

City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 | 503-823-7300 | www.portland.gov/bds



### Permit Revision Submittal Requirements and Application

A Permit Revision is required when there are proposed changes to the project after the permit has been issued. This may arise due to discrepancies between the city-approved permit drawings and actual field conditions, or the customer has changed their mind about an aspect of the project. In all cases, a revision to the existing permit must be submitted, reviewed and approved.

Minimum Submittal Requirements (check all boxes and sign below):

- A copy of this application.
- One PDF copy of plans for electronic submittals or three copies for paper submittals.
- All plans must clearly reflect the proposed change(s). Changes must be bubbled.
- Drawings and calculations must be stamped and signed by the Architect and/or the Engineer of Record, if applicable.
- Project narrative for extensive revisions.
- One PDF copy of calculations and other supporting documents for electronic submittals or two copies for paper submittals.
- Copy of Inspector's correction notice, if the revision is due to an inspection correction. One PDF copy for electronic submittals and two copies for paper submittals.

#### Applicant Information:

Mariah	Madtson
	Mariah

Street Address 3895 Cascadia Canyon Ave SE suite 140	City/State/ZIP_Salem, Or 97302
Email_picsalem@purelightpower.com	Phone 971 272 8717
Value of Proposed Revision \$10,000	Issued Permit #_ <sup>4988184</sup>
Job Site Address 5311 SE Mitchell St	City/State/ZIP_Portland Oregon 97206

Description of Revision Number of panels and inverters changed. Layout of panels changed.

	DocuSigned by:		
Applicant Signature	Mariah Madtson	_Date_1/4/2024	12:07:14 PM PST
0 -	05740000000000		

#### Fees:

An invoice with permit fees will be sent to the applicant once minimum submittal requirements have been verified. Permit Revisions are subject to fees associated with plan review, processing and any increase in project value.

The Bureau of Development Services fee schedule is on the BDS web site: www.portlandoregon.gov/bds/article/102792

#### Helpful Information:

Bureau of Development Services |City of Portland, Oregon 1900 SW 4th Avenue, Portland, OR 97201 For Hours Call 503-823-7310 or visit www.portlandoregon.gov/bds

#### Important Telephone Numbers:

BDS main number	503-823-7300
DSC automated information line	503-823-7310
Building code information	503-823-1456
BDS 24-hour inspection request line	503-823-7000
Residential information for one- and two-family dwelling	503-823-7388
General Permit Processing and Fee Estimate info	503-823-7357
Zoning Information Line	503-823-7526
City of Portland TTY	503-823-6868

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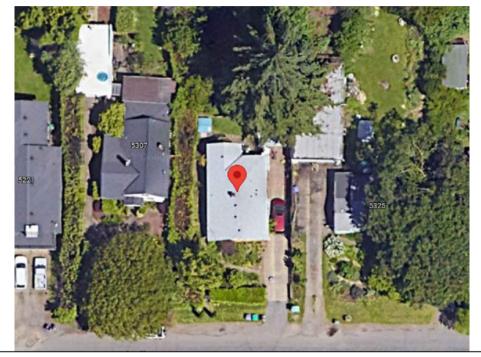
City Of Portland REVIEWED FOR CODE COMPLIANC

