SCOPE OF WORK:

GENERAL NOTES:

TO INSTALL A ROOF MOUNTED SOLAR PHOTOVOLTAIC SYSTEM AT THE OWNER RESIDENCE LOCATED AT

THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT.

THESE CONSTRUCTION DOCUMENTS HAVE BEEN BASED ON FIELD INSPECTIONS AND

ARCHITECT HAS NOT BEEN RETAINED TO SUPERVISE ANY CONSTRUCTION OR

OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE

CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAINS ALL

CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS

BEFORE PROCEEDING WITH THE WORK. ANY WORK STARTED BEFORE CONSULTATION

CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY THEM WITHOUT ADDITIONAL

FLOORS, ETC. SHALL BE REPAIRED TO THE ORIGINAL CONDITION OR REPLACED BY THE

THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION AND

NO CHANGES ARE TO BE MADE WITHOUT THE CONSULTATION AND APPROVAL OF THE

CONTRACTOR SHALL OBTAIN BULDING PERMIT. NO WORK TO START UNLESS BUILDING

ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY AND IN COMPLIANCE

IT IS ESSENTIAL THAT ALL WORK PROCEED WITH THE MAXIMUM COOPERATION OF ALL

THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE WITH THE

CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.

PARTIES AND WITH MINIMUM INTERFERENCE TO THE OCCUPANTS WITHIN THE BUILDING.

ALL EXPOSED PLUMBING, HVAC, ELECTRICAL DUCTWORK, PIPING AND CONDUITS ARE TO

WITH THE REQUIREMENTS OF THE TX BUILDING CODE, THE DEPARTMENT OF

THE OWNER'S DIRECTIONS IN THIS REGARD SHALL BE FULLY COMPLIED WITH

AND EXISTING CONDITIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER

PERMITS, LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION.

AND ACCEPTANCE BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE

DAMAGE CAUSED TO THE EXISTING STRUCTURE, PIPES, DUCTS, WINDOWS, WALL

THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES

EQUIPMENT SUMMARY	
71 SILFAB SIL-330 NL MODULES	
01 SOLAREDGE SE6000H-US INVERTER	
01 SOLAREDGE SE10000H-US INVERTER	
71 SOLAREDGE POWER OPTIMIZER P340	

MODIFICATIONS IN CONSTRUCTION DETAILS.

INSTALLATION OF ANY EQUIPMENT AT SITE.

CONTRACTOR AT NO ADDITIONAL COST

BE PAINTED BY GENERAL CONTRACTOR.

PERMIT IS PROPERLY DISPLAYED.

COMPLETION OF THE WORK WITH APPROVED MATERIALS.

ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES.

LOCAL LAWS, REGULATIONS AND THE NATIONAL ELECTRIC CODE.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS,

WIRING AND CONDUIT NOTES:

GOVERNING CODES

2018 INTERNATIONAL RESIDENTIAL CODE

2015 INTERNATIONAL FIRE CODE

2017 NATIONAL ELECTRICAL CODE

- ALL CONDUIT SIZES AND TYPES, SHALL BE LISTED FOR ITS PURPOSE AND APPROVED FOR THE SITE APPLICATIONS
- ALL PV CABLES AND HOMERUN WIRES BE #10AWG *USE-2, PV WIRE, OR PROPRIETARY SOLAR CABLING SPECIFIED BY MFR, OR EQUIVALENT; ROUTED TO SOURCE CIRCUIT COMBINER BOXES AS REQUIRED
- ALL CONDUCTORS AND OCPD SIZES AND TYPES SPECIFIED ACCORDING TO [NEC 690.8 (A)(1) & (B)(1)], [NEC 240] [NEC 690.7] FOR MULTIPLE CONDUCTORS
- ALL PV DC CONDUCTORS IN CONDUIT EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO [NEC TABLE 310.15 (B)(2)(C)] BLACK ONLY**
- EXPOSED ROOF PV DC CONDUCTORS SHALL BE USE-2, 90°C RATED, WET AND UV RESISTANT, AND UL LISTED RATED FOR 600V, UV RATED SPIRAL WRAP SHALL BE USED TO PROTECT WIRE FROM SHARP EDGES
- PHASE AND NEUTRAL CONDUCTORS SHALL BE DUAL RATED THHN/THWN-2 INSULATED, 90°C RATED, WET AND UV RESISTANT, RATED FOR 600V PER NEC 2008 OR 1000V PER NEC 2011
- 4-WIRE DELTA CONNECTED SYSTEMS HAVE THE PHASE WITH THE HIGHER VOLTAGE TO GROUND MARKED ORANGE OR IDENTIFIED BY OTHER EFFECTIVE MEANS
- ALL SOURCE CIRCUITS SHALL HAVE INDIVIDUAL SOURCE CIRCUIT PROTECTION
- VOLTAGE DROP LIMITED TO 2% FOR DC CIRCUITS AND 1% FOR AC CIRCUITS
- NEGATIVE GROUNDED SYSTEMS DC CONDUCTORS SHALL BE COLOR CODED AS FOLLOWS: DC POSITIVE - RED (OR MARKED RED), DC NEGATIVE - GREY (OR MARKED GREY)
- POSÍTIVE GROUNDED SYSTÈMS DC CONDUCTORS COLOR CODED: DC POSITIVE - GREY (OR MARKED GREY), DC NEGATIVE - BLACK (OR MARKED BLACK)
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED: PHASE A OR L1- BLACK, PHASE B OR L2- RED, PHASE C OR L3- BLUE, NEUTRAL- WHITE/GRAY

