

## **FIRST AMENDMENT TO OFFICE LEASE AGREEMENT**

**THIS FIRST AMENDMENT TO OFFICE LEASE AGREEMENT** (this "Amendment") is made and entered into as of October 19, 2016 (the "Effective Date"), by and between **PRIII SUNSET HILLS VIRGINIA LLC**, a Delaware limited liability company ("Landlord"), and **DPR CONSTRUCTION**, a California general partnership ("Tenant").

### **WITNESSETH:**

WHEREAS, Landlord is the landlord and Tenant is the tenant under that certain Office Lease Agreement dated as of September 16, 2015 (the "Lease"), for certain premises (the "Premises") designated as Suite 200 and deemed to comprise 20,612 rentable square feet consisting of the entirety of the second (2nd) floor of the building (the "Building") commonly known as Sunset Corporate Plaza II and located at 11109 Sunset Hills Road, Reston, Virginia 20190, for a term (the "Term") currently expiring on March 31, 2027; and

WHEREAS, Landlord and Tenant desire to amend and restate certain provisions of the Lease relating to Tenant's Rooftop Installations, all on the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the foregoing recitals, the mutual covenants and agreements herein contained, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby covenant and agree as follows:

**1. Definitions.** Capitalized terms used in this Amendment and not otherwise defined herein shall have the same meaning as provided in the Lease.

**2. Rooftop Communications Equipment.** Effective as of the Effective Date hereof, Article XXXII (Rooftop Communications Equipment) of the Lease shall be and is hereby amended by deleting it in its entirety and by substituting the following Article XXXII (Rooftop Communications Equipment) in lieu thereof:

### **"ARTICLE XXXII - Rooftop Communications Equipment**

32.1 Subject to the terms and provisions of this Article XXXII, and subject, further, to the availability of adequate space therefor from time to time (it being acknowledged, understood, and agreed that Landlord shall not be required to hold any space in reserve for Tenant for purposes hereof), Tenant shall have the non-exclusive right and license, all in accordance with applicable Laws and upon written notice to Landlord, to license a portion of the Building's roof to be designated by Landlord (not to exceed Tenant's Proportionate Share of the total available tenant roof space, except as hereinafter provided) (collectively, "**Tenant's Roof Space**"), to install, operate and maintain (a) satellite dishes, antennae, and/or other communications equipment (collectively, the "**Rooftop Communications Equipment**"), (b) solar panels and related equipment and installations serving the Premises (collectively, the "**Solar Panels**"), (c) skylights serving the Premises (the "**Skylights**"), and/or (d) a rooftop deck (the "**Rooftop Deck**", and together with the Rooftop Communications Equipment, the Solar Panels, and the Skylights, collectively, the "**Rooftop Installations**"), subject, in each case, to the following terms, conditions, and limitations:

(i) the location of Tenant's Roof Space and the Rooftop Installations shall be in such location as Landlord shall direct, and Tenant agrees

that in the event Landlord requires the relocation of any portion of Tenant's Roof Space and/or the Rooftop Installations after they have been installed, Tenant agrees to relocate the same, at Landlord's sole cost and expense, to a new location at the Building reasonably designated by Landlord (provided, such new location shall provide similar efficiency and results with respect to such Rooftop Installations, as well as similar or better sunlight for electricity production with respect to the Solar Panels, as the existing location), unless such relocation (A) is necessary to comply with applicable Laws (whether currently existing or hereafter enacted), (B) results from Tenant's use of any Excess Roof Space (as hereinafter defined), notwithstanding that such use may have otherwise been permitted under Section 32.4 below, or (C) is required in connection with any maintenance or repair work which Landlord reasonably determines (1) is required to be performed within Tenant's Roof Space (or any Excess Roof Space occupied by Tenant from time to time hereunder), (2) cannot reasonably be completed without the relocation of the Rooftop Installations, or any portion thereof, (3) is the least costly alternative permitting or facilitating completion of such maintenance or repair work (and is not being done merely for the convenience of Landlord), and (4) is not covered by the warranty provided by Landlord's roofing contractor (and, if so requested by Tenant at such time, Landlord shall provide Tenant with a copy of the contract between Landlord and such roofing contractor), and in the case of either Clause (A), Clause (B), or Clause (C) above, such relocation, whether temporary or permanent, shall be at Tenant's sole cost and expense;

(ii) the installation, operation, maintenance, repair, replacement, and removal of the Rooftop Installations, together with any and all maintenance and repair of the roof and other affected areas of the Building, including, without limitation, Tenant's Roof Space and the Excess Roof Space, to the extent arising from or required in connection with the Rooftop Installations and/or Tenant's use thereof or access thereto, and any attendant costs and expenses, shall be the sole responsibility of Tenant and shall be subject to the provisions of this Lease, including, without limitation, Article IX hereof;

(iii) prior to the installation of any such Rooftop Installations, Tenant shall obtain, at its sole cost and expense, all approvals, permits, and licenses required by any regulatory body having authority over the installation or operation of the Rooftop Installations, if any, and shall, if any such approvals, permits, or licenses are required, deliver evidence of the same to Landlord, and shall in all events comply with any and all Laws applicable to the Rooftop Installations;

(iv) Tenant shall use contractors reasonably approved by Landlord (including, without limitation, Landlord's rooftop manager, if any) for the installation, maintenance, and removal of the Rooftop Installations, as well as access to Tenant's Roof Space from time to time;

(v) upon the expiration or earlier termination of this Lease (but in any event, prior thereto), Tenant shall, unless directed otherwise by Landlord in writing, remove the Rooftop Installations and repair, to Landlord's reasonable satisfaction, Tenant's Roof Space, together with any and all damage to other

portions of the Building caused by such Rooftop Installations, or the installation, use, or removal thereof, all at Tenant's sole cost and expense, and restore those portions of the Building affected thereby to the condition existing prior to such installation;

(vi) Tenant and all other third parties shall be prohibited from accessing or using the Building's roof or other secured areas for any purpose not expressly permitted under this Article XXXII or elsewhere in this Lease, without Landlord's prior written consent in each instance;

(vii) Tenant shall not, without the prior written consent of Landlord, assign, sublet, license, or otherwise permit any other party to use the Rooftop Installations, nor engage in the reselling of any services associated with the Rooftop Communications Equipment or the Solar Panels, it being acknowledged and agreed that the Rooftop Communications Equipment and the Solar Panels may only be utilized by Tenant in connection with its business activities conducted at the Premises;

(viii) such Rooftop Installations shall not materially interfere with the systems or equipment of Landlord or other tenants or occupants of the Building at any time;

(ix) Tenant shall at all times install, use, maintain, and operate the Rooftop Installations in first class condition and repair, in a clean, safe and tenantable condition, and otherwise in accordance with all Laws and the requirements of this Lease, and shall promptly make all repairs, perform all maintenance, and make all replacements necessary to the foregoing; and

(x) without limitation of Tenant's other obligations hereunder, Tenant shall be responsible for any and all snow and ice removal of and from the Rooftop Installations only (i.e. snow and ice will be removed therefrom and placed on such other portions of the roof as Landlord shall reasonably direct) within Tenant's Roof Area and/or the Excess Roof Space (provided, (A) such snow and ice removal from such Rooftop Installations shall be at Tenant's discretion unless Tenant is notified by Landlord at any time, or from time to time, that such removal is required for safety reasons, due to a potentially material or adverse effect on the Building Structure and Systems (including, without limitation, water leakage or seepage), or for other reasonable causes, and (B) nothing contained herein shall be deemed to modify or otherwise amend Landlord's maintenance and repair obligations with respect to the roof generally as, and to the extent, provided under Section 8.2 of the Lease, which obligations shall include snow and ice removal from the roof area generally, but excluding the Rooftop Installations).

32.2 The size, type, and location of the Rooftop Installations, together with any and all plans and specifications related thereto, shall be subject to Landlord's approval, which approval shall not be unreasonably withheld so long as such Rooftop Installations and the placement thereof do not materially or adversely affect the Building Structure and Systems, or otherwise adversely impact the appearance or aesthetics of the Building (and Landlord may require an enclosure or other screening in connection therewith). That portion of the Rooftop Installations consisting of the Solar Panels shall

be installed in accordance with those certain plans and specifications prepared by PowerSecure Solar Energy Solutions captioned "DPR Reston" and dated June 20, 2016 (the "**Solar Panels Plans**"), a true and correct copy of which Solar Panels Plans are attached as Exhibit A to that certain First Amendment to Office Lease Agreement dated as of October 19, 2016, and which Solar Panels Plans have heretofore been reviewed and approved by each of Landlord and Tenant. Landlord's consenting to the installation of the Rooftop Installations, including, without limitation, the Solar Panels, at the Building is in no way to be interpreted as any representation by Landlord that such Rooftop Installations will conform with applicable Laws, or relieve Tenant of its obligation to obtain the necessary consents, licenses, or other approvals necessary to install and operate such Rooftop Installations. Tenant further agrees to cause its insurance policies required under the Lease to be extended to include Tenant's Roof Space and the Rooftop Installations, including, without limitation, the Solar Panels, naming Landlord as an additional insured (as well as any mortgagee of Landlord and any other party reasonably designated in writing by Landlord), and insuring against any loss resulting from the installation, operation, maintenance, and removal of such Rooftop Installations, including, without limitation, the Solar Panels, as well as the use and occupancy of Tenant's Roof Space.

32.3 Notwithstanding anything in this Article XXXII to the contrary, if Tenant does not fulfill any of its obligations hereunder, Landlord shall have its rights and remedies as set forth in Section 8.1 of the Lease.

