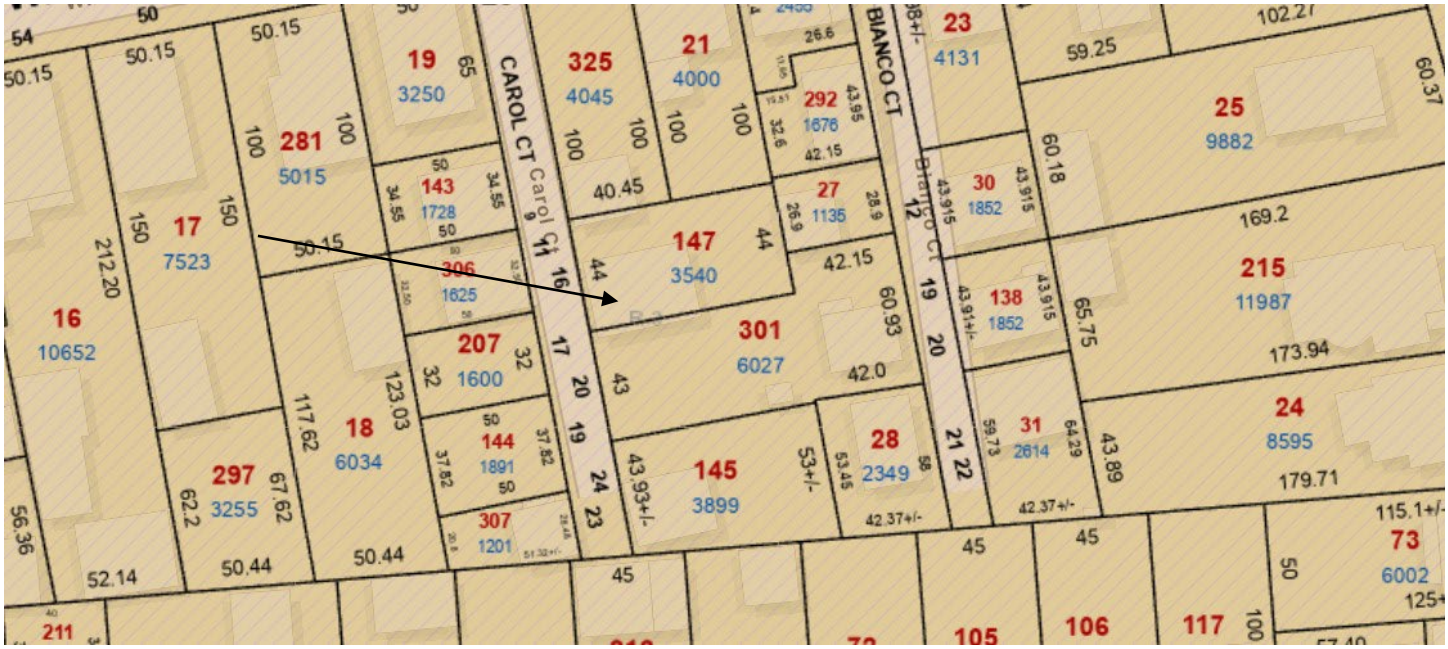
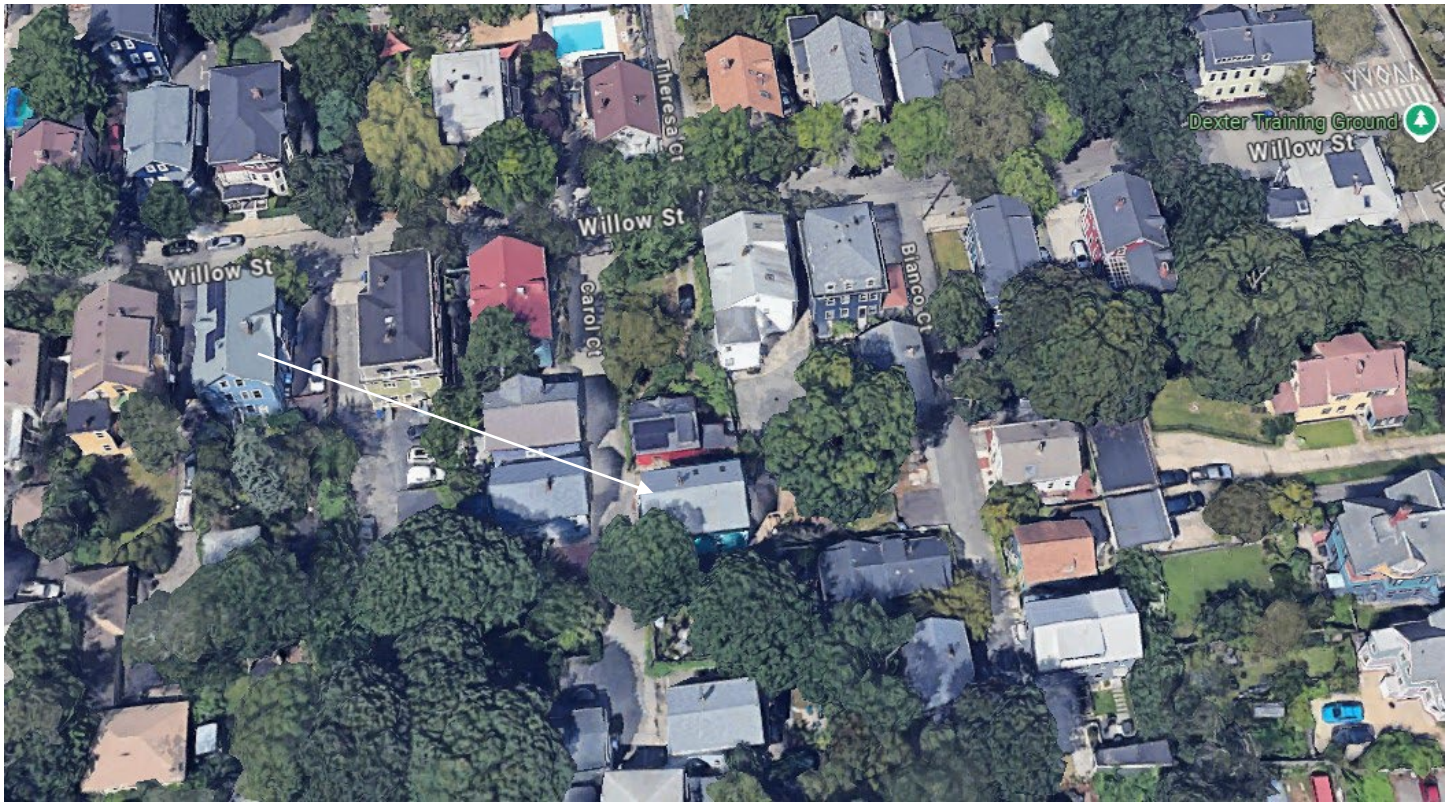
4. CASE 24.139, 16 CAROL COURT, House, 1860 (ARMORY)
2 ½- story, Greek Revival with front, two-bay, sidehall entry.
CONTRIBUTING