Date: 01/08/24

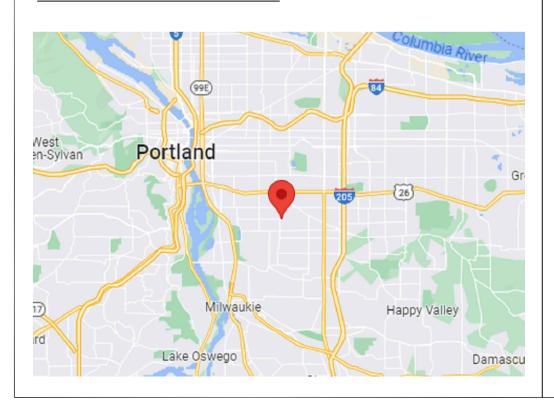
Permit #. 23-102375-REV-01-RS

## PHC/TOVOLTAIC ROOF MOUNT SYSTEM 18 MC/DULES-ROOF MOUNTED - 7.29 kWDC, 5.31 kWAC 5311 SE MITCHELL ST PORTLAND OR 97206

### AERIAL VIEW



### VICINITY MAP



### **DESIGN CRITERIA**

ROOF TYPE: ASPHALT SHINGLE NUMBER OF LAYERS: 1 ROOF FRAMING:2X4 @ 24" OC. RAFTERS NUMBER OF STORIES: 1 SNOW LOAD: 25 PSF WIND SPEED: 97 MPH (per ASCE 7-16) WIND EXPOSURE: B RISK CATEGORY: II OCCUPANCY: R-3 RESIDENTIAL EXISTING DEAD LOAD: 9 PSF PANEL DEAD LOAD: 2.8 PSF (MAX)

# 23-102375 REV 01 RS

#### 1. WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A SIGN WILL BE PROVIDED WARNING OF THE HAZARDS. (PER ART. 690.17)

- 2. EACH UNGROUNDED CONDUCTOR OF THE MULTIWIRE BRANCH CIRCUIT WILL BE IDENTIFIED BY PHASE AND SYSTEM. (PER ART. 210.5)
- 3. A NATIONALLY RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH ARTICLE 110.3.
- 4. ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY POINTS INTO BOXES AS REQUIRED BY UL LISTING
- 5. MODULE FRAMES SHALL BE GROUNDED AT THE UL-LISTED LOCATION PROVIDED BY THE MANUFACTURER USING UL-LISTED GROUNDING HARDWARE.
- 6. MODULE FRAMES, RAIL, AND POSTS SHALL BE BONDED WITH EQUIPMENT GROUND CONDUCTORS AND GROUNDED AT THE MAIN ELECTRICAL PANEL.
- 7. THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO ARTICLE 250.166B & 690.47.

### **GOVERNING CODES**

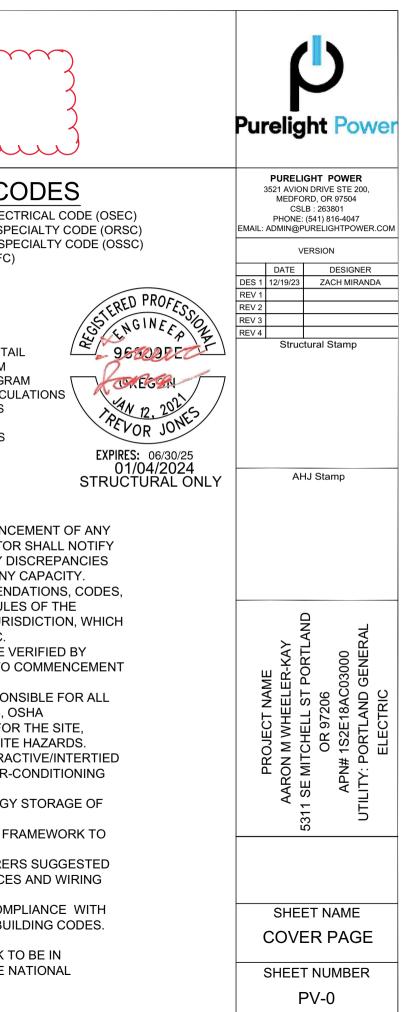
2021 OREGON SPECIALTY ELECTRICAL CODE (OSEC) 2021 OREGON RESIDENTIAL SPECIALTY CODE (ORSC) 2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC) 2022 OREGON FIRE CODE (OFC)

#### SHEET INDEX

PV-0	COVER PAGE
PV-1	SITE PLAN
PV-2	ROOF PLAN
PV-3	ATTACHMENT DET
PV-4	CIRCUIT DIAGRAM
PV-5	ELECTRICAL DIAG
PV-6	ELECTRICAL CALC
PV-7	WARNING LABELS
PV-8	PLACARD
PV-9	CROSS SECTIONS