• CONTRACTORS SHALL OBTAIN FIRE CERTIF. UPON COMPLETION OF WORK. **ELECTRICAL NOTES:**

ARCHITECT

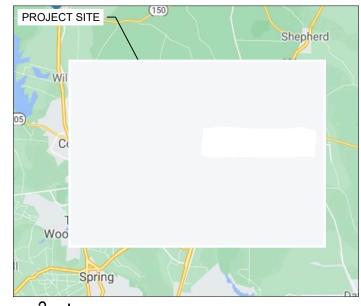
- THE EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE INSTALLED ONLY BY QUALIFIED PEOPLE. A QUALIFIED PERSON IS ONE WHO HAS SKILLS AND KNOWLEDGE RELATED TO THE CONSTRUCTION AND OPERATION OF THE ELECTRICAL EQUIPMENT AND INSTALLATIONS AND HAS RECIEVED SAFETY TRAINING TO RECOGNIZE AND AVOID THE HAZARDS INVOLVED. (NEC 690.4(E) AND 705.6)
- LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND ACTIVATION OF ANY SOLAR PHOTOVOLTAIC INSTALLATION. FOR A LINE SIDE TAP CONNECTION,
 UTILITY NEEDS TO BE NOTIFIED WELL IN ADVANCE TO COORDINATE BUILDING ELECTRICAL SHUT OFF.
- NEW CONDUIT ROUTING SHOWN IS ESSENTIALLY SCHEMATIC. SUBCONTRACTOR SHALL LAY OUT RUNS TO SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF OTHER TRADES.
- ARRAY WIRING SHOULD NOT BE READILY ACCESSIBLE EXCEPT TO QUALIFIED PERSONNEL.
- ALL EXTERIOR CONDUIT, FITTINGS, AND BOXES SHALL BE WATERTIGHT AND APPROVED FOR USE IN WET LOCATIONS. (NEC 314.15A)
- WIRING METHODS FOR PV SYSTEM CONDUCTORS AREN'T PERMITTED WITHIN 10 IN. OF THE ROOF DECKING OR SHEATHING EXCEPT WHERE LOCATED DIRECTLY
