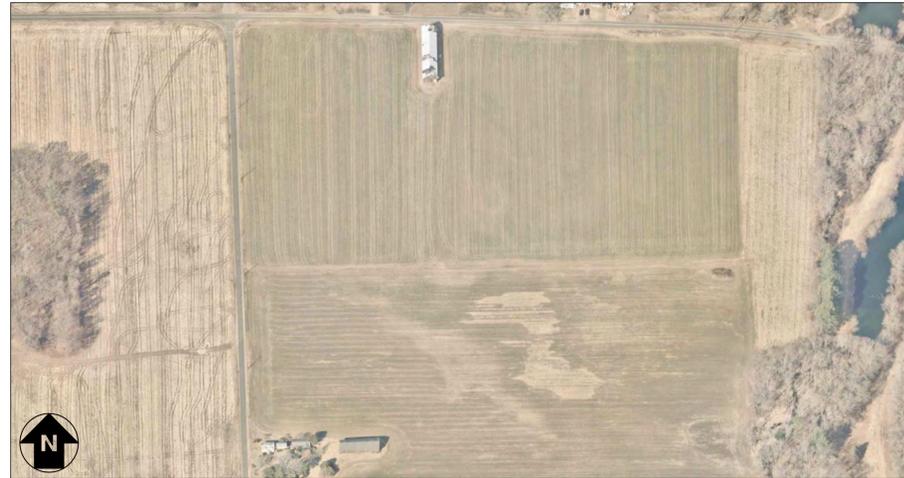


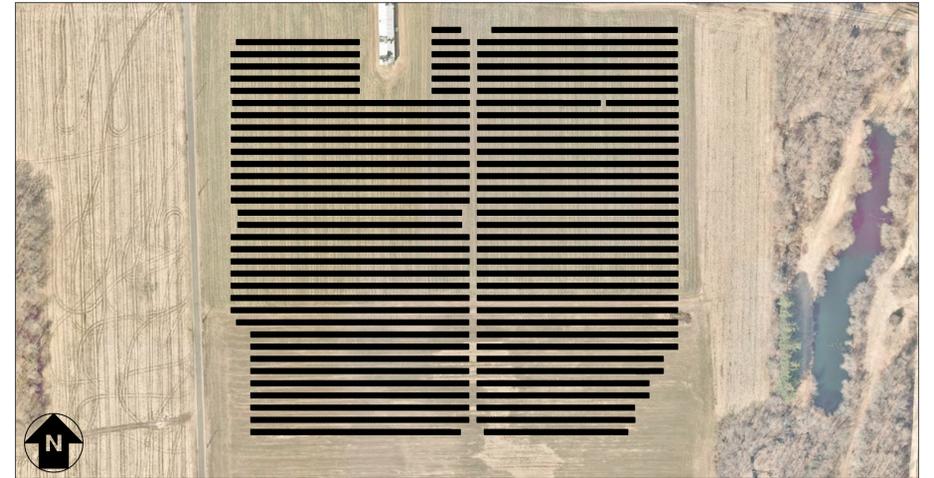
7,590.57 KW SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD, EAST WINDSOR, CONNECTICUT 06016



LOCATION MAP
SCALE: 1" = 2000'-0"



BIRDS-EYE VIEW FROM SOUTH
SCALE: 1" = 200'-0"



SYSTEM PLAN
SCALE: 1" = 200'-0"

TOTAL SYSTEM SUMMARY:

TOTAL DC SYSTEM SIZE: 7,590.57 kWDC
AC SYSTEM SIZE: 4,975.00 kWAC

MODULE MANUFACTURER: TRINA SOLAR
MODULE MODEL: TSM-DEG15MC.20(II) 395W
MODULES PER STRING: 26
MODULE QUANTITY: 15,990
DUMMY MODULE QUANTITY: 2
STRING QUANTITY: 615

MODULE MANUFACTURER: RISEN SOLAR TECHNOLOGY
MODULE MODEL: RSM144-6-380BMDG 380W
MODULES PER STRING: 26
MODULE QUANTITY: 3,354
DUMMY MODULE QUANTITY: 2
STRING QUANTITY: 129

MODULE TILT: 30°
MODULE AZIMUTH: 180°

INVERTER MANUFACTURER: SOLECTRIA RENEWABLES
INVERTER MODEL: XGI 1500-125/125
INVERTER QUANTITY: 39

INVERTER MANUFACTURER: CHINT POWER SYSTEMS
INVERTER MODEL: CPS SCH100KTL-DO/US-600
INVERTER QUANTITY: 1

SUBSYSTEM SUMMARIES:

SYSTEM 1	SYSTEM 3
TOTAL DC SIZE: 3,122.08 kWDC	TOTAL DC SIZE: 1,469.65 kWDC
AC SYSTEM SIZE: 2,000.00 kWAC	AC SYSTEM SIZE: 975.00 kWAC
MODULE QUANTITY: 7,904	MODULE QUANTITY: 494/3,354
STRING QUANTITY: 304	STRING QUANTITY: 19/129
SYSTEM 2	
TOTAL DC SIZE: 2,998.84 kWDC	
AC SYSTEM SIZE: 2,000.00 kWAC	
MODULE QUANTITY: 7,592	
STRING QUANTITY: 292	

SCOPE OF WORK SUMMARY

GROUND MOUNT PV ARRAY:
INSTALL SOLAR MODULES AND RACKING SYSTEM ON GROUND LEVEL. INSTALL INVERTERS AND ELECTRICAL DISTRIBUTION EQUIPMENT TO INTERCONNECT AT LOCAL UTILITY DISTRIBUTION LINES.

DEVELOPER:



150 TRUMBULL ST, 4TH FLOOR
HARTFORD, CT 06103

ENGINEERED BY:



5 MARINE VIEW PLAZA, SUITE 301
HOBOKEN, NEW JERSEY, 07030

DRAWING INDEX

GENERAL				
G001	TITLE SHEET	●	●	●
G200	ARRAY PLAN	●	●	●
ELECTRICAL				
E001	ELECTRICAL NOTES & SYMBOL LIST		●	○
E100	OVERALL ELECTRICAL PLAN		●	○
E110	INVERTER & EQUIPMENT AREA PLAN		●	○
E111	EQUIPMENT AREA ELEVATION		●	○
E120	EQUIPMENT MOUNTING DETAILS IN ARRAY		●	○
E200	PARTIAL DC ELECTRICAL PLAN		●	○
E201	PARTIAL DC ELECTRICAL PLAN		●	○
E202	PARTIAL DC ELECTRICAL PLAN		●	○
E203	PARTIAL DC ELECTRICAL PLAN		●	○
E204	PARTIAL DC ELECTRICAL PLAN		●	○
E205	PARTIAL DC ELECTRICAL PLAN		●	○
E210	PV MODULES AND WIRING DETAILS		●	○
E300	ONE LINE DIAGRAM - MEDIUM VOLTAGE		●	○
E301	ONE LINE DIAGRAM - SYSTEM 1	●	●	●
E302	ONE LINE DIAGRAM - SYSTEM 2	●	●	●
E303	ONE LINE DIAGRAM - SYSTEM 3	●	●	●
E310	SCHEDULES & CALCULATIONS	●	●	○
E311	SCHEDULES & CALCULATIONS	●	●	○
E312	SCHEDULES & CALCULATIONS		●	○
E313	SCHEDULES & CALCULATIONS		●	○
E401	GROUNDING DETAILS		●	○
E402	ELECTRICAL DETAILS		●	○
E500	LABELS & SIGNAGE		●	○
E600	EQUIPMENT DATA SHEETS		●	○
E601	EQUIPMENT DATA SHEETS		●	○

LEGEND:

UPDATED DRAWING ISSUED	●
UNCHANGED, PREVIOUSLY ISSUED DRAWING STILL CURRENT	○
DRAWING REMOVED FROM SET	X

DRAWING TITLE
TITLE SHEET

DRAWING #
G001

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE
341 EAST ROAD
EAST WINDSOR, CONNECTICUT 06016

PAGE SIZE: 36" x 24"
PROJECT #: 00682

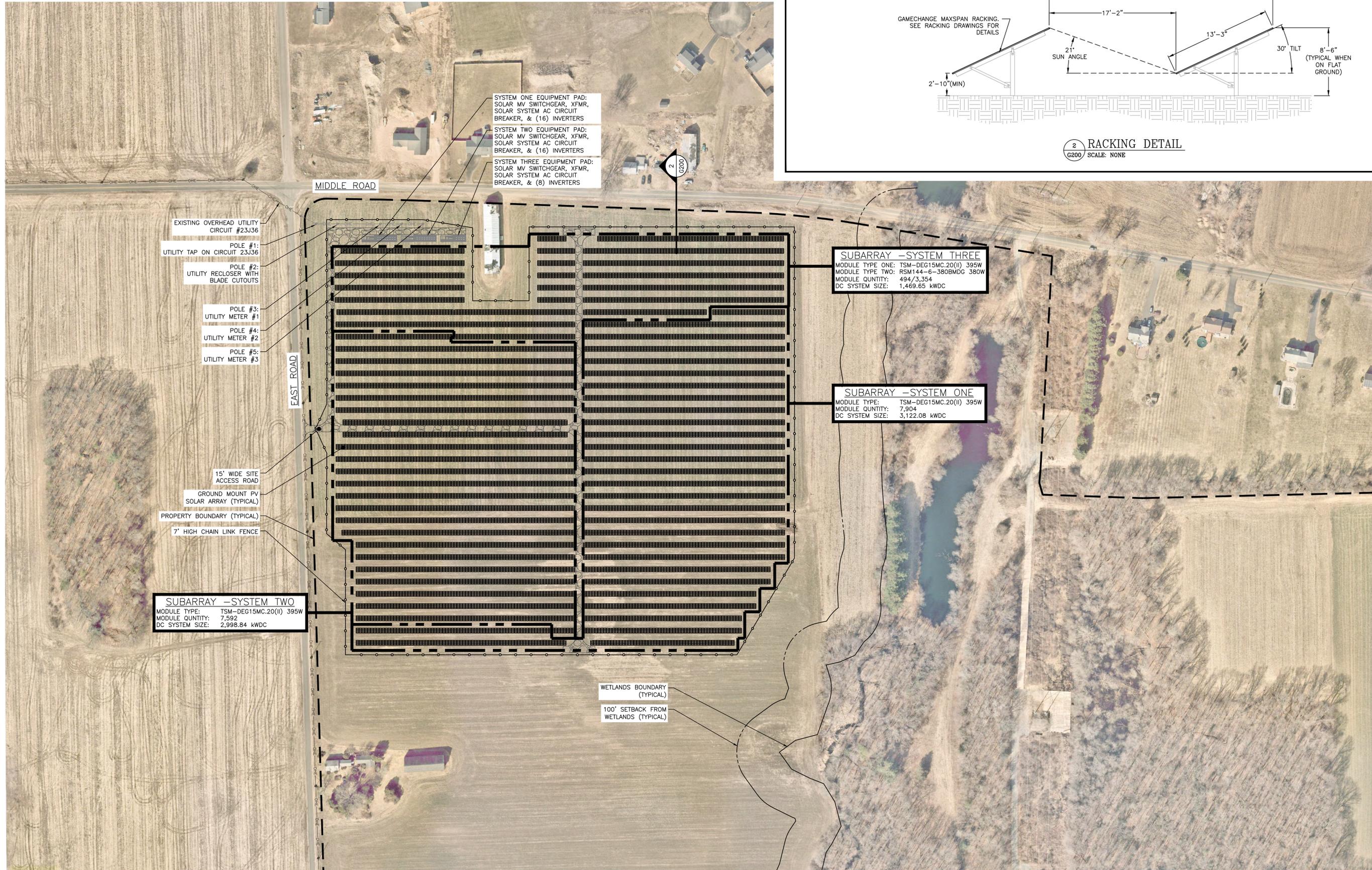
DEVELOPER:
VEROGY
150 TRUMBULL STREET
HARTFORD, CT 06103
WWW.VEROGY.COM

VEROGY PROFESSIONAL ENGINEERING
REGISTERED PROFESSIONAL ENGINEER
RICHARD A. VINCIGUERRA
CT LICENSE NO. 05692862

DATE	REVISION DESCRIPTION	PM	ENG	CHK
05/05/2021	ISSUE FOR PERMIT	RK	ES	RI
09/28/2020	90% DESIGN DEVELOPMENT	RK	AA	RI
07/30/2020	30% DESIGN - REV.1	RK	CP	RI
07/01/2020	30% CONCEPTUAL DESIGN	RK	CP	RI

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
PLOT DATE: 5/19/2021 10:31 AM

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



SUBARRAY -SYSTEM TWO
 MODULE TYPE: TSM-DEG15MC.20(I) 395W
 MODULE QUANTITY: 7,592
 DC SYSTEM SIZE: 2,998.84 kWDC

SUBARRAY -SYSTEM ONE
 MODULE TYPE: TSM-DEG15MC.20(I) 395W
 MODULE QUANTITY: 7,904
 DC SYSTEM SIZE: 3,122.08 kWDC

SUBARRAY -SYSTEM THREE
 MODULE TYPE ONE: TSM-DEG15MC.20(I) 395W
 MODULE TYPE TWO: RSM144-6-380BMDG 380W
 MODULE QUANTITY: 494/3,354
 DC SYSTEM SIZE: 1,469.65 kWDC

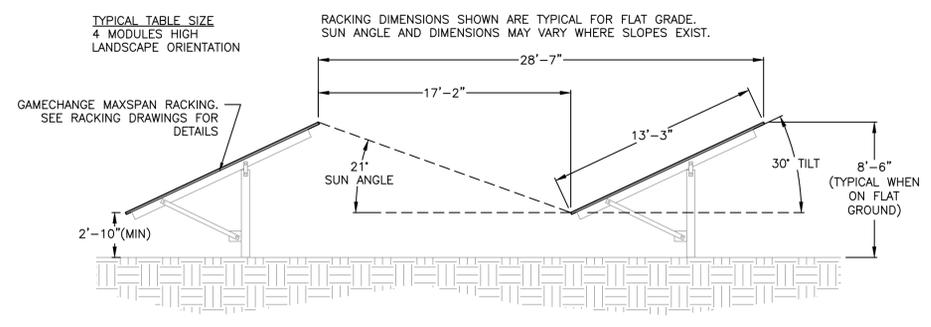
- EXISTING OVERHEAD UTILITY CIRCUIT #23J36
- POLE #1: UTILITY TAP ON CIRCUIT 23J36
- POLE #2: UTILITY RECLOSER WITH BLADE CUTOUPS
- POLE #3: UTILITY METER #1
- POLE #4: UTILITY METER #2
- POLE #5: UTILITY METER #3

- SYSTEM ONE EQUIPMENT PAD: SOLAR MV SWITCHGEAR, XFMR, SOLAR SYSTEM AC CIRCUIT BREAKER, & (16) INVERTERS
- SYSTEM TWO EQUIPMENT PAD: SOLAR MV SWITCHGEAR, XFMR, SOLAR SYSTEM AC CIRCUIT BREAKER, & (16) INVERTERS
- SYSTEM THREE EQUIPMENT PAD: SOLAR MV SWITCHGEAR, XFMR, SOLAR SYSTEM AC CIRCUIT BREAKER, & (8) INVERTERS

- 15' WIDE SITE ACCESS ROAD
- GROUND MOUNT PV SOLAR ARRAY (TYPICAL)
- PROPERTY BOUNDARY (TYPICAL)
- 7" HIGH CHAIN LINK FENCE

WETLANDS BOUNDARY (TYPICAL)
 100' SETBACK FROM WETLANDS (TYPICAL)

1 OVERALL ARRAY PLAN
 G200 SCALE: 1" = 100'-0"



2 RACKING DETAIL
 G200 SCALE: NONE

<p>PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016</p>	<p>DC SYSTEM POWER: 7,990.57 kW AC SYSTEM POWER: 4,975.00 kW MODULE TYPE: TRINA 395/RISEN 380 MODULE QUANTITY: 15,990/3,354 STRING QUANTITY: 615/129 ORIENTATION: 30° TILT, 180° AZIMUTH</p>	<p>DEVELOPER: VEROGY 150 FAIRFIELD STREET HARTFORD, CT 06103 WWW.VEROGY.COM</p>	<p>REGISTERED PROFESSIONAL ENGINEER RICHARD A. VONDERHEG LICENSE NO. 3692862</p>	<p>REVISION DESCRIPTION ISSUE FOR PERMIT 90% DESIGN DEVELOPMENT 30% DESIGN - REV.1 30% CONCEPTUAL DESIGN</p>	<p>DATE 05/05/2021 09/28/2020 07/30/2020 07/01/2020</p>	<p>PM ENG CHK RK ES RI RK AA RI RK CP RI RK CP RI</p>	
<p>PAGE SIZE: 3.6" x 24"</p>		<p>PROJECT #: 00682</p>		<p>DATE: 05/05/2021</p>		<p>SCALE: NONE</p>	

DRAWING TITLE	DRAWING #
OVERALL ARRAY PLAN	G200

ELECTRICAL NOTES

1. GENERAL

- 1.A. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) TO APPLICABLE UL STANDARDS. THE CONTRACTOR SHALL PROCURE ALL NECESSARY CERTIFICATIONS FOR ALL WORK INSTALLED, PAY ALL FEES AND CHARGES CONNECTED THEREWITH AND DELIVER ALL CERTIFICATES AND INSPECTION APPROVALS TO THE OWNER THROUGH THE ENGINEER, BEFORE WORK WILL BE FINALLY ACCEPTED.
- 1.B. ALL INVERTERS SHALL BE IEEE 1547 COMPLIANT AND SHALL BE INSPECTED BY LOCAL UTILITY BEFORE COMMISSIONING, TESTING AND OPERATION OF THE SYSTEM.
- 1.C. UNLESS OTHERWISE NOTED, NEW EQUIPMENT SHALL HAVE AN INTERRUPT RATING (KAIC) OR SHORT CIRCUIT CURRENT RATING (SCCR) GREATER THAN OR EQUAL TO THE EXISTING EQUIPMENT.

2. MANNER OF INSTALLATION

- 2.A. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. ALL DETAILS OF THE INSTALLATION SHALL BE MECHANICALLY AND ELECTRICALLY CORRECT.
- 2.B. TORQUE AND MARK ALL RACKING AND MECHANICAL LUGS.

3. CONDUCTORS AND CONDUCTOR INSTALLATION

- 3.A. COMPRESSION LUGS SHALL BE USED ON ALL ALUMINUM CABLE TERMINATIONS. MECHANICAL LUGS MAY ONLY BE USED FOR COPPER CABLE TERMINATIONS OR ALUMINUM CABLE WITH COMPRESSION PIN ADAPTORS.
- 3.B. IF ALUMINUM MC CABLE IS USED, THHN/THWN-2 INSULATION IS ACCEPTABLE. FOR ALUMINUM CONDUCTORS, XHHW-2 SHALL BE USED.
- 3.C. ANTI-OXIDANT COMPOUND SHALL BE USED WITH ALL ALUMINUM LUGS. CLEAN OXIDATION FROM WIRE STRANDS WITH STEEL WIRE BRUSH PRIOR TO APPLICATION OF COMPOUND.
- 3.D. PV SYSTEM CONDUCTORS SHALL BE MARKED AND IDENTIFIED PER NEC 690.31(B).
- 3.E. INSTALL WIRE AND CABLE IN ACCORDANCE WITH THE NEC AND AS HEREINAFTER SPECIFIED. USE THE NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION'S "STANDARD OF INSTALLATION", THE MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS SUPERSEDED BY THESE SPECIFICATIONS. IN ALL CASES THE INSTALLATION SHALL BE IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES.
- 3.F. THE USE OF WIRE SPLICES AT ANY POINT IN THE INSTALLATION IS STRICTLY PROHIBITED.
- 3.G. THE USE OF WIRE LUBE IS REQUIRED FOR ALL WIRE PULLS THROUGH CONDUIT RUNS OF 20' OR LONGER, OR WITH BENDS IN 180' OR MORE. WIRE LUBE IS REQUIRED EVEN WHEN USING SELF LUBRICATING CABLES SUCH AS SOUTHWIRE 'SIMPULL'.
- 3.H. STRING WIRING & HOMERUNS SHALL BE SECURED TO UNDERSIDE OF THE RACKING & MODULES USING ZIP TIES OUTDOOR RATED FOR UV. HELLERMAN TYTON PA66UV OR EQUAL. TRANSITION TO EMT OUTSIDE OF ARRAY.
- 3.I. ALL PV SOURCE CIRCUITS WHICH WOULD BE EXPOSED TO PHYSICAL DAMAGE SHALL BE PROTECTED IN CONDUIT OR CABLE TRAY.
- 3.J. ALL PV SOURCE CIRCUITS WITH DIRECT EXPOSURE TO SUNLIGHT SHALL BE PROTECTED THROUGH THE USE OF CONDUIT, PROTECTIVE WRAP, SPLIT LOOM, OR EQUIVALENT, WHICH ARE DURABLE FOR THE ENVIRONMENT AND RATED FOR THE APPLICATION.
- 3.K. ALL PLUG AND SOCKET CONNECTORS MATED TOGETHER SHALL BE OF THE SAME TYPE AND OF THE SAME MANUFACTURER. "COMPATIBLE" CONNECTORS SHALL NOT BE ACCEPTED (IEC 62446-1).
- 3.L. ALL FIELD-MADE PLUG & SOCKET CONNECTORS SHALL BE INSTALLED USING MANUFACTURER APPROVED TOOLS AND METHODS, AND CABLE GLANDS SHALL BE TIGHTENED TO MANUFACTURER'S SPECIFIED TORQUE VALUE.

4. PHASE RELATIONSHIP

- 4.A. CONNECT FEEDERS TO MAINTAIN PHASE RELATIONSHIP THROUGH SYSTEM. PHASE LEGS OF FEEDERS SHALL MATCH BUS OR CABLE ARRANGEMENTS IN EQUIPMENT TO WHICH THE FEEDERS ARE CONNECTED. COLOR CODING SHALL BE AS FOLLOWS:

208/120 VAC
A PHASE: BLACK, B PHASE: RED, C PHASE: BLUE

277/480 VAC
A PHASE: BROWN, B PHASE: ORANGE, C PHASE: YELLOW

1500 VDC, 1000 VDC, OR 600 VDC
UNGROUND POSITIVE CONDUCTOR: RED
UNGROUND NEGATIVE CONDUCTOR: BLACK

AC AND DC SYSTEMS:
GROUNDED CONDUCTOR: WHITE
GROUND: GREEN

- 4.B. GROUNDED CONDUCTORS (NEUTRAL) AND EQUIPMENT GROUNDING CONDUCTORS SMALLER THAN #4 MUST HAVE COLOR CODED INSULATION. WHERE COLOR CODED CABLE IS NOT USED, TAPE CONDUCTOR WITH OVERLAPPED COLORED TAPE FOR A MINIMUM OF 6" IN ACCESSIBLE LOCATIONS. COLOR CODING MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.

5. CONDUITS AND RACEWAYS

- 5.A. PROVIDE RACEWAYS MINIMUM SIZE 3/4".
- 5.B. CONDUITS SHALL BE EMT WHERE NOT SUBJECT TO PHYSICAL DAMAGE. CONDUITS SHALL BE IMC OR RMC WHERE SUBJECT TO PHYSICAL DAMAGE. PVC CONDUITS ONLY PERMITTED IN BELOW GRADE DUCT BANKS.
- 5.C. DRAWINGS SHOW RACEWAY LOCATIONS DIAGRAMMATICALLY. CONTRACTOR SHALL ADJUST ROUTING TO SUIT FIELD LOCATIONS. ANY CHANGES TO PROPOSED ROUTING SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL.
- 5.D. FURNISH AND INSTALL ALL FITTINGS AND SPECIAL DEVICES NECESSARY FOR THE PROPER INSTALLATION, CONNECTION AND OPERATION OF THE SYSTEM. CONDUIT ELBOWS SHALL BE OF THE SAME MAKE, QUALITY AND FINISH AS THE CONDUIT USED.
- 5.E. A PROTECTIVE COATING OF ASPHALT COMPOUND, PLASTIC SHEATH, OR

- OTHER EQUIVALENT PROTECTION SHALL BE APPLIED TO ANY GALVANIZED STEEL CONDUITS DIRECTLY BURIED IN EARTH.
- 5.F. EMT CONDUIT SHALL USE COMPRESSION RAIN-TIGHT CONNECTORS, FACTORY STAMPED RAIN-TIGHT WITH COMPONENTS PROPERLY INSTALLED.
- 5.G. PROVIDE EXPANSION FITTINGS WITH BONDING JUMPERS FOR EVERY 100' OF STRAIGHT METAL CONDUIT RUN.
- 5.H. CONDUIT EXPANSION AND DEFLECTION FITTINGS WITH BONDING JUMPERS SHALL BE USED WHENEVER CROSSING BUILDING EXPANSION AND SEISMIC SEPARATION JOINTS.
- 5.I. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. ALL EMPTY CONDUITS OVER 10' IN LENGTH SHALL BE PROVIDED WITH SYNTHETIC FIBER ROPE PULL WIRE.
- 5.J. PATCH AND REPAIR ALL SURFACES DAMAGED BY TRENCHING TO MATCH THE PREVIOUSLY EXISTING CONDITIONS.
- 5.K. 15" WIDE OR LESS BUCKET TO BE USED FOR TRENCHING.
- 5.L. ALL PENETRATIONS SHALL BE SEALED TO MAINTAIN THE EXISTING FIRE RATING.
- 5.M. ALL ROOFTOP CONDUITS SHALL BE MARKED PER LOCAL FIRE CODES.
- 5.N. ALL CONDUITS ENTERING ENCLOSURES SHALL BE FITTED WITH PROTECTIVE BUSHINGS, INCLUDING CONDUIT WITH CONDUCTOR SIZES SMALLER THAN #4 AWG. METALLIC CONDUIT/BUSHINGS SHALL BE BONDED PER NEC.
- 5.O. ALL CONDUIT ENTERING ENCLOSURES SHALL BE SEALED WITH AN APPROVED SEALANT.

