

**B** ELEVATION  
 S3.0 SCALE: 1" = 1'-0"

### Proposed System Specifications

Ground mount racking detail – side elevation

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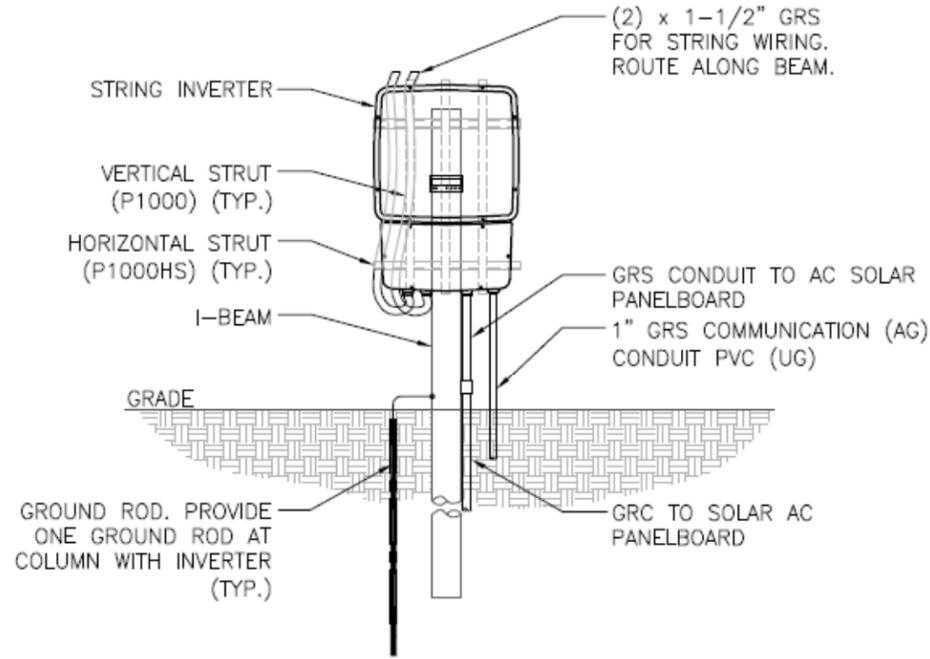
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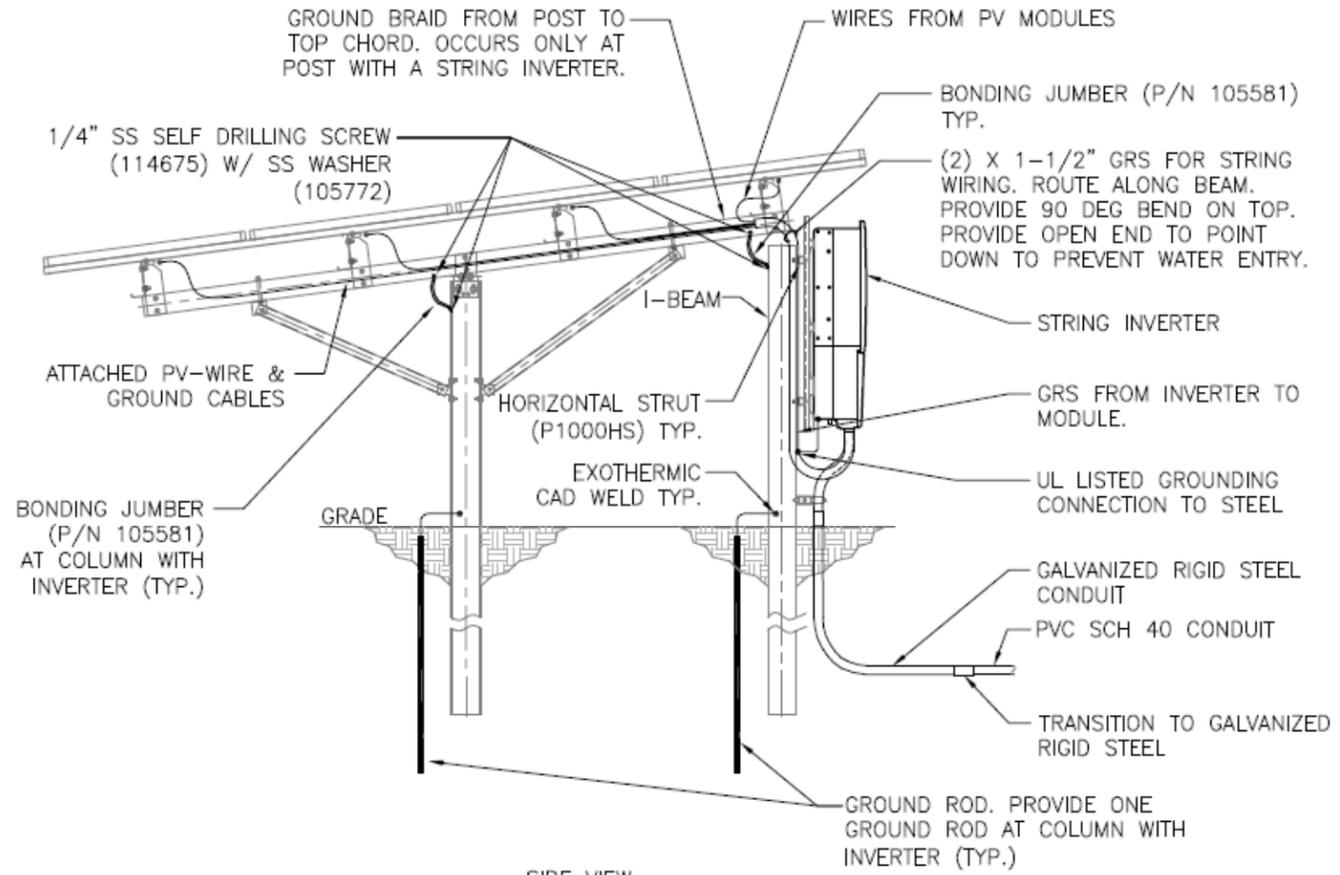
Nevada County, CA  
 Ranch Property Solar Project  
 16782 Highway 49  
 Nevada City, CA 95959

