MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address: 7420 Maple Avenue, Takoma Park
Meeting Date: 2/12/2020

Resource: Contributing Resource
Report Date: 2/5/2020
Takoma Park Historic District

Applicant: Sonja Prince
Public Notice: 1/29/2020

Review: HAWP
Tax Credit: n/a

Case Number: 37/03-20I
Staff: Dan Bruechert

PROPOSAL: Solar Panel Installation

RECOMMENDATION

Staff recommends the HPC approve the HAWP application.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Contributing Resource within the Takoma Park Historic District
STYLE: Craftsman
c.1910-1920

Figure 1: 7420 Maple Ave. is at the corner of Maple and Old Philadelphia Ave.
**PROPOSAL**

The applicant proposes to install 53 (fifty-three) roof-mounted solar panels.

**APPLICABLE GUIDELINES**

When reviewing alterations and additions for new construction to Contributing Resources within the Takoma Park Historic District, decisions are guided by the Takoma Park Historic District Design Guidelines (*Guidelines*) and Montgomery County Code Chapter 24A (*Chapter 24A*), and the Secretary of the Interior’s Standards for Rehabilitation (*Standards*).

**Takoma Park Historic District Design Guidelines**

There are two very general, broad planning and design concepts which apply to all categories. These are:

- The design review emphasis will be restricted to changes that are at all visible from the public right-of-way, irrespective of landscaping or vegetation (it is expected that the majority of new additions will be reviewed for their impact on the overall district), and,

- The importance of assuring that additions and other changes to existing structures act to reinforce and continue existing streetscape, landscape, and building patterns rather than to impair the character of the district.

Contributing Resources should receive a more lenient review than those structures that have been classified as Outstanding. This design review should emphasize the importance of the resource to the overall streetscape and its compatibility with existing patterns rather than focusing on a close scrutiny of architectural detailing. In general, however, changes to Contributing Resources should respect the predominant architectural style of the resource. As stated above, the design review emphasis will be restricted to changes that are *at all visible from the public right-of-way*, irrespective of landscaping or vegetation.

Some of the factors to be considered in reviewing HAWPs on Contributing Resources include:

- All exterior alterations, including those to architectural features and details, should be generally consistent with the predominant architectural style and period of the resource and should preserve the predominant architectural features of the resource; exact replication of existing details and features is, however, not required

- Minor alterations to areas that do not directly front on a public right-of-way such as vents, metal stovepipes, air conditioners, fences, skylights, etc. – should be allowed as a matter of course; alterations to areas that do not directly front on a public way-of-way which involve the replacement of or damaged to original ornamental or architectural features are discouraged, but may be considered and approved on a case-by-case basis

- Major additions should, where feasible, be placed to the rear of existing structures so that they are less visible from the public right-of-way; additions and alterations to the first floor at the front of a structure are discouraged, but not automatically prohibited

- While additions should be compatible, they are not required to be replicative of earlier architectural styles

- Some non-original building materials may be acceptable on a case-by-case basis; artificial siding
on areas visible to the public right-of-way is discouraged where such materials would replace or damage original building materials that are in good condition.

Alterations to features that are not visible from the public right-of-way should be allowed as a matter of course.

All changes and additions should respect existing environmental settings, landscaping, and patterns of open space.

**Montgomery County Code, Chapter 24A Historic Resources Preservation**

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:

1. The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
2. The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
6. In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.

(d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord. No. 9-4, § 1; Ord. No. 11-59.)

**Secretary of the Interior’s Standards for Rehabilitation**

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, space and spatial relationships that characterize a property will be avoided.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

**STAFF DISCUSSION**

The subject property is a two-story Foursquare with Craftsman details and a large two-story addition to the rear. Based on information in the tax records the addition was constructed in 1942. The addition is larger than the historic house. The house has a low-sloped hipped roof which is visible from both the east and north.

The applicant proposes installing 53 (fifty-three) solar panels in 7 arrays on the north, south, and western roof slopes. No panels are proposed for the front-facing, east roof slope. The black panels will be attached to the roof using a CrossRail system that will project approximately 5” (five inches) above the roof surface.
Figure 2: Roof plan showing the placement of the 53 solar panels. The historic roof form is outlined by the red box.

On the historic roof, the applicant proposes installing two arrays, one with six panels on the south slope and a seven-panel array on the north roof slope. The south array will only be visible from an oblique angle from Maple Ave. The array on the north roof slope will be more visible from Old Philadelphia Ave. However, neither of these arrays will detract from the foursquare form that makes the subject property architecturally significant to the surrounding district, per 24A-8(b)(2). The CrossRail system employed to mount the solar arrays will penetrate the asphalt shingle roof, but Staff does not find this roofing to be historically significant, per Standards 9 and 10.

On the 1942 addition, the applicant proposes installing five arrays; two on the hyphen, and one each on the north, south, and west slopes of the rear addition. As these roof sections are not historic and do not substantially contribute to the character of the surrounding district, a more lenient review should be granted under 24A-8(d). Staff finds that the two arrays on the south-facing roof slopes will not be at all visible from the right-of-way and should be approved as a matter of course under the Design Guidelines. Staff further finds the array on the west-facing roof slope is the rear of the house which is the least architecturally significant elevation. Staff does not find that a solar array in this location would impair the historic character of the surrounding district (24A-8(d)). The final two arrays are on the north-facing roof slopes. This will be visible from the Takoma Park Memorial Park across Philadelphia Ave., but will have only a minimal impact on the historic character of the subject property or surrounding historic district.

