# PLANNING COMMISSION PACKET

September 30, 2023

### Hello All,

Enclosed please find your packet for the meeting of October 2, 2023.

For consideration we have:

- 1 resurvey
- 1 solar array (outside established PC Guidelines for Solar Arrays)

If you receive any citizen inquiries regarding these cases the plans may be viewed by going to:

### www.mtnbrook.org

- Calendar (upper right corner)
- Planning Commission (October 2, 2023)
- Meeting Information (for agenda) and Supporting Documents (to view proposed plans select link associated with the case number)

If you have any questions about these cases please don't hesitate to give me a call at 802-3816 or send me an email at <a href="mailto:hazend@mtnbrook.org">hazend@mtnbrook.org</a>.

Looking forward to seeing you on Monday! **Dana** 

### MEETING AGENDA

### **CITY OF MOUNTAIN BROOK**

PLANNING COMMISSION OCTOBER 2, 2023

PRE-MEETING: (ROOM A106) 5:15 P.M. REGULAR MEETING: (ROOM A108) 5:30 P.M.

CITY HALL, 56 CHURCH STREET MOUNTAIN BROOK, AL 35213

FOR APPLICANTS AND PERSONS WHO WISH TO SPEAK, THE MEETING IS TO BE HELD IN-PERSON AT CITY HALL.

ZOOM VIDEO CONFERENCING IS PROVIDED MERELY AS A CONVENIENCE FOR MEMBERS OF THE PUBLIC WHO WISH TO FOLLOW ALONG (BUT WILL NOT BE AFFORDED AN OPPORTUNITY TO SPEAK).

ZOOM ACCESS INSTRUCTIONS MAY BE FOUND ON CITY WEBPAGE AT: MTNBROOK,ORG - CALENDAR (UPPER RIGHT CORNER) - PLANNING COMMISSION – OCTOBER 2, 2023

- 1. Call To Order
- 2. Approval of Agenda
- 3. Approval of Minutes: August 7, 2023
- 4. Case P-23-14: Benton & Anna Emblom and John & Sara McDonald

Hendon Survey Plat No. 2, being a resurvey of Lot 3, according to the Hendon Survey as recorded in Map Book 174, Page 94, in the Office of the Judge of Probate, Jefferson County, Alabama, and an acreage parcel; all being situated in the NW ¼ of the NW ¼ of Section 4, Twp-18S, R-2W, Jefferson County, Alabama. **15 Memory Lane** 

- 5. Case P-23-15: Charles and Elizabeth Scribner request approval for the installation of an alternative solar energy system consisting of roof mount arrays. 2940 Balmoral Road
- 6. Next Meeting: November 6, 2023
- 7. Adjournment



## Planning Commission Application PART I

## Project Data

Address of Subject Property15 Memory Lane, Birmingham, Alabama				
Zoning Classification Residence A District				
Name of Property Owner(s) Benton & Anna Emblom				
Phone Number N/A Email N/A				
Name of Representative Agent (if applicable)				
Gonzalez-Strength & Associates, Inc.				
Phone Number <u>205-942-2486</u> Email				
Name of Engineer or Surveyor Derek S. Meadows				
Phone Number 205-942-2486 Email dmeadows@gonzalez-strength.com				
Property owner or representative agent must be present at hearing				
<u>Plans</u>				
See applicable Section of the Zoning Ordinance for submittal requirements				
pertaining to your particular application. Applicable Code Section may be found				
in Part II, list of application types. Contact City Planner with any specific				
questions as to required plans submittal.				

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## P-23-14

### Resurvey in existing Residence A zoning

✓ Lot line adjustment transferring a triangular area from the rear of Lot 3-A (25 Memory Lane) to 3-B (15 Memory Lane).

The purpose of the proposed plat is to give secondary vehicular access to Memory Lane from adjoining Lot 1 (2 Country Club Road); see attached Exhibit Map for driveway illustration. Applicant John Montgomery owns 2 Country Club Road and is under contract to purchase 15 Memory Lane.