NOTE: THE PROPOSED ARRAY LAYOUT SHOWN IS DESIGNED TO FIT EXISTING CONDITIONS AS THEY ARE DESCRIBED ON THIS DRAWING. kWp AND MODULE QUANTITY < TYPE, AND LAYOUT ARE SUBJECT TO CHANGE BASED ON SUNPOWER VERIFICATION OF ACTUAL SITE CONDITIONS, AS WELL AS ON MODULE AVAILABILITY AT THE DATE OF ORDER

- NOTE:  
 1. ALL STRUT SHALL BE CONNECTED WITH 3/8-16 HEX BOLTS WITH APPROPRIATE WASHERS AND NUTS (STAINLESS STEEL).  
 2. REFER TO E201 FOR CONDUIT SIZE.



FRONT VIEW  
 NOTE: PV PANELS AND EQUIPMENT NOT SHOWN FOR CLARITY.



SIDE VIEW

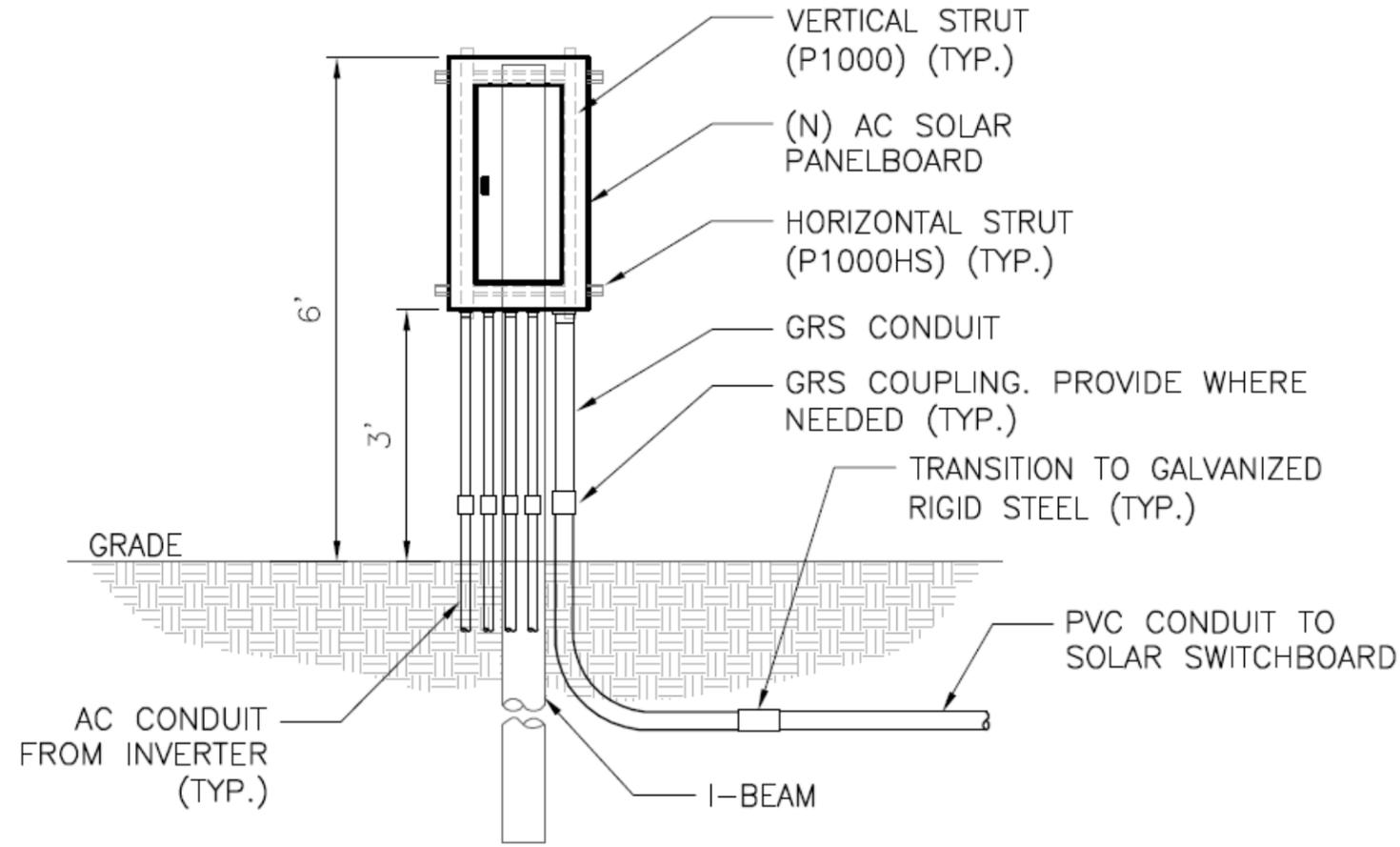
1 INVERTER MOUNTING DETAIL  
 SCALE: NTS