STAFF RECOMMENDATION

Staff recommends that the Commission approve the HAWP under the Criteria for Issuance in Chapter 24A-8(b)(2) and (d) having found that the proposal will not substantially alter the exterior features of the historic resource and is compatible in character with the district, the Takoma Park Historic District Guidelines, and the purposes of Chapter 24A;
and with the Secretary of the Interior’s Standards for Rehabilitation #2, #9, and #10,

and with the general condition that the applicant shall present the **3 permit sets of drawings, if applicable, to Historic Preservation Commission (HPC) staff for review and stamping** prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff’s discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.
HISTORIC PRESERVATION COMMISSION
301/563-3400
APPLICATION FOR
HISTORIC AREA WORK PERMIT

Contact Email: schwitters@sustainableaggregates.net
Contact Person: Sylvia Weber
Daytime Phone No.: 301 788-4003

Tax Account No.: 13-010 609.88

Name of Property Owner: Sonia Prince
Daytime Phone No.: 301 265-6928

Address: 7420 Maple Ave, Takoma Park, Maryland 20912

Contractor: Sustainable Energy Systems
Phone No.: 301 783-6003

Agent for Owner: Contractor
Daytime Phone No.: —

LOCATION OF BUILDING/PREMISE

House Number: 7420
Street: Maple Ave
Town/City: Takoma Park
Nearest Cross Street: Philadelphia Ave
Lot: 7A
Block: 48
Subdivision: Patty 861

PART ONE: TYPE OF PERMIT, ACTIVITY AND USE

1A. CHECK ALL APPLICABLE:
☐ Construct ☐ Extant ☐ Alter/Remodel
☐ Move ☐ Install ☐ Wreck/Remove
☐ Revision ☐ Repair ☐ Removeable

1B. Construction cost estimate: $ 33,540

1C. If this is a revision of a previously approved active permit, see Permit #

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTERNAL ADDITIONS

2A. Type of sewage disposal:
01 WSSC
02 Septic
03 Other:

2B. Type of water supply:
01 WSSC
02 Well
03 Other:

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height ______ feet ______ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:
☐ On property line/property line
☐ Entirely on land of owner
☐ On public right of way/encroachment

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and except that to be a condition for the issuance of this permit.

[Signature]
Date: 12/31/99

Approved: For Chairperson, Historic Preservation Commission

Disapproved: Signature: Date:

Application/Permit No.: Date Filed: Date Issued:

SEE REVERSE SIDE FOR INSTRUCTIONS
THE FOLLOWING ITEMS MUST BE COMPLETED AND THE REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.

1. WRITTEN DESCRIPTION OF PROJECT
   a. Description of existing structure(s) and environmental setting, including their historical features and significance:

   Installing 10.69 kW on an existing single family dwelling located in Takoma Park's historic district. The home is located at 7428 Maple Ave.

   b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

   The effect of the panels will be mainly on the roof, other than the equipment to connect to the existing electrical service. Our plan does reflect that no panels will go on the roof that is street facing to Maple Avenue.

2. SITE PLAN
   Site and environmental setting, drawn to scale. You may use your plot. Your site plan must include:
   a. The scale, north arrow, and data;
   b. Dimensions of all existing and proposed structures; and
   c. Site features such as walkways, driveways, fences, pools, streams, trash dumpsters, mechanical equipment, and landscaping.

3. PLANS AND ELEVATIONS
   You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8.5" x 11" paper are preferred.
   a. Schematic construction plans, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.
   b. Elevations (façades), with marked dimensions, clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each façade affected by the proposed work is required.

4. MATERIALS SPECIFICATIONS
   General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. PHOTOGRAPHS
   a. Clearly labeled photographic prints of each façade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
   b. Clearly labeled photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. TREE SURVEY
   If you are proposing construction adjacent to or within the drip line of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree at least that dimension.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS
   For ALL projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question.

PLEASE PRINT IN BLUE OR BLACK INK OR TYPE THIS INFORMATION ON THE FOLLOWING PAGE.
PLEASE STAY WITHIN THE GUIDES OF THE TEMPLATE, AS THIS WILL BE PHOTOCOPIED DIRECTLY ONTO MAILING LABELS.
## HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

<table>
<thead>
<tr>
<th>Owner's mailing address</th>
<th>Owner's Agent's mailing address</th>
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</thead>
<tbody>
<tr>
<td>7420 Maple Avenue</td>
<td>Sustainable Energy Systems</td>
</tr>
<tr>
<td>Takoma Park MD 20912</td>
<td>4501 Metropolitan St. Suite H</td>
</tr>
<tr>
<td></td>
<td>Frederick MD 21701</td>
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<table>
<thead>
<tr>
<th>Adjacent and confronting Property Owners mailing addresses</th>
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<tbody>
<tr>
<td>106 Philadelphia Ave</td>
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<tr>
<td>7418 Maple Avenue</td>
</tr>
<tr>
<td>7417 Maple Avenue</td>
</tr>
</tbody>
</table>
# SOLAR PV PROJECT, WARD, SONJA 16.695 KW

## 7420 Maple Avenue, Takoma Park, MD, 20912

**FINANCING:** SUNNOVA

**SALES PERSON CONTACT:** Sam Vinton (202) 427-5464

**APPROVED BY:**

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**DRAWING INDEX**

<table>
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<tr>
<th>DRAWING INDEX</th>
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<td>Z001 SITE PLAN</td>
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<td>S001 ARRAY LAYOUT</td>
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<td>S002 SECTION</td>
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<td>E001 ONE LINE</td>
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**SCOPE OF WORK:**
Installing 53 Asphalt Roof Mounted Solar Panels - 16.695 kW

**SUSTAINABLE ENERGY SYSTEMS, LLC**

---

**SIGNED BY:**

**JUAN UTRERA**

**Digitally signed by:**

JUAN UTRERA

**Date:** 2019.12.04

**10:27:27 -05'00'**

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**Dedicated Area for Notes:**

![Notes]

- Hopefully asphalt penetration is possible. If not, run conduit over gutter to 1st 
  junction box, but keep all other conduits in connecting attic space.

