

PHOTOVOLTAIC SYSTEM

2,592 MODULES - PARKING CANOPY - 984.96 kWDC, 726.0 kWAC
301 EAST OAK AVENUE, LAWNSIDE, NJ 08045



dGEN Energy Partners

PHONE: (574)-904-4477
Website: www.dgenergy.com
Address: 30 N Gould St, Suite 5736
Sheridan, WY 82801

OWNER/APPLICANT:
BT-NEWYO, LLC
ATTN: RAY CHESNA
55 GLENLAKE PARKWAY
ATLANTA, GA 30328

DRAWING REVISION:

FINAL SITE PLAN

REVISIONS		
DESCRIPTION	DATE	REV
30% SET	04/04/2020	1
60% SET	09/09/2020	2
100% SET	12/21/2020	3.1

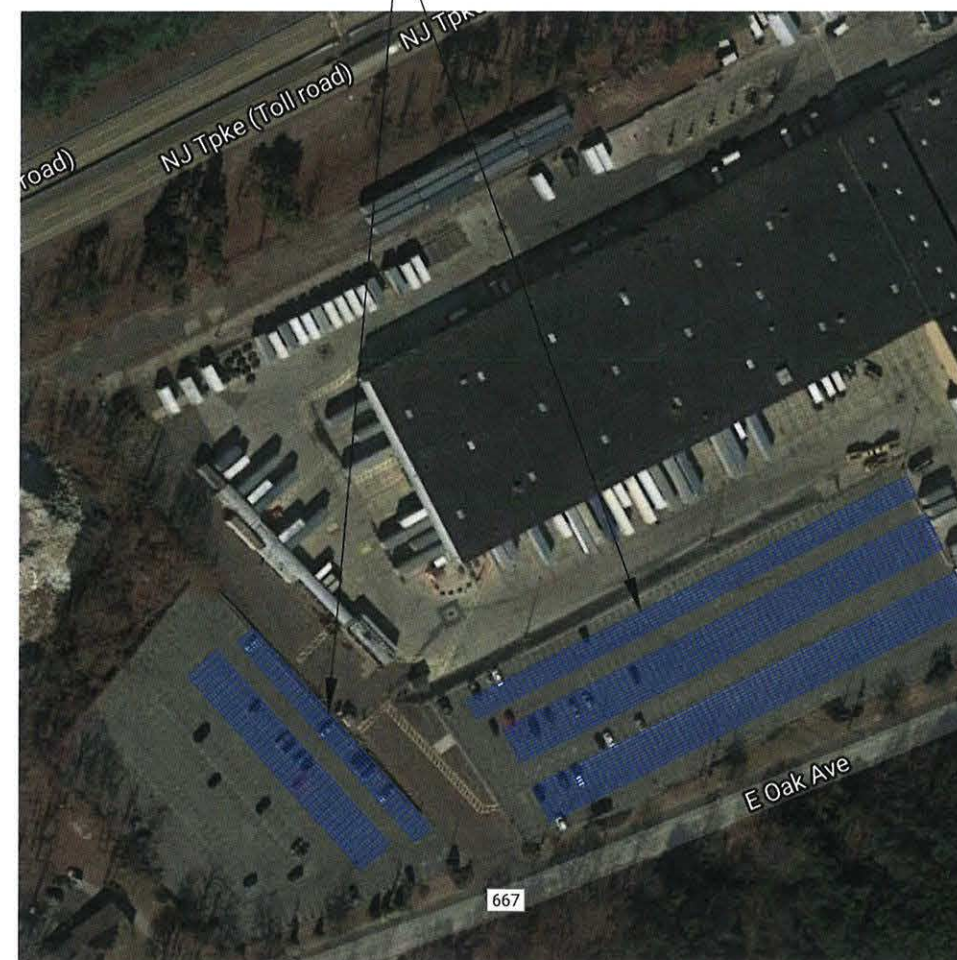


PROJECT NAME

UNITED PARCEL SERVICE INC
301 East Oak Avenue
Lawnside, NJ 08045

List of Drawings				
Page Number	Title	30%	60%	100%
General				
G-1	Cover Sheet	X	X	X
G-2	General Notes	X	X	X
G-3	Site Plan	X	X	X
G-3.1	Site Plan	X	X	X
G-3.2	Module Layout		X	X
G-3.3	Module Layout		X	X
Electrical				
PV-1	Single Line Diagram	X	X	X
PV-2	Wire Schedule		X	X
PV-3	Equipment Pad		X	X
PV-4	Additional Details		X	X
PV-5	Inverter Mounting		X	X
PV-6	Placards		X	X
PV-7	Module Datasheet		X	X
PV-8	Inverter Datasheet		X	X
PV-9	Inverter Datasheet		X	X
Structural				
	Structural Analysis	X	X	X

ARRAY LOCATIONS

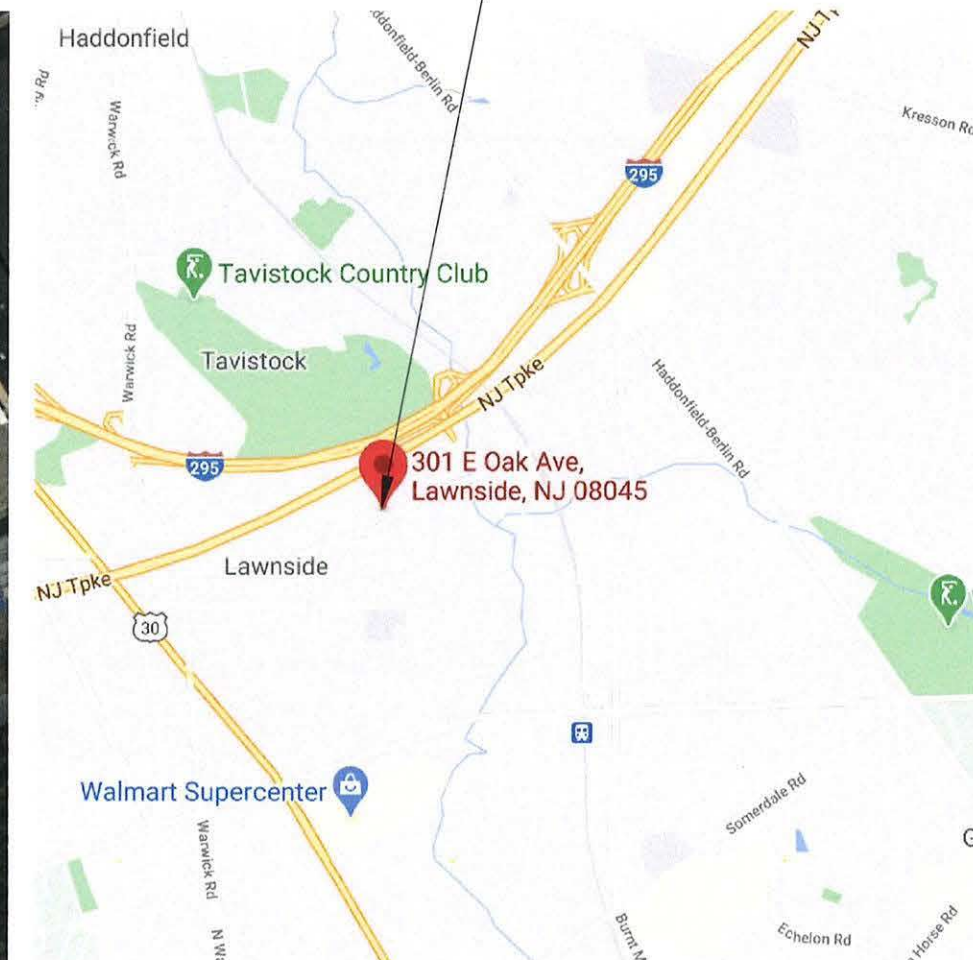


1 | AERIAL PHOTO

G-1

SCALE: 1"=100'

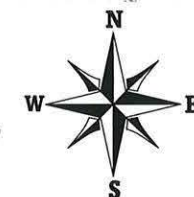
PROJECT SITE



2 | VICINITY MAP

G-1

SCALE: 1"=1000'