32.4 Notwithstanding anything in this Article XXXII to the contrary, but otherwise subject to the terms and provisions hereof, Tenant shall, with the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned, or delayed (and which approval was heretofore granted in connection with the Solar Panels Plans), be permitted to use additional portions of the Building's roof which are in excess of Tenant's Proportionate Share of the total available tenant roof space (herein, the "**Excess Roof Space**") for purposes of the Rooftop Installations; provided, however, that Tenant's use of such Excess Roof Space shall be at Tenant's sole risk, cost, and expense, and shall also be subject to the terms and provisions of this Article XXXII. In the event that Landlord hereafter requires the use of all or any portion of such Excess Roof Space for another tenant or tenants of the Building, Tenant shall be required to vacate and surrender such portion(s) of the Excess Roof Space, and to remove the Rooftop Installations therefrom, promptly following Landlord's written demand therefor, and otherwise in accordance with the terms and provisions of this Article XXXII. Without limitation of the foregoing, Landlord agrees that it will not market or advertise the availability of the Excess Roof Space to prospective tenants as part of Landlord's general marketing or advertising program for the Building, nor will Landlord offer such Excess Roof Space to prospective tenants on an unsolicited basis; provided, however, that if any such prospective tenant requests such Excess Roof Space as a material part of the terms or consideration for such prospective tenant's lease of space at the Building, and if Landlord is unable to identify any comparable space or a commercially reasonable alternative, Landlord shall be permitted to offer and lease to such prospective tenant up to its proportionate share of such Excess Roof Space. In such event, Landlord shall provide a new location at the Building reasonably designated by Landlord for the relocation of any Rooftop Installations located within such portion of the Excess Roof Space so leased (provided, however, that such new location shall provide similar efficiency and results with respect to such relocated Rooftop Installations, as well as

similar or better sunlight for electricity production with respect to any relocated Solar Panels, as such portion of the Excess Roof Space)."

**3. Security Deposit.** It is acknowledged and agreed that (i) Landlord is currently holding the sum of Seventy Thousand Four Hundred Twenty-Four and 34/100 Dollars (\$70,424.34) as the Security Deposit pursuant to the terms and provisions of Article XI (Security Deposit) of the Lease, and (ii) Landlord shall continue to hold the aforementioned sum as the Security Deposit during the Term, subject to the terms and provisions of said Article XI (Security Deposit) of the Lease.

**4. Brokers.** Tenant hereby represents and warrants to Landlord that Tenant has not dealt with any broker, agent, or finder in connection with this Amendment, and Tenant agrees to indemnify, defend, and hold Landlord, Landlord's property manager, and their respective members, principals, officers, employees, agents, affiliates, successors, and assigns harmless from and against any and all claims, damages, judgments, liabilities, liens, proceedings, costs, and expenses (including, without limitation, court costs and reasonable attorneys' fees) arising from any claims or demands of any broker, agent, or finder with whom Tenant has dealt or is alleged to have dealt for any commission or fee due or alleged to be due in connection with this Amendment.

**5. Miscellaneous.**

A. This Amendment sets forth the entire agreement between the parties with respect to the matters set forth herein. There have been no additional oral or written representations or agreements. Other than as expressly set forth in this Amendment, under no circumstances shall Tenant be entitled to any Rent abatement, improvement allowance, leasehold improvements, or other work related to the Premises, or any similar economic incentives that may have been provided Tenant in connection with entering into the Lease or any prior amendment, in connection with this Amendment. The mutual obligations of the parties as provided herein are the sole consideration for this Amendment.

B. Tenant agrees that neither Tenant nor its agents or any other parties acting on behalf of Tenant shall disclose any matters set forth in this Amendment or disseminate or distribute any information concerning the terms, details or conditions hereof to any person, firm or entity without obtaining the express written consent of Landlord.

C. The recitals to this Amendment are incorporated into the body of this Amendment as if restated herein.

D. Interpretation of this Amendment shall be governed by the laws of the Commonwealth of Virginia.

E. Each party to this Amendment represents that its signatory has the authority to execute and deliver the same on behalf of the party for which such signatory is acting.

F. This Amendment shall not be binding until executed and delivered by both parties. This Amendment may not be amended except in writing signed by both parties.

G. Signatures to this Amendment transmitted by electronic means shall be valid and effective to bind the party so signing. Each party agrees to promptly deliver an execution original to this Amendment with its actual signature to the other party, but a failure to do so shall not affect the enforceability of this Amendment, it being expressly agreed that each party to this Agreement shall be bound by its own electronically transmitted signature and shall accept the electronically transmitted signature of the other party to this Amendment.

H. This Amendment may be executed in counterparts, each of which shall be an original and all of which counterparts taken together shall constitute one and the same agreement.

I. From and after the Effective Date hereof, all references to the term "Lease" or words of similar import that are contained in the Lease and any amendments or modifications thereto, shall hereinafter refer to the Lease as modified by this Amendment.

J. Except as set forth in this Amendment, the terms, covenants, conditions, and agreements of the Lease shall remain unmodified and otherwise in full force and effect. In the event of any inconsistency between the terms of the Lease and the terms of this Amendment, the terms of this Amendment shall govern and control.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the Effective Date first above written.

LANDLORD:

**PRIII SUNSET HILLS VIRGINIA LLC**, a  
Delaware limited liability company

By: Penzance Management LLC, a Delaware limited liability  
company, property management agent for Landlord

By:   
Name: \_\_\_\_\_  
Title: \_\_\_\_\_ Michael Klein  
Authorized Signatory

TENANT:

**DPR CONSTRUCTION**, a  
California general partnership

By:   
Name: GREG HALLENBECK  
Title: EXECUTIVE VP

**EXHIBIT A**

**SOLAR PANELS PLANS**

# DPR RESTON

11109 SUNSET HILLS RD.  
RESTON, VA

AERIAL MAP	STREET MAP	SYSTEM SUMMARY	SHEET LIST
		<p><b>SYSTEM SUMMARY</b></p> <p>AC SYSTEM SIZE: 108 KW AC  DC SYSTEM SIZE: 141.3 KW DC  STRING SIZE: 141.3 KW DC  STRING COUNT: 141.3 KW DC  MODULES: (432) SUNPOWER SPR-E20-327  INVERTERS: (4) SMA STP24000TL-US AND (1) SMA STP12000TL-US  INVERTER TOPOLOGY: UNGROUNDED  DC VOLTAGE: 1,000V  AC VOLTAGE: 480V, 3Ø, 4 WIRE  ARRAY AZIMUTH: 186°  ARRAY TILT: 10°  RACKING: HELIX ST 1H LANDSCAPE</p>	<p><b>ELECTRICAL</b></p> <p>PV0.1 COVER SHEET  PV0.2 GENERAL NOTES AND SYMBOLS  PV0.3 SINGLE LINE DIAGRAM  PV1.1 PV SCHEDULES  PV1.2 PV LABELS  PV2.0 SITE PLAN - ARRAY LAYOUT  PV2.1 ROOF PLAN - DIMENSIONS  PV2.2 ROOF PLAN - INVERTER, OUTPUT AND DC ROUTING  PV2.3 ROOF PLAN - ANCHOR AND BALLAST PLANS  PV2.4 ROOF PLAN - ANCHOR AND BALLAST PLANS  PV2.5 ROOF PLAN - GROUNDDING PLAN  PV2.6 ROOF PLAN - STRINGING LAYOUT</p> <p><b>STRUCTURAL</b></p> <p>S1 STRUCTURAL</p>
SITE MAP		PROJECT CONTACTS	
		<p><b>PROJECT MANAGER:</b> BRUCE BOWERS  POWERSECURE SOLAR  4022 STIRRUP CREEK DRIVE, SUITE 320  DURHAM, NC 27703  (919)805-6469  BBOWERS@POWERSECURE.COM</p> <p><b>DESIGNER:</b> BELETE DEMISSE  POWERSECURE SOLAR  4022 STIRRUP CREEK DRIVE, SUITE 320  DURHAM, NC 27703  (919)215-8130  BDEMISSE@POWERSECURE.COM</p> <p><b>ENGINEER OF RECORD:</b></p> <p><b>ELECTRICAL:</b> DANIEL DOMINGUEZ  POWERSECURE SOLAR  4022 STIRRUP CREEK DRIVE, SUITE 320  DURHAM, NC 27703  (919)802-3660  DDOMINGUEZ@POWERSECURE.COM</p> <p><b>STRUCTURAL:</b> DOUG FITZPATRICK  FITZPATRICK ENGINEERING GROUP, PLLC  10250 WEST CATAWBA AVENUE  SUITE 311  CORNELIUS, NC 28031  (704)987-9114  DFITZPATRICK@FEGSTRUCTURAL.COM</p>	



CONTINENTAL  
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REV	DATE	DESCRIPTION

