

## PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(33) Q CELL Q.PEAK DUO G-5 325
INVERTER	(1) SEI0000H-US
OPTIMIZER	(33) SOLAREEDGE P370
ARRAY PITCH	45°
ARRAY AZIMUTH	~230°
RACKING	IRONRIDGE XRI00 ALUMINUM RAIL
ATTACHMENT	ALUMINUM L-FEET WITH SNAP N' RACK FASTENERS

## AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PALERMO ME
ELECTRICAL AUTHORITY	PALERMO ME
ZONING/PLANNING AUTHORITY	PALERMO ME
ELECTRICAL UTILITY	CMP

## DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	100 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	70 PSF
EXPOSURE CATEGORY	B
ROOF HEIGHT	22
ROOF COMPOSITION	STANDING SEAM METAL
RAFTER	
RAFTER SPACING	

## SHEET LIST:

G001	TITLE SHEET
A001	SITE PLAN
A002	MODULE LAYOUT
E001	ONE LINE DIAGRAM

## GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES AND BUILDING CODES.
2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE AND LOCALLY ADOPTED ELECTRICAL CODE.
3. ROOFTOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A RECOGNIZED LABORATORY.
5. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS PER NEC 690.
6. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND DISCONNECTS SHALL BE INSTALLED IN THE MOST DIRECT ROUTE POSSIBLE.
7. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES REQUIRED BY NEC 110.
8. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.



**REVISION  
ENERGY**

91 WEST MAIN STREET  
LIBERTY, ME 04949  
(207)-589-4171

CLIENT:

BOB MORRISON  
2000 LEVEL HILL RD  
PALERMO ME, 04354

SYSTEM TYPE:

10.725KW GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

AS BUILT

DESIGNED BY: JJP

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 2/20/2019

DWG TITLE:

TITLE SHEET

DWG NUMBER:

G001

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

# PROJECT SUMMARY:

THE PROJECT SCOPE INCLUDES THE DESIGN, SPECIFICATION, PROCUREMENT, INSTALLATION AND COMMISSIONING OF A COMPLETE, TURN-KEY, GRID-TIED PHOTOVOLTAIC ELECTRIC SYSTEM.

MODULE TYPE	(33) Q CELL Q.PEAK DUO G-5 325
INVERTER	(1) SEI0000H-US
OPTIMIZER	(33) SOLAREEDGE P370
ARRAY PITCH	45°
ARRAY AZIMUTH	~230°
RACKING	IRONRIDGE XRI00 ALUMINUM RAIL
ATTACHMENT	ALUMINUM L-FEET WITH SNAP N' RACK FASTENERS

# DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	100 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	70 PSF
EXPOSURE CATEGORY	B
ROOF HEIGHT	22
ROOF COMPOSITION	STANDING SEAM METAL
RAFTER	
RAFTER SPACING	

# JOB NOTES:

BREAKER BACKFEED IN MAIN PANEL (IT'S 225A RATED WITH A 200A MAIN BREAKER). GROSS METER TO BE INSTALLED TO THE RIGHT OF LB FOR SERVICE PENETRATION OF EXTERIOR WALL. IDEALLY YOU'D PIPE OUT THE BACK OF THE INVERTER INTO THE GROSS METER, SPLIT THE NEUTRAL WITH A 3 PORT BURNDY. RUN 2 LINES, A NEUTRAL AND A GROUND OUT TO THE GROSS METER, RUN 2 LINES BACK THROUGH THE SAME CONDUIT TO THE INVERTER WHERE YOU'D PICK UP A NEUTRAL AND GROUND AND INTO THE MAIN PANEL WHERE YOU INTERCONNECT. DC ROUGH-IN HAS ALREADY BEEN DONE, RYAN WARNS 360° OF BEND IN ATTIC ALONE.