BOROUGH CERTIFICATIONS

THIS PLAN IS HEREBY APPROVED BY THE PLANNING BOARD OF THE BOROUGH OF LAWNSIDE

PLANNING BOARD CHAIRPERSON _____ DATE _____

PLANNING BOARD SECRETARY _____ DATE _____

PLANNING BOARD ENGINEER _____ DATE _____

SHEET NAME

COVER SHEET

SHEET SIZE
ARCH D
36" X 24"

SHEET NUMBER

G-1

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GENERAL NOTES

- ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
- THIS SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY IS OBTAINED. THIS IS A UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.
- ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF TYPE NEMA 3R AND SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
- WIRING METHOD SHALL BE EMT ABOVE GROUND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE- 40 PVC FOR BELOW GROUND INSTALLATION UNLESS NOTED OTHERWISE.
- AN OSHA APPROVED LADDER PROVIDING ACCESS TO ALL PORTIONS OF THE ARRAY SHALL BE SECURED PRIOR TO REQUESTING INSPECTION.
- SOLAR MODULES MOUNTED ON CANOPY.
- CONNECT SYSTEM TO MAIN PANEL VIA PV BREAKER, IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
- COMPLY WITH STATE AND LOCAL CODES, AND UTILITY COMPANY REGULATIONS. FINAL INTERPRETATIONS WILL BE MADE BY THE LOCAL INSPECTION AUTHORITY (AHJ). THE CONTRACTOR TO VERIFY THE GOVERNANCE OF THE FOLLOWING CODES AFFIXED TO THIS SHEET, INCLUDING ANY AMENDMENTS AND SUPPLEMENTARY CODES.
- EQUIPMENT AND MATERIALS SHALL BE NEW, UL-LISTED FOR THE INTENDED USE, AND FREE FROM DAMAGE OR DEFECT. THEY SHALL COMPLY WITH THE LATEST INDUSTRY STANDARDS, INCLUDING UL1703 (PANELS AND/OR FRAME SUPPORT), UL 1704 (INVERTERS), UL 1741 (COMBINER BOXES, ETC.).
- ALL COMPONENTS SHALL BE RATED FOR USE IN THE ENVIRONMENT IN WHICH THEY ARE INSTALLED. THIS INCLUDES UV RATING FOR EXTERIOR WIRING, WIRING SUPPORTS, CONNECTORS, INVERTERS, COMBINERS, ETC. STEEL LOCATED OUTDOORS SHALL BE GALVANIZED (NOT PAINTED).

WIRING

- CONDUCTORS SHALL BE COPPER, SIZED ACCORDING TO FEEDER SCHEDULE FOUND IN THIS DRAWING SET, AND RATED FOR 90C. SEE DRAWING FOR ROUTING.
- COLOR CODING TO BE AS FOLLOWS: A. CURRENT CARRYING DC WIRES SHALL BE RED (POS), AND BLACK (UNGROUND NEG.), B. CURRENT CARRYING AC SHALL BE COLOR CODED PER THE NEC, AND C. GROUND WIRES SHALL BE BARE OR GREEN.

PHOTOVOLTAIC PANELS

- THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS AND THE DESIGN OF THE PANEL CONNECTIONS TO THE STRUCTURE INCLUDING ALL COMPONENTS REQUIRED TO MAKE CONNECTIONS. PHOTOVOLTAIC PANELS, COMPONENTS, AND CONNECTIONS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEISMIC LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- MODULES SHALL BE LISTED IN CONFORMANCE WITH UL 1703.

LUGS

- LUGS IN ALL EQUIPMENT WILL BE RATED FOR THE USE. LUGS WILL BE SUITABLE FOR COPPER OR ALUMINUM CONDUCTORS, RATED FOR 75C.

GRID-TIED INVERTERS

- INVERTERS SHALL BE DC TO 60 CYCLE AC POWER. THE WATTAGES OF RESPECTIVE INVERTERS SHALL BE AS SHOWN ON THE DRAWINGS.
- INVERTERS SHALL BE CERTIFIED TO UL 1741.

START UP PROCEDURES

- FOLLOW MANUFACTURER'S RECOMMENDED PROCEDURES IN STARTING UP THE EQUIPMENT.

ZONING SCHEDULE / BULK CHART		
ZONE:	GOVERNED BY THE OAK AVENUE REDEVELOPMENT PLAN AND THE UNDERLYING ZONING I-A INDUSTRIAL DISTRICT	
STANDARD	REQUIRED	PROPOSED
MINIMUM LOT AREA	2 ACRES	EXISTING LOT 34 ACRES
MAXIMUM HEIGHT	40 FT	18 FT
FRONT YARD	30 FT	45 FT
REAR YARD	30 FT	650 FT
SIDE YARD	30 FT	55 FT
HEIGHT MAY NOT EXCEED HEIGHT OF THE PRIMARY STRUCTURE THAT THE PARKING AREA SERVES. EXISTING UPS FACILITY HEIGHT: 30 FT.		

ADOPTED CODES, BOROUGH OF LAWNSIDE

- 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) NJ ED
- 2017 NEW JERSEY BUILDING CODE
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-10)
- 2016 EDITION OF COLD-FORMED STEEL DESIGN SPECIFICATION ADOPTED BY THE LOCAL GOVERNING AGENCIES.
- 2017 NATIONAL ELECTRIC CODE (NEC)

LIST 136 200 FT BLOCK 405 LOT 1				
BLOCK	LOT	CLA	PROPERTY OWNER	PROPERTY LOCATION
601	1	1	VCC LAWNSIDE BUS PK I REN LLC 228 LANDIS AVE ST 300, VINELAND, NJ 08360	101 WALTER A GAINES WAY
601	2	1	STATION OAK PARTNERS URBAN RENEWAL 600 S LIVINGSTON AVE #102, LIVINGSTON, NJ 07039	402 E OAK AVENUE
701	1	1	NEW JERSEY AMERICAN WATER CO INC 1025 LAUREL OAK RD, VOORHEES, NJ 08043	100 WALTER A GAINES WAY
1003	2	1	VINELAND CONSTRUCTION CO PO BOX 1517, VINELAND, NJ 08362	ALONG TURNPIKE
1003	3	4A	STILL, JR ELMER ETAL 4303 VILLAGE BRIDGE, LINDENWOLD, NJ 08021	43 DOCTOR MLK JG ROAD

TERMS AND ABBREVIATIONS

ABBRV	TERM
(#)	NUMERICAL QUANTITIES WHEN ENCLOSED IN PARENTHESES
A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ARCH	ARCHITECT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BOD	BOTTOM OF DECK
BOS	BOTTOM OF STEEL BEARING
BRG	CONTRACT DOCUMENTS
CD	CAST-IN-PLACE CONSTRUCTION JOINT
CIP	CONTROL JOINT
CJ	CENTERLINE
CL	CLEAR
CLR	CONCRETE MASONRY UNIT
CMU	DEPTH
D	DIAMETER
DIA	DIMENSION
DIM	DEAD LOAD
DL	EACH
EA	EACH FACE
EF	EXPANSION JOINT
EJ	ELEVATION
EL	EDGE OF SLAB
EOS	EQUAL
EQ	EQUIPMENT
EQUIP	EXPANSION
EXP	EXTERIOR
EXT	EACH WAY
EW	FUTURE
(F)	FINISH FLOOR ELEVATION
FF	FLOOR
FLR	FEET
FT	FOOTING
GA	GALVANIZED
GALV	GENERAL CONTRACTOR
GC	GLUED LAMINATED WOOD BEAM
GLB	GENERAL STRUCTURAL NOTES
GSN	HORIZONTAL
HORIZ	HEADED STUD ANCHOR
HSA	HOLLOW STRUCTURAL SECTION MOMENT OF INERTIA
HSS	INTERNATIONAL BUILDING CODE
I	INSIDE DIAMETER
IBC	INTERIOR
ID	ONE THOUSAND POUNDS
INT	KIP PER LINEAR FOOT
KIP	STEEL ANGLE
KLF	POUND
L	LIVE LOAD
LB	LONG LEG BACK TO BACK
LL	LONG LEG HORIZONTAL
LLB	LONG LEG VERTICAL
LLH	LONGITUDINAL
LLV	LAMINATED STRAND LUMBER
LONG	LONG SIDE HORIZONTAL
LSL	LONG SIDE VERTICAL
LSH	MASONRY CONTROL JOINTS
LSV	MECHANICAL
MCS	MANUFACTURER
MECH	NOT APPLICABLE
MFR	NOT TO SCALE
NA	ON CENTER
NTS	OUTSIDE DIAMETER
OC	OPPOSITE
OD	ORIENTED STRAND BOARD
OPP	PERPENDICULAR
OSB	PLATE
PERP	POUNDS PER LINEAR FOOT
PL	POUNDS PER SQUARE FOOT
PLF	POUNDS PER SQUARE INCH
PSF	PARALLEL STRAND LUMBER
PSI	POST TENSIONED
PSL	QUALITY ASSURANCE
PT	QUALITY CONTROL
QA	REINFORCING
QC	REQUIRED
REINF	REQUEST FOR INFORMATION
REQD	ROUGH SAWN
RFI	ROOF TOP UNIT
RS	SQUARE FOOT
RTU	SIMILAR
SF	SPECIFICATION
SIM	SQUARE
SPEC	STANDARD
SO	STRUCTURE
STD	SHEAR WALL
STRUCT	TOP AND BOTTOM
SW	TONGUE AND GROOVE
T&B	TOP OF BEAM
T&G	TOP OF CONCRETE
TOB	TOP OF DECK
TOC	TOP OF FOOTING
TOD	TOP OF JOIST
TOP	TOP OF MASONRY
TOJ	TOP OF PARAPET
TOM	TOP OF STEEL
TOS	TOP OF WALL
TOW	TYPICAL
TYP	UNLESS NOTED OTHERWISE
UNO	VERTICAL
VERT	WITH
W	WATER TO CEMENT RATIO
WI	WITHOUT
W/C	WINDLOAD
W/O	WDRK POINT
WL	WELDED WIRE FABRIC
WP	
WWF	

