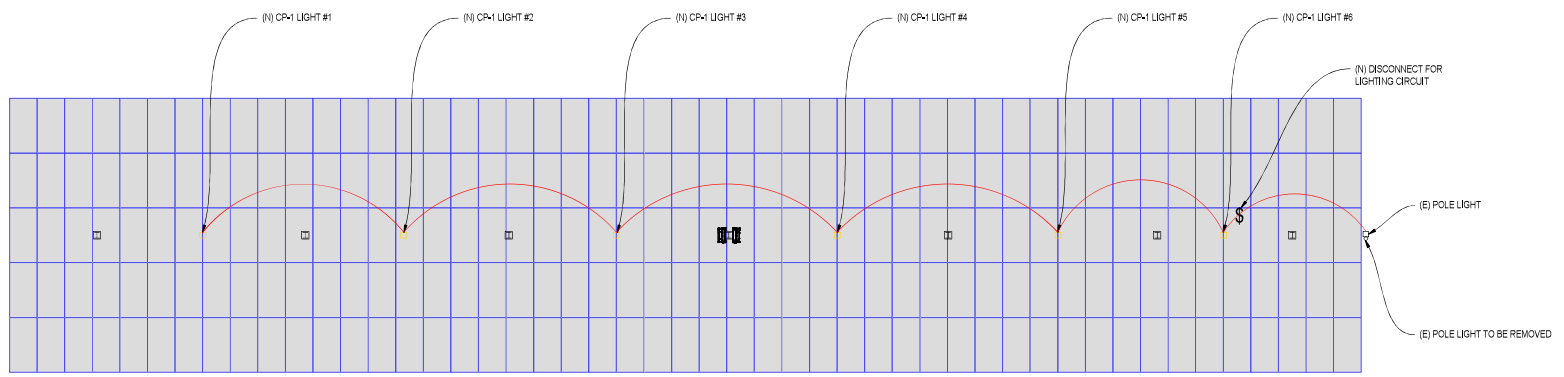
A-103.00



01 STRING PLAN

GENERAL NOTES:

1. LIGHTS SHALL BE AUTOMATICALLY TURNED OFF WHEN DAYLIGHT IS PRESENT AND SATISFIES THE LIGHTING NEEDS, PER IECC SEC. C405.2.7.1
2. ALL CANOPY LIGHTING TO TIE INTO EXISTING LIGHTING CIRCUITS AND TO EXISTING BUILDING LIGHTING CONTROLS, LIGHTING CONTROLS TO BE COMPLY WITH IECC SEC. C405.2.7.1, SEC. C405.2.7.2 OR SEC. C405.2.7.3 AND SEC. C405.2.7.4
3. LUMINAIRES (FIXTURES) MEET AND EXCEED ALL BACKLIGHTING AND GLARE REQUIREMENTS. UPLIGHTING REQUIREMENTS ARE IRRELEVANT DUE THE INSTALLATION TYPE - THE LUMINAIRES WILL BE COMPLETELY COVERED BY THE CARPORTS AND WILL BE INSTALLED PARALLEL TO THE FINISHED GRADE
5. DEBRIS TO BE REMOVED FROM SITE.



LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	ARR. LUM. LUMENS	LLF	BUG RATING	DESCRIPTION	LUM. LUMENS
	6	C1	SINGLE	7579	0,900	B3-U3-G2	COOPER # CLCS15S-60W-3000K	7579

2M CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN	MOUNTING HEIGHT	DISTANCE TO NEAREST PROPERTY LINE
CP	ILLUMINANCE	Fc	8,07	16,3	0,1	80,70	163,00	10,00	150,00

LIGHTING CIRCUIT ANALYSIS

STRING	QTY	PHASE	OCPD	PHASE A	KW
1	6	A	20	0,36	0,36
TOTAL	6			0,36	0,36

LIGHTING CIRCUIT MAINTENANCE

LIGHTING CIRCUIT	LOCATION
CIRCUIT 1	LIGHTING CONTROL PANEL CKT #6



DEMOLITION NOTES:

ELECTRICAL

1. ELECTRICAL CIRCUITS TO BE DISCONNECTED AT GROUND JUNCTION BOXES.
2. POLE LIGHT FIXTURES TO BE REMOVED FROM FOUNDATION.
3. LIGHT FIXTURES TO BE REMOVED FROM POLE AND PALLETIZED FOR STORAGE USING MODULE PALLETS.
4. EQUIPMENT TO BE STORED ONSITE.
5. EXISTING LIGHTING CIRCUITS TO BE USED FOR NEW CANOPY LIGHT FIXTURES.

FOUNDATION

1. CEMENT FOUNDATIONS TO BE REMOVED TO 6" BELOW GRADE.
2. EXISTING REBAR TO BE REMOVED TO GROUND LEVEL.
3. NEW CEMENT CAPS TO BE INSTALLED TO GRADE.
4. IN LOCATIONS DETERMINED BY ELECTRICIAN, REMOVE FOUNDATION TO 14" BELOW GRADE, AND POUR NEW CEMENT CAPS AROUND GROUND JUNCTION BOX.
5. DEBRIS TO BE REMOVED FROM SITE.

CONTRACTOR
BIG SUN SOLAR

PHONE: (214) 955-2200
LIC. NO.: TERA 12550

UNAUTHORIZED USE OF THE CONTRACTOR'S NAME OR LOGO FOR ANY PROJECT NOT AUTHORIZED BY THE CONTRACTOR IS PROHIBITED AND WILL BE PROSECUTED.

