



City of Bristol
Historic District Commission

REGULAR MEETING OF WEDNESDAY, JULY 23, 2025
MEETING ONLINE VIA ZOOM AND
CITY HALL - COUNCIL CHAMBERS
111 NORTH MAIN STREET
5:00 PM

INFORMATION TO ACCESS THIS MEETING

Zoom Meeting link:

<https://bristolct-gov.zoom.us/j/85362625429?pwd=ff7Yyc4a4BfQRk5l2qcWjaMrxnXA4U.1>

Meeting Number:

853 6262 5429

Meeting Password:

123456

Join by phone:

1-929-205-6099

AGENDA

1. Call to Order
2. Public Participation
3. Approval of Minutes
 - a. Regular Meeting - June 25, 2025
4. Public Hearings
 - a. Application #2025-07-01 - Request for a Certificate of Appropriateness for new siding at 132 Stearns Street; Assessor's Map 25A, Lot 72; Diane Lupinski, applicant.
 - b. Application 2025-07-02 – Request for a Certificate of Appropriateness for reconstruction of porch at 132 Stearns Street; Assessor's Map 25A, Lot 72; Diane Lupinski, applicant.
 - c. Application 2025-07-03 – Request for a Certificate of Appropriateness for new solar panels at 239 Grove Street; Assessor's Map 24, Lot 100; Infinity Solar Systems, applicant
5. Adjournment

REMINDER: The next regular meeting of the Historic District Commission is Wednesday,
August 27, 2025

**BRISTOL HISTORIC DISTRICT COMMISSION
MINUTES
REGULAR MEETING OF WEDNESDAY JUNE 25, 2025
DRAFT MINUTES**

By: Chairman Collins

Time: 5:10 P.M.

Place: City Hall
Council Chambers
111 North Main Street
First Floor

MEMBERS:	NAME	PRESENT	ABSENT
REGULAR MEMBERS:	Andrew E. Collins, Chairman	X	
	Colleen Nicastro		X
	Karen Stevens Vice Chairman	X	
	Patti Philippon (Secretary)		X
	Jennifer St. John	X	
ALTERNATE MEMBERS:	Keith David Elder		X
	Alicia M. Jennings	Zoom	
	Daphnee Delgado	Zoom	
STAFF:	Andrew Armstrong, Assistant City Planner	X	

1. Call to Order

Per the order of Chairman Collins, the meeting was called to order at 5:10 P.M.

Chairman Collings reminded the Commission the next Regular Meeting was on Wednesday July 23, 2025.

2. Public Participation

There was no public participation.

3. Approval of Minutes

a. Regular Meeting – March 26, 2025

Chairman Collins designated himself, regular Commissioners Stevens and St. John with alternate Commissioners Jennings and Delgado to vote on the March 26, 2025, regular minutes.

Motion: Move to approve the minutes of the March 26, 2025, regular meeting, as amended with Commissioner St. John listed as a Regular Member, and under Old Business, the correct address is 17 Broadview Street.

By: Commissioner Stevens

Seconded: Commissioner St. John

For: Collins, Stevens, St. John, Jennings and Delgado

Against: None.

Abstained: None.

4. Public Hearings

- a. Application #2025-06-01 – Request for a Certificate of Appropriateness for an ADA ramp at 196 Woodland Street; Assessor's Map 25, Lot 110/40-1; Eugene Klimaszewski, applicant.

Chair Collins designated himself, regular Commissioners Philippon, Nicastro, St. John and Stevens with alternate Commissioners Elder, Jennings and Delgado to vote on Application #2025-06-01.

- a. application form
- b. location map
- c. two photographs of proposed ADA entrance
- d. railing specifications (14 Pgs.)
- e. ramp specifications (with railing information (5 Pgs.)

Applicant Eugene Klimaszewski of Woodland Suites, LLC, 196 Woodland St., Bristol spoke about a City of Bristol Building Department requirement for an ADA accessible ramp at 196 Woodland Street. The Building Department has approved a side entrance as the location for the ramp. This location doesn't immediately face the road, though the ramp will be visible to a degree based on the nature of it. Ramp options were presented and discussed.

Options included a black and metal temporary ramp that would be secured to the pavement and ramp up straight into the building entrance door. Another option is a concrete platform running along side the building with a platform for entering the building. With the second option there are railings similar to those on a deck, with a step or steps attached for a second and direct entrance into the building. Black is the preferable color option overall to match the existing building trim color.

Additional discussion covered the options that allow straight entrance into the building vs. entrance from the side to a platform, railings and steps. The least expensive and less awkward entrance would be a direct line into the building vs. implementing a ramp along the side of the building and then adding a platform and a step for entrance into the doorway.

No one else spoke in favor of the application.

No one spoke against the application.

The hearing is closed.

By: Commissioner Stevens

Seconded: Commissioner St. John

For: Collins, Stevens, St. John, Jennings and Delgado

Against: None.

Abstained: None.

Chairman Collins designated himself, regular Commissioners Stevens and St. John with alternate Commissioners Jennings and Delgado to vote on the application.

Discussion among the Commission Members continued with the question of longevity for the temporary ramp being put in place as a permanent option vs. the concrete. The ramp will still be visible to some though the side of the house it is being proposed for is a private road without as much traffic as a public one. Because the ramp is required by the city, the Commission's vote is more to the type of ramp, aesthetics and quality of it in an effort to make it stand out less rather than the historical aspects of the ramp itself.

The consensus was that because the ramp is intended to remain and isn't being put in place for one tenant but rather for all to have access to the building, the Commission opted for the more permanent and substantial concrete option with black railings. While the temporary ramp is solid enough, the look of the concrete option would be more appealing, and a direct entrance to the building vs. alongside of it was also decided. That will allow for the easiest and most direct route to the entrance door.

There were no further comments or questions on the application.

MOTION: Move to approve Application #2025-06-01 – Request for a Certificate of Appropriateness for an ADA ramp at 196 Woodland Street; Assessor's Map 25, Lot 110/40-1; Eugene Klimaszewski, applicant, in accordance with the plot plan and information submitted, be APPROVED because of the following reasons:

This Approval is subject to the following conditions:

- 1) Prior to the final Certificate of Occupancy being issued, the Land Use Staff will conduct an inspection to certify compliance with the terms and conditions of the approval.
- 2) Any deviation from the approved plans may require approval of the Commission after staff review and discussion with the Vice Chairman.
- 3) Any transfer or assignment of this permit shall require approval of the Commission.
- 4) This permit may be revoked if the permittee exceeds the conditions or limitations of this permit or has secured the permit through deception or inaccurate information.

By: Commissioner St. John

Seconded: Commissioner Stevens

For: Collins, Stevens, St. John, Jennings and Delgado

Against: None.

Abstained: None.

The application is approved. The Commission thanks the applicant

5. Adjournment

MOTION: Move to adjourn at 5:39 P.M.

By: Commissioner St. John

Seconded: Commissioner Stevens

For: Collins, Stevens, St. John, Jennings and Delgado

Against: None.

Abstained: None.

The meeting adjourned at 5:39 P.M.

Respectfully submitted,

Sharon Arsego
Recording Secretary

Andrew E. Collins, Chairman

Patti Philippon, Secretary

**BRISTOL HISTORIC DISTRICT COMMISSION
CITY OF BRISTOL, CONNECTICUT
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS**

2025-07-01
APPLICATION NO. _____

DATE FILED: 06-26-25

The undersigned Applicant hereby applies for approval of a Certificate of Appropriateness for the proposed work described below:

Address of the Property: 132 Stearns St Bristol CT 06010

Assessor's Map No.: 25A Assessor's Lot No.(s): 72 Est. Value of Proposed Work: 25,200

Nature of Proposed Work (check all that apply):

- | | | |
|--|--|--|
| ☐ New Construction/Installation | ☐ Roof | ☐ Fence |
| ☐ Addition/Renovation | ☐ Windows/Doors | ☒ Siding |
| ☐ Alteration/Replacement | ☐ Porch/Deck | ☐ Other |
| ☐ Demolition/Removal | | |

Proposed Work Will Be Done On: ☒ Main Building ☒ Accessory Structure ☐ Other (including land)

Brief Description of Proposed Work: (attach additional sheet if needed) Siding House and garage.
Attached is Proposal Summary.

Has this property been subject to Historic District approval before? ☒ Yes ☐ No

Has the work being proposed on this application already been started and/or completed? ☐ Yes ☒ No

APPLICANT (If more than one, list each separately)

CHECK ONE: ☒ owner ☐ other: _____

Name: Diane Lupinski

Address: 132 Stearns St City: Bristol State: CT Zip: 06010

Telephone No.: 203-231-4323 E-Mail: dianelupinski@gmail.com

Signature: Diane Lupinski Signature (Printed/Typed): Diane Lupinski

OWNER(S) OF RECORD (If other than Applicant; if more than one, list each separately)

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature (Printed/Typed): _____

For Office Use Only

Date of Public Hearing: _____

Building Permit Required? ☐ Yes ☐ No

Date of Commission Decision: _____

Decision: ☐ Approved ☐ With Conditions ☐ See Attached
☐ Denied ☐ With Modifications
☐ Withdrawn

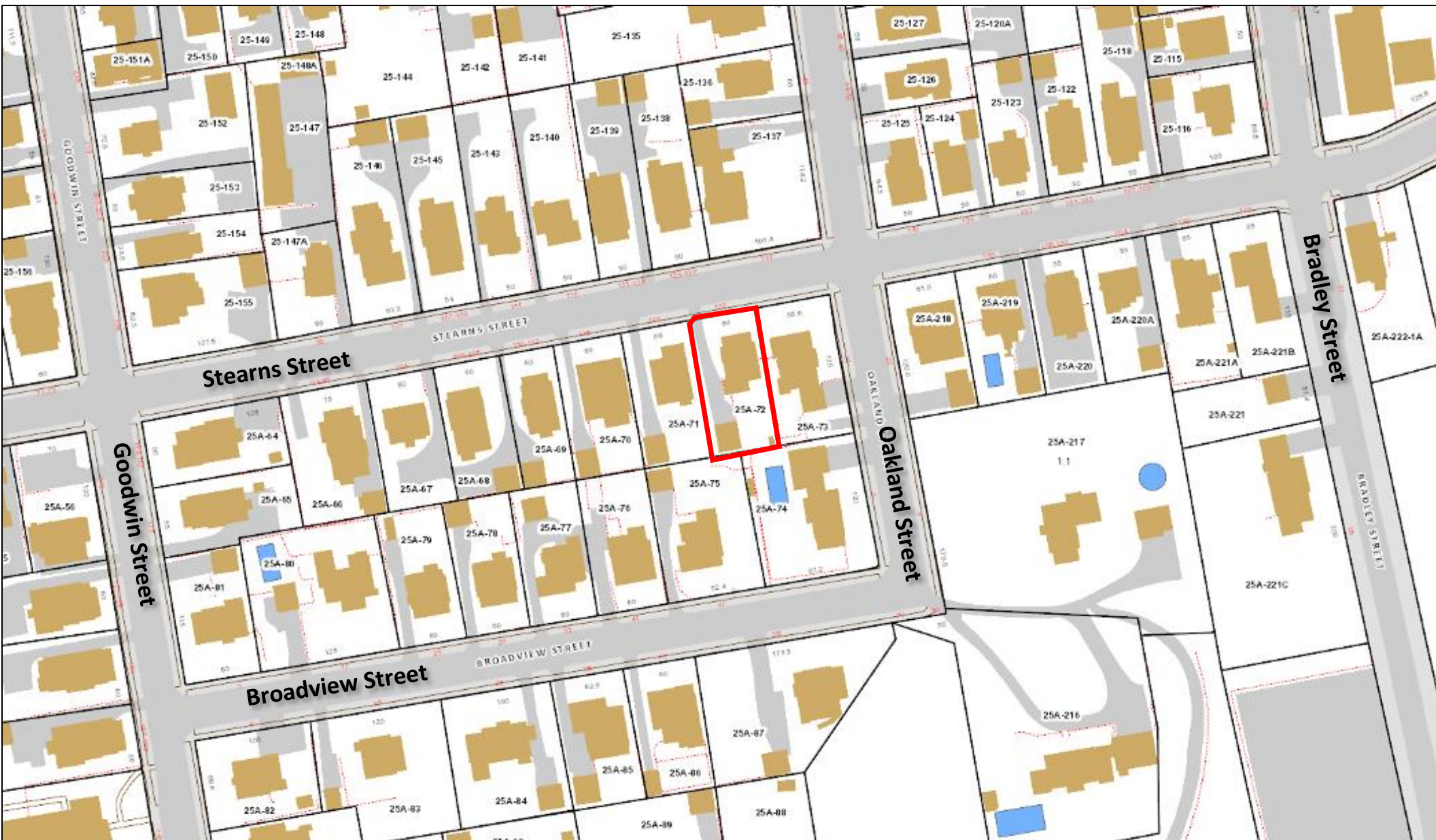
Signed: _____

Chairman/Secretary, Bristol Historic District Commission

Date

THIS APPLICATION MUST BE FILED BY 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!

132 Stearns Street
Location Map



132 Stearns Street
Aerial Map



Proposal for siding replacement at 132 Stearns Street Bristol CT which is my current full time residence. The reason for the siding replacement is that the first siding replacement was not done properly. All the windows are incorrectly rapped and causing water damage and potential rot and mold issues. The windows were left unwrapped and there is a massive amount of glue exposed around the windows creating an unattractive appearance of the home. All the roof over hangings were cut too short causing many areas to have gaps and now have birds or other such wildlife inhabiting them. This is a health issue and potential for rotting in the eaves. The current siding is thinner than the original clap board which can be seen in the image that shows the cutout from the siding where there have been carpenter bees destroying the wood under the siding. The garage was never finished sided and the original clap board is exposed and rotting on the back side of the garage which faces the back yard neighbors house. This is unattractive and is causing the boards to rot and become infested with bugs.

I am proposing a carbon color siding that ae vertical slats around the home and has a four inch width. This size goes with the age of the home and the original six inch clap board. As shown in the image of the historical four square home a wider trim of 6 inches will be used to give it the character of a four square home from the early 1900s. To also provide character of an original Four Square home which shows the separation of the floors the same carbon color siding will be used on the lower front porch area in a board and batten style and run vertically to define the separate levels.

This is my proposal for the siding replacement at 132 Stearns Street Bristol CT.

Thank you,

Diane Lupinski

BROCHURE FOR PROPOSED SIDING



Cedar Knolls™

DELUXE VINYL SIDING

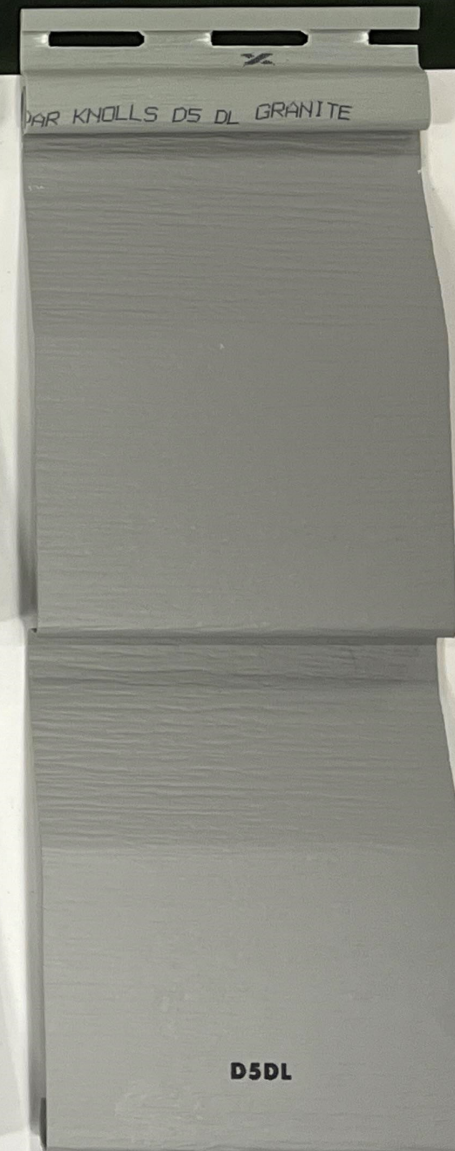
*Diane Lupinski
132 Stearns St
Bristol CT
06010*



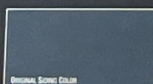
THE BEAUTY OF CEDAR,
THE PERFORMANCE OF VINYL



3 POPULAR PROFILES



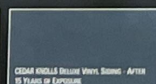
15 Year
COMPARISON
OF FADE



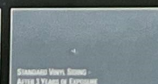
ORIGINAL SIDING COLOR



CEDAR KNOLLS DELUXE VINYL SIDING - AFTER 3 YEARS OF EXPOSURE



CEDAR KNOLLS DELUXE VINYL SIDING - AFTER 15 YEARS OF EXPOSURE



STANDARD VINYL SIDING - AFTER 15 YEARS OF EXPOSURE

This is a visual representation of the actual fade that can be expected on standard vinyl siding vs. Cedar Knolls Deluxe Vinyl Siding. Colors are mechanically reproduced.



COMPLEMENT YOUR NEW SIDING WITH OTHER QUALITY EXTERIOR PRODUCTS



Your home deserves the best. That's why, in addition to siding, we offer other top quality products to beautify and protect your home. Whether it's entry doors, energy-efficient windows, soffit, trim, or metals, you can rest comfortably knowing you've finished your home with performance products that are among the best the industry has to offer.



CERTIFICATION PROGRAM
CONSULT THE VSI WEBSITE AT:
WWW.VINYLSIDING.ORG FOR A CURRENT LIST
OF CERTIFIED PRODUCTS AND COLORS.



These symbols apply to the Cedar Knolls Deluxe Vinyl Siding line.