REVISIONS

DESCRIPTION	DATE	REV
30% SET	04/04/2020	1
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100% SET	12/21/2020	3.1



PROJECT NAME

UNITED PARCEL SERVICE INC
301 East Oak Avenue
Lawnside, NJ 08045

SHEET NAME

GENERAL NOTES

SHEET SIZE

ARCH D
36" X 24"

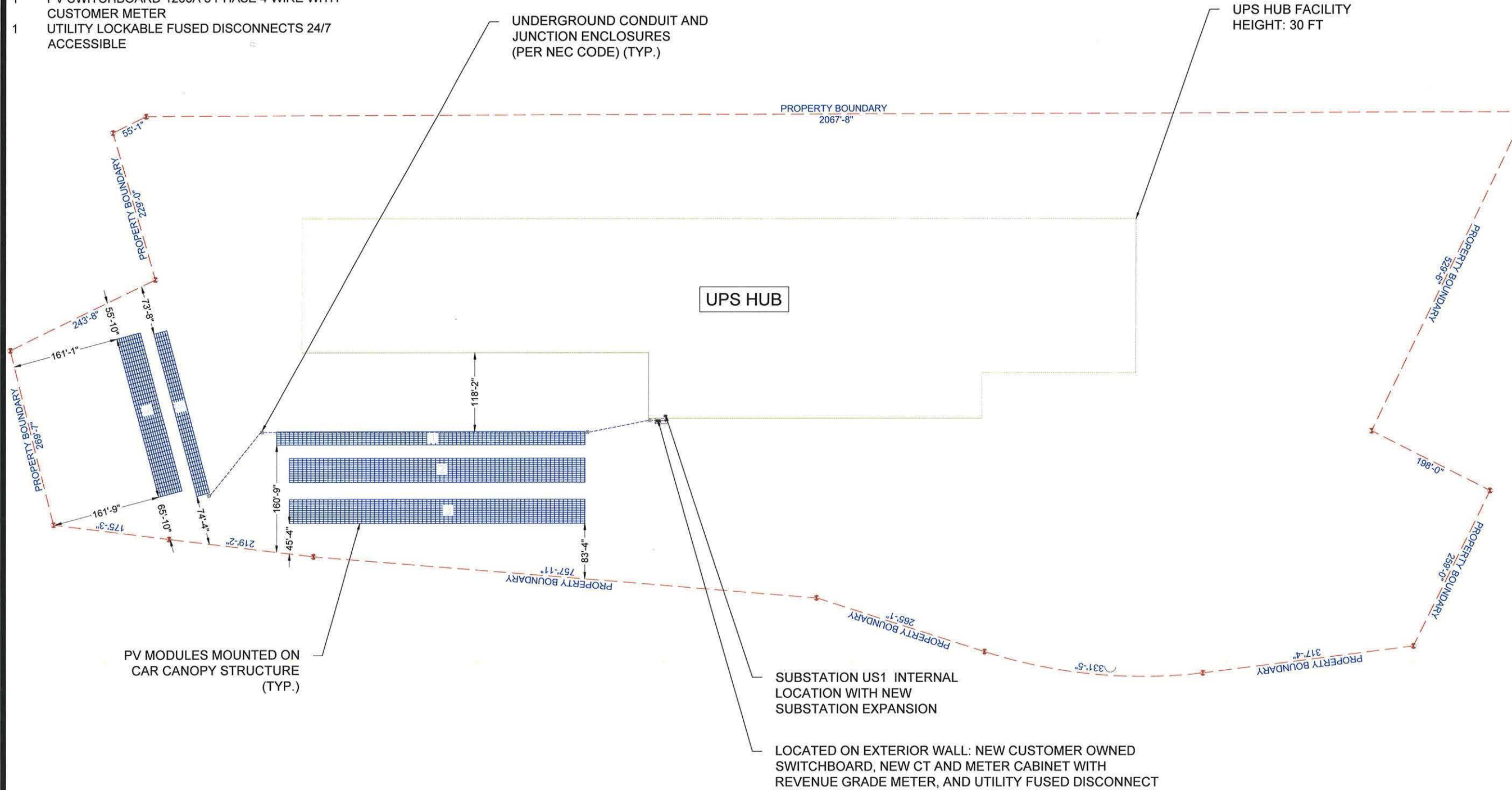
SHEET NUMBER

G-2

PROJECT DESCRIPTION:

EQUIPMENT SUMMARY

- 2592 ZNSHINE (380W) MODULES
- 11 DELTA ENERGY M60U-120 66 KW INVERTERS
- 5 CAR CANOPY STRUCTURES
- 1 PV SWITCHBOARD 1200A 3 PHASE 4 WIRE WITH CUSTOMER METER
- 1 UTILITY LOCKABLE FUSED DISCONNECTS 24/7 ACCESSIBLE



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PROJECT NAME
UNITED PARCEL SERVICE INC
 301 East Oak Avenue
 Lawnside, NJ 08045

SHEET NAME
SITE PLAN

SHEET SIZE
**ARCH D
 36" X 24"**

SHEET NUMBER
G-3

1 FULL SITE PLAN WITH PROPERTY LINES

G-3 SCALE: 1"= 30'-0"



