



# Building Permit Application

Howard County Maryland  
Department of Inspections, Licenses and Permits  
3430 Court House Drive  
Permits: 410-313-2455  
www.howardcountymd.gov

Date Received: \_\_\_\_\_

Permit No.: \_\_\_\_\_

Building Address: 13605 Frederick Rd.  
City: West Friendship State: MD Zip Code: 21794  
Suite/Apt. # \_\_\_\_\_ SDP/WP/BA #: \_\_\_\_\_  
Subdivision: 2001 - Pennington Sub  
Lot: 1 Tax Map: 0015 Parcel: 0256

Existing Use: SFD  
Proposed Use: SFD With Solar  
Estimated Construction Cost: \$ 44,000  
Description of Work: Install 63 ground-mounted Solar Panels, 18.90 kW

Occupant/Tenant Name: \_\_\_\_\_  
Was tenant space previously occupied?  Yes  No  
Contact Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Property Owner's Name: SCHAFFNER, Matthew + Raquel  
Address: 13605 Frederick Rd  
City: West Friendship State: MD Zip Code: 21794  
Phone: 443-535-3589 Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Applicant's Name & Mailing Address (if other than stated herein)  
Applicant's Name: Margaret Dixon  
Address: 5681 Main St.  
City: Elkridge State: MD Zip Code: 21075  
Phone: 410-579-2082 Fax: \_\_\_\_\_  
Email: JStokes@SolarEnergyWorld.com

Contractor Company: Solar Energy World  
Contact Person: John Stokes  
Address: 5681 Main St.  
City: Elkridge State: MD Zip Code: 21075  
License No.: JMHIC-127353  
Phone: 410-579-2082 Fax: \_\_\_\_\_  
Email: JStokes@SolarEnergyWorld.com

Engineer/Architect Company: \_\_\_\_\_  
Responsible Design Prof.: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Email: \_\_\_\_\_

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 <sup>st</sup> floor:	
	2 <sup>nd</sup> floor:	
Area of construction (sq. ft.):	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
<b>Construction type:</b>	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	
<input type="checkbox"/> Structural Steel	<b>Multi-family Dwelling</b>	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> <b>Roadside Tree Project Permit</b>	Footings:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	Roof:	
<b>Roadside Tree Project Permit #</b>	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Electric:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Gas:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Heating System	
<input checked="" type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
Sprinkler System:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Grading Permit Number:	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Margaret Dixon  
Applicant's Signature  
JStokes@SolarEnergyWorld.com  
Email Address  
Solar Energy World  
Title/Company