LOOK OF WOOD, THE VALUE OF VINYL

S AND BENEFITS

.044" Panel thickness with a natural cedar embossed woodgrain pattern

A 5/8" panel projection provides rigidity and casts deep, appealing shadow lines

A heavy duty extended return leg snaps tightly into the TitanBar Reinforced Nail Hem which is double the thickness of the siding panel under the nail head, for an installation that's solid, secure and protects against panel blow off in adverse weather conditions



XLoc® Technology combines the TitanBar®, Reinforced Nail Hem and the NailRIGHT® Siding Installation System, two innovations that help ensure the siding is securely interlocked and properly affixed to the wall

COLORHOLD®
Lifetime Fade Protection

ColorHold is a highly-durable capstock that resists fading and discoloring and is backed by a Limited Lifetime Transferable Warranty* including Lifetime Fade Protection

*Visit www.norandex.com to view warranty details

Matching and contrasting soffit, accessories, shakes and shingles available to give your home a one-of-a-kind look

GHT™
TION SYSTEM

FOR A SAFE SECURE
INSTALLATION

• **THREE DISTINCTIVE PROFILES:**

- Double 4" & 5" Clapboard
- Double 5" Dutchlap

Make Cedar Knolls Deluxe Vinyl Siding the choice for the life of your home.

- Virtually maintenance free. Save time and money on upkeep costs.
- Because it's solid vinyl, it won't blister, crack, flake, peel or rot like wood exteriors.
- A sound investment that can help increase the resale value of your home.

STAFF PHOTOS

GOOGLE STREETVIEW (JULY 2017)





APPLICANT PHOTOS



current residence is 132 Stearns St

4:48



google.com

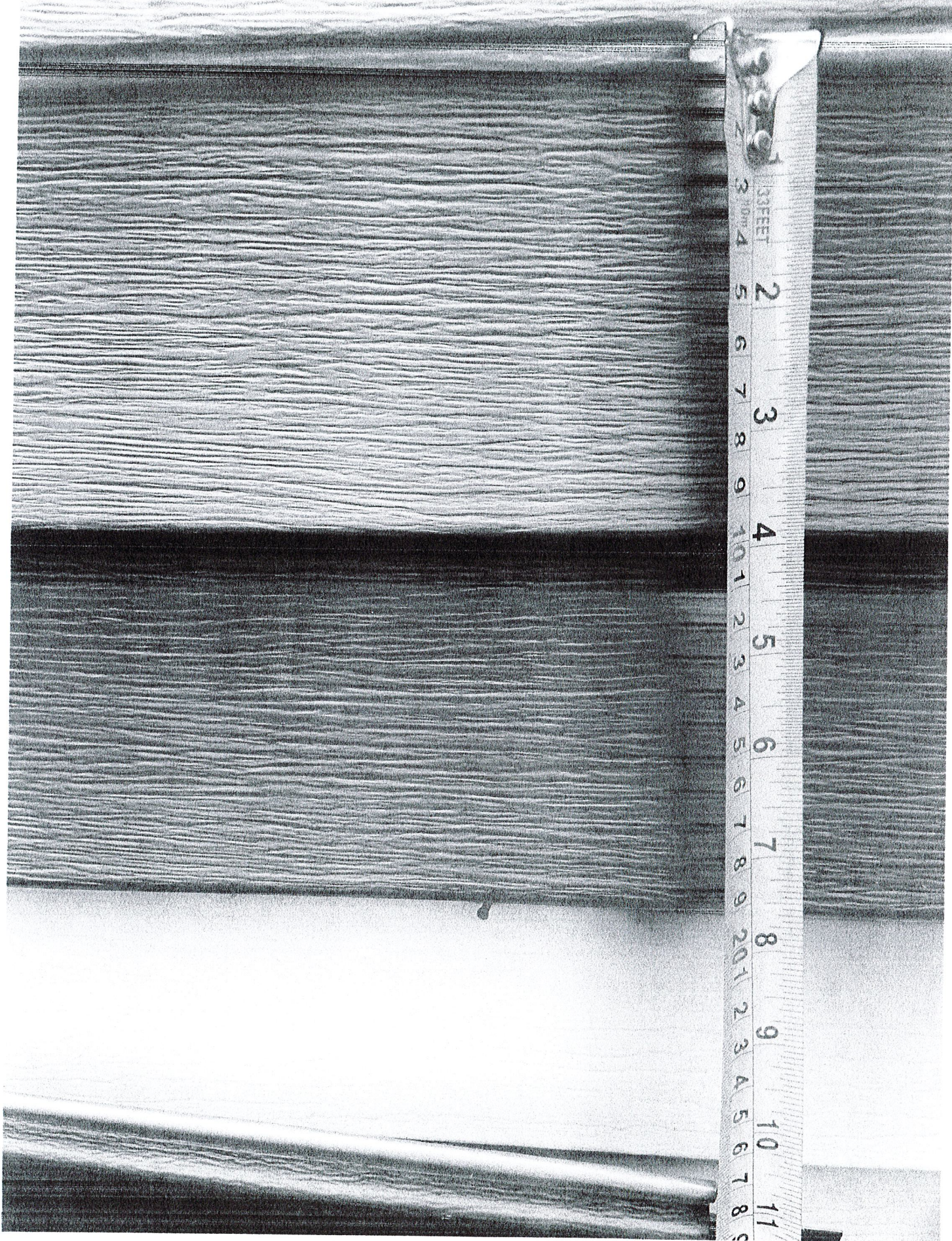


Historical 4 square
home
shows wider corner trim

can't see home siding too thin, damaged wood
where bees are damaging the wood
see sawdust lower right.



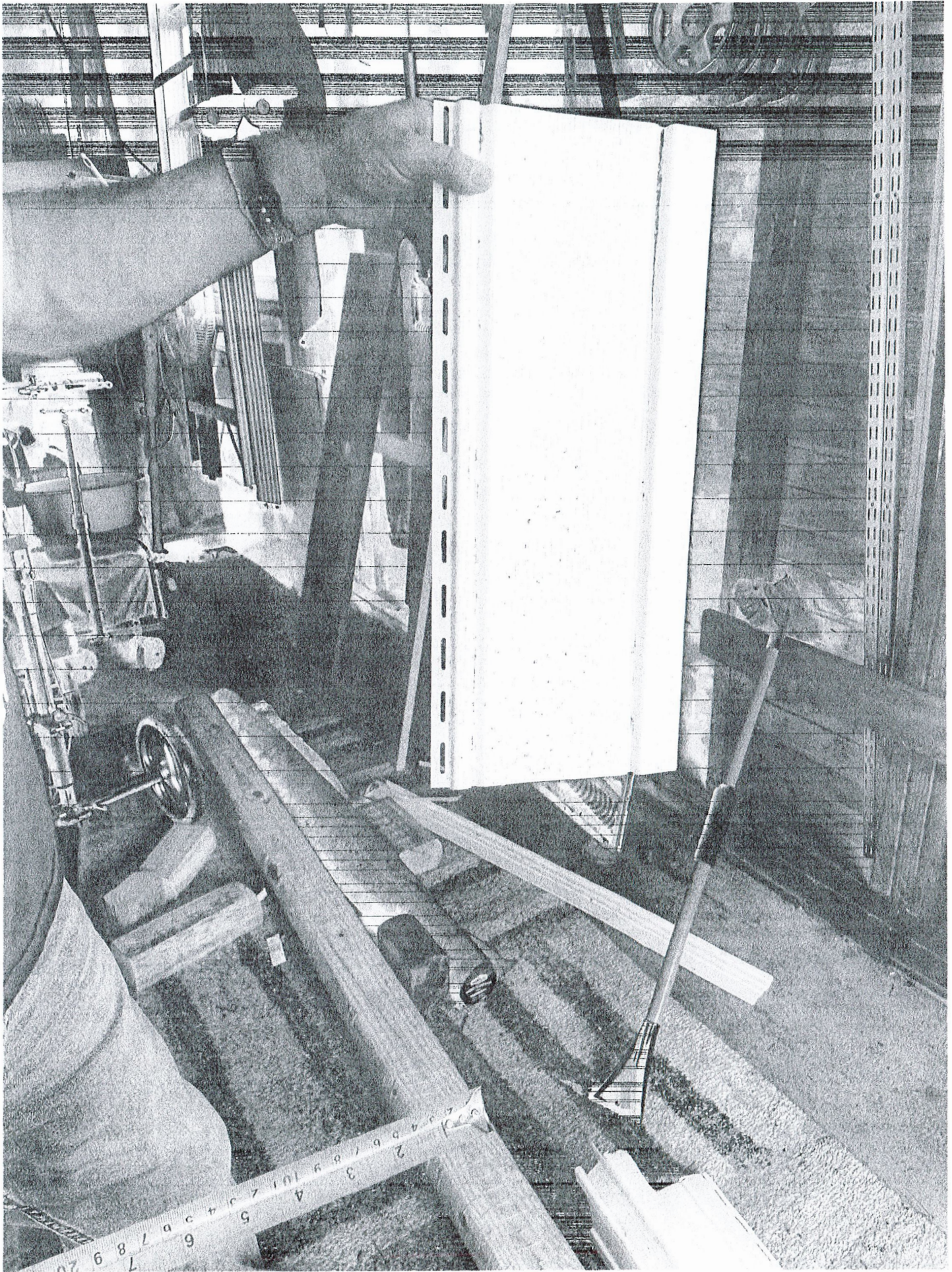
Carbon 4 inch Siding

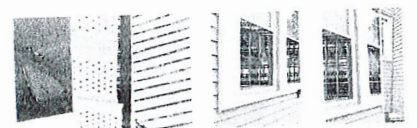


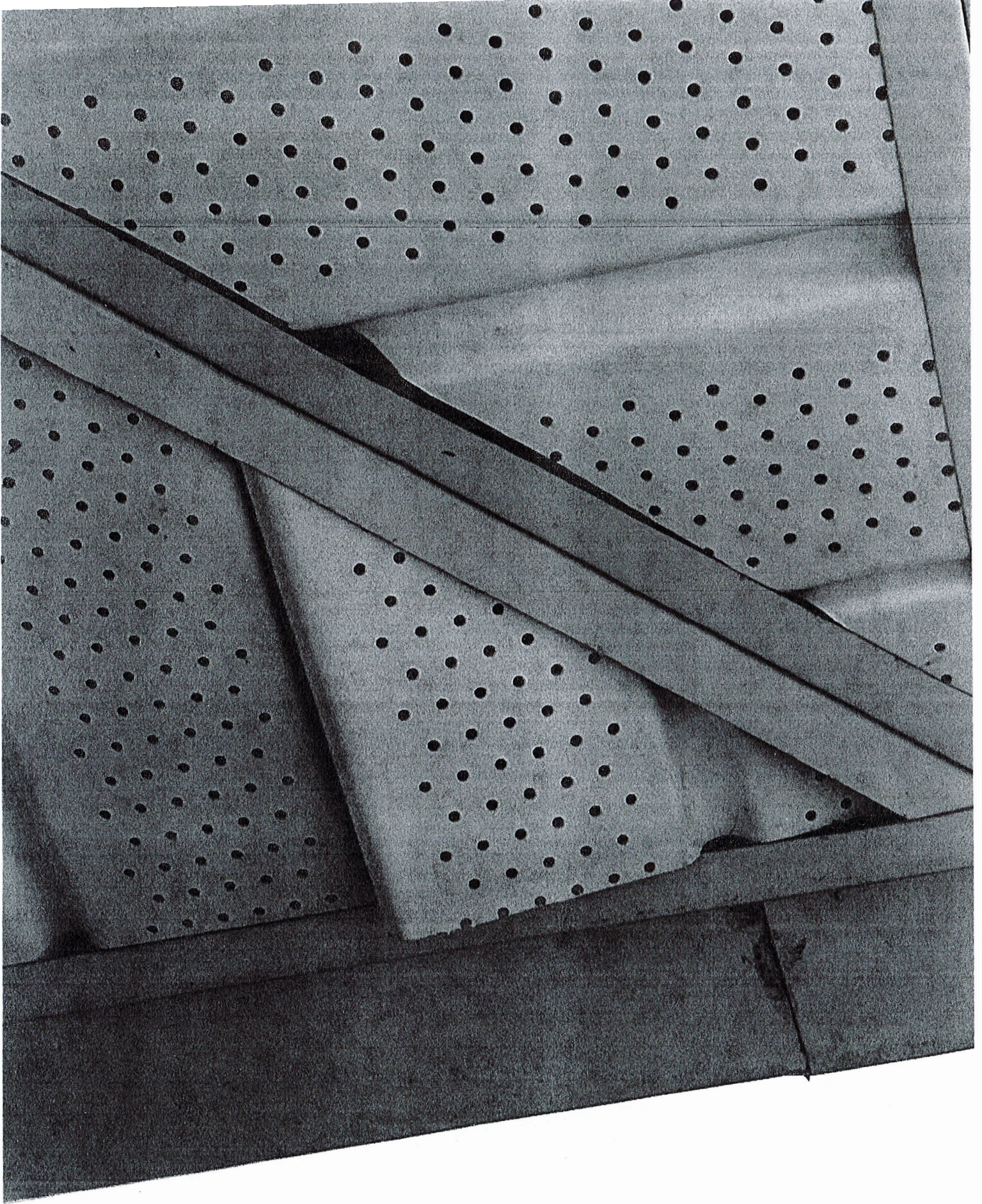
proposed corner
6" trim

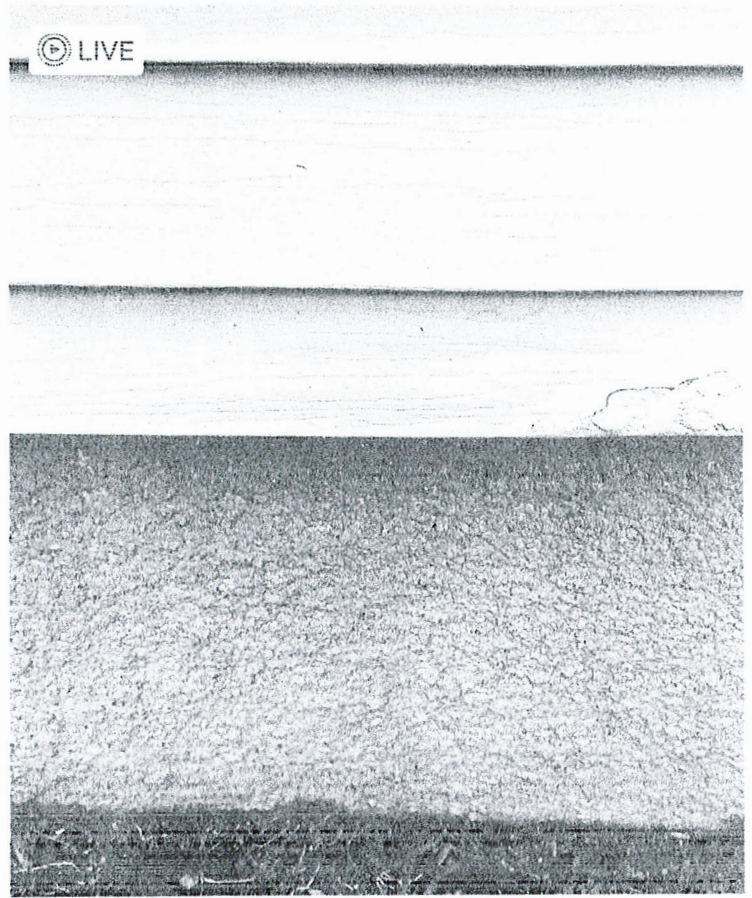


Vertical Board V-Bayer will be case



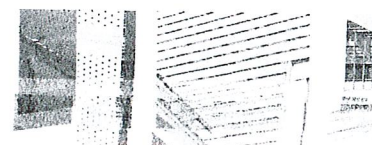






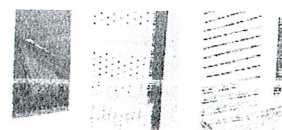
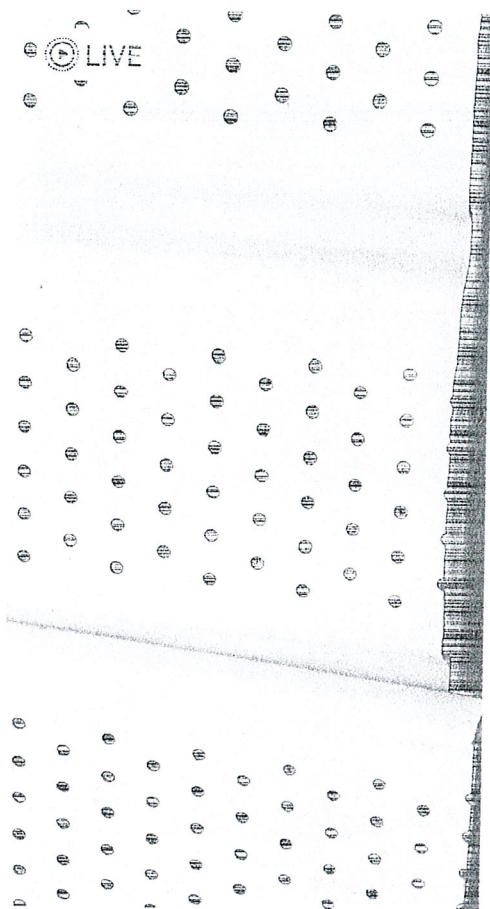
June 18, 2025 at 6:12 PM

3 of 12





June 18, 2025 at 6:11 PM
2 of 12



© LIVE







**BRISTOL HISTORIC DISTRICT COMMISSION
CITY OF BRISTOL, CONNECTICUT
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS**

APPLICATION NO. 2025-07-02
DATE FILED: 7-10-25

The undersigned Applicant hereby applies for approval of a Certificate of Appropriateness for the proposed work described below:

Address of the Property: 132 Stearns Street Bristol CT 06010

Assessor's Map No.: 25A Assessor's Lot No.(s): 72 Est. Value of Proposed Work: 7500

Nature of Proposed Work (check all that apply):

- | | | |
|--|--|---------------------------------|
| ☐ New Construction/Installation | ☐ Roof | ☐ Fence |
| ☐ Addition/Renovation | ☐ Windows/Doors | ☐ Siding |
| ☒ Alteration/Replacement | ☒ Porch/Deck | ☐ Other |
| ☐ Demolition/Removal | | |

Proposed Work Will Be Done On: ☐ Main Building ☐ Accessory Structure ☒ Other (including land)

Reconstruct the porch pillars to support the 24 foot wide roof and remove

Brief Description of Proposed Work: (attach additional sheet if needed)

deteriorated porch. The new porch will have construction up to code and support the wide roof span with 4 columns instead of 2

columns. By adding 2 full columns to the porch the original design has changed and in keeping with the historical time period we

are proposing 4 full columns 14 1/2 inches with new railings as shown in the attached summary. Work started due to safety issue.