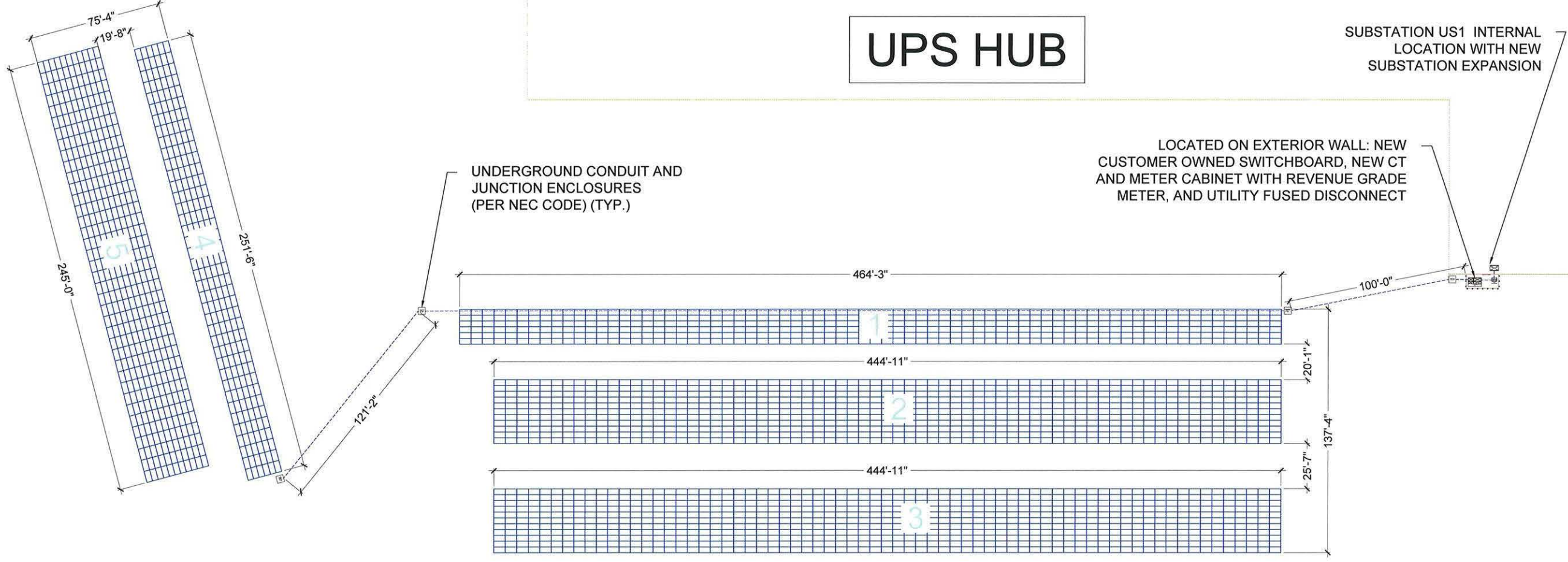
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UPS HUB



SUBSTATION US1 INTERNAL LOCATION WITH NEW SUBSTATION EXPANSION

LOCATED ON EXTERIOR WALL: NEW CUSTOMER OWNED SWITCHBOARD, NEW CT AND METER CABINET WITH REVENUE GRADE METER, AND UTILITY FUSED DISCONNECT

UNDERGROUND CONDUIT AND JUNCTION ENCLOSURES (PER NEC CODE) (TYP.)

1 | SITE PLAN WITH MODULE LAYOUT

G-3.1 SCALE: 1"= 30'-0"



SHEET NAME
SITE PLAN

SHEET SIZE
**ARCH D
36" X 24"**

SHEET NUMBER
G-3.1

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PROJECT NAME

UNITED PARCEL SERVICE INC
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SHEET NAME

MODULE LAYOUT (EAST)

SHEET SIZE

**ARCH D
36" X 24"**

SHEET NUMBER

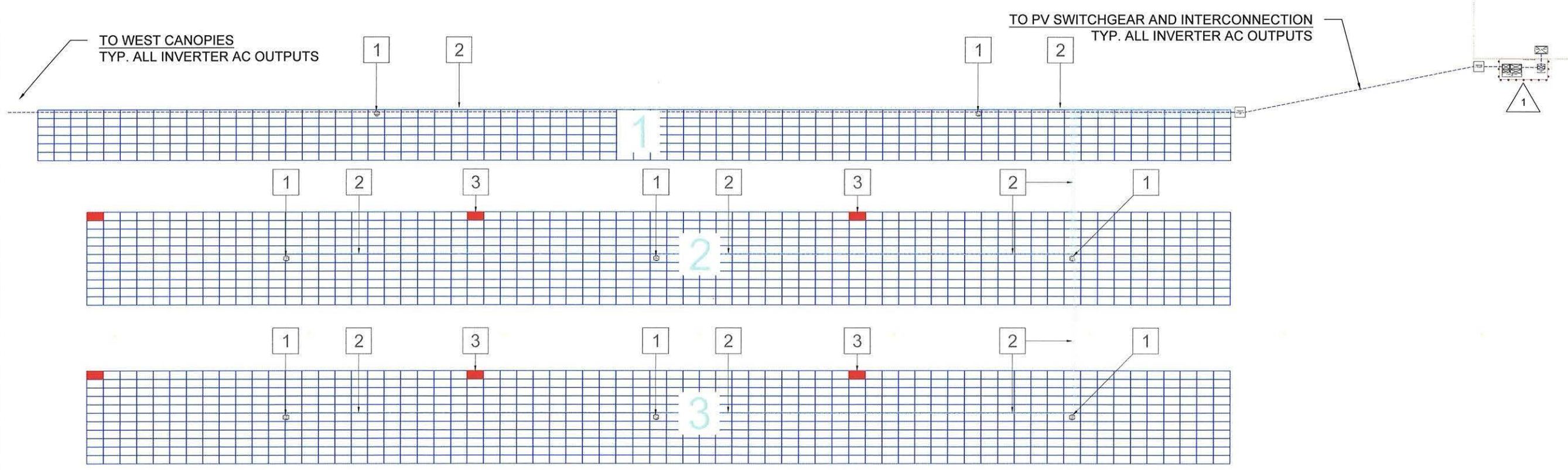
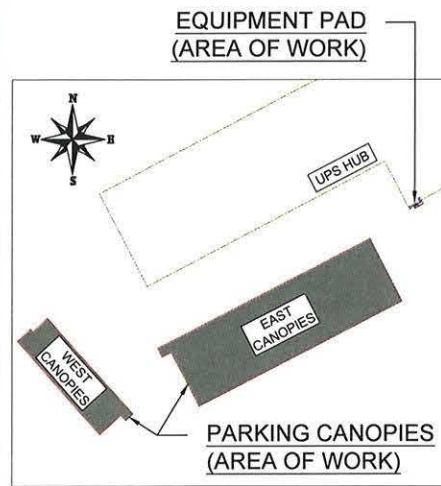
G-3.2

LEGEND:

- 1 (N) (8) CANOPY MOUNTED PV INVERTERS (66 kW INVERTERS)
- 2 (N) UNDERGROUND PV PVC CONDUIT AND/OR PV EMT CONDUIT
- 3 DUMMY MODULES (NON-OPERATING)
- 4 (N) SWITCHGEAR 1200A, 480V, 3 PHASE
- 5 (N) PV AC DISCONNECT (ON EXTERIOR WALL)
- 6 (N) MAIN AC DISCONNECT 1200A FUSE IN 1200A SWITCHBOARD (ON EXTERIOR WALL)
- 7 (E) SWITCHBOARD (ON INTERIOR WALL)

GENERAL NOTES:

- 1 ALL EXTERIOR EQUIPMENT AT THE CUSTOMER OWNED EQUIPMENT PAD TO BE 24/7 UTILITY ACCESSIBLE INCLUDING: CT/METERING CABINET AND PV DISCONNECT.



1 MODULE LAYOUT (EAST PARKING CANOPIES)

G-3.2 SCALE: 1"= 20'-0"