CHARLES E. HIRK
09110478
TEK: 805195

REVISION / RELEASE		
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01	90% DESIGN	02.12.2020

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COCA - MISSION BRANCH LIBRARY

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SAN ANTONIO, TX 78214
APN: 1254170

ENGINEER OF RECORD

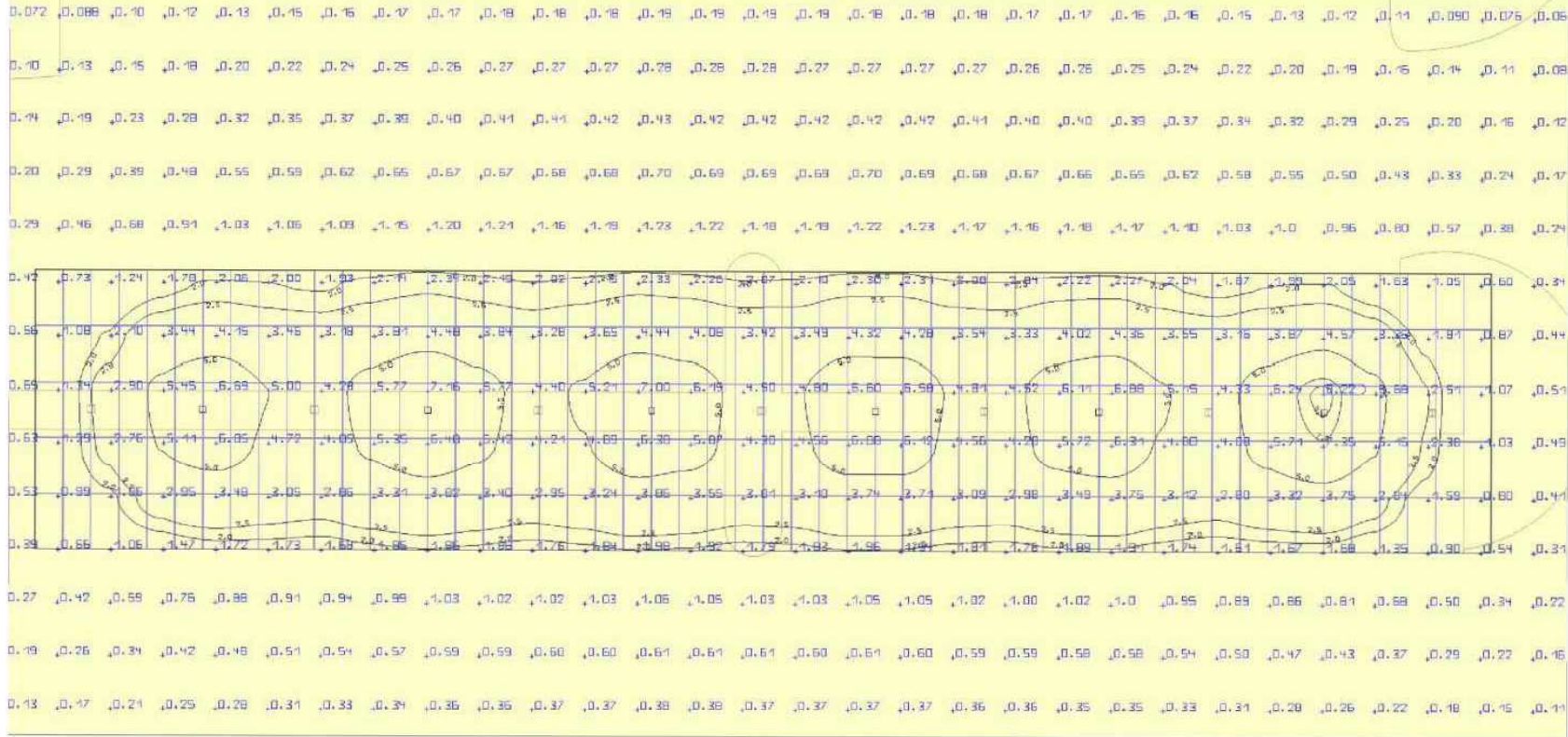
Barun Corp.
Firm #20326
REGISTERED ELECTRICAL ENGINEER

SHEET TITLE: LIGHTING PLAN

DATE: 07/2020
DESIGN BY: P.E.C.
CHECKED BY: P.E.C.
SHEET NUMBER: A-104.00

LEGEND
 □ (N) CP

NOTE: THE AMOUNT OF LIGHT FALLING ON THE SURFACE/GROUND (ILLUMINANCE) IS REPRESENTED ON THE PLAN USING NUMERICAL DECIMAL VALUES IN FOOTCANDLES (FC).