6. ELECTRICAL ENCLOSURES

- 6.A. ALL OUTDOOR ENCLOSURES (PANELBOARDS, DISCONNECT SWITCHES, JUNCTION BOXES, COMBINER BOXES, ETC.) SHALL BE NEMA 3R, 4, OR 4X. INDOOR ENCLOSURES SHALL BE NEMA 1.
- 6.B. PANELBOARD DOORS SHALL BE QUARTER TURN LATCHES OR EXTERNAL HANDLE WITH INTERNAL LATCHES, NO SETS OF EXTERNAL SCREW DOWN CLAMPS.
- 6.C. CONDUIT TERMINATING IN OUTDOOR ENCLOSURES SHALL USE MYERS-TYPE HUBS WITH GROUND SCREW. UTILIZE RAIN-TIGHT FITTINGS FOR ALL CABLE ENTRIES.
- 6.D. NO PENETRATIONS OR CABLE ENTRIES IN THE TOP OF OUTDOOR ENCLOSURES. ENTER OUTDOOR ENCLOSURES FROM THE BOTTOM (PREFERRED) OR SIDE.
- 6.E. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED OR LABELED BY A RECOGNIZED TESTING AGENCY.
- 6.F. ARC FLASH HAZARD WARNING LABELS SHALL BE PROVIDED AND MOUNTED ON EVERY COMBINER BOX, TERMINAL BOX, INVERTER, AC AND DC SWITCH, TRANSFORMER, AND SWITCHGEAR.
- 6.G. HAND HOLES, PULL BOXES, OR CONDUIT BODIES SHALL BE INSTALLED (WHETHER OR NOT SHOWN ON DRAWINGS) WHEN THE RACEWAY HAS MORE THAN 360° OF BENDS, OR AS NECESSARY TO NOT EXCEED MANUFACTURER'S MAXIMUM CABLE PULLING TENSION.

7. GROUNDING

- 7.A. THE CONTRACTOR SHALL FURNISH AND INSTALL GROUNDING NECESSARY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

8. TESTS

- 8.A. FINAL TESTS AND INSPECTION SHALL BE HELD IN THE PRESENCE OF OWNER'S REPRESENTATIVES AND TO THEIR SATISFACTION.
- 8.B. MEGGER TEST ALL DC STRING WIRING, DC COMBINER BOX OUTPUT FEEDERS, AND AC FEEDERS. SUBMIT RESULTS TO OWNER FOR REVIEW.
- 8.C. HI-POT TEST ALL MEDIUM VOLTAGE FEEDERS IN ACCORDANCE WITH CABLE MANUFACTURER INSTRUCTIONS.
- 8.D. IV CURVE TRACES OF STRINGS SHALL BE GENERATED USING THE SOLMETRIC PV ANALYZER (OR EQUIVALENT DEVICE) AND SUBMITTED TO OWNER FOR APPROVAL.
- 8.E. OPEN-CIRCUIT VOLTAGE (V_{oc}) MEASUREMENTS OF ALL DC STRING CONDUCTORS.
- 8.F. GROUND FAULT PROTECTION SYSTEMS SHALL BE FUNCTIONAL TESTED IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS (NEC 230.95(C)).
- 8.G. MEDIUM VOLTAGE EQUIPMENT SHALL BE TESTED IN ACCORDANCE WITH NEC 230.95 AND PER MANUFACTURER INSTRUCTIONS.

GENERAL NOTES

9. THE GENERAL NOTES APPLY TO ALL DRAWINGS UNDER THE CONTRACT. REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.
10. DRAWINGS ARE DIAGRAMS AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT OF WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM, SPACE CONDITIONS, AND REQUIRED CLEARANCES.
11. PV SYSTEM CONTRACTOR SHALL COORDINATE ALL THE WORK WITH THE ENGINEER, THE CONSTRUCTION MANAGER AND ALL OTHER CONTRACTORS TO INSURE THAT THE PV SYSTEM IS INSTALLED AS SPECIFIED IN THESE DRAWINGS.
12. PERSONAL PROTECTIVE EQUIPMENT (PPE) SHALL BE PROVIDED AS REQUIRED IN ACCORDANCE WITH NEC 70E AND OSHA REQUIREMENTS.
13. UNFORSEEN OBSTRUCTIONS ON THE SITE MAY NECESSITATE A CHANGE IN THE LAYOUT. ANY CHANGES TO THE RACKING LAYOUT SHOULD BE REPORTED TO THE ENGINEER. CHANGES IN UP TO 5% OF THE MODULES SHOULD BE ANTICIPATED. CHANGES TO THE ARRAY LAYOUT SHOULD BE MADE AS TO NOT IMPACT THE NUMBER OF MODULES ON A COMBINER BOX OR INVERTER.
14. LANDSCAPING: RESTORE TO ORIGINAL CONDITIONS.
15. ALL STRUCTURAL AND MISCELLANEOUS EXTERIOR STEEL, INCLUDING STRUT CHANNEL (SUCH AS UNISTUR OR KINDORF) SHALL BE CORROSION RESISTANT, HOT DIP GALVANIZED OR GALVANNEALED WITH A COATED FINISH MINIMUM.

LEGEND - GENERAL

- LIGHT LINE INDICATES EXISTING OR BEYOND THE SCOPE OF PROJECT
- DARK LINE INDICATES NEW OR WITHIN THE SCOPE OF PROJECT
- DASHED LINE INDICATES EQUIPMENT AT A DIFFERENT ELEVATION
- EXISTING TEXT LIGHT TEXT INDICATES EXISTING OR BEYOND THE SCOPE OF PROJECT
- NEW TEXT DARK TEXT INDICATES NEW OR WITHIN THE SCOPE OF PROJECT

LEGEND - PLAN SYMBOLS

- SOLAR MODULE
- RACEWAY TURNING UP OR TOWARDS OBSERVER
- RACEWAY TURNING DOWN OR AWAY FROM OBSERVER
- CABLE TRAY
- PULLBOX
- JUNCTION BOX
- PANEL BOARD
- LOCAL DISCONNECT SWITCH
- SIMPLEX RECEPTACLE, RATED: 125-VOLTS AC, 20A
- DUPLEX RECEPTACLE, RATED: 125-VOLTS AC, 20A
- WEATHERPROOF DUPLEX RECEPTACLE, RATED: 125-VOLTS AC, 20A
- GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE, RATED: 125-VOLTS AC, 20A
- DOUBLE DUPLEX (QUAD) RECEPTACLE
- CEILING/PENDANT-MOUNT LIGHT, SEE FIXTURE SCHEDULE FOR TYPE
- WALL-MOUNT LIGHT, SEE FIXTURE SCHEDULE FOR TYPE
- GROUND ROD
- GROUND ROD W/ TEST WELL

LEGEND - ONE LINE DIAGRAM AND WIRING DIAGRAM SYMBOLS

- CIRCUIT BREAKER, FRAME SIZE AND TRIP SETTING AS NOTED
- DISCONNECT SWITCH
- INVERTER
- BUS CONNECTION POINT
- CROSSING POINT (NO CONNECTION)
- NORMALLY CLOSED - NORMALLY OPEN CONTACTS
- TRANSFORMER CONTROL/POWER, SIZE AND RATING AS NOTED
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- FUSE, SIZE/RATING AS NOTED
- FUSED DISCONNECT SWITCH
- EARTH GROUND
- PUSHBUTTON SWITCHES; NUMBER AND TYPE OF CONTACT BLOCKS MAY VARY
- PUSHBUTTON SWITCHES MUSHROOM HEAD; NUMBER AND TYPE OF CONTACT BLOCKS MAY VARY
- KEYED INTERLOCK (KIRK KEY OR EQ.)
- SHUNT TRIP COIL

ABBREVIATIONS

A	AMPERES
AERMS	ARC ENERGY REDUCING MAINTENANCE SWITCH
AF	AMPERE FRAME
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AFDI	ARC FAULT DETECTION & INTERRUPTER
AIC	AMPS INTERRUPTING CAPACITY
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	CIRCUIT BREAKER
C	CONDUIT
CB	COMBINER BOX
CKT	CIRCUIT
COU	CONDITIONS OF USE
CP	CONTROL PANEL
CU	COPPER
DISC	DISCONNECT
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEC	ELECTRIC, ELECTRICAL
EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EXIST	EXISTING
G, GND	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT
HID	HIGH-INTENSITY DISCHARGE (LIGHTING)
HZ	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
KAIC	1000 AMPS INTERRUPT CAPACITY
KCMIL	1000 CIRCULAR MILLS
kVA	KILO-VOLT AMPERE
kW	KILOWATT
LA	LIGHTNING & SURGE ARRESTOR
LED	LIGHT-EMITTING DIODE
LSIG	LONG, SHORT, INSTANTANEOUS, & GROUND FAULT
LTG	LIGHTING
MAX	MAXIMUM
MFG	MANUFACTURER
MLO	MAIN LUGS ONLY
MLPE	MODULE LEVEL POWER ELECTRONICS
MPPT	MAXIMUM POWER POINT TRACKING
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NTS	NOT TO SCALE
P	POLE
PF	POWER FACTOR
PLC	PROGRAMMABLE LOGIC CONTROLLER
POA	PLANE OF ARRAY
POI	POINT OF INTERCONNECTION
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
PWR	POWER
RCPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL CONDUIT
RMC	RIGID METAL CONDUIT
SA	SURGE ARRESTOR
SEC	SECONDARY
SPD	SURGE PROTECTION DEVICE
SSBJ	SUPPLY SIDE BONDING JUMPER
ST	SHUNT TRIP
STP	SHIELDED TWISTED PAIR
SW	SWITCH
TBD	TO BE DETERMINED
TP	TWISTED PAIR
TYP	TYPICAL
V	VOLT
VA	VOLT-AMPERE
W	WATT
WP	WEATHERPROOF
XFMR	TRANSFORMER
Ø	DIAMETER OR PHASE

NOTES SPECIFIC TO CONNECTICUT

ADOPTED NEC VERSION: 2017

UTILITY: EVERSOURCE

UTILITY DISCONNECT SWITCH REQUIREMENTS:

AN EXTERNAL DISCONNECT AT THE PCC OR AT ANOTHER MUTUALLY AGREEABLE POINT THAT IS ACCESSIBLE TO COMPANY PERSONNEL AT ALL HOURS OF ALL DAYS AND THAT CAN BE OPENED FOR ISOLATION IF REQUIRED. THE SWITCH SHALL BE GANG OPERATED, HAVE A VISIBLE AIR GAP BETWEEN SWITCH CONTACTS, BE RATED TO INTERRUPT THE MAXIMUM GENERATOR OUTPUT AND BE CAPABLE OF BEING LOCKED OPEN, TAGGED AND GROUNDED ON COMPANY SIDE BY COMPANY PERSONNEL. THIS DEVICE MAY BE OPERATED MANUALLY, REMOTELY OR THROUGH THE OPERATION OF A COMPANY TRANSFER TRIP SCHEME.

DRAWING TITLE
ELECTRICAL NOTES
& SYMBOL LIST

DRAWING #
E001

PLUG DATE: 5/9/2021 10:31 AM

RULER IN INCHES:

DC SYSTEM POWER: 7,590.57 kW
AC SYSTEM POWER: 4,975.00 kW
MODULE TYPE: TRINA 395/RISEN 380
STRING QUANTITY: 15,990/3,354
ORIENTATION: 30° TILT, 180° AZIMUTH

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016

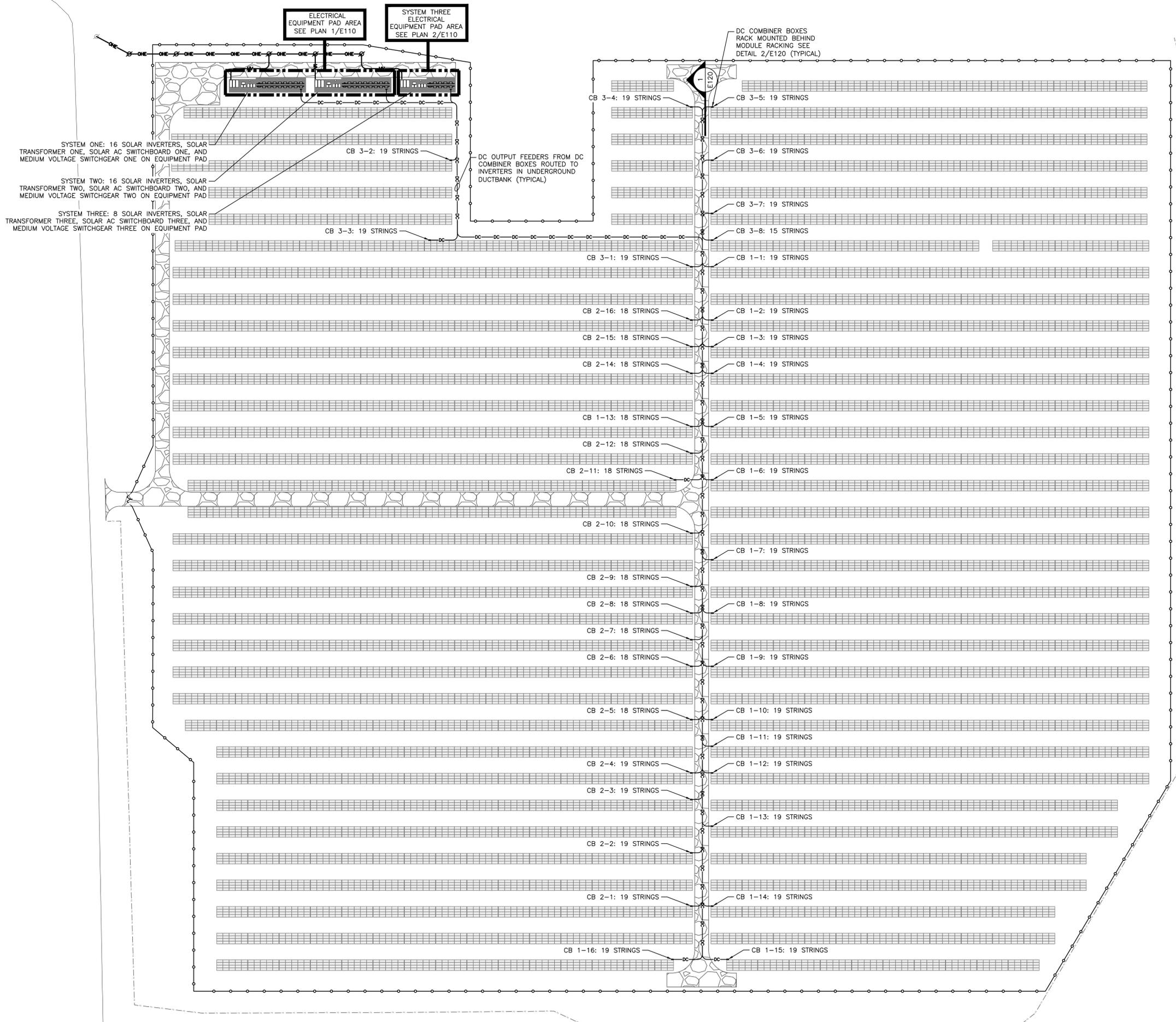
DATE: 03/24/2020
REVISION DESCRIPTION: 90% DESIGN DEVELOPMENT
DATE: 03/24/2020
REVISION DESCRIPTION: 90% DESIGN DEVELOPMENT

VEROGY DEVELOPER
150 TRAVELER BLVD
HARTFORD, CT 06103
WWW.VEROGY.COM

PUREPOWER
5 MARINE VIEW PLAZA, HOBOKEN, NJ
WWW.PUREPOWER.COM
RICHARD A. VINS
CT LICENSE NO. 00592862

PROJECT # 00682
PAGE SIZE 3.6" x 24"

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



1 OVERALL ELECTRICAL PLAN
 E100 SCALE: 1" = 50'-0"



DRAWING TITLE	DRAWING #
OVERALL ELECTRICAL PLAN	E100

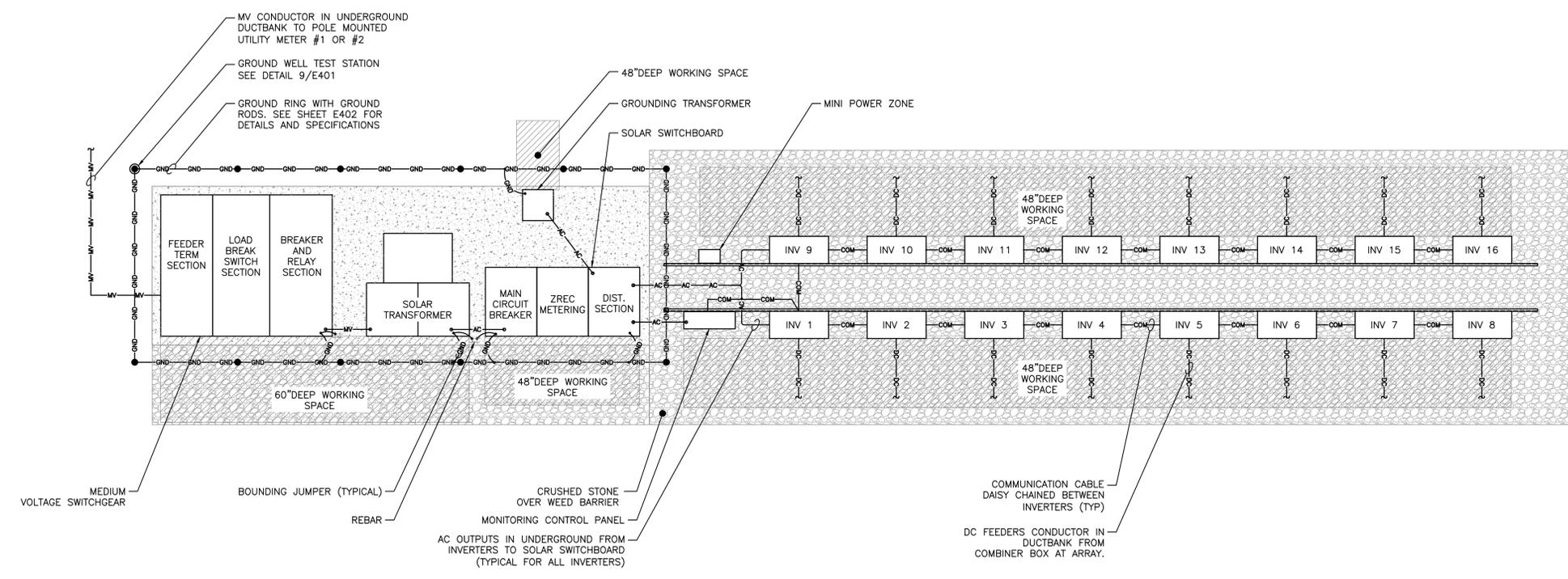
PROJECT	SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
DC SYSTEM POWER:	7,590.57 kW
AC SYSTEM POWER:	4,975.00 kW
MODULE TYPE:	TRINA 395/RISEN 380
MODULE QUANTITY:	15,990/3,354
STRING QUANTITY:	615/129
ORIENTATION:	30° TILT, 180° AZIMUTH
DEVELOPER	VEROGY 150 TRAVELERS STREET HARTFORD, CT 06103 WWW.VEROGY.COM
DESIGNER	PUREPOWER 5 MARINE VIEW PLAZA, HOBOKEN, NJ WWW.PUREPOWER.COM RICHARD A. VINSO CT LICENSE NO. 00682
DATE	03/05/2021
REVISION DESCRIPTION	ISSUE FOR PERMIT
DATE	03/29/2020
REVISION DESCRIPTION	90% DESIGN DEVELOPMENT
DATE	
REVISION DESCRIPTION	
DATE	
REVISION DESCRIPTION	
DATE	
REVISION DESCRIPTION	
DATE	

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

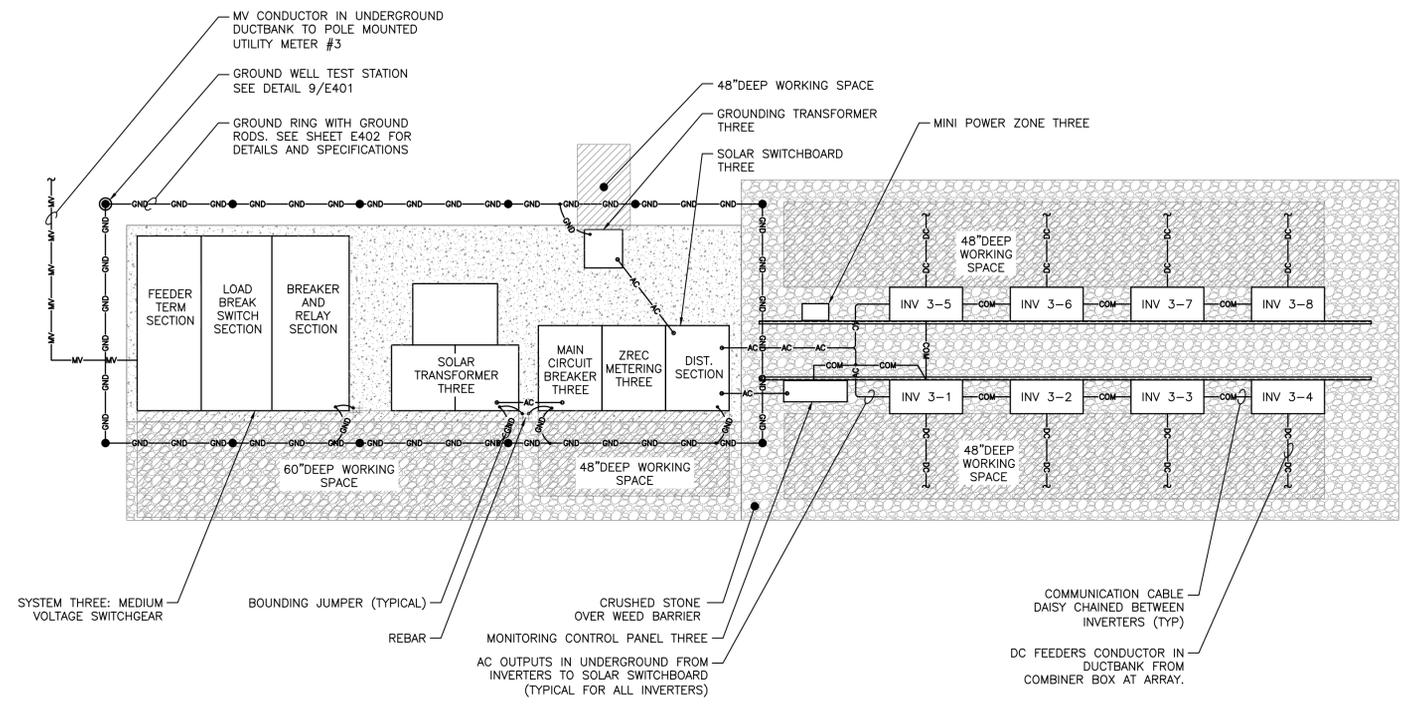
- NOTES:
1. ALL PAD MOUNTED EQUIPMENT SHALL BE BOLTED AND SECURED TO EQUIPMENT PAD WITH SUITABLE CONCRETE ANCHORS AT FOUR CORNERS.
 2. STUB-UP LOCATIONS ARE DIAGRAMMATIC. REFER TO EQUIPMENT SUBMITTALS FOR EXACT LOCATIONS.
 3. PAD SIZE IS APPROXIMATE. CONTRACTOR TO COORDINATE WITH EQUIPMENT SHOP DRAWINGS.