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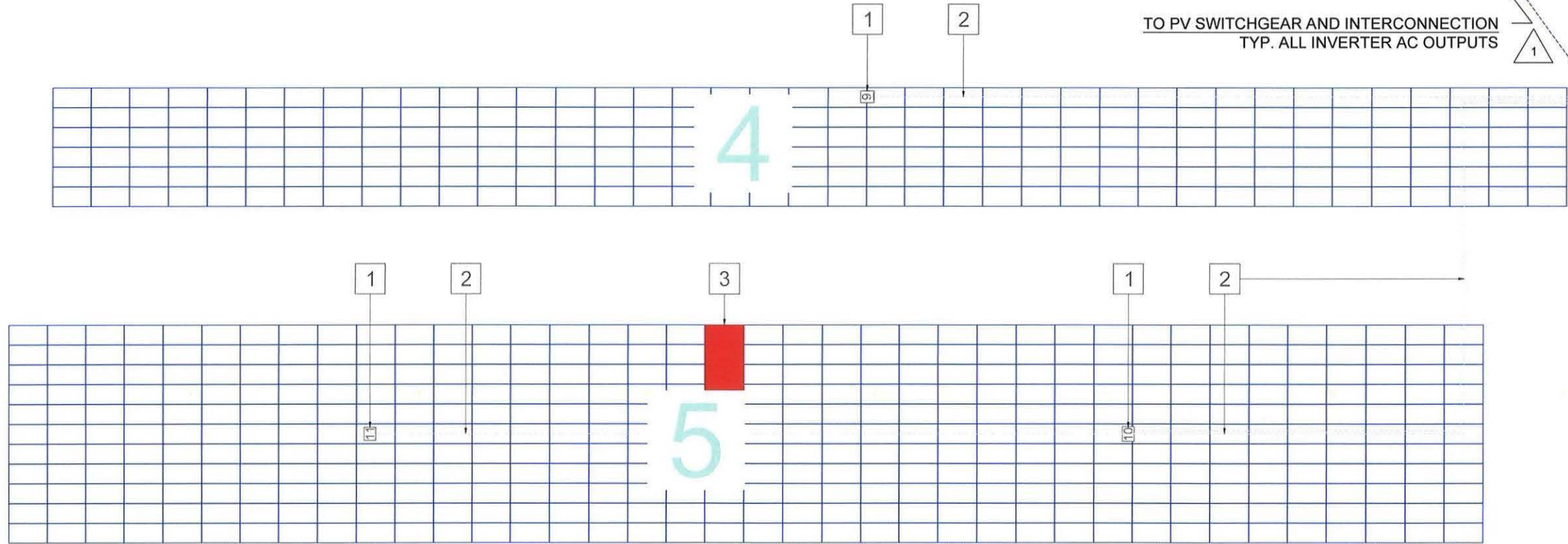
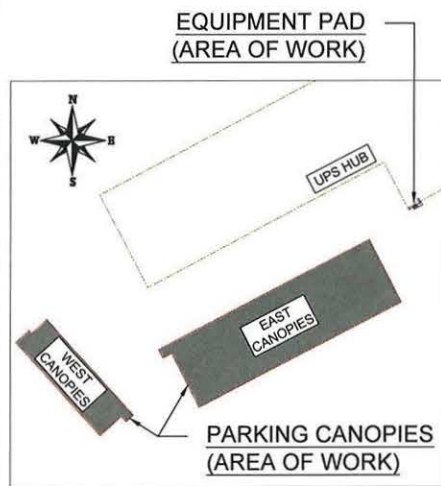
SHEET NAME	MODULE LAYOUT (WEST)
SHEET SIZE	ARCH D 36" X 24"
SHEET NUMBER	G-3.3

LEGEND:

- 1 (N) (3) CANOPY MOUNTED PV INVERTERS (66 kW INVERTERS)
- 2 NEW UNDERGROUND PV PVC CONDUIT AND/OR PV EMT CONDUIT
- 3 DUMMY MODULES (NON-OPERATING)

GENERAL NOTES:

ALL EXTERIOR EQUIPMENT AT THE CUSTOMER OWNED EQUIPMENT PAD TO BE 24/7 UTILITY ACCESSIBLE INCLUDING: CT/METERING CABINET AND PV DISCONNECT.



1 MODULE LAYOUT (WEST PARKING CANOPIES)

G-3.3 SCALE: 1"= 10'-0"



**PROPOSED INVERTER
IEEE1547 RELAY SETTINGS**

DEVICE	PICKUP	TIME DELAY	DESCRIPTION	NOTE(S)
27-1	139V	1.1 SEC	UNDERVOLTAGE RELAY	
27-2	244V	2.0 SEC		
59-1	304V	2.0 SEC	OVERVOLTAGE RELAY	
59-2	332V	0.16 SEC		
81U-1	56.5 HZ	0.16 SEC	OVER/UNDER-FREQUENCY	
81U-2	58.5 HZ	300 SEC		
810-1	61.0 HZ	300 SEC		
810	62.0 HZ	0.16 SEC		

**SITE
DETAILS**

AC NAMEPLATE (kW)	726.00
AC NAMEPLATE (kVAR)	~0
DC NAMEPLATE (kW)	984.96
MODULES	2592
INVERTERS	11
STRINGS	144

PV EQUIPMENT NOTES

MODULE

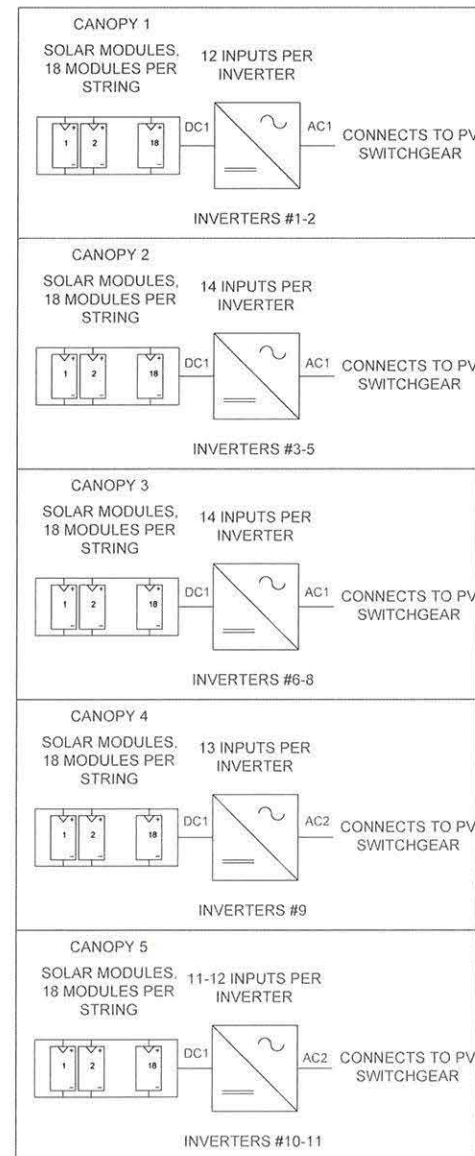
ZNShine ZXM6-72-380/M
 RATED POWER (W): 380
 Isc (A): 10.03
 Voc (V): 48.6
 Imp (A): 9.53
 Vmp (V): 39.9
 UL 1703 LISTED

INVERTER

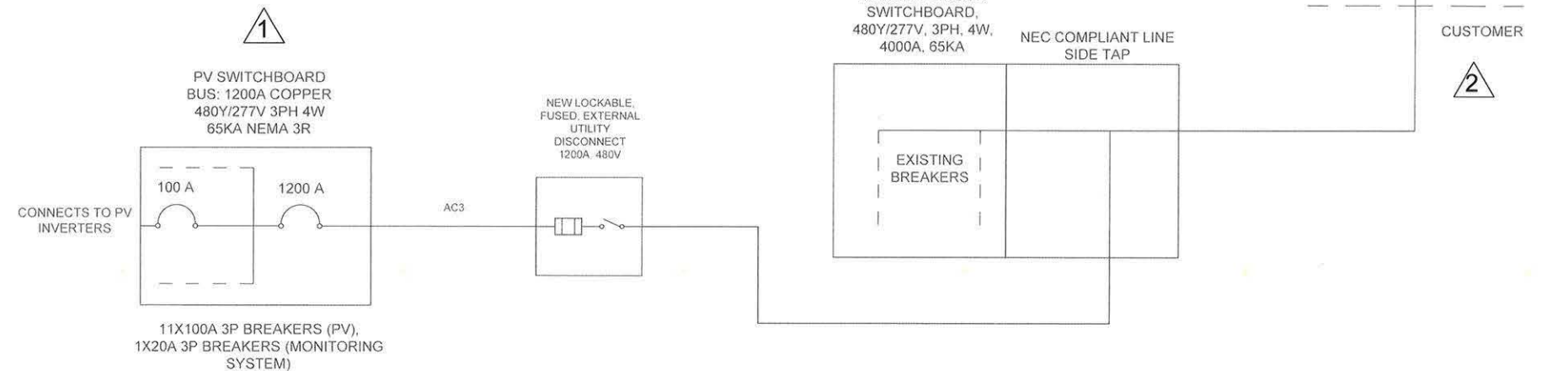
DELTA ENERGY M60U-120
 POWER (kW): 66
 Iac (A): 80
 Vac (V): 480
 UL 1741 LISTED

GENERAL NOTES:

- 1 ALL EQUIPMENT AT THE CUSTOMER OWNED EQUIPMENT PAD TO BE 24/7 UTILITY ACCESSIBLE INCLUDING: PV SWITCHGEAR AND PV DISCONNECT.
- 2 EXISTING CUSTOMER MEDIUM VOLTAGE GEAR NOT PICTURED, REFER TO FACILITY SINGLE LINE FOR DETAILS
- 3 SEVERAL CANOPIES HAVE MODULES THAT ARE NOT ELECTRICALLY CONNECTED IN ORDER TO COMPLETE THE ROOF STRUCTURE OF THE CANOPY. CANOPY 2 HAS 3 BLANK MODULES. CANOPY 3 HAS 3 BLANK MODULES. CANOPY 5 HAS 4 BLANK MODULES.



