Agenda **Tolland Green Historic District Commission** 21 Tolland Green, Tolland, Connecticut Wednesday, March 20, 2024 at 7:00 p.m., via Zoom **Remote Participation Only**

- 1. Call to Order
- 2. Seating of Alternate(s)
- 3. Additions to Agenda
- **4. Public Comment** Any person wishing to ask a question, make a comment or put forward a suggestion for any item or matter other than a public hearing item (2 minute limit).

5. Public Hearing(s)

5.01. Testimony Received

- 5.1. HDC #24-02 Certificate of Appropriateness- Request to install building-mounted solar arrays.
 - 5.1.1. Refer to Testimony Received 5.01
- 5.2. HDC #24-03 Certificate of Appropriateness- Request to install building-mounted solar arrays.
 - 5.2.1. Refer to Testimony Received 5.01

6. New Business

- 6.1. Consideration of the COA at 45 Tolland Green by the Commission, and vote thereon
- 6.2. Consideration of the COA at 95 Tolland Green by the Commission, and vote thereon
- 6.3. Discuss COA application fees and application requirements

7. Old Business

8. Correspondence

9. Approval of Minutes – February 21, 2024 Regular Meeting

10. Adjournment

To join the Zoom meeting, either click: <u>https://us06web.zoom.us/j/82431515423?pwd=nJYD5z0yKkaIMKfCzmvDbjXSBDMC3a.1</u> **One tap mobile:** +13052241968,,82431515423#,,,,*03202024# US **Or call:** 1-646-876-9923 and input: Meeting ID: 824 3151 5423 Passcode: 03202024

Agenda Item 5.01

Laura Smith

From:	Susan Lucek <
Sent:	Monday, March 18, 2024 11:06 AM
То:	Laura Smith; Town Council; Jim Paquin
Cc:	Hughes, John
Subject:	[EXTERNAL]Examples of historic solar in CT-for 3/20 HDC meeting
Attachments:	hdc_21-05_article.pdf; Branfordsolar.jpg; Salisburyhistoricsolar.png

To the Tolland Historic District Commission and Tolland Town Council:

I would like to submit the below information and attached articles and photos in support of the two applications for solar panels in the Tolland Historic District that will come before the HDC for the second and third time on Wed. March 20.

As stated in Chapter 97, Sec. 7-147f of the Connecticut statutes prohibit a commission from denying an application for a certificate of appropriateness for a "solar energy system designed for the utilization of renewable resources" unless "the commission finds that the feature cannot be installed without substantially impairing the historic character and appearance of the district."

From the attached Energy News Network article which quotes the CT State Historic Preservation Office:

"Historic preservation boards are seeing more requests related to solar panels and increasingly finding compromise.

Historic preservation boards are increasingly finding ways to compromise with homeowners who want to install solar panels in historically significant areas.

The acceptance of solar comes as technology helps to make systems less obtrusive, and also as more historic preservationists recognize the urgency to address climate change.

Cases involving solar panels are also becoming more common. In Connecticut, about a tenth of the state's 3,000 historic preservation cases last year involved solar installations. That's a significant increase from five years ago, said Todd Levine, an architectural historian for the state's preservation office.

Of those 300 solar cases, only 10 were concluded to have adverse effects, but even in those cases the state office was able to work with stakeholders and ultimately approve them all."

I would also call your attention to the photos attached, which show multiple historic CT buildings, with solar systems, one posted on a Ct.gov main page showing a roof mounted solar system on a historic home, zero lot line.

The below links clearly show the preferred use of solar on side facing roof surfaces of historic homes and buildings.

Salisbury Historic District Commission Solar Guidelines – "To Do" photo included in booklet: <u>https://www.historicsalisburyct.org/solar-energy-booklet-information</u>

CT.gov photo on main page shows roof mounted solar on historic home, zero lot line: <u>https://portal.ct.gov/DECD/Content/Historic-</u> <u>Preservation/03_Technical_Assistance_Research/Energy-Efficiency-For-Historic-Houses</u>

Energy News Network article quoting CT SHPO:

https://energynews.us/2019/03/04/connecticut-historic-preservation-boards-warming-up-to-solarpanels/ (hdg. 21.05, article.pdf.full.text.attached)

(hdc_21-05_article.pdf full text attached)

In accordance with state guidance and statutes and many other CT historic districts, we appreciate your prompt review and approval of these solar applications.

Thank you.

Susan Lucek-Hughes

95 Tolland Green

ENERGY NEWS NETWORK

Connecticut historic preservation boards warming up to solar panels



by Meg Dalton March 4, 2019



A historic district in New London, Connecticut.

Historic preservation boards are seeing more requests related to solar panels and increasingly finding compromise.

Historic preservation boards are increasingly finding ways to compromise with homeowners who want to install solar panels in historically significant areas.

The acceptance of solar comes as technology helps to make systems less obtrusive, and also as more historic preservationists recognize the urgency to address climate change. Cases involving solar panels are also becoming more common. In Connecticut, about a tenth of the state's 3,000 historic preservation cases last year involved solar installations. That's a

significant increase from five years ago, said Todd Levine, an architectural historian for the state's preservation office.

Of those 300 solar cases, only 10 were concluded to have adverse effects, but even in those cases the state office was able to work with stakeholders and ultimately approve them all. "In some ways, the solar panels help the historic structure and don't harm it," said Catherine Labadia, deputy state historic preservation officer. "That's not to negate the few cases when it's bad."

The National Trust for Historic Preservation and the Department of the Interior recommend installing solar panels on the area least visible to the public or on any new addition on the property, like a garage. Typically, historic commissions don't want panels on the principal facade of the building facing the public right-of-ways. If they have to be on the roof, it's better to have them on the non-street-facing part, or even ground-mounted in a backyard. They also suggest solar panels and mounting systems that match the roof's color scheme. In general, the lower the profile the better.

'In some ways, the solar panels help the historic structure and don't harm it.'

While the Department of the Interior <u>provides guidance</u> for installs in historic districts, the responsibility ultimately falls on the local historic commissions. In Connecticut, the state historic preservation office also provides resources and guidance, as well as handles cases that require state or federal permitting.

In New Haven, Connecticut, a home in one of the city's three historic neighborhoods is the latest to successfully petition for approval from its local Historic District Commission. Nestled on a sunny street corner in Fair Haven, the single-family home received immediate approval from the commission last month to install a rooftop solar array, despite a few hiccups during the approval process.

Trinity Solar, the company behind the install, approached the commission in January with a <u>mea</u> <u>culpa</u> after starting the installation before getting formal approval from the commissioners. After realizing its mistake, the company apologized and temporarily stopped the installation, deciding to wait for the commission's approval before proceeding. Since the planned solar array was street-facing and highly visible, the commission's approval was critical.

After making some adjustments — including moving some equipment inside — Trinity Solar received unanimous approval for the three-panel array on the home's rooftop. This case is one example of the evolving relationship between historic preservation and green technology in Connecticut and across the nation.

"It's something people want to see happen and in a way that respects historic integrity in these buildings," said Elizabeth Holt, director of preservation services at the New Haven Preservation Trust.

That hasn't always been the view of historic preservationists. Several cities and towns have pushed back against solar on certain properties, believing it would compromise their historic character. In Washington, D.C, a local commission <u>denied homeowners</u>from installing visible rooftop solar panels on their house in the historic Cleveland Park district in 2013. This year, the same commission loosened its restrictions, <u>allowing for visible solar panels</u>, at least in some cases.

"I have a sense that there's rapidly growing sophistication among preservationists that there's a societal mandate to achieve greater sustainability and energy efficiency," said Anthony Veerkamp, director of policy development at the National Trust for Historic Preservation. He only has an anecdotal sense of what's happening on the ground, but noted a shift from commissions defaulting to "no." More boards seem open to working with property owners, whether that means adjusting where to situate an array, or opting for ground-mounted panels instead. He attributes the shift partially to improved technology, with solar panels becoming more streamlined in recent years, as well as the emergence of solar roof tiles. It's analogous to television antennas or satellite dishes. "First, TVs were the size of car, and now they're the size of pizza pan," Veerkamp said.

Plus, a home solar installation can make a difference for state or city climate goals. Municipalities can't just rely on new housing to reduce carbon footprints; they need to maximize older stock, too.

"I want to believe historic commissions around country are looking for ways that historic buildings can help contribute to reaching carbon goals," Veerkamp said. As a preservationist, Holt thinks the realities of climate change mean that preservation and sustainability must go hand in hand. New Haven's commission has become flexible and collaborative, and she believes they can do that while still championing New Haven's historic architecture.

"Each case should be reviewed individually to find a solution that respects the historic integrity of the building and maximizes the effectiveness of the solar panels," she said. At the state level, the historic preservation office has partnered with the quasi-public clean energy agency, the <u>Connecticut Green Bank</u>, to mitigate any adverse effects installs could have on historic properties. Together, they're developing a publication they plan to distribute in the coming months outlining best practices on the intersection of energy efficiency, renewable energy, and historic preservation.

MEG DALTON

Meg is a freelance journalist and audio producer based in Connecticut who reports on the environment, gender and media. She's reported and edited for the Columbia Journalism Review, PBS NewsHour, Architectural Digest, MediaShift, Hearst Connecticut newspapers, and more. In addition, her audio work has appeared on WSHU, Marketplace, WBAI, and NPR. Meg covers Connecticut and Rhode Island.





Laura Smith

From: Sent: To: Cc: Subject: Jodie Coleman-Marzialo Tuesday, March 19, 2024 11:02 PM Laura Smith Jim Paquin [EXTERNAL]Fw: HDC Public hearings

Hi Laura,

For the mtg packet please.

Thanks, Jodie

From: Hollie Barnas
Sent: Tuesday, March 19, 2024 5:08 PM
To: Jodie Coleman-Marzialo
Subject: Re: HDC Public hearings

Hi Jodie,

As I noted in a previous email, we are not opposed to solar panels as long as 2 conditions are met: 1. Panels are not visible from the street and 2. Tall trees must be planted to obscure any street visible panels as well as for any panels that are noticeable to other residents' sight lines; front, side or back. The church took down all the tall trees which used to obscure our side and back view, now leaving us a view of a parking lot and roof proposed for solar panels. Therefore, I object to any proposed solar panels on the church roof unless they are willing to restore the trees and allow for our view to be obscure thereby restoring our historic ambience. Thank you for allowing comment, Hollie

On Fri, Mar 15, 2024 at 11:37 AM Jodie Coleman-Marzialo < > wrote: Hi Hollie and Dave,

I wanted you to know that there is a PH next Wednesday for solar panels on the UCCT and <u>95 Tolland Green</u>. Please consider sending an email and/or attending the meeting via Zoom regarding your opinion. The packet link is below.

Thanks, Jodie

https://www.tollandct.gov/sites/g/files/vyhlif11831/f/uploads/2024-03-20 meeting packet amended.pdf

Agenda Item 5.1

Legal Notice Public Hearing

Tolland Green Historic District Commission

The Tolland Green Historic District Commission will hold a Public Hearing on Wednesday, March 20, 2024, commencing at 7:00 p.m., to hear and discuss the following:

<u>45 Tolland Green</u> - Request by Kevin Thompson to install a roof-mounted solar array **<u>95 Tolland Green</u>** - Request by Venture Home Solar to install a roof-mounted solar array

A copy of these applications are on file and available for review online: <u>https://www.tollandct.gov/historic-district-commission/pages/applications-pending</u>

To be advertised twice in the Journal Inquirer: Thursday, March 7, 2024 and Thursday, March 14, 2024



TOLLAND GREEN HISTORIC DISTRICT COMMISSION Application for a Certification of Appropriateness

Property Information

Property Address: 45 Tolland Green

Property Owner: United Congregational Church of Tolland

Phone Number:

Applicant Information

Applicant Name: Kevin Thompson on behalf of 715 United Congregational Church of Tolland members

Applicant Address: 65 Noah Lane Tolland CT 06084

Phone Number:

Email:

Project Information

Type of Building: Church and Education Building

Nature and description of work to be done as it affects exterior appearance. Attach appropriate drawing or plans giving the position of the house or structure on the site, ground plan of house with proposed addition, and all pertinent elevations showing size and style of windows, dormers, doors, exterior wall finishes, roofing material, chimneys, vents and ornamentation. (If more space needed, attach sheet to application.)