**REVISION ENERGY**

91 WEST MAIN STREET  
LIBERTY, ME 04949  
(207)-589-4171

CLIENT:

BOB MORRISON  
2000 LEVEL HILL RD  
PALERMO ME, 04354

SYSTEM TYPE:

10.725KW GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

AS BUILT

DESIGNED BY: JJP

REVISION: 0

PRINT SIZE: 11" X 17"

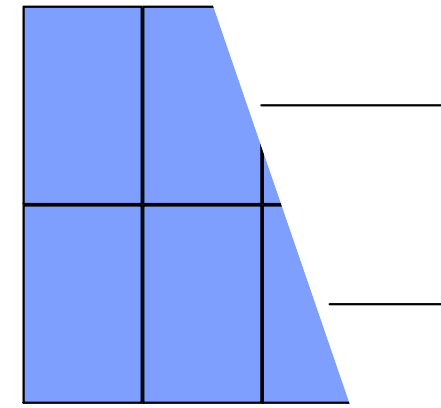
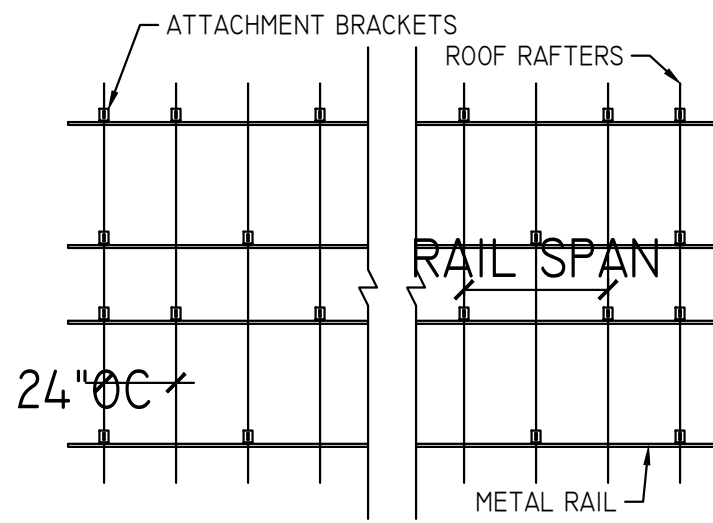
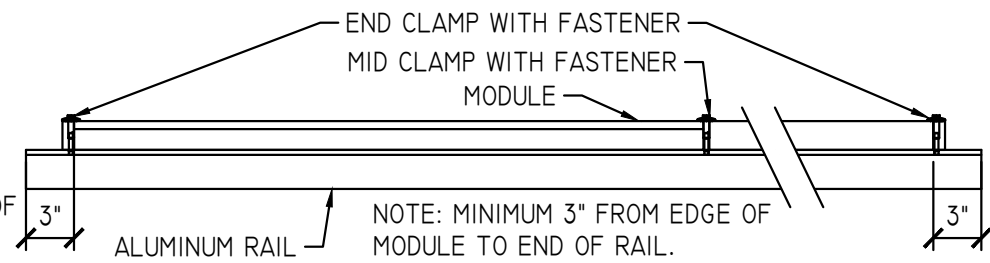
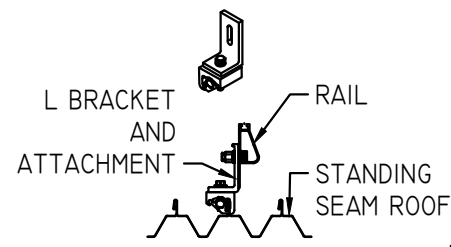
DATE: 2/20/2019

