



Building Services & Consultant, LLC

THE HOME PERFORMANCE PEOPLE

*Diagnostic Testing
Inspection and
Evaluation of Your
Home's Performance*

Home Performance with ENERGY STAR®
Residential Performance Evaluation For:

Burke O'Neal
421 Cantwell Ct
Madison, WI 53703



MILWAUKEE OFFICE

8831 W. Greenfield Ave., Ste. B
West Allis, WI 53214
(414) 431-2174
Fax (414) 481-1675

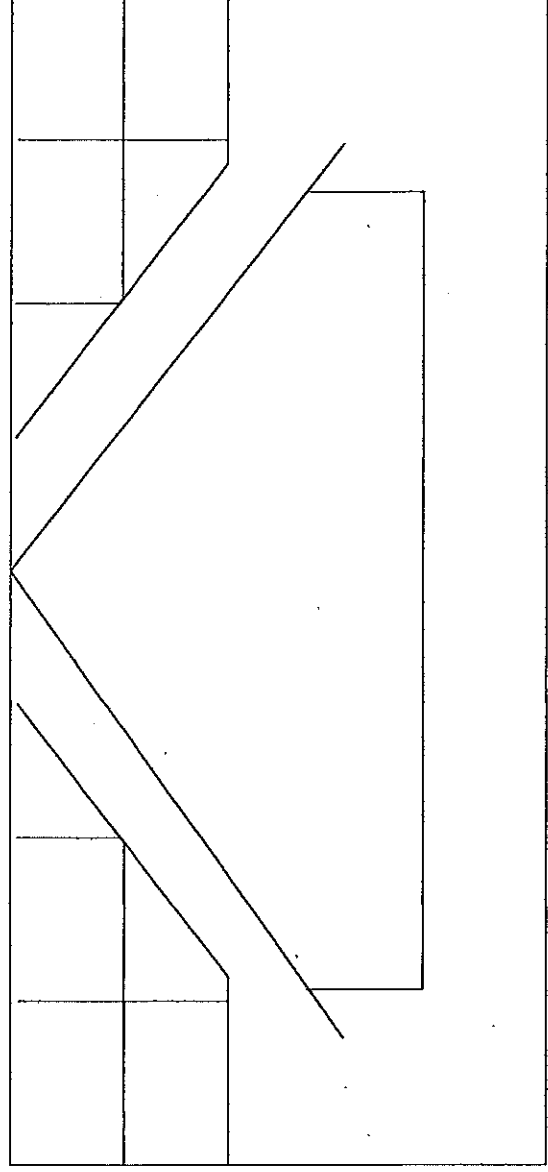
(866) 331-8659
www.homeperformancetesting.net

MADISON OFFICE

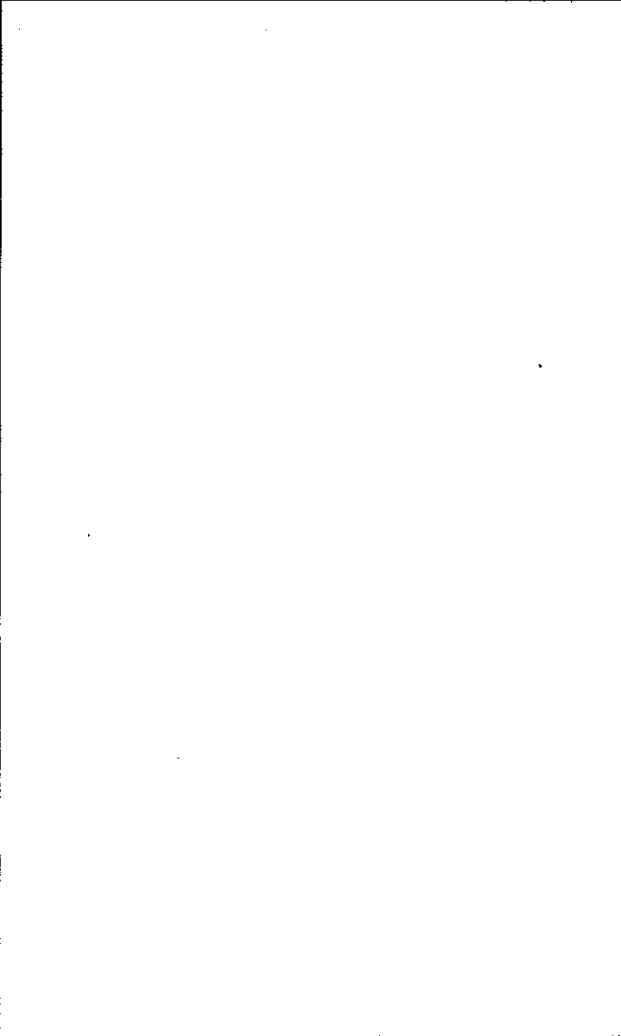
402 Lake Street
Mt. Horeb, WI 53572
(608) 437-1136
Fax: (608) 437-1135

The upper areas of the roof are the only acceptable location for install of solar modules. All areas in the small yard are shaded more than 50% by neighboring houses and trees.