Building mounted solar arrays (see attached presentation for details)

Estimated Start and Completion Dates:

Start: August 2024

Complete: December 2024

- 1. Attach a photograph of the existing structure or place to be changed as viewed from the street showing that portion of the structure to be altered, together with a drawing of the proposed alteration or change.
- 2. Application fee of \$75.00 must accompany application (make checks payable to Town of Tolland).
- Application form, fee, plans, photograph and drawing must be submitted to <u>Planning & Building Department</u>. Public Hearings will be scheduled within not more than sixty-five days after the filing of an application. Certificate of Appropriateness will expire 1 year from date of approval.

This application form and all accompanying plans and materials are accurate and complete:

Applicant Signature: Kevin Thompson Date: February 20, 2024

Property Owner Signature: Not applicable Date:

OFFICE USE ONLY

Received & Fee Paid: 2 20 24	earing Scheduled:	32024
Hearing Advertised: 3/6/24 + 3/3 24	Action:	
Notice of Action to Applicant:	HDC Due Date:	4 25 24

United Congregational Church of Tolland (UCCT) Tolland Green Historic District Commission (TGHDC) Compromise Solar Energy Proposal Revision One March 2024

Join Us in Supporting the UCCT Holistic Commitment to a Green Environment

- The main source of carbon emissions is powering the electrical grid
- Through the release of 2350 billion tons of carbon dioxide since 1850, the average global temperature has increased 2 degrees Fahrenheit¹
- By 2100 the average global temperature is expected to have increased by 5-10 degrees Fahrenheit¹
- The impact of rising global temperatures includes:
 - Extended periods of drought
 - Severe deluges with flooding
 - Periods of dangerous heat waves
 - Rising sea levels
 - Melting of permafrost and ice caps that release methane and possibly release pathogens
- Solar panels are recyclable. <u>17 US Solar Panel Recycling Company Directory</u>.
- In 2023 investments in UCCT Green initiatives including LED lighting and setback thermostats exceeded \$25,000
 - Similar investments continue in 2024

Join Us in Supporting the UCCT Commitment to Tolland

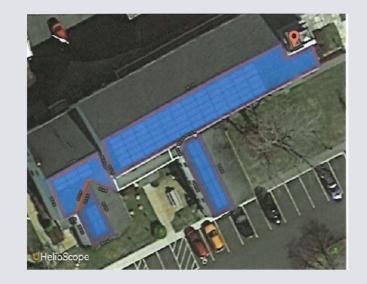
- Supporting <u>all-inclusive</u> faith formation in all church activities
- Providing baptisms, weddings, funerals and other pastoral services to <u>all</u> in the community who desire them
- Hiring a Community Engagement Pastor in 2023
- Supporting young families for 40 years with Tolland Green Learning Center daycare
- Providing a free, safe meeting space for:

Alcoholics AnonymousFoodshare DistributionBoy & Girl ScoutsPFLAG Tolland-Mansfield ChapterMother's & Veterans GroupsTHS Rage Robotics

- Giving out candy on Halloween and providing cider and hot chocolate at the Tolland Light Parade
- Offering the use of the parking lots and bathrooms during events on the Green
- Supporting the Tolland Food Pantry, Cornerstone Soup Kitchen, and South Park Inn
- Providing chaplaincy services for the fire department and state police

UCCT Recent Solar Proposals

- October 2023 building-mounted solar panel installation
 - 60 All-black solar panels on primary church roof
 - Capacity equal to 100% of Church and Education building electric requirements
 - Total project cost of \$144,000
 - Payback period of 8 years (based on conservative annual electric rate increases)
- November ground-based solar panel site preparation and installation
 - UCCT made a good faith effort to test the feasibility of the TGHDC's suggested ground-based solar array, but unfortunately, that approach resulted in exceptional practical difficulty and undue financial hardship
 - Total project cost of \$225,000 (56% higher than the initial building-mounted proposal)
 - Payback period of 15 years (based on conservative annual electric rate increases)
 - Significant ground-based solar panel additional costs:
 - Purchase and install steel solar panel support structure
 - Trench and install conduit and cable 453 feet from array to electric meters
 - Prepare site including church, education building, Tobiassen House and parking lot drainage design and construction
 - Remove and dispose of 18 trees
 - Implement long-term knotweed control
 - Install heavy duty landscape fabric, spread topsoil, and plant grass
 - Install perimeter fencing



UCCT March 2024 Compromise Solar Proposal

- UCCT proposes a <u>compromise</u> solution installing all-black solar panels on the Church and Phelps Education buildings:
 - Remove 25 (42%) solar panels from the historic front of the church as requested by the TGHDC
 - Create an incidental only view of solar panels from public streets
 - Mount solar panels on the side or to the rear of buildings
 - Setback roof solar panels 130 feet from Route 195
 - Total project cost of \$172,000
 - 24% (\$53,000) lower than ground-based solar panels
 - 19% (\$28,000) higher than October 2023 TGHDC proposal
 - Payback period of 12 (+4 from October) years (based on conservative annual electric rate increases)
 - Capacity equal to 90% of Church and Education building electric requirements

UCCT Proposed Solar Panels

Q.PEAK DUG	O XL-G10	Bifacial energy yield gain of up to 20% Bifacial QANTUM solar cells with zero gap cell layout make efficient use of light shining on the module rear-side for radically improved LCOE.
		Control Contro
MODEL GIPEAK DUO XL10.3/BFG		per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.2%.
		A reliable investment
	Bifacial energy yield gain of up to 20% Bracel CANTUM solar cetts with zero gap cell layout make efficient use of light shrining on the medular rear-side for radically improved LCDE.	Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty.
	Low electricity generation costs QANTUM DUG 2 containes cutting edge cell separation and incentive wind Q ANTUM technology for higher yield	Enduring high performance
	per surface area, lower BOS code, higher power classes, and an efficiency rate of up to 21/28.	Long-term yield security with Anti LeTID Technology, Anti PID Cecells Technology ² , Hot-Spot Protect.
	A reliable investment Double gives module design enables extended livit me with	
and the second land that the	 Double grass module design ecology selected retires with U-year product warranty and improved 30-year performance warranty 	Frame for versatile mounting options
	Enduring high performance Long-term yield security with Ans LeTID Technology, Anti PID Technology ¹ , Hut-Spot Protect	High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2400 Pa).
	Frame for versatile mounting options	
	 High-tech akminum nörp forme protects hem damage, enables use af a wide range of mounting structures and its centified regarding IEC for high spaw GRUDbit and wind 	Innovative all-weather technology
	load: (2400 Pg)	Optimal yields, whatever the weather with excellent low-light and temperature behavior.
	Innovative all-weather technology	
	Optimal yields, whatever the weather with execution low-light and temperature behavior.	¹ See data sheet on rear for further information. ² APT test conditions according to IEC/TS 62904-12015 method B (~1500 V, 168h) including post treatment according to IEC 61215-14 Ed. 2.0 (CD)
	¹ Yook angle shape to insure Yoo he W as to formation. ¹⁷ And you constrained according to the CP instance of CP instance of P-Instance of CP instance of CP	including post awatment according to rec. 61215-14 Eb. 2.0 (LD)

19

UCCT Proposed Solar Panel Image⁻



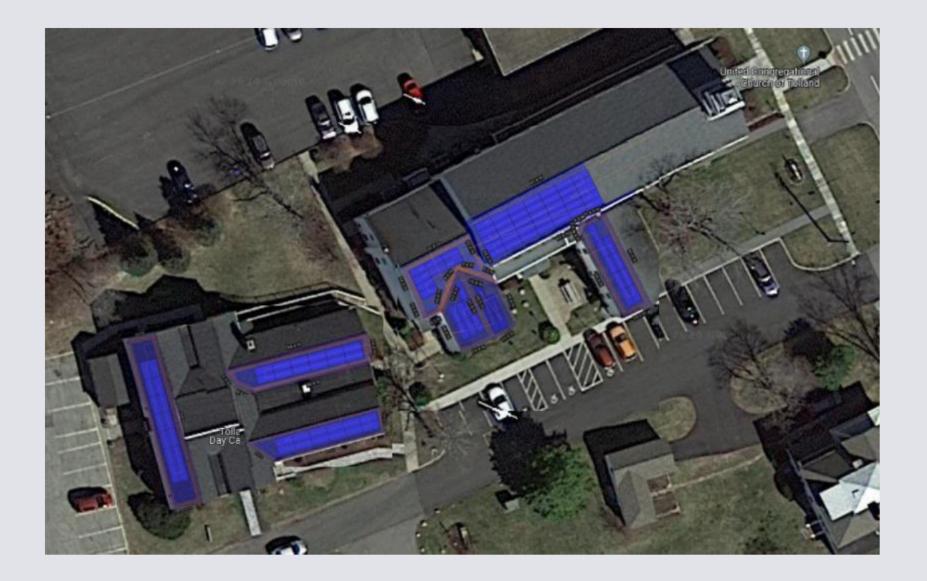


UCCT Proposed Solar Panel Installed Images





UCCT Compromise Solar Proposal



UCCT Compromise Solar Proposal – Spring, Summer, Fall Street View

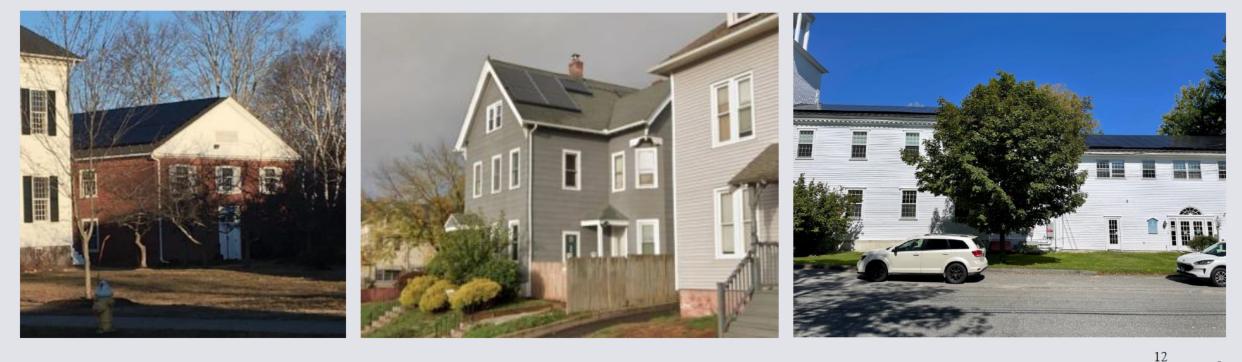


UCCT Compromise Solar Proposal – Winter Street View



Connecticut Historic District Solar Approvals

- The Connecticut State Office of Historic Preservation approved the UCCT building-mounted solar proposal
- Connecticut historic district structures with approved solar panels:



New Britain CT

Vernon CT Historic District Solar Approvals











Historic District Guidelines that Support this Compromise Solar Proposal

- Connecticut General Statute 7-147f and Section 96-5 of the Tolland Code: No application for a certificate of appropriateness for an exterior architectural feature, <u>such as a solar energy system</u>, designed for the utilization of renewable resources shall be denied unless the commission finds that the feature cannot be installed without <u>substantially impairing the historic character and appearance of</u> <u>the district</u>
- Tolland Green Historic District Chapter 96 Regulations: 96-4 Certificate of Appropriateness; ... For the purposes of this chapter, exterior architectural features which <u>are located on the side or to the rear of</u> <u>buildings or structures and are only incidentally visible from a</u> <u>public street</u> shall not be considered "open to view." "

Join Us in Supporting this Compromise Solar Panel Proposal

- This Compromise Solar Panel Proposal:
 - Creates green environment support that is only incidentally visible from a public street
 - Results in no substantial impairment of the historic character and appearance of the district
 - Relieves UCCT from exceptional practical difficulty and undue financial hardship
 - Supports long-term continuation and support of UCCT and its 715 members
 - Aligns with UCCT member vote to approve Compromise proposal
 - Encourages continued UCCT community involvement and support
 - Demonstrates meaningful compromise between historic preservation and global stewardship
 - Establishes a tasteful, prestigious Tolland example of historic preservation, reduced carbon footprint, and green environment support
- UCCT respectfully requests TGHDC approval of this compromise solar proposal

Name	Address
Laura Bretas	16 Tolland Green
Tom Calabrese	59 Tolland Green
Anne-Marie & Dennis Carlson	41 Tolland Green
Lisa & Fred Day-Lewis	63 Tolland Green
Mitchell L Doucette	100 Tolland Green
Tonja Kelly	64 Tolland Greem
Susan Lucek-Hughes	95 Tolland Green
Anabel Perez Malone	699 Tolland Stage Road
Kate Vallo	80 Tolland Green

To Whom it May Concern

My family has lived in Tolland since 1977 and my husband, daughter and I have had a home in Tolland since 2002. We moved to the "Historic Green" a little over 5 years ago.