Arrow indicates 16 Carol Court.



Arrow indicates project location, looking north.

Applicant/Contractor: Kai R. Hadley, Portside Renewables, 77 N. Water St, New Bedford, MA 02740
Owner: Jennifer Hellmuth, 16 Carol Court, Providence, RI 02907

Proposal: The scope of work proposed consists of Minor Alterations and includes:

- installation of 24 solar panels to the south slope of the gable-end roof.

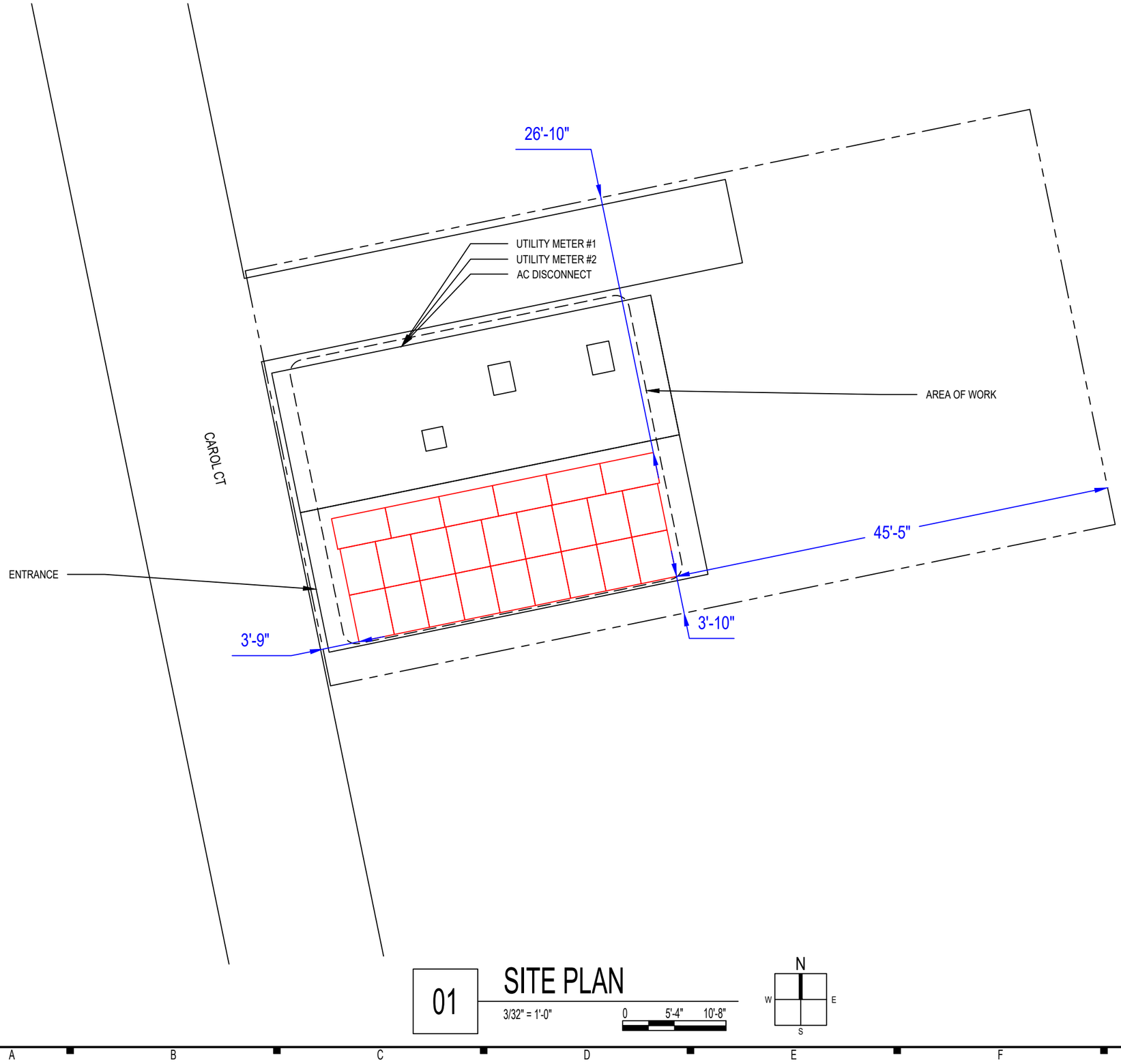
Issues: The following issues are relevant to this application:

- The application as submitted will be minimally visible from the public rights-of-way;
- The modifications as proposed meets Minor Alterations: Solar Energy Systems Guidelines, Section 2, in the following manner: Panel layout shall be sympathetic or appropriate to design and scale of building. Rectangular configurations are preferred, with ample setback from edge of roof, dormers, chimneys, etc. (2.A); Panels shall be installed parallel to the existing roof slope and matched as closely as possible to the roof plane (2.B); Panels shall be installed without destroying or replacing original or historic materials or significantly compromising or altering the building's structural integrity (2.C); Panels shall be compatible in color to existing roofing insofar as possible (2.D); Installation of panels shall be as inconspicuous as possible when viewed from public right-of-way (2.E); Installation shall be reversible. Panels shall be removed when no longer viable or functioning and roofing restored to pre-existing conditions (2.F); and,
- Plans, specifications and pictures have been submitted.

