

Building Inspection Department

Jason Dool
Chief Building Inspector

Lockport Municipal Building
One Locks Plaza
Lockport, NY 14094
Phone (716) 439-6759
Fax (716) 439-6605

July 14, 2026

Megan Brewer

AGENDA

Please be advised that there are three (3) items on the agenda for the regularly scheduled Zoning Board of Appeals Meeting, Tuesday, July 28, 2026. The Zoning Board of Appeals will convene at 4:30 P.M. for agenda discussion and a public hearing will be held at 5:00 P.M.

1. Muhammad Azhar. 167 Van Buren Street. Request to demolish the existing building and erect an 8 unit multi-family dwelling situated in a Low Density Residential Zone. (Use-Multi-family dwelling)
2. Empire Solar Solutions. 269 So. Niagara Street. Request to install a 13.80 KW roof mounted solar array situated in a Mixed Light Industrial Zone. (Area-roof mounted solar array larger than 10 KW)
3. Essential Power, Inc. 702 Willow Street. Request to install an 11.125 KW roof mounted solar array situated in a Low Density Residential Zone. (Area-roof mounted solar array larger than 10 KW)

If you cannot attend the meeting please contact Megan Brewer at 716-439-6754 or mbrewer@lockportny.gov



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NOTICE OF PUBLIC HEARING

Case No. 2379

July 14, 2026

Megan Brewer

Dear Sir or Madam:

An Appeal under the Zoning Ordinance as applied to the property at 167 Van Buren Street, Lockport, New York, had been filed by Muhammad Azhar.

The request is for a variance to demolish the existing building and erect an 8 unit multi-family dwelling situated in a Low Density Residential Zone.

Approval of the permit application was denied or withheld because multi-family structures are not a permitted use in a Low Density Residential Zone.

The City of Lockport Zoning Ordinance permits multi-family dwellings in Mixed Use Downtown Zones and permits multi-family dwellings by Special Use Permit in Mixed Residential, Mixed Use General Commercial and Mixed Light Industrial Zones.

A Public Hearing will be held by the Zoning Board of Appeals on **Tuesday, July 28, 2026 at 5:00 P.M.**, at the Lockport Municipal Building, One Locks Plaza, Lockport, New York, at which time you may appear, if you so desire, either in person or by agent or attorney.

The purpose of this Hearing is to give all affected property owners an opportunity to support or oppose the granting of this Appeal.

Supporting documentation for this case may be found on the City of Lockport website lockportny.gov.

LOCKPORT ZONING BOARD OF APPEALS
Megan Brewer

CITY OF LOCKPORT, NEW YORK ZONING BOARD OF APPEALS APPLICATION

☒ AREA VARIANCE

☒ USE VARIANCE

It is the responsibility of the applicant to complete this form in its entirety, including all required attachments, and as precisely as possible. Failure to submit a complete application may result in a delay in being placed on a Zoning Board of Appeals agenda or a delayed decision from the Zoning Board.

PROPERTY ADDRESS: 167 Van Buren St.

APPLICANT INFORMATION

NAME: Muhammed Azhar ADDRESS: 167 Van Buren Street

PHONE: 516-523-7658 Lockport NY 14094
CITY STATE ZIP

FAX: _____ E-MAIL: azhar1@gmail.com

OWNER INFORMATION

NAME: Muhammed Azhar ADDRESS: 13 Anna Drive

PHONE: 516-523-7658 Bowmansville NY 14026
CITY STATE ZIP

FAX: _____ E-MAIL: azhar1@gmail.com

RELATIONSHIP OF APPLICANT TO PROPERTY:

___ CONTRACT PURCHASER ___ CONTRACTOR ___ OTHER
___ ARCHITECT/ ENGINEER ___ LESSEE

OFFICE USE ONLY

RECEIVED BY: _____ DATE/TIME RECEIVED: _____

FEE AMOUNT: _____ CHECK/MONEY ORDER#: _____

ZONING: _____ FEE TRANSMITTAL DATE: _____

AGENDA DATE: _____ DEADLINE DATE: _____

COUNTY TAX MAP IDENTIFICATION NUMBER: _____

BRIEF HISTORY OF PROPERTY (historic use of property, ownership history, etc.)

Existing structure on site was previously used as a mixed use building consisting of a bar/restaurant on First Floor with a Dwelling Unit on Second Floor. Building was severely damaged in a fire over a year ago.

DESCRIPTION OF PROPOSED ACTION (include specific use proposed, hours, # of employees, etc.)

Damnation of existing building. Construction of 2 story (8) unit Apartment building. Each Apartment will be a one bedroom design. Overall appearance of the building will be in keeping with the general residential character of the neighborhood.

VARIANCE STANDARDS (USE VARIANCE)

Applications for use variances must be based on alleviating a clearly demonstrable hardship, as opposed to a special privilege of convenience sought by the owner. Furthermore, the hardship must be peculiar to the land or building and must not generally apply to land throughout the neighborhood. An example of a property that may potentially have a case for a used variance is a corner store in a predominantly residential neighborhood. If the building has large plate glass windows, a parking lot and loading docks in the rear, it would be extremely costly to convert the building to residential uses to comply with existing zoning regulations.

VARIANCE STANDARDS (AREA VARIANCE)

Applications for area variances must be based on some extraordinary topographic condition or other physical condition inherent in the parcel (for example: exceptional narrowness, shallowness, shape or area). This condition must prohibit or unreasonably restrict the use of the land and/or building. One example of special condition: A utility right-of-way cutting through the rear half of several properties within a larger neighborhood limiting the buildable area of those properties, thereby requiring variances for rear and side yard setbacks for those particular property owners to construct new garages or sheds.

DESCRIPTION OF HARDSHIP (describe the features or conditions of the property that restrict reasonable use of the property under current zoning regulations)

The last occupancy of the existing building was that of a mixed use nature. Based on the properties to the east & south of the property (auto repair & factory, respectively) the potential investment return of a single family home at this location is minimal at best. A multi family structure would allow the owner to achieve a reasonable return on their investment & making a profitable use (for the city & owner) of an otherwise unattractive property in the city.

Describe how the requested variance will not alter the character of the larger neighborhood or impact adjacent properties:

The proposed building is minimally larger than the existing building and will be designed to generally give the appearance of a residential building, similar in design characteristics to the surrounding neighborhood.

APPLICATION ATTACHMENTS

To ensure appropriate and timely review of the application, please provide the following additional documentation in support of the application. Failure to provide all of the applicable materials listed below may result in a delay in scheduling the application for review by the Zoning Board of Appeals.

___ \$150 application fee (cash or checks payable to the City of Lockport)

___ Detailed site plan (10 copies)

___ Photographs of existing conditions

___ Property survey (10 copies)

APPLICANT/OWNER AFFIRMATION

I, THE UNDERSIGNED, DO HEREBY AFFIRM THAT THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND I FURTHER UNDERSTAND THAT INTENTIONALLY PROVIDING FALSE OR MISLEADING INFORMATION IS GROUNDS FOR IMMEDIATE DENIAL OF MY APPLICATION.

FURTHERMORE, I UNDERSTAND THAT I (OR A DESIGNATED REPRESENTATIVE) MUST BE PRESENT AT THE MEETING TO REPRESENT THE APPLICATION AND RESOND TO ANY QUESTIONS FROM THE ZONING BOARD OF APPEALS MEMBERS.

Signature (Applicant)

7/7/2026
Date

IF APPLICANT IS NOT THE OWNER OF RECORD FOR SUBJECT PARCEL:

I, THE UNDERSIGNED, HEREBY AFFIRM THAT I AM THE OWNER OF RECORD FOR THE SUBJECT PARCEL AT THE TIME OF APPLICATION. FURTHERMORE, I AM FAMILIAR WITH THE REQUEST BY THE APPLICANT AND AUTHORIZE SAID APPLICANT TO REPRESENT THE INTEREST OF THE OWNER (S) IN FURTHERANCE OF THE REQUEST.

Signature (Owner)

Date

Regular meetings of the Zoning Board of Appeals are generally held on the 4th Tuesday of every month. The meetings are held at 5:00 P.M. in the Common Council chambers on the first floor of City Hall. Applicants will receive a reminder notice in the mail prior to the meeting.

Pursuant to Section §190-188(d) of the City of Lockport Zoning Ordinance, property owners within a 200' radius will be notified of the intent of the applicant and given an opportunity to speak for or against the application.

Short Environmental Assessment Form

Part 1 - Project Information

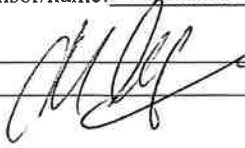
Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

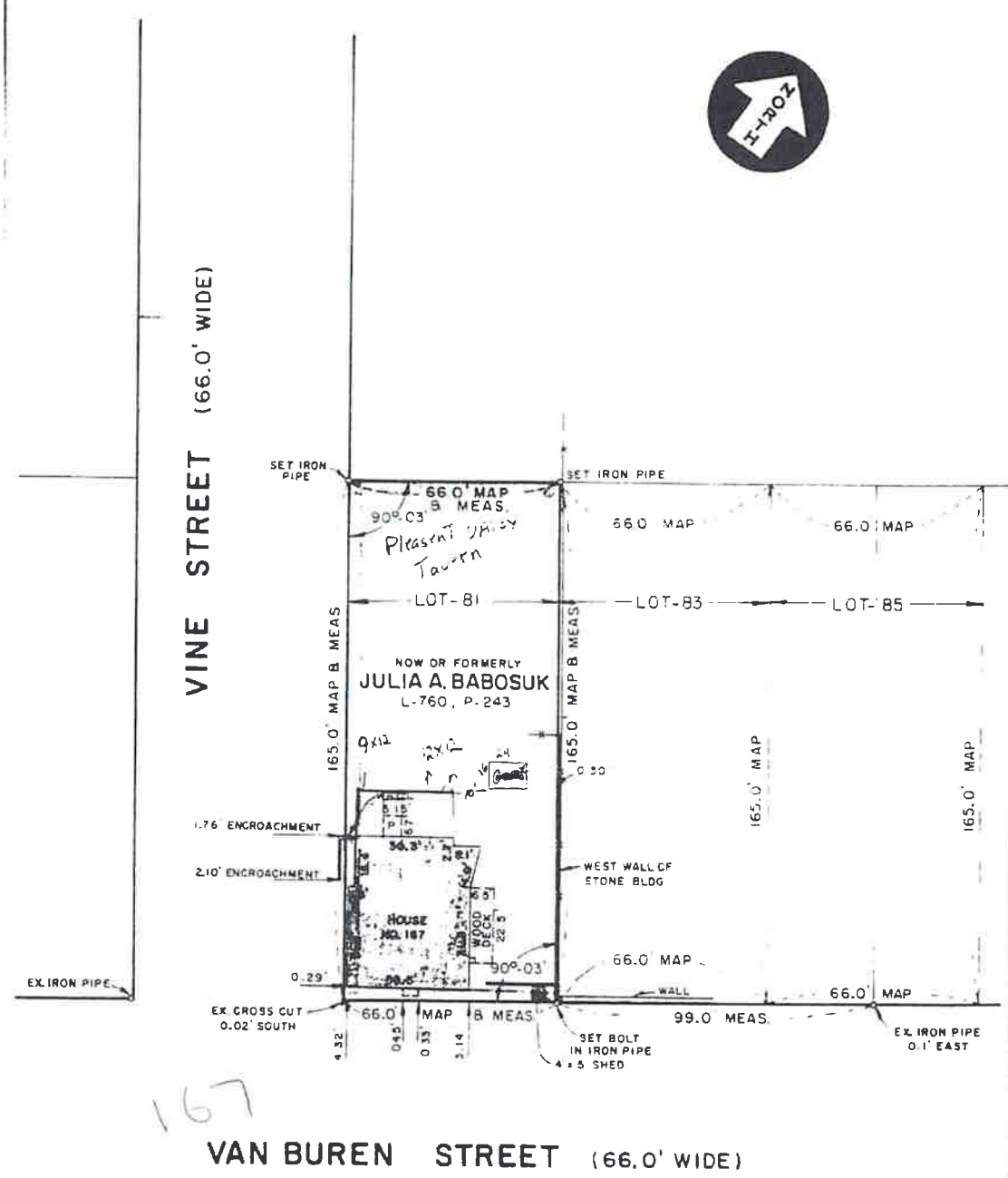
Complete all items in Part 1. You may also provide any additional information you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Name of Action or Project: 167 Van Buren Street, Lockport, NY			
Project Location (describe, and attach a location map): 167 Van Buren Street, Lockport, NY			
Brief Description of Proposed Action: Construct 2 story structure with (8) one bedroom apartments on site of previously destroyed building			
Name of Applicant or Sponsor: Muhammad Azhar		Telephone: 516-523-7658	
		E-Mail: azhar@icloud.com	
Address: 13 Anna Drive			
City/PO: Lockport		State: NY	Zip Code: 14026
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If No, continue to question 2.			NO ☒ YES ☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Variance from Lockport ZBA & building permit			NO ☐ YES ☒
3. a. Total acreage of the site of the proposed action?		0.24 acres	
b. Total acreage to be physically disturbed?		0.2 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		0.24 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
☒ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☐ Residential (suburban)			
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):			
☐ Parkland			

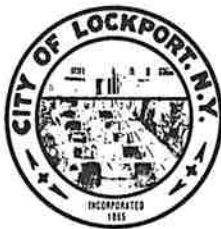
5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☐	☐	☐
b. Consistent with the adopted comprehensive plan?	☐	☐	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify:	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation services available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☒	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:	☐	☒	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☐	☒	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☐	☒	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☒	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☒ Urban ☐ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO ☒	YES ☐
16. Is the project site located in the 100-year or 500-year flood plain?	NO ☒	YES ☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: Existing storm water management system 	NO ☐ YES ☒ NO ☒ YES ☐ NO ☐ YES ☒	YES ☐ YES ☒ YES ☒ YES ☐
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO ☒	YES ☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO ☒	YES ☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO ☒	YES ☐
21. Is the project located within, or within ½ mile of, a disadvantaged community? If No, could impacts from the project affect a disadvantaged community? If Yes to either question in 21, answer the following question. a. Identify the potential pollution impacts of the project, either direct or indirect, that may occur within the disadvantaged community (e.g., wastewater discharges, air emissions, noise, odors, solid or hazardous waste generation or management):	NO ☒ YES ☒	YES ☐ YES ☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor/name: <u>Muhammad Azhar</u> Date: <u>7-8-26</u>		
Signature:  Title: <u>owner</u>		





DATE: FEBRUARY 2, 1972



Building Inspection Department

Jason Dool
Chief Building Inspector

Lockport Municipal Building
One Locks Plaza
Lockport, NY 14094
Phone (716) 439-6759
Fax (716) 439-6605

NOTICE OF PUBLIC HEARING

Case No. 2380

July 14, 2026

Megan Brewer

Dear Sir or Madam:

An Appeal under the Zoning Ordinance as applied to the property at 269 So. Niagara Street, Lockport, New York, had been filed by Empire Solar Solutions.

The request is for a variance to install a 13.80 KW roof mounted solar array situated in a Mixed Light Industrial Zone.

Approval of the permit application was denied or withheld because roof mounted solar array will be larger than 10 KW.

The City of Lockport Zoning Ordinance allows a roof mounted solar array to be a maximum 10 KW.

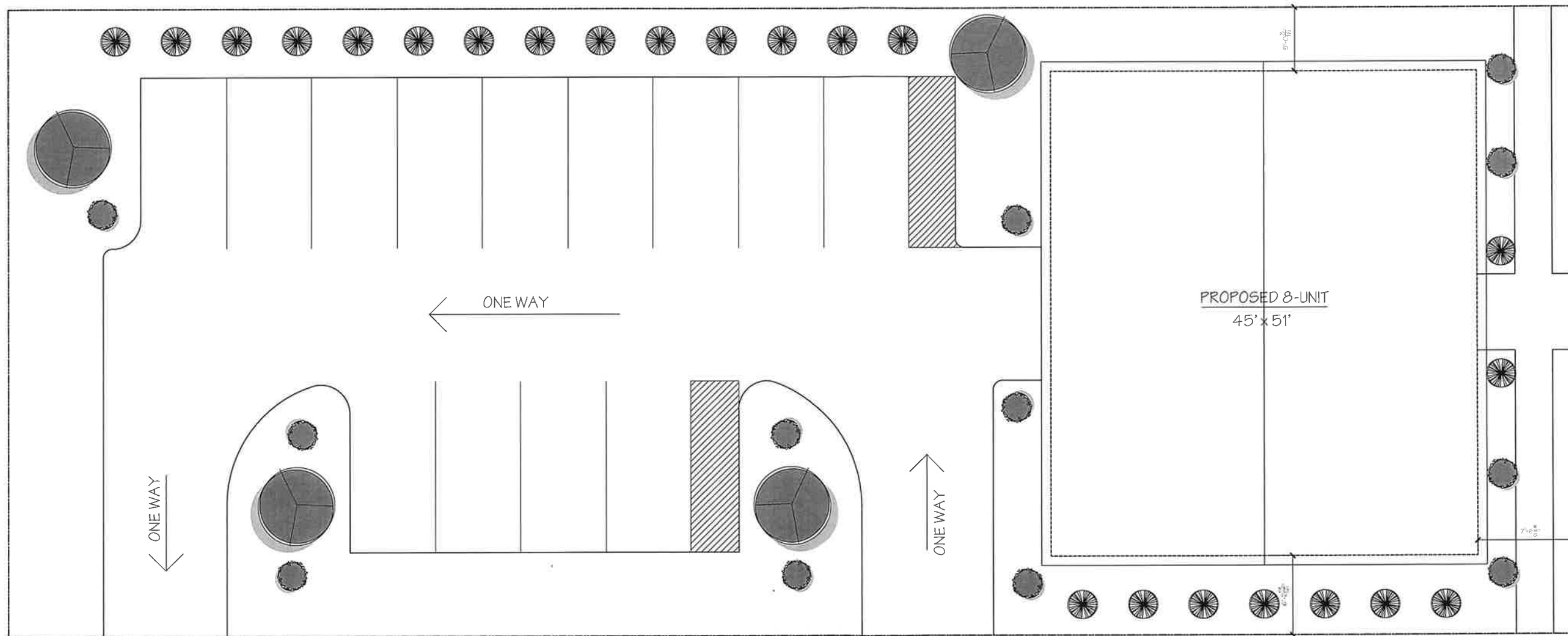
A Public Hearing will be held by the Zoning Board of Appeals on **Tuesday, July 28, 2026 at 5:00 P.M.**, at the Lockport Municipal Building, One Locks Plaza, Lockport, New York, at which time you may appear, if you so desire, either in person or by agent or attorney.

The purpose of this Hearing is to give all affected property owners an opportunity to support or oppose the granting of this Appeal.

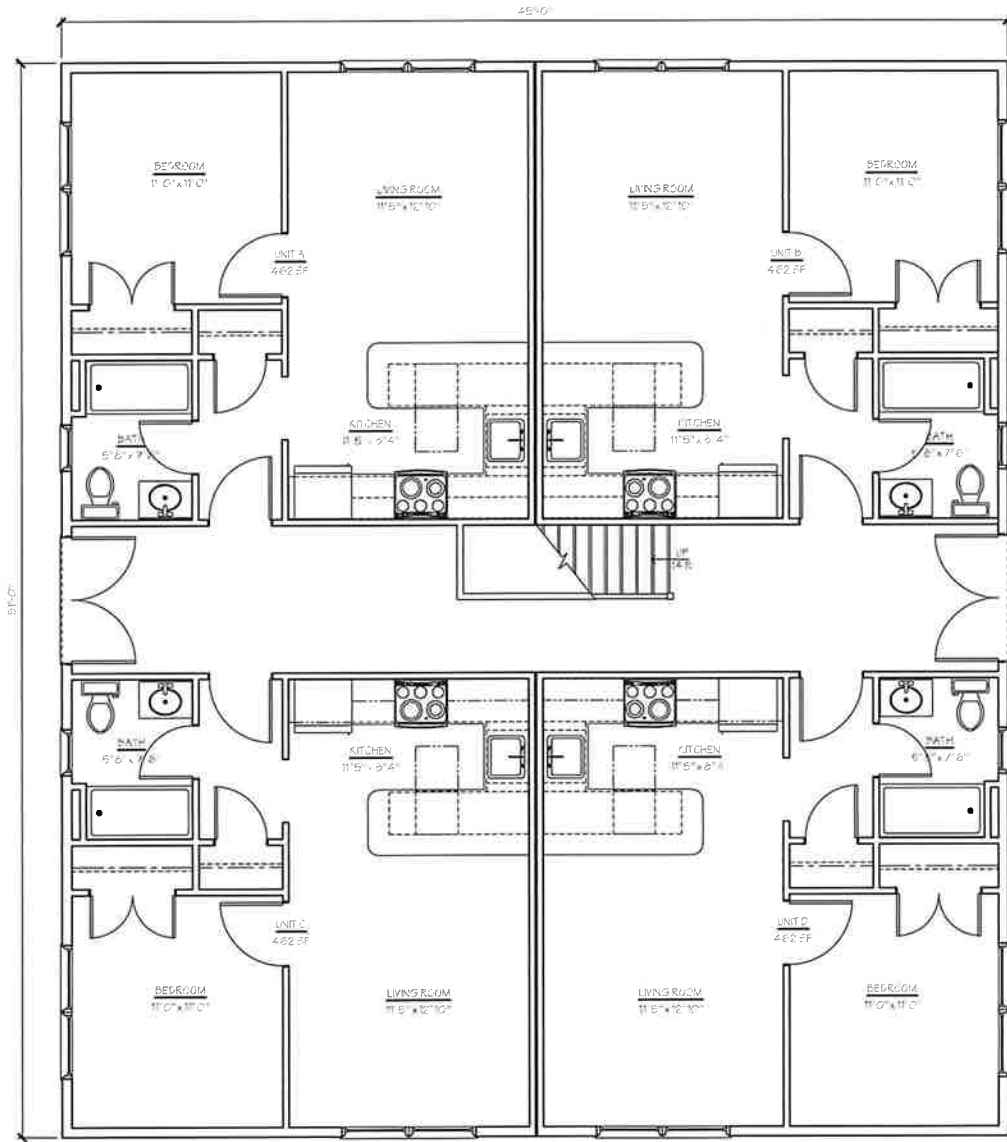
Supporting documentation for this case may be found on the City of Lockport website lockportny.gov.