COVER SHEET	PROJECT:	DATE:
	SOLAR PHOTOVOLTAIC SYSTEM 11109 SUNSET HILLS RD. RESTON, VA	06.20.2016

PROJECT:	DATE:
PVO.1	06.20.2016

ABBREVIATIONS	GENERAL NOTES	SYMBOLS
<p>A AMPS  AC ALTERNATING CURRENT  AL ALUMINUM  ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS  C CELSIUS  CT CURRENT TRANSFORMER  CU COPPER  DB DRY BULB  DC DIRECT CURRENT  DIA DIAMETER  DISC DISCONNECT  DWG DRAWING  EGC EQUIPMENT GROUNDING CONDUCTOR  EMT ELECTRICAL METALLIC TUBING  ETL ELECTRICAL TESTING LABS  GALV GALVANIZED  GEC GROUNDING ELECTRODE CONDUCTOR  GFI GROUND FAULT INTERRUPTER  GND GROUND  IMC INTERMEDIATE METALLIC CONDUIT  IMP MAXIMUM POWER CURRENT  INV INVERTER  ISC SHORT CIRCUIT CURRENT  KW KILOWATT  KV KILOVOLT  KA KILOVOLT AMPS  KVM <del>KEYBOARD, VIDEO, MOUSE</del>  LFMC LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT  LFNC LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT  MAX MAXIMUM  MCB MAIN CIRCUIT BREAKER  MIN MINIMUM  MLO MAIN LUG ONLY  MPP MAXIMUM POWER POINT  MV MEDIUM VOLTAGE  NEC NATIONAL ELECTRIC CODE  NEG NEGATIVE  NEU NEUTRAL  NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION  NFPA NATIONAL FIRE PROTECTION ASSOCIATION  NRTL NATIONALLY RECOGNIZED TESTING LABORATORY  OCPD OVER CURRENT PROTECTION DEVICE  PC PERSONAL COMPUTER  PCC POINT OF COMMON COUPLING  PLC PROGRAMMABLE LOGIC CONTROLLER  POS POSITIVE  PT POTENTIAL TRANSFORMER  PV PHOTOVOLTAIC  PVC POLYVINYL CHLORIDE  RMC RIGID METALLIC CONDUIT  RTU REMOTE TERMINAL UNIT  SCADA SUPERVISORY CONTROL AND DATA ACQUISITION  SCH SCHEDULE  STC STANDARD TEST CONDITIONS  TEMP TEMPERATURE  TYP TYPICAL  UL UNDERWRITERS LABORATORIES  UPS UNINTERRUPTIBLE POWER SUPPLY  V VOLT/VOLTS  VAC VOLTS AC  VDC VOLTS DC  VMP MAXIMUM POWER VOLTAGE  VOC OPEN CIRCUIT VOLTAGE  XFMR TRANSFORMER</p> <p>1. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL OSHA REGULATIONS AND SAFETY PRECAUTIONS ON SITE. THE ENGINEER IS NOT RESPONSIBLE FOR SPECIFIC WORKING HAZARDS.  2. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL EQUIPMENT MANUALS AND DRAWINGS PRIOR TO INSTALLING AND ENERGIZING EQUIPMENT.  3. ALL SYSTEM COMPONENTS SHALL BE LISTED BY A THIRD PARTY TESTING AGENCY (UL, NRTL, ETL, ETC.). ALL EQUIPMENT SHALL HAVE A MINIMUM RATING OF NEMA 3R UNLESS LOCATED INDOORS.  4. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A CERTIFIED ELECTRICIAN AND APPRENTICES UNDER THE SUPERVISION OF A LICENSED ELECTRICAL CONTRACTOR.  5. PV STRINGS SHALL BE CONNECTED AND LABELED AS DETAILED IN THE DRAWING SET.  6. THE SYSTEM SHALL BE INSTALLED PER NEC 2011 AND SHALL ADHERE TO ALL LOCAL CODES AND STANDARDS.  7. THE PV SYSTEM SHALL BE GROUNDED AND BONDED PER NEC ARTICLE 690 SECTION V AND ARTICLE 250. ANY DEVIATIONS FROM THE DRAWINGS SET WILL NEED TO BE APPROVED BY THE ENGINEER.  8. SYSTEM SIGNAGE SHALL BE INSTALLED AND LABELED PER NEC ARTICLE 690 SECTION VI.  9. WORKING CLEARANCES AROUND ALL EQUIPMENT SHALL CONFORM TO NEC 110.26.  10. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH CHAPTER 3 OF THE NEC.  11. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ENGINEER PRIOR TO MAKING ANY CHANGES. APPROVED CHANGES SHALL REQUIRE A DRAWING REVISION TO MAINTAIN VERSION CONTROL.  12. ACTUAL LOCATION OF OVERHEAD AND UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED AND DOCUMENTED PRIOR TO THE EXECUTION OF ANY WORK. THE ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES TO EXISTING CONDITIONS.  13. ALL CONDUCTORS AND EQUIPMENT SHALL BE CONSIDERED "ENERGIZED" UNLESS CHECKED, AND CHECKED AGAIN. LOCKOUT + TAGOUT PROCEDURES SHALL BE EMPLOYED BEFORE ANY WORK IS DONE ON ELECTRICAL EQUIPMENT.  14. THE CONTRACTOR SHALL MAKE AN EFFORT TO CAUSE AS LITTLE DISTURBANCE AS POSSIBLE AND PROTECT THE NATURAL ENVIRONMENT AND RESOURCES OF THE FACILITY DURING THE COURSE OF THE WORK. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR PRE-CONSTRUCTION STATE OR BETTER. AREAS WHICH ARE SEEDED OR SODDED WITH ESTABLISHED GRASS SHALL BE SEEDED AS SOON AS POSSIBLE AFTER COMPLETION OF THE WORK IN THAT AREA.  15. THE CONDUIT LAYOUT DEPICTED IN THE DRAWING SET IS FOR DIAGRAMMATIC PURPOSES ONLY UNLESS OTHERWISE NOTED. CONTRACTOR SHALL ROUTE CONDUIT TO BEST SUIT SITE CONDITIONS AND PROVIDE ACCURATE AS-BUILTS.  16. CONNECTORS, TERMINATIONS AND EQUIPMENT HARDWARE SHALL BE TORQUED PER DEVICE LISTING OR INSTALLATION DOCUMENTATION.  17. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON THE DRAWINGS INCLUDING EXISTING STRUCTURES. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES IN THE DRAWINGS AND/OR EXISTING SITE CONDITIONS.  18. DC VOLTAGE IS ALWAYS PRESENT FROM THE ARRAY DURING DAYLIGHT HOURS. THERE IS A POTENTIAL FOR VOLTAGE TO BE PRESENT AT THE TERMINALS OF THE DC DISCONNECT, COMBINER BOX AND AT THE DC TERMINALS ON THE INVERTER. ALL PERSONNEL SHOULD BE NOTIFIED OF THIS POTENTIAL HAZARD AND SHOULD TAKE PRECAUTIONS TO PREVENT ACCIDENTAL SHOCK OR INJURY.  19. ALL EQUIPMENT SHALL BE MOUNTED PER MANUFACTURER'S SPECIFICATIONS.  20. THE CONTRACTOR SHALL SUPPLY EQUIPMENT/MATERIAL SUBMITTALS PRIOR TO ORDERING. APPROVAL BY POWERSECURE SOLAR FOR ALL EQUIPMENT IS MANDATORY.</p>	 XX-X DETAIL TAG  EQUIPMENT TAG  FEEDER TAG  KEYED NOTE TAG  REVISION TAG  MODULE  COMBINER  CONTACTOR RECOMBINER  INVERTER  METER  FUSE  CIRCUIT BREAKER  THREE-WINDING TRANSFORMER  TWO-WINDING TRANSFORMER  FUSED DISCONNECT  SWITCH  FUSED SWITCH  CURRENT TRANSFORMER  RATIO  POTENTIAL TRANSFORMER	



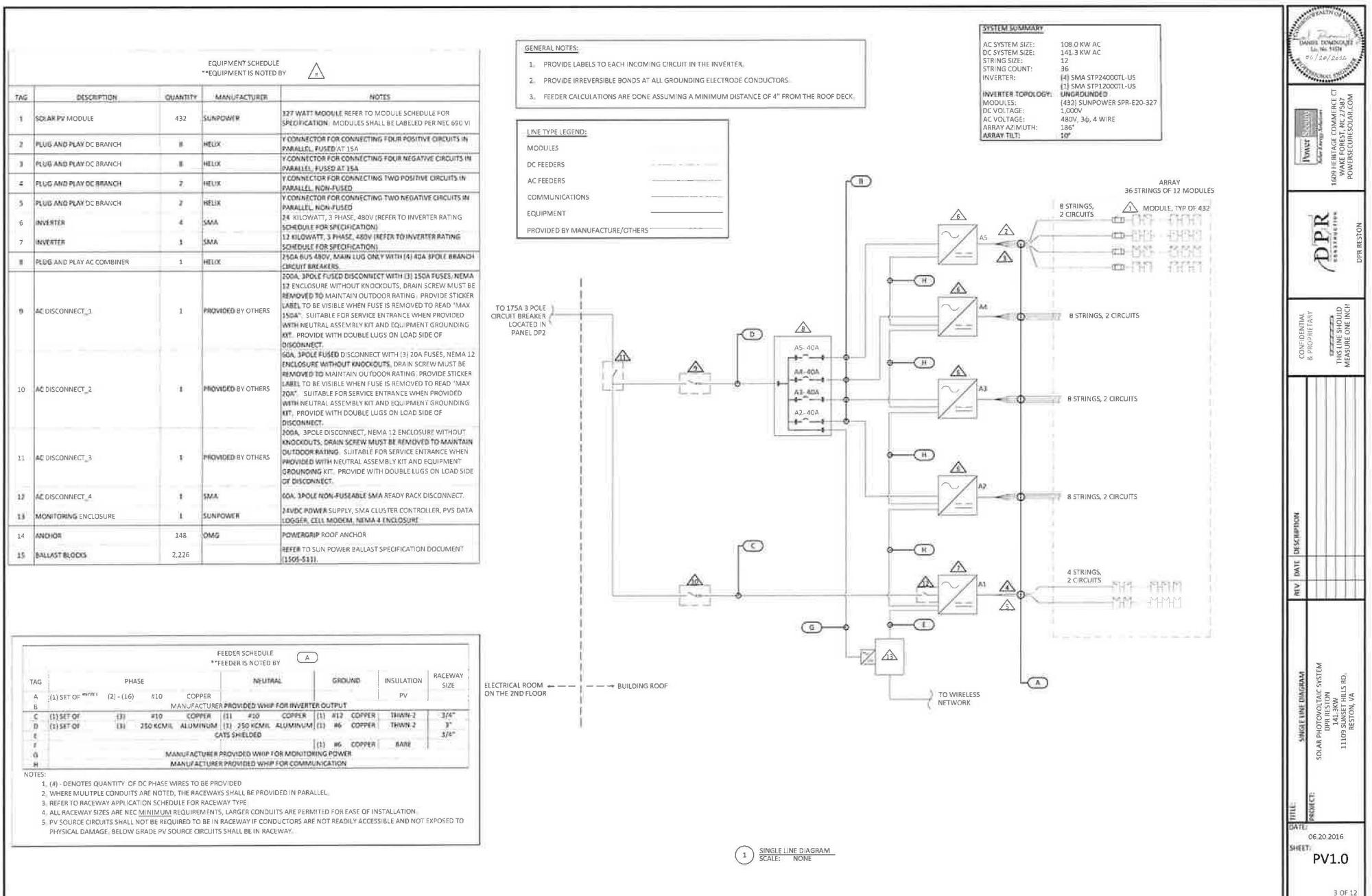
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REV DATE DESCRIPTION