LINE TYPE LEGEND

— AC — AC	AC POWER CONDUIT UNDERGROUND (600V)
— MW — MW	AC POWER CONDUIT UNDERGROUND (25kV)
— DC — DC	DC FEEDER CONDUIT UNDERGROUND (1500V)
— GND — GND	BARE GROUND CABLE UNDERGROUND
— COM — COM	COMS CONDUIT UNDERGROUND



1 TYPICAL INVERTER & EQUIPMENT AREA PLAN—SYSTEM ONE & TWO
 E110 SCALE: 1/4" = 1'-0"



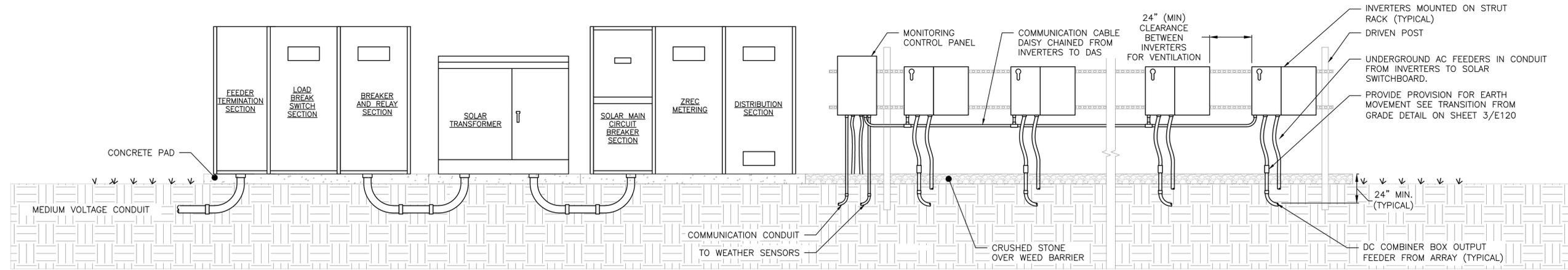
2 EQUIPMENT AREA PLAN—SYSTEM THREE
 E110 SCALE: 1/4" = 1'-0"

DRAWING TITLE	DRAWING #
EQUIPMENT AREA PLAN	E110

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE, 341 EAST ROAD, EAST WINDSOR, CONNECTICUT 06016
 DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 MODULE QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH
 DEVELOPER: VEROGY
 150 TRAVIS FLORES STREET, HARTFORD, CT 06103
 WWW.VEROGY.COM
 VEROGY
 5 MARINE VIEW PLAZA, HOBOKEN, NJ
 WWW.PUREPOWER.COM
 RICHARD A. UNOS
 03/28/2020
 90% DESIGN DEVELOPMENT
 RKL AL R
 DATE: 03/05/2021
 ISSUE FOR PERMIT
 REVISION DESCRIPTION: 03/28/2020 90% DESIGN DEVELOPMENT
 PM TENG CHK
 DATE: 03/05/2021
 ISSUE FOR PERMIT
 RKL AL R
 DATE: 03/28/2020
 90% DESIGN DEVELOPMENT
 RKL AL R

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

PLOT DATE: 5/9/2021 10:32 AM

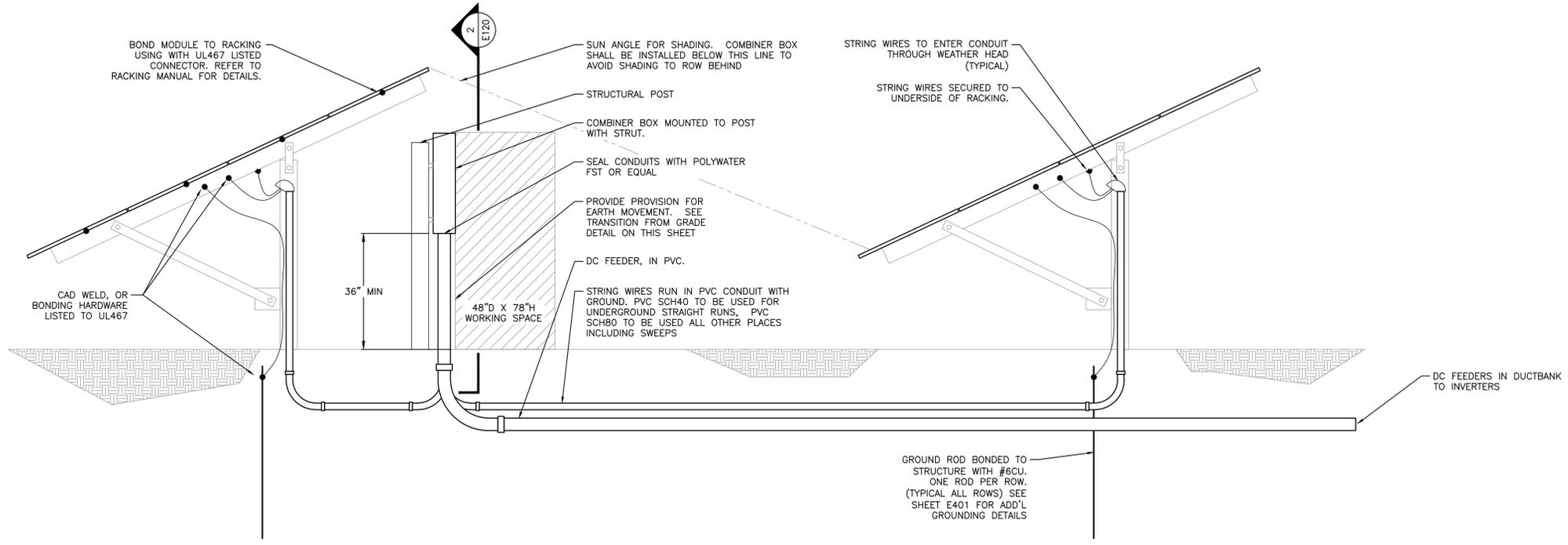


1 ELECTRICAL EQUIPMENT AREA ELEVATION
 E111 SCALE: 3/8" = 1'-0"

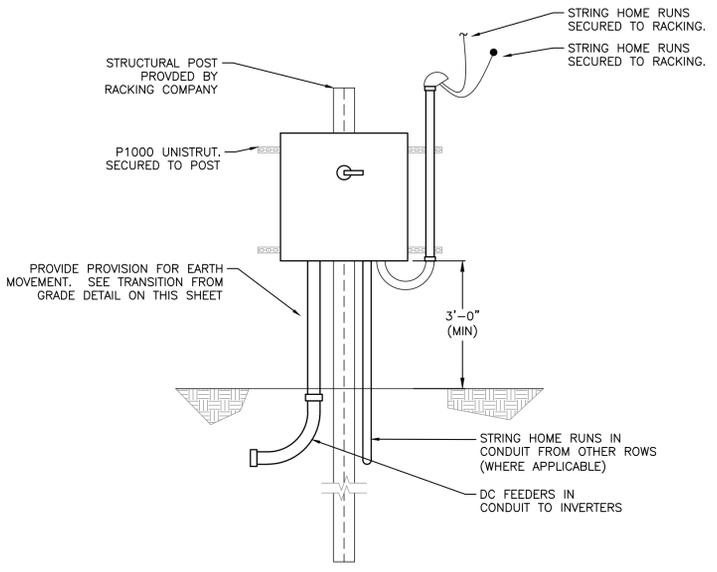
DRAWING TITLE	DRAWING #
EQUIPMENT AREA ELEVATION PLAN	E111

PROJECT SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016	DC SYSTEM POWER: 7,590.57 kW AC SYSTEM POWER: 4,975.00 kW MODULE TYPE: TRINA 395/RISEN 380 STRING QUANTITY: 15,990/3,354 STRING QUANTITY: 615/129 ORIENTATION: 30° TILT, 180° AZIMUTH	DEVELOPER VEROGY 150 TRAVELERS STREET HARTFORD, CT 06103 WWW.VEROGY.COM	DATE 03/28/2020	REVISION DESCRIPTION 90% DESIGN DEVELOPMENT	PM / ENG / CHK R. A. T. R.
	PAGE SIZE 3.6" x 24"	PROJECT # 00682		DATE 03/28/2020	REVISION DESCRIPTION 90% DESIGN DEVELOPMENT

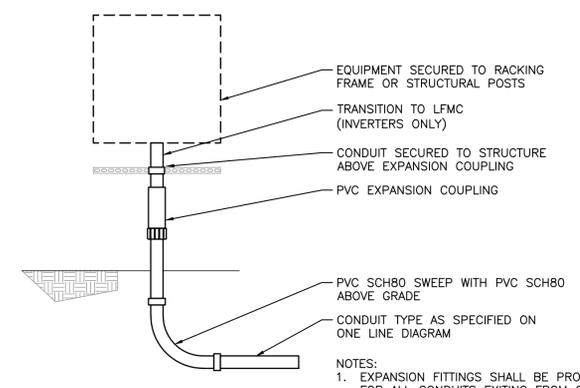
RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



1 TYPICAL EQUIPMENT RACKING ELEVATION - SIDE VIEW
 E120 SCALE: 1/2" = 1'-0"



2 TYPICAL COMBINER BOX ELEVATION - FRONT VIEW
 E120 SCALE: 1/2" = 1'-0"



- NOTES:
1. EXPANSION FITTINGS SHALL BE PROVIDED FOR ALL CONDUITS EXITING FROM GRADE THAT TERMINATE ON FIXED EQUIPMENT. CONDUITS THAT TERMINATE AT WEATHER HEADS DO NOT REQUIRE PROVISION FOR EARTH MOVEMENT.
 2. PVC SWEEPS SHALL ONLY BE USED AT END WHERE WIRE REEL IS LOCATED. RMC SWEEPS SHALL BE USED AT END WHERE THE PULLING MACHING IS LOCATED.

3 TYPICAL CONDUIT TRANSITION ABOVE GRADE
 E120 SCALE: 1/2" = 1'-0"

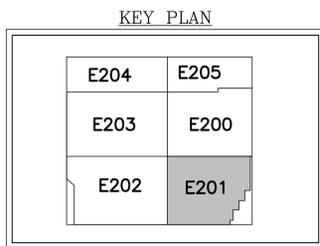
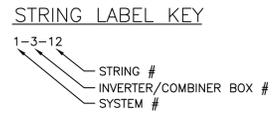
 5 MARINE VIEW PLAZA, HARTFORD, CT 06103 WWW.PUREPOWER.COM CT LICENSE NO. 00522862	REVISION DESCRIPTION DATE PM ENG CHK
 150 TRINITY FLOORS STREET HARTFORD, CT 06103 WWW.VEROGY.COM	DEVELOPER VEROGY
PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016	PAGE SIZE: 36" x 24" PROJECT #: 00682
DC SYSTEM POWER: 7,590.57 kW AC SYSTEM POWER: 4,975.00 kW MODULE TYPE: TRINA 395/RISEN 380 STRING QUANTITY: 15,990/3,354 STRING QUANTITY: 615/129 ORIENTATION: 30° TILT, 180° AZIMUTH	DEVELOPER: VEROGY PROJECT #: 00682

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
 PLOT DATE: 5/9/2021 10:32 AM



IMPORTANT
 CONTRACTOR MUST REDLINE
 DRAWINGS TO REFLECT EXACT
 AS-BUILT STRINGING AND RETURN
 TO PURE POWER.

1 PARTIAL DC ELECTRICAL PLAN
 SCALE: 1" = 20'-0"



DRAWING TITLE: **PARTIAL DC ELECTRICAL PLAN**
 DRAWING #: **E201**

PURE POWER
 5 MARINE VIEW PLAZA, HARTFORD, CT 06103
 WWW.PUREPOWER.COM
 LICENSE NO. 00529862

VEROGY
 150 TRAVELERS STREET
 HARTFORD, CT 06103
 WWW.VEROGY.COM

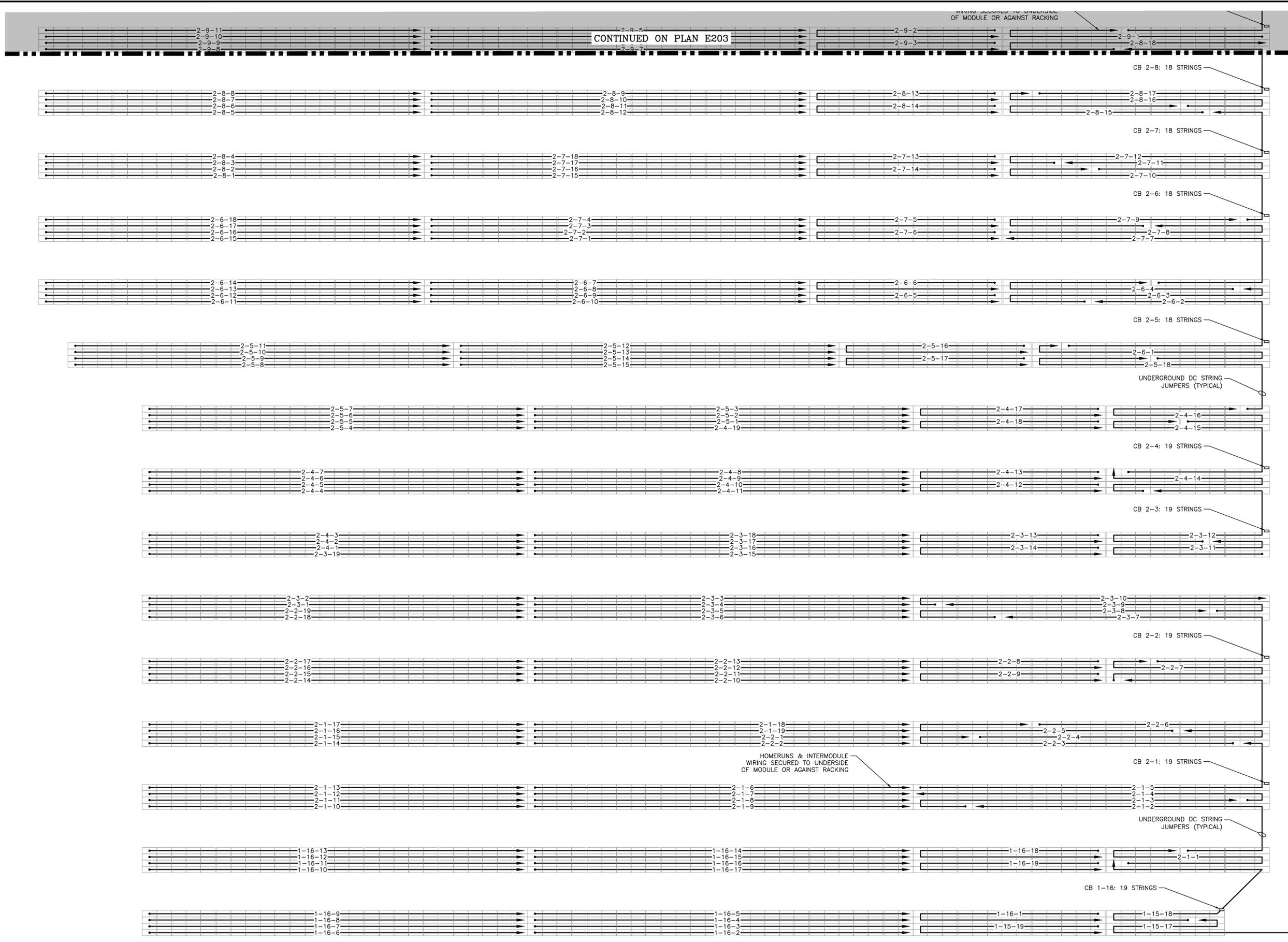
PROJECT: **SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE**
 341 EAST ROAD
 EAST WINDSOR, CONNECTICUT 06016

DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 MODULE QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH

DEVELOPER: **VEROGY**
 PAGE SIZE: 3.6" x 2.4"
 PROJECT #: 00682

DATE: 05/24/2020
 REVISION DESCRIPTION: 90% DESIGN DEVELOPMENT
 PM / ENG CHK: [Blank]
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 PM / ENG CHK: [Blank]

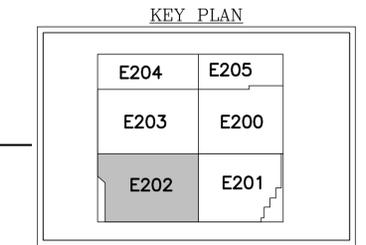
RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



IMPORTANT
 CONTRACTOR MUST REDLINE
 DRAWINGS TO REFLECT EXACT
 AS-BUILT STRINGING AND RETURN
 TO PURE POWER.

1 PARTIAL DC ELECTRICAL PLAN
 E202 SCALE: 1" = 20'-0"

STRING LABEL KEY
 1-3-12
 — STRING #
 — INVERTER/COMBINER BOX #
 — SYSTEM #

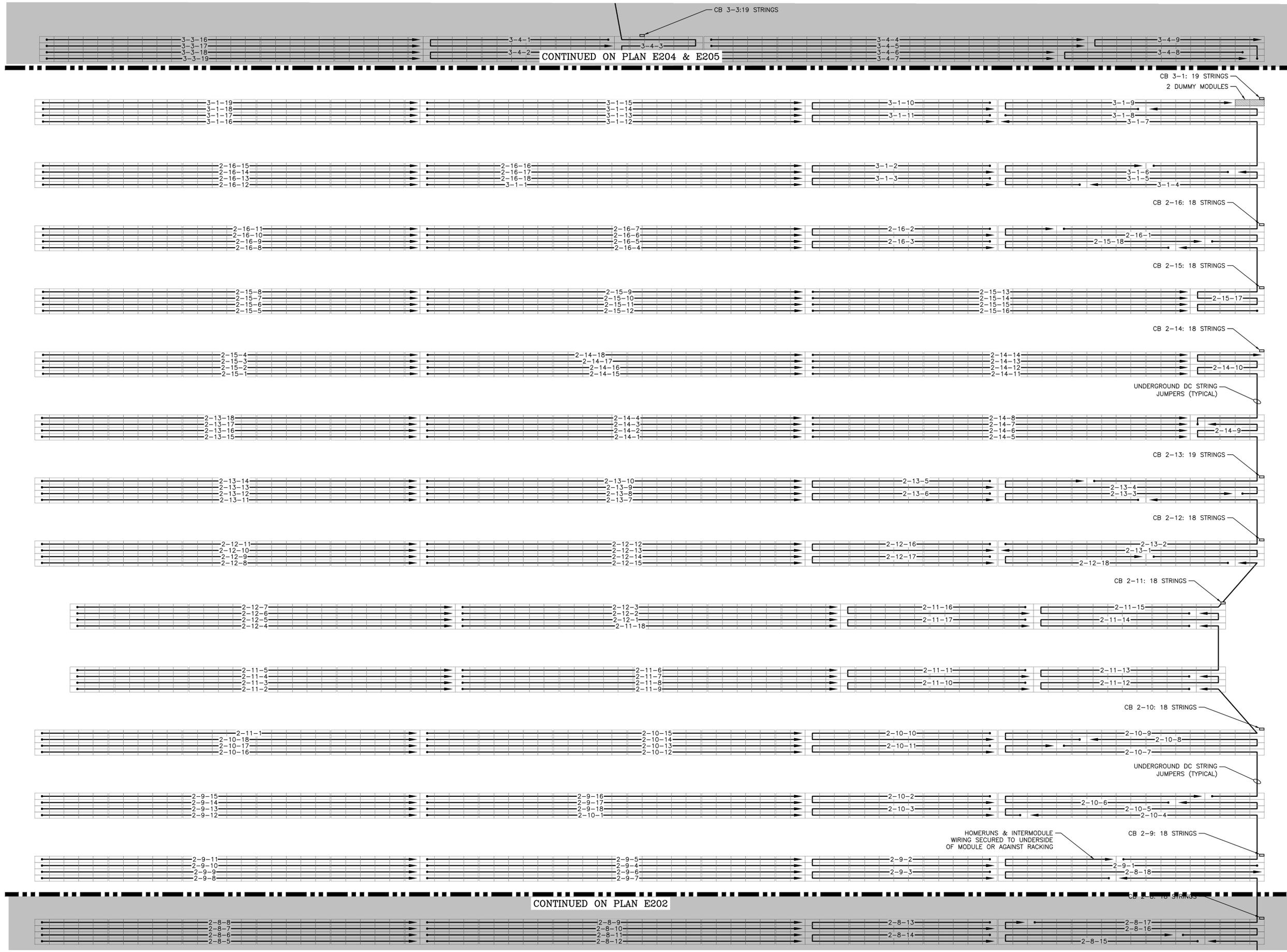


DRAWING TITLE: PARTIAL DC ELECTRICAL PLAN
 DRAWING #: E202

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
 DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 STRING QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH
 DEVELOPER: VEROGY
 150 TRAVELERS STREET HARTFORD, CT 06103 WWW.VEROGY.COM
 VEROGY
 5 MARINE VIEW PLAZA HOBOKEN, NJ WWW.PUREPOWER.COM
 RICHARD A. WINSOR
 03/24/2020 90% DESIGN DEVELOPMENT RK AL R
 DATE: 03/24/2020
 REVISION DESCRIPTION: PM ENG CHK
 DATE: 03/24/2020
 REVISION DESCRIPTION: PM ENG CHK

PLOT DATE: 5/9/2021 10:32 AM

RULER IN INCHES:



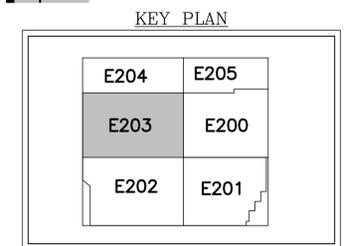
IMPORTANT
 CONTRACTOR MUST REDLINE
 DRAWINGS TO REFLECT EXACT
 AS-BUILT STRINGING AND RETURN
 TO PURE POWER.

1 PARTIAL DC ELECTRICAL PLAN
 E203 SCALE: 1" = 20'-0"



STRING LABEL KEY

- 1-3-12 STRING #
- INVERTER/COMBINER BOX #
- SYSTEM #



DRAWING TITLE: **PARTIAL DC ELECTRICAL PLAN**
 DRAWING #: **E203**

DATE: 05/24/2020
 REVISION DESCRIPTION: 90% DESIGN DEVELOPMENT
 PM / ENG / CHK: [Blank]
 DATE: 05/24/2020
 REVISION DESCRIPTION: 90% DESIGN DEVELOPMENT
 PM / ENG / CHK: [Blank]

PURE POWER
 5 MARINE VIEW PLAZA, HARTFORD, CT 06103
 WWW.PUREPOWER.COM
 RICHARD A. VINS
 CT LICENSE NO. 0032862

VEROGY
 150 TRAVIS FLORES STREET
 HARTFORD, CT 06103
 WWW.VEROGY.COM

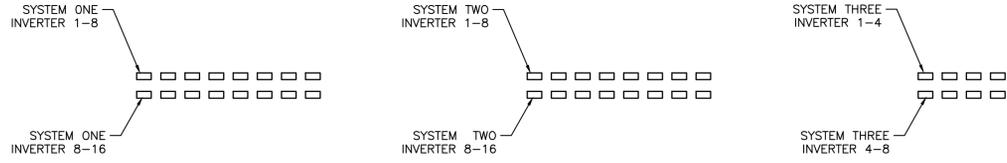
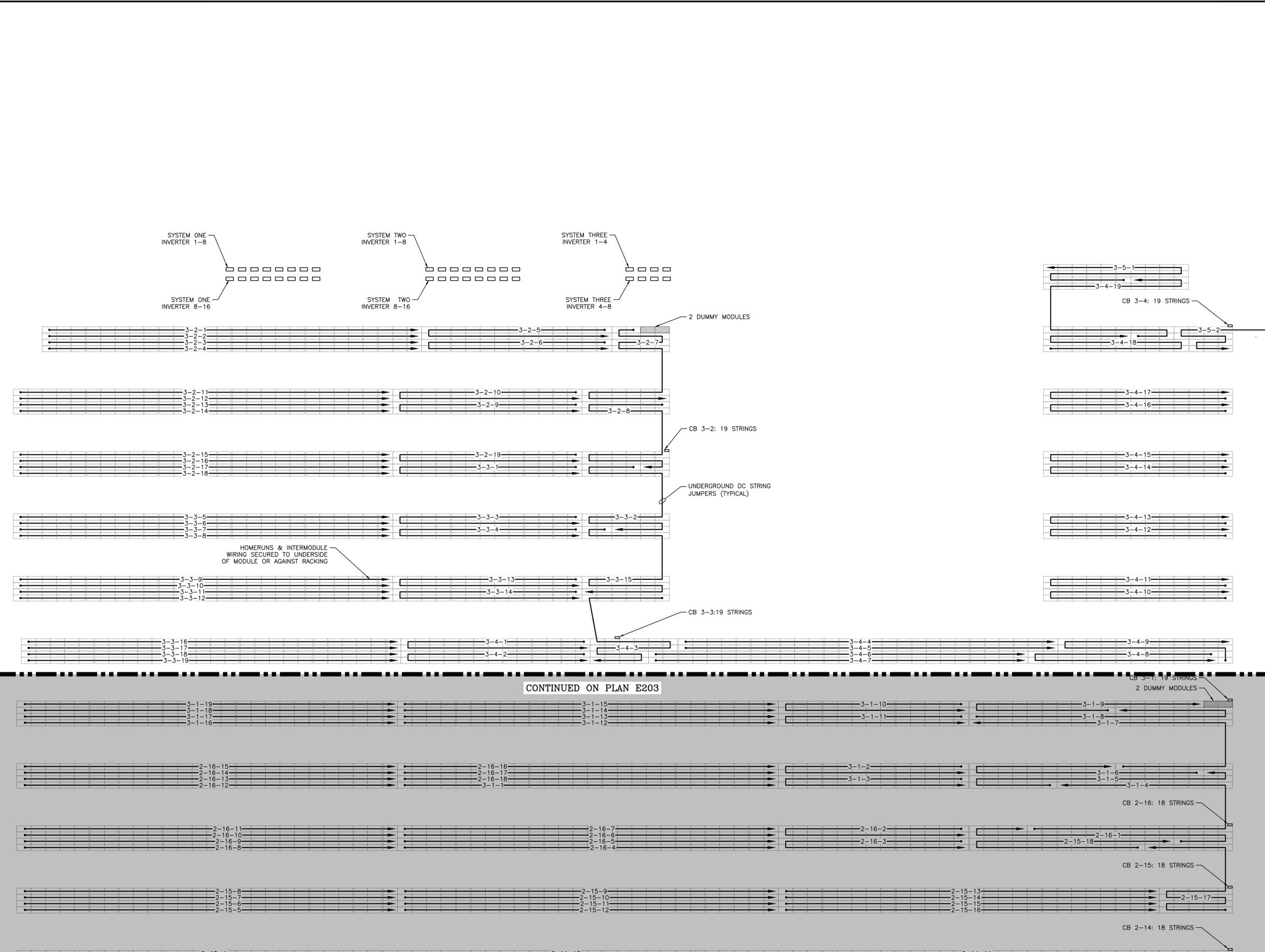
DEVELOPER: VEROGY
 PROJECT #: 00682
 PAGE SIZE: 36" x 24"

DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 MODULE QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, -180° AZIMUTH

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016

RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

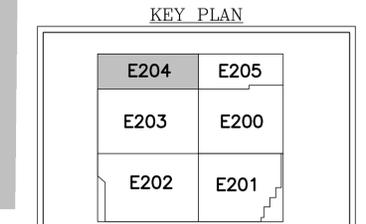
PLOT DATE: 5/9/2021 10:32 AM



HOMERUNS & INTERMODULE WIRING SECURED TO UNDERSIDE OF MODULE OR AGAINST RACKING

CONTINUED ON PLAN E203

CONTINUED ON PLAN E205



IMPORTANT
CONTRACTOR MUST REDLINE DRAWINGS TO REFLECT EXACT AS-BUILT STRINGING AND RETURN TO PURE POWER.

