

1. Historic District Commission Virtual Meeting

Documents:

[HISTORIC DISTRICT COMMISSION - 09 NOV 2021 - AGENDA - PDF.PDF](#)



AGENDA

Historic District Commission Meeting

7:00pm - 11/9/2021

Virtual, via Zoom, see footer

Page

1. CALL TO ORDER

2. ROLL CALL

Alex Pettit, Chair

Erika Lindsay, Vice Chair

James Ratzlaff

Amy Swift

James Chesnut

Stefan Szumko

Vacant

Scott Slagor, Staff

3. APPROVAL OF AGENDA

4. PUBLIC COMMENT ON AGENDA ITEMS

5. PUBLIC HEARINGS

6. BUSINESS SESSION

6.1. OLD BUSINESS

6.2. NEW BUSINESS

3 - 49

[209 Washtenaw](#)

[214 N Huron](#)

[302 E Cross](#)

6.3. STUDY ITEMS

51 - 58

[302 E Cross](#)

[116-118 W Michigan](#)

6.4. ADMINISTRATIVE APPROVALS

6.5. OTHER BUSINESS

1. Property Monitoring

2. Updates from Staff

3. Commissioner Comments

7. AUDIENCE PARTICIPATION ON NON-AGENDA ITEMS

8. HOUSEKEEPING BUSINESS

8.1. Approval of meeting minutes 10/26/2021

59 - 62

[Historic District 10-26-2021 Full Minutes](#)

9. ADJOURNMENT

Meeting ID: 893 1509 8076. Link: <https://us02web.zoom.us/j/89315098076>. Toll-Free Phone: 888 475 4499 or 877 853 5257



HDC Work Permit Staff Review

Property address: 209 Washtenaw (formerly 127 N Washington)

Property History: The property includes the Ypsilanti United Methodist Church, which is contributing to the historic district. The original Victorian Gothic-style church was erected 1891-1892. It was designed by Akron, Ohio architect, Weary Kramer, using his "Akron Plan," which was popular for late nineteenth century protestant churches in the Midwest.ⁱ The rear education wing was added in 1957.ⁱⁱ

Date Complete Application Received: November 2, 2021

Date of Review: November 3, 2021

Date of Meeting: November 9, 2021

Proposed work: Solar Array.

Materials: Roof-mounted solar array, black cells with metallic trim, and iron ridge mounting system.

Staff review:

1. The applicant is proposing a 36-modular solar array on the flat roof of the education wing of the building.
 - a. The roof has a parapet on the north, west, and east sides.
2. The panels will be Hanwha 400W modules with a black cell and metallic frame.
3. The panels will be mounted using an iron ridge system, which attaches to concrete blocks. The roof will not need to be punctured as part of this installation.
4. A conduit for the inverter will extend down the west side of the building.

Recommended Motions:

Move to approve and issue a Certificate of Appropriateness for the work at 209 Washtenaw as submitted in the application dated November 2, 2021, for installation of a solar array

1. Use property for original purpose or provide compatible use with minimal alteration.

2. Do not destroy original character. Do not remove or alter historic material or features.

3. Do not imitate earlier styles.

4. Preserve significant changes acquired over time.

5. Preserve distinctive features.

6. Repair, don't replace. Replacements shall match original.

7. Clean building gently—no sandblasting.

8. Preserve archaeological resources.

9. Contemporary designs shall be compatible and shall not destroy significant original material.

10. New work shall be removable.

system with 36 Hanwha 400 modules, as specified, with the connection boxes on the west elevation.

Relevant Secretary of the Interior's Standards:
#9, #10

Prepared by:

Scott E. Slagor, Preservation Planner

ⁱ *The Ypsilantian*, "The Methodists are Jubilant," (June, 1892).

ⁱⁱ Ypsilanti Heritage Foundation, Ypsilanti Home Tour 1979 Pamphlet, "Home Tours" file, Ypsilanti Historical Society.



**City of Ypsilanti
Historic District Commission
Work Permit Application**

One South Huron • Ypsilanti, MI 48197
Phone: (734) 483-9646 • Fax: (734) 483-7260
www.cityofypsilanti.com

OFFICE USE ONLY

Date Filed:

Meeting Date:

Action Item/Study Item

To complete this application:

1. Complete this form.
2. Attach the following documents:
 - a. Photo(s) showing all locations where work is proposed (can be emailed).
 - b. Catalog cut sheets or similar details for windows, doors, light fixtures, and any other manufactured or preassembled components—this includes information from catalogues, professional quotes, or websites (can be emailed).
 - c. Dimensioned drawings of any new construction or modifications to existing structures, including awnings and signs.
 - d. A sketch plan, if proposal is for work on the grounds and not just the main structure (e.g., installing a new driveway, fence, or shed). This can be drawn on a scaled copy of a mortgage survey.
3. Applications and materials must be received by the Building Department **no later** than 4pm on the Tuesday one week prior to the meeting.

INCOMPLETE APPLICATIONS WILL NOT BE PLACED ON THE AGENDA

Property

Address

209 Washtenaw Ave., Ypsilanti, MI 48197

Applicant

**If applicant is not owner of property, a written statement from the owner authorizing this application must be included.*

Name

Brandon Knight

Address

[REDACTED]

City

Highland Park

State

MI

Zip

48203

Phone / Fax

[REDACTED]

E-Mail

Contractor

Contractor Name & Contact Info

Brandon Knight [REDACTED]

Type of work

- | | | |
|--|--|--|
| ☐ Roofing | ☐ Porches | ☐ Painting |
| ☐ Window/Door Replacement | ☐ Sign | ☒ Other |
| | ☐ Fence (or other sitework) | ☐ Application Amendment |

Complete Description of Proposed Work:

14.4 kW Roof-Mounted Solar Array

Black Cell on Silver Frame Solar Panels
(See cutsheet in packet)

One Conduit run will come down West side of the building

Note: Most, if not all, of the Panels won't be visible from street-level

Materials (for paint include color chips or samples with application):

Permit Application Fee (action items only)

The fee is \$45 for the first \$3,000 in construction cost plus \$5 for every additional \$3,000 of construction cost. There is a flat fee of \$10 for painting only. *An additional fee of \$50 applies to HDC work started without the applicable permit.*

Construction Cost:

\$17,000

Permit fee:

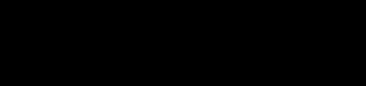
\$45 + \$20 = \$65

Signature

I hereby attest that the above information is accurate. I am authorized to and grant permission to the City of Ypsilanti staff to be on the subject property for the purposes of preparing staff reports and/or evaluating this application.

I further affirm that this property has, or will have before the proposed work is completed, a fire alarm system or smoke alarm complying with the Stille-DeRossett-Hale single-state construction code, PA 230 of 1972, as amended.

Signature



Date:

11/02/2021

Print Name:

Brandon Knight

If you have questions about what the HDC generally permits or does not permit, or what they need to see in an application to render a decision, please call the office at 734-483-9646 or view our factsheets online at cityofypsilanti.com/hd.

All other necessary approvals and permits must be acquired before beginning work.

GENERAL NOTES

1. ALL ELECTRICAL MATERIALS SHALL BE NEW AND LISTED BY RECOGNIZED ELECTRICAL TESTING LABORATORY
CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY

2. OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED OR BETTER

3. ALL METALLIC EQUIPMENT SHALL BE GROUNDED

4. CONTRACTOR SHALL OBTAIN ELECTRICAL PERMITS PRIOR TO INSTALLATION AND SHALL COORDINATE ALL INSPECTIONS, TESTING COMMISSIONING AND ACCEPTANCE WITH THE CLIENT, UTILITY CO. AND CITY INSPECTORS AS NEEDED.

5. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF SERVICE POINTS AND SERVICE SIZES WITH THE SERVING UTILITY COMPANY AND COMPLY WITH ALL UTILITY COMPANIES REQUIREMENTS.

6. DRAWINGS ARE DIAGRAMMATIC ONLY, ROUTING OF RACEWAYS SHALL BE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER TRADES.

7. IF THE ROOF MATERIAL OR ROOF STRUCTURE NOT ADEQUATE FOR PV INSTALLATION, CALL ENGINEER PRIOR TO INSTALL. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THAT THE ROOF IS CAPABLE OF WITHSTANDING THE EXTRA WEIGHT.

8. IF THE DISTANCES FOR CABLE RUNS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER TO VALIDATE THE WIRE SIZE. FINAL DRAWINGS WILL BE RED-LINED AND UPDATED AS APPROPRIATE.

9. WHENEVER A DISCREPANCY IN QUALITY OF EQUIPMENT ARISES ON THE DRAWING OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE COMPLIANCE AND LONGEVITY OF THE OPERABLE SYSTEM REQUIRED BY THE ARCHITECT/ENGINEERS.

10. ALL BROCHURES, OPERATION MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE HANDED OVER TO OWNER'S REPRESENTATIVE AT THE COMPLETION OF WORK

PHOTOVOLTAIC NOTES:

1. ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY

2. SOLAR SYSTEM SHALL NOT COVER ANY PLUMBING OR MECHANICAL VENTS

3. MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDED.

4. SOLAR INVERTER SHALL BE LISTED TO UL1741.

5. REMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR AND THE PHOTOVOLTAIC SOURCE AND/OR OUTPUT CIRCUIT GROUNDED CONDUCTORS.

6. ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE.

7. LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.

8. INVERTER IS EQUIPED WITH INTEGRATED GFDI, THUS PROVIDING GROUND FAULT PROTECTION

9. ALL CONDUCTORS SHALL BE COPPER AND 90 DEG RATED

10. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY A RECOGNIZED ELECTRICAL TESTING LABORATORY.

11. A SINGLE CONDUCTOR SHALL BE PERMITTED TO BE USED TO PERFORM THE MULTIPLE FUNCTIONS OF DC GROUNDING, AC GROUNDING AND BONDING BETWEEN AC AND DC SYSTEMS.

12. NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT SHALL BE EFFECTIVELY BONDED TOGETHER. BOND BOTH ENDS OF RACEWAYS.

MAIN

THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES:

NATIONAL ELECTRICAL CODE 2017
INTERNATIONAL FIRE CODE 2012
MICHIGAN BUILDING CODE 2015

AS ADOPTED BY THE STATE OF MICHIGAN

ALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES

VICINITY MAP
SCALE: NTS

INDEX	
1	ROOF PLAN
2	SINGLE LINE DIAGRAM
3	SIGNAGE
4	SITE PLAN
5	ATTACHMENT LAYOUT
6	INVERTER DATA SHEET
7	MODULE DATA SHEET
8	OPTIMIZER DATA SHEET
9	RACKING DATA SHEET
10	ATTACHMENT DATA SHEET
11	SPAN TABLE
12	TEST REPORT & FIRE CLASSIFICATION

PV SOLAR SYSTEM DETAILS

SYSTEM SIZE: DC STC: 14.400 KW
SYSTEM SIZE: AC CEC: 13.293 KW
SOLAR MODULES: (36) Hanwha 400 Watt
INVERTERS: (2) SolarEdge 7.6 KW

ELECTRICAL INFORMATION:
EXISTING
MAIN SERVICE PANEL BUS SIZE: 200A
MAIN SERVICE BREAKER SIZE: 200A
MOUNTING SYSTEM: IRONRIDGE

BUILDING INFORMATION:
CONSTRUCTION TYPE: V-B
OCCUPANCY: A
ROOF: TORCH DOWN
RAFTER :2"x6" @ 24" O.C.



SATELLITE VIEW
SCALE: NTS

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



ENGINEERING INC

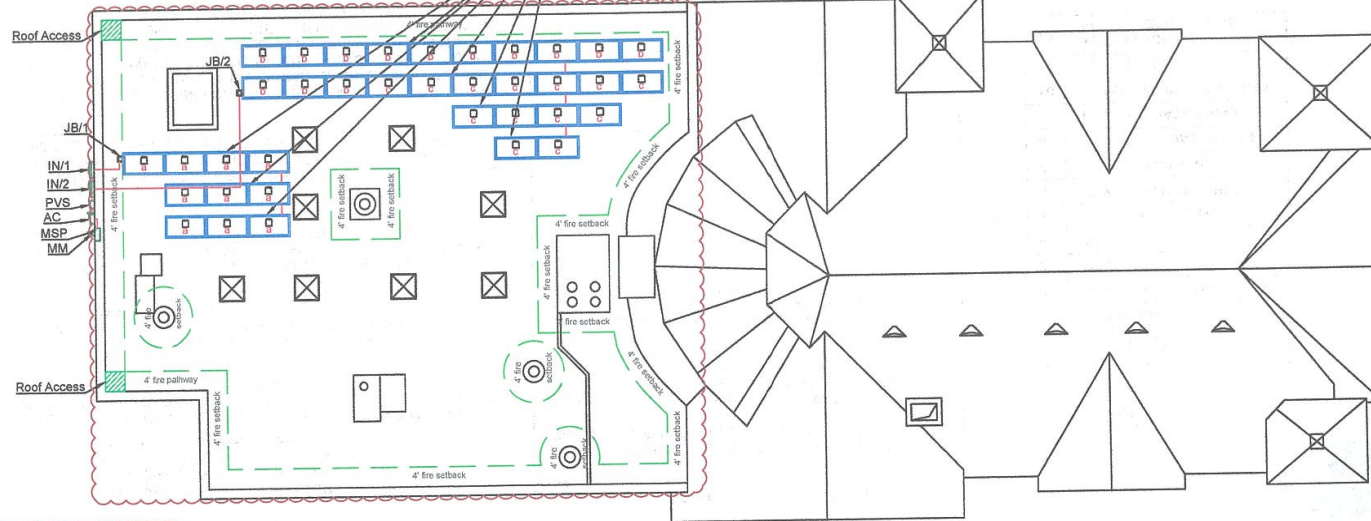
Drawn by: New@engineerinc.io
DATE: 10/27/2021

INDEX	
MSP	(E) Main Service Panel
MM	(E) Main Meter
IN	(N) 2 x Inverter
JB	(N) Junction Box
AC	(N) AC Disconnect
PVS	(N) PV Sub Panel
	Optimizer
	Solar Module
	Conduit
	Setback

Total Roof Area: 14490
Total Module Area: 792
5.47% of Coverage

Solar PV Array
36 - Hanwha 400W Modules
36 - P400 Optimizers
Roof Pitch: 2 Deg
Roof Orientation: 180 Deg
Panel Tilt Leg: 10 Deg
Panel Tilt Leg Orientation: 180 Deg

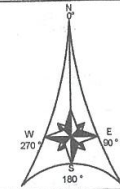
Washtenaw Ave



NOTE: roof access points and pathways comply with 605.11.1.1 through 605.11.1.3.