GENERAL NOTES AND SPECIFICATIONS

PROJECT: DPR RESTON  
SYSTEM: SOLAR PHOTOVOLTAIC SYSTEM  
LOCATION: 141.3KW  
1109 SUNSET HILLS RD.  
RESTON, VA

TITLE: DATE: 06.20.2016  
SHEET: PVO.2





POWER SOURCE  
Solar Energy Solutions  
1603 HERITAGE COMMONS CT  
WARE FOREST, NC 27087  
POWERSECURESOAL.COM  
DPR RESTON

DPR  
STRUCTURES

FEEDER SCHEDULE						
TAG	PHASE	NEUTRAL		GROUND	INSULATION	RACEWAY SIZE
		NEUTRAL	NEUTRAL			
A	(1) SET OF (16) #10 COPPER	(2)-(16)	#10 COPPER		PV	
B	MANUFACTURER PROVIDED WHIP FOR INVERTER OUTPUT					
C	(1) SET OF (3) #10 COPPER (1) #10 COPPER (1) #12 COPPER	(3)		THHN-2		3/4"
D	(1) SET OF (3) 250 KCMIL ALUMINUM (1) 250 KCMIL ALUMINUM (1) #6 COPPER	(3)		THHN-2		3/4"
E	CAT5 SHIELDED					3/4"
F						
G	MANUFACTURER PROVIDED WHIP FOR MONITORING POWER					
H	MANUFACTURER PROVIDED WHIP FOR COMMUNICATION					

NOTES:  
 1. (R) - DENOTES QUANTITY OF DC PHASE WIRES TO BE PROVIDED  
 2. WHERE MULTIPLE CONDUITS ARE NOTED, THE RACEWAYS SHALL BE PROVIDED IN PARALLEL.  
 3. REFER TO RACEWAY APPLICATION SCHEDULE FOR RACEWAY TYPE.  
 4. ALL RACEWAY SIZES ARE NEC MINIMUM REQUIREMENTS, LARGER CONDUITS ARE PERMITTED FOR EASE OF INSTALLATION.  
 5. PV SOURCE CIRCUITS SHALL NOT BE REQUIRED TO BE IN RACEWAY IF CONDUCTORS ARE NOT READILY ACCESSIBLE AND NOT EXPOSED TO PHYSICAL DAMAGE. BELOW GRADE PV SOURCE CIRCUITS SHALL BE IN RACEWAY.

MINIMUM CONDUIT REQUIRED PER APPLICATION	
APPLICATION	CONDUIT TYPE
ROOF MOUNTED (EXPOSED)	IMC
BUILDING INTERIOR (EXPOSED TO PHYSICAL DAMAGE)	IMC
BUILDING INTERIOR (PROTECTED FROM PHYSICAL DAMAGE)	IMT
BUILDING EXTERIOR (EXPOSED TO PHYSICAL DAMAGE)	IMC
BUILDING EXTERIOR (PROTECTED FROM PHYSICAL DAMAGE)	IMC
BELOW GRADE	PVC SCHED 40
IN DIRECT CONTACT WITH EARTH	
TRANSITION FROM BELOW GRADE TO ABOVE GRADE	IMC
(EXPOSED TO PHYSICAL DAMAGE)	
TRANSITION FROM BELOW GRADE TO ABOVE GRADE	PVC SCHED 80
(PROTECTED FROM PHYSICAL DAMAGE)	

EQUIPMENT SCHEDULE			
*EQUIPMENT IS NOTED BY			
TAG	DESCRIPTION	QUANTITY	MANUFACTURER
1	SOLAR PV MODULE	432	SUNPOWER
2	PLUG AND PLAY DC BRANCH	11	HELIX
3	PLUG AND PLAY DC BRANCH	8	HELIX
4	PLUG AND PLAY DC BRANCH	3	HELIX
5	PLUG AND PLAY DC BRANCH	2	HELIX
6	INVERTER	4	SMA
7	INVERTER	1	SMA
8	PLUG AND PLAY AC COMBINER	1	HELIX
9	AC DISCONNECT_1	1	PROVIDED BY OTHERS
10	AC DISCONNECT_2	1	PROVIDED BY OTHERS
11	AC DISCONNECT_3	1	PROVIDED BY OTHERS
12	AC DISCONNECT_4	1	SMA
13	MONITORING ENCLOSURE	1	SUNPOWER
14	ANCHOR	148	DMG
15	BALLAST BLOCKS	2,226	

NOTES:  
 1. (R) - DENOTES QUANTITY OF DC PHASE WIRES TO BE PROVIDED  
 2. WHERE MULTIPLE CONDUITS ARE NOTED, THE RACEWAYS SHALL BE PROVIDED IN PARALLEL.  
 3. REFER TO RACEWAY APPLICATION SCHEDULE FOR RACEWAY TYPE.  
 4. ALL RACEWAY SIZES ARE NEC MINIMUM REQUIREMENTS, LARGER CONDUITS ARE PERMITTED FOR EASE OF INSTALLATION.  
 5. PV SOURCE CIRCUITS SHALL NOT BE REQUIRED TO BE IN RACEWAY IF CONDUCTORS ARE NOT READILY ACCESSIBLE AND NOT EXPOSED TO PHYSICAL DAMAGE. BELOW GRADE PV SOURCE CIRCUITS SHALL BE IN RACEWAY.

MODULE MANUFACTURER	SUNPOWER
MODULE MODEL	SPN-E20-327
MAX POWER (Pmax)	327 W
MAX POWER-POINT CURRENT (Imax)	5.98 A
MAX POWER-POINT VOLTAGE (Vmpp)	54.70 V
OPEN CIRCUIT VOLTAGE (Voc)	64.90 V
SHORT CIRCUIT CURRENT (Isc)	6.46 A
MAX SERIES FUSE	15 A
MAXIMUM DC VOLTAGE	1,000 V
VOC TEMP COEFF (mV/C)	-0.272
ISC TEMP COEFF (mV/C)	0.0541
PMP TEMP COEFF (mV/C)	-0.38
CONNECTOR TYPE	M44-COMPATIBLE

INVERTER DESIGNATION	A2-A4	A1
INVERTER MANUFACTURER	SMA	SMA
INVERTER MODEL	STP24000TL-US	STP12000TL-US
INVERTER QUANTITY	4	1
MAXIMUM DC VOLTAGE	1,000 V	1,000 V
AC POWER OUTPUT	24.0 kW	12.0 kW
MODULE QUANTITY	96	48
DC POWER INPUT	31.4 kW	15.6%
DC/AC RATIO	1.308	1.308
OUTPUT VOLTAGE	480V, 3Φ	480V, 3Φ
MAXIMUM OUTPUT CURRENT	29.0 A	14.5 A
SIZE OF OVER CURRENT PROTECTION REQUIRED	40 A	20 A
MIN Vmp	450 V	300 V
MAX Vmp	800 V	800 V
START UP VOLTAGE	188 V	388 V
ENCLOSURE	NEMA 3R	NEMA 3R
MPPT QUANTITY	2	2
GROUNDING CONFIGURATION	UNGROUNDED	UNGROUNDED

PRINTED:	DATE:	REV:	DATE:	DESCRIPTION:
PRINTER:	06.20.2016			PV SCHEDULES
PRINTER:				SOLAR PHOTOVOLTAIC SYSTEM
PRINTER:				DPR RESTON
PRINTER:				11109 35TH ST. RD.
PRINTER:				RESTON, VA
PRINTER:				

**INVERTER DC INPUT**  
**A1**  
4 STRINGS

RATED MPP CURRENT 23.92 A  
RATED MPP VOLTAGE 656.4 V  
MAX SYSTEM VOLTAGE 855.3 V  
MAX CIRCUIT CURRENT 32.3 A

**WARNING**

APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY MAY RESULT IN DEATH OR INJURY. REFER TO NFPA 70E.

