AGENDA

TOLLAND GREEN HISTORIC DISTRICT COMMISSION

Wednesday, June 15, 2022 at 7:00 p.m.

REMOTE MEETING

Public Hearing

1. Call to Order
2. Roll Call
3. Reading of Public Notice as appearing in Journal Inquirer
4. Consideration of Application for a COA at 675 Tolland Stage Road for solar panels
5. Neighbor comments, both for and against
6. Close of Public Hearing

Regular Meeting

7. Call to Order
8. Consideration of COA for 675 Tolland Stage Road by Commission, and vote thereon
9. New Business
   9.1 Enforcement letters 89 and 94 Tolland Green
10. Miscellaneous
    10.1 Discuss and review guidelines packet available here:
    https://www.dropbox.com/s/vqmt7fr5ydbheyl/TGHDC%20Design%20Guidlelines%20Draft.pdf?dl=0
11. Approval of Minutes from May 18, 2022 Regular Meeting
12. Adjournment

To View Meeting Materials:

See https://www.tolland.org/historic-district-commission/pages/remote-meeting-packets-audio-recordings

To Join Zoom Meeting:

If using a computer, tablet or smartphone, download Zoom app prior to the meeting.
Go to: https://us06web.zoom.us/j/83994770952?pwd=N05MQTVxdzhzZG03ZHJ6VHZaYUV6dz09

Meeting ID: 839 9477 0952
Passcode: 06152022

Or call: 929-205-6099 and enter meeting ID 839 9477 0952
Meeting password is 06152022
If you receive an error message after entering the password:
Enter the password again.
If it does not work, click on the meeting link.
If you still cannot get into the meeting, call in.

Agenda Item 3

Legal Notice
Tolland Green Historic District Commission

The Commission will hold a Public Hearing on June 15, 2022 at 7:00pm to consider an application for a Certificate of Appropriateness by Kristopher Scott Farley, for solar panels at 675 Tolland Stage Road. This application is on–line at https://www.tolland.org/historic-district-commission/pages/applications-pending
Only remote participation will be allowed. Instructions to participate will be on the agenda, which will be posted by June 13, 2022 at www.tolland.org

To run once in the Journal Inquirer on June 6 & 7

From: Rod Hurtuk <rhurtuk@aol.com>
Sent: Monday, June 13, 2022 4:58 PM
To: Kathy Bach <kwbach@gmail.com>
Cc: Mike McGee <mcgee.michael@hotmail.com>; Jodie Coleman-Marzialo <mjmarz@msn.com>
Subject: Re: 675 Tolland Stage Application

Thanks for the prompt reply.

I saw your note that you were likely getting a new puppy and that was why you were unable to attend. Just didn't know it had come to pass, from your original note.
Rod

Sent from my iPhone

On Jun 13, 2022, at 4:45 PM, Kathy Bach <kwbach@gmail.com> wrote:

Rod,
I had notified everyone a couple weeks ago that I was unable to attend.
Completely agree that more than a simple quorum should be deciding. I sent my thoughts along when I notified the commission of my absence.
This is a district driven decision, not a house decision.
Kathy

On Mon, Jun 13, 2022, 4:34 PM Rod Hurtuk <rhurtuk@aol.com> wrote:

> Afternoon, folks. The pending Application is one that will benefit from more than a bare quorum in attendance and for consideration.
>
> We'd appreciate your attendance. Please let us know if you can make it.
>
> Mariah, Jodie and Tim are otherwise occupied, and this is worthy of attendance.
>
> Thanks.
> Rod

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> Mariah, Jodie and Tim are otherwise occupied, and this is worthy of attendance.
>
> Thanks.
> Rod

Laura Smith

From: Kathy Bach <kwbach@gmail.com>
Sent: Monday, June 13, 2022 10:29 PM
To: Jodie Coleman-Marzialo
Cc: Rod Hurtuk; Mariah Bumps; Ann Deegan; Celeste Senechal; Tim Malone; Michael McGee; Laura Smith
Subject: [EXTERNAL]Re: 675 Tolland Stage Application

Dear Commissioners:

I'd like to comment as President of the Tolland Historical Society which operates three museums in the Historic District. The society was a participant neighbor when the ordinance was first discussed, then it was voted on as a neighborhood, then voted on as a town. So the Historic District is protected by Town Ordinance, it has structures that are on the State and National Registers and the Green itself is a protected property. This quarter mile long area is an historic treasure that Tolland is fortunate to have, few New England communities do. For 300+ years townspeople have worked to preserve a bit of our heritage here. Homeowners have invested in this neighborhood in that effort.

The application before you requesting street facing solar panels at 675 Tolland Stage Road desecrates the Ordinance and the centuries of preservation work by those who are here now and who came before. It does not respect the neighbors or the neighborhood.

The commission must consider the impact of the application on the purpose of the district. Yes, you can advocate for this application, much like you can advocate for spandex body suits for 97 year olds, but why would you?

Thank you for your time,
Kathy Bach. President
Tolland Historical Society

On Mon, Jun 13, 2022, 9:46 PM Jodie Coleman-Marzialo <mjmarz@msn.com> wrote:

> Dear Tolland Green Historic District Commission,
> I would like to provide my neighbor comment regarding the COA application at 675 Tolland Stage Road for the installation of 31 solar panels. By placing 31 solar panels on the front and street facing side of the property will display 100% visibility. This installation will adversely impact the Historic District and the neighboring historic properties to the north and south in a negative way. The applicant's property was specifically designed as a colonial to be in keeping with the historic styles and nature of the District and is also located on a State designated Scenic Road. Although the property may not be historic it lies within the Historic District with designated guidelines and is surrounded by historic homes, and this installation will not be in keeping with the neighborhood due to its overwhelming view.
> Sincerely,
> Jodie Coleman-Marzialo
> 79 Tolland Green
> w/a garage/barn located adjacent to 699 Tolland Stage Road

Laura Smith

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To: Rod Hurtuk; Kathy Bach; Mariah Bumps; Ann Deegan; Celeste Senechal; Tim Malone; Michael McGee
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Agenda Item 4

TOLLAND GREEN HISTORIC DISTRICT COMMISSION
Application for a Certification of Appropriateness

RECEIVED
MAY 25 2022
BY: LAS

Property Information

Property Address: 675 Tolland Stage Road, Tolland CT, 06084
Property Owner: Kristopher Scott Farley
Phone Number: [redacted]

Applicant Information

Applicant Name: Kristopher Farley
Applicant Address: 675 Tolland Stage Road, Tolland CT, 06084
Phone Number: [redacted] **Email Address:** [redacted]

Project Information

Type of Building: Single Family Residential

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.)*

Photovoltaic system will be installed on the front of the house facing the road. Design is Attached.

Estimated Start and Completion Dates:

Start: 06/30/2022 Complete: 08/05/2022

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*).
3. Application form, fee, plans, photograph and drawing must be submitted to ***Planning & Building Department***. 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: Kris Farley (May 25, 2022 13:58 EDT) **Date:** 05/25/22

Property Owner Signature: Kris Farley (May 25, 2022 13:58 EDT) **Date:** 05/25/22

OFFICE USE ONLY

Received & Fee Paid:	5/25/22 LS	Hearing Scheduled:	6/15/22
Hearing Advertised:	6/7/22&6/8/22	Action:	
Notice of Action to Applicant:			

INSTALLATION OF NEW ROOF MOUNTED PV SOLAR SYSTEM

675 TOLLAND STAGE ROAD
TOLLAND, CT 06084

VICINITY MAP
SCALE: NTS

GENERAL NOTES

1. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL DIRECTIONS AND INSTRUCTIONS CONTAINED IN THE DRAWING PACKAGE AND INFORMATION RECEIVED FROM TRINITY.
2. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL DIRECTIONS AND INSTRUCTION CONTAINED IN THE COMPLETE MANUAL.
3. THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR READING AND UNDERSTANDING ALL DRAWINGS, COMPONENT AND INVERTER MANUALS PRIOR TO INSTALLATION. THE INSTALLATION CONTRACTOR IS ALSO REQUIRED TO HAVE ALL COMPONENT SWITCHES IN THE OFF POSITION AND FUSES REMOVED PRIOR TO THE INSTALLATION OF ALL FUSE BEARING SYSTEM COMPONENTS.
4. ONCE THE PHOTOVOLTAIC MODULES ARE MOUNTED, THE INSTALLATION CONTRACTOR SHOULD HAVE A MINIMUM OF ONE ELECTRICIAN WHO HAS ATTENDED A SOLAR PHOTOVOLTAIC INSTALLATION COURSE ON SITE.
5. FOR SAFETY, IT IS RECOMMENDED THAT THE INSTALLATION CREW ALWAYS HAVE A MINIMUM OF TWO PERSONS WORKING TOGETHER AND THAT EACH OF THE INSTALLATION CREW MEMBERS BE TRAINED IN FIRST AID AND CPR.
6. THIS SOLAR PHOTOVOLTAIC SYSTEM IS TO BE INSTALLED FOLLOWING THE CONVENTIONS OF THE NATIONAL ELECTRICAL CODE. ANY LOCAL CODE WHICH MAY SUPERSEDE THE NEC SHALL GOVERN.
7. ALL SYSTEM COMPONENTS TO BE INSTALLED WITH THIS SYSTEM ARE TO BE "UL" LISTED. ALL EQUIPMENT WILL BE NEMA 3R OUTDOOR RATED UNLESS INDOORS.