 BELOW THE ROOF SURFACE THAT'S COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT WIRING
- BACK-FED BREAKER MUST BE AT THE OPPOSITE END OF BUS BAR FROM THE MAIN BREAKER OR MAIN LUG SUPPLYING CURRENT FROM THE UTILITIES.
- ALL CONDUCTORS AND WIRE TIES EXPOSED TO SUNLIGHT ARE LISTED AS UV RESISTANT.
- CONTRACTOR SHALL FOLLOW ALL ELECTRICAL EQUIPMENT LABELING REQUIREMENTS IN NEC 690 AND IFC 2015
- MEASURE THE LINE-TO-LINE AND LINE-TO-NEUTRAL VOLTAGE OF ALL SERVICE ENTRANCE CONDUCTORS PROIR TO INSTALLING ANY SOLAR EQUIPMENT. THE
 VOLTAGES FOR THE 240VAC RATED.

23.43 KWDC 16.0 KWAC

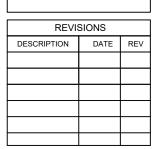
	SHEET INDEX
PV-0	COVER PAGE
PV-1	SITE PLAN
PV-2	ROOF PLAN & MODULES
PV-2A	STRING LAYOUT & BOM
PV-3	ATTACHMENT DETAIL
PV-3A	ATTACHMENT DETAIL
PV-4	ELECTRICAL LINE DIAGRAM & CALCS.
PV-4A	SPECIFICATIONS & NOTES
PV-5	SIGNAGE
PV-6+	EQUIPMENT SPECIFICATIONS







2 PV-0	VICINITY MAP	SCALE: NTS



Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

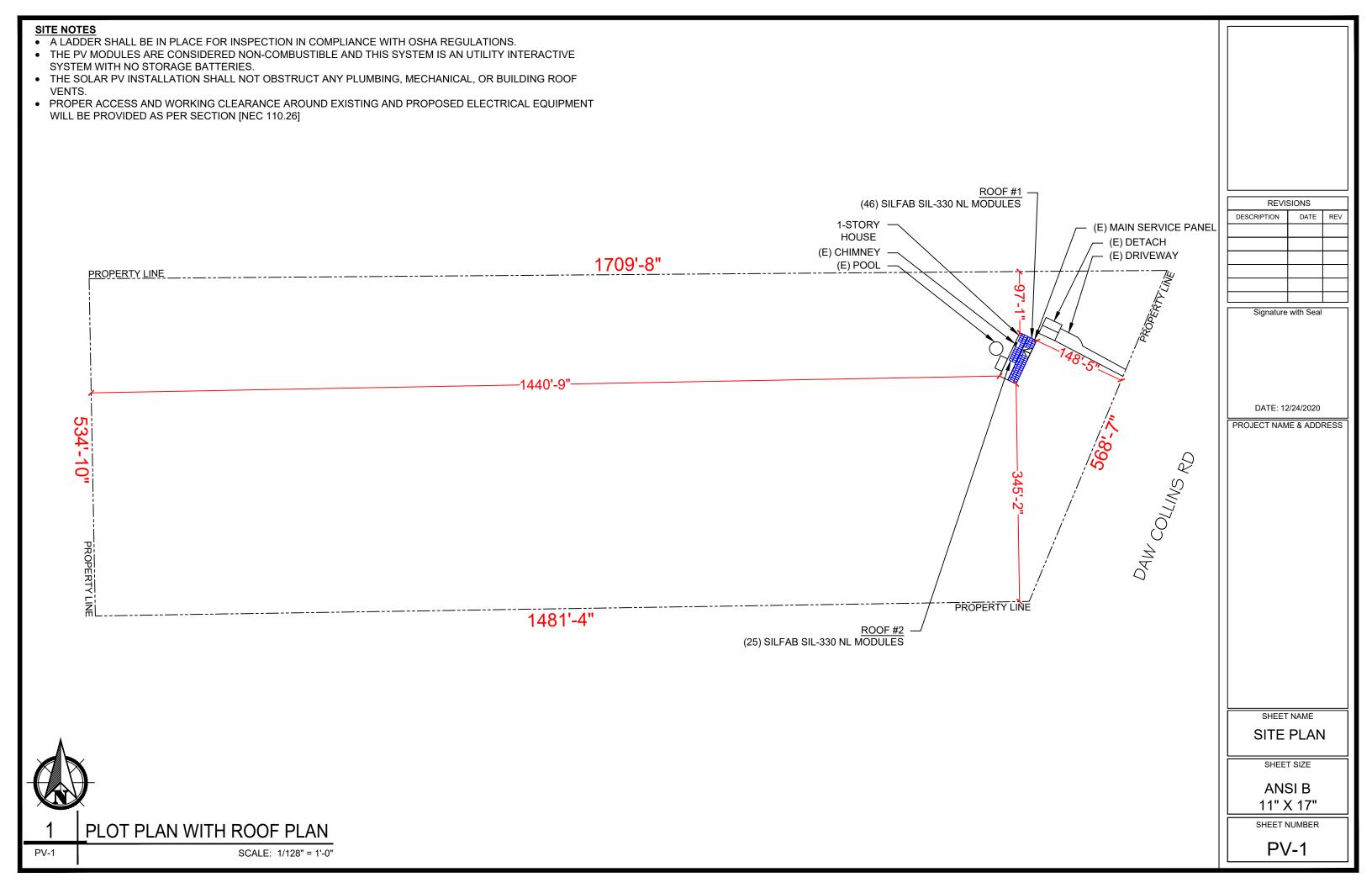
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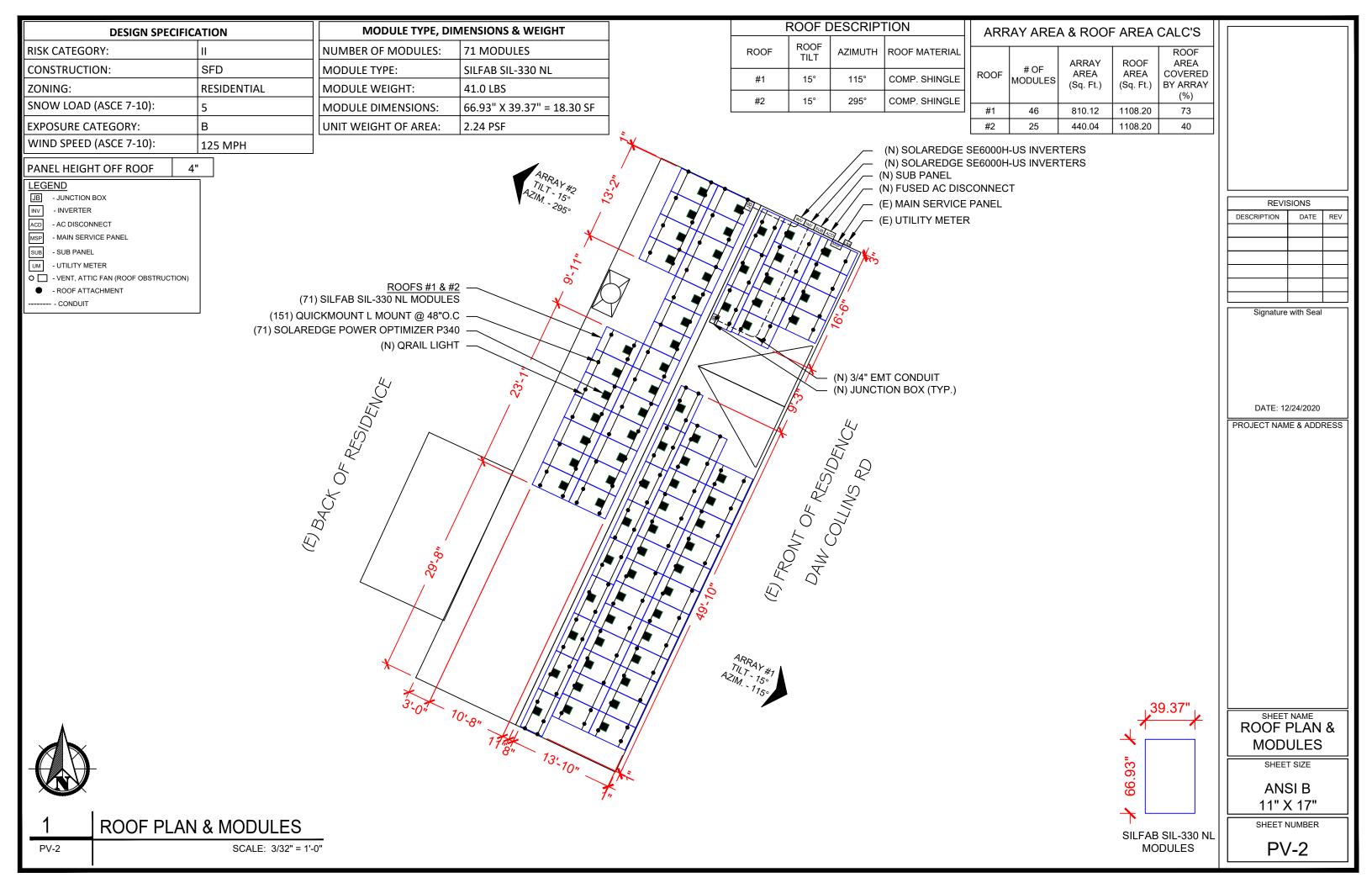
COVER PAGE