As with all residents of the historic district, we fully embrace the historical heritage of our homes and the district as a whole. At the same time, we are also keenly aware of a responsibility to the future of our town, and to all of its residents.

We appreciate and fully support the prospect of having solar panels installed on the roof of United Congregational Church, right here in the historic district of Tolland. What a wonderful opportunity to demonstrate the town's commitment to a clean and sustainable energy future, especially on one of our most beautiful and iconic buildings!

We look forward to the adoption of solar panels at the UCC, as well as other historic buildings and homes in the district.

Thank you for your consideration.

Susan Lucek-Hughes 95 Tolland Green

Anabel Perez Malone

9/19/2023 11:10 AM

Solar Panel Support

Good morning,

I want to express my support for the installation of solar panels on the United Congregational Church of Tolland and education building. Embracing solar panels on buildings on the Tolland Green demonstrates the town's commitment to both preserving the historic integrity of the site as well as the advances in clean and renewable power sources.

While I understand objection to the panels on the basis that they are not historic, that cannot be the only metric by which the Commission reviews proposals. Allowing the solar panels actually gives the Historic District Commission more credibility because it shows that it can balance maintaining the beauty of the Tolland Green with the progress that will keep this town alive and thriving.

As a homeowner in the Tolland Green Historic District, I, again, fully support the solar panel proposal before the Commission.

Best, Anabel

Anabel Perez Malone 699 Tolland Stage Rd Tolland, CT 06084

Mitchell Doucette

Support of solar panels for UCC



 Dr. Mitchell L. Doucette, resident of 100 Tolland Green, fully support UCC's installation of solar panels. I also find the need to voice my support for a private property owner's ability to make adjustments to their property antithetical to the American process.

Sincerely, Mitchell L. Doucette, PhD, MS 100 Tolland Green

Mitchell L. Doucette, PhD, MS

08/14/2023

To Whom it may concern;

My thoughts re our church adding solar on the roof:

I applaud the plan to add solar; it makes so much sense. A large structure such as our church affords a lot of roof space to effectively generate lots of electricity. That makes it ideal. I hope the plan gets approved and moves forward. I commend the church leadership for developing this plan. Adding solar on buildings to generate power is what we need to do much more of around the world to reduce generation by fossil fuels. I will be happy to look over at the church to see the solar panels just as I am when I see the ones at our neighbor's place at the former Tolland Inn.

Tom Calabrese 59 Tolland Green Tolland, CT 06084 9/18/2023 6:12 PM

August 22, 2023

41 Tolland Green Tolland, CT 06084

To Whom It May Concern:

My husband and I live next door to the United Congregational Church of Tolland. We rent the first floor of what is commonly known as the Tobiassen House which is owned by the church. We love our spot on the Green and work hard to make sure that our home is visually appealing throughout the seasons.

We would like to take this opportunity to state that we have absolutely no issue with the church's potential use of solar panels. Having lived in a solar-paneled home 40 years ago, we do not find them unsightly. The look of solar panels has come a long way since then and we were thrilled at how much electricity we saved.

Our congregational church, like most towns in New England, is an iconic part of the town's main thruway. A building with solar panels shows that the owners care deeply for the environment and we support the church's use of solar panels 100%.

Thank you!

AMCarlson and R

Anne-Marie & Dennis Carlson

Lisa Day-Lewi

Please feel free to comment -

To BAILEY BRENN JP

8/14/2023 5:07 PM

We are happy to make changes if needed. If it looks good i will send it as an attachment.

Copy Fred Day-Lewi

Dear Tolland Historical Committee and all other relevant parties:

This letter is written in strong support for the application of The United Congregational Church in Tolland (UCCT) for solar panels on its primary and secondary buildings.

We will not spend time here spelling out the federal and state statutes for guidance to historic districts in regard to the rights of home red business owners seeking to avail themselves of renewable energy tources. Nor will we quote from the HDC's own charter on the topic. Based on experience, we know the Commission has been presented with that information on numerous occasions. Suffice to say that solar and greening of historic buildings is acceptable and even encouraged in most situations. Taking with solar contractors and historic architects, we know that historic districts all over the state and country are increasingly accepting of solar. In Connecticut, Tolland HDC has been the exception, not the rule, in denying solar applications.

UCCT is an organization that we consider the open heart of this town. In one form or another, at this location or at the north of the Green, this Church has been central to Tolland for 200 years. The UCCT is corrently vibrant and financially viable, but financial projections indicate that the long-term viability of the church will require a strategy to decrease energy costs and improve efficiency. Churches all over Connecticut are closing, in part because of the increasing costs of keeping up and heating large, old buildings. It is our conviction that the value of having the Church on the Green (and we mean the Church and not the church building!) is of paramoust importance to the historic district and to all of Tolland. We hope the HDC will also appreciate UCCT's ongoing contribution to Tolland and the need to support its continued presence.

UCCT is an asset to the Town, even to residents who are not members. Reverend Jeff Gallagher goes above and beyond his duties as a pastor to volunteer as a firefighter, chaplain, and sports coach. Many UCCT members are active in important roles within our community. UCCT hosts the food share, AA meetings, PFLAG Tolland-Mansfield meetings, and other community events. The church property also hosts daycare and before/after school programs at a location convenient to Tolland Intermediate School and bus routes. If UCCT were to move, there's us telling what sort of business entity would purchase the property and what that would look like for the community. But we can be certain that losing the UCCT on the Green would be in enormous loss.

UCCT's application for solar will allow the church to continue to operate and maintain the large buildings it occupies. We have been members of a church that faced financial hardship before, and it is very difficult for the leaders to continue to focus on the mission of the Church when proceepied with paying the bills. We don't wont that for our church community on the Green. Showing the UCCT and its leaders our support in their endeavors, though it won't guarantee things will stay the same, is one of the ways that our community can show them that we want them here. We want them to be successful, we want them to thrive. And if the UCCT's aim to go green is inspired by principles of stewardship, we want the UCCT's be allowed to essercise those principles where they are now, without needing to move.

And no, the community will not lose its historic designation by allowing homeowners and organizations to add solar. That simply will not happen, despite scare tactics to the contrary. Again, Tolland has been the exception, not the rule, in denying solar applications. Modern, architectural asphalt shingles really have no more historic value or relevance than solar panels.

We know other neighbors feel the same and hope you will be hearing from many of them.

Sincerely,

Lisa and Fred Day-Lewis 63 Tolland Green Tolland, CT 06084

31



Dear Church Moderator Bailey Brenn,

Thank you for alerting neighbors about the United Congregational Church of Tolland's hope to install solar renewable energy collection panels on the church's south roof as well as on the education building. As a neighbor, I am in support of this project.

The Tolland Green has a rich history, including a history of innovation. Solar panels offer an energy solution that is innovative, while also being low profile enough so as to not distract from the historic charm of the neighborhood.

Good luck with the project!

Kate Vallo 80 Tolland Green (former UCCT parsonage!)

Solar panels for church



Bailey,

I would like to add my support to the proposed solar panel project at our United Congregational Church on Tolland Green. My family has been on the Green since 1951 - it is a part of our character and being, and we hope that the historical character of the Green will remain for a long time. But life goes on and changes occur, generally for the betterment of our way of life. Even our church has made upgrades and additions, keeping the colonial character intact even while expanding and improving its place in the community, growing and changing with the times. Now we all need to be environmentally proactive and make changes in our choices for energy. Solar power is the obvious choice. The rooftop panels do not change the structure of the building and are removable and replaceable. I imagine that the early residents of the Green would have loved to hamess the power of the sun in this way! Going solar would be a definite benefit for the life of our church, which has been at the center of our community for generations. We can keep our colonial heritage and still move forward. Thank you.

Laura Bretas 228 Buff Cap Rd and 16 Tolland Green Tolland CT

Hi Bailey,

As a resident of the Tolland Green, I support the installation of solar renewable energy collection panels on the south facing roof of the United Congregational Church of Tolland and on the education building to the rear of the church building. This is a step in the right direction for the sustainability of UCCT and Tolland Green Learning Center as resources to the community. This is a **common sense** approach in consideration of present day reality and the preservation of this historic building, particularly as many mainline churches are closing their doors due to a decline in membership and financial support.

Sincerely, Tonja Kelly 64 Tolland Green Tolland, CT 06084

Laura Smith

From:

Sent:

To:

Kevin Thompson Friday, March 8, 2024 4:44 PM Laura Smith Subject: [EXTERNAL]Re: FW: [EXTERNAL]Re: COA Application 45 Tolland Green **Attachments:** UCCT Solar Presentation Rev One 03.08.2024.pptx

Hello Laura,

Attached is a revised presentation that addresses the questions raised by the Tolland Green Historic District Commission Chair. Please see presentation references in blue.

Please confirm receipt and distribution to the TGHDC.

Thank you,

Kevin Thompson

On Mon, Mar 4, 2024 at 8:12 AM Laura Smith lsmith@tollandct.gov> wrote:

Good morning,

Please see below for the requested information from the Chair of the TGHDC. Any correspondence can be emailed directly to me.

Kind regards,

Laura Smith

Building Permit Technician

21 Tolland Green

Tolland, CT 06084

860-871-3601

lsmith@tollandct.gov

Please note the change in my email address to lsmith@tollandct.gov

From	Indie	Coleman-Marzial		
FIUIII.	Jouie	COleman-Iviai ziai	0	

Sent: Friday, March 1, 2024 9:36 AM

To: Laura Smith <lsmith@Tollandct.gov>; Jim Paquin <jpaquin@Tollandct.gov>

Cc: Ann Deegan	; Celeste Senechal		; Kathy Bach
; Fred Day-Lewis	;	Mariah B	; John Hughes
		Katie Stargardter	

Subject: [EXTERNAL]Re: COA Application 45 Tolland Green

Thank you, Laura.

Can you please ask the applicant for:

1. The locations/addresses of the 2 stone churches they reference in the packet so we can see where they are located within an HD. Given a presumed preference for CT historic district solar panel photographs, new images with CT location references replace previous federal examples and are on slides 12 and 13.

2. For current pictures taken of the property with the tree as seen today (a winter view). Winter view images are on slide 11.

3. A current (winter view) before and after picture of the proposed solar installation including the # of panels. The after-view picture provided in the packet has the solar panels superimposed on top and in front of a tree with leaves, which does not depict the actual view of the roof demonstrating as it will be seen from the street today. Winter view images are on slide 11. Number of roof panels is on slide 10.

4. A realistic picture/photograph of the actual solar panel, so we can see how visible the silver lines will be. The flyer included in the packet is difficult to see. Enlarged images are on slide 7. There is slight variation on panel surfaces based on panel availability at the time of installation. The panels proposed in this revision are all black as compared to the original presentation which were black with aluminum borders.

