



APPLICATION # _____

MEETING DATE: _____

Town of North Smithfield

Office of the Building and Zoning Official

TOWN OF NORTH SMITHFIELD

ZONING BOARD OF REVIEW

APPLICATION FOR VARIANCE OR SPECIAL USE PERMIT

Check Each Type Zoning Relief Sought: ☐ Variance ☒ Use *

☐ Variance - Dimensional*

☒ Special Use Permit **

* Attach Appendix A to apply for a Use or Dimensional Variances

**Attach Appendix B to apply for a Special Use Permit

Applicant: Kevin and Laina Crowthers

Address 600 Greenville Road, North Smithfield, RI

Zip Code 02896 Phone 401-762-5010 Home/Office /Mobile

E-mail kevin.crowthers@gmail.com 742-7349

Owner: same as above

Address _____

Zip Code _____ Phone _____ Home/Office/ Mobile

E-mail _____



APPLICATION # _____

MEETING DATE: _____

Town of North Smithfield

Office of the Building and Zoning Official

Lessee: _____

Address _____

Zip Code _____ Phone: _____ Home/Office Mobile _____

E-mail _____

Does the proposal require review by any of the following (check each):

____ Planning Board

____ Historic District Commission

____ Other

1. Location of Property: 600 Greenville Road, North Smithfield, RI 02896

Street Address

2. Zoning District(s): RA

Special purpose or overlay district(s): _____

3a. Date owner purchased the Property:

7/24/2003

3b. Month/year of lessee's occupancy: _____

3. Dimensions of each lot:

Lot # 226 Frontage 245.06 depth 590.49 Total area 144705.5 sq. ft.

Lot # _____ Frontage _____ depth _____ Total area _____ sq. ft.



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Lot # _____ Frontage _____ depth _____ Total area _____ sq. ft.

4. Size of each structure located on the Property:

Principal Structure: Total gross square footage _____ 2488

Footprint _____ Height ^{0.75 story} _____ Floors _____ 2

Accessory Structure: Total gross square footage _____ 336 shed

Footprint ^{14x24 (ft)} _____ Height ^{0.75 story} _____ Floors _____ 2

5. Size of proposed structure(s): Total gross square footage:

_____ 675.64 sqft solar array

Footprint ^{13.3 x 50.8 (ft)} _____ Height _____ Floors _____

6a. Existing Lot coverage: (include all buildings, decks, etc.)

_____ 2824 sqft

6b. Proposed Lot coverage: (include new construction)

_____ 3499.64 sqft

7a. Present Use of Property (each lot/structure):

_____ residential

7b. Legal Use of Property (each lot/structure) as recorded in the Office of the Building and Zoning Official

_____ residential/agricultural (RA)



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8. Proposed Use of Property (each lot/structure):

addition of an accessory solar array- ground mount

9. Number of Current Parking Spaces: 0

10. Describe the proposed construction or alterations (each lot/structure):

addition of an accessory solar array- ground mount

11. Are there outstanding violations concerning the Property under any of the following:

No Zoning Ordinance

No RI State Building Code

No North Smithfield Town Ordinance



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12. List all Sections of the Zoning Ordinance from which relief is sought and description of each section:

Section 5.7- Solar Photovoltaic System Installation

Section 5.7.4 Requirements for Accessory Use Solar Photovoltaic Systems

5.7.6 Ground-Mounted Solar Photovoltaic System Procedure and Submission Requirements

13. Explain the changes proposed for the Property.

addition of a ground mount solar array

solar permit number SO-22-39



APPLICATION # _____

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Office of the Building and Zoning Official

The undersigned acknowledge(s) and agree(s) that members of the Zoning Board of Review and its staff may enter upon the exterior of the Property in order to view the Property prior to any hearing on the application. The undersigned further acknowledge(s) that the statements herein and in any attachments or appendices are true and accurate, and that providing a false statement in this application may be subject to criminal and/or civil penalties as provided by law, including prosecution under the State and Municipal False Claims Acts. Owner(s)/Applicant(s) are jointly responsible with their attorneys for any false statements.

Owner(s):

Applicant(s):

Kevin Crowthers

Laina Crowthers

Print Name

Print Name

Signature

Signature

All requirements listed and described in the Instruction Sheet must be met or this application will not be considered complete or vested



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Town of North Smithfield

Office of the Building and Zoning Official

APPENDIX B

APPLICATION(S) FOR SPECIAL USE PERMIT

1. Identify the section(s) of the Ordinance that provides for the special use permit.

Section 5.7- Solar Photovoltaic System Installation
Section 5.7.4 Requirements for Accessory Use Solar Photovoltaic Systems

2. State all facts that demonstrate that the proposed special use will not substantially injure the use and enjoyment of neighboring property.

The Photovoltaic array is situated on the property to maximize the efficiency of the system. Photos 1-4 identify how the array is oriented. If there is any glare, it is not hitting our neighboring property at 610 Greenville Rd. The array is far enough from other properties not to be bothered by noise.

3. State all facts that demonstrate that the proposed special use will not significantly devalue neighboring property.

With increasing prices for electricity, adding a solar array will only serve to increase the value of the property



APPLICATION # _____

MEETING DATE: _____

Town of North Smithfield

Office of the Building and Zoning Official

4. State all facts that demonstrate that the proposed special use will not be detrimental or injurious to the health or welfare of the community.

We have decided to link into the grid to supply excess
~~electricity. By adding the array, the community will benefit from~~
the surplus. As part of the regulations, a fence and warning
signs (as per 5.7.4d) will be installed.

0K253PG0702

RECEIVED FOR RECORD
NORTH SMITHFIELD, R.I.
03 JUL 24 PM 12:20
BOOK NO. 253 PAGE 702

WARRANTY DEED
We, HORIZON DESIGN SERVICES, INC.
of 377 MAJOR POTTER ROAD, WARWICK, RI 02886
FOR CONSIDERATION PAID, GRANT TO
KEVIN CROWTHERS and LAINA CROWTHERS of 47A AUSTIN AVENUE
GREENVILLE, RI 02828

AS TENANTS BY THE ENTIRETY, NOT JOINT TENANTS, NOR TENANTS IN COMMON
with WARRANTY COVENANTS:

PROPERTY ADDRESS: 600 GREENVILLE ROAD
NORTH SMITHFIELD, RI 02896

See legal description marked Exhibit "A" attached hereto and made a part hereof.

This transfer is such that no RI GL Section 44-307(1)3 withholding is required as seller is a resident
corporation of Rhode Island evidenced by affidavit and the undersigned hereby certify that the smoke detector
and carbon monoxide law, RI GL Section 23-23.23-1 et seq, has been complied with.

WITNESS our hands and seals this 23rd day of July, 2003.

HORIZON DESIGN SERVICES, INC.
President DAVID W. DANIEL
ATTEST:

Secretary/Treasurer
STATE OF RHODE ISLAND
COUNTY OF PROVIDENCE

In the City of Woonsocket on this 23rd day of July, 2003, personally appeared
DAVID W. DANIEL, of to me known and known by me to be the party executing the foregoing
instrument, and he/she acknowledged said instrument to be his/her executed to be his/her free act and deed, and
the free act and deed of the aforementioned corporation.

Patricia M. Watson
NOTARY PUBLIC
PRINT NAME: PATRICIA M. WATSON
MY COMMISSION EXPIRES: 12/29/06

PREPARED BY: LAW OFFICES OF GLENN J. ANDREONI
1023 PARK AVE.
WOONSOCKET, RI 02895

GRANTEE ADDRESS: 600 GREENVILLE ROAD
NORTH SMITHFIELD, RI 02896

TAX \$ 1900.00
DATE 7-24-03
RECORDED
002677
RECEIVED FOR RECORD
NORTH SMITHFIELD, R.I.