- **☑** May be approved as a final plat.
- ✓ Meets the Zoning Regulations for the Res-A district.
- ✓ **Overall layout is acceptable**, with the final plat to fully comply with all applicable requirements of the Mountain Brook Subdivision Regulations.
- ✓ No floodplain present.
- ✓ No relevant history or prior cases.

### • Project Data:

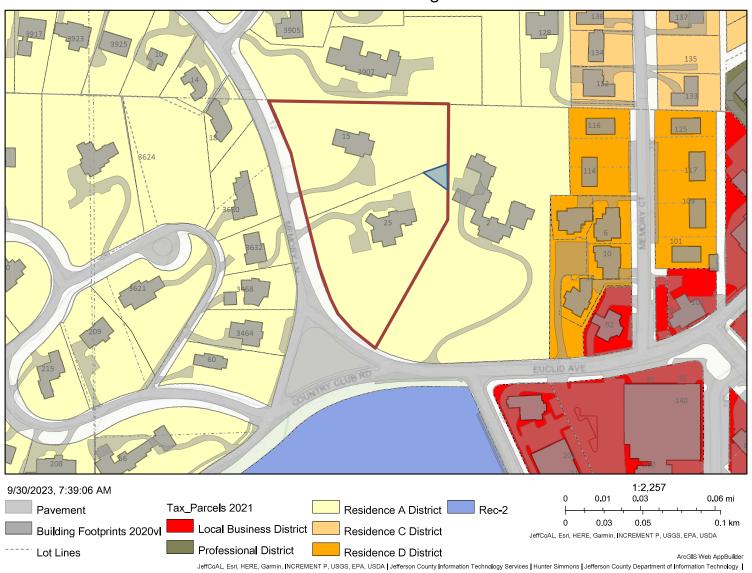
NAME: Hendon Survey Plat No. 2

CURRENT ZONING: Residence A

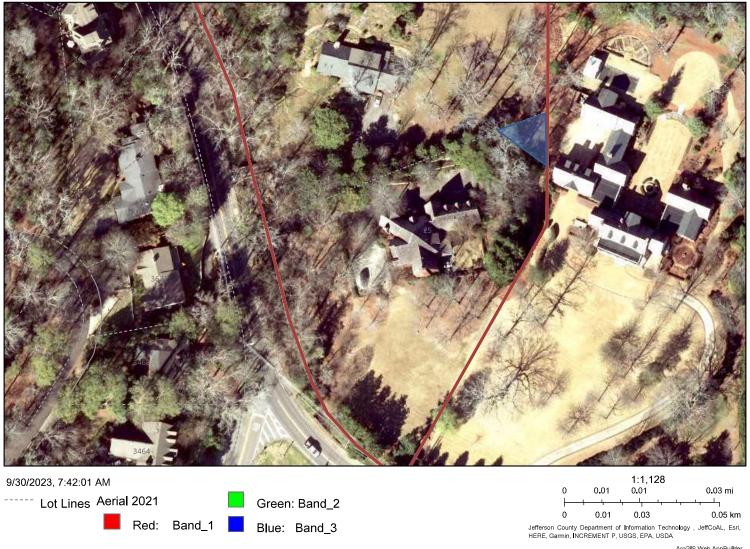
OWNERS: Deirdre Knight (15 Memory Lane)

John Montgomery (2 Country Club Road) Benton Emblom (25 Memory Lane)

P-23-14 Zoning



P-23-14 Aerial



ArcGIS Web AppBuilder

JeffCoAL, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA | Jefferson County Information Technology Services | Hunter Simmons | Jefferson County Department of Information Technology |