3



1

2



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SHEET NAME

**SINGLE LINE
DIAGRAM**

SHEET SIZE

**ARCH D
36" X 24"**

SHEET NUMBER

PV-1

1 ELECTRICAL SINGLE-LINE DIAGRAM

PV-1 SCALE: N.T.S.



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SHEET NAME

SCHEDULES

SHEET SIZE

**ARCH D
 36" X 24"**

SHEET NUMBER

PV-2

POWER FEEDER SCHEDULE

IDENTIFIER	CONDUCTOR SIZE	CONDUCTOR TYPE	NEUTRAL	INSULATION TYPE	GROUND SIZE	GROUND TYPE	GROUND INSULATION	CONDUIT	FEEDER SETS PER CIRCUIT	CURRENT
DC1	#10 AWG PER RACEWAY	COPPER	NA	PV WIRE 2KV	(1) #6 AWG	COPPER	XHHW-2	1.25 INCH EMT	1	
AC1	(3) 1/0 AWG PER RACEWAY	COPPER	1/0 AWG	XHHW-2	(1) #4 AWG	COPPER	XHHW-2	2 INCH EMT	1	100
AC2	(3) 4/0 AWG PER RACEWAY	COPPER	4/0 AWG	XHHW-2	(1) 2/0 AWG PER RACEWAY	COPPER	XHHW-2	2.5 INCH EMT	1	100
AC3	(3) 350KCMIL AWG PER RACEWAY	COPPER	4/0 AWG	XHHW-2	(1) 2/0 AWG PER RACEWAY	COPPER	XHHW-2	2.5 INCH EMT	4	1200

GENERAL NOTES:

1. ALL VALUES IN POWER FEEDER SCHEDULE TO BE CONFIRMED BY CONTRACTOR.
2. ROOF CIRCUIT LENGTHS ARE NOT LONG ENOUGH TO CREATE SIGNIFICANT VOLTAGE DROP AT 480V.
3. ALL CONDUCTOR SIZES ARE NEC COMPLIANT.

EQUIPMENT PAD NOTES

1. BOLLARDS TO HAVE 4 INCH DIAMETER.
2. BOLLARDS THAT ARE IN FRONT OF EQUIPMENT DOORS TO BE REMOVABLE, ALLOWING FOR THE EQUIPMENT PAD TO BE ABUTTING THE BOLLARDS.
3. UPS TO PROVIDE APPROVED SHOP DRAWINGS OF AC GEAR AT A LATER DATE. CURRENT DRAWINGS BASED ON QUOTED EQUIPMENT BY SCHNEIDER ELECTRIC.
4. CONCEPTUAL PAD AND CONCRETE TO HAVE 4000PSI 28 DAY COMPRESSIVE STRENGTH MINIMUM.
5. UTILITY COMPANY HAS NOT CONFIRMED ALL EQUIPMENT THAT IS REQUIRED FOR INTERCONNECTION. THIS WILL BE DETERMINED AT A LATER DATE.
6. CONTRACTOR SHALL PROVIDE SIGNED AND SEALED ENGINEERING SHOP DRAWINGS FOR STRUCTURAL EQUIPMENT PAD APPROVED BY CALIFORNIA LICENSED P.E.



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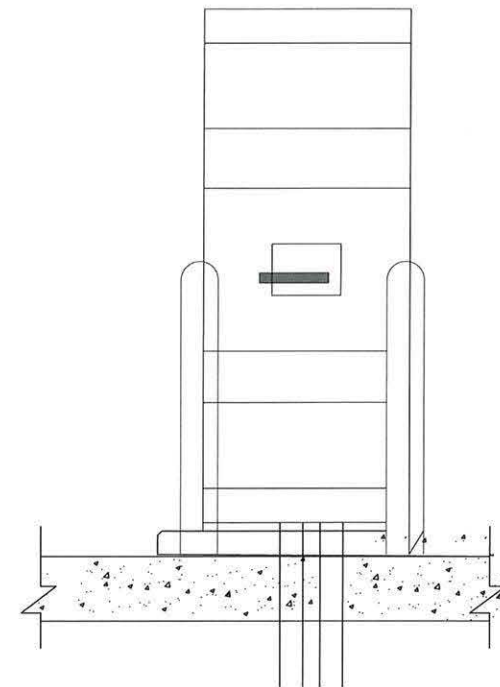
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SHEET NAME
Equipment Pad Detail

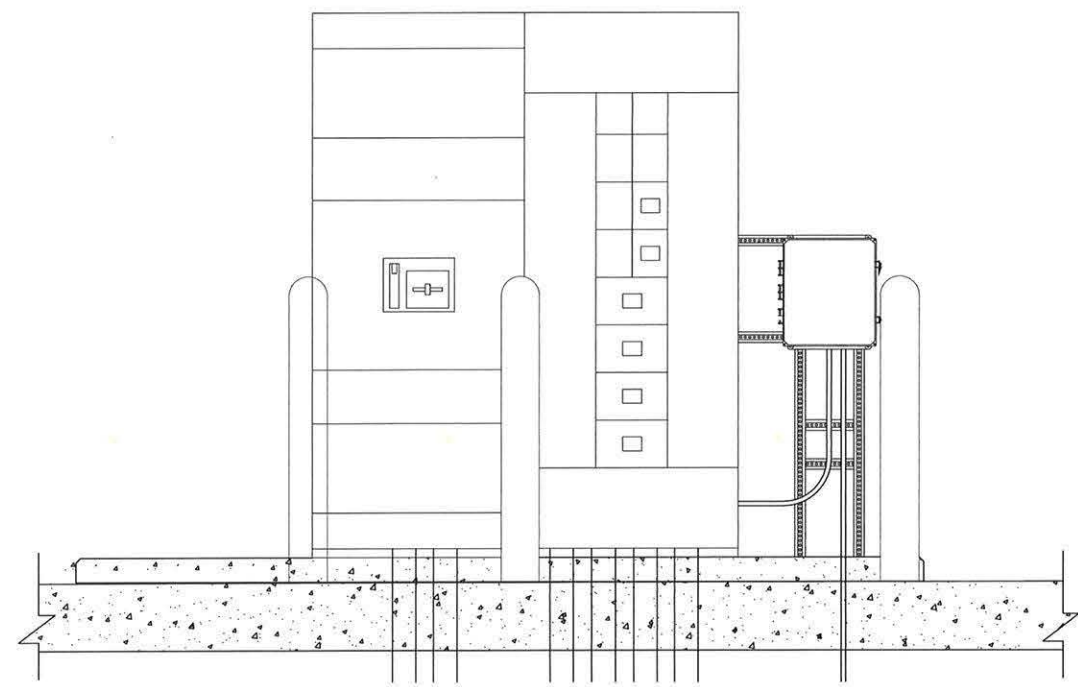
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36" X 24"**

SHEET NUMBER
PV-3



2 | EQUIPMENT PAD - AC UTILITY DISCONNECT

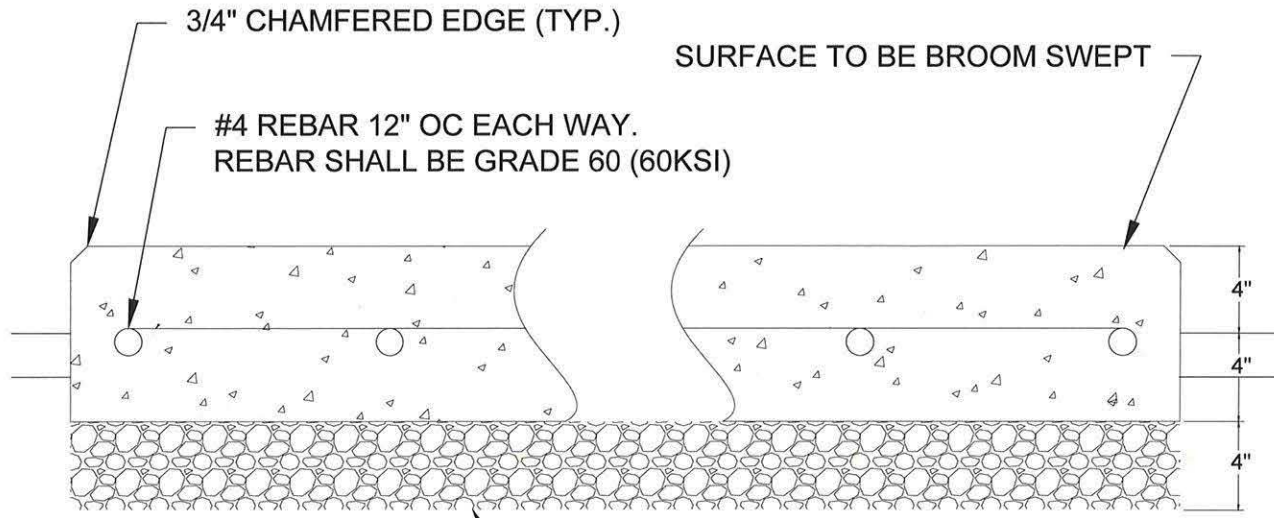
PV-3



1 | EQUIPMENT PAD - SWITCHGEAR

PV-3

SCALE: 1/16"= 1'-0"

