

#### HISTORIC PRESERVATION COMMISSION

Marc Elrich County Executive Robert Sutton Chairman

Date: October 31, 2023

#### **MEMORANDUM**

TO:	Rabbiah Sabbakhan
	Department of Permitting Services
FROM:	Michael Kyne
	Historic Preservation Section
	Maryland-National Capital Park & Planning Commission Historic Area Work
SUBJECT:	Permit # 1040700: Solar panel installation and new conduit.

The Montgomery County Historic Preservation Commission (HPC) has reviewed the attached application for a Historic Area Work Permit (HAWP). This application was <u>Approved</u> at the September 20, 2023 HPC meeting.

The HPC staff has reviewed and stamped the attached construction drawings.

THE BUILDING PERMIT FOR THIS PROJECT SHALL BE ISSUED CONDITIONAL UPON ADHERENCE TO THE ABOVE APPROVED HAWP CONDITIONS AND MAY REQUIRE APPROVAL BY DPS OR ANOTHER LOCAL OFFICE BEFORE WORK CAN BEGIN.

Applicant:Samuel BrysonAddress:5 Columbia Avenue, Takoma Park

This HAWP approval is subject to the general condition that the applicant will obtain all other applicable Montgomery County or local government agency permits. After the issuance of these permits, the applicant must contact this Historic Preservation Office if any changes to the approved plan are made. Once work is complete the applicant will contact Michael Kyne at 301.563.3403 or <u>michael.kyne@montgomeryplanning.org</u> to schedule a follow-up site visit.



	FOR STAFF ONLY:
SCOMERY COL	HAWP# <u>1040700</u>
APPLICATIO HISTORIC AREA W HISTORIC PRESERVATION 301.563.340	N FOR ORK PERMIT COMMISSION 0
APPLICANT:	
Name: Samuel Bryson	<sub>E-mail:</sub> sam.bryson@gmail.com
Address: 5 Columbia Ave	<sub>City:</sub> Takoma Park <sub>zip:</sub> 20912
Daytime Phone: 202-340-2924	Tax Account No.: 01058893
AGENT/CONTACT (if applicable):	
Name:	E-mail:
Address:	City: Zip:
Daytime Phone:	Contractor Registration No.:
LOCATION OF BUILDING/PREMISE: MIHP # of Histori	c Property
Is the Property Located within an Historic District? $\underline{X}$	res/District <u>Name</u>
	No/Individua APPROVED
<sup>m</sup> By Michael Kyne at 2:43 pm, Oct 20, 2023 <sup>e Ea</sup>	sement Hole Montgomery County
Are other Planning and/or Hearing Examiner Approvals	Historic Preservation Commission
(Conditional Use, Variance, Record Plat, etc.?) If YES, in	clude inform
Building Number: 5 Street: CO	Iumbia MMEha/MMA
Town/City: Takoma Park	Pine Ave
Lot: P13 Block: 18 Subdivision:	0025 Parcel:
TYPE OF WORK PROPOSED: See the checklist on P for proposed work are submitted with this applica	age 4 to verify that all supporting items
be accepted for review. Check all that apply:	Shed/Garage/Accessory Structure
New Construction Deck/Porch	Solar
Addition Fence	scape Window/Door
Grading/Excavation Roof	Other:
I hereby certify that I have the authority to make the fo	pregoing application, that the application is correct
and accurate and that the construction will comply will agencies and hereby acknowledge and accept this to be	th plans reviewed and approved by all necessary
agencies and nereby acknowledge and accept tills to	8/14/2023

<b>Owner's</b> mailing address 5 Columbia Ave Takoma Park, MD 20912	Owner's Agent's mailing address N/A
Adjacent and confi	onting Property Owners mailing addresses
5 Pine Ave Takoma Park, MD 20912	7 Columbia Ave Takoma Park, MD 20912
6 Pine Ave Takoma Park, MD 20912	1 Columbia Avenue, Takoma Park MD 20912 8 Columbia Avenue, Takoma Park MD 20912
105 Carroll Avenue, Takoma Park M	D 20912
<b>VIEWED</b> Aichael Kyne at 2:43 pm, Oct 20, 20	APPROVED Montgomery County Historic Preservation Commission

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Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

The existing structure is an historic farmhouse and is a contributing resource in the Takoma Park Historic Distric. The property underwent a significant renovation in 2019 & 2020 to restore it to habitability.

