Plan Commission
Meeting Agenda
Tuesday June 28, 2016
6:30 p.m. Village Hall Court Room
3930 N. Murray Ave Village of Shorewood, WI 53211

1. Call to order.
2. Roll call.
3. Approval of April 26, 2016 meeting minutes.
4. Statement of Public Notice.
5. Consideration of conditional use application for installation of solar panels at residential property 2504 E. Newton Ave.
6. Schedule next meeting.
7. Adjournment.

Dated at Shorewood, Wisconsin, this 23rd day of June, 2016

Village of Shorewood

Tanya O'Malley, Village Clerk WCPC

PLEASE BE ADVISED THAT A REPRESENTATIVE OF THE APPLICANT FOR THE AGENDA ITEM MUST BE PRESENT AT THIS MEETING.
Should you have any questions or comments regarding any item on this agenda, please contact Ericka Lang, Planning Director, Planning & Development Department, at (414) 847-2640.
Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals.

It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information; no action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice.

MEMORANDUM

June 23, 2016

To: Plan Commission
Cc: Village Manager Chris Swartz

From: Planning Director Ericka Lang

RE: Conditional Use for Solar Panel 2504 Newton

Agenda Item #: Consideration of Solar Panel CUP

On June 2, 2016 the village received a conditional use application for installation of solar panels at residential property 2504 E. Newton Ave. The owner is Paul Zovic and the applicant is Arch Electric Inc.

Panel Description
The application is for 10 solar modules mounted in two locations on the roof of the house: at the front of the and the back as shown on the aerial attachments .

Code
Per 535-30D, installation and use of solar energy systems are a conditional use in all districts. The full code is attached. It also says that your commission shall review the proposed system and may only restrict if one of the following conditions is satisfied:

> [1] Serves to preserve or protect the public health or safety.
> [2] Does not significantly increase the cost of the system or significantly decrease its efficiency.
> [3] Allows for an alternative system of comparable cost and efficiency.

The review and approval criteria in 535-30D apply to solar and wind energy systems.

APPLICATION FOR CONDITIONAL USE PERMIT

Village of Shorewood
Planning & Development Department
3930 N. Murray Avenue
Shorewood, WI 53211
Phone (414) 847-2640
Facsimile (414) 847-2648
www.villageofshorewood.org
PAD@villageofshorewood.org

Office Use Only	
General Fee $125	**Solar Energy Fee $75**
Permit No. 16-0959	
Zoning District R-5	
CUP Reason solar panels	
Code Reference 535-30D	
Plan Comm. Meeting 6/28/16	
Outcome	

CONDITIONAL USE APPLICATIONS ARE CONSIDERED BY THE PLAN COMMISSION. MEETINGS ARE THE 4TH TUESDAY EACH MONTH, AS NEEDED. APPLICATIONS ARE DUE 4 WEEKS BEFORE SCHEDULED MEETINGS AND ADDITIONAL MATERIALS AS IDENTIFIED BY THE PLANNING & DEVELOPMENT DEPARTMENT.

PROPERTY ADDRESS: 2504 E. Newton Ave.

PROPERTY OWNER

Owner Name: Joanne & Paul Zovic
Phone Number: 414-659-2350
Email: zovi@wi.rr.com
Owner Address: 2504 E. Newton Ave.

APPLICANT/BUSINESS

Name: Jen Simons/ Arch Electric Inc.
Phone Number: 920-893-8388
Email: jen@archelec.com
Address: W4499 Sumac Rd. Plymouth, WI 53073

Check if prefer to receive Meeting Agenda by EMAIL: PROPERTY OWNER APPLICANT

BUSINESS INFORMATION

Name of Business Arch Electric Inc. Max # Employees On-site 3
Is a survey attached? (if required)
Is a parking plan attached? (if required)
*Provide copy of business plan

What do you wish to do that will require a Conditional Use Permit?
Install a fixed roof mounted Solar PV System

