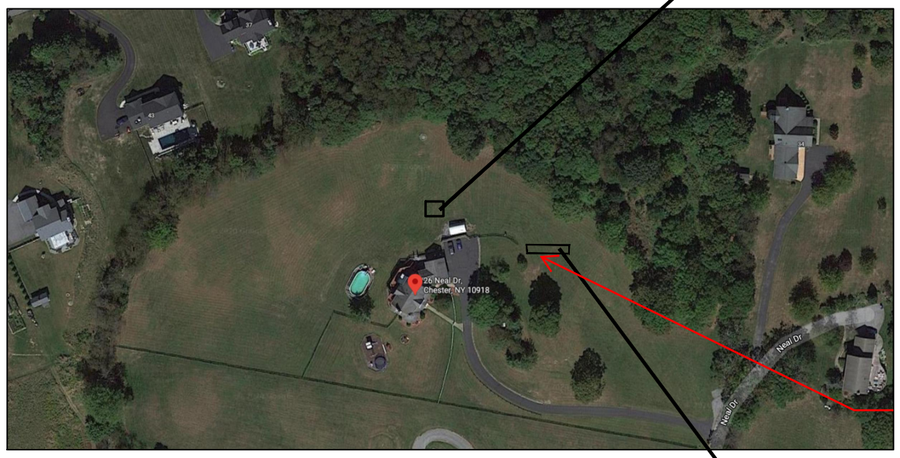
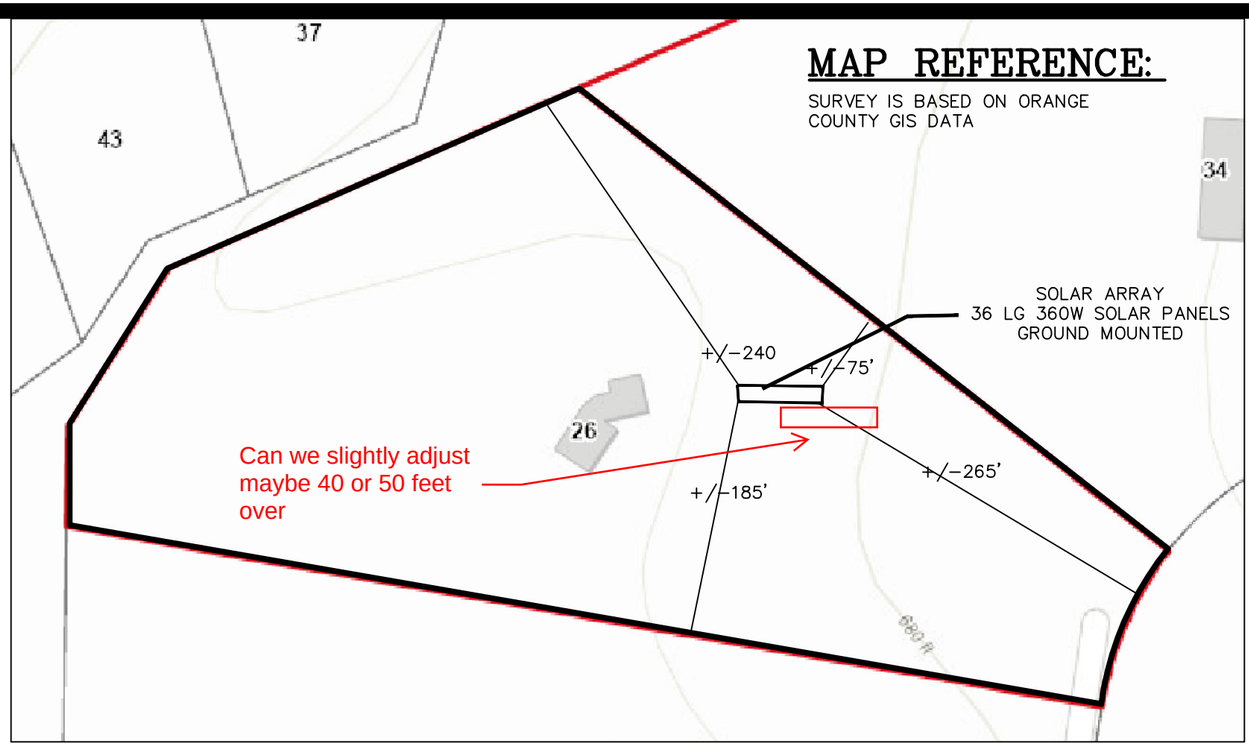