Description of Work Proposed: Please give an overview of the work to be undertaken:

We seek to install new solar panels, expanding the existing array that is already on the roof. The additional panels will be added to the roof surfaces sloping South (facing Pine Ave) and East (facing the neighbording property at 7 Columbia Ave. No panels will be added to roof surfaces facing to the North (Columbia Ave).

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Work Item 1: See attached			
Description of Current Condition:	Proposed Work:		
Work Item 2:	<u></u>		
Description of Current Condition: <b>REVIEWED</b> By Michael Kyne at 2:43 pm, Oct 20, 2023	Proposed Work:	APPROVED Montgomery County Historic Preservation Commission	
Work Item 3:			
Description of Current Condition:	Proposed Work:		

#### HISTORIC AREA WORK PERMIT CHECKLIST OF APPLICATION REQUIREMENTS

	Required Attachments						
Proposed Work	I. Written Description	2. Site Plan	3. Plans/ Elevations	4. Material Specifications	5. Photographs	6. Tree Survey	7. Property Owner Addresses
New Construction	*	*	*	*	*	*	*
Additions/ Alterations	*	*	*	*	*	*	*
Demolition	*	*	*		*		*
Deck/Porch	*	*	*	*	*	*	*
Fence/Wall	*	*	*	*	*	*	*
Driveway/ Parking Area	*	*		*	*	*	*
Grading/Exc avation/Land scaing	*	*		*	*	*	*
Tree Removal	*	*		*	*	*	*
Siding/ Roof Changes	*	*	*	*	*		*
Window/ Door Changes	*	*	*	*	*		*
Masonry Repair/ Repoint	*	*	*	*	*		*
Signs	*	*	*	*	*		*

**REVIEWED** 

By Michael Kyne at 2:43 pm, Oct 20, 2023

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Vicinity Map		System Description		
	MODULE TYPE	SILFAB-400 HC+		ΜΔΤΕ
	QUANTITY	18		,
	SYSTEM SIZE	7.2 kW		
	ROOF TYPE	SHINGLE	MODULE	
B Columbia Ave	PITCH	45°, 42.5°, 18.4°	MODULE	(18) SIL
	STRUCTURE	RAFTER/TRUSS		(1) COL
	AZIMUTH	91°	INVERTER	
	MOUNTING SYSTEM	SNAP N' RACK		(10) 60
MontgomenyAve	INVERTER(S)	SOLAR EDGE 6 kW HD	OPTIMIZER	(18) 50



### RIAL LIST

FAB 400 HC+

AREDGE 6kW

LAREDGE S440s

# NOT TO SCALE

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By Michael Kyne at 2:43 pm, Oct 20, 2023

Montgomery County Historic Preservation Commission

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REVISIONS	MM/DD/YY REMARKS					
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module

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Snap n Rack

5/16 SS lag bolt min 2 1/2" Embedment

not to scale

REVISIONS	REMARKS					
	MM/DD/YY					
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## **ELEVATION DETAIL**





## • RELIABLE ENERGY. DIRECT FROM THE SOURCE.

Designed to outperform.

Dependable, durable, high-performance solar panels engineered for North American homeowners.

#### SILFABSOLAR.COM







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With over 40 years of experience in solar, Silfab continues to be the leader in North American solar manufacturing. Incorporating premium materials, strict quality controls, leading-edge automation and worldclass customer service, Silfab Prime solar panels are the perfect combination of quality, performance and aesthetics.