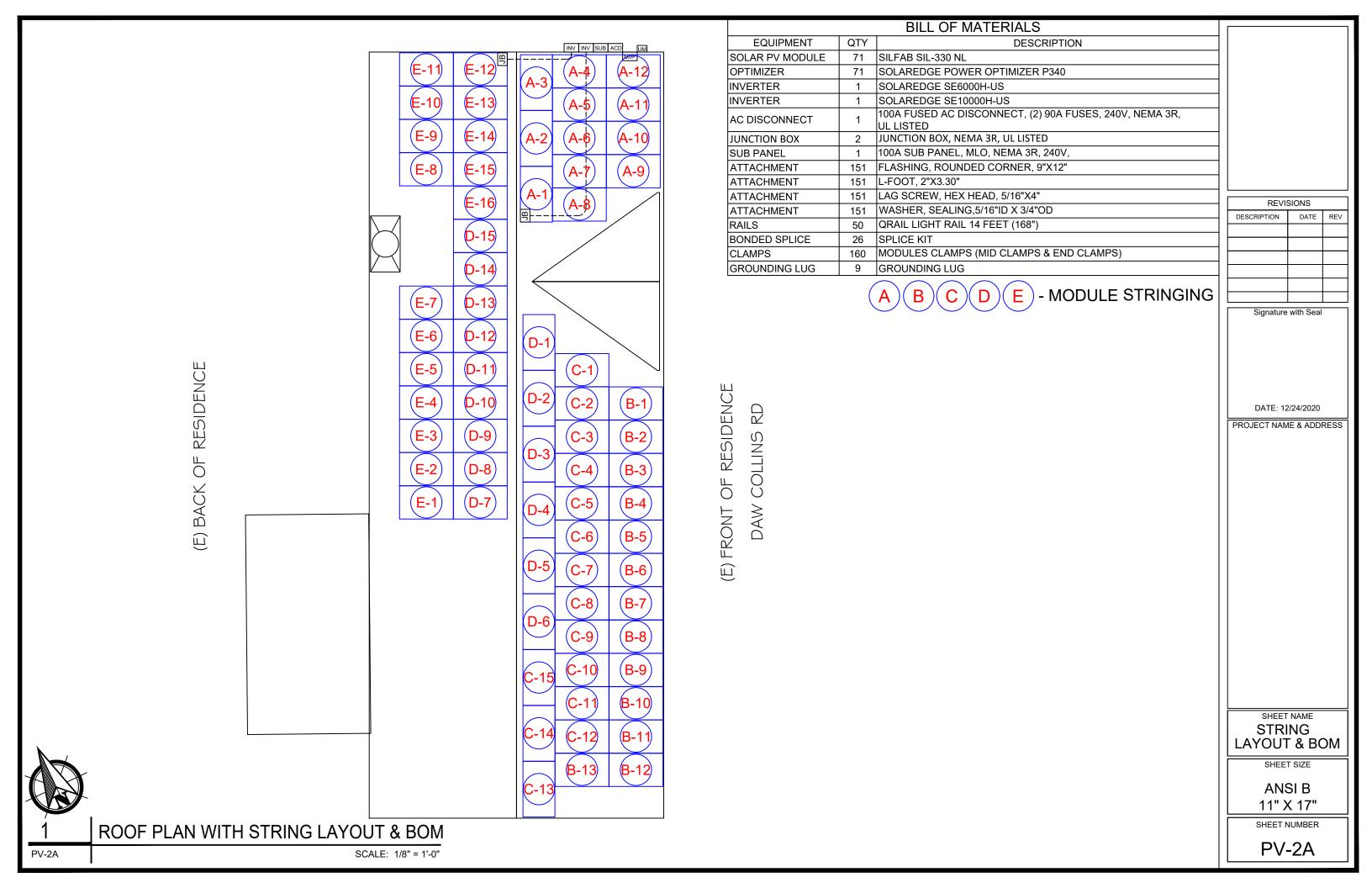
SHEET SIZE

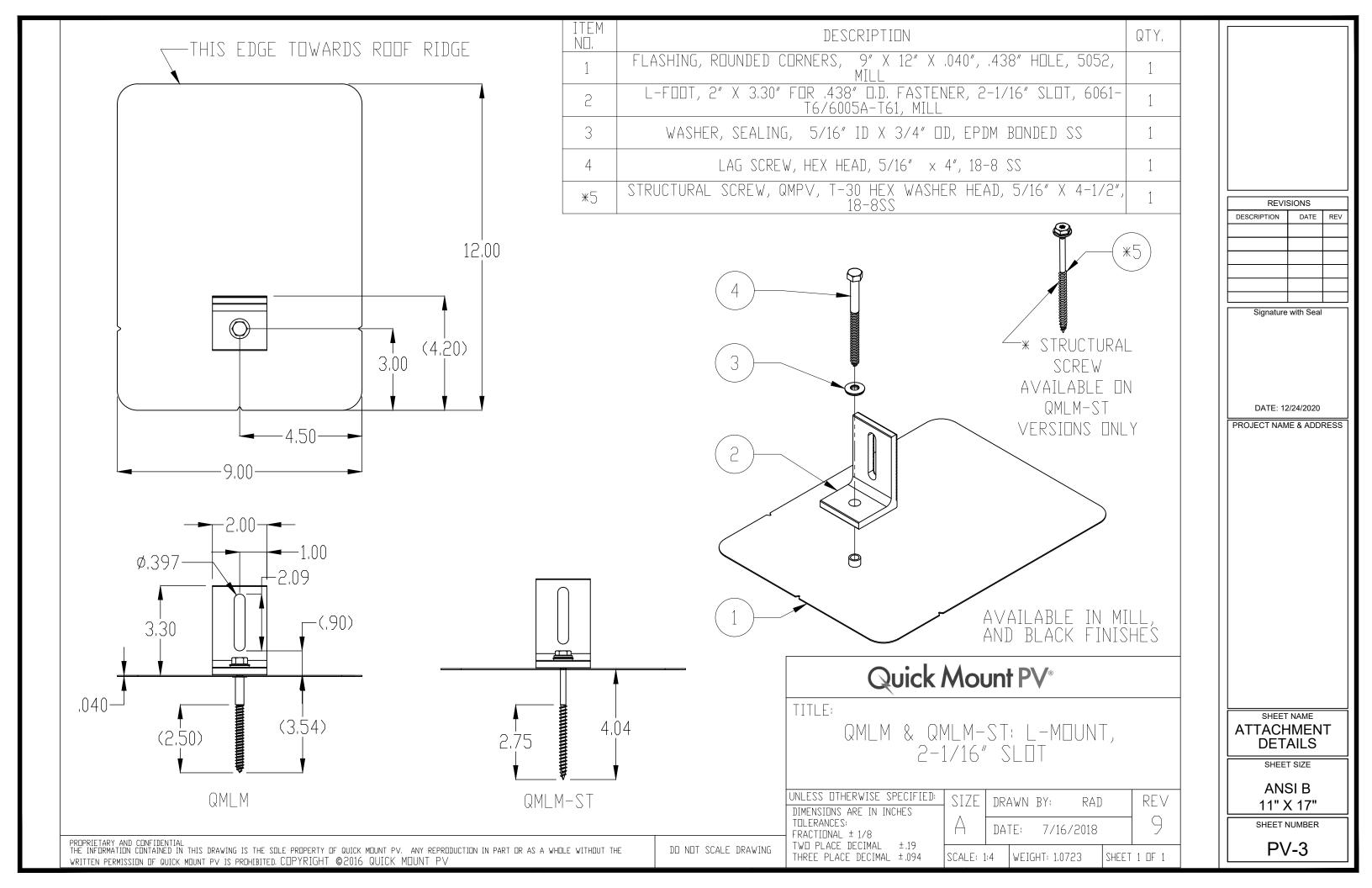
ANSI B 11" X 17"

