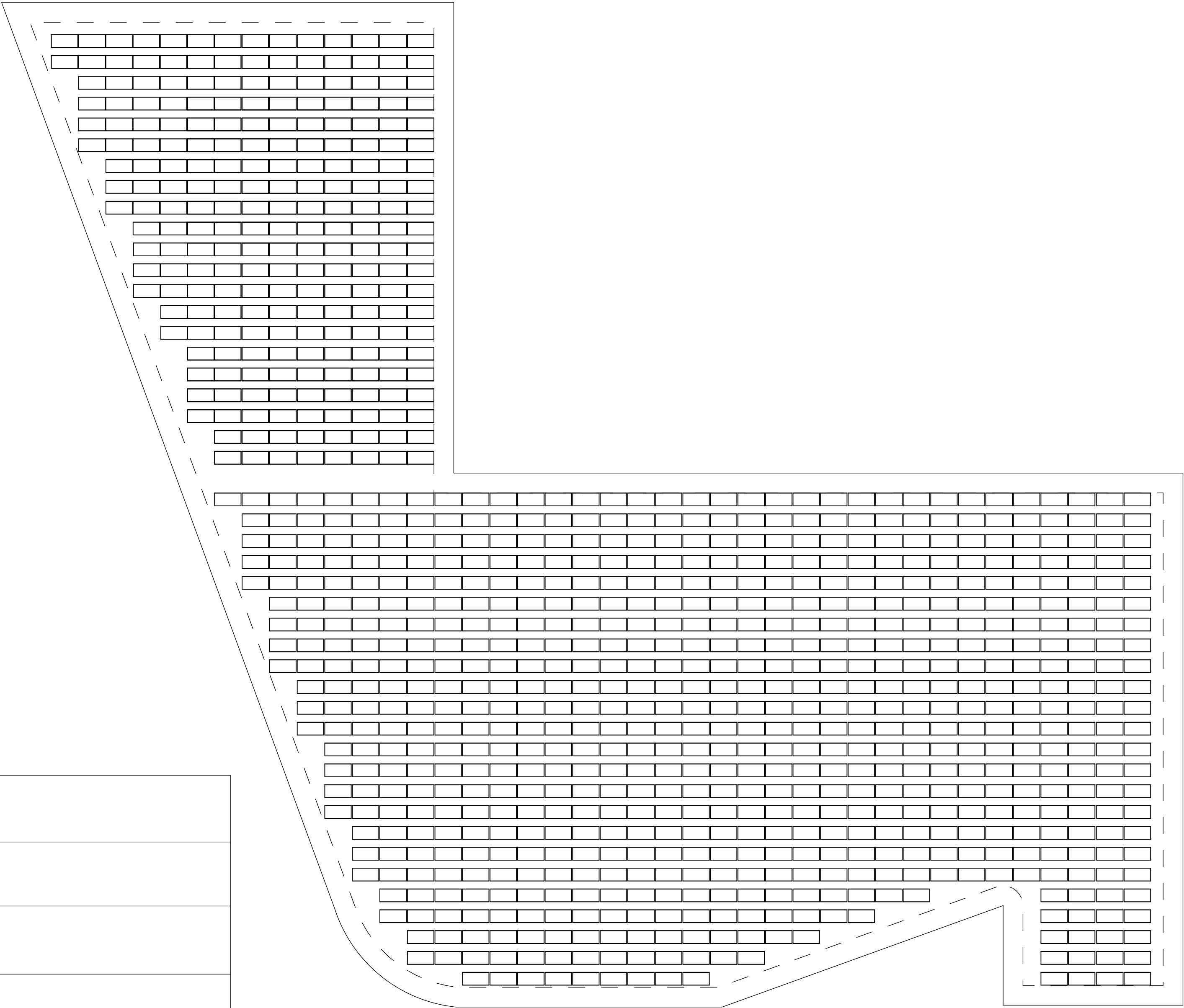
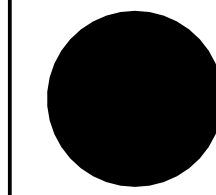