CONTRACTOR
 BIG SUN SOLAR
 PHONE: 214 65230
 LIC. NO. TERA 1250

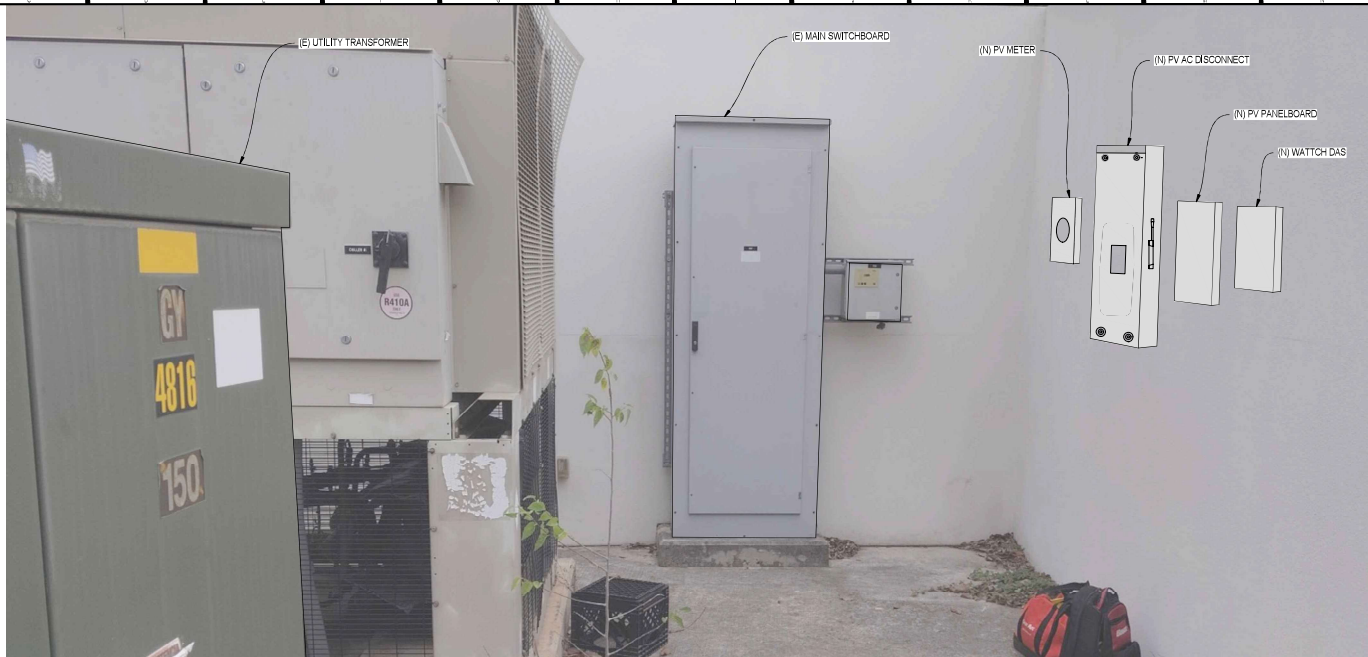


REVISION / RELEASE		
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01	90% DESIGN	02.12.2020

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COCA - MISSION BRANCH LIBRARY
 3134 ROOSEVELT AVE
 SAN ANTONIO, TX 78214
 APN: 1254170



ENGINEER OF RECORD
 Barun Corp.
 Firm #20326
 REGISTERED ELECTRICAL ENGINEER
 SHEET TITLE: PHOTOMETRY PLAN
 DATE: 01/20/20
 DESIGNED BY: P.E.C.
 CHECKED BY: P.E.C.
 SHEET NUMBER: A-105.00



A EQUIPMENT ELEVATION-1 (EXTERIOR)



B EQUIPMENT ELEVATION-2 (EXTERIOR)



C EQUIPMENT ELEVATION-3 (EXTERIOR)




CONTRACTOR
 BIG SUN SOLAR
 PHONE: (214) 965-2200
 LIC. NO.: TERA 42250



CHARLES E. MIK
 (911) 4-178
 TEX. #05185

REVISION / RELEASE		
NO.	DESCRIPTION	DATE
01	90% DESIGN	02.12.2029

PROJECT
 NEW PV SYSTEM 134.75 MWDC / 96.00 MWAC
COXA - MISSION BRANCH LIBRARY
 3134 ROOSEVELT AVE
 SAN ANTONIO, TX 78214
 APN: 1254170