GENERAL NOTES CONTINUED

8. THE DC VOLTAGE FROM THE PANELS IS ALWAYS PRESENT AT THE DC DISCONNECT ENCLOSURE AND THE DC TERMINALS OF THE INVERTER DURING DAYLIGHT HOURS. ALL PERSONS WORKING ON OR INVOLVED WITH THE PHOTOVOLTAIC SYSTEM ARE WARNED THAT THE SOLAR MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT.
9. ALL PORTIONS OF THIS SOLAR PHOTOVOLTAIC SYSTEM SHALL BE MARKED CLEARLY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 690 & 705.
10. PRIOR TO THE INSTALLATION OF THIS PHOTOVOLTAIC SYSTEM, THE INSTALLATION CONTRACTOR SHALL ATTEND A PRE-INSTALLTION MEETING FOR THE REVIEW OF THE INSTALLATION PROCEDURES, SCHEDULES, SAFETY AND COORDINATION.
11. PRIOR TO THE SYSTEM START UP THE INSTALLATION CONTRACTOR SHALL ASSIST IN PERFORMING ALL INITIAL HARDWARE CHECKS AND DC WIRING CONDUCTIVITY CHECKS.
12. FOR THE PROPER MAINTENANCE AND ISOLATION OF THE INVERTERS REFER TO THE ISOLATION PROCEDURES IN THE OPERATION MANUAL.
13. THE LOCATION OF PROPOSED ELECTRIC AND TELEPHONE UTILITIES ARE SUBJECT TO FINAL APPROVAL OF THE APPROPRIATE UTILITY COMPANIES AND OWNERS.
14. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREIN SHALL BE IN ACCORDANCE WITH
    A) CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS STANDARDS AND REQUIREMENTS

GENERAL NOTES CONTINUED

14. B) CURRENT PREVAILING UTILITY COMPANY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS
15. THIS SET OF PLANS HAVE BEEN PREPARED FOR THE PURPOSE OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. ONCE APPROVED, THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL SYSTEM COMPONENTS AS DESCRIBED IN THE DRAWING PACKAGE.
16. ALL INFORMATION SHOWN MUST BE CERTIFIED PRIOR TO USE FOR CONSTRUCTION ACTIVITIES.

ABBREVIATIONS

AMP	AMPERE
AC	ALTERNATING CURRENT
AL	ALUMINUM
AF	AMP. FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AWG	AMERICAN WIRE GAUGE
C	CONDUIT (GENERIC TERM OF RACEWAY. PROVIDE AS SPECIFIED)
CB	COMBINER BOX
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT SWITCH
DWG	DRAWING
EC	ELECTRICAL SYSTEM INSTALLER
EMT	ELECTRICAL METALLIC TUBING
FS	FUSIBLE SWITCH
FU	FUSE
GND	GROUND
GFI	GROUND FAULT INTERRUPTER
HZ	FREQUENCY (CYCLES PER SECOND)

ABBREVIATIONS CONTINUED

JB	JUNCTION BOX
kCMIL	THOUSAND CIRCULAR MILS
kVA	KILO-VOLT AMPERE
kW	KILO-WATT
kWH	KILO-WATT HOUR
L	LINE
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NO #	NUMBER
NTS	NOT TO SCALE
OCP	OVER CURRENT PROTECTION
P	POLE
PB	PULL BOX
PH #	PHASE
PVC	POLY-VINYL CHLORIDE CONDUIT
PWR	POWER
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
SN	SOLID NEUTRAL
SWBD	SWITCHBOARD
TYP	TYPICAL
U.O.I.	UNLESS OTHERWISE INDICATED
WP	WEATHERPROOF
XFMR	TRANSFORMER
+72	MOUNT 72 INCHES TO BOTTOM OF ABOVE FINISHED FLOOR OR GRADE

SHEET INDEX

GENERAL NOTES

IF ISSUED DRAWING IS MARKED WITH A REVISION CHARACTER OTHER THAN "A", PLEASE BE ADVISED THAT FINAL EQUIPMENT AND/OR SYSTEM CHARACTERISTICS ARE SUBJECT TO CHANGE DUE TO AVAILABILITY OF EQUIPMENT.

Issued / Revisions

NO.	DESCRIPTION	DATE
P1	ISSUED TO HOMEOWNER FOR PERMIT	5/11/2022

Project Title:
FARLEY, KRISTOPHER-
TRINITY ACCT #: 2022-04-695375

Project Address:
675 TOLLAND STAGE ROAD
TOLLAND, CT 06084
41.8746639,-72.3727607

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE	5/11/2022
DRAWN BY	PM
REVISED BY	

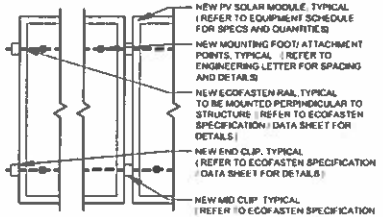
System Information:

DC SYSTEM SIZE:	12.4kW
AC SYSTEM SIZE:	10kW
MODULE COUNT:	31
MODULES USED	HANWHA 400
MODULE SPEC #:	Q PEAK DUO BK ML-G10.a+ 400
UTILITY COMPANY	EVERSOURCE
UTILITY ACCT #:	51468959051
UTILITY METER #:	868231812
DEAL TYPE:	SUNNOVA

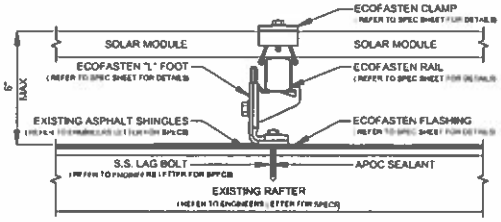
Rev. No.	Sheet
P1	PV - 1

Trinity® SOLAR
2721 Allenwood Road
Wall, New Jersey 07719
877-786-7283
www.Trinity-Solar.com

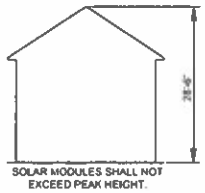
NOTES: *REFER TO MODULE SPECS FOR MODULE DIMENSIONS
*DEPICTED MODULES MAY BE PORTRAIT OR LANDSCAPE



ATTACHMENT & CLIP DETAIL
SCALE: NOT TO SCALE



PV MODULE ATTACHMENT ON ASPHALT SHINGLE ROOF
SCALE: NOT TO SCALE



HEIGHT FROM GROUND LEVEL TO PEAK OF ROOF
SCALE: NOT TO SCALE

ARRAY SCHEDULE

ROOF 1
MODULES: 0
PITCH: 45°
ORIENTATION: 352°

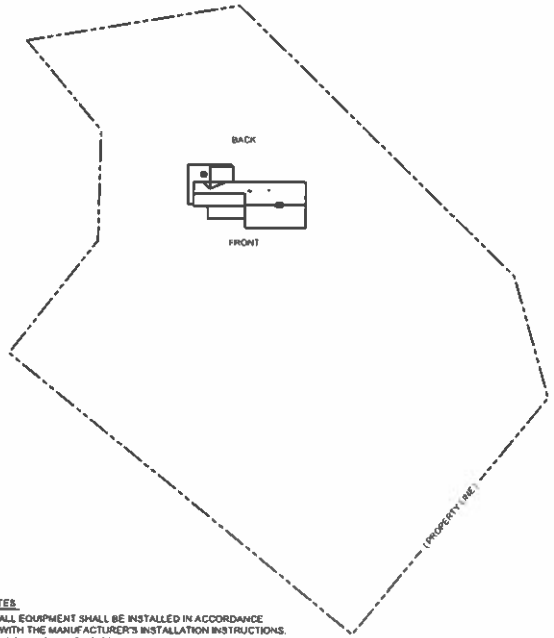
ROOF 2
MODULES: 23
PITCH: 45
ORIENTATION: 172