## **GENERAL NOTES**

- 1. PRIOR TO THE COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL NOTIFY THE DESIGNER OF ANY DISCREPANCIES WITH THE DESIGN IN ANY CAPACITY. ESPECIALLY RECOMMENDATIONS, CODES, OR REGULATIONS & RULES OF THE AUTHORITY HAVING JURISDICTION, WHICH SUPERSEDED THE NEC.
- 2. ALL DIMENSIONS TO BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY PRECAUTIONS, OSHA REQUIREMENTS ETC. FOR THE SITE, INCLUDING EXISTING SITE HAZARDS.
  SYSTEM IS GRID INTERACTIVE/INTERTIED
- 4. SYSTEM IS GRID INTERACTIVE/INTERTIE VIA A UL LISTED POWER-CONDITIONING INVERTER.
- 5. SYSTEM HAS NO ENERGY STORAGE OF ANY KIND, OR UPS.
- 6. ALL SOLAR MOUNTING FRAMEWORK TO BE GROUNDED.
- FOLLOW MANUFACTURERS SUGGESTED INSTALLATION PRACTICES AND WIRING SPECIFICATIONS.
- 8. ALL WORK TO BE IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODES. (IBC)
- 9. ALL ELECTRICAL WORK TO BE IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE (NEC).