NOTE: AC Disconnect is lockable, taggable, accessible 24/7 and within 5 ft from Utility Meter.

NOTE: A 36-inchwide pathway shall be provided to the emergency escape and rescue opening. Roof access is not located in areas that require placement of ground ladders over exterior wall openings.



SCALE: 1/16" = 1'-0"

1 ROOF PLAN

Project Name:
First United
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Ypsilanti, MI 48197

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Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



ENGINEERING

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

ITEM	DESCRIPTION	QTY
1	PV MODULE Hanwha 400W Q. PEAK DUO L-G5.2 (400W) VOC = 49.0V, VMP = 41.04V ISC = 10.24A, IMP = 9.75A	36
2	INVERTER SOLAREDGE SE 7600H-US (240) 99% CEC EFFICIENCY 7600Wac CONTINUOUS MAX OUTPUT CURRENT 32 Aac MAX INPUT CURRENT 20 Adc 4"x4"x2" UL LISTED WATER TIGHT NEMA TYPE 3	2
3	PVC JUNCTION BOX 4"x4"x2" UL LISTED WATER TIGHT NEMA TYPE 3	2
4	AC DISCONNECT 100A 2P BLADE TYPE 240V FUSIBLE AC DISCONNECT WITH 80A FUSES	1
5	MAIN SERVICE PANEL MAIN SERVICE PANEL 200A BUSBAR & 200A MAIN BREAKER	1
6	POWER OPTIMIZER SOLAREDGE P400 OPTIMIZER INPUT POWER: 400 WATTS MAX INPUT VOLTAGE: 80Vdc MPPT RANGE: 8 TO 80Vdc MAX INPUT CURRENT: 12.5 Adc MAX OUTPUT CURRENT: 15Adc STRING LIMITATIONS: 8 TO 25, 6000 WATTS STC PER STRING MAX	36
7	MAIN METER UTILITY METER	1
8	PV SUB PANEL 100A PV SUB PANEL, 120/240V	1

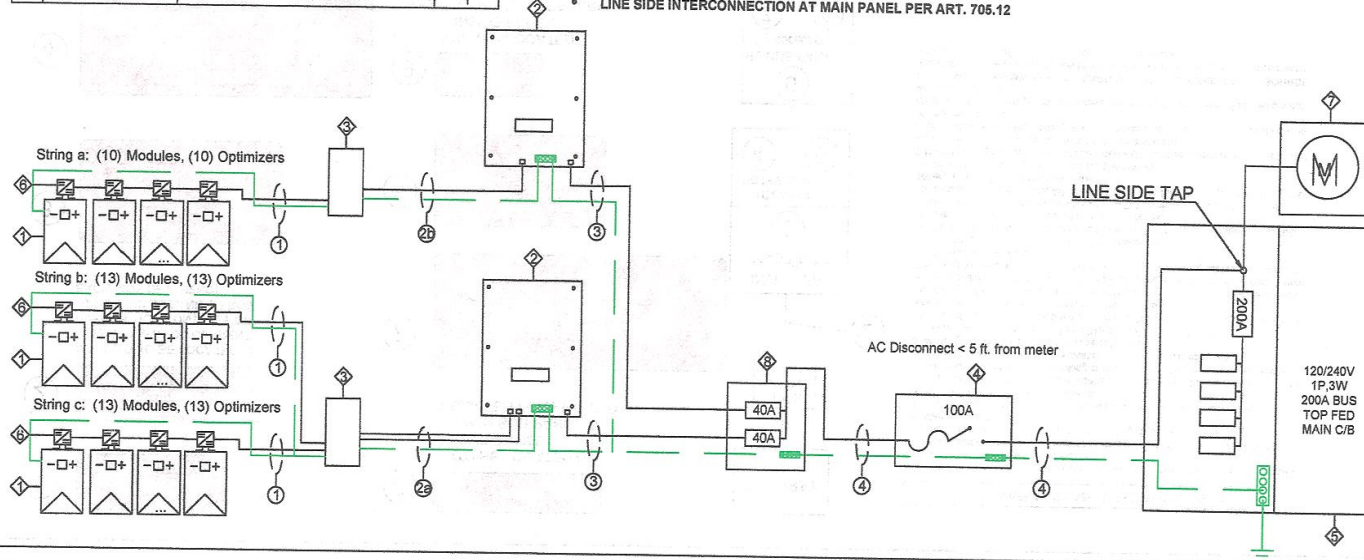
WIRE CHART						
#	MAX AMPS X NEC MULT = DESIGN AMPS	BREAKER SIZE (A)	WIRE TYPE	EGC	WIRE RATING X TEMP DERATE X CONDUCTOR DERATE = DERATED WIRE	CONDUIT SIZE
1	15 X 1.25 = 18.8 A	20	(2) #10 PV-WIRE	(1) #10 BARE SOLID COPPER GEC	40 X .71 X 1 = 28.4 >= 18.8	IN FREE AIR
2	15 X 1.25 = 18.8 A	20	(4) #10 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	40 X .71 X 1 = 22.72 >= 18.8	3/4" EMT
3	15 X 1.25 = 18.8 A	20	(2) #10 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	40 X .71 X .8 = 28.4 >= 18.8	3/4" EMT
4	32 X 1.25 = 40A	40	(3) #8 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	55 X .91 X 1 = 50.05 >= 40	3/4" EMT
5	2 X 32 X 1.25 = 80A	80	(3) #4 AWG, CU-THHN	(1) #8 AWG, CU-THWN-2 EGC	95 X .91 X 1 = 86.45 >= 80	1" EMT

KEY NOTES:

- SOLID BARE G.E.C (FREE-AIR) MOUNTED UNDER ARRAY
- PER NEC ARTICLE 690.35 INVERTER GROUND FAULT PROTECTION PROVIDED
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR WIRREVERSIBLE CRIP CONNECTOR.
- BACKFED BREAKERS MUST BE LOCATED @ OPPOSITE END OF BUS BAR FROM MAIN BREAKER OR MAIN LUG ON GRID SIDE. WHEN A BACKFED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION, BREAKER SHALL NOT READ 'LINE'.
- PER CEC 250.65(C); CONDUCTOR SPLICES ONLY ALLOWED WITH COMPRESSION CONNECTORS OR EXOTHERMIC WELDING
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR WIRREVERSIBLE CRIP CONNECTOR.
- VERIFY (E) UFER GROUND NEAR MSP. IF (E) UFER IS NOT ACCESSIBLE OR VERIFIABLE, INSTALL A NEW 5/8" Ø X 8' LONG GROUNDING ROD AND BOND SOLAR SYSTEM EQUIPMENT GROUNDING ACCORDINGLY.
- LINE SIDE INTERCONNECTION AT MAIN PANEL PER ART. 705.12

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
.80	4-6
.70	7-9
.50	10-20

AC SYSTEM SIZE CALCULATION				
Module PTC Rating (W)	x	NO. of Modules	x	Average Inverter CEC Efficiency
373.0	x	36	x	99%
				= AC System Size
				= 13.293 kW AC



2 SINGLE LINE DIAGRAM

Project Name:
First United
Property address:
**209 Washtenaw Ave
Ypsilanti, MI 48197**

CONTRACTOR

Distributed Power
Address:
**2415 Burdette St.
Ferndale, MI 48220v**



ENGINEERING INC

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

① CAUTION
AUTHORIZED SOLAR
PERSONNEL ONLY!

② CAUTION
SOLAR DC CURRENT PRESENT
DURING DAYLIGHT HOURS

(STICKER TO BE LOCATED ON
CONDUIT WITH DC CURRENT
EVERY 4' HORIZONTALLY OR
10' VERTICALLY AND 1' FROM
EACH SIDE OF A BEND)

③ WARNING!
ELECTRIC SHOCK HAZARD.
IF GROUND FAULT IS INDICATED,
NORMALLY GROUNDED
CONDUCTORS MAY BE
UNGROUND AND ENERGIZED.

④ DC DISCONNECT
DC PHOTOVOLTAIC POWER SOURCE
RATED MAX POWER POINT CURRENT: 5.75 AMPS
RATED MAX POWER POINT VOLTAGE: 400 VOLTS
MAXIMUM SYSTEM VOLTAGE: 480 VOLTS
SHORT CIRCUIT CURRENT: 20.31 AMPS

⑤ WARNING!
ELECTRIC SHOCK HAZARD.
DO NOT TOUCH THE TERMINALS.
TERMINALS ON BOTH THE LINE AND
LOAD SIDES MAY BE ENERGIZED IN
THE OPEN POSITION.

⑪ PV LOAD CENTER SIZED FOR PV
BREAKERS ONLY OR RENDERED UNABLE
TO ACCEPT ANY ADDITIONAL LOADS.
(STICKER LOCATED
ON THE PV SUB PANEL)

⑬ SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN
TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION TO
SHUTDOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN ARRAY

Plaques will have red background & white lettering.

⑥ PV SUB-PANEL ONLY
(TO BE LOCATED ON
SUB-PANEL ONLY
WHEN SUB-PANEL IS
DEDICATED FOR PV ONLY)

⑦ AC DISCONNECT
AC PHOTOVOLTAIC POWER SOURCE
RATED AC OUTPUT CURRENT: 80 A MAX
NOMINAL AC OPERATING VOLTAGE: 240 Vac

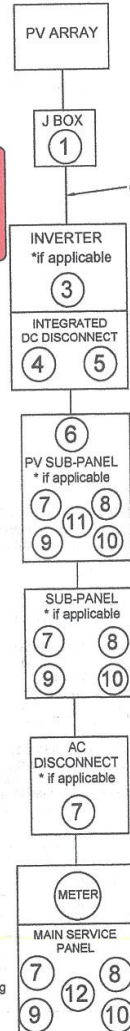
⑧ THIS PANEL FED BY
MULTIPLE SOURCES
(UTILITY & SOLAR)

⑨ SOLAR
(STICKER LOCATED
INSIDE PANEL
NEXT TO SOLAR BREAKER)

⑩ WARNING!
INVERTER OUTPUT CONNECTION. DO NOT
RELOCATE THIS OVERCURRENT DEVICE
(STICKER LOCATED
INSIDE PANEL
BELOW PV BREAKER)

⑫ PHOTOVOLTAIC SYSTEM
EQUIPPED WITH
RAPID SHUTDOWN
(STICKER LOCATED
ON THE MAIN SERVICE PANEL)

Permanent directory or plaque providing location of
service disconnecting means and photovoltaic system
disconnecting means, if not located at the same
location. (Plaques shall be metal or plastic, with engraved
or machine printed letters, or electro-photo plating, in a
contrasting color to the plaque. Plaques shall be
permanently attached to the equipment or in the required
location using an approved method that is suitable to
withstand the environment to which it is exposed. Plaques
and signage shall meet legibility, defacement, exposure and
adhesion requirements of Underwriters Laboratories marking
and labeling system 969(UL969).



MARKINGS, LABELS AND WIRING SIGNS

A. Purpose: Provide emergency responders with appropriate warning and guidance with respect to isolating solar electric system.
This can facilitate identifying energized electrical lines that connect solar panels to the inverter, as these should not be cut when venting for smoke removal

B. Main Service Disconnect.

1. Residential buildings - The marking main be placed within the main service disconnect. The marking shall be placed outside cover if the main service disconnect is operable with the service panel closed.

2. Commercial buildings - This marking shall be placed adjacent to the main service disconnect clearly visible from the location where the level is operated

3. Markings: Verbiage, Format and Type of Material.

a. Verbiage: CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

b. Format: White lettering on a red background. Minimum 3/8 inches letter height. All letters shall be capitalized. Arial or similar font, non bold.

c. Material: Reflective, weather resistant material suitable for the environment (use UL-969 as standard for weather rating). Durable adhesive materials meet this requirement.