1 PARTIAL DC ELECTRICAL PLAN
E204 SCALE: 1" = 20'-0"

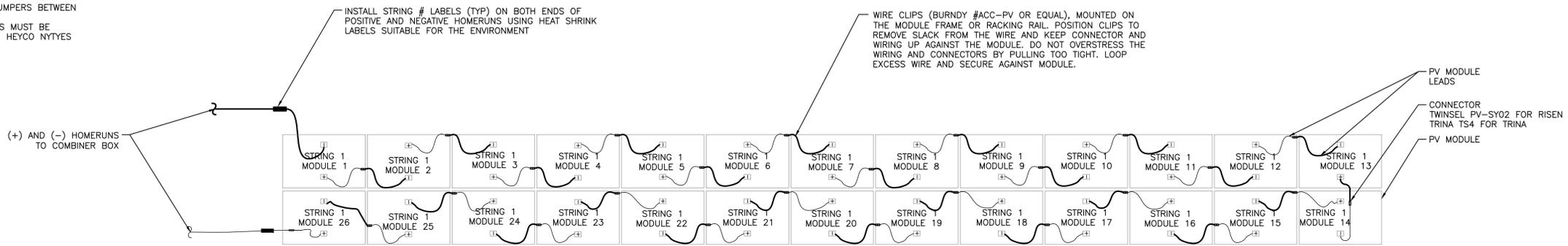
STRING LABEL KEY
1-3-12
— STRING #
— INVERTER/COMBINER BOX #
— SYSTEM #

DRAWING TITLE: PARTIAL DC ELECTRICAL PLAN
DRAWING #: E204

 PURE POWER 5 MARINE VIEW PLAZA, HOBOKEN, NJ WWW.PUREPOWER.COM RICHARD A. VINSKY CT LICENSE NO. 0052862	REVISION DESCRIPTION DATE	PM ENG CHK BK ES BK ES BK ES
	05/05/2021 05/24/2020	ISSUE FOR PERMIT 90% DESIGN DEVELOPMENT
	DEVELOPER VEROGY 150 HAVENHILL STREET HARTFORD, CT 06103 WWW.VEROGY.COM	PAGE SIZE 3.6" x 2.4" PROJECT # 00682
PROJECT SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016	DC SYSTEM POWER: 7,590.57 kW AC SYSTEM POWER: 4,975.00 kW MODULE TYPE: TRINA 395/RISEN 380 MODULE QUANTITY: 15,990/3,354 STRING QUANTITY: 615/129 ORIENTATION: 30° TILT, 180° AZIMUTH	DEVELOPER VEROGY 150 HAVENHILL STREET HARTFORD, CT 06103 WWW.VEROGY.COM

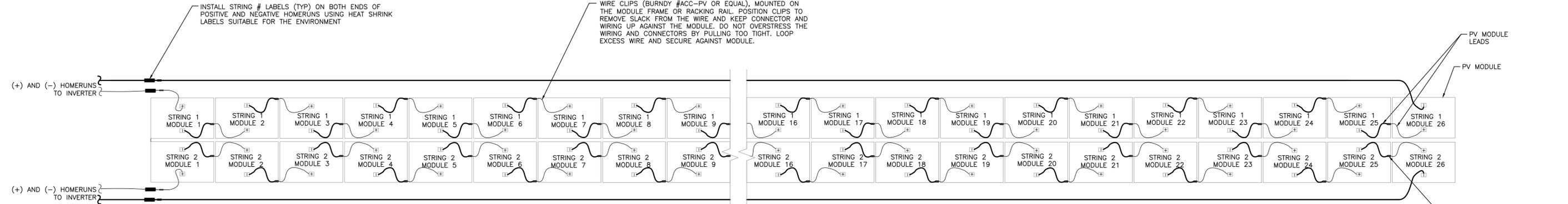
RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

- NOTES:
- CONDUCTORS TRANSITIONING BETWEEN TABLES SHALL BE PROPERLY SECURED AND PROTECTED WITH UV RESISTANT SPLIT LOOM OR SPIRAL WRAP.
 - STRING HOME RUN CONDUCTORS SHALL USE HORIZONTAL PURLINS FOR CABLE MANAGEMENT AND SUPPORT. SECURE CONDUCTORS WITH UV RESISTANT CABLE TIES.
 - (26) MODULE STRING SHOWN. TYPICAL FOR (28) MODULE STRING.
 - CONTRACTOR SHOULD INSTALL JUMPERS BETWEEN MODULES FOR SHORTER LEADS.
 - ALL CABLE MANAGEMENT ZIP TIES MUST BE PLASTIC COATED STEEL ZIP TIES. HEYCO NYTYES OR EQUIVALENT.



1 HALF ROW INTERMODULE WIRING DETAIL
E210 SCALE: NONE

- NOTES:
- CONDUCTORS TRANSITIONING BETWEEN TABLES SHALL BE PROPERLY SECURED AND PROTECTED WITH UV RESISTANT SPLIT LOOM OR SPIRAL WRAP.
 - STRING HOME RUN CONDUCTORS SHALL USE HORIZONTAL PURLINS FOR CABLE MANAGEMENT AND SUPPORT. SECURE CONDUCTORS WITH UV RESISTANT CABLE TIES.
 - (26) MODULE STRING SHOWN. TYPICAL FOR (28) MODULE STRING.
 - CONTRACTOR SHOULD INSTALL JUMPERS BETWEEN MODULES FOR SHORTER LEADS.
 - ALL CABLE MANAGEMENT ZIP TIES MUST BE PLASTIC COATED STEEL ZIP TIES. HEYCO NYTYES OR EQUIVALENT.



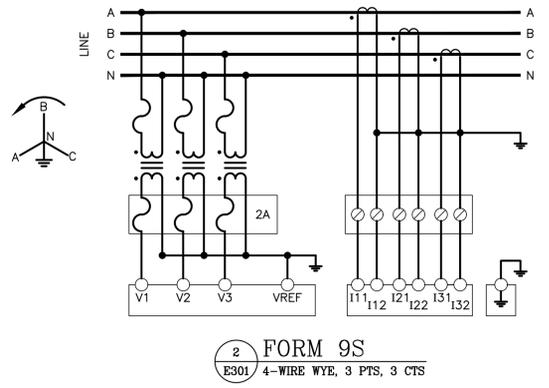
2 FULL ROW INTERMODULE WIRING DETAIL
E210 SCALE: NONE

DRAWING TITLE
PV MODULES & WIRING DETAILS

DRAWING #
E210

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE, 341 EAST ROAD, EAST WINDSOR, CONNECTICUT 06016
 DC SYSTEM POWER: 7,590.57 kW, AC SYSTEM POWER: 4,975.00 kW, MODULE TYPE: TRINA 395/RISEN 380, MODULE QUANTITY: 15,990/3,354, STRING QUANTITY: 615/129, ORIENTATION: 30° TILT, 180° AZIMUTH
 DEVELOPER: VEROGY, 150 TRINITY HILL STREET, HARTFORD, CT 06103, WWW.VEROGY.COM
 PUREPOWER ENERGY SOLUTIONS, 5 MARINE VIEW PLAZA, HEBRON, IN 46124, WWW.PUREPOWER.COM, RICHARD A. VONDERHEID, CT LICENSE NO. 00329262
 DATE: 05/05/2021, ISSUE FOR PERMIT, 03/24/2020, 90% DESIGN DEVELOPMENT
 REVISION DESCRIPTION: PM LENG CHK
 DATE: 05/05/2021, ISSUE FOR PERMIT, RK ES RT
 DATE: 03/24/2020, 90% DESIGN DEVELOPMENT, RK AA RT

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



- ZREC METER NOTES**
- (3) CTs 1500:5A, 0.3% ACCURACY, RATING FACTOR = 2, SOLID CORE, SINGLE RATIO
 - (3) Pts, 2.89:1
 - CT CABINET: 2500A BUS, NEMA 3R
 - METER SOCKET: FORM 9S, 120V, NEMA 3R, 13-TERMINAL SOCKET WITH TEST SWITCH.
 - ALL EQUIPMENT TO BE SUBMITTED TO EVERSOURCE FOR APPROVAL PRIOR TO INSTALLATION
 - PEAK DEMAND CTs PART #COL1500S
 - ION 8650 METER PART #S8650C0C0E6S1A7A-AA480

EXTERNAL RELAY SETTINGS - SYSTEM 1

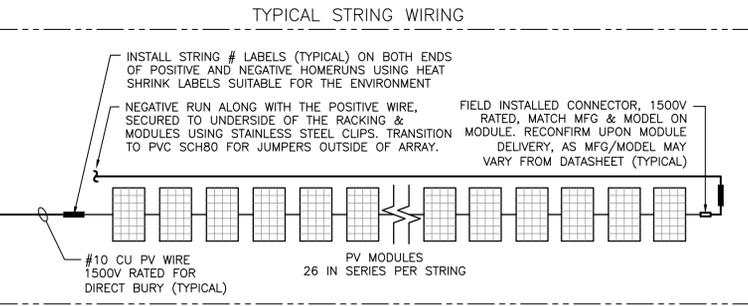
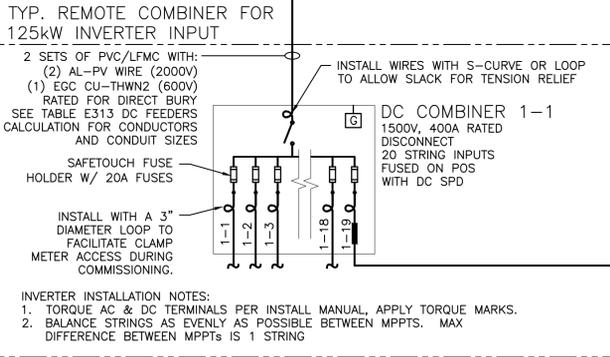
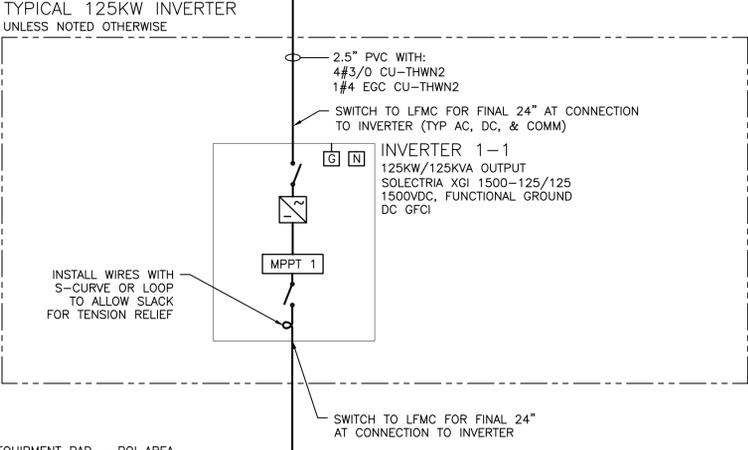
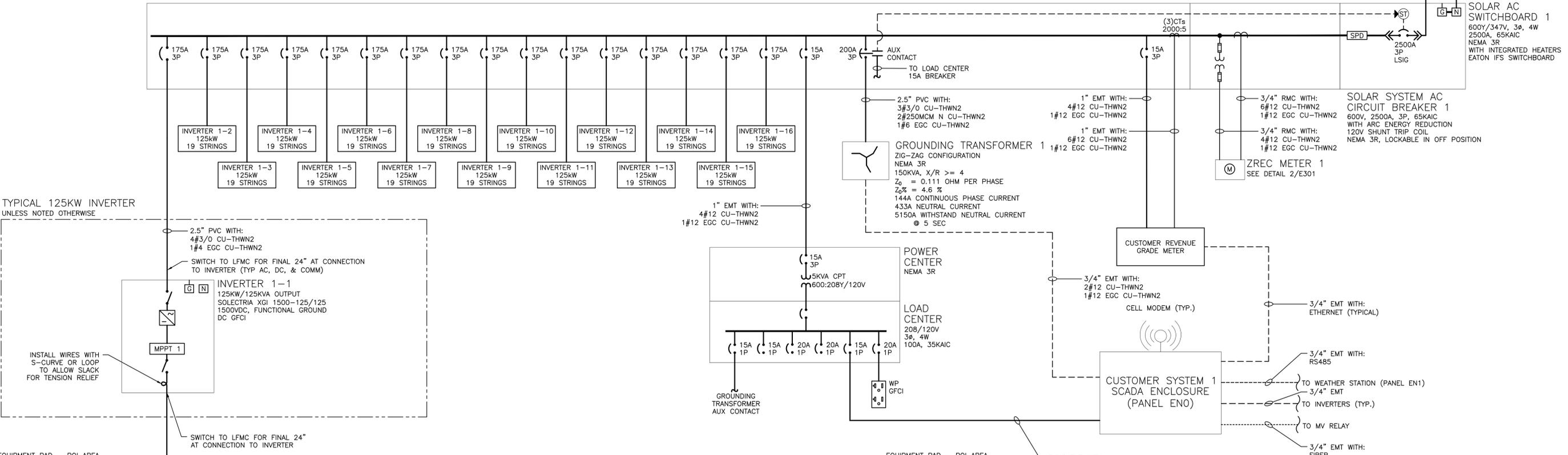
ANSI ELEMENT #	Pickup	Real	Units	Level	Delay (sec)	Total Clear Time (sec)*	Curve	Description
27-1	58.42	11684	V	88%	1.95	2.00		Slow UV
27-2	33.19	6638	V	50%	1.05	1.10		Fast UV
59-1	73.03	14606	V	110%	1.95	2.00		Slow OV
59-2	79.67	15934	V	120%	0.11	0.16		Fast OV
81U-1	56.50	56.50	Hz	94%	0.11	0.16		Fast UF
81U-2	58.50	58.50	Hz	98%	299.95	300.00		Slow UF
81O-1	62.00	62.00	Hz	103%	0.11	0.16		Fast OF
81O-2	61.20	61.20	Hz	102%	299.95	300.00		Slow OF
51G	0.62	12	A	25%	1.95	2.00	U4	Timed Ground OC
50P	37.65	753	A	1500%	0.00	0.05		Instant Phase OC
51P	3.76	75	A	150%	1.95	2.00	U4	Timed Phase OC
79	63.07	12614	V	95%	299.95	300.00		Min Reclosing Voltage Value
79	69.71	13942	V	105%	299.95	300.00		Max Reclosing Voltage Value
79	59.50	59.50	V	99%	299.95	300.00		Min Reclosing Frequency Value
79	60.50	60.50	Hz	101%	299.95	300.00		Max Reclosing Frequency Value

50.2A USED FOR 50/51 ELEMENTS 13279V USED FOR 27/59 ELEMENTS
 CT RATIO FACTOR = 20 PT RATIO FACTOR = 200
* total clear time includes 0.05 sec breaker opening time

4 MV RELAY SETTINGS

SYSTEM ONE SUMMARY

DC SYSTEM ONE SIZE	3,122.08 KW
AC SYSTEM ONE SIZE	2,000.00 KW
MODULE 1	TRINA 395W
MODULE 1 QTY	7,904
MODULE 2	RISEN 380W
MODULE 2 QTY	0
INVERTER 1	SOLECTRIA 125kW
INVERTER 1 QTY	16
INVERTER 2	CHINT 100kW
INVERTER 2 QTY	0



INVERTER INTERNAL PROTECTIVE SETTINGS: UL1741-SA COMPLIANT

ANSI ELEMENT #	Pickup	Units*	Level	Total Clear Time (sec)	Description
27-1	304.8	V	88%	2.00	Slow UV
27-2	173.2	V	50%	1.10	Fast UV
59-1	381.1	V	110%	2.00	Slow OV
59-2	415.7	V	120%	0.16	Fast OV
81U-1	56.50	Hz	94%	0.16	Fast UF
81U-2	58.50	Hz	98%	300.00	Slow UF
81O-1	62.00	Hz	103%	0.16	Fast OF
81O-2	61.20	Hz	102%	300.00	Slow OF
79	329.1	V	95%	300.00	Min Reclosing Voltage Value
79	363.7	V	105%	300.00	Max Reclosing Voltage Value
79	59.5	Hz	99%	300.00	Min Reclosing Frequency Value
79	60.5	Hz	101%	300.00	Max Reclosing Frequency Value

INVERTER INTERNAL OPERATION SETTINGS

PF Set Point	1.00	Power Factor Control
Var Control	OFF	Reactive Power Control
Ramp Rate	10%/1 sec	dkw / dt
Freq Control	OFF	Speed Control

* voltages based off 346.4V Line to Neutral

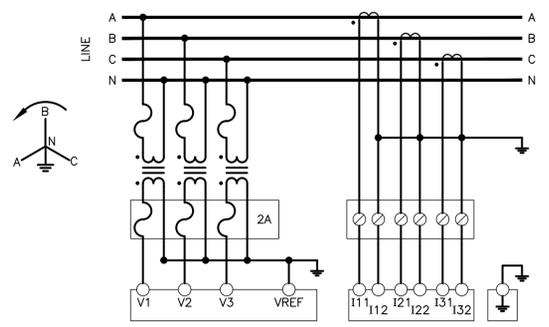
1 ONE LINE DIAGRAM - SYSTEM ONE

3 INVERTER SETTINGS

DRAWING TITLE
ONE LINE DIAGRAM SYSTEM ONE

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE
 341 EAST ROAD
 EAST WINDSOR, CONNECTICUT 06016
 DRAWING #: E301
 DEVELOPER: VEROGY
 150 HAVENWOOD STREET
 HARTFORD, CT 06103
 WWW.VEROGY.COM
 PAGE SIZE: 36" x 24"
 PROJECT #: 00682
 DC SYSTEM POWER: 7,990.57 KW
 AC SYSTEM POWER: 4,975.00 KW
 MODULE TYPE: TRINA 395W/RISEN 380
 STRING QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



FORM 9S
E303 4-WIRE WYE, 3 PTS, 3 CTS

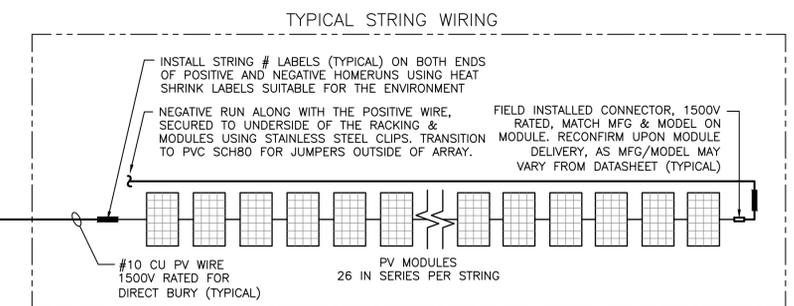
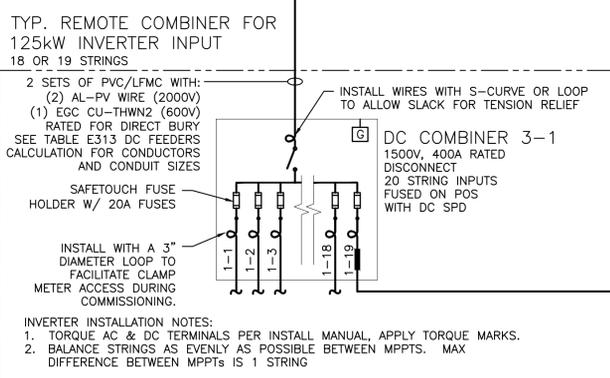
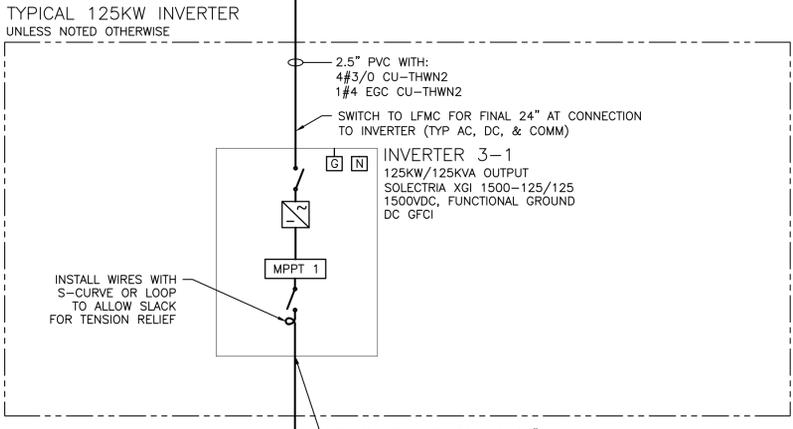
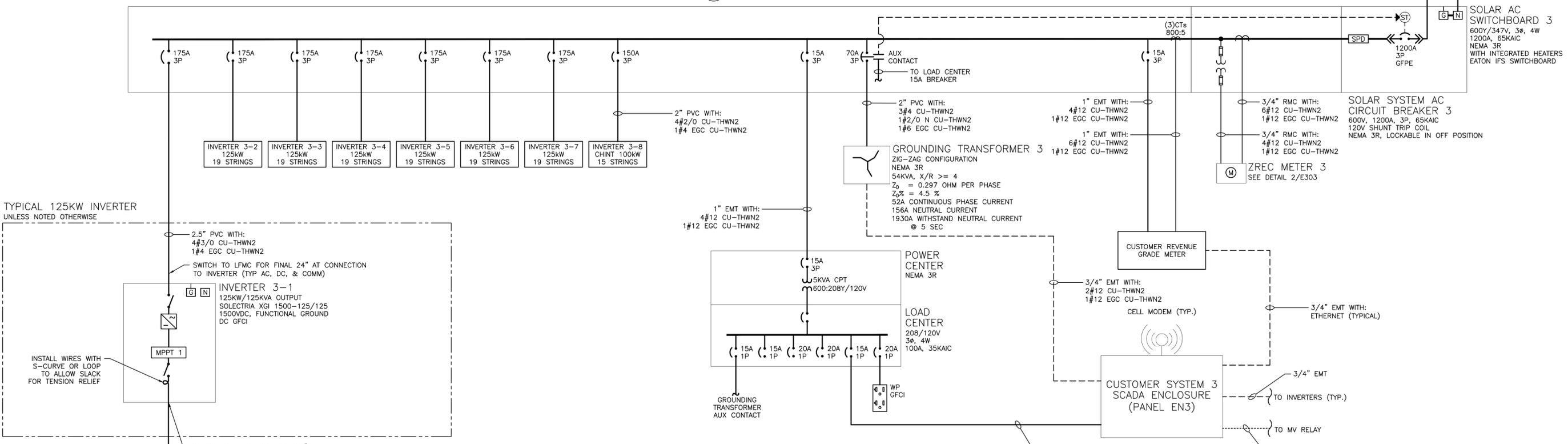
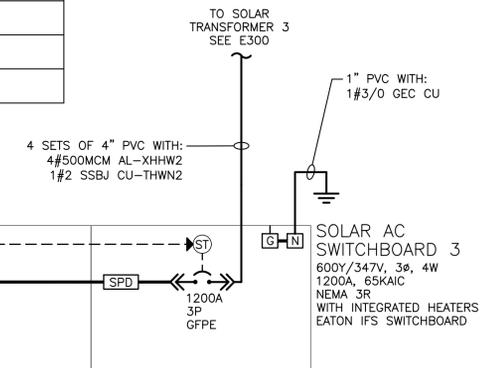
- ZREC METER NOTES**
- (3) CTs 1000:5A, 0.3% ACCURACY, RATING FACTOR = 2, SOLID CORE, SINGLE RATIO
 - (3) Pts, 2.89:1
 - CT CABINET: 1200A BUS, NEMA 3R
 - METER SOCKET: FORM 9S, 120V, NEMA 3R, 13-TERMINAL SOCKET WITH TEST SWITCH.
 - ALL EQUIPMENT TO BE SUBMITTED TO EVERSOURCE FOR APPROVAL PRIOR TO INSTALLATION
 - PEAK DEMAND CTS PART #COL1000S
 - ION 8650 METER PART #S8650C0C0E6S1A7A-AA480