![Image]

- Hopefully 100a disco fits next to 200a main disco. If not locate it to 
  the front corner and maintain clearance. Line side tap out side in 
  200a whole house disco.

---

**PROJECT MANAGER:** Kurt Zawaly (240-324-6199)

---

**INFORMATION:**

- Address: 301-786-4003
- Location: 4509 Metropolitian CT, Frederick, MD 21704

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**STATE OF MARYLAND**

**LICENCE #: 245513**

**EXPIRATION DATE: 5/12/2021**

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**PROFESSIONAL CERTIFICATION:** I hereby certify that these documents were prepared or approved by me, and that I am a professional engineer duly licensed under the laws of the State of Maryland.
Sonja Ward 16.695 kW
7420 Maple Avenue
Takoma Park, MD, 20912
240-205-6978
sonprnc@aol.com
(38.980698, -77.011172)

(N) INVERTER
(N) CONSUMPTION/SUB
(N) INVERTER
(N) EXTERNAL SURFACE CONDUIT
(N) UTILITY DISCONNECT
(E) 200A DISCONNECT
(E) UTILITY METER
(N) J-BOX
(N) INTERNAL ATTIC CONDUIT
(N) SOLAR MODULE

JUAN UTRERA
Digitally signed by JUAN UTRERA
Date: 2019.12.04
10:25:33 -05'00'

SUSTAINABLE ENERGY SYSTEMS, LLC
301-786-4003
4509 METROPOLITAN CT, FREDERICK, MD 21704
JM
2001 SITE PLAN

12/04/2019
10:25:33-05'00'
PV MODULE SPECS:
Jinko 315 watt
Module Weight: 41.9 lbs
Module Length: 66.3"
Module Width: 39.45"
Frame: 1.38" (35mm)

Inverter: (1) SolarEdge SE7600H-US
String 1-16 modules
String 2-14 modules

Inverter: (2) SolarEdge SE6000H-US
String 3-12 modules
String 4-11 modules

Racking: Everest
Optimizer: SolarEdge P320 (1 per module)

Mount: 24+18+8+19+17+11+28=125
# of Rails: 27
# of Mid Clips: 78   S  String Homerun
# of End Clips: 58 A  String Jumper
# of Splices: 14
# of Grounding Lugs: 15
J-Box: 7

Sonja Ward 16.695 kW
7420 Maple Avenue
Takoma Park, MD, 20912
240-205-6978
sonprnc@aol.com

STRUCTURAL NOTES:
1. MOUNTS ARE APPROXIMATE LOCATION BUT ACCURATELY SPACED
2. MOUNTS SHOULD BE SPACED WHEN POSSIBLE TO EVENLY DISTRIBUTE LOAD
3. DO NOT PLACE RAILS IN MIDDLE 50% OF SPAN BETWEEN TWO MOUNTS
4. ON TRUSS ROOF SYSTEM, KEEP ATTACHMENTS 8" MTL FROM NAIL PLATES

ROOF 1:
ROOF 2:
ROOF 3:
ROOF 4:
ROOF 5:
ROOF 6:
ROOF 7:

Juan UTRERA
Digitally signed by JUAN UTRERA
Date: 2019.12.04
10:27:10 -05'00'

SUSTAINABLE ENERGY SYSTEMS, LLC
301-788-4003
4509 METROPOLITAN CT, FREDERICK, MD, 21704

RB  S001
Sonja Ward 16.695 kW
7420 Maple Avenue
Takoma Park, MD, 20912
240-205-6978
sonprmc@aol.com

PV MODULE SPECS:
Jinko 315 watt
Module Weight: 41.9 lbs
Module Length: 66.3"
Module Width: 39.45"
Frame: 1.38" (35mm)

ROOF SPECS:
2 x 8 Rafter
Rafter Spacing: 16"
Roof Material: Asphalt

ARRAY 1 SPECS:
Pitch: 35°
Azimuth: 208°
# Of Modules: 12
Total Module Weight: 502.8 lbs
Racking Weight: 70.4 lbs
Array Weight: 573.2 lbs
Array Area: 218.4 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 24
Load Per Mount: 23.8 lbs

ARRAY 2 SPECS:
Pitch: 35°
Azimuth: 206°
# Of Modules: 6
Total Module Weight: 251.4 lbs
Racking Weight: 35.2 lbs
Array Weight: 296.8 lbs
Array Area: 192.2 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 18
Load Per Mount: 15.9 lbs

ARRAY 3 SPECS:
Pitch: 40°
Azimuth: 207°
# Of Modules: 3
Total Module Weight: 125.7 lbs
Racking Weight: 17.0 lbs
Array Weight: 143.3 lbs
Array Area: 54.0 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 10
Load Per Mount: 17.3 lbs

ARRAY 4 SPECS:
Pitch: 35°
Azimuth: 207°
# Of Modules: 7
Total Module Weight: 377.1 lbs
Racking Weight: 52.8 lbs
Array Weight: 429.9 lbs
Array Area: 163.8 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 17
Load Per Mount: 21.7 lbs

ARRAY 5 SPECS:
Pitch: 35°
Azimuth: 27°
# Of Modules: 5
Total Module Weight: 293.3 lbs
Racking Weight: 41.1 lbs
Array Weight: 334.4 lbs
Array Area: 227.6 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 11
Load Per Mount: 22.6 lbs