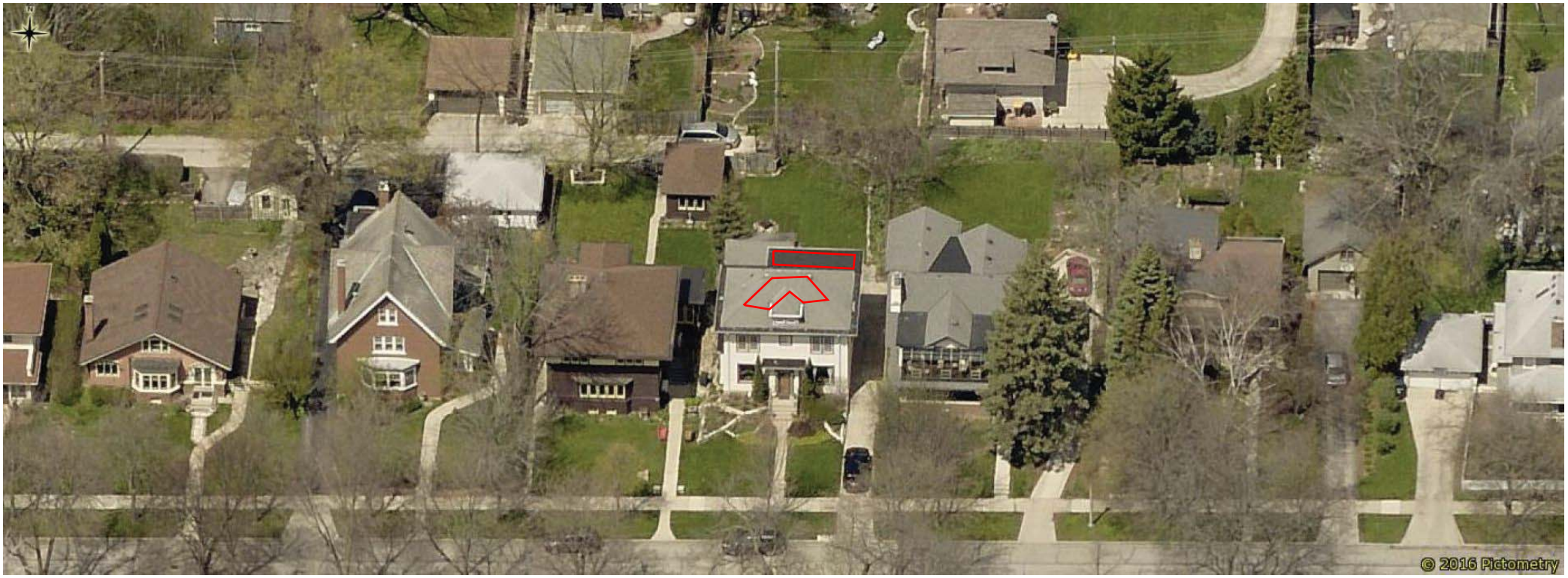
SIGNATURE DATE

2504 E ewton Ave
E Newton Ave
E Newton Ave

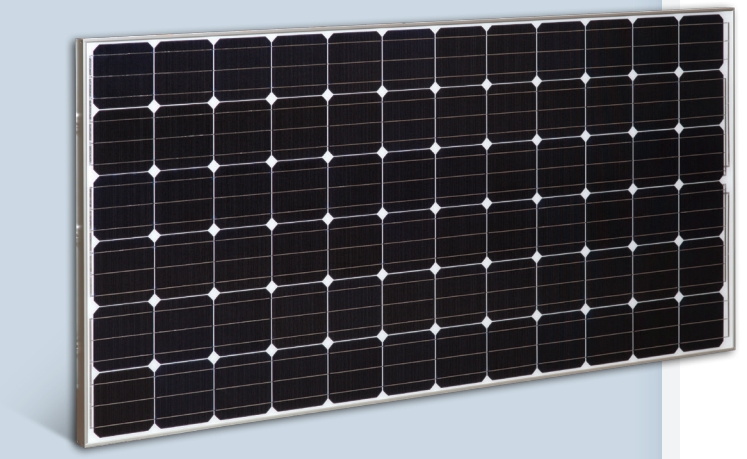
2504 Newton

03/19/2015

2504 Newton



05/02/2016



Suniva®
The Brilliance of Solar Made Sensible®

SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 72 CELL MODULES (SILVER FRAME)

Optimus® modules are known for their superior quality and long-term reliability. These high-powered modules consist of Suniva's premium ARTisun® Select cell technology and are designed and manufactured in the U.S.A. and North America using our pioneering ion implantation technology. Suniva's high power-density Optimus modules provide excellent performance and value.