ROOF 3
MODULES: 8
PITCH: 45
ORIENTATION: 172

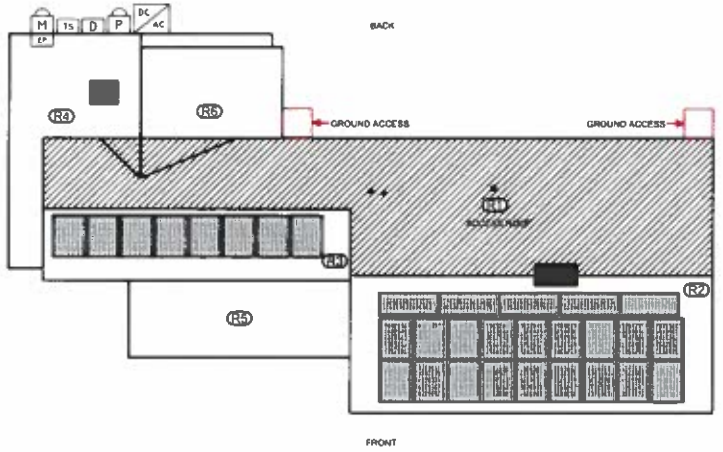
ROOF 4
MODULES: 0
PITCH: 45°
ORIENTATION: 262°

ROOF 5
MODULES: 0
PITCH: 18°
ORIENTATION: 172°

ROOF 6
MODULES: 0
PITCH: 23°
ORIENTATION: 82°



NOTES
1.) ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2.) ARRAY BONDING TO COMPLY WITH MANUFACTURER SPECIFICATION.
3.) ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
4.) AN AC DISCONNECT SHALL BE GROUPED WITH INVERTER (S). NEC 690.13 (E)
5.) ALL OUTDOOR EQUIPMENT SHALL BE RAIN TIGHT WITH MINIMUM NEMA 3R RATING.
6.) ROOFTOP SOLAR INSTALLATION ONLY PV ARRAY SHALL NOT EXTEND BEYOND THE EXISTING ROOF EDGE.



SYMBOL LEGEND

R1	INDICATES ROOF DESIGNATION. REFER TO ARRAY SCHEDULE FOR MORE INFORMATION	UD	INDICATES NEW UNFUSED PV DISCONNECT TO BE INSTALLED OUTSIDE (UTILITY ACCESSIBLE)	SP	INDICATES NEW PV ONLY SUBPANEL TO BE INSTALLED
M	INDICATES EXISTING METER LOCATION		INDICATES NEW PV SOLAR MODULE. RED MODULES INDICATE PANELS THAT USE MICRO INVERTERS. REFER TO EQUIPMENT SCHEDULE FOR SPECS.	DC	INDICATES NEW DC DISCONNECT
EP	INDICATES EXISTING ELECTRICAL PANEL LOCATION INSIDE	P	INDICATES NEW PRODUCTION METER TO BE INSTALLED OUTSIDE	SD	INDICATES EXISTING SERVICE DISCONNECT
D	INDICATES NEW FUSED PV DISCONNECT TO BE INSTALLED OUTSIDE (UTILITY ACCESSIBLE)	PV AC	INDICATES NEW INVERTER TO BE INSTALLED OUTSIDE REFER TO EQUIPMENT SCHEDULE FOR SPECS	TS	INDICATES EXISTING TRANSFER SWITCH

PLUMBING SCHEDULE

OTHER OBSTRUCTIONS

EQUIPMENT SCHEDULE

QTY	SPEC #
31	HANWHA 400 (Q.PEAK DUO BLK ML-G10.a+ 400)
1	SE10000H-US0SHBNC4

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DRAWN BY:	PM
REVISED BY	

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AC SYSTEM SIZE	10kW
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MODULE SPEC #	Q PEAK DUO BLK ML-G10 a+ 400
UTILITY COMPANY	EVERSOURCE
UTILITY ACCT #:	51468959053
UTILITY METER #:	868231812
DEAL TYPE:	SUNNOVA

Rev. No.	Sheet
P1	PV - 2

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2211 Allenwood Road
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ARRAY CIRCUIT WIRING NOTES
1.) LICENSED ELECTRICIAN ASSUMES ALL RESPONSIBILITY FOR DETERMINING ONSITE CONDITIONS AND EXECUTING INSTALLATION IN ACCORDANCE WITH
NEC 2017

2.) LOWEST EXPECTED AMBIENT TEMPERATURE BASED ON ASHRAE MINIMUM MEAN EXTREME DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. LOWEST EXPECTED AMBIENT TEMP = -16°C

3.) HIGHEST CONTINUOUS AMBIENT TEMPERATURE BASED ON ASHRAE HIGHEST MONTH 2% DRY BULB TEMPERATURE FOR ASHRAE LOCATION MOST SIMILAR TO INSTALLATION LOCATION. HIGHEST CONTINUOUS TEMP = 33°C

4.) 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.1°C). FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN A ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES)

5.) PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION THAT CONTROLS SPECIFIC CONDUCTORS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D)

6.) PHOTOVOLTAIC POWER SYSTEMS SHALL BE PERMITTED TO OPERATE WITH UNGROUNDED PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUIT AS PER **NEC 690.41 (A)(4)**

7.) UNGROUNDED DC CIRCUIT CONDUCTORS SHALL BE IDENTIFIED WITH THE FOLLOWING OUTER FINISH:
POSITIVE CONDUCTORS = RED
NEGATIVE CONDUCTORS = BLACK
NEC 210.5(C)(2)

8.) ARRAY AND SUB ARRAY CONDUCTORS SHALL BE #10 PV WIRE TYPE RHW-2 OR EQUIVELANT AND SHALL BE PROTECTED BY CONDUIT WHERE EXPOSED TO DIRECT SUNLIGHT. SUB ARRAY CONDUIT LONGER THAN 24" SHALL CONTAIN ≤ 20 CURRENT CARRYING CONDUCTORS AND WHERE EXPOSED TO DIRECT SUNLIGHT SHALL CONTAIN ≤ 9 CURRENT CARRYING CONDUCTORS.

9.) ALL WIRE LENGTHS SHALL BE LESS THAN 100' UNLESS OTHERWISE NOTED

10.) FLEXIBLE CONDUIT SHALL NOT BE INSTALLED ON ROOFTOP AND SHALL BE LIMITED TO 12" IF USED OUTDOORS

11.) OVERCURRENT PROTECTION FOR CONDUCTORS CONNECTED TO THE SUPPLY SIDE OF A SERVICE SHALL BE LOCATED WITHIN 10' OF THE POINT OF CONNECTION NEC 705.31

12.) WHERE TWO SOURCES FEED A BUSSBAR, ONE A UTILITY AND THE OTHER AN INVERTER, PV BACKFEED BREAKER(S) SHALL BE LOCATED OPPOSITE FROM UTILITY **NEC 705.12(B)(2)(3)(b)**

13.) ALL SOLAR SYSTEM LOAD CENTERS TO CONTAIN ONLY GENERATION CIRCUITS AND NO UNUSED POSITIONS OR LOADS

14.) ALL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE A NEMA 3R RATING

CALCULATIONS FOR CURRENT CARRYING CONDUCTORS
REQUIRED CONDUCTOR AMPACITY PER STRING
(NEC 690.8(B)(1)): (15.00*1.25)1 = 18.75A