5. Photographs of the same solar panels installed on existing properties. Existing property images are on slide 8.

At our next scheduled HDC meeting on March 20 th we will be discussing and updating our COA application form to reflect these requirements. Thank you for your assistance with this request.
Much appreciated,
Jodie
From: Laura Smith < <u>Ismith@Tollandct.gov</u> > Sent: Thursday, February 29, 2024 4:34 PM To: Jodie Coleman-Marzialo Subject: COA Application 45 Tolland Green
Hi Jodie,
Attached is the new COA application for 45 Tolland Green.
Have a nice night.
Laura Smith
Building Permit Technician
21 Tolland Green
Tolland, CT 06084
860-871-3601
<u>lsmith@tollandct.gov</u>
Please note the change in my email address to <u>lsmith@tollandct.gov</u>

Agenda Item 5.2

Legal Notice Public Hearing

Tolland Green Historic District Commission

The Tolland Green Historic District Commission will hold a Public Hearing on Wednesday, March 20, 2024, commencing at 7:00 p.m., to hear and discuss the following:

<u>45 Tolland Green</u> - Request by Kevin Thompson to install a roof-mounted solar array **<u>95 Tolland Green</u>** - Request by Venture Home Solar to install a roof-mounted solar array

A copy of these applications are on file and available for review online: <u>https://www.tollandct.gov/historic-district-commission/pages/applications-pending</u>

To be advertised twice in the Journal Inquirer: Thursday, March 7, 2024 and Thursday, March 14, 2024



TOLLAND GREEN HISTORIC DISTRICT COMMISSION Application for a Certification of Appropriateness

Updated 03/05/24

Property Information	
Property Address:	95 Tolland Green, Tolland, Connecticut 06084
Property Owner:	John Hughes
Phone Number:	

Applicant Information

Applicant Name:	Dicant Name: Venture Home solar - Marilu Medina (permit coordinator)					
Applicant Address: 327 Captain Lewis Dr. Southington CT 06489						
Phone Number:	Email Address:					

Project Information

Type of Building:

Residential - Single house

Nature and description of work to be done as it affects exterior appearance. Attach appropriate drawing or plans giving the position of the house or structure on the site, ground plan of house with proposed addition, and all pertinent elevations showing size and style of windows, dormers, doors, exterior wall finishes, roofing material, chimneys, vents and ornamentation. (If more space needed, attach sheet to application.)

PV Solar panels roof mounted installation 13.60kw - 32 panels- Not structural upgrades

Estimated Start and Completion Dates:

Start:

Complete:

- 1. Attach a photograph of the existing structure or place to be changed as viewed from the street showing that portion of the structure to be altered, together with a drawing of the proposed alteration or change.
- 2. Application fee of \$75.00 must accompany application (make checks payable to Town of Tolland).
- Application form, fee, plans, photograph and drawing must be submitted to <u>Planning & Building Department</u>. Public Hearings will be scheduled within not more than sixty-five days after the filing of an application.

Certificate of Appropriateness will expire 1 year from date of approval.

This application form and all accompanying plans and materials are accurate and complete:						
Applicant Signature:	How Ach	Date:	03/05/24			
Property Owner Signature:	John Hughes	Date:	03/05/24			

----OFFICE-USE ONLY ---

Received & Fee Paid:	Hearing Sc	Scheduled:
Hearing Advertised:	Action:	
Notice of Action to Applicant:	HDC Due [Date:

Prepared for:

Work Order Number

00074211

Prepared By: Name

Venture Home Solar



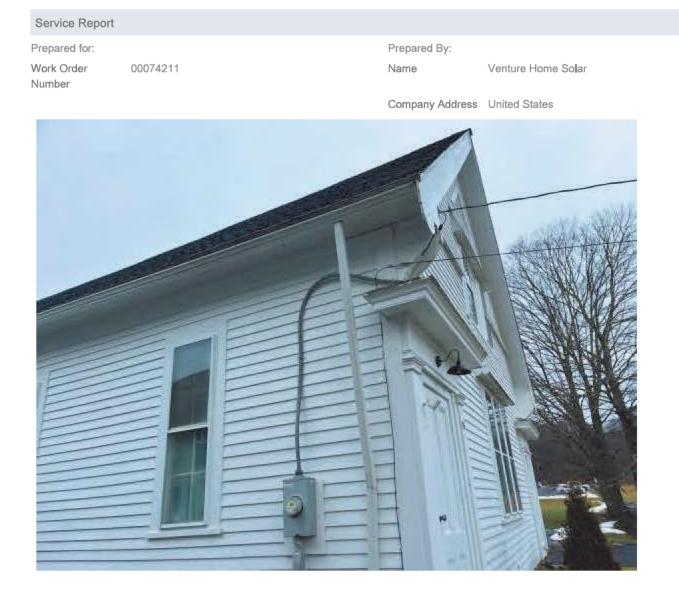
Prepared for:

Work Order Number 00074211

Prepared By: Name

Venture Home Solar





00074211

Prepared for:

Work Order Number Prepared By: Name

Venture Home Solar



Prepared for:

Work Order Number 00074211

Prepared By: Name

Venture Home Solar



Prepared for:

Work Order Number 00074211

Prepared By: Name

Venture Home Solar



Service Report Prepared for: Prepared By: Work Order 00074211 Name Venture Home Solar Number Venture Home Solar Venture Home Solar



00074211

Prepared for:

Work Order Number Prepared By: Name

Venture Home Solar



Aurora Shade Report

Customer John Hughes

Address 95 Tolland Grn Tolland, CT 06084, USA

Designer Gunjan Singh

Coordinates (41.874286, -72.370815) Organization Venture Solar LLC

Date 2 March 2024



2,450 or more

φ

Summary

Array	Pane Count	Azimuth (deg.)	Pitch (deg.)	Annual TOF (%)	Annua l Sol ar Access (%)	Annual TSRF (%)
1	23	162	43	99	88	87
2	9	252	20	85	94	80
Weighted average by panel count	-	-	-	-	89.7	85.1

Monthly solar access (%) across arrays

Array	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	85	87	85	87	91	94	93	88	85	86	86	87
2	97	96	95	94	92	91	92	93	95	97	97	97



Customer

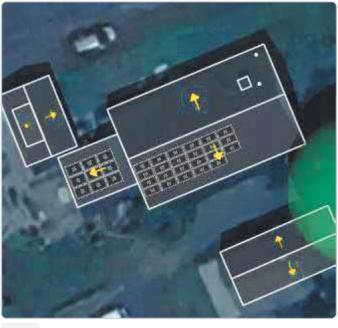
John Hughes

Address 95 Tolland Grn Tolland, CT 06084, USA **Designer** Gunjan Singh

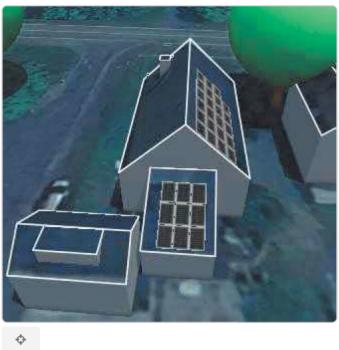
Coordinates (41.874286, -72.370815) **Organization** Venture Solar LLC

Date 2 March 2024

Zoomed out satellite view



3D model



Φ

3D model with LIDAR overlay

25 ft





Customer

John Hughes

Address 95 Tolland Grn Tolland, CT 06084, USA **Designer** Gunjan Singh

Coordinates (41.874286, -72.370815) **Organization** Venture Solar LLC

Date 2 March 2024

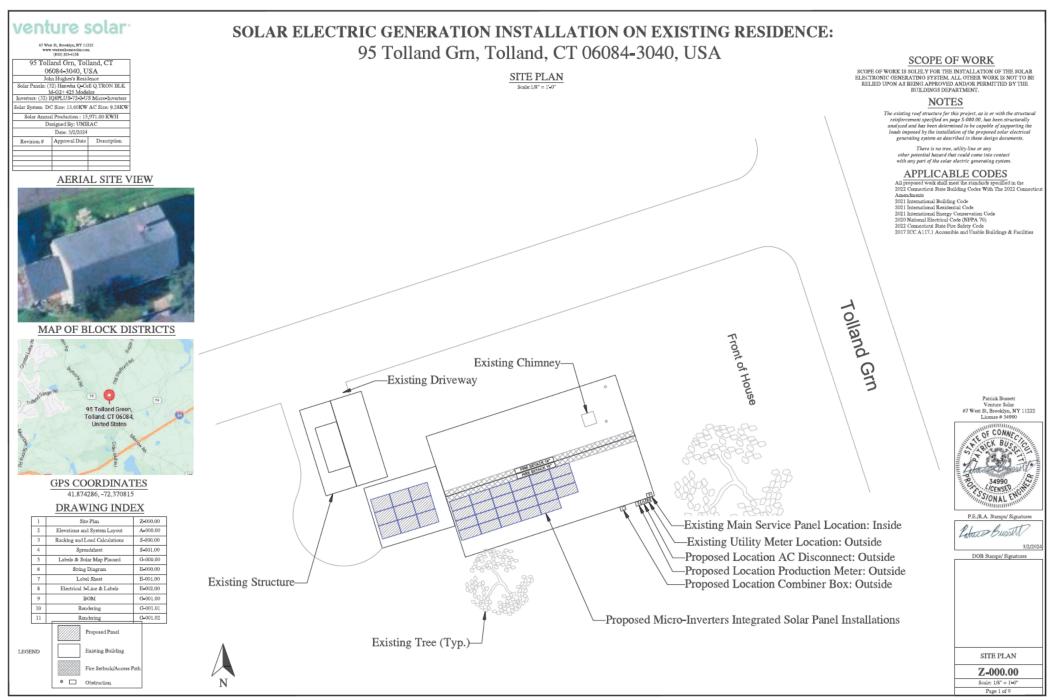
Street view and corresponding 3D model

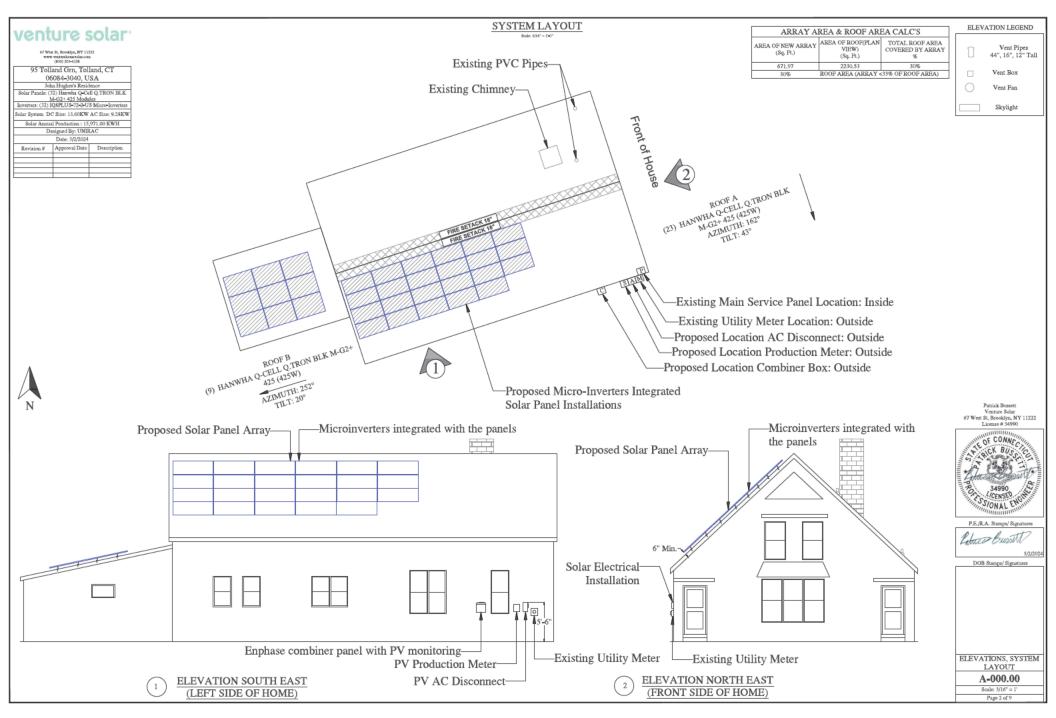


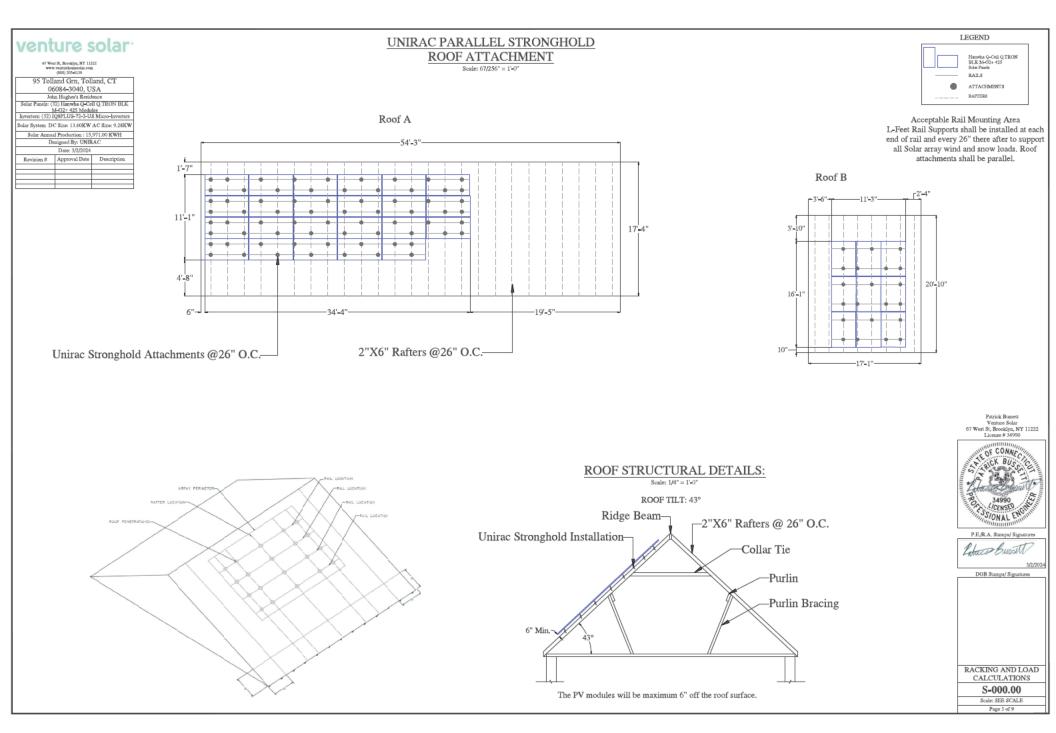
φ

I, **Gunjan Singh**, certify that I have generated this shading report to the best of my abilities, and I believe its contents to be accurate.







