CITY OF YAKIMA
HISTORIC PRESERVATION COMMISSION

Date: **June 25, 2025**
Time: **5:30 p.m**
Place: **City Hall Council Chambers**
Staff: **Connor Kennedy, Associate Planner**

I.	**Call to Order**	**Commission Chair**
II.	**Roll Call**	**Staff Liaison**
III.	**Approval of Meeting Minutes from 3/13/25**	**Commission Chair**
IV.	**Audience Participation**	**Commission Chair**
V.	**Audience Participation**	**Commission Chair**
VI.	**New Business** i. Certificate of Appropriateness – 3103 W. Yakima Ave	**Staff Liaison**
VII.	**Old Business**	
VIII.	**Other Business** i. Member Terms	**Commission Chair**
IX.	**Adjournment**	

Adjourn to next scheduled Historic Preservation Commission meeting July 23, 2025, at 5:30pm in the Council Chambers.

Commission Members
Cynthia Hall ▪ Clayton Bussey ▪ Paul Edmondson ▪ Joe Mann ▪ Dawn King

CITY OF YAKIMA
HISTORIC PRESERVATION COMMISSION
Council Chambers, City Hall

Date: March 13, 2025
Time: 5:15 P.M.
Place: Council Chambers, City Hall, 129, N. 2nd St.
Staff: Connor Kennedy, Associate Planner/ Historic Preservation Liaison

---

I. **Call to Order**
Meeting was called to order at approximately 5:20 P.M.

II. **Roll Call**
Commissioners Hall, Bussey, King, and Mann were present, with Commissioner Edmondson absent.

III. **Staff Announcements**
None.

IV. **Audience Participation**
None.

V. **New Business: Certificate of Appropriateness Hearing**
5 S. Naches Ave

- Connor Kennedy provided details for a proposal to add solar panels to the roof of an auxiliary building on a historic property .
- Commissioner Mann noted that the church is the oldest in the City.
- Commissioner Bussey noted that he felt it was a good proposal.
- Commissioner King agreed that the proposal looked good and it was a great idea and addressed a community need.
- Chair Hall provided a summary of the approval recommendations.
- Commissioner Bussey makes a motion to approve the certificate of appropriateness, which passed unanimously.

VI. **Other Business**
Letter in support of Yakima Valley Trolleys

- Commissioner Bussey provided a summary of a proposed letter in support of the Yakima Valley Trolleys

- Commission members shared that they felt the letter was great and that they did not need any further information on its contents or purpose.
- Commissioner Bussey moves to send a letter of support as a commission to the Yakima Valley Trolleys organization based on the draft that was shared in the meeting. The motion passes unanimously.

VII. **Adjournment**

A motion to adjourn to April 23, 2025 was passed with a unanimous vote. The meeting was adjourned at approximately 5:55 P.M.

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HPR#00225

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Yakima Historic Preservation Commission

Application for Certificate of Appropriateness

Date Submitted: 5/20/2025 | 1:06 PM PDT
Building/Property Name:
Building/Property Address: 3103 W Yakima Ave , Yakima, WA 98902
Historic District (if applicable): Barge-Chestnut District
Applicant's Name: Freedom Forever Washington, LLC - Stephanie Hawkins
Applicant's Address: 6528 S 216th St, Kent, WA 98032, USA
Applicant's Telephone: 206-929-6328
Applicant's Email: permitseattle@freedomforever.com
Property Owner's Name (if different from applicant): Salvador Gutierrez
Property Owner's Address: 3103 W Yakima Ave , Yakima, WA 98902
Property Owner's Signature: Signed by: Salvador Gutierrez *(The application must be signed by the property owner to be processed. By signing this application, the owner confirms that the application has been reviewed and approves of the proposed scope of work.)*

A Certificate of Appropriateness is requested for:

(Check one type of review)

☐ Type I Administrative Review (for repairs and replacements-in-kind); or

☐ Type II Commission Review for the following proposed work (check all that apply):

☑ Exterior alteration ☐ Interior alteration ☐ Signage

☐ New construction (addition or new building)

☐ Preliminary Approval (for large projects that may require phased approvals)

☐ Demolition/Waiver of Certificate of Appropriateness

☑ Other (please describe): Solar - Roof Mounted

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Please describe the proposed scope of work in detail below or attach a description:

Solar system installation

7.695kW Solar System Installation - Roof Mounted on Main Dwelling and Detached Structure
-(N) 200A SolarEdge Backup Interface
-(N) Solaredge Energy Bank

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Application Checklist:

- ☑ Application form
- ☑ Property owner consent/signature
- ☑ Scaled drawings depicting proposed work
- ☑ Clear photographs of existing conditions of the building, object, site or structure
- ☑ Description of the proposed scope of work
- ☐ Samples of replacement materials

Submit completed application and supporting materials to:

Department of Community and Economic Development
129 North Second Street
Yakima, WA 98901

Please note: The Yakima Historic Preservation Commission meets on the fourth Wednesday of each month. Completed applications are due four weeks prior to the meeting date you are targeting, so please plan accordingly. Incomplete or missing information will delay consideration of your application.