#### SILFAB PRIME SIL - 400 HC+

*High-Efficiency Premium Mono-Perc PV Module designed and engineered exclusively for North American homeowners.* 

#### AMERICA'S CHOICE

Join thousands of homeowners who are choosing Silfab Solar for their solar needs every day!

#### SUPERIOR TECHNOLOGY. STRONGER PERFORMANCE. TOTAL RELIABILITY.

Silfab Prime panels are designed for homeowners seeking a premium, high-quality solar solution you can count on. Precision engineering combined with strict quality controls in our fully automated ISO certified facilities ensures quality panels you can trust. Featuring 9-bus bar technology that maximizes energy collection and conversion while highefficiency half-cell design improves performance and durability.

Manufactured and compliant with the Buy America Act, Silfab modules have been installed by the US State Department, US military and FAA.

#### SLEEK, ELEGANT AND DURABLE

A sleek all black aesthetic that will look elegant and compliment any roof. Exclusively designed for wideranging racking compatibility, durability and ease of installation.

#### LOCAL CUSTOMER SERVICE

Our North American team is available to provide customer service that is direct, efficient and local.

#### INDUSTRY-LEADING WARRANTY

An industry-leading 25-year workmanship and 30-year performance warranty backed by a company that has been perfecting solar products for over four decades.





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# **Ultra Rail**

**REVIEWED** By Michael Kyne at 2:43 pm, Oct 20, 2023



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# The Ultimate Value in Rooftop Solar



Industry leading Wire Management Solutions



Single Tool Installation



Mounts available for all roof types



All SnapNrack Module Clamps & Accessories are compatible with both rail profiles

# **Start Installing Ultra Rail Today**

RESOURCES DESIGN WHERE TO BUY snapnrack.com/resources snapnrack.com/configurator snapnrack.com/where-to-buy

# **SnapNrack Ultra Rail System**

A sleek, straightforward rail solution for mounting solar modules on all roof types. Ultra Rail features two rail profiles; UR-40 is a lightweight rail profile that is suitable for most geographic regions and maintains all the great features of SnapNrack rail, while UR-60 is a heavier duty rail profile that provides a larger rail channel and increased span capabilities. Both are compatible with all existing mounts, module clamps, and accessories for ease of install.

### The Entire System is a Snap to Install

- New Ultra Rail Mounts include snap-in brackets for attaching rail
- Compatible with all the SnapNrack Mid Clamps and End Clamps customers love
- Universal End Clamps and snap-in End Caps provide a clean look to the array edge



### Unparalleled Wire Management

- Open rail channel provides room for running wires resulting in a long-lasting quality install
- Industry best wire management offering

includes J Clamps, M Clamps • System is Standard

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### Heavy Duty UR-60 Rail

**REVIEWED** 

• UR-60 rail profile provides increased span capabilities for high wind speeds and snow loads

By Michael Kyne at 2:43 pm, Oct 20, 2023

- Taller, stronger rail profile includes profilespecific rail splice and end cap
- All existing mounts, module clamps, and accessories are retained for the same great install experience



amen. Motton

# **Quality. Innovative. Superior.**

SnapNrack Solar Mounting Solutions are engineered to optimize material use and labor resources and improve overall installation quality and safety.

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# SolarEdge System Overview



architects of energy™

# SolarEdge System Description

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SolarEdge provides next generation solar power harvesting and monitoring solutions that effectively remove all known system constraints across the photovoltaic energy space. Our Smart DC ASIC technology and active electronics enable increased production of clean, grid-ready energy at a lower cost.

Traditional photovoltaic installations suffer from a broad range of limitations that prevent them from reaching their full potential. Module mismatch and partial shading prevent systems from achieving their optimum. System design is made complex due to numerous constraints, such as the inability to leverage full roof real estate, to combine strings of different lengths, or to easily address differing roof facets. Traditional systems lack monitoring and analysis capabilities, as well as critical safety features. The systems can pose risks to workers installing or maintaining the system, as well as to firefighters dealing with fires in the vicinity of a PV installation. SolarEdge Technologies presents a unique, patent-pending distributed power harvesting system, combining more efficient power harvesting, a highly reliable inverter, and comprehensive module level monitoring.