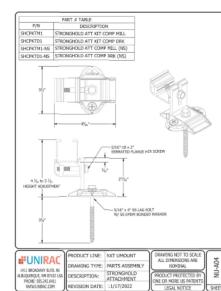


venture solar

67 West St, Rovskiya, NY 11322 www.ws.monocheconstolar.com (800) 203+61:58					
95 Tol	land Grn, Tol	land, CT			
0	5084-3040, U	SA			
Jo	hn Hughes's Resid	lence			
Solar Panels: (32) Hanwha Q-Cell Q.TRON BLK N-G2+ 425 Modules					
	IQ8PLUS-72-2-U				
Solar System DC Size: 13,60KW AC Size: 9,28KW					
Solar Armu	al Production : 15	,971.00 KWH			
D	esigned By: UNB	AC			
	Date: 3/2/2024				
Revision# Approval Date Description					

NXT UMOUNT RAIL





PRODUCT PROTECTED BY ONE OR MORE US PATENT LEGAL NOTICE

SHEET

STRONGHOLD INSTALLATION

NXT UMOUNT RAILS MAX. SPAN

Maximum Continuous Spliced Rail Length for NXT UMOUNT Rail with Stronghold Attachments (ft.)/Maximum Reaction Force (lbs)

	Attachment Spacing					
ΔT (°F)	24"	48"	72"			
40	67 / 155	94/218	117/272			
50	59/171	86/250	105/305			
60	55/191	78/272	93/324			
70	51/207	70/285	81/329			
80	47 / 218	62/288	80/372			
90	43 / 225	62/324	69/361			
100	43 / 250	54/314	64/372			
120	39/272	53/369	53/369			
140	35/285	45/366	45/366			

Maximum Continuous Spliced Rail Length for NXT UMOUNT Rail with Flashkit Pro Attachments (ft.)/Maximum Reaction Force (lbs)

	Attachment Spacing					
ΔT (°F)	24"	48"	72"			
40	75/139	102/189	129/239			
50	67 / 155	94/218	117/271			
60	63/175	86 / 239	105/292			
70	55/178	78/253	93/302			
80	51/189	70/259	93/345			
90	51/213	70/308	81/338			
100	47 / 218	62 / 287	80/371			
120	43 / 239	62 / 345	66 / 367			
140	39/253	54/350	57/370			

INVERTER IQ8 PLUS SPEC-SHEET

18 F67 6 M/L (30)	0815	48-48-2-15		100001-11-1-0-0
Commonly areal workule pair legal	w	230-350		338-440
Module-compatibility	-	Screent compatibility, PV resulting must have Merials representibility oper its charter.	e til in versioner ingest DC -	vollage and racinum modale (_ lated letion. . Installers interpinverters/pairolator
MPPT voltage gauge	v	27-37		23-48
Operating range	v	10-40		9-01
Minimum/Maximum start solitope	Y	22.49		21/56
Maximum Input DC sullarge	v	90		82
Maximum continuous input DC current	A	10		8
Maximum input DIC short-circuit current	A		29	
Maximum module I.			20	
Overvoltage-class OC port				
DCport backfeed current	mA		0	
PV array sorthgunation	- 1+1		ction required, AC-side pr	
SERVER MALER	1473	10-12-0-16		1007.01-11-1-01
Reak output power	NA:	245		300
Maximum continuous output youngr	3A	240		290
Nominal grid voltage (2-4.)	×		240, split-pressell, LJ, WC	7
Matinum and Maximum grid college?			29-284	
Maximum continuence output 029882		LD		1.21
Nominal Insperso	10		60	
Estamled buquency unge	10		47-18	
RC short-should fault surveille une if energy les	Jama .		2	
Maximum artin per 20.4 S-4.3branch nicrait ⁴		*		a
Tstallian manic distortion	- 16		+5	
Durvellage class.MI port				
RC port backhed samed	mΔ		30	
Rower tactor setting			50	
Brid-teclpower factor ladjusable)			0.85 keeding 0.85 laggin	9
Peak efficiency	- 5		80	
CBC weighted efficiency	-16		92	
Nghtimepower consumption	πN	23		29
Anblerit temperature range			070 to 6070 1-40% to 140	
Antenere temperature range Balaites Incredity serger			4% to 100% (condensing)	
DC corrector tope			Are to roun ponteneng	
Desenational (Hereita - E)			1 id - 111 min H.9 id - 20.	Les (Les)
Weight		20 84 85	LOB N/ CL 28 Inc	
Cooling			Kabural possection no far	-
Approved for wet locations			fee	•
Polition degree			100	
Incinary		Classificity disclosed	labed, consolion-melidant	ponenerty enclosure
End-screenfal satisfiers/UV exposure satis			HERE THE BROADS	

COMBINER BOX 4 SPEC-SHEET

ADDEL NUMBER	
10m8inar 8 43A86-348 4 2-8-4M1 313-4 (000 1547-3016	14 Continue 4 with 40-Ensures pointed circuit based for integrand sevenue pack PV production meaning IAMI CVL29 a 3/5N and zon-ampties monitoring(s):2.3N; Inductive a silver polarability for another the Q Battery and R System-Controller 3 and to obtact their.
3 Cumbiner 4 C 142-Milt-2481-45 121-12-4M1-240-42: (888-1547:3288)	12 Eurobies 42-with 32 Balance patient distribution for 34 spant deverse path PP production-interimp (348) CC3.23 + 8.2% and instanty distribution for the spant deverse path PP production version (348) CC3.23 + 8.2% and instanty distribution of path CC3.24 + 8.2% and the spant development of
ACCESSORIES AND REPLICEMENT PAR	(TE (not included, order separately)
iupportecimionorwerters	195,/82, and 196. (De not: mix 196/7 Ministry enters with 198)
Conversional KR COMMERCIAL MODELLA MT-016 CELLMODEM MT-06-07-01 CELLMODEM MT-06-07-05	Insteades COMMISIONT FIL and CELLANDERM MIL BIL 5P-02 with 5-year Reprint data plans - 46 Description TRAVE enhancement and Separat Separat data plans - 46 Description TRAVE enhancement (Separat Separat Casta plans
Could Develop 10 P 0 P 0 P 0 P 0 P 0 P 0 P 0 P 0 P 0	Hericanov Control Control Control Fill (1997) Fills Control (1997) Fills Fills Fi
(4.50, 435HE) 3-E5	Septement of a sheld for a Continue 44th
14.PL0.0120-3	Annexativy susceptable for Present Upp Carrier in K2 Combiner A140 (suspired for EPL-D-07)
10-0A-00-020A	Heid-dawn hit far Eatar einnarlinnglar with pergan
Consumption manitoring CT C1 080 SPLIT/CT 008-CLAM/S	A pair of 2008, split care so with barehowness
LECTRICAL SPECIFICATIONS	
lating	Continuous dela
Lystere outtage	10:04/0AC.M Hz
interview branches trading	134
And comfile your carried safety	104
Aux. continuous-summit teling/inputhans Publicsepp)	644
Ans, fame to rait to two leves of	994
manuti circuita (solar andror atorage)	Up in four 2-pole Eakier BR series Exhibitisched Economitien (E.C.) Invalue's anty (soil invaluied)
Fan. total branch-circuit breaker using deput	80A of distributed generation/VBA with/Q Gateway'sreaker induded
() Catoway Israalier	104.ce 158.rating GE/Stemena/Exten Included
Production metering CT	205A actid core pre-installed andwineths H3 forsevery
HECHANICAL DATA	
Simensions (Asstud)	52.5 cm x 46.5 cm x 16.6 cm (14.78 in x 19.5 in x 6.63 in). Height is 53.5 cm (21.66 in) with mounting bracasta.
Weight	15 kg m 5 kg
Lerbieri lempetaliste tampe	18PC to #4MC(45PF to T8PF)
Cooling	Heneral convection, also hear shield
national environmental rating	Curboox NPTL-swittled, NEAAA type 290 polyce/benete-cellstituction
Version	 253 Ao 55A Invalier Insults: Vis 6 4745 support constantizing 655 Invalue tranch Ingut; 4 to 16 AMG support constantizing Marin Ingementing colgues; 150 In 2440 Support conductors Nearch and ground: 14 to 16 capter conductors Nearch and cold cod cobramationment for conductors
Altrade	Up to 3,000/wersex (4,643 feet)
NTERNET CONNECTION OPTIONS	
rangement set P1	HER BELTING R
Cellular Nacuat	CELLMODERINT 05-07-08, CELLMODEM M1-85-AT-95-040 leased LTE-NT opticale modernit. PeterhatianMobile Connect onNue modernis required for di Erginana Energy System tra alfelites.
Identi SOMPLIANCE	Optional, BIER (803.3, Earlie (or Early) (ITP-(thermet rable (included)
Camplianos, rd Cantoner	OK Byle 21 (31, 194-56) ITEE 157-218-1, 0, 194-56, 27 (a, 0) and 197-20-1 and 218 (A-MH-54)-40] OMEGICA 213, 97 (31, 116-44) 27 (32 - and 34) and 34, 653-033 Production Instances, and an and an analysis (31, 159-56) contrain() Consemption Interless, association (31, 159-58) Consemption
Iompfiance, KL Garaney	UL 6060* 1/CHR018 20.2 Na. 61919-1 LTID Explose logo, IC-CO16610* 1/VC, and urber names are bode '6051.0'

PV MODULE SPEC-SHEET

Mechar	nical Specification	Patrick Bussett
Format	67.8 in × 44.6 in × 1.18 in (including frame) (1722 mm × 1134 mm × 30 mm)	Venture Solar 67 West St, Brooklyn, NY 1 License # 34990
Weight	47.2 lbs (21.4 kg)	THE OF CONNECT
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology	T ACK BUSSET
Back Cover	Composite film	Setucient
Frame	Black anodised aluminium	20, 34990 L/CENSED
Cell	6 × 18 monocrystalline Q.ANTUM NEO solar half cells	SIONAL EN
Junction box	2.09-3.98 in × 1.26-2.36 in× 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), Protection class IP67, with bypass diodes	P.E./R.A. Stamps/ Signati
Cable	4 mm² Solar cable; (+) ≥59.4 in (1510 mm), (-) ≥59.4 in (1510 mm)	Labour Bussill
Connector	Stäubli MC4; IP68	DOB Stamps/ Signature



venture solar

67 West 5t, Brooklyn, NY 11222

	(800) 203-4158	
95 Tol	land Grn, Tol	land, CT
0	6084-3040, U	SA
Jo	hn Hughes's Resid	ience
	32) Hanwha Q=Co M-G2+ 425 Modu	
Inverters: (32)	IQ8PLUS-72-2-U	S Micro-Inverters
Solar System D	C Size: 13,60KW	AC Size: 9,28KW
Solar Annua	al Production : 15	,971,00 KWH
D	esigned By: UNII	RAC
	Date: 3/2/2024	
Revision#	Approval Date	Description