Margaret Dixon  
Print Name  
5/20/19  
Date

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY  
\*\*PLEASE WRITE NEATLY & LEGIBLY\*\*  
-FOR OFFICE USE ONLY-

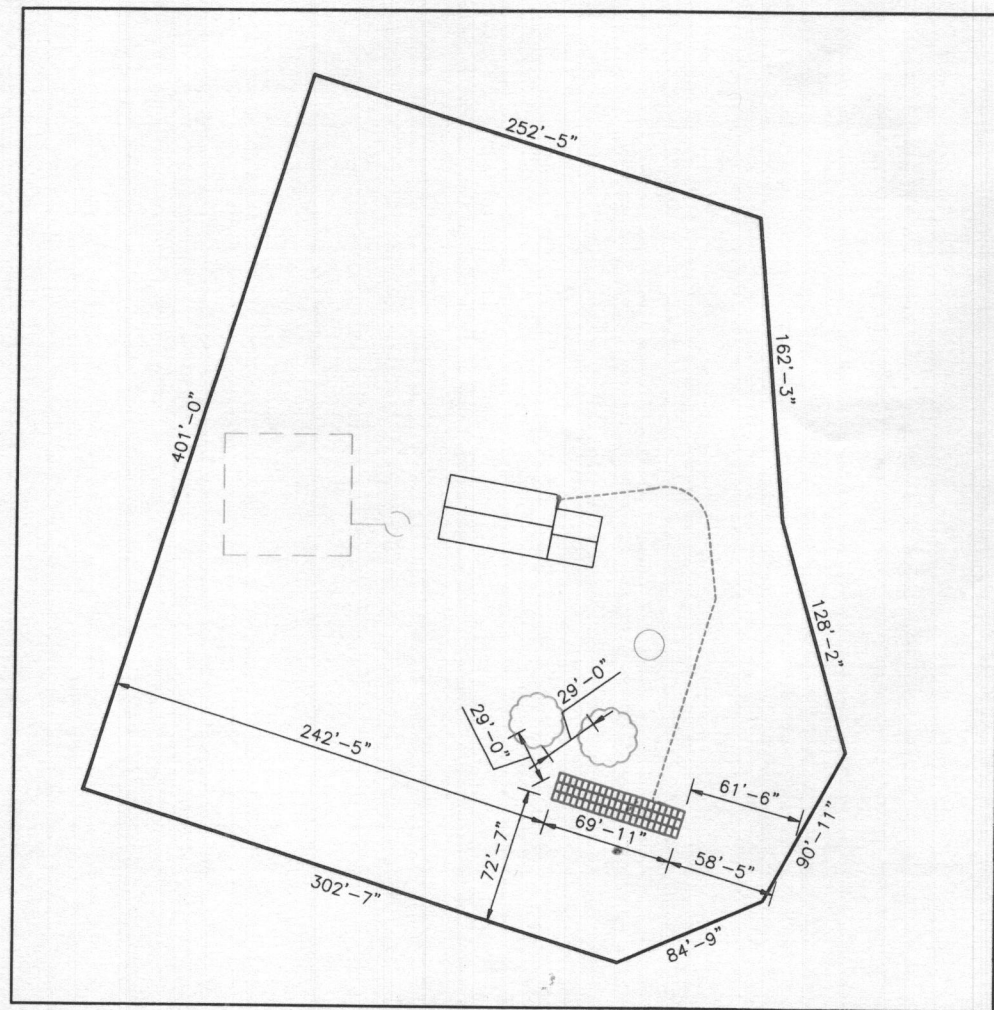
AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA ( Zoning )		
PSZA ( Engineering )		
Health	<u>5/20/19</u>	<u>Print Name</u>

Is Sediment Control approval required for issuance?  Yes  No  
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION
Front:
Rear:
Side:
Side St.:
All minimum setbacks met? <input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required? <input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District? <input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:
SDP/Red-line approval date:

Filing Fee	\$
Permit Fee	\$
Tech Fee	\$
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$
Sub- Total Paid	\$
Balance Due	\$
Check	#

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



**SITE PLAN**  
Scale: 1" = 100'



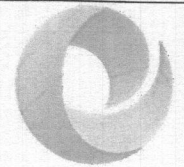
**SITE PLAN**  
Scale: 1" = 100'



**NOTES:**

1. THIS DRAWING IS TO PROVIDE REFERENCE FOR THE INSTALLATION OF GROUND MOUNT PHOTOVOLTAIC ARRAYS.
2. THE SYSTEM SHALL INCLUDE [63] Silfab SLA-M 300M MODULES
3. PROPOSED ARRAYS SHALL COVER APROX. 1,045 SQ. FEET OF PROPERTY.

General Notes



**SolarEnergyWorld**  
Because Tomorrow Matters  
Solar Energy World LLC.  
5681 Main Street  
Elkridge, MD 21075  
(888) 497-3233

Disclaimer:  
This drawing is the property of Solar Energy World Inc. The information herein contained shall be used for the sole benefit of Solar Energy World. It shall not be disclosed to others outside the recipient's organization, in whole or in part, without the written permission of Solar Energy World, except in connection with the sale and use of the respective Solar Energy equipment.