Robert M



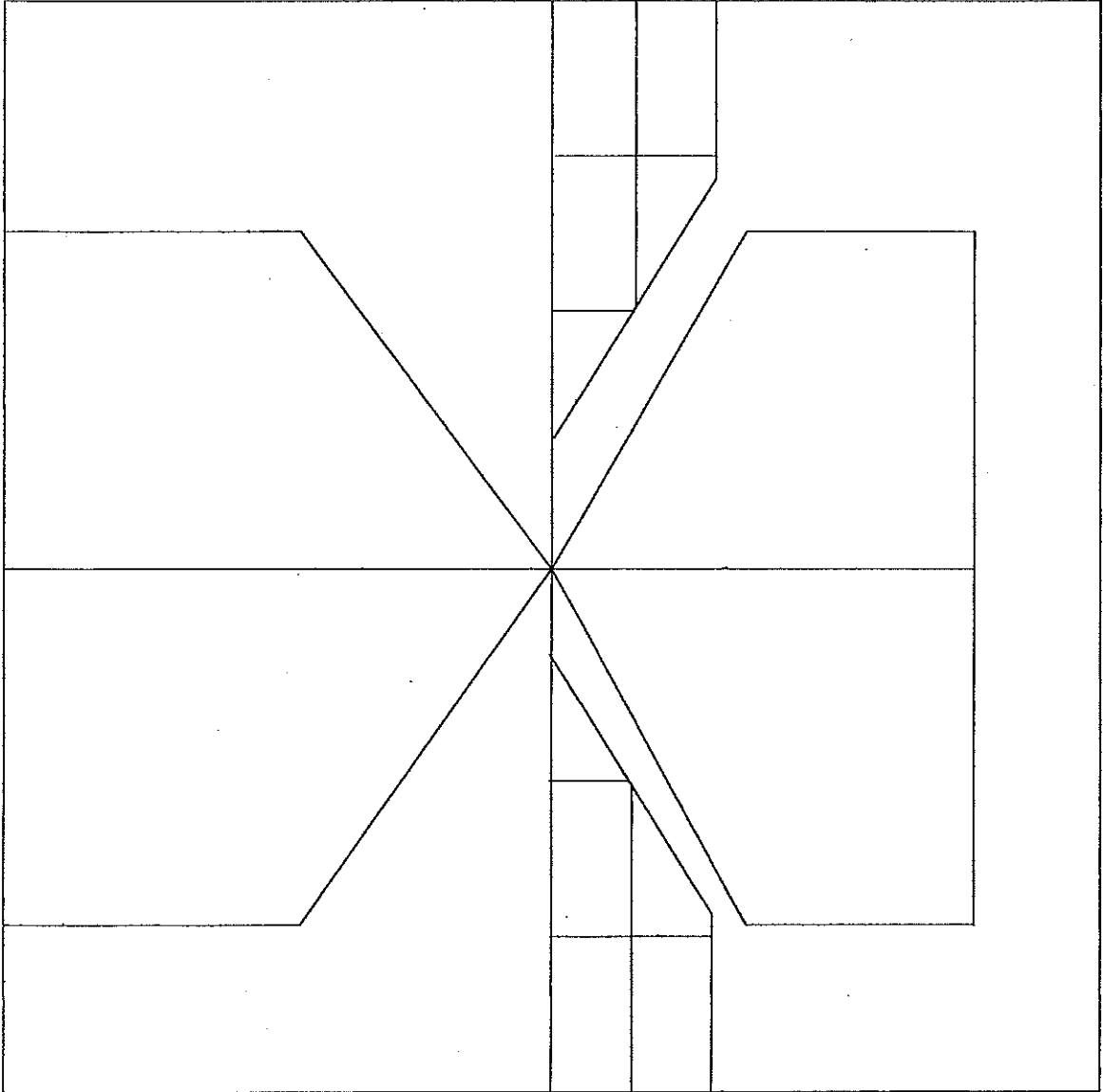
SOUTHWEST ELEVATION (FACING CANTWELL COURT)
1/4" = 1"
MODULES MOUNTED ABOUT 3" ABOVE ROOF SURFACE
PARALLEL TO THE SLOPE



421 Cantwell Ct.

↑ Thornton Ave.

AERIAL VIEW OF 421 CANTWELL CT.

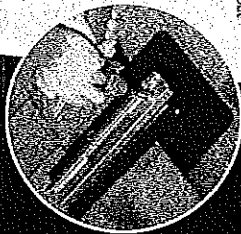


↓ cantwell ct.

The Sharp Solar Racking System—for faster, easier installations.