**WARNING: ELECTRIC SHOCK HAZARD**  
DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION.

**WARNING: ELECTRIC SHOCK HAZARD**  
IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

WHITE LETTERING ON RED BACKGROUND  
TYPICAL OF 1

**INVERTER DC INPUT**  
**A2-A5**  
8 STRINGS

RATED MPP CURRENT 47.84 A  
RATED MPP VOLTAGE 656.4 V  
MAX SYSTEM VOLTAGE 855.7 V  
MAX CIRCUIT CURRENT 64.6 A

**WARNING**

APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY MAY RESULT IN DEATH OR INJURY. REFER TO NFPA 70E.

**WARNING: ELECTRIC SHOCK HAZARD**  
DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION.

**WARNING: ELECTRIC SHOCK HAZARD**  
IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

WHITE LETTERING ON RED BACKGROUND  
TYPICAL OF 4

**PHOTOVOLTAIC AC DISCONNECT**  
**A1**

AC OUTPUT CURRENT 14.5 A  
NOMINAL AC VOLTAGE 480 V

**WARNING**

APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY MAY RESULT IN DEATH OR INJURY. REFER TO NFPA 70E.

**WARNING: ELECTRIC SHOCK HAZARD**  
DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION.

**WARNING: ELECTRIC SHOCK HAZARD**  
IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

**WARNING**

THIS EQUIPMENT IS FED BY MULTIPLE SOURCES (UTILITY AND PHOTOVOLTAIC)

WHITE LETTERING ON RED BACKGROUND  
TYPICAL OF 1 ON INVERTER A1 UNFUSED AC DISCONNECT.

**PHOTOVOLTAIC AC DISCONNECT**  
**INVERTER A2-A5**

AC OUTPUT CURRENT 29 A  
NOMINAL AC VOLTAGE 480 V

**WARNING**

APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY MAY RESULT IN DEATH OR INJURY. REFER TO NFPA 70E.

**WARNING: ELECTRIC SHOCK HAZARD**  
DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION.

**WARNING: ELECTRIC SHOCK HAZARD**  
IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

**WARNING**

THIS EQUIPMENT IS FED BY MULTIPLE SOURCES (UTILITY AND PHOTOVOLTAIC)

WHITE LETTERING ON RED BACKGROUND  
TYPICAL OF 4 ON INVERTER COMBINER PANEL BOARD

**PHOTOVOLTAIC AC SYSTEM**  
**MAIN DISCONNECT**

AC OUTPUT CURRENT 130.5 A  
NOMINAL AC VOLTAGE 480 V

**WARNING**

APPROPRIATE PPE REQUIRED. FAILURE TO COMPLY MAY RESULT IN DEATH OR INJURY. REFER TO NFPA 70E.

**WARNING: ELECTRIC SHOCK HAZARD**  
DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDE MAY BE ENERGIZED IN THE OPEN POSITION.

**WARNING: ELECTRIC SHOCK HAZARD**  
IF A GROUND FAULT IS INDICATED NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED.

**WARNING**

THIS EQUIPMENT IS FED BY MULTIPLE SOURCES (UTILITY AND PHOTOVOLTAIC)

WHITE LETTERING ON RED BACKGROUND  
TYPICAL OF 1 ON 200A NON-FUSED AC DISCONNECT

**1000VDC WIRE**  
POSITIVE BLACK  
NEGATIVE WHITE  
GROUND GREEN OR BARE

WHITE LETTERING ON BLACK BACKGROUND  
PROVIDE WARNING SIGNAGE AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND ANY OTHER DEVICE WHERE ENERGIZED THAT CONTAINS 1000VDC WIRE.

**120/240VAC WIRE**  
L1 BLACK  
L2 RED  
NEUTRAL WHITE OR GRAY  
GROUND GREEN OR BARE

WHITE LETTERING ON BLACK BACKGROUND  
PROVIDE WARNING SIGNAGE AT EACH JUNCTION BOX OR ANY OTHER DEVICE WHERE ENERGIZED THAT CONTAINS 120/240VAC WIRE.

**480VAC WIRE**  
A PHASE BROWN  
B PHASE ORANGE  
C PHASE YELLOW  
GROUND GREEN OR BARE

WHITE LETTERING ON BLACK BACKGROUND  
PROVIDE WARNING SIGNAGE AT EACH JUNCTION BOX OR ANY OTHER DEVICE WHERE ENERGIZED THAT CONTAINS 480VAC WIRE.

**PHOTOVOLTAIC SYSTEM EQUIPPED**  
**WITH RAPID SHUTDOWN**  
PER NEC 690.56(C)

WHITE LETTERING ON RED BACKGROUND

**INVERTER**  
**A1 - A5**

WHITE LETTERING ON BLACK BACKGROUND  
ONE LABEL FOR EACH OF THE CORRESPONDING INVERTERS

**COMMUNICATION CONTROLLER**

WHITE LETTERING ON BLACK BACKGROUND

**INVERTER COMBINER PANEL BOARD**  
480V, 3φ, 4W  
250A BUS, MAIN LUG ONLY

WHITE LETTERING ON BLACK BACKGROUND

**PV DISCONNECT**

WHITE LETTERING ON BLACK BACKGROUND

**PHOTOVOLTAIC**  
**DC DISCONNECT**

WHITE LETTERING ON RED BACKGROUND

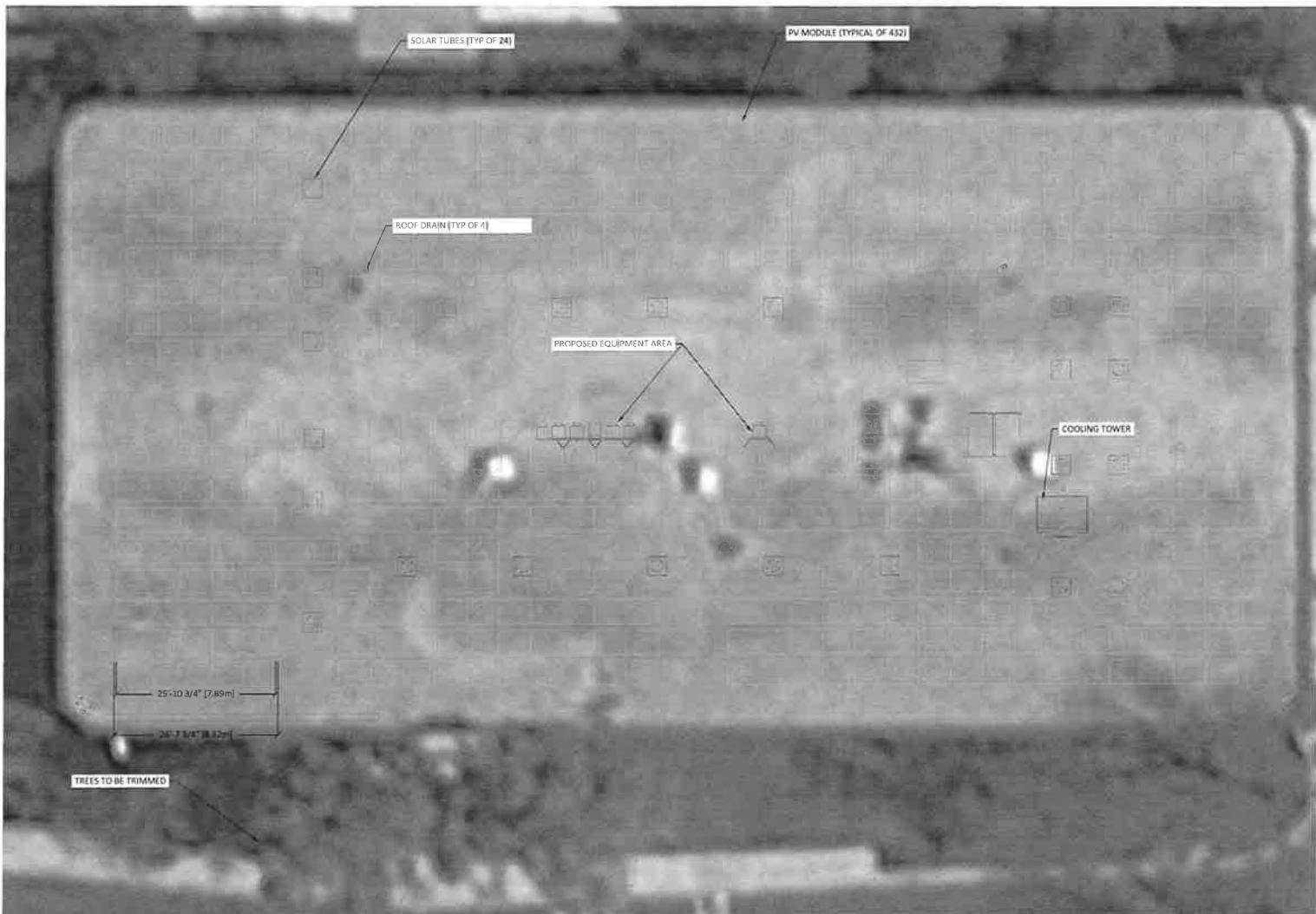


CONFIDENTIAL & PROPRIETARY  
THIS LINE SHOULD  
MEASURE ONE INCH

DATE / DESCRIPTION

REV / PV LABELS  
PHOTOVOLTAIC SYSTEM  
DR BOSTON  
1141 3RD ST.  
NORTH BOSTON, MA 02125

FILE / PROJECT:  
DATE: 06.20.2016  
SHEET: PV1.2  
PAGE: 5 OF 12



GENERAL NOTES:

1. REFER TO SINGLE LINE DIAGRAM ON PV1.0 FOR SPECIFICATIONS.
2. REFER TO EQUIPMENT AND FEEDER SCHEDULES ON PV1.1 FOR SPECIFICATIONS.
3. PROVIDE HELIX SINGLE TILT RACKING SYSTEM AT 10 DEGREE TILT. RACKING SYSTEM SHALL BE A BALLASTED ROOF MOUNTED SYSTEM. THE RACKING SYSTEM SHALL BE UL LISTED FOR GROUNDING AND BONDING. COMPONENTS WITHIN THE RACKING SYSTEM SHALL FORM AN ELECTRICALLY BONDED UNIT AND WILL REQUIRE ADDITIONAL BONDING FROM ONE INDIVIDUAL ARRAY SECTION TO ADJACENT ARRAY SECTIONS. REFER TO MANUFACTURER PROVIDED DOCUMENTATION AND SEALED STRUCTURAL DOCUMENTATION.
4. STRINGING FEEDERS SHALL BE ROUTED ALONG RACKING SYSTEM IN WIRE MANAGEMENT SYSTEM OR CLIP. REFER TO PV2.2 DC FEEDER ROUTING AND PV2.3 AC FEEDER ROUTING.