DWG TITLE: SITE PLAN

DWG NUMBER: A001

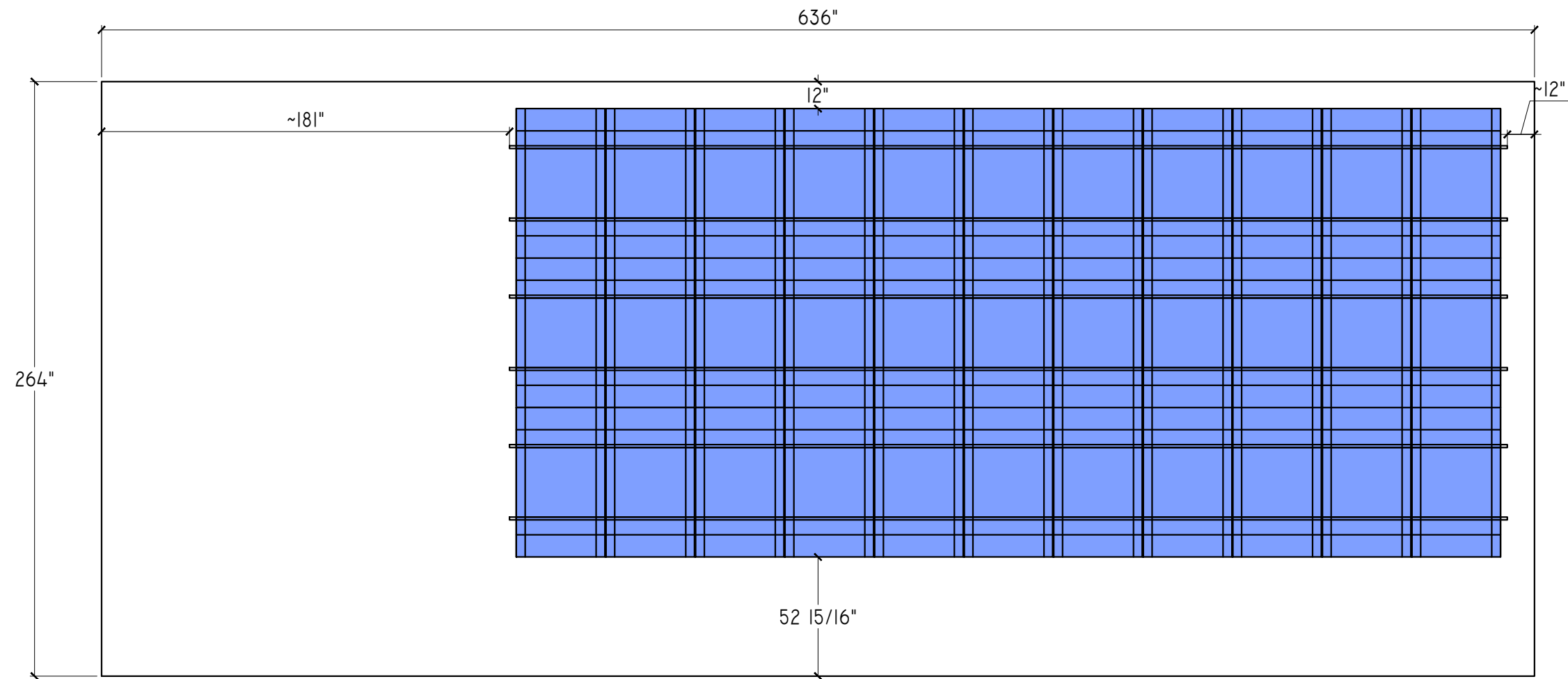
© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.



ATTACHMENT NOTES:

1. MAXIMUM RAIL LENGTH IS 50' BEFORE EXPANSION GAP IS REQUIRED.
2. MAXIMUM RAIL SPAN IS TYPICALLY 4'. THIS DISTANCE WILL VARY BASED ON ROOF SLOPE, SNOW LOAD, WIND SPEED, AND EXPOSURE CATEGORY.
3. MAXIMUM RAIL CANTILEVER DISTANCE IS 0.40 X RAIL SPAN.
4. SEAL ALL ATTACHMENT POINTS WITH GEOCELL. SEALS SHALL BE WATERTIGHT BETWEEN THE ATTACHMENT BRACKETS, ROOF MATERIAL AND STRUCTURAL MEMBERS.
5. ROOF ATTACHMENTS SHALL BE STAGGERED FOR EVEN DISTRIBUTION OF LOAD ON ROOF RAFTERS.
6. CLEARANCE BETWEEN THE ROOF AND THE BOTTOM OF THE RAIL SHALL BE A MINIMUM OF 2"