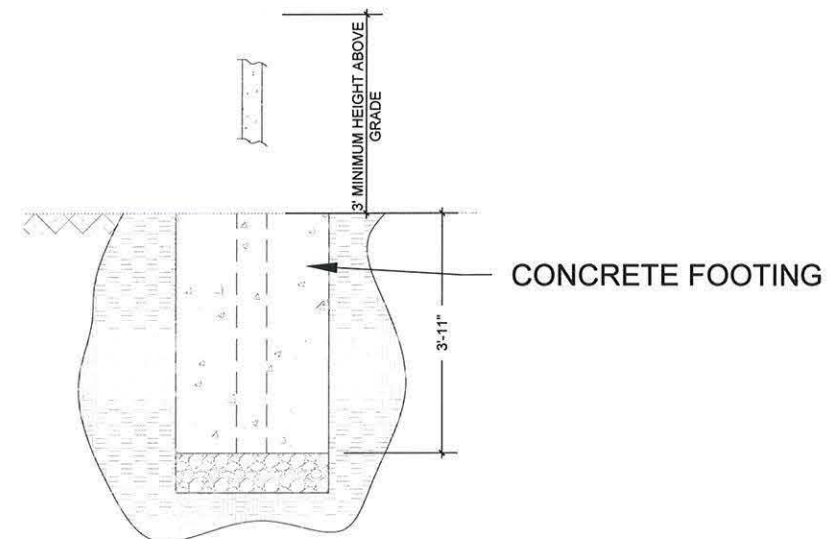


3 | CONCRETE PAD DETAIL

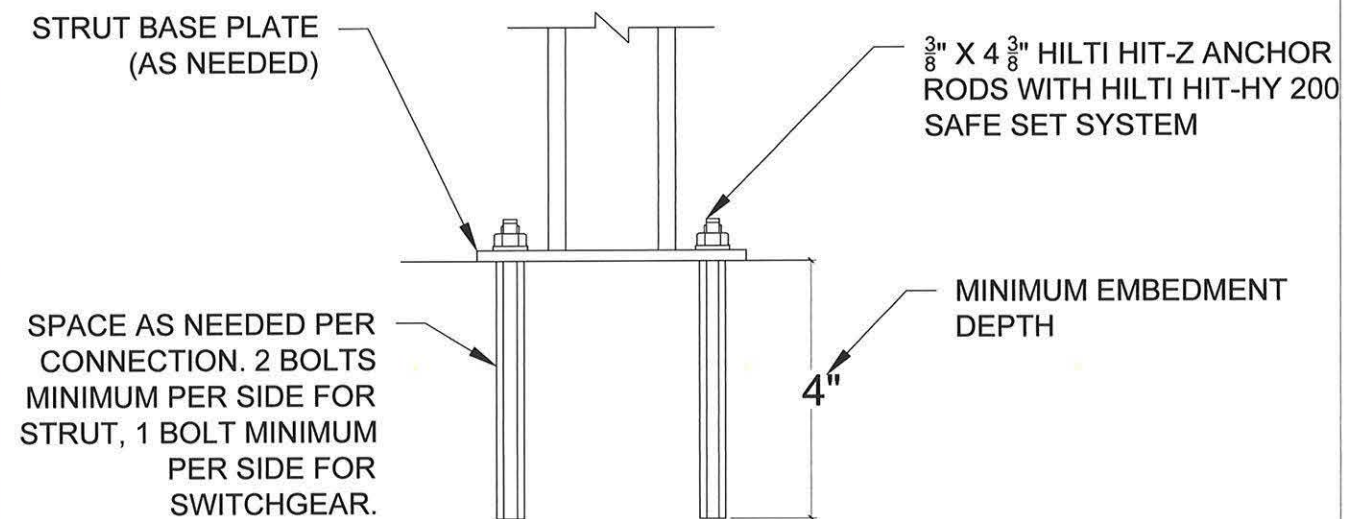
PV-3

EQUIPMENT PAD NOTES

1. CONCRETE PAD MOUNTING DETAIL TYPICAL AND MOUNTING PLATE MAY VARY BY EQUIPMENT. REFER TO MANUFACTURER MOUNTING AND ANCHORING REQUIREMENTS FOR ADDITIONAL DETAILS. IN THE EVENT OF CONFLICT, MANUFACTURER REQUIREMENTS WILL PREVAIL IF MORE STRINGENT THAN DESIGN SHOWN IN THIS DETAIL.



2 | PIPE BOLLARD TYPICAL
PV-4



1 | CONCRETE PAD MOUNTING
PV-4 SCALE: 1/16"= 1'-0"



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REVISIONS		
DESCRIPTION	DATE	REV
30% SET	04/04/2020	1
60% SET	09/09/2020	2
100% SET	12/21/2020	3.1



PROJECT NAME
UNITED PARCEL SERVICE INC
301 East Oak Avenue,
Lawnside, NJ 08045

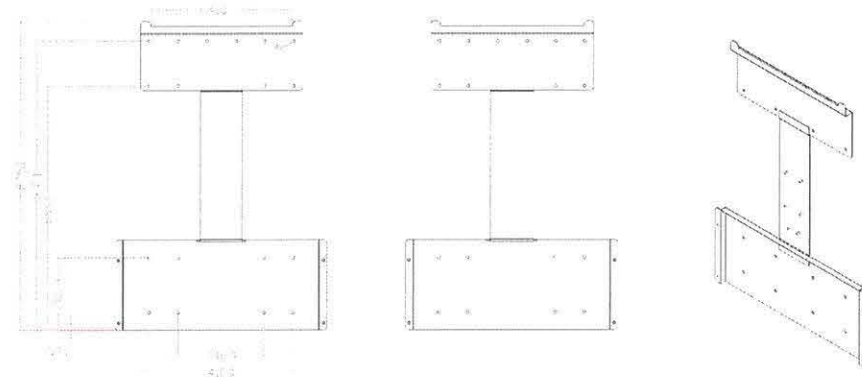
SHEET NAME
Additional Detail

SHEET SIZE
ARCH D
36" X 24"