JUL 24 2003

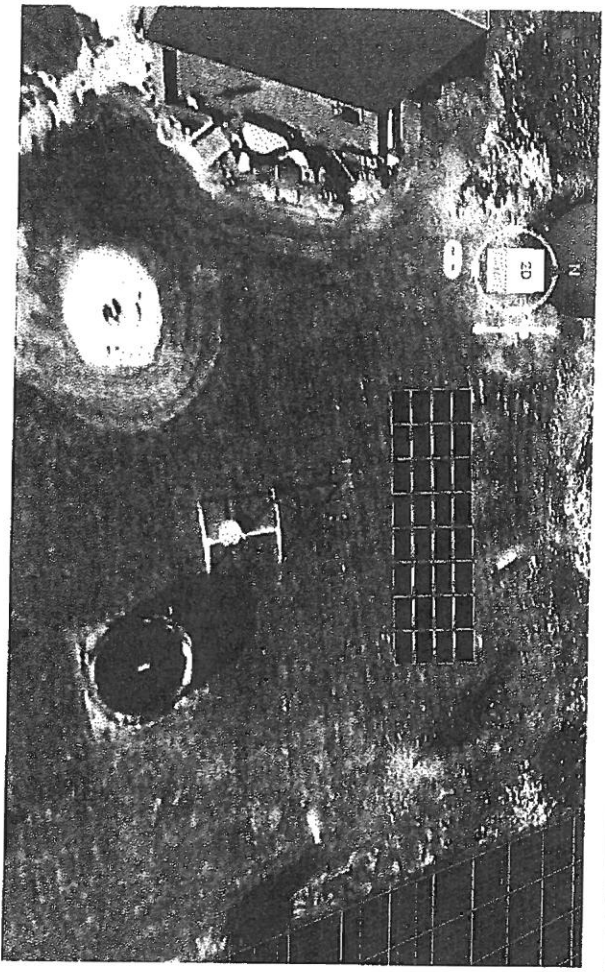
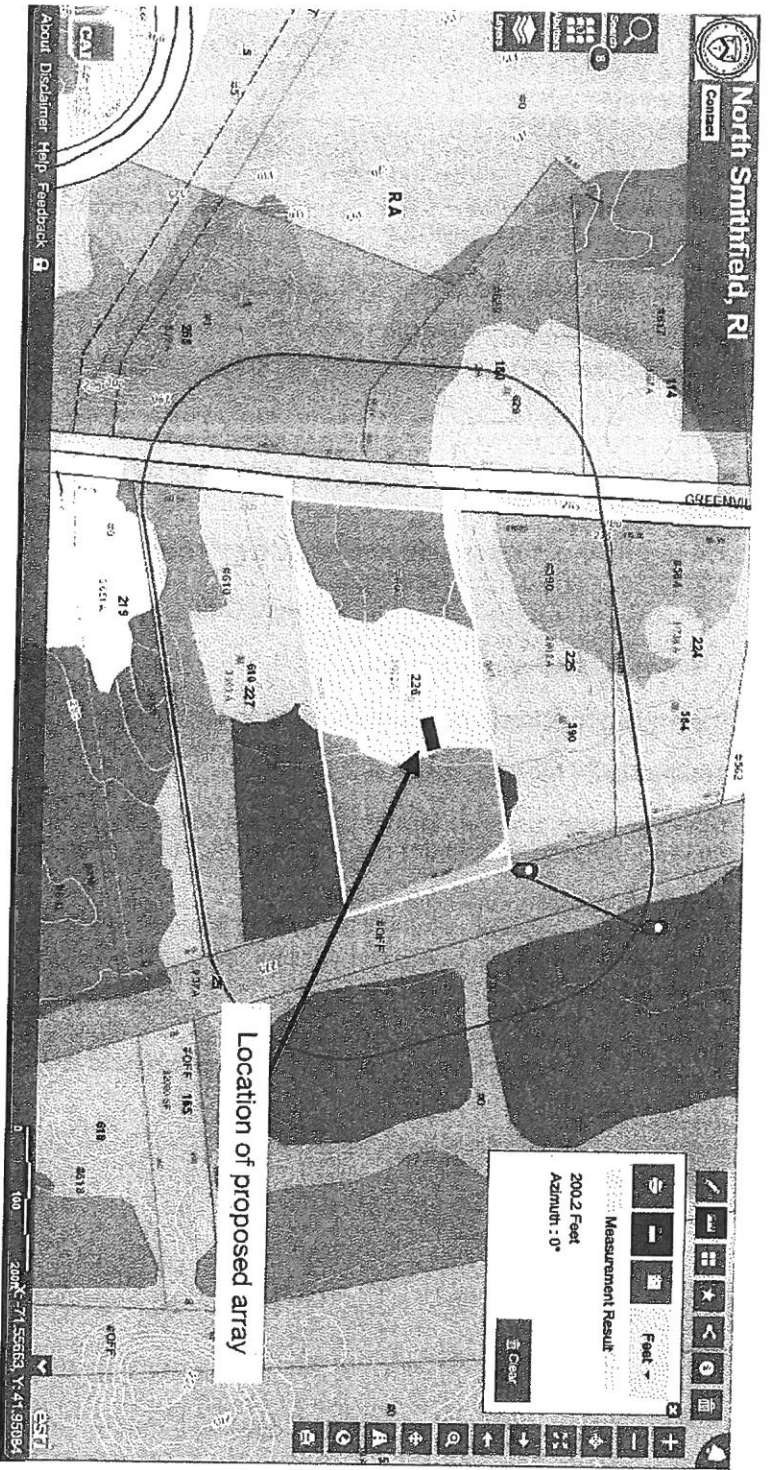
AT 1:20 PM ATTEST *Patricia M. Watson*
TOWN CLERK

EXHIBIT A

A certain lot or parcel of land with all buildings and
improvements thereon situated on the easterly side of Farmum Pike,
in the Town of North Smithfield, County of Providence and State of
Rhode Island, laid out and designated as Lot No. 4 on that Plat
known as "Division of Land Owned by Lucy Gautieri to be Acquired
by Robert C. Cournoyer and Associates, Inc. North Smithfield,
R.I." and recorded in the Registry of Deeds office in the Town of
North Smithfield, and found on Sheet 26.

Subject to Setback line as shown on said recorded map.

Property Address:
600 GREENVILLE ROAD
NORTH SMITHFIELD, RHODE ISLAND 02896
AP 15, AL 226





August 18, 2022

NuWatt Energy
PO Box 4464
Windham, NH 03087

Subject: Structural Certification Letter
Job Number: PZSE Portal #7257
Project Name: Kevin Crowthers
Client PO:
Address: 600 Greenville Road, North Smithfield, RI 02896

Attn.: To Whom It May Concern,
Re: Residential Flush-Mount Solar Photovoltaic Installation

PZSE's scope of work is limited to performing a structural evaluation of loading at the address above. After review, PZSE certifies that the alteration to the existing structure by installation of the PV system meets the requirements of the applicable codes and criteria shows below:

Design Criteria

- Applicable Codes: 2021 RI SBC-2, ASCE 7-16 and NDS-18
- Ground Snow Load: 40 lb/sqft
- Basic Wind Speed: 131 mph, Exposure Category C
- Existing Roof Dead Load: 7 lb/sqft
- Existing Roof Live Load: 20 lb/sqft

The existing structure is adequate to support the PV alteration per Code Sections 402.3 and 402.4.

Residential PV Module Assembly

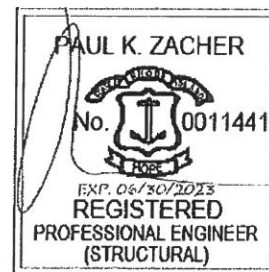
The PV module assembly including structural supporting components shall be installed in accordance with the manufacturers specifications and meets or exceeds all requirements set forth by the referenced codes above.

Residential Installation Requirements

The PV system shall be mounted flush to the existing roof surface. The contractor shall notify PZSE of any signs of damage to the roof framing prior to commencing the installation. PZSE shall then determine if the existing roof is adequate to support the applied loads. The electrical engineering and waterproofing system shall be addressed by others.

If you have any questions on the above, do not hesitate to call.

Prepared By:
PZSE, Inc. - Structural Engineers
Roseville, CA



1478 Stone Point, Suite 190, Roseville, CA 95661
T 916.961.3960 F 916.961.3965 W www.pzse.com
Experience | Integrity | Empowerment



200 foot Abutters List Report

North Smithfield, RI
November 03, 2022

Subject Property:

Parcel Number: 015-226
CAMA Number: 015-226
Property Address: 600 GREENVILLE RD

Mailing Address: CROWTHERS KEVIN & LAINA
600 GREENVILLE RD
N SMITHFIELD, RI 02896

Abutters:

Parcel Number: 015-025
CAMA Number: 015-025
Property Address: OFF DOUGLAS PIKE

Mailing Address: AMERICAN TEL CO
PO BOX 7207
BEDMINSTER, NJ 07921-7207

Parcel Number: 015-114
CAMA Number: 015-114
Property Address: 617 GREENVILLE RD

Mailing Address: BABBITT MICHAEL
75 CHAPMAN ST
PROVIDENCE, RI 02905

Parcel Number: 015-180
CAMA Number: 015-180
Property Address: 629 GREENVILLE RD

Mailing Address: FRANCESCHI MARIO R & PATRICIA LIFE
ESTATE
629 GREENVILLE ROAD
N SMITHFIELD, RI 02896

Parcel Number: 015-224
CAMA Number: 015-224
Property Address: 584 GREENVILLE RD

Mailing Address: GUERTIN GEORGE L & ELIZABETH M
584 GREENVILLE RD
N SMITHFIELD, RI 02896

Parcel Number: 015-225
CAMA Number: 015-225
Property Address: 590 GREENVILLE RD

Mailing Address: ZAMBARANO RICHARD ERNEST JR &
ROBIN ANNE
590 GREENVILLE RD
N SMITHFIELD RI 02869,

Parcel Number: 015-227
CAMA Number: 015-227
Property Address: 610 GREENVILLE RD

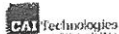
Mailing Address: MELENDEZ EDGAR H & JULIAO WENDY
L
610 GREENVILLE RD
N SMITHFIELD, RI 02896

Parcel Number: 015-255
CAMA Number: 015-255
Property Address: 0 GREENVILLE RD

Mailing Address: GOODWIN ROBERT O
1993 PROVIDENCE PK
N SMITHFIELD, RI 02896

Parcel Number: 015-268
CAMA Number: 015-268
Property Address: 1 BLUNDERS WAY

Mailing Address: GREGG JASON H & KATHERINE E
1 BLUNDERS WAY
N SMITHFIELD, RI 02896



www.cai-tech.com

Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.

