

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	(27) REC N-PEAK 325
INVERTER	(1) SE7600H-US
OPTIMIZER	(27) SOLAREEDGE P340
ARRAY PITCH	45°
ARRAY AZIMUTH	173°
RACKING	BLACK IRONRIDGE XRI00 ALUMINUM RAIL
ATTACHMENT	SNAPNRACK WIDE STANDING SEAM CLAMPS AND ALUMINUM L-FEET

AUTHORITIES HAVING JURISDICTION:

BUILDING AUTHORITY	PLAINFIELD NH
ELECTRICAL AUTHORITY	PLAINFIELD NH
ZONING/PLANNING AUTHORITY	PLAINFIELD NH
ELECTRICAL UTILITY	LIBERTY

DESIGN CRITERIA:

OCCUPANCY	RESIDENTIAL
DESIGN WIND LOAD	115 MPH
RISK CATEGORY	I
GROUND SNOW LOAD	90 PSF
EXPOSURE CATEGORY	C
ROOF HEIGHT	12' ABOVE GRADE TO EAVES
ROOF COMPOSITION	STANDING SEAM STEEL
RAFTER	2"X8"
RAFTER SPACING	16" O.C.

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH LOCAL AND STATE ORDINANCES.
2. ELECTRICAL INSTALLATION SHALL COMPLY WITH STATE REQUIREMENTS.
3. ROOFTOP PENETRATIONS SHALL BE SEALED.
4. ALL EQUIPMENT SHALL BE LISTED AND TESTED BY A REGISTERED PROFESSIONAL ENGINEER.
5. SYSTEM SHALL CONFORM TO RAPID SHUTDOWN REQUIREMENTS.
6. CONDUIT RUNS BETWEEN SUB-ARRAYS, COMBINERS, AND INVERTERS SHALL BE THE MOST DIRECT ROUTE POSSIBLE.
7. ELECTRICAL EQUIPMENT SHALL BE INSTALLED TO MAINTAIN CLEARANCES AS REQUIRED BY THE NATIONAL ELECTRICAL CODE (NEC).
8. EQUIPMENT SHALL BE LABELED PER NEC 2017 REQUIREMENTS.