Stamp

**APPROVED**  
WALK-THRU BUILDING PERMIT  
BP# \_\_\_\_\_ A# \_\_\_\_\_  
APP. SAN Robert Freeman DATE: 5/20/2019  
DESC. OF WORK: 63 ground mounted solar panels

Project Name and Address

Matthew & Raquel Schaffner  
13605 Frederick Rd,  
West Friendship, MD 21794  
18.90 kW

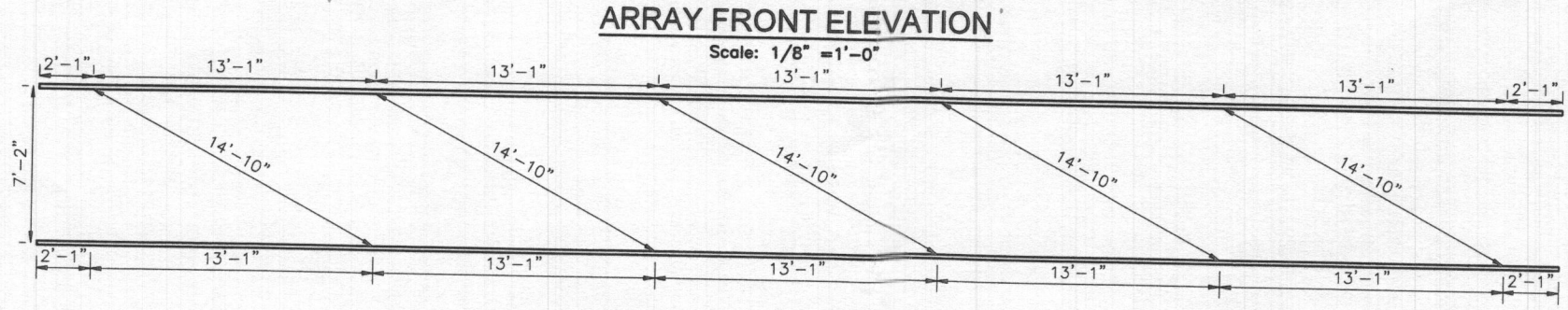
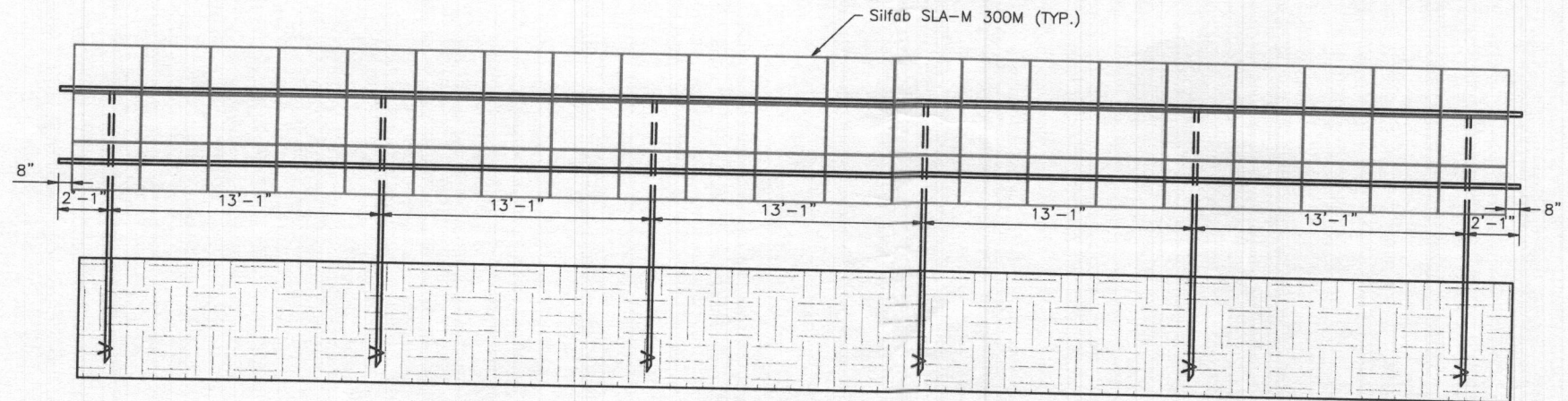
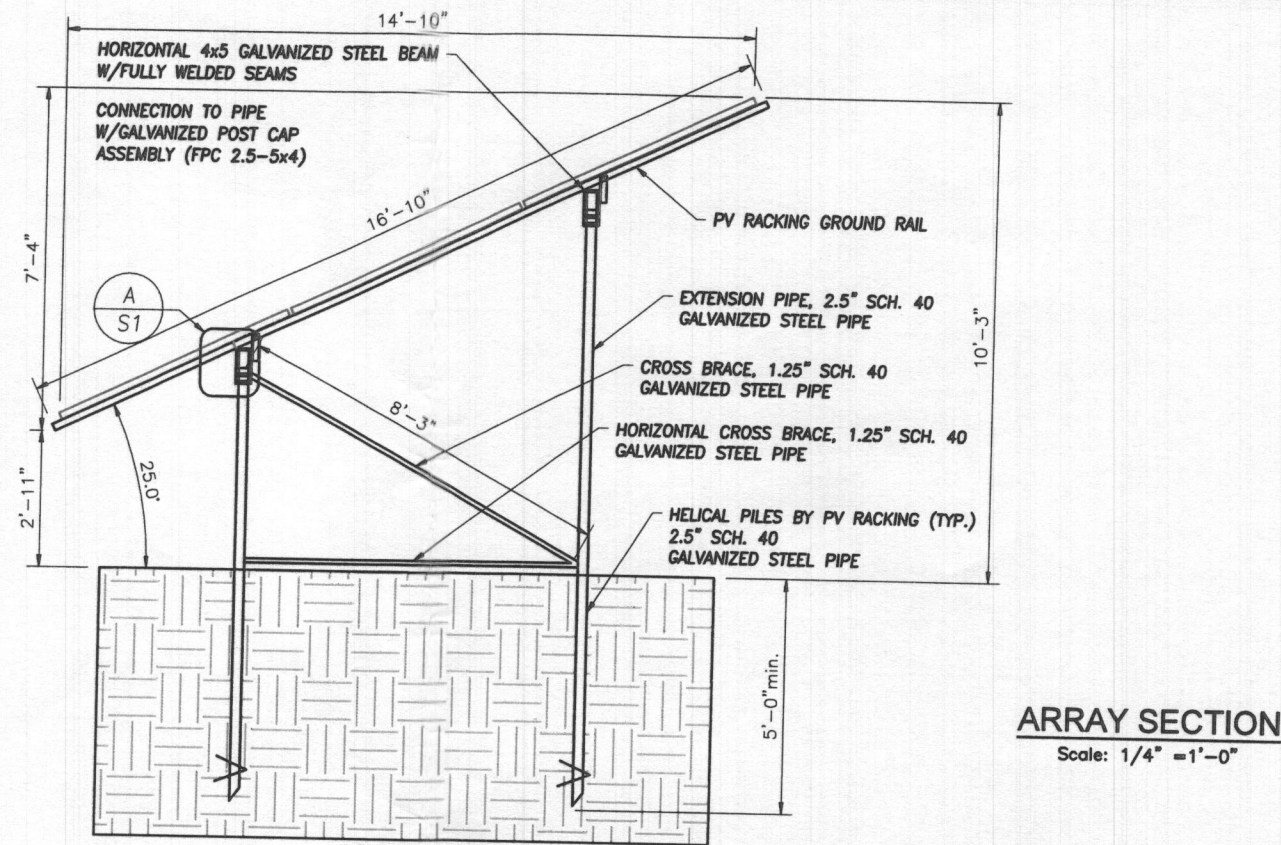
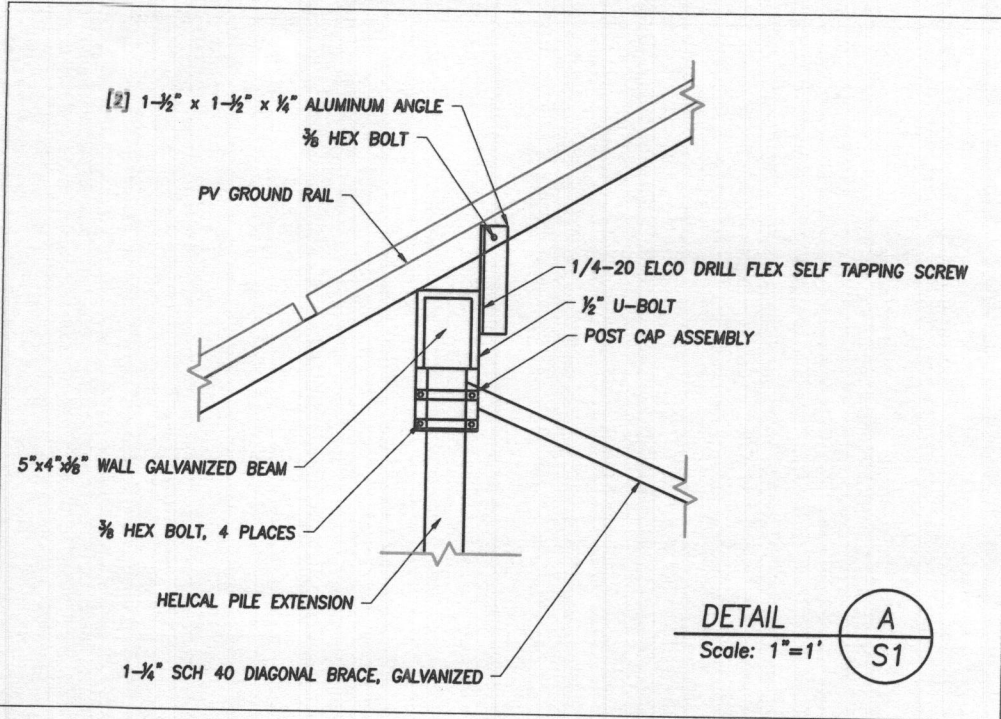
Drawn by  
DTK