The SolarEdge technology marries traditional photovoltaic workflows and installation methods with a groundbreaking holistic system approach. It is a quiet revolution that is disruptive because of its profound benefits in changing the manner in which energy is harvested, deployed, managed and delivered and at the same time complementary because it fits into the current photovoltaic workflow.

We believe the PV delivery chain is ultimately only as strong as its weakest link. By adopting a "system first" philosophy that identifies and eliminates the Achilles heel at each step of the process, we enable a constraint-free delivery of sun harvested energy.

#### THE SOLAREDGE SYSTEM IS COMPRISED OF THREE KEY ELEMENTS:

- SolarEdge PowerBox<sup>™</sup>: The SolarEdge PowerBox is a DC-DC power optimizer that is integrated into each module, replacing the traditional junction box. The PowerBox optimizes energy output and enables performance monitoring for each module. Further, the PowerBoxes automatically maintain a fixed string voltage, giving installers greater flexibility to design optimal PV systems, and providing higher fault tolerance.
- SolarEdge Inverter: The SolarEdge Inverter is a highly reliable PV inverter. Because MPPT and voltage management are handled separately for each module, the inverter is only responsible for DC to AC inversion. Consequently, it is a less complicated, more reliable device. The fixed string voltage ensures operation at the highest efficiency (>97%) at all times, independent of string length and temperature. The inverter is small, lightweight and easy to install.



SolarEdge Monitoring Portal: A web-based application provides module-level, string-level and system-wide monitoring. The software automatically provides alerts to a wide range of issues affecting energy generation and to safety events, visually pinpointed on a site layout map. Module performance is communicated over existing power lines, so no extra wiring is needed. SolarEdge monitoring can be deployed in conjunction with the PowerBox, or separately to monitor existing solar installations.







SolarEdge Monitoring

**Good design always** requires a holistic viewpoint. Take a step back, consider all the details from above, and you get a better perspective on how to deal with problems up close. That's precisely how SolarEdge developed its system-centric approach which maximizes Solar PV performance.



#### SOLAREDGE SYSTEM BENEFITS

#### Maximum Power Harvesting (up to 25% More Power)

- No partial shading sensitivity
- No module mismatch losses
- No under/over voltage losses
- Improved MPP tracking performance

#### Simple, Plug and Play, Error-Free System Design & Installation

- Removes traditional design constraints with SolarEdge flexible architecture
- Simplifies installation by connecting strings of different lengths to a single inverter
- Allows for multi-facet installation with a single inverter
- Scalable installation for future needs

#### Next Generation Maintenance with Module-level Monitoring & Troubleshooting

- Real time monitoring revolutionizes installation feedback and troubleshooting
- In-module monitoring system continuously tracks module power and status
- Communication over the existing power lines, without additional wires
- Data analysis software automatically detects and locates faults and presents them on a physical layout map

#### **Unprecedented Installer & Firefighter Safety**

- Electrocution risk eliminated due to low module voltage during installation
- Maximizes safety by enabling module shutdown during service
- Protects firefighters by automatic module shutdown

#### **Extraordinary Reliability**

- Designed for extreme outdoor conditions IP65 / NEMA 3R
- Module-level reliability
- 25 year warranty for PowerBox, 12 year warranty for inverter

#### Cost Savings on Wiring, Diodes, Fuses and Other Hardware

Longer strings allowing for less cabling and hardware

#### **Advanced Anti-theft Capability**

- Real time theft detection
- Module immobilization

#### **MODULE MANUFACTURERS**

- Create a superior PV module key differentiator
- Added value to increase market penetration and revenues
- Module production line improvement enables higher currents from existing modules
- Remove manufacturing limitations temperature variance, module mismatch and manufacturing variations no longer affect power harvesting
- Simplifies module inventory considerations by avoiding unnecessary stockpiling of specific models. Enables the design and delivery of a system per customer with speed and efficiency
- Easier vertical integration to the BoS market segment