AWG #10, OR RATED AMPACITY
AMBIENT TEMP: 33°C, TEMP DERATING FACTOR: .96
RACEWAY DERATING = 6 CCC: 0.80
(40*.96)0.80 = 30.72A

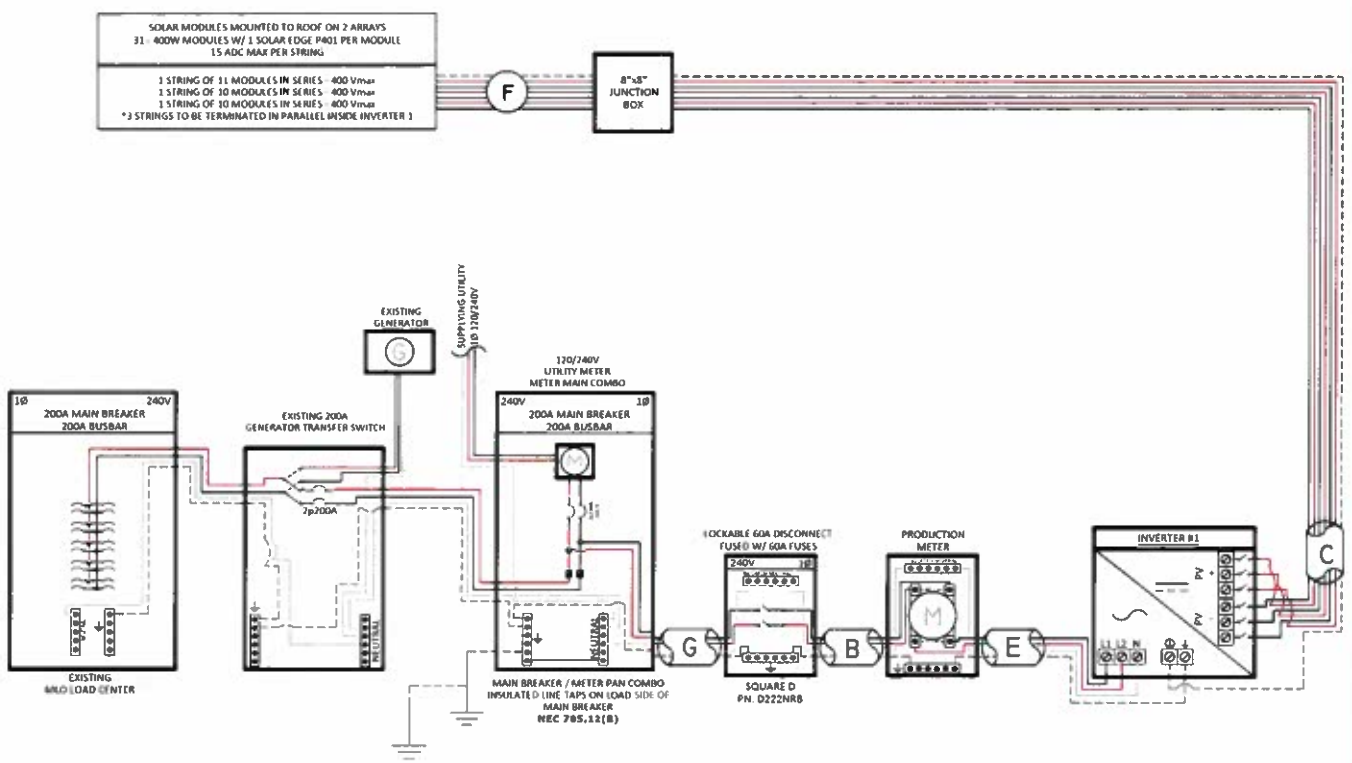
30.72A ≥ 18.75A, THEREFORE WIRE SIZE IS VALID

TOTAL AC REQUIRED CONDUCTOR AMPACITY
42.00A*1.25 = 52.50A

AWG #6, DERATED AMPACITY
AMBIENT TEMP: 30°C, TEMP DERATING: 1.0
RACEWAY DERATING = 3 CCC: N/A
75A*1.0 = 75A

75A ≥ 52.50A, THEREFORE AC WIRE SIZE IS VALID

CALCULATION FOR PV OVERCURRENT PROTECTION
TOTAL INVERTER CURRENT: 42.00A
42.00A*1.25 = 52.50A
--> 60A OVERCURRENT PROTECTION IS VALID



PV MODULE SPECIFICATIONS	
HANWHA 400 (Q.PEAK DUO BLK ML-G10.a+ 400)	
Imp	10.77
Vmp	37.13
Voc	45.3
Isc	11.14

INVERTER #1 - SE10000H-US05HBNC4			
DC		AC	
Imp	27	Pout	10000
Vmp	400	Imax	42
Voc	480	OCPDmax	52.5
Isc	45	Vnom	240

NOTE: CONDUIT TYPE SHALL BE CHOSEN BY THE INSTALLATION CONTRACTOR TO MEET OR EXCEED NEC AND LOCAL AHJD REQUIREMENTS

A	#6 THWN-2 GEC TO EXISTING GROUND ROD
B	1" CONDUIT W/ 2-#6 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND
C	1" CONDUIT W/ 6-#10 THWN-2, 1-#10 THWN-2 GROUND
D	1" CONDUIT W/ 6-#10 THWN-2, 1-#10 THWN-2 GROUND
E	1" CONDUIT W/ 2-#6 THWN-2, 1-#10 THWN-2, 1-#10 THWN-2 GROUND
F	#10 PV WIRE (FREE AIR) W/ #8 BARE COPPER BOND TO ARRAY
G	1" CONDUIT W/ 2-#6 THWN-2, 1-#6 THWN-2, 1-#6 THWN-2 GROUND

Engineer / License Holder:

Issued / Revisions

NO.	DESCRIPTION	DATE
P1	ISSUED TO TOWNSHIP FOR PERMIT	5/31/2022

Project Title:
FARLEY, KRISTOPHER-
TRINITY ACCT #: 2022-04-695375

Project Address:
675 TOLLAND STAGE ROAD
TOLLAND, CT 06084
41.8746639, 72.3727607

Drawing Title:
PROPOSED PV SOLAR SYSTEM

Drawing Information

DRAWING DATE:	5/31/2022
DRAWN BY:	PM
REVISED BY	

System Information:

DC SYSTEM SIZE	12.4kW
AC SYSTEM SIZE	10kW
MODULE COUNT	31
MODULES USED	HANWHA 400
MODULE SPEC #	Q PEAK DUO BLK ML-G10.a+ 400
UTILITY COMPANY	EVERSOURCE
UTILITY ACCT #:	51468959051
UTILITY METER #:	868231812
IDEAL TYPE:	SUNNOVA

Rev. No.	Sheet
P1	PV - 3

Trinity® SOLAR
2211 Allenwood Road
Wall, New Jersey 07719
877-786-7283
www.Trinity-Solar.com

MATERIAL LIST

(FOR INTERNAL USE ONLY)

JOB NAME: FARLEY, KRISTOPHER-
ADDRESS: 675 Tolland Stage Road
Tolland, CT 06084
41.8746639,-72.3727607

Trinity® SOLAR
2211 Allenwood Road
Wall, New Jersey 07719
877-786-7283
www.Trinity-Solar.com

83.84 ESTIMATED PERSONNEL HOURS	3.49 DAYS	2.62 DAYS	1.75 DAYS
• 31 HANWHA 400's (12.4KW)	(CREW OF 3)	(CREW OF 4)	(CREW OF 6)
• 2 SEPARATE ARRAYS			
• 28' PEAK TO GROUND			
• 26 PORTRAIT & 5 LANDSCAPED			
• 1 INVERTERS INSTALLED OUTSIDE			
• NO TRENCH			