11/3/2022

Page 1 of 1



North Smithfield

(Summary Data - may not be Complete Representation of Property)



Parcel: 015-226
Account: 3647

Location: 600 GREENVILLE RD
User Acct: 03-1315-43

Owner: CROWTHERS KEVIN & LAINA
LUC: 01 - Single Fam Zoning: RA

Parcel Values

Total: \$489,800 Land: \$125,800 Land Area: 3.002 AC Buidling: \$364,000 Assessed: \$489,800

Sales Information

Book and Page	Instrument Type	Date	Price	Grantor
253-702		07/24/2003	\$475,000	HORIZON DESIGN SERVICES INC
248-673		05/14/2003	\$460,000	SARAVO KEVIN M

Building Type: Colonial	Year Built: 1999	Grade: 11	Condition: GD
Heat Fuel: Oil	Heat Type: FHA	% Air Conditioned: 100.00	Fireplaces: 1
Exterior Wall: Vinyl	Bsmnt Garage: 0	Roof Cover: Asphalt	# of Units: 1
# of Rooms: 9	# of Bedrooms: 4	Full Bath: 2	1/2 Baths: 1

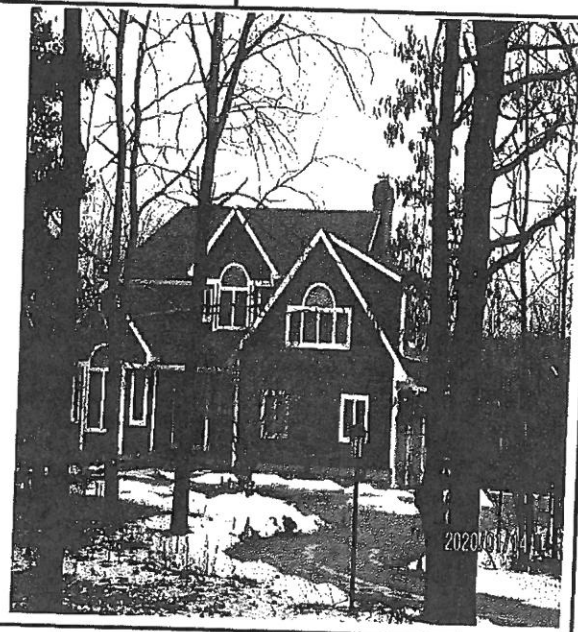
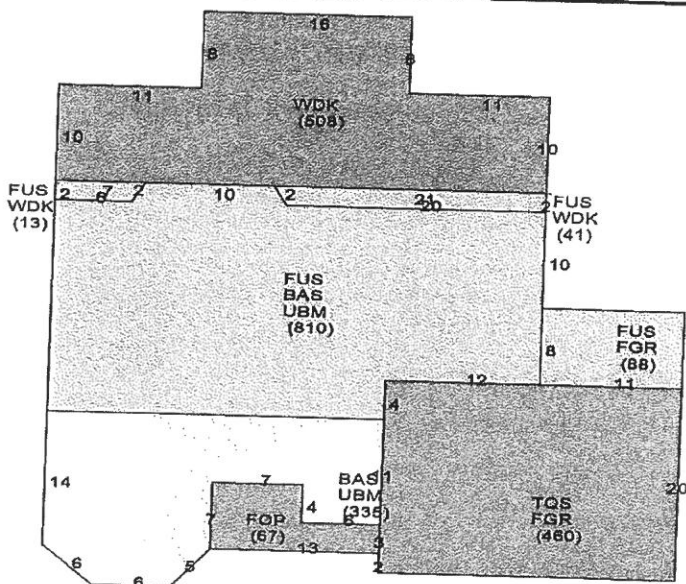
Yard Item(s)

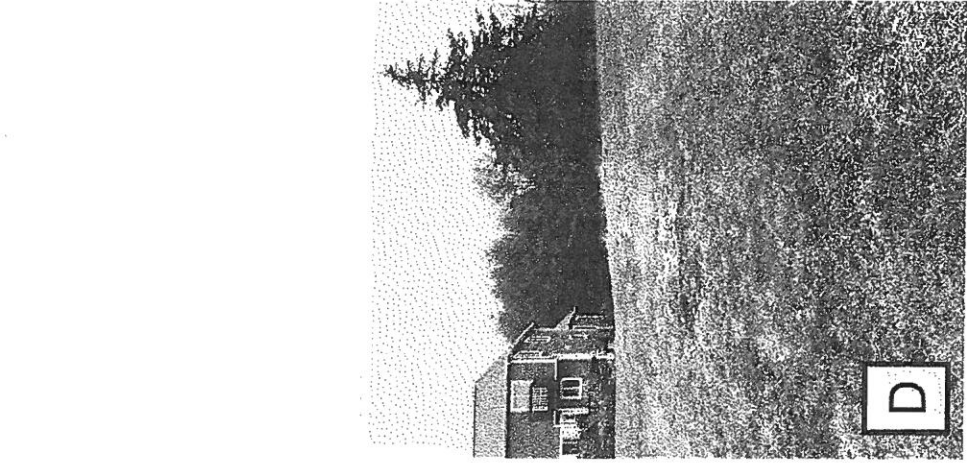
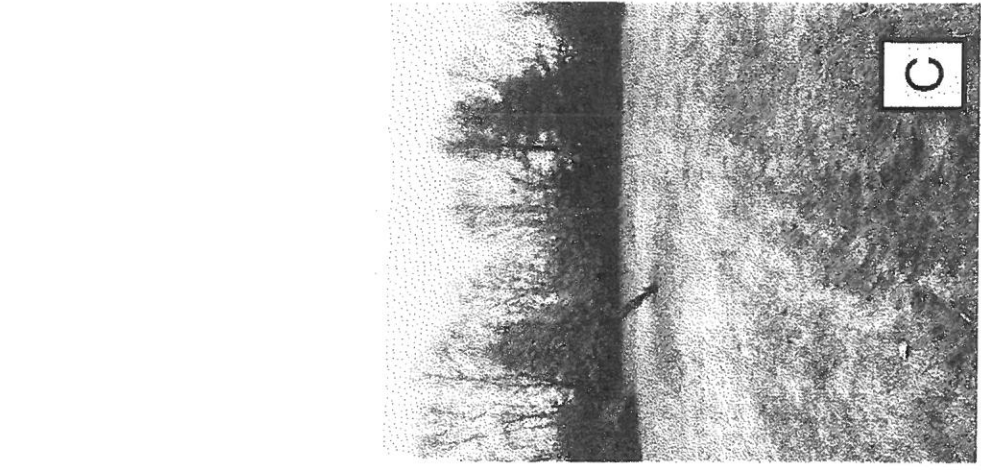
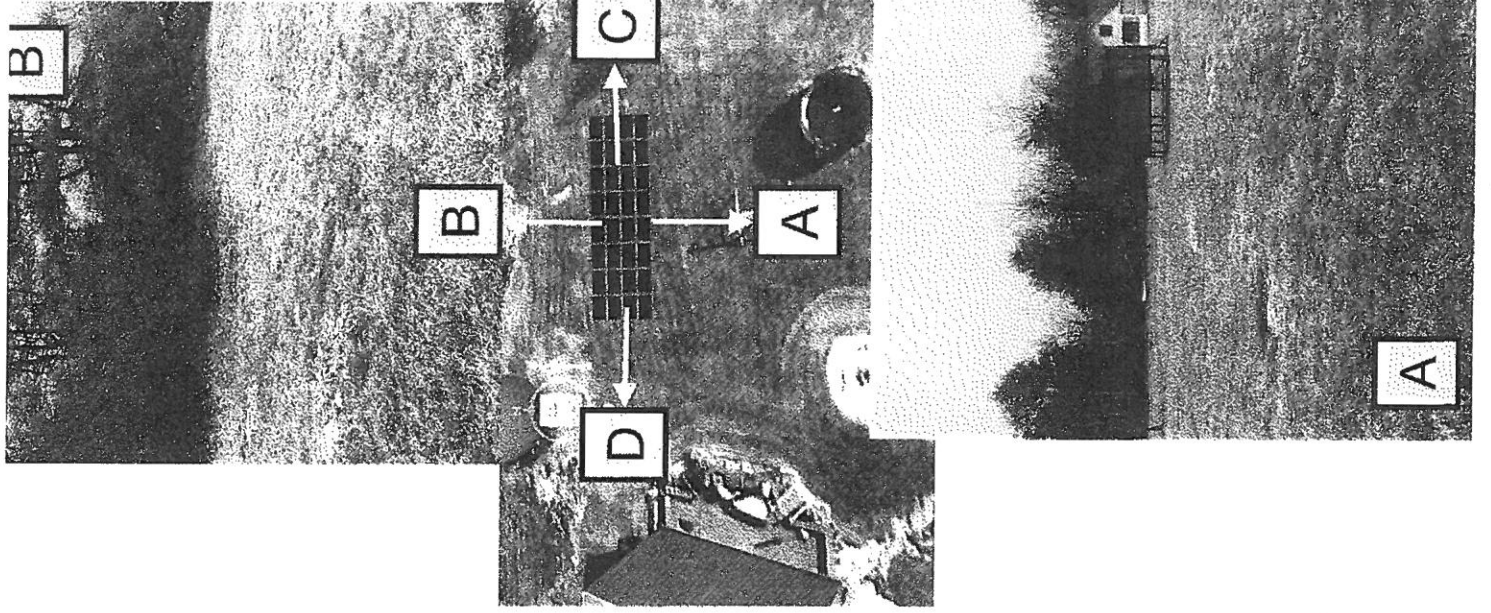
Description	Quantity	Size	Year	Condition	Quality	Value
Alarm	1	2318	1999	AV	Average	\$700.00
Shed Frame	1	336	2010	AV	Average	\$2,300.00