#### **INTEGRATORS, INSTALLERS** AND MAINTENANCE PROVIDERS

- Ideal for residential, commercial and large field installers
- Lower installation costs with faster design, less wiring, diodes, fuses and better maintenance
- Simple installation use the same installation methods as exist today with all the SolarEdge added benefits
- Immediate installation feedback for faster site commissioning
- Scalable installation adding modules to existing installations is simple and straightforward
- maintenance progress
- and fire risks are eliminated with automatic module voltage shutdown during installation and maintenance

### REVIEWED By Michael Kyne at 2:43 pm, Oct 20, 2023





# SolarEdge System Benefits

- Create maintenance reports and log
- Full safety solution electrocution

#### SYSTEM OWNERS

- Up to 25% more energy due to reduced power losses, for faster ROI
- Optimal roof area utilization
- Effective remote monitoring easier maintenance that costs less
- Enhanced system troubleshooting
- Theft prevention mechanism
- Better fire safety reduce insurance premiums

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# solaredge

#### About SolarEdge

SolarEdge provides next generation power conversion electronics that effectively remove all known system constraints across the photovoltaic energy space. Our Smart DC technology enables increased production of clean, grid-ready energy at a lower cost.

The SolarEdge technology marries traditional photovoltaic workflows and installation methods with a groundbreaking holistic system approach. It is a quiet revolution that is disruptive because of its profound benefits in changing the manner in which energy is harvested, deployed, managed and delivered and at the same time complementary because it fits into the current photovoltaic workflow.

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### **REVIEWED** By Michael Kyne at 2:43 pm, Oct 20, 2023

USA	2225 East Bayshore Rd., Suite 200, Palo Alto CA 94303, USA
Germany	Königstr. 5, 01097 Dresden, Germany
Japan	B-9 Ariake Frontier Building, 3-7-26 Ariake, Koto-Ku, Tokyo 135-0063, Japar
Israel	6 HaHarash St. PO.Box 7349, Neve Neeman, Hod Hasharon 45240, Israel

#### www.solaredge.com

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### architects of energy™



DEPARTMENT OF PERMITTING SERVICES

Rabbiah Sabbakhan Director

#### Marc Elrich County Executive

# HISTORIC AREA WORK PERMIT APPLICATION

Application Date: 8/14/2023

Application No: 1040700 AP Type: HISTORIC Customer No: 1374901

#### Affidavit Acknowledgement

The Homeowner is the Primary applicant This application does not violate any covenants and deed restrictions

#### **Primary Applicant Information**

Address 5 COLUMBIA AVE TAKOMA PARK, MD 20912

Homeowner Bryson (Primary)

#### Historic Area Work Permit Details

Work Type ADD

Scope We seek to install new solar panels, expanding the existing array that is already on the roof. The additional panels will be added to the roof surfaces of sloping South (facing Pine Ave) and East (facing the neighbording property at 7 Columbia Ave. No panels will be added to roof surfaces facing to the Work North (Columbia Ave).

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2425 Reedie Drive, 7th Floor. Wheaton. MD 20902. (240)777-0311. (240)777-6256 TTY

#### WEST ELEVATION – FACING PINE AVENUE



### REVIEWED

By Michael Kyne at 2:43 pm, Oct 20, 2023

#### SOUTHWEST ELEVATION - FACING PINE AVENUE



## **REVIEWED**

By Michael Kyne at 2:43 pm, Oct 20, 2023

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#### SOUTH ELEVATION - FACING 8 PINE AVENUE



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By Michael Kyne at 2:43 pm, Oct 20, 2023

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# stub up onto roof with boot

Patial conveluit white to

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**REVIEWED** By Michael Kyne at 6:40 pm, Oct 31, 2023

APPROVED

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