### **LEGEND**

● IPF ● IPS IRON PIN FOUND
IRON PIN SET

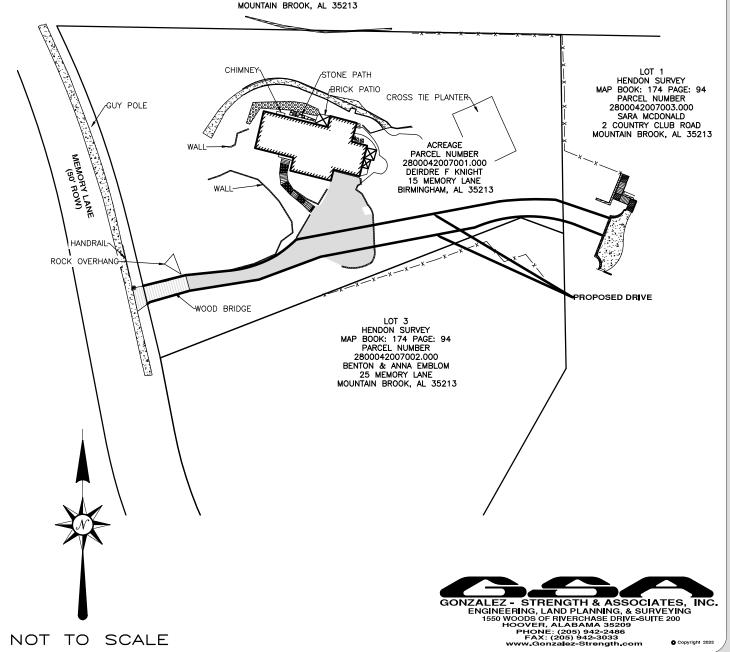
R.O.W.

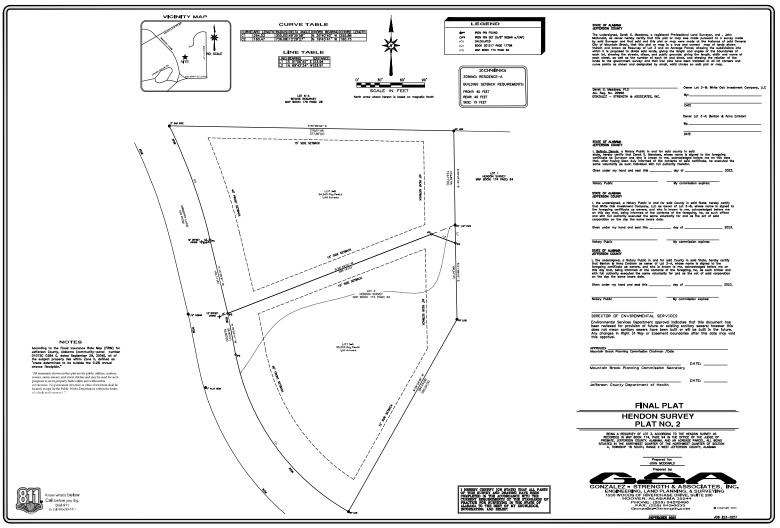
RIGHT OF WAY

### **EXHIBIT MAP**

NW 1/4 OF THE NW 1/4 SEC. 4, T-18-S, R-2-W JEFFERSON COUNTY, AL.

LOT 6-A
RITCHIE RESURVEY
MAP BOOK: 179 PAGE: 28
PARCEL NUMBER
2300333003018.002
RITCHIE THOMAS
3907 MEMORY BROOK CIRLCE
MOUNTAIN BROOK, AL 35213







## Planning Commission Application PART I

Project Data

Address of Subject Property 2940 Balmoral Road Mtn Brook, 4L 35233						
Zoning Classification Residence A District						
Name of Property Owner(s) Charles and Elizabeth Scribner						
Phone Number 205-914-6591 Email charles. Scribner @ gmail. con						
Name of Representative Agent (if applicable)						
AJ Covey - Engle Solar 3 Light						
Phone Number 480 - 766 -0910 Email ajcovey Ceaglesolar and light.com						
Name of Engineer or Surveyor						
Phone Number Email						
Property owner or representative agent must be present at hearing						
<u>Plans</u>						
See applicable Section of the Zoning Ordinance for submittal requirements						
pertaining to your particular application. Applicable Code Section may be found						
in Part II, list of application types. Contact City Planner with any specific						
questions as to required plans submittal.						

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### P-23-15

### **Petition Summary**

Request approval for the installation of an alternative solar energy system consisting of a roof mount array.