ARRAY 6 SPECS:
Pitch: 35°
Azimuth: 27°
# Of Modules: 5
Total Module Weight: 209.5 lbs
Racking Weight: 28.3 lbs
Array Weight: 236.3 lbs
Array Area: 200.2 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 12
Load Per Mount: 21.7 lbs

ARRAY 7 SPECS:
Pitch: 35°
Azimuth: 27°
# Of Modules: 11
Total Module Weight: 460.9 lbs
Racking Weight: 84.5 lbs
Array Weight: 525.4 lbs
Array Area: 300.2 sq.ft.
Array Dead Load: 2.6 lbs/sq.ft.
Number of Mounts: 26
Load Per Mount: 18.8 lbs

Sustainable Energy Systems, LLC
301-788-4003
4509 METROPOLITAN CT, FREDERICK, MD, 21704
JM S002 SECTION
### PV Module Specs
- **Jinko 315 watt**
- **Module Weight:** 41.9 lbs
- **Module Length:** 66.3"
- **Module Width:** 38.45"
- **Frame:** 1.38" (35mm)

### Inverter 1 Specs
- SOLAREDGE SE7600H-US
- **Operating Current (IMP):** 20A
- **Operating Voltage (VMP):** 380VDC
- **Max Short Circuit Current (ISC):** 30A
- **Max System Voltage (VOC):** 600VDC
- **Strings:** 3, 2, 12
- **CCPD 46A**

### Inverter 2 Specs
- SOLAREDGE SE8000H-US
- **Operating Current (IMP):** 13.5A
- **Operating Voltage (VMP):** 380VDC
- **Max Short Circuit Current (ISC):** 30A
- **Max System Voltage (VOC):** 500VDC
- **Strings:** 3, 4
- **CCPD35A**

### AC Output
- **System Voltage:** 240 VAC
- **System Ampacage:** 57 A

### DC Source Conductors - all conductors are Cu

<table>
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<tr>
<th>#</th>
<th>CONDUIT</th>
<th>CONDUCTOR</th>
<th>GROUND</th>
<th>#</th>
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<td>(2) 10 AWG PV WIRE</td>
<td>(1) 8 AWG BARE</td>
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<td>3/4&quot; EMT</td>
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### AC Source Conductors - all conductors are THHN/Cu *unless noted*

Sonja Ward 16.695 kW
7420 Maple Avenue
Takoma Park, MD, 20912
240-205-6978
sonprnc@aol.com

SUSTAINABLE ENERGY SYSTEMS, LLC
301-788-4003
4509 METROPOLITAN CT FREDERICK, MD 21704
E001 ONE LINE
Eagle HC 60M G2
315-335 Watt
MONO PERC HALF CELL MODULE
Positive power tolerance of 0~+3%

KEY FEATURES

- Diamond Cell Technology
  Uniquely designed high performance 5 busbar mono PERC half cell

- Higher Module Power
  Decrease in current loss yields higher module efficiency

- Shade Tolerance
  More shade tolerance due to twin arrays

- PID FREE
  Reinforced cell prevents potential induced degradation

- Strength and Durability
  Certified for high snow (5400 Pa) and wind (2400 Pa) loads

- IEC61215 / IEC61730 certified products
- UL1703 certified products
- ISO9001: 2008 Quality Standards
- ISO14001: 2004 Environmental Standards
- OHSAS18001 Occupational Health & Safety Standards
- UL1703 certified products
- UL1703 certified products

Nomination
JKM335M-60HBL

LINEAR PERFORMANCE WARRANTY
10 Year Product Warranty + 25 Year Linear Power Warranty
**Engineering Drawings**

**Electrical Performance & Temperature Dependence**

**Mechanical Characteristics**
- **Cell Type**: Mono PERC Diamond Cell (158.75 x 158.75 mm)
- **No. of Half-cells**: 120 (6 x 20)
- **Dimensions**: 1684 x 1002 x 35 mm (66.30 x 39.45 x 1.38 in)
- **Weight**: 19.9 kg (43.9 lbs)
- **Front Glass**: 3.2 mm Anti-Reflection Coating
- **Frame**: High Transmission, Low Iron, Tempered Glass
- **Frame Material**: Anodized Aluminum Alloy
- **Junction Box**: IP67 Rated
- **Output Cables**: 12AWG, Anode 1525 mm (60.04 in), Cathode 1525 mm (60.04 in) or Customized Length
- **Fire Type**: Type 1

**PACKAGING CONFIGURATION**
- Two pallets = One stack
- 30pcs/pallet, 60pcs/stack, 780pcs/40 HQ Container

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Module Type</th>
<th>JKM315M-60HL</th>
<th>JKM320M-60HL</th>
<th>JKM325M-60HL</th>
<th>JKM330M-60HL</th>
<th>JKM335M-60HL</th>
<th>JKM340M-60HL</th>
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<tbody>
<tr>
<td>STC</td>
<td>STC</td>
<td>STC</td>
<td>STC</td>
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<tr>
<td>NOCT</td>
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</table>