Has this property been subject to Historic District approval before? ☒ Yes ☐ No

Has the work being proposed on this application already been started and/or completed? ☒ Yes ☐ No

APPLICANT (If more than one, list each separately)

CHECK ONE: ☐ owner ☐ other: _____

Name: Diane Lupinski

Address: 132 Stearns Street City: Bristol State: CT Zip: 06010

Telephone No.: 203-231-4323 E-Mail: dianelupinski@gmail.com

Signature: _____ Signature (Printed/Typed): Diane lupinski

OWNER(S) OF RECORD (If other than Applicant; if more than one, list each separately)

Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone No.: _____ E-Mail: _____

Signature: _____ Signature (Printed/Typed): _____

For Office Use Only

Date of Public Hearing: _____

Building Permit Required? ☐ Yes ☐ No

Date of Commission Decision: _____

Decision: ☐ Approved ☐ With Conditions ☐ See Attached
☐ Denied ☐ With Modifications
☐ Withdrawn

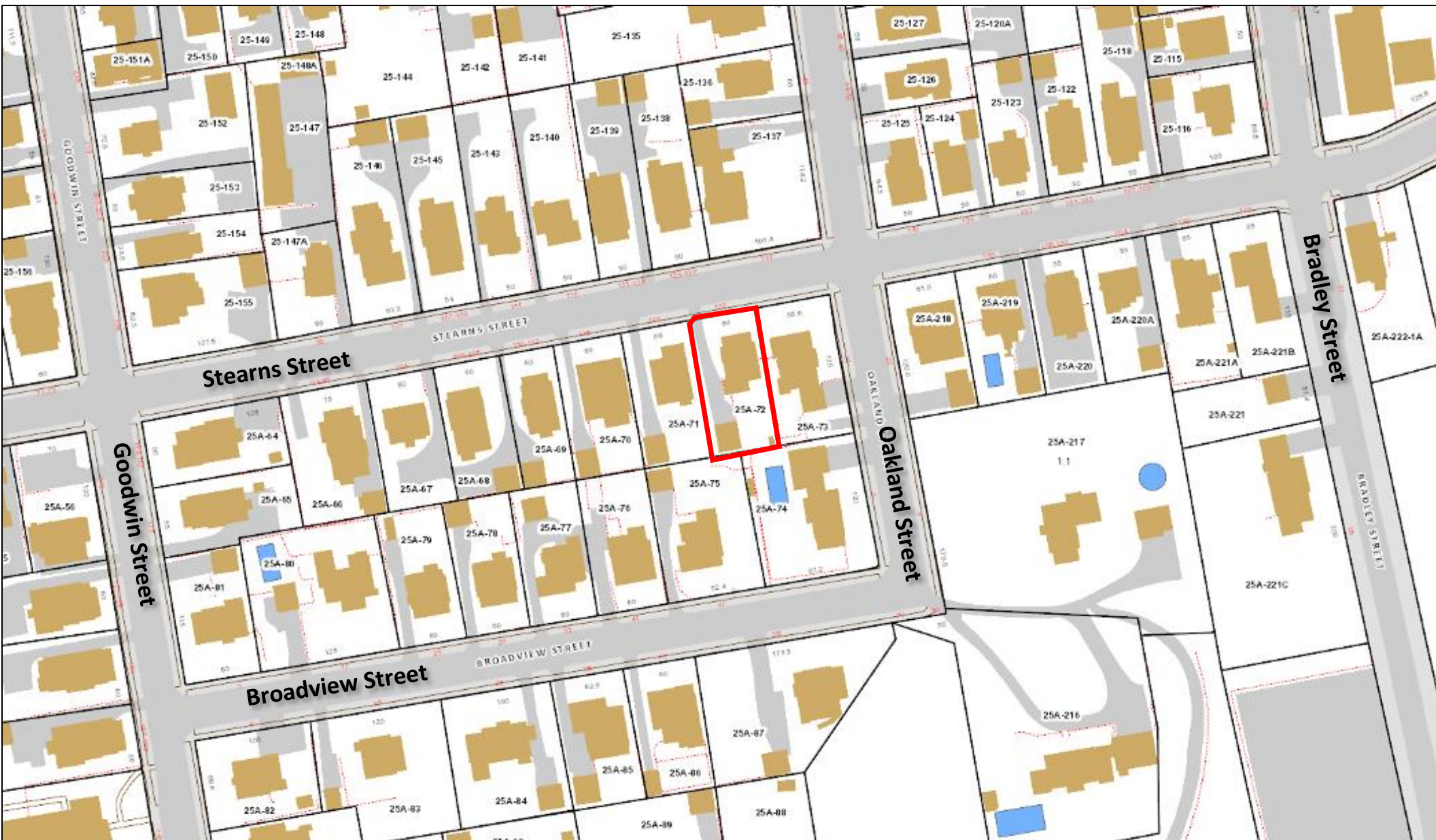
Signed: _____

Chairman/Secretary, Bristol Historic District Commission

Date

THIS APPLICATION MUST BE FILED BY 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!

132 Stearns Street
Location Map



132 Stearns Street
Aerial Map



Reasons why we had to reconstruct the entire porch was due to termite damage and corrosion of the foundation, floor, railings, and interior wood supports in the columns, as well as the deterioration of the plaster columns. The framing in each of the corners of the porch foundation dropped 3 inches due to bad footings and on top of the footings were 3-foot pipes not cemented in. The reason we went with four posts in the front instead of the original two end post support pillars is because the span of the entire porch roof is over 20 feet. Two posts are not up to code to support that wide of a span. The materials that was originally on the porch could not be reused due to termite damage as shown in the pictures for pillars, boxes and railings, therefore the entire porch had to be rebuild.

The proposed design is to keep with the oversized pillars and add two more pillars in the center to support the wide roof span and the weight of it. We will be wrapping the pillars with 2x4s, 4x4s and 2x10 to create the oversized pillars and wrap them with PVC boards to prevent future deterioration and make it last for centuries to come. The railing balusters will be built from 3/4-inch PVC boards framed with pressure treated 2x4, 2x6, and 1 8 boards. The railings will be constructed from 2x 6 pressure treated boards and wrapped with PVC to match the columns and balusters.

Picture taken before showing the original oversized sinking end pillars.



Picture showing the proposed design with 4 pillars. The pillar design on the house will have a simpler design and will be wider than the picture A. New pillars will be 15 ½ square from top to bottom PVC board and trimmed on top and bottom with cedar to match the porch shown in picture B which is the current porch construction.

A



B

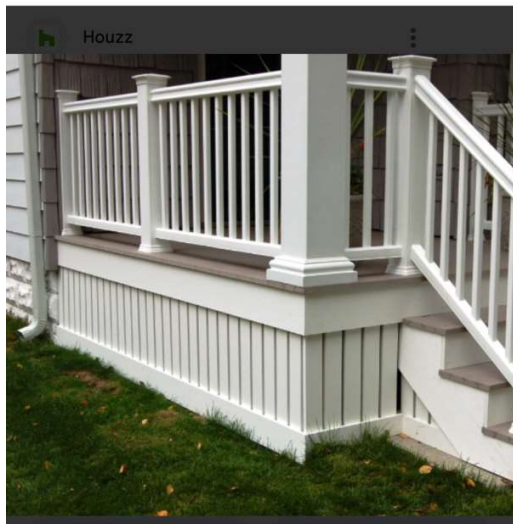


Skirting will be constructed from PVC board and framed with 2 x 4 pressure treated boards.

9:40



google.com



BEFORE PHOTO



BEFORE PHOTO





PROPOSED RAILINGS



VINYL FENCING & RAILING

ALUMINUM FENCING & RAILING

LED LIGHTING

weatherables®

The Weatherables® Difference

Stronger. Thicker. Built to Last.

When I started in the vinyl fencing industry over 25 years ago, most fences looked the same. But over time, competitors have cut corners—using less vinyl, making their products thinner and weaker.

At Weatherables®, we never compromise on quality. We still manufacture the same heavy-duty, USA-made vinyl fencing and railing that we did decades ago. In fact, our vinyl products can be up to 50% heavier and thicker than the competition.

WHY DOES THIS MATTER?

- ✓ More vinyl = Thicker, stronger, more durable fencing
- ✓ Heavier panels stand up to the elements and last longer
- ✓ Use the  to compare our fence panel weight to other brands—you'll see the Weatherables® difference

More Than a Product—A Promise

At Weatherables®, the only thing stronger than our products is the service that comes with them.™

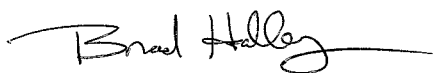
We believe Great Experiences Matter. From your first call to the final installation, we're here to ensure every step is seamless. Our commitment to quality means we only offer products that are built to last—and we stand by that promise with:

INDUSTRY LEADING WARRANTY & LIFETIME IMPLEMENTATION SUPPORT

Why Choose Weatherables® Vinyl Fencing & Railing?

- | | |
|---|---|
| ✓ Made in the USA:
High-quality, vinyl fencing and railing | ✓ Low maintenance—no chipping, rotting, or cracking |
| ✓ Thick, heavy-duty vinyl for
maximum durability | ✓ High-impact resistant |
| ✓ DIY-Friendly Installation | ✓ Customizable to fit your needs |

**WE STAND BEHIND EVERYTHING WE MAKE. AND WE'LL BE
HERE FOR YOU—BEFORE, DURING, AND AFTER YOUR PURCHASE.**


President, Weatherables®

WE TAKE PRIDE IN MANUFACTURING PREMIUM QUALITY FENCING AND RAILING THAT ARE ENVIRONMENTALLY FRIENDLY



MANUFACTURED FROM
PVC, 100% BPA FREE

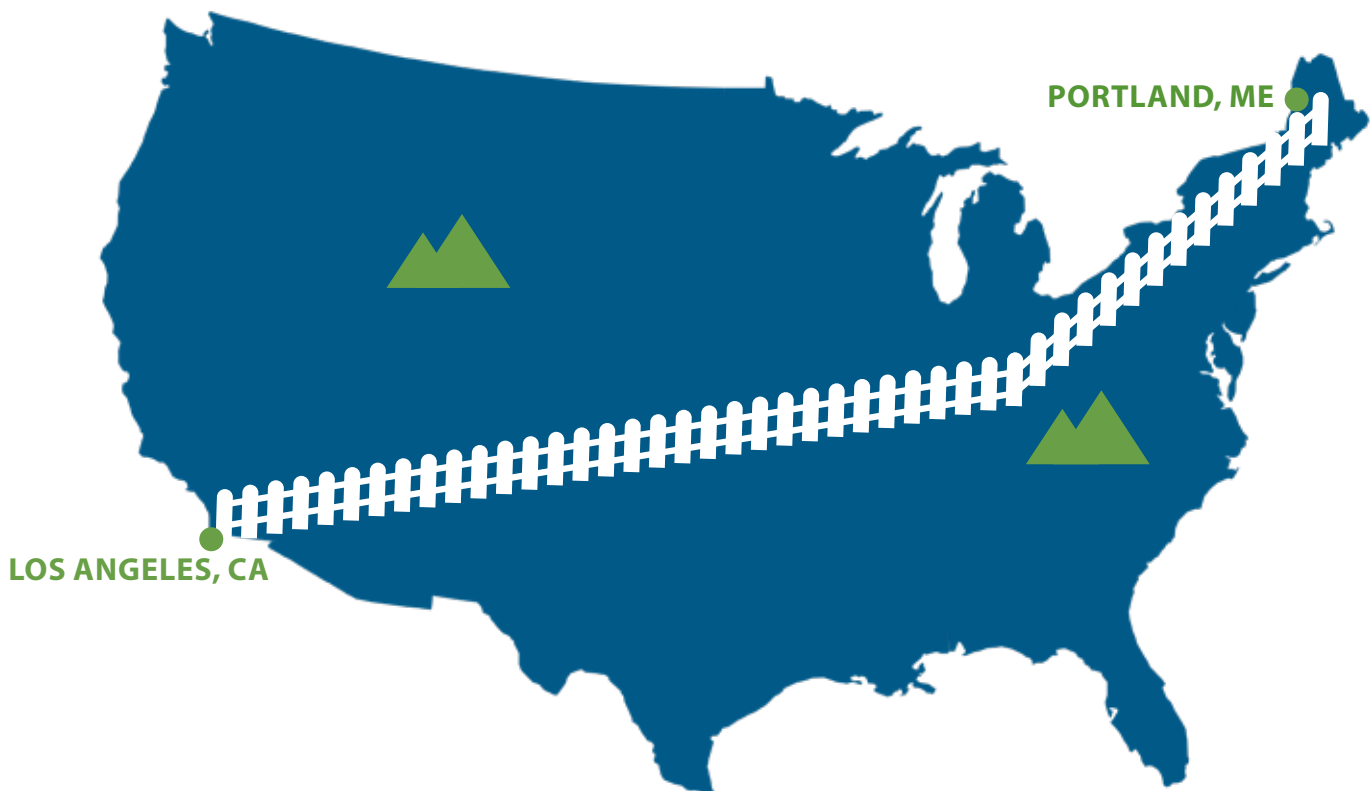


MADE FROM
85% RECYCLED MATERIAL



EXTRUDED WITH A
CLOSED LOOP WATER SYSTEM

BY USING RECYCLED MATERIALS, WE HAVE KEPT MORE THAN 50 MILLION POUNDS OF PLASTIC OUT OF LANDFILLS. ENOUGH TO PUT A WEATHERABLES PICKET FENCE FROM PORTLAND, MAINE TO LOS ANGELES, CALIFORNIA.



WEATHERABLES® RAILING SYSTEMS: THE BEST CHOICE FOR STRENGTH AND DURABILITY

AVAILABLE IN A RANGE OF ATTRACTIVE COLORS

EASY TO MAINTAIN

FULLY CUSTOMIZABLE

IMPACT- AND WEATHER-RESISTANT

CODE COMPLIANT



Premium

Enhance your outdoor space with Weatherables® Premium Railings, engineered for strength, durability, and code compliance.



The Berkshire™ Railing

Color: ☐ ☐ ☐

Rail: 2" x 3.5" top & bottom rail

Railing Height: 36" & 42" (bottom rail 2" from the ground)

Spindle Style: 1.5" Square Spindle

Length: 4', 6' & 8' straight; 6' & 8' stair

Aluminum Inserts:

Top Rail Insert–included

Bottom Rail Insert–optional

Stair Rail–top & bottom rail inserts are included

IRC¹ & IBC¹ | Brackets Included

The Washington™ Railing

Color: ☐ ☐ ☐

Rail: T-Rail top rail & 2" x 3.5" bottom rail

Railing Height: 36" & 42" (bottom rail 2" from the ground)

Spindle Style: 1.5" Square Spindle

Length: 4', 6', 8' & 10' straight; 6' & 8' stair

Aluminum Inserts:

Top Rail Insert–included

Bottom Rail Insert–optional

Stair Rail–top & bottom rail inserts are included

IRC¹ & IBC¹ | Brackets Included



The Burlington™ Railing

Color: ☐

Rail: 2" x 3.5" top & bottom rail

Railing Height: 36" & 42" (bottom rail 2" from the ground)

Spindle Style: 1.5" Colonial Spindle

Length: 4', 6' & 8' straight; 6' & 8' stair

Aluminum Inserts:

Top Rail Insert–included

Bottom Rail Insert–optional

Stair Rail–top & bottom rail inserts are included

IRC¹ & IBC¹ | Brackets Included

The Addison™ Railing

Color: ☐

Rail: T-Rail top rail & 2" x 3.5" bottom rail

Railing Height: 36" & 42" (bottom rail 2" from the ground)

Spindle Style: 1.5" Colonial Spindle

Length: 4', 6', 8' & 10' straight; 6' & 8' stair

Aluminum Inserts:

Top Rail Insert–included

Bottom Rail Insert–optional

Stair Rail–top & bottom rail inserts are included

IRC¹ & IBC¹ | Brackets Included

*The brackets included with the premium stair railing are designed for angles of 30° to 40°.

Fwd: Linda Yelder responded to your message

Diane Lupinski <dianelupinski@gmail.com>

Tue 7/15/2025 3:12 PM

To: Andrew Armstrong <AndrewArmstrong@bristolct.gov>;

Hi,



Here is a link to the railing brochure. I spoke with Linda at weatherables and the Berkshire is what Home Depot is referring to as the Walton.

Diane

PROPOSED PORCH COLUMNS

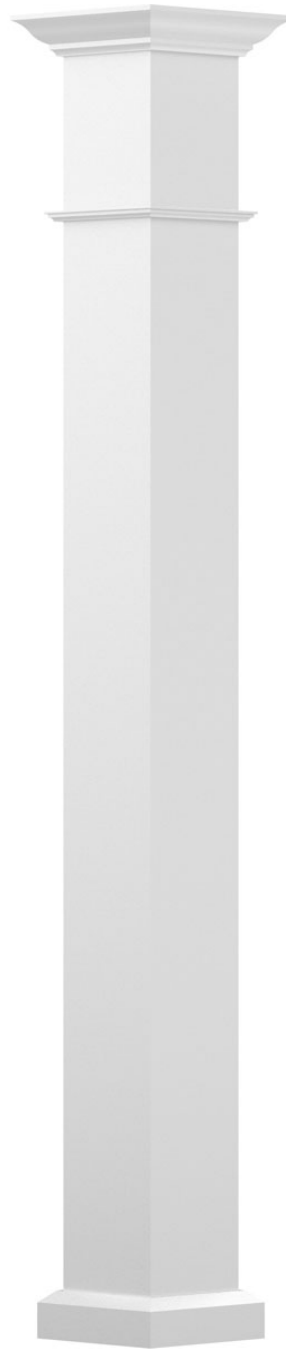
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QUICK OVERVIEW

Endura-Aluminum columns are a solid choice for your home improvement needs. Durable and beautiful, these columns add incredible value to your home. In addition, they are virtually maintenance-free, easy to install, and have the option of load-bearing capabilities, all at the fraction of the cost of traditional columns.