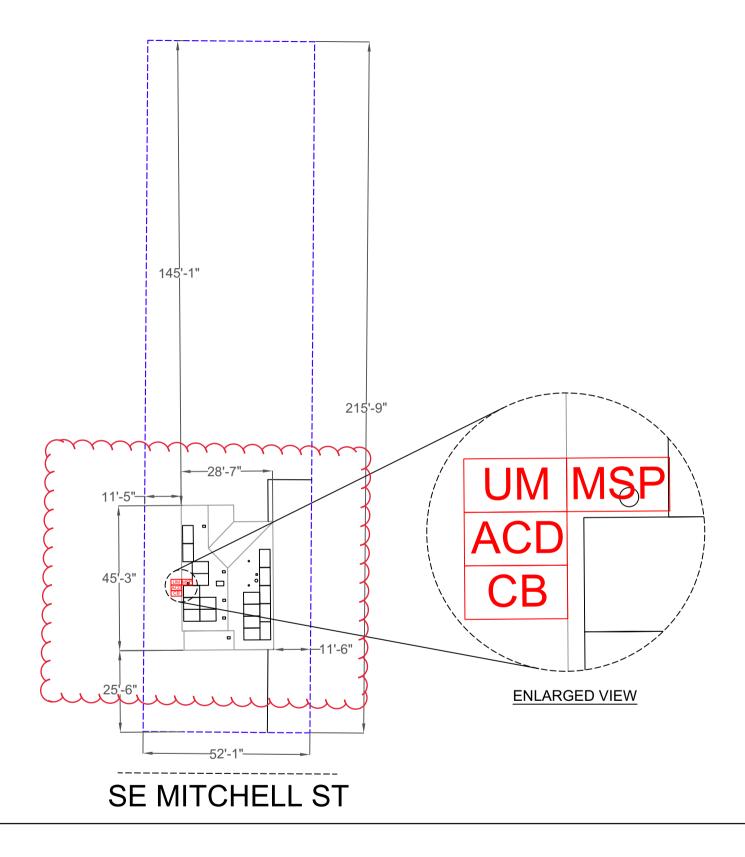




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### LEGEND

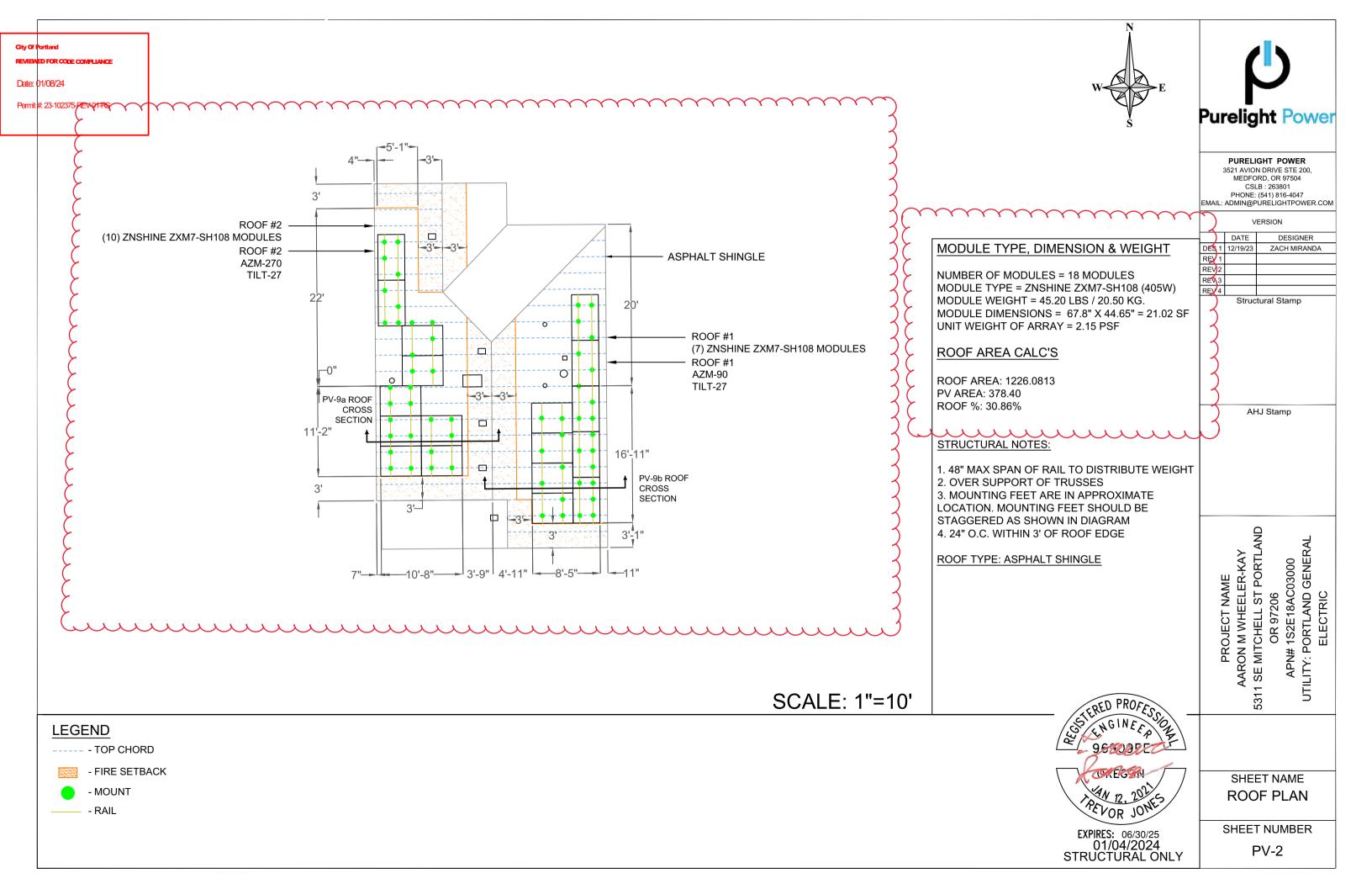
MSP

- UM UTILITY METER ---- PROPERTY LINE
  - MAIN SERVICE PANEL DRIVEWAY

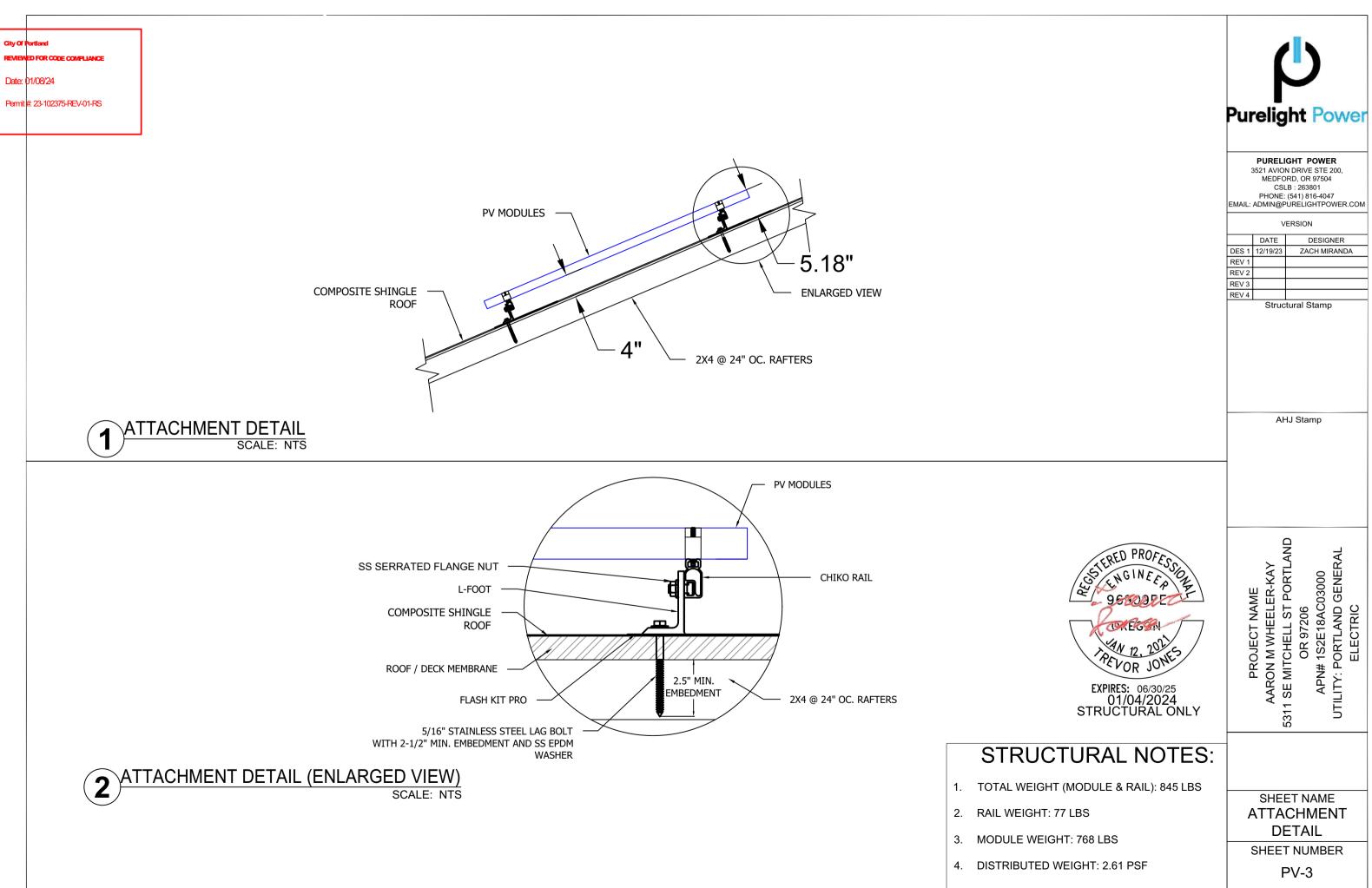
---- - ROAD LINE

- ACD AC DISCONNECT
- CB COMBINER PANEL

	1
	Purelight Power
	PURELIGHT POWER     3521 AVION DRIVE STE 200,     MEDFORD, OR 97504     CSLB : 263801     PHONE: (541) 816-4047     EMAIL: ADMIN@PURELIGHTPOWER.COM     VERSION     DATE   DESIGNER     DES 1   12/19/23   ZACH MIRANDA     REV 1
STERED PROFESSION	AHJ Stamp
EXPIRES: 06/30/25 01/04/2024 STRUCTURAL ONLY	PROJECT NAME AARON M WHEELER-KAY 5311 SE MITCHELL ST PORTLAND OR 97206 APN# 1S2E18AC03000 UTILITY: PORTLAND GENERAL ELECTRIC
	SHEET NAME
	SITE PLAN SHEET NUMBER
	PV-1