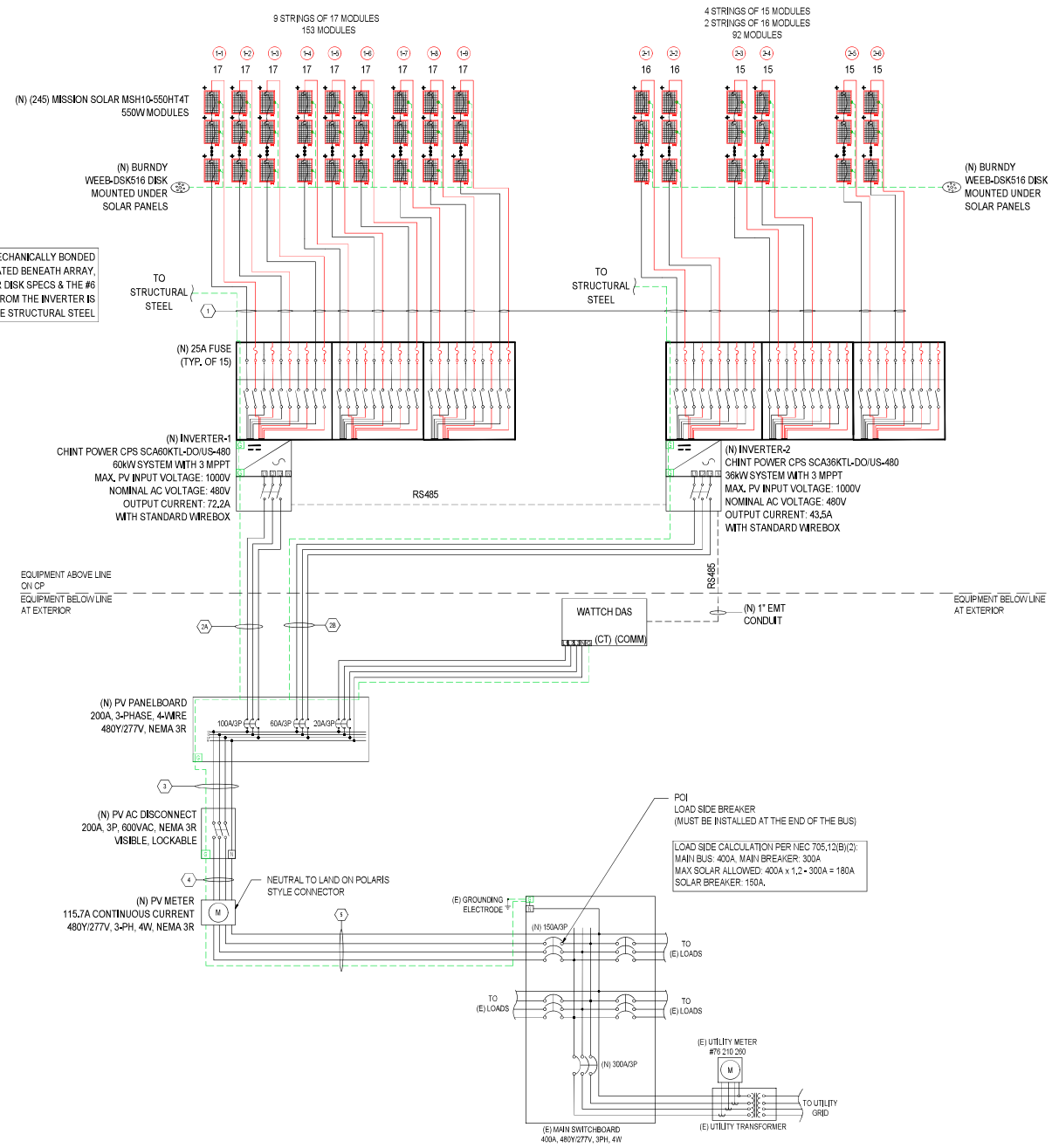
ENGINEER OF RECORD

 Barun Corp.
 Firm #20326
 POWER FILE BY: CEM/AM/2025

SHEET TITLE:
 EQUIPMENT ELEVATION
 (SHEET 7)

DATE: 01.17.2025
DESIGN BY: P.E.C.
CHECKED BY: P.E.C.
SHEET NUMBER:
 A-106.00

- NOTES:
 1. ALL PARALLEL CONDUCTORS TO BE IN SEPARATE CONDUITS
 2. ALL BUILDING METAL PIPING TO BE BONDED.
 3. NEW AC SURGE PROTECTOR TO BE INSTALLED OBSERVING NEC230.67

NOTE: CARPORT ARRAY IS MECHANICALLY BONDED BY GROUNDING DISKS LOCATED BENEATH ARRAY. REFER SHEET R-002.00 FOR DISK SPECS & THE #6 BARE COPPER WIRE FROM THE INVERTER IS CONNECTED TO THE STRUCTURAL STEEL



01 THREE LINE DIAGRAM
 NOT TO SCALE

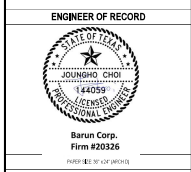


CONTRACTOR
 BIG SUN SOLAR
 PHONE: (214) 953-9200
 LIC. NO.: TERA 42550



REVISION / RELEASE		
NO.	DESCRIPTION	DATE
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 COSA - MISSION BRANCH LIBRARY
 3134 ROOSEVELT AVE
 SAN ANTONIO, TX 78214
 APN: 1254170



SHEET TITLE
 THREE LINE DIAGRAM
 SHEET NO.
 DATE: 07.2020
 DESIGNED BY: P.E.C.
 CHECKED BY: P.E.C.
 SHEET NUMBER:

E-601.00

MODULES								
QTY.	MAKE AND MODEL	PMAX	ISC	IMP	VOC	VMP	TEMP. COEFF. OF VOC	MAX. FUSE RATING
245	MISSION SOLAR MSH10-650HT4T	550W	14A	13.12A	49.8V	41.95V	-0.258%/°C	25A

INVERTERS									
QTY.	MAKE AND MODEL	AC VOLTAGE	GROUND	MAX OCPD RATING	RATED POWER	SHORT-CIRCUIT CURRENT PER MPPT	MAX OUTPUT CURRENT	MAX INPUT VOLTAGE	MAX EFFICIENCY
1	CHINT POWER CPS SCA36KTL-DO/US-480	480V	FLOATING	110A	36,000W	54.4A	43.5A	1000V	98.80%
1	CHINT POWER CPS SCA60KTL-DO/US-480	480V	FLOATING	125A	60,000W	54.4A	72.2A	1000V	98.80%

DESIGN TEMPERATURES	
ASHRAE EXTREME LOW	-4.4°C (24.1F), SOURCE: SAN ANTONIO STINSON, TX, USA
ASHRAE 2% HIGH	31.4°C (88.5°F), SOURCE: SAN ANTONIO STINSON, TX, USA