EXTERNAL RELAY SETTINGS - SYSTEM 3									
ANSI ELEMENT #	Pickup	Real	Units	Level	Delay (sec)	Total Clear Time (sec)*	Curve	Description	
27-1	58.42	11684	V	88%	1.95	2.00		Slow UV	
27-2	33.19	6638	V	50%	1.05	1.10		Fast UV	
59-1	73.03	14606	V	110%	1.95	2.00		Slow OV	
59-2	79.67	15934	V	120%	0.11	0.16		Fast OV	
81U-1	56.50	56.50	Hz	94%	0.11	0.16		Fast UF	
81U-2	58.50	58.50	Hz	98%	299.95	300.00		Slow UF	
81O-1	62.00	62.00	Hz	103%	0.11	0.16		Fast OF	
81O-2	61.20	61.20	Hz	102%	299.95	300.00		Slow OF	
51G	0.62	6	A	25%	1.95	2.00	U4	Timed Ground OC	
50P	37.65	377	A	1500%	0.00	0.05		Instant. Phase OC	
51P	3.76	38	A	150%	1.95	2.00	U4	Timed Phase OC	
79	63.07	12614	V	95%	299.95	300.00		Min Reclosing Voltage Value	
79	69.71	13942	V	105%	299.95	300.00		Max Reclosing Voltage Value	
79	59.50	59.50	Hz	99%	299.95	300.00		Min Reclosing Frequency Value	
79	60.50	60.50	Hz	101%	299.95	300.00		Max Reclosing Frequency Value	
25.1A USED FOR 50/51 ELEMENTS					13279V USED FOR 27/59 ELEMENTS				
CT RATIO FACTOR = 10					PT RATIO FACTOR = 200				
* Total clear time includes 0.05 sec breaker opening time									

MV RELAY SETTINGS
E303

SYSTEM THREE SUMMARY	
DC SYSTEM ONE SIZE	1,469.65 KW
AC SYSTEM ONE SIZE	975.00 KW
MODULE 1	TRINA 395W
MODULE 1 QTY	494
MODULE 2	RISEN 380W
MODULE 2 QTY	3,354
INVERTER 1	SOLECTRIA 125KW
INVERTER 1 QTY	7
INVERTER 2	CHINT 100KW
INVERTER 2 QTY	1

NOTE:
INVERTER 3-1 USES TRINA 395W MODULES
INVERTERS 3-2 THRU 3-8 USE RISEN 380W MODULES



INVERTER INTERNAL PROTECTIVE SETTINGS: UL1741-SA COMPLIANT					
ANSI ELEMENT #	Pickup	Units*	Level	Total Clear Time (sec)	Description
27-1	304.8	V	88%	2.00	Slow UV
27-2	173.2	V	50%	1.10	Fast UV
59-1	381.1	V	110%	2.00	Slow OV
59-2	415.7	V	120%	0.16	Fast OV
81U-1	56.50	Hz	94%	0.16	Fast UF
81U-2	58.50	Hz	98%	300.00	Slow UF
81O-1	62.00	Hz	103%	0.16	Fast OF
81O-2	61.20	Hz	102%	300.00	Slow OF
79	329.1	V	95%	300.00	Min Reclosing Voltage Value
79	363.7	V	105%	300.00	Max Reclosing Voltage Value
79	59.5	Hz	99%	300.00	Min Reclosing Frequency Value
79	60.5	Hz	101%	300.00	Max Reclosing Frequency Value

INVERTER INTERNAL OPERATION SETTINGS			
Setting	Value	Control	Notes
PF Set Point	1.00	Power Factor Control	
Var Control	OFF	Reactive Power Control	
Ramp Rate	10%/1 sec		dkw / dt
Freq Control	OFF	Speed Control	

*voltages based off 346.4V Line to Neutral

INVERTER SETTINGS
E303

ONE LINE DIAGRAM - SYSTEM THREE
E303 SCALE: NONE

DRAWING TITLE
ONE LINE DIAGRAM SYSTEM THREE

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
 DRAWING #: E303
 DEVELOPER: VEROGY 150 HAVEN FLOORS STREET HARTFORD, CT 06103
 PAGE SIZE: 36" x 24" PROJECT #: 00682
 DC SYSTEM POWER: 7,590.57 kW AC SYSTEM POWER: 4,975.00 kW MODULE TYPE: TRINA 395W/RISEN 380 MODULE QUANTITY: 15,990/3,354 STRING QUANTITY: 615/129 ORIENTATION: 30° TILT, 180° AZIMUTH
 PUREPOWER 5 MARINE VIEW PLAZA, HEBRON, IN 46024 WWW.PUREPOWER.COM RICHARD A. VINSKY, P.E. CT LICENSE NO. 0052862
 VEROGY DEVELOPER 150 HAVEN FLOORS STREET HARTFORD, CT 06103 WWW.VEROGY.COM
 DATE: 05/05/2021 ISSUE FOR PERMIT: 09/28/2020 90% DESIGN DEVELOPMENT: 08/18/2020 30% DESIGN - REV 2: 07/30/2020 30% DESIGN - REV 1:

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

SYSTEM ONE - LV FEEDER CALCULATIONS

EQUIPMENT SUPPLIED	FED FROM	VOLTAGE	FULL LOAD AMPS 'FLA'	FLA x 1.25	OCPD SIZE	GROUND SIZE	CONDUCTORS PER PHASE	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	75° AMPACITY	90° AMPACITY	90° AMPACITY WITH C.O.U.	C.O.U. DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	FEEDER LENGTH (FEET)	SEGMENT VOLTAGE DROP AT FLA	TOTAL VOLTAGE DROP AT FLA
SOLAR AC SWITCHBOARD	SOLAR TRANSFORMER 1	600	1920.0	2400.0	2500	CU #2 55BJ	9	AL 500MCM	AL 500MCM	2790	3150	3024	0.96	1.00	10	0.03%	0.03%
INVERTER 1-1	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 1-2	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 1-3	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.16%
INVERTER 1-4	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	35	0.16%	0.19%
INVERTER 1-5	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	40	0.18%	0.21%
INVERTER 1-6	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	45	0.20%	0.23%
INVERTER 1-7	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	50	0.23%	0.25%
INVERTER 1-8	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	60	0.27%	0.30%
INVERTER 1-9	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 1-10	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 1-11	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.16%
INVERTER 1-12	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	35	0.16%	0.19%
INVERTER 1-13	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	40	0.18%	0.21%
INVERTER 1-14	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	45	0.20%	0.23%
INVERTER 1-15	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	50	0.23%	0.25%
INVERTER 1-16	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	60	0.27%	0.30%

AVERAGE AC VOLTAGE DROP FROM POI TO INVERTERS: 0.18%

NOTE: DISTANCES ARE ESTIMATES GENERATED FOR ENGINEER'S CALCULATIONS, CONTRACTOR IS RESPONSIBLE FOR OWN MEASUREMENTS AND TAKEOFFS.

SYSTEM TWO - LV FEEDER CALCULATIONS

EQUIPMENT SUPPLIED	FED FROM	VOLTAGE	FULL LOAD AMPS 'FLA'	FLA x 1.25	OCPD SIZE	GROUND SIZE	CONDUCTORS PER PHASE	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	75° AMPACITY	90° AMPACITY	90° AMPACITY WITH C.O.U.	C.O.U. DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	FEEDER LENGTH (FEET)	SEGMENT VOLTAGE DROP AT FLA	TOTAL VOLTAGE DROP AT FLA
SOLAR AC SWITCHBOARD	SOLAR TRANSFORMER 2	600	1920.0	2400.0	2500	CU #2 55BJ	9	AL 500MCM	AL 500MCM	2790	3150	3024	0.96	1.00	10	0.03%	0.03%
INVERTER 2-1	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 2-2	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 2-3	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.16%
INVERTER 2-4	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	35	0.16%	0.19%
INVERTER 2-5	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	40	0.18%	0.21%
INVERTER 2-6	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	45	0.20%	0.23%
INVERTER 2-7	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	50	0.23%	0.25%
INVERTER 2-8	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	60	0.27%	0.30%
INVERTER 2-9	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 2-10	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 2-11	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.16%
INVERTER 2-12	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	35	0.16%	0.19%
INVERTER 2-13	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	40	0.18%	0.21%
INVERTER 2-14	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	45	0.20%	0.23%
INVERTER 2-15	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	50	0.23%	0.25%
INVERTER 2-16	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	60	0.27%	0.30%

AVERAGE AC VOLTAGE DROP FROM POI TO INVERTERS: 0.18%

NOTE: DISTANCES ARE ESTIMATES GENERATED FOR ENGINEER'S CALCULATIONS, CONTRACTOR IS RESPONSIBLE FOR OWN MEASUREMENTS AND TAKEOFFS.

SYSTEM THREE - LV FEEDER CALCULATIONS

EQUIPMENT SUPPLIED	FED FROM	VOLTAGE	FULL LOAD AMPS 'FLA'	FLA x 1.25	OCPD SIZE	GROUND SIZE	CONDUCTORS PER PHASE	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	75° AMPACITY	90° AMPACITY	90° AMPACITY WITH C.O.U.	C.O.U. DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	FEEDER LENGTH (FEET)	SEGMENT VOLTAGE DROP AT FLA	TOTAL VOLTAGE DROP AT FLA
SOLAR AC SWITCHBOARD	SOLAR TRANSFORMER 3	600	936.2	1170.0	1200	CU #2 55BJ	4	AL 500MCM	AL 500MCM	1240	1400	1344	0.96	1.00	10	0.03%	0.03%
INVERTER 3-1	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 3-2	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 3-3	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.17%
INVERTER 3-4	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	40	0.18%	0.21%
INVERTER 3-5	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	15	0.07%	0.10%
INVERTER 3-6	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	20	0.09%	0.12%
INVERTER 3-7	SOLAR AC SWITCHBOARD	600	120.0	150.0	175	CU #4	1	AL #3/0	AL #3/0	155	175	168	0.96	1.00	30	0.14%	0.17%
INVERTER 3-8	SOLAR AC SWITCHBOARD	600	96.2	120.0	150	CU #4	1	AL #2/0	AL #2/0	135	150	144	0.96	1.00	30	0.13%	0.16%

AVERAGE AC VOLTAGE DROP FROM POI TO INVERTERS: 0.13%

NOTE: DISTANCES ARE ESTIMATES GENERATED FOR ENGINEER'S CALCULATIONS, CONTRACTOR IS RESPONSIBLE FOR OWN MEASUREMENTS AND TAKEOFFS.

SYSTEM ONE - MV CONDUCTOR SPECIFICATIONS

FULL LOAD CURRENT [A]	50.2
CONDUCTOR SIZE	#1
CONDUCTOR MATERIAL	AL
FULL CONDUCTOR SPEC	(3)#1 AL MV-105 FULL CONCENTRIC NEUTRAL 25KV 133% EPR. INCLUDE (1)CU #2G (600V)
NEC TABLE REFERENCE	310.60(C)(78)
C.O.U. CORRECTION FACTORS	0.89
CONDUCTOR AMPACITY [A]	108
CONDUIT, PVC SCH 80	5"
VOLTAGE DROP	0.28%
OCPD TYPE	E-RATED FUSE
FUSE AMPACITY	80
CONDUCTOR AMPACITY > FLA?	PASS
OCPD RATING > FLA x 1.25?	PASS
OCPD COMPLIANT WITH 240.101(A)?	PASS

SYSTEM TWO - MV CONDUCTOR SPECIFICATIONS

FULL LOAD CURRENT [A]	50.2
CONDUCTOR SIZE	#1
CONDUCTOR MATERIAL	AL
FULL CONDUCTOR SPEC	(3)#1 AL MV-105 FULL CONCENTRIC NEUTRAL 25KV 133% EPR. INCLUDE (1)CU #2G (600V)
NEC TABLE REFERENCE	310.60(C)(78)
C.O.U. CORRECTION FACTORS	0.89
CONDUCTOR AMPACITY [A]	108
CONDUIT, PVC SCH 80	5"
VOLTAGE DROP	0.28%
OCPD TYPE	E-RATED FUSE
FUSE AMPACITY	80
CONDUCTOR AMPACITY > FLA?	PASS
OCPD RATING > FLA x 1.25?	PASS
OCPD COMPLIANT WITH 240.101(A)?	PASS

SYSTEM THREE - MV CONDUCTOR SPECIFICATIONS

FULL LOAD CURRENT [A]	25.1
CONDUCTOR SIZE	#1
CONDUCTOR MATERIAL	AL
FULL CONDUCTOR SPEC	(3)#1 AL MV-105 FULL CONCENTRIC NEUTRAL 25KV 133% EPR. INCLUDE (1)CU #2G (600V)
NEC TABLE REFERENCE	310.60(C)(78)
C.O.U. CORRECTION FACTORS	0.89
CONDUCTOR AMPACITY [A]	108
CONDUIT, PVC SCH 80	5"
VOLTAGE DROP	0.05%
OCPD TYPE	E-RATED FUSE
FUSE AMPACITY	40
CONDUCTOR AMPACITY > FLA?	PASS
OCPD RATING > FLA x 1.25?	PASS
OCPD COMPLIANT WITH 240.101(A)?	PASS

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
 DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 MODULE QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH
 DEVELOPER: VEROGY 150 TRAVELERS STREET HARTFORD, CT 06103 WWW.VEROGY.COM
 VEROGY
 PURE POWER ENGINEERING INC. 5 MARINE VIEW PLAZA HOBOKEN, NJ 07030/07/2020 WWW.PUREPOWER.COM
 DATE: 08/28/2020 90% DESIGN DEVELOPMENT
 07/30/2020 30% DESIGN - REV.1
 07/07/2020 30% CONCEPTUAL DESIGN
 REVISION DESCRIPTION: PM ENG CHK
 RK AA RI
 RK CP RI
 RK CP RI
 RK CP RI

PLG DATE: 5/2/2021 10:33 AM
RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

COMBINER BOXES 1-1 THRU 1-4				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
1-1-1	#10	0.00124	105	0.22%
1-1-2	#10	0.00124	100	0.21%
1-1-3	#10	0.00124	100	0.21%
1-1-4	#10	0.00124	90	0.19%
1-1-5	#10	0.00124	105	0.22%
1-1-6	#10	0.00124	90	0.19%
1-1-7	#10	0.00124	85	0.18%
1-1-8	#10	0.00124	85	0.18%
1-1-9	#10	0.00124	100	0.21%
1-1-10	#10	0.00124	115	0.24%
1-1-11	#10	0.00124	120	0.25%
1-1-12	#10	0.00124	120	0.25%
1-1-13	#10	0.00124	240	0.49%
1-1-14	#10	0.00124	255	0.53%
1-1-15	#10	0.00124	270	0.56%
1-1-16	#10	0.00124	280	0.58%
1-1-17	#10	0.00124	280	0.58%
1-1-18	#10	0.00124	200	0.41%
1-1-19	#10	0.00124	110	0.23%
1-2-1	#10	0.00124	235	0.48%
1-2-2	#10	0.00124	230	0.47%
1-2-3	#10	0.00124	340	0.70%
1-2-4	#10	0.00124	430	0.89%
1-2-5	#10	0.00124	400	0.82%
1-2-6	#10	0.00124	400	0.82%
1-2-7	#10	0.00124	390	0.80%
1-2-8	#10	0.00124	405	0.83%
1-2-9	#10	0.00124	440	0.91%
1-2-10	#10	0.00124	305	0.63%
1-2-11	#10	0.00124	295	0.61%
1-2-12	#10	0.00124	225	0.46%
1-2-13	#10	0.00124	215	0.44%
1-2-14	#10	0.00124	140	0.29%
1-2-15	#10	0.00124	140	0.29%
1-2-16	#10	0.00124	60	0.12%
1-2-17	#10	0.00124	50	0.10%
1-2-18	#10	0.00124	80	0.16%
1-2-19	#10	0.00124	85	0.18%
1-3-1	#10	0.00124	55	0.11%
1-3-2	#10	0.00124	75	0.15%
1-3-3	#10	0.00124	215	0.44%
1-3-4	#10	0.00124	205	0.42%
1-3-5	#10	0.00124	190	0.39%
1-3-6	#10	0.00124	250	0.52%
1-3-7	#10	0.00124	390	0.80%
1-3-8	#10	0.00124	365	0.75%
1-3-9	#10	0.00124	380	0.78%
1-3-10	#10	0.00124	400	0.82%
1-3-11	#10	0.00124	460	0.95%
1-3-12	#10	0.00124	450	0.93%
1-3-13	#10	0.00124	455	0.94%
1-3-14	#10	0.00124	310	0.64%
1-3-15	#10	0.00124	340	0.70%
1-3-16	#10	0.00124	255	0.53%
1-3-17	#10	0.00124	260	0.54%
1-3-18	#10	0.00124	150	0.31%
1-3-19	#10	0.00124	155	0.32%
1-4-1	#10	0.00124	65	0.13%
1-4-2	#10	0.00124	65	0.13%
1-4-3	#10	0.00124	90	0.19%
1-4-4	#10	0.00124	90	0.19%
1-4-5	#10	0.00124	160	0.33%
1-4-6	#10	0.00124	190	0.39%
1-4-7	#10	0.00124	330	0.68%
1-4-8	#10	0.00124	305	0.63%
1-4-9	#10	0.00124	310	0.64%
1-4-10	#10	0.00124	370	0.76%
1-4-11	#10	0.00124	460	0.95%
1-4-12	#10	0.00124	465	0.96%
1-4-13	#10	0.00124	465	0.96%
1-4-14	#10	0.00124	485	1.00%
1-4-15	#10	0.00124	485	1.00%
1-4-16	#10	0.00124	365	0.75%
1-4-17	#10	0.00124	365	0.75%
1-4-18	#10	0.00124	340	0.70%
1-4-19	#10	0.00124	250	0.52%

COMBINER BOXES 1-5 THRU 1-8				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
1-5-1	#10	0.00124	45	0.09%
1-5-2	#10	0.00124	70	0.14%
1-5-3	#10	0.00124	85	0.18%
1-5-4	#10	0.00124	105	0.22%
1-5-5	#10	0.00124	85	0.18%
1-5-6	#10	0.00124	90	0.19%
1-5-7	#10	0.00124	100	0.21%
1-5-8	#10	0.00124	260	0.54%
1-5-9	#10	0.00124	210	0.43%
1-5-10	#10	0.00124	210	0.43%
1-5-11	#10	0.00124	280	0.58%
1-5-12	#10	0.00124	410	0.85%
1-5-13	#10	0.00124	400	0.82%
1-5-14	#10	0.00124	385	0.79%
1-5-15	#10	0.00124	415	0.86%
1-5-16	#10	0.00124	445	0.92%
1-5-17	#10	0.00124	450	0.93%
1-5-18	#10	0.00124	450	0.93%
1-5-19	#10	0.00124	455	0.94%
1-6-1	#10	0.00124	255	0.53%
1-6-2	#10	0.00124	260	0.54%
1-6-3	#10	0.00124	165	0.34%
1-6-4	#10	0.00124	170	0.35%
1-6-5	#10	0.00124	80	0.16%
1-6-6	#10	0.00124	70	0.14%
1-6-7	#10	0.00124	75	0.15%
1-6-8	#10	0.00124	110	0.23%
1-6-9	#10	0.00124	90	0.19%
1-6-10	#10	0.00124	95	0.20%
1-6-11	#10	0.00124	195	0.40%
1-6-12	#10	0.00124	200	0.41%
1-6-13	#10	0.00124	285	0.59%
1-6-14	#10	0.00124	290	0.60%
1-6-15	#10	0.00124	420	0.87%
1-6-16	#10	0.00124	420	0.87%
1-6-17	#10	0.00124	425	0.88%
1-6-18	#10	0.00124	425	0.88%
1-6-19	#10	0.00124	445	0.92%
1-7-1	#10	0.00124	410	0.85%
1-7-2	#10	0.00124	410	0.85%
1-7-3	#10	0.00124	405	0.83%
1-7-4	#10	0.00124	275	0.57%
1-7-5	#10	0.00124	280	0.58%
1-7-6	#10	0.00124	190	0.39%
1-7-7	#10	0.00124	185	0.38%
1-7-8	#10	0.00124	85	0.18%
1-7-9	#10	0.00124	90	0.19%
1-7-10	#10	0.00124	60	0.12%
1-7-11	#10	0.00124	60	0.12%
1-7-12	#10	0.00124	75	0.15%
1-7-13	#10	0.00124	165	0.34%
1-7-14	#10	0.00124	170	0.35%
1-7-15	#10	0.00124	255	0.53%
1-7-16	#10	0.00124	260	0.54%
1-7-17	#10	0.00124	390	0.80%
1-7-18	#10	0.00124	390	0.80%
1-7-19	#10	0.00124	395	0.81%
1-8-1	#10	0.00124	435	0.90%
1-8-2	#10	0.00124	415	0.86%
1-8-3	#10	0.00124	410	0.85%
1-8-4	#10	0.00124	410	0.85%
1-8-5	#10	0.00124	405	0.83%
1-8-6	#10	0.00124	280	0.58%
1-8-7	#10	0.00124	275	0.57%
1-8-8	#10	0.00124	190	0.39%
1-8-9	#10	0.00124	185	0.38%
1-8-10	#10	0.00124	90	0.19%
1-8-11	#10	0.00124	70	0.14%
1-8-12	#10	0.00124	80	0.16%
1-8-13	#10	0.00124	80	0.16%
1-8-14	#10	0.00124	65	0.13%
1-8-15	#10	0.00124	65	0.13%
1-8-16	#10	0.00124	165	0.34%
1-8-17	#10	0.00124	170	0.35%
1-8-18	#10	0.00124	255	0.53%
1-8-19	#10	0.00124	260	0.54%

COMBINER BOXES 1-9 THRU 1-12				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
1-9-1	#10	0.00124	445	0.92%
1-9-2	#10	0.00124	440	0.91%
1-9-3	#10	0.00124	435	0.90%
1-9-4	#10	0.00124	435	0.90%
1-9-5	#10	0.00124	415	0.86%
1-9-6	#10	0.00124	410	0.85%
1-9-7	#10	0.00124	410	0.85%
1-9-8	#10	0.00124	405	0.83%
1-9-9	#10	0.00124	275	0.57%
1-9-10	#10	0.00124	280	0.58%
1-9-11	#10	0.00124	190	0.39%
1-9-12	#10	0.00124	185	0.38%
1-9-13	#10	0.00124	95	0.20%
1-9-14	#10	0.00124	90	0.19%
1-9-15	#10	0.00124	50	0.10%
1-9-16	#10	0.00124	55	0.11%
1-9-17	#10	0.00124	85	0.18%
1-9-18	#10	0.00124	165	0.34%
1-9-19	#10	0.00124	170	0.35%
1-10-1	#10	0.00124	310	0.64%
1-10-2	#10	0.00124	300	0.62%
1-10-3	#10	0.00124	445	0.92%
1-10-4	#10	0.00124	440	0.91%
1-10-5	#10	0.00124	435	0.90%
1-10-6	#10	0.00124	435	0.90%
1-10-7	#10	0.00124	415	0.86%
1-10-8	#10	0.00124	410	0.85%
1-10-9	#10	0.00124	410	0.85%
1-10-10	#10	0.00124	405	0.83%
1-10-11	#10	0.00124	275	0.57%
1-10-12	#10	0.00124	280	0.58%
1-10-13	#10	0.00124	190	0.39%
1-10-14	#10	0.00124	185	0.38%
1-10-15	#10	0.00124	90	0.19%
1-10-16	#10	0.00124	65	0.13%
1-10-17	#10	0.00124	75	0.15%
1-10-18	#10	0.00124	70	0.14%
1-10-19	#10	0.00124	70	0.14%
1-11-1	#10	0.00124	190	0.39%
1-11-2	#10	0.00124	185	0.38%
1-11-3	#10	0.00124	280	0.58%
1-11-4	#10	0.00124	275	0.57%
1-11-5	#10	0.00124	415	0.86%
1-11-6	#10	0.00124	410	0.85%
1-11-7	#10	0.00124	410	0.85%
1-11-8	#10	0.00124	405	0.83%
1-11-9	#10	0.00124	390	0.80%
1-11-10	#10	0.00124	390	0.80%
1-11-11	#10	0.00124	395	0.81%
1-11-12	#10	0.00124	400	0.82%
1-11-13	#10	0.00124	255	0.53%
1-11-14	#10	0.00124	260	0.54%
1-11-15	#10	0.00124	170	0.35%
1-11-16	#10	0.00124	165	0.34%
1-11-17	#10	0.00124	70	0.14%
1-11-18	#10	0.00124	70	0.14%
1-11-19	#10	0.00124	80	0.16%
1-12-1	#10	0.00124	55	0.11%
1-12-2	#10	0.00124	80	0.16%
1-12-3	#10	0.00124	165	0.34%
1-12-4	#10	0.00124	170	0.35%
1-12-5	#10	0.00124	255	0.53%
1-12-6	#10	0.00124	260	0.54%
1-12-7	#10	0.00124	390	0.80%
1-12-8	#10	0.00124	390	0.80%
1-12-9	#10	0.00124	395	0.81%
1-12-10	#10	0.00124	400	0.82%
1-12-11	#10	0.00124	390	0.80%
1-12-12	#10	0.00124	395	0.81%
1-12-13	#10	0.00124	395	0.81%
1-12-14	#10	0.00124	400	0.82%
1-12-15	#10	0.00124	250	0.52%
1-12-16	#10	0.00124	255	0.53%
1-12-17	#10	0.00124	155	0.32%
1-12-18	#10	0.00124	140	0.29%
1-12-19	#10	0.00124	135	0.28%