ENGINEERING EXCELLENCE

- Built exclusively with **Suniva's premium ARTisun Select cells**, providing one of the highest power outputs per square meter at an affordable price
- **The leading US-born, US-operated crystalline silicon cell and module manufacturer**, spun out of Georgia Tech's University Center of Excellence in Photovoltaics; one of only two such research centers in the U.S.
- Suniva's state-of-the art manufacturing and module lab facilities feature the most advanced equipment and technology

QUALITY & RELIABILITY

- Suniva Optimus modules are manufactured and warranted to our specifications assuring consistent high performance and high quality.
- Rigorous in-house quality management tests beyond standard UL and IEC standards
- Performance longevity with advanced polymer backsheet
- UL1703 listed Type 2 PV module
- Passed the most stringent salt spray tests based on IEC 61701
- Passed enhanced stress tests[1] based on IEC 61215 conducted at Fraunhofer ISE[2]
- PAN files are independently validated

FEATURES

PRODUCTS OF THE USA

- Utilizes our premier American-made cell technology, ARTisun Select®
- Superior performance and reliability; enhanced stress tests conducted at Fraunhofer ISE
- Module families ranging from 325-340W
- Positive only power tolerance
- Marine grade aluminum frame with hard anodized coating
- Certified PID-free by PV Evolution Labs (PVEL)
- Made in North America
- Qualifies for Ex-Im Financing
- 1000V UL
- 25 year linear power warranty; 10 year product warranty

CERTIFICATIONS

PVEL ADVANCING SOLAR

www.suniva.com

OPTIMUS SERIES: OPT 72 CELL MODULES

ELECTRICAL DATA (NOMINAL)

The rated power may only vary by -0/+10W and all other electrical parameters by ± 5%

Module Type	OPT325-72-4-100	OPT330-72-4-100	OPT335-72-4-100	OPT340-72-4-100
Power Classification (Pmax)	325 W	330 W	335 W	340 W
Module Efficiency (%)	16.66%	16.92%	17.18%	17.43%
Voltage at Max. Power Point (Vmp)	37.5 V	37.6 V	37.7 V	37.8 V
Current at Max. Power Point (Imp)	8.67 A	8.78 A	8.89 A	8.99 A
Open Circuit Voltage (Voc)	45.8 V	45.9 V	45.9 V	46.0 V
Short Circuit Current (Isc)	9.42 A	9.54 A	9.66 A	9.78 A

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with AM 1.5 spectra at 25°C.

CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun Select cells, 3 and 5 busbar options available
Frame	Silver anodized aluminum alloy
Glass	Tempered (low-iron), anti-reflective coating
Junction Box	NEMA IP67 rated; 6 internal diodes
Cable & Connectors	12 AWG (4 mm²) PV Wire with multiple connector options available; cable length 1300 mm

MECHANICALS

Cells / Module	72 (6 x 12)
Module Dimensions	1970 x 990 mm (77.6 x 39 in.)
Module Thickness (Depth)	38 mm (1.5 in.)
Approximate Weight	23 kg (50.7 lbs.)

TEMPERATURE COEFFICIENTS

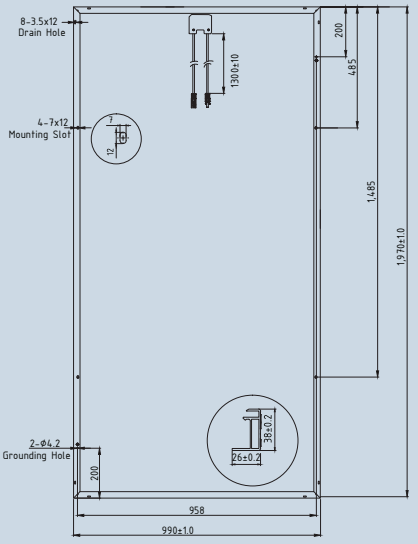
Voltage	ß, Voc (%/°C)	-0.335
Current	α, Isc (%/°C)	+0.047
Power	γ, Pmax (%/°C)	-0.420
NOCT Avg	(+/- 2 °C)	46.0

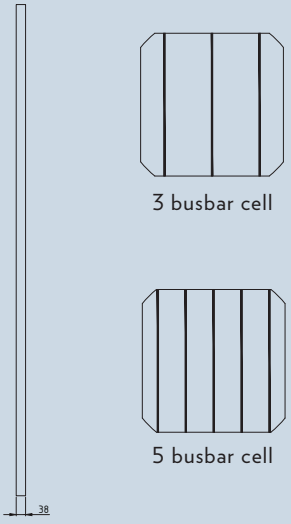
LIMITS

Max. System Voltage	1000 VDC for IEC, 1000 VDC for UL
Max Series Fuse Rating	15 Amps
Operating Module Temperature	-40°C to +85°C (-40°F to +185°F)
Storm Resistance/Static Load	Tested to IEC 61215 for loads of 2400 Pa (50 psf); hail and wind resistant