### Background (general)

On April 4, 2016, the Planning Commission approved "Guidelines for Planning Commission Review of Solar Energy Systems." These guidelines are not regulatory but intended for use by the Planning Commission in the review process for alternative solar energy systems. The applicant in the subject case has included these guidelines in his application and has indicated compliance with each item within said document (see "scope of work" in Applicant Request), with the exception of not being visible from the road.

### Analysis

The subject solar panel array is a rooftop array atop a single family home. **Two of the five array surfaces will be visible from Balmoral Road**; however vegetation and topography (lot is higher than the street) may minimize the visual effect from the street.

### Affected Regulation

Section 129-292 (Use Exemptions) of the Zoning Code specifies that the installation of equipment and minor structures and improvements that are incidental to the provision of and distribution of gas, electricity, water and telecommunications including, but not limited to, gas regulators, fogging stations, electric transformer stations without major rotating equipment, *solar panel systems*, poles, cables and towers for the transmission of electricity, water pressure regulator stations, water pumping stations, telephone exchanges, cables, poles, antennas and masts for antennas as may be permitted in any zoning district, subject to Planning Commission approval. In conjunction with any such approval, the Planning Commission may impose conditions which promote the purposes of the zoning ordinance.

### Appends

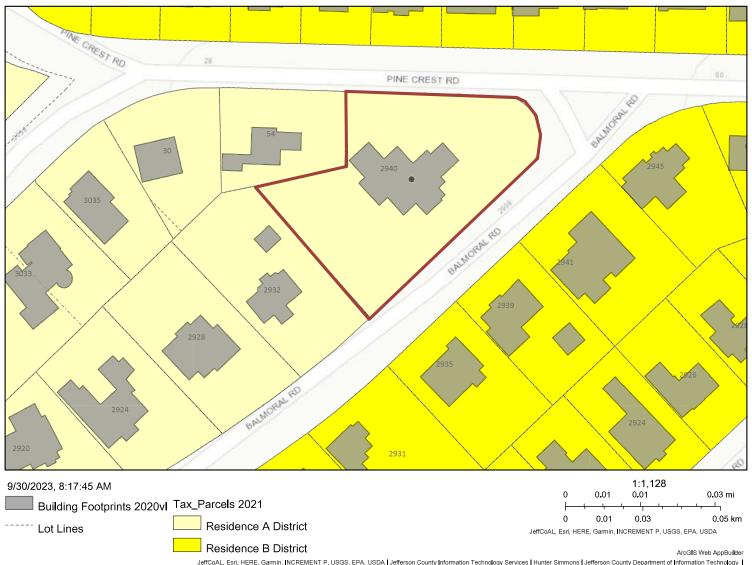
LOCATION: 2940 Balmoral Road

ZONING DISTRICT: Residence A

OWNER: Charles and Elizabeth Scribner

AGENT: AJ Covey, Eagle Solar & Light, LLC

### P-23-15 Zoning



JeffCoAL, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA | Jefferson County Information Technology Services | Hunter Simmons | Jefferson County Department of Information Technology |

P-23-15 Aerial



JeffCoAL, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA | Jefferson County Information Technology Services | Hunter Simmons | Jefferson County Department of Information Technology |

September 8, 2023

City of Mountain Brook Mountain Brook Planning Commission 56 Church Street Mountain Brook, AL 35213

### Request Review of Solar Energy Systems Municipal Code 129-292 Mountain Brook Planning Commission Meeting – October 2, 2023

Enclosed is a request for the City of Mountain Brook Planning Commission to review and approve the installation of solar panels as part of a solar energy system at the following address:

Physical/Mailing Address: 2940 Balmoral Road, Mountain Brook, AL, 35233

Owner: Charles & Elizabeth Scribner

### **Scope of Project:**

Solar panels will be installed on pitched portions of the roof of the existing residential building at 2940 Balmoral Road to generate energy to be consumed on site.

The solar panels and racking will be flush-mounted to the 25-degree pitched portions of the roof. The roof-mounted solar energy system will not increase the height of the residence.

