Brookline Preservation Commission
Local Historic District Report

Local Historic District: Pill Hill

Applicant: Helen Shih

Address: 1 Edgehill Road

Statement of Significance:
This house, dating to c. 1866, is one of the early structures built in the Brookline Land Company development of High Street Hill. It was a traditional L-shaped Italianate style residence built by Frank Higginson for a Miss Lizzie Higginson. The original section was the east half of the house, including the center section that was an ell. There may have been a porch extending across the the ell, now the entry portico.

The house underwent a major remodeling for Thomas and Sarah Groom in 1925. Mr. Groom was listed in the directory as a "stationer". The extensive alterations to the house, which included stucco facing, new windows, and an enclosed entrance portico framed by a roof over-hang n brackets, gave the house an Arts and Crafts character. As part of the modernization, a small automobile garage was also added. Little evidence remains of the original Italianate style house. The architects were the successors to the famous firm of Andrews, Jaques & Rantoul.

1 Edgehill Rd

Proposed Alterations: Install twenty-one solar panels on east slopes and six on south slope of roof of house

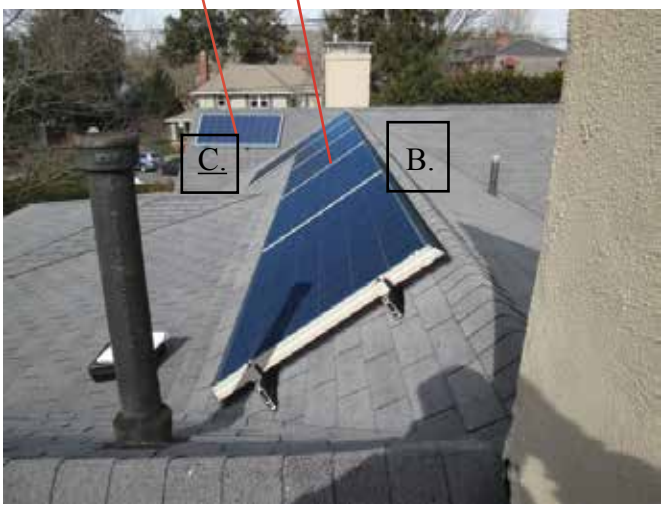
Applicable Guidelines: When possible, renewable energy systems should be proposed for installation in locations where they will not be visible from a public way, park or body of water. In cases where this is not practicable, systems attached to buildings should not obscure historic features from public view, or be visible in a way which significantly alters the profile or character of the building... For proposed installations with visibility from a public way, park or body of water, the Commission will consider the historic and architectural significance of the facades which may be affected, including

Guidelines, cont.: roofs and rooflines, the historic fabric, including materials, which may be affected, and the reversibility of the proposed system.

Preliminary Findings: The commission may request a reduction in the number of panels or a consideration of locating them on other roof slopes with favorable exposure, both because of their visibility from Edgehill Road and High Street. The nearly total coverage of the roof slope facing Edgehill Road would significantly alter the profile of the roof edges, a character-defining element of the oldest section of the house.

Visibility of east roof slope from Edgehill Rd

View of south roof slopes from High St



Dimensions of each configuration, Slope, and Exposure

A. 20 panels

38′ 7 ½ ″ x 3′ 5 ¾″

33 degree pitch

78% exposure

B. 6 panels

27′ 8 ½″ x 3′2 ½ ″

28 degree pitch

83% exposure

C. 1 panel

5′ 4 ½″ x 3′ 2 ½ ″

33 degree pitch

85% exposure

SOLARMOUNT Technical Datasheets

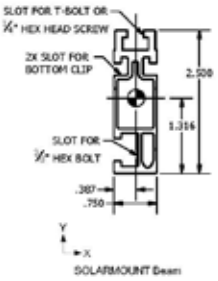
UNIRAC

SOLARMOUNT Beams

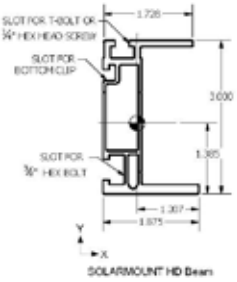
Part No. 310132C, 310132C-B, 310168C, 310168C-B, 310168D
310208C, 310208C-B, 310240C, 310240C-B, 310240D,
410144M, 410168M, 410204M, 410240M