SYSTEM SUMMARY					
INVERTER # MPPT #	INVERTER-1 MPPT #1	INVERTER-1 MPPT #2	INVERTER-1 MPPT #3	INVERTER-2 MPPT #1	INVERTER-2 MPPT #2 & #3
INVERTER STRINGING	(1-1) THRU (1-3)	(1-4) THRU (1-6)	(1-7) THRU (1-9)	(2-1) & (2-2)	(2-3) THRU (2-6)
MODULE COUNT	17 X 3	17 X 3	17 X 3	16 X 2	15 X 2
MPPT VMP	616.90V	616.90V	616.90V	580.61V	544.32V
MPPT VOC	910.82V	910.82V	910.82V	857.24V	803.66V
MPPT IMP	39.36A	39.36A	39.36A	26.24A	26.24A
MPPT ISC x 1.25	52.50A	52.50A	52.50A	35.00A	35.00A
STRING ARRAY STC POWER	28,050W	28,050W	28,050W	17,600W	16,500W
TOTAL STC POWER	134,750W				
TOTAL INVERTER AC CURRENT	115.7A				
TOTAL INVERTER AC POWER	96,000W				

CONDUCTOR AND CONDUIT SCHEDULE W/ELECTRICAL CALCULATIONS																
ID	TYPICAL	CONDUCTOR	CONDUIT	CURRENT-CARRYING CONDUCTORS IN CONDUIT	OCPD	EGC	TEMP. CORR. FACTOR	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT (156% FOR DC, 125% FOR AC)	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING	AMP. @ TERMINAL	LENGTH (FT)	VOLTAGE DROP %
1	15	10 AWG PV WIRE (1000V), COPPER	N/A	FREE AIR	N/A	6 AWG BARE, COPPER	0.96 (31.4°C)	1.0	14.00A	21.84A	55A	52.8A	60°C	40A	50	0.31
2A	1	1/0 AWG THWN-2, ALUMINUM	2" PVC/EMT	3	100A	6 AWG THWN-2, ALUMINUM	0.96 (31.4°C)	1.0	72.20A	90.25A	135A	129.6A	60°C	120A	100	0.52
2B	1	4 AWG THWN-2, ALUMINUM	1" PVC/EMT	3	60A	8 AWG THWN-2, ALUMINUM	0.96 (31.4°C)	1.0	43.50A	54.37A	75A	72.0A	60°C	65A	100	0.80
3	1	3/0 AWG THWN-2, ALUMINUM	2" PVC/EMT	3+N	N/A	4 AWG THWN-2, ALUMINUM	0.96 (31.4°C)	1.0	115.70A	144.62A	175A	168.0A	75°C	155A	10	0.05
4	1	3/0 AWG THWN-2, ALUMINUM	2" PVC/EMT	3+N	150A	4 AWG THWN-2, ALUMINUM	0.96 (31.4°C)	1.0	115.70A	144.62A	175A	168.0A	75°C	155A	10	0.05
5	1	3/0 AWG THWN-2, ALUMINUM	2" PVC/EMT	3+N	150A	4 AWG THWN-2, ALUMINUM	0.96 (31.4°C)	1.0	115.70A	144.62A	175A	168.0A	75°C	155A	10	0.05

! WARNING !
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.

MAX INPUT CURRENT: 36.24A DC
OPERATING VOLTAGE: 910.82V DC
MAX SHORT CURRENT: 52.50A DC
MAX VOLTAGE: 910.82V DC

MAX INPUT CURRENT: 36.24A DC
OPERATING VOLTAGE: 910.82V DC
MAX SHORT CURRENT: 52.50A DC
MAX VOLTAGE: 910.82V DC

PV AC DISCONNECT
OPERATING CURRENT: 115.7A AC
OPERATING VOLTAGE: 480V AC

LABEL 1
AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT [NEC 690.17]

LABEL 2A INVERTER-1
AT EACH APPLICABLE DC DISCONNECTING MEANS [NEC 690.53]

LABEL 2B INVERTER-2
AT EACH APPLICABLE DC DISCONNECTING MEANS [NEC 690.53]

LABEL 3A
AT POINT OF INTERCONNECTION, MARKED AT DISCONNECTING MEANS [NEC 690.54]

! WARNING !
DUAL POWER SOURCES, SECOND SOURCE IS PV SYSTEM

WARNING PHOTOVOLTAIC POWER SOURCE

PHOTOVOLTAIC DC DISCONNECT

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED
PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED SOUTH SIDE OF THE BUILDING

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED

LABEL 4
AT POINT OF INTERCONNECTION [NEC 705.12(D)(4)]

LABEL 5
AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS, SPACED AT MAXIMUM 10 FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILING, OR FLOORS, [NEC 690.31(G)] LETTERS AT LEAST 3/8 INCH, WHITE ON RED BACKGROUND, REFLECTIVE [IFC 805.11.1.1]

LABEL 6
AT EACH DC DISCONNECTING MEANS [NEC 690.13(B)]

LABEL 7
AT UTILITY METER [NEC 690.56(B)]

PHOTOVOLTAIC AC DISCONNECT

! WARNING !
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

! WARNING !
POWER SOURCE OUTPUT CONNECTION, DO NOT RELOCATE THIS OVERCURRENT DEVICE

PV METER

REVENUE METER

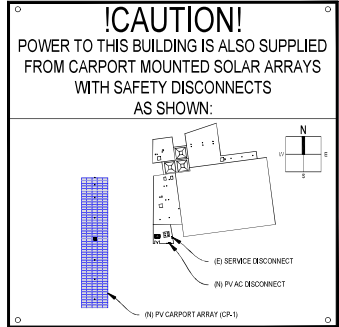
LABEL 8
AT EACH AC DISCONNECTING MEANS [NEC 690.13(B)]