A 3-foot setback will be utilized from each roof edge, and a 1.5-foot setback will be used on both sides of hips, valleys, and ridges, ensuring 3-foot walking lanes on pitched areas. No part of the roof-mounted system will extend beyond the edge of the roof.

The panels and system are designed to blend into the architecture of the residence. Any electrical lines and conduit will be painted to match the color of the adjacent roofing and walls.

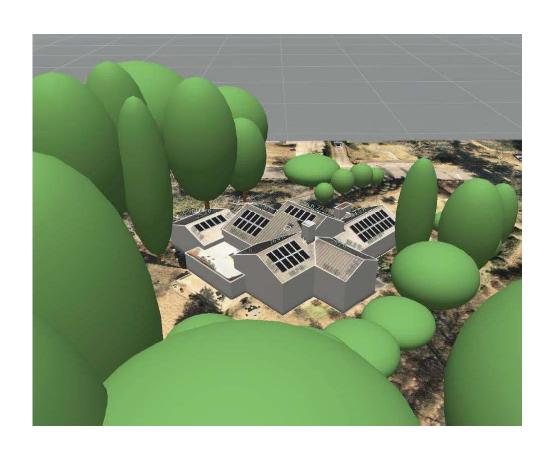
Two of the five roof surfaces with solar modules will be visible from Balmoral Road, though the visibility will be obstructed by the vegetation and hillside in the Scribner's yard (see attached photos). The remaining roof surfaces with solar modules are not visible from any public street.

### **Attachments:**

- Parts I and II of the completed Planning Commission Application
- Solar panel specification sheet
- Jefferson County Tax Assessor-certified list of names and mailing addresses of property owners within 500-foot radius of subject property
- Aerial map/satellite image of property
- 2 aerial views of proposed solar energy system
- Photographs from Balmoral Road showing vegetation obstruction of roof visibility
- Copy of check (actual check mailed on 9/7/2023)