Recommendations: The staff recommends the PHDC make the following findings of fact:

a) 16 Carol Court is a structure of historical and architectural significance that contributes to the significance of the Armory local historic district, having been recognized as a contributing structure to the Broadway/Armory National Register Historic District;
b) The modifications as proposed meets Minor Alterations: Solar Energy Systems Guidelines, Section 2, and the application is considered complete; and,
c) The work as proposed is in accord with PHDC Standards 8 & 9 as follows: 8) the work will be done so that it does not destroy the historic character of the property or the district as they are not on the primary elevation and will be minimally visible from the public rights-of-way; and, 9) Whenever possible… alterations to structures shall be done in such a manner that if removed in the future, the essential form and integrity of the structure and the site will be unimpaired.

Staff recommends a motion be made stating that: The application is considered complete. 16 Carol Court is a structure of historical and architectural significance that contributes to the significance of the Armory local historic district, having been recognized as a contributing structure to the Broadway/Armory National Register Historic District. The Commission grants Final Approval of the proposal as submitted as the proposed alteration is appropriate having determined that the proposed alteration does not destroy the historic character of the property or the district and are historically and architecturally compatible with the property and district. The proposed alteration meets Minor Alterations: Solar Energy Systems Guidelines, Section 2, is reversible and will not have an adverse effect on the property or district as they will be minimally visible from the public rights-of-way (Standards 8 & 9), and the recommendations in the staff report, with staff to review any additional required details.



GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

PROPERTY LINE

01 SITE PLAN

3/32" = 1'-0"

0 5'-4" 10'-8"

N W E S

PORTSIDE RENEWABLES

CONTRACTOR

PORTSIDE RENEWABLES, LLC

PHONE: 508-470-1467
ADRESS: 77 N.WATER ST, NEW BEDFORD, MA 02740

LIC. NO.: GC-48542
HIC. NO.:
ELE. NO.:

NEW PV SYSTEM: 10.320 kWp

HELLMUTH & CORMIER RESIDENCE

16 CAROL CT,
PROVIDENCE, RI 02909

APN: 360147

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

SITE PLAN

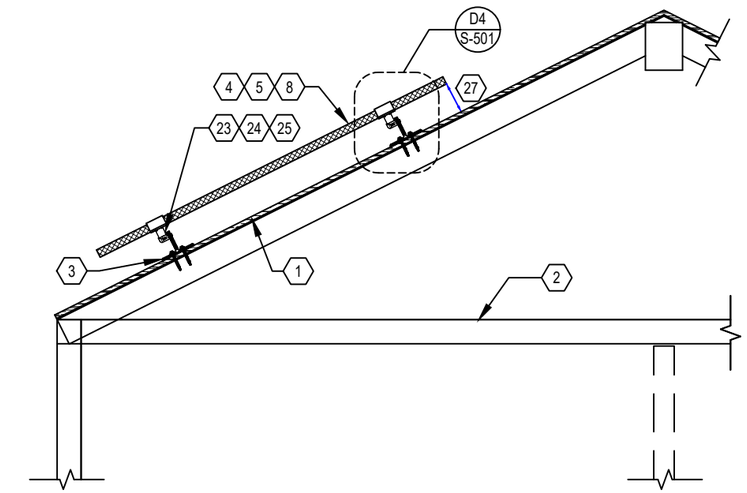
DATE: 09.24.2023

DESIGN BY: O.S.

CHECKED BY: M.M.