LOCKPORT ZONING BOARD OF APPEALS
Megan Brewer

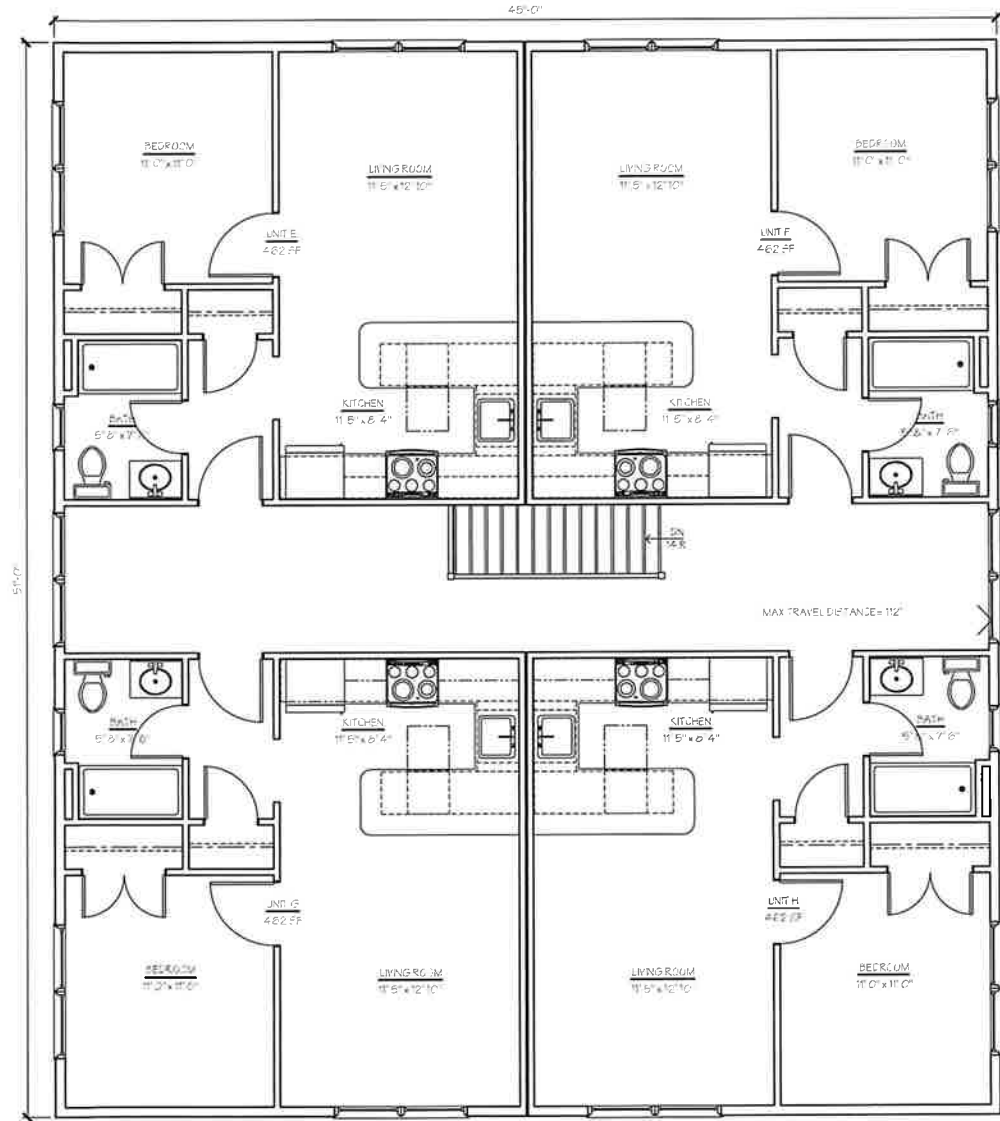
1



Life A-1



SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"



FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

Life by Design
architecture
6324 robinson road
lockport, new york
716 - 727 - 3191
cadahike@lbdarchitecture.com

charles a dahiye, r.a.
registered architect

DESIGNER

REVISIONS

DATE: JULY 2, 2023

SHEET 2 OF 2

designs to build your life on	residential	commercial	church design
PROJECT LOCATION	167 VAN BUREN STREET LOCKPORT, NEW YORK		
CLIENT NAME	MUHAMMAD AZHAR		
PROJECT TITLE	167 VAN BUREN RESTORATION AND ADDITION		
CONTENTS ON FILE	PROPOSED FLOOR PLANS		

Life
DRAWING NUMBER
A-2
25-362

**CITY OF LOCKPORT, NEW YORK
ZONING BOARD OF APPEALS APPLICATION**

____ AREA VARIANCE

☒ USE VARIANCE

It is the responsibility of the applicant to complete this form in its entirety, including all required attachments, and as precisely as possible. Failure to submit a complete application may result in a delay in being placed on a Zoning Board of Appeals agenda or a delayed decision from the Zoning Board.

PROPERTY ADDRESS: 269 S Niagara St. Lockport, NY 14094

APPLICANT INFORMATION

NAME: Courtney Roberts ADDRESS: 2-8 Johnes St.
PHONE: (645) 317-8019 Newburgh, NY 12550
FAX: _____ E-MAIL: COURTNEY@COURTNEYROBERTS.COM

OWNER INFORMATION

NAME: Suzette Smith ADDRESS: 269 S Niagara St.
PHONE: (716) 471-7292 Lockport, NY 14094
FAX: _____ E-MAIL: _____

RELATIONSHIP OF APPLICANT TO PROPERTY:

____ CONTRACT PURCHASER ☒ CONTRACTOR ____ OTHER
____ ARCHITECT/ENGINEER ____ LESSEE

OFFICE USE ONLY

RECEIVED BY: _____ DATE/TIME RECEIVED: _____
FEE AMOUNT: _____ CHECK/MONEY ORDER#: _____
ZONING: _____ FEE TRANSMITTAL DATE: _____
AGENDA DATE: _____ DEADLINE DATE: _____
COUNTY TAX MAP IDENTIFICATION NUMBER: _____

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

BRIEF HISTORY OF PROPERTY (historic use of property, ownership history, etc.)

The property located at 269 S Niagara St. Lockport, NY 14094, has historically been used as a single-family residential dwelling. To the best of our knowledge, the property has remained residential in nature and has not undergone any significant change in use.

DESCRIPTION OF PROPOSED ACTION (include specific use proposed, hours, # of employees, etc.)

Proposed installation of a 13.80kW roof-mounted solar system consisting of 30 REC 460W panels with 1 Tesla Powerwall 3 string inverters. The system will be mounted on the NE & NW sides of the roof. Installation is anticipated to take approximately one day (approximately 5 hours) and will involve a crew of three workers. No employees will remain on-site after installation. The system will serve only the residential property and will not change the use or character of the property.

VARIANCE STANDARDS (USE VARIANCE)

Applications for use variances must be based on alleviating a clearly demonstrable hardship, as opposed to a special privilege of convenience sought by the owner. Furthermore, the hardship must be peculiar to the land or building and must not generally apply to land throughout the neighborhood. An example of a property that may potentially have a case for a used variance is a corner store in a predominantly residential neighborhood. If the building has large plate glass windows, a parking lot and loading docks in the rear, it would be extremely costly to convert the building to residential uses to comply with existing zoning regulations.

VARIANCE STANDARDS (AREA VARIANCE)

Applications for area variances must be based on some extraordinary topographic condition or other physical condition inherent in the parcel (for example: exceptional narrowness, shallowness, shape or area). This condition must prohibit or unreasonably restrict the use of the land and/or building. One example of special condition: A utility right-of-way cutting through the rear half of several properties within a larger neighborhood limiting the buildable area of those properties, thereby requiring variances for rear and side yard setbacks for those particular property owners to construct new garages or sheds.

DESCRIPTION OF HARDSHIP (describe the features or conditions of the property that restrict reasonable use of the property under current zoning regulations)

The property is subject to a hardship under current zoning regulations due to the 10 kW cap on solar energy system size, which restricts the reasonable and effective use of the property for renewable energy generation. The household's electrical demand exceeds what a 10 kW system can reliably produce, particularly given site-specific conditions such as roof orientation, limited usable roof planes, and partial shading from surrounding structures and vegetation. These constraints reduce system efficiency, requiring a larger system capacity to meet the property's actual energy needs.

Describe how the requested variance will not alter the character of the larger neighborhood or impact adjacent properties:

The requested variance to allow a solar energy system will not alter the character of the surrounding neighborhood or negatively impact adjacent properties. The proposed installation will be integrated into the existing structure, mounted flush with the roofline, and designed to minimize visual impact. The system will not introduce significant height, noise, traffic, or lighting changes that would affect neighboring properties. Solar panels are a common and increasingly accepted residential improvement that aligns with modern development patterns and sustainability practices.

APPLICATION ATTACHMENTS

To ensure appropriate and timely review of the application, please provide the following additional documentation in support of the application. Failure to provide all of the applicable materials listed below may result in a delay in scheduling the application for review by the Zoning Board of Appeals.

- ☐ \$150 application fee (cash or checks payable to the City of Lockport)
- ☐ Detailed site plan (10 copies)
- ☐ Photographs of existing conditions
- ☐ Property survey (10 copies)

APPLICANT/OWNER AFFIRMATION

I, THE UNDERSIGNED, DO HEREBY AFFIRM THAT THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND I FURTHER UNDERSTAND THAT INTENTIONALLY PROVIDING FALSE OR MISLEADING INFORMATION IS GROUNDS FOR IMMEDIATE DENIAL OF MY APPLICATION.

FURTHERMORE, I UNDERSTAND THAT I (OR A DESIGNATED REPRESENTATIVE) MUST BE PRESENT AT THE MEETING TO REPRESENT THE APPLICATION AND RESPOND TO ANY QUESTIONS FROM THE ZONING BOARD OF APPEALS MEMBERS.



Signature (Applicant)

6/12/2026

Date

IF APPLICANT IS NOT THE OWNER OF RECORD FOR SUBJECT PARCEL:

I, THE UNDERSIGNED, HEREBY AFFIRM THAT I AM THE OWNER OF RECORD FOR THE SUBJECT PARCEL AT THE TIME OF APPLICATION. FURTHERMORE, I AM FAMILIAR WITH THE REQUEST BY THE APPLICANT AND AUTHORIZE SAID APPLICANT TO REPRESENT THE INTEREST OF THE OWNER(S) IN FURTHERANCE OF THE REQUEST.



Signature (Owner)

6/12/2026

Date

Regular meetings of the Zoning Board of Appeals are generally held on the 4th Tuesday of every month. The meetings are held at 5:00 P.M. in the Common Council chambers on the first floor of City Hall. Applicants will receive a reminder notice in the mail prior to the meeting.

Pursuant to Section §190-188(d) of the City of Lockport Zoning Ordinance, property owners within a 200' radius will be notified of the intent of the applicant and given an opportunity to speak for or against the application.

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



FRONT OF HOUSE

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



BACK OF HOUSE

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



VIEW OF THE HOUSE FROM 261 S NIAGARA ST.

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



VIEW OF THE HOUSE FROM 277 S NIAGARA ST.

Suzette Smith Residence

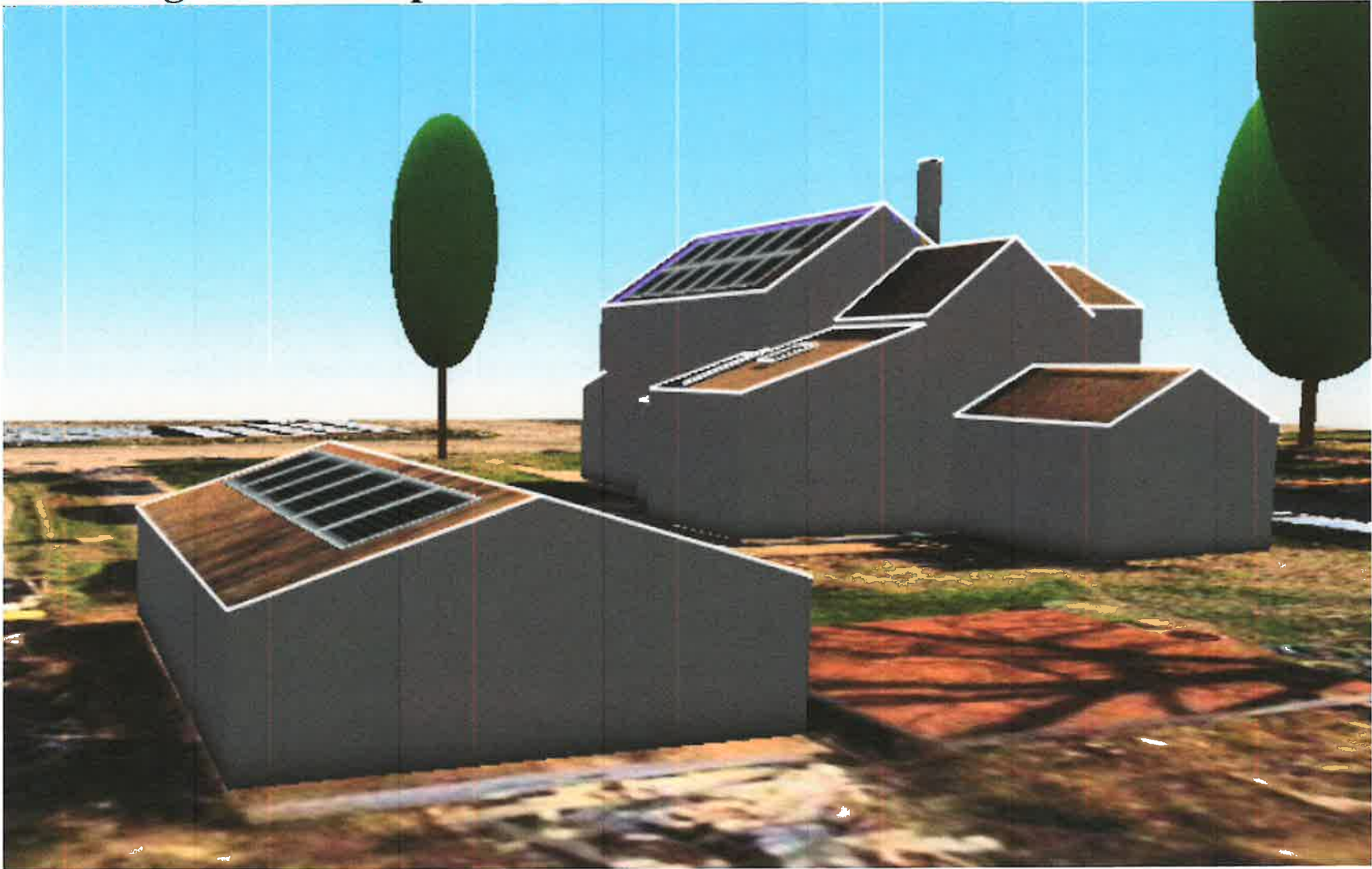
269 S Niagara St. Lockport, NY 14094



**3D RENDERING OF PANELS SUPERIMPOSED – FRONT OF
HOUSE**

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



3D RENDERING OF PANELS SUPERIMPOSED – BACK OF HOUSE

Suzette Smith Residence

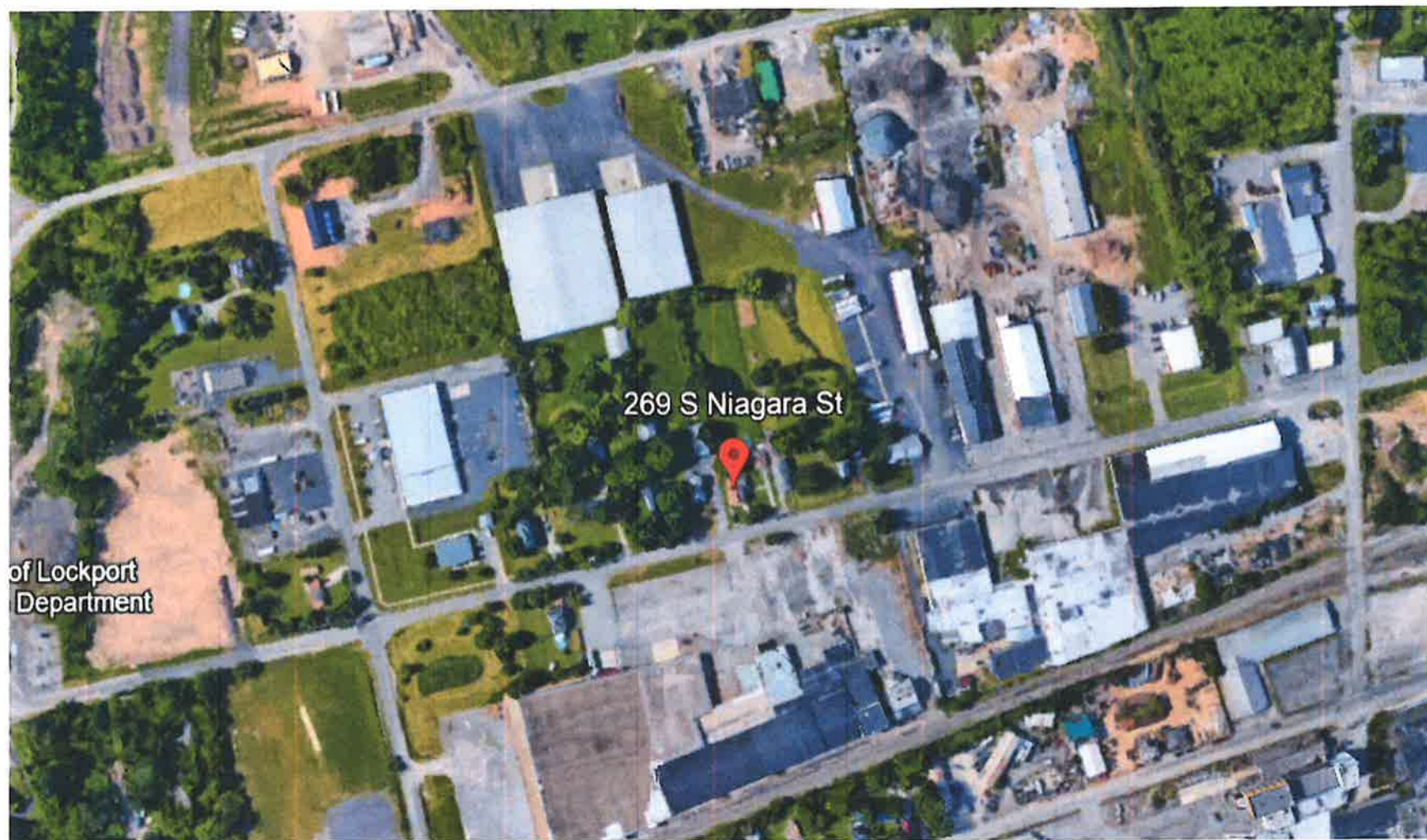
269 S Niagara St. Lockport, NY 14094



AERIAL VIEW OF PANELS

Suzette Smith Residence

269 S Niagara St. Lockport, NY 14094



AERIAL VIEW OF 269 S NIAGARA ST.

Michael E. Miele, PE

Licensed Professional Engineer
Licensed In New York, New Jersey, Connecticut & California
New York License # 079676
New Jersey License # 44042
Connecticut License # 23158
California License # 31508

May 27, 2026

City of Lockport Building Department
Code Enforcement Office

Re: Suzette Smith - 269 S Niagara St. Lockport, NY 14094
Single Family Residence, Solar Panel Loading Certification
City of Lockport, County of Niagara, State of New York

Dear Building Department

I am the engineer of record for the above referenced project. I have prepared the attached plans dated May 27, 2026 that consist of the installation of (30) REC460W solar panels at the above referenced location.