C. Marking Requirements on DC conduit, raceways, enclosures, cable assemblies, DC combiners and junction boxes:

1. Markings: Verbiage, Format and Type of Material.

a. Placement: Markings shall be placed every 10 feet on all interior and exterior DC conduits, raceways, enclosures, and cable assemblies,

at turns, above and for below penetrations, all DC combiners and junction boxes

b. Verbiage: CAUTION: SOLAR CIRCUIT Note: The format and type of material shall adhere to "V, V-3b, c" of this requirement.

c. Inverters are not required to have caution markings

1. Marking is required on all interior and exterior DC conduit raceways, enclosures, cable assemblies, and junction boxes, combiner boxes and disconnects.

2. The materials used for marking shall be reflective, weather resistant material suitable for the environment.

Minimum 3/8 "letter height; all upper case letters Arial or similar font; Red background with white lettering.

3. Marking shall contain the words: WARNING : PHOTOVOLTAIC POWER SOURCE.

4. Marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated

3 SIGNAGE

Project Name:
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Property address:
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CONTRACTOR

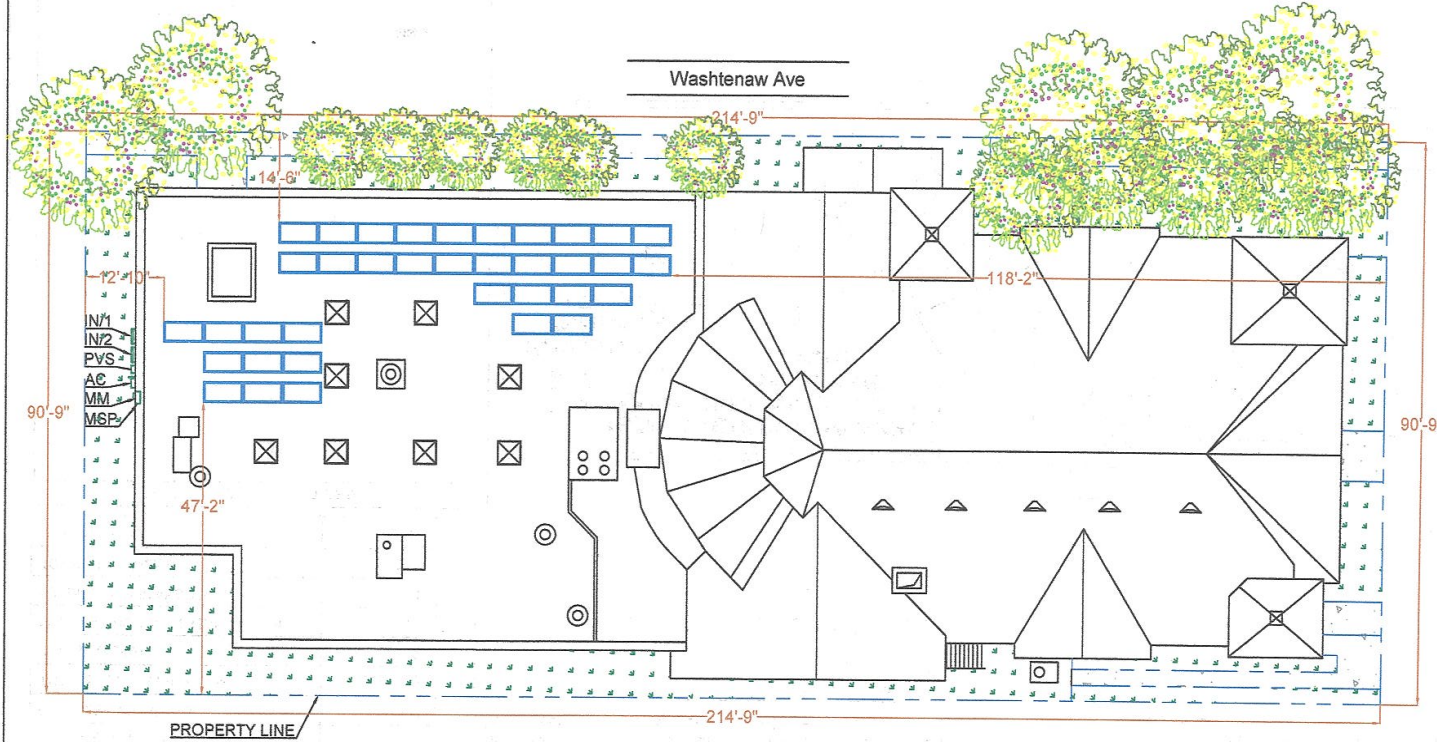
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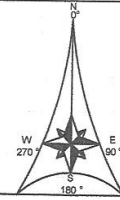
ENGINEERING INC

Drawn by: New@engineerinc.io
DATE: 10/27/2021

INDEX	
MSP	Main Service Panel
MM	Main Meter
IN	Inverter
AC	AC Disconnect
PVS	PV Sub Panel
	Solar Module



NOTE: AC Disconnect is lockable, taggable, accessible 24/7 and within 5 ft from Utility Meter.



SCALE: 1/16" = 1'-0"

4 SITE PLAN

Project Name:
First United
Property address:
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CONTRACTOR

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Address:
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Ferndale, MI 48220v



**DISTRIBUTED
POWER**

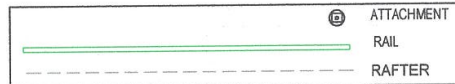
ENGINEERING

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

MODULE WEIGHT (lbs)	51.8
# OF MODULES	36
TOTAL MODULE WEIGHT (lbs)	1864.8
RACK WEIGHT (lbs)	372.96
OPTIMIZER WEIGHT (lbs)	61.2
TOTAL SYSTEM WEIGHT (lbs)	2298.96
# OF STANDOFFS	132
MAX SPAN BETWEEN STANDOFFS (in)	48
LOADING PER STANDOFF (lbs)	17.41
TOTAL AREA (sq.ft.)	792
LOADING (PSF)	2.90

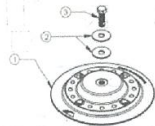
1. Ironridge Racking System
2. Ironridge Flat roof Attachment
3. Roof attachment hardware to be mounted to existing structure (2"x6" @ 24" O.C. RAFTER) with 48" O.C. rail spans or less.
4. Lag bolts are 5/16" X 3.5" stainless steel with 2.5" minimum embedment into the center of the roof
5. Roof sheathed with 1/2" plywood and upper surface is faced with felt paper.

Finished roof surface is One layer of TORCH DOWN .



Prior to the commencement of work, the contractor shall verify the existing roof and framing conditions. Notify New@engineerinc.io of any Discrepancies prior to starting construction. Prior to the commencement of work, the contractor shall inspect framing for any damage such as water damage, cracked framing, etc. and These Plans are stamped for structural code compliance of the roof framing supporting the proposed PV installation reference only. These plans are not stamped for water leakage. PV modules, racking, and attachment components must follow manufacturer guidelines and requirements. Attachments to be installed in a staggered orientation to properly distribute loads.

FLAT ROOF ATTACHMENT DETAILS

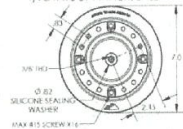


ITEM NO.	DESCRIPTION
1	FLAT ROOF ATTACH. BASE
2	WASHER, FLAT 3/8" X 1.25" OD SS
3	BOLT, 3/8-16 X 1.125" HEX. SS

FLAT ROOF ATTACHMENT (FRA)

Part Number	Description
FRA-BASE-01-M1	Flat Roof Attachment, Mill

1) FLAT ROOF ATTACH. BASE



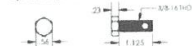
Property	Value
Material	Aluminum
Finish	Mill

2) WASHER, FLAT 3/8" X 1.25" OD SS

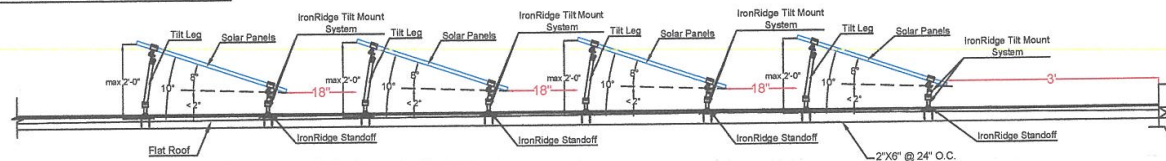
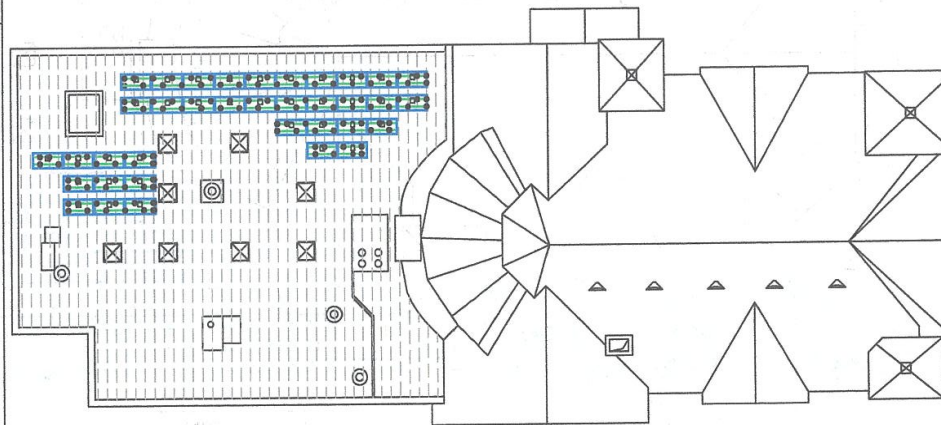


Property	Value
Material	300 Series Stainless Steel
Finish	Clear

3) BOLT, 3/8-16 X 1.125" HEX. SS



Property	Value
Material	300 Series Stainless Steel
Finish	Clear



5 ATTACHMENT LAYOUT

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



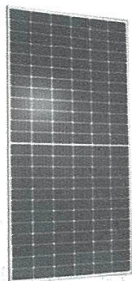
ENGINEERING INC

Drawn by: New@engineerinc.io
DATE: 10/27/2021

powered by
Q.ANTUM/DUO

Q. PEAK DUO L-G5.2 380-400

AWARD-WINNING
HIGH PERFORMANCE



LOW ELECTRICITY GENERATION COSTS

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.1%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti-LID Technology, Anti-PID Technology, Hot-Spot Protect and Traceable Quality Tia-QTM.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, tested to the extreme in Australia for Australian Conditions at James Cook University Cyclone Test Station.



A RELIABLE INVESTMENT

Inclusive 12-year product warranty and 25-year linear performance warranty*.



STATE OF THE ART MODULE TECHNOLOGY

Q. ANTUM DUO combines cutting edge cell separation and innovative wiring with Q. ANTUM Technology.

* AMT test conditions according to IEC 61215:2016, method B (1500V, 1000h)
* See data sheet on rear for further information.

THE IDEAL SOLUTION FOR:



Engineered in Germany

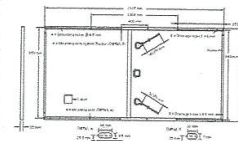
Q CELLS

Engineered in Germany

Q CELLS

MECHANICAL SPECIFICATION

Format	2056 mm × 1000 mm × 35 mm (including frame)
Weight	23.5 kg
Front Cover	3.2 mm thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 × 24 monocrystalline Q. ANTUM solar half cells
Junction box	70-85 mm × 50-70 mm × 13-21 mm
Protection class	IP67 with bypass diodes
Cable	4 mm ² Solar cable, (+) ≥ 1350 mm, (-) ≥ 1350 mm
Connector	Standard MC4-Evo2 (IP67)

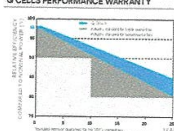


ELECTRICAL CHARACTERISTICS

POWER CLASS		380	385	390	395	400	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC (POWER TOLERANCE ± 5 W / -0 W)							
Minimum	Power at MPP	P_{MPP} [W]	380	385	390	395	400
	Short Circuit Current	I_{sc} [A]	10.06	10.10	10.14	10.19	10.24
	Open Circuit Voltage	V_{oc} [V]	40.66	40.21	40.68	40.24	40.00
	Current at MPP	I_{mp} [A]	9.57	9.61	9.66	9.70	9.75
	Voltage at MPP	V_{mp} [V]	39.71	40.05	40.38	40.71	41.04
	Efficiency	η [%]	≥ 18.9	≥ 19.1	≥ 19.4	≥ 19.6	≥ 19.9
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT							
Minimum	Power at MPP	P_{MPP} [W]	284.4	288.2	291.9	295.6	299.4
	Short Circuit Current	I_{sc} [A]	8.10	8.14	8.17	8.21	8.25
	Open Circuit Voltage	V_{oc} [V]	45.11	45.46	45.71	45.96	46.21
	Current at MPP	I_{mp} [A]	7.53	7.57	7.60	7.64	7.67
	Voltage at MPP	V_{mp} [V]	37.77	38.08	38.40	38.71	39.02

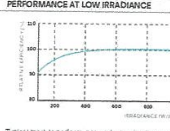
* Measurement tolerances P_{MPP} ± 3%, I_{sc} ± 5%, V_{oc} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 G according to IEC 60904-3, 1000 W/m², spectrum AM 1.5 G

Q CELLS PERFORMANCE WARRANTY



At least 96% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 90.1% of nominal power after 20 years. At least 85% of nominal power after 25 years.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{sc}	α [%/K]	+0.04	Temperature Coefficient of V _{oc}	β [%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ [%/K]	+0.36	Normal Module Operating Temperature	TMOT [°C]	43 ± 3

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	V _{sys} [V]	1500 (IEC) / 1500 (UL)	Safety Class	II
Maximum Reverse Current	I _r [A]	20	Fire Rating	C / TYPE 1
Max. Design Load, Push/Pull	[F]	3600/1600	Permitted Module Temperature in Continuous Duty	+40 °C / +85 °C
Max. Test Load, Push/Pull	[F]	5400/2400		

QUALIFICATIONS AND CERTIFICATES

IEC 61215:2016, IEC 61730:2016, Application Class II
This data sheet complies with DIN EN 50383.