WARNING ELECTRICAL SHOCK HAZARD

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

LABEL LOCATION: INVERTER(S), AC DISCONNECT(S), AC COMBINER PANEL (IF APPLICABLE), PER CODE(S): NEC 2020: NEC 690,15 (C) & NEC 690,13/B)

RAPID SHUTDOWN FOR SOLAR PV SYSTEM

LABEL LOCATION; UTILITY SERVICE ENTRANCE/METER (WITHIN 3 FEET), INVERTER/IDC DISCONNECT IF REQUIRED BY LOCAL AHJ, OR OTHER LOCATIONS AS REQUIRED BY LOCAL AHJ, 690.12(D)(2)

▲ WARNING

LABEL LOCATION: SERVICE PANEL IF SUM OF BREAKERS EXCEEDS PANEL RATING NEC 690.12 (B)(3)(2)

WARNING DUAL POWER SOURCE COND SOURCE IS PHOTOVOLTAIC SYSTE

LABEL LOCATION: POINT OF INTERCONNECTION PRODUCTION METER NEC 705 12(D)(3) & NEC 690 59

NOTES AND SPECIFICATIONS: • SIGNS AND LABELS SHALL MEET THE REQUIREMENTS OF THE 2020 ARTICLE 110,21(B), UNLESS SPECIFIC INSTRUCTIONS ARE REQUIRED BY SECTION 690, OR

- IT REQUESTED BY THE LOCAL AHJ. SIGNS AND LABELS SHALL ADEQUATELY WARN OF HAZARDS USING
- EFFECTIVE WORDS, COLORS AND SYMBOLS.
- EFFECTIVE WORDS, COLORS AND SYMBOLS. LABELS SHALL BE PERMANENTLY AFFIXED TO THE EQUIPMENT OR WIRING METHOD AND SHALL NOT BE HAND WRITTEN.
- LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE
- ENVIRONMENT INVOLVED. SIGNS AND LABELS SHALL COMPLY WITH ANSI Z535.4-2011, PRODUCT SAFETY
- SIGNS AND LABELS, UNLESS OTHERWISE SPECIFIED. DO NOT COVER EXISTING MANUFACTURER LABELS.

PHOTOVOLTAIC AC DISCONNECT RATED AC OUTPUT CURRENT: 38.72 AMPS NOMINAL OPERATING AC VOLTAGE: 240 VAC

LABEL LOCATION: AC DISCONNECT(\$), PHOTOVOLTAIC SYSTEM POINT OF INTERCONNECT(ON, PER CODE(\$): NEC 2020: 690,54

PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION: CONDUIT, COMBINER BOX (PER CODE: NEC690.31(D)(2)

PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION: EMT/ CONDUIT RACEWAYS (PER CODE: NEC 690,31(O)(2)

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

LABEL LOCATION: MAIN SERVICE DISCONNECT / UTILITY METER (PER CODE: NEC 690,13(B))

PHOTOVOLTAIC

AC DISCONNECT 2020 NEC CODE 690,13(B)



LABEL LOCATION: INVERTER PER CODE: NEC 690.31(E)



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

LABEL LOCATION: COMBINER BOX / CIRCUITS / CONDUIT COMBINER BOX / ENCLOSURES / EMT ENCLOSURES PER CODE: NEC 706.15(C)(4) and NEC 690.13(B)

TURN OFF PHOTOVOLTAIC

AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

LABEL LOCATION: COMBINER BOX / CIRCUITS / CONDUIT COMBINER BOX / ENCLOSURES / EMT PER CODE: NEC 110.27(C) & OSHA 1910.145(f)(7)

ENCLOSURES

AC Output Current: 38.72A Nominal Operating AC Voltage: 240V

COMBINER PANEL

CALITION POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING

SOURCES WITH DISCONNECT(S) LOCATED AS SHOWN:





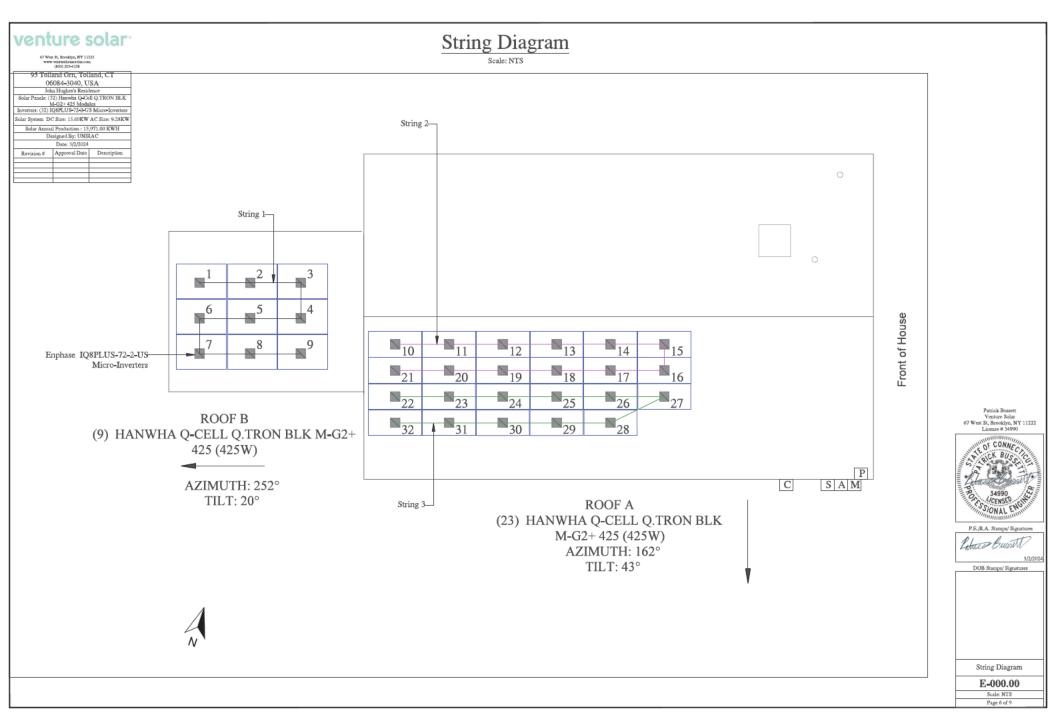
G-000.00 Scale: NTS Page 5 of 9

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

COMBINER PANEL

SOLAR PV SYSTEM EQUIPPED

LABEL LOCATION; MAIN SERVICE PANEL PER CODE : NEC 2020 : IFC 605,11,3,1(1) & 690,56(C)



venture solar		La	bels Sheet			
67 Wee R, Rowskin, NY 11222 vvv wurdankaenduz.com (000, 39-138 95 Tolland Grn, Tolland, CT 060684-3040, USA	String Number	Module Number	Sticker		23	
John Hugher's Residence Solar Panche: (32) Hawba C-Coll Q. TRON BLK M-G24+425 Modulet Inventes: (32) IQEPLUS-72-0-US Micro-Inverters		1			24	
Solar System DC Size: 13.60KW AC Size: 9.28KW Solar Azenal Production: 15.971.00 KWH Deteigned By: URRAC		2			25	
Date: 3/2/2024 Revision # Approval Date Description		3			26	
		4			27	
		5		3	28	
	1	6			29	
		7			30	
		8			31	
		9			32	
		10				
		11				
		12				Patrick Bussett Venture Solar
		13				Partick Buasett Venture Solar 67 West S., Brookyn, NY 11222 Liorae 6 43690
		14				OF CONNEC
		15				34990 34990
		16				A JA990 JCENSED SJONAL FUEL
	2	17				P.E. (R.A. Stamps/Signatures
		18				3/2/2024 DOB Stampe/Signatures
		19				
		20				
		21				
		22				Label Sheet E-001.00
						Scale: NTS Page 7 of 9

venture solar

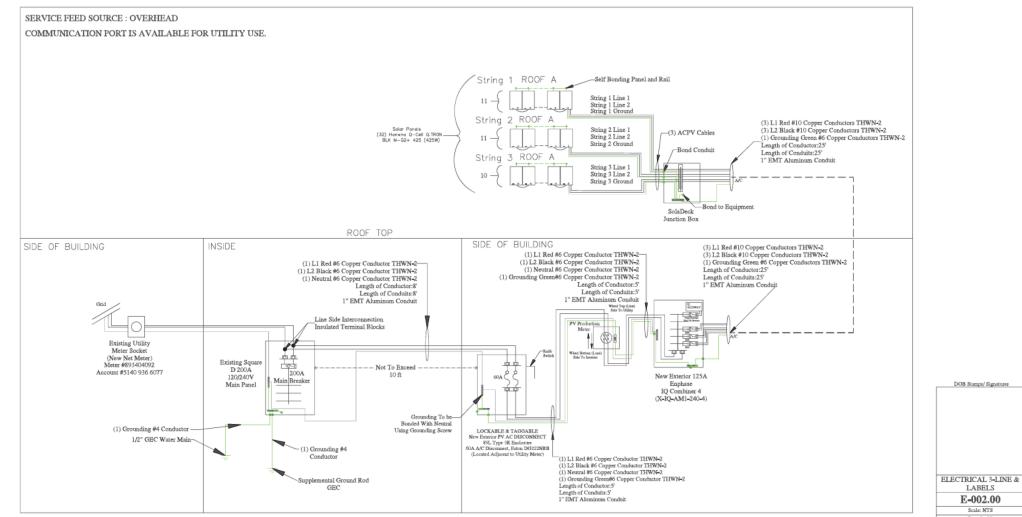
	st St, Brooklyn, NY 112 #.venturehemesolar.com (800) 203–4158	
95 Tol	land Grn, Tol	land, CT
0	6084-3040, U	SA
Jo	hn Hughes's Resid	lence
	32) Hanwha Q-Ce M-G2+ 425 Modu	II Q.TRON BLK.
Inverters: (32)	Q8PLUS-72-2-U	S Micro-Inverters
Solar System D	C Size: 13.60KW	AC Size: 9.28KW
Solar Annu	al Production : 15	,971.00 KWH
D	esigned By: UNIF	RAC
	Date: 3/2/2024	
Revision#	Approval Date	Description

MODULE SPEC-SHEET

WER CLASS			410	415	420	425	430
NIMUM PERFORMANCE AT STANDA	8D TEST CONDITIONS, ST	C'(POWER TO	LERANCE +5W/-0	0W0			
Power at MPP*	Pure	[W]	410	415	420	425	430
Short Circuit Current'	1 ₆₀	(A)	13.39	13.42	13.46	13.49	13.53
Open Circuit Voltage!	Vec	[M]	38.58	38.61	38.64	38.67	38.70
Current at MPP	kaa	TA1	12.68	12.75	12.82	12.88	12.95
CONCIL OF MELE							
Voltage at MPP	Vare	M	32.32	32.55	32.77	32.98	33.20
	V _{arr}	[M] [N]	32.32 ≥21.4	22.55 2216	32.77 ≥21.9	32.98 222.2	33.20 ≥22.4
Voltage at MPP Efficiency ²	Vore 1 OPERATING CONDITION	(N) (N) S, NMOT?					≥22.4
Voltage at MPP Efficiency ⁴ NMUM PERFORMANCE AT NORMAL	V _{arr}	[M] [N]	≥21.4	2216	>219	≥22.2	
Voltage at MPP Efficiency' NMLM PERFORMANCE AT NORMAL Power at MPP	Vare 1 OPERATING CONDITION Page	[M] [N] 5, NMOT? [W]	21.4	2216	21.9	22.2	≥22.4 325.2
Voltage at MPP Efficiency ⁴ NMLM PERFORMANCE AT NORMAL Power at MPP Short Circuit Current	Vure 1 OPERATING CONDITION Pure Isc	[M] [%] 5, NMOT? [W] [A]	221.4 310.0 10.79	>216 313.8 10.82	>21.9 317.6 10.84	≥22.2 321.4 10.87	≥22.4 325.2 10.90