Properties	Units	SOLARMOUNT	SOLARMOUNT HD
Beam Height	in	2.5	3.0
Approximate Weight (per linear ft)	plf	0.811	1.271
Total Cross Sectional Area	in²	0.678	1.059
Section Modulus (X-Axis)	in³	0.353	0.898
Section Modulus (Y-Axis)	in³	0.113	0.221
Moment of Inertia (X-Axis)	in⁴	0.464	1.450
Moment of Inertia (Y-Axis)	in⁴	0.044	0.287
Radius of Gyration (X-Axis)	in	0.289	1.170
Radius of Gyration (Y-Axis)	in	0.254	0.502

*Rails are extruded using these aluminum alloys: 6005-T5, 6105-T5, 6061-T6



SOLARMOUNT Beam



SOLARMOUNT HD Beam

Dimensions specified in inches unless noted

4

CS6P-240/245/250/255/260M

Electrical Data

Nominal Maximum Power (Pmax)	240W	245W	250W	255W	260W	
Optimum Operating Voltage (Vmp)	30.2V	30.3V	30.4V	30.5V	30.7V	
Optimum Operating Current (Imp)	7.95A	8.09A	8.23A	8.36A	8.46A	
Open Circuit Voltage (Voc)	37.9V	37.96V	37.7V	37.7V	37.8V	
Short Circuit Current (Isc)	8.48A	8.61A	8.74A	8.87A	8.99A	
Module Efficiency	14.62%	14.92%	15.24%	15.55%	15.78%	
Operating Temperature	-40°C~+85°C					
Maximum System Voltage	1000V(IEC)/600V(UL)					
Maximum Series Fuse Rating	15A					
Application Classification	Class A					
Power Tolerance	0~+5W					

NOCT						
Nominal Maximum Power (Pmax)	174W	177W	180W	184W	188W	
Optimum Operating Voltage (Vmp)	27.8V	27.8V	27.7V	27.8V	28.0V	
Optimum Operating Current (Imp)	6.29A	6.40A	6.51A	6.62A	6.72A	
Open Circuit Voltage (Voc)	34.7V	34.8V	34.6V	34.6V	34.7V	
Short Circuit Current (Isc)	6.85A	6.97A	7.05A	7.19A	7.29A	

Under Nominal Operating Cell Temperature, Irradiance of 800W/m², spectral AM 1.5, ambient temperature 20°C, wind speed 1 m/s

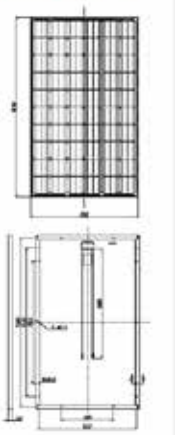
Temperature Characteristics

Temperature Coefficient	Pmax	-0.41%/°C
	Voc	-0.31 %/°C
	Isc	0.053 %/°C
Nominal Operating Cell Temperature		43±3°C

Performance at Low Irradiance

Industry leading performance at low irradiation environment, +95.5% module efficiency from an irradiance of 1000w/m² to 200w/m² (AM 1.5, 25 °C)

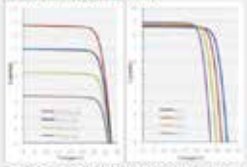
Engineering Drawings

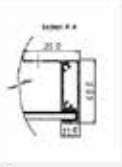


Mechanical Data

Cell Type	Mono-crystalline 125 x 125 mm, 3 or 5 Busbars
Cell Arrangement	60 (5 x 12)
Dimensions	1638 x 982 x 40mm (64.5 x 38.7 x 1.57 in)
Weight	19kg (41.9 lbs)
Front Cover	3.2mm Tempered glass
Frame Material	Anodized aluminum alloy
J-Box	IP65/IP67 rated
Cable	4mm² (IEC) or 12AWG (UL), 1000mm
Connector	MC4 or MC4 Compatible
Standard Packaging (Modules per Pallet)	26pcs
Module Pieces per container (40'HC Container)	672pcs (40'HC)

I-V Curves (CS6P-250M)





About Canadian Solar

Canadian Solar Inc. is one of the world's largest solar companies. As a leading vertically-integrated manufacturer of ingots, wafers, cells, solar modules and solar systems, Canadian Solar delivers solar power products of uncompromising quality to worldwide customers. Canadian Solar's world class team of professionals works closely with our customers to provide them with solutions for all their solar needs.

Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006. Canadian Solar has cell manufacturing capacity of 1.5GW and module manufacturing capacity of 2.3GW.

Headquarters, 545 Speedvale Avenue West
Guelph, Ontario, N1K 1E6, Canada
Tel: +1 519 837 1881
Fax: +1 519 837 2550
inquiry.ca@canadiansolar.com
www.canadiansolar.com