		ESTIMATED	SENT TO JOB	USED
☐	HANWHA 400 (Q.PEAK DUO BLK ML-G10.a+ 400)	31	___	___
☐	P401 SE OPTIMIZERS	31	___	___
☐	SE10000H-US0SHBNC4	1	___	___
☐	60A OUTDOOR FUSED DISCONNECT W/ (2) 60A FUSES	1	___	___
☐	60A OUTDOOR NON-FUSED DISCONNECT	1	___	___
☐	SOLADECK BOX(ES) & HAYCO CONNECTOR(S)	2	___	___
☐	PV LEAD WIRE	150'	___	___
☐	INSULATED BUG BITES (LINE TAPS)	2	___	___
☐	CASE(S) OF BLACK SPRAY PAINT	1	___	___
☐	CASE(S) OF TAR	1	___	___
☐	ECOFASTEN 2012025 CF STD RAIL MLL AL 171.5	18	___	___
☐	ECOFASTEN 2012013 CF RAIL SPLICE	15	___	___
☐	ECOFASTEN 2099017 CF END CLAMP 32MM BLK	16	___	___
☐	ECOFASTEN 2099022 CF MID CLAMP SHORT BLK	54	___	___
☐	ECOFASTEN 4011011 MODULE JUMPER	2	___	___
☐	GROUNDING LUG (NOT PROVIDED BY ECOFASTEN)	2	___	___
☐	ECOFASTEN 2012022 CF UNIV L-FOOT MLL 3	70	___	___
☐	ECOFASTEN 3012020 GF-1 FLASHING GLV BLK 8 x 10	70	___	___
☐	ECOFASTEN 2012019 CF MLPE MOUNT	31	___	___
☐	ECOFASTEN 2012020 CF WIRE MGMT CLIP	31	___	___
☐	ECOFASTEN 2012024 CF END CAP	16	___	___

Trinity SOLAR
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Wall, New Jersey 07719
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INSTALLATION OF NEW
ROOF MOUNTED PV SOLAR SYSTEM

FARLEY, KRISTOPHER-
675 TOLLAND STAGE ROAD
TOLLAND, CT 06084
41.8746639,-72.3727607

APPENDIX

CONTENTS
LABELS, STICKERS, AND PLACARDS
EQUIPMENT DATA SHEETS

NOTES:
1.) COMPLIES WITH NEC 2017
2.) REFER TO SHEET PV-3 FOR SITE SPECIFIC VALUES REQUIRED BY NEC 690
3.) STICKERS, LABELS, AND PLACARDS SHALL BE OF SUFFICIENT DURRABILITY TO WITHSTAND THE ENVIROMENT INVOLVED

Trinity® SOLAR

To be located on all DC junction boxes and every 10' on DC conduit

NEC 690.31(G)


DC Junction Box


Soladeck


DC Conduit

NEC 690.56(C)(1)(A)


Service Disconnect

NEC 690.56(C)(1)(A)

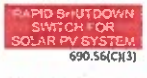

Main Service Panel


Utility


Utility Meter Socket

NEC 690.13(B)


Solar Meter Socket



690.56(C)(3)

NEC 690.13(B)


NEC 690.54


NEC 690.54

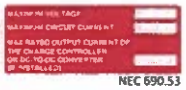
690.56(C)(3)

NEC 690.13(B)

NEC 690.4(B)


NEC 690.53

NEC 690.4(B)


NEC 690.53


DC Disconnect

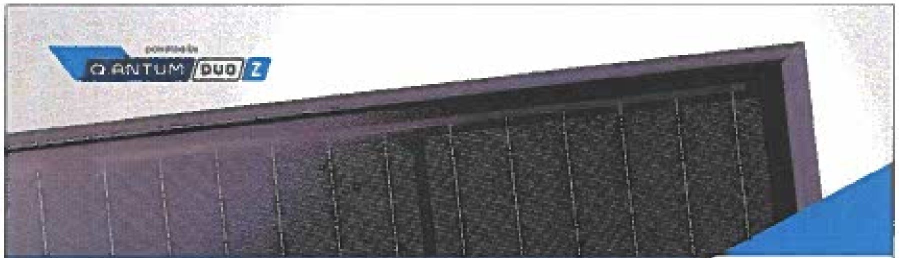
NEC 690.13(B)


Enphase Envoy Box

Photovoltaic AC Disconnect

Load Center (To Combine Inverters)

Inverter(s)



powered by Q.ANTUM DUO Z

Q.PEAK DUO BLK ML-G10.a+

385-405

ENDURING HIGH PERFORMANCE

25 YR Warranty — Product & Performance

Q CELLS Yield Security

BREAKING THE 20% EFFICIENCY BARRIER
Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.

THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY
Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.

INNOVATIVE ALL-WEATHER TECHNOLOGY
Optimal yields, whatever the weather with excellent low-light and temperature behaviour.

ENDURING HIGH PERFORMANCE
Long-term yield security with Anti LID Technology, Anti PID Technology[1], Hot-Spot Protect and Traceable Quality Tra.Q™.

EXTREME WEATHER RATING
High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).

A RELIABLE INVESTMENT
Inclusive 25-year product warranty and 25-year linear performance warranty[2].

[1] APT test conditions according to IEC/TS 62804-1:2015, method A (−1500 V, 96 h)
[2] See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:

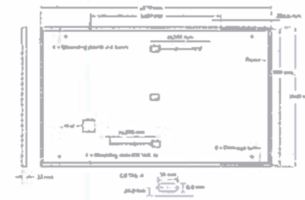
Rooftop arrays on residential buildings

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	1879 mm × 1045 mm × 32 mm (including frame)
Weight	22.0 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 22 monocrystalline Q.ANTUM solar half cells
Junction box	53-101 mm × 32-60 mm × 15-18 mm Protection class IP67, with bypass diodes
Cable	4 mm² Solar cable; (+) ≥1250 mm, (−) ≥1250 mm
Connector	Stäubli MC4; IP68

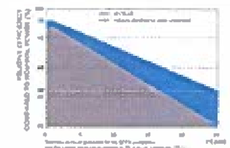


ELECTRICAL CHARACTERISTICS

POWER CLASS				385	390	395	400	405
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC[1] (POWER TOLERANCE +5 W / −0 W)								
Minimum	Power at MPP[1]	P_{MPP}	[W]	385	390	395	400	405
	Short Circuit Current[1]	I_{SC}	[A]	11.04	11.07	11.10	11.14	11.17
	Open Circuit Voltage[1]	V_{OC}	[V]	45.19	45.23	45.27	45.30	45.34
	Current at MPP	I_{MPP}	[A]	10.59	10.66	10.71	10.77	10.83
	Voltage at MPP	V_{MPP}	[V]	36.36	36.62	36.88	37.13	37.39
	Efficiency[1]	η	[%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT[2]								
Minimum	Power at MPP	P_{MPP}	[W]	288.8	292.6	296.3	300.1	303.8
	Short Circuit Current	I_{SC}	[A]	8.90	8.92	8.95	8.97	9.00
	Open Circuit Voltage	V_{OC}	[V]	42.62	42.65	42.69	42.72	42.76
	Current at MPP	I_{MPP}	[A]	8.35	8.41	8.46	8.51	8.57
	Voltage at MPP	V_{MPP}	[V]	34.58	34.81	35.03	35.25	35.46

[1] Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • [2] 800 W/m², NMOT, spectrum AM 1.5

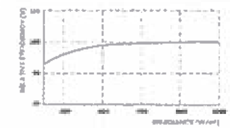
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α	[%/K]	+0.04	Temperature Coefficient of V_{OC}	β	[%/K]	−0.27
Temperature Coefficient of P_{MPP}	γ	[%/K]	−0.34	Nominal Module Operating Temperature	NMOT	[°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V_{SYS}	[V]	1000	PV module classification	Class II
Maximum Reverse Current	I_R	[A]	20	Fire Rating based on ANSI / UL 61730	C / TYPE 2
Max. Design Load, Push / Pull		[Pa]	3600 / 2660	Permitted Module Temperature on Continuous Duty	−40 °C − +85 °C
Max. Test Load, Push / Pull		[Pa]	5400 / 4000		

QUALIFICATIONS AND CERTIFICATES

Quality Controlled PV - TÜV Rheinland; IEC 61215:2016; IEC 61730:2016. This data sheet complies with DIN EN 50380.