			COND	UCTOR SIZING CALCU	JLATION			
CIRCUIT DESCRIPTION	NO. OF INVERTERS	Imax (690.(8A))	Icont (690,(8B)(2)(a) calc	SPECIFIED CONDUCTOR	AMPACITY @ 90°C	AMBIENT TEMPERATURE °C	CURRENT CARRYING COND.	COND. OF USE APPPLIED (690.(8B)(2)(b) calc
PV SOURCE STRING 1	11.00	13.31	13.31 x 1.25 = 16.64	#10 THWN-2	40	31-35	1-3	40A x 0,96 (amb. temp) x 1,0 (raceway fill) = 38,40A
PV SOURCE STRING 2	11.00	13.31	13.31 x 1.25 = 16.64	#10 THWN-2	40	31-35	1-3	40A x 0,96 (amb, temp) x 1.0 (raceway fill) = 38,40A
PV SOURCE STRING 3	10.00	12.10	12.10 x 1.25 = 15.13	#10 THWN-2	40	31-35	1-3	40A x 0,96 (amb, temp) x 1.0 (raceway fill) = 38,40A
COMBINER BOX OUTPUT	32.00	38.72	38.72 x 1.25 = 48.40	#6 THWN-2	75	31-35	1-3	75A x 0.96 (amb. temp) x 1.0 (raceway fill) = 72,00A
AC DISCONNECT OUTPUT	32.00	38.72	38.72 x 1.25 = 48.40	#6 THWN-2	75	31-35	1-3	75A x 0,96 (amb, temp) x 1.0 (raceway fill) = 72,00A

FUSE SIZE CALCULATIONS	STRING CALCULATIONS
(32) x 1,21A x 1,25 = 48,40A = 60A fuse size (Min.)	(11) x 1.21A x 1.25 = 16.64A <20A>OK
	(11) x 1.21A x 1.25 = 16.64A <20A>OK
	(10) x 1.21A x 1.25 = 15.13A <20A>OK



LABELS

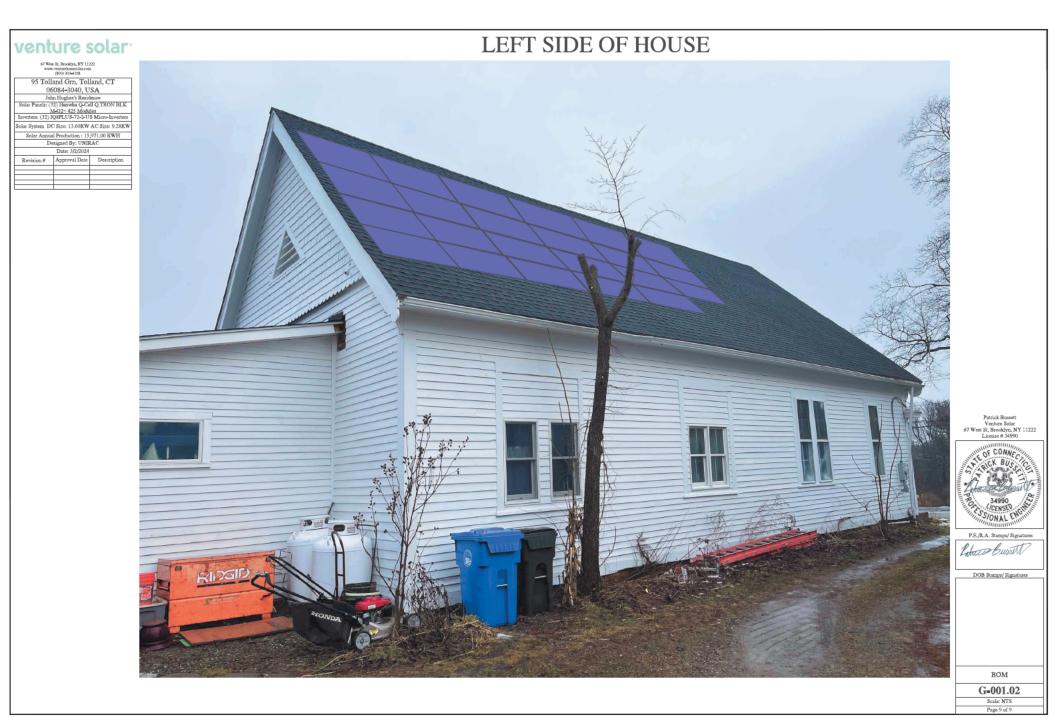
Scale: NTS Page 8 of 9

venture solar[.]

67 West St, Brooklyn, NY 11222 www.venturehemesoluc.com

ĸ
113
¢₩
_
_
-
_

			VENTURE SC	DLAR		
Customer Name	John Hughes					
Customer Address		alland CT 0608	4-3040 1154			
	UNIRAC		4-3040, OSA			
Team	ROOF			ELECTRICAL		
Description	Qty.		Bar Code	Description	Qty.	Bar Code
Hanwha 425	32		Baroode	Enphase IQ Combiner 4	1	Buroode
Portrait Q Cable - #Conn				Enphase Mobile Connect	1	
Landscape Q Cable- #Conn	14			Enphase IQ7 + Micro	0	
Q Term	3			Enphase IQ7X Micro	0	
Q Seal	6			Eaton 20 A Breaker	3	
Q-Conn 10M	2			IPC - 4/0 - #6 (Taps)	2	
Q-Conn 10F	2			60 A Disconnect	1	
Micro Inverter T Bolt				60A Set of Fuses	1	
Wire Restraints	3			100 AMP Disconnect	0	
Ground Lug				100A Set of Fuses	0	
Ground Edg	Pitched ROOF			125 A Solar Load Center	0	
Strong Hold Box (Qty.20)				Square D 100 A Main Breaker	0	
Unirac Rail	-			Square D 20 A Breaker	0	
Unirac Splice	6			Square D 15 A Breaker	0	
Unirac Ends				Enphase IQ Envoy	0	
Unirac Mids				Enphase IQ Envoy Enphase IQ7A Micro	0	
Solar Seal	4			Enphase IQ8 Micro	0	
Solar Deck				Enphase IQ8+ Micro	32	
Consumption CT x 1Sets	200			Enphase IQ84 Micro	32 0	
Fire and Smoke detector x 1 No	No			Enphase IQ8MC MICro	0	
File and Shibke detector X 1 No	110		Battery Deta		0	
Manufacturer		Туре	Battery Deta	Mfr. Part No. & Description		Qty
Enphase Energy Inc		Battery		Enphase Encharge 10		0
Enphase Energy Inc		Other		ENCHARGE-10-1P-NA AC Batter		0
Enphase Energy Inc		Moniter		COMMS-KIT-01 (Ensemble)	y	0
Enphase Energy inc	FLAT ROOF	Monter		CONFIRMATIO	N	
Chemlink 6" E-curb Kit				CONTINUATIO		
L- Foot Box w/ Nut & Bolt (Qty.24)						
4" Stand Off						
Unirac Tilt 18 - 30"	0					
Unirac Tillt 26 - 44"	0					
Unirac Tilit 40 - 72"	0			Procurement Team Signature		
Silver Unirac Rail	0			The surface of the su		
Silver Unirac Splice	0					
Silver Unirac End	0					
Silver Unirac Mid	0					
Silver Unirac Mid 4" Lag	-					
-				Come Forenan Simon fore		
8"x8"x4" Junction Box	0			Crew Foreman Signature		





Agenda Item 6.3



TOLLAND GREEN HISTORIC DISTRICT COMMISSION Application for a Certification of Appropriateness

Property Information	
Property Address:	
Property Owner:	
Phone Number:	

Applicant Informatio	n
Applicant Name:	
Applicant Address:	
Phone Number:	Email Address:

Project Information	
giving the position of the h pertinent elevations show	work to be done as it affects exterior appearance. Attach appropriate drawing or plans nouse or structure on the site, ground plan of house with proposed addition, and all ing size and style of windows, dormers, doors, exterior wall finishes, roofing material, nentation. <i>(If more space needed, attach sheet to application.)</i>
Estimated Start and Com	lation Dates:
Estimated Start and Comp	
Estimated Start and Comp Start:	letion Dates: Complete:
Start: 1. Attach a photograph o	

3. Application form, fee, plans, photograph and drawing must be submitted to <u>*Planning & Building Department*</u>. Public Hearings will be scheduled within not more than sixty-five days after the filing of an application.

Certificate of Appropriateness will expire 1 year from date of approval.

roperty Owner Signature:	Date:

Received & Fee Paid:			Hearing Scheduled:	
Hearing Advertised:			Action:	
Notice of Action to Applicant:			HDC Due Date:	

Agenda Item 9

Minutes Tolland Green Historic District Commission 21 Tolland Green, Tolland, Connecticut Wednesday, February 21, 2024 at 7:00 PM via Zoom Remote Participation Only

1. Call to order at 7:11 PM

Roll Call:

Members: Jodie Coleman-Marzialo; Celeste Senechal; Ann Deegan; Frederick Day-Lewis Alternates: John Hughes; Michael McGee Town Council Liaison: Katie Stargardter Guests: Denis Deegan; Joshua Esposito; Heather and Matthew Ferretti; Denmar Lawrence; Marilu Medina; Claudette Morehouse; Ann Nelson

J. Hughes recused himself from his role as an alternate for the matter of *HDC* #24-01.

2. Election of officers for the new year

<u>Motion</u>: To elect J. Coleman-Marzialo Chair of the Historic District Commission (HDC) By: K. Bach; 2nd A. Deegan There was no discussion. Voice vote: Unanimous in favor – the motion passed.

<u>Motion</u>: To elect C. Senechal Vice Chair of the HDC By: K. Bach; 2nd A. Deegan There was no discussion. Voice vote: Unanimous in favor – the motion passed.

K. Bach and A. Deegan thanked the HDC for the privilege of serving in the role of clerk or acting clerk and nominated F. Day-Lewis for clerk, based on the premise that he was the newest alternate, and it would be easier for an alternate than a voting member to keep minutes.

F. Day-Lewis said that he had been appointed by the Town Council (TC) as a seated, voting member. K. Stargardter confirmed that the TC voted to appoint Day-Lewis to the open seat on the HDC as a voting member. With no alternates expressing interest in serving as clerk, Day-Lewis accepted the nomination to serve as clerk on a trial basis.

<u>Motion</u>: To elect F. Day-Lewis to serve as Clerk of the HDC on a temporary basis By: K. Bach; 2nd A. Deegan Voice vote: Unanimous in favor – the motion passed.

M. McGee agreed to continue as enforcement officer.

The HDC and officers for 2024 are thus: Jodie Coleman-Marzialo (Chair) Celeste Senechal (Vice Chair) Fred Day-Lewis (Clerk) Other voting members: Kathy Bach; Ann Deegan Alternates: John Hughes; Michael McGee; and Mariah Bumps (absent) Enforcement office (continuing): Michael McGee

3. Seating of alternates

No additional alternates were seated.

4. Additions to agenda

C. Senechal proposed inclusion of an item for enforcement in future agendas.

5. Public comment

None.

6. Public hearing(s)

6.1. The public hearing was opened for a Certificate of Appropriateness (COA) at 95 Tolland Green: *HDC* #24-01 Certificate of Appropriateness- Request to install PV solar panels, roof-mounted installation 13.60kW- 32 panels- not structural upgrades.

J. Coleman-Marzialo read the Public Notice as it appeared in the Journal Inquirer, where it ran 8-February 2024 and 15-February 2024; this notice was also posted in the meeting packet online.

J. Hughes presented the COA application for installation of solar panels, continuing with renovations and to make his family's house more affordable in the face of rapidly rising electricity costs. His goal is to enable his family to stay long-term in the house that he has been renovating. Furthermore, he finds solar appealing given its benefits in terms of sustainability, decentralizing the power grid, and reducing our environmental footprint/impact. He said that in his view solar panels do not detract from the historic aspect of the house, and the layout would be barely visible from the street. He said that solar is increasingly accepted in historic districts (HDs) across the country. Within view of his house are plastic fences, metal fences, and houses built in the 1960s or 1980s; hence he does not feel that this project would detract from the HD.

J. Esposito, representing the Hughes' solar contractor, spoke to the environmental benefits of solar and outlined the layout of the system. He showed street views through screen sharing in Zoom. He also showed the results of a shade study which indicated the footprint of panels on the roof and the larger area of roof where solar could be effective, including at the front of the house. The panels would be installed on only one roof, on the side of the house, and not all the way to the front. He said that in the proposed design, the panels were pushed back as far as possible on the roof to minimize view from street under constraints imposed by the roof construction and its exposure to the sun. Driving from the west past the house, there would be "zero view" of panels.