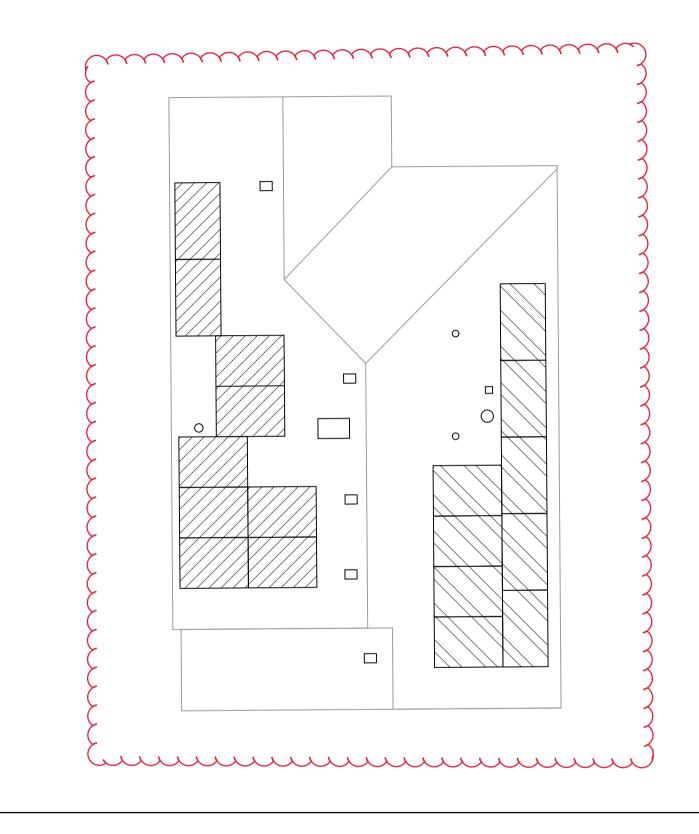


#### City Of Portland

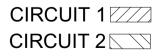
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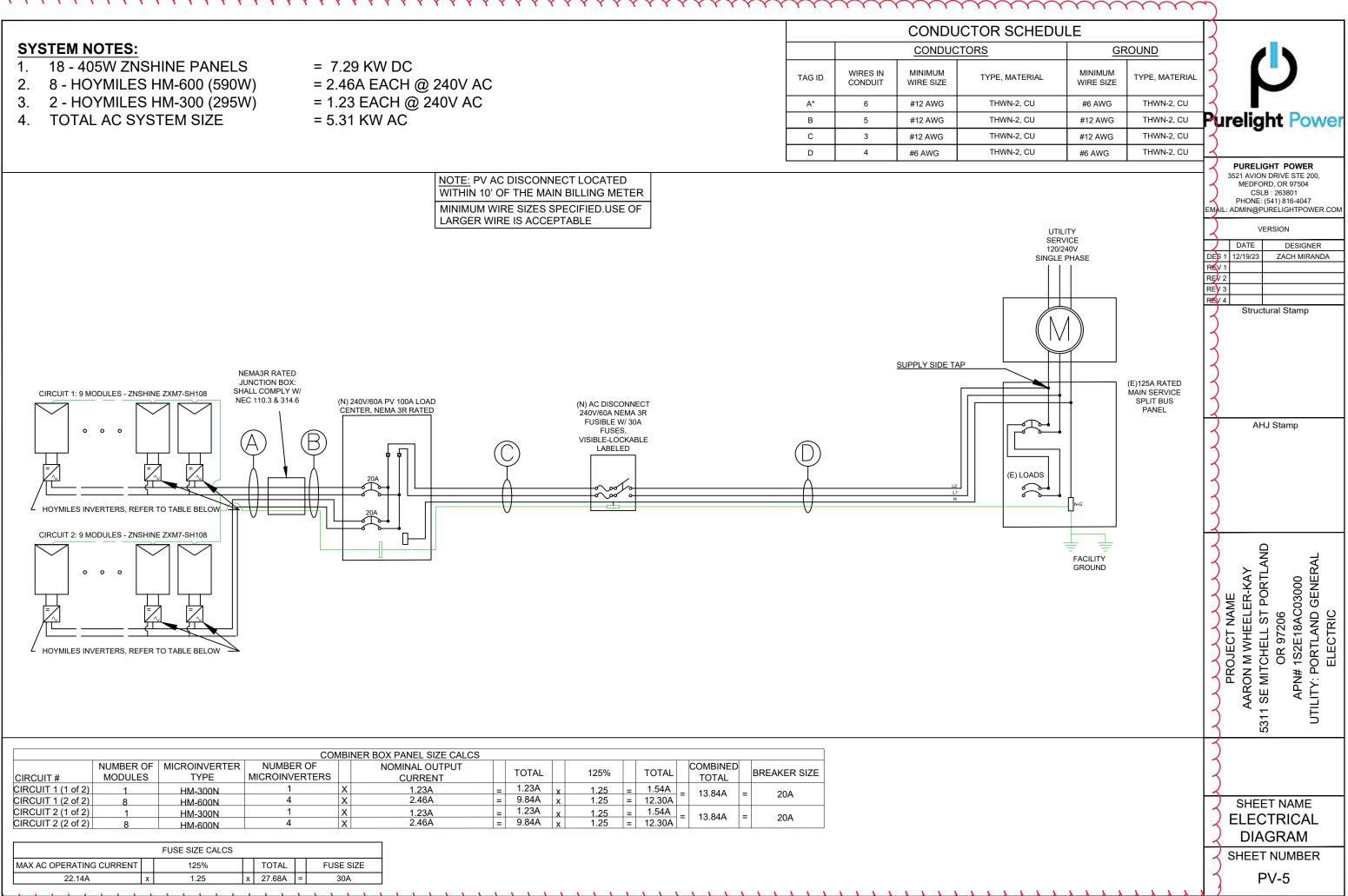
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### LEGEND



W E	Purelight Power
	PURELIGHT POWER     3521 AVION DRIVE STE 200,     MEDFORD, OR 97504     CSLB : 263801     PHONE: (541) 816-4047     EMAIL: ADMIN@PURELIGHTPOWER.COM     VERSION     DATE   DESIGNER     DES 1   12/19/23   ZACH MIRANDA     REV 1
	AHJ Stamp
SCALE: NTS	PROJECT NAME AARON M WHEELER-KAY 5311 SE MITCHELL ST PORTLAND OR 97206 APN# 1S2E18AC03000 UTILITY: PORTLAND GENERAL ELECTRIC
	SHEET NAME CIRCUIT DIAGRAM SHEET NUMBER PV-4



			COM	ИВІІ	NER BOX PANEL SIZE CALCS										
CIRCUIT #	NUMBER OF MODULES	MICROINVERTER TYPE	NUMBER OF MICROINVERTERS		NOMINAL OUTPUT CURRENT		TOTAL		125%		TOTAL		COMBINED TOTAL		BREAKER SIZE
CIRCUIT 1 (1 of 2)	1	HM-300N	1	Х	1.23A	=	1.23A	x	1.25	=	1.54A	_	13.84A	_	20A
CIRCUIT 1 (2 of 2)	8	HM-600N	4	Х	2.46A	=	9.84A	x	1.25	=	12.30A	_	13.047	-	20A
CIRCUIT 2 (1 of 2)	1	HM-300N	1	Х	1.23A	=	1.23A	x	1.25	=	1.54A	_	13.84A	_	20A
CIRCUIT 2 (2 of 2)	8	HM-600N	4	X	2.46A	=	9.84A	x	1.25	=	12.30A	_	13.04A	-	20A

		FUSE SIZE CALCS				
MAX AC OPERATING CURRENT		125%		TOTAL		FUSE SIZE
22.14A	х	1.25	х	27.68A	=	30A

### 

		BILL OF MATERIALS
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	18	ZNSHINE ZXM7-SH108 (405W) MODULES
INVERTER #1	8	HOYMILES HM-600N MICRO-INVERTER
INVERTER #2	2	HOYMILES HM-300N MICRO-INVERTER
JUNCTION BOX	2	600V, 55A MAX, 4 INPUTS, MOUNTED ON ROOF FOR WIRE & CONDUIT TRANSITION
LOAD CENTER	01	100A SOLAR LOAD CENTER
AC DISCONNECT	01	AC DISCONNECT 60A FUSED, VISIBLE, LOCKABLE, LABELED, DISCONNECT SQUARE D MODEL D222NRB, WITH 30A FUSES, 240 VAC

#### MAX AC OPERATING CURRENT CALCS FOR HM-600 # OF MICROINVERTERS MAX OUTPUT CURRENT MAX AC OPERATING CURRENT 2.46A 8 X = 19.68A MAX AC OPERATING CURRENT CALCS FOR HM-300 # OF MICROINVERTERS MAX OUTPUT CURRENT MAX AC OPERATING CURRENT

	2		X		1.23	A	=
	MAX AC	OP	ERATING		TOTAL		
CL	JRRENT FC	R	HM-600 & 300				
	HM-600		HM-300				
	19.68A	+	2.46A	=	22.14A		

#### **ELECTRICAL NOTES**

- 1.) ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
- 2.) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 & 75 DEGREE C WET ENVIRONMENT.
- 3.) WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
- 4.) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- 5.) DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
- 6.) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- 7.) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- 8.) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
- 9.) MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
- 10.) THE POLARITY OF THE GROUNDED CONDUCTORS IS NEGATIVE

#### **INTERCONNECTION NOTES:**

- INTERCONNECTION SIZING, LIMITATIONS AND COMPLIANCE 1 DETERMINED IN ACCORDANCE WITH [NEC 705.12], AND [NEC 690.64].
- 2 GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9], [NEC
- 230.95] AND [NEC 690.5] ALL EQUIPMENT TO BE RATED FOR BACKFEEDING.

#### **GROUNDING & GENERAL NOTES:**

- 1 A SECOND FACILITY GROUNDING ELECTRODE IS NOT REQUIRED PER [NEC 690.47(C)(3)]
- 2. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE. DC GEC AND AC EGC TO REMAIN UNSPLICED, OR SPLICED TO EXISTING 3. ELECTRODE
- ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
- 5. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
- AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER 6. AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.



PURELIGHT POWER 3521 AVION DRIVE STE 200. MEDFORD, OR 97504 CSLB : 263801 PHONE: (541) 816-4047 MAIL: ADMIN@PURELIGHTPOWER.COM

VERSION

DATE DESIGNER DES 1 12/19/23 ZACH MIRANDA REV 1 REV 2 REV 3 REV 4

Structural Stamp

AHJ Stamp

SHEET NAME **ELECTRICAL** CALCULATIONS SHEET NUMBER

5311

PROJECT NAME AARON M WHEELER-KAY SE MITCHELL ST PORTLAND

OR 97206 APN# 1S2E18AC03000 UTILITY: PORTLAND GENERAL ELECTRIC

PV-6