I can hereby certify that the existing roof structure combined with the additional weight of the solar panels meets the requirements of The 2025 Residential Code of New York State.

The design loads were as follows,
Ground Snow Load: 50psf as per 2025 Residential Code of NYS Figure R301.2(4)
Wind Design Load: 120mph
No additional structural members were required.

The house roof is currently framed with 2x6 true dimensional wood framing @ 16" O.C. and the garage is framed with 2x6 wood framing @ 16" O.C. The roof structural members are in compliance with ASCE 7-22 for deflection and acceptable bending stress.

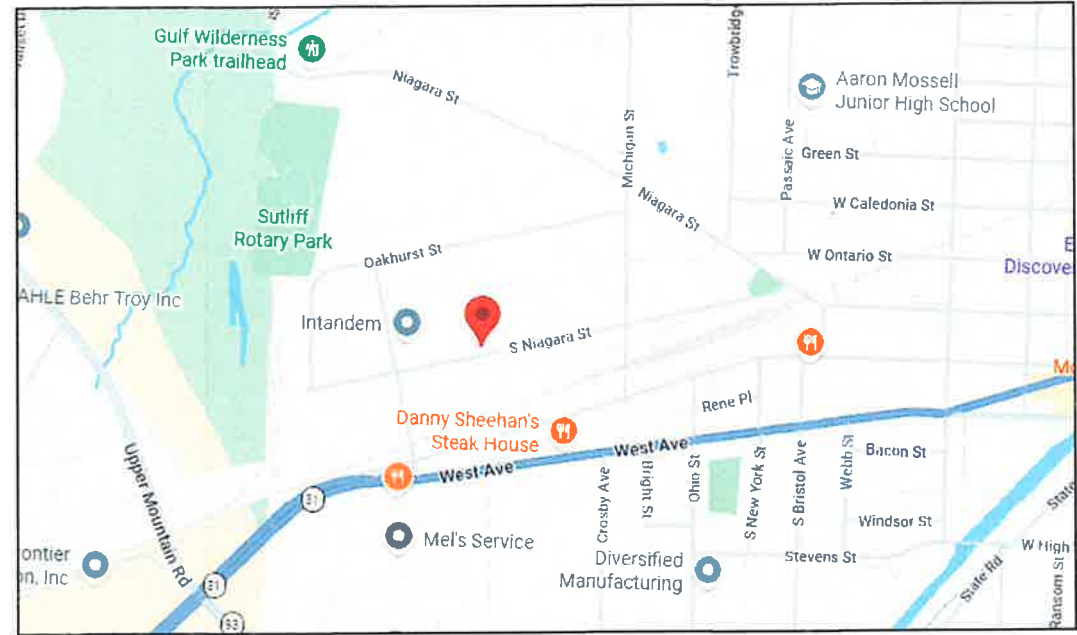
If you have any questions, please feel free to call me at any time. Thanks in advance.

Sincerely Yours,



Michael E. Miele, PE





AERIAL MAP:
NTS

ROOF PANEL LAYOUT PLAN:
NTS

SITE VERIFICATION NOTES:

1. PRIOR TO SUBMISSION TO MUNICIPALITY OF THE PLANS, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO SUBMISSION OF THE PLANS. SUBMISSION OF PLANS SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF WORK. IF EXISTING CONDITIONS VARY FROM PLANS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY PROJECT ENGINEER A.S.A.P. CONTRACTOR ASSUMES ALL RESPONSIBILITY AND LIABILITY THEREFROM.
3. THE OWNER/CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, VERIFY ALL CONDITIONS, EXAMINE THE DESIGN DOCUMENTS AND BE RESPONSIBLE FOR ALL MEASUREMENTS, DIMENSIONS AND CONDITIONS.
4. COMMENCEMENT OF CONSTRUCTION WILL SIGNIFY THAT THE CONTRACTOR WILL HOLD THE DESIGN ENGINEER HARMLESS FOR ANY AND ALL ERRORS, OMISSIONS AND PERSONAL LIABILITY.

PROJECT DESIGN DATA:

WORK SHALL BE COMPLETED AS PER 2025 RESIDENTIAL CODE OF NEW YORK STATE, NFPA 70, 2023 NATIONAL ELECTRICAL CODE, NFPA 855 (STANDARD FOR INSTALLATION OF STATIONARY ENERGY STORAGE SYSTEMS) AND 2018 WOOD FRAME CONSTRUCTION MANUAL. LOAD CRITERIA AS FOLLOWS:
EXPOSURE CATEGORY: "B"
GROUND SNOW LOAD: 50 PSF
WIND SPEED: 120 MPH

GENERAL NOTES:

1. ALL SOLAR MODULES TO BE REC 460W AND SHALL BE INSTALLED AS PER REC INSTALLATION MANUAL.
2. ALL INVERTERS TO BE TESLA INVERTERS, ALL PANELS TO BE ATTACHED WITH K2 CROSS RAIL SYSTEM, INSTALL AS PER INSTALLATION MANUAL.

RESIDENTIAL SOLAR PANEL INSTALLATION

LOCATED AT - 269 S NIAGARA ST. LOCKPORT, NY 14094
CITY OF LOCKPORT, NIAGARA COUNTY, NEW YORK



SOLAR PANEL INSTALLATION

SMITH RESIDENCE

269 S NIAGARA ST.
LOCKPORT, NY
14094

REVISIONS NOTES		SYSTEM NOTES: TOTAL SYSTEM SIZE: 13.8 KW DC SYSTEM / 11.5KW AC SYSTEM ENERGY STORAGE CAPACITY: 13.5 KWH PANEL TYPE: REC 460W OF PANELS: 30 INVERTER TYPE: TESLA (POWER WALL 3) OF INVERTERS: 1 ARRAY #1 #2 #3 AZIMUTH: 257 77 76 TILT: 34 34 17 #PANELS: 12 12 6	PROFESSIONAL NOTES: UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS MAP NOT HAVING THE SEAL OF THE ENGINEER SHALL NOT BE VALID	SEAL & SIGNATURE 	DWG# S-1 PROJECT SITE PLAN AND NOTES DWG. 1 OF 4
DWG. BY: MEM	SCALE: AS-NOTED				
CHECKED BY: MEM	PROJECT #: ES-4955-26				
DATE: MAY 27, 2026	SBL #: 108.15-1-11				
MUNICIPALITY: CITY OF LOCKPORT	COUNTY: NIAGARA				

PROPOSED ARRAY #1
(12) REC 460W SOLAR
MODULES MOUNTED
PORTRAIT CONFIGURATION
ATTACHED WITH K2 CROSS
RAIL SYSTEM, INSTALL AS
PER INSTALLATION MANUAL

COMBINER BOX
DISCONNECT SWITCH
UTILITY METER/GATEWAY
MAIN SERVICE PANEL

PROPOSED ARRAY #3
(6) REC 460W SOLAR
MODULES MOUNTED
PORTRAIT CONFIGURATION
ATTACHED WITH K2 CROSS
RAIL SYSTEM, INSTALL AS
PER INSTALLATION MANUAL

PROPOSED ARRAY #2
(12) REC 460W SOLAR
MODULES MOUNTED
PORTRAIT CONFIGURATION
ATTACHED WITH K2 CROSS
RAIL SYSTEM, INSTALL AS
PER INSTALLATION MANUAL

TRENCH
19.7 FT

TRENCH
52.1 FT

TESLA PW3

FIRST RESPONDER ACCESS AS PER THE 2025
RESIDENTIAL CODE OF NEW YORK STATE
SECTION R329.6 "ROOF ACCESS AND PATHWAYS"

FRONT OF HOUSE

ROOF PANEL LAYOUT:



TESLA PW3 LOCATION:

NOTES:

1.PER NFPA 855 - EQUIPMENT TO BE INSTALLED AT
LEAST 3 FEET AWAY FROM DOORS AND/OR WINDOWS



SOLAR PANEL
INSTALLATION
SMITH
RESIDENCE
269 S NIAGARA ST.
LOCKPORT, NY
14094

REVISIONS NOTES

DWG. BY:	MEM	SCALE:	AS-NOTED
CHECKED BY:	MEM	PROJECT #:	ES-4955-26
DATE:	MAY 27, 2026	SBL #:	108.15-1-11
MUNICIPALITY:	CITY OF LOCKPORT	COUNTY:	NIAGARA

SYSTEM NOTES:

TOTAL SYSTEM SIZE:
13.8 KW DC SYSTEM / 11.5KW AC SYSTEM
ENERGY STORAGE CAPACITY: 13.5 KWh
PANEL TYPE: REC 460W
OF PANELS: 30
INVERTER TYPE: TESLA (POWER WALL 3)
OF INVERTERS: 1
ARRAY #1 #2 #3
AZIMUTH: 257 77 76
TILT: 34 34 17
PANELS: 12 12 6

PROFESSIONAL NOTES:

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DWG#

S-2
SOLAR
ROOF
LAYOUT
PLAN

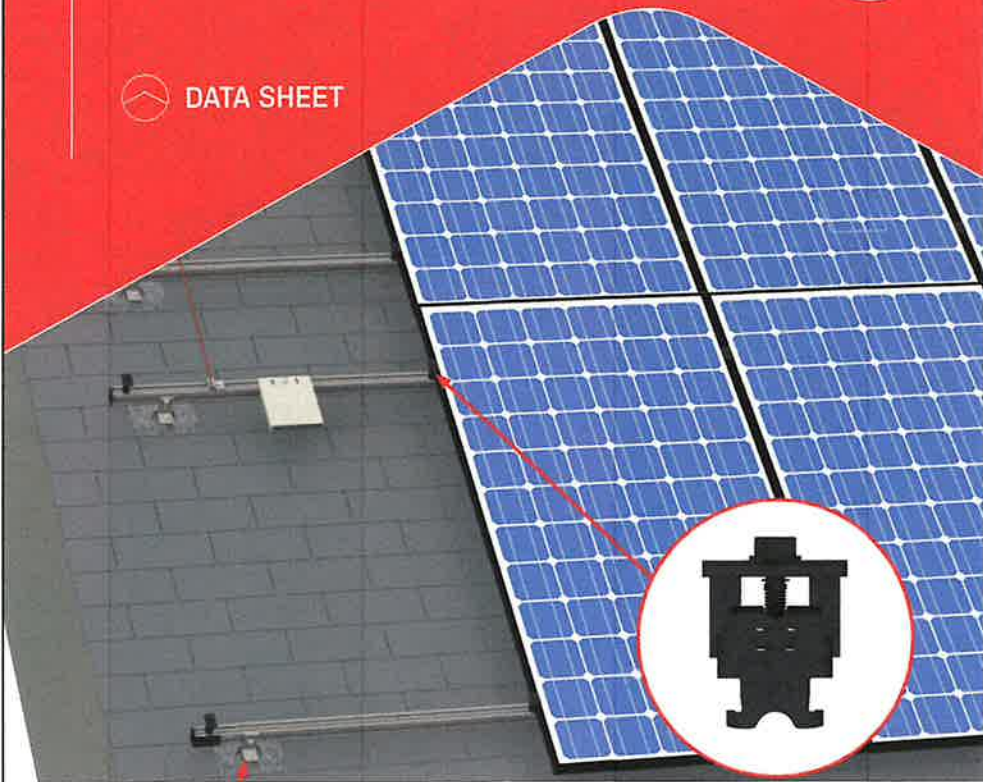
DWG:

2 OF 4

CrossRail System



 DATA SHEET





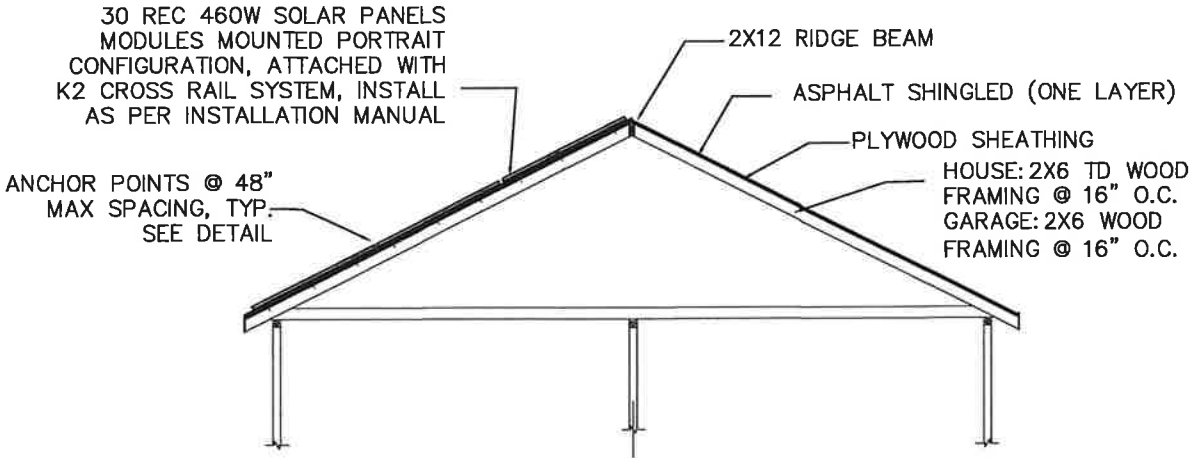
In-Rail Wire Management

- / 4 open channel rail types available
- / Clamps and wire management clips help secure cables
- / 4 clip types available

K2 Flash Comp Kit Waterproofing

- / Water Shield redirects water away from penetration
- / K2 EverSeal preassembled on L-Foot
- / EPDM backed sealing washing on lag screw

ATTACHMENT DETAIL:
NTS



ROOF SECTION:
NTS

TECHNICAL DATA

	CrossRail System
Roof Type	Composition shingle, tile, standing seam, corrugated metal, trapezoidal metal
Material	High corrosion resistance stainless steel and high grade aluminum
Flexibility	Modular construction, suitable for any system size, height adjustable
PV Modules	For all common module types
Module Orientation	Portrait and landscape
Roof Connection	Rafter or deck connection depending on selected roof attachment
Structural Validity	IBC compliant, stamped engineering letters available for all solar states
Certifications	UL 2703, ASCE 7-16, Class A Fire Rating
Warranty	25 years



SOLAR PANEL
INSTALLATION
SMITH
RESIDENCE
269 S NIAGARA ST.
LOCKPORT, NY
14094

REVISIONS NOTES			
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CHECKED BY:	MEM	PROJECT #:	ES-4955-26
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COUNTY:	NIAGARA		

SYSTEM NOTES:
TOTAL SYSTEM SIZE:
13.8 KW DC SYSTEM / 11.5KW AC SYSTEM
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PANEL TYPE: REC 460W
OF PANELS: 30
INVERTER TYPE: TESLA (POWER WALL 3)
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ARRAY #1 #2 #3
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#PANELS: 12 12 6

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DWG#
S-3
SOLAR
PANEL
ATTACHMENT
PLAN I
DWG.

CERTIFICATION NOTES:

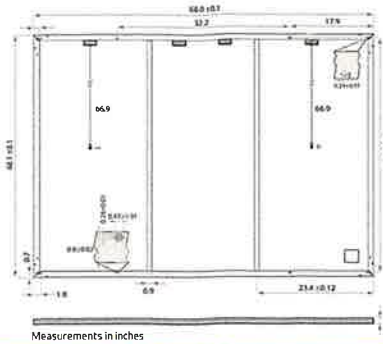
1. THE ROOF STRUCTURAL MEMBERS HAVE BEEN CHECKED FOR 120 MPH WIND LOADS BASED ON ASCE 7-22 AND FOR COMPLIANCE WITH THE 2025 RESIDENTIAL CODE OF NEW YORK STATE. THERE WAS (1) LAYER OF ROOF SHINGLES INSTALLED AT THE TIME OF THE INSPECTION. THIS PLAN DOES NOT APPLY IF ANY ADDITIONAL ROOF SHINGLES LAYERS ARE INSTALLED AFTER THE SITE INSPECTION. INSTALLATION OF SOLAR PANELS WITH MORE THAN (1) LAYERS OF ROOF SHINGLES IS NEVER PERMITTED.
2. THE MOUNTING BRACKETS & HARDWARE MEET OR EXCEED ASCE 7-22 AND 2025 RESIDENTIAL CODE OF NEW YORK STATE, WITH 120 MPH WIND DESIGN. THE SYSTEM'S ATTACHMENT TO THE ROOF TO MEET OR EXCEED 2025 RESIDENTIAL CODE OF NEW YORK STATE.
3. ANY PLUMBING VENTS THROUGH THE ROOF ARE NOT TO BE CUT OR COVERED DURING PANEL INSTALLATION. ANY MODIFICATION OR RELOCATION OF VENTS WILL REQUIRED A PLUMBING PERMIT AND INSPECTIONS.
4. SIZES OF MEMBERS THAT WERE NOT ACCESSIBLE FOR DIRECT MEASUREMENT ARE BASED ON OBSERVATIONS OF ACCESSIBLE MEMBERS OR CONSTRUCTION DEPTH OR BOTH AND OUR KNOWLEDGE OF STANDARD CONSTRUCTION PRACTICES AT THE TIME OF CONSTRUCTION.
5. THE EXISTING ROOF AND BUILDING STRUCTURE CAN SAFELY SUSTAIN, AND DISTRIBUTE TO THE GROUND, THE ADDITIONAL LOADS IMPOSED BY THE PROPOSED WORK IN ADDITION TO ALL OTHER GRAVITY AND LATERAL LOADS AS REQUIRED BY 2025 RESIDENTIAL CODE OF NEW YORK STATE.

REC ALPHA PURE-RX SERIES
PRODUCT SPECIFICATIONS



GENERAL DATA

Cell type:	88 half-cut bifacial REC heterojunction cells with lead-free, gapless technology
Glass:	0.12 in solar glass with anti-reflective surface treatment in accordance with EN 12150
Backsheet:	Highly resistant polymer
Frame:	Anodized aluminum (black)
Junction box:	4-part, 4 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors:	Stäubli MC4 PV-KBT4/KST4 (12 AWG) in accordance with IEC 62852, IP68 only when connected
Cable:	12 AWG solar cable, 66.9 + 66.9 in in accordance with EN 50618
Dimensions:	68.0 x 48.1 x 1.2 in (22.4 sq ft)
Weight:	5.6 lb
Origin:	Made in Singapore



ELECTRICAL DATA

	Product Code: RECxxxAA Pure-RX	
Power Output - P _{max} (Wp)	450	460
Watt Class Sorting - (W)	0/+10	0/+10
Nominal Power Voltage - V _{nom} (V)	54.3	54.9
Nominal Power Current - I _{nom} (A)	8.29	8.38
Open Circuit Voltage - V _{oc} (V)	65.1	65.3
Short Circuit Current - I _{sc} (A)	8.81	8.88
Power Density (W/sq-ft)	20.1	20.5
Panel Efficiency (%)	21.6	22.1
Power Output - P _{max} (Wp)	343	350
Nominal Power Voltage - V _{nom} (V)	51.2	51.7
Nominal Power Current - I _{nom} (A)	6.70	6.77
Open Circuit Voltage - V _{oc} (V)	61.3	61.6
Short Circuit Current - I _{sc} (A)	7.11	7.17

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m², temperature 77°F (25°C)), based on a production spread with a tolerance of P_{max} V_{oc} & I_{sc} ±3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m², temperature 65°F (20°C), windspeed 3.3 ft/s (1 m/s)). *Where xxx indicates the nominal power class (P_{max}) at STC above.

MAXIMUM RATINGS

Operational temperature	-40...+185°F
System voltage:	1000 V
Test load (front):	+7000 Pa (146.2 lbs/sq-ft)
Test load (rear):	-4000 Pa (83.5 lbs/sq-ft)
Series fuse rating:	25 A
Reverse current:	25 A

See installation manual for mounting instructions. Design load = Test load / 1.5 (safety factor)

WARRANTY

	Standard	REC ProTrust
Installed by an REC Certified Solar Professional	No	Yes
System Size	All	<25 kW 25-500 kW
Product Warranty (yrs)	20	25
Power Warranty (yrs)	25	25
Labor Warranty (yrs)	0	10
Power in Year 1	98%	98%
Annual Degradation	0.25%	0.25%
Power in Year 25	92%	92%

The REC ProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See www.recgroup.com for more details.

Available from:

Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.