Building Areas

Area	Net Area	Finished Area
.75 Story	391 SF	391 SF
Finished Upper Story	952 SF	952 SF
First Floor	1,145 SF	1,145 SF
Garage	548 SF	0 SF
Porch, Open	67 SF	0 SF
Unfinished Basement	1,145 SF	0 SF
Wood Deck	562 SF	0 SF

Disclaimer: This information is for tax
assessing purposes
and is not warranted





SPECIAL USE PERMIT APPLICATION
 ADDENDUM FOR:
 CROWTHERS SOLAR ARRAY INSTALLATION-
 600 GREENVILLE ROAD, NORTH SMITHFIELD
 RI
 PHOTOS TAKEN 11/16/22 BY KEVIN
 CROWTHERS 401-742-7349

Grid-Tied Photovoltaic System

DC Rating: 13.32 kW

KEVIN CROWTHERS
400 GREENVILLE RD
NORTH SMITHFIELD, RHODE ISLAND 02896

Jurisdiction: Town of NORTH
SMITHFIELD, RHODE ISLAND

Scope of Work:

NuWatt Energy shall install a Grid-Tied Photovoltaic ("PV") System using EWPV370K 370W Modules with EnPhase Energy IQ8PLUS-72-2-US microinverters. The Modules shall be Ground mounted and interconnected via line side connection.

Equipment Specifications:

Modules: (36) EWPV370K 370W
Microinverters: (36) EnPhase Energy, IQ8PLUS-72-2-US

Roof Mount System Specifications:

System as per attached engineered Structural Report.

Site Specifications:

Occupancy:
Design Wind Speed:
Exposure Category:
Snow Load:

All Work to be in Compliance with:

RI State Building Code with Amendments, Inclusive of the Referenced 2015 Codes:
The International Building Code (IBC); International Residential Code (IRC);
International Mechanical Code (IMC); and Portions of the International Fire Code (IFC).

2017 National Electrical Code (NEC)
ASCE/ANSI 7-10 Minimum Design Loads for Buildings and Other Structures
As amended and adopted by Town of NORTH SMITHFIELD.

General Notes:

1. System follows any/all Fire Code Setbacks per Ordinances of the Town of NORTH SMITHFIELD.
2. All projects will comply with the Ordinances of the Town of NORTH SMITHFIELD.
3. Construction Hours: 7am-8pm Monday-Friday, 9am-8pm Saturday, No time on Sunday or legal Holidays.
4. Product Data Sheets shall be included.
5. Rooftop penetrations shall be completed and sealed per code by a licensed contractor.
6. All Photovoltaic modules shall be tested and listed by a recognized laboratory.
7. Certifications shall include UL1703, IEC61646, IEC61730.
8. A continuous ground shall be provided for the Array and for all Photovoltaic Equipment.
9. DC Wiring shall be run in metal conduit or raceways within enclosed spaces in a building.
10. Conduit, Wire systems and Raceways shall be located as close as possible to ridges, hips, and outside walls.
11. Conduit between Sub Arrays and to DC Combiners/Disconnects shall use guidelines that minimize the total amount of conduit by taking the shortest path.
12. Space Requirements for electrical equipment shall comply with NEC Article 110.
13. Equipment grounding shall be sized in accordance with Table 250.122.
14. Connectors that are not readily accessible and that are used in the circuits operating at or over 30V AC or DC shall require a tool for opening and are required to be marked "Do not disconnect under load" or "Not for current interrupting", per 690.33 (c) & (e).
15. All signage to be placed in accordance with local building code.
16. Signs or Directories shall be attached to the electrical equipment or located adjacent to the identified equipment.
17. Signs should be of sufficient durability to withstand the environment.
18. Any plaques shall be metal or plastic with engraved or machine printed letters, or electro-plating, in a red background with white lettering, a minimum of 3/8" height and all capital letters.

Sheet List

Sheet No:-
PV-000
PV-A01
PV-A02
PV-A03
PV-E01
PV-E02

Sheet Title:-
COVER
SITE PLAN
MODULE LAYOUT
DETAILS
ELECTRICAL DIAGRAM
UTILITY METER

HOUSE VIEW



MAP VIEW



NuWatt Energy, LLC
400 Trade Center, Suite 200
North Smithfield, RI 02896
877-775-ANEP
www.nuwatenergy.com

Notes:

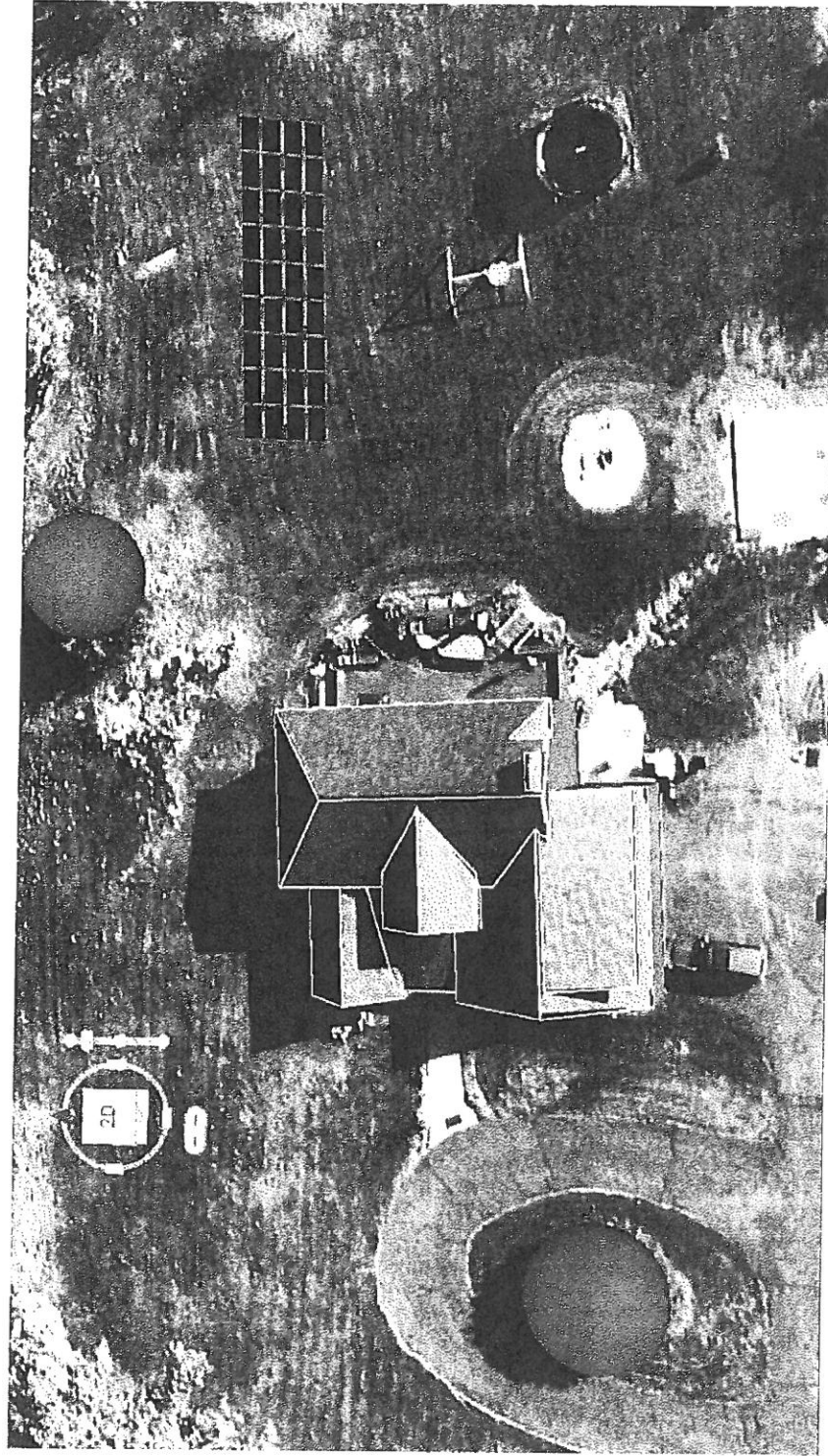
REV	DESCRIPTION	BY	DATE
C			
B			
A			

CONSTRUCTION ISSUE

CLIENT	KEVIN CROWTHERS 400 GREENVILLE RD NORTH SMITHFIELD, RHODE ISLAND 02896
DESIGNER	NuWatt Energy 400 Trade Center, Suite 200 North Smithfield, RI 02896