COMBINER BOXES 1-13 THRU 1-16				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
1-13-1	#10	0.00124	105	0.22%
1-13-2	#10	0.00124	45	0.09%
1-13-3	#10	0.00124	50	0.10%
1-13-4	#10	0.00124	130	0.27%
1-13-5	#10			

PLG DATE: 5/9/2021 10:53 AM
RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

COMBINER BOXES 2-5 THRU 2-8				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
2-5-1	#10	0.00124	280	0.58%
2-5-2	#10	0.00124	280	0.58%
2-5-3	#10	0.00124	275	0.57%
2-5-4	#10	0.00124	460	0.95%
2-5-5	#10	0.00124	460	0.95%
2-5-6	#10	0.00124	455	0.94%
2-5-7	#10	0.00124	450	0.93%
2-5-8	#10	0.00124	475	0.98%
2-5-9	#10	0.00124	470	0.97%
2-5-10	#10	0.00124	465	0.96%
2-5-11	#10	0.00124	465	0.96%
2-5-12	#10	0.00124	330	0.68%
2-5-13	#10	0.00124	335	0.69%
2-5-14	#10	0.00124	245	0.51%
2-5-15	#10	0.00124	240	0.49%
2-5-16	#10	0.00124	155	0.32%
2-5-17	#10	0.00124	160	0.33%
2-5-18	#10	0.00124	60	0.12%
2-6-1	#10	0.00124	120	0.25%
2-6-2	#10	0.00124	80	0.16%
2-6-3	#10	0.00124	85	0.18%
2-6-4	#10	0.00124	90	0.19%
2-6-5	#10	0.00124	200	0.41%
2-6-6	#10	0.00124	195	0.40%
2-6-7	#10	0.00124	285	0.59%
2-6-8	#10	0.00124	290	0.60%
2-6-9	#10	0.00124	375	0.77%
2-6-10	#10	0.00124	370	0.76%
2-6-11	#10	0.00124	515	1.06%
2-6-12	#10	0.00124	510	1.05%
2-6-13	#10	0.00124	510	1.05%
2-6-14	#10	0.00124	505	1.04%
2-6-15	#10	0.00124	485	1.00%
2-6-16	#10	0.00124	485	1.00%
2-6-17	#10	0.00124	480	0.99%
2-6-18	#10	0.00124	475	0.98%
2-7-1	#10	0.00124	375	0.77%
2-7-2	#10	0.00124	370	0.76%
2-7-3	#10	0.00124	290	0.60%
2-7-4	#10	0.00124	285	0.59%
2-7-5	#10	0.00124	195	0.40%
2-7-6	#10	0.00124	200	0.41%
2-7-7	#10	0.00124	95	0.20%
2-7-8	#10	0.00124	85	0.18%
2-7-9	#10	0.00124	95	0.20%
2-7-10	#10	0.00124	65	0.13%
2-7-11	#10	0.00124	60	0.12%
2-7-12	#10	0.00124	65	0.13%
2-7-13	#10	0.00124	165	0.34%
2-7-14	#10	0.00124	170	0.35%
2-7-15	#10	0.00124	265	0.55%
2-7-16	#10	0.00124	260	0.54%
2-7-17	#10	0.00124	350	0.72%
2-7-18	#10	0.00124	340	0.70%
2-8-1	#10	0.00124	515	1.06%
2-8-2	#10	0.00124	510	1.05%
2-8-3	#10	0.00124	510	1.05%
2-8-4	#10	0.00124	505	1.04%
2-8-5	#10	0.00124	485	1.00%
2-8-6	#10	0.00124	485	1.00%
2-8-7	#10	0.00124	480	0.99%
2-8-8	#10	0.00124	475	0.98%
2-8-9	#10	0.00124	340	0.70%
2-8-10	#10	0.00124	350	0.72%
2-8-11	#10	0.00124	265	0.55%
2-8-12	#10	0.00124	260	0.54%
2-8-13	#10	0.00124	165	0.34%
2-8-14	#10	0.00124	170	0.35%
2-8-15	#10	0.00124	85	0.18%
2-8-16	#10	0.00124	60	0.12%
2-8-17	#10	0.00124	60	0.12%
2-8-18	#10	0.00124	80	0.16%

COMBINER BOXES 2-9 THRU 2-12				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
2-9-1	#10	0.00124	70	0.14%
2-9-2	#10	0.00124	165	0.34%
2-9-3	#10	0.00124	170	0.35%
2-9-4	#10	0.00124	260	0.54%
2-9-5	#10	0.00124	255	0.53%
2-9-6	#10	0.00124	340	0.70%
2-9-7	#10	0.00124	350	0.72%
2-9-8	#10	0.00124	495	1.02%
2-9-9	#10	0.00124	490	1.01%
2-9-10	#10	0.00124	485	1.00%
2-9-11	#10	0.00124	485	1.00%
2-9-12	#10	0.00124	500	1.03%
2-9-13	#10	0.00124	505	1.04%
2-9-14	#10	0.00124	505	1.04%
2-9-15	#10	0.00124	510	1.05%
2-9-16	#10	0.00124	365	0.75%
2-9-17	#10	0.00124	360	0.74%
2-9-18	#10	0.00124	285	0.59%
2-10-1	#10	0.00124	290	0.60%
2-10-2	#10	0.00124	195	0.40%
2-10-3	#10	0.00124	200	0.41%
2-10-4	#10	0.00124	90	0.19%
2-10-5	#10	0.00124	95	0.20%
2-10-6	#10	0.00124	110	0.23%
2-10-7	#10	0.00124	65	0.13%
2-10-8	#10	0.00124	50	0.10%
2-10-9	#10	0.00124	60	0.12%
2-10-10	#10	0.00124	165	0.34%
2-10-11	#10	0.00124	170	0.35%
2-10-12	#10	0.00124	260	0.54%
2-10-13	#10	0.00124	255	0.53%
2-10-14	#10	0.00124	350	0.72%
2-10-15	#10	0.00124	340	0.70%
2-10-16	#10	0.00124	480	0.99%
2-10-17	#10	0.00124	475	0.98%
2-10-18	#10	0.00124	475	0.98%
2-11-1	#10	0.00124	505	1.04%
2-11-2	#10	0.00124	480	0.99%
2-11-3	#10	0.00124	480	0.99%
2-11-4	#10	0.00124	475	0.98%
2-11-5	#10	0.00124	470	0.97%
2-11-6	#10	0.00124	335	0.69%
2-11-7	#10	0.00124	345	0.71%
2-11-8	#10	0.00124	250	0.52%
2-11-9	#10	0.00124	255	0.53%
2-11-10	#10	0.00124	165	0.34%
2-11-11	#10	0.00124	160	0.33%
2-11-12	#10	0.00124	85	0.18%
2-11-13	#10	0.00124	80	0.16%
2-11-14	#10	0.00124	55	0.11%
2-11-15	#10	0.00124	45	0.09%
2-11-16	#10	0.00124	130	0.27%
2-11-17	#10	0.00124	140	0.29%
2-11-18	#10	0.00124	225	0.46%
2-12-1	#10	0.00124	265	0.55%
2-12-2	#10	0.00124	355	0.73%
2-12-3	#10	0.00124	360	0.74%
2-12-4	#10	0.00124	500	1.03%
2-12-5	#10	0.00124	495	1.02%
2-12-6	#10	0.00124	495	1.02%
2-12-7	#10	0.00124	490	1.01%
2-12-8	#10	0.00124	480	0.99%
2-12-9	#10	0.00124	475	0.98%
2-12-10	#10	0.00124	475	0.98%
2-12-11	#10	0.00124	470	0.97%
2-12-12	#10	0.00124	340	0.70%
2-12-13	#10	0.00124	350	0.72%
2-12-14	#10	0.00124	260	0.54%
2-12-15	#10	0.00124	255	0.53%
2-12-16	#10	0.00124	165	0.34%
2-12-17	#10	0.00124	170	0.35%
2-12-18	#10	0.00124	85	0.18%

COMBINER BOXES 2-13 THRU 2-16				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
2-13-1	#10	0.00124	90	0.19%
2-13-2	#10	0.00124	80	0.16%
2-13-3	#10	0.00124	70	0.14%
2-13-4	#10	0.00124	70	0.14%
2-13-5	#10	0.00124	160	0.33%
2-13-6	#10	0.00124	165	0.34%
2-13-7	#10	0.00124	260	0.54%
2-13-8	#10	0.00124	255	0.53%
2-13-9	#10	0.00124	340	0.70%
2-13-10	#10	0.00124	350	0.72%
2-13-11	#10	0.00124	480	0.99%
2-13-12	#10	0.00124	475	0.98%
2-13-13	#10	0.00124	475	0.98%
2-13-14	#10	0.00124	470	0.97%
2-13-15	#10	0.00124	495	1.02%
2-13-16	#10	0.00124	495	1.02%
2-13-17	#10	0.00124	500	1.03%
2-13-18	#10	0.00124	500	1.03%
2-14-1	#10	0.00124	375	0.77%
2-14-2	#10	0.00124	370	0.76%
2-14-3	#10	0.00124	285	0.59%
2-14-4	#10	0.00124	290	0.60%
2-14-5	#10	0.00124	200	0.41%
2-14-6	#10	0.00124	195	0.40%
2-14-7	#10	0.00124	120	0.25%
2-14-8	#10	0.00124	115	0.24%
2-14-9	#10	0.00124	50	0.10%
2-14-10	#10	0.00124	25	0.05%
2-14-11	#10	0.00124	85	0.18%
2-14-12	#10	0.00124	80	0.16%
2-14-13	#10	0.00124	165	0.34%
2-14-14	#10	0.00124	170	0.35%
2-14-15	#10	0.00124	260	0.54%
2-14-16	#10	0.00124	255	0.53%
2-14-17	#10	0.00124	340	0.70%
2-14-18	#10	0.00124	350	0.72%
2-15-1	#10	0.00124	510	1.05%
2-15-2	#10	0.00124	505	1.04%
2-15-3	#10	0.00124	500	1.03%
2-15-4	#10	0.00124	500	1.03%
2-15-5	#10	0.00124	475	0.98%
2-15-6	#10	0.00124	470	0.97%
2-15-7	#10	0.00124	465	0.96%
2-15-8	#10	0.00124	465	0.96%
2-15-9	#10	0.00124	350	0.72%
2-15-10	#10	0.00124	355	0.73%
2-15-11	#10	0.00124	260	0.54%
2-15-12	#10	0.00124	265	0.55%
2-15-13	#10	0.00124	165	0.34%
2-15-14	#10	0.00124	170	0.35%
2-15-15	#10	0.00124	85	0.18%
2-15-16	#10	0.00124	80	0.16%
2-15-17	#10	0.00124	20	0.04%
2-15-18	#10	0.00124	90	0.19%
2-16-1	#10	0.00124	60	0.12%
2-16-2	#10	0.00124	165	0.34%
2-16-3	#10	0.00124	170	0.35%
2-16-4	#10	0.00124	260	0.54%
2-16-5	#10	0.00124	255	0.53%
2-16-6	#10	0.00124	350	0.72%
2-16-7	#10	0.00124	340	0.70%
2-16-8	#10	0.00124	475	0.98%
2-16-9	#10	0.00124	470	0.97%
2-16-10	#10	0.00124	465	0.96%
2-16-11	#10	0.00124	465	0.96%
2-16-12	#10	0.00124	485	1.00%
2-16-13	#10	0.00124	490	1.01%
2-16-14	#10	0.00124	495	1.02%
2-16-15	#10	0.00124	495	1.02%
2-16-16	#10	0.00124	365	0.75%
2-16-17	#10	0.00124	360	0.74%
2-16-18	#10	0.00124	285	0.59%

COMBINER BOXES 3-1 THRU 3-1				
STRING NUMBER	STRING TO INVERTER WIRE GAUGE	STRING TO INVERTER IMPEDANCE (Ω/ft)	STRING DISTANCE (FEET)	STRING VOLTAGE DROP
3-1-1	#10	0.00124	295	0.61%
3-1-2	#10	0.00124	200	0.41%
3-1-3	#10	0.00124	210	0.43%
3-1-4	#10	0.00124	80	0.16%
3-1-5	#10	0.00124	95	0.20%
3-1-6	#10	0.00124	90	0.19%
3-1-7	#10	0.00124	65	0.13%
3-1-8	#10	0.00124	70	0.14%
3-1-9	#10	0.00124	65	0.13%
3-1-10	#10	0.00124	165	0.34%
3-1-11	#10	0.00124	170	0.35%
3-1-12	#10	0.00124	260	0.54%
3-1-13	#10	0.00124	255	0.53%
3-1-14	#10	0.00124	350	0.72%
3-1-15	#10	0.00124	340	0.70%

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

PLOT DATE: 5/9/2021 10:33 AM

DC FEEDER CALCULATIONS - SYSTEM ONE																														
CIRCUIT DESCRIPTION				FEEDER SIZING						CONDUCTOR CHECK PER 690.8(B)(1)				CONDUCTOR CHECK PER 690.8(B)(2)				TERMINAL CHECK				OCPD CHECK				VOLTAGE DROP CALCS				
COMBINER BOX	QTY OF STRINGS	OPERATING VOLTAGE Vmp (V)	STRING SHORT CIRCUIT CURRENT (STRING Isc)	FEEDER SHORT CIRCUIT CURRENT (Isc)	FEEDER MAX CURRENT (Isc x 1.25)	CONDUCTORS PER POLE	CONDUCTOR SIZE	GROUND SIZE	OCPD SIZE	90° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	C.O.U DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	90° AMPACITY WITH C.O.U.	FEEDER MAX CURRENT (Isc x 1.25)	PASS?	75° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	90° AMPACITY WITH C.O.U.	75° AMPACITY	MAX ALLOWABLE OCPD	PASS?	STRING OPERATING CURRENT (STRING Imp)	FEEDER OPERATING CURRENT	FEEDER LENGTH (FT, ONE WAY)	FEEDER VOLTAGE DROP		
CB-1-1	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	756	1.0%	3"	21%
CB-1-2	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	781	1.0%	3"	21%
CB-1-3	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	800	1.0%	3"	21%
CB-1-4	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	824	1.0%	3"	21%
CB-1-5	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	875	1.1%	3"	21%
CB-1-6	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	927	1.2%	3"	21%
CB-1-7	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1007	1.3%	3"	21%
CB-1-8	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1057	1.3%	3"	21%
CB-1-9	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1139	1.4%	3"	21%
CB-1-10	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1190	1.5%	3"	21%
CB-1-11	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1213	1.5%	3"	21%
CB-1-12	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1236	1.6%	3"	21%
CB-1-13	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1288	1.6%	3"	21%
CB-1-14	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1367	1.7%	3"	21%
CB-1-15	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1419	1.8%	3"	21%
CB-1-16	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1425	1.8%	3"	21%

DC FEEDER CALCULATIONS - SYSTEM TWO																														
CIRCUIT DESCRIPTION				FEEDER SIZING						CONDUCTOR CHECK PER 690.8(B)(1)				CONDUCTOR CHECK PER 690.8(B)(2)				TERMINAL CHECK				OCPD CHECK				VOLTAGE DROP CALCS				
COMBINER BOX	QTY OF STRINGS	OPERATING VOLTAGE Vmp (V)	STRING SHORT CIRCUIT CURRENT (STRING Isc)	FEEDER SHORT CIRCUIT CURRENT (Isc)	FEEDER MAX CURRENT (Isc x 1.25)	CONDUCTORS PER POLE	CONDUCTOR SIZE	GROUND SIZE	OCPD SIZE	90° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	C.O.U DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	90° AMPACITY WITH C.O.U.	FEEDER MAX CURRENT (Isc x 1.25)	PASS?	75° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	90° AMPACITY WITH C.O.U.	75° AMPACITY	MAX ALLOWABLE OCPD	PASS?	STRING OPERATING CURRENT (STRING Imp)	FEEDER OPERATING CURRENT	FEEDER LENGTH (FT, ONE WAY)	FEEDER VOLTAGE DROP		
CB-2-1	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1323	1.7%	3"	21%
CB-2-2	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1260	1.6%	3"	21%
CB-2-3	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1195	1.5%	3"	21%
CB-2-4	19	1061	12.35	235	293	2	AL 350MCM	CU #2	400	560	367	PASS	0.96	1	538	293	PASS	500	367	PASS	537.6	500	500	PASS	11.71	222.49	1163	1.5%	3"	21%
CB-2-5	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	1100	1.3%	3"	21%
CB-2-6	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	1137	1.4%	3"	21%
CB-2-7	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	1005	1.2%	3"	21%
CB-2-8	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	972	1.2%	3"	21%
CB-2-9	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	960	1.2%	3"	21%
CB-2-10	18	1061	12.35	222	278	2	AL 350MCM	CU #2	350	560	347	PASS	0.96	1	538	278	PASS	500	347	PASS	537.6	500	500	PASS	11.71	210.78	900	1.1%	3"	21%
CB-2-11	18	1061	12.35	222	278	2	AL 300MCM	CU #2	350	520	347	PASS	0.96	1	499	278	PASS	460	347	PASS	499.2	460	500	PASS	11.71	210.78	848	1.2%	2.5"	29%
CB-2-12	18	1061	12.35	222	278	2	AL #4/0	CU #2	350	410	347	PASS	0.96	1	394	278	PASS	360	347	PASS	393.6	360	400	PASS	11.71	210.78	810	1.6%	2.5"	23%
CB-2-13	18	1061	12.35	222	278	2	AL #4/0	CU #2	350	410	347	PASS	0.96	1	394	278	PASS	360	347	PASS	393.6	360	400	PASS	11.71	210.78	769	1.5%	2.5"	23%
CB-2-14	18	1061	12.35	222	278	2	AL #4/0	CU #2	350	410	347	PASS	0.96	1	394	278	PASS	360	347	PASS	393.6	360	400	PASS	11.71	210.78	710	1.4%	2.5"	23%
CB-2-15	18	1061	12.35	222	278	2	AL #4/0	CU #2	350	410	347	PASS	0.96	1	394	278	PASS	360	347	PASS	393.6	360	400	PASS	11.71	210.78	680	1.4%	2.5"	23%
CB-2-16	18	1061	12.35	222	278	2	AL #4/0	CU #2	350	410	347	PASS	0.96	1	394	278	PASS	360	347	PASS	393.6	360	400	PASS	11.71	210.78	643	1.3%	2.5"	23%

DC FEEDER CALCULATIONS - SYSTEM THREE																														
CIRCUIT DESCRIPTION				FEEDER SIZING						CONDUCTOR CHECK PER 690.8(B)(1)				CONDUCTOR CHECK PER 690.8(B)(2)				TERMINAL CHECK				OCPD CHECK				VOLTAGE DROP CALCS				
COMBINER BOX	QTY OF STRINGS	OPERATING VOLTAGE Vmp (V)	STRING SHORT CIRCUIT CURRENT (STRING Isc)	FEEDER SHORT CIRCUIT CURRENT (Isc)	FEEDER MAX CURRENT (Isc x 1.25)	CONDUCTORS PER POLE	CONDUCTOR SIZE	GROUND SIZE	OCPD SIZE	90° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	C.O.U DERATE AMBIENT TEMP	C.O.U. DERATE CONDUIT FILL	90° AMPACITY WITH C.O.U.	FEEDER MAX CURRENT (Isc x 1.25)	PASS?	75° AMPACITY	FEEDER CONTINUOUS CURRENT (Isc x 1.25 x 1.25)	PASS?	90° AMPACITY WITH C.O.U.	75° AMPACITY	MAX ALLOWABLE OCPD	PASS?	STRING OPERATING CURRENT (STRING Imp)	FEEDER OPERATING CURRENT	FEEDER LENGTH (FT, ONE WAY)	FEEDER VOLTAGE DROP		
CB-3-1	19	1061	12.35	235	293	2	AL 250MCM	CU #2	400	460	367	PASS	0.96	1	442	293	PASS	410	367	PASS	441.6	410	450	PASS	11.71	222.49	560	1.0%	2.5"	26%
CB-3-2	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	170	0.4%	2.5"	23%
CB-3-3	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	268	0.6%	2.5"	23%
CB-3-4	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	736	1.5%	2.5"	23%
CB-3-5	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	639	1.3%	2.5"	23%
CB-3-6	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	576	1.2%	2.5"	23%
CB-3-7	19	1041	12.12	230	288	2	AL #4/0	CU #2	400	410	360	PASS	0.96	1	394	288	PASS	360	360	PASS	393.6	360	400	PASS	11.40	216.6	516	1.1%	2.5"	23%
CB-3-8	15	1041	12.12	182	227	2	AL #4/0	CU #4	300	410	284	PASS	0.96	1	394	227	PASS	360	284	PASS	393.6	360	400	PASS	11.40	171	484	0.8%	2.5"	22%

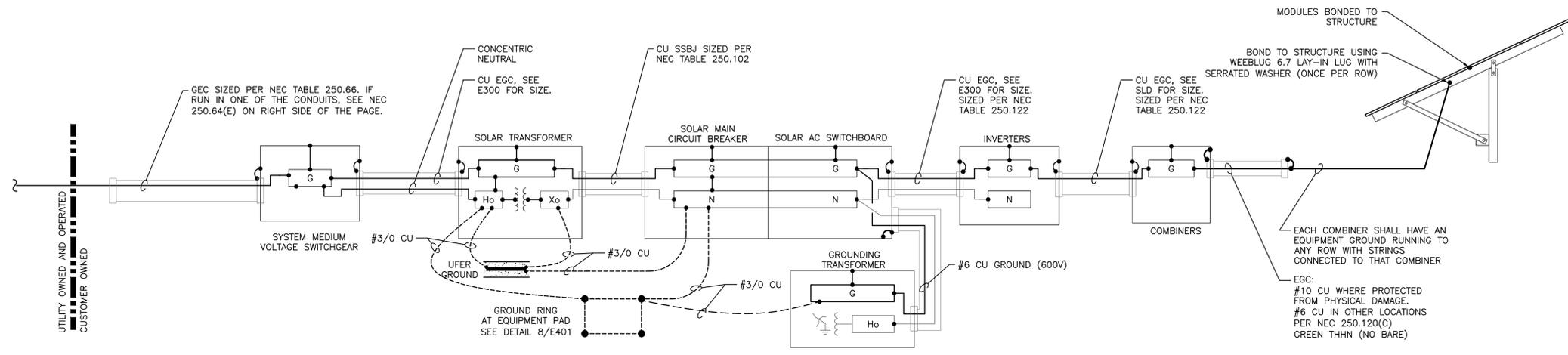
NOTE: DISTANCES ARE ESTIMATES GENERATED FOR ENGINEER'S CALCULATIONS, CONTRACTOR IS RESPONSIBLE FOR OWN MEASUREMENTS AND TAKEOFFS.

MODULE SPECIFICATIONS	
MAKE/MODEL	RISEN TDS RSM144 6-380MDG
POWER [W]	380
ISC [A]	12.12
IMP [A]</	

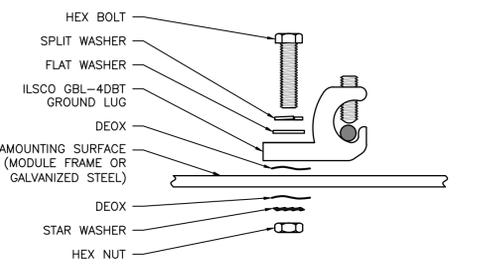
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PLG DATE: 5/19/2021 10:33 AM

NEC 250.64(E) - ENCLOSURES FOR GROUNDING ELECTRODE CONDUCTORS
 FERROUS METAL ENCLOSURES FOR GROUNDING ELECTRODE CONDUCTORS SHALL BE ELECTRICALLY CONTINUOUS FROM THE POINT OF ATTACHMENT TO CABINETS OR EQUIPMENT TO THE GROUNDING ELECTRODE AND SHALL BE SECURELY FASTENED TO THE GROUND CLAMP OR FITTING. NONFERROUS METAL ENCLOSURES SHALL NOT BE REQUIRED TO BE ELECTRICALLY CONTINUOUS. FERROUS METAL ENCLOSURES THAT ARE NOT PHYSICALLY CONTINUOUS FROM CABINETS OR EQUIPMENT TO THE GROUNDING ELECTRODE SHALL BE MADE ELECTRICALLY CONTINUOUS BY BONDING EACH END OF THE RACEWAY OR ENCLOSURE TO THE GROUNDING ELECTRODE CONDUCTOR. BONDING METHODS IN COMPLIANCE WITH 250.92(B) FOR INSTALLATIONS AT SERVICE EQUIPMENT LOCATIONS AND WITH 250.92(B)(2) THROUGH (B)(4) FOR OTHER THAN SERVICE EQUIPMENT LOCATIONS SHALL APPLY AT EACH END AND TO ALL INTERVENING FERROUS RACEWAYS, BOXES, AND ENCLOSURES BETWEEN THE CABINETS OR EQUIPMENT AND THE GROUNDING ELECTRODE. THE BONDING JUMPER FOR A GROUNDING ELECTRODE CONDUCTOR RACEWAY OR CABLE ARMOR SHALL BE THE SAME SIZE AS, OR LARGER THAN, THE ENCLOSED GROUNDING ELECTRODE CONDUCTOR. IF A RACEWAY IS USED AS PROTECTION FOR A GROUNDING ELECTRODE CONDUCTOR, THE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE APPROPRIATE RACEWAY ARTICLE.