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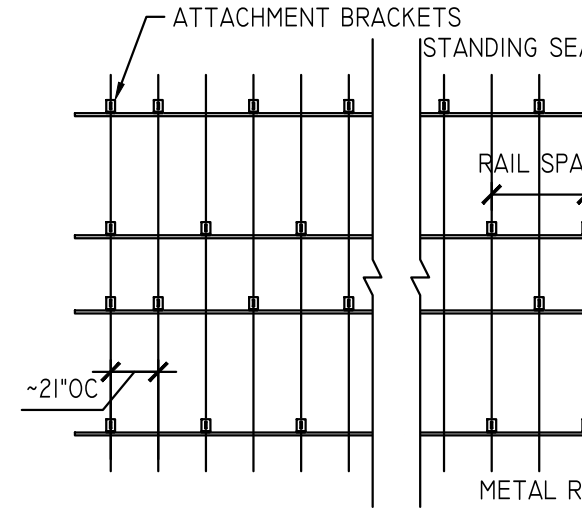
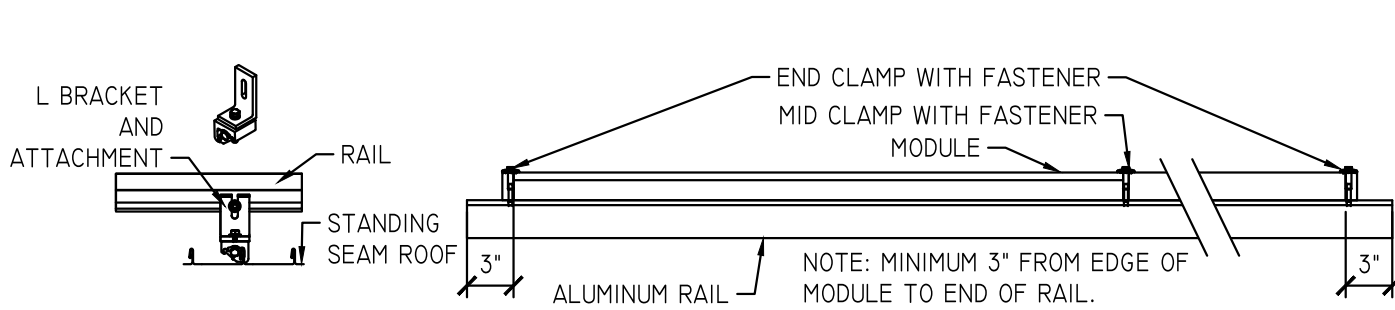
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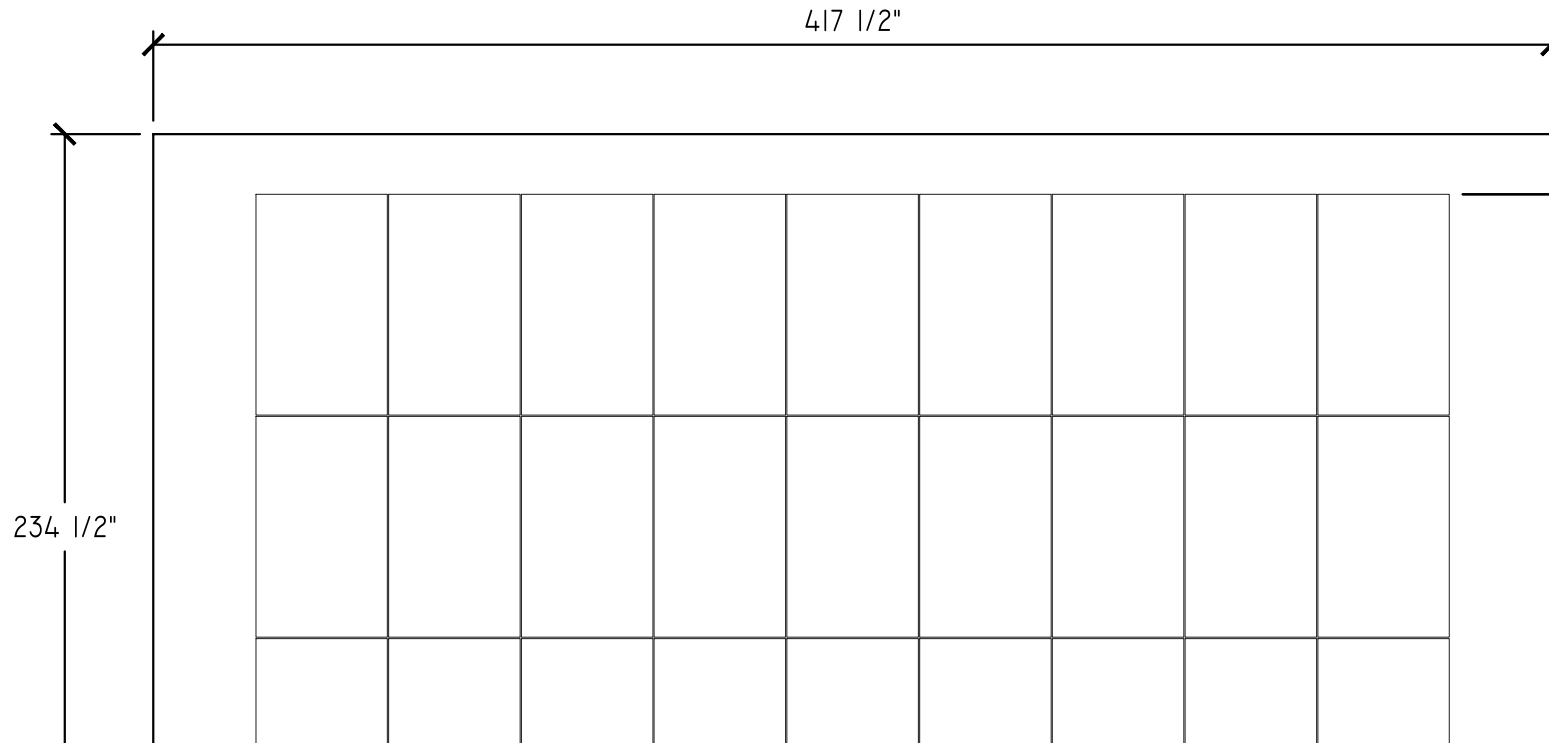
EQUIPMENT LOCATIONS:





ATTACHMENT NOTES:

1. MAXIMUM RAIL LENGTH IS 100' 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"



MODULE SPECIFICATIONS	
REC N-PEAK 325 QTY 27	
STC RATING	325
VMP	34.4
IMP	9.46
Voc	40.7
Isc	10.28
TEMP COEFF. Voc %	-0.27

MODULE-LEVEL DC OPTIMIZER SPECIFICATIONS	
SOLAREEDGE P340 QTY 27	
NOMINAL DC RATING (WATTS)	340
MAX OUTPUT CURRENT I _{dc}	15

GRID TIED INVERTER SPECIFICATIONS	
SE7600H-US QTY 1	
NOMINAL AC RATING	7600
NOMINAL V _{ac}	240
MAX I _{ac}	32
CEC EFFICIENCY	99.00%

STICKER CALCULATIONS	
MAXIMUM DC VOLTAGE	480V
MAXIMUM CIRCUIT CURRENT	15A
RATED AC OUTPUT CURRENT	32A
NOMINAL OPERATING AC VOLTAGE	240V

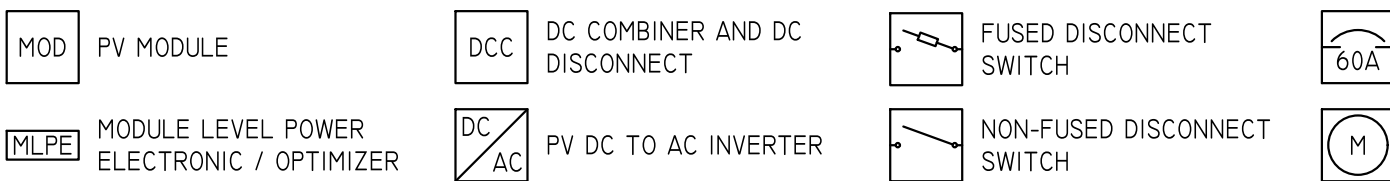
DESIGN NOTES:

- ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- SYSTEM VOLTAGE DROP SHALL NOT EXCEED 5%
- LOWEST EXPECTED AMBIENT TEMPERATURE IS

WIRING SCHEDULE					
TAG	DESCRIPTION	SETS	CABLE	INSULATION	CONDUIT
AI	PV ARRAY ON BARN TO JUNCTION BOX (JB)	1	L:(4)#10 AWG G:(1)#6 AWG	PV	
BI	JB TO INVERTER	1	L:(4)#10 AWG G:(1)#10 AWG	THWN-2	3/4"
CI	INVERTER TO BARN SUB PANEL	1	L:(2)#8 AWG N:(1)#10 AWG G:(1)#10 AWG	THWN-2	3/4"
DI	BARN SUB PANEL TO TRENCH JB	1	L:(2)#2 AWG N:(1)#2 AWG G:(1)#8 AWG	THWN-2	1-1/4"
EI	TRENCH JB TO TRENCH	1	L:(2)#2 AWG N:(1)#2 AWG G:(1)#8 AWG	THWN-2	2" SCH
FI	TRENCH	1	L:(2)#2 AWG N:(1)#2 AWG G:(1)#8 AWG	THWN-2	2" SCH
GI	TRENCH TO TRENCH JB	1	L:(2)#2 AWG N:(1)#2 AWG G:(1)#8 AWG	THWN-2	2" SCH
HI	TRENCH JB TO INTERCONNECTION	1	L:(2)#2 AWG N:(1)#2 AWG G:(1)#8 AWG	THWN-2	1-1/4"