DATE	400 GREENVILLE RD NORTH SMITHFIELD, RHODE ISLAND 02896		
TITLE	COVER PAGE		
SCALE AT JOB	DATE	DESIGNED	CHECKED
N.T.S.	04-23-22	D.F.	AA
PROJECT NO.	DRAWING NO.		REVISION
22-04-2472	PV-000		A

PLAN VIEW



NUWATT Energy, LLC
 480 Trade Center, Suite 2000
 Woburn, MA 01801
 877-775-3337
 www.nuwattenergy.com

Notes:

NOTES

REV	DESCRIPTION	BY	DATE
C			
B			
A			

CONSTRUCTION ISSUE

CLIENT: KEVIN CROWTHERS 480 GREENVILLE RD NORTH BARRFIELD, RHODE ISLAND 02894	DESIGNER: NUWATT Energy 480 Trade Center, Suite 2000 Woburn, MA 01801
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SHEET: 480 GREENVILLE RD NORTH BARRFIELD, RHODE ISLAND 02894	TITLE: SITE PLAN
DATE: 06-26-22	DESIGNER: CF
PROJECT NO: 22-06-26/2	PV-A01
	A

400 Trade Center, Suite 200
Woburn, MA 01801
(877) 772-6357
info@nuwattenergy.com
www.nuwattenergy.com

Notes:

NOTES

REV	DESCRIPTION	BY	DATE
C			
B			
A			

CONSTRUCTION ISSUE

OWNER: KEVIN CROWTHERS

400 GREENVILLE RD
NORTH SMITHFIELD, RHODE ISLAND 02894

DESIGNER: NuWatt Energy

400 Trade Center, Suite 200
Woburn, MA 01801

TITLE: 400 GREENVILLE RD

PROJECT NO: 10-001-001

DATE: 2-06-2012

BY: PV-A02

REVISION: A

PV ARRAY 1 MECHANICAL LOADS	
Array Area:	3.33 sq ft
Array Weight:	3.33 lbs
Anchor Qty:	54
Design Values for Roof Zone:	
Min. Ball Spacing:	36 in. O.C.
Max. Ball Spacing:	36 in. O.C.
Adjusted Anchor Spacing:	36 in. O.C.
Downsloped Fastener Load:	188.5 lbs
Uplift Fastener Load:	79.5 lbs
Minimum Anchor Strength:	79.5 lbs
Average Safety Factor:	1.13

PV ARRAY 2 MECHANICAL LOADS	
Array Area:	3.33 sq ft
Array Weight:	3.33 lbs
Anchor Qty:	54
Design Values for Roof Zone:	
Min. Ball Spacing:	36 in. O.C.
Max. Ball Spacing:	36 in. O.C.
Adjusted Anchor Spacing:	36 in. O.C.
Downsloped Fastener Load:	188.5 lbs
Uplift Fastener Load:	79.5 lbs
Minimum Anchor Strength:	79.5 lbs
Average Safety Factor:	1.13

PV ARRAY 3 MECHANICAL LOADS	
Array Area:	3.33 sq ft
Array Weight:	3.33 lbs
Anchor Qty:	54
Design Values for Roof Zone:	
Min. Ball Spacing:	36 in. O.C.
Max. Ball Spacing:	36 in. O.C.
Adjusted Anchor Spacing:	36 in. O.C.
Downsloped Fastener Load:	188.5 lbs
Uplift Fastener Load:	79.5 lbs
Minimum Anchor Strength:	79.5 lbs
Average Safety Factor:	1.13

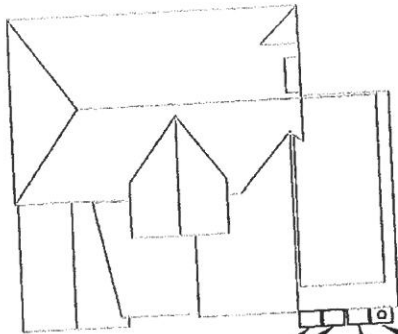
PANEL LAYOUT



NOTE:
The utility revenue meter and VLLD are placed less than 10ft apart.
VLLD: Visible Lockable Labeled Disconnect

Array #	# of Panels	Pitch	Azimuth
1	36	30	178

Component	Qty	Model	Manufacturer
PV Panel	36	EPV370K	Panasonic
Micro-Inverter	36	IQ8PLUS-72-2-US	EnPhase Energy
Battery	1	IQ-10	EnPhase Energy



IQ-10 ESS
and Rapid
shutdown
switch

Solar AC
Disconnect

Utility revenue
meter

NOTES:

- Total Quantity of Attachments = 164
- Roof Zones are defined by dimension, a=3.0ft
- Attachment: Eco-Fastener Green-Fastener with CP-SQ-Slotted Bracket and Aluminum Flashing attached with 5/16"x3-12" Lag Bolt, Hex-Head, 18-8SS
- All Dimensions shown are to module edges, including 1 in. Spacing between Modules required when using the Top Clamp Method.
- The Rails Extend 3 in. Beyond the module edges in order to support the End Clamps.
- Attachment Locations, if shown, are approximate. Final adjustment of attachment location may be necessary depending on field conditions. All attachments are staggered amongst the framing members.

Notes:

NOTES

	DATE	PAGE	CONSTRUCTION ISSUE
C			
B			
A			

CLIENT	KEVIN CROWTHERS 600 GREENVILLE RD NORTH SMITHFIELD, RHODE ISLAND 02896
DESIGNER	NuWatt Energy 400 Trade Center, Suite 2500 Woburn, MA 01801

001	GOO GREENVILLE RD	DATE	04-24-22	OFFICIAL	AA	CHECKED	AA
	WINDY LAUREL DR SUITE 101 N 10000A	N.T.S	2-06-26/2	DESIGNED	REV	DATE	04-24-22
TITLE		ELECTRICAL SLID					
		PV-E01					
		A					

WIRE SCHEDULE						
Tag	QTY	Size	Wire Type	Ground Size & Type	Conduit	Length
A	3	10 AWG	Engage cable	6 AWG BARE Cu	Freeair	N/A
B	3	6 AWG	THHN/THWN-2	6 AWG THWN-2	3/4" EMT	50ft
C	3	3 AWG	THHN/THWN-2	6 AWG THWN-2	3/4" EMT	10ft

WIRE SIZING			
Tag	Size	90°C Derated Ampacity (Allowable Amps x Temp Derate)	Ampacity
A	10 AWG	30A x 0.76	23A
B	6 AWG	75A x 0.96	72A
C	3 AWG	115A x 0.96	110A

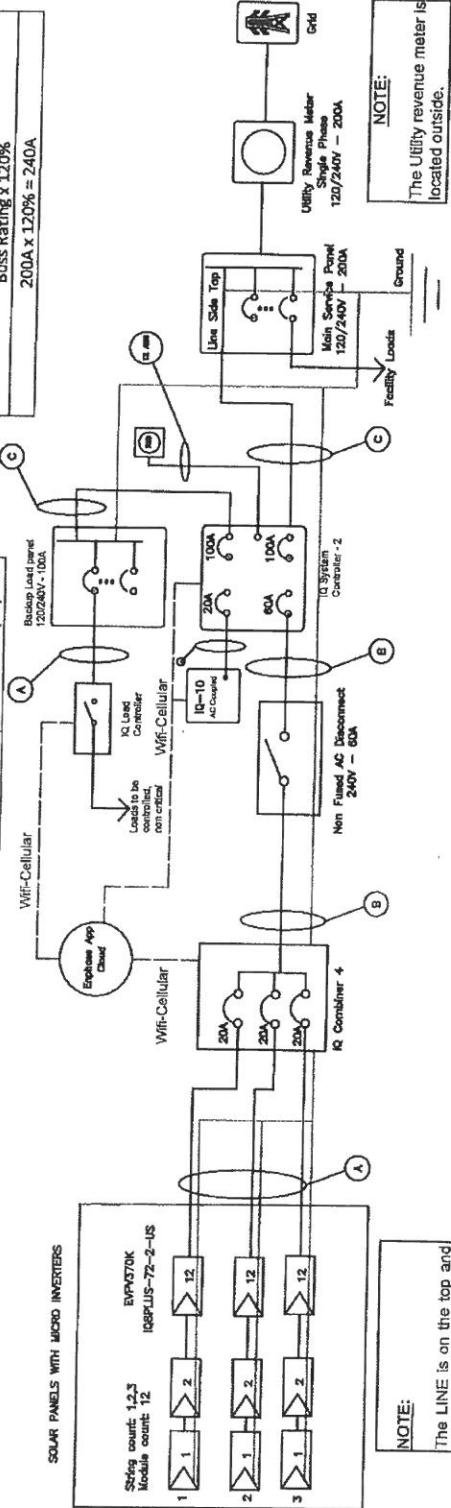
SYSTEM LABELING SPECIFICATIONS					
Max. Vdc (-21°C):		49.97 V	DC Max. Current:		13.19 A
Operating Vdc:		37.40 V	DC Operating Current:		9.90 A
Nominal Vac:		240 V	Max. AC Current:		1.21 A