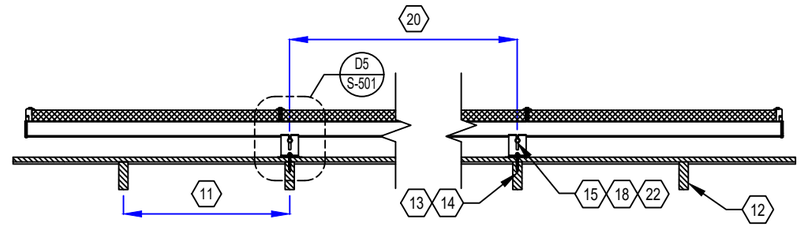
REVISIONS

A-101.00



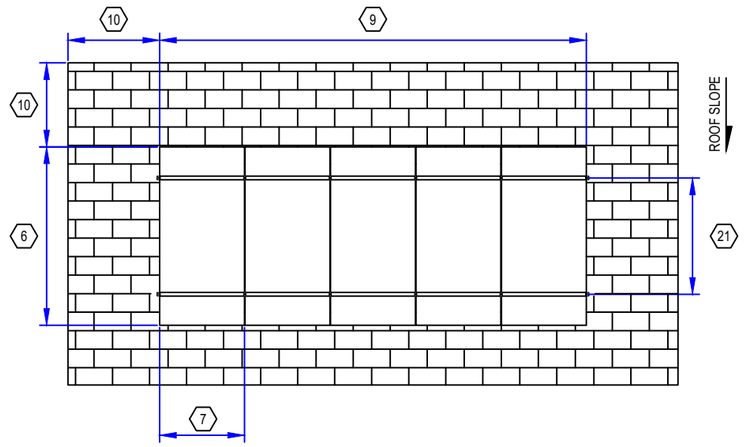
D1 RACKING DETAIL (TRANSVERSE)

NOT TO SCALE



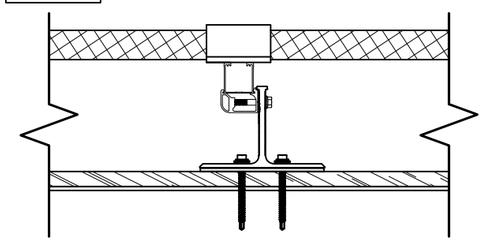
D2 RACKING DETAIL (LONGITUDINAL)

NOT TO SCALE



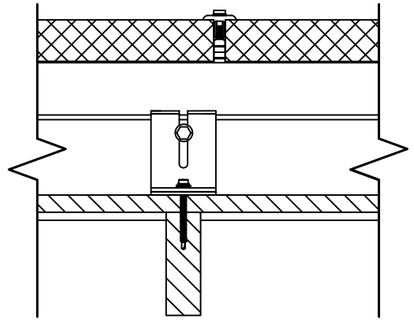
D3 RACKING DETAIL (TOP)

NOT TO SCALE



D4 DETAIL (TRANSVERSE)

NOT TO SCALE



D5 DETAIL (LONGITUDINAL)

NOT TO SCALE

GENERAL NOTES

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SHEET KEYNOTES

1. ROOF MATERIAL: ASPHALT SHINGLE
2. ROOF STRUCTURE: INTERIOR BEARING WALL
3. ATTACHMENT TYPE: UNIRAC STONGHOLD BUTYL ATT KIT
4. MODULE MANUFACTURER: SILFAB SOLAR
5. MODULE MODEL: SIL-430 QD
6. MODULE LENGTH: 67.8"
7. MODULE WIDTH: 44.6"
8. MODULE WEIGHT: 46.3 LBS.
9. SEE SHEET A-103 FOR DIMENSION(S)
10. MIN. FIRE OFFSET: 18" FROM RIDGE, 36" FROM EDGE
11. RAFTER SPACING: 24 IN. O.C.
12. RAFTER SIZE: 2X4 IN. NOMINAL
13. LAG BOLT DIAMETER: BOLT/SCREW SUPPLIED WITH RACKING.
14. LAG BOLT EMBEDMENT: PER RACKING MFG SPECIFICATIONS.
15. TOTAL # OF ATTACHMENTS: 57.
16. TOTAL AREA: 503.98 SQ. FT.
17. TOTAL WEIGHT: 1249.16 LBS.
18. WEIGHT PER ATTACHMENT: 21.92 LBS.
19. DISTRIBUTED LOAD: 2.48 PSF
20. MAX. HORIZONTAL STANDOFF: 48 IN.
21. MAX. VERTICAL STANDOFF: IN ACCORDANCE WITH MODULE MANUFACTURER'S INSTRUCTIONS.
22. STANDOFF STAGGERING: YES
23. RAIL MANUFACTURER (OR EQUIV.): UNIRAC
24. RAIL MODEL (OR EQUIVALENT): NXT-UMOUNT
25. RAIL WEIGHT: 0.401 PLF
26. MAX. RAFTER SPAN: 16 FT.
27. MODULE CLEARANCE: 3 IN. MIN., 6 IN. MAX.