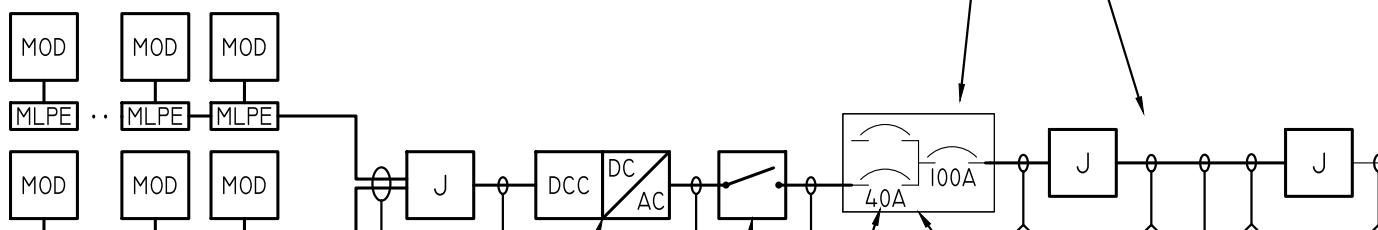
MONITORING	HOME ROUTER
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SYMBOLS:



REMOVE SEU CABLE AND METER OF EXISTING BARN SERVICE AFTER UTILITY DISCONNECTS OVERHEAD SERVICE CABLE. CONVERT BARN PANEL INTO A SUB PANEL FED FROM HOUSE MAIN PANEL VIA NEW FEEDER CABLE IN NEW BURIED CONDUIT.

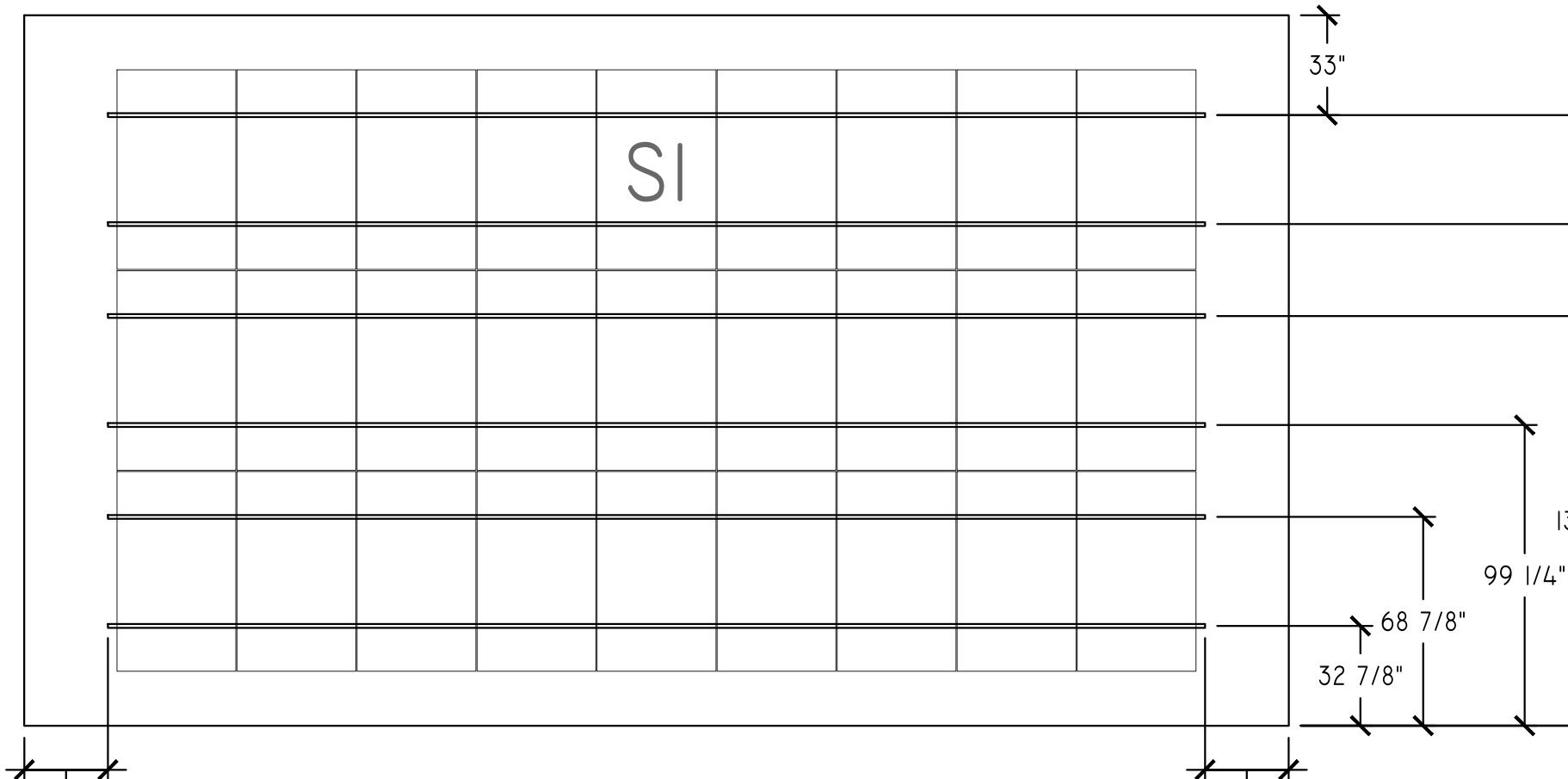
INSTALL SPARE 2" PVC CONDUIT IN TRENCH FROM HOUSE