UK CA CE

PACKAGING INFORMATION

Horizontal packaging	1940 mm	1100 mm	1220 mm	751 kg	28 pallets	24 pallets	32 modules
Vertical packaging	1970 mm	1150 mm	1215 mm	765 kg	28 pallets	24 pallets	33 modules

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS GmbH
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | **TEL** +49 (0)3494 66 99-23444 | **FAX** +49 (0)3494 66 99-23000 | **EMAIL** sales@q-cells.com | **WEB** www.q-cells.com

Engineered in Germany

Q CELLS

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US /
SE7600H-US / SE10000H-US / SE11400H-US

INVERTERS

Optimized installation with HD-Wave technology

- Specifically designed o work with power optimizers
- Record-breaking 99% weighted efficienc
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014, NEC 2017 and NEC 2020 per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid complianc
- Small, lightweight, and easy to install both outdoors or indoors
- Built-in module-level monitoring
- Optional: Faster installations with built-in consumption metering (1% accuracy) and production revenue grade metering (0.5% accuracy, ANSI C12.20)

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Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/
SE7600H-US / SE10000H-US / SE11400H-US

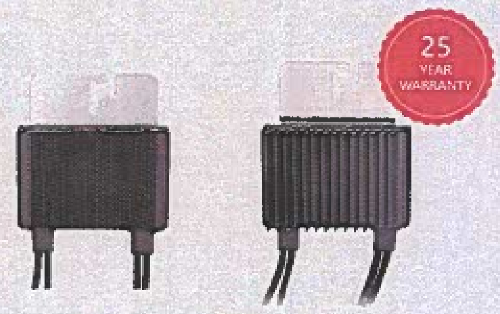
MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current @240V[2]	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V[2]	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600kΩ Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Metering, ANSI C12.20	Optional[3]							
Consumption metering								
Inverter Commissioning	With the SetApp mobile application using Built-in Wi-Fi Access Point for Local Connection							
Rapid Shutdown - NEC 2014, NEC 2017 and NEC 2020, 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07							
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)							
Emissions	FCC Part 15 Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG					1" Maximum /14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG					1" Maximum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174					21.3 x 14.6 x 7.3 / 540 x 370 x 185		in / mm
Weight with Safety Switch	22 / 10		25.1 / 11.4	26.2 / 11.9		38.8 / 17.6		lb / kg
Noise	< 25					< 50		dBA
Cooling	Natural Convection							
Operating Temperature Range	-40 to +140 / -40 to +60[4]							°F / °C
Protection Rating	NEMA 4X (Inverter with Safety Switch)							

(1) For other regional settings please contact SolarEdge support
(2) A higher current source may be used; the inverter will limit its input current to the values stated
(3) Inverter with Revenue Grade Meter P/N: SExxxxH-US000BNC4; inverter with Revenue Grade Production and Consumption Meter P/N: SExxxxH-US000BNI4. For consumption metering, current transformers should be ordered separately: SEACT0750-200NA-20 or SEACT0750-400NA-20. 20 units per box
(4) Full power up to at least 50°C / 122°F; for power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf

Power Optimizer

For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505



POWER OPTIMIZER

PV power optimization at the module-level

- Specifically designed to work with SolarEdge inverters
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch losses, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Fast installation with a single bolt
- Next generation maintenance with module-level monitoring
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)
- Module-level voltage shutdown for installer and firefighter safety

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Power Optimizer

For North America

P320 / P340 / P370 / P400 / P401 / P405 / P485 / P505

Optimizer model (typical module compatibility)	P320 (for 60-cell modules)	P340 (for high-power 60-cell modules)	P370 (for higher-power 60 and 72-cell modules)	P400 (for 72 & 96-cell modules)	P401 (for high power 60 and 72 cell modules)	P405 (for high-voltage modules)	P485 (for high-voltage modules)	P505 (for higher current modules)	
INPUT									
Rated Input DC Power[1]	320	340	370	400		405	485	505	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48		60	80	60	125[2]		83[2]	Vdc
MPPT Operating Range	8 - 48		8 - 60	8 - 80	8-60	12.5 - 105		12.5 - 83	Vdc
Maximum Short Circuit Current (Isc)	11			10.1	11.75	11		14	Adc
Maximum DC Input Current	13.75			12.5	14.65	12.5		17.5	Adc
Maximum Efficiency	99.5								%
Weighted Efficiency	98.8							98.6	%
Overvoltage Category	II								
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)									
Maximum Output Current	15								Adc
Maximum Output Voltage	60					85			Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)									
Safety Output Voltage per Power Optimizer	1 ± 0.1								Vdc
STANDARD COMPLIANCE									
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3								
Safety	IEC62109-1 (class II safety), UL1741								
Material	UL94 V-0, UV Resistant								
RoHS	Yes								
INSTALLATION SPECIFICATIONS									
Maximum Allowed System Voltage	1000								Vdc
Compatible inverters	All SolarEdge Single Phase and Three Phase inverters								
Dimensions (W x L x H)	129 x 153 x 27.5 / 5.1 x 6 x 1.1			129 x 153 x 33.5 / 5.1 x 6 x 1.3	129 x 153 x 29.5 / 5.1 x 6 x 1.16	129 x 159 x 49.5 / 5.1 x 6.3 x 1.9		129 x 162 x 59 / 5.1 x 6.4 x 2.3	mm / in
Weight (including cables)	630 / 1.4			750 / 1.7	655 / 1.5	845 / 1.9		1064 / 2.3	gr / lb
Input Connector	MC4[3]						Single or dual MC4[3][4]	MC4[3]	
Input Wire Length	0.16 / 0.52				0.16 or 0.9 / 0.52 or 2.95[5]	0.16 / 0.52			m / ft
Output Wire Type / Connector	Double insulated / MC4								
Output Wire Length	0.9 / 2.95		1.2 / 3.9						m / ft
Operating Temperature Range[6]	-40 - +85 / -40 - +185								°C / °F
Protection Rating	IP68 / NEMA6P								
Relative Humidity	0 - 100								%

(1) Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% power tolerance are allowed
(2) NEC 2017 requires max input voltage be not more than 80V
(3) For other connector types please contact SolarEdge
(4) For dual version for parallel connection of two modules use P485-4NMDMRM. In the case of an odd number of PV modules in one string, installing one P485 dual version power optimizer connected to one PV module. When connecting a single module seal the unused input connectors with the supplied pair of seals
(5) Longer inputs wire length are available for use. For 0.9m input wire length order P401-[illegible]
(6) For ambient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV System Design Using a SolarEdge Inverter[7][8]		Single Phase HD-Wave	Single phase	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	P320, P340, P370, P400, P401	8		10	18	
	P405, P485, P505	6		8	14	
Maximum String Length (Power Optimizers)		25		25	50[9]	
Maximum Power per String		5700 (6000 with SE7600-US - SE11400-US)	5250	6000[10]	12750[11]	W
Parallel Strings of Different Lengths or Orientations		Yes				

(7) For detailed string sizing information refer to: http://www.solaredge.com/sites/default/files/string_sizing_na.pdf
(8) It is not allowed to mix P405/P485/P505 with P320/P340/P370/P400/P401 in one string
(9) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement
(10) For 208V grid: it is allowed to install up to 6,500W per string when the maximum power difference between each string is 1,000W
(11) For 277/480V grid: it is allowed to install up to 15,000W per string when the maximum power difference between each string is 2,000W

Intertek RoHS

ilsco

KUP-L-TAP® (IPC) Insulation Piercing (Dual Rated)

- Kup-L-Tap® insulation piercing connector
- Body is molded from tough, reinforced glass-filled nylon.
- UL 486A/B 90° C Listed and is CSA. Certified
- For use with stranded conductor Class B or C
- Compact design
- Tin Plated copper current path and pre-filled with silicone lubricant
- Removable end tabs.
- Dual Rated for Copper and Aluminum Conductor
- UL File E8807

Item ID	Figure Number	Conductor Range Main	Conductor Range Tap	Voltage	Hex Size	Standard Package Quantity	*UNSPSC Number
IPC-4/0-6	2	4/0-4 AWG	6-14 AWG	600	1/2	12	0783689326582