SYSTEM SIZE	
DC:	13.320 kW STC
AC:	10.44 kW (max)
Storage:	3.84kW (AC)

MAIN SERVICE PANEL INTERCONNECTION REC 2037 A-Hide 705-1210(2131b) [1200k Hide]	
Utility Feed + Solar + Battery Back Feed	
200A + 54A + 200A = 274A	
Buss Rating x 120%	
200A x 120% = 240A	

Backlog Load served
120/240V - 100A

(A) (C)



NOTE:

NOTE:
The LINE is on the top and
the LOAD is on the bottom

Exterior Electrical	Interior Electrical	EXISTING
Exterior Electrical	Interior Electrical	Exterior Electrical

EXISTING

Component	Qty	Model	Manufacturer
PV Panel	36	EPVP370K	Panasonic
Micro-Inverter	36	IQ8PLUS-72-2-US	EnPhase Energy
Battery	1	IQ-10	EnPhase Energy

Storage Charging Capability

Special Advertising Section

Secretary's Profession of Faith

SOLAR PANELS WITH MICRO INVERTERS

NuWatt Energy, LLC
 400 Trade Center, Suite 2000
 Woburn, MA 01801
 NuWatt Energy, LLC
 8671 775-3357
 nuwattenergy.com
 APPROVED CLEAN ENERGY

Notes:

NOTES



CONSTRUCTION ISSUE	DATE
C	
B	
A	
DATE	

CLIENT: KEVIN CROWTHERS
 600 GREENVILLE RD
 NORTH BATHFIELD, RHODE ISLAND 02864
 DESIGNER: NuWatt Energy
 400 Trade Center, Suite 2000
 Woburn, MA 01801

UTILITY METER	DATE	ISSUE	REMARKS
7-05-2012	04-24-12	DF	AA
PV-E03	04-24-12	DF	AA

- NOTES:**
1. All conduit to use water-tight expansion fittings.
 2. All Rooftop conduit to be a minimum of 1" above the roof surface.
 3. PV Connection into Load Center shall be positioned at the opposite end from the Utility Input feeder location. (Where applicable)
 4. All equipment exposed to the elements shall be rated NEMA-3R.
 5. All equipment installed inside the building shall be rated NEMA-12.
 6. Lowest expected ambient temperature based on ASHRAE min. mean extreme dry bulb temperature for ASHRAE location most similar to installation.
 7. Highest continuous ambient temperature based on ASHRAE highest month 2% dry bulb temperature for ASHRAE location most similar to installation.
 8. All conductors to be copper unless noted otherwise.
 9. Conductor sizing shall limit Voltage drop to 1.5% DC & 2% AC.
 10. Insulated Ground conductors shall have green color jacket.

WIRE SCHEDULE

Tag	QTY	Size	Wire Type	Ground Size & Type	Conduit	Length
A	3	10 AWG	Engage cable	6 AWG BARE Cu	Freeair	N/A
B	3	6 AWG	THHN/THWN-2	6 AWG THWN-2	3/4" EMT	50ft
C	3	3 AWG	THHN/THWN-2	6 AWG THWN-2	3/4" EMT	10ft

WIRE SIZING

Tag	Size	90°C Derated Ampacity (Allowable Amps x Temp Derate)	Ampacity
A	10 AWG	30A x 0.76	23A
B	6 AWG	75A x 0.96	72A
C	3 AWG	115A x 0.96	110A

SYSTEM LABELING SPECIFICATIONS

Max. Vdc (-21°C):	48.97 V	DC Max. Current:	13.19 A
Operating Vdc:	37.40 V	DC Operating Current:	9.90 A
Nominal Vac:	240V	Max. AC Current:	1.21 A

MAIN SERVICE PANEL INTERCONNECTION
NEC 2017 Article 706.326(B)(2)(b) (120% Rule)

Utility Feed + Solar + Battery Back Feed	200A + 54A + 20A = 274A
Buss Rating x 120%	200A x 120% = 240A

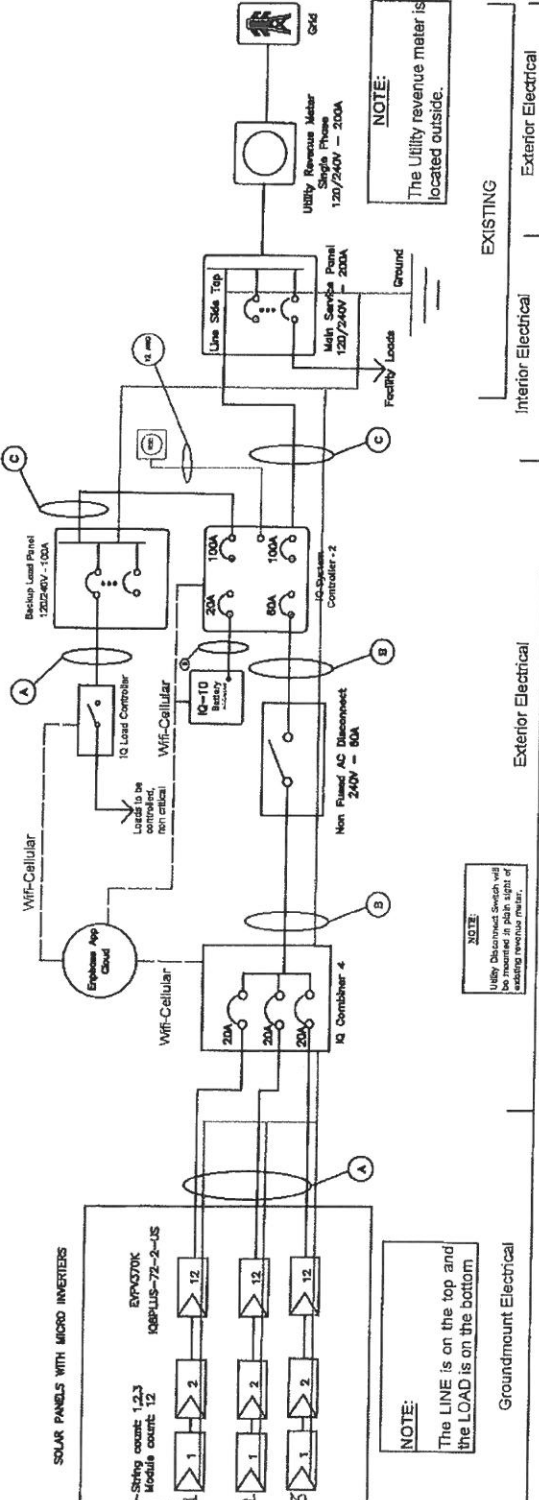
SYSTEM SIZE

PV DC:	13.320 kW STC
PV AC:	10.44 kW (max)
Storage:	3.84kWh (AC)

Component	Qty	Model	Manufacturer
PV Panel	36	EPV370K	Panasonic
Micro-Inverter	36	IQ8PLUS-72-2-US	EnPhase Energy
Battery	1	IQ-10	EnPhase Energy

Storage Charging Capacity:
Unrestricted Electric Grid or Renewable

Storage Discharge Capacity:
Unrestricted Electric Grid or Onsite Load



NOTE:
The LINE is on the top and the LOAD is on the bottom

NOTE:
Utility Disconnect Switch will be installed in path right of existing revenue meter.

NOTE:
The Utility revenue meter is located outside.

NUWatt Energy, LLC
400 Trade Center, Suite 200
Woburn, MA 01801
Tel: 781-775-4337
Email: info@nuwattenergy.com
www.nuwattenergy.com

NOTES:

REV	DESCRIPTION	BY	DATE
1	ISSUED FOR PERMIT		

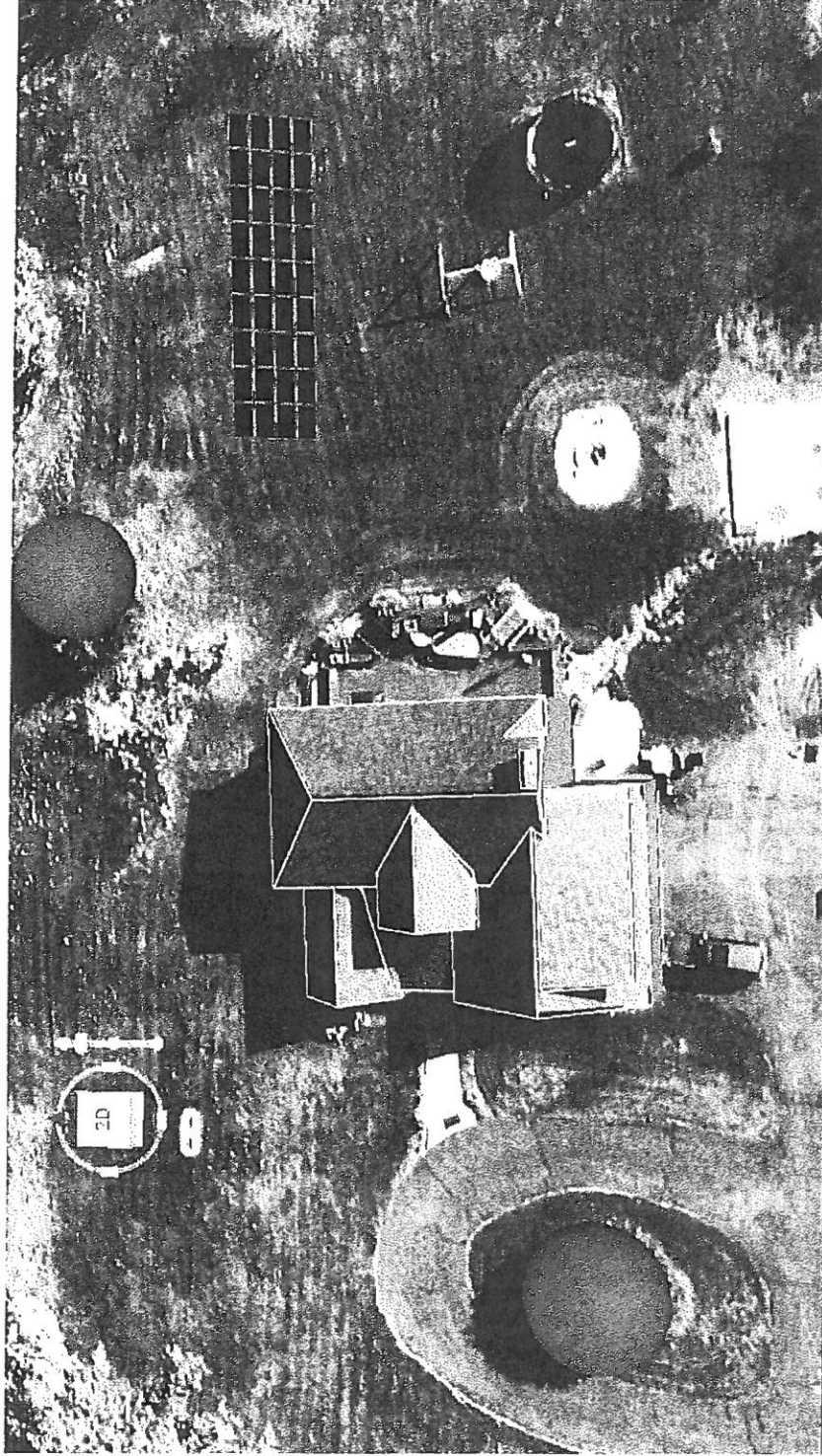
CONSTRUCTION ISSUE

OWNER: KEVIN CROWTHERS
400 GREENVILLE RD
NORTH SMITHFIELD, RHODE ISLAND 02894

DESIGNER: NUWatt Energy
400 Trade Center, Suite 200
Woburn, MA 01801

TITLE: ELECTRICAL SLD			
SCALE: AS SHOWN	DATE: 10-25-20	DESIGNED BY: A.A.	CHECKED BY: A.A.
PROJECT NO: 2-06-26/2		SHEET NO: PV-E01	

PLAN VIEW



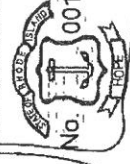
NuWatt Energy, LLC
 400 Trade Center, Suite 2000
 Woburn, MA 01801
 877-775-4337
 www.nuwatenergy.com

Notes:

NOTES

FOR EXISTING
 STRUCTURE ONLY

PAUL K. ZACHER



EXP. 06/30/2025
 REGISTERED
 PROFESSIONAL ENGINEER
 (STRUCTURAL)

COA # 184.007582

REV	DESCRIPTION	BY	DATE
C			
B			
A			
1			

CONSTRUCTION ISSUE

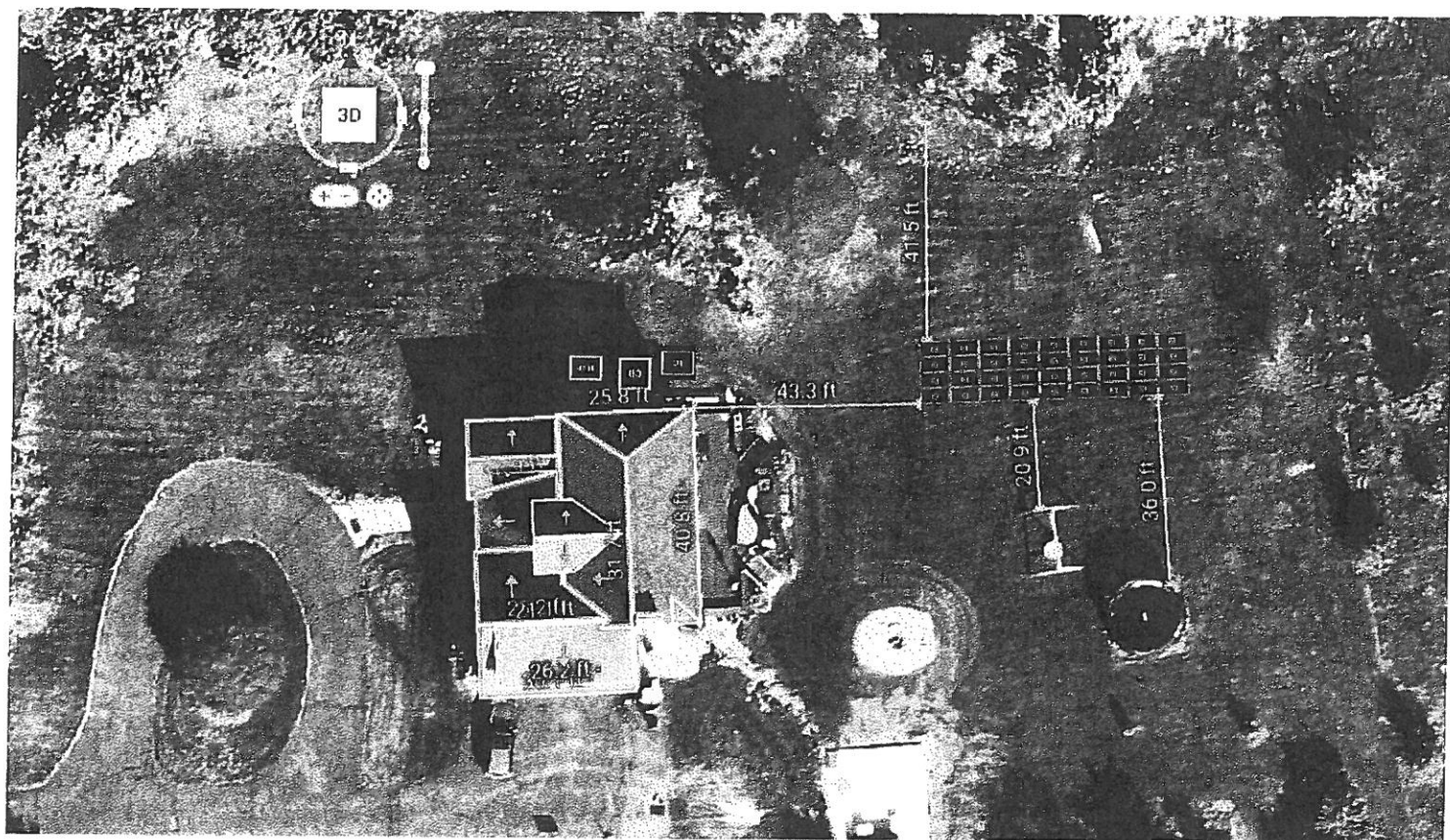
OWNER: KEVIN CROWTHERS
 600 GREENVILLE RD
 NORTH SAUTFIELD, INDIAN LAND 02934

NuWatt Energy
 400 Trade Center, Suite 2000
 Woburn, MA 01801

600 GREENVILLE RD
 NORTH SAUTFIELD, INDIAN LAND 02934

SITE PLAN

DATE	BY	CHKD	DATE
22-06-24/2	PV-A01		



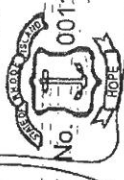
400 Trade Center, Suite 2000
Woburn, MA 01801
(877) 772-4337
info@nuwattenergy.com
www.nuwattenergy.com

Notes:

NOTES

FOR EXISTING
STRUCTURE ONLY

PAUL K. ZACHER



EXP. 06/30/2023

REGISTERED
PROFESSIONAL ENGINEER
(STRUCTURAL)

COA # 184.007562

REV	DESCRIPTION	BY	DATE
C			
B			
A			

CONSTRUCTION ISSUE

CLIENT: KEVIN CROWTHERS
400 GREENVILLE RD
NORTH SMYRNA, MISSISSIPPI 38954

NUWATT Energy
400 Trade Center, Suite 2000
Woburn, MA 01801

PROJECT NO: 256-26/2				PROJECT NAME: PV-A02			
DATE: 2-6-2022				DRAWN BY: A			
CHECKED BY: A				APPROVED BY: A			
SCALE: 1/8" = 1'-0"				SHEET: 1 OF 1			