<table>
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<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Maximum Power Voltage (Vmp)</td>
<td>33.2V 31.2V 33.4V 31.4V 33.6V 31.6V 34.6V 31.8V 34.6V 32.0V</td>
</tr>
<tr>
<td>Maximum Power Current (Imp)</td>
<td>4.9A 7.6A 9.5A 7.6A 9.6A 7.6A 9.7A 7.4A 9.8A 7.2A</td>
</tr>
<tr>
<td>Open-circuit Voltage ( Voc)</td>
<td>40.7V 37.6V 40.9V 37.8V 41.1V 38.0V 41.3V 38.2V 41.5V 38.5V</td>
</tr>
<tr>
<td>Short-circuit Current (Is c)</td>
<td>10.0A 8.3A 10.1A 8.4A 10.2A 8.5A 10.3A 8.6A 10.3A 8.7A</td>
</tr>
</tbody>
</table>

| Module Efficiency STC (%) | 18.87% 18.86% 19.26% 19.55% 19.83% |
| Operating Temperature (°C) | -40°C to +85°C |
| Maximum System Voltage | 1000VDC (UL/1000VDC) IEC |
| Maximum Series Fuse Rating | 20A |
| Power Tolerance | 0 to 3% |
| Temperature Coefficients of Pmax | -0.36%/°C |
| Temperature Coefficients of Voc | -0.28%/°C |
| Temperature Coefficients of Is c | 0.04%/°C |
| Nominal Operating Cell Temperature (NOCT) | 45±2°C |

**STC**: Irradiance 1000W/m²  Cell Temperature 25°C  AM = 1.5

**NOCT**: Irradiance 800W/m²  Ambient Temperature 20°C  AM = 1.5  Wind Speed 1m/s

*Power measurement tolerance: ± 3%*
Single Phase Inverter with HD-Wave Technology
for North America

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)
### Single Phase Inverter with HD-Wave Technology for North America


#### OUTPUT

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Rated AC Power Output</td>
<td>3000</td>
<td>3800 @ 240V</td>
<td>5000</td>
<td>6000 @ 240V</td>
<td>7600</td>
<td>10000</td>
<td>11400 @ 240V</td>
</tr>
<tr>
<td>Maximum AC Power Output</td>
<td>5000</td>
<td>3800 @ 240V</td>
<td>5000</td>
<td>6000 @ 240V</td>
<td>7600</td>
<td>10000</td>
<td>11400 @ 240V</td>
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<tr>
<td>AC Output Voltage Min-Nom-Max (211 - 240 - 264)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>AC Output Voltage Min-Nom-Max (183 - 208 - 229)</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>AC Frequency (Nominal)</td>
<td>59.3 - 60 - 60.5</td>
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<tr>
<td>Maximum Continuous Output Current @240V</td>
<td>12.5</td>
<td>16</td>
<td>21</td>
<td>25</td>
<td>32</td>
<td>42</td>
<td>47.5</td>
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<tr>
<td>Maximum Continuous Output Current @280V</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>24</td>
<td>-</td>
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<td>48.5</td>
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<td>GFII Threshold</td>
<td>1</td>
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<tr>
<td>Utility Monitoring, Islanding Protection, Country Configurable Thresholds</td>
<td>Yes</td>
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#### INPUT

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<tbody>
<tr>
<td>Maximum DC Power @240V</td>
<td>4650</td>
<td>5000</td>
<td>7750</td>
<td>9300</td>
<td>11800</td>
<td>15500</td>
<td>17650</td>
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<tr>
<td>Maximum DC Power @280V</td>
<td>-</td>
<td>5100</td>
<td>-</td>
<td>7750</td>
<td>-</td>
<td>-</td>
<td>15500</td>
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<td>Transformer-less, Lugrounded</td>
<td>Yes</td>
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<tr>
<td>Maximum Input Voltage</td>
<td>480</td>
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<tr>
<td>Nominal DC Input Voltage</td>
<td>380</td>
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<tr>
<td>Maximum Input Current @240V</td>
<td>8.5</td>
<td>10.5</td>
<td>13.5</td>
<td>16.5</td>
<td>20</td>
<td>27</td>
<td>30.5</td>
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<tr>
<td>Maximum Input Current @280V</td>
<td>-</td>
<td>9</td>
<td>-</td>
<td>13.5</td>
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<td>27</td>
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<tr>
<td>Max. Input Short Circuit Current</td>
<td>45</td>
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<tr>
<td>Reverse-Polarity Protection</td>
<td>Yes</td>
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<tr>
<td>Ground-Fault Isolation Detection</td>
<td>600kHz Sensitivity</td>
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<tr>
<td>Maximum Invert er Efficiency</td>
<td>99</td>
<td></td>
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<tr>
<td>CEC Weighted Efficiency</td>
<td>35.2</td>
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<tr>
<td>Nighttime Power Consumption</td>
<td>&lt; 2.5</td>
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<td></td>
</tr>
</tbody>
</table>

#### ADDITIONAL FEATURES

- Supported Communication Interfaces: RS485, Ethernet, ZigBee (optional), Cellular (optional)
- Revenue Grade Data: ANSI C12.20  
  Optimal 
- Rapid Shutdown – NEC 2014 and 2017 690.12  
  Automatic Rapid Shutdown upon AC Grid Disconnect

#### STANDARD COMPLIANCE

- Safety: UL1741, UL1741 SA, UL61019, CSA C22.2, Canadian APCI according to NEL M-07
- Grid Connection Standards: IEEE1547, Rule 21, Rule 4 (HI)
- Emissions: FCC Part 15, Class B

#### INSTALLATION SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>AC Output Conduit Size / AWG Range</td>
<td>T1 Maximum / 14-6 AWG</td>
<td>T1 Maximum / 14-6 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 14-6 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 14-6 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
</tr>
<tr>
<td>DC Input Conduit Size / # of Strings / AWG Range</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td>T1 Maximum / 12-4 AWG</td>
<td></td>
</tr>
<tr>
<td>Dimensions with safety Switch (HWxWxH)</td>
<td>17.7 x 14.6 x 6.9</td>
<td>450 x 170 x 174</td>
<td>213 x 46 x 7.3 x 540 x 370 x 185</td>
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<tr>
<td>Weight with Safety Switch</td>
<td>22 / 10</td>
<td>22 / 10</td>
<td>22 / 10</td>
<td>22 / 10</td>
<td>22 / 10</td>
<td>22 / 10</td>
<td>22 / 10</td>
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<tr>
<td>Noise</td>
<td>&lt; 25</td>
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<tr>
<td>Cooling</td>
<td>Natural Convection</td>
<td></td>
<td></td>
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<tr>
<td>Operating Temperature Range</td>
<td>13 to +140 / -25 to +60°C (-40°F to +140°F, -13°F to +122°F)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Protection Rating</td>
<td>NEMA 4X (Inverter with Safety Switch)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