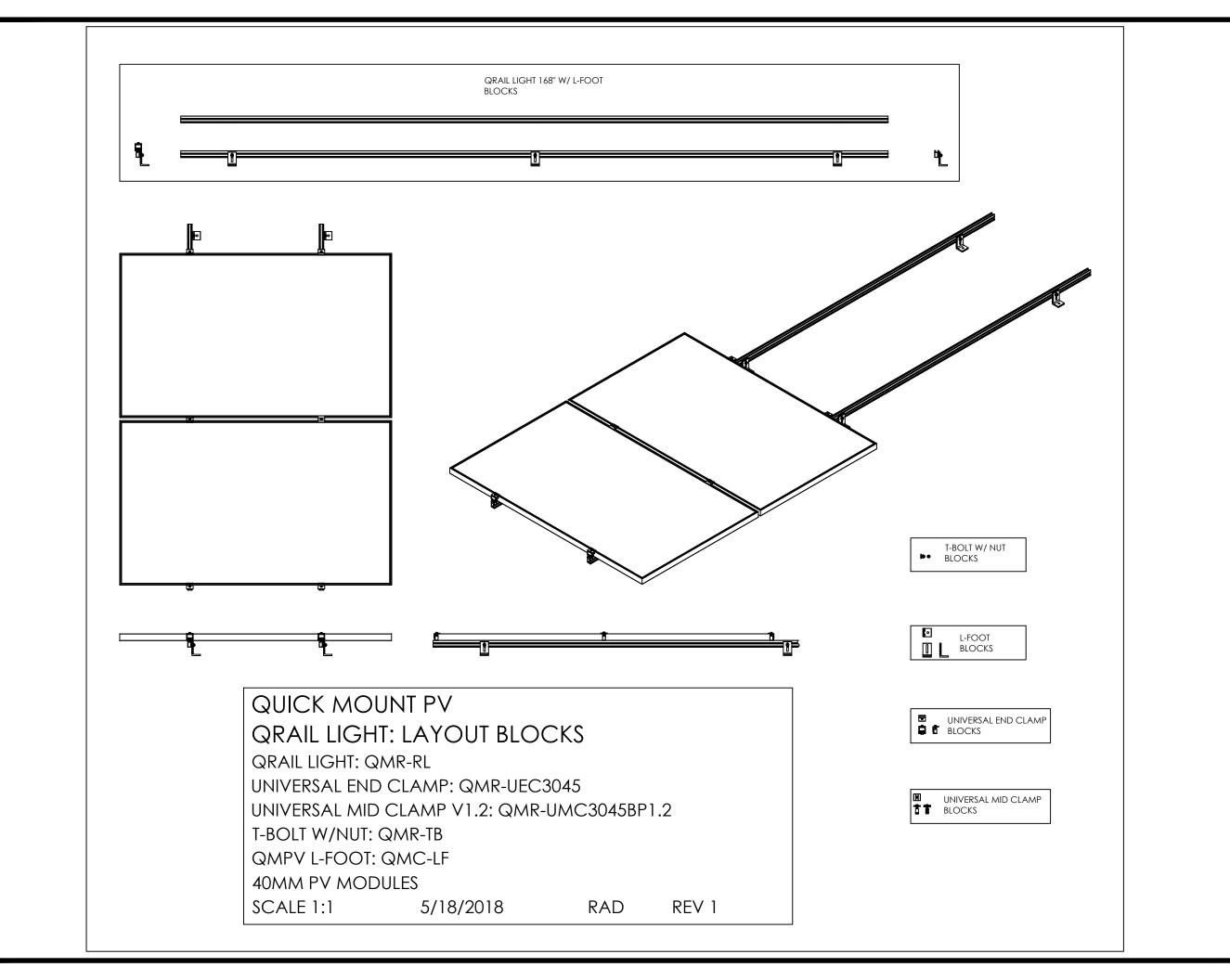
SHEET NUMBER











REVI	SIONS	
DESCRIPTION	DATE	REV

Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

SHEET NAME
ATTACHMENT
DETAILS

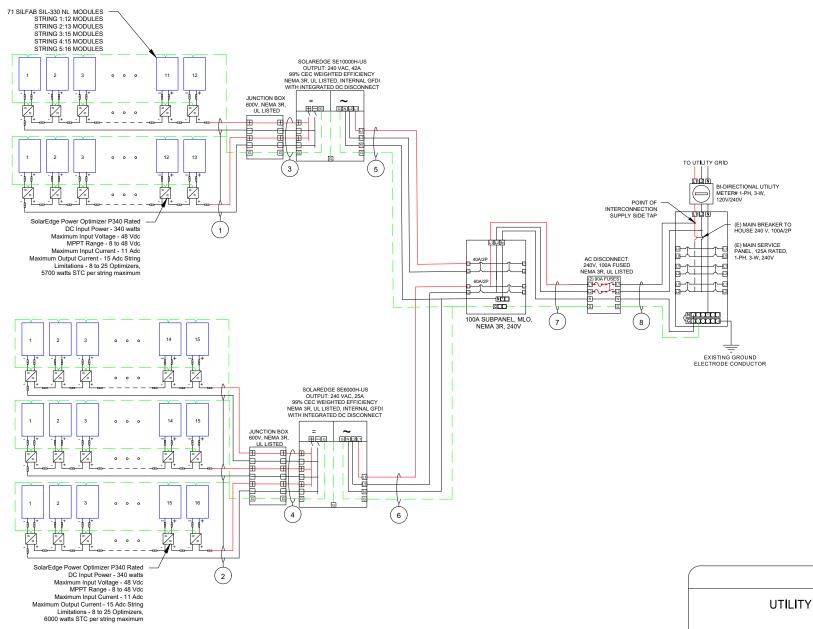
SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-3A

ID	TYPICAL	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	CONDUCTOR	CONDUIT	# OF PARALLEL CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	CONDUIT FILL PERCENT	OCPD	E	:GC		. CORR. CTOR	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP.	DERATED AMP.	TERM. TEMP. RATING	LENGTH	VOLTAGE DROP	
1	2	STRING	JUNCTION BOX	10 AWG PV WIRE COPPER	Open Air	1	2	N/A	N/A	6 AWG	BARE COPPER	0.71	(57°C)	N/A	15.0A	18.8A	40A	28.4A	90°C	95FT	0.03%	
2	3	STRING	JUNCTION BOX	10 AWG PV WIRE COPPER	Open Air	1	2	N/A	N/A	6 AWG	BARE COPPER	0.71	(57°C)	N/A	15.0A	18.8A	40A	28.4A	90°C	95FT	0.03%	
3	1	JUNCTION BOX	INVERTER-1	10 AWG THWN-2 COPPER	MIN 0.75" Dia EMT	3	6	26.72%	N/A	8 AWG	THWN-2, COPPER	0.96	(35°C)	0.8	15.0A	18.8A	40A	30.7A	90°C	35FT	0.13%	
4	1	JUNCTION BOX	INVERTER-2	10 AWG THWN-2 COPPER	MIN 0.75" Dia EMT	2	4	19.09%	N/A	8 AWG	THWN-2, COPPER	0.96	(35°C)	0.8	15.0A	18.8A	40A	30.7A	90°C	20FT	0.34%	
5	1	INVERTER-1	SUB PANEL	6 AWG THWN-2 COPPER	MIN 0.75" Dia EMT	1	3	26.73%	40A	8 AWG	THWN-2, COPPER	0.96	(35°C)	1	25.0A	31.3A	40A	38.4A	90°C	5FT	0.39%	
6	1	INVERTER-2	SUB PANEL	8 AWG THWN-2 COPPER	MIN 0.75" Dia EMT	1	3	36.53%	60A	8 AWG	THWN-2, COPPER	0.96	(35°C)	1	42.0A	52.5A	75A	72.0A	90°C	5FT	0.13%	
7	1	SUB PANEL	FUSED AC DISCONNECT	3 AWG THWN-2 COPPER	MIN 1.25" Dia EMT	1	3	25.15%	90A	6 AWG	THWN-2, COPPER	0.96	(35°C)	1	84.0A	105.0A	115A	110.4A	90°C	5FT	0.13%	
8	1	FUSED AC DISCONNECT	MSP	3 AWG THWN-2 COPPER	MIN 1.25" Dia EMT	1	3	25.15%	N/A	6 AWG	THWN-2, COPPER	0.96	(35°C)	1	84.0A	105.0A	115A	110.4A	90°C	5FT	0.13%	



SERVICE INFO

UTILITY PROVIDER: ONCOR

AHJ NAME:

MAIN SERVICE VOLTAGE: 240V

MAIN PANEL BRAND:

MAIN SERVICE PANEL: 125A MAIN CIRCUIT BREAKER RATING: 100A

MAIN SERVICE LOCATION: NORTH

SERVICE FEED SOURCE: OVERHEAD

REVISIONS

Signature with Seal

DATE: 12/24/2020
PROJECT NAME & ADDRESS

DATE REV

DESCRIPTION

SHEET NAME
ELECTRICAL LINE
& CALCS.

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-4

1 ELECTRICAL LINE DIAGRAM

PV-4

SCALE: NTS

SOLAR MODULE SPECIFICATIONS					
MANUFACTURER / MODEL	SILFAB SIL-330 NL				
VMP	33.3 V				
IMP	9.92 A				
voc	40.5V				
ISC	10.42 A				
TEMP. COEFF. VOC	-0.28%/°C				
PTC RATING	307.56 W				
MODULE DIMENSION	66.93"(L) x 39.37"(W)				
PANEL WATTAGE	330W				

INVERTER SPECIFICATION #1						
MANUFACTURER / MODEL	SOLAREDGE SE6000H-US					
NOMINAL AC POWER	11400 W					
NOMINAL OUTPUT VOLTAGE	240 VAC					
NOMINAL OUTPUT CURRENT	25 A					

INVERTER SPECIFICATION #2						
MANUFACTURER / MODEL	SOLAREDGE SE10000H-US					
NOMINAL AC POWER	11400 W					
NOMINAL OUTPUT VOLTAGE	240 VAC					
NOMINAL OUTPUT CURRENT	42 A					