PV ARRAY 1 - MECHANICAL LOADS									
Array Area	225.00 sq ft	Year Photoresistive Load	3.13 lbf						
Array Weight	516 lbs	Avg. Dead Load per Anchor	34						
Anchor Qty	54								
Design Values by Roof Zone:									
Max. Rail Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Max. Rail Center-to-Center	36" O.C.	Max. O.C.	36" O.C.	Interior					
Adjusted Anchor Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Downwind Point Load	188.5 lbs	Max. O.C.	36" O.C.	Interior					
Minimum Anchor Strength	75.5 lbs	Max. O.C.	36" O.C.	Interior					
Average Safety Factor	1.5	Max. O.C.	36" O.C.	Interior					

PV ARRAY 2 - MECHANICAL LOADS									
Array Area	225.00 sq ft	Year Photoresistive Dead Load	3.13 lbf						
Array Weight	516 lbs	Avg. Dead Load per Anchor	34						
Anchor Qty	54								
Design Values by Roof Zone:									
Max. Rail Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Max. Rail Center-to-Center	36" O.C.	Max. O.C.	36" O.C.	Interior					
Adjusted Anchor Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Downwind Point Load	188.5 lbs	Max. O.C.	36" O.C.	Interior					
Minimum Anchor Strength	75.5 lbs	Max. O.C.	36" O.C.	Interior					
Average Safety Factor	1.5	Max. O.C.	36" O.C.	Interior					

PV ARRAY 3 - MECHANICAL LOADS									
Array Area	225.00 sq ft	Year Photoresistive Dead Load	3.13 lbf						
Array Weight	516 lbs	Avg. Dead Load per Anchor	34						
Anchor Qty	54								
Design Values by Roof Zone:									
Max. Rail Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Max. Rail Center-to-Center	36" O.C.	Max. O.C.	36" O.C.	Interior					
Adjusted Anchor Spacing	36" O.C.	Max. O.C.	36" O.C.	Interior					
Downwind Point Load	188.5 lbs	Max. O.C.	36" O.C.	Interior					
Minimum Anchor Strength	75.5 lbs	Max. O.C.	36" O.C.	Interior					
Average Safety Factor	1.5	Max. O.C.	36" O.C.	Interior					

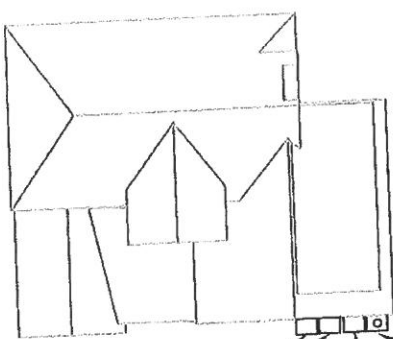
PANEL LAYOUT



NOTE:
The utility revenue meter and VLLD are placed less than 10ft apart.
VLLD: Visible Labeled Disconnect

Array #	# of Panels	Pitch	Azimuth
1	36	30	178

Component	Qty	Model	Manufacturer
PV Panel	36	EPV370K	Panasonic
Micro-Inverter	36	IQ8PLUS-72-2-US	EnPhase Energy
Battery	1	IQ-10	EnPhase Energy



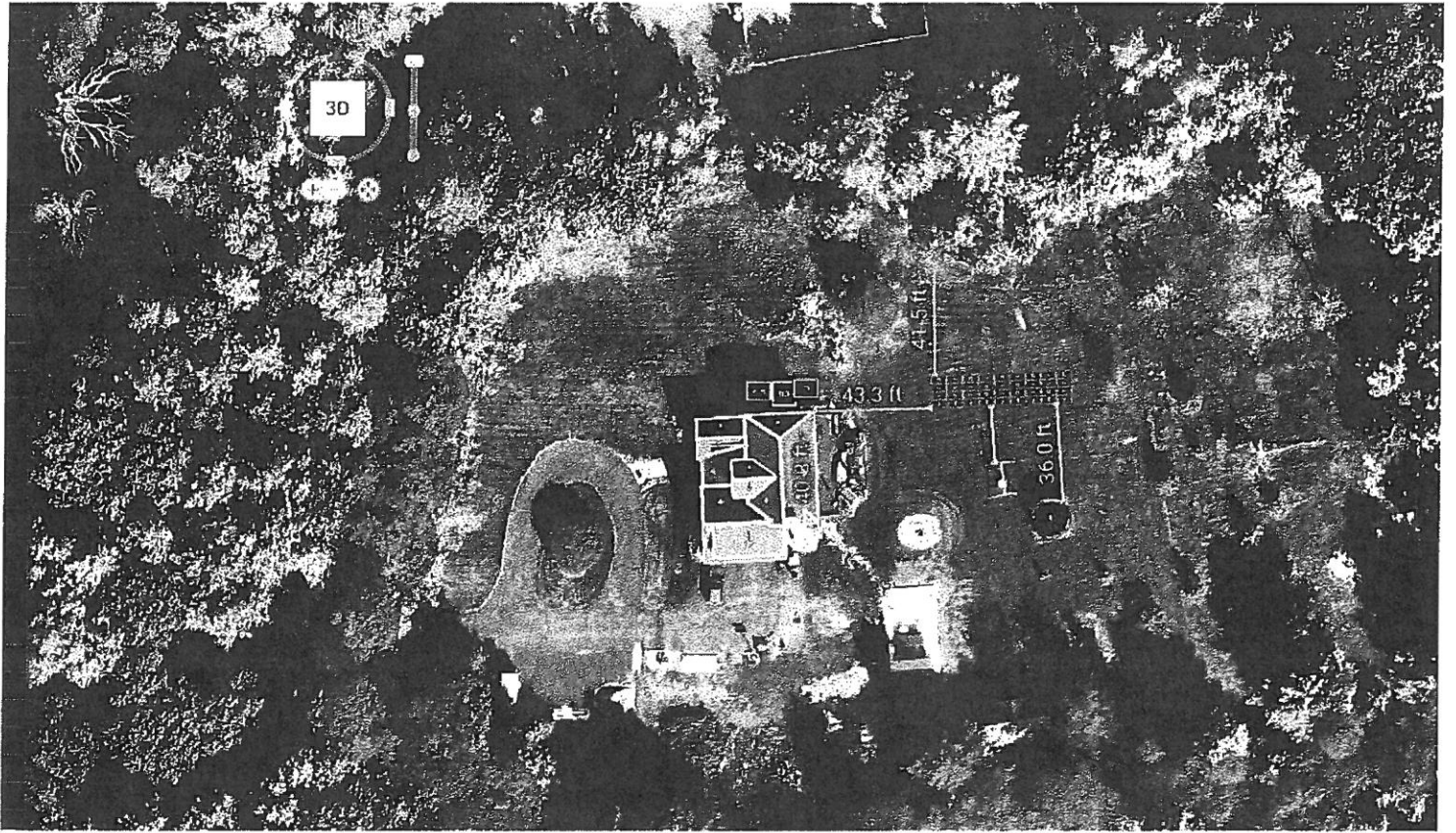
IQ-10 ESS and Rapid shutdown switch

Solar AC Disconnect

Utility revenue meter

NOTES:

- Total Quantity of Attachments = 164
- Roof Zones are defined by dimension, a=3.0ft
- Attachment: Eco-Fastener Green-Fastener with CP-SQ-Slotted Bracket and Aluminum Flashing attached with 5/16"x2-1/2" Lag Bolt. Headhead: 18-8SS
- All Dimensions shown are to module edges, including 1 in. Spacing between Modules required when using the Top Clamp Method.
- The Rails Extend 3 in. Beyond the module edges in order to support the End Clamps.
- Attachment Locations, if shown, are approximate. Final adjustment of attachment location may be necessary depending on field conditions. All attachments are staggered amongst the framing members.



NORTH SMITHFIELD ZONING BOARD HEARING NOTICE

Pursuant to the provisions of the North Smithfield Zoning Ordinance, the North Smithfield Zoning Board of Review will hold a public hearing on Tuesday, January 10, 2023 at 7 PM at the North Smithfield Town Hall, 83 Greene Street, North Smithfield, R.I. 02896. The Board will consider the following:

The application for a Special Use Permit by Kevin & Linda Crowthers, 600 Greenville Road, North Smithfield, RI 02896 to construct a residential ground mounted solar array on the land they own at 600 Greenville Road, North Smithfield, AP 015 Lot 226 in an RA Zone. Section 5.7 Solar Photovoltaic Systems and 5.7.4 Requirements for Accessory Use Solar and 5.7.5 Ground Mounted Solar Systems of the North Smithfield Zoning Ordinance requires a Special Use Permit to construct a solar array in an RA Zoning District.

Application materials and operating procedures of the Zoning Board of Review are available for review at the Office of the Zoning Official, Town of North Smithfield Town Hall, 83 Greene Street. North Smithfield, RI during regular business hours.

Individuals requesting interpreter services for the hearing impaired must call (401) 767-2200 at least 72 hours in advance of meeting date.