PACKAGING INFORMATION

Number of Modules per Pallet	29
Number of Pallets per Trailer (24)	24
Number of Pallets per 40' HC-Container (26)	22
Pallet Dimensions (L × W × H)	2050 × 1150 × 1100 mm
Pallet Weight	742 kg

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Made in Korea

Hanmu Q CELLS Australia Pty Ltd
Suite 1, Level 1, 12 Blue Street, Sydney NSW 2060, Australia | TEL +61 (0)2 9249 3033 | FAX +61 (0)2 9249 3032 | EMAIL q-cells-australia@q-cells.com | WEB www.q-cells.com.au

7 MODULE DATA SHEET

Project Name:
First United
Property address:
**209 Washtenaw Ave
Ypsilanti, MI 48197**

CONTRACTOR

Distributed Power
Address:
**2415 Burdette St.
Ferndale, MI 48220v**



ENGINEERING

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US



12-25 YEAR WARRANTY

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown per NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

solaredge.com

solaredge

INVERTERS

Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 4800 @ 208V	5000	6000 @ 240V 7200 @ 208V	7600	10000	11400 @ 240V 13680 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 4800 @ 208V	5000	6000 @ 240V 7200 @ 208V	7600	10000	11400 @ 240V 13680 @ 208V	VA
AC Output Voltage Min/Nom/Max (V _{LL} ± 24V ± 25%)	✓	✓	✓	✓	✓	✓	✓	VAC
AC Output Voltage Min/Nom/Max (V _{LN} ± 20% ± 22%)	✓	✓	✓	✓	✓	✓	✓	VAC
AC Frequency (Nominal)	50.3 ± 0.3 / 60.3 ± 0.3							Hz
Maximum Continuous Output Current @ 240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @ 208V	-	16	-	24	-	-	48.5	A
GFDR Threshold	1							A
Utility Monitoring: Islanding Protection, Low-Voltage Disconnect Threshold	Yes							
INPUT								
Maximum DC Power @ 240V	4800	5900	7700	9300	11800	15000	17050	W
Maximum DC Power @ 208V	-	5180	-	7700	-	-	15500	W
Transformerless: Ungrounded	Yes							
Maximum Input Voltage	480							VDC
Normal DC Input Voltage	380							VDC
Maximum Input Current @ 240V	8.5	10.5	13.5	16.5	20	27	30.5	ADC
Maximum Input Current @ 208V ¹	-	9	-	13.5	-	-	27	ADC
Max. Input Short-Circuit Current	45							ADC
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	Sensitivity							%
Maximum Inverter Efficiency	99			99.2			99 @ 240V 98.5 @ 208V	%
IEC Weighted Efficiency	99							%
Nighttime Power Consumption	< 2.5							W
ADDITIONAL FEATURES								
Supported Communications Interface	RS-485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Data, ANSI C12.20	Optional ¹							
Rapid Shutdown - NEC 2014 and 2017 (690.12)	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741SA, UL999B, CSA C22.2, Canadian ATO, according to IEC 61683							
Grid Connection (Standard)	IEEE1547, Rule 21, Rule 14 (in)							
Enclosure	NEMA 4X, Type 3, Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	1" Maximum / 14-4 AWG				1" Maximum / 14-4 AWG			
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 2-2 strings / 14-6 AWG				1" Maximum / 1-3 strings / 14-6 AWG			
Dimensions with Safety Switch (inches)	17.2 x 14.5 x 6.8 / 4.50 x 3.70 x 1.74				21.3 x 14.5 x 7.3 / 5.40 x 3.70 x 1.93			
Weight with Safety Switch	22.1 lb				35.8 lb			
Noise	< 25				< 50			
Cooling	Natural Convection							
Operating Temperature Range	-13 to +131 / -25 to +267 / -40 to +125 °C (optional)							°F / °C
Protection Rating	NEMA 4X enclosure with safety switch							

¹ For other regional settings, please contact your distributor.
² A higher rated input may be used, the inverter will limit its output to the rated value.
³ Revenue grade metering, UL1741, UL1741SA, UL999B, CSA C22.2, Canadian ATO, according to IEC 61683.
⁴ For power distribution information, refer to the "Power Distribution" section of the datasheet. Temperature derating refers to the
⁵ Maximum DC Voltage: 480VDC

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RoHS

6 INVERTER DATA SHEET

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



ENGINEERING INC

Drawn by: Now@engineeringinc.io
DATE: 10/27/2021

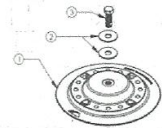
MODULE WEIGHT (lbs)	51.8
# OF MODULES	36
TOTAL MODULE WEIGHT (lbs)	1864.8
RACK WEIGHT (lbs)	372.96
OPTIMIZER WEIGHT (lbs)	61.2
TOTAL SYSTEM WEIGHT (lbs)	2298.96
# OF STANDOFFS	132
MAX SPAN BETWEEN STANDOFFS (in)	48
LOADING PER STANDOFF (lbs)	17.41
TOTAL AREA (sq.ft.)	792
LOADING (PSF)	2.90

1. Ironridge Racking System
2. Ironridge Flat roof Attachment
3. Roof attachment hardware to be mounted to existing structure
(2"X6" @ 24" O.C. RAFTER) with 48" O.C. rail spans or less.
4. Lag bolts are 5/16" X 3.5" stainless steel with 2.5" minimum embedment into the center of the roof
5. Roof sheathed with 1/2" plywood and upper surface is faced with felt paper.
Finished roof surface is One layer of TORCH DOWN .

Prior to the commencement of work, the contractor shall verify the existing roof and framing conditions. Notify New@engineerinc.io of any Discrepancies prior to starting construction. Prior to the commencement of work, the contractor shall inspect framing for any damage such as water damage, cracked framing, etc. and These Plans are stamped for structural code compliance of the roof framing supporting the proposed PV installation reference only. These plans are not stamped for water leakage. PV modules, racking, and attachment components must follow manufacturer guidelines and requirements. Attachments to be installed in a staggered orientation to properly distribute loads.



FLAT ROOF ATTACHMENT DETAILS

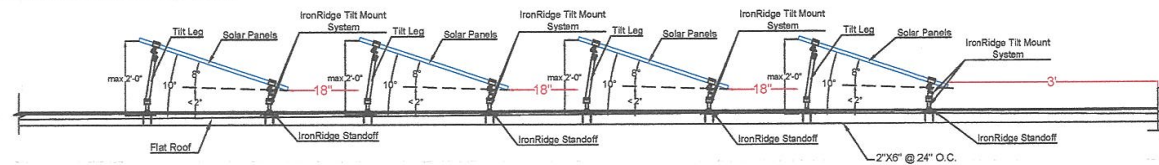
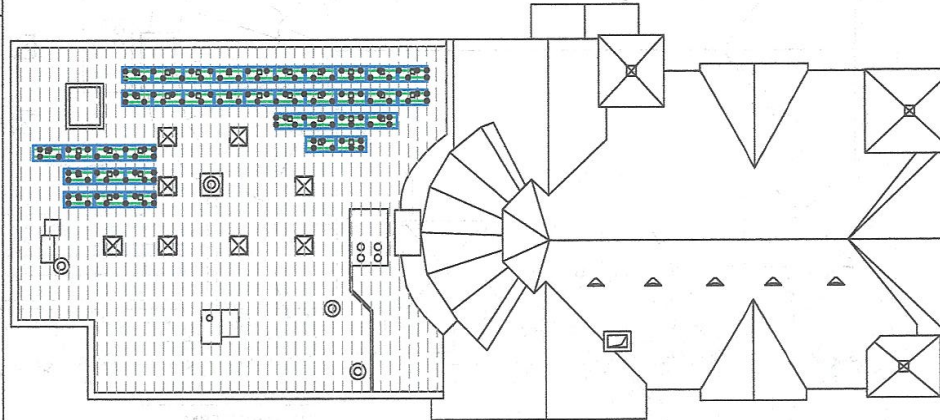


ITEM NO.	DESCRIPTION
1	FLAT ROOF ATTACH. BASE
2	WASHER, FLAT 3/8" X 1.25" OD SS
3	BOLT, 3/8-16 X 1.125" HEX. SS

FLAT ROOF ATTACHMENT (FRA)

Part Number	Description
FRA-BASE-01-M1	Flat Roof Attachment, M1

1) FLAT ROOF ATTACH. BASE		2) WASHER, FLAT 3/8" X 1.25" OD SS	
Property	Value	Property	Value
Material	300 Series Stainless Steel	Material	300 Series Stainless Steel
Finish	Clear	Finish	Clear
3) BOLT, 3/8-16 X 1.125" HEX. SS			
Property	Value	Property	Value
Material	Aluminum	Material	300 Series Stainless Steel
Finish	M1	Finish	Clear



5 ATTACHMENT LAYOUT

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

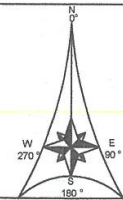
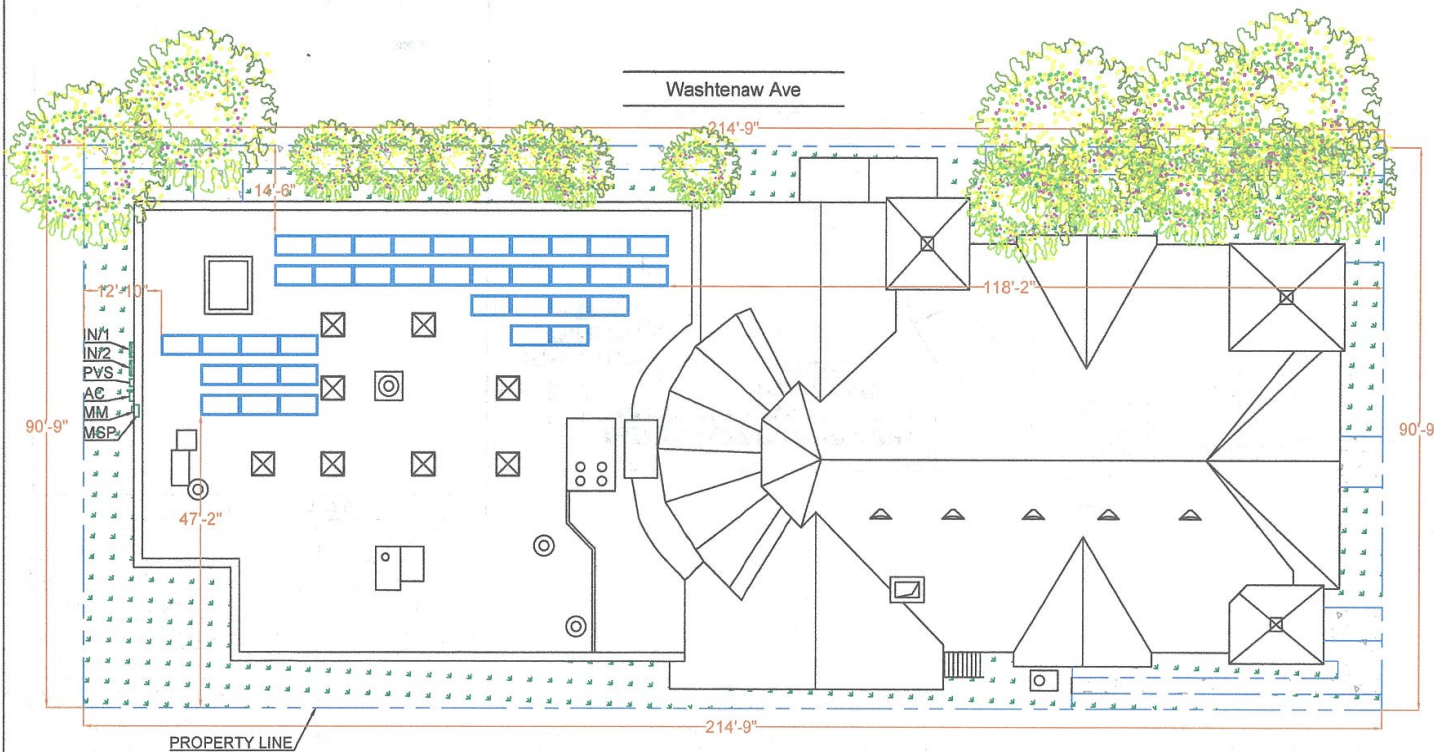
CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



Drawn by: New@engineerinc.io
DATE: 10/27/2021

INDEX	
MSP	Main Service Panel
MM	Main Meter
IN	Inverter
AC	AC Disconnect
PVS	PV Sub Panel
	Solar Module



SCALE: 1/16" = 1'-0"

4

SITE PLAN

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



DISTRIBUTED
POWER

ENGINEERING INC

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

① CAUTION
AUTHORIZED SOLAR
PERSONNEL ONLY!