**REVISION ENERGY**

91 WEST MAIN STREET  
LIBERTY, ME 04949  
(207)-589-4171

CLIENT:

BOB MORRISON  
2000 LEVEL HILL RD  
PALERMO ME, 04354

SYSTEM TYPE:

10.725KW GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

AS BUILT

DESIGNED BY: JJP  
REVISION: 0  
PRINT SIZE: 11" X 17"  
DATE: 2/20/2019  
DWG TITLE:

MODULE LAYOUT

DWG NUMBER:  
A002

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

MODULE SPECIFICATIONS	
Q CELL Q.PEAK DUO G-5 325 QTY 33	
STC RATING	325
VMP	33.65
IMP	9.66
Voc	40.4
ISC	10.14
TEMP COEFF. Voc %	-0.0028

MODULE-LEVEL DC OPTIMIZER SPECIFICATIONS	
SOLAREEDGE P370 QTY 33	
NOMINAL DC RATING (WATTS)	370
MAX OUTPUT CURRENT Idc	15

GRID TIED INVERTER SPECIFICATIONS	
SEI0000H-US QTY 1	
NOMINAL AC RATING	10000
NOMINAL VAC	240
MAX IAC	42
CEC EFFICIENCY	99.00%

STICKER CALCULATIONS	
MAX. DC VOLTAGE	480V
MAX. CIRCUIT CURRENT	15A
RATED AC OUTPUT CURRENT	42A
NOMINAL OPERATING AC VOLTAGE	240V