Proposed System Specifications	
Ground mount inverter racking detail - typical	

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FRONT VIEW

NOTE:

1. ALL STRUT SHALL BE CONNECTED WITH 3/8-16 HEX BOLTS WITH APPROPRIATE WASHERS AND NUTS (STAINLESS STEEL).
2. REFER TO E201 FOR CONDUIT/FEEDER SIZE.

2  
—  
SOLAR PANELBOARD MOUNTING DETAIL

SCALE: NTS

Proposed System Specifications

Ground mount panelboard mounting detail - typical

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## SunPower® E-Series Commercial Solar Panels | E20-435-COM

### More than 20% Efficiency

Captures more sunlight and generates more power than Conventional Panels.

### High Performance

Delivers excellent performance in real world conditions, such as high temperatures, clouds and low light.<sup>1,2,4</sup>

### Utility grade

Optimized to maximize returns, the E-Series panel is a bankable solution for large-scale power plants.



Maxeon® Solar Cells: Fundamentally better. Engineered for performance, designed for reliability.

### Engineered for Peace of Mind

Designed to deliver consistent, trouble-free energy over a very long lifetime.<sup>3,4</sup>

### Designed for Reliability

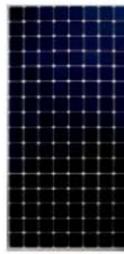
The SunPower Maxeon Solar Cell is the only cell built on a solid copper foundation. Virtually impervious to the corrosion and cracking that degrade Conventional Panels.<sup>3</sup>

### #1 Rank in Fraunhofer durability test.<sup>9</sup>

100% power maintained in Atlas 25+ comprehensive Durability test.<sup>10</sup>

Data Sheet

### High Performance & Excellent Reliability



SPR-E20-435-COM



### High Efficiency<sup>5</sup>

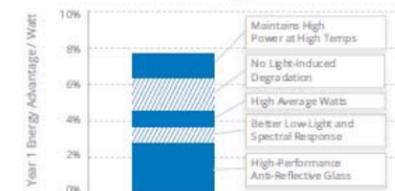
Generate more energy per square foot

E-Series commercial panels convert more sunlight to electricity producing 31% more power per panel,<sup>1</sup> and 60% more energy per square foot over 25 years.<sup>1,2,3</sup>

### High Energy Production<sup>6</sup>

Produce more energy per rated watt

More energy to power your operations. High year one performance delivers 7-9% more energy per rated watt.<sup>2</sup> This advantage increases over time, producing 20% more energy over the first 25 years to meet your needs.<sup>3</sup>



SUNPOWER®



## SunPower® E-Series Commercial Solar Panels | E20-435-COM

### Sunpower Offers The Best Combined Power And Product Warranty



More guaranteed power: 95% for first 5 years, -0.4%/yr. to year 25.<sup>7</sup>



Combined Power and Product defect 25 year coverage that includes panel replacement costs.<sup>8</sup>