PANEL LOCATION ON LOT:

NTS

NORTH



SURVEY MAP:

NTS

SURVEY NOTES:

SURVEY SHOWN IS BASED ON DUTCHESS COUNTY G.I.S DATA, SETBACKS ARE BASED ON FIELD MEASURMENTS

** ARRAY SHALL BE STAKED BY A PROFESSIONAL LAND SURVEYOR PRIOR TO INSTALLATION TO ENSURE REQUIRED SETBACKS ARE MET **

ARRAY NOTES:

THERE IS (1) GROUND MOUNT ARRAY, FOR A TOTAL OF 725 SQ.FT.

PROJECT DESIGN DATA:

WORK SHALL BE COMPLETED AS PER THE 2020 NEW YORK STATE RESIDENTIAL BUILDING CODE, 2020 NATIONAL ELECTRICAL CODE AND 2001 WOOD FRAME CONSTRUCTION MANUEL
LOAD CRITERIA AS FOLLOWS
EXPOSURE CATEGORY: "B"
GROUND SNOW LOAD: 40 PSF
WIND SPEED: 120 MPH, 35SPF

GENERAL NOTES:

1. ALL SOLAR MODULES TO BE LG-360W AND SHALL BE INSTALLED AS PER LG INSTALLATION MANUAL.
2. ALL INVERTERS TO BE ENPHASE MICRO-INVERTERS ALL RACKING AS PER DETAILS FOR GROUND MOUNT INSTALLATION

SITE VERIFICATION NOTES:

1. PRIOR TO SUBMISSION TO MUNICIPALITY OF THE PLANS, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO SUBMISSION OF THE PLANS. SUBMISSION OF PLANS SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF WORK. IF EXISTING CONDITIONS VARY FROM PLANS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY PROJECT ENGINEER A.S.A.P. CONTRACTOR ASSUMES ALL RESPONSIBILITY AND LIABILITY THEREFROM.
3. THE OWNER/CONTRATOR SHALL OBTAIN ALL NECESSARY PERMITS, VERIFY ALL CONDITIONS, EXAMINE THE DESIGN DOCUMENTS AND BE RESPONSIBLE FOR ALL MEASUREMENTS, DIMENSIONS AND CONDITIONS.
4. COMMENCEMENT OF CONSTRUCTION WILL SIGNIFY THAT THE CONTRACTOR WILL HOLD THE DESIGN ENGINEER HARMLESS FOR ANY AND ALL ERRORS, OMISSIONS AND PERSONAL LIABILITY.

RESIDENTIAL GROUND MOUNT SOLAR PANEL INSTALLATION

LOCATED AT 30 HILEE ROAD, RHINEBECK, NY 12572

TOWN OF CHESTER, ORANGE COUNTY, NEW YORK

InfinityEnergy

SOLAR PANEL INSTALLATION
~~ALZAMORE~~ ALZAMORA
RESIDENCE
26 NEAL DRIVE
CHESTER
NEW YORK, 10918

REVISIONS NOTES

DWG. BY:	MEM	SCALE:	AS-NOTED
CHECKED BY:	MEM	PROJECT #:	GM-0005
DATE:	JULY 4, 2021		
MUNICIPALITY:	TOWN OF CHESTER	COUNTY:	ORANGE

SYSTEM NOTES:

TOTAL SYSTEM SIZE: 12.96kW DC SYSTEM
PANEL TYPE: LG360-Q1C-A5
OF PANELS: 36
INVERTER TYPE: IQ7PLUS-72-2-US
OF INVERTERS: 36