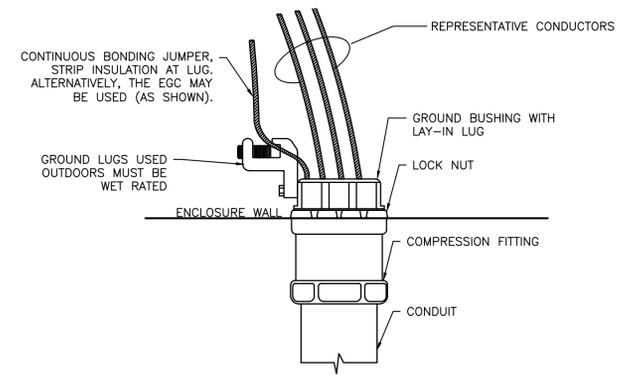


1 TYPICAL GROUNDING DETAIL
 E401 SCALE: NONE

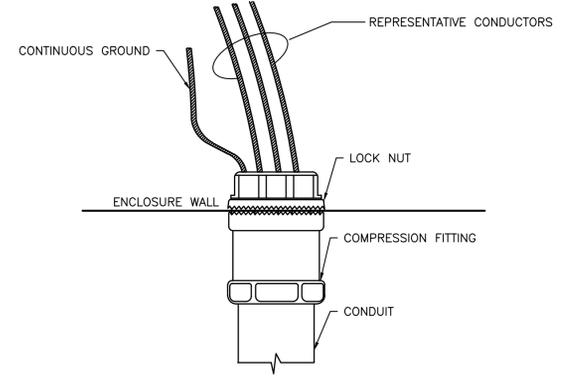


NOTES
 1. ALL HARDWARE TO BE STAINLESS STEEL.
 2. REFER TO ILSCO MANUAL FOR ADDITIONAL REQUIREMENTS AND TORQUE VALUES

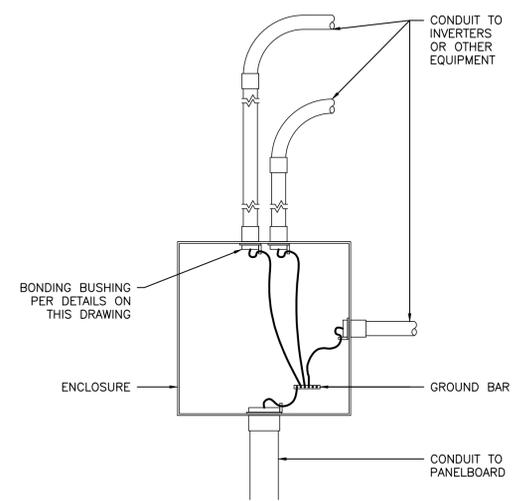
2 GROUND LUG DETAIL - ILSCO
 E401 SCALE: NONE



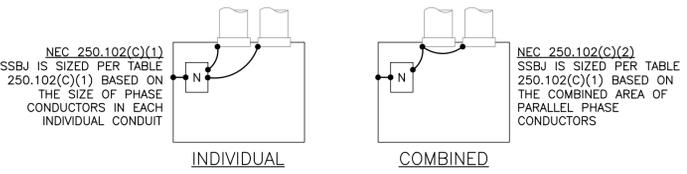
3 BONDING BUSHING GROUNDING DETAIL
 E401 SCALE: NONE



4 MYER'S HUB GROUNDING DETAIL
 E401 SCALE: NONE



5 PULL BOX/TROUGH GROUNDING DETAIL
 E401 SCALE: NONE



SIZE OF LARGEST UNGROUNDED CONDUCTOR OR EQUIVALENT AREA FOR PARALLEL CONDUCTORS (AWG/KCMIL)		SIZE OF GROUNDED CONDUCTOR OR BONDING JUMPER (AWG/KCMIL)	
COPPER	ALUMINUM OR COPPER-CLAD ALUMINUM	COPPER	ALUMINUM OR COPPER-CLAD ALUMINUM
2 OR SMALLER	1/0 OR SMALLER	8	6
1 OR 1/0	2/0 OR 3/0	6	4
2 OR 2/0	4/0 OR 250	4	2
OVER 3/0 THROUGH 350	OVER 250 THROUGH 500	2	1/0
OVER 350 THROUGH 600	OVER 500 THROUGH 900	1/0	3/0
OVER 600 THROUGH 1100	OVER 900 THROUGH 1750	2/0	4/0
OVER 1100	OVER 1750	REFER TO NOTES IN NEC TABLE 250.102(C)(1)	

6 SUPPLY SIDE BONDING JUMPERS (SSBJ)
 E401 SCALE: NONE

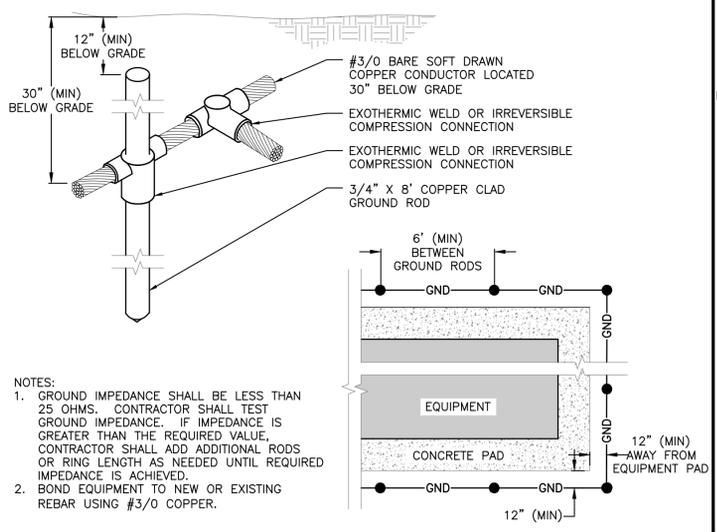
A) FOR CONCENTRIC KNOCKOUTS, USE BONDING JUMPERS AS FOLLOWS:

OVERCURRENT DEVICE CIRCUIT NOT EXCEEDING (AMPERES)	SIZE (AWG OR KCMIL)	
	COPPER	ALUMINUM
15	14	12
20	12	10
60	10	8
100	8	6
200	6	4
300	4	2
400	3	1
500	2	1/0
600	1	2/0
800	1/0	3/0
1000	2/0	4/0
1200	3/0	250
1600	4/0	350
2000	250	400
2500	350	600
3000	400	600
4000	500	750

FOR PARALLEL FEEDERS - NEC 250.102(D) EQUIPMENT BONDING JUMPER IS SIZED PER TABLE 250.122, REGARDLESS IF COMBINED OR INDIVIDUAL BONDING JUMPERS ARE USED

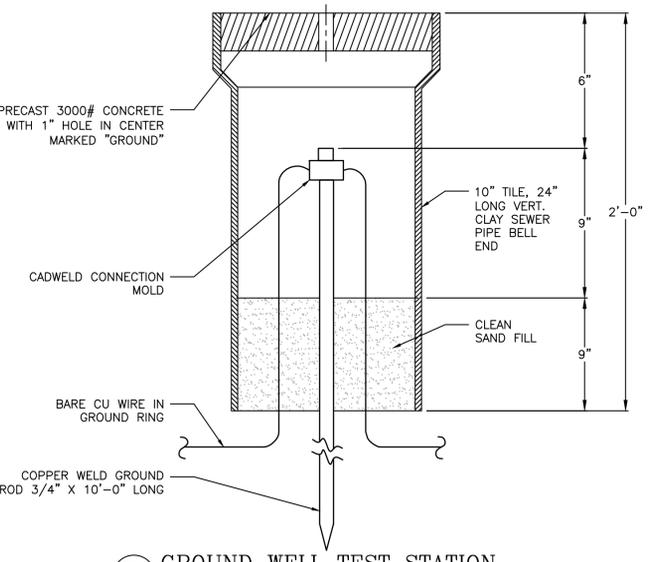
- B) FOR NON-CONCENTRIC KNOCKOUTS, THE FOLLOWING METHODS SHALL BE PERMITTED (PER NEC 250.97)
- 1) THREADLESS COUPLINGS AND CONNECTORS FOR CABLES WITH METAL SHEETS
 - 2) TWO LOCKNUTS, ON RIGID METAL CONDUIT OR INTERMEDIATE METAL CONDUIT, ONE INSIDE AND ONE OUTSIDE OF BOXES AND CABINETS.
 - 3) FITTINGS WITH SHOULDERS THAT SEAT FIRMLY AGAINST THE BOX OR CABINET, SUCH AS ELECTRICAL METALLIC TUBING CONNECTORS, FLEXIBLE METAL CONDUIT CONNECTORS, AND CABLE CONNECTORS, WITH OR LOCKNUT ON THE INSIDE OF BOXES AND CABINETS LISTED FITTINGS (SUCH AS MEYERS HUB)

7 LOAD SIDE EQUIPMENT BONDING JUMPER
 E401 SCALE: NONE



NOTES:
 1. GROUND IMPEDANCE SHALL BE LESS THAN 25 OHMS. CONTRACTOR SHALL TEST GROUND IMPEDANCE. IF IMPEDANCE IS GREATER THAN THE REQUIRED VALUE, CONTRACTOR SHALL ADD ADDITIONAL RODS OR RING LENGTH AS NEEDED UNTIL REQUIRED IMPEDANCE IS ACHIEVED.
 2. BOND EQUIPMENT TO NEW OR EXISTING REBAR USING #3/0 COPPER.

8 GROUND RING DETAIL
 E401 SCALE: NONE



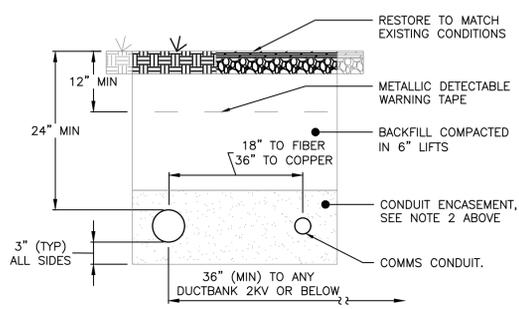
9 GROUND WELL TEST STATION
 E401 SCALE: NONE

DRAWING TITLE
GROUNDING DETAILS

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
 DRAWING #: E401
 DEVELOPER: VEROGY
 150 PARK HILL STREET HARTFORD, CT 06103 WWW.VEROGY.COM
 VEROGY
 5 MARINE VIEW PLAZA, HARTFORD, CT 06103 WWW.PUREPOWER.COM
 RICHARD A. VINSO
 03/28/2020 90% DESIGN DEVELOPMENT RJK AL R
 CT LICENSE NO. 0052862
 DC SYSTEM POWER: 7,590.57 KW
 AC SYSTEM POWER: 4,975.00 KW
 TRINA 395/RISEN 380
 MODULE TYPE: 15,990/3,354
 STRING QUANTITY: 615/729
 ORIENTATION: 30° TILT, 180° AZIMUTH
 PAGE SIZE: 3.6" x 24"
 PROJECT #: 00682

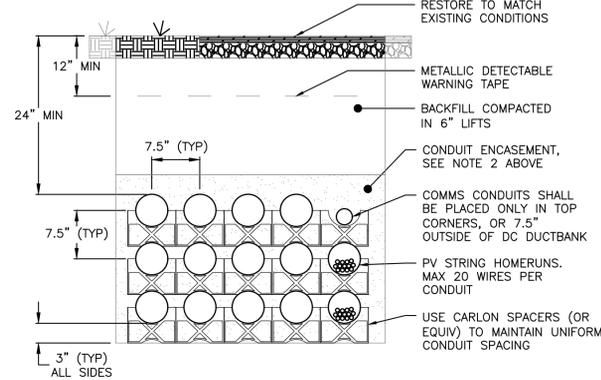
RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

- NOTES:**
- ALL UNDERGROUND CONDUIT SHALL BE PVC AND TRANSITION TO RMC FOR ELBOW. RMC ELBOW DOES NOT NEED TO BE BONDED IF THE ENTIRE ELBOW IS $\geq 18"$ DEEP (NEC 250.86 EXCEPTION 3)
 - UNDER ROADS AND PARKING AREAS ENCASUREMENT SHALL BE 2500 PSI CONCRETE. UNDER GRASSY AREAS NOT SUBJECT TO VEHICULAR TRAFFIC ENCASUREMENT SHALL BE SAND.
 - CALL BEFORE YOU DIG, DIAL 811 TO BE CONNECTED TO THE LOCAL ON-CALL CENTER. YOU MUST CALL AT LEAST 48 HOURS BEFORE EXCAVATING.
 - IF DUCTBANK SLOPES SUCH THAT ANY PART OF THE DUCTBANK IS ABOVE STUB UP ELEVATION, INCLUDE HAND HOLE WITH GRAVEL BASE TO ALLOW DRAINAGE.



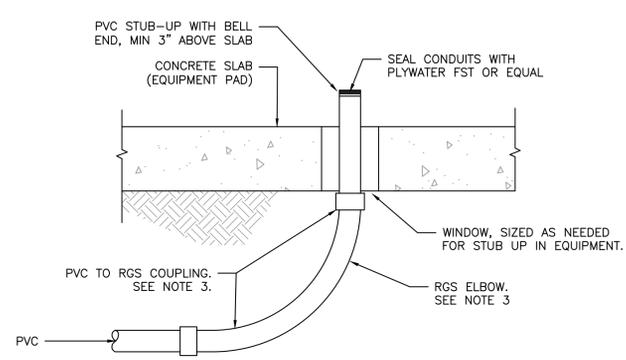
1 TYPICAL MV DUCTBANK DETAIL
E402 SCALE: NONE

- NOTES:**
- ALL UNDERGROUND CONDUIT SHALL BE PVC AND TRANSITION TO RMC FOR ELBOW. RMC ELBOW DOES NOT NEED TO BE BONDED IF THE ENTIRE ELBOW IS $\geq 18"$ DEEP (NEC 250.86 EXCEPTION 3)
 - UNDER ROADS AND PARKING AREAS ENCASUREMENT SHALL BE 2500 PSI CONCRETE. UNDER GRASSY AREAS NOT SUBJECT TO VEHICULAR TRAFFIC ENCASUREMENT SHALL BE SAND.
 - CALL BEFORE YOU DIG, DIAL 811 TO BE CONNECTED TO THE LOCAL ON-CALL CENTER. YOU MUST CALL AT LEAST 48 HOURS BEFORE EXCAVATING.
 - IF DUCTBANK SLOPES SUCH THAT ANY PART OF THE DUCTBANK IS ABOVE STUB UP ELEVATION, INCLUDE HAND HOLE WITH GRAVEL BASE TO ALLOW DRAINAGE.



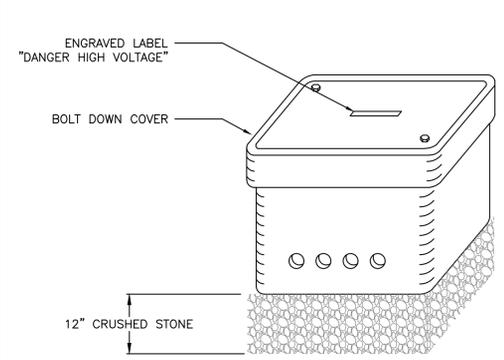
2 TYPICAL 1500VDC DUCTBANK DETAIL
E402 SCALE: NONE

- NOTES:**
- INITIALLY INSTALL COUPLING GAP TO PREVENT DAMAGE TO STUB-UP UNTIL GEAR IS SET.
 - INSTALL ROUNDED FITTING BEFORE PULLING CABLES TO AVOID DAMAGE TO CABLES.
 - RMC ELBOW ONLY REQUIRED ON ONE SIDE OF EACH PULL NEAREST THE LOCATION OF THE PULLING MACHINE. ON OPPOSITE SIDE, PVC SCH80 ELBOWS ARE PERMITTED.

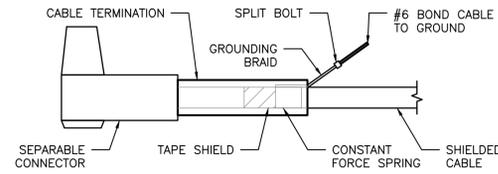


3 EQUIPMENT PAD STUB-UP DETAIL
E402 SCALE: NONE

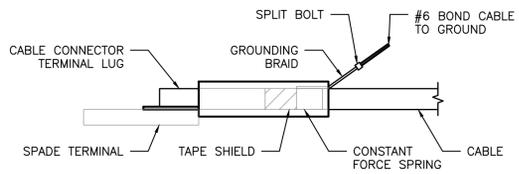
- NOTES:**
- BOX SHALL BE RATED TB FOR USE IN GRASSY AREAS NOT SUBJECT TO VEHICULAR TRAFFIC, OR RATED T22 FOR USE IN SIDEWALKS OR PARKING LOTS SUBJECT TO OCCASIONAL NON-DELIBERATE HEAVY VEHICULAR TRAFFIC. BOXES TO BE USED IN ROADWAYS OR AREAS FREQUENTLY SUBJECT TO HEAVY VEHICULAR TRAFFIC SHALL BE SUBMITTED TO EOR FOR APPROVAL
 - CONDUITS SHALL ENTER ON SIDES. MINIMUM BURIAL DEPTHS OF CONDUITS IS 24" BELOW FINISHED GRADE.
 - CONDUIT KNOCKOUTS SHALL BE DRILLED OR PUNCHED ON SITE. QUANTITIES AND SIZES TO MATCH TRENCH PLAN AND COMBINER SCHEDULE.



4 HANDHOLE DETAIL
E402 SCALE: NONE



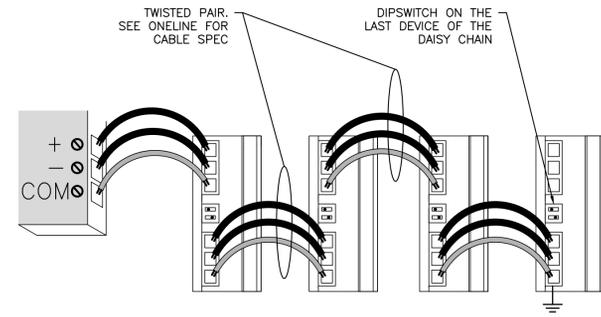
DEAD FRONT MV TERMINATION



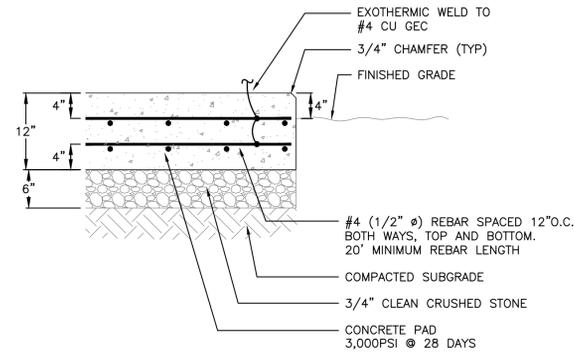
LIVE FRONT MV TERMINATION

5 SHIELDED CABLE DETAIL
E402 SCALE: NONE

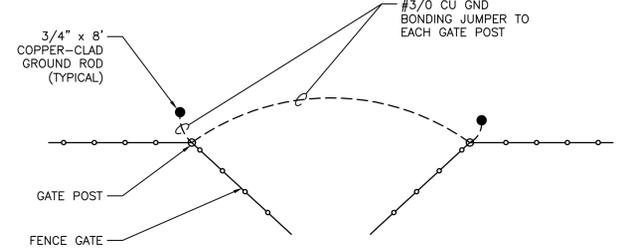
- MONITORING NOTES:**
- REFER TO MONITORING SYSTEM INSTALLATION MANUAL FOR DETAILS ON TERMINAL BLOCKS, CABLE TERMINATIONS, AND SYSTEM CONFIGURATION.
 - WIRELESS TRANSCEIVERS MUST HAVE LINE-OF-SIGHT BETWEEN EACH OTHER.
 - PYRANOMETER MUST BE INSTALLED IN UNSHADOWED LOCATION.



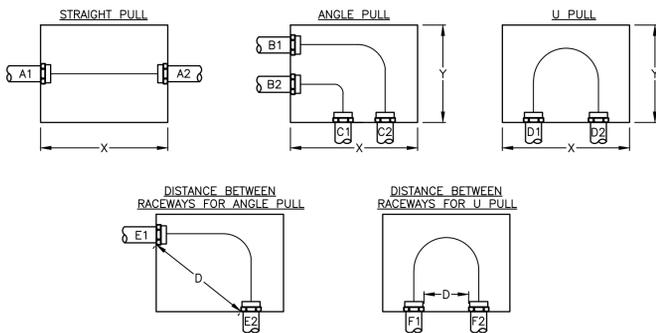
12 MODBUS DETAIL
E402 SCALE: NONE



8 CONCRETE PAD DETAIL
E402 SCALE: NONE



11 FENCE GATE GROUNDING DETAIL
E402 SCALE: NONE

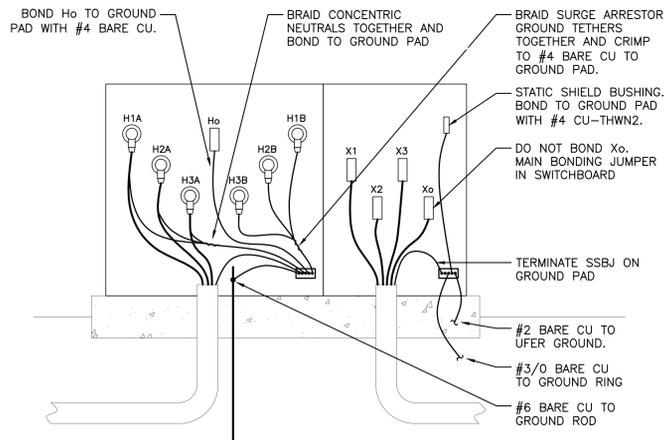


NEC 314.28(A)(1)-(3) PULL BOX SIZING

PULL BOX TYPE	LENGTH (X)	HEIGHT (Y)	DISTANCE (D)
STRAIGHT PULL	8 X LARGEST OF A1 & A2	AS NEEDED	N/A
ANGLE PULL	6 X (LARGEST OF B1 & B2) + SUM OF OTHER CONDUIT ENTERING THE SAME WALL	6 X (LARGEST OF C1 & C2) + SUM OF OTHER CONDUIT ENTERING THE SAME WALL	6 X LARGEST OF E1 & E2
U PULL	AS NEEDED	6 X (LARGEST OF D1 & D2) + SUM OF OTHER CONDUIT ENTERING THE SAME WALL	6 X LARGEST OF F1 & F2

NOTE:
REFER TO NEC 314.28 FOR ADDITIONAL REQUIREMENTS.