---

* For other regional settings please contact SolarEdge support
* A higher current rating may be used; the invertor will limit output current to the values stated
* Revenue grade invertor: P/N: SE6000H-US/HNC2
* For power density information refer to: https://www.solaredge.com/sites/default/files/size-water-temperature-derating-netc-r.pdf
* All versions P/N: SE6000H-US/N4

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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

solaredge.com


# Power Optimizer
For North America
P320 / P340 / P370 / P400 / P405 / P505

<table>
<thead>
<tr>
<th>Optimizer model (typical module compatibility)</th>
<th>P320 (for 60-cell modules)</th>
<th>P340 (for high-power 60-cell modules)</th>
<th>P370 (for higher-power 60 and 72-cell modules)</th>
<th>P400 (for 72 &amp; 96-cell modules)</th>
<th>P405 (for thin film modules)</th>
<th>P505 (for higher current modules)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INPUT</strong></td>
<td></td>
<td></td>
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<tr>
<td>Rated Input DC Power W</td>
<td>320</td>
<td>340</td>
<td>370</td>
<td>400</td>
<td>405</td>
<td>505</td>
</tr>
<tr>
<td>Absolute Maximum Input Voltage</td>
<td>48</td>
<td>60</td>
<td>80</td>
<td>125</td>
<td>83</td>
<td>Vdc</td>
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<tr>
<td>Voc at lowest temp condition</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>MPPT Operating Range</td>
<td>8 – 48</td>
<td>8 – 60</td>
<td>8 – 80</td>
<td>12.5 – 105</td>
<td>12.5 – 183</td>
<td>Vdc</td>
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<tr>
<td>Maximum Short Circuit Current (A)</td>
<td>1</td>
<td>11</td>
<td>101</td>
<td>14</td>
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<tr>
<td>Maximum DC Input Current</td>
<td>13.75</td>
<td>13.75</td>
<td>12.63</td>
<td>17.5</td>
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<tr>
<td>Maximum Efficiency γ</td>
<td></td>
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<tr>
<td>Weighted Efficiency γ</td>
<td>988</td>
<td>988</td>
<td>98.8</td>
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<td>Overvoltage Category</td>
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<tr>
<td><strong>OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)</strong></td>
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<tr>
<td>Maximum Output Current</td>
<td>15</td>
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<tr>
<td>Maximum Output Voltage</td>
<td>60</td>
<td>60</td>
<td>85</td>
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<tr>
<td><strong>OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)</strong></td>
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<tr>
<td>Safety Output Voltage per Power Optimizer</td>
<td>1 ± 0.1</td>
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<td><strong>STANDARD COMPLIANCE</strong></td>
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<td>EMC</td>
<td>FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3</td>
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<td>IEC62109-1 (class II safety), UL1741</td>
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<td>RoHS</td>
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<td><strong>INSTALLATION SPECIFICATIONS</strong></td>
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<td>Maximum Allow 3 System Voltage</td>
<td>1000</td>
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<tr>
<td>Compatible inverters</td>
<td>All SolarEdge Single Phase and Three Phase inverters</td>
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</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>129 x 53 x 275 / 5 x 5 x 2 x 11</td>
<td>129 x 153 x 335 / 51 x 6 x 1</td>
<td>129 x 199 x 49.5 / 51 x 9 x 19</td>
<td>129 x 162 x 55 / 51 x 6 x 2 x 3</td>
<td>mm / in</td>
<td></td>
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<tr>
<td>Weight (including cables)</td>
<td>630 / 14</td>
<td>750 / 17</td>
<td>845 / 19</td>
<td>1064 / 23</td>
<td>gr / lo</td>
<td></td>
</tr>
<tr>
<td>Input Connector</td>
<td>MC4</td>
<td></td>
<td></td>
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<td>Output Wire Type / Connector</td>
<td>Double Insulated, MC4</td>
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<td>Output Wire Length</td>
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<td>12 / 19</td>
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<td>Input Wire Length</td>
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<td>Operating Temperature Range</td>
<td>-40 to +45°C / -40 to +185°F</td>
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<td>Protection Rating</td>
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<td>Relative Humidity</td>
<td>0 to 100%</td>
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1) Rated STC power of the module. Module of up to ±3% power tolerance allowed
2) NEC 2017 requires max input voltage be not more than 80V
3) For other connector types please contact Solaredge

<table>
<thead>
<tr>
<th>PV System Design Using a SolarEdge Inverter</th>
<th>Single Phase</th>
<th>Single Phase</th>
<th>Three Phase 208V</th>
<th>Three Phase 480V</th>
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<tbody>
<tr>
<td>Minimum String Length (Power Optimizer) a)</td>
<td>P320, P340, P370, P400</td>
<td>8</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Maximum String Length (Power Optimizer) a)</td>
<td>P405 / P505</td>
<td>6</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Maximum Power per String</td>
<td>3700 (6000 with SE460-US / SE1460-US)</td>
<td>525</td>
<td>600 a)</td>
<td>12.750 a)</td>
</tr>
<tr>
<td>Parallel Strings of Different Lengths of Orientation</td>
<td>Yes</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

a) For detailed string sizing information refer to http://www.solaredge.com/sites/default/files/string_sizing.pdf
b) If not allowed to max P405/P505, with P420/P420M/P432/P420M, in one string
c) A string with more than 10 inverters does not meet NEC regulation requirements, safety voltage may be above the 30V requirement
d) For SE1440-US / SE2440-US, it is allowed to install up to 6,500W per string when 3 strings are connected to the inverter (3 strings per unit for SE462-US) and when the maximum power difference between the strings is up to 1,000W