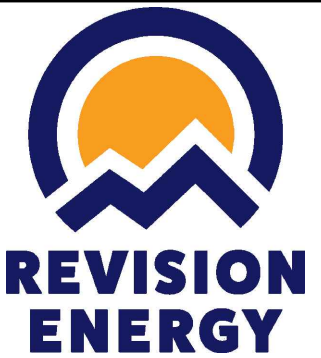
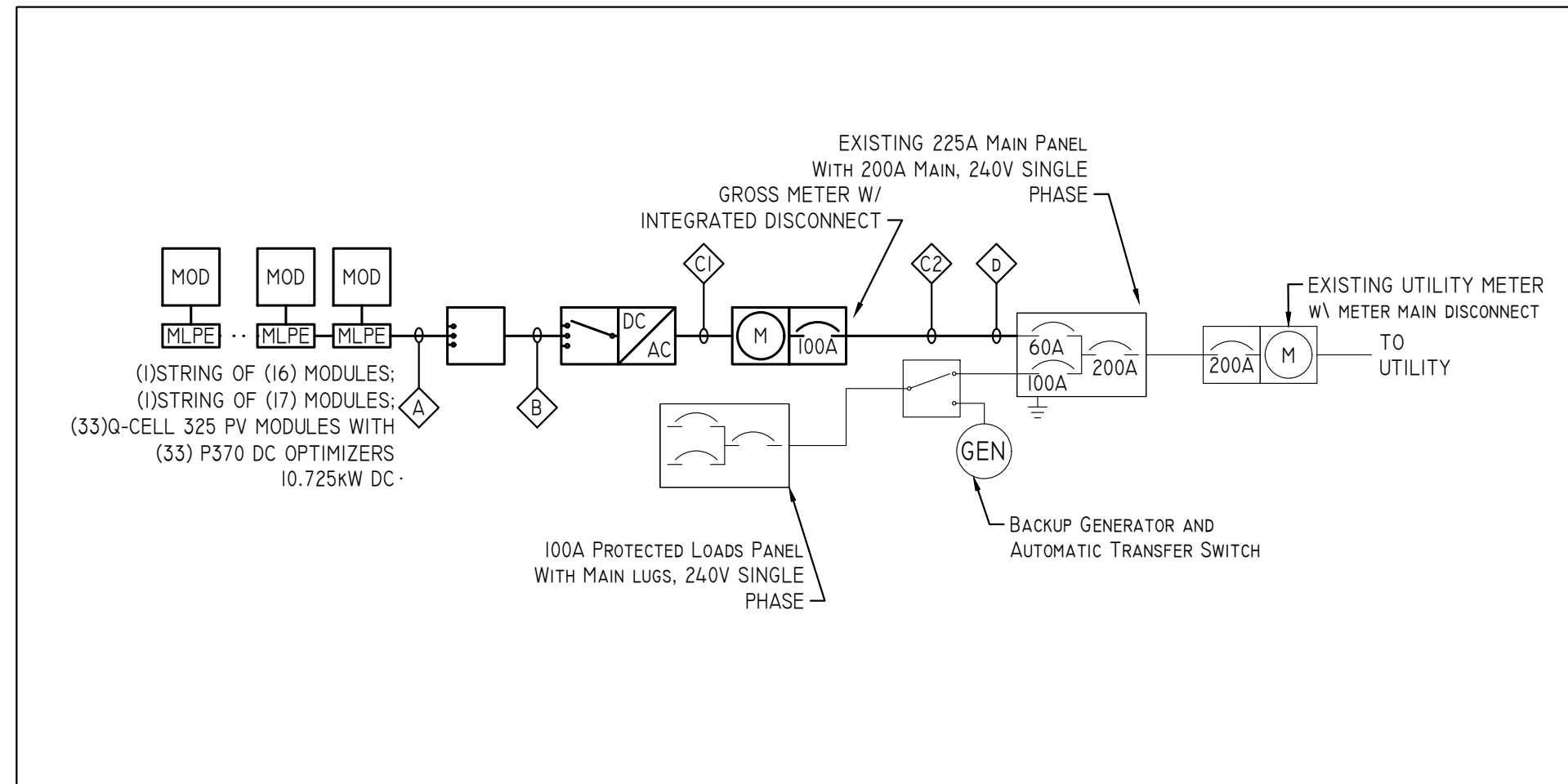
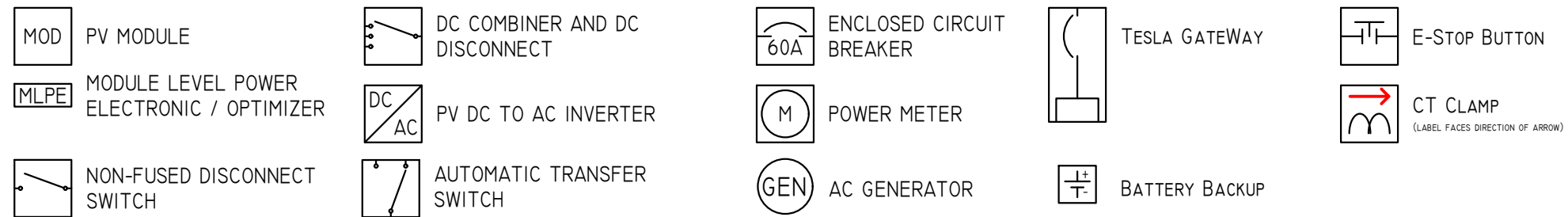
### DESIGN NOTES:

- ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%
- LOWEST EXPECTED AMBIENT TEMPERATURE IS BASED ON ASHRAE EXTREME MIN FOR THE SPECIFIED LOCATION.
- AVERAGE HIGH TEMPERATURE IS BASED ON ASHRAE 2% AVG. FOR THE SPECIFIED LOCATION.