9 PULL BOX SIZING
E402 SCALE: NONE



10 TRANSFORMER GROUNDING: WYE-G/WYE-G
E402 SCALE: NONE

DRAWING TITLE
ELECTRICAL DETAILS

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016
 DRAWING #: E402
 DEVELOPER: VEROGY
 150 TRINITY ELODGE STREET HARTFORD, CT 06103 WWW.VEROGY.COM
 VEROGY
 5 MARINE VIEW PLAZA, HARTFORD, IN WWW.PUREPOWER.COM
 RICHARD A. VINSO, P.E. CT LICENSE NO. 00682
 DATE: 03/24/2020 90% DESIGN DEVELOPMENT
 REVISION DESCRIPTION: PM LENG CHK
 DATE:

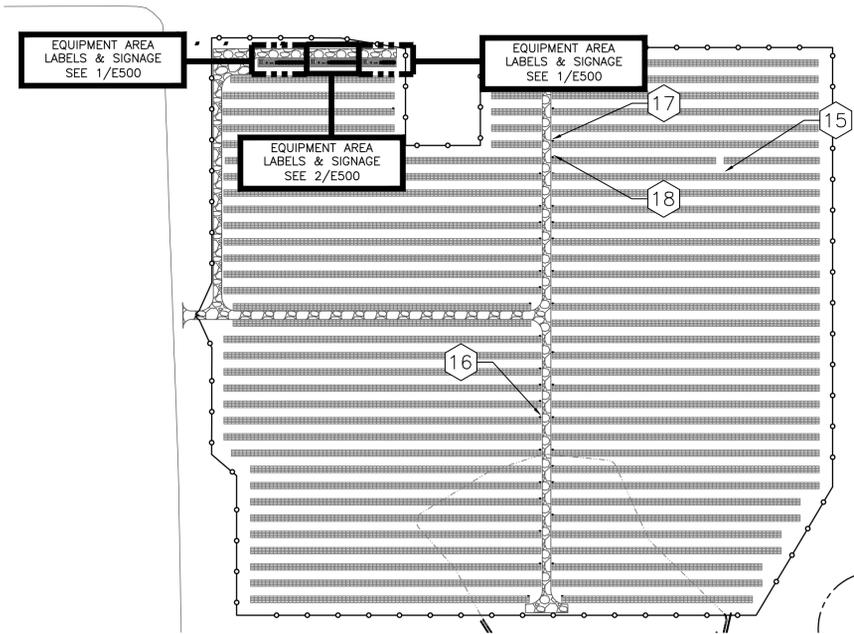
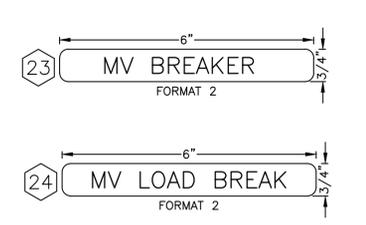
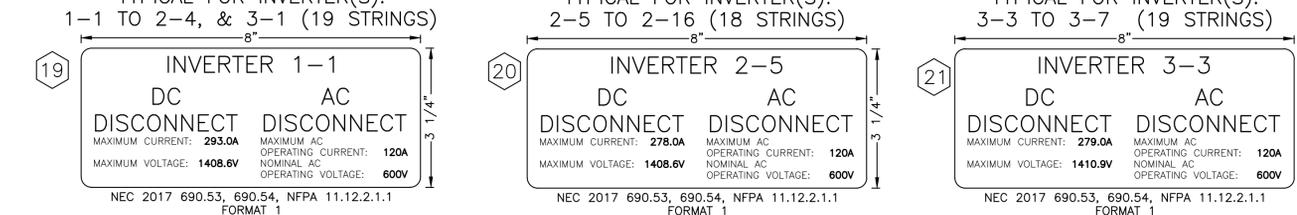
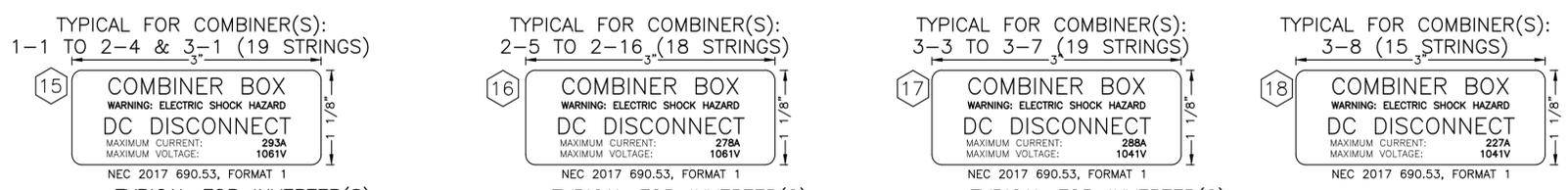
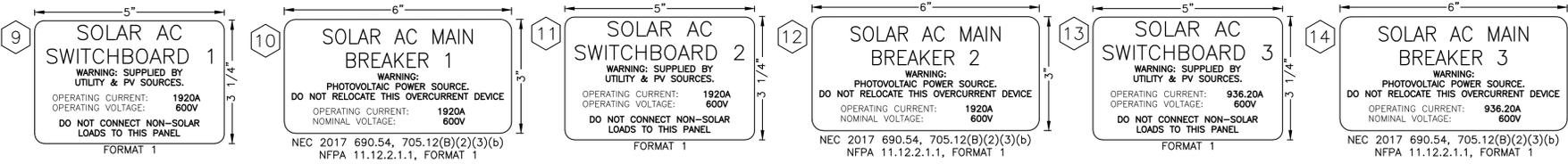
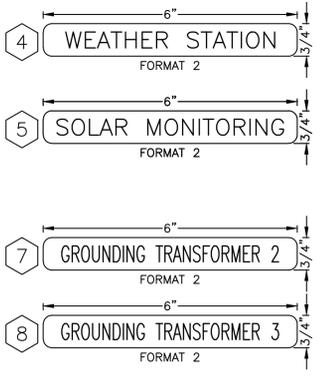
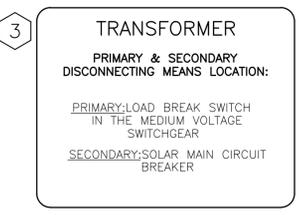
RULER IN INCHES: 0 1/2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

GENERAL NOTES FOR LABELS:
 1. LABEL SCALE 1:2 UNLESS NOTED
 2. LETTERING ON SIGNS SHALL BE CAPITAL LETTERS
 3. CLEARLY LABEL ALL CIRCUIT BREAKERS IN THE PANELBOARD(S). THE LABEL SHALL INDICATE THE NAME OF THE DEVICE IT SERVES.

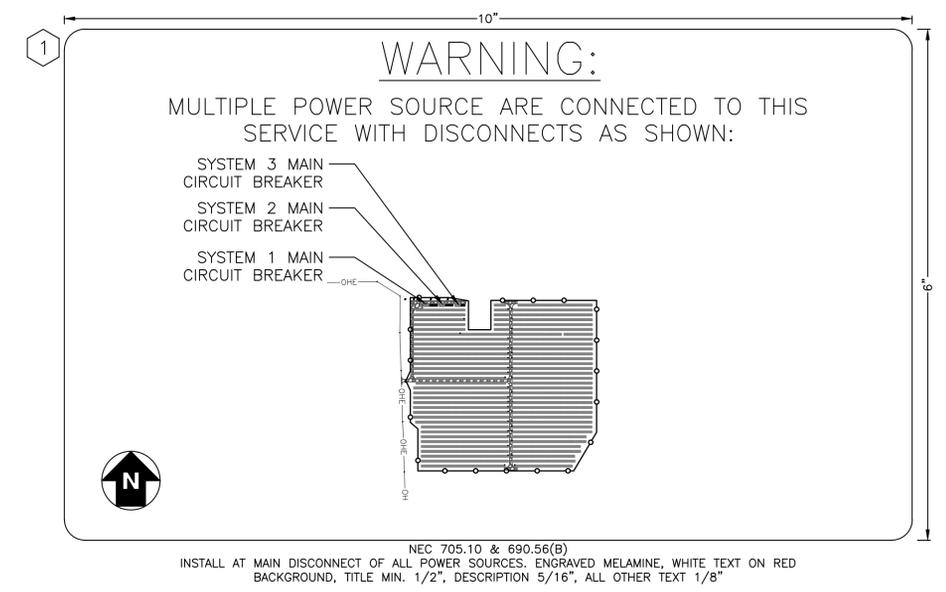
LABEL FORMAT NOTES:
 1. **FORMAT 1:** ENGRAVED MELAMINE, WHITE TEXT ON RED BACKGROUND. TEXT HEIGHT: TITLES 3/8", ALL OTHER TEXT 5/32".
 2. **FORMAT 2:** ENGRAVED MELAMINE, BLACK TEXT ON WHITE BACKGROUND. TEXT HEIGHT: 3/8".
 3. **FORMAT 3:** REFLECTIVE UV RATED LABEL, RED BACKGROUND WITH WHITE CAPITAL LETTERS AT LEAST 3/8" TALL. LABELS SHALL BE SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED.
 4. **FORMAT 4:** ENGRAVED MELAMINE, WHITE TEXT ON RED BACKGROUND. TEXT HEIGHT: TITLES 5/32", ALL OTHER TEXT 3/32".

PER 2017 NEC 690.31(B)(1), PV SYSTEM CIRCUIT CONDUCTORS SHALL BE IDENTIFIED AT ALL ACCESSIBLE POINTS OF TERMINATION, CONNECTION, AND SPLICES.

- STRING HOMERUNS AT ARRAY
- DC INPUT TERMINALS OF COMBINER BOX
- DC OUTPUT TERMINALS OF COMBINER BOX
- DC INPUT TERMINALS OF INVERTER
- AC OUTPUT TERMINALS OF INVERTER
- AC INPUT & OUTPUT TERMINALS OF EACH SUCCESSIVE DEVICE (WHERE APPLICABLE)

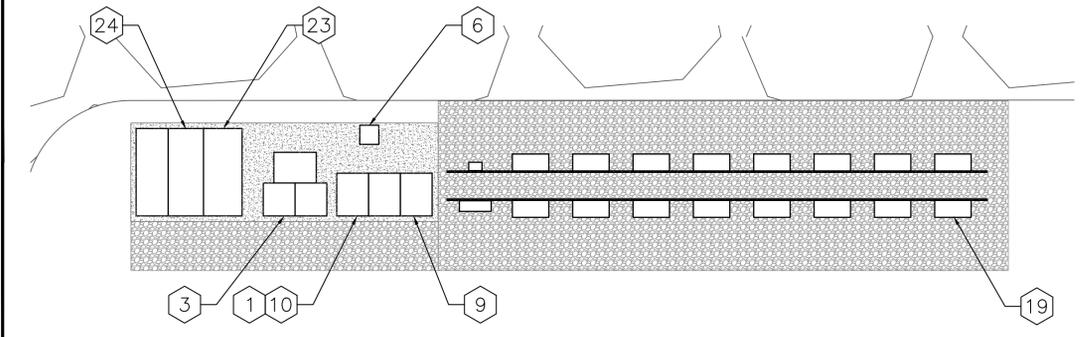


1 LABELS & SIGNAGE
 E500 SCALE: 1" = 100'-0"

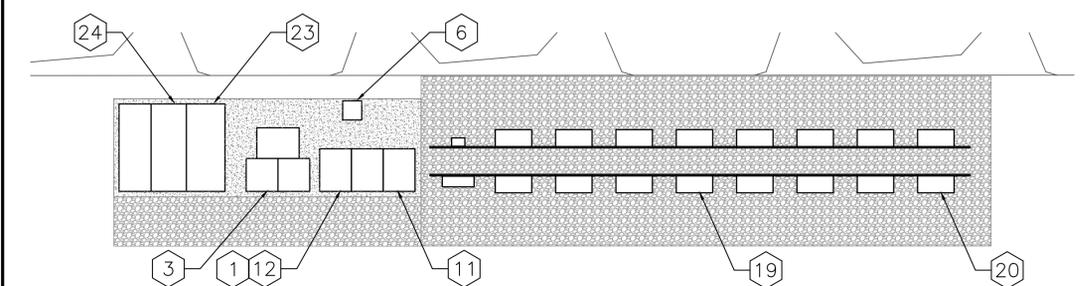


NEC 705.10 & 690.56(B)
 INSTALL AT MAIN DISCONNECT OF ALL POWER SOURCES. ENGRAVED MELAMINE, WHITE TEXT ON RED BACKGROUND, TITLE MIN. 1/2", DESCRIPTION 5/16", ALL OTHER TEXT 1/8"

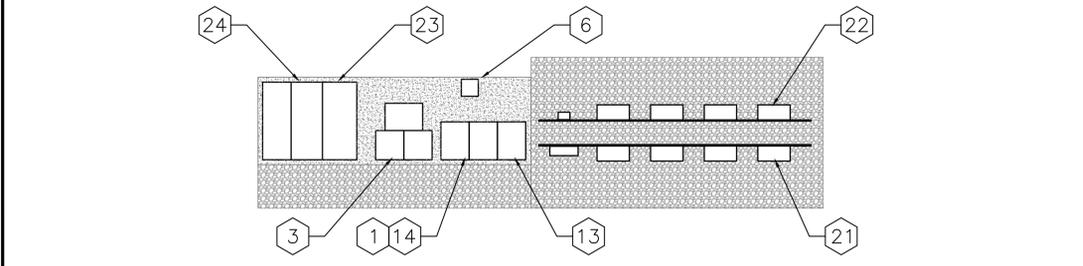
2 DIRECTORY LABEL
 E500 SCALE: 1:1



1 EQUIPMENT AREA - LABELS & SIGNAGE SYSTEM ONE
 E500 SCALE: 1/8" = 1'-0"



2 EQUIPMENT AREA - LABELS & SIGNAGE SYSTEM TWO
 E500 SCALE: 1/8" = 1'-0"



3 EQUIPMENT AREA - LABELS & SIGNAGE SYSTEM THREE
 E500 SCALE: 1/8" = 1'-0"

DRAWING TITLE
 LABELS & SIGNAGE

DATE	REVISION DESCRIPTION	PM	LENG	CHK
05/05/2021	ISSUE FOR PERMIT	BK	ES	RI
09/28/2020	SIZE DESIGN DEVELOPMENT	BK	AA	RI

PURE POWER
 5 MARINE VIEW PLAZA, HARTFORD, CT 06103
 WWW.PUREPOWER.COM
 RICHARD A. VINSO
 CT LICENSE NO. 0362862

VEROGY
 150 HAVENWOOD STREET
 HARTFORD, CT 06103
 WWW.VEROGY.COM

DEVELOPER: VEROGY
 PROJECT # 00682

PAGE SIZE: 36" x 24"

DC SYSTEM POWER: 7,590.57 kW
 AC SYSTEM POWER: 4,975.00 kW
 MODULE TYPE: TRINA 395/RISEN 380
 MODULE QUANTITY: 15,990/3,354
 STRING QUANTITY: 615/129
 ORIENTATION: 30° TILT, 180° AZIMUTH

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE
 341 EAST ROAD
 EAST WINDSOR, CONNECTICUT 06016

DRAWING # E500

RULER IN INCHES: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18


Datasheet

100/125kW, 1500Vdc String Inverters for North America



CPS SCH100/125KTL-DO/US-600

The 100 & 125kW high power CPS three phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch safe fusing for up to 20 strings. The CPS Flex Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70, NEC 2014 and 2017 compliant
- NEMA Type 4X outdoor rated, tough tested enclosure
- Touch safe DC Fuse holders adds convenience and safety
- Advanced Smart-Grid features (CA Rule 21 certified)
- CPS Flex Gateway enables remote FW upgrades
- kVA Headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Integrated AC & DC disconnect switches
- Generous 1.87 and 1.5 DC/AC Inverter Load Ratios
- 1 MPPT with 20 fused inputs for maximum flexibility
- Separable wire-box design for fast service
- Copper and Aluminum compatible AC connections
- Standard 5 year warranty with extensions to 20 years



100/125KTL Standard Wire-box



100/125KTL Centralized Wire-box



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Chint Power Systems America
6800 Koll Center Parkway, Suite 235 Pleasanton, CA 94566
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

CPS		Technical Data	
Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600	
DC Input			
Max. PV Power	187.5kW	187.5kW	
Max. DC Input Voltage	1500V	1500V	
Operating DC Input Voltage Range	600-1450Vdc	600-1450Vdc	
Startup DC Input Voltage / Power	900V / 250W	900V / 250W	
Number of MPP Trackers	1	1	
MPPT Voltage Range ¹	870-1300Vdc	870-1300Vdc	
Max. PV Input Current (Isc x1.25)	275A	275A	
Number of DC Inputs	20 PV source circuits, pos. & neg. fused (Standard Wire-box) 1 PV output circuit, 1-2 terminations per pole, non-fused (Centralized Wire-box)		
DC Disconnection Type	Load-rated DC switch		
DC Surge Protection	Type II MOV (with indicator/remote signaling), Up to 2.5kV, In=20kA (820uS)		
AC Output			
Rated AC Output Power	100kW	125kW	
Max. AC Output Power ²	100kVA (111kVA @ PF=0.9)	125kVA (132kVA @ PF=0.95)	
Rated Output Voltage	600Vac		
Output Voltage Range ³	528-600Vac		
Grid Connection Type ⁴	3Ø / PE / N (Neutral optional)		
Max. AC Output Current @600Vac	98.2/106.8A	120.3/127.2A	
Rated Output Frequency	60Hz		
Output Frequency Range ⁵	57-63Hz		
Power Factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)	
Current THD	<3%		
Max. Fault Current Contribution (1-cycle RMS)	41.47A	175A	
Max. OCPD Rating	150A	175A	
AC Disconnection Type	Load-rated AC switch		
AC Surge Protection	Type II MOV (with indicator/remote signaling), Up to 2.5kV, In=20kA (820uS)		
System			
Topology	Transformerless		
Max. Efficiency	98.1%		
CEC Efficiency	98.5%		
Stand-by / Night Consumption	<4W		
Environment			
Enclosure Protection Degree	NEMA Type 4X		
Cooling Method	Variable speed cooling fans		
Operating Temperature Range	-22°F to +140°F / -30°C to +60°C (derating from +113°F / +45°C)		
Non-Operating Temperature Range ⁶	-40°F to +158°F / -40°C to +70°C maximum		
Operating Humidity	0-100%		
Operating Altitude	8200ft / 2500m (no derating)		
Audible Noise	<65dB@1m and 25°C		
Display and Communication			
User Interface and Display	LED Indicators, WiFi + APP		
Inverter Monitoring	Modbus RS485		
Site Level Monitoring	CPS Flex Gateway (1 per 32 Inverters)		
Modbus Data Mapping	SunSpec/CPS		
Remote Diagnostics / FW Upgrade Functions	Standard / with Flex Gateway		
Mechanical			
Dimensions (WxHxD)	45.28x24.25x9.84in (1150x616x250mm) with Standard Wire-box 39.37x24.25x9.84in (1000x616x250mm) with Centralized Wire-box		
Weight	Inverter: 121lb / 55kg; Wire-box: 55lb / 25kg (Standard Wire-box); 33lb / 15kg (Centralized Wire-box)		
Mounting / Installation Angle	15 - 90 degrees from horizontal (vertical or angled)		
AC Termination	M10 Stud Type Terminal Block (3Ø) (Wire range: 10AWG - 500kcmil CU/AL, Lugs not supplied) Screw Clamp Terminal Block (N) (W12 - 10AWG CU/AL)		
DC Termination	Screw Clamp Fuse Holder (Wire range: #12 - #8AWG CU), Standard Wire-box Busbar, M8 PEMs (Wire range: #1AWG - 250kcmil CU/AL, Lugs not supplied) - Centralized Wire-box		
Fused String Inputs	15A or 20A fuses provided (Determined by product SKU)		
Safety			
Safety and EMC Standard	UL1741-SA-2016, CSA-C22.2 NO.107-1.01, IEEE1547A-2014, FCC PART15		
Selectable Grid Standard	IEEE 1547a-2014, CA Rule 21, ISO-NE		
Smart-Grid Features	Volt-Ride/Thru, Freq-Ride/Thru, Ramp-Rate, Specified-PF, Volt-VAr, Freq-Watt, Volt-Watt		
Warranty			
Standard ⁷	5 years		
Extended Terms	10, 15 and 20 years		

¹ See user manual for further information regarding MPPPT Voltage Range when operating at non-unity PF
² Max. AC Output Power rating valid within MPPPT voltage range and temperature range of -30°C to +40°C (22°F to +104°F) for 100kW PF 0.9 and 125kW PF 0.95
³ The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.
⁴ Wire neutral grounded. Data may not be correct for other grid standards.
⁵ See user manual for further requirements regarding non-operating conditions.
⁶ 5 year warranty effective for units purchased after October 1st, 2019.



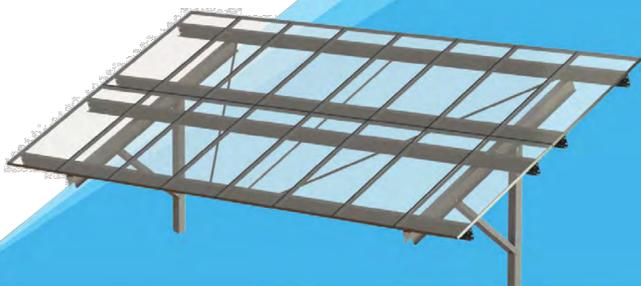
OVER 10 GW SOLD

Global Leader for Fixed Tilt Structures & Trackers

TECHNICAL DATASHEET

MAXSPAN™

BEST QUALITY AND PRICED POST DRIVEN FIXED TILT SYSTEMS



FAST INSTALL + HANDLES SLOPING GROUND

LESS POSTS WITH UNMATCHED SPAN AND UP TO 15% TERRAIN SLOPES

- Supports all poly, glass, and thin film modules
- Rugged design enables 175 mph [78 m/s] wind and 90 psf [4,300 Pa] snow loads
- Pull test and geotech services available
- Galvanized Z purlins have integrated trays for easy wire management
- 10° to 35° tilt with multiple inter-row spacing options



OVER 10 GW SOLD

Global Leader for Fixed Tilt Structures & Trackers



2-Up in Portrait Single Post System



4-8Up in Landscape for Bi-Facial Modules



2-Up in Portrait and 4-8Up in Landscape



East/West Post System

FEATURES

- Industry's most flexible racking system handles undulating ground conditions
- Three axes of adjustability demanded by installers for navigating real world site conditions where significant adjustability in the field is required
- The unmatched span capability of MaxSpan™ means there are fewer foundations than competing systems, which means less posts and less post installation cost. As few as 180 posts per MW for 2 up in portrait, 130 posts per MW for 3 up in portrait.
- Over 5" (12.7 cm) vertical adjustment for fast top of post leveling
- Up to 4'-0" (122 cm) high ground clearance to allow for snow and vegetation
- 10° to 35° tilt with multiple inter-row spacing options
- Available for framed modules (including First Solar Series 6™) in 2 to 4 portrait and 4 to 8 landscape and for multiple glass on glass module configurations including First Solar Series 4™
- Full layout and engineering analysis for every project
- Integrated grounding and wire management
- WideRange and roll formed posts available
- South facing and East/West system option
- Single and Dual Post configuration available
- StubPost™ - With adjustable extender to handle rolling ground without grading
 - 35% shorter and lighter stub posts for faster handling and faster post driving
 - Install StubPost™
 - Install extender and base bracket at the same time
- Pre-assembled "Swiss Army Knife" Beam:
 - One worker carry by weight
 - Just bolt it onto post extender, cut zip tie, swing braces and brackets into position, and bolt down
 - All hardware and brackets pre-attached and in assembly kit
 - Super simple staging: one unit replaces previous staging of nuts, bolts, brackets, braces, and beam
- MaxSpan™ with TwistClamps™
 - TwistClamps™ increase install speed 400%
 - 400 modules per worker day versus 100 with nuts and bolts
 - One worker inserts and twists all pre-assembled TwistClamps™ into purlins
 - Follow-up workers slide modules under TwistClamps™
 - Workers then use torque wrenches to do just one final rotation on the pre-attached serrated flange nut to reach required torque and simultaneously grounds the module
 - Modules always align even if posts and beams are far out of alignment since workers can slide modules north and south under TwistClamps™
 - No power tools or hardware needed
 - No follow-up torquing operations required

TEST & CERTIFICATION

- Meet IBC and ASCE standards for structural loading
- Electrical bonding with GameChange top mount clamps or star washers included
- ETL / UL 2703 tested (similar to the relevant sections of IEC 61215 & 61730)
- Wind tunnel tested by industry leader CPP
- Independent assessment by Black & Veatch
- Warranty 20 years - Designed and engineered in USA

CALCULATIONS

- PE Stamped Drawings - Design loads according to local building codes: ASCE 7, NBC, Eurocode, AS1170, GB 50009
- 100% code compliant designs for any locality

PULL TEST & GEOTECH

- Vertical and lateral capacity of the post is determined by pull test
- Test data is then analyzed by our in-house engineering team in parallel with geotechnical report to give the most efficient embedment depths, spans and post type

MATERIAL

- Post: G235 (55 µm) galvanized steel (HDG ASTM A123 option also available)
- Galvanized Purlins, NS Beam, Brace: G90 (20 µm) galvanized steel.
- Standard up to Ø180 (60 µm) special order.
- Star bolt or ETL / UL top mount teether module clamp; stainless steel & magnesium
- Proprietary Integrated Hardware™: For faster structure assembly, module mounting and reduced O&M cost. Oversized Serrated Flange Nyloc Nut and Oversized Flange Star Bolt with integrated star washer eliminates the need for washers and star washers.

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Rev: 2-2-2021

PROJECT: SOLAR GROUND MOUNT SYSTEM AT EAST WINDSOR SOLAR ONE 341 EAST ROAD EAST WINDSOR, CONNECTICUT 06016

DEVELOPER: VEROGY

PAGE SIZE: 3.6" x 24"

PROJECT #: 00682

DC SYSTEM POWER: 7,590.57 kW
AC SYSTEM POWER: 4,975.00 kW
MODULE TYPE: TRINA 395/RISEN 380
MODULE QUANTITY: 15,990/3,354
STRING QUANTITY: 615/129
ORIENTATION: 30° TILT, 180° AZIMUTH

PURE POWER ENERGY STORAGE
5 MARINE VIEW PLAZA, HOBOKEN, NJ
WWW.PUREPOWER.COM
RICHARD A. WILSON
03/28/2020 9:02 AM DESIGN DEVELOPMENT
CT LICENSE NO. 00528262

DATE: 03/05/2021

REVISION DESCRIPTION: PM LENG CHK