POWER OPTIMIZER (SOLAREDGE P340)					
MAXIMUM INPUT POWER	340 W				
MAXIMUM INPUT VOLTAGE	48 VDC				
MAXIMUM INPUT ISC	11 ADC				
MAXIMUM OUTPUT CURRENT	15 ADC				
WEIGHTED EFFICIENCY	98.80%				

AMBIENT TEMPERATURE SPECS					
RECORD LOW TEMP	-4°C				
AMBIENT TEMP (HIGH TEMP 2%)	35°C				
CONDUIT HEIGHT	0.5"				
ROOF TOP TEMP	90°C				
CONDUCTOR TEMPERATURE RATE	57°C				
MODULE TEMPERATURE COEFFICIENT OF VOC	-0.28%/°C				

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
0.80	4-6
0.70	7-9
0.50	10-20

REVISIONS										
DATE	REV									
	_									

Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

SHEET NAME
SPECIFICATIONS
& NOTES

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-4A



WARNING

ELECTRIC SHOCK HAZARD

IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED

LABEL LOCATION:
DC DISCONNECT, INVERTER
(PER CODE: NEC 690.5(C))
[To be used when inverter is ungrounded]

2

▲ WARNING

ELECTRIC SHOCK HAZARD

THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED

LABEL LOCATION:
DC DISCONNECT, INVERTER
(PER CODE: NEC 690.35(F))
[To be used when inverter is ungrounded]

3

A WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL LOCATION: POINT OF INTERCONNECTION, (PER CODE: NEC 690.17(E))



WARNING - Electric Shock Hazard

No user serviceable parts inside

Contact authorized service provider for assistance

LABEL LOCATION: INVERTER, JUNCTION BOXES (ROOF), (PER CODE: NEC690.13.G.3 & NEC 690.13.G.4)

5

WARNING: DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION:
POINT OF INTERCONNECTION
(PER CODE: NEC 705.12(D)(4))

6

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION:
CONDUIT, COMBINER BOX
(PER CODE: NEC690.31(G)(3)(4) & NEC 690.13(G)(4)

ADHESIVE FASTENED SIGNS:

- THE LABEL SHALL BE SUITABLE FOR THE ENVIRONMENT WHERE IT IS INSTALLED.
- WHERE REQUIRED ELSEWHERE IN THIS CODE, ALL FIELD APPLIED LABELS, WARNINGS, AND MARKINGS SHOULD COMPLY WITH ANSI Z535.4 [NEC 110.21(B) FIELD MARKING].
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT [IFC 605.11.1.3]

7

PATED AC OUTDUT CURRENT 67 AMPS

RATED AC OUTPUT CURRENT <u>67</u> AMPS NOMINAL OPERATING AC VOLTAGE <u>240</u> VOLTS

LABEL LOCATION:
POINT OF INTERCONNECTION,
(PER CODE: NEC 690.54)

8

WARNING

INVERTER OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL LOCATION:

POINT OF INTERCONNECTION (PER CODE: NEC 705.12(D)(7))

[Not required if panelboard is rated not less than sum of ampere ratings of all overcurrent devices supplying it]

9

CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

LABEL LOCATION:
POINT OF INTERCONNECTION
(PER CODE: NEC690.15, 690.13(B))
INVERTER 1

10

! CAUTION!

PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN

LABEL PER NEC 690.56(C)- PROVIDE AT NEW SUB PANEL OR SERVICE PANEL FOR RAPID SHUTDOWN COMPLIANT SYSTEM

11

CAUTION: SOLAR CIRCUIT

LABEL LOCATION

MARKINGS PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, AND CABLE ASSEMBLIES AT LEAST EVERY 10 FT, AT TURNS AND ABOVE/BELOW PENETRATIONS AND ALL COMBINER/JUCTION BOXES. (PER CODE: IFC 605.11.1.4)

12

RATED MAXIMUM POWER-POINT CURRENT (Imp)
RATED MAXIMUM POWER-POINT VOLTAGE (Vmp)
MAXIMUM SYSTEM
VOLTAGE (VOC)
MAXIMUM CIRCUIT
CURRENT (Isc)

16.5
A
280
V
480
V

LABEL LOCATION: INVERTER #1 (PER CODE: NEC 690.53)

13

RATED MAXIMUM POWER-POINT CURRENT (Imp)
RATED MAXIMUM POWER-POINT VOLTAGE (Vmp)
MAXIMUM SYSTEM
VOLTAGE (VOC)
MAXIMUM CIRCUIT
CURRENT (Isc)

A

27

A

400

V

480

V

LABEL LOCATION: INVERTER #2 (PER CODE: NEC 690.53) REVISIONS

DESCRIPTION DATE REV

Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

SHEET NAME SIGNAGE

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER



SIL-330 NL













HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE









CHUBB.

INDUSTRY LEADING WARRANTY

All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION

Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY

Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



BAA / ARRA COMPLIANT

Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department. US Military and FAA have all utilized Silfab panels in their solar installations.

III LIGHT AND DURABLE

Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS

Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC PRODUCTION

Silfab Solar manufactures PV modules in two automated locations within North America. Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING

All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT

PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-330 NL mono PERC		
Test Conditions		STC	NOCT	
Module Power (Pmax)	Wp	330	235	
Maximum power voltage (Vpmax)	V	33.3	30.2	
Maximum power current (Ipmax)	A	9.92	7.8	
Open circuit voltage (Voc)	V	40.5	36.7	
Short circuit current (Isc)	A	10.42	8.2	
Module efficiency	%	19.4	17.3	
Maximum system voltage (VDC)	V	10	000	
Max series fuse rating	A		20	
Power Tolerance	Wp	0 to	o +10	

remperature katings	SIL-530 NL	MONO PERC
Temperature Coefficient Isc	0.064	4 %/°C
Temperature Coefficient Voc	-0.28	3 %/°C
Temperature Coefficient Pmax	-0.36	6 %/°C
NOCT (± 2°C)	46	5°C
Operating temperature	-40/-	-85 °C
Mechanical Properties and Components	SIL-330 NL	mono PERC
	Metric	Imperial
Module weight	18.6 kg ±0.2 kg	41 ±0.4 lbs
Dimensions (H x L x D)	1700 mm x 1000 mm x 38 mm	66.9 in x 39.4 in x 1.5 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load N/m2	83.5/112.8 lb/ft^2
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	60 - Si mono PERC - 5 busbar 158.75 x 158.75 mm	60 - Si mono PERC - 5 busbar 6.25 x 6.25 Inch
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating
Cables and connectors (refer to installation manual)	1200 mm, ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 in (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and	UV resistance, multi-layer dielectric film,

fluorine-free PV backsheet Frame Anodized Aluminum (Black)

Bypass diodes 3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current) Junction Box UL 3730 Certified, IEC 62790 Certified, IP67 rated Module product workmanship warranty 25 years**

30 years Linear power performance guarantee ≥ 97.1% end 1st year | ≥ 91.6% end 12th year | ≥ 85.1% end 25th year ≥ 82.6% end 30th year Certifications

ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-Product 1-1/-2***, IEC 61730-1/-2***, CSA C22.2#61730-1/-2***, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2