LABEL 9
AT EACH DISCONNECTING MEANS FOR PHOTOVOLTAIC EQUIPMENT (2" X 4") [NEC 690.13]

LABEL 10
MAIN DISTRIBUTION PANEL (ONLY IF SOLAR IS BACK-FED)
SUBPANEL (ONLY IF SOLAR IS BACK-FED)
CODE REF: NEC 705.12 (B)(2)

LABEL 11
AT PV METER SOCKET

LABEL 12
AT CPS ENERGY REVENUE METER SOCKET



! CAUTION !
POWER TO THIS BUILDING IS ALSO SUPPLIED FROM CARPORT MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:

DIRECTORY
PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS (IF NOT IN THE SAME LOCATION) [NEC 690.55(B)]
WHERE THE INVERTERS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE INSTALLED AT EACH DC PV SYSTEM DISCONNECTING MEANS, AT EACH AC DISCONNECTING MEANS, AND AT THE MAIN SERVICE DISCONNECTING MEANS SHOWING THE LOCATION OF ALL AC AND DC PV SYSTEM DISCONNECTING MEANS IN THE BUILDING. [NEC 690.4(H)]

LABELING NOTES
1.1 LABELING REQUIREMENTS BASED ON THE 2023 NATIONAL ELECTRICAL CODE, 2024 INTERNATIONAL FIRE CODE, C94.33 CFR 1910.399, A193.2335
1.2 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
1.3 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
1.4 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.
1.5 ALERTING WORDS TO BE COLOR CODED, "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND, [A193.2335]

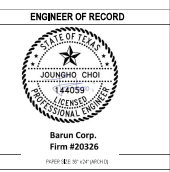


CONTRACTOR
MISSION SOLAR
PHONE: (214) 982-0200
LIC. NO.: TEP4142500
UNLICENSED USE OF THE CONTRACTOR'S NAME OR LOGO FOR ANY OTHER PROJECTS IS STRICTLY PROHIBITED. VIOLATION WILL BE PROSECUTED TO THE FULL EXTENT OF THE LAW.



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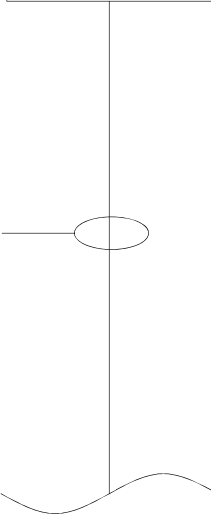


SHEET TITLE
WIRING CALCULATIONS & PLACARDS

DATE: 01/23/23
DESIGN BY: P.E.C.
CHECKED BY: P.E.C.
SHEET NUMBER: E-602.00

(N) (6) CP LIGHTS
 "COOPER # CLCS15S-60W-3000K"
 60 WATTS, 7,579 LUMENS, 120-277V

(N) (1) 1" CONDUIT
 (2) 10 AWG, CU
 (1) 10 AWG, CU, GRD



TO
 (E) POLE LIGHT CIRCUITS

01 LIGHTING LINE DIAGRAM
 NOT TO SCALE



CONTRACTOR
 BIG SUN SOLAR
 PHONE: 214-858-2200
 LIC. NO.: TERA 4250



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 COSA - MISSION BRANCH
 LIBRARY
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 APN: 1254170



ENGINEER OF RECORD
 Barun Corp.
 Firm #20326
 REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE: LIGHTING LINE DIAGRAM
DATE: 01/11/2028
DESIGN BY: P.E.C.
CHECKED BY: P.E.C.
SHEET NUMBER: E-603.00

P-PERC Bifacial 144HC
Transparent Backsheet



540-560W

Class leading power output

Solar Built for the Long Haul

Mission Solar Energy is headquartered in San Antonio, Texas. This product is tailored for commercial and utility applications. Every Mission Solar Energy solar module is certified and surpasses industry standard regulations, providing excellent performance over the long term. Mission Solar Energy is a proud member of the CIG family of companies.

America's Module Company®

- Fair Trade Practices**
 - Free of forced labor at all stages of the supply chain
 - Not subject to AFD/DOJ tariffs or investigations
- Certified Reliability**
 - Tested to UL 6750
 - PID resistant
- Advanced Technology**
 - Half-cut cell with 50 busbar
 - Passivated emitter rear contact
 - Engineered for residential and commercial applications
- Extreme Weather Resilience**
 - Up to 5,600 Pa front load & 2,400 Pa back load
 - Tested to UL 6750
 - Half test results exceed 25mm at 23 m/s

CERTIFICATIONS



FRAME-TO-FRAME WARRANTY
Degradation guaranteed up to 0.35% per year for 30 years or 100,000 hours, whichever comes first. 0.2% per year for 30 years or 100,000 hours, whichever comes first.