WIRING SCHEDULE								
TAG	DESCRIPTION	SETS	CABLE	INSULATION	CONDUIT	LENGTH	CONDUIT FILL	VOLTAGE DROP
A	ARRAY TO JBOX	1	L:(4)#10 AWG G:(1)#6 AWG	PV		20		0.22%
B	JBOX TO INVERTER	1	L:(4)#10 AWG G:(1)#10 AWG	THWN-2	3/4 EMT	40	19.80%	0.43%
CI	INVERTER TO AC GROSS METER	1	L:(4)#6 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	1 EMT	2	28.40%	0.05%
C2	GROSS METER TO INVERTER	1	L:(4)#6 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	1 EMT	2	28.40%	0.05%
D	INVERTER TO MDP	1	L:(2)#6 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	3/4 SCH 80 PVC	2	35.20%	0.05%

NOTE: CI AND C2 SHARE SAME CONDUIT, 1" EMT WITH (4) LINES, (1) NEUTRAL AND (1) GROUND

### SYMBOLS:



91 WEST MAIN STREET  
LIBERTY, ME 04949  
(207)-589-4171

CLIENT:

BOB MORRISON  
2000 LEVEL HILL RD  
PALERMO ME, 04354

SYSTEM TYPE:

10.725KW GRID TIED SOLAR  
PHOTOVOLTAIC SYSTEM

AS BUILT

### LINE TYPES:

- - - DEMOLITION
- EXISTING
- NEW

DESIGNED BY: JJP

REVISION: 0

PRINT SIZE: 11" X 17"

DATE: 2/20/2019

DWG TITLE:  
ONE LINE AND EQUIPMENT SPECIFICATIONS

DWG NUMBER:  
E001

© COPYRIGHT REVISION ENERGY

THIS DIAGRAM IS PROVIDED AS A SERVICE AND IS BASED ON THE UNDERSTANDING OF THE INFORMATION SUPPLIED. IT IS SUBJECT TO CHANGE BASED ON ACTUAL CONDITIONS, APPLICABLE EDITION OF THE NATIONAL ELECTRIC CODE, AND LOCAL GOVERNMENTAL AUTHORITIES.

118C9F4C-B8	118CE5AA-5C	118C0828-00	118CC338-C8	118C1416-F7	118CC036-C3	118C01F6-C4	118CC1DE-6C	118C1508-ED	118CC755-E9	118CBF1E-AA
1.1.16	1.1.13	1.1.2	1.1.3	1.1.14	1.1.8	1.1.4	1.2.2	1.2.12	1.2.1	1.2.4
118CD264-03	118CC23F-CE	118878FF-46	118C13F5-D5	118CA080-ED	118CDF0E-8A	118C13DB-BB	118CC8F8-8D	118C15A7-89	118CC6EA-7D	118CCDDDD-77
1.1.17	1.1.1	1.1.5	1.1.15	1.1.7	1.2.5	1.2.14	1.2.11	1.2.15	1.2.7	1.2.13
118CD5A2-44	118C8D83-0D	118C1D22-0C	118C8C45-CE	11887D12-58	118CBDE2-6C	118CC189-17	118CE743-F7	118CD584-56	118CBE53-DE	118C0AD9-80
1.1.9	1.1.10	1.1.11	1.1.6	1.1.12	1.2.10	1.2.6	1.2.3	1.2.16	1.2.9	1.2.8



## STRING AND STICKER MAP

PLEASE CONNECT MODULES AS STRUNG. PLEASE SHOW ROOF PENETRATIONS.

BOB MORRISON  
2000 LEVEL HILL RD  
PALERMO ME, 04354

SUMMARY			
TYPE	PRODUCT	DIMENSIONS	QUANTITY
MODULE:	Q CELL Q.PEAK DUO G-5 325	1000MM x 1685MM	33
RAIL:	IRON RIDGE XRI00	248 IN	(6) FULL (6) CUT
FASTENERS:	IRON RIDGE UFO	0.375 IN	72 MIN

RAIL LENGTH								
RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	MODULE ORIENTATION	RAIL ORIENTATION	RAIL LENGTH (IN)	FULL STICKS	CUT PIECE (IN)	SCRAP (IN)
SI	6	11	PORTRAIT	HORIZONTAL	442 7/8	1	194 7/8	53 1/8

RAIL CUT LIST	
RAIL LENGTH (IN)	QTY
FULL	6
194 7/8	6