**Power Secure**  
Power Secure, Inc.  
1601 HERITAGE CENTER, C-1  
100 E COLSTON, NC 27757  
POWERSECUREINC.COM

**DPR**  
DPR RESTON  
DPR RESTON

CONFIDENTIAL & PROPRIETARY	100% SHIELD MEASURE ONE INCH
----------------------------	---------------------------------

DATE:	06.20.2016
PROJECT:	SOLAR PHOTOVOLTAIC SYSTEM
LOCATION:	DPR RESTON 11109 LEAFWOOD HILLS RD. RESTON, VA
FILE#:	PV2.0



1609 HERITAGE COMMERCE CT  
WAKE FOREST, NC 27587  
POWERSECURE5OLAR.COM

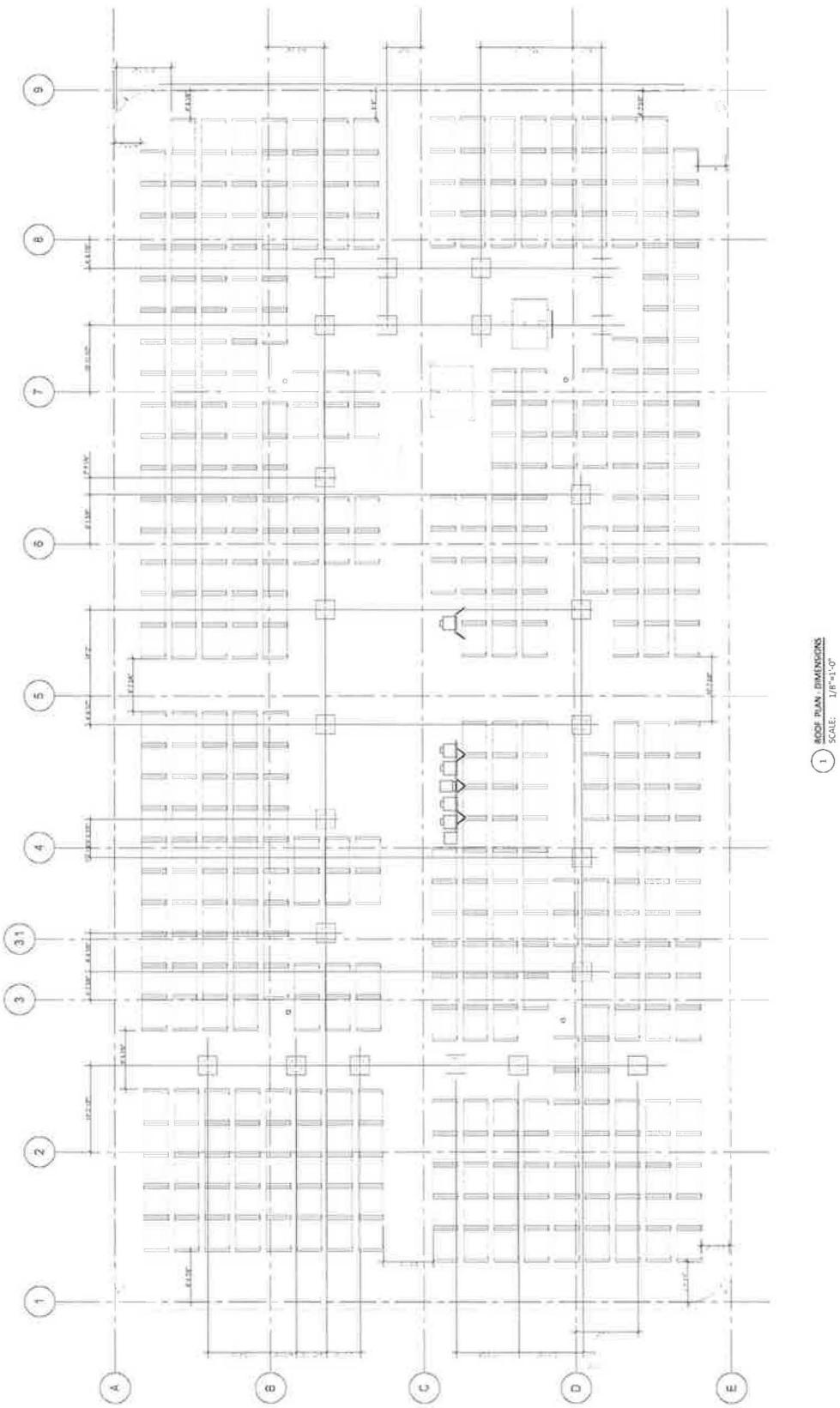
DPR RESTON

MEASURE ONE INCH  
THIS LINE SHOULD  
BE PARALLEL  
CONFINEDENTIAL

OLAR PHOTOVOLTAIC SYSTEM  
ORR HEIST  
141 SAWYER  
11109 SUNSET BLVD.  
RESTON, VA

SHEET: PV2.1  
06/20/2016

70E12





DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_

DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_

DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_

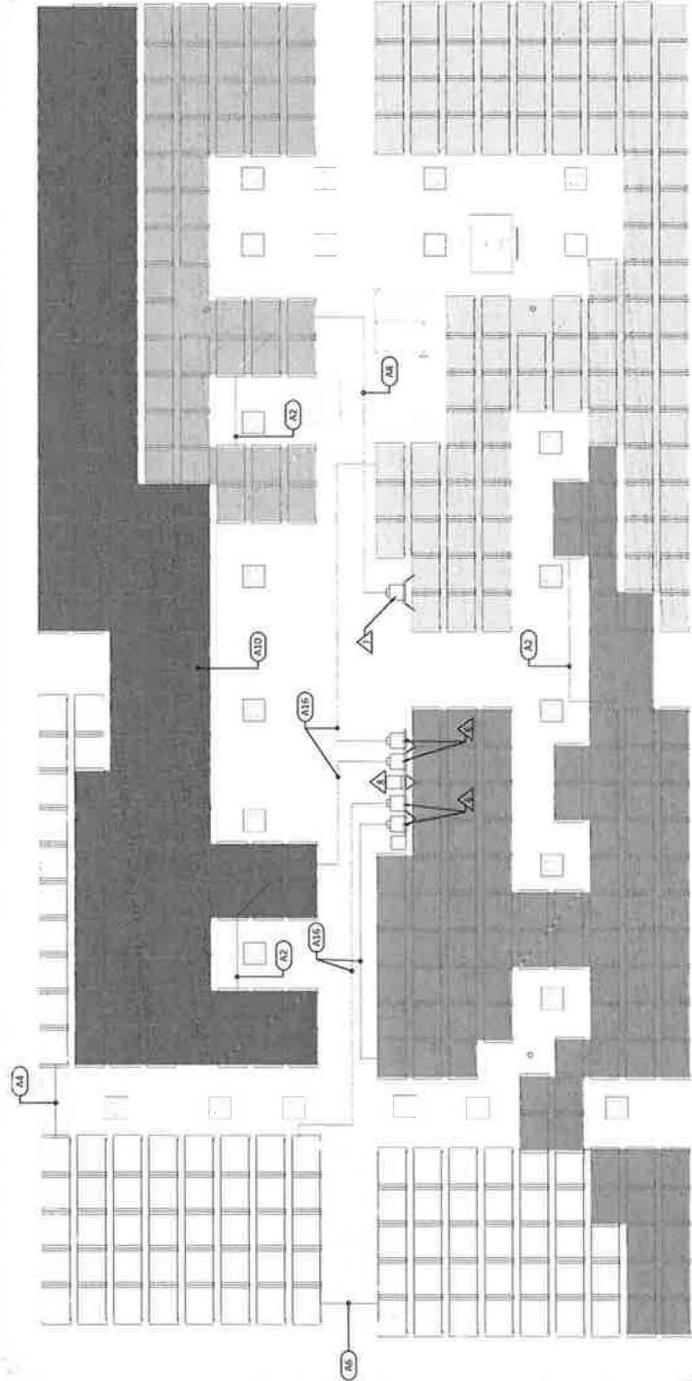
DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_

DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_

DATE: 04/26/16  
REV: A  
INVERTER 1 \_\_\_\_\_  
INVERTER 2 \_\_\_\_\_  
INVERTER 3 \_\_\_\_\_  
INVERTER 4 \_\_\_\_\_  
INVERTER 5 \_\_\_\_\_



- GENERAL NOTES:
- REFER TO SINGLE LINE DIAGRAM ON PV1.0 FOR SPECIFICATIONS.
  - REFER TO EQUIPMENT AND FEEDER SCHEDULES ON PV1.1 FOR SPECIFICATIONS.
  - REFER TO STRINGING PLANS ON PV2.6.
  - ALL FEEDER ROUTING SHOULD BE DRAMATICALLY. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FEEDER ROUTING.