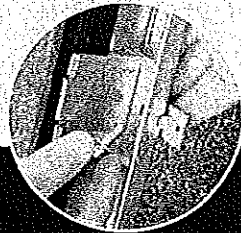
The Sharp Solar Racking System is a new, innovative, and easy-to-install system that allows you to get your solar panels up and running in less than 24 hours. The Sharp Solar Racking System is a new, innovative, and easy-to-install system that allows you to get your solar panels up and running in less than 24 hours.

The Sharp Solar Racking System is a new, innovative, and easy-to-install system that allows you to get your solar panels up and running in less than 24 hours. The Sharp Solar Racking System is a new, innovative, and easy-to-install system that allows you to get your solar panels up and running in less than 24 hours.



Our adjustable slider assemblies are the latest no-brainer for solar installers.

These adjustable slider assemblies speed up installations with their generous vertical and horizontal tolerances. Simply mount, adjust, and move on. The sliders are also equipped with built-in sealant pads that instantly create a waterproof seal at all roof penetrations.



Better aesthetics are just a click away with our Talon clips.

One of the most innovative aspects of the SRS is the new Talon clip. They grip each module securely in place while integrating so smoothly that no parts of the mounting structure are visible on the roof.

Improved aesthetics, streamlined installation.

This innovative new solution for residential and light commercial installations uses a shared rail system that requires 30% less rail than conventional systems. That means fewer rail lines to draw and less mounting hardware to install.

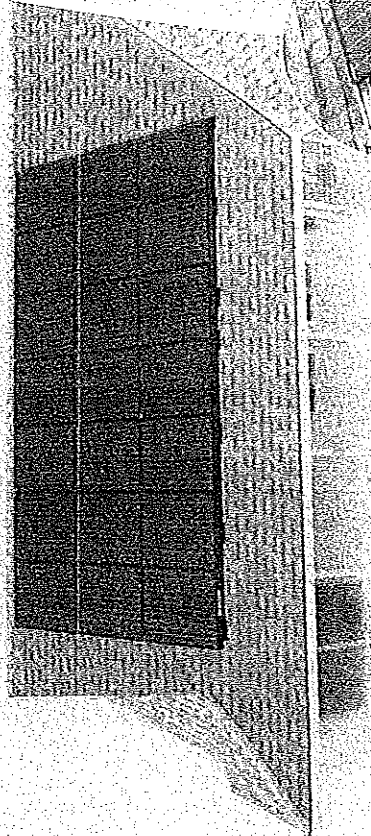
The racking system is compatible with virtually all types of asphalt shingles, on both peak and hipped roofs, for retrofit or new construction.

All components are covered by a 5-year limited warranty against defective materials and workmanship, with the option of a 5-year extension.

We've thought of all the mounting hardware so you won't have to.

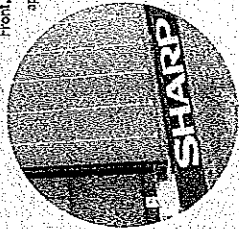
The mounting hardware is made of steel because it's structurally superior to aluminum. We treat it with SuperDymax®, a lightweight, corrosion-resistant, scratch-resistant, alloy coating designed especially for outdoor exposure. SuperDymax is so effective, it's used as standard corrosion protection throughout the automotive industry.

Self-tapping screws eliminate the need for pilot holes, and the screws and bolts are standardized to minimize tool changes.



Trim covers offer form, function and a finishing touch.

Front, top and side trim covers provide a finished appearance while decreasing wind drag and improving water channeling. The result is a streamlined system with clean aesthetics.



Sharp's online Web Order Kit system makes it easy to take care of business. Simply configure a system and place an order for the exact materials needed. All racking materials are included in the customized kit; no additional hardware is required. And the rails are conveniently pre-cut in one- to four-module lengths to make ordering and installation even easier.

It's our mission to bring the benefits of solar electricity to everyone, and this new system is the latest example of how we're doing it. And it shows how we're making it easier for you to grow your business. And as the demand for solar electricity continues to increase dramatically, we'll continue to provide you with the products, systems and resources you need to seize the opportunity.

Rankin, Katherine

From: Burke O'Neal [burke@fullspectrumsolar.com]
Sent: Wednesday, December 26, 2007 2:51 PM
To: Rankin, Katherine
Subject: Solar photovoltaic installation at 421 Cantwell Court

Hi Kitty,

Attached are Solar Pathfinder readings and analysis from the Solar Pathfinder Assistant software. This shows locating the modules on the house will produce about 25% more power than locating modules on the garage. I didn't run the analysis for the backyard, but it would be much worse in terms of shading.

The garage would require significant rebuilding before we could install solar modules on it. A garage installation would require trenching through the back yard and longer wire runs to the house service entrance, which is towards the front of the house. From the house roof to the basement service entrance location, there is an easy indoor wire run through a plumbing chase.