② CAUTION
SOLAR DC CURRENT PRESENT
DURING DAYLIGHT HOURS

(STICKER TO BE LOCATED ON
CONDUIT WITH DC CURRENT
EVERY 4' HORIZONTALLY OR
10' VERTICALLY AND 1' FROM
EACH SIDE OF A BEND)

③ WARNING!
ELECTRIC SHOCK HAZARD.
IF GROUND FAULT IS INDICATED,
NORMALLY GROUNDED
CONDUCTORS MAY BE
UNGROUND AND ENERGIZED.

④ DC DISCONNECT
DC PHOTOVOLTAIC POWER SOURCE
RATED MAX POWER POINT CURRENT: 5.75 AMPS
RATED MAX POWER POINT VOLTAGE: 400 VOLTS
MAXIMUM SYSTEM VOLTAGE: 480 VOLTS
SHORT CIRCUIT CURRENT: 20.31 AMPS

⑤ WARNING!
ELECTRIC SHOCK HAZARD.
DO NOT TOUCH THE TERMINALS.
TERMINALS ON BOTH THE LINE AND
LOAD SIDES MAY BE ENERGIZED IN
THE OPEN POSITION.

⑪ PV LOAD CENTER SIZED FOR PV
BREAKERS ONLY OR RENDERED UNABLE
TO ACCEPT ANY ADDITIONAL LOADS.

(STICKER LOCATED
ON THE PV SUB PANEL)

⑬ SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION TO
SHUTDOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN ARRAY



Plaques will have red background & white lettering.

⑥ PV SUB-PANEL ONLY
(TO BE LOCATED ON
SUB-PANEL ONLY
WHEN SUB-PANEL IS
DEDICATED FOR PV ONLY)

⑦ AC DISCONNECT
AC PHOTOVOLTAIC POWER SOURCE
RATED AC OUTPUT CURRENT: 80 A MAX
NOMINAL AC OPERATING VOLTAGE: 240 Vac

⑧ THIS PANEL FED BY
MULTIPLE SOURCES
(UTILITY & SOLAR)

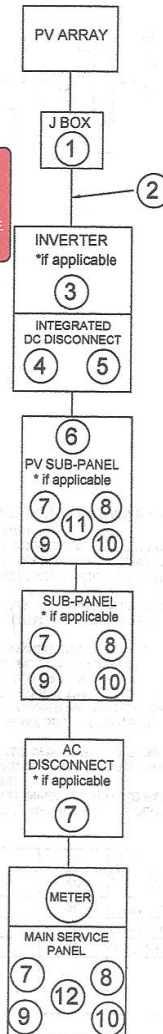
⑨ SOLAR
(STICKER LOCATED
INSIDE PANEL
NEXT TO SOLAR BREAKER)

⑩ WARNING!
INVERTER OUTPUT CONNECTION. DO NOT
RELOCATE THIS OVERCURRENT DEVICE

(STICKER LOCATED
INSIDE PANEL
BELOW PV BREAKER)

⑫ PHOTOVOLTAIC SYSTEM
EQUIPPED WITH
RAPID SHUT DOWN
(STICKER LOCATED
ON THE MAIN SERVICE PANEL)

Permanent directory or plaque providing location of
service disconnecting means and photovoltaic system
disconnecting means, if not located at the same
location. (Plaques shall be metal or plastic, with engraved
or machine printed letters, or electro-photo plating, in a
contrasting color to the plaque. Plaques shall be
permanently attached to the equipment or in the required
location using an approved method that is suitable to
withstand the environment to which it is exposed. Plaques
and signage shall meet legibility, defacement, exposure
and adhesion requirements of Underwriters Laboratories marking
and labeling system 959(UL959).



MARKINGS, LABELS AND WIRING SIGNS

A. Purpose: Provide emergency responders with appropriate warning and guidance with respect to isolating solar electric system.
This can facilitate identifying energized electrical lines that connect solar panels to the inverter, as these should not be cut when venting for smoke removal

B. Main Service Disconnect

1. Residential buildings - The marking main be placed within the main service disconnect. The marking shall be placed outside cover if the main service disconnect is operable with the service panel closed.

2. Commercial buildings - The marking shall be placed adjacent to the main service disconnect clearly visible from the location where the level is operated

3. Markings: Verbiage, Format and Type of Material

a. Verbiage: CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

b. Format: White lettering on a red background. Minimum 3/8 inches letter height. All letters shall be capitalized. Arial or similar font, non bold.

c. Material: Reflective, weather resistant material suitable for the environment (use UL - 959 as standard for weather rating). Durable adhesive materials meet this requirement.

C. Marking Requirements on DC conduit, raceways, enclosures, cable assemblies, DC combiners and junction boxes:

1. Markings: Verbiage, Format and Type of Material

a. Placement: Markings shall be placed every 10 feet on all interior and exterior DC conduits, raceways, enclosures, and cable assemblies, at turns, above and for below penetrations, all DC combiners and junction boxes

b. Verbiage: CAUTION: SOLAR CIRCUIT Note: The format and type of material shall adhere to "V, V-3b, c" of this requirement.

c. Inverters are not required to have caution markings

1. Marking is required on all interior and exterior DC conduit raceways, enclosures, cable assemblies, and junction boxes, combiner boxes and disconnects.

2. The materials used for marking shall be reflective, weather resistant material suitable for the environment.

Minimum 3/8 "letter height; all upper case letters Arial or similar font; Red background with white lettering.

3. Marking shall contain the words: WARNING : PHOTOVOLTAIC POWER SOURCE.

4. Marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated

3 SIGNAGE

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Farmdale, MI 48220v



ENGINEERING INC

Drawn by: New@engineerinc.io
DATE: 10/27/2021

ITEM	DESCRIPTION	QTY
PV MODULE	Hanwha 400W Q. PEAK DUO L-G5.2 (400W) VOC = 49.0V, VMP = 41.04V ISC = 10.24A, IMP = 9.75A	36
INVERTER	SOLAREEDGE SE 7600H-US (240) 99% CEC EFFICIENCY 7600Wac CONTINUOUS MAX OUTPUT CURRENT 32 Aac MAX INPUT CURRENT 20 Adc	2
PVC JUNCTION BOX	4"x4"x2" UL LISTED WATER TIGHT NEMA TYPE 3	2
AC DISCONNECT	100A 2P BLADE TYPE 240V FUSIBLE AC DISCONNECT WITH 80A FUSES	1
MAIN SERVICE PANEL	MAIN SERVICE PANEL 200A BUSBAR & 200A MAIN BREAKER	1
POWER OPTIMIZER	SOLAREEDGE P400 OPTIMIZER INPUT POWER: 400 WATTS MAX INPUT VOLTAGE: 80Vdc MPPT RANGE: 8 TO 80Vdc MAX INPUT CURRENT: 12.5 Adc MAX OUTPUT CURRENT: 15Adc STRING LIMITATIONS: 8 TO 25, 8000 WATTS STC PER STRING MAX	36
MAIN METER	UTILITY METER	1
PV SUB PANEL	100A PV SUB PANEL, 120/240V	1

#	MAX AMPS X NEC MULT = DESIGN AMPS	BREAKER SIZE (A)	WIRE TYPE	EGC	WIRE RATING X TEMP DERATE X CONDUCTOR DERATE = DERATED WIRE	CONDUIT SIZE
1	15 X 1.25 = 18.8 A	20	(2) #10 PV-WIRE	(1) #10 BARE SOLID COPPER GEC	40 X .71 X 1 = 28.4 >= 18.8	IN FREE AIR
2	15 X 1.25 = 18.8 A	20	(4) #10 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	40 X .71 X 1 = 28.4 >= 18.8	3/4" EMT
3	15 X 1.25 = 18.8 A	20	(2) #10 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	40 X .71 X .8 = 28.4 >= 18.8	3/4" EMT
4	32 X 1.25 = 40A	40	(3) #8 AWG, CU-THHN	(1) #10 AWG, CU-THWN-2 EGC	55 X .91 X 1 = 50.05 >= 40	3/4" EMT
5	2 X 32 X 1.25 = 80A	80	(3) #4 AWG, CU-THHN	(1) #8 AWG, CU-THWN-2 EGC	95 X .91 X 1 = 86.45 >= 80	1" EMT

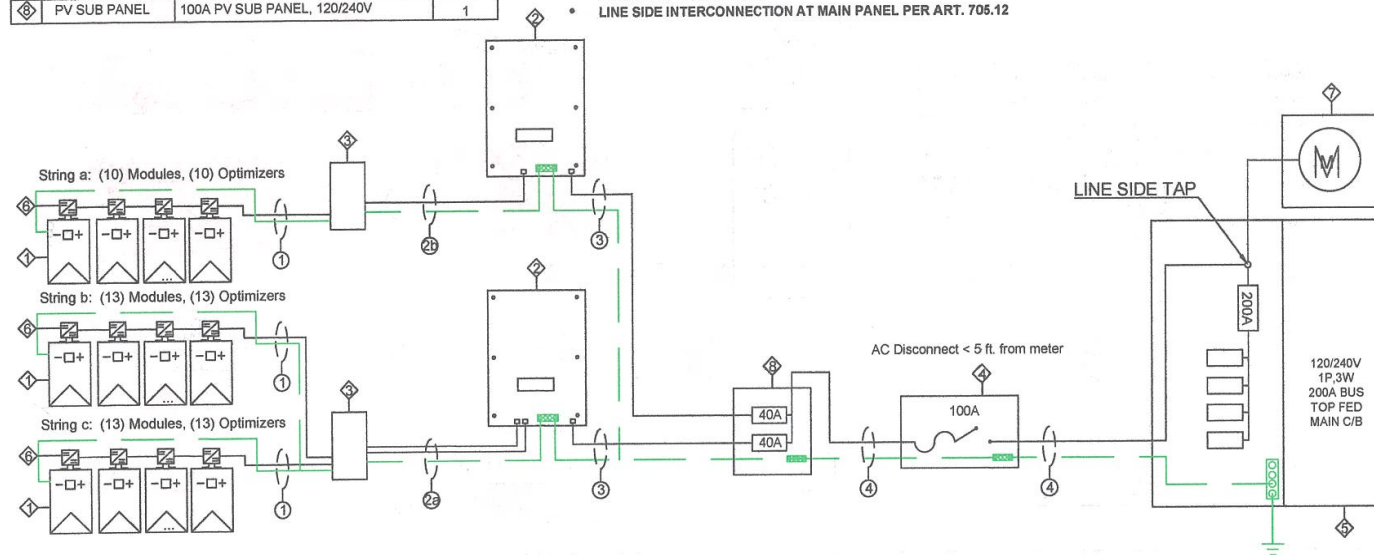
KEY NOTES:

- SOLID BARE G.E.C (FREE-AIR) MOUNTED UNDER ARRAY
- PER NEC ARTICLE 690.35 INVERTER GROUND FAULT PROTECTION PROVIDED
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR WIRREVERSIBLE CRIP CONNECTOR.
- BACKFED BREAKERS MUST BE LOCATED @ OPPOSITE END OF BUS BAR FROM MAIN BREAKER OR MAIN LUG ON GRID SIDE. WHEN A BACKFED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION, BREAKER SHALL NOT READ 'LINE'.
- PER CEC 250.85(C): CONDUCTOR SPLICES ONLY ALLOWED WITH COMPRESSION CONNECTORS OR EXOTHERMIC WELDING
- ALL GROUNDS AND NEUTRALS BONDED TO EXISTING GROUNDING CONDUCTOR WIRREVERSIBLE CRIP CONNECTOR.
- VERIFY (E) UFER GROUND NEAR MSP. IF (E) UFER IS NOT ACCESSIBLE OR VERIFIABLE, INSTALL A NEW 5/8" Ø X 8' LONG GROUNDING ROD AND BOND SOLAR SYSTEM EQUIPMENT GROUNDING ACCORDINGLY.
- LINE SIDE INTERCONNECTION AT MAIN PANEL PER ART. 705.12

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
.80	4-6
.70	7-9
.50	10-20

AC SYSTEM SIZE CALCULATION

Module PTC Rating (W)	x	NO. of Modules	x	Average Inverter CEC Efficiency	=	AC System Size
373.0	x	36	x	99%	=	13.293 kW AC