1 ROOF PLAN - INVERTER LAYOUT AND DC ROUTING  
SCALE: 1/8 = 1'-0"

DATE: 06/20/2016  
SHEET: PV2.2

8 OF 12

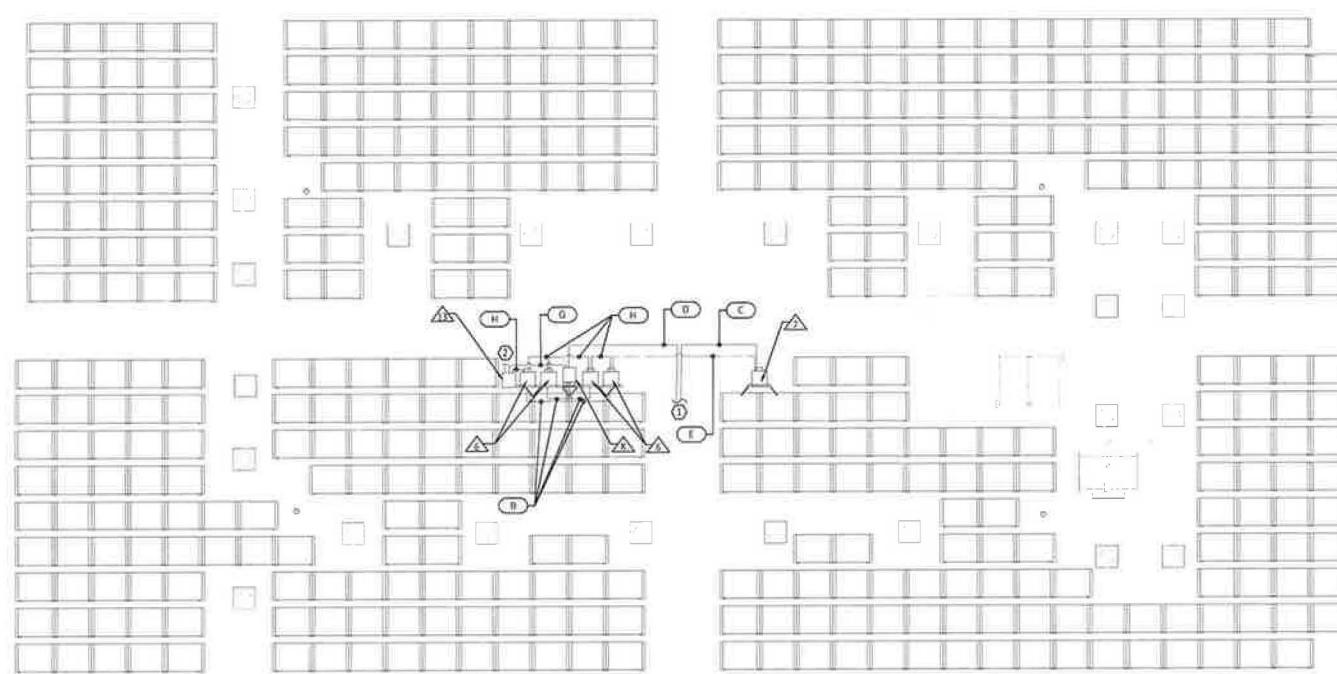
LINE TYPE LEGEND:	
AC FEEDERS	_____
COMMUNICATIONS	_____
EQUIPMENT	_____
PROVIDED BY MANUFACTURE/OTHERS	_____

KEYED NOTES: ☺

- ① CONDUITS SHALL BE ROUTED TO WIREWAY THAT IS TO BE SIZED AND LOCATED BY OTHERS.
- ② TO CELLULAR NETWORK.

GENERAL NOTES:

1. REFER TO SINGLE LINE DIAGRAM ON PV1.0 FOR SPECIFICATIONS.
2. REFER TO EQUIPMENT AND FEEDER SCHEDULES ON PV1.1 FOR SPECIFICATIONS.
3. ALL FEEDER ROUTING SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FEEDER ROUTING.



1 ROOF PLAN - AC AND COMMUNICATIONS ROUTING  
SCALE: 1/8"=1'-0"



POWER SECURE SOLAR  
Power Secure Solar  
1609 HERITAGE COMMERCIAL CT  
WALNUT FOREST, NC 27287  
POWERSECURESOLAR.COM

DPR  
DPR  
CONFIDENTIAL & PROPRIETARY  
THIS LINE SHOULD MEASURE ONE INCH  
DPR MISSION

FILE:	ROOF PLAN - AC AND COMMUNICATIONS ROUTING	REV:	DATE:	DESCRIPTION
PROJECT:	SOLAR PHOTOVOLTAIC SYSTEM			DPR RESTON 141 LEWIS MILLS RD. RESTON, VA

DATE: 06.20.2016  
SHEET: PV2.3





DANIEL DOMENZIE  
LIC. NO. 57574  
6/6/2016

Power Sector  
Solar Energy Division

IRONHORSE SOLAR LLC  
WAKE FOREST, NC 27587  
POWERSECUREMALAR.COM  
DPR RESTON

DPR  
IRONHORSE SOLAR LLC  
DPR RESTON

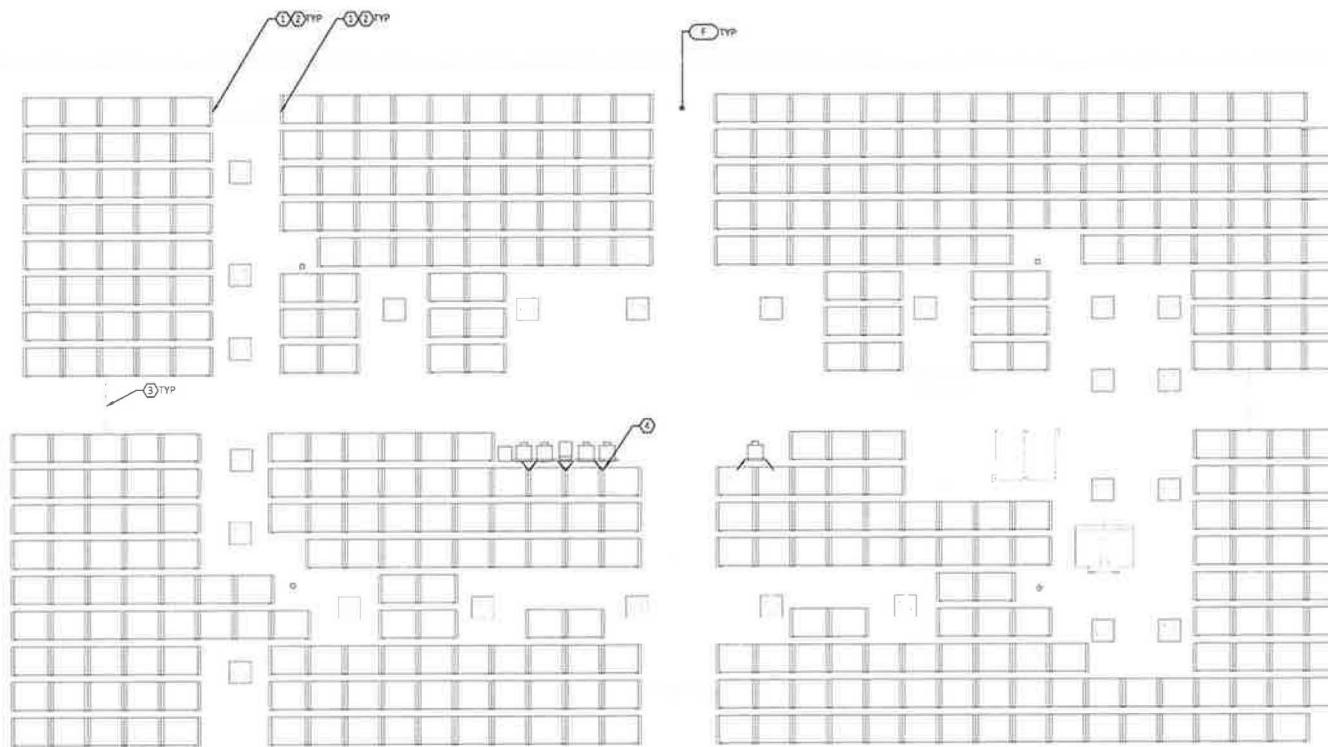
CONFIDENTIAL & PROPRIETARY  
THIS LINE SHOULD  
MEASURE ONE INCH

KEYED NOTES: ☺

- ① USE ILSCO SGB-4 FOR BONDING ARRAYS.
- ② BONDING LUGS SHALL ATTACH TO THE SIDE RAIL PER SUNPOWER HELIX INSTALL MANUAL.
- ③ BONDING JUMPERS SHALL BE ROUTED WITH SOURCE CIRCUIT CONDUCTORS.
- ④ INVERTER EGC BOND ON THE DC SIDE IS MADE THROUGH THE INVERTER RACK AND MODULE RACK ATTACHMENT.