8" X 8' ENDURA-ALUMINUM WELLINGTON STYLE COLUMN, SQUARE SHAFT (FOR POST WRAP INSTALLATION), NON-TAPERED, GLOSS WHITE FINISH W/ CAPITAL & BASE

Width	Height	Inside Width	Bottom Width	Inside Diameter	Top Width
7 1/4"	96"	5 1/2"	12 3/4"	6"	12 3/4"

Item No.: EA0808INPSEWEWE

Estimated ship date:

Friday, Aug. 1st - Friday, Aug. 8th

 17 customer reviews | [Write a Review](#) | [Questions & Answers \(2\)](#)

Made In USA

\$321.40 EACH

1. Size (Width x Height) ⓘ

8"W x 8'H

2. Installation ⓘ

Post Wrap Installation

3. Finish ⓘ

Gloss White



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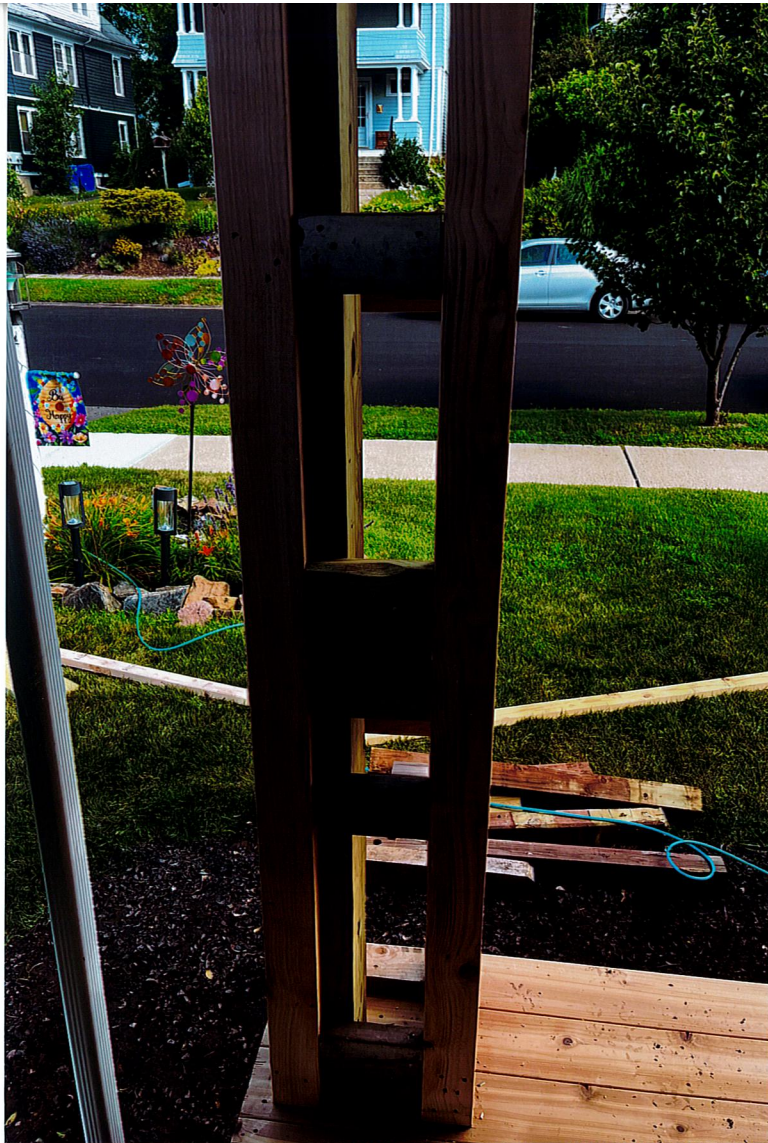
HELPFUL RESOURCES

Chat

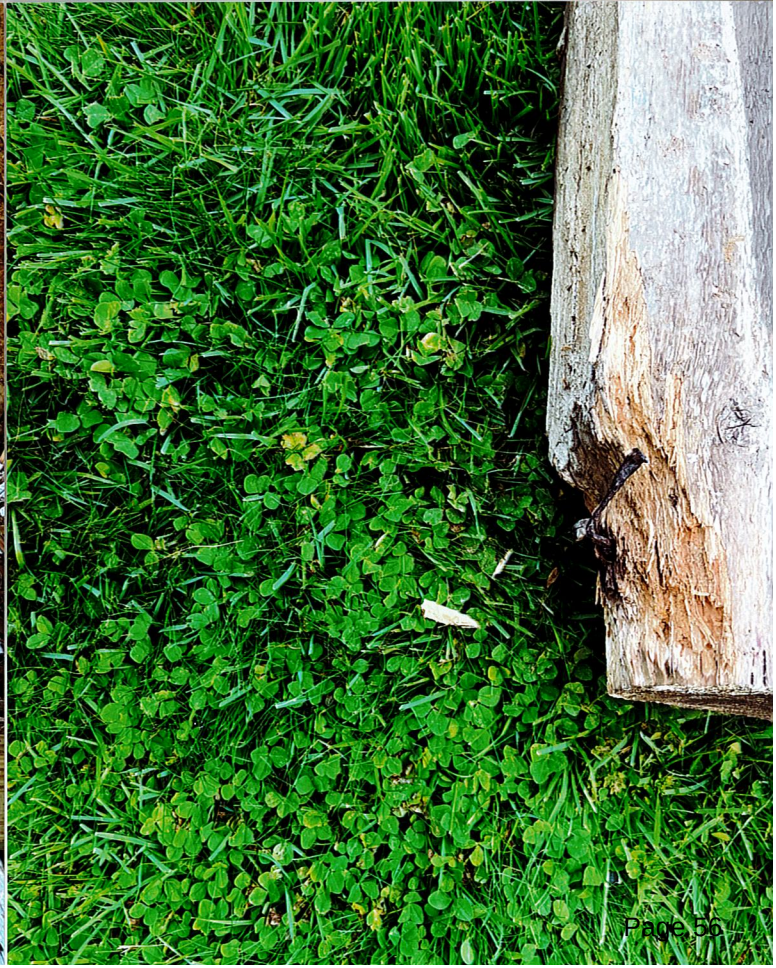
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APPLICANT PHOTOS

























**BRISTOL HISTORIC DISTRICT COMMISSION
CITY OF BRISTOL, CONNECTICUT
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS**

APPLICATION NO. 2025-07-03

DATE FILED: _____

The undersigned Applicant hereby applies for approval of a Certificate of Appropriateness for the proposed work described below:

Address of the Property: 239 Grove Street

Assessor's Map No.: 24 Assessor's Lot No.(s): 100 Est. Value of Proposed Work: \$78,000

Nature of Proposed Work (check all that apply):

- | | | |
|--|--|---|
| ☐ New Construction/Installation | ☒ Roof | ☐ Fence |
| ☐ Addition/Renovation | ☐ Windows/Doors | ☐ Siding |
| ☐ Alteration/Replacement | ☐ Porch/Deck | ☒ Other |
| ☐ Demolition/Removal | | |

Proposed Work Will Be Done On: ☒ Main Building ☐ Accessory Structure ☐ Other (including land)

Brief Description of Proposed Work: *(attach additional sheet if needed)* _____

Roof mounted solar installation of 42 panels @ 18.060kW and rip and replace roof shingles

Has this property been subject to Historic District approval before? ☐ Yes ☒ No

Has the work being proposed on this application already been started and/or completed? ☐ Yes ☒ No

APPLICANT (If more than one, list each separately) CHECK ONE: ☐ owner ☒ other: Contractor

Name: Infinity Solar Systems

Address: 575 Corporate Dr., Suite 2200 City: Mahwah State: NJ Zip: 07430

Telephone No.: 201-466-4859 ext 210 E-Mail: permitting@infinitysolarsystems.com

Signature: _____ Signature (Printed/Typed): Doris Ceballos- Infinity Solar Systems

OWNER(S) OF RECORD (If other than Applicant; if more than one, list each separately)

Name: Michael Benevento

Address: 239 Grove St. City: Bristol State: CT Zip: 06010

Telephone No.: 814-883-5506 E-Mail: mbenevento23@yahoo.com

Signature: michael benevento Signature (Printed/Typed): Michael Benevento

For Office Use Only

Date of Public Hearing: _____

Building Permit Required? ☐ Yes ☐ No

Date of Commission Decision: _____

Decision: ☐ Approved ☐ With Conditions ☐ See Attached
☐ Denied ☐ With Modifications
☐ Withdrawn

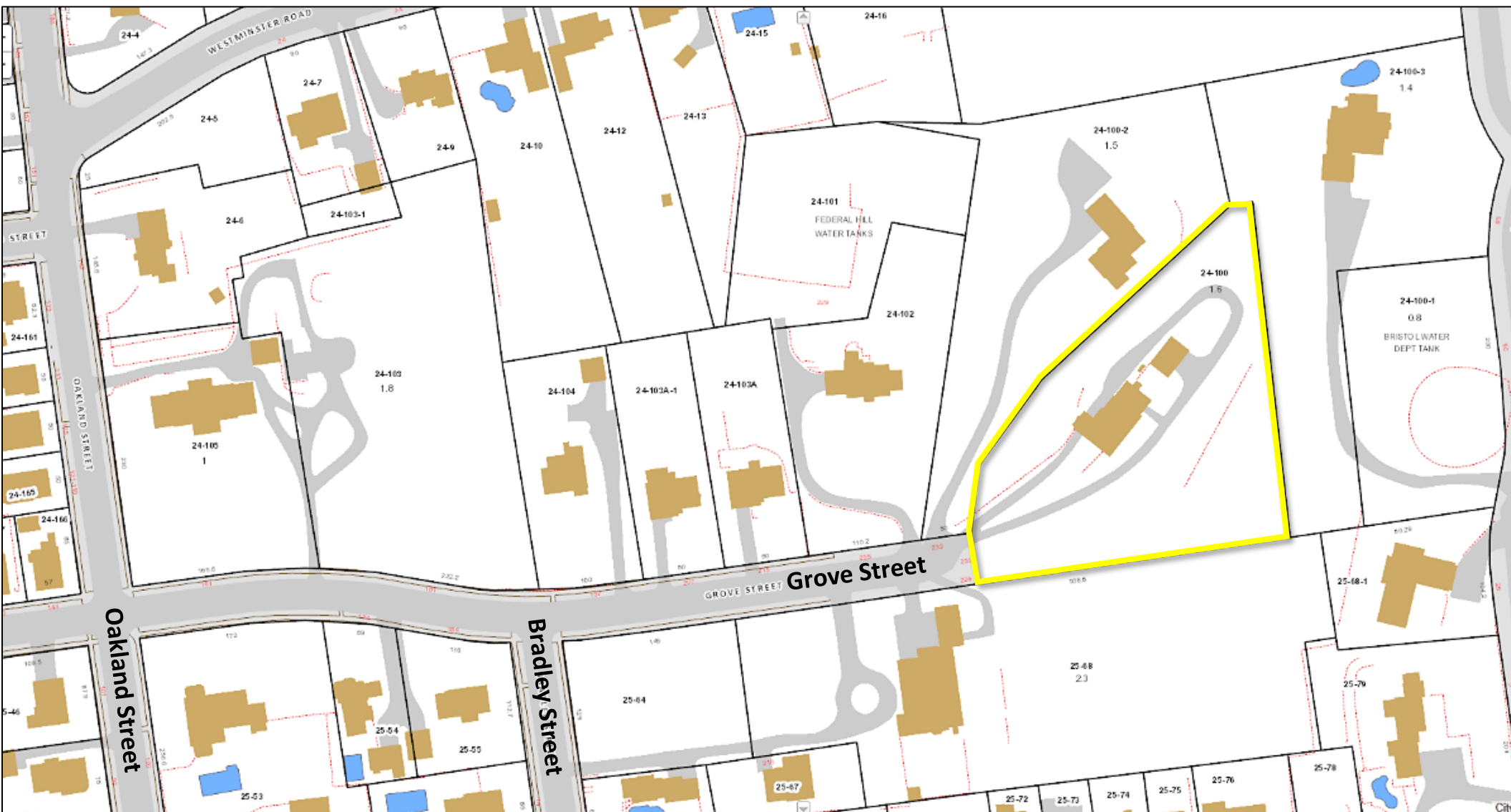
Signed: _____

Chairman/Secretary, Bristol Historic District Commission

Date

THIS APPLICATION MUST BE FILED BY 12 NOON ON THE DEADLINE DAY FOR APPLICATION SUBMISSION – NO EXCEPTIONS!

239 Grove Street
Location Map



239 Grove Street
Aerial Map



Tom Petersen

Architects • Planners

Construction Official
Building Department for project at:
239 Grove Street
Bristol, CT 06010

April 21, 2025

Re: Solar Panel Installation
Benevento Residence
239 Grove Street
Bristol, CT 06010

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.

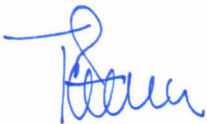
Criteria: Applicable codes: 2022 CT State Building Code (2021 IRC w/ amendments)
2018 Wood Frame Construction Manual (WFCM)
Design roof load: 30 psf live load, 10 psf dead load, 40 psf total load
Design wind load: 115 mph, 35 psf

My findings are as follows.

1. The new solar panels will imply an additional dead load of 3 psf. The existing roof structure ('true' 2x6 rafters @ 24" o.c., with 2x8 ridge, span = +/- 9'-4" 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.

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

Sincerely yours,



Tom Petersen

Cc: Mike LaRosa, Infinity Solar



PHOTOVOLTAIC ROOF MOUNT SYSTEM

42 MODULES-ROOF MOUNTED - 18.060 kW DC, 13.440 kW AC, 239 GROVE ST, BRISTOL, CT 06010

PHOTOVOLTAIC SYSTEM SPECIFICATIONS:

SYSTEM SIZE:	18.060 kW DC 13.440 kW AC
MODULE TYPE & AMOUNT:	(42) SEG SOLAR SEG-430-BTD-BG [430W]
MODULE DIMENSIONS:	(L/W/H) 67.80"/44.65"/1.18"
INVERTER:	(42) ENPHASE IQ8MC-72-M-US [240V]
INTERCONNECTION METHOD:	LINE SIDE TAP
UTILITY METER#:	96441806
AHJ#:	BRISTOL CITY

SCOPE OF WORK:
INSTALLATION OF UTILITY INTERACTIVE PHOTOVOLTAIC SOLAR SYSTEM AND ANY NECESSARY ADDITIONAL WORK NEEDED FOR INSTALLATION.

GOVERNING CODES

THE 2022 CONNECTICUT STATE BUILDING CODE ADOPTED FOLLOWING CODES:

- 2021 INTERNATIONAL BUILDING CODE
- 2021 INTERNATIONAL EXISTING BUILDING CODE
- 2021 INTERNATIONAL PLUMBING CODE
- 2021 INTERNATIONAL MECHANICAL CODE
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE
- 2020 NFPA 70, NATIONAL ELECTRICAL CODE
- 2021 INTERNATIONAL SWIMMING POOL AND SPA CODE
- 2021 INTERNATIONAL RESIDENTIAL CODE

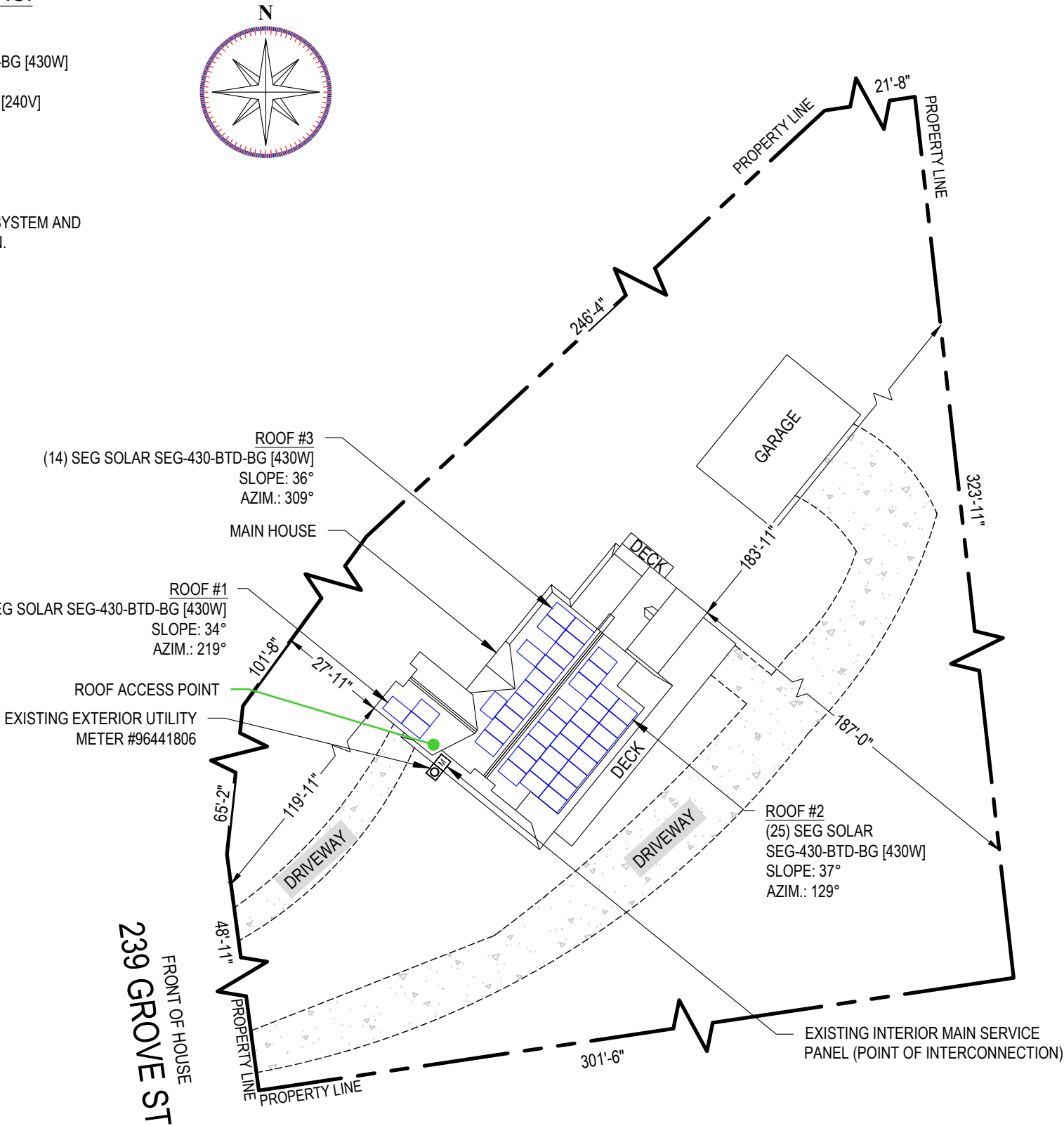
GENERAL NOTES

- A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
- THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM.
- THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THIS CODE AND THE APPROVED MANUFACTURER'S INSTRUCTIONS SUCH THAT THE ROOF COVERING SHALL SERVE TO PROTECT THE BUILDING OR STRUCTURE.
- MODULE CERTIFICATIONS WILL INCLUDE UL1703, IEC61646, IEC61730.
- IF APPLICABLE, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE MARKED GROUNDING LUG HOLES PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- AS INDICATED BY DESIGN, OTHER NRTL LISTED MODULE GROUNDING DEVICES MAY BE USED IN PLACE OF STANDARD GROUNDING LUGS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ.
- CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY FIELD CONDITIONS.
- ALL INVERTERS, MOTOR GENERATORS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, DC COMBINERS, DC-TO-DC CONVERTERS,SOURCE CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER NEC 690.4(B).