Electrical Data	SPR-E20-435-COM	SPR-E19-410-COM
	Nominal Power (Pnom) <sup>11</sup>	435 W
Power Tolerance	+/- 5%	+/- 5%
Avg. Panel Efficiency <sup>12</sup>	20.3%	19.1%
Rated Voltage (Vmpp)	72.9 V	72.9 V
Rated Current (Impp)	5.97 A	5.62 A
Open-Circuit Voltage (Voc)	85.6 V	85.3 V
Short-Circuit Current (Isc)	6.43 A	6.01 A
Max. System Voltage	1000 V UL & 1000 V IEC	
Maximum Series Fuse	15 A	
Power Temp Coef.	-0.38% / °C	
Voltage Temp Coef.	-235.5 mV / °C	
Current Temp Coef.	3.5 mA / °C	

- REFERENCES:
- All comparisons are SPR-E20-327 vs. a representative conventional panel: 250W, approx. 1.6 m<sup>2</sup>, 15.3% efficiency.
  - Typically 7-9% more energy per watt, BEW/DNV Engineering "SunPower Yield Report," Jan 2013.
  - SunPower 0.25%/yr degradation vs. 1.0%/yr conv. panel. Carpeau, Z. et al. "SunPower Module Degradation Rate," SunPower white paper, Feb 2013; Jordan, Dirk "SunPower Test Report," NREL, Q1-2015.
  - "SunPower Module 40-Year Useful Life" SunPower white paper, May 2015. Useful life is 99 out of 100 panels operating at more than 70% of rated power.
  - Second highest, after SunPower X-Series, of over 3,200 silicon solar panels, Photon Module Survey, Feb 2014.
  - 8% more energy than the average of the top 10 panel companies tested in 2012 (151 panels, 102 companies), Photon International, Feb 2013.
  - Compared with the top 15 manufacturers, SunPower Warranty Review, May 2015.
  - Some restrictions and exclusions may apply. See warranty for details.
  - 5 of top 8 panel manufacturers tested in 2013 report, 3 additional panels in 2014. Ferrara, C., et al. "Fraunhofer PV Durability Initiative for Solar Modules: Part 2", Photovoltaics International, 2014.
  - Compared with the non-stress-tested control panel, Atlas 25+ Durability test report, Feb 2013.
  - Standard Test Conditions (1000 W/m<sup>2</sup> irradiance, AM 1.5, 25° C), NREL calibration Standard: SOMS current, LACCS FF and Voltage.
  - Based on average of measured power values during production.
  - Type 2 fire rating per UL1703:2013, Class C fire rating per UL1703:2002.
  - See sales person for details.

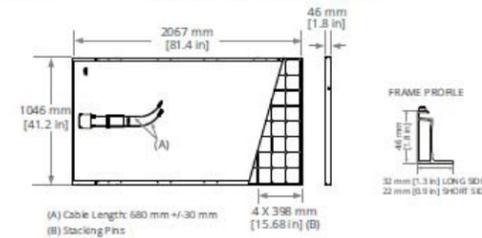
See <http://www.sunpower.com/facts> for more reference information. For more details, see extended datasheet: [www.sunpower.com/datasheets](http://www.sunpower.com/datasheets).

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Tests And Certifications	
Standard tests <sup>13</sup>	UL1703 (Type 2 Fire Rating), IEC 61215, IEC 61730
Quality Certs	ISO 9001:2008, ISO 14001:2004
EHS Compliance	RoHS, OHSAS 18001:2007, lead free, REACH SVHC-155, PV Cycle
Sustainability	Cradle to Cradle (eligible for LEED points) <sup>14</sup>
Ammonia test	IEC 62716
Desert test	10.1109/PVSC.2013.6744437
Salt Spray test	IEC 61701 (maximum severity)
PID test	Potential-Induced Degradation free: 1000V <sup>9</sup>
Available listings	UL, CEC, CSA, TUV, FSEC

Operating Condition And Mechanical Data	
Temperature	-40°F to +185°F (-40°C to +85°C)
Impact resistance	1 inch (25mm) diameter hail at 52 mph (23 m/s)
Appearance	Class B
Solar Cells	128 Monocrystalline Maxeon Gen II
Tempered Glass	High transmission tempered Anti-Reflective
Junction Box	IP-65, 680mm cables / MC4 Compatible
Weight	56 lbs (25.4 kg)
Max load	Wind: 2400 Pa, 50 psf front & back Snow: 2400 Pa, 50 psf front
Frame	Class 2 silver anodized; stacking pins



Please read the safety and installation guide.

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Solar PV Modules: SunPower E20-435-COM