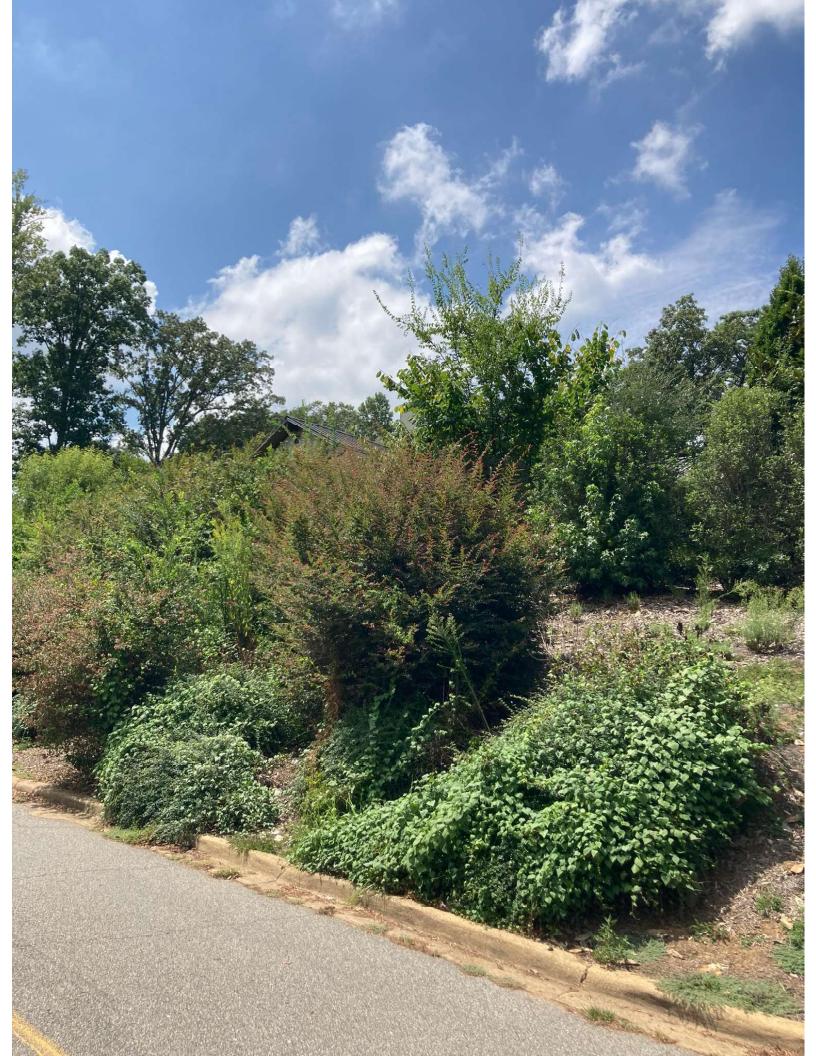
AJ Covey















## REC N-PEAK SERIES

PREMIUM MONO N-TYPE SOLAR PANELS WITH SUPERIOR PERFORMANCE



MONO N-TYPE: THE MOST EFFICIENT C-SI



NO LIGHT INDUCED DEGRADATION



SUPER-STRONG FRAME UP TO 7000 PA SNOW LOAD



FLEXIBLE
INSTALLATION
OPTIONS



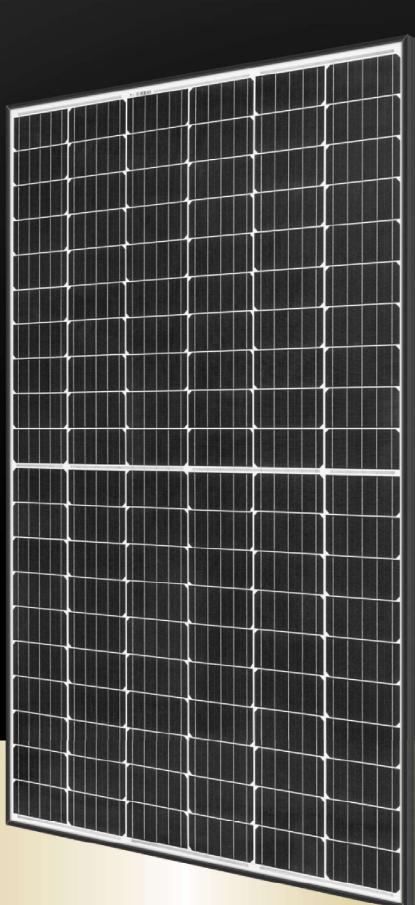
IMPROVED PERFORMANCE IN SHADED CONDITIONS



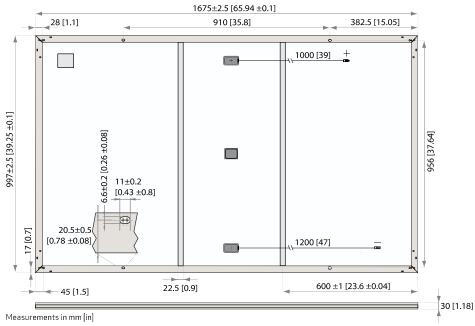
GUARANTEED HIGH POWER OVER LIFETIME







## PEAK SE



ELECTRICAL DATA @ STC	Product code*: RECxxxNP					
Nominal Power - P <sub>MAX</sub> (Wp)	305	310	315	320	325	330
Watt Class Sorting - (W)	0/+5	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage - $V_{MPP}(V)$	33.3	33.6	33.9	34.2	34.4	34.6
Nominal Power Current - I <sub>MPP</sub> (A)	9.17	9.24	9.31	9.37	9.46	9.55
Open Circuit Voltage - $V_{oc}(V)$	39.3	39.7	40.0	40.3	40.7	41.0
Short Circuit Current $-I_{SC}(A)$	10.06	10.12	10.17	10.22	10.28	10.33
Panel Efficiency (%)	18.3	18.6	18.9	19.2	19.5	19.8

Values at standard test conditions (STC: air mass AM 1.5, irradiance 1000 W/m², temperature 25°C), based on a production spread with a tolerance of  $P_{\text{MAX}}$ ,  $V_{\text{OC}}$  &  $I_{\text{SC}}$  ±3% within one watt class.\* Where xxx indicates the nominal power class ( $P_{\text{MAX}}$ ) at STC above.