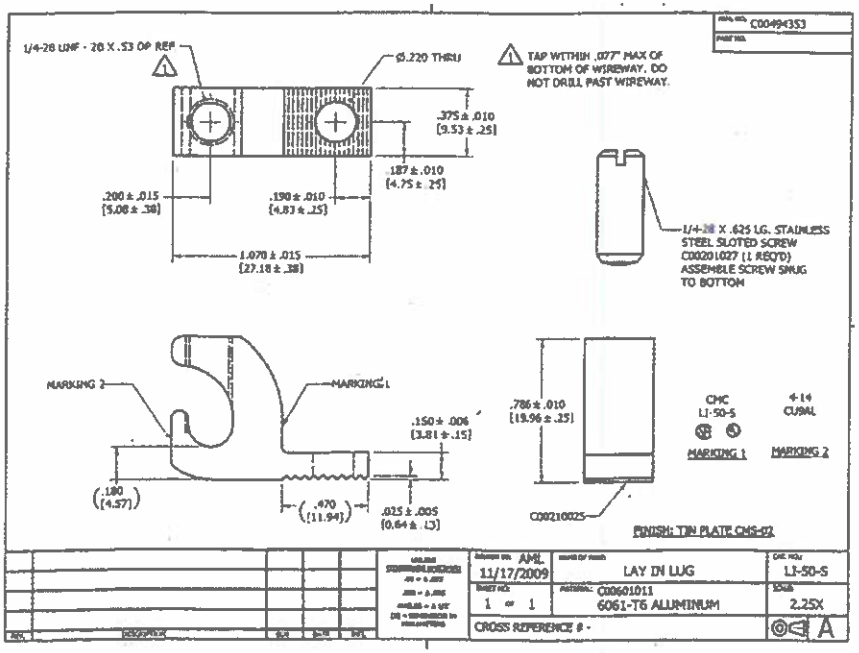
Grounding Connectors

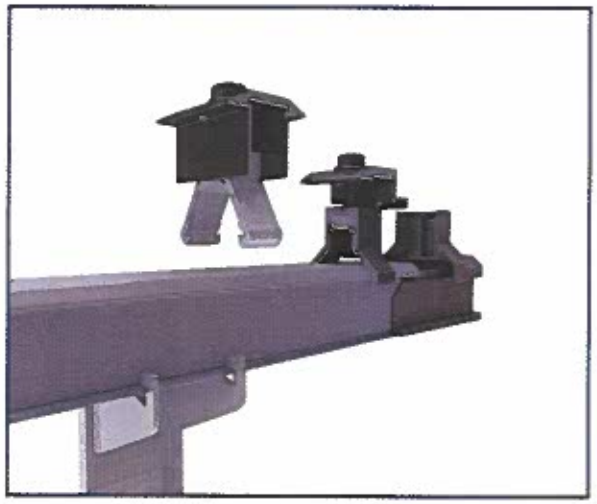
TYPE: LI Lay-In Connector

CMC® LI-S ground connectors are manufactured from high strength 6061-T6 aluminum alloy to insure both maximum strength and conductivity. They are dual rated for both copper and aluminum conductors and are electro tin plated to provide low contact resistance and protection against corrosion. They are designed for use on conduit grounding bushings. The open-faced design allows the installer to quickly lay-in the grounding conductor as a jumper to multiple conduits with no break in the ground conductor.

90°C RATING (486B LISTED)

Catalog Number	Fig. No.	Cond. Range AWG	Stud Size*	Dimensions, Inches		
				H	W	L
LI-50S	1	4 - 14	0.22	0.78	0.38	1.07
LI-112S	1	1/0 - 14	0.27	1.17	0.6	1.5
LI-200S	2	3/0 - 6	0.33	1.56	0.8	2
LI-252S	2	250 - 6	0.33	1.79	0.8	2.2





CLICKFIT

The UL 2703 listed ClickFit is one of the fastest installing rail-based systems in the industry. Thanks to its Click-In Rail assembly, the rails can be connected to any of EcoFasten's composition shingle, tile and metal roof mounts in seconds without the need for fasteners or tools. The ClickFit system is made of robust materials, such as aluminum and coated steel, to ensure resistance to corrosion and longevity. ClickFit is tested in extreme weather, wind, fire, and snow conditions.

FEATURES

- Tool and fastener free rail attachment
- Fully integrated bonding
- Click-on Mid & End Clamps
- Compatible with a variety of EcoFasten roof attachments

FEATURES + BENEFITS

REVISION DATE: 08/11/21 | VERSION: v1.4

CLICKFIT
INSTALLATION GUIDE

EcoFasten
For Installers. By Installers.

RATINGS

Fire Rating**	Class A System Fire Rating
Max System Voltage	1500 VDC
Max Fuse Rating	30A
Certification	Conforms to UL STD 2703
Warranty	20 Year Material and Workmanship
UL 2703 Markings	Product listing label is located on the rail end-caps
Roof Pitch	2:12 – 12:12
UL 2703 Allowable Design Load Rating	10 psf downward, 5 psf upward, and 5 psf lateral
Max Module Size	25.6 sqft
Module Orientation	Portrait or Landscape
Multiple use Rated Components (Position Independent)	Mid Clamp, MLPE Clip, and MLPE Bracket

**Class A System fire rating with Type 1 & 2 PV modules. Any module-to-roof gap is permitted, with no skirt required. This rating is applicable with any roof attachment.

UL 2703 MARKING EXAMPLE:

TORQUE SPECIFICATIONS

Component	Torque (in-lb)	Notes
Lag Screw	N/A	Fully Seat. Use visual indicator of the black EPDM ring around the bonded washer for torquing.
Mid-Clamp	144	
End-Clamp	96	
Rail Clicker Leveling Bolt	142	Pre-torqued upon delivery. Applies to Tile Hook and L-Foot/Clicker
Hook Height Bolt	N/A	Lightly clamp hook to flush with top of next tile row
Ground Lug	N/A	Refer to specific ground lug manufacturer's installation manual
MLPE Clip	144	
MLPE Mount	144	