GENERAL NOTES:

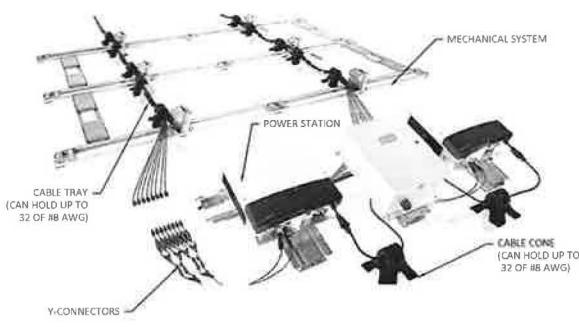
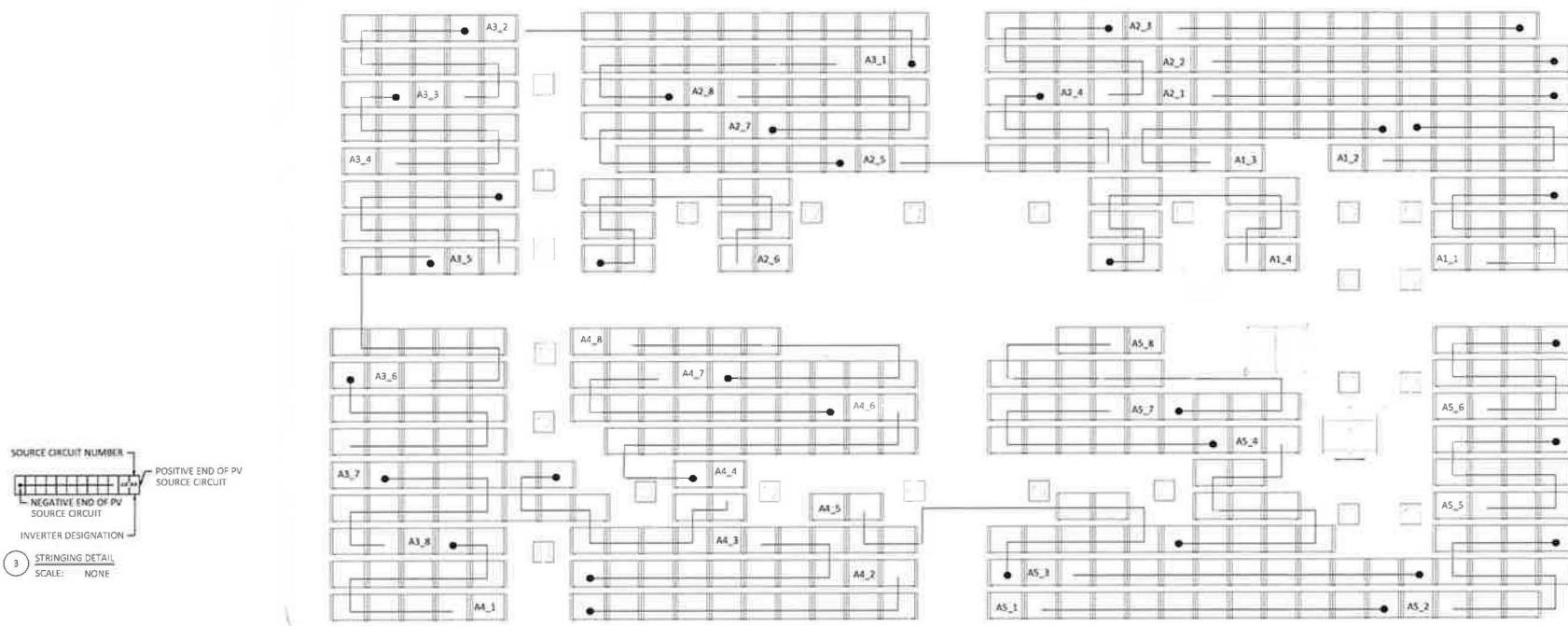
1. REFER TO SINGLE LINE DIAGRAM ON PV1.0 FOR SPECIFICATIONS.
2. REFER TO EQUIPMENT AND FEEDER SCHEDULES ON PV1.1 FOR SPECIFICATIONS.
3. ALL FEEDER ROUTING SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FEEDER ROUTING.



1 ROOF PLAN - GROUNDING  
SCALE: 1/8"=1'-0"

NAME	ROOF PLAN - GROUNDING	REV	DATE	DESCRIPTION
PRINCIPAL	SOLAR PHOTOVOLTAIC SYSTEM DPR RESTON 11100 SIGHTLINE RD. RESTON, VA		06-20-2016	SHEET: PV2.5

11 OF 12



1 ROOF PLAN-STRINGING LAYOUT  
SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. EACH STRING SHALL BE LABELED AS DESIGNATED WITH SHRINK TUBE.
2. LABELS SHALL BE LOCATED AT CONNECTOR ON BOTH POSITIVE AND NEGATIVE SIDES, AND AT THE CONNECTOR BOX.



**POWER SECURE SOLAR**  
Solar Energy Solutions  
1601 HERITAGE COMMERCE CT  
WAKE FOREST, NC 27587  
POWERSECURESOLAR.COM

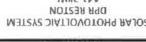
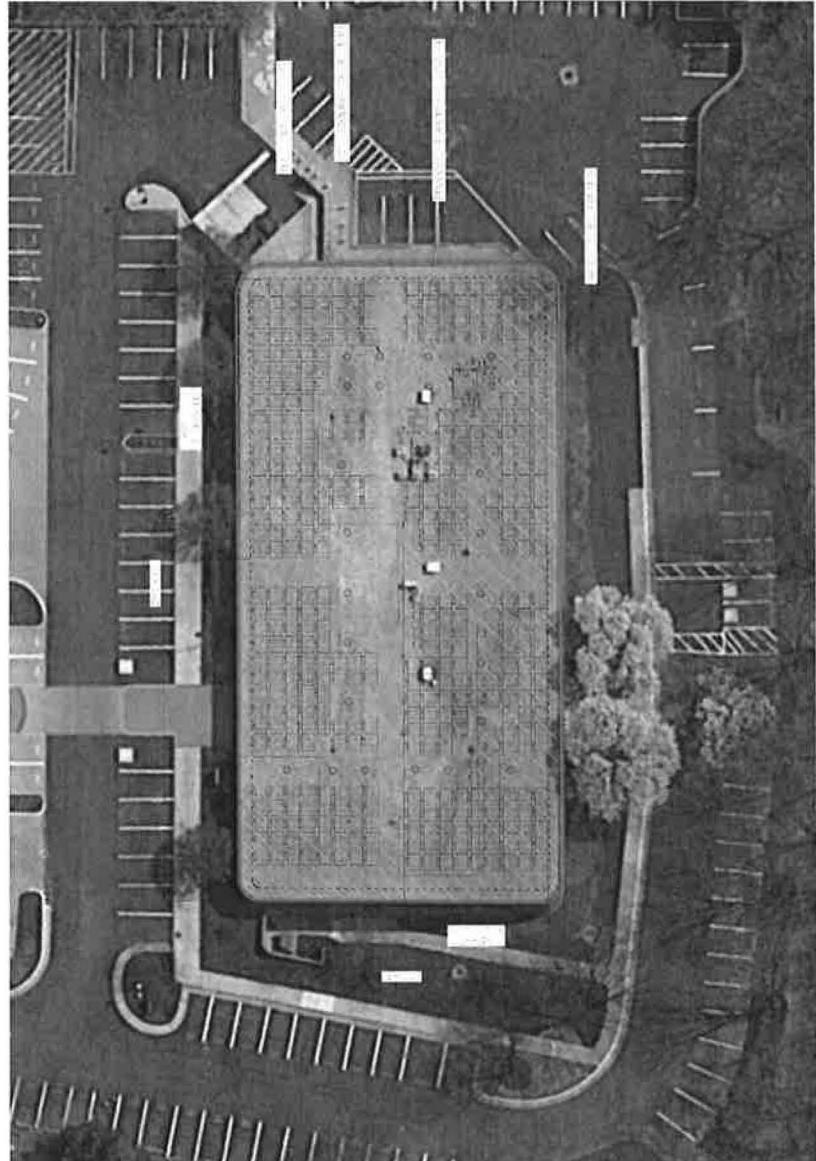
**DPR**  
DESIGN PROFESSIONALS  
DPR.COM

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THIS LINE SHOULD  
MEASURE ONE INCH

REV DATE DESCRIPTION

ROOF PLAN-STRINGING LAYOUT  
SOLAR PHOTOVOLTAIC SYSTEM  
IPM HSTN  
11109 JUNIOR MILLS RD.  
RESTON, VA

DATE: 06.20.2016  
PROJECT: PV2.6  
SHEET: 12 OF 12

									
<b>SITE</b> 		<b>DESCRIPTION</b> A PREPARATORY & CONSTRUCTION THIS LINE SHOULD BE ERASED OR REWRITTEN REV. DATE		DR. DESIGN 1109 SUNSET HILLS RD. RESTON, VA 20191		SHEET NO. 06-28-2016 1		DATE SHEET	
									
<small>NOTES: ROOF STRUCTURE SHOULD BE STRENGTHENED IN A STRUCTURAL            FASHION TO SUPPORT THE WEIGHT OF THE SOLAR PANELS AND MOUNTING TRA            BRINGS AND THE WEIGHT OF AN ANCHOR. (1/4" ANCHOR CAPS).            © 1998 FLETCHER ENGINEERING GROUP INC.</small>									
<small>PRINTED ON 06/28/2016 BY DRAFTING SYSTEMS INC.</small>									

160 HERTZ COMMERCIAL WIRELESS INC., NC 27587	11100 SUNSET HILLS RD RESTON, VA 20190	DPR DESIGN DPR DESIGN	SOLAR PHOTOVOLTAIC SYSTEM 141,42Kw	REV A DATE 06-20-2016	PROJECT: REF ID: PV2.1	TITLE: ROOF PLAN - DIMENSIONS	SHEET: 12
						DESCRIPTION	CONSIDERATION