ARRAY #1
AZIMUTH: 180
TILT: 30

PROFESSIONAL NOTES:

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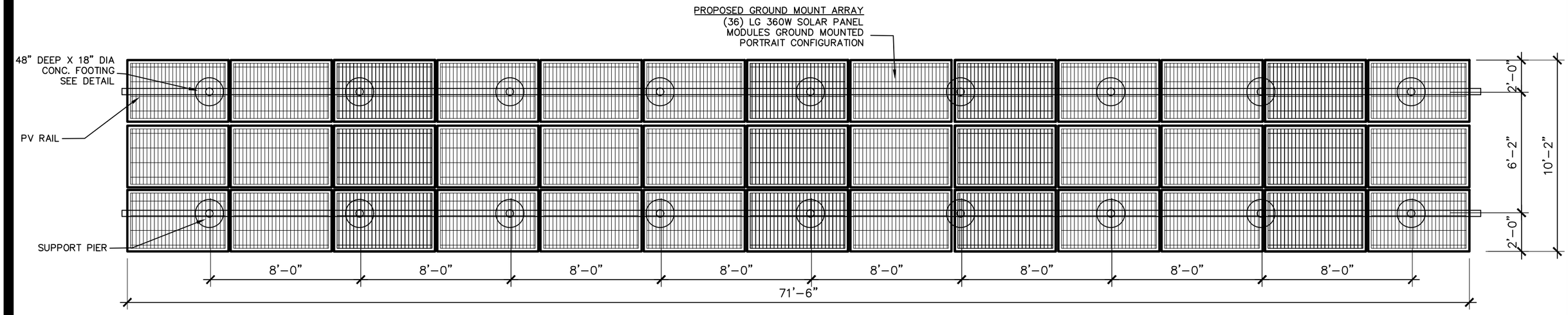
SEAL & SIGNATURE

STATE OF NEW YORK
MICHAEL EDWARD MEE
079676
LICENSED PROFESSIONAL ENGINEER

DWG# S-1

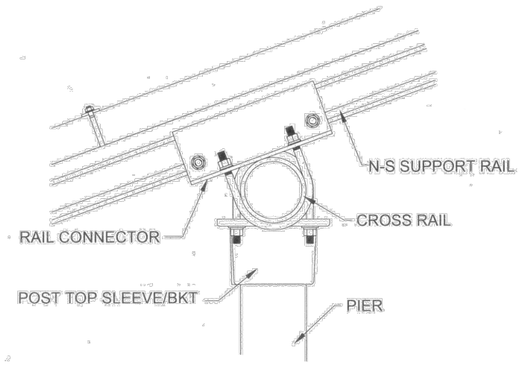
PROJECT SITE PLAN AND NOTES

DWG. 1 OF 4

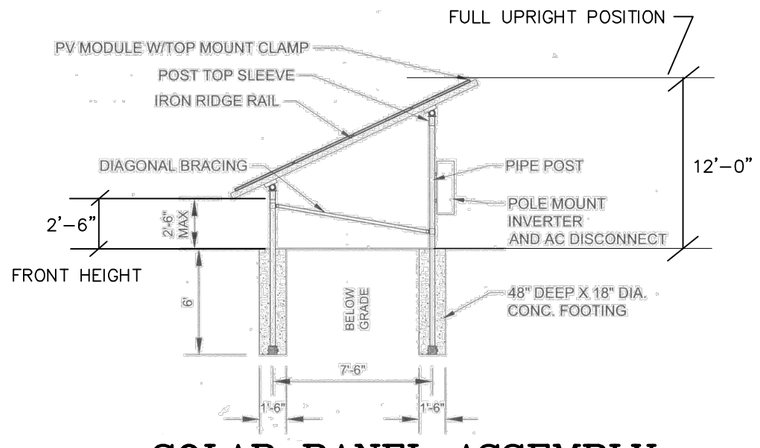


GROUND MOUNT LAYOUT:

NTS



SOLAR PANEL ATTACHMENT:



SOLAR PANEL ASSEMBLY:

InfinityEnergy

SOLAR PANEL INSTALLATION
ALZAMORE RESIDENCE
26 NEIL DRIVE
CHESTER
NEW YORK, 10918

REVISIONS NOTES

DWG. BY:	MEM	SCALE:	AS-NOTED
CHECKED BY:	MEM	PROJECT #:	GM-0005
DATE:	DECEMBER 1, 2020		
MUNICIPALITY:	TOWN OF CHESTER	COUNTY:	ORANGE

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MICHAEL EDWARD ALLEN
079676
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DWG# S-2

SOLAR PANEL LAYOUT PLAN

DWG. 2 OF 4

LG NeON® R

Preliminary

LG365Q1C-A5 | LG360Q1C-A5 | LG355Q1C-A5 | LG350Q1C-A5

Mechanical Properties

Cells	6 x 10
Cell Vendor	LG
Cell Type	Monocrystalline / N-type
Cell Dimensions	161.7 x 161.7 mm / 6 inches
Dimensions (L x W x H)	1,700 x 1,016 x 40 mm 66.93 x 40.0 x 1.57 in
Front Load	6,000Pa / 125 psf
Rear Load	5,400Pa / 113 psf
Weight	18.5 kg / 40.79 lb
Connector Type	MC4 (MC)
Junction Box	IP68 with 3 Bypass Diodes
Cables	1,000 mm x 2 ea / 39.37 in x 2 ea
Glass	High Transmission Tempered Glass
Frame	Anodized Aluminium

Certifications and Warranty

Certifications	IEC 61215, IEC 61730-1/-2
	UL 1703
	IEC 61701 (Salt mist corrosion test)
	IEC 62716 (Ammonia corrosion test)
	ISO 9001
Module Fire Performance	Type 1 (UL)
Fire Rating	Class C
Product Warranty	25 years
Output Warranty of Pmax	Linear Warranty*

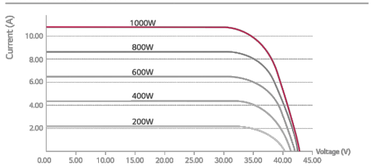
* 1) First 5 years : 95%, 2) After 5th year : 0.4%p annual degradation, 3) 25 years : 87.0%

Temperature Characteristics

NOCT*	[°C]	44 ± 3
Pmax	[%/°C]	-0.30
Voc	[%/°C]	-0.24
Isc	[%/°C]	0.04

* NOCT (Nominal Operating Cell Temperature): Irradiance 800 W/m², ambient temperature 20 °C, wind speed 1 m/s

Characteristic Curves



Electrical Properties (STC*)

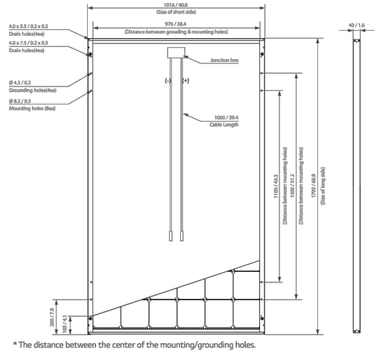
Model		LG365Q1C-A5	LG360Q1C-A5	LG355Q1C-A5	LG350Q1C-A5
Maximum Power (Pmax)	[W]	365	360	355	350
MPP Voltage (Vmpp)	[V]	36.7	36.5	36.3	36.1
MPP Current (Impp)	[A]	9.95	9.87	9.79	9.70
Open Circuit Voltage (Voc)	[V]	42.8	42.7	42.7	42.7
Short Circuit Current (Isc)	[A]	10.80	10.79	10.78	10.77
Module Efficiency	[%]	21.1	20.8	20.6	20.3
Operating Temperature	[°C]	-40 ~ +90			
Maximum System Voltage	[V]	1,000 (UL / IEC)			
Maximum Series Fuse Rating	[A]	20			
Power Tolerance	[%]	0 ~ +3			

* STC (Standard Test Condition): Irradiance 1000 W/m², Module Temperature 25 °C, AM 1.5
* The nameplate power output is measured and determined by LG Electronics at its sole and absolute discretion.