REC Solar PTE. LTD.
20 Tuas South Ave. 14
Singapore 637312
post@recgroup.com



Powerwall 3 Technical Specifications

System Technical Specifications

Model Number	1707000-xx-y
Nominal Grid Voltage (Input & Output)	120/240 VAC
Grid Type	Split phase
Frequency	60 Hz
Nominal Battery Energy	13.5 kWh AC ¹
Nominal Output Power (AC)	5.8 kW 7.6 kW 10 kW 11.5 kW
Maximum Apparent Power	5,800 VA 7,600 VA 10,000 VA 11,500 VA
Maximum Continuous Current	24 A 31.7 A 41.7 A 48 A
Overcurrent Protection Device ²	30 A 40 A 60 A 60 A
Configurable Maximum Continuous Discharge Power Off-Grid (PV Only, -20°C to 25°C)	15.4 kW ³
Maximum Continuous Charge Current / Power (Powerwall 3 only)	20.8 A AC / 5 kW
Maximum Continuous Charge Current / Power (Powerwall 3 with up to (3) Expansion units)	33.3 A AC / 8 kW
Output Power Factor Rating	0 - 1 (Grid Code configurable)
Maximum Output Fault Current (1 s)	160 A
Maximum Short-Circuit Current Rating	10 kA
Load Start Capability	185 LRA
Solar to Battery to Home/Grid Efficiency	89% ¹⁴
Solar to Home/Grid Efficiency	97.5% ⁵
Power Scalability	Up to 4 Powerwall 3 units supported
Energy Scalability	Up to 3 Expansion units (for a maximum total of 7 units)
Supported Islanding Devices	Gateway 3, Backup Switch, Backup Gateway 2
Connectivity	Wi-Fi (2.4 and 5 GHz), Ethernet, Cellular (LTE/4G ⁹)
Hardware Interface	Dry contact relay, Rapid Shutdown (RSD) certified switch and 2-pin connector, RS-485 for meters
AC Metering	Revenue Grade (+/- 0.5%, ANSI C12.20)
Protections	Integrated arc fault circuit interrupter (AFCI), Isolation Monitor Interrupter (IMI), PV Rapid Shutdown (RSD) using Tesla Mid-Circuit Interrupters
Customer Interface	Tesla Mobile App
Warranty	10 years

¹Values provided for 25°C (77°F), at beginning of life. 3.3 kW charge/discharge power.
²See [Powerwall 3 Installation Manual](#) for fuse requirements if using fuse for overcurrent protection.
³15.4kW off-grid maximum continuous discharge power is only available if on-grid rating is 11.5 kW. If enabled, Powerwall 3 must be installed with an 80 A breaker and appropriately sized conductors.
⁴Typical solar shifting use case.
⁵Tested using CEC weighted efficiency methodology.
⁶The customer is expected to provide internet connectivity for Powerwall 3; cellular should not be used as the primary mode of connectivity. Cellular connectivity subject to network operator service coverage and signal strength.

2025

Powerwall 3 Datasheet

SEAL & SIGNATURE



DWG#

S-4

SOLAR
PANEL &
INVERTER
SPECIFICATIONS

DWG.

4 OF 4



SOLAR PANEL
INSTALLATION
SMITH
RESIDENCE
269 S NIAGARA ST.
LOCKPORT, NY
14094

REVISIONS NOTES

DWG. BY:	MEM	SCALE:	AS-NOTED
CHECKED BY:	MEM	PROJECT #:	ES-4955-26
DATE:	MAY 27, 2026	SBL #:	108.15-1-11
MUNICIPALITY:	CITY OF LOCKPORT	COUNTY:	NIAGARA

SYSTEM NOTES:

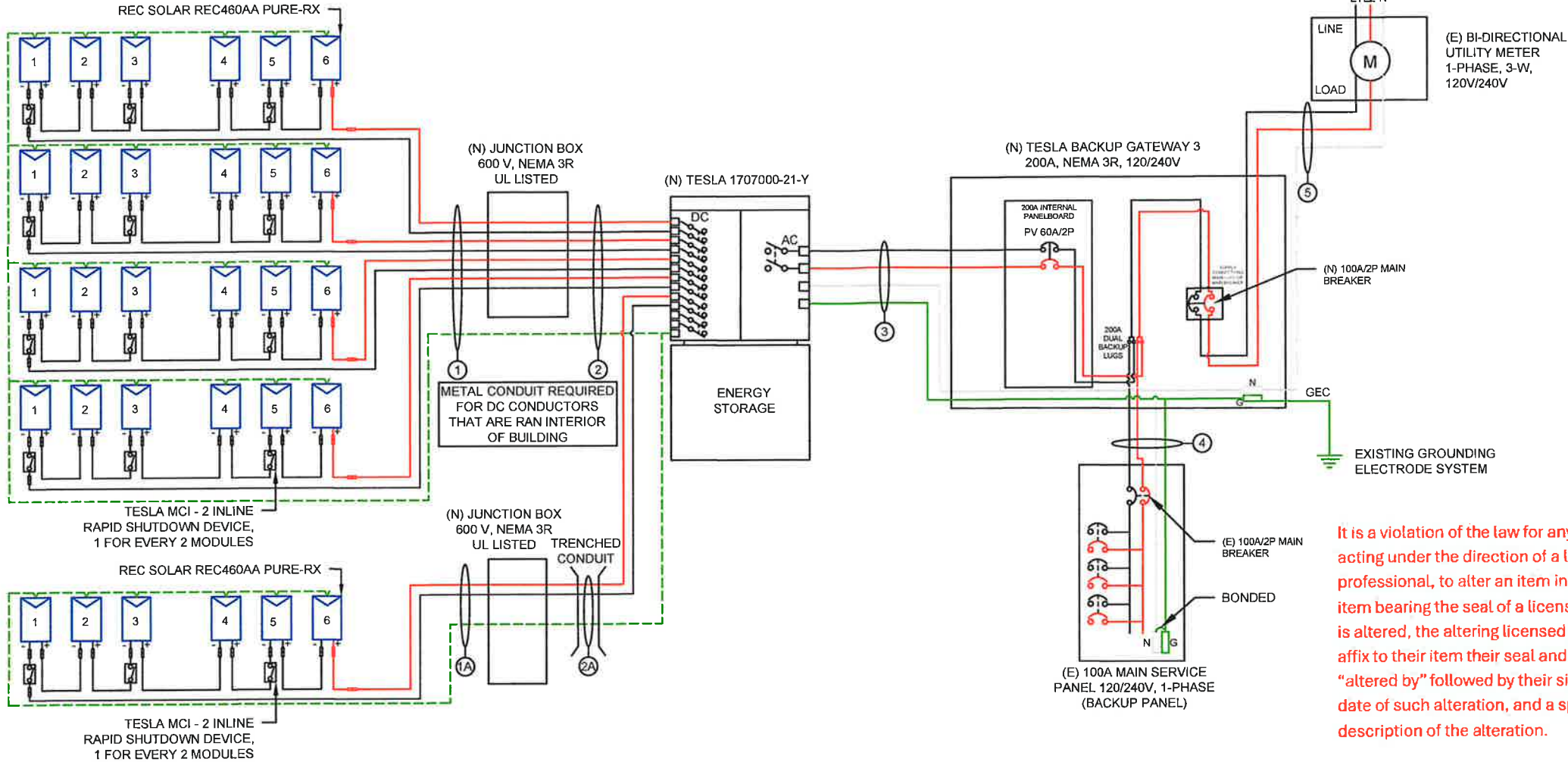
TOTAL SYSTEM SIZE:
13.8 KW DC SYSTEM / 11.5KW AC SYSTEM
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PANEL TYPE: REC 460W
OF PANELS: 30
INVERTER TYPE: TESLA (POWER WALL 3)
OF INVERTERS: 1
ARRAY
AZIMUTH: 257 77 76
TILT: 34 34 17
#PANELS: 12 12 6

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INVERTER SPECIFICATIONS		SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	TESLA 1707000-21-Y	MANUFACTURER / MODEL #	REC SOLAR REC460AA PURE-RX
POWER RATING	11500W	VMP	54.9 V
MAX CONT. OUTPUT CURRENT	48A	IMP	8.38 A
MAX CURRENT PER MPPT (IMP)	15A ²	VOC	65.8 V
MAX DC VOLTAGE	600V	ISC	8.88 A
MAX SHORT CIRCUIT CURRENT PER MPPT (ISC)	19A ²	TEMP. COEFF. VOC	-0.24 %/°C

AMBIENT TEMPERATURE SPECIFICATIONS	
RECORD LOW TEMP	-24.9
AMBIENT TEMP (HIGH TEMP 2% AVG.)	36.8
MINIMUM CONDUIT HEIGHT ABOVE ROOF SURFACE	7/8"



WIRE ID	WIRE LENGTH [FT]	VOLTAGE DROP %
2A	71.8	0.43%

2023 NATIONAL ELECTRICAL CODE

DESCRIPTION	FORMULA	RESULT
PV OVERCURRENT PROTECTION NEC 690.9(B)	TOTAL INVERTER OUTPUT CURRENT x 1.25 = 48.0A x 1.25	60.00A (SELECTED OCPD = 60A)

DC WIRE CALCULATION												
WIRE ID	EXPECTED WIRE TEMP (°C)	TEMP DERATE (90 °C)	QTY OF CURRENT CARRYING CONDUCTORS	CONDUIT FILL DERATE	MINIMUM CONDUIT SIZE (TBD ON SITE)	WIRE GAUGE & TYPE	CONDUCTOR AMPACITY @ 90°C (A)	CONDUCTOR AMPACITY @ 75°C (A)	REQUIRED CIRCUIT CONDUCTOR AMPACITY (A)	ADJUSTED CONDUCTOR AMPACITY @ 90 °C (A)	NEUTRAL CONDUCTOR SIZE & TYPE	GROUND WIRE SIZE & TYPE
1	36.8	0.91	8	IN AIR	N/A	#10 AWG PV WIRE	40	35	13.875	36.4	NONE	#6 AWG BARE Cu
2	36.8	0.91	8	0.7	3/4" METAL	#10 THWN-2	40	35	13.875	25.48	NONE	#8 THWN-2
1A	36.8	0.91	2	IN AIR	N/A	#10 AWG PV WIRE	40	35	13.875	36.4	NONE	#6 AWG BARE Cu
2A	36.8	0.91	2	1	1" PVC	#10 THWN-2	40	35	13.875	36.4	NONE	#8 THWN-2

AC WIRE CALCULATION												
3	36.8	0.91	2	1	3/4"	#6 THWN-2	75	65	60	68.25	#6 THWN-2	#8 THWN-2
4	36.8	0.91	2	1	1-1/4"	#2 THWN-2	130	115	100	118.3	#2 THWN-2	#8 THWN-2
5	36.8	0.91	2	1	1"	#2 THWN-2	130	115	100	118.3	#2 THWN-2	NONE

CONTRACTOR

EMPIRE SOLAR SOLUTIONS

2-8 JOHNES ST
NEWBURGH, 12550
PHONE - (845) 728-2165
LIC. NO. WC 28886 H17

ELECTRICAL ONLY

Wyssling Consulting, PLLC
76 N. Meadowbrook Drive, Alpine UT
New York COA # 022082
Signed 5/29/2026

PROJECT NAME & ADDRESS

SUZETTE SMITH
269 S NIAGARA ST,
LOCKPORT, NY 14094

APN #: 290900A1080150001011000
AHJ: CITY OF LOCKPORT
UTILITY: NEW YORK STATE
ELECTRIC & GAS

SYSTEM DETAILS

13.800 KW DC-(STC) / 11.500 KW AC
(30) REC SOLAR REC460AA PURE-RX
(15) TESLA MCI-2 RSD'S
(1) TESLA 1707000-21-Y
(ENERGY STORAGE CAPACITY 13.5KWH)

REVISIONS		
REV	DESCRIPTION	DATE

SHEET TITLE

ELECTRICAL
DIAGRAM

DRAWN DATE

5/27/2026

DRAWN BY

PP

SHEET NUMBER

PV-01



Building Inspection Department

Jason Dool
Chief Building Inspector

Lockport Municipal Building
One Locks Plaza
Lockport, NY 14094
Phone (716) 439-6759
Fax (716) 439-6605

NOTICE OF PUBLIC HEARING

Case No. 2381

July 14, 2026

Megan Brewer

Dear Sir or Madam:

An Appeal under the Zoning Ordinance as applied to the property at 702 Willow Street, Lockport, New York, had been filed by Essential Power Inc.

The request is for a variance to install an 11.125 KW roof mounted solar array situated in a Low Density Residential Zone.

Approval of the permit application was denied or withheld because roof mounted solar array will be larger than 10 KW.

The City of Lockport Zoning Ordinance allows a roof mounted solar array to be a maximum 10 KW.

A Public Hearing will be held by the Zoning Board of Appeals on **Tuesday, July 28, 2026 at 5:00 P.M.**, at the Lockport Municipal Building, One Locks Plaza, Lockport, New York, at which time you may appear, if you so desire, either in person or by agent or attorney.

The purpose of this Hearing is to give all affected property owners an opportunity to support or oppose the granting of this Appeal.

Supporting documentation for this case may be found on the City of Lockport website lockportny.gov.

LOCKPORT ZONING BOARD OF APPEALS
Megan Brewer

**CITY OF LOCKPORT, NEW YORK
ZONING BOARD OF APPEALS APPLICATION**

_____ **AREA VARIANCE**

_____ **USE VARIANCE**

It is the responsibility of the applicant to complete this form in its entirety, including all required attachments, and as precisely as possible. Failure to submit a complete application may result in a delay in being placed on a Zoning Board of Appeals agenda or a delayed decision from the Zoning Board.

PROPERTY ADDRESS: 702 Willow St, Lockport, NY 14094

APPLICANT INFORMATION

NAME: NYS Essential Power Inc. ADDRESS: 249 Trade Zone Drive,

PHONE: [REDACTED] Ronkonkoma NY 11779

FAX: _____ E-MAIL: [REDACTED]

OWNER INFORMATION

NAME: Wayne Seifert ADDRESS: 702 Willow St,

PHONE: [REDACTED] Lockport NY 14094

FAX: _____ E-MAIL: [REDACTED]

RELATIONSHIP OF APPLICANT TO PROPERTY:

_____ CONTRACT PURCHASER ☒ CONTRACTOR _____ OTHER

_____ ARCHITECT/ ENGINEER _____ LESSEE

OFFICE USE ONLY

RECEIVED BY: _____ DATE/TIME RECEIVED: _____

FEE AMOUNT: _____ CHECK/MONEY ORDER#: _____

ZONING: _____ FEE TRANSMITTAL DATE: _____

AGENDA DATE: _____ DEADLINE DATE: _____

COUNTY TAX MAP IDENTIFICATION NUMBER: _____

BRIEF HISTORY OF PROPERTY (historic use of property, ownership history, etc.)

Residential-1family purchased by the current owner in 2021

DESCRIPTION OF PROPOSED ACTION (include specific use proposed, hours, # of employees, etc.)

Install residential roof-mounted PV solar system of (25) solar modules & (25) micro-inverters.

DC size: 11.125KW

8 hours - 10 workers

VARIANCE STANDARDS (USE VARIANCE)

Applications for use variances must be based on alleviating a clearly demonstrable hardship, as opposed to a special privilege or convenience sought by the owner. Furthermore, the hardship must be peculiar to the land or building and must not generally apply to land throughout the neighborhood. An example of a property that may potentially have a case for a used variance is a corner store in a predominantly residential neighborhood. If the building has large plate glass windows, a parking lot and loading docks in the rear, it would be extremely costly to convert the building to residential uses to comply with existing zoning regulations.

VARIANCE STANDARDS (AREA VARIANCE)

Applications for area variances must be based on some extraordinary topographic condition or other physical condition inherent in the parcel (for example: exceptional narrowness, shallowness, shape or area). This condition must prohibit or unreasonably restrict the use of the land and/or building. One example of special condition: A utility right-of-way cutting through the rear half of several properties within a larger neighborhood limiting the buildable area of those properties, thereby requiring variances for rear and side yard setbacks for those particular property owners to construct new garages or sheds.

DESCRIPTION OF HARDSHIP (describe the features or conditions of the property that restrict reasonable use of the property under current zoning regulations)

The proposed roof-mounted PV solar system DC size is above 10KW

Describe how the requested variance will not alter the character of the larger neighborhood or impact adjacent properties:

The roof-mounted PV solar system will be installed on the customer's roof.

APPLICATION ATTACHMENTS

To ensure appropriate and timely review of the application, please provide the following additional documentation in support of the application. Failure to provide all of the applicable materials listed below may result in a delay in scheduling the application for review by the Zoning Board of Appeals.

___ \$150 application fee (cash or checks payable to the City of Lockport)

___ Detailed site plan (10 copies)

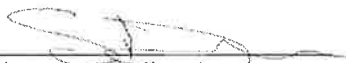
___ Photographs of existing conditions

___ Property survey (10 copies)

APPLICANT/OWNER AFFIRMATION

I, THE UNDERSIGNED, DO HEREBY AFFIRM THAT THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND I FURTHER UNDERSTAND THAT INTENTIONALLY PROVIDING FALSE OR MISLEADING INFORMATION IS GROUNDS FOR IMMEDIATE DENIAL OF MY APPLICATION.

FURTHERMORE, I UNDERSTAND THAT I (OR A DESIGNATED REPRESENTATIVE) MUST BE PRESENT AT THE MEETING TO REPRESENT THE APPLICATION AND RESPOND TO ANY QUESTIONS FROM THE ZONING BOARD OF APPEALS MEMBERS.



Signature (Applicant)

7/10/2026

Date

IF APPLICANT IS NOT THE OWNER OF RECORD FOR SUBJECT PARCEL:

I, THE UNDERSIGNED, HEREBY AFFIRM THAT I AM THE OWNER OF RECORD FOR THE SUBJECT PARCEL AT THE TIME OF APPLICATION. FURTHERMORE, I AM FAMILIAR WITH THE REQUEST BY THE APPLICANT AND AUTHORIZE SAID APPLICANT TO REPRESENT THE INTEREST OF THE OWNER (S) IN FURTHERANCE OF THE REQUEST.



Signature (Owner)

7/10/2026

Date

Regular meetings of the Zoning Board of Appeals are generally held on the 4th Tuesday of every month. The meetings are held at 5:00 P.M. in the Common Council chambers on the first floor of City Hall. Applicants will receive a reminder notice in the mail prior to the meeting.

Pursuant to Section §190-188(d) of the City of Lockport Zoning Ordinance, property owners within a 200' radius will be notified of the intent of the applicant and given an opportunity to speak for or against the application.

Tom Petersen

Architects • Planners

Construction Official
Building Department for project at:
702 Willow Street
Lockport, NY 14094

June 16, 2026

Re: Solar Panel Installation
Seifert Residence
702 Willow Street
Lockport, NY 14094

Dear Sirs,

I've reviewed the proposed solar panel installation at this location to evaluate the existing roof structure and the connection of the panels to the roof.

Criteria: Applicable codes: 2025 Residential Code of New York State
2024 Wood Frame Construction Manual
Design roof load: 50 psf live load, 10 psf dead load, 60 psf total load
Design wind load: 115 mph

My findings are as follows.

1. The new solar panels will imply an additional dead load of 3 psf. The existing roof structure (hip roof: 2x6 roof rafters @ 16" o.c. with collar ties, 2x8 hips and ridge, span = +/- 10'-10" at maximum) is sufficient to bear this additional load. Inaccessible, assumed or concealed structural members that were not documented during the initial site analysis will be verified by the system installer prior to the system installation, and any discrepancies will be reported to the Architect in writing.
2. The solar panels are attached to the roof with the rack system, connectors and components as shown on the attached drawings. The rack system, roof connections and connection spacing are are rated for 115 mph.

It is a violation of NYSED 7209 for any person, unless acting under the direction of a licensed professional, to alter an item in any way. If an item bearing the seal of a licensed professional is altered, the altering licensed professional must attach the notation 'altered by' with his seal, signature, date of alteration, and description of the alteration.

I therefore certify that this installation complies with the applicable codes and design loads mentioned above, as well as ASCE 7-2022, and is acceptable for approval. Please let me know if you have any questions on this information. Thanks!