ISO9001:2015

Factory

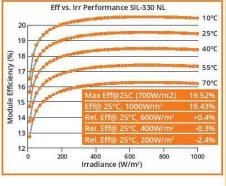
III Modules Per Pallet: 26 Pallets Per Truck: 36 III Modules Per Truck: 936

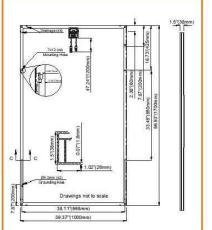
***▲** Warning. Read the Safety and Installation Manual for mounting specifications and before handling installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

***Certification and CEC listing in progress. August 2020 expected completion date for CEC listing. IEC 61730/61215 and CSA C22.2#61730-1/-2

Third-party generated pan files from Fraunhofer-Institute for Solar Energy Systems ISE are available for download at: www.silfabsolar.com/downloads





HOM

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Silfab Solar Inc. 800 Cornwall Ave

POPUL Bellingham WA 98225 USA Tel +1 360-569-4733

SHEET NAME **EQUIPMENT SPECIFICATION**

REVISIONS

Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

DATE REV

DESCRIPTION

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US





Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12

- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- / Outdoor and indoor installation
- / Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)



NVERTERS

/ Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/ SE7600H-US / SE10000H-US / SE11400H-US

Model Number	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER				SEXXXXH-XXXXXBXX	4			
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage MinNomMax. (211 - 240 - 264)	~	V	~	✓	V	~	·	Vac
AC Output Voltage MinNomMax. (183 - 208 - 229)	9	✓	÷	·	90	÷	*	Vac
AC Frequency (Nominal)				59.3 - 60 - 60.5(1)				Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	А
Maximum Continuous Output Current @208V	14	16	=	24	-	=	48.5	А
Power Factor			1	, adjustable -0.85 to 0	.85			
GFDI Threshold		1						A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds		Yes						
INPUT	70							0.
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	19	5100	-	7750	1+4	-	15500	W
Transformer-less, Ungrounded			100	Yes				
Maximum Input Voltage				480				Vd
Nominal DC Input Voltage		38	30			400		Vdi
Maximum Input Current @240V [©]	8.5	10.5	13.5	16.5	20	27	30.5	Ad
Maximum Input Current @208V ²	14	9	-4	13.5	9		27	Ad
Max. Input Short Circuit Current			20:	45				Ad
Reverse-Polarity Protection				Yes				
Ground-Fault Isolation Detection				600kΩ Sensitivity				
Maximum Inverter Efficiency	99			9	9.2			%
CEC Weighted Efficiency			g	9			99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption		< 2.5						W

REVISIONS						
DESCRIPTION	DATE	REV				

Signature with Seal

DATE: 12/24/2020

PROJECT NAME & ADDRESS

EQUIPMENT SPECIFICATION

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-7

solaredge.com

For other regional settings please contact SolarEdge support
A higher current source may be used; the inverter will limit its input current to the values stated

/ Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/ SE7600H-US / SE10000H-US / SE11400H-US

Model Number	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
ADDITIONAL FEATURES								
Supported Communication Interfaces			RS485, Etherne	et, ZigBee (optional), C	ellular (optional)			T
Revenue Grade Data, ANSI C12.20	_			Optional ⁽³⁾		_		
Inverter Commissioning		with the Se	tApp mobile applicat	ion using built-in Wi-F	i Access Point for loc	al connection		
Rapid Shutdown - NEC 2014 and 2017 690.12			Automatic Rap	id Shutdown upon AC	Grid Disconnect			
STANDARD COMPLIANCE								
Safety		UL1741	, UL1741 SA, UL1699B	, CSA C22.2, Canadiar	AFCI according to T	I.L. M-07		I
Grid Connection Standards		IEEE1547, Rule 21, Rule 14 (HI)						
Emissions	_	FCC Part 15 Class B						
INSTALLATION SPECIFICAT	IONS							
AC Output Conduit Size / AWG Range		1" Maximum / 14-6 AWG 1" Maximum /14-4 AWG				1/14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range		1" Maximum / 1-2 strings / 14-6 AWG 1" Maximum / 1-3 strings / 14-6 AW				strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)		17.7 x	14.6 x 6.8 / 450 x 37	0 x 174		21.3 x 14.6 x 7.3	/ 540 x 370 x 185	in / mm
Weight with Safety Switch	22	/10	25.1 / 11.4	26.2	/ 11.9	38.8	/ 17.6	lb/kg
Noise		<	25	-		<50		dBA
Cooling				Natural Convection				
Operating Temperature Range			4	40 to +140 / -40 to +6	50 ⁽⁴⁾			"F/"C
Protection Rating			NEMA	4X (Inverter with Safet	y Switch)			

REVISIONS DESCRIPTION

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DATE: 12/24/2020

PROJECT NAME & ADDRESS

SHEET NAME **EQUIPMENT SPECIFICATION**

SHEET SIZE

ANSI B 11" X 17"

SHEET NUMBER

PV-7A

[#] Revenue grade inverter P/N: SExxxxH-US000BNC4
Full power up to at least 50°C / 122°F; for power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf

Power Optimizer

For North America

P320 / P340 / P370 / P400 / P405 / P505





POWER OPTIMIZER

PV power optimization at the module-level

- Specifically designed to work with SolarEdge
- / Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization

- / Fast installation with a single bolt
- / Next generation maintenance with modulelevel monitoring
- / Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety



/ Power Optimizer For North America

P320 / P340 / P370 / P400 / P405 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high- power 60-cell modules)	P370 (for higher- power 60 and 72-cell modules)	P400 (for 72 & 96- cell modules)	P405 (for thin film modules)	P505 (for higher current modules)		
INPUT								
Rated Input DC Power ⁽¹⁾	320	340	370	400	405	505	W	
Absolute Maximum Input Voltage (Voc at lowest temperature)	48 60 80 125 ⁽²⁾ 87 ⁽²⁾						Vdc	
MPPT Operating Range	8	- 48	8 - 60	8 - 80	12.5 - 105	12.5 - 87	Vdc	
Maximum Short Circuit Current (Isc)		11		1	0.1	14	Adc	
Maximum DC Input Current		13.75		1	2.5	17.5	Adc	
Maximum Efficiency			99	9.5			%	
Weighted Efficiency			98.8			98.6	%	
Overvoltage Category				1				
OUTPUT DURING OPER	ATION (POWE	R OPTIMIZER CO	ONNECTED TO C	PERATING SOI	AREDGE INVER	TER)	707	
Maximum Output Current			1	5			Adc	
Maximum Output Voltage			60	~	8	5	Vdc	
INVERTER OFF) Safety Output Voltage per Power Optimizer	1 ± 0.1							
STANDARD COMPLIANO	CE							
EMC		FC	CC Part15 Class B. IEC6	51000-6-2. IEC61000-	5-3		Ī	
Safety			IEC62109-1 (class	Il safety), UL1741				
Material			UL94 V-0 , I	JV Resistant				
RoHS			Y	es				
INSTALLATION SPECIFIC	ATIONS		_					
Maximum Allowed System Voltage			10	00			Vdc	
Compatible inverters		All S	olarEdge Single Phase	and Three Phase inv	erters			
Dimensions (W x L x H)	129	9 x 153 x 27.5 / 5.1 x 6	x1.1	129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9	129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in	
Weight (including cables)		630 / 1.4	l i	750 / 1.7	845 / 1.9	1064 / 2.3	gr/lb	
Input Connector			Single or o	dual MC4 ⁽³⁾	10			
Input Wire Length			0.16 /	0.52			m/ft	
Output Wire Type / Connector			Double Insu	lated / MC4				
Output Wire Length	0.9	/ 2.95		1.2	/ 3.9		m/ft	
Operating Temperature Range ⁽⁴⁾			-40 - +85 /	-40 - +185			°C / °F	
Protection Rating			IP68 / N	IEMA6P				
Relative Humidity		0 - 100						

- Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed PI NEC 2017 requires max input voltage be not more than 80V
- Pror other connector types please contact SolarEdge
 For ambient temperature above +85°C / + 185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV System Design Using a SolarEdge Inverter ⁽⁵⁾⁽⁶⁾		Single Phase Single phase Three Phase 20			Three Phase 480V	
Minimum String Length	P320, P340, P370, P400	8 10		8 10		
(Power Optimizers)	P405 / P505	6		8	14	
Maximum String Length (Power Optimizers)		25	5	25	50 ⁽⁷⁾	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400- US) 5250		6000 ⁽⁸⁾	12750 ^g	W
Parallel Strings of Differer or Orientations	nt Lengths			Yes		

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REVISIONS DESCRIPTION

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DATE: 12/24/2020

PROJECT NAME & ADDRESS

SHEET NAME **EQUIPMENT SPECIFICATION**

SHEET SIZE

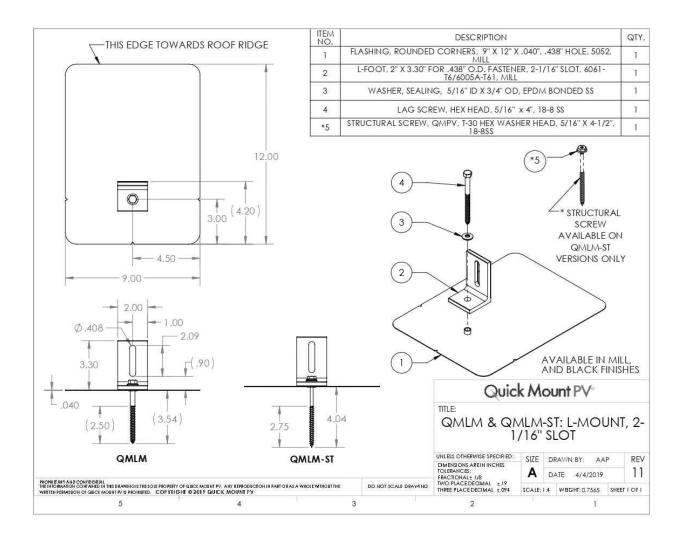
ANSI B 11" X 17"

SHEET NUMBER

€ RoHS

L-Mount | QMLM / QMLM-ST

Elevated Water Seal Technology®





L-Mount Installation Instructions

Installation Tools Required: tape measure, roofing bar, chalk line, stud finder, caulking gun, sealant compatible with roofing materials, drill with 7/32" or 1/8" bit, drill or impact gun with 1/2" socket.

WARNING: Quick Mount PV products are NOT designed for and should NOT be used to anchor fall protection equipment.



mounts will be placed.



mounted. Select the courses of shingles where bar, just above placement of mount. Remove up so top edge of flashing is at least ¾" higher nails as required and backfill holes with aproved than the butt-edge of the 3rd course and lower sealant. See "Proper Flashing Placement" on next flashing edge is above the butt-edge of 1st course.



Locate, choose, and mark centers of rafters to be Carefully lift composition roof shingle with roofing Insert flashing between 1st and 2nd course. Slide Mark center for drilling.



1/8" bit (ST) for attaching with the structural screw. compatible with roofing materials. Drill pilot hole into roof and rafter, taking care to drill square to the roof. Do not use mount as a drill guide. Drill a 2" deep hole into rafter





If attaching with lag bolt use a 1/32" bit (Lag). Use a Clean off any sawdust, and fill hole with sealant Place L-foot onto elevated flute and rotate L-foot to desired orientation.



can no longer easily rotate. **DO NOT over-torque.** sure top of L-Foot makes solid contact with racking. NOTE: Structural screw can be driven with T-30 hex head bit.



Prepare lag bolt or structural screw with sealing You are now ready for the rack of your choice. washer. Using a 1/2-inch socket on an impact gun, Follow all the directions of the rack manufacturer drive prepared lag bolt through L-foot until L-foot as well as the module manufacturer. NOTE: Make

All roofing manufacturers' written instructions must also be followed by anyone modifying a roof system. Consult the roof manufacturer's specs and instructions prior to working on the roof.

> SHEET NAME **EQUIPMENT SPECIFICATION**

REVISIONS

Signature with Seal

DATE: 12/24/2020 PROJECT NAME & ADDRESS

DESCRIPTION

SHEET SIZE

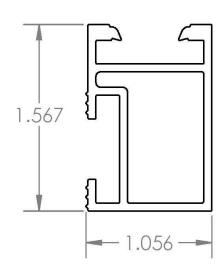
ANSI B 11" X 17"

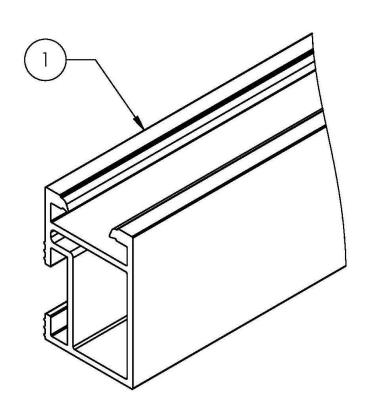
SHEET NUMBER

PV-9

BI 7.2.3-44 Apr-2019 Rev 6 BI 7.2.3-44 Apr-2019 Rev 6

ITEM NO.	DESCRIPTION	QTY.
1	QRAIL, LIGHT, AL, MILL	1





NOTES:

- 1. AVAILABLE IN MILL FINISH AND BLACK FINISH
- 2. WEIGHT = 0.50 POUNDS PER FOOT

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SIZE DRAWN BY: RAD

Quick Mount PV®

QMR-RL: QRAIL LIGHT

DATE: 10/7/2019

REV

ANSI B 11" X 17"

SHEET NUMBER

SHEET NAME

EQUIPMENT

SPECIFICATION

SHEET SIZE

REVISIONS

Signature with Seal

DATE: 12/24/2020 PROJECT NAME & ADDRESS

DESCRIPTION

PV-10

FRACTIONAL± 1/8 TWO PLACE DECIMAL ±.19 THREE PLACE DECIMAL ±.094

3

TITLE:

SCALE: 1:1 WEIGHT: 0.50

SHEET 1 OF 1