RATINGS

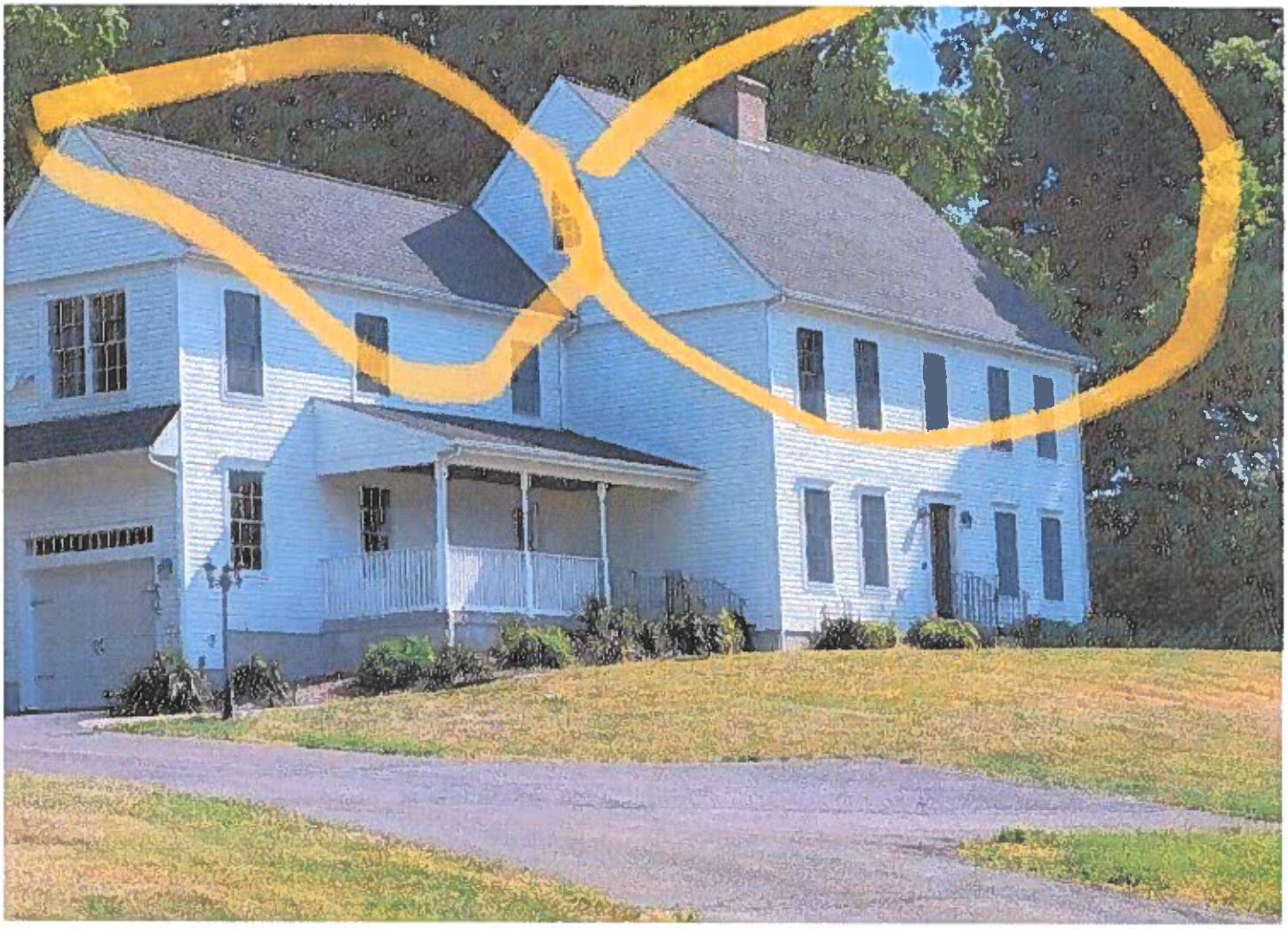
Laura Smith

From: Richard Wilkman [redacted]
Sent: Tuesday, June 7, 2022 9:27 AM
To: Kris Farley; Laura Smith
Subject: [EXTERNAL]Re: Application COA

Hi Laura,

My apologies for not providing these upfront. Attached you will see a few pictures from the street. I've also circled the areas where panels will be placed in one of the photos. If anything else is needed let me know.

Thanks.



Richard Wilkman | Energy Consultant | Trinity Solar | [redacted]

[redacted]

CT Corporate Location: 7 McKee Place Cheshire, CT 06410, Master Electric Contractor # ELC.0124054-E1 | CT, Home Improvement Contractor #HIC.0635520

For other jurisdictions, please visit: http://www.trinity-solar.com/about-us/locations-and-licenses

Description: Description: trinity_logo_cmyk (640x334)

From: Kris Farley [redacted]
Sent: Tuesday, June 7, 2022 8:28:44 AM
To: Richard Wilkmar [redacted]
Subject: Fwd: Application COA

Hey dude, think you could help me out with this?

---------- Forwarded message ---------
From: **Laura Smith** <lsmith@tollandct.gov>
Date: Tue, Jun 7, 2022, 8:20 AM
Subject: Application COA
To: Kris Farley [redacted]

Hello Chris,

The Chair of the Historic District Commission is asking that you, "…complete #1 on the application and provide pictures/photographs of the house with 31 solar panels on it from street view at different angles. There is only a diagram provided."

If you could please complete that, and return to me as soon as possible I would appreciate it.

Thank you,

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

Agenda Item 8

Agenda Item 9

Tolland Green Historic District Commission
21 Tolland Green
Tolland, CT 06084

June 9, 2022

Mr. Theodore Jick
89 Tolland Green
Tolland, CT 06084

Dear Mr. Jick:

Our records indicate that we met with you in a Public Hearing to consider the wood lattice fence installed at the above property, lacking Commission approval, on November 17, 2021.

The outcome of that meeting was that the fence emplacement was granted, with the stipulations that (1) the front street-facing panels and gate were to be framed and painted, and (2) that there would be substantial plantings added to the front of this area of fencing. The remainder of the fence was to be allowed as natural.

This is a friendly reminder that it has been seven months since the COA was granted and we look forward to your compliance with its terms.

Sincerely,

Rodney S. Hurtuk, Vice Chair and Enforcement Officer
Tolland Green Historic District Commission

Tolland Green Historic District Commission
21 Tolland Green
Tolland, CT 06084

June 9, 2022

Mr. Brendan West
94 Tolland Green
Tolland, CT. 06084

Dear Mr. West:

It has come to the attention of the Tolland Green Historic District Commission that the above property has recently presented an unauthorized fence, parallel to the public right of way, within the 300' setback from that public right of way.

Our records reflect an Application for a COA from you on 5/25/18 for emplacement of a vinyl fence, 8' tall, and running 72' along your south property line, beginning 15'-20' past the driveway, and ending at the last pine tree between the properties.

Such Application was granted as the fence's impact to the public view was minimal as the fence was end-on to the public view, and much of its run was obscured by structures and plantings.

Notwithstanding the foregoing, no further Application was received for the new installation, which is vinyl and fully open to the public view, and is, therefore, unauthorized. Moreover, it is not historical in material and is readily discernable to be vinyl, rather than wood or another historically accurate material.

If it is your wish to subject this matter for a retroactive COA review such should be submitted without delay. Please understand that such review does not assure a positive outcome for this matter. Otherwise, please advise us of your plans for its removal.

Sincerely,

Rodney S. Hurtuk, Vice Chair and Enforcement Officer
Tolland Green Historic District Commission

Agenda Item 10.1

Agenda Item 11

MINUTES
TOLLAND GREEN HISTORIC DISTRICT COMMISSION
Wednesday, May 18, 2022 at 7:00 p.m.
REMOTE MEETING

Public Hearing

Roll: Jodie Coleman-Marzialo, Chair; Rod Hurtuk, Vice Chair; Ann Deegan, Co-Clerk, Tim Malone.

Guests: Matt Sivillo (property owners – 88 Tolland Green)

1. Call to Order at 7:03 PM

2 Reading of Public Notice as appearing in Journal Inquirer

3. #88 Tolland Green

3.1 Consideration of Application for a COA for 8 Harvey replacement windows on the house at 88 Tolland Green. As the house was built in 1965 the house is not a historic property even though it is within the Historic District. Because this is a nonconforming property they should be given the same opportunity as the house at 100 Tolland Green to use a nonconforming material for the windows.

4. Motion to close the public hearing at 7:16 PM by Rod Hurtuk, 2nd Tim Malone Vote unanimous

Regular Meeting

Roll: Jodie Coleman-Marzialo, Chair; Rod Hurtuk, Vice Chair; Ann Deegan, Co-Clerk, Tim Malone.

Guests: Matt Sivillo (property owners – 88 Tolland Green)

1. Call to Order at 7:16 PM

2. New Business

2.1 Discussion by commission members and the home owner about a time line for the replacement of the remaining windows in the house. Mr. Sivillo felt that this could probably be completed within the timeline stated on the COA application.

2.2 Motion to amend the original COA for 88 Tolland Green to include an additional 5 windows for a total of 13 windows to be replaced as stated in the COA as presented by Rod Hurtuk, 2nd Tim Malone. Vote unanimous

2.3 Motion to grant the enhanced COA for 88 Tolland Green with the amended information without restrictions for the replacement of 13 windows to the same measurement specification as the original windows as presented by Rod Hurtuk, 2nd Tim Malone, Vote Unanimous

3. Miscellaneous

3.1 The chair spoke earlier today with the 4 finalists for the town manager . Of interest is the information gathered from Covington, Kentucky which holds a historic preservation resource fair which offers advice and resources for historic homeowners.

3.2 The chair wrote a letter to the Planning and Zoning opposing the modification of the Table of the Uses for the TVA-GD to allow for new drive-thru service

3.3 Continuation of the study of the guidelines for the TGHDC. Jodie Coleman-Marzialo discussed the guidelines provided from Summerville, SC. It was agreed that the placement of utility boxes should be included in the packet.. It was also agreed that the section from the SC packet on solar should be included along with a glossary at the back with terms that are appropriate to our town. Laura Smith has agreed to take pictures for the design guidelines.

3.4 Discussion of the joint meeting of the sidewalk committees on June 29th Phil Barlow and the State Preservation office will attend.

3.5 The chair stated that new signage in the Historic District is in the works. The chair would like the commission to look into the possibility that our Connecticut Scenic road might now meet the credentials to be designated as an "All American Road." This would offer further opportunities for grants.

3.6 Comments on the West fencing placement

4. Approval of corrected Minutes from November 17, 2021 Regular Meeting by Rod Hurtuk, 2nd Tim Malone vote unanimous

5. Motion to accept April 2022 minutes by Rod Hurtuk, 2nd Ann Deegan Vote unanimous

5. Motion to Adjourn at 7:53 PM by R. Hurtuk,, 2nd Tim Malone, Vote: Unanimous

Respectfully submitted,
Ann Deegan, Commissioner Co-Clerk