I have selected modules with a black frame and encapsulate so they have a nice, uniform skylight appearance and I am installing them parallel to the roof line with a low profile. I am removing an existing utility mast head, satellite dish and associated wire.

Sincerely,

Burke

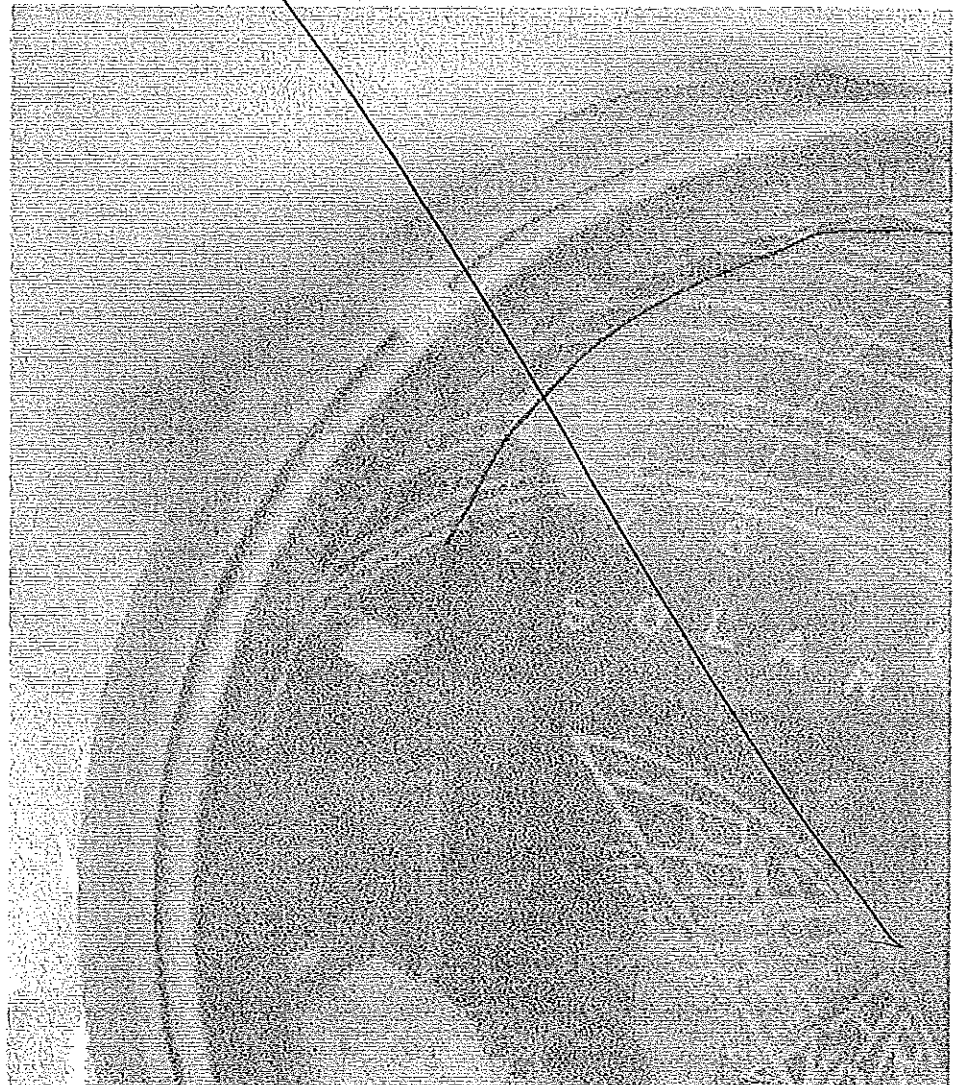
Burke O'Neal
421 Cantwell Court
Madison, WI 53703
(608) 217-8774