1 PLOT PLAN

PV 0.0

SCALE: 1/32" = 1'-0"

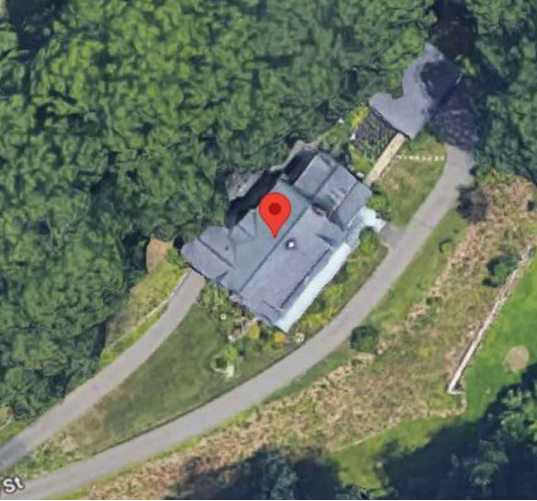


SHEET INDEX:

PV 0.0:	COVER SHEET
PV 1.0:	SITE PLAN
PV 2.0:	BILL OF MATERIALS
S 1.1:	MOUNT DETAILS
S 1.2:	ROOF SECTION
E 1.1:	3-LINE DIAGRAM
E 1.2:	NOTES
E 1.3:	WARNING LABELS
DS+	EQUIPMENT SPEC SHEET

ROOF ACCESS POINT

ROOF ACCESS POINT SHALL NOT BE LOCATED IN AREAS THAT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.



2 SATELLITE VIEW

PV 0.0

SCALE: NTS



3 VICINITY MAP

PV 0.0

SCALE: NTS

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REVISIONS

Description	Date	Rev
Initial Design	4/18/2025	00

Signature with Seal



Thomas F. Petersen

Project Name & Address

MICHAEL BENEVENTO RESIDENCE

239 GROVE ST,
BRISTOL, CT 06010
PHONE: (814) 883-5506
APN #: 24-100_0163503

Sheet Name

COVER SHEET

Sheet Size

ANSI B
11" X 17"

Sheet Number

PV 0.0

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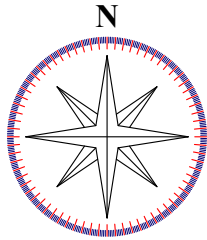
PremiumCAD

PHOTOVOLTAIC SYSTEM SPECIFICATIONS:

SYSTEM SIZE: 18.060 kW DC
13.440 kW AC
MODULE TYPE & AMOUNT: (42) SEG SOLAR SEG-430-BTD-BG [430W]
MODULE DIMENSIONS: (L/W/H) 67.80"/44.65"/1.18"
INVERTER: (42) ENPHASE IQ8MC-72-M-US [240V]



FRONT OF HOUSE
239 GROVE ST



ROOF SECTIONS

ROOF #01	MODULE - 03 SLOPE - 34° AZIMUTH - 219° MATERIAL - COMP SHINGLE TD WOOD FRAMING SIZE & SPACING - 2"x6" @ 24" O.C.
ROOF #02	MODULE - 25 SLOPE - 37° AZIMUTH - 129° MATERIAL - COMP SHINGLE TD WOOD FRAMING SIZE & SPACING - 2"x6" @ 24" O.C.
ROOF #03	MODULE - 14 SLOPE - 36° AZIMUTH - 309° MATERIAL - COMP SHINGLE TD WOOD FRAMING SIZE & SPACING - 2"x6" @ 24" O.C.

SYSTEM LEGEND

- EXISTING EXTERIOR UTILITY METER #96441806
- EXISTING INTERIOR MAIN SERVICE PANEL (POINT OF INTERCONNECTION)
- NEW PV AC DISCONNECT GROUPED WITH SERVICE EQUIPMENT
- NEW ENPHASE COMBINER PANEL
- NEW PV PRODUCTION METER
- NEW JUNCTION BOX
- 42 NEW SEG SOLAR SEG-430-BTD-BG [430W] MODULES WITH 42 - ENPHASE IQ8MC-72-M-US [240V] INVERTERS, MOUNTED ON THE BACK OF EACH MODULES.
- = FIRE PATHWAY
- = ROOF OBSTRUCTIONS
- = ATTACHMENT POINTS
- = TD WOOD FRAMING
- = RACKING SYSTEM
- = CONDUIT RUN (INSIDE ATTIC)

CIRCUIT(S)

- CIRCUIT #1 - 11 MODULES
- CIRCUIT #2 - 11 MODULES
- CIRCUIT #3 - 10 MODULES
- CIRCUIT #4 - 10 MODULES

MODULE, ARRAY WEIGHT (LOAD CALC'S)

Number of Modules	42	
Module Weight	45.2	LBS
Total Module (Array) Weight	1898.40	LBS
Number of Attachment point	59	
Mounting System Weight (Per Attachment)	1.5	LBS
Mounting System Weight (Module Weight + Mounting System Weight)	88.50	LBS
Total System Weight (Array Weight / Number of Attachment Point)	1986.90	LBS
Weight at Each Attachment Point (Array Weight / Number of Attachment Point)	32.18	LBS
Module Area (67.80"x44.65")	21.02	SqFt
Total Array Area	882.95	SqFt
Distributed Load (Total System Weight / Total Array Area)	2.25	Per SqFt
Total Roof Area	4351	SqFt
Total Percentage or Roof Covered (Total Array Area / Total Roof Area)*100	20.29%	

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PH: 1 (845) 200-3700

REVISIONS		
Description	Date	Rev
Initial Design	4/18/2025	00

Signature with Seal

STATE OF CONNECTICUT
THOMAS F. PETERSEN
No 12454
LICENSED ARCHITECT

Project Name & Address

MICHAEL BENEVENTO RESIDENCE
239 GROVE ST,
BRISTOL, CT 06010
PHONE: (814) 883-5506
APN #: 24-100_0163503

Sheet Name

SITE PLAN

Sheet Size

ANSI B
11" X 17"

Sheet Number

PV 1.0

Drawn By

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BILL OF MATERIALS		
NUMBER OF MODULES	42	SEG SOLAR SEG-430-BTD-BG [430W]
NUMBER OF INVERTER	42	ENPHASE IQ8MC-72-M-US [240V]
COMBINER PANEL	1	125A ENPHASE IQ COMBINER 5/5C X-IQ-AM1-240-5/5C, 240V
AC DISCONNECT	1	100A FUSIBLE AC DISCONNECT,WITH 70A FUSES,240V
PV METER	1	125A REC PV PRODUCTION METER
NUMBER OF ATTACHMENTS	104	CLICKFIT SMARTFOOT ATTACHMENT
RAILS	23	ECOFASTEN CLICKFIT RAIL-171.5" SECTION
RAIL SPLICE	14	SPLICE KIT
MID CLAMPS	64	MID CLAMPS / UFO
END CLAMPS	40	END CLAMPS / STOPPER SLEEVE
GROUNDING LUG	10	GROUNDING LUG



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Sheet Name

BILL OF MATERIAL

Sheet Size

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Sheet Number

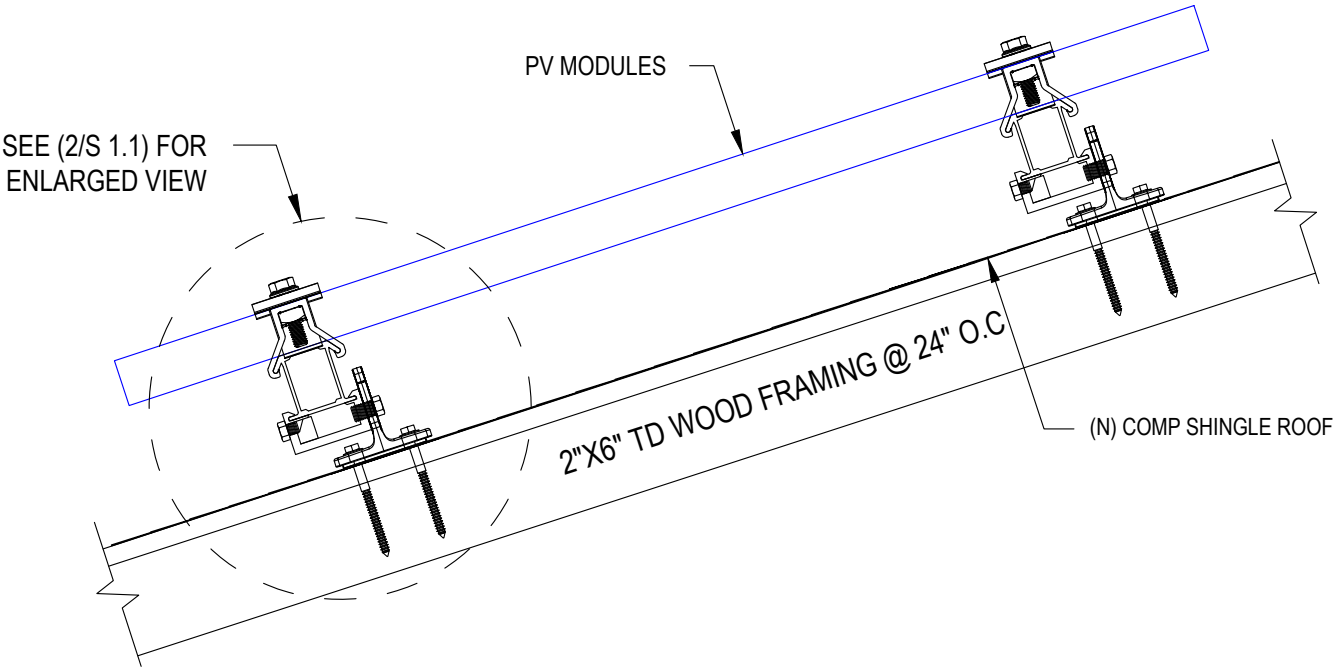
PV 2.0

Drawn By

PremiumCAD

GENERAL STRUCTURAL NOTES:

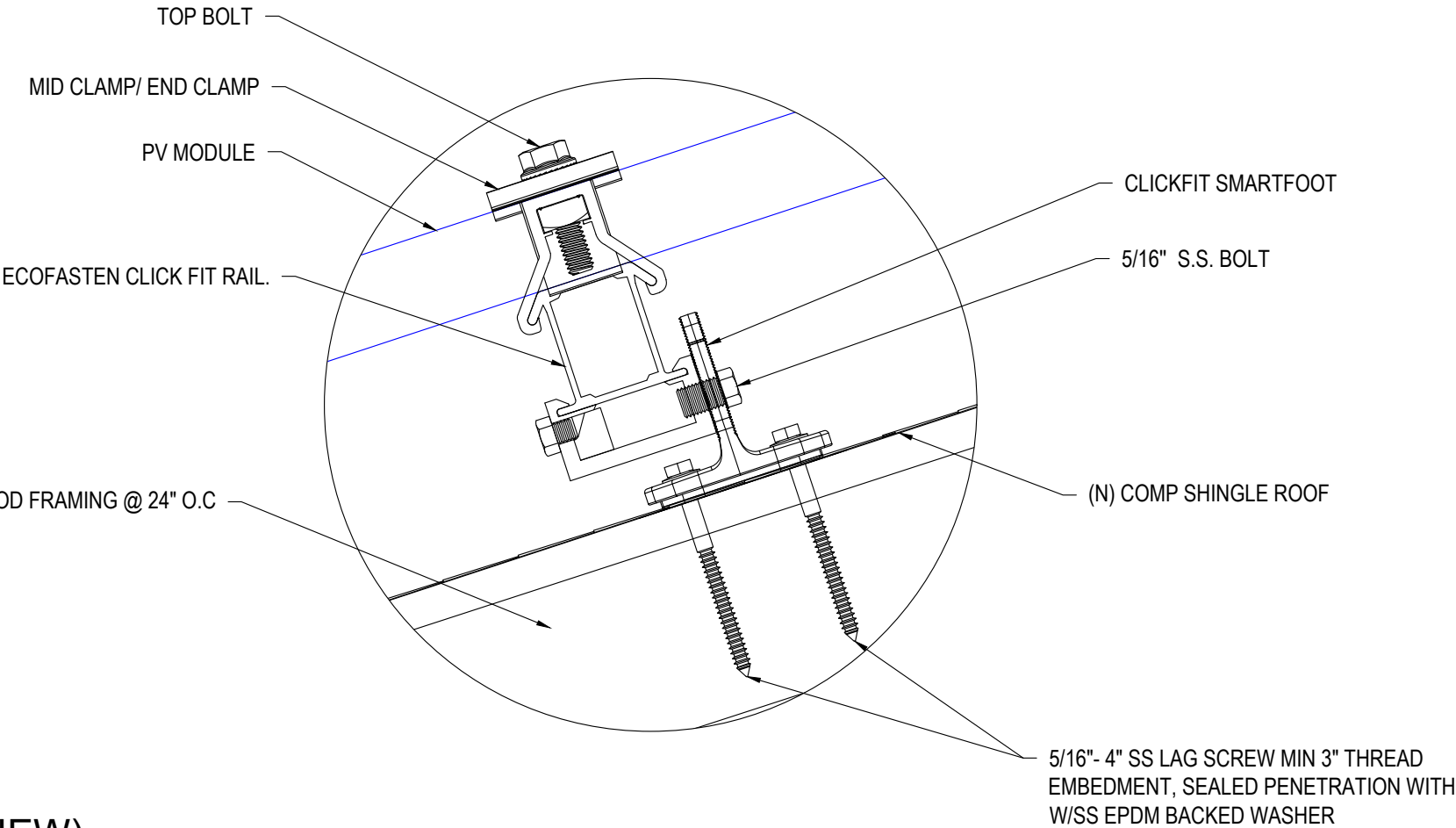
- 1. THE SOLAR PANELS ARE TO BE MOUNTED TO THE ROOF FRAMING USING THE ECOFASTEN CLICK FIT RACKING SYSTEM WITH SMARTFOOT ASSEMBLY. THE MOUNTING FEET ARE TO BE SPACED AS SHOWN IN THE DETAILS, AND MUST BE STAGGERED TO ADJACENT FRAMING MEMBERS TO SPREAD OUT THE ADDITIONAL LOAD.
- 2. UNLESS NOTED OTHERWISE, MOUNTING ANCHORS SHALL BE 5/16" LAG SCREWS WITH A MINIMUM OF 2-1/2" PENETRATION INTO ROOF FRAMING.
- 3. THE PROPOSED PV SYSTEM ADDS 2.56 PSF TO THE ROOF FRAMING SYSTEM.
- 4. ROOF LIVE LOAD = 20 PSF TYPICAL, 0 PSF UNDER NEW PV SYSTEM.
- 5. GROUND SNOW LOAD = 35 PSF
- 6. WIND SPEED = 120 MPH
- 7. EXPOSURE CATEGORY = B
- 8. RISK CATEGORY = II



1 ATTACHMENT DETAIL (SIDE VIEW)

S 1.1

SCALE: NTS



2 ATTACHMENT DETAIL (ENLARGED VIEW)

S 1.1

SCALE: NTS

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Sheet Name

MOUNT DETAIL

Sheet Size

ANSI B
11" X 17"