2 SINGLE LINE DIAGRAM

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



ENGINEERING

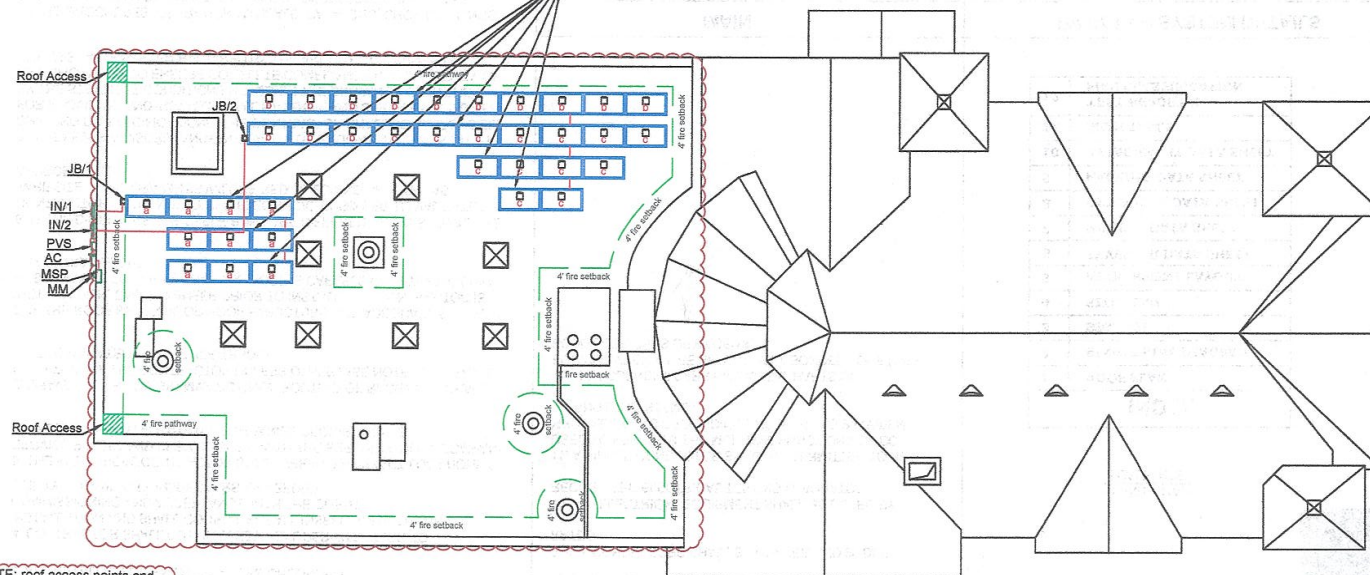
Drawn by: Now@engineeringinc.io
DATE: 10/27/2021

INDEX	
MSP	(E) Main Service Panel
MM	(E) Main Meter
IN	(N) 2 x Inverter
JB	(N) Junction Box
AC	(N) AC Disconnect
PVS	(N) PV Sub Panel
	Optimizer
	Solar Module
	Conduit
	Setback

Total Roof Area: 14490
Total Module Area: 792
5.47% of Coverage

Solar PV Array
36 - Hanwha 400W Modules
36 - P400 Optimizers
Roof Pitch: 2 Deg
Roof Orientation: 180 Deg
Panel Tilt Leg: 10 Deg
Panel Tilt Leg Orientation: 180 Deg

Washtenaw Ave



NOTE: roof access points and pathways comply with 605.11.1 through 605.11.13.

NOTE: AC Disconnect is lockable, taggable, accessible 24/7 and within 5 ft from Utility Meter.

NOTE: A 36-inch-wide pathway shall be provided to the emergency escape and rescue opening. Roof access is not located in areas that require placement of ground ladders over exterior wall openings



SCALE: 1/16" = 1'-0"

1 ROOF PLAN

Project Name:
First United
Property address:
209 Washtenaw Ave
Ypsilanti, MI 48197

CONTRACTOR

Distributed Power
Address:
2415 Burdette St.
Ferndale, MI 48220v



ENGINEERING INC

Drawn by: New@engineeringinc.io
DATE: 10/27/2021

GENERAL NOTES

1. ALL ELECTRICAL MATERIALS SHALL BE NEW AND LISTED BY RECOGNIZED ELECTRICAL TESTING LABORATORY

CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY

2. OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED OR BETTER

3. ALL METALLIC EQUIPMENT SHALL BE GROUNDED

4. CONTRACTOR SHALL OBTAIN ELECTRICAL PERMITS PRIOR TO INSTALLATION AND SHALL COORDINATE ALL INSPECTIONS, TESTING COMMISSIONING AND ACCEPTANCE WITH THE CLIENT, UTILITY CO. AND CITY INSPECTORS AS NEEDED.

5. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF SERVICE POINTS AND SERVICE SIZES WITH THE SERVING UTILITY COMPANY AND COMPLY WITH ALL UTILITY COMPANIES REQUIREMENTS.

6. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER TRADES.

7. IF THE ROOF MATERIAL OR ROOF STRUCTURE NOT ADEQUATE FOR PV INSTALLATION, CALL ENGINEER PRIOR TO INSTALL. THE CONTRACTOR IS RESPONSIBLE TO VERIFY THAT THE ROOF IS CAPABLE OF WITHSTANDING THE EXTRA WEIGHT.

8. IF THE DISTANCES FOR CABLE RUNS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL ENGINEER TO VALIDATE THE WIRE SIZE. FINAL DRAWINGS WILL BE RED-LINED AND UPDATED AS APPROPRIATE.

9. WHENEVER A DISCREPANCY IN QUALITY OF EQUIPMENT ARISES ON THE DRAWING OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE COMPLIANCE AND LONGEVITY OF THE OPERABLE SYSTEM REQUIRED BY THE ARCHITECT/ENGINEERS.

10. ALL BROCHURES, OPERATION MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE HANDED OVER TO OWNER'S REPRESENTATIVE AT THE COMPLETION OF WORK

PHOTOVOLTAIC NOTES:

1. ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY

2. SOLAR SYSTEM SHALL NOT COVER ANY PLUMBING OR MECHANICAL VENTS

3. MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDED.

4. SOLAR INVERTER SHALL BE LISTED TO UL1741.

5. REMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR AND THE PHOTOVOLTAIC SOURCE AND/OR OUTPUT CIRCUIT GROUNDED CONDUCTORS.

6. ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE.

7. LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.

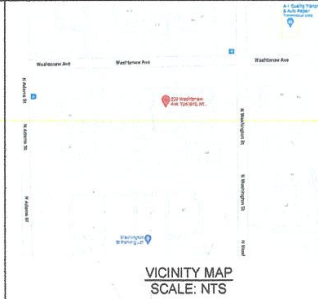
8. INVERTER IS EQUIPED WITH INTEGRATED GFDI, THUS PROVIDING GROUND FAULT PROTECTION

9. ALL CONDUCTORS SHALL BE COPPER AND 90 DEG RATED

10. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY A RECOGNIZED ELECTRICAL TESTING LABORATORY.

11. A SINGLE CONDUCTOR SHALL BE PERMITTED TO BE USED TO PERFORM THE MULTIPLE FUNCTIONS OF DC GROUNDING, AC GROUNDING AND BONDING BETWEEN AC AND DC SYSTEMS.

12. NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT SHALL BE EFFECTIVELY BONDED TOGETHER. BOND BOTH ENDS OF RACEWAYS.



INDEX

1	ROOF PLAN
2	SINGLE LINE DIAGRAM
3	SIGNAGE
4	SITE PLAN
5	ATTACHMENT LAYOUT
6	INVERTER DATA SHEET
7	MODULE DATA SHEET
8	OPTIMIZER DATA SHEET
9	RACKING DATA SHEET
10	ATTACHMENT DATA SHEET
11	SPAN TABLE
12	TEST REPORT & FIRE CLASSIFICATION

Project Name:
First United
Property address:
**209 Washtenaw Ave
Ypsilanti, MI 48197**

MAIN

THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES:

NATIONAL ELECTRICAL CODE 2017
(INTERNATIONAL FIRE CODE 2012)
(MICHIGAN BUILDING CODE 2015)

AS ADOPTED BY THE STATE OF MICHIGAN

ALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES

PV SOLAR SYSTEM DETAILS

SYSTEM SIZE: DC STC: 14.400 KW
SYSTEM SIZE: AC CEC: 13.293 KW
SOLAR MODULES: (36) Hanwha 400 Watt
INVERTERS: (2) SolarEdge 7.6 KW

ELECTRICAL INFORMATION:
EXISTING
MAIN SERVICE PANEL BUS SIZE: 200A
MAIN SERVICE BREAKER SIZE: 200A
MOUNTING SYSTEM: IRONRIDGE

BUILDING INFORMATION:
CONSTRUCTION TYPE: V-B
OCCUPANCY: A
ROOF: TORCH DOWN
RAFTER :2"X6" @ 24" O.C.

CONTRACTOR

Distributed Power
Address:
**2415 Burdette St.
Ferndale, MI 48220v**



ENGINEERING INC

Drawn by: Now@engineeringinc.io
DATE: 10/27/2021



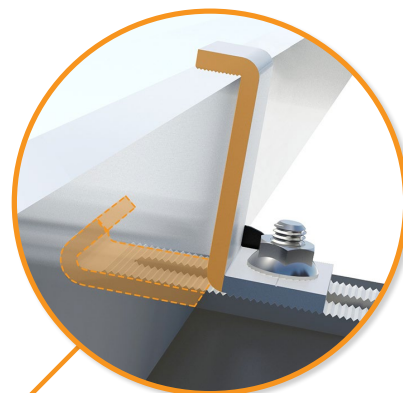
BX Chassis

Strong, Light, and Ready for Anything

The IronRidge BX System is designed to meet the needs of commercial solar—navigating complex roof layouts, while also handling the most extreme environmental conditions.

At the core of BX is the Chassis, a ballasted mount made of BASF Ultramid polyamides. They are exceptional for their high mechanical strength, rigidity and thermal stability (and are 100% recyclable).

Moreover, Ultramid polyamides afford good impact resistance even at low temperatures as well as UV protections for long life. Chassis come in 5° and 10° options and are backed by IronRidge's 25-year warranty.



Top & Bottom Clamp

The multi-directional grip on the module from above and below ensures a strong connection regardless of force direction.



360° Reinforcement

A flange around the entire perimeter helps to reinforce and stiffen the Chassis in all directions—alongside wide bends to reduce point loading and braced corners to increase rigidity.

Roof-Friendly Design

Wide base spreads weight and reduces point pressure, while openings along the bottom and corners prevent pooling and reduce ballast weathering.



Inter-Row Spacing & Edge Clearances

5° Chassis



10° Chassis



With 10-13" inter-row spacing, BX provides an **8-10% increase** in power density compared with other ballasted systems—that's a **capacity increase of 20%** in a typical 50kW system. The BX Chassis geometry also offers more than 5" of clearance in the 10-degree configuration and 8" in the 5-degree configuration, enabling the system to avoid drain domes, roof saddles, and conduit supports.

Flat Roof Attachment Anchors

BX Systems can be fully ballasted, fully anchored, or a hybrid optimized for the site.

Combine BX with an IronRidge Flat Roof Attachment Kit to eliminate hundreds of pounds of required ballast weight and achieve configurations as light as 3 PSF.

The placement and fastening method can be optimized for existing roof structures, and pre-approved membranes are offered to maintain membrane roof warranties.



Testing & Certification

Design Assistant

Automated design software provides an accurate bill of materials, using a simple drag-and-draw interface to generate a complete system plan—also generate a ballast map showing the required ballast for each Chassis.

Permit Documentation

Design Assistant project reports are backed with a ASCE/PE stamp and Commercial Services are also available to assist with more complex projects. Visit our website or contact an IronRidge sales representative.

UL 2703

Certification for the BX System conforms to the latest requirements and includes 1) Mechanical, 2) Bonding, and 3) Class A Fire Ratings (without wind deflectors). Ninety percent of solar modules are fully supported.





Facing northeast to south and west elevations of education wing



Facing southwest to facade and west elevation of education wing



Facing south to facade of education wing



Facing southwest to Washington and Washtenaw facades



Facing southeast to west elevation



HDC Work Permit Staff Review

Property address: 214 N Huron

Property History: The property includes an Italianate-style house, erected in 1850, that is contributing to the historic district.

Date Complete Application Received: November 2, 2021

Date of Review: November 3, 2021

Date of Meeting: November 9, 2021

Proposed work: Membrane roof and replacement door.

Materials: Stevens wood door; Pro-Grade silicone roof coating.

Staff review:

Door

1. A door at the southeast corner of the house has been damaged by carpenter ants.
2. The applicant tried to find a matching historic door but could not and instead elected for a compatible new door.
3. The applicant has not indicated how the door will be finished.

Roof

4. The low sloped roof of the rear wrap-around porch needs replacing. Currently it appears to be some type of rolled asphalt.
5. The applicant would like to use a membrane system commonly used on flat roofs.
6. Staff advised that the membrane would only be appropriate if it was a dark color to match the shingles on the rest of the house. Although the pitch is low, the slope is visible from parts of Huron street.
 - a. The applicant agreed.

Recommended Motions:

Move to approve and issue a Certificate of Appropriateness for the work at 214 N Huron as submitted in the application dated

1. Use property for original purpose or provide compatible use with minimal alteration.

2. Do not destroy original character. Do not remove or alter historic material or features.

3. Do not imitate earlier styles.

4. Preserve significant changes acquired over time.

5. Preserve distinctive features.

6. Repair, don't replace. Replacements shall match original.

7. Clean building gently—no sandblasting.

8. Preserve archaeological resources.

9. Contemporary designs shall be compatible and shall not destroy significant original material.

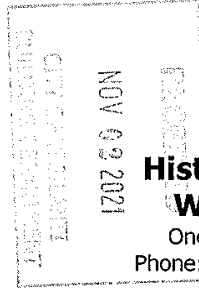
10. New work shall be removable.

November 2, 2021, for replacement of the door at the southeast corner of the house, and new roof, as specified. Approval is conditioned that the door be finished in a paint or opaque stain, and that the membrane roof system be colored dark gray to match as closely as possible to the shingled portions of the building.