12/26/2007

House

System Picture Layout

Layout Type Single Picture
Layout Point Count 1



House

Solar Site Analysis Report

Image File IMG_1658.JPG

Solar Obstruction Data

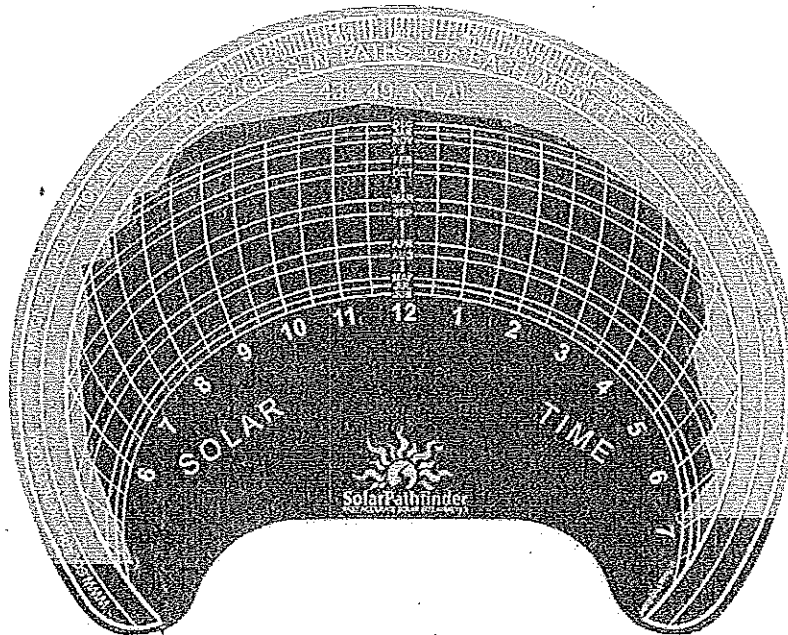
Month	Unshaded % of Ideal Site Azimuth=180 Tilt=43.05	Actual Solar Rad w/ Shading Azimuth=225.0 Tilt=38.0 KWH/m ² /day	Actual AC Power (KWH) w/ shading Azimuth=225.0 Tilt=38.0
January	97.00%	2.60	76.13
February	99.00%	3.70	98.00
March	99.00%	4.11	118.20
April	100.00%	4.64	123.00
May	100.00%	5.77	151.00
June	100.00%	6.02	149.00
July	100.00%	5.98	149.00
August	100.00%	5.73	144.00
September	99.00%	4.40	113.10
October	100.00%	3.59	95.60
November	99.00%	2.44	64.00
December	92.00%	2.24	65.00
Totals	98.80%	--	1344.03
Unweighted Yearly Avg		Effect: 93.25%	Sun Hrs: 4.27

Azimuth/Altitude Data

Azimuth / Altitude (degrees) where North = 0 degrees

55	0.0	100	4.0	145	3.0	190	15.0	235	4.5	280	6.5
60 (ENE)	4.5	105	3.0	150 (SSE)	6.0	195	14.5	240 (WSW)	4.0	285	0.5
65	5.5	110	0.0	155	9.0	200	13.0	245	2.5	290	4.0
70	5.5	115	4.5	160	11.0	205	11.5	250	4.0	295	0.0
75	5.0	120 (ESE)	2.0	165	12.5	210 (SSW)	10.5	255	5.0	300 (WNW)	0.0
80	5.0	125	1.5	170	13.0	215	9.5	260	7.5	305	0.0
85	4.5	130	5.5	175	13.0	220	9.0	265	12.0		
90 (E)	4.5	135 (SE)	3.0	180 (S)	15.0	225 (SW)	7.5	270 (W)	10.0		
95	3.0	140	2.5	185	15.0	230	7.0	275	4.0		

Notes: [None]



House

1

Solar Site Analysis Report

Image File IMG_1666.JPG

Solar Obstruction Data

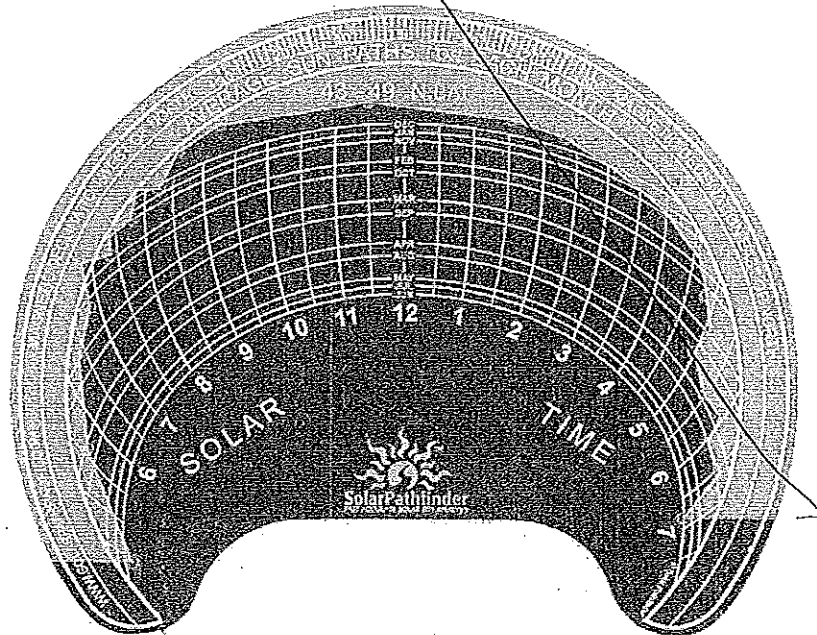
Month	Unshaded % of Ideal Site	Actual Solar Rad w/ Shading	Actual AC Power (KWH) w/ shading
		KWH/m ² /day	
January	97.00%	2.60	76.13
February	99.00%	3.70	96.00
March	99.00%	4.11	118.20
April	100.00%	4.64	123.00
May	100.00%	5.77	151.00
June	100.00%	6.02	149.00
July	100.00%	5.98	149.00
August	100.00%	5.73	144.00
September	99.00%	4.40	113.10
October	100.00%	3.59	95.60
November	99.00%	2.44	64.00
December	92.00%	2.24	65.00
Totals	98.80%	--	1344.00
	Unweighted Yearly Avg	Effect: 93.25%	Sun Hrs: 4.27