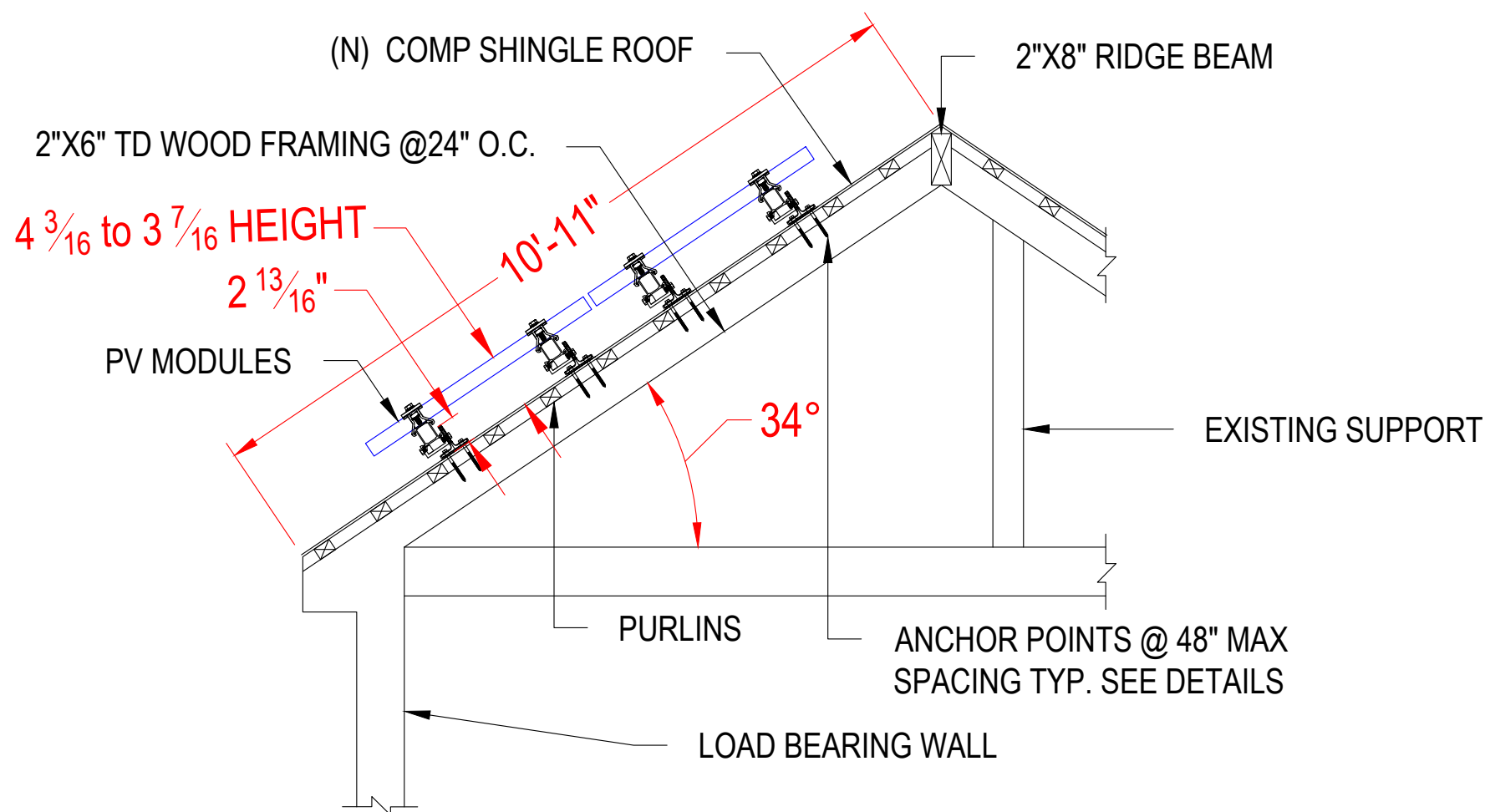
Sheet Number

S 1.1

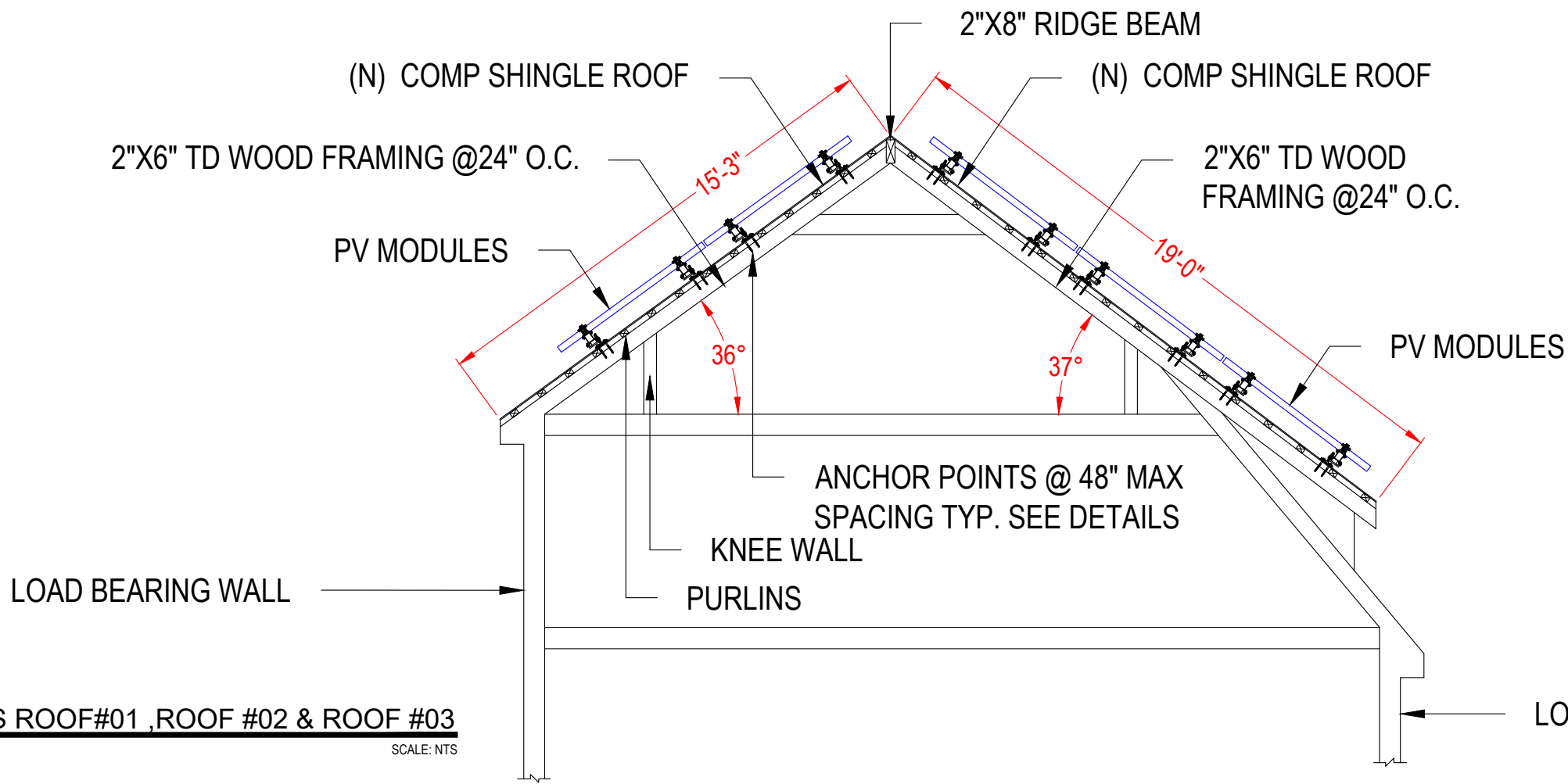
Drawn By

PremiumCAD

ROOF #01
AZIMUTH - 219°
SLOPE - 34°



ROOF #03
AZIMUTH - 309°
SLOPE - 36°



ROOF #02
AZIMUTH - 37°
SLOPE - 129°

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Sheet Name

ROOF SECTION

Sheet Size

ANSI B
11" X 17"

Sheet Number

S 1.2

Drawn By

PremiumCAD

PHOTOVOLTAIC SYSTEM SPECIFICATIONS:

SYSTEM SIZE:	18.06 kW DC 13.44 kW AC
MODULE TYPE & AMOUNT:	(42) SEG SOLAR SEG-430-BTD-BG [430W]
MICRO-INVERTER:	(42) ENPHASE IQ8MC-72-M-US [240V]

Rooftop conductor ampacities designed in compliance with art. 690.8, Tables 310.15(B)(2)(a), 310.15(B)(3)(a), 310.15(B)(3)(c), 310.15(B)(16), Chapter 9 Table 4, 5, & 9. Location specific temperature obtained from ASHRAE 2020 data tables

RECORD LOW TEMP	N/A
AMBIENT TEMP (HIGH TEMP 2%)	32°C
CONDUIT HEIGHT	0.5"
ROOF TOP TEMP	54°C
CONDUCTOR TEMPERATURE RATE	90°C

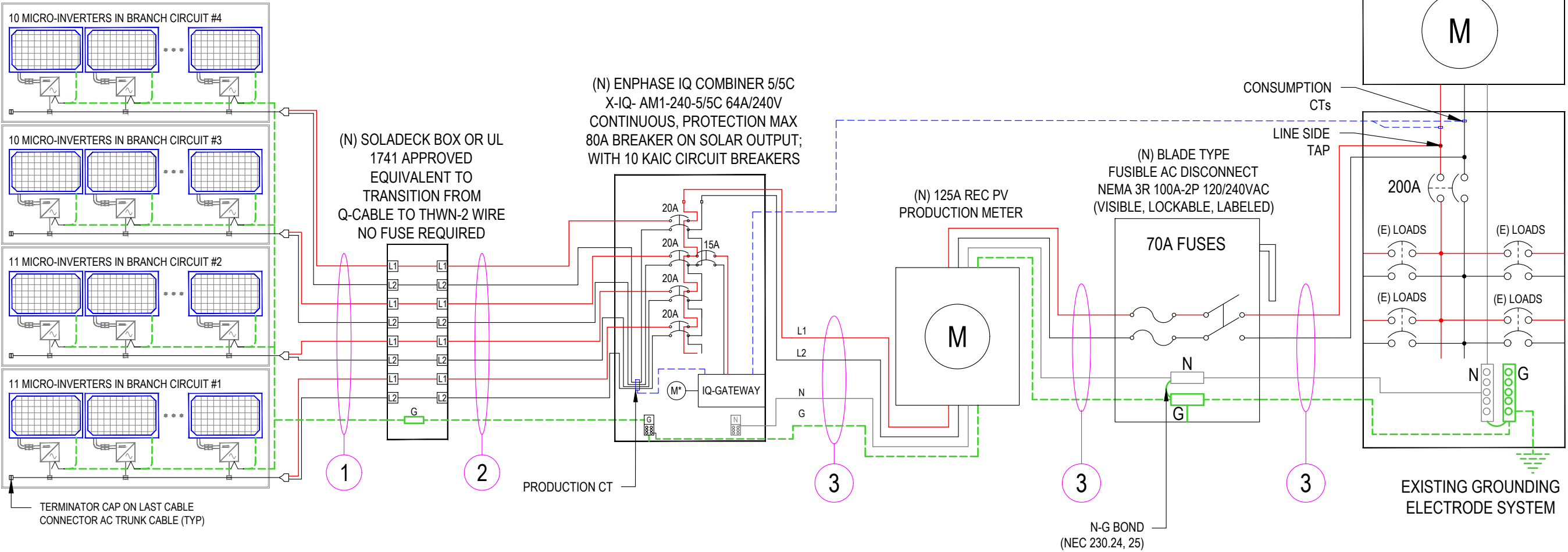
THIS PANEL IS FED BY MULTIPLE SOURCES
(UTILITY AND SOLAR)

AC OUTPUT CURRENT	55.86A
NOMINAL AC VOLTAGE	240V

ENPHASE Q CABLE TO BE ATTACHED TO
RAIL MIN. 3-1/2" ABOVE ROOF SURFACE

VISIBLE, LOCKABLE, LABELED DISCONNECT
WITHIN 10' OF UTILITY METER

(42) (ENPHASE IQ8MC-72-M-US [240V])
MICROINVERTERS
240VAC, 1.33A MAX
CEC WEIGHTED EFFICIENCY 97.0%
NEMA 4R, UL LISTED, INTERNAL GFDI



POINT OF INTERCONNECT, LINE SIDE TAP
EXISTING 240V/200A BUS BAR RATING,
MAIN SERVICE PANEL, SINGLE PHASE,
WITH A 200A MAIN BREAKER
UTILITY COMPANY - EVERSOURCE
UTILITY METER# 96441806
SERVICE: UNDERGROUND

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REVISIONS

Description	Date	Rev
Initial Design	4/18/2025	00

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Address

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PHONE: (814) 883-5506
APN #: 24-100_0163503

Sheet Name

3-LINE
DIAGRAM

Sheet Size

ANSI B
11" X 17"

Sheet Number

E 1.1

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PremiumCAD

WIRE TAG #	WIRE FROM --	CONDUIT	WIRE QTY	WIRE GAUGE:	WIRE TYPE ENPHASE TRUNK CABLE INCLUDES #12 GROUND	TEMP RATING:	WIRE AMP	TEMP DE-RATE:	CONDUIT FILL:	WIRE OCP:	TERMINAL 75°C RATING:	INVERTER QTY:	NOC:	NEC:	STRING AMPS	GRND SIZE	GRND WIRE TYPE
①	ARRAY TO JUNCTION BOX	IQ CABLE	8	#12	TRUNK CABLE	90°	30A x	0.96 x	N/A =	28.80A	25A	11	x 1.33A x	1.25 =	18.29A	#6	SBC
②	JUNCTION BOX TO COMBINER PANEL	1" EMT	8	#10	THWN-2	75°	35A x	0.94 x	0.70 =	23.03A	35A	11	x 1.33A x	1.25 =	18.29A	#8	THWN-2
③	COMBINER PANEL TO MSP	1" EMT	3	#4	THWN-2	75°	85A x	0.94 x	1.00 =	79.90A	85A	42	x 1.33A x	1.25 =	69.83A	#8	THWN-2

PV MODULE RATING @ STC	
MANUFACTURER	SEG SOLAR SEG-430-BTD-BG [430W]
MAX. POWER-POINT CURRENT (IMP)	13.32 AMPS
MAX. POWER-POINT VOLTAGE (VMP)	32.30 VOLTS
OPEN-CIRCUIT VOLTAGE (VOC)	38.90 VOLTS
SHORT-CIRCUIT CURRENT (ISC)	13.99 AMPS
NOM. MAX. POWER AT STC (PMAX)	430 WATT
MAX. SYSTEM VOLTAGE	1500V
VOC TEMPERATURE COEFFICIENT	-0.25° %/°C

MICRO-INVERTER SPECIFICATIONS	
MANUFACTURER	ENPHASE IQ8MC-72-M-US
MAX. INPUT DC VOLTAGE	60 VOLTS
MAX. CONT. OUTPUT POWER	320 WATTS
NOMINAL AC VOLTAGE	240 VOLTS
MAX. AC CURRENT	1.33 AMPS
MAX. OCPD RATING	20 AMPS
MAX. PANELS/CIRCUIT	12

EQUIPMENT LOCATIONS:

- ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY NEC 110.26.
- WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY NEC 690.31 (A),(C) AND NEC TABLES 310.15 (B)(2)(A) AND 310.15 (B)(3)(C).
- JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO NEC 690.34.
- ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVICING DISCONNECT. 2.2.6 ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO NEC APPLICABLE CODES.
- ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.

STRUCTURAL NOTES:

- RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUSTALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAI MANUFACTURER'S INSTRUCTIONS.
- JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS.
- ROOFTOP PENETRATIONS FOR PV RACEWAY WILLBE COMPLETED AND SEALED W/ APPROVED CHEMICAL SEALANT PER CODE BY A LICENSED CONTRACTOR.
- ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER. 2.3.6 WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.

WIRING & CONDUIT NOTES:

- ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS AREBASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.
- CONDUCTORS SIZED ACCORDING TO NEC 690.8, NEC 690.7.
- VOLTAGE DROP LIMITED TO 1.5%.
- DC WIRING LIMITED TO MODULE FOOTPRINT. MICROINVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY W/ SUITABLE WIRING CLIPS.
- AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3- BLUE, YELLOW, ORANGE**, OR OTHER CONVENTION NEUTRAL- WHITE OR GREY IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [NEC 110.15].

GROUNDING NOTES:

- GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.
- PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC TABLE 250.122.
- METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURES CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.136(A).
- EQUIPMENT GROUNDING CONDUCTORS SHALLBE SIZED ACCORDING TO NEC 690.45 AND MICROINVERTER MANUFACTORERS' INSTRUCTIONS.
- EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS.
- THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OFA MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.
- GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [NEC 250.119]
- THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH NEC 690.47 AND NEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO NEC 250, NEC 690.47 AND AHJ.
- GROUND-FAULT DETECTION SHALL COMPLY WITH NEC 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS

DISCONNECTION AND OVER-CURRENT PROTECTION NOTES:

- DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHENTHE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARECONNECTED TO THE TERMINALS MARKED “LINE SIDE” (TYPICALLY THE UPPER TERMINALS).
- DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).
- ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO NEC 690.8, 690.9, AND 240.
- MICROINVERTER BRANCHES CONNECTED TO A SINGLE BREAKER OR GROUPED FUSES IN ACCORDANCE WITH NEC 110.3(B).
- IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO NEC 690.11 AND UL1699B.

INTERCONNECTION NOTES:

- LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 705.12 (B)]
- THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS OUTPUT MAY NOT EXCEED 120% OF BUSBAR RATING [NEC 705.12(D)(2)(3)].
- THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR, PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [NEC 705.12(B)(2)(3)].
- AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO NEC 705.12 (B)(2)(3)(C).
- FEEDER TAP INTERCONECTION (LOADSIDE) ACCORDING TO NEC 705.12 (B)(2)(1)
- SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO NEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH NEC 230.42 2.7.8BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [NEC 705.12 (B)(5)].



INFINITY ENERGY

575 CORPORATE DR, SUITE 2200,
MAHWAH, NJ 07430
PH: 1 (845) 200-3700

REVISIONS		
Description	Date	Rev
Initial Design	4/18/2025	00

Signature with Seal



MICHAEL BENEVENTO RESIDENCE

Project Name & Address

239 GROVE ST,
BRISTOL, CT 06010
PHONE: (814) 883-5506
APN #: 24-100_0163503

Sheet Name

NOTES

Sheet Size

ANSI B
11" X 17"

Sheet Number

E 1.2

Drawn By

PremiumCAD



www.segsolar.com

YUKON N Series

Half-Cell N-Type TOPCon
Monofacial Module

415-430Wp | 22.02%
Module Power Output | Max Efficiency



Key Features



High module conversion efficiency



Better temperature coefficient



Super multi busbar technology



Low attenuation long warranty



Superior load capacity



Aesthetic appearance

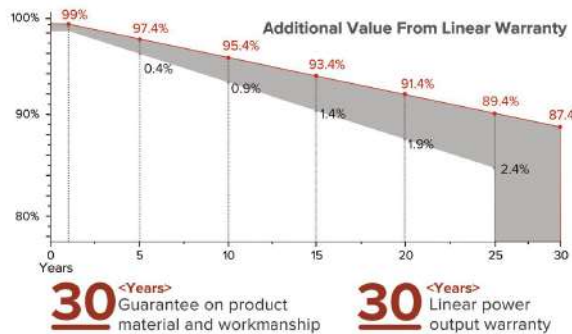


USA based liability insurance.



Houston, Texas based company.

Warranty



About SEG Solar

SEG Solar is a leading manufacturer of high-performance solar panels for residential, commercial, and utility applications. The company, headquartered in Houston, Texas, is committed to providing cost-effective and reliable solar solutions that help customers reduce their energy costs and carbon footprint.