PORTSIDE RENEWABLES

CONTRACTOR

PORTSIDE RENEWABLES, LLC

PHONE: 508-470-1467
ADRESS: 77 N.WATER ST, NEW BEDFORD, MA 02740

LIC. NO.: GC-48542
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NEW PV SYSTEM: 10.320 kWp

HELLMUTH & CORMIER RESIDENCE

16 CAROL CT,
PROVIDENCE, RI 02909

APN: 360147

ENGINEER OF RECORD

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ASSEMBLY DETAILS

DATE: 09.24.2023

DESIGN BY: O.S.

CHECKED BY: M.M.

REVISIONS

S-501.00

SILFAB PRIME NTC

SIL-430 QD

SILFAB SOLAR®

INTRODUCING NEXT-GENERATION N-TYPE CELL TECHNOLOGY

- Improved Shade Tolerance
- Improved Low-Light Performance
- Increased Performance in High Temperatures
- Enhanced Durability
- Reduced Degradation Rate
- Industry-Leading Warranty

SILFABSOLAR.COM

ELECTRICAL SPECIFICATIONS		430	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	430	321
Maximum power voltage (Vpmax)	V	33.25	31.02
Maximum power current (Ipmax)	A	12.93	10.33
Open circuit voltage (Voc)	V	38.91	36.58
Short circuit current (Isc)	A	13.87	11.15
Module efficiency	%	22.1%	20.6%
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	25	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m² • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10 W.

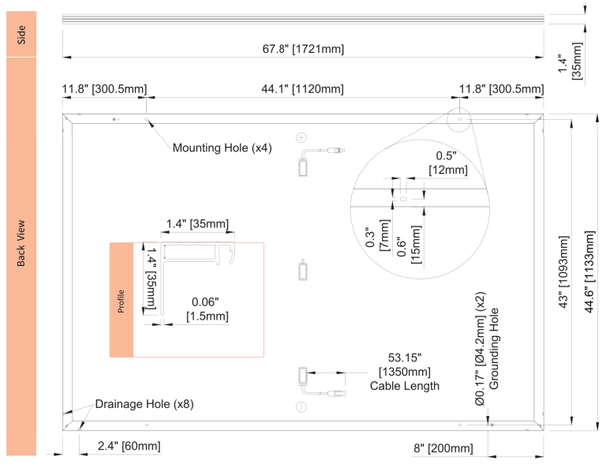
MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	21 kg ± 0.2 kg	46.3 lbs ± 0.4 lbs
Dimensions (H x L x D)	1721 mm x 1133 mm x 35 mm	67.8 in x 44.6 in x 1.37 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5 lb/ft² rear load / 112.8 lb/ft² front load
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	108 Half cells - N-Type Silicon solar cell 182 mm x 91 mm	108 Half cells - N-Type Silicon solar cell 7.16 in x 3.58 in
Glass	3.2 mm high transmittance, tempered, antireflective coating	0.126 in high transmittance, tempered, antireflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, MC4 from Staubli	53.1 in, ø 0.22 in (12 AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized aluminum (Black)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated, 3 diodes	

TEMPERATURE RATINGS	
Temperature Coefficient Isc	0.04 %/°C
Temperature Coefficient Voc	-0.24 %/°C
Temperature Coefficient Pmax	-0.29 %/°C
NOCT (± 2 °C)	45 °C
Operating temperature	-40/+85 °C

WARRANTIES	
Module product workmanship warranty	25 years**
Linear power performance guarantee	30 years
	≥ 98% end 1st yr ≥ 94.7% end 12th yr ≥ 90.8% end 25th yr ≥ 89.3% end 30th yr

CERTIFICATIONS		SHIPPING SPECS	
Product	UL 61215, UL 61730, CSA C22.2#61730, IEC 61215, IEC 61730, IEC 61701 (Salt Mist Corrosion), IEC 62716 (Ammonia Corrosion), CEC Listed, UL Fire Rating: Type 2	Modules Per Pallet:	26 or 26 (California)
		Pallets Per Truck	32 or 30 (California)
Factory	ISO9001:2015	Modules Per Truck	832 or 780 (California)

* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.
** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com.
PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.



SILFAB SOLAR INC.

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F +1 905.696.0267

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36 Willow St
Providence, Rhode Island
Google Street View
Aug 2023
See more dates
WILLOW ST
Oak St
Dexter Field
Hudson St
Google


16
Little Giant


NO PARKING