Azimuth/Altitude Data

Azimuth / Altitude (degrees) where North = 0 degrees

55	0.0	100	4.0	145	3.0	190	15.0	235	4.5	280	6.5
60 (ENE)	4.5	105	3.0	150 (SSE)	6.0	195	14.5	240 (WSW)	4.0	285	0.5
65	5.5	110	0.0	155	9.0	200	13.0	245	2.5	290	4.0
70	5.5	115	4.5	160	11.0	205	11.5	250	4.0	295	0.0
75	5.0	120 (ESE)	2.0	165	12.5	210 (SSW)	10.5	255	5.0	300 (WNW)	0.0
80	5.0	125	1.5	170	13.0	215	9.5	260	7.5	305	0.0
85	4.5	130	5.5	175	13.0	220	9.0	265	12.0		
90 (E)	4.5	135 (SE)	3.0	180 (S)	15.0	225 (SW)	7.5	270 (W)	18.0		
95	3.0	140	2.5	185	15.0	230	7.0	275	4.0		

Notes: (None)



Garage

Solar Site Analysis Report

Image File IMG_1662.JPG

Solar Obstruction Data

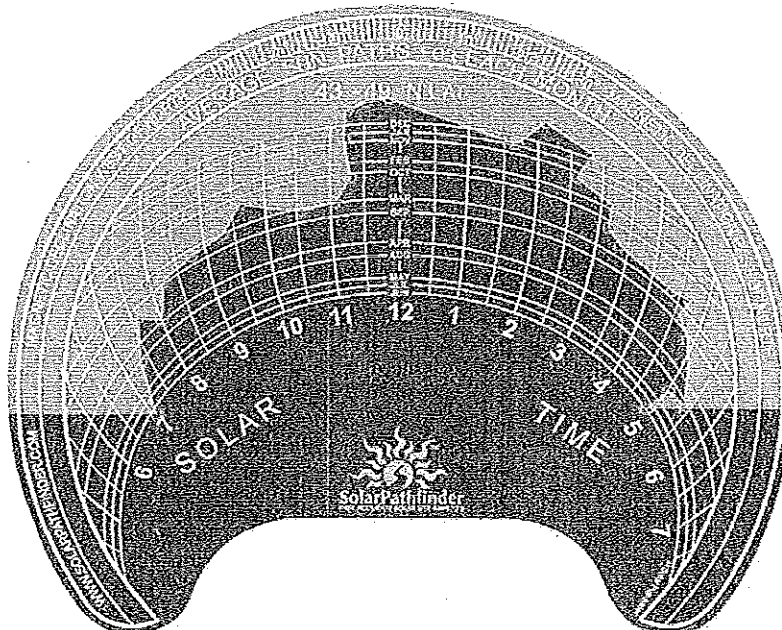
Month	Unshaded % of Ideal Site	Actual Solar Rad w/ Shading Azimuth=180 Tilt=43.05 KWH/m ² /day	Actual AC Power (KWH) w/ shading Azimuth=135.0 Tilt=18.4
January	54.00%	1.25	36.58
February	52.00%	1.76	45.99
March	75.00%	2.95	81.83
April	97.00%	4.48	116.00
May	98.00%	5.85	152.95
June	99.00%	6.29	151.50
July	99.00%	6.16	151.31
August	97.00%	5.63	139.40
September	92.00%	3.96	98.49
October	52.00%	1.61	42.49
November	53.00%	1.06	27.37
December	45.00%	0.88	24.87
Totals	76.01%	--	1068.78
Unweighted Yearly Avg		Effect: 76.25%	Sun Hrs: 3.49

Azimuth/Altitude Data

Azimuth / Altitude (degrees) where North = 0 degrees

55	0.0	100	22.5	145	34.0	190	17.5	235	21.0	280	0.0
60 (ENE)	0.0	105	21.5	150 (SSE)	38.0	195	18.5	240 (WSW)	20.0	285	0.0
65	0.0	110	26.0	155	40.0	200	19.0	245	17.0	290	0.0
70	0.0	115	24.5	160	40.5	205	19.0	250	13.5	295	0.0
75	0.0	120 (ESE)	26.0	165	38.0	210 (SSW)	7.5	255	12.5	300 (WNW)	0.0
80	0.0	125	28.5	170	15.5	215	8.5	260	12.0	305	0.0
85	27.5	130	30.5	175	13.0	220	12.5	265	13.0		
90 (E)	26.0	135 (SE)	29.5	180 (S)	13.5	225 (SW)	17.0	270 (W)	13.5		
95	24.0	140	27.5	185	15.5	230	17.0	275	0.0		