Relevant Secretary of the Interior's Standards:
#6, #9

Prepared by:

Scott E. Slagor, Preservation Planner



**City of Ypsilanti
Historic District Commission
Work Permit Application**

One South Huron • Ypsilanti, MI 48197
Phone: (734) 483-9646 • Fax: (734) 483-7260
www.cityofypsilanti.com

29173
3579

OFFICE USE ONLY

Date Filed:

Meeting Date:

Action Item/Study Item

To complete this application:

1. Complete this form.
2. Attach the following documents:
 - a. Photo(s) showing all locations where work is proposed (can be emailed).
 - b. Catalog cut sheets or similar details for windows, doors, light fixtures, and any other manufactured or preassembled components—this includes information from catalogues, professional quotes, or websites (can be emailed).
 - c. Dimensioned drawings of any new construction or modifications to existing structures, including awnings and signs.
 - d. A sketch plan, if proposal is for work on the grounds and not just the main structure (e.g., installing a new driveway, fence, or shed). This can be drawn on a scaled copy of a mortgage survey.
3. Applications and materials must be received by the Building Department **no later** than 4pm on the Tuesday one week prior to the meeting.

INCOMPLETE APPLICATIONS WILL NOT BE PLACED ON THE AGENDA

Property

Address

214 NORTH HURON ST ; YPSILANTI 48197

Applicant

**If applicant is not owner of property, a written statement from the owner authorizing this application must be included.*

Name

CHERYL C. FARMER

Address

[REDACTED]

City

YPSILANTI

State

MI

Zip

48197

Phone / Fax

[REDACTED]

E-Mail

[REDACTED]

Contractor

Contractor Name & Contact Info

ALI HAWIO A+H CONSTRUCTION

Type of work

☒ Roofing
☒ Window/Door Replacement

☐ Porches
☐ Sign
☐ Fence (or other sitework)

☐ Painting
☐ Other
☐ Application Amendment

Complete Description of Proposed Work:

- ① REPAIR FLAT ROOFS OVER FRONT & SOUTH PORCHES WITH A RUBBERIZED LIQUID OVER EXISTING ROOFS
- ② REPLACE CARPENTER ANT INFESTED WOOD DOOR SOUTHEAST END OF HOUSE

Materials (for paint include color chips or samples with application):

will e-mail

Permit Application Fee (action items only)

The fee is \$45 for the first \$3,000 in construction cost plus \$5 for every additional \$3,000 of construction cost. There is a flat fee of \$10 for painting only. *An additional fee of \$50 applies to HDC work started without the applicable permit.*

Construction Cost:

Permit fee:

\$45 + _____ =

Signature

I hereby attest that the above information is accurate. I am authorized to and grant permission to the City of Ypsilanti staff to be on the subject property for the purposes of preparing staff reports and/or evaluating this application.

I further affirm that this property has, or will have before the proposed work is completed, a fire alarm system or smoke alarm complying with the Stille-DeRossett-Hale single-state construction code, PA 230 of 1972, as amended.

Signature:

Date:

11-2-21

Print Name:

CHARLY C. FARMER

If you have questions about what the HDC generally permits or does not permit, or what they need to see in an application to render a decision, please call the office at 734-483-9646 or view our factsheets online at cityofypsilanti.com/hd.

All other necessary approvals and permits must be acquired before beginning work.



The Home Depot Special Order Quote

Customer Agreement #: H2721-219573

Printed Date: 11/2/2021

Customer: CHERYL FARMER

Address: [REDACTED]

Phone 1: 7 [REDACTED]

Phone 2: [REDACTED]

Email: [REDACTED]

Store: 2721

Associate: ANDREW

Address: 3 [REDACTED]

Phone: 7 [REDACTED]

Pre-Savings Total: \$3,822.41

Total Savings: (\$0.00)

Pre-Tax Price: \$3,822.41

All prices are subject to change. Customer is responsible for verifying product selections. The Home Depot will not accept returns for the below products.



Catalog Version 219



*** Dimensions ***

Call Width = 36"

Call Height = 80"

Frame Width = 37.5

Frame Height = 80.75

Line Number	Item Summary	Was Price	Now Price	Quantity	Total Savings	Total Price
100-1	Premium Wood Entry Door Complete Unit 37.5 x 80.75 Mahogany	\$1,994.41	\$1,994.41	1	\$0.00	\$1,994.41
Unit 100 Total:		\$1,994.41	\$1,994.41		\$0.00	\$1,994.41

Begin Line 100 Description

---- Line 100-1 ----

*** Product ***

Premium Wood Entry Door Left Outswing 37.5 x 80.75

*** Dimensions ***

Call Width = 36"

Call Height = 80"

Frame Width = 37.5

Frame Height = 80.75

*** Additional Information ***

Room Location =

*** SKU ***

SKU = 780810

Lead Time = 28 Days

Vendor Name = Steves and Sons

Vendor Number = 60072836

Customer Service = (800) 617-8586

Catalog Date = 5/24/2021

*** Re-Order ***

Is this a re-order = No

*** Jamb/Casing ***

Jamb Type = Rabbeted - Weather Stripped

Jamb Size = 4-9/16"

Jamb Species = Hardwood - Stain Grade

Jamb Finish = Unfinished

Casing Design = No Casing

Brickmold = No

*** Hardware ***

Quick Door Hanger = No - Do NOT Add the Quick

Door Hanger

Hinge Finish = Satin Nickel

Sill Type Options = ADA - Low Profile

Sill Finish Options = Mill

Lock Type = Standard

Lock Style = Windsor

Lock Finish = Satin Nickel

*** Finishing ***

Exterior Door Slab Finishing = Unfinished

*** Door ***

Thickness = 1-3/4"

Core = Engineered Wood Core

*** EDS ***

Collection = Deco Glass

Species = Mahogany

Glass Layout = 3/4 Lite

Glass Name = Rain

Grill/Caming Option = No Grill

*** Unit Type ***

Unit Type = Complete Unit

Handing = Left Outswing

End Line 100 Description



Catalog Version 49



*** Dimensions ***

Call Width = 36", Call Height = 80",
Frame Width = 37.5, Frame Height =
81.5

Line Number	Item Summary	Was Price	Now Price	Quantity	Total Savings	Total Price
200-1	American Red Oak Entry Door Right Hand Out-Swing 37.5 x 81.5	\$1,828.00	\$1,828.00	1	\$0.00	\$1,828.00
Unit 200 Total:		\$1,828.00	\$1,828.00		\$0.00	\$1,828.00

Begin Line 200 Description

---- Line 200-1 ----

*** Product ***

American Red Oak Entry Door 37.5 x 81.5

*** Dimensions ***

Call Width = 36", Call Height = 80", Frame Width =
37.5, Frame Height = 81.5

*** Additional Information ***

Room Location =

*** Unit Type ***

Adequate Overhang = Yes, Door Swing = Right
Hand Out-Swing

*** Door Options ***

Door Slab Type = 3/4 Lite, Exterior Finish =
Unfinished, Interior Finish = Unfinished, Glass Size
= SH-556-3680 DR, Panel/Glazing Type = Glass A,
Glass Caming Color = Patina, Glass Option =
Standard Glue Chip

*** Hardware/Prep Options ***

Lock Prep = Standard Double Bore, Hinge Color =
Satin Nickel, Threshold/ Sill Type = Solid Oak Sill,
Door Sweep = Vinyl, Weather Stripping Color =
White

*** Frame Options ***

Jamb Depth = 4-9/16", Interior Moulding Type =
None, Exterior Moulding Type = None

*** SKU ***

SKU = 789286, Vendor Number = 60019532,
Customer Service = 310-515-3667, Catalog
Version Date = 07012020

End Line 200 Description

(/)

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Pro-Grade® 988 Premium & Custom Color Silicone Roof Coating

A solvent-free, one-component, moisture-curing silicone rubber roof coating system



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Pro-Grade® 988 Silicone Roof Coating is a solvent-free, one-component, moisture-curing silicone rubber roof coating system for use on existing smooth asphaltic BUR, smooth or granulated cap sheet, single ply roof membrane, well-adhered acrylic coating, metal, sprayed-in-place polyurethane foam and various aged membrane roofing.

Pro-Grade® 988 Silicone Roof Coating is available in several premium colors that are produced with sophisticated manufacturing and precise quality control to ensure there is no color variation visually perceptible from pail to pail. Protect roofers and other maintenance personnel by marking potential safety hazards on your roof with Safety Yellow. This coating can be used as a visual warning for equipment, sky concern.

Got any product questions? I'm happy to help!

Pro-Grade® 988 Silicone Roof Coating is available in custom colors, ideal for situations

(/).

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where an exact color match is required. Henry can provide an accurate, color-matched silicone for the majority of the color spectrum.

Features and benefits

- Permanent ponding water resistance
- Ultra-low VOC
- High solids
- Excellent adhesion to many substrates
- Restoration system installation qualifies for up to 20-year Material, Labor & Workmanship Henry Gold Seal Warranty
- For professional use only

Sizes available

- 5 gallon pail and 55 gallon drum

Color

- Almond, brick red, brown, charcoal, light gray, tan, terra cotta, safety yellow and custom

Related products



Pro-Grade®
988 Silicone
White Roof
Coating



Pro-Grade®
923 Butter
Grade Silicone
Roof Sealer



Pro-Grade®
957 Silicone
Fibered Roof
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Henry® Pro-Grade® Product Catalog Contact (/contact)

<u>Installation and Technical Literature</u>	+
<u>Specifications</u>	+
<u>Architectural Details</u>	+
<u>Warranty</u>	+

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Got any product questions? I'm
happy to help!





Facing northeast to facade and south elevation



Facing east-northeast to facade



Facing northeast to facade porch



Facing north to south door that has been damaged by ants



Facing northwest to south porch.



HDC Work Permit Staff Review

Property address: 302 E Cross

Property History: The property includes a "Late Victorian" Gothic Revival-style house, erected ca. 1880 that is contributing to the historic district. The property has been considered a case of Demolition by Neglect since 2018.

Date Complete Application Received: October 27, 2021

Date of Review: November 3, 2021

Date of Meeting: November 9, 2021

Proposed work: Rebuild west porch.

Materials: Wood framing and decking.

Staff review:

1. The applicant amended the application to only include the porch as this time but will discuss the other items as a study item.
2. As part of the siding repair to resolve demolition by neglect, the applicant deconstructed the west porch, so new siding could properly be reapplied.
3. The applicant would like to reconstruct the porch to the original dimensions
4. The porch will have treated lumber framing and footings.
5. The foundation will be screened by vertical lattice.
6. The original columns and trim pieces will be reused.
7. At this time the applicant has not calculated the dimensions of the roof. The HDC may make a conditional approval for the roof or ask that the applicant return with an updated application.
 - a. The roof was a very low-pitch or flat roof with a simple fascia.
8. Porch floor will be vertical grain tongue-and-groove porch flooring.
9. The application does not specify if there will be stairs to access the porch. Based on file photos, there has not

1. Use property for original purpose or provide compatible use with minimal alteration.

2. Do not destroy original character. Do not remove or alter historic material or features.

3. Do not imitate earlier styles.

4. Preserve significant changes acquired over time.

5. Preserve distinctive features.

6. Repair, don't replace. Replacements shall match original.

7. Clean building gently—no sandblasting.

8. Preserve archaeological resources.

9. Contemporary designs shall be compatible and shall not destroy significant original material.

10. New work shall be removable.

been an intact step to access the porch in over a decade.

Recommended Motions:

Move to approve and issue a Certificate of Appropriateness for the work at 302 E Cross as submitted in the revised application dated October 27, 2021 for reconstruction of the west porch. The porch shall be built to specifications, and reuse the historic columns and decorative trim pieces. The applicant may reconstruct the roof so long as it matches the pitch, trim, and sheathing of the original roof.

Relevant Secretary of the Interior's Standards:

#2, #5, #6

Move to approve and issue a Certificate of Appropriateness for the work at 302 E Cross as submitted in the revised application dated October 27, 2021 for reconstruction of the west porch. The porch shall be built to specifications, and reuse the historic columns and decorative trim pieces. Approval is for work described in the application only. When the porch roof is reconstructed, the applicant must submit an amendment that details the pitch, dimensions, trim, and sheathing of the new porch roof.

Relevant Secretary of the Interior's Standards:

#2, #5, #6

Prepared by:

Scott E. Slagor, Preservation Planner



**City of Ypsilanti
Historic District Commission
Work Permit Application**

One South Huron • Ypsilanti, MI 48197
Phone: (734) 483-9646 • Fax: (734) 483-7260
www.cityofypsilanti.com

29013
1646

OFFICE USE ONLY

Date Filed:

Meeting Date:

Action Item/Study Item

To complete this application:

1. Complete this form.
2. Attach the following documents:
 - a. Photo(s) showing all locations where work is proposed (can be emailed).
 - b. Catalog cut sheets or similar details for windows, doors, light fixtures, and any other manufactured or preassembled components—this includes information from catalogues, professional quotes, or websites (can be emailed).
 - c. Dimensioned drawings of any new construction or modifications to existing structures, including awnings and signs.
 - d. A sketch plan, if proposal is for work on the grounds and not just the main structure (e.g., installing a new driveway, fence, or shed). This can be drawn on a scaled copy of a mortgage survey.
3. Applications and materials must be received by the Building Department **no later** than 4pm on the Tuesday one week prior to the meeting.