Date  
17-MAY-2019

Scale  
AS NOTED

Sheet

**A001**



**NOTES:**

- THIS DRAWING IS TO PROVIDE REFERENCE FOR THE INSTALLATION OF GROUND MOUNT PHOTOVOLTAIC ARRAYS.
- PV RACKING FOR GROUND MOUNT WILL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
- LOAD CRITERIA PER IRC 2003 AND ASCE 7-03:  
RISK CATEGORY I  
EXPOSURE CATEGORY B  
GROUND SNOW LOAD,  $P_g = 25$  PSF  
LATERAL LOAD:  
WIND LOADS (ULTIMATE DESIGN WIND SPEED = 115 MPH)

General Notes

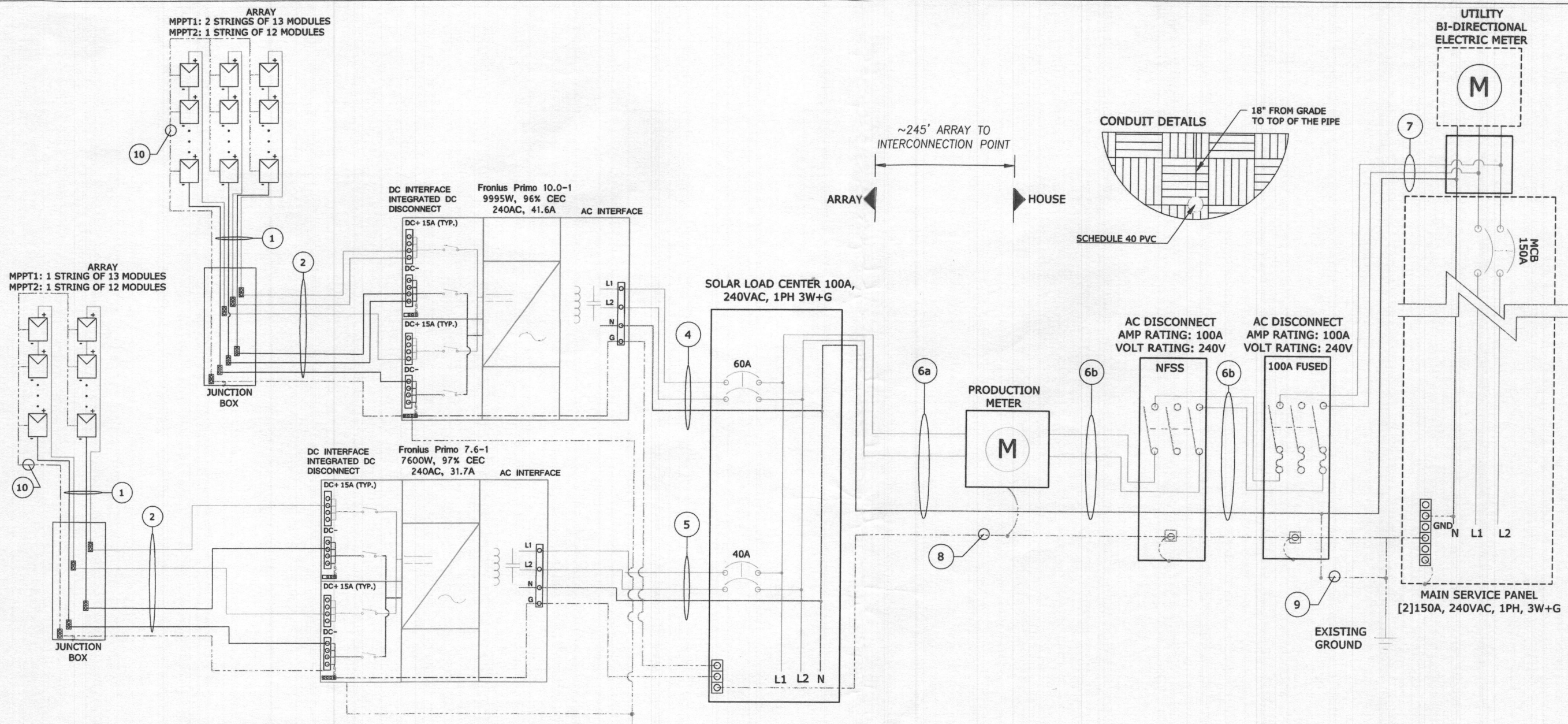
**SolarEnergyWorld**  
*Because Tomorrow Matters*  
Solar Energy World LLC.  
5681 Main Street  
Elkridge, MD 21075  
(888) 497-3233

Disclaimer:  
This drawing is the property of Solar Energy World Inc. The information herein contained shall be used for the sole benefit of Solar Energy World. It shall not be disclosed to others outside the recipient's organization, in whole or in part, without the written permission of Solar Energy World, except in connection with the sale and use of the respective Solar Energy equipment.

Stamp

Project Name and Address  
**Matthew & Raquel Schaffner**  
13605 Frederick Rd,  