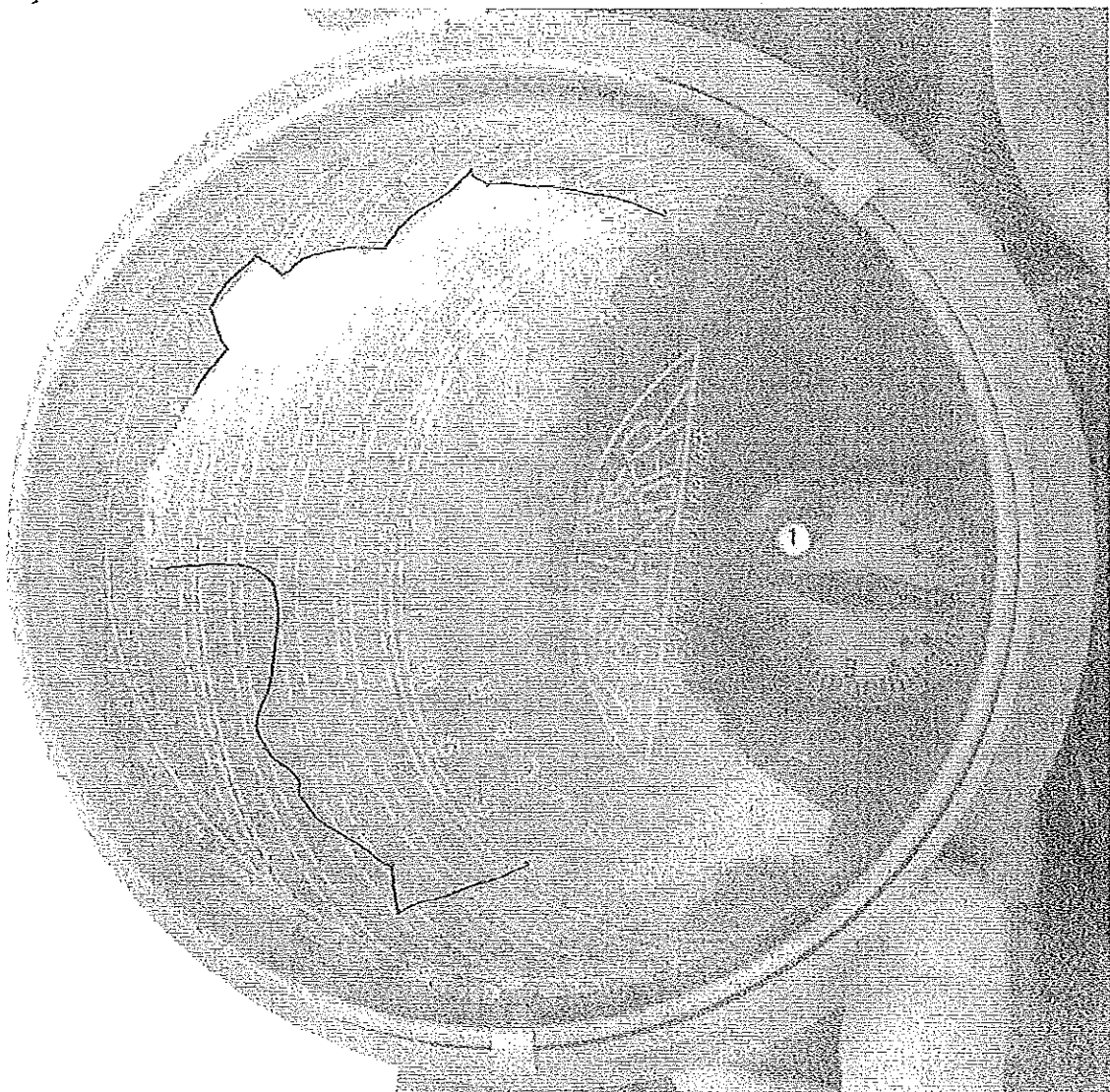
Notes: [None]