ELECTRICAL DATA @ NOCT	Product code*: RECxxxNP					
Nominal Power - P <sub>MAX</sub> (Wp)	214	217	221	224	228	231
Nominal Power Voltage - $V_{MPP}(V)$	31.1	31.4	31.7	32.0	32.2	32.4
Nominal Power Current - I <sub>MPP</sub> (A)	6.86	6.91	6.97	7.01	7.08	7.14
Open Circuit Voltage - V <sub>oc</sub> (V)	36.7	37.1	37.4	37.7	38.0	38.3
Short Circuit Current - $I_{SC}(A)$	7.53	7.57	7.61	7.65	7.69	7.73

Nominal operating cell temperature (NOCT: air mass AM1.5, irradiance 800 W/m², temperature 20°C, windspeed 1 m/s). \*Where xxx indicates the nominal power class ( $P_{\text{MAX}}$ ) at STC above.

#### **CERTIFICATIONS**













UL 1703 (Fire Type 2), IEC 61215, IEC 61730 & UL 1703; UL 61730, MCS 005, IEC 62804, IEC 61701, IEC 62716, IEC 62782 ISO 9001: 2015, ISO 14001: 2004, OHSAS 18001: 2007

WARRANTY						
	Standard	REC	ProTrust			
Installed by an REC Certified Solar Professional	No	Yes	Yes			
System size	any	≤25kW	25 <b>-</b> 500 kW			
Product Warranty (yrs)	20	25	25			
Power Warranty (yrs)	25	25	25			
Labor Warranty (yrs)	0	25	10			
Power in Year 1	98%	98%	98%			
Annual Degradation	0.5%	0.5%	0.5%			
Power in Year 25	86%	86%	86%			
See warranty documents for details. Some conditions apply.						

**GENERAL DATA** 

Backsheet:

120 half-cut n-type mono c-Si cells Cell type:

6 strings of 20 cells in series

Glass: 0.13" (3.2 mm) solar glass with anti-reflection surface treatment

Highly resistant polymeric

Frame: Anodized aluminum (black)

Junction box: 3-part, 3 bypass diodes, IP67 rated

in accordance with IEC 62790

construction

12 AWG (4 mm<sup>2</sup>) PV wire, 39 + 47" (1 m + 1.2 m) Cable:

in accordance with EN 50618

Connectors: Stäubli MC4 PV-KBT4/KST4, 12 AWG(4 mm²)

in accordance with IEC 62852 IP68 only when connected

Origin: Made in Singapore

### **MECHANICAL DATA**

Dimensions: 65.9 x 39.25 x 1.1" (1675 x 997 x 30 mm) 17.98 ft<sup>2</sup>(1.67 m<sup>2</sup>) Area: Weight: 39.7 lbs (18 kg)

#### **MAXIMUM RATINGS**

-40 ... +85°C Operational temperature: 1000 V Maximum system voltage: Design load (+): snow 4666 Pa (97.5 lbs/ft2)\* Maximum test load (+): 7000 Pa (146 lbs/ft2)\* Design load (-): wind 1600 Pa (33.4 lbs/ft2)\* Maximum test load (-): 2400 Pa (50 lbs/ft²)\* Max series fuse rating: 20 A 20 A Max reverse current:

> \*Calculated using a safety factor of 1.5 See installation manual for mounting instructions

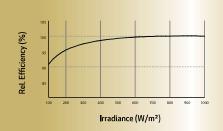
### **TEMPERATURE RATINGS**

Nominal Operating Cell Temperature: 44°C (±2°C) Temperature coefficient of P<sub>MAX</sub>: -0.35 %/°C Temperature coefficient of V<sub>oc</sub>: -0.27 %/°C Temperature coefficient of I<sub>SC</sub>: 0.04 %/°C

\*The temperature coefficients stated are linear values

#### **LOW LIGHT BEHAVIOUR**

Typical low irradiance performance of module at STC.