Download Datasheet

Product Certification

IEC61215:2016; IEC 61730:2016; UL61730

IEC62804

PID

IEC61701

Salt Mist

IEC62716

Ammonia Resistance

IEC60068

Dust and Sand

IEC61215

Hailstone

Fire Type (UL61730):Type29

ISO14001:2015; ISO9001:2015; ISO45001:2018



YUKON N Series SEG-XXX-BTD-BG(108Cells)

Electrical Characteristics

Module Type	SEG-415-BTD-BG		SEG-420-BTD-BG		SEG-425-BTD-BG		SEG-430-BTD-BG	
	Front STC	Front NOCT	Front STC	Front NOCT	Front STC	Front NOCT	Front STC	Front NOCT
Maximum Power -Pmp(Wp)*	415	312	420	316	425	320	430	324
Open Circuit Voltage -Voc(V)	38.30	36.39	38.50	36.58	38.70	36.77	38.90	36.96
Short Circuit Current -Isc(A)	13.75	11.00	13.83	11.06	13.91	11.13	13.99	11.19
Maximum Power Voltage -Vmp(V)	31.70	29.78	31.90	29.99	32.10	30.21	32.30	30.41
Maximum Power Current -Imp(A)	13.09	10.48	13.17	10.54	13.24	10.59	13.32	10.66
Module Efficiency(%)	21.25		21.51		21.76		22.02	
Power Tolerance(W)	(0, +4.99)							
Maximum System Voltage	1500V DC							
Maximum Series Fuse Rating	30 A							

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5

NOCT: Irradiance 800W/m² ambient temperature 20°C module temperature 45°C wind speed: 1m/s

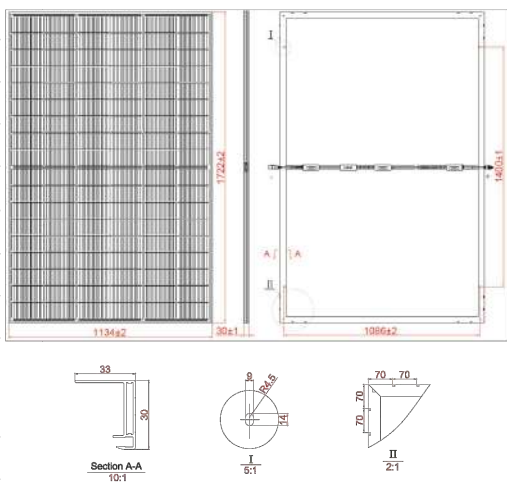
*Measuring tolerance: ±3%

Mechanical Specifications

External Dimension	1722 x 1134 x 30 mm
Weight	20.5 kg
Solar Cells	N-TOPCon 182 x 91mm(108 pcs)
Front Glass	1.6 mm AR coating semi-tempered glass
Back Glass	1.6 mm Semi-tempered glass
Frame	Black anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	PV-CO02-xy / MC4
Cable Type Cable Length	12 AWG PV Wire (UL) Portrait: 400 mm(+) / 200 mm(-) Landscape: 1200 mm(+) / 1200 mm(-) or customized length
Mechanical Load(Front)	5400 Pa / 113 psf*
Mechanical Load(Rear)	2400 Pa / 50 psf*

*Refer to SEG installation Manual for details

Technical Drawing



*Refer to SEG installation Manual for details

Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	6	24
Pieces per Container	216	864

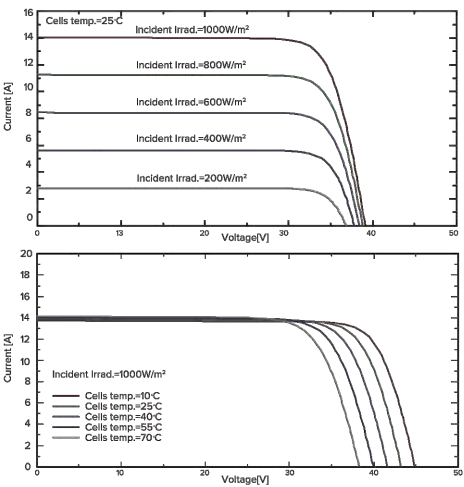
Temperature Characteristics

Pmax Temperature Coefficient	-0.30 %/°C
Voc Temperature Coefficient	-0.25 %/°C
Isc Temperature Coefficient	+0.046 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

www.segsolar.com

Specifications subject to technical changes SEG_DS_EN_2023V4.0 © Copyright 2023 SEG Solar

I-V Curve





IQ8MC 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. This chip is built in advanced 55-nm technology with high-speed digital logic and has 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.

*Meets UL 1741 only when installed with IQ System Controller 2 or 3.



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 conforms 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
- Faster 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 Microinverters cannot be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series, and so on) in the same system.
- IQ Microinverters ship with default settings that meet North America’s IEEE 1547 interconnection standard requirements. Region-specific adjustments may be requested by an Authority Having Jurisdiction (AHJ) or utility representative. An IQ Gateway is required to make these changes during installation.

IQ8MC Microinverter

INPUT DATA (DC)		UNITS	IQ8MC-72-M-US
Commonly used module pairings ¹	W		260–460
Module compatibility	—	To meet compatibility, PV modules must be within the following max. input DC voltage and max. module I _{sc} . Module compatibility can be checked at https://enphase.com/installers/microinverters/calculator .	
MPPT voltage range	V		25–45
Operating range	V		18–58
Min./Max. start voltage	V		22/58
Max. input DC voltage	V		60
Max. continuous operating DC current	A		14
Max. input DC short-circuit current	A		25
Max. module I _{sc}	A		20
Overvoltage class DC port	—		II
DC port backfeed current	mA		0
PV array configuration	—	Ungrounded array; no additional DC side protection required; AC side protection requires max 20 A per branch circuit	

OUTPUT DATA (AC)		UNITS	IQ8MC-72-M-US @240 VAC	IQ8MC-72-M-US @208 VAC
Peak output power	VA		330	315
Max. continuous output power	VA		320	310
Nominal grid voltage (L-L)	V		240, split-phase (L-L), 180°	208, single-phase (L-L), 120°
Min./Max. grid voltage ²	V		211–264	183–229
Max. continuous output current	A		1.33	1.49
Nominal frequency	Hz		60	
Extended frequency range	Hz		47–68	
AC short circuit fault current over three cycles	Arms		2.70	
Max. units per 20 A (L-L) branch circuit ³	—		12	10
Total harmonic distortion	%		<5	
Overvoltage class AC port	—		III	
AC port backfeed current	mA		18	
Power factor setting	—		1.0	
Grid-tied power factor (adjustable)	—		0.85 leading ... 0.85 lagging	
Peak efficiency	%		97.4	97.2
CEC weighted efficiency	%		97.0	96.5
Nighttime power consumption	mW		33	25

MECHANICAL DATA		UNITS
Ambient temperature range		–40°C to 65°C (–40°F to 149°F)
Relative humidity range		4% to 100% (condensing)
DC connector type		Stäubli MC4
Dimensions (H × W × D); Weight		212 mm (8.3") × 175 mm (6.9") × 30.2 mm (1.2"); 1.1 kg (2.43 lbs)
Cooling		Natural convection – no fans
Approved for wet locations; Pollution degree		Yes; PD3
Enclosure		Class II double-insulated, corrosion-resistant polymeric enclosure
Environ. category; UV exposure rating		NEMA Type 6; outdoor

COMPLIANCE	
Certifications	CA Rule 21 (UL 1741-SA), UL 62109-1, IEEE 1547:2018 (UL 1741-SB), FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01. This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, NEC 2020, and NEC 2023 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors when installed according to the manufacturer’s instructions.

(1) No enforced DC/AC ratio.
(2) Nominal voltage range can be extended beyond nominal if required by the utility.
(3) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.



X-IQ-AM1-240-5
X-IQ-AM1-240-5C

IQ Combiner 5/5C

The IQ Combiner 5/5C consolidates interconnection equipment into a single enclosure and streamlines IQ Series Microinverters and IQ Gateway installation by providing a consistent, pre-wired solution for residential applications. IQ Combiner 5/5C uses wired control communication and is compatible with IQ System Controller 3/3G and IQ Battery 5P.

The IQ Combiner 5/5C, IQ Series Microinverters, IQ System Controller 3/3G, and IQ Battery 5P provide a complete grid-agnostic Enphase Energy System.



IQ Series Microinverters
The high-powered smart grid-ready IQ Series Microinverters (IQ6, IQ7, and IQ8 Series) simplify the installation process.



IQ System Controller 3/3G
Provides microgrid interconnection device (MID) functionality by automatically detecting grid failures and seamlessly transitioning the home energy system from grid power to backup power.



IQ Battery 5P
Fully integrated AC battery system. Includes six field-replaceable IQ8D-BAT Microinverters.



IQ Load Controller
Helps prioritize essential appliances during a grid outage to optimize energy consumption and prolong battery life.



5-year limited warranty

*For country-specific warranty information, see the <https://enphase.com/installers/resources/warranty> page.

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Smart

- Includes IQ Gateway for communication and control
- Includes Enphase Mobile Connect (CELLMODEM-M1-06-SP-05), only with IQ Combiner 5C
- Supports flexible networking: Wi-Fi, Ethernet, or cellular
- Provides production metering (revenue grade) and consumption monitoring

Easy to install

- Mounts to one stud with centered brackets
- Supports bottom, back, and side conduit entries
- Supports up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV branch circuits
- Bluetooth-based Wi-Fi provisioning for easy Wi-Fi setup

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- 5-year limited warranty
- 2-year labor reimbursement program coverage included for both the IQ Combiner SKUs*
- UL1741 Listed

IQ Combiner 5/5C

MODEL NUMBER	
IQ Combiner 5 (X-IQ-AM1-240-5)	IQ Combiner 5 with IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%), consumption monitoring (±2.5%), and IQ Battery monitoring (±2.5%). Includes a silver solar shield to deflect heat.
IQ Combiner 5C (X-IQ-AM1-240-5C)	IQ Combiner 5C with IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%), consumption monitoring (±2.5%), and IQ Battery monitoring (±2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05) ¹ . Includes a silver solar shield to deflect heat.
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
Busbar	80 A busbar with support for one IQ Gateway breaker and four 20 A breakers for installing IQ Series Microinverters and IQ Battery 5P
IQ Gateway breaker	Circuit breaker, 2-pole, 10 A/15 A
Production CT	Pre-wired revenue-grade solid-core CT, accurate up to ±0.5%
Consumption CT	Two consumption metering clamp CTs, shipped with the box, accurate up to ±2.5%
IQ Battery CT	One battery metering clamp CT, shipped with the box, accurate up to ±2.5%
CTRL board	Control board for wired communication with IQ System Controller 3/3G and the IQ Battery 5P
Enphase Mobile Connect (only with IQ Combiner 5C)	4G-based LTE-M1 cellular modem (CELLMODEM-M1-06-SP-05) with a 5-year T-Mobile data plan
Accessories kit	Spare control headers for the COMMS-KIT-2 board
ACCESSORIES AND REPLACEMENT PARTS (NOT INCLUDED, ORDER SEPARATELY)	
CELLMODEM-M1-06-SP-05	4G-based LTE-M1 cellular modem with a 5-year T-Mobile data plan
CELLMODEM-M1-06-AT-05	4G-based LTE-M1 cellular modem with a 5-year AT&T data plan
Circuit breakers (off-the-shelf)	Supports Eaton BR2XX, Siemens Q2XX, and GE/ABB THQL21XX Series circuit breakers (XX represents 10, 15, 20, 30, 40, 50, or 60). Also supports Eaton BR220B, BR230B, and BR240B circuit breakers compatible with the hold-down kit.
Circuit breakers (provided by Enphase)	BRK-10A-2-240V, BRK-15A-2-240V, BRK-20A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B (more details in the "Accessories" section)
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 5/5C
XA-ENV2-PCBA-5	IQ Gateway replacement printed circuit board (PCB) for IQ Combiner 5/5C
X-IQ-NA-HD-125A	Hold-down kit compatible with Eaton BR-B Series circuit breakers (with screws)
XA-COMMS2-PCBA-5	Replacement COMMS-KIT-2 printed circuit board (PCB) for IQ Combiner 5/5C
ELECTRICAL SPECIFICATIONS	
Rating	80 A
System voltage and frequency	120/240 VAC or 120/208 VAC, 60 Hz
Busbar rating	125 A
Fault current rating	10 kAIC
Maximum continuous current rating (input from PV/storage)	64 A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR, Siemens Q, or GE/ABB THQL Series distributed generation (DG) breakers only (not included)
Maximum total branch circuit breaker rating (input)	80 A of distributed generation/95 A with IQ Gateway breaker included
IQ Gateway breaker	10 A or 15 A rating GE/Siemens/Eaton included
Production metering CT	200 A solid core pre-installed and wired to IQ Gateway
Consumption monitoring CT (CT-200-CLAMP)	A pair of 200 A clamp-style current transformers is included with the box
IQ Battery metering CT	200 A clamp-style current transformer for IQ Battery metering, included with the box

¹A plug-and-play industrial-grade cell modem for systems of up to 60 microinverters. Available in the United States, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.

CERTIFICATE OF COMPLIANCE

Certificate Number 20230825-E341165
Report Reference E341165-20210317
Date 2023-09-27

SB

Issued to: Enphase Energy Inc.
1420 N. McDowell Blvd. Petaluma, CA 94954-6515

This is to certify that representative samples of Photovoltaic Grid Support Utility Interactive Inverter with Rapid Shutdown Functionality

Models: IQ8-60, IQ8PLUS-72, IQ8M-72, IQ8A-72, IQ8H-208-72, IQ8H-240-72, may be f/b -2, -5, -E or -M, may be f/b -ACM, f/b -US, may be f/b -NM, may be f/b -RMA, may be f/b -&, where "&" designates additional characters.

Models IQ8HC-72, IQ8AC-72, IQ8MC-72 may be f/b -2, -5, -E or -M, may be f/b -ACM, f/b -US, may be f/b -NM, may be f/b -RMA, may be f/b -&, where "&" designates additional characters.

Model IQ8X-80 may be f/b -2, -5, -E, or -M, may be f/b -ACM, f/b -US, may be f/b -NM, may be f/b -RMA, may be f/b -&, where "&" designates additional characters

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: See Page 2

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

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B. Mahrenholz

Bruce Mahrenholz, Director North American Certification Program

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CERTIFICATE OF COMPLIANCE

Certificate Number 20230825-E341165
Report Reference E341165-20210317
Date 2023-09-27

SB

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements. Standards for Safety:

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements. Standards for Safety:

UL 1741, Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources, Edition 3, Issue Date 05/19/2023. Including the requirements in UL 1741 Supplement SA and SB.

IEEE 1547, Interconnection and Interoperability of Distributed Energy Resources (DERs) with Associated Electric Power Systems (EPSs) Interfaces, Issue Date 02/15/2018

IEEE 1547.1, IEEE Standard Conformance Test Procedures for Interconnecting Distributed Energy Resources (DERs) with Electric Power Systems (EPSs) Associated Interfaces, Issue Date 03/05/2020.

CSA C22.2 No. 107.1-16, General Use Power Supplies, Edition 4, Issue Date 06/2016

☒ R21: The evaluation to the Standards above provides evidence of compliance to the intent of the existing California Rule 21 Interconnection (references to the past publication of IEEE 1547 standards) and UL1741Table SA1.1 option to use the IEEE 1547.1-2020 and UL1741SB test methods in conjunction with using IEEE 1547-2018 as the SRD under which SA11.2 Normal Ramp Rate is not address. Additional testing was conducted to confirmed compliance to Normal Ramp Rate SA11.2

☐ 14H (SA): The evaluation to the Standards above provides evidence of compliance to HECO Rule 14H, SRD V1.0, Interconnection Application.

☒ 14H (SB): The evaluation to the Standards above provides evidence of compliance to HECO Rule 14H, SRD V2.0, Interconnection Application.