INCOMPLETE APPLICATIONS WILL NOT BE PLACED ON THE AGENDA

Property

Address

302 E Cross

Applicant

**If applicant is not owner of property, a written statement from the owner authorizing this application must be included.*

Name

Maxwell A. Ziebarth

Address

City

Ypsilanti

State

MI

Zip

48197

Phone / Fax

E-Mail

Contractor

Contractor Name & Contact Info

Type of work

- ☐ Roofing
☒ Window/Door Replacement

- ☒ Porches
☐ Sign
☐ Fence (or other sitework)

- ☐ Painting
☒ Other
☐ Application Amendment

Complete Description of Proposed Work:

- ① Complete wood Repairs at Porch elevation Park st.
- ② missing windows AND door west elevation
Replace or Repair
- ③ Repair front Porch Roof AND siding
- ④ Repair missing AND damaged siding at All elevations
- ⑤ Repair missing or damaged Trim wood at All elevations

Materials (for paint include color chips or samples with application):

Permit Application Fee (action items only)

The fee is \$45 for the first \$3,000 in construction cost plus \$5 for every additional \$3,000 of construction cost. There is a flat fee of \$10 for painting only. *An additional fee of \$50 applies to HDC work started without the applicable permit.*

Construction Cost:

\$ 3,000.00

Permit fee:

\$45 + _____ =

Signature

I hereby attest that the above information is accurate. I am authorized to and grant permission to the City of Ypsilanti staff to be on the subject property for the purposes of preparing staff reports and/or evaluating this application.

I further affirm that this property has, or will have before the proposed work is completed, a fire alarm system or smoke alarm complying with the Stille-DeRossett-Hale single-state construction code, PA 230 of 1972, as amended.

Signature:

[Redacted Signature]

Date:

9/17/21

Print Name:

If you have questions about what the HDC generally permits or does not permit, or what they need to see in an application to render a decision, please call the office at 734-483-9646 or view our factsheets online at cityofypsilanti.com/hd.

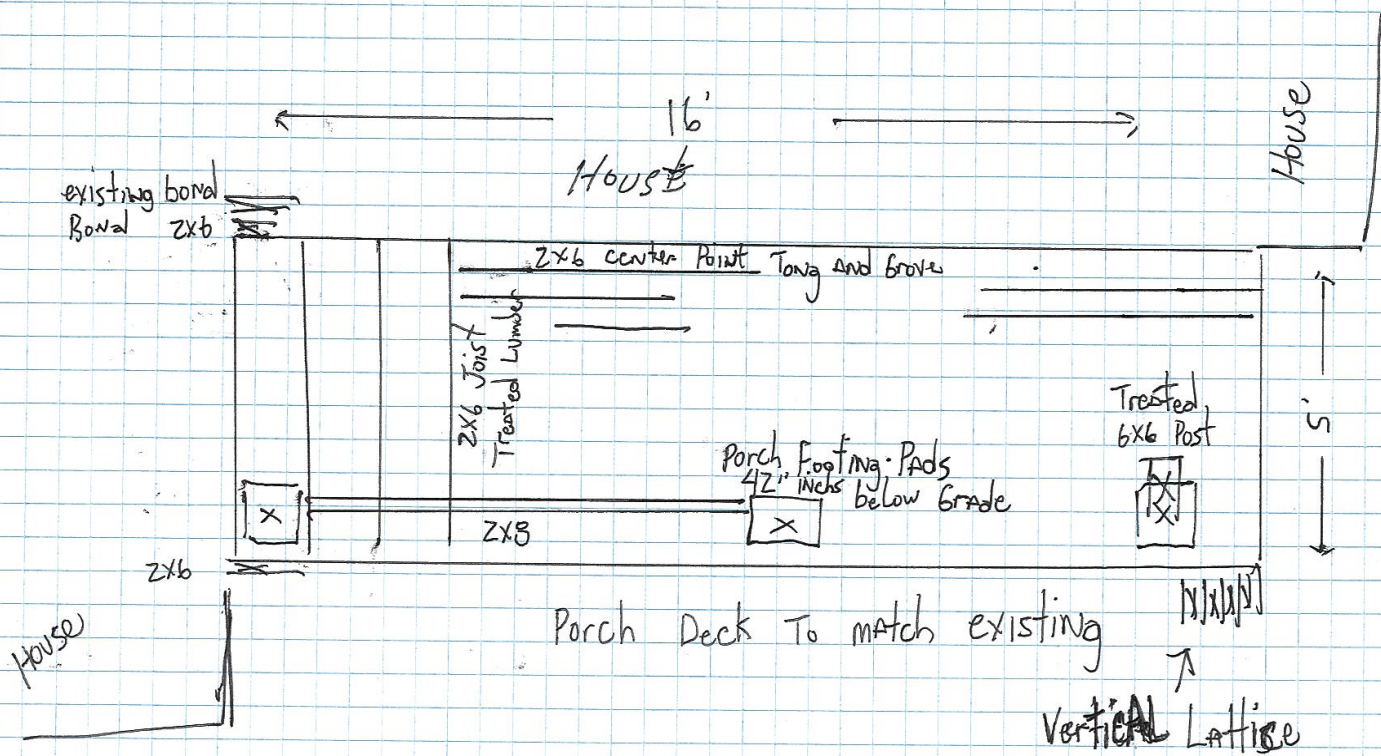
All other necessary approvals and permits must be acquired before beginning work.

PHDC-21-0070

MAX Ziebarth 734-8193002

302 E CROSS

Park st. west elevation





View of west porch in 2018 before removal.

Current photos of 302 E Cross



Facing southeast to facade and west elevation



Facing south-southwest to facade and east elevation



Facing southwest to facade and east elevation



Facing southeast to facade and west elevation



Facing east to west elevation porch



Facing northeast to south and west elevations









SOUTH ELEVATION C4
 SCALE: 1/4" = 1'-0"



Contractor
O'NEAL CONSTRUCTION
525 W. WILLIAM
ANN ARBOR, MI 48103
P: 734.769-0770
E: jcorcoran@onealconstruction.com

Client
HERBAL SOLUTIONS
124 W Michigan Ave,
Ypsilanti, MI 48197
p: 734-487-8421
e: info@herbalsolutions420.com

Structural Engineering
Robert Darvas Associates
440 South Main Street
Ann Arbor, MI 48104
p: 734.761.8713

Mechanical, Plumbing, & Electrical Engineering
MA Engineering
400 S Old Woodward Ave Suite 100
Birmingham, MI 48009
p: 248.258.1610

118 W. MICHIGAN AVE
YPSILANTI, MI 48197

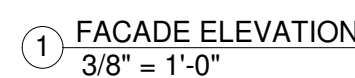
HERBAL
SOLUTIONS
EXTERIOR
ELEVATION

Project number	202016
Date	Issue Date
Drawn by	Author
Checked by	Checker

A306

Scale $3/8" = 1'-0"$

11/2/2021 10:43:13 AM









MINUTES

City of Ypsilanti HISTORIC DISTRICT COMMISSION Virtual Meeting held via Zoom

Tuesday, October 26, 2021
7:00 P.M.

CALL TO ORDER AND ROLL CALL

Chairperson Pettit Video/telephone usage instructions given for potential attendees
Meeting called to order at 7:04pm

Commissioners Present: Alex Pettit – Washtenaw County, City of Ypsilanti
James Chesnut – Washtenaw County, City of Ypsilanti
James Ratzlaff – Washtenaw County, City of Ypsilanti
Stefan Szumko - Washtenaw County, City of Ypsilanti

Commissioners Absent: Erika Lindsay, Amy Swift

Staff Present: Scott Slagor, Preservation Planner
Nancy Hare-Dickerson, Commission Recording Secretary

APPROVAL OF AGENDA

Discussion: Staff requested to add 316 N Grove to the agenda as a study item.

Motion: Chesnut (second: Ratzlaff) moved to approve the agenda as amended.

Roll Call Vote - Ayes: Commissioners Pettit, Chesnut, Ratzlaff, Szumko
Nays: None
Absent: Commissioners Lindsay, Swift
Motion carried.

PUBLIC COMMENT ON AGENDA ITEMS—none

PUBLIC HEARING—none

OLD BUSINESS—none

NEW BUSINESS
202 N Washington
**Brick Veneer.*

Applicant: William Sloan, owner – present

Discussion: Slagor: Staff provided a review citing the following information — that the proposed project was reviewed by the HDC as a study item on October 12, 2021; that the applicant had removed a brick veneer on the building that was in poor condition and that applicant was looking for re clad options.

Staff noted that additional research showed that based on Sanborn maps, the Assessing records which date the building to 1924 are incorrect and that that was probably when the original filling station was built; that Building Department records show that a permit was pulled to construct the extant building in 1950; that the first building permit did not have any details but, in 1970, a second permit was pulled to add the brick veneer and put on the mansard roof that currently exists; and that based on that information, the original filling station possibly had an enameled panel veneer *[further discussed similarity of veneer style and architectural design to a local car repair building and local gas station, respectively]*.

Staff indicated that after discussing all the options, applicant proposes to redo the veneer in a simple, red thin brick that matches what was there; and to brick to match the non-historic vinyl siding on the bulkhead wall under the window *[reference photo materials]*.

Staff referenced various photos showing the previous façade before work was done and the removed brick veneer on the side elevation.

Sloan: Acknowledged the staff review. Stated that the intent is to use the comparable brick veneer as to what is there now and put that underneath those main windows and on the south side of the building to match *[reference photo materials]*.

Ratzlaff: Initiated discussion as to what caused the original veneer to disconnect itself from the underlying structure.

Pettit: Stated that it looks like there are several different ways that the proposed system could be mounted which would seem to all include some sort of anchoring.

Sloan: Confirmed.

Chesnut: Asked for clarification on how the windows and trim would be treated as to the corners.

Sloan: Stated his understanding is that there are bricks specifically made for those type of corners. Stated that there was aluminum trimming around the window and door *[reference photo materials]*.

Pettit: Stated that it looks like that is aluminum where the glass from the front wraps around and then meets the brick *[reference photo materials]*.

Sloan: Stated that the aluminum trim on the bottom portion of those windows is still there.

Chesnut: Stated that he does not mind the aesthetic of the veneer brick if it is book-ended by the vertical white stripes and the window is cased with white because the language of the building will be more consistent. Stated that he would question, a little bit, the corner brick being used and running it back into the aluminum mullion of the glazing system. Stated an opinion that that would become a unique condition.

Sloan: Stated that the intent is to basically restore it to how this picture is *[reference photo materials]* with the white trim except for the use of the vinyl; that where the white vinyl is would be brick veneer as well.

Chesnut: Asked what would be used for the trim.

Sloan: Stated that he would like to use the aluminum trim as shown in the photo *[reference photo in packet materials]*.

Ratzlaff: Stated an opinion that from a materiality perspective, it is good, as long as it has the white trim around it. Acknowledged that the intention stated by applicant is to make it look the way it did previously.

Szumko: Asked if the plan is to run the brick all the way down to the ground.

Sloan: Stated yes, so that it matches the front.

Chesnut: Discussed thoughts as to the area to the right of the gutter leader *[reference photo material]* – area of transition from the brick veneer.

[Further clarification discussion as to installation locations of aluminum trim and brick veneer]

Motion: Ratzlaff (second: Chesnut) moved to approve and issue a Certificate of Appropriateness for the work at 202 N Washington as submitted in the application dated October 21, 2021, for installation of a thin brick veneer in "plantation red" with gray mortar on the south elevation and under the display windows, as well as white aluminum trim around the fenestration, as specified.

Secretary of the Interior Standards:

#6- Repair don't replace. Replacements shall match the original.

Roll Call Vote - Ayes: Commissioners Pettit, Chesnut, Ratzlaff, Szumko

Nays: None

Absent: Commissioners Lindsay, Swift

Motion carried.

STUDY ITEMS

202 N Washington

**Mural.*

Property owner, William Sloan, discussed proposal of a mural installation on the building.

316 N Grove

**Roof drainage.*

Applicant/representative not present. Study item not discussed.

ADMINISTRATIVE APPROVALS

210 Washtenaw Roof

304 E Forest Deck

304 E Forest Roof

Motion: Chesnut (second: Szumko) moved to accept the administrative approvals cited above, as submitted by staff on 10-26-2021.

Roll Call Vote - Ayes: Commissioners Pettit, Chesnut, Ratzlaff, Szumko

Nays: None

Absent: Commissioners Lindsay, Swift

Motion carried.

OTHER BUSINESS

1. Property Monitoring

Commissioners/Staff discussed status of a property issue under review.

2. Updates from Staff

Re: HDC commissioner vacancy.

3. Commissioner Comments—none

AUDIENCE PARTICIPATION ON NON-AGENDA ITEMS—none

HOUSEKEEPING BUSINESS

Approval of the minutes of October 12, 2021

Motion: Szumko (second: Chesnut) moved to approve the minutes of October 12, 2021, as submitted.

Roll Call Vote - Ayes: Commissioners Pettit, Chesnut, Ratzlaff, Szumko

Nays: None

Absent: Commissioners Lindsay, Swift

Motion carried.

ADJOURNMENT

Chairperson Pettit adjourned the meeting, citing the end of the agenda with no further items to discuss.

MEETING ADJOURNED at 7:45 p.m.

Full Minutes Prepared By: Nancy Hare-Dickerson