For more information, visit www.missionsolar.com/warranty

Class Leading 540-560W P-PERC Bifacial 144HC Transparent Backsheet

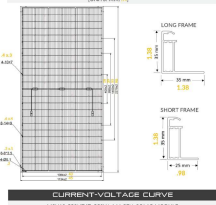
ELECTRICAL SPECIFICATION

PRODUCT TYPE	Series	444	444	444
Power Output	Watt	540	550	560
Module Efficiency	%	21.1	21.2	21.3
Tolerance	%	0.4	0.4	0.4
Short Circuit Current	mA	1395	1407	1407
Open Circuit Voltage	V	49.6	49.6	49.6
Rated Current	mA	1305	1322	1332
Rated Voltage	V	41.4	41.4	41.4
Peak Rating	A	25	25	25
System Voltage	V	1,500	1,500	1,500

ELECTRICAL SPECIFICATION (MAXIMUM)

PRODUCT TYPE	Series	444	444	444
Power Output	Watt	540	550	560
Short Circuit Current	mA	1,350	1,310	1,330
Open Circuit Voltage	V	51.2	51.2	51.2
Rated Current	mA	1,020	1,010	1,035
Rated Voltage	V	39.6	39.6	39.9

BASIC DIMENSIONS



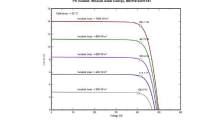
OPERATING CONDITIONS

Maximum System Voltage	1,500 VDC
Operating Temperature Range	-40°C to 125°C (-40°F to 160°F)
Minimum Series Fuse Rating	25A
Safety Classification	UL 1741-SA and IEC 62109-2
Weight & Back Load	18.5 x 5.000 Pa front and 2,400 Pa back load

MECHANICAL DATA

Cell Count	72
Cell Orientation	180°
Module Orientation	270° (max. 1.534 mm x 25 mm)
Weight	6.64 kg (14.6 lbs)
Frame Glass	3.2 mm High Transmission Tempered Glass
Frame	Anodized Aluminum Alloy
Encapsulant	Ethylene Vinyl Acetate (EVA)
Junction Box	IP68 Rated
Carrier	Wire-Less (32AWG)
Conductor	MGC/EVA/Al-ACA

CURRENT-VOLTAGE CURVE



SHIPPING INFORMATION

Track Load	Sho To	Pressure	Module	600W Pin
50	Head	2000	50	210
50	Head	2000	50	210
50	Head	2000	50	210

PACKET DIMENSIONS

Weight (kg)	Height (mm)	Width (mm)	Length (mm)
18.5	110	1700	1700
18.5	110	1700	1700
18.5	110	1700	1700

CERTIFICATIONS AND TESTS



Mission Solar Energy, San Antonio, Texas
5055 S. New Braunfels Ave., San Antonio, Texas
78202
www.missionsolar.com
Mission Solar Energy reserves the right to make design changes without notice.
Contact Us: sales@missionsolar.com

www.missionsolar.com
1 | info@missionsolar.com

CPS 50/60 kW, 1000 Vdc String Inverters for North America

The CPS 50/60 kW three-phase string inverters are designed for ground mount, rooftop and carport applications. The units are high performance, advanced, and reliable inverters designed specifically for the North American environment and grid. They are designed to operate at high efficiency across a wide range of operating conditions, and are designed to operate at high efficiency across many applications.

The CPS 50/60 kW units ship with either the Standard wire box or the Rapid Shutdown wire box, both fully integrated and separable with touch-safe fusing, monitoring, and AC and DC disconnect switches. The integrated PLC Transformer in the Rapid Shutdown wire box enables PMS3 certified module-level rapid shutdown when used with AFS-RSD-PRC-RSD-2 products. The CPS FlexNet Gateway enables monitoring, control, and remote product upgrades.

Key Features

- NEC 2017/2020 PMS3 certified for rapid shutdown
- 5S 66 kW rating allows max rated active power at 60 Hz
- Selectable AC supported power of 50/55 kW and 60/66 kW
- NEC compliant and UL listed arc-fault circuit protection
- 15°/90° mounting orientation for low-profile roof installs
- Optional FlexNet Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 3 MPPTs with 5 inputs each for maximum flexibility
- NEMA Type 4X outdoor rated enclosure
- UL 1741-SA certified for CA Rule 21, including SA-S418
- UL 1741-SB and IEC 62109-2 certified
- Separable wire box design for fast service
- Standard 10-year warranty with extensions up to 20 years



50/60kW Standard Wire Box
50/60kW Rapid Shutdown Wire Box
CPS 50/60kW DOUS-680
CPS 50/60kW DOUS-680

www.missionsolar.com
1 | info@missionsolar.com

CPS 50/60 kW, 1000 Vdc String Inverters for North America

Model Name	CPS 50/60kW DOUS-680	CPS 50/60kW DOUS-680
Max. PV power	60 kW (33 kW per MPPT)	60 kW (33 kW per MPPT)
Max. DC input voltage	1000 VDC	1000 VDC
Operating DC input voltage range	200-900 VDC	200-900 VDC
Max. AC output power	50 kW / 60 kW	50 kW / 60 kW
Max. AC output current	100 A / 120 A	100 A / 120 A
Max. AC output voltage	240 VAC / 240 VAC	240 VAC / 240 VAC
Max. AC output frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Max. AC output power factor	0.95	0.95
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LITE DATA ACQUISITION SYSTEM WDAS-LI

FEATURES

- ANSI C12.20 revenue grade energy metering
- Second by second monitoring and control for distributed generation assets
- Universal compatibility with Modbus/RTU and Modbus/TCP devices
- Intuitive installation and configuration