Founded in Norway in 1996, REC is a leading vertically integrated solar energy company. Through integrated manufacturing from silicon to wafers, cells, high-quality panels and extending to solar solutions, REC provides the world with a reliable source of cleanenergy. REC's renowned product quality is supported by the lowest warranty claims rate in the industry. REC is a Bluestar Elkem company with headquarters in Norway and operational headquarters in Singapore. REC employs around 2,000 people worldwide, producing 1.5 GW of solar panels annually.



### City of Mountain Brook

### **Guidelines for Planning Commission Review of Solar Energy Systems**

Whereas Section 129-292 of the Municipal Code allows the installation in or upon a parcel located within any zoning district, such equipment and minor structures and improvements incidental to the provision and distribution of gas, electricity, water and similar services as may be approved by the planning commission; which approval shall be subject to such conditions, if any, which the planning commission may require to promote the purposes of Chapter 129 of the Municipal Code; and

Whereas the planning commission has determined that it is desirable for the City to permit and regulate the use of solar energy in the City of Mountain Brook; and

Whereas the planning commission has determined that the use and regulation of solar energy systems in the City will reduce the need for additional electrical generation and distribution and tend to reduce atmospheric pollution that are considered harmful to the environment; and

Whereas the planning commission recognizes that the purpose of regulating solar energy systems is to provide for appropriate locations for solar energy systems, to ensure compatibility with surrounding uses, and to promote safe and effective use of solar energy to increase opportunities for generation of renewable energy.

**Therefore** the following are guidelines to be used by the Planning Commission when approval of an application for a solar energy system has been requested:

### **Definitions:**

**Solar Energy System (SES)**. An energy system which converts solar energy to usable thermal, mechanical, chemical or electrical energy to meet all or a portion of the energy requirements of a principal building or an associated accessory structure.

**Solar Energy Equipment (SEE).** Items including but not limited to solar panels, lines, pumps, batteries, mounting brackets, framing and/or foundation used for or intended to be used for the collection of solar energy in connection with a building on residential, municipal or commercial properties. Solar energy equipment and its use are accessory to the principal use of the property.

### Solar Energy Systems, generally.

- 1) SES shall not be commercial operations and are prohibited as a principal use. The main purpose of the SES may not be to generate energy for sale back to the energy grid rather than being consumed on site.
- 2) Abandoned or inactive SES, within twelve (12) months of the cessation of operations, shall be removed by the property owner.

### **Roof Mounted Solar Energy Systems**

- 1) The placement of SES on roofs of principal buildings is preferred and encouraged.
- 2) For pitched, hipped or gambrel roofs, roof mounted SES shall not be more than twelve (12) inches from the surface of the roof at any point, and may not extend above the ridgeline of the roof. The twelve (12) is measured from the upper side of the solar panel.
- 3) For flat roofs or the horizontal portion of mansard roofs, roof mounted SES may extend up to five (5) feet above the highest point of the roof.
- 4) In no instance shall any part of a roof mounted SES extend beyond the edge of the roof.
- 5) Roof mounted SES shall be designed to blend into the architecture of the building.
- 6) No portion of the SES shall be visible from any public street.
- 7) All exterior plumbing and electrical lines must be painted and/or coated to match the color of adjacent roofing material and walls.
- 8) Roof Mounted SES shall be located so as not to increase the total height of the structure above the maximum allowable height of the structure on which it is located, in accordance with the applicable zoning regulations, and may not exceed the height of the ridge of the roof on which it is located.

### **Ground Mounted Solar Energy Systems**

- 1) Ground mounted SES and SEE shall be considered accessory structures and shall be governed in accordance with Section 129-314 of the Municipal Code of the City of Mountain Brook.
- 2) Ground mounted SES shall be of permanent installation and shall not be portable in nature.
- 3) To the extent possible, without compromising the solar SES's access to sunlight, ground mounted SES shall be screened from view at-grade from all adjacent properties.
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### City of Mountain Brook

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