Garage

System Picture Layout

Layout Type Single Picture
Layout Point Count 1



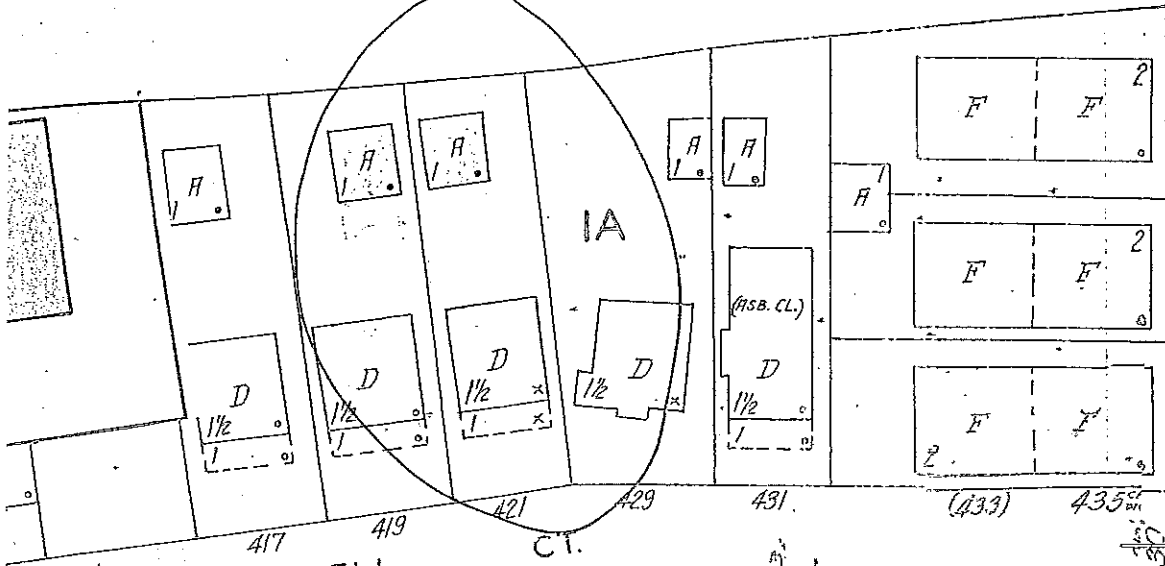
S. THORNTON

AV.

6"W.P.

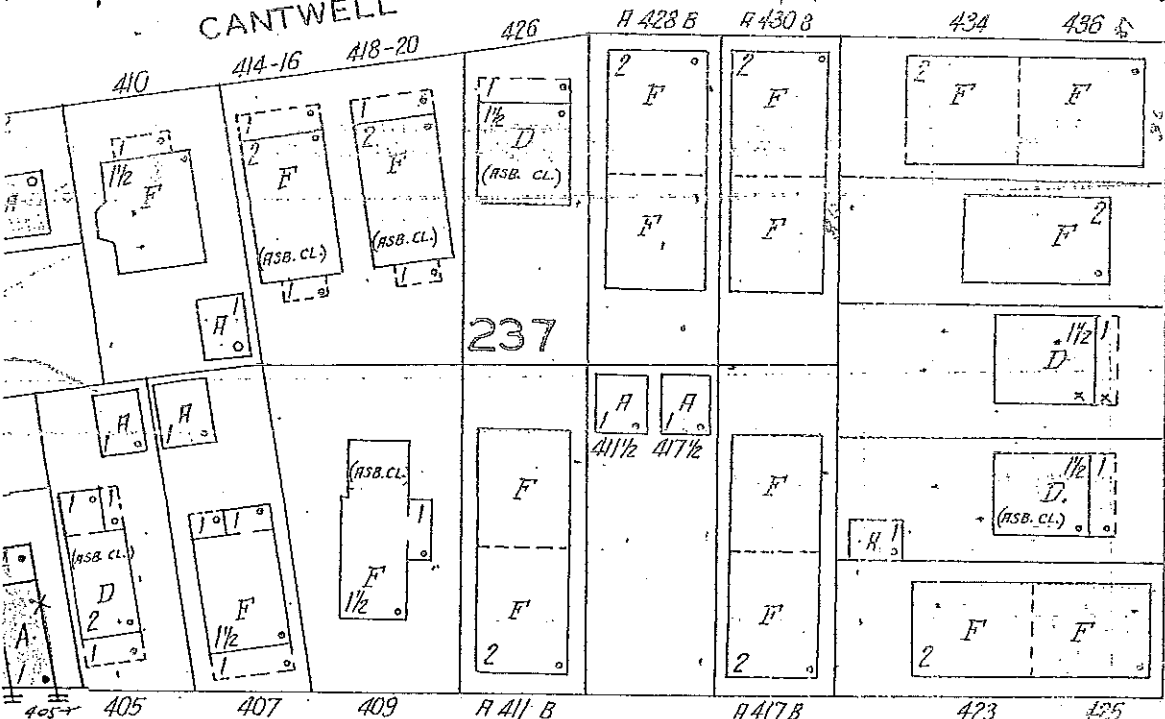
4"W.P.

T.H. 4"W.P. 66'



A1530 B
A1526 B
A1522 B
A1532 B
JENNER

CANTWELL



1512
1510
1508

ROGERS

4"W.P.

6"W.P.

405 407 409 H 411 B H 417 B 423 425