West Friendship, MD 21794  
18.90 kW

Drawn by <b>DTK</b>	Sheet <b>S001</b>
Date <b>17-MAY-2019</b>	
Scale <b>AS NOTED</b>	



1 SINGLE LINE DIAGRAM  
SCALE: NA

MODULE SPECIFICATION				
MODEL NO.	Silfab's SLA-M 300W			
PEAK POWER	300 W			
RATED VOLTAGE (V <sub>mpp</sub> )	32.8 V			
RATED CURRENT (I <sub>mp</sub> )	9.16 A			
OPEN CIRCUIT VOLTAGE (V <sub>oc</sub> )	39.85 V			
SHORT CIRCUIT CURRENT (I <sub>sc</sub> )	9.71 A			
MAXIMUM SYSTEM VOLTAGE	1000VDC			
Inverters Spec's	FroniusPrimo 10.0-1	FroniusPrimo 7.6-1		
Maximum DC Voltage	600 V	600 V		
Maximum Power Output	9995 W	7600 W		
Nominal AC Voltage	240 VAC	240 VAC		
Maximum AC Current	41.6 A	31.7 A		
ARRAY A DETAILS				
	MPPT 1	MPPT2	MPPT 1	MPPT2
NO. OF MODULE PER STRING	13	12	13	12
NO. OF STRINGS	2	1	1	1
ARRAY WATTS AT STC	7800	3600	3900	3600
MAX. VOLTAGE	579	534	579	534
690.53 Label Info				
Rated Voltage	426.40 V	393.60 V	426.40 V	393.60 V
Rated Current	18.32 A	9.16 A	9.16 A	9.16 A
Maximum System Voltage	578.66 V	534.15 V	578.66 V	534.15 V
Short Circuit Current	24.28 A	12.14 A	12.14 A	12.14 A

WIRE/CONDUIT SCHEDULE ARRAY			
TAG	DESCRIPTION	WIRE SIZE/TYPE	NOTES
1	Panel to Transition Box	#10 USE-2	
2	Transition Box to DC Disconnect	#10 THHN/THWN-2	
3	DC Disconnect to Inverter	NA	Integrated
4	Inverter to Solar Load Center	#6 THHN/THWN-2	
5	Inverter to Solar Load Center	#8 THHN/THWN-2	
6a	Solar Load Center to Production Meter	#1 THHN/THWN-2 IN PVC	VD=2.30%
6b	Production Meter to Fused AC Disconnect	#3 THHN/THWN-2	
7	Fused AC Disconnect to Interconnection Point	#3 Cu	
8	Equipment Grounding Conductor	#8 Cu	
9	Grounding Electrode Conductor	#8 Cu	
10	Bare Copper Wire	#8 Cu	Equipment Grounding Conductor

GENERAL ELECTRICAL NOTES: NEC2017

- EQUIPMENT USED SHALL BE NEW, UNLESS OTHERWISE NOTED.
  - EQUIPMENT USED SHALL BE UL LISTED, UNLESS OTHERWISE NOTED.
  - EQUIPMENT SHALL BE INSTALLED PROVIDING ADEQUATE PHYSICAL WORKING SPACE AROUND THE EQUIPMENT AND SHALL COMPLY WITH NEC.
  - COPPER CONDUCTORS SHALL BE USED AND SHALL HAVE INSULATION RATING 600V, 90°C, UNLESS OTHERWISE NOTED.
  - CONDUCTORS SHALL BE SIZED IN ACCORDANCE TO NEC. CONDUCTORS AMPACITY SHALL BE DE-RATED FOR TEMPERATURE INCREASE, CONDUIT FILL AND VOLTAGE DROP.
  - ALL CONDUCTORS, EXCEPT PV WIRE, SHALL BE INSTALLED IN APPROVED CONDUITS OR RACEWAY. CONDUITS SHALL BE ADEQUATELY SUPPORTED AS PER NEC.
  - AC DISCONNECT SHOWN IS REQUIRED IF THE UTILITY REQUIRES VISIBLE-BLADE SWITCH.
  - EXPOSED NON-CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AS PER NEC.
  - LOAD SIDE INTER-CONNECTION SHALL COMPLY WITH NEC
  - SMS MONITORING SYSTEM AND IT'S CONNECTION SHOWN IS OPTIONAL. IF USED, REFER TO SMS INSTALLATION MANUAL FOR WIRING METHODS AND OPERATION PROCEDURE.
  - ASHRAE FUNDAMENTAL OUTDOOR DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE U.S. (PHOENIX, AZ or PALM SPRINGS, CA)
  - FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF MOUNTED SUNLIGHT CONDUIT USING THE OUTDOOR TEMPERATURE OF 47°C
  - 10AWG CONDUCTOR ARE GENERALLY ACCEPTABLE FOR MODULES WITH AN I<sub>sc</sub> OF 9.6 AMPS WITH A 15 AMP FUSE.
- Wire sizing for OCPD  
Ex(I<sub>sc</sub>\*(1.25)(1.25)(# of strings in paralell)= wire ampacity or using NEC table 690.8

SolarEnergyWorld  
5681 Main Street  
Elkridge, MD 21075  
(888) 497-3233

---

ENGINEER'S STAMP

**Matthew & Raquel Schaffner**  
18.90 kW  
13605 Frederick Rd,  
West Friendship, MD 21794

SINGLE LINE DIAGRAM

REV	DATE	DESCRIPTION

OPPORTUNITY: -  
PROJECT: -  
DATE DRAWN: 05/17/19  
DRAWN BY: DTK  
DMS #: REV. \*\*  
SHEET: E001