B. Mahrenholz

Bruce Mahrenholz, Director North American Certification Program

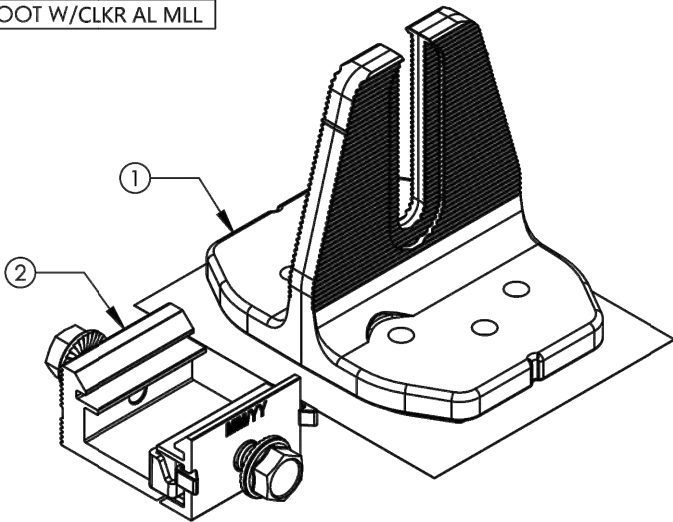
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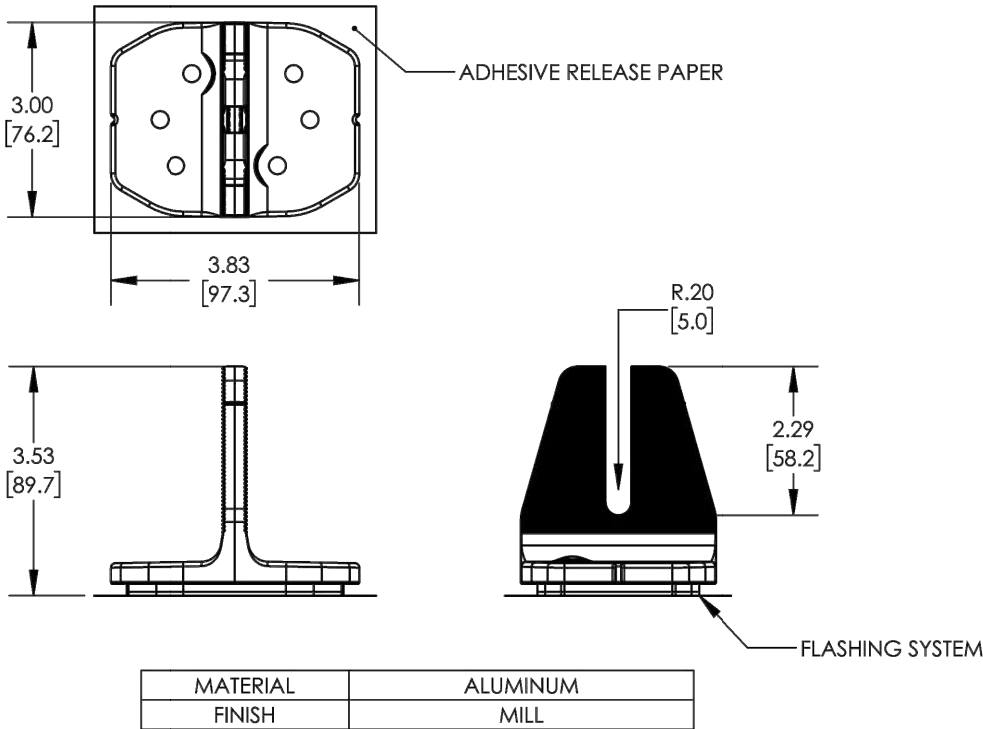
CF SMART FOOT W/CLKR AL MLL

PART NUMBER	DESCRIPTION
2012028	CF SMART FOOT W/CLKR AL MLL



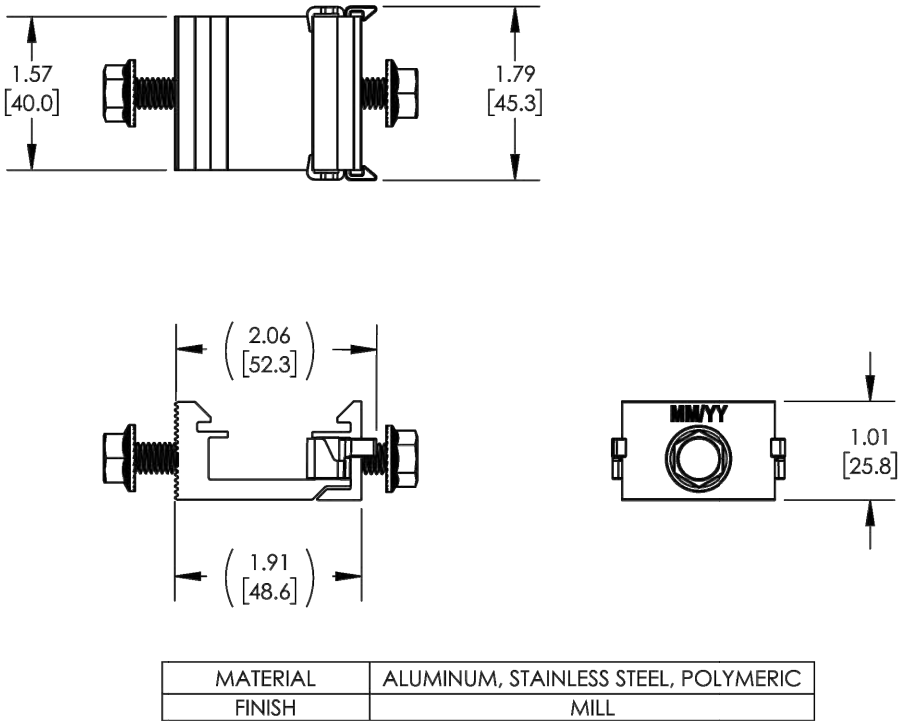
ITEM NO.	DESCRIPTION
1	CLICKFIT SMARTFOOT
2	CLICKFIT RAIL ATTACHMENT ASSY W/MNT BOLT

1) CLICKFIT SMARTFOOT



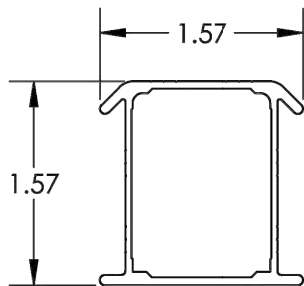
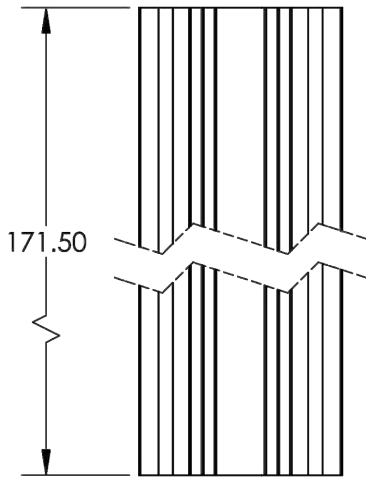
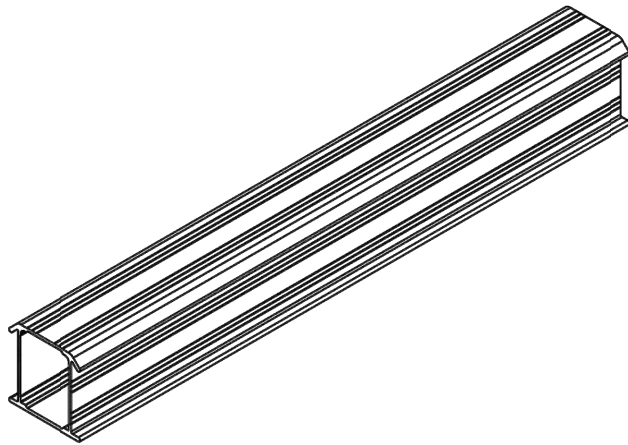
CF SMART FOOT W/CLKR AL MLL

2) CLICKFIT RAIL ATTACHMENT ASSY W/MNT BOLT

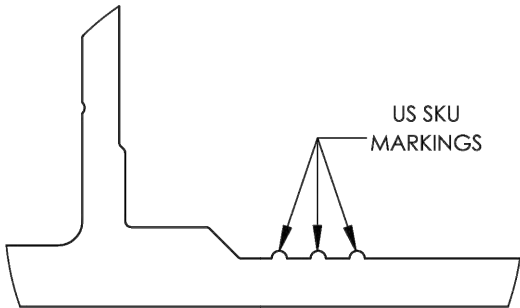
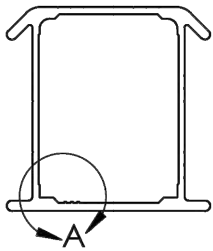


CF STD RAIL AL MILL 171.5"

PART NUMBER	DESCRIPTION
2012025	CF STD RAIL AL MLL 171.5"
2012035	CF STD US RAIL AL MLL 171.5"



2012035 - US MADE INDICATOR MARKINGS

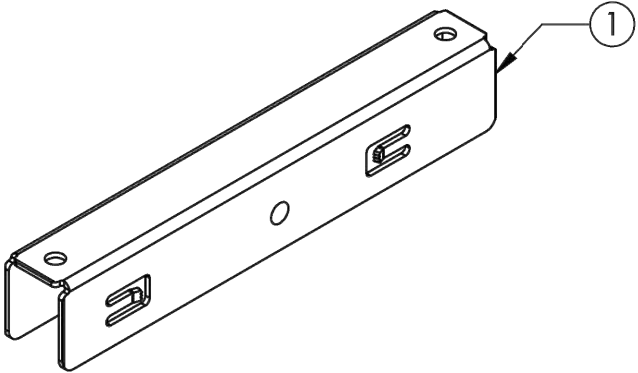


DETAIL A
SCALE 4 : 1

MATERIAL	ALUMINUM
FINISH	MILL

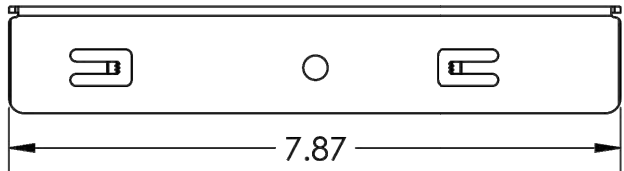
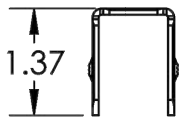
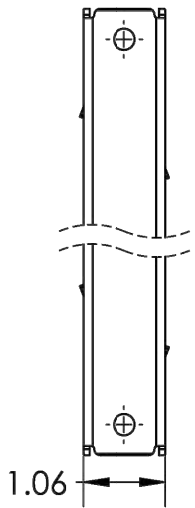
CF RAIL SPLICE SS

PART NUMBER	DESCRIPTION
2012013	CF RAIL SPLICE SS



ITEM NO.	DESCRIPTION
1	RAIL COUPLER

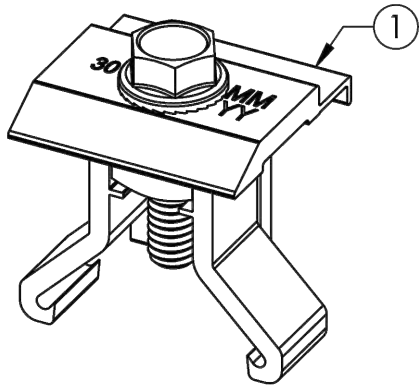
1) RAIL COUPLER



Material	Corrosion Resistant Steel
Finish	Mill

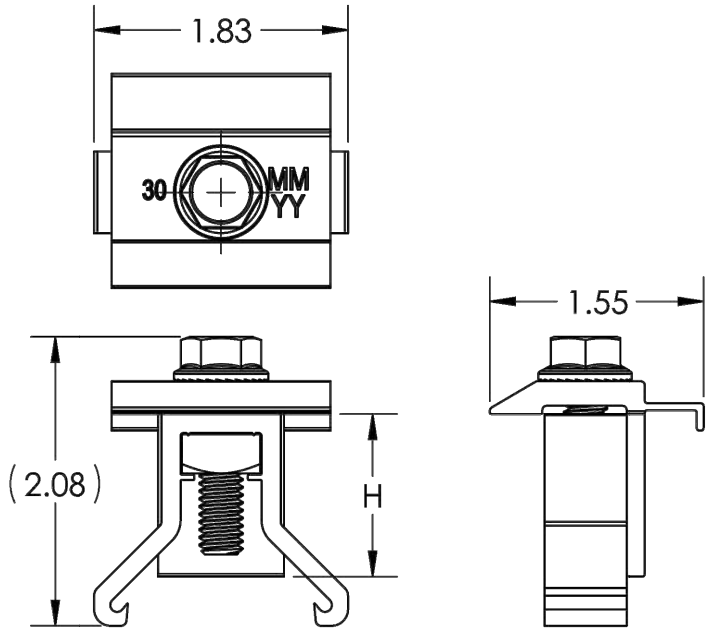
CF/RF END CLAMP AL BLK

PART NUMBER	DESCRIPTION	HEIGHT (H)
2099016	CF/RF END CLAMP AL BLK 30MM	1.17"
2099017	CF/RF END CLAMP AL BLK 32MM	1.25"
2099018	CF/RF END CLAMP AL BLK 35MM	1.37"
2099019	CF/RF END CLAMP AL BLK 38MM	1.49"
2099020	CF/RF END CLAMP AL BLK 40MM	1.57"
2099021	CF/RF END CLAMP AL BLK 45MM	1.76"



ITEM NO.	DESCRIPTION
1	CLICKFIT HEAVY DUTY END CLAMP ASSEMBLY, BLACK

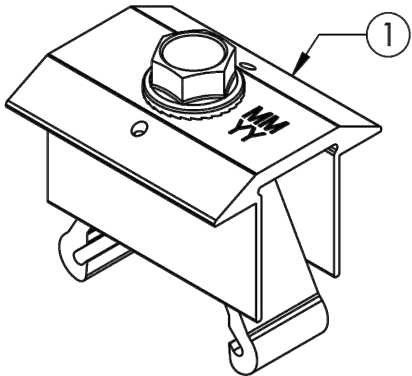
1) CLICKFIT HEAVY DUTY END CLAMP ASSEMBLY BLACK



Material	Aluminum/Steel
Finish	Black

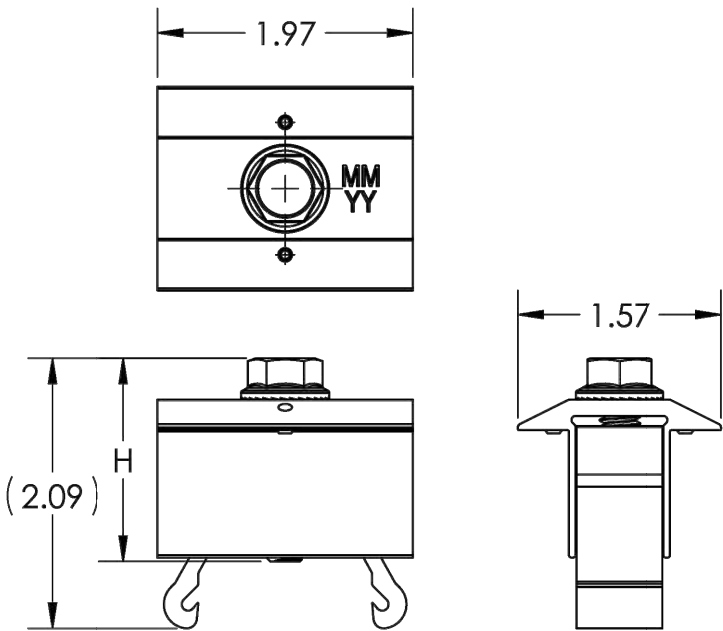
CF/RF MID CLAMP AL BLK

PART NUMBER	DESCRIPTION	HEIGHT (H)
2099022	CF/RF MID CLAMP AL BLK 30-40MM	1.57"
2099023	CF/RF MID CLAMP AL BLK 40-50MM	2.07"



ITEM NO.	DESCRIPTION
1	CLICKFIT HEAVY DUTY MIDCLAMP ASSEMBLY, BLACK

1) CLICKFIT HEAVY DUTY MIDCLAMP ASSEMBLY, BLACK



Material	Aluminum/Stainless Steel
Finish	Black



Photovoltaic System Design Summary

Project Name: Michael Benevento Residence

Project Address: 239 Grove Street, Bristol, CT 06010

Prepared by: Infinity Energy / PremiumCAD

1. Project Scope

The scope of this project includes the design and installation of a **roof-mounted, utility-interactive photovoltaic (PV) solar energy system**. The system is designed to meet the client's on-site electrical needs and interconnect with the existing utility service via a line-side tap configuration. The system will comply with all applicable state and national codes.

2. System Overview

Parameter	Specification
System Type	Grid-tied PV system with microinverters
System Capacity	18.060 kW DC / 13.440 kW AC
Modules	(42) SEG Solar SEG-430-BTD-BG (430W each)
Inverters	(42) Enphase IQ8MC-72-M-US (one per module)
Interconnection	Line-side tap to existing 200A main service panel
Mounting System	EcoFasten ClickFit with SmartFoot attachments
Compliance Codes	2020 NEC, 2022 CT State Building Code

3. Site & Roof Configuration

- **Total Roof Area:** 4,351 sq. ft.
- **Array Coverage:** 882.95 sq. ft. (20.29% of total roof area)
- **Roof Construction:** 2"×6" wood framing @ 24" O.C.
- **Roof Material:** Composite shingles

Module Placement by Roof Section:

Roof Section	# of Modules	Slope	Azimuth
Roof #1	3 modules	34°	219°
Roof #2	25 modules	37°	129°
Roof #3	14 modules	36°	309°

Structural Loading:

- Module weight: 45.2 lbs each; total array: 1,898.4 lbs
- Mounting hardware: 88.5 lbs
- Total system weight: 1,986.9 lbs
- Distributed load: 2.25 psf
- Additional load to structure: 2.56 psf
- Wind Speed: 120 mph
- Ground Snow Load: 35 psf

4. Electrical Design

Branch Circuits:

- (4) AC branch circuits:
 - Circuit 1: 11 modules

- Circuit 2: 11 modules
- Circuit 3: 10 modules
- Circuit 4: 10 modules

Main Service Panel:

- 200A single-phase, 240V
- Utility: Eversource
- Utility Meter #: 96441806

Interconnection Method:

- Line-side tap using 100A fusible AC disconnect with 70A fuses
- Enphase IQ Combiner Panel with integrated monitoring (X-IQ-AM1-240-5/5C)
- 125A REC PV Production Meter
- All AC disconnects and junctions are grouped and labeled according to NEC requirements

Wiring Notes:

- All rooftop conductors rated to 90°C
- Voltage drop limited to $\leq 1.5\%$
- Conductor ampacities per NEC 310.15 and 690.8
- Q-cables under modules, secured to rails, transitions via Soladeck or UL 1741 box

5. Equipment List (Bill of Materials)

Component	Quantity/Specification
PV Modules	42 × SEG Solar SEG-430-BTD-BG (430W)
Microinverters	42 × Enphase IQ8MC-72-M-US

Combiner Panel	1 × Enphase IQ Combiner 5/5C, 125A
AC Disconnect	1 × 100A, fusible, NEMA 3R
PV Production Meter	1 × REC 125A PV Meter
Mount Attachments	104 × ClickFit SmartFoot
Rails	23 × EcoFasten ClickFit (171.5" each)
Rail Splices	14 × Splice Kits
Mid Clamps / End Clamps	64 Mid / 40 End Clamps
Grounding Lugs	10 × UL-listed lugs

6. Code Compliance and Safety Features

Applicable Codes:

- 2020 National Electrical Code (NEC)
- 2021 International Residential Code (IRC)
- 2021 IBC, IMC, IPC, and IECC
- CT State Building Code (2022 Edition)

Safety Provisions:

- **Fire Setbacks:** 18" edge clearance; 36" fire pathways maintained
- **Rapid Shutdown:** Enphase microinverter system complies with NEC 690.12
- **Grounding:** UL-listed WEEB clips and lugs per NEC 690.43 & 250
- **Warning Labels:** All required NEC 2020 labels included (690.13, 705.10, 705.12)
- **Disconnect Accessibility:** Visible, lockable disconnect within 10 feet of utility meter
- **Arc Fault Protection:** In compliance with NEC 690.11 where applicable

7. Structural and Electrical Notes

- All penetrations sealed per local building requirements
- Racking and attachments spaced and staggered per manufacturer's specs
- Conduit and wire rated for outdoor use and sunlight exposure
- PV system adds no live load (20 psf live load remains typical)
- Roof penetrations for conduit flashed and sealed per code

APPLICANT PHOTOS