Electrical Properties (NOCT)

Model		LG365Q1C-A5	LG360Q1C-A5	LG355Q1C-A5	LG350Q1C-A5
Maximum Power (Pmax)	[W]	275	271	267	263
MPP Voltage (Vmpp)	[V]	36.6	36.4	36.2	36.0
MPP Current (Impp)	[A]	7.51	7.45	7.39	7.32
Open Circuit Voltage (Voc)	[V]	40.2	40.2	40.2	40.1
Short Circuit Current (Isc)	[A]	8.70	8.69	8.68	8.67

Dimensions (mm / inch)



LG Electronics Inc.
Solar Business Division
LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul
07336, Korea
www.lg-solar.com

Product specifications are subject to change without notice.
DS-Q1-60-C-G-F-EN-70307

Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)	IQ7-60-2-US	IQ7PLUS-72-2-US
Commonly used module pairings[1]	235 W - 350 W +	235 W - 440 W +
Module compatibility	60-cell PV modules only	60-cell and 72-cell PV modules
Maximum input DC voltage	48 V	60 V
Peak power tracking voltage	27 V - 37 V	27 V - 45 V
Operating range	16 V - 48 V	16 V - 60 V
Min/Max start voltage	22 V / 48 V	22 V / 60 V
Max DC short circuit current (module Isc)	15 A	15 A
Overvoltage class DC port	II	II
DC port backfeed current	0 A	0 A
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	

OUTPUT DATA (AC)	IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power	250 VA		295 VA	
Maximum continuous output power	240 VA		290 VA	
Nominal (L-L) voltage/range[2]	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency	60 Hz		60 Hz	
Extended frequency range	47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit[3]	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port	III		III	
AC port backfeed current	0 A		0 A	
Power factor setting	1.0		1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	

EFFICIENCY	@240 V	@208 V	@240 V	@208 V
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %

MECHANICAL DATA	
Ambient temperature range	-40°C to +65°C
Relative humidity range	4% to 100% (condensing)
Connector type (IQ7-60-2-US & IQ7PLUS-72-2-US)	MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)
Dimensions (WxHxD)	212 mm x 175 mm x 30.2 mm (without bracket)
Weight	1.08 kg (2.38 lbs)
Cooling	Natural convection - No fans
Approved for wet locations	Yes
Pollution degree	PD3
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environmental category / UV exposure rating	NEMA Type 6 / outdoor

FEATURES	
Communication	Power Line Communication (PLC)
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC-2014 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.

1. No enforced DC/AC ratio. See the compatibility calculator at https://enphase.com/en-us/support/module-compatibility.
2. Nominal voltage range can be extended beyond nominal if required by the utility.
3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE.

2019-3-26

InfinityEnergy

SOLAR PANEL INSTALLATION
ALZAMORE RESIDENCE
26 NEAL DRIVE
CHESTER
NEW YORK, 10918

REVISIONS NOTES

DWG. BY:	MEM	SCALE:	AS-NOTED
CHECKED BY:	MEM	PROJECT #:	GM-0005
DATE:	DECEMBER 1, 2020		
MUNICIPALITY:	TOWN OF CHESTER	COUNTY:	ORANGE

SYSTEM NOTES:
TOTAL SYSTEM SIZE: 12.96kW DC SYSTEM
PANEL TYPE: LG360-Q1C-A5
OF PANELS: 36
INVERTER TYPE: IQ7PLUS-72-2-US
OF INVERTERS: 36
ARRAY #1
AZIMUTH: 180
TILT: 30