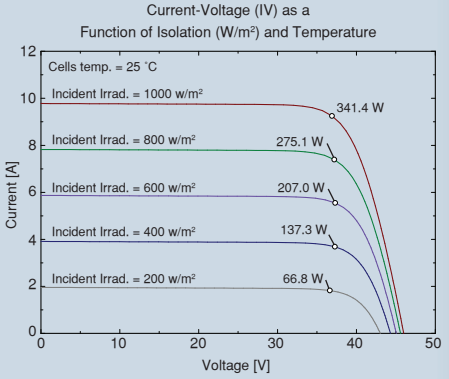
Suniva® reserves the right to change the data at any time. View manual at suniva.com.
[1]UV 90 kWh, TC 400, DH 2000. [2]Tests were conducted on module type OPT 60 silver frame.

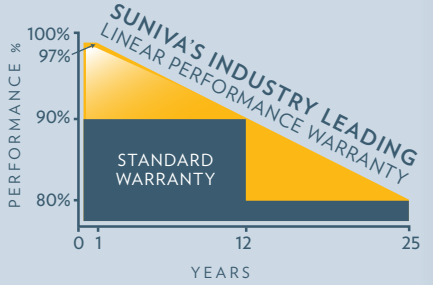
Please read installation manual before installing or working with module.





PV module: Suniva, OPT340-72-4-100





PLEASE RECYCLE

AUGUST 19, 2015 (REV. 6) [SAMD_0051]

Product	Modules per pallet:	Modules per full 53 ft. truck load, double stacked
OPT - 72 cell	22	660

HEADQUARTERS
5765 Peachtree Industrial Blvd.,
Norcross, Georgia 30092 USA
Tel: +1 404 477 2700
www.suniva.com

Suniva®
The Brilliance of Solar Made Sensible®

SM SOLAR MOUNT

NEW ENHANCEMENTS

UNIRAC®
A HILTI GROUP COMPANY

SOLARMOUNT defined the standard in solar racking. New enhancements are designed to get installers off the roof faster than ever before. Components are pre-assembled and optimized to reduce installation steps and save labor time. Our new grounding & bonding process eliminates copper wire and grounding straps to reduce costs. Utilize the microinverter mount with a wire management clip for an easier installation.

ELIMINATE THE GROUNDWIRE FROM YOUR SOLARMOUNT ARRAY

LOSE THE COPPER & LUGS

INTEGRATED GROUNDING

POWERED BY: [e] enphase ENERGY

UL2703 LISTED

BONDING & GROUNDING
MECHANICAL LOADING
SYSTEM FIRE CLASSIFICATION
CLASS A - TYPE 1, 2, 3 & 10 MODULES

TÜVRheinland US

ROOF MOUNT SYSTEMS

GET OFF THE ROOF FASTER THAN EVER BEFORE

OPTIMIZED COMPONENTS • VERSATILITY • AVAILABILITY • DESIGN TOOLS

SM SOLAR MOUNT

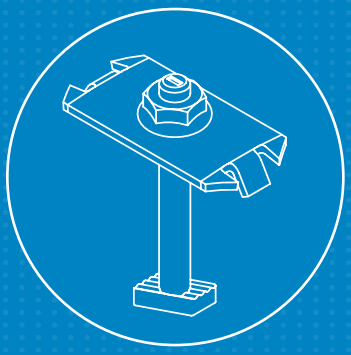
NEW ENHANCEMENTS

UNIRAC®
A HILTI GROUP COMPANY

OPTIMIZED COMPONENTS

INTEGRATED BONDING & PRE-ASSEMBLED PARTS

Components are pre-assembled and optimized to reduce installation steps and save labor time. Our new grounding & bonding process eliminates copper wire and grounding straps or bonding jumpers to reduce costs. Utilize the microinverter mount with a wire management clip for an easier installation.

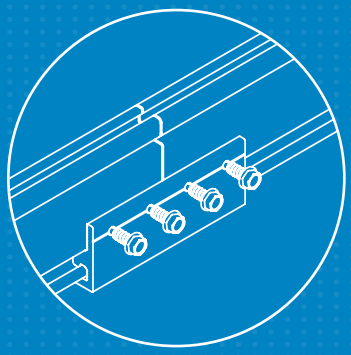


INTEGRATED BONDING MIDCLAMP

VERSATILITY

ONE PRODUCT - MANY APPLICATIONS

Quickly set modules flush to the roof or at a desired tilt angle. Change module orientation to portrait or landscape while securing a large variety of framed modules on flat, low sloped or steep pitched roofs. Available in mill, clear and dark anodized finishes to outperform your projects financial and aesthetic aspirations.