10 DEGREE FIXED TILT PV ARRAY	
MODULES	RENESOLA 260W 260M-24/Bbs
NUMBER OF PANELS	1110
DC POWER	288.60 kW



1 DOVER HIGH SCHOOL ROOFTOP PV LAYOUT



HARVARD, MA 01461-0242

www.solar design.com

tel: 978-456-6855

fax: 978-772-8715

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DOVER HIGH SCHOOL

SUBMISSION

#Project Status

Thursday, November 05, 2015

PROFESSIONAL STAMP

ISSUED FOR #Project Status ONLY
NOT FOR CONSTRUCTION

REVISION NOTES

MARK	DATE	DESCRIPTION

CONTRACTOR

NAME	
STREET	
CITY/ST/ZIP	
NOTES	

BUILDING

NAME	
STREET	#Street
CITY/ST/ZIP	#City, NEW HAMPSHIRE #Post
NOTES	

DRAWING

FILE NAME	2015-11-04 Dover HS NH Roof Layout.pln
SCALE	AS NOTED
DRAWN BY	#CAD Technician DATE DRAFTED: 11/5/2015
CHECKED BY	#Architect SHEET SIZE: ARCH D
DRAWING NO.	PV101
DRAWING TITLE	PV LAYOUT
SHEET 3 OF 15	



Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at <http://sam.nrel.gov>) that allow for more precise and complex modeling of PV systems.

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RESULTS

361,171 kWh per Year *

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Energy Value (\$)
January	2.30	18,053	2,941
February	3.05	21,564	3,513
March	4.14	31,543	5,138
April	5.11	36,373	5,925
May	5.83	42,149	6,866
June	5.82	39,723	6,471
July	6.35	43,881	7,148
August	5.45	37,860	6,167
September	4.62	31,543	5,138
October	3.30	24,259	3,952
November	2.48	17,853	2,908
December	2.13	16,371	2,667
Annual	4.22	361,172	\$ 58,834

Location and Station Identification

Requested Location	dover, new hampshire
Weather Data Source	SolarAnywhere® from Clean Power (43.15, -70.85) 3.5 mi
Latitude	43.15° N

Longitude	70.85° W
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PV System Specifications *(Residential)*

DC System Size	288.6 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	10°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	97%
DC to AC Size Ratio	1.1

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.16 \$/kWh
Initial Cost	3.30 \$/Wdc
Cost of Electricity Generated by System	0.21 \$/kWh

These values can be compared to get an idea of the cost-effectiveness of this system. However, system costs, system financing options (including 3rd party ownership) and complex utility rates can significantly change the relative value of the PV system.



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RESULTS

2,127,477 kWh per Year *

Month	Solar Radiation (kWh / m ² / day)	AC Energy (kWh)	Energy Value (\$)
January	2.30	106,340	17,323
February	3.05	127,024	20,692
March	4.14	185,802	30,267
April	5.11	214,253	34,902
May	5.83	248,281	40,445
June	5.82	233,987	38,116
July	6.35	258,483	42,107
August	5.45	223,014	36,329
September	4.62	185,804	30,267
October	3.30	142,897	23,278
November	2.48	105,162	17,131
December	2.13	96,432	15,709
Annual	4.22	2,127,479	\$ 346,566

Location and Station Identification

Requested Location	dover, new hampshire
Weather Data Source	SolarAnywhere® from Clean Power (43.15, -70.85) 3.5 mi
Latitude	43.15° N

Longitude	70.85° W
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PV System Specifications *(Residential)*

DC System Size	1700 kW
Module Type	Standard
Array Type	Fixed (open rack)
Array Tilt	10°
Array Azimuth	180°
System Losses	14.08%
Inverter Efficiency	97%
DC to AC Size Ratio	1.1

Initial Economic Comparison

Average Cost of Electricity Purchased from Utility	0.16 \$/kWh
Initial Cost	3.30 \$/Wdc
Cost of Electricity Generated by System	0.21 \$/kWh

These values can be compared to get an idea of the cost-effectiveness of this system. However, system costs, system financing options (including 3rd party ownership) and complex utility rates can significantly change the relative value of the PV system.