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CrossRail System

- High quality, German-engineered system optimized for residential installation
- MK3 mounting hardware simplifies module installation - fast, easy and secure
- Easily integrates with third party roof attachment products
- L-Foot provides adjustability and compatibility with common roof types
- 100% code compliant, structural validation for all solar states
- 3 rail sizes available to suit all structural conditions
- Most components also available in dark anodized color
- Fast installation with minimal component count result in low total installed cost
- Simple to design using our code compliant Everest Online Design Tool

www.everest-solarsystems.com
Components

CrossRail 48-X/48-XL/80
Rail Connector 48-X/48-XL
Mid Clamp
End Clamp
Yeti Clamp
WEEB Lug
L-Foot, Slotted Set
Aluminum End Clamp Set
eComp Kit

Attachments

Tile Hook 35
SingleHook
Flat Tile Hook
Standing Seam PowerClamp
# L-Mount | QMLM / QMLM-ST

**Elevated Water Seal Technology®**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
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<tbody>
<tr>
<td>1</td>
<td>FLASHINGS, ROUNDED CORNERS, 9&quot; X 12&quot; X 0.040&quot; .438&quot; HOLE, 5052, MILD</td>
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<tr>
<td>2</td>
<td>L-FOOT, 2&quot; X 3.30&quot; FOR .438&quot; O.D. FASTENER, 2.1/16&quot; SLOT, 6061-T6/6005A-T61, MILD</td>
<td>1</td>
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<tr>
<td>3</td>
<td>WASHER, SEALING, 5/16&quot; ID X 3/4&quot; OD, EPDM BONDED SS</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>LAG SCREW, HEX HEAD, 5/16&quot; X 4&quot;, 18-8 SS</td>
<td>1</td>
</tr>
<tr>
<td>*5</td>
<td>STRUCTURAL SCREW, QMPV, 1-30 HEX WASHER HEAD, 5/16&quot; X 4-1/2&quot;, 18-8 SS</td>
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</tbody>
</table>

* STRUCTURAL SCREW AVAILABLE ON QMLM-ST VERSIONS ONLY

**Quick Mount PV**

**TITLE:**

QMLM & QMLM-ST: L-MOUNT, 2-1/16" SLOT

**UNLESS OTHERWISE SPECIFIED:**

INCHES ARE IN INCHES

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<td>4/4/2019</td>
<td>11</td>
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**SHEET 1 OF 1**
Mr. Bells:
In accordance with your request, Juan Utrera P.E. acting as an independent structural engineer for the project, located on 7420 Maple Avenue – Takoma Park, MD 20912, have reviewed the information provided by Sustainable Energy Systems, LLC for the installation of solar panels on the existing roof system.

The proposed solar panels will add an additional 3 PSF of dead load to the roof framing system; the solar panels are to be supported using the Everest Cross Rail System and the L-Mount fastened to the existing roof framing at 72” O.C. maximum.

**Conclusions & Recommendations:**

**Roof 1:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 9.08 SF per mount location the rafters can support the 272 pounds of snow load imposed by the design ground snow load of 30 PSF.

**Roof 2:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 6.05 SF per mount location the rafters can support the 182 pounds of snow load imposed by the design ground snow load of 30 PSF.

**Roof 3:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 6.75 SF per mount location the rafters can support the 202 pounds of snow load imposed by the design ground snow load of 30 PSF.

**Roof 4:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 8.63 SF per mount location the rafters can support the 259 pounds of snow load imposed by the design ground snow load of 30 PSF.

**Roof 5:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 7.47 SF per mount location the rafters can support the 224 pounds of snow load imposed by the design ground snow load of 30 PSF.

**Roof 6:**
The existing roof rafters spaced @ 16” O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 8.27 SF per mount location the rafters can support the 248 pounds of snow load imposed by the design ground snow load of 30 PSF.
Roof 7:
The existing roof rafters spaced @ 16" O.C. are structurally sound to support the additional 3 PSF imposed by the solar panels. Please note that at 7.14 SF per mount location the rafters can support the 214 pounds of snow load imposed by the design ground snow load of 30 PSF.

The proposed solar panel collectors and the Everest Cross Rail System to support the collectors comply with the 2015 International Building Code (IBC) and the Uniform Solar Energy Code. The mounting hardware will work well with the existing roof framing.

Should you have any questions regarding the information submitted, or if I can be of further assistance please call me at (301) 748-2769.

Sincerely,

Juan M. Utrera, P.E.
President

12/04/2019

[Signature]

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a professional engineer duly licensed under the laws of the State of Maryland. License No. 24518 Expiration Date: 9/21/2021
MUNICIPALITY LETTER
December 4, 2019

To:  Souja Prince Ward  sonprnc@aol.com

To:  Department of Permitting Services
     255 Rockville Pike, 2nd Floor
     Rockville, Maryland 20850-4166  Fax 240-777-6398; 240-777-6262; 240-777-6223

From: Planning and Development Services Division

THIS IS NOT A PERMIT – For Informational Purposes Only

VALID FOR ONE YEAR FROM DATE OF ISSUE

The property owner is responsible for obtaining all required permits from
Montgomery County and the City of Takoma Park. If this property is in the Takoma Park
Historic District, it is subject to Montgomery County Historic Preservation requirements.