INTEGRATED BONDING SPLICE BAR

AVAILABILITY

NATIONWIDE NETWORK

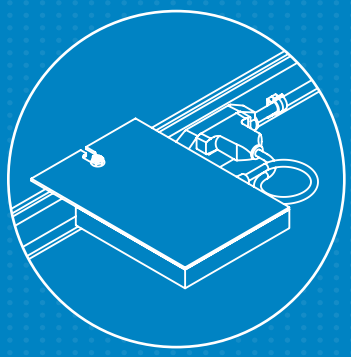
Unirac maintains the largest network of stocking distributors for our racking solutions. Our partners have distinguished their level of customer support, availability, and overall value, thereby providing the highest level of service to users of Unirac products. Count on our partners for fast and accurate delivery to meet your project objectives. Visit Unirac.com for a list of distributors.

INTEGRATED BONDING L-FOOT w/ T-BOLT

AUTOMATED DESIGN TOOL

DESIGN PLATFORM AT YOUR SERVICE

Creating a bill of materials is just a few clicks away with U-Builder, a powerful online tool that streamlines the process of designing a code compliant solar mounting system. Save time by creating a user profile, and recall preferences and projects automatically when you log in. You will enjoy the ability to share projects with customers; there's no need to print results and send to a distributor, just click and share.



INTEGRATED BONDING MICROINVERTER MOUNT w/ WIRE MANAGEMENT

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

UNMATCHED EXPERIENCE | CERTIFIED QUALITY | ENGINEERING EXCELLENCE | BANKABLE WARRANTY | DESIGN TOOLS | PERMIT DOCUMENTATION

TECHNICAL SUPPORT

Unirac's technical support team is dedicated to answering questions & addressing issues in real time. An online library of documents including engineering reports, stamped letters and technical data sheets greatly simplifies your permitting and project planning process.

CERTIFIED QUALITY PROVIDER

Unirac is the only PV mounting vendor with ISO certifications for 9001:2008, 14001:2004 and OHSAS 18001:2007, which means we deliver the highest standards for fit, form, and function. These certifications demonstrate our excellence and commitment to first class business practices.

BANKABLE WARRANTY

As a Hilti Group Company, Unirac has the financial strength to back our products and reduce your risk. Have peace of mind knowing you are receiving products of exceptional quality. SOLARMOUNT is covered by a 10-year limited product warranty and a 5-year limited finish warranty.

PROTECT YOUR REPUTATION WITH QUALITY RACKING SOLUTIONS BACKED BY ENGINEERING EXCELLENCE AND A SUPERIOR SUPPLY CHAIN

535-30 ARCHITECTURAL PROJECTIONS, SPECIAL STRUCTURES, MOBILE WIRELESS TOWERS AND SOLAR AND WIND ENERGY SYSTEMS

D. Conditional use permits for solar and wind energy systems.

(1) Installation and use of a "wind energy system" or a "solar energy system" shall be a conditional use in all districts. The Village Plan Commission may authorize the Planning and Development Department to issue a conditional use permit for solar or wind energy systems after review and a public hearing. Any restriction placed on a solar or wind energy system by the Plan Commission is subject to the limitations found in this section. The review and approval criteria set forth in this subsection shall apply to solar and wind energy systems.

(2) Definitions. As used in this subsection, the following terms shall have the meanings indicated:

A SOLAR ENERGY SYSTEM. Equipment which directly converts and then transfers or stores solar energy into usable forms of thermal or electrical energy.

A WIND ENERGY SYSTEM. Equipment and associated facilities that convert and then store or transfer energy from the wind into usable forms of energy.

(3) Authority to restrict systems limited.

(a) The Village Plan Commission shall review any proposed wind energy system and may approve the system if the applicant meets the owner requirements for a wind energy system as set forth in §§ PSC 128.10 through 128.19, Wis. Adm. Code, (current through Administrative Register, December 2014, No. 708) and as hereinafter amended, which are hereby incorporated by reference and made a part hereof as if fully set forth herein.

(b) The Village Plan Commission shall review any proposed solar or wind energy system and may only restrict the system if the restriction satisfies one of the following conditions:

[1] Serves to preserve or protect the public health or safety.

[2] Does not significantly increase the cost of the system or significantly decrease its efficiency.

[3] Allows for an alternative system of comparable cost and efficiency.