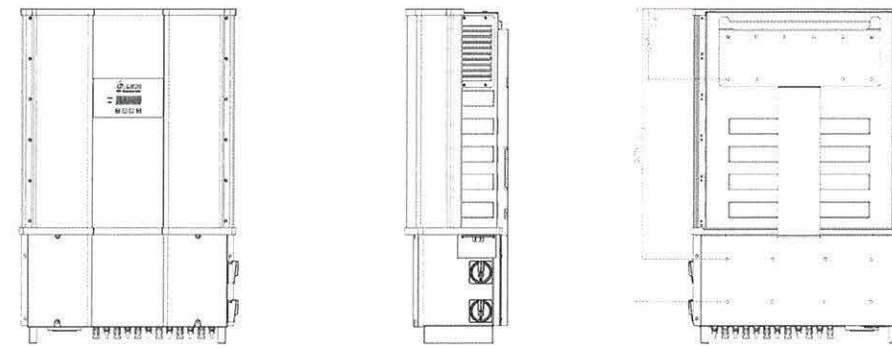
SHEET NUMBER
PV-4

INVERTER MOUNTING NOTES

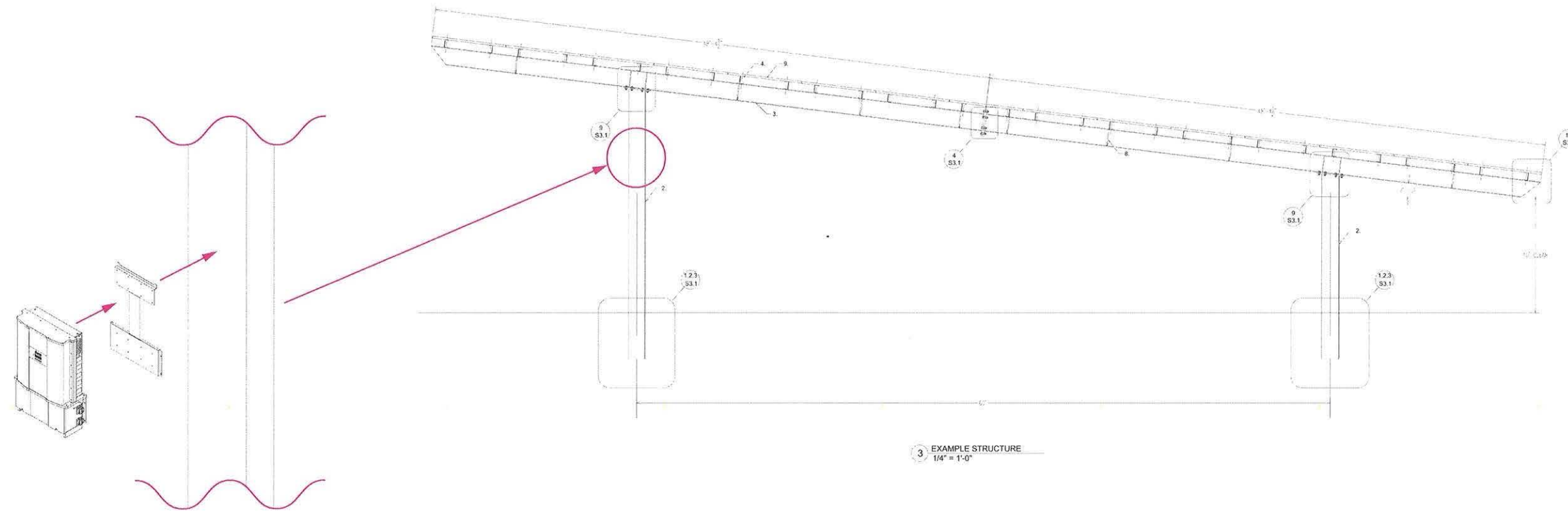
Inverter mounting diagrams supplied by Delta Electronics. Contractor to use Delta Inverter Mount supplied by Delta Electronics.



BRACKET



INVERTER



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REVISIONS		
DESCRIPTION	DATE	REV
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60% SET	09/09/2020	2
100% SET	12/21/2020	3.1



PROJECT NAME

UNITED PARCEL SERVICE INC
301 East Oak Avenue,
Lawnside, NJ 08045

SHEET NAME
Inverter Mounting

SHEET SIZE
**ARCH D
36" X 24"**

SHEET NUMBER
PV-5

1 | INVERTER MOUNTING

PV-5 | SCALE: 1/16" = 1'-0"

⚠ 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 690.35(F))
 [To be used when inverter is ungrounded]

⚠ 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]

⚠ WARNING
ELECTRIC SHOCK HAZARD
 DO NOT TOUCH TERMINALS TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
 DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT

LABEL LOCATION:
 AC DISCONNECT, 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), AC DISCONNECT
 (PER CODE: NEC690.13.G.3 & NEC 690.13.G.4)

WARNING: PHOTOVOLTAIC POWER SOURCE

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

**PHOTOVOLTAIC SYSTEM AC DISCONNECT
 RATED AC OPERATING CURRENT 1200 AMPS
 AC NOMINAL OPERATING VOLTAGE 480 VOLTS**

LABEL LOCATION:
 AC DISCONNECT, POINT OF INTERCONNECTION
 (PER CODE: NEC690.54)

⚠ 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]

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/JUNCTION BOXES. (PER CODE: IFC605.11.1.4)

SOLAR DISCONNECT

LABEL LOCATION:
 DISCONNECT, POINT OF INTERCONNECTION
 (PER CODE: NEC690.13(B))

⚠ WARNING DUAL POWER SOURCE
 SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

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

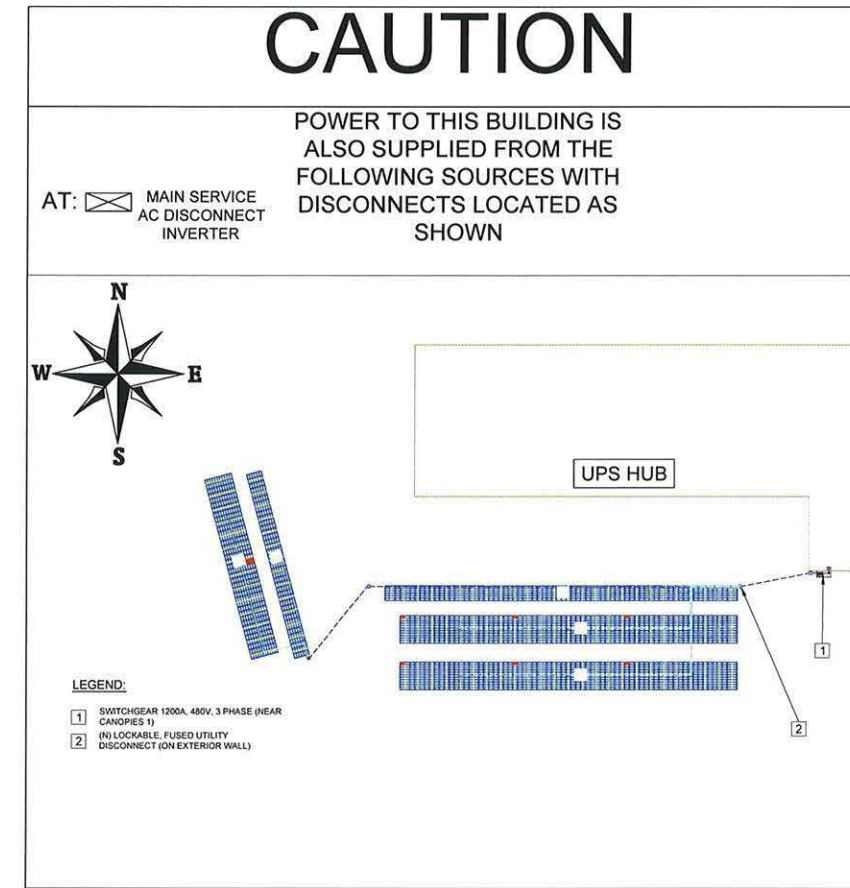
CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

LABEL LOCATION:
 WEATHER RESISTANT MATERIAL, DURABLE ADHESIVE, UL969 AS STANDARD TO WEATHER RATING (UL LISTING OF MARKINGS NOT REQUIRED), MIN 3/8" LETTER HEIGHT ARIAL OR SIMILAR FONT NON-BOLD, PLACED WITHIN THE MAIN SERVICE DISCONNECT, PLACED ON THE OUTSIDE OF THE COVER WHEN DISCONNECT IS OPERABLE WITH SERVICE PANEL CLOSED. (PER CODE: NEC690.15, 690.13(B))

INVERTER #1 - #11 (M60U-120)

RATED MAXIMUM POWER-POINT CURRENT (Imp)	133.42	A
RATED MAXIMUM POWER-POINT VOLTAGE (Vmp)	718.2	V
MAXIMUM SYSTEM VOLTAGE (VOC)	874.8	V
MAXIMUM CIRCUIT CURRENT (Isc)	140.42	A

LABEL LOCATION:
 DC DISCONNECT, INVERTER
 (PER CODE: NEC690.53)



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]



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PROJECT NAME
UNITED PARCEL SERVICE INC
 301 East Oak Avenue
 Lawnside, NJ 08045

SHEET NAME
PLACARDS

SHEET SIZE
**ARCH D
 36" X 24"**

SHEET NUMBER
PV-6