Representative/email: Sylvia Weber, permitting@sustainableenergysystems.net 301-788-4003
Location of Project:  7420 Maple Avenue, Takoma Park, MD 20912
Proposed Scope of Work: Installing 53 roof mounted solar panels, 16.695 kW

The purpose of this municipality letter is to inform you that the City of Takoma Park has
regulations and city permit requirements that may apply to your project. This municipality letter
serves as notification that, in addition to all Montgomery County requirements, you are required
to comply with all City permitting requirements, including:

- Tree Impact Assessment/Tree Protection Plan
- Stormwater management
- City Right of Way

Failure to comply with these requirements could result in the issuance of a Stop Work Order and
other administrative actions within the provisions of the law. Details of Takoma Park’s permit
requirements are attached on page 2.

The issuance of this letter does not indicate approval of the project nor does it authorize the
property owner to proceed with the project. The City retains the right to review and comment on
project plans during the Montgomery County review process.
The City of Takoma Park permits for the following issues:

**Tree Impact Assessment/Tree Protection Plan/Tree Removal Application:**
Construction activities that occur within 50 feet of any urban forest tree (7 5/8" in diameter or greater), located on the property or on an adjacent property, may require a Tree Impact Assessment and Tree Protection Plan. Make sure to submit a Tree Impact Assessment and schedule a site visit with the City's Urban Forest Manager if any urban forest tree will be impacted by the proposed construction. The removal of any urban forest tree will require a tree removal application. The tree ordinance is detailed in the City Code, section 12.12. For permit information check: [https://takomaparkmd.gov/services/permits/tree-permits/](https://takomaparkmd.gov/services/permits/tree-permits/) The City's Urban Forest Manager can be reached at 301-891-7612 or janvz@takomaparkmd.gov.

**Stormwater Management:**
If you plan to develop or redevelop property, you may be required to provide appropriate stormwater management measures to control or manage runoff, as detailed in City Code section 16.04. All commercial or institutional development in the city must apply for Stormwater Management Permit regardless of the size of the land disturbance. Additions or modifications to existing detached single-family residential properties do not require a Stormwater Management permit if the project does not disturb more than 5,000 square feet of land area. For more information: [https://takomaparkmd.gov/government/public-works/stormwater-management-program/](https://takomaparkmd.gov/government/public-works/stormwater-management-program/). The City Engineer should be contacted to determine if a City permit is required at 301-891-7620.

**City Right of Way:**
- To place a construction dumpster or storage container temporarily on a City right of way (usually an adjacent road), you will need to obtain a permit. A permit is not required if the dumpster is placed in a privately-owned driveway or parking lot.
- If you plan to install a new driveway apron, or enlarge or replace an existing driveway apron, you need a Driveway Apron Permit.
- If you plan to construct a fence in the City right of way, you need to request a Fence Agreement. If approved, the Agreement will be recorded in the Land Records of Montgomery County.

For more information and applications for City permits, see [https://takomaparkmd.gov/services/permits/](https://takomaparkmd.gov/services/permits/) or contact the Takoma Park Department of Public Works at 301-891-7633.

Failure to comply with the City’s permitting requirements could result in the issuance of a Stop Work Order and other administrative actions within the provisions of the law.
Property Owner's Name:          Sonja Prince Ward

Property Owner's Address:       7420 Maple Ave Takoma Park MD 20712

I certify that:

X I prepared or approved the electrical drawings and related documents for the photovoltaic (PV) system at the above location.

X The design of the PV system, and all electrical installations and equipment, meets the standards and requirements of the National Electrical Code as adopted by Montgomery County in COMCOR 17.02.01.

X I reviewed and completed the Worksheet for PV System which was attached to the permit application for the PV system at the above location.

Montgomery County Master Electrician License Number: ME203184

Date:  12/11/2019

Signature:  

29
Address: 7420 Maple Avenue, Takoma Park, MD, 20912

I reviewed the design of the photovoltaic (PV) system, as designed by the manufacturer, and the design criteria utilized for the mounting equipment and panel mounting assembly (rack system) for the installation of 53 panels supported by the rack system, as shown on the drawings prepared for the above referenced address. I certify that the configurations and design criteria meet the standards and requirements of the International Residential Code (IRC) and the International Existing Building Code (IEBC) adopted by Montgomery County in COMCOR 08.00.02.

The attachment of the rack system to the building at the above address, including the location, number, and type of the attachment points; the number of fasteners per attachment point; and the specific type of fasteners (size, diameter, length, minimum embedment into structural framing etc.) meets the standards and requirements of the IRC and IEBC adopted by Montgomery County in COMCOR 08.00.02.

I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. I certify that no structural modifications of the existing roof structure are required. The existing roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02, necessary to support the PV system.

I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. Structural modifications of the existing roof structure are required. I certify that the roof structure, as modified on the drawings for this project, will support the additional loads imposed by the PV system. I further certify that the modified roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02.

I prepared or approved the construction documents for the mounting equipment, rack system, roof structure for this project.

24518
Maryland PE License

Date: 12-04-2019
Signature:

Digitally signed by JUAN UTRERA
Date: 2019.12.04 10:28:35 -05'00'

12/04/2019

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a professional engineer duly licensed under the laws of the State of Maryland.
License No. 24518  Expiration Date: 9/21/2021

Address: 7420 Maple Avenue, Takoma Park, MD, 20912

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Maryland PE License

Date: 12-04-2019

Signature: [Signature]

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