SUMMARY			
TYPE	PRODUCT	DIMENSIONS	QUANTITY
MODULE:	REC N-PEAK 325	39.25IN x 65.94IN	27
RAIL:	IRON RIDGE XRI00	248 IN	(6) FULL (6) CUT
FASTENERS:	IRON RIDGE UFO	0.375 IN	60 MIN

RAIL LENGTH				
RAIL SECTION TAG	NUMBER OF RAIL SECTIONS	QTY OF PANELS IN SECTION	RAFTER SPACING	MODULE ORIENTATION
SI	6	9	16"	PORTRAIT

INVERTER	WATTS / STRING	MAX MODS PER STRING
SE7600H-US	6000	18





SAFETY SHEET NOTES:

1. DRAW IN APPROXIMATE ANCHOR LOCATIONS AND SWING RADIUS
2. DRAW IN APPROXIMATE RESTRICTED ACCESS ZONE (RULE OF THUMB 10' FOR EVERY STORY OF BUILDING)
3. DRAW IN MACHINERY OR PERSONNEL ACCESS PATHS

ANCHOR POINT ATTACHMENT NOTES:

1. ANCHOR POINTS REQUIRING FASTENERS MUST BE INSTALLED INTO BUILDING STRUCTURE (RAFTERS OR PURLINS)
2. ANCHOR POINTS TO BE INSTALLED A MINIMUM OF 72" FROM ROOF RAKE
3. MAXIMUM SPACING BETWEEN ANCHOR POINTS IS 96"
4. LEAVE BEHIND ANCHOR TO BE INSTALLED UNDER TOP LEFT AND TOP RIGHT PANELS TO FACILITATE SAFE ROOF EXIT
5. 3 MINIMUM ANCHORS PER ROOF
6. ANCHOR POINT I:I (ONE PERSON PER ANCHOR POINT AT A TIME)
7. WORK IS TO BE DONE WITHIN WHILE WITHIN 30 DEGREES OF ANCHOR.