PROFESSIONAL NOTES:
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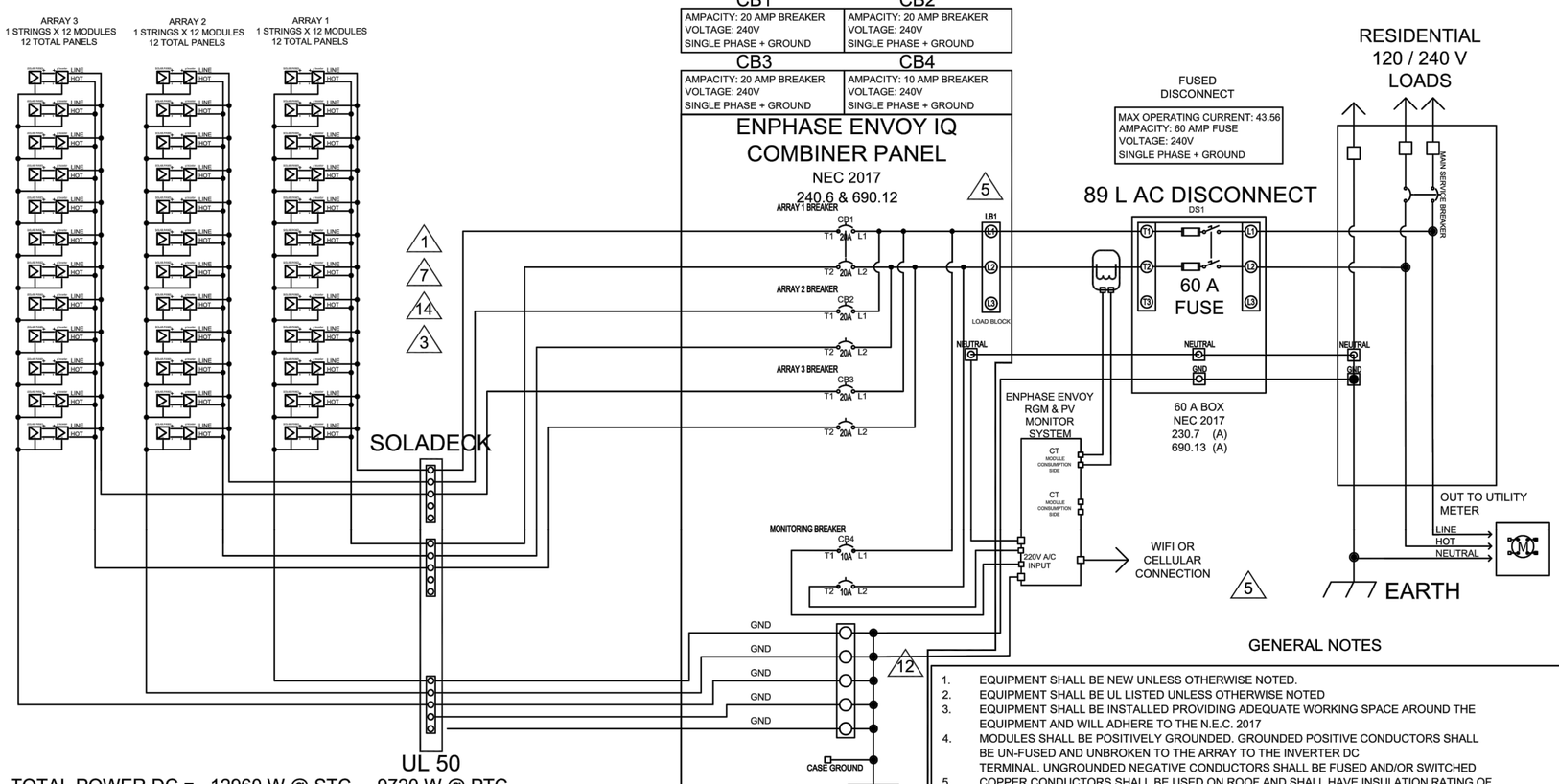
MICHAEL EDWARD ALLEN
079676
LICENSED PROFESSIONAL ENGINEER