Freedom Forever
Planset Revision Letter

5/16/2025
REV #1

Attn. City of Yakima (WA):

The changes outlined in Revision Details have been applied to the plans corresponding to the following customer:

SALVADOR GUTIERREZ
3103 W YAKIMA AVE

Revision Details:
REV 1
One additional solar module added to the project bringing the total to 20. Optimizers changed due to string size capability. The additional module will be shown on the main structure of the home.

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PLANNING DIV.

All corresponding changes are notated on the plans by revision clouds.

Thank you for your time in reviewing these plans. Please reach out if you have any additional questions or concerns.

Construction Engineering
Freedom Forever
engineering@freedomforever.com

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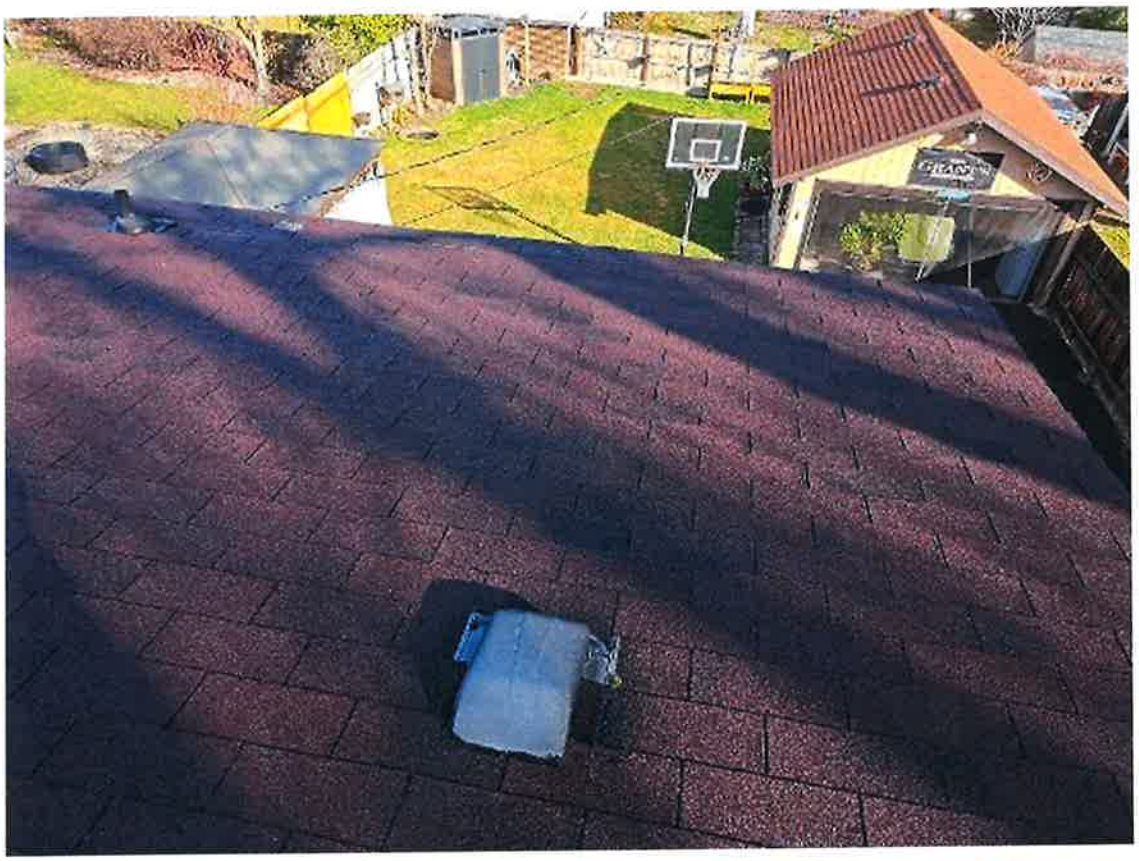