From the east, the panels would be set back far enough to be largely hidden by trees and the adjacent house.

J. Coleman-Marzialo posed questions to J. Esposito about the design of the system and asked that he compare this design to the one in a proposal submitted previously by the applicant. J. Esposito had no information about the former proposal from 2020. J. Hughes said the design goal was to minimize the layout while keeping it economically beneficial (90% of electric use). In the design, the panels were located at the back of the roof to the extent possible.

J. Coleman-Marzialo asked if the use of different roofs located at the back of the house and on a secondary structure had been considered as alternatives to the more visible side roof used in the design. J. Esposito said there were design constraints related to roof pitch and azimuth. He said the use of the back roofs would have negative visual impact because of the additional conduit and electrical that would be required to link multiple buildings. He said the use of lower pitch roofs would require lifting panels off the roof and tilting them, and there are structural issues with low-pitch roofs. He said the proposed design minimized visibility to a reasonable extent.

K. Bach expressed concern over visibility from the street and visibility to the neighbors and suggested that moving panels to the back of the property would be helpful and advantageous to the proposal, and that the extra conduit would be visible only to the homeowner.

K. Bach said she was opposed to solar on moral grounds unrelated to HD considerations. She said her opposition to solar would never be addressed through design modifications, but at least neighbors' concerns might be mitigated if panels could be relocated and made less visible.

A. Deegan asked about a tree on the adjacent property and questioned how effectively the tree would screen the view from the street.

K. Bach likened the role of the HDC to that of a Homeowners Association (HOA). She pointed to Colonial Williamsburg as a model of how an historic community should function.

J. Esposito said that moving panels to the back roof and the roof of the secondary structure, if possible, would require more conduit and connections and questioned whether it would serve to minimize the aesthetic impact of the overall project.

J. Coleman-Marzialo said that 95 Tolland Green is a nationally registered historic property in a nationally registered historic green, so every effort should be made to minimize visual impact from the street. She said that the DOI and NPS state that solar panels should be installed where not visible from the street.

F. Day-Lewis questioned this characterization of the DOI guidelines, saying that the guidelines allow panels to be visible from the street. He said that panels should be on the sides or rear of houses where possible, but that the guidelines do not require panels to be unseen from streets.

Day-Lewis asked for details of the specific panels to be used including the color of the panels and their offset from the roof.

A. Deegan repeated her earlier question, asking whether J. Esposito could show where panels are relative to the tree on the neighboring property. She said that the panels would be visible from the street and asked if there were town regulations limiting visibility of solar from neighbors' houses.

K. Stargardter requested to speak as a resident of the town and not as a TC member nor as TC liaison to the HDC. She said a recent town manager (TM) report documented extra costs and time devoted by town staff to support processing of the last COA related to solar. She asked that the HDC strive to come to a decision on this COA in a timely manner and not create undue burden for the Town.

K. Stargardter referred the HDC to Connecticut State Statute Section 7.147f (a) "No application for a certificate of appropriateness for an exterior architectural feature, such as a solar energy system, designed for the utilization of renewable resources shall be denied unless the commission finds that the feature cannot be installed without substantially impairing the historic character and appearance of the district." She asked that the HDC, whatever its decision, speak specifically to compliance with this statute. She also referred the HDC to examples at the National Park Service web site showing solar panels on historic properties in historic areas, including examples of NPS-compliant installations in which panels are visible from the street, albeit low-profile and set back as far from the street as possible. She asked the HDC to consider compliance with this national standard.

J. Coleman-Marzialo said she had seen the examples on the NPS site.

C. Morehouse asked if there were any Planning & Zoning (P&Z) limitations with respect to setbacks and if the project had yet been approved by P&Z. K. Stargardter pointed out that the setback restrictions pertain only to ground-mounted systems.

H. and M. Ferretti, direct neighbors, both spoke and referred HDC members to photographs in the packet showing the view from their house to the house at 95 Tolland Green. H. Ferretti said that the two houses are offset only about 20 feet. The views from the Ferrettis' windows look onto the Hughes' roof which currently is covered in black asphalt shingles.

J. Coleman-Marzialo said that the existing solar installations in the district are on houses offset much farther, with less visibility from neighbors.

J. Huges said the solar panels would not change the Ferrettis' view of his house from their own it's a black roof with or without panels.

K. Bach asked about the height of panels off the roof. J. Esposito answered that the panels would be 2-4 inches from the roof.

With photographs from the agenda packet showing the views from the Ferrettis' house in Zoom, M. Ferretti posed the question: If you were looking to buy an historic home, would you buy a house with that view? M. Ferretti said that having solar on the roof of the house next-door would

make his house more difficult to sell. The Ferrettis said that they would not oppose solar panels they could not see from their house, back yard, or front porch. If panels could be relocated to the other two roofs, they would not oppose.

M. McGee said that as an electrical engineer he could not understand why the COA was not already approved.

D. Deegan said that in his view people buying homes in the HD are committing to preserving history in the community. He said that the subject property is not just any house in the HD but rather a former grange. He said that it was beyond him how anyone would buy an historic property and modify it in the way proposed. Regarding the neighbors' comments, "Beauty is in the eyes of the beholder." He said that if he were living next to a house where solar was installed, he would sue that neighbor, the Town, and everyone who had supported the project. He said the solar installation would negatively impact the value of neighboring houses. He opposed installation of solar panels on historic homes and opposed the application under consideration.

J. Hughes said that the house would not even be there had he not purchased it and saved it from demolition.

D. Deegan said the Town should have neither sold the property nor disposed of it. He said that the Town should have renovated the building for use as a social center for youth or for some other public purpose.

J. Coleman-Marzialo said that for its purchase price, someone else could have bought the house, and that it would not have been demolished. J. Coleman-Marzialo and J. Hughes contested whether the house would have been demolished had the Hughes not purchased and renovated it. J. Coleman-Marzialo said the HDC might have stepped in to stop the demolition. J. Hughes said that the demolition permit was before P&Z at the time of his purchase.

<u>Motion</u>: To close the public hearing at 8:26 PM. By: K. Bach; 2nd C. Senechal There was no discussion. Voice vote: Unanimous in favor – the motion passed.

7. Old Business:

None.

8. New Business

8.1. The regular meeting was called to order to consider the COA HDC #24-01 at 95 Tolland Green by the Commission, and vote thereon.

F. Day-Lewis said he supported approval of the COA. He said that based on his past discussions with an historic architect and several attorneys, it is his understanding that the CT state statutes explicitly disallow an HDC from denying a COA for solar unless the project would substantially

impair the entire district. He said the DOI guidelines are clear that the goal is to minimize solar visibility and blend with asphalt shingles but not to prevent installation altogether. He said that the guidelines allow for panels on the sides of houses and even fronts in some cases. He noted that asphalt shingles have only been used for ~90 years and are also anachronistic in the HD. He found the Hughes' plan to be consistent with the DOI guidelines and said the HDC should not deny the COA based personal opinions that run counter to statutes and guidelines.

C. Senechal said she found remarks about plastic and metal fences interesting. She said that she feels that plastic and seeing solar panels form the street detract substantially from the historic feeling of a neighborhood. After seeing the photographs of the neighbors' view of the roof and considering the concern over negative impact to house values, it's not about one person versus another but rather the need to preserve the historic nature of the district.

J. Coleman-Marzialo asked about the color of the panels and whether silver-colored lines are visible. Referring to photographs in the packet and by screen sharing additional photos, she said there's a variety of panel appearance, some with grids of metallic lines and a considerable amount of silver metal showing, others all-black cells and black framing. J. Esposito confirmed that his company's panels would be all-black, with no obvious silver showing or highly visible grid within the cells. J. Esposito showed additional photographs of a solar installation within the HD on Tolland Stage Rd., with road-facing solar cells, as well as photographs of his company's product which is all-black with no shiny silver-colored metal.

A. Deegan asked for explanation of the calculation of electrical billing offset as it relates to solar production. J. Esposito provided an explanation but said a complete answer would require assistance from his billing department.

K. Bach described the HD as a "conundrum," as it was established after the installation of power lines and widening of roads. She said that change occurs, but core values should remain—there should be trust and respect among neighbors, and there has to be something like an HOA in the HD. She said some things will stay, and some are "flash-in-the-pan conservation tools." She spoke about wastefulness and lack of recycling with solar panels. She said that promises about solar technology have not been kept, and she described this as the basis for her moral opposition to solar power. She said that the only answer is conservation. With respect to the COA before the HDC, she felt no effort was made to put panels farther back on the roofs and used the property differently out of respect for neighbors.

J. Esposito asked whether moving panels to the back of the house would only shift the problematic view to another neighbor. K. said that the rear of the property was not visible from another residence.

J. Coleman-Marzialo laid out options for motions to support, deny, or ask for modifications and requested a motion.

J. Esposito asked that any motion involving requests for modification should provide detailed instruction for what would be acceptable to the HDC.

There was a brief discussion of reopening the public hearing to enable further discussion of engineering modification.

Motion: To deny HDC #24-01 COA for solar panels at 95 Tolland Green as presented By: C. Senechal; 2nd K. Bach

F. Day-Lewis said he opposed the motion to deny the COA, describing the motion's assertion that the project substantially impairs the district as incorrect, inconsistent with state statutes and DOI guidelines, and inconsistent with practices in many other HDs around CT. He said that based on his conversations with an historic architect and attorneys in the past, he believed the Town would lose in court if the COA were denied and an appeal filed by the applicants. He did not want to see taxpayers bear these unnecessary costs.

A. Deegan said she was in favor of the motion as written, that the solar installation would impair the HD, and that decisions by other HDs to allow solar do not make it historically right. She said she did not feel that the HDC should approve a COA out of fear of litigation, as happened with a previous application for solar that came before the HDC.

J. Esposito began to ask a question, but K. Stargardter called a point of order that the public hearing was closed.

J. Coleman-Marzialo said that the project would impair the HD and Green, that visibility would be excessive. She said that other solar projects in the HD had the support of neighbors, and that this was not true for this COA. She described the house in question as unique in the district, as it was formerly a grange. She felt no effort was made to place panels on other, less visible roofs on non-historic additions or outbuildings. She expressed concern about the maple tree's health and how long it would serve to help screen the street view of the panels. She said that this is a nationally registered historic district, with a charge from the TC to preserve the historic nature of the district. She said that the installation would definitely impair the historic nature of all the properties in the district.

K. Stargardter requested a roll-call vote.

<u>Vote on motion to deny the COA:</u> Roll-call vote: In favor: K. Bach; A. Deegan; C. Senechal; J. Coleman-Marzialo Against: F. Day-Lewis The motion to deny the COA passed.

J. Coleman-Marzialo said that the COA application fee would be waived should the applicant choose to revise the design and submit a new application. A new application would be considered without prejudice.

9. Other business

K. Stargardter informed the HDC that the TC expects the TM's budget on March 13. The TC will soon start deliberations, and any outstanding requests should be submitted as soon as possible. J. Coleman-Marzialo asked how to find information about the HDC budget. K. Stargardter said the budget book is available online. There was discussion of a budget request for streetlights. The installation of streetlights is currently held up while awaiting resolution of the sidewalk issue.

K. Bach asked about the status of a grant for the Jail Museum. K. Stargardter said that this has not yet been presented to the TC. K. Bach asked if the TC would contact the Tolland Historical Society to work out the details of the grant application related to building use. K. Stargardter said there are legal issues complicating the process. K. Bach suggested J. Coleman-Marzialo communicate with the TC and TM about the grant.

10. Correspondence

A letter was included in the packet from Rev. Dr. J. Gallagher in support of HDC #24-01 COA.

11. Approval of minutes

Motion: To accept the minutes from the Special meeting on November 29, 2023 By: C. Senechal; 2nd A. Deegan In favor: J. Coleman-Marzialo, A. Deegan, C. Senechal Abstentions: K. Bach and F. Day-Lewis The motion passed.

<u>Motion</u>: To adjourn the meeting at 9:00 PM Voice vote: Unanimous in favor – the motion passed.

Respectfully submitted, Frederick Day-Lewis, Acting Clerk