DWG# S-3
SOLAR PANEL & INVERTER SPECIFICATIONS
DWG. 3 OF 4



WIRE CONDUIT SCHEDULE

TAG	DESCRIPTION	ARRAY 1	ARRAY 2	ARRAY 3	NOTES
1	ARRAY TO SOLADECK TERMINALS	10 AWG	10 AWG	10 AWG	SUPPLIED ENPHASE QCABLE 3 WIRE
2	SOLADECK TO COMBINER BOX	10 AWG	10 AWG	10 AWG	THHN IN M.C
3	COMBINER BOX TO AC DISCONNECT		6 AWG		THHN IN M.C
4	AC DISCONNECT TO MSP		6 AWG		THHN IN M.C
5	BARE COPPER WIRE		6 AWG		THHN IN M.C
6	GROUNDING ELECTRODE CONDUCTOR		8 AWG		EQUIP GND TO EXISTING

WIRE SIZE

GENERAL NOTES

1. EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED.
2. EQUIPMENT SHALL BE UL LISTED UNLESS OTHERWISE NOTED
3. EQUIPMENT SHALL BE INSTALLED PROVIDING ADEQUATE WORKING SPACE AROUND THE EQUIPMENT AND WILL ADHERE TO THE N.E.C. 2017
4. MODULES SHALL BE POSITIVELY GROUNDED. GROUNDED POSITIVE CONDUCTORS SHALL BE UN-FUSED AND UNBROKEN TO THE ARRAY TO THE INVERTER DC TERMINAL. UNGROUNDED NEGATIVE CONDUCTORS SHALL BE FUSED AND/OR SWITCHED
5. COPPER CONDUCTORS SHALL BE USED ON ROOF AND SHALL HAVE INSULATION RATING OF 600V 90°C UNLESS OTHERWISE NOTED
6. CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH N.E.C. AMPACITY SHALL BE DE-RATED TO COMPENSATE FOR THERMAL LOAD, CONDUIT FILL AND VOLTAGE DROP
7. CONDUITS SHALL BE ADEQUATELY SUPPORTED AS PER N.E.C. 2017
8. AC DISCONNECT SHOWN IS REQUIRED IF THE UTILITY REQUIRES VISIBLE VISIBLE BLADE SWITCH
9. EXPOSED NON CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AS PER N.E.C. 2017
10. LOAD SIDE INTERCONNECTION SHALL COMPLY WITH N.E.C.
11. THIS DESIGN IS BASED UPON COLDEST AMBIENT TEMPERATURE -14°F AND AVERAGE HOTTEST TEMP 85°F
12. BREAKERS SHALL BE INSTALLED IN ACCORDANCE WITH N.E.C. 2017 690.13.
13. I.C.P.D. SHALL BE DESIGNED AS PER (ISC)(1.25)(1.25)=WIRE AMPACITY OR N.E.C. 2017 TABLE 690.8
14. ANY DC CONDUCTORS INSIDE OF THE STRUCTURE SHALL BE IN METAL CONDUIT
15. IT IS CONTRACTORS RESPONSIBILITY TO COMPLY WITH N.E.C. 2017 690.11 ARC FAULT PROTECTION REQUIREMENTS.
16. ALL INSTALLATIONS MUST BE APPROVED BY LOCAL BUILDING DEPARTMENT

ARRAY 1
(12 MODULES PARALLEL)