SPECIFICATIONS

GENERAL		DATA ACQUISITION	
Dimensions	11.82 x 13.25 x 7.27 in (300 x 336 x 187 mm)	Resolution	10 record interval Configurable down to 1 second
Weight	12 lb (5.4 kg)	Device Limit	250 devices over ethernet 32 devices over RS-485
Rating	UL 508A	Compatibility	Modbus/RTU or Modbus/TCP devices Contact sales@wattch.com for options to increase device count
Mounting	Non-venting surface mount installation with the flange kit	Interface ¹	RS-485
Warranty	3 years against defects in materials and workmanship	Storage Capacity ²	Up to 3 months of offline data storage capacity
ENVIRONMENTAL		Connectivity	LTE Cat 4 Modem with multi-carrier compatibility (requires Wattch data plan)
Operating Temperature	-20 to 70°C (0-150°F) relative humidity non-condensing	METERING	
Protection Rating	NEMA 4X (IP67 outdoor-rated)	CT Inputs	8 (300A CTs included) Compatible with any 333 MV CT
POWER SUPPLY		<small>1. Annual air conditioning and power for remote 2. Annual air conditioning and power for remote 3. Annual air conditioning and power for remote 4. Annual air conditioning and power for remote 5. Annual air conditioning and power for remote 6. Annual air conditioning and power for remote 7. Annual air conditioning and power for remote 8. Annual air conditioning and power for remote 9. Annual air conditioning and power for remote 10. Annual air conditioning and power for remote</small>	
Input Voltage	180-240Vrms 1L	Production Meter	AccuEnergy AccuBus 1313
Input Protection	2A Class C fuses on L1, L2, and L3 lines	Power Supply	Includes 10 AonCT-125 300-330mA current transformers
Power Consumption ³	Average: 9W Peak: 45W	Data Logger/Controller	Wattch Edge Controller
External	Mount 18A-20A DC available for external meters and sensors Switched VUL 1077 supplementary protection	COMMUNICATIONS	
		LTE Modem	Digi International RDJ-005A



BILL OF MATERIALS

GENERAL		DATA ACQUISITION	
Options	Extra WPC9040185	Production Meter	AccuEnergy AccuBus 1313
POWER SUPPLY		Power Supply	Includes 10 AonCT-125 300-330mA current transformers
Power Supply	Mean Well MDR-60-24	Data Logger/Controller	Wattch Edge Controller
Fuses	Edison HCC3L	COMMUNICATIONS	
Fuse Holder	Edison HCC3DU	LTE Modem	Digi International RDJ-005A
RS-485 Supplementary Protection	Edison FAZ-1-SP		

Developed in partnership with **ACCUEnergy**



WEEB-DSK516, 1.01" WEEB disk washer, Bottom Mount Application, 0.21" hole size

By Burndy
Catalog # WEEB-DSK516

WEEB - Washer Electrical Equipment Dept.

Features

- Made from corrosion resistant 304 stainless steel for outstanding durability and performance
- Eliminates the need for surface preparation and oxide inhibitor
- Detailed manual specifying proper hardware, torque, and mounting information is available upon request
- UL407 Recognized for grounding and bonding equipment
- Custom grounding and bonding solutions available upon request

Application

WEEB washers offer a simple, low cost method to bond any non-conductive coated surface together reducing time, labor, waste, and the amount of copper wiring. WEEB's patented teeth pierce through most non-conductive coatings and embed into the underlying metal, creating a bonding connection between the mounting surface and coated metal component that it is installed on or between.

General

Category Number	WEEB-DSK516
Item Type	3B
Material	304 Stainless Steel
UPC	6203046452
UPC 14 Digit GTIN	007989644782

Dimensions

Dimension - Thread Size

Certifications And Compliance

Buy American(s) Qualified	Contact Manufacturer
Certification - CSA Approved	N
Certification - ETL	Y
Certification - UL Recognized	Y
Certification - cULus	N
Certified Listed	UL2703 Recognized
Industry Standard(s)	UL2703 Recognized
Standards - RoHS Compliance Status	CM
UL Listed	Yes

Logistics

Carton Quantity	6000
Pallet Quantity	100

Product Assets

Brochures - WEEB Washer Guide and WEEB Washer Theory
Catalogs - Burndy Grounding Catalog
Catalogs - BURNDY Master Catalog - Section E4 - Wiley Grounding
Catalogs - BURNDY Master Catalog - Full Line BURNDY Catalog
Catalogs - BURNDY Master Catalog - Section G - Wire Management
Certifications - Certificates of Compliance, UL 2703
Customer Notices - Prep 65 Notice
Interactive Catalog - BURNDY Full-Line Digital Catalog
Sales Drawings - WEEB-DSK516 Equipment Bond
Sales Drawings - 3001076
Specifications - WEEBDSK516



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WEEB-DSK516-DS-SP-EN-102-1/2023



CONTRACTOR

Big Sun Solar

PHONE: 214-652-2000

LIC. NO.: TELA 12550

UNLICENSED USE OF THE COMPANY'S NAME OR LOGO FOR ANY OTHER PROJECTS IS STRICTLY PROHIBITED. ANY VIOLATION WILL BE REPORTED TO THE APPROPRIATE REGULATORY AGENCIES FOR PROSECUTION.



CHARLES E. MIRE
99110-178
TELA #05195

REVISION / RELEASE

NO.	DESCRIPTION	DATE
01	90% DESIGN	02.12.2023

PROJECT

NEW PV SYSTEM 134.75 MWDC / 96.00 MWAC

COGA - MISSION BRANCH LIBRARY

3134 ROOSEVELT AVE
SAN ANTONIO, TX 78214
APN: 1254170

ENGINEER OF RECORD

PAPER FILE # 23-04-0016

SHEET TITLE

RESOURCE DOCUMENTS-2

(SHEET 1)

DATE: 01/23/23

DESIGN BY: P.E.C.

CHECKED BY: P.E.C.

SHEET NUMBER:

R-002.00