Sincerely yours,



Tom Petersen

Cc: Lisa Gustam, Essential Power



NEW SOLAR PV SYSTEM

25 MODULES-ROOF MOUNTED - 11.125 KWDC, 9.600 KWAC
702 WILLOW ST, LOCKPORT, NY 14094, USA



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11778 UNIT #13

SYSTEM SUMMARY

(N) 25 - TRINA SOLAR (TSM-445NEG9R.25) PV MODULES
(N) 25 - ENPHASE ENERGY INC./IQ8HC-72-M-DOM-US [240V] [SI1-SB] MICRO-INVERTERS
(N) (1) JUNCTION BOX
(N) ENPHASE IQ COMBINER BOX 5C (X-IQ-AM1-240-S)
(N) (1) 60A NON-FUSED AC DISCONNECT, NEMA 3R, UL LISTED
(N) (1) 60A FUSED AC DISCONNECT WITH 50A FUSES, NEMA 3R, UL LISTED
(E) 150A MAIN SERVICE PANEL WITH 150A MAIN BREAKER

DESIGN CRITERIA

ROOF TYPE: COMP SHINGLES
ROOF FRAME: 2"x6" RAFTER @ 16" O.C
STORY: ONE STORY
SNOW LOAD: 56 PSF
WIND SPEED: 115 MPH
WIND EXPOSURE: B
RISK CATEGORY: II
COORDINATE: 43.159869, -78.677238

GOVERNING CODES:

2025 RESIDENTIAL CODE OF NEW YORK STATE (RCNYS)
2025 BUILDING CODE OF NEW YORK STATE (BCNYS)
2025 EXISTING BUILDING CODE OF NEW YORK STATE
(EBCNYS), WHERE APPLICABLE
2025 FIRE CODE OF NEW YORK STATE (FCNYS)
2025 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW
YORK STATE (ECCCNYS)
NATIONAL ELECTRICAL CODE (NEC) 2023

GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO INSTALLATION.
- ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONTRACT DOCUMENTS SHALL BE REPORTED TO THE DESIGNER PRIOR TO CONSTRUCTION.
- ALL EQUIPMENT SHALL BE LISTED, LABELED, AND INSTALLED IN ACCORDANCE WITH ITS LISTING AND MANUFACTURER'S INSTRUCTIONS.
- INSTALLATION SHALL BE PERFORMED BY QUALIFIED PERSONNEL FAMILIAR WITH PHOTOVOLTAIC SYSTEMS AND APPLICABLE CODE REQUIREMENTS.
- ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL, STATE, UTILITY, AND AHJ REQUIREMENTS.
- THE ROOF STRUCTURE HAS BEEN EVALUATED FOR THE ADDITIONAL DEAD LOAD IMPOSED BY THE PHOTOVOLTAIC SYSTEM.
- ROOF-MOUNTED EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MOUNTING MANUFACTURER'S ENGINEERING DOCUMENTATION AND INSTALLATION INSTRUCTIONS.
- ROOF PENETRATIONS SHALL BE FLASHED AND SEALED IN A WEATHERPROOF MANNER.
- STRUCTURAL FRAMING MEMBERS SHALL NOT BE CUT, DRILLED, OR MODIFIED EXCEPT AS SPECIFICALLY APPROVED BY THE PROJECT ENGINEER.
- ALL ATTACHMENT HARDWARE SHALL BE CORROSION RESISTANT AND SUITABLE FOR EXTERIOR EXPOSURE.
- INSTALLATION SHALL MAINTAIN REQUIRED ROOF DRAINAGE PATHS AND ROOF FUNCTIONALITY.

ELECTRICAL NOTES

- ELECTRICAL INSTALLATION SHALL COMPLY WITH NEC 2023.
- PHOTOVOLTAIC SYSTEMS SHALL COMPLY WITH NEC ARTICLE 690.
- INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES SHALL COMPLY WITH NEC ARTICLE 705.
- GROUNDING AND BONDING SHALL COMPLY WITH NEC ARTICLE 250.
- RAPID SHUTDOWN EQUIPMENT SHALL COMPLY WITH NEC 690.12.
- ALL CONDUCTORS INSTALLED IN EXTERIOR OR WET LOCATIONS SHALL BE LISTED AND RATED FOR THE INTENDED ENVIRONMENT.
- CONDUCTORS EXPOSED TO SUNLIGHT SHALL BE SUNLIGHT RESISTANT.
- CONDUCTOR AMPACITY CALCULATIONS SHALL BE BASED ON NEC 2023 REQUIREMENTS INCLUDING APPLICABLE TEMPERATURE AND CONDUIT FILL ADJUSTMENTS.
- ALL RACEWAYS, FITTINGS, AND ENCLOSURES SHALL BE LISTED FOR THE INSTALLED ENVIRONMENT.
- ALL UNUSED OPENINGS SHALL BE PROPERLY CLOSED USING LISTED CLOSURE DEVICES.



1 SITE LAYOUT

PV-0 SCALE: NTS



2 VICINITY MAP

PV-0 SCALE: NTS



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

COVER SHEET

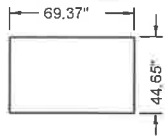
SHEET SIZE

ANSI B
11" X 17"

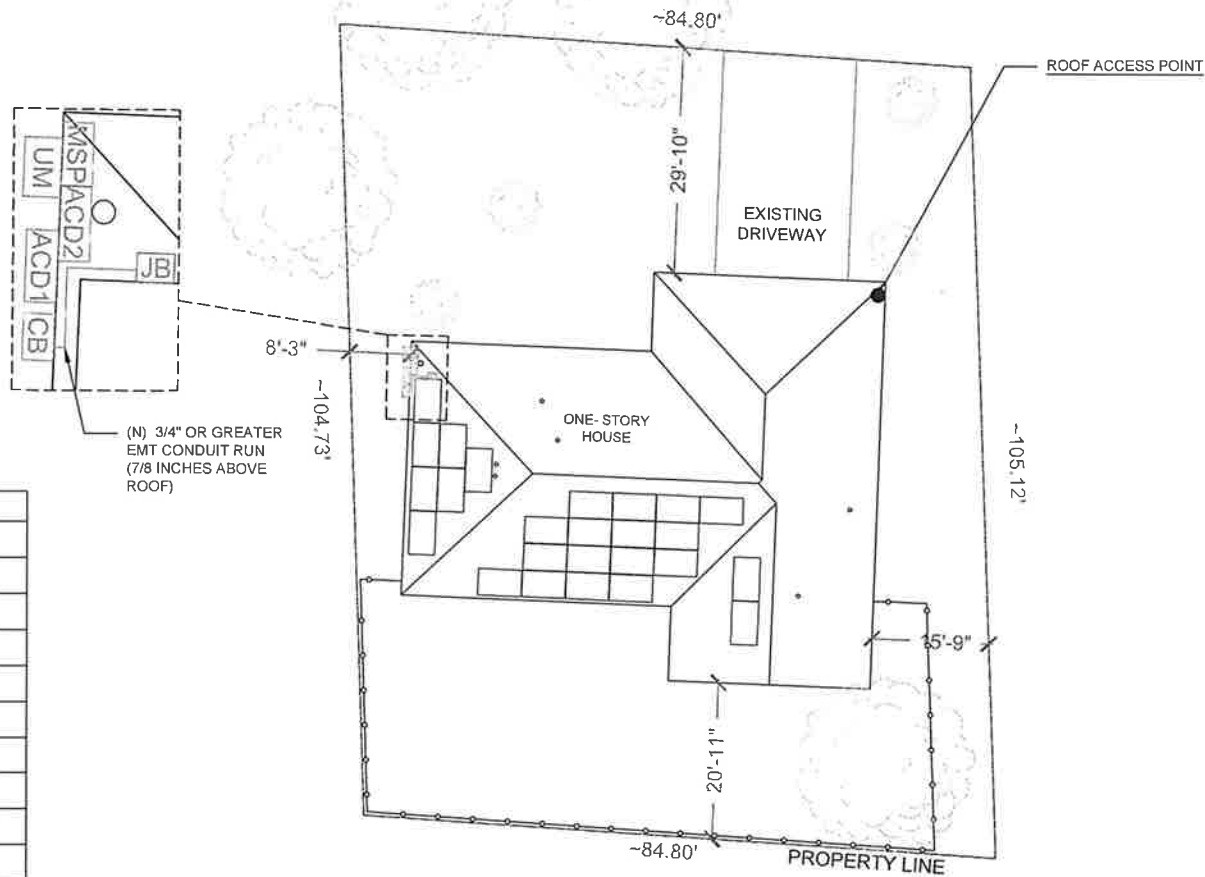
SHEET NUMBER

PV-0

PHOTOVOLTAIC MODULES
TRINA SOLAR (TSM-445NEG9R.25)
PV MODULES



WILLOW ST



LEGEND

JB	JUNCTION BOX
ACD	UTILITY DISCONNECT
ACD	AC DISCONNECT
UM	UTILITY METER
CB	ENPHASE COMBINER BOX
	GATE
	CONDUIT
○ □	VENT, ATTIC FAN, SKY LIGHT (ROOF OBSTRUCTION)
—○—	FENCE
---	PROPERTY LINE
MSP	MAIN SERVICE PANEL
	TREES
⊞	CHIMNEY

1

SITE PLAN WITH ROOF PLAN

SCALE: 1/16" = 1'-0"



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SITE PLAN WITH
ROOF PLAN

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-1



BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	25	TRINA SOLAR (TSM-445NEG9R.25) PV MODULES
JUNCTION BOX	1	600V, 55A MAX, 4 INPUTS, MOUNTED ON ROOF FOR WIRE & CONDUIT TRANSITION
MICRO-INVERTERS	25	ENPHASE ENERGY INC./IQ8HC-72-M-DOM-US MICRO-INVERTERS (IQ8HC-72-M-DOM-US)
AC DISCONNECT	1	80A NON-FUSED AC DISCONNECT, NEMA 3R, UL LISTED
AC DISCONNECT	1	80A FUSED AC DISCONNECT WITH 50A FUSES, NEMA 3R, UL LISTED
RAIL	19	UNIRAC NXT MOUNT RAIL 165" MILL (165RLM1-US)
SPLICE	10	NXT MOUNT RAIL SPLICE (UNIRLSPLCM2-US)
UNIVERSAL CLAMP	66	NXT MOUNT COMBO CLAMP - DARK (CCLAMP01-US)
RAIL CLAMP	74	STRONGHOLD RAIL CLAMP MILL (SHCLMPM2-US)
ATTACHMENT	74	UNIRAC STRONGHOLD BUTYL ATT KIT #14S MILL (SHBUTYLM2-US)
MLPE & GROUNDING	33	UNIVERSAL MLPE MOUNT (MLPEMNT-US)

MODULE TYPE, DIMENSIONS

NUMBER OF MODULES = 25 MODULES
 MODULE TYPE = TRINA SOLAR (TSM-445NEG9R.25) PV MODULES
 MODULE WEIGHT = 46.30 LBS / 21.0 KG
 MODULE DIMENSIONS = 69.37" X 44.65" = 21.50 SF
 UNIT WEIGHT OF ARRAY = 2.15 PSF

WILLOW ST FRONT YARD

ARRAY AREA & ROOF AREA CALC'S		
AREA OF NEWARRAY (Sq. Ft.)	AREA OF ROOF(PLAN VIEW) (Sq. Ft.)	TOTAL ROOF AREA COVERED BY ARRAY %
537.5	2726.95	19.71

ROOF DESCRIPTION					
ROOF TYPE			COMP SHINGLES		
ROOF #	# OF MODULES	ROOF TILT	AZIMUTH	RAFTER SIZE	RAFTER SPACING
#1	2	20°	272°	2" X 6"	16" O.C.
#2	7	19°	272°	2" X 6"	16" O.C.
#3	16	19°	182°	2" X 6"	16" O.C.



VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-04-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
 LOCKPORT, NY 14094, USA
 APN: 29090012307175
 UTILITY: NYSEG

DIN

SHEET NAME
 ROOF PLAN WITH
 MODULES

SHEET SIZE
 ANSI B
 11" X 17"

SHEET NUMBER
 PV-2

(N) 3/4" OR GREATER EMT CONDUIT RUN
 (7/8 INCHES ABOVE ROOF)

36" FIRE PATHWAY



18" FIRE PATHWAY



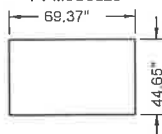
NOTE:
 ALL ELECTRICAL EQUIPMENT,
 INVERTERS/COMBINER, DISCONNECTS, MAIN
 SERVICE PANELS, ETC., SHALL NOT BE
 INSTALLED WITHIN 3' OF THE GAS METERS'
 SUPPLY OR DEMAND PIPING.

NOTE: 3/4" OR GREATER IMC, RMC, FMC, LFMC,
 PVC, HDPE, NUCC, RTRC, LFNC, FMT, ENT OR
 EMT CONDUIT RUN EXPOSED CONDUIT RUN
 SHALL BE MIN. 7/8" ABOVE ROOF. * ROMEX RUN
 INSIDE ATTIC

PLUMBING VENTS, SKYLIGHTS AND MECHANICAL
 VENTS SHALL NOT BE COVERED, MOVED,
 RE-ROUTED OR RE-LOCATED.

REAR YARD

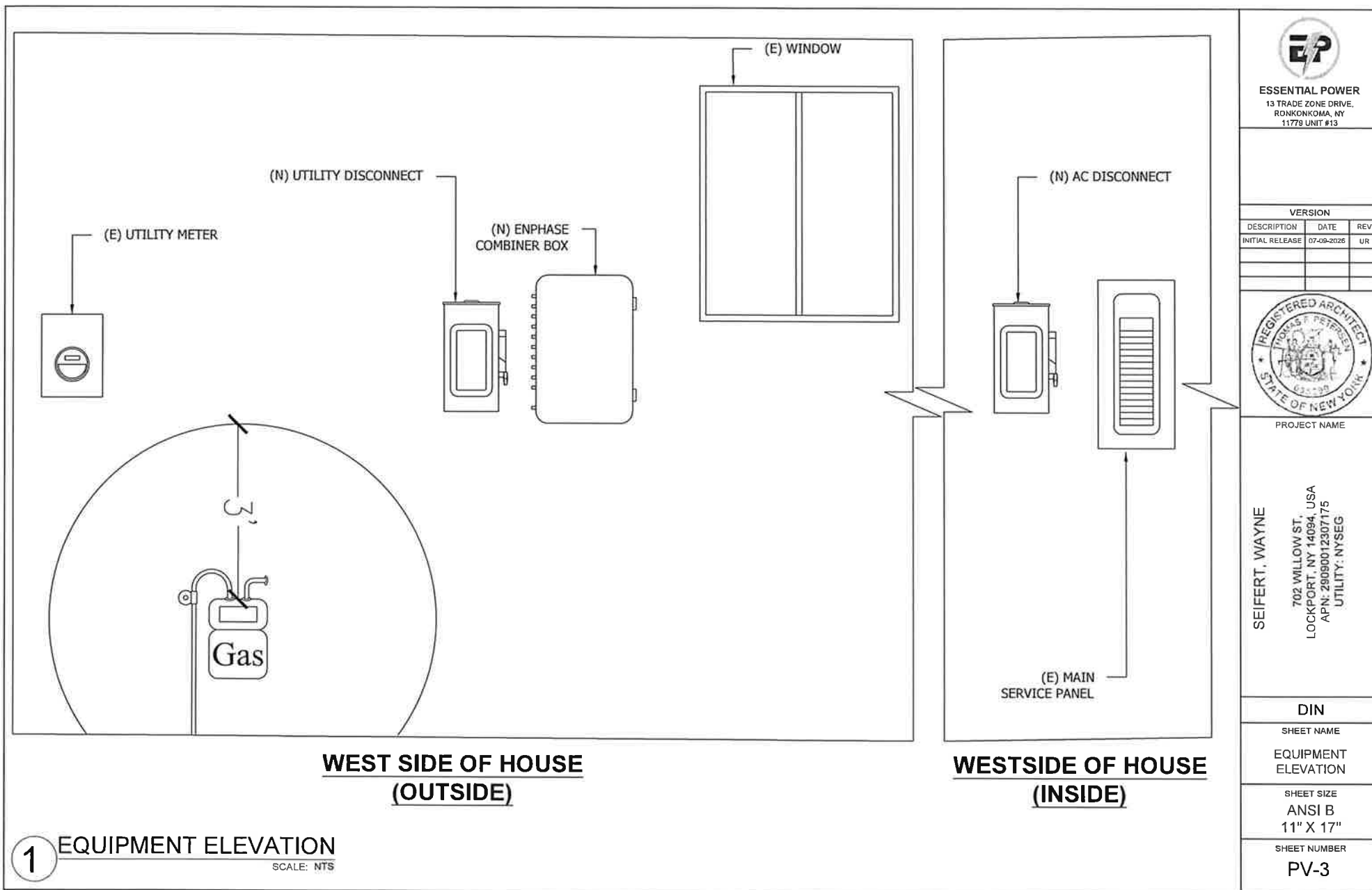
PHOTOVOLTAIC MODULES
 TRINA SOLAR (TSM-445NEG9R.25)
 PV MODULES



1 ROOF PLAN WITH MODULES

SCALE: 1/8" = 1'-0"





ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-08-2025	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST., USA
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

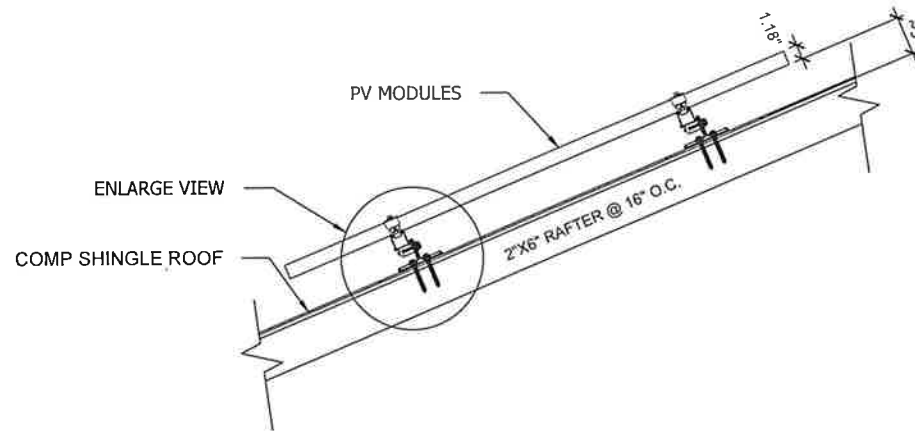
SHEET NAME

EQUIPMENT
ELEVATION

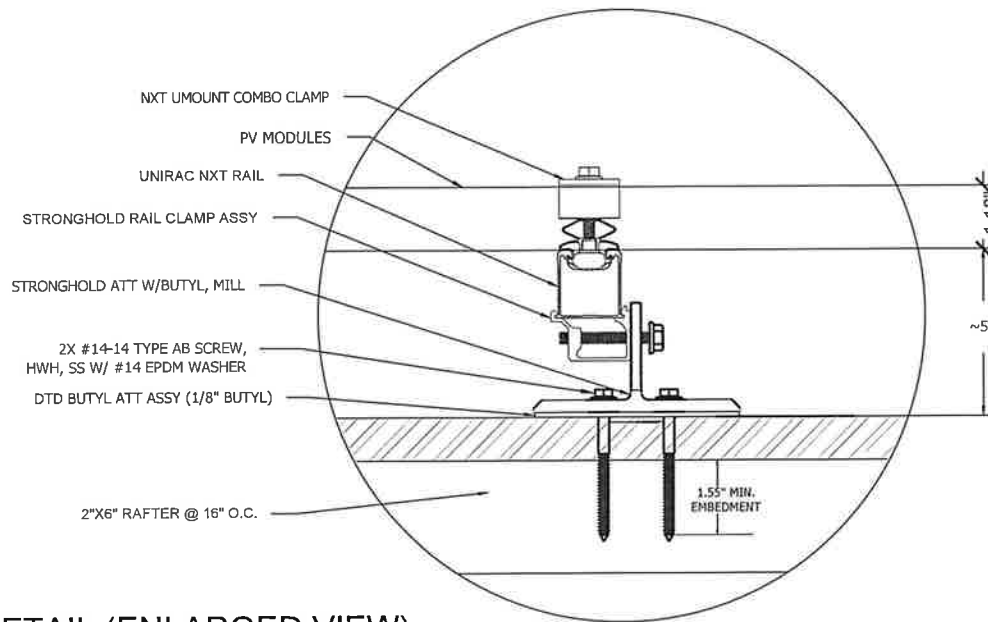
SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-3

NOTE: ACTUAL ROOF CONDITIONS AND RAFTERS (OR SEAM) LOCATIONS MAY VARY. INSTALL PER MANUFACTURER(S) INSTALLATION GUIDELINES AND ENGINEERED SPANS FOR ATTACHMENTS



1 ATTACHMENT DETAIL
SCALE: NTS



2 ATTACHMENT DETAIL (ENLARGED VIEW)
SCALE: NTS



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
ROCKY HILL, CT 06151
11778 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE
702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

**ATTACHMENT
DETAIL**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-3.1

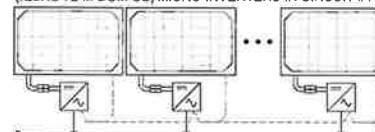
INVERTER SPECIFICATIONS			
MANUFACTURER / MODEL #	QUANTITY	NOMINAL OUTPUT VOLTAGE	NOMINAL OUTPUT CURRENT
ENPHASE ENERGY INC./IQ8HC-72-M-DOM-US [240V] [SH-SB] MICRO-INVERTERS	25	240VAC	1.58A

SOLAR MODULE SPECIFICATIONS						
MANUFACTURER / MODEL #	VMP (V)	IMP (A)	VOC (V)	ISC (A)	TEMPERATURE COEFFICIENT OF V _{oc}	QUANTITY OF MODULES
TRINA SOLAR (TSM-445NEG9R.25)	44.30	10.05	52.60	10.71	-0.24%/C	25
MODULE DIMENSIONS	69.37"L x44.65"W x1.18"D					

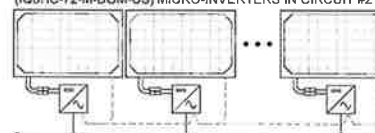
NOTES:

- PV MODULES SHALL BE LISTED AND LABELED IN ACCORDANCE WITH APPLICABLE UL STANDARDS.
- INVERTERS SHALL BE UTILITY-INTERACTIVE AND LISTED FOR GRID-INTERCONNECTED PHOTOVOLTAIC APPLICATIONS.
- DC AND AC DISCONNECTING MEANS SHALL BE INSTALLED AS SHOWN ON THE PLANS.
- THE PHOTOVOLTAIC SYSTEM SHALL NOT BE ENERGIZED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED AND APPROVAL HAS BEEN GRANTED BY THE AUTHORITY HAVING JURISDICTION AND NYSEG.
- UTILITY INTERCONNECTION SHALL COMPLY WITH NYSEG REQUIREMENTS AND NEW YORK STATE STANDARDIZED INTERCONNECTION REQUIREMENTS.
- FINAL CONNECTION TO THE UTILITY GRID SHALL NOT OCCUR UNTIL PERMISSION TO OPERATE (PTO) HAS BEEN ISSUED BY NYSEG.
- UTILITY REQUIREMENTS SHALL GOVERN WHERE MORE RESTRICTIVE THAN THESE DRAWINGS.

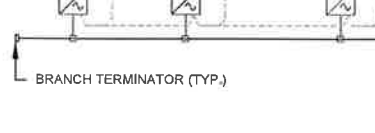
9 TRINA SOLAR (TSM-445NEG9R.25) WITH 9 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #1



8 TRINA SOLAR (TSM-445NEG9R.25) WITH 8 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #2

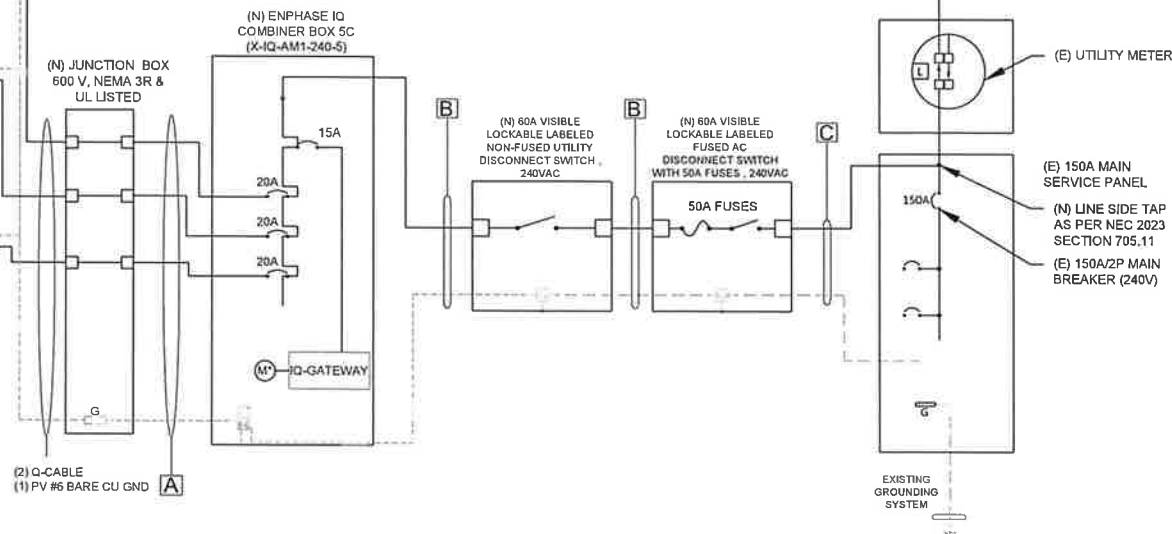


8 TRINA SOLAR (TSM-445NEG9R.25) WITH 8 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #3



BRANCH TERMINATOR (TYP.)

NOTE: LINE-SIDE TAP CONNECTION SHALL COMPLY WITH NEC 2023 SECTION 705.11. ALL TAP CONNECTORS SHALL BE LISTED AND SUITABLE FOR USE ON THE LINE SIDE OF SERVICE EQUIPMENT.



1 ELECTRICAL SINGLE LINE DIAGRAM

SCALE: NTS



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

ELECTRICAL SINGLE
LINE DIAGRAM

SHEET SIZE

ANSI B
11" X 17"

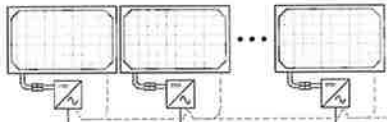
SHEET NUMBER

PV-4

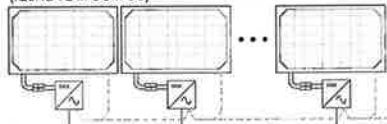
INVERTER SPECIFICATIONS			
MANUFACTURER / MODEL #	QUANTITY	NOMINAL OUTPUT VOLTAGE	NOMINAL OUTPUT CURRENT
ENPHASE ENERGY INC./IQ8HC-72-M-DOM-US [240V] [SH1-SB] MICRO-INVERTERS	25	240VAC	1.58A

SOLAR MODULE SPECIFICATIONS						
MANUFACTURER / MODEL #	VMP (V)	IMP (A)	VOC (V)	ISC (A)	TEMPERATURE COEFFICIENT OF Voc	QUANTITY OF MODULES
TRINA SOLAR (TSM-445NEG9R.25)	44.30	10.05	52.60	10.71	-0.24%/C	25
MODULE DIMENSIONS	69.37"L x44.65"W x1.18"D					

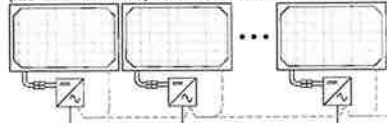
9 TRINA SOLAR (TSM-445NEG9R.25) WITH 9 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #1



8 TRINA SOLAR (TSM-445NEG9R.25) WITH 8 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #2



8 TRINA SOLAR (TSM-445NEG9R.25) WITH 8 (IQ8HC-72-M-DOM-US) MICRO-INVERTERS IN CIRCUIT #3



BRANCH TERMINATOR (TYP.)

(N) JUNCTION BOX
600 V, NEMA 3R &
UL LISTED

(N) ENPHASE IQ
COMBINER BOX 5C
(X-IQ-AM1-240-S)

(2) Q-CABLE
(1) PV #6 BARE CU GND

NOTE: LINE-SIDE TAP CONNECTION SHALL COMPLY WITH NEC 2023 SECTION 705.11, ALL TAP CONNECTORS SHALL BE LISTED AND SUITABLE FOR USE ON THE LINE SIDE OF SERVICE EQUIPMENT.

NOTES:

- PV MODULES SHALL BE LISTED AND LABELED IN ACCORDANCE WITH APPLICABLE UL STANDARDS.
- INVERTERS SHALL BE UTILITY-INTERACTIVE AND LISTED FOR GRID-INTERCONNECTED PHOTOVOLTAIC APPLICATIONS.
- DC AND AC DISCONNECTING MEANS SHALL BE INSTALLED AS SHOWN ON THE PLANS.
- THE PHOTOVOLTAIC SYSTEM SHALL NOT BE ENERGIZED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED AND APPROVAL HAS BEEN GRANTED BY THE AUTHORITY HAVING JURISDICTION AND NYSEG.
- UTILITY INTERCONNECTION SHALL COMPLY WITH NYSEG REQUIREMENTS AND NEW YORK STATE STANDARDIZED INTERCONNECTION REQUIREMENTS.
- FINAL CONNECTION TO THE UTILITY GRID SHALL NOT OCCUR UNTIL PERMISSION TO OPERATE (PTO) HAS BEEN ISSUED BY NYSEG.
- UTILITY REQUIREMENTS SHALL GOVERN WHERE MORE RESTRICTIVE THAN THESE DRAWINGS.

SERVICE FEED: OVERHEAD
UTILITY METER: 3060253903

BI-DIRECTIONAL
UTILITY METER
1-PHASE, 3-W,
120V/240V, 60Hz

(E) UTILITY METER

(E) 150A MAIN
SERVICE PANEL

(N) LINE SIDE TAP
AS PER NEC 2023
SECTION 705.11
(E) 150A/2P MAIN
BREAKER (240V)

EXISTING
GROUNDING
SYSTEM



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
ROCKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

ELECTRICAL THREE
LINE DIAGRAM

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-4.1

1

ELECTRICAL THREE LINE DIAGRAM

SCALE: NTS

INVERTER SPECIFICATIONS			
MANUFACTURER / MODEL #	QUANTITY	NOMINAL OUTPUT VOLTAGE	NOMINAL OUTPUT CURRENT
ENPHASE ENERGY INC./IO8HC-72-M-DOM-US [240V] [S11-SB] MICRO-INVERTERS	25	240VAC	1.58A

EASILY ACCESSIBLE BY UTILITY.

NOTE: * 3/4" OR GREATER IMC, RMC, FMC, LFMC, PVC, HDPE, NUCC, RTRC, LFNC, FMT, ENT OR EMT
CONDUIT RUN EXPOSED CONDUIT RUN SHALL BE MIN. 7/8" ABOVE ROOF.* ROMEX RUN INSIDE ATTIC

SOLAR MODULE SPECIFICATIONS						
MANUFACTURER / MODEL #	VMP (V)	IMP (A)	VOC (V)	ISC (A)	TEMPERATURE COEFFICIENT OF V _{oc}	QUANTITY OF MODULES
TRINA SOLAR (TSM-445NEG9R.25)	44.30	10.05	52.60	10.71	-0.24%/C	25
MODULE DIMENSIONS	69.37"L x44.65"W x1.18"D					

AMBIENT TEMPERATURE SPECIFICATIONS				
RECORD LOW TEMPERATURE	AMBIENT TEMP (HIGH TEMP 2%)	CONDUIT HEIGHT	CONDUCTOR TEMPERATURE RATE (ON ROOF)	CONDUCTOR TEMPERATURE RATE (OFF ROOF)
-16°	30°	7/8"	90°	90°

WIRE TAG	CONDUIT	WIRE QTY	WIRE GAUGE	WIRE TYPE	TEMP. RATING	WIRE AMPACITY (A)	TEMP. DERATE	CONDUIT FILL DERATE	DERATED AMPACITY (A)	NOC (A)	CEC CORRECTION	DESIGN CURRENT (A)	OCPD	GROUND SIZE	GROUND WIRE TYPE
A	3/4" EMT	4+G	10 AWG	THWN-2	90°C	40	1.00	0.8	32.00	14.22	1.25	17.78	20	10 AWG	THWN-2
B	3/4" EMT	3+G	8 AWG	THWN-2	90°C	55	1.00	1.0	55	39.50	1.25	49.38	-	10 AWG	THWN-2
C	3/4" EMT	3+G	6 AWG	THWN-2	90°C	75	1.00	1.0	75.00	-	-	49.38	-	8 AWG	THWN-2



ESSENTIAL POWER
 13 TRADE ZONE DRIVE,
 RONKONKOMA, NY
 11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
 LOCKPORT, NY 14094, USA
 APN: 29090012307175
 UTILITY: NYSEG

DIN

SHEET NAME

ELECTRICAL WIRE CALCULATIONS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-4.2

⚠ WARNING
ELECTRICAL SHOCK HAZARD

TERMINALS ON LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL LOCATION:
MAIN SERVICE PANEL
PER CODE: NEC 690.13(B)

**RAPID SHUTDOWN
SWITCH FOR SOLAR PV
SYSTEM**

LABEL LOCATION:
UTILITY SERVICE ENTRANCE/METER (WITHIN 3 FEET),
INVERTER/DC DISCONNECT IF REQUIRED BY LOCAL AHJ, OR
OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ.
PER CODE: NEC 690.12(D)(2)

PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT: 30.0 AMPS
NOMINAL OPERATING AC VOLTAGE: 240 VAC

LABEL LOCATION:
AC DISCONNECT(S), PHOTOVOLTAIC SYSTEM POINT OF
INTERCONNECTION
PER CODE: NEC 690.13(B), NEC 690.54

PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION:
CONDUIT, INVERTER
PER CODE: NEC 690.31(D)(2)

**MAIN PHOTOVOLTAIC
SYSTEM DISCONNECT**

LABEL LOCATION:
MAIN SERVICE DISCONNECT / UTILITY METER
PER CODE: NEC 690.13(B)

**PHOTOVOLTAIC
AC DISCONNECT**

LABEL LOCATION:
AC DISCONNECT/BREAKER/
POINT OF CONNECTION
PER CODE: NEC 690.13(B)

⚠ WARNING
ELECTRIC SHOCK HAZARD

TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT

LABEL LOCATION:
DC DISCONNECT, POINT OF INTERCONNECTION
PER CODE: NEC 690.13(B)

**CAUTION
DUAL POWER SOURCE**

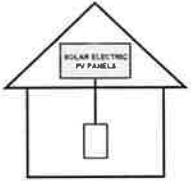
FIRST SOURCE IS UTILITY ELECTRICAL GRID
SECOND SOURCE IS PV INVERTER

LABEL LOCATION:
POINT OF INTERCONNECTION
MAIN SERVICE PANEL
PER CODE: NEC 705.12(B)(3), NEC 705.10

4"

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY.



LABEL LOCATION:
MAIN SERVICE PANEL
PER CODE: NEC 690.12(D)

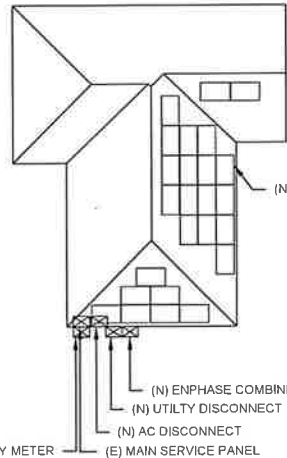
NOTE: ALL REQUIRED PV SYSTEM LABELS, PLACARDS, DIRECTORIES, AND WARNING MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH NEC 2023 ARTICLES 110, 690, AND 705 AT LOCATIONS SHOWN ON THE APPROVED PLANS. LABELS SHALL BE PERMANENT, DURABLE, WEATHER-RESISTANT, AND CLEARLY VISIBLE AFTER INSTALLATION. PV DISCONNECTS, RAPID SHUTDOWN EQUIPMENT, PV POWER SOURCE CONDUCTORS AND EQUIPMENT, MULTIPLE POWER SOURCES, AND ELECTRICAL SHOCK HAZARDS SHALL BE IDENTIFIED AS REQUIRED. ADDITIONAL LABELING REQUIRED BY THE AHJ, UTILITY, FIRE DEPARTMENT, OR EQUIPMENT MANUFACTURER SHALL BE PROVIDED.



**CAUTION !
MULTIPLE SOURCES OF POWER**

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

702 WILLOW ST



(N) PV MODULES

(N) ENPHASE COMBINER BOX

(N) UTILITY DISCONNECT

(N) AC DISCONNECT

(E) UTILITY METER

(E) MAIN SERVICE PANEL



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
ROCKYHILL, CT 06067
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN
SHEET NAME
WARNING LABELS & PLACARD
SHEET SIZE
ANSI B 11" X 17"
SHEET NUMBER
PV-5

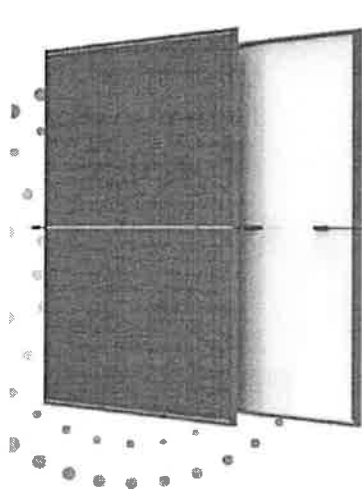
DUAL GLASS N type I-TOPCon MODULE

PRODUCT TYPE NEG9L25
POWER RANGE 425-450 W

450 W
MAXIMUM POWER OUTPUT

0/+5W
POSITIVE POWER TOLERANCE

22.5%
MAXIMUM EFFICIENCY



- Designed with aesthetics in mind
- Inheriting Trina Solar awards-winning full black design

- Up to 25 years product warranty and 30 years power warranty
- Excellent fire rating and resistance to harsh environmental conditions
- 5,400 Pa snow load and 4,000 Pa wind load (test loads)

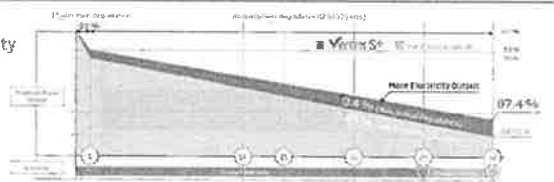
- Up to 450 W, 27.5 % module efficiency with high density interconnect technology
- Reduces installation cost with higher power bin and efficiency
- Boost performance in warm weather with low temperature coefficient and operating temperature

- Designed for compatibility with existing mainstream inverters, optimizers and mounting systems
- Perfect size and low weight for easy handling. Optimized transportation cost
- Flexible installation solutions for system deployment

1 3/4
1 1/2

0.4%

25 Years
of Leadership in the Industry



Comprehensive Products and System Certificates

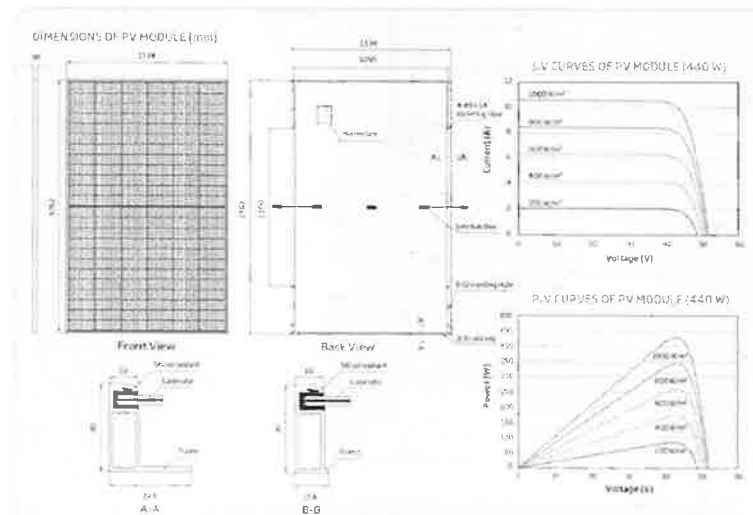


CE A014064: Greenhouse Gas Emissions verification
50210701: Environmental Management System

TrinaSolar

Vertex S+

DUAL CLASS N type I TOPCon MODULE

[illegible]

Electrical/LASER (ROE)	THz (4)	THz (5)	THz (6)	THz (7)	THz (8)	THz (9)
Maximum Power (mW) (10)	0.05	0.06	0.2	0.06	0.09	0.1
Maximum Power (mW) (11)	0.1	0.15	0.18	0.12	0.18	0.17
Maximum Power (mW) (12)	0.25	0.11	0.15	0.17	0.22	0.2
Open Circuit Voltage (V) (13)	0.6	0.68	0.58	0.64	0.62	0.64
Short Circuit Current (A) (14)	0.11	0.19	0.17	0.16	0.13	0.15

10272 • J. Neurosci., September 24, 2008 • 28(39):10265–10272

MICHIGAN STATE UNIVERSITY

Year built	Manufactured in 1974
No. of Units	148 units
Physical Characteristics	150' x 114' x 10' high
Roofing	20' g
Power/Electrical	3.5 m. High (30' max.) 400 Amp Three-Phase Transformer
Environmental/Other	None
Notes/Comments	3 m. High Transformer Unit
Price	10' x 14' x 10' (30' max.) 400 Amp Three-Phase Transformer
Other	20' g
Costs	Manufactured in 1974 (30' max.) 400 Amp Three-Phase Transformer
Comments	150' x 114' x 10' high

TEMPERATURE EFFECTS

ROD (cross-section) of specimen	3.33 $\times 10^{-2}$ m	Electromagnet temperature	4.2 K ± 0.1 K
Temperature (calibration) of flux	± 0.25 K/°C	Magnetic field strength (G)	1.00 ± 0.05 T
Temperature (calibration) of χ_{H}	± 0.24 K/°C	Max. Sample Heating	2 K
Temperature (calibration) of χ_{H}	± 0.04 K/°C		

WARRANTY

15. You are given the following information:
 (1) price of a share is ₹ 100
 (2) the firm has 100,000 shares
 (3) the firm has 10,000 debentures
 (4) the firm has 10,000 preference shares

FASTTRACK CONFIGURATION

Monday per day	24 per
Week per (not 47,000,000)	0.1 per

Strong support was also expressed for the need to

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
© 2024 TeraSol Gel, LLC. All rights reserved. Some restrictions included in this document are required to change with the product.
Version number: TSM-EN-2024-PA



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2025	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
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DIN

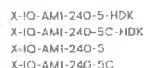
SHEET NAME

SPEC SHEETS

SHEET SIZE
ANSI B
11" X 17"

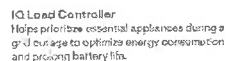
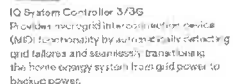
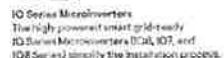
SHEET NUMBER

PV-6



The IQ Combiner 575C consolidates telecommunication equipment into a single enclosure and streamlines IQ Series Microconverters and IQ Gateway installation by providing a consistent, turn-key solution for residential applications. IQ Combiner 575C uses a standard control communication board compatible with IQ System Controller 343S and IQ Battery 5P.

The IC Combiner 2/50, IC Series Uninterruptible, IC System Controller 3/50, and IC Battery 5F provide a complete and robust Engine Energy System.



5-year limited warranty

*For country specific warranty information, see the <http://www.honda.com> website.

② 2025 Express Energy will be a significant increase in the 2025 budget. It is important that the Board of Directors be kept informed of the progress of the 2025 budget. The Board of Directors will be kept informed of the progress of the 2025 budget. The Board of Directors will be kept informed of the progress of the 2025 budget.

DOI: 10.1007/s10687-009-9191-9

MODEL NUMBER

IO Combiner 6 (1-IO-AM1-240-5C/3-IO-AM1-240-5C-HDR)	IO Combiner 5 with IO Gateway printed circuit board for integrated revenue-grade PV production metering (AM1C12-20-0.5%), consumption metering (2.5%), and IO Battery metering (2.5%). Includes a silver solder shield to defeat heat-seeking (ESL) and 57 mA/0.2V includes after solar output is defeated to defeat heat-seeking (ESL) and 57 mA/0.2V includes a factory-installed hold-down compatible with all the circuit breakers identified in the Accessories and Replacement Parts section.
IO Combiner 5C (1-IO-AM1-240-5C/3-IO-AM1-240-5C-HDR)	IO Combiner 5C with IO Gateway printed circuit board for integrated revenue-grade PV production metering (AM1C12-20-0.5%), consumption metering (2.5%), and IO Battery metering (2.5%). Includes Enphase Micro Connect modular metering (ESL) and 57 mA/0.2V includes after solar output is defeated to defeat heat-seeking (ESL) and 57 mA/0.2V includes a factory-installed hold-down compatible with all the circuit breakers identified in the Accessories and Replacement Parts section.

WHAT'S IN THE BOX

IQ Gateway printed circuit board	IQ Gateway is the platform for total energy management for comprehensive, remote maintenance, and management of the Enphase Energy System
Batteries	80 A battery with support for one IQ Gateway battery and four 20 A breakers for installing IQ Series Microinverters and IQ Gateway S2
IQ Gateway interface	Circuit breakers, 20/10V, 10 A/15 A
Production/CT	Pre-wired inverter output split-core CT, accurate up to 100%
Consumption/CT	Two-consumption monitoring inline CTs shipped with the box, accurate up to 12.5%
IQ Battery CT	Optional metering split-core CT shipped with the box, accurate up to 12.5%
CTRL board	Control board for wired communication with IQ System Controller 3/3B and the IQ Battery-5P
Enphase Mobile Connect (only with IQ Combiner S2)	LTE CAT 4-based cellular modem with a 5-year data plan (CELLM-CODEM-CT-NatUS for AT&T 14-Mbit/s)
Accessories kit	Special control headers for the COM/S-CT-2 board

ACCESSORIES AND REPLACEMENT PARTS NOT INCLUDED. ORDER SEPARATELY.

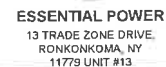
CELLMODEM-07-NA-05	LTE Cat 4-based cellular modem with a 5-year data plan (for AT&T, T-Mobile).
CELLMODEM-MI-05-SP-05	4G-based LTE-M cellular modem with a 5-year T-Mobile data plan
CELLMODEM-MI-06-AT-05	4G-based LTE-M cellular modem with a 5-year AT&T data plan
Circuit breakers (off-the-shelf)	Supports Eaton BR2XX, Siemens QZXX, and GE/ABB THQ12XX Series circuit breakers (XX represents 10, 15, 20, 30, 40, 50, or 60). Also supports Eaton BR220E, BR230E, and BR240E 2-pole breakers compatible with the hold-down.
Circuit breakers (provided by End-user)	BRK-10A-5-240V, BRK-15A-2-240V, BRK-20A-2P-240V, BRK-30A-2P-240V-E, and BRK-40A-2P-240V-E (more details in the "Accessories" section)
XA-SCXARS46LD-ES	Replacement scalar shaft for IQ Controller 5/5C
XA-EXV2-PCBA-5	IQ Gateway replacement printed circuit board (PCB) for IQ Controller 5/5C
X-IQ-HA-HD-125A	Hold-down kit (compatible with Eaton BR-Series circuit breakers with 1/2" throw). Not required for X-IQ-AMV-240V-5 or X-IQ-AMV-240V-5C-HDC.
X-IQ-AMV-PCBA-5	Replacement COM40-K12 2-wire digital input PCB for X-IQ Controller 5/5C

ELECTRICAL SPECIFICATIONS

Rating	50 A
System voltage and frequency	230/240 VAC or 120/208 VAC, 60 Hz
Disin rating	2.5 A
Fault current rating	10 kAIC
Maximum continuous current rating (input from PV/storage)	62 A
Branch circuits (solar and/or storage)	15p to four 2-pole Extra Breakers Q or OE/SE3 THQ Series distributed generation (IECS) breakers only. (not on 14304)
Maximum total branch-circuit breaker rating (total)	60 A or distributed generation 50 A with 10 A busway breaker included
10 Gasway breaker	10 A or 15 A rating GE/Siemens/Epcon included

1. *Physanthus* species are all grasses, and therefore not members of the DCO and are not considered. *Physanthus* in the extreme forms, *Physanthus* *lanceolatus*, and *Physanthus* *lanceolatus*, where there is adequate evidence for the existence of the species.

doi:10.1017/S0007122615000055



VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER

PV-7



Enphase IQ Cable accessories

The Enphase IQ Cable and accessories are part of the latest generation Enphase Energy System. These accessories provide simplicity, reliability, and faster installation times.



Enphase IQ Cable

- Two-wire, double-insulated Enphase IQ Cable is 50% lighter than the previous generation Enphase cable
- New cable numbering and plug-and-play connectors speed up installation and simplify wire management
- Link connectors eliminate cable waste

IQ Field Wireable Connectors

- Quickly connect IQ Cable on the roof without complex wiring
- Make connections from any open connector and center-feed any section of cable within branch limits
- Available in male and female connector types

Enphase IQ Cable accessories



CONDUCTOR SPECIFICATIONS

Certification	UL 3003 (prev. 1014), UL 7732 SolarE-Series
Flame Retarding	FT4
Compliance	RoHS, CE, REE, CE, IEC, TUV, UL, combined UL for Canada and United States
Conductor type	TINNED, Tinned-Copper
Disconnecting means	The AC and DC bulkhead connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.

IQ CABLE TYPES/ORDERING OPTIONS

Connecterized models	Size/Maximum nominal voltage	Connector spacing	Connector count per box
Q-12-10-240	12 AWG/277 VAC	1.0 m (32.8 ft)	240
Q-12-10-240	12 AWG/277 VAC	1.5 m (49.2 ft)	240
Q-12-10-240	12 AWG/277 VAC	2.0 m (65.6 ft)	240
Q-12-10-240	12 AWG/277 VAC	2.5 m (82.0 ft)	240
Q-12-20-240	12 AWG/277 VAC	2.5 m (82.0 ft)	200
Q-12-22-200	12 AWG/277 VAC	2.5 m (82.0 ft)	200
Q-12-25-200	12 AWG/277 VAC	2.5 m (82.0 ft)	200

ENPHASE IQ CABLE ACCESSORIES

Name	Model number	Description
IQ Raw Cable	Q-12-RAW-300	300 meters of 12 AWG cable with no connectors
IQ Field Wireable Connector (male)	Q-CONN-10M	Make connections from any open connector
IQ Field Wireable Connector (female)	Q-CONN-10F	Make connections from any IQ Cable open connector
IQ Cable Clip	Q-CLIP-100	Used to fasten cabling to the racking or to secure sloped cabling
IQ Disconnect Tool	Q-DISC-10	IQ Disconnect tool for IQ Cable connectors, DC connectors, and AC module mount
IQ Heating Caps (female)	Q-HEAT-10	One needed to cover each unused connector on the cabling
IQ Terminator	Q-TERM-10	IQ Terminator for unused cable ends
Enphase EN4 to MC4 adapter (150 mm)	ECA-EN4-S22	Connect PV module using MC4 connectors to IQ Microconverters with EN4 (TE PV4-S SOLARLOK) 150 mm/5.9" to MC4
Enphase EN4 to MC4 adapter (180 mm)	ECA-EN4-S22-10-12	Connect PV module using MC4 connectors to IQ Microconverters with EN4 (TE PV4-S SOLARLOK) 180 mm/7.0" to MC4
Enphase EN4 to MC4 adapter (180 mm)	ECA-EN4-S22-15-12	Connect PV module using MC4 connectors to IQ Microconverters with EN4 (TE PV4-S SOLARLOK) 180 mm/7.0" to MC4
Enphase EN4 to non-terminated extension cable	ECA-EN4-FW-12	For field wiring of UL-certified DC connectors: EN4 to non-terminated cable, 150 mm/5.9"
Enphase EN4 non-terminated adapter	ECA-EN4-FW	For field wiring of UL-certified DC connectors: EN4 to non-terminated cable, 150 mm/5.9"
Enphase EN4 to MC4 adapter (600 mm)	ECA-EN4-S22-4	For field wiring of UL-certified DC connectors: EN4 to non-terminated cable, 600 mm/23.6"
Enphase EN4 to MC4 adapter (97 mm)	ECA-EN4-S22-12	Connect PV module using MC4 connectors to IQ Microconverters with EN4 (TE PV4-S SOLARLOK) 97 mm/3.8"
Enphase EN4 to non-terminated extension cable (1000 mm)	ECA-EN4-FW-10-12	For field wiring of UL-certified DC connectors: EN4 to non-terminated cable, 1000 mm/39.4"
Replacement MC4 to MC4 adapter (MC4)	Q-DCC-2	DC adapter to MC4 (max voltage 100 VDC)
Replacement DC adapter (UTX)	Q-DCC-S	DC adapter to UTX (max voltage 100 VDC)
Replacement DC adapter (MC4)	Q-DCC-2-P	DC Adapter to MC4 (max voltage 100 VDC) for 100W Microconverter
Replacement MC4 to non-terminated extension cable (2000 mm)	ECA-EN4-FW-12	For field wiring of UL-certified DC connectors: MC4 to non-terminated cable, 2000 mm/78.7"
Enphase MC4 to MC4 extension cable (1500 mm)	ECA-G22-S22-10-12	MC4 to MC4 extension cable to connect PV module to DC adapter (MC4) or IQ Microconverters with MC4, 1500 mm/59.4"

To learn more about Enphase offerings, visit <https://enphase.com>

IQ Cable accessories 03490224-1 © 2024-07-03

IQ Cable accessories 03490224-1 © 2024-07-03



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

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PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
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DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE

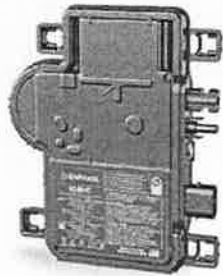
ANSI B
11" X 17"

SHEET NUMBER

PV-8



DATA SHEET



IQ8HC Microinverter

Our newest IQ8 Series Microinverters are the industry's first microgrid-forming*, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC), which enables the microinverter to operate in grid-tied or off-grid modes. Its chip is built in advanced 65-nm technology with high-speed digital logic and fast superfast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the IQ Battery, IQ Gateway, and the Enphase App monitoring and analysis software.



Connect PV modules quickly and easily to the IQ8 Series Microinverters that have integrated MC4 connectors.



IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.



IQ8 Series Microinverters are UL Listed as PV rapid shutdown equipment and conform with various regulations when installed according to the manufacturer's instructions.

Easy to install

- Lightweight and compact with plug-and-play connectors
- Power line communication (PLC) between components
- Fast installation with simple two-wire cabling

High productivity and reliability

- Produces power even when the grid is down†
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547-2018 (UL 1741-SB)

NOTE:

- IQ8 Series Microinverters must be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series, and so on) in the same system.
- IQ8 microinverters ship with default settings that meet North American (UL 1547-SAF) interconnection standard requirements. Region-specific adjustments may be requested by an Authorized Listing Jurisdiction (ALJ) or utility representative. According to the IEEE 1547-2018 standard, a listing jurisdiction (ALJ) is required to make these changes during installation.

IQ8HC Microinverter

INPUT DATA (DC)	UNITS	IQ8HC-72-M-UDS/IDM-C-72-M-UDS-UDS
Commonly used module ratings †	W	320-540
Module compact size ‡	—	To meet compatibility, PV modules must be within the maximum input DC voltage and maximum module L _{oc} listed below. Module compatibility can be checked at https://enphase.com/compatibility-checker .
MPPT voltage range	V	29.5-45
Operating range	V	16-58
Minimum/Maximum start voltage	V	22/58
Maximum input DC voltage	V	60
Maximum continuous operating DC current	A	14
Maximum input DC short-circuit current	A	25
Maximum module I _{sc}	A	20
Overvoltage class AC port	—	I
DC port lightning current	—	0
PV array configuration	—	Ungrounded array; no additional DC side protection required; AC side protection requires max. 70 A per branch circuit

OUTPUT DATA (AC)	UNITS	IQ8HC-72-M-UDS @240 VAC IQ8HC-72-M-UDS-UDS @240 VAC	IQ8HC-72-M-UDS @208 VAC IQ8HC-72-M-UDS-UDS @208 VAC
Pack output power	W	384	368
Maximum continuous output power	W	380	360
Nominal grid voltage (L-L)	V	240, split phase (L-L) 180°	208, single phase (L-L) 120°
Minimum and maximum grid voltage ‡	V	215-264	183-220
Maximum continuous output current	A	1.56	1.73
Nominal frequency	Hz	60	60
Extended frequency range	Hz	47-68	47-68
AC short-circuit fault current over three cycles	A _{sc}	2.70	2.70
Maximum units per 20 A (L-L) branch circuit †	—	10	8
Total harmonic distortion	%	<5	<5
Overvoltage class AC port	—	I	I
AC port backfeed current	mA	18	18
Power factor setting	—	1.0	1.0
Grid-tied power factor (adjustable)	—	0.85 leading to 0.85 lagging	0.85 leading to 0.85 lagging
Peak efficiency	%	97.3	97.2
CEC weighted efficiency	%	97.0	96.9
Nighttime power consumption	mW	22	26

MECHANICAL DATA	UNITS	IQ8HC-72-M-UDS/IDM-C-72-M-UDS-UDS
Ambient temperature range	°F/°C	-40 to 65 (-40 to 150)
Relative humidity range	%	4 to 100 (condensing)
DC connector type	—	Standard MC4
Dimensions (H x W x D, Weight)	in (mm) kg (lb)	2.13 in (54 mm) x 1.91 in (48.6 mm) x 1.12 in (28.4 mm) 0.11 kg (0.24 lb)
Cooling	—	Natural convection - no fans
Approved for wet locations; Pollution degree	—	Yes, PD0
Enclosure	—	Class II double-insulated, corrosion-resistant polycarbonate enclosure
Environmental category per IEC 60721-3-2	—	MEM & Type K, outdoor

IQ8HC-72-M-UDS/IDM-C-72-M-UDS-UDS is undergoing compliance and the specifications are preliminary. The data is made in the USA, and the PCBs, components, and enclosure are automatically manufactured to meet the requirements of regulatory bodies for use in the USA and the PCBs, components, and enclosure are automatically manufactured to meet the requirements of regulatory bodies for use in the USA.

† Maximum voltage range can be adjusted based on the IEC standard for the region. The voltage range can be adjusted based on the IEC standard for the region. The voltage range can be adjusted based on the IEC standard for the region.

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*Meets UL 1741-1 and is certified with C-System Controller 2 or 3.
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ROCKYHILL, CT 06067
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SHEET NAME

SPEC SHEETS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-9

STRONGHOLD | BUTYL



SIMPLIFIED FLASHLESS SOLUTION

- One-step Butyl application
- Minimize labor with one step installation using the pre-applied, peel and install, butyl design
- Reliable waterproofing without messy sealant
- Eliminate risk of roof damage. No more disturbing shingles

OPTIMIZED FOR NXT UMount, UNIRAC'S OPEN CHANNEL RAIL SYSTEM

- Open slot design for ease of rail connectivity with included STRONGHOLD™ NXT UMount® rail clamp
- STRONGHOLD™ Butyl combined with the NXT UMount® system make installation and wire management a breeze
- UL Certified with NXT UMount®

DUAL MOUNTING OPTIONS

- Pre-attached butyl pad: Simply peel, stick, and fasten with the two (2) included screws for rafter mount
- For direct-to-deck applications, simply install additional decking screws

ADDITIONAL BENEFITS

- Competitively priced with standard rafter attachments

WHY STRONGHOLD™ BUTYL?

Unirac's STRONGHOLD™ Butyl is efficient, dependable, and optimized for UNIRAC's NXT UMount® system. The pre-applied butyl pad removes the need for additional flashing. Just peel the liner, place the attachment, and fasten it to the roof. In addition, the butyl, used throughout the roofing and solar industries for its reliability, conforms to the screws and roof for a robust, dependable seal with no extra work! Couple this with the NXT UMount® system, and you have a highly reliable, easy-to-install system with integrated wire management.

KITTED WITH

- ONE (1) Stronghold™ Butyl direct-to-deck attachment with pre-applied butyl patch. (Extra patches for shimming available.)
- TWO (2) screws for rafter installation. (Additional screws for direct-to-deck applications available.)
- ONE (1) NXT Rail Clamp



FOR QUESTIONS OR CUSTOMER SERVICE CONTACT:
505-242-6411 | SALES@UNIRAC.COM | WWW.UNIRAC.COM

CONFORMS TO
UL2703A



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-10

NXT UMount

UNIRAC
BETTER SOLAR STARTS HERE

OPEN CHANNEL RACKING SYSTEM FOR RESIDENTIAL AND COMMERCIAL INSTALLATIONS

STREAMLINED INSTALLATION

- Easy-to-engage rails and clamps speed up installation, cutting labor time on the roof.
- A truly structural internal splice reduces attachment points and supports cantilever designs.
- Combo clamp functions as both a mid clamp and end clamp, reducing the number of components needed.
- This new MLPE mount is the first single SKU solution from any racking manufacturer which combines the MLPE mount and Ground Lug. Twist-in design with a full size 1/2" bolt head ensures a fast and secure installation.

SMART, INTEGRATED DESIGN

- Fewer SKUs with multifunctional components = simplified inventory and logistics.
- Built-in wire management within the open channel rail keeps arrays clean and efficient.
- Truly structural splice allows you to seamlessly extend rail lengths with confidence, even within the cantilever.
- Sleek accessories and optional hidden end clamps deliver a polished, finished look.
- Meets the UL 2703 standard.
- UL 3741 compliant system for residential & commercial applications.

MAXIMUM VERSATILITY

- Two rail profiles meet every project's structural and span requirements. The Standard Rail delivers reliable performance for most installations, while the HD Rail provides heavy-duty strength with simplicity—supporting spans up to 10 1/2 ft. in nearly all wind zones.
- Cross-compatible with a variety of Unirac attachments for flexible designs.
- Fully compatible with S-51 metal roof attachments that meet the UL 2703 standard.

WORKS ON:



CONFORMS TO
UL 3741 **UL 2703** **ISO** 9001:2015 14001:2015 CERTIFIED

NXT UMount

UNIRAC
BETTER SOLAR STARTS HERE

OPEN CHANNEL RACKING SYSTEM FOR RESIDENTIAL AND COMMERCIAL INSTALLATIONS



NXT UMount® RAIL

Our standard rail supports up to 6.5' spans while featuring an open channel design for simplified wire management. The hassle-free, click-in functionality speeds up installation.



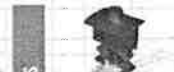
NXT UMount® HD RAIL

The new HD Rail delivers heavy-duty performance without the added complexity. Engineered for demanding conditions with industry-leading spans up to 10 1/2'. Enables 2-rail installs in nearly all wind zones. Rail-specific splice and end caps are sold separately.



NXT UMount® TRULY STRUCTURAL SPLICE

Supports splicing at both midspan and cantilever points. Simplifies installation without compromising strength, ensures smooth installation and a refined aesthetic.



NXT UMount® COMBO CLAMP

A single universal clamp that serves as both the mid and end clamp. Designed to fit module frames from 50–40 mm, it features an integrated bonding pin to ensure a secure electrical bond between the module and rail. Finishes: Dark and Mill.



NXT UMount® HIDDEN END CLAMP

For a clean, finished look, this optional end clamp securely bonds modules to the rail at the array edges. Designed for 30–40 mm module frames, it comes pre-assembled with a sleek black end cap for enhanced system aesthetics. Finish: Mill only.



STRONGHOLD® DUTY

Install it fast—with no mess! This mount comes with a pre-applied butyl pad, so there's no need for sealants or flashing. Just peel, place, and fasten for a quick, clean, and reliable installation every time. Product is approved for High Velocity Hurricane Zone of the Florida Building Code, NCA No. 24-0129.06.



BOSS AND ACCESSORIES

Complete line of E-BOSS accessories for wire management, bonding, and grounding. Includes the new NXT MLPE Mount + Ground Lug—domestic SKU. Optional adjustable tilt legs support 10°–30° angles for flexible system layouts.

FOR QUESTIONS OR CUSTOMER SERVICE CONTACT:
505.242.6411 | SALES@UNIRAC.COM | WWW.UNIRAC.COM

CONFORMS TO
UL 3741 **UL 2703** **ISO** 9001:2015 14001:2015 CERTIFIED



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

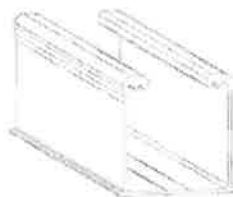
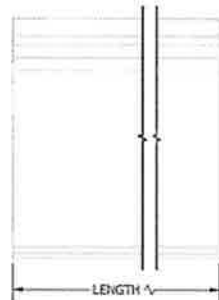
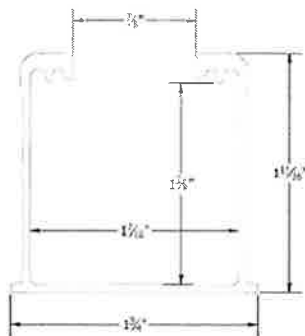
SHEET SIZE

ANSI B
11" X 17"

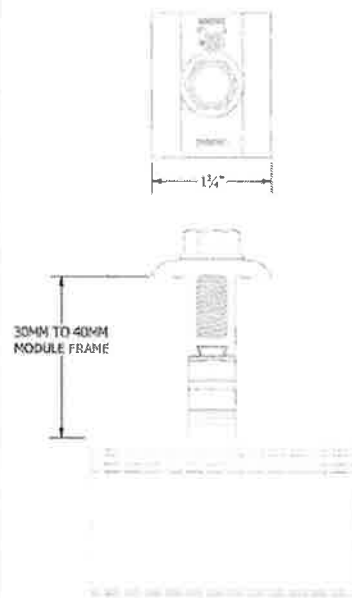
SHEET NUMBER

PV-11

PART # TABLE		
P/N	DESCRIPTION	LENGTH
084RLM1	NXT UMOUNT RAIL 84" MILL	84"
084RLD1	NXT UMOUNT RAIL 84" DARK	84"
168RLM1	NXT UMOUNT RAIL 168" MILL	168"
168RLD1	NXT UMOUNT RAIL 168" DARK	168"
208RLM1	NXT UMOUNT RAIL 208" MILL	208"
208RLD1	NXT UMOUNT RAIL 208" DARK	208"
246RLM1	NXT UMOUNT RAIL 246" MILL	246"
246RLD1	NXT UMOUNT RAIL 246" DARK	246"
171RLM1	NXT UMOUNT RAIL 171" MILL	171.50"
171RLD1	NXT UMOUNT RAIL 171" DARK	171.50"
096RLM1	NXT UMOUNT RAIL 96" MILL	96"
096RLD1	NXT UMOUNT RAIL 96" DARK	96"
185RLM1	NXT UMOUNT RAIL 185" MILL	185"
185RLD1	NXT UMOUNT RAIL 185" DARK	185"



PART # TABLE	
P/N	DESCRIPTION
CCLAMP1	NXT COMBO CLAMP - MILL
CCLAMP01	NXT COMBO CLAMP - DARK



UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE: NXT UMOUNT
DRAWING TYPE: PART DETAIL
DESCRIPTION: RAIL
REVISION DATE: 2/29/2024

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE
NOMINAL
PRODUCT PROTECTED BY
ONE OR MORE US PATENTS
LEGAL NOTICE

NU-P01
SHEET

UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE: NXT UMOUNT
DRAWING TYPE: PART & ASSEMBLY
DESCRIPTION: COMBO CLAMP
REVISION DATE: 2/29/2024

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE
NOMINAL
PRODUCT PROTECTED BY
ONE OR MORE US PATENTS
LEGAL NOTICE

NU-A03
SHEET



ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2025	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-12

PART # TABLE	
P/N	DESCRIPTION
SHBUTYLM2	STRONGHOLD BUTYL ATT KIT #14S MILL
SHBUTYLD2	STRONGHOLD BUTYL ATT KIT #14S DARK

 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE: NXT LMOUNT DRAWING TYPE: PARTS DESCRIPTION: SH BUTYL ATTACHMENT REVISION DATE: 7/14/2023	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	NU-A10-1 SHEET
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PART # TABLE	
P/N	DESCRIPTION
MLPEMNT	UNIVERSAL MLPE MOUNT
MLPEMNT-US	UNIVERSAL MLPE MOUNT

UNIVERSAL MLPE MOUNT

 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE: E-BOSS DRAWING TYPE: PARTS ASSEMBLY DESCRIPTION: UNIVERSAL MLPE MOUNT REVISION DATE: 3/4/2025	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EB-A11 SHEET
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ESSENTIAL POWER
 13 TRADE ZONE DRIVE,
 ROCKYHOLM, NY
 11778 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR

PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
 LOCKPORT, NY 14094, USA
 APN: 29090012307175
 UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-13

NXT UMount MECHANICAL LOAD TEST 36

SYSTEM CERTIFICATION PAGE

The NXT UMount system has been certified and listed to the UL 2703 standard (Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels). This standard included electrical grounding, electrical bonding, mechanical load and fire resistance testing.

SYSTEM LEVEL FIRE CLASSIFICATION

The system fire class rating features installation in the manner specified in the NXT UMount Installation Manual. NXT UMount has been classified to the system level fire portion of UL 2703. NXT UMount has achieved system level performance for steep sloped roofs and low sloped roofs. System level fire performance is inherent in the NXT UMount design and no additional installation requirements are required. See table below for definition of steep sloped and low sloped roofs. The system is to be installed over fire resistant roof covering rated for the application. There is no required minimum or maximum height limitation along the roof deck to maintain the system fire rating for NXT UMount Approved Module Types. A System Level Fire Rating is listed below.

Roof Type	Module Type	System Level Fire Rating	Rail Description	Module Orientation
Steep Slope - roof pitches > 2 in/ft	Type 1, 2, 3 with metal frame, 10 with metal frame, 19, 22, 23, 26, 30 & 36	Class A	Parallel OR Perpendicular to Ridge	Landscape OR Portrait
Low Slope - roof pitches < 2 in/ft	Type 1, 2, 29, 30 & 36			

MECHANICAL LOAD TEST MODULES

The modules selected for UL 2703 mechanical load testing were selected to represent the broader range possible for modules on the market. The tests performed govern module frame thicknesses greater than or equal to 3.0 mm angle and usable rail frame profiles (some complex frame profiles could require further analysis to determine applicability), and clear and dark anodized aluminum frames. PV modules may have a reduced load rating, independent of the NXT UMount rating. Please consult the PV module manufacturer's installation manual for more information.

RAIL TYPE	Tested Module	Design Load Ratings	Tested Loads	Record Module Area
NXT RAIL	SunPower SPR-A46-COM	Down: 50 psf Up: 10 psf, Slope: 1.1 psf	Down: 75 psf Up: 75 psf, Slope: 7.9 psf	21.89 sq ft
	First Solar FS-172-6-47	Down: 59.41 psf Up: 22.28 psf, Slope: 6 psf	Down: 59.20 psf Up: 33.42 psf, Slope: 12 psf	27.76 sq ft
	Q Cells Q.Pc-A Duo X1-G11.5-60G	Down: 37.96 psf Up: 10.97 psf, Slope: 2.6 psf	Down: 15.60 psf Up: 16.46 psf, Slope: 11.3 psf	75.49 sq ft
	Q.M.A.C.D.O.X1-G11.5-60G-SB	Down: 36.50 psf Up: 10.96 psf, Slope: 7.4 psf	Down: 54.87 psf Up: 31.43 psf, Slope: 11.4 psf	30.85 sq ft
NOV H/S RAIL	JA Solar JAM72D50-mwMB	Down: 10.47 psf Up: 25.57 psf, Slope: 8.20 psf	Down: 74.7 psf Up: 88.35 psf, Slope: 12.6 psf	27.81 sq ft

NXT UMount COMBO CLAMP INSTALLATION 23

INSTALLATION MANUAL PAGE

INSTALL COMBO (END) CLAMPS:
Install Combo Clamps starting at the aligned end of rail.

INSERT COMBO CLAMP:
Insert Combo Clamp from one side of the rail into the rail and rock in the other side. Ensure that the rail rail profile is seated in the rail profile.

INSTALL END MODULE: Position first module onto rails and engage module frame with end clamps. Hold clamp in place against module while tightening bolt.
NOTE: Ensure a minimum clearance of 2" from the end of the module to the end of the rail.

PLACE ADJACENT MODULE AGAINST CLAMPS:
Modules must be tight against clamps with no gaps. Tighten bolts to required torque.
TORQUE VALUE: 120 IN-FT.

INSTALL REMAINING MODULES:
Proceed with module installation. Engage each clamp with previously positioned module.
NOTE: Spacing clamps are capable of supporting maximum frame area independent of rail length.

INSTALL COMBO (MID) CLAMPS:
Clamp assemblies may be positioned in rail near joints of one rail to module placement.
NOTE: The clamps may be installed using split torque.
PRG TIP: Press the clamp assembly slightly over the rail to allow for easy sliding of clamp in the rail.

NXT UMount SYSTEM GROUNDING 30

INSTALLATION MANUAL PAGE

SYSTEM GROUNDING: Rails can be bonded using a MLEP, A GROUNDING LUG (NULUGLP); GROUND WELD LUG #1 or ILSCD LAY IN LUG (GOL4001). At least one rail per row of modules in an array must be bonded to electrical ground. Each additional row of modules must be grounded with at least one rail. Lay per row or with a row-to-row bonding device listed here.
NOTE: See Page 2 for electrical layout required for expansion & contraction.

SYSTEM GROUNDING WITH MLEP & GROUNDING LUG: Insert the T-rail in the rail by holding the plastic cover's tabs with thumb and middle finger. Rotate the clamp 90 deg in clockwise direction in the rail and engage when aligned with rail. Ensure that the T-rail is engaged in the rail profile. Place the grounding wire on top of the grounding plate on one of the side of the bolt provided to the grounding plate flanges. Ensure copper is not in contact with rail or MLEP plate surface. For stranded wire, UMLP, recommend bagging the wire around the bolt and leaving some insulation on the end of the wire to keep strands together. Tighten bolt to recommended torque.
TORQUE VALUE: 120 IN-FT. (15 N-M)
NOTE: HEFT & GROUNDING LUGS are single use items.

ALTERNATE SYSTEM GROUNDING WITH ILSCD LAY-IN LUG - UMLP P/N 04000P: Alternative Grounding Lug. Drill hole in rail 7/32" in diameter, deburr hole and bolt through one wall of rail.
NOTE: TORQUE VALUE: 15 N-M. 11 POUNDS FORCE INCHES. 4-20 N-M. 3 POUNDS INCHES. 20 IN-FT.

ALTERNATE ROW GROUNDING WITH H/S BONDING CLAMP: Insert clamp between module rows and tighten bolt.
TORQUE VALUE: 20 IN-FT.

ALTERNATE ROW GROUNDING WITH H/S BONDING CLIP: Insert clip between module rows and tighten bolt.
TORQUE VALUE: 20 IN-FT.

NXT UMount BONDING CONNECTIONS & GROUNDING PATHS 31

INSTALLATION MANUAL PAGE

BONDING COMBO MID-END CLAMP ASSEMBLY
1) Aluminum combo mid-end clamp cap with stainless steel bonding pins that pierce module frame - anodization to bond module to module through clamp.
2) Stainless steel bolt secures aluminum clamp to stainless steel Hex Bolt.
3) Aluminum combo mid-end clamp rail nut with stainless steel bonding pins that pierce rail anodization to bond module to module through clamp.
NOTE: See Page 23 for installation details.

BONDING RAIL SPLICE
1) Bonding Hardware creates bond between Splice bar and each rail section.
2) Aluminum splice bar spans across rail gap to create rail. To rail bond rail on at least one side of splice will be grounded.
NOTE:
- See Page 23 for installation details.
- Double confirm the dimensions only.

BONDING BETWEEN THERMAL BREAKS
1) LUG is connected at the end of each thermal break to the rail.
2) Solid copper wire is connected across the gap to bond the two ends.
NOTE: See Page 2 for installation details.

RACK SYSTEM GROUNDING
1) Tabs on the grounding plate pierce anodization on the rail to bond rail to ground wire.
2) Solid copper wire connected to lug is raised to provide final system ground connection.
NOTE: See Page 23 for installation details and alternate wiring system grounding methods.

ESSENTIAL POWER
13 TRADE ZONE DRIVE
RONKONKOMA, NY
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE
702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN
SHEET NAME

SPEC SHEETS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER
PV-14

Product data sheet

Accessories

Accessories



Safety switch, general duty, non fusible, 2 pole, 2 wire, 240VAC, 60A, Type 3R with bolt on hub prov

DU222R0

Product availability: Stock - Normally stocked in distribution facility

Main

Product	Single Throw Safety Switch
Duty Rating	General Duty
Device Application	Residential
Disconnect Type	Non-Automatic disconnect switch
Factory Installed Neutral	None
Number of Poles	2
Current Rating	60 A
Voltage Rating	240 V AC
Enclosure Rating NEMA	NEMA 3R
Motor power hp	10 hp at 240 V AC 60 Hz for 1 phase motors

Complementary

Mounting Type	Surface
Electrical Connection	Lugs
Wiring configuration	2 wire
Wire Size	AWG 12...AWG 3 aluminum AWG 14...AWG 3 copper
Tightening Torque	35 lbf in (4.0 N m) 0.003 - 0.006 inF (2.08 - 5.26 mmF) (AWG 14...AWG 10) 35 lbf in (4.0 N m) (AWG 14...AWG 10) 45 lbf in (5.08 N m) 0.01 inF (3.37 mmF) (AWG 8) 45 lbf in (5.08 N m) 0.02 - 0.03 inF (12.5 - 21.12 mmF) (AWG 6...AWG 4) 50 lbf in (5.6 N m) 0.04 inF (26.67 mmF) (AWG 3)
Depth	3.75 in (95.25 mm)
Width	7.75 in (196.85 mm)
Height	8.43 in (214.60 mm)
Product Weight	17.0 lb (US) (7.7 kg)

Environment

Certifications	UL Listed File E2975
----------------	----------------------

Ordering and shipping details

Category	US1DE1A09106
Discount Schedule	DE1A
GTIN	755801491491

Price is "List Price" and may be subject to a trade discount - check with your local distributor or retailer for actual price.

Jun 25, 2026

Schneider

1

Returnability	Yes
Country of origin	MX

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	5.200 in (13.206 cm)
Package 1 Width	7.540 in (19.050 cm)
Package 1 Length	0.600 in (24.882 cm)
Package weight (Lbs)	4.744 lb (US) (2.152 kg)
Unit Type of Package 2	CAR
Number of Units in Package 2	5
Package 2 Height	10.000 in (25.400 cm)
Package 2 Width	10.700 in (27.178 cm)
Package 2 Length	24.100 in (61.214 cm)
Package 2 Weight	24.905 lb (US) (11.297 kg)
Unit Type of Package 3	PAL
Number of Units in Package 3	120
Package 3 Height	38.000 in (96.520 cm)
Package 3 Width	40.000 in (101.600 cm)
Package 3 Length	48.000 in (121.920 cm)
Package 3 Weight	650.000 lb (US) (294.935 kg)

Contractual warranty

Warranty (in months)	1R
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Disclaimer: This information is not intended as a substitute for and is not to be used for engineering, installation, or suitability of these products for specific user applications.



ESSENTIAL POWER
13 TRADE ZONE DRIVE.
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-15

Schneider

Jun 25, 2026

Product data sheet

See Notes

ESSENTIAL C



Safety switch, general duty,
fusible, 2 pole, 3 wire, 240VAC,
60A, Type 3R, bolt on hub prov,
with neutral

D722NR8

Product availability: Stock - Normally stocked in distribution
facility

Main

Product	Single Throw Safety Switch
Duty Rating	General Duty
Device Application	Residential
Disconnect Type	Fusible disconnect switch
Factory Installed Neutral	Neutral (Factory Installed)
Number of Poles	2
Current Rating	60 A
Voltage Rating	240 V AC
Endurance Rating NEMA	NEMA 3R
Motor power hp	1.5 hp at 120 V AC 60 Hz for 1 phase motors Unrated 120 V AC 60 Hz for 1 phase motors 3 hp at 240 V AC 60 Hz for 1 phase motors 1.5 hp at 240 V AC 60 Hz for 3 phase motors 10 hp at 240 V AC 60 Hz for 1 phase motors 15 hp at 240 V AC 60 Hz for 3 phase motors

Complementary

Short Circuit Current Rating	100 kA maximum depending on fuse M, K or R
Fuse type	1, K or R
Mounting Type	Surface
Electrical Connection	Lug
Wiring configuration	3-wire
Wire Size	AWG 12, AWG 8 aluminum AWG 14, AWG 10 copper
Tightening Torque	25 lb-in (2.8 N-m) 0.003 - 0.008 in (0.076 - 0.203 mm) (AWG 14, AWG 10) 35 lb-in (3.9 N-m) 0.01 - 0.02 in (0.254 - 0.508 mm) (AWG 8) 45 lb-in (5.0 N-m) 0.01 - 0.02 in (0.254 - 0.508 mm) (AWG 6) 50 lb-in (5.6 N-m) 0.04 in (1.27 mm) (AWG 4) 50 lb-in (5.6 N-m) 0.04 in (1.27 mm) (AWG 3)
Depth	4.87 in (123.76 mm)
Width	7.45 in (189.23 mm)
Height	14.88 in (377.95 mm)
Product Weight	8.8 lb (3.99 kg)

Environment

Certifications	UL listed file E28775
----------------	-----------------------

Price is "List Price" and may be subject to a trade discount - Check with your local distributor or retailer for actual price.

Jun 8 2026

Schneider

Ordering and shipping details

Category	US10E1A20106
Discount Schedule	DE 1A
GTIN	785951493640
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Num of units in pkg	1
Package 1 Height	5.490 in (13.716 cm)
Package 1 Width	7.090 in (17.912 cm)
Package 1 Length	16.300 in (41.402 cm)
Package weight(Lbs)	8.340 lb(US) (3.782 kg)
Unit Type of Package 2	PAL
Number of Units in Package 2	120
Package 2 Height	45.000 in (114.300 cm)
Package 2 Width	40.000 in (101.600 cm)
Package 2 Length	48.000 in (121.920 cm)
Package 2 Weight	877.000 lb(US) (397.800 kg)

Contractual warranty

Warranty (in months)	18
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ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION		
DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2026	UR



PROJECT NAME

SEIFERT, WAYNE

702 WILLOW ST.
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE
ANSI B
11" X 17"

SHEET NUMBER

PV-16

Schneider

Jun 8 2026



Certificate of Compliance

Certificate: 76131715 Master Contract: 26999
Project: 6/27/2013 Date Issued: 2016-10-10
Issued For: Online
1411 Broadway NY
Alderson, New Mexico
80102
United States
Attention: Peter Racine

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



PRODUCTS

Class SOLAR POWER SYSTEMS - PHOTOVOLTAICS - PV Mounting
Class SOLAR POWER SYSTEMS - PHOTOVOLTAICS - PV Mounting and clamping systems Certified to US Standards

FixedPanel is a 5 degree ballasted PV mounting system that is installed parallel to the roof in the landscape orientation.
FixedPanel is a ballasted PV mounting system that is installed parallel to the roof in both portrait and landscape orientations.

Model:
FixedPanel (FixedPanel)

FixedPanel (FixedPanel)

The system listed on this certificate complies with the requirements of the applicable standards and has been found to be in compliance with the applicable standards.

CSA GROUP Inc. 2016-10-10

CSA GROUP Inc. 2016-10-10

Page 1



Certificate: 76131715
Project: 6/27/2013

Master Contract: 26999
Date Issued: 2016-10-10

FixedPanel is a 5 degree ballasted PV mounting system that is installed parallel to the roof in the landscape orientation.

Model:
FixedPanel (FixedPanel)

The system listed on this certificate complies with the requirements of the applicable standards and has been found to be in compliance with the applicable standards.

The system listed on this certificate complies with the requirements of the applicable standards and has been found to be in compliance with the applicable standards.

FixedPanel is a 5 degree ballasted PV mounting system that is installed parallel to the roof in the landscape orientation.

FixedPanel is a 5 degree ballasted PV mounting system that is installed parallel to the roof in the landscape orientation.

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Certificate: 76131715
Project: 6/27/2013

Master Contract: 26999
Date Issued: 2016-10-10

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Model:
FixedPanel (FixedPanel)

The system listed on this certificate complies with the requirements of the applicable standards and has been found to be in compliance with the applicable standards.

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ESSENTIAL POWER
13 TRADE ZONE DRIVE,
RONKONKOMA, NY
11779 UNIT #13

VERSION

DESCRIPTION	DATE	REV
INITIAL RELEASE	07-09-2020	UR



PROJECT NAME

SEIFERT, WAYNE
702 WILLOW ST.,
LOCKPORT, NY 14094, USA
APN: 29090012307175
UTILITY: NYSEG

DIN

SHEET NAME

SPEC SHEETS

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-17