MODULE SPECIFICATIONS

MODEL NUMBER	LG360N1C-N5
PEAK POWER	360W
RATED VOLTAGE (VMPP)	35.1 VDC
RATED CURRENT (IMP)	10.28 ADC
OPEN CIRCUIT VOLTAGE (VOC)	41.6 VDC
SHORT CIRCUIT CURRENT (ISC)	10.84 ADC
MAXIMUM SYSTEM VOLTAGE	1000 VDC
INVERTER SPECIFICATIONS:	596-00239
MODEL	IQ7PLUS-72-2-US
MAXIMUM DC VOLTAGE	60 V DC
MAXIMUM POWER OUTPUT	3480 W
NOMINAL AC VOLTAGE	240V AC
MAXIMUM AC CURRENT	14.52 A AC
ARRAY DETAILS	
MODULES PER STRING	12
NUMBER OF STRINGS	1
ARRAY WATTS @ STC	4320 W
ARRAY WATTS @ PTC	3240 W
MAXIMUM VOLTAGE	240 V AC
690.53 LABEL INFO:	596-00241
RATED CURRENT	14.52 A A/C
RATED VOLTAGE	240 V A/C
MAXIMUM SYSTEM VOLTAGE	264 V A/C
SHORT CIRCUIT CURRENT	18.15 A A/C

ARRAY 2
(12 MODULES PARALLEL)

MODULE SPECIFICATIONS

MODEL NUMBER	LG360N1C-N5
PEAK POWER	360W
RATED VOLTAGE (VMPP)	35.1 VDC
RATED CURRENT (IMP)	10.28 ADC
OPEN CIRCUIT VOLTAGE (VOC)	41.6 VDC
SHORT CIRCUIT CURRENT (ISC)	10.84 ADC
MAXIMUM SYSTEM VOLTAGE	1000 VDC
INVERTER SPECIFICATIONS:	596-00239
MODEL	IQ7PLUS-72-2-US
MAXIMUM DC VOLTAGE	60 V DC
MAXIMUM POWER OUTPUT	3480 W
NOMINAL AC VOLTAGE	240V AC
MAXIMUM AC CURRENT	14.52 A AC
ARRAY DETAILS	
MODULES PER STRING	12
NUMBER OF STRINGS	1
ARRAY WATTS @ STC	4320 W
ARRAY WATTS @ PTC	3240 W
MAXIMUM VOLTAGE	240 V AC
690.53 LABEL INFO:	596-00241
RATED CURRENT	14.52 A A/C
RATED VOLTAGE	240 V A/C
MAXIMUM SYSTEM VOLTAGE	264 V A/C
SHORT CIRCUIT CURRENT	18.15 A A/C

ARRAY 3
(12 MODULES PARALLEL)

MODULE SPECIFICATIONS

MODEL NUMBER	LG360N1C-N5
PEAK POWER	360W
RATED VOLTAGE (VMPP)	35.1 VDC
RATED CURRENT (IMP)	10.28 ADC
OPEN CIRCUIT VOLTAGE (VOC)	41.6 VDC
SHORT CIRCUIT CURRENT (ISC)	10.84 ADC
MAXIMUM SYSTEM VOLTAGE	1000 VDC
INVERTER SPECIFICATIONS:	596-00239
MODEL	IQ7PLUS-72-2-US
MAXIMUM DC VOLTAGE	60 V DC
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NOMINAL AC VOLTAGE	240V AC
MAXIMUM AC CURRENT	14.52 A AC
ARRAY DETAILS	
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ARRAY WATTS @ PTC	3240 W
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RATED VOLTAGE	240 V A/C
MAXIMUM SYSTEM VOLTAGE	264 V A/C

InfinityEnergy

SOLAR PANEL INSTALLATION
ALZAMORE RESIDENCE

26 NEAL DRIVE
CHESTER
NEW YORK, 10918

REVISIONS NOTES

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CHECKED BY:	MEM	PROJECT #:	GM-0005
DATE:	DECEMBER 1, 2020		
MUNICIPALITY:	TOWN OF CHESTER	COUNTY:	ORANGE

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TOTAL SYSTEM SIZE: 12.96kW DC SYSTEM

PANEL TYPE: LG360-Q1C-A5

OF PANELS: 36

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OF INVERTERS: 36

ARRAY #1
AZIMUTH: 180
TILT: 30

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079676
LICENSED PROFESSIONAL ENGINEER

DWG#

S-4

SOLAR
3-LINE
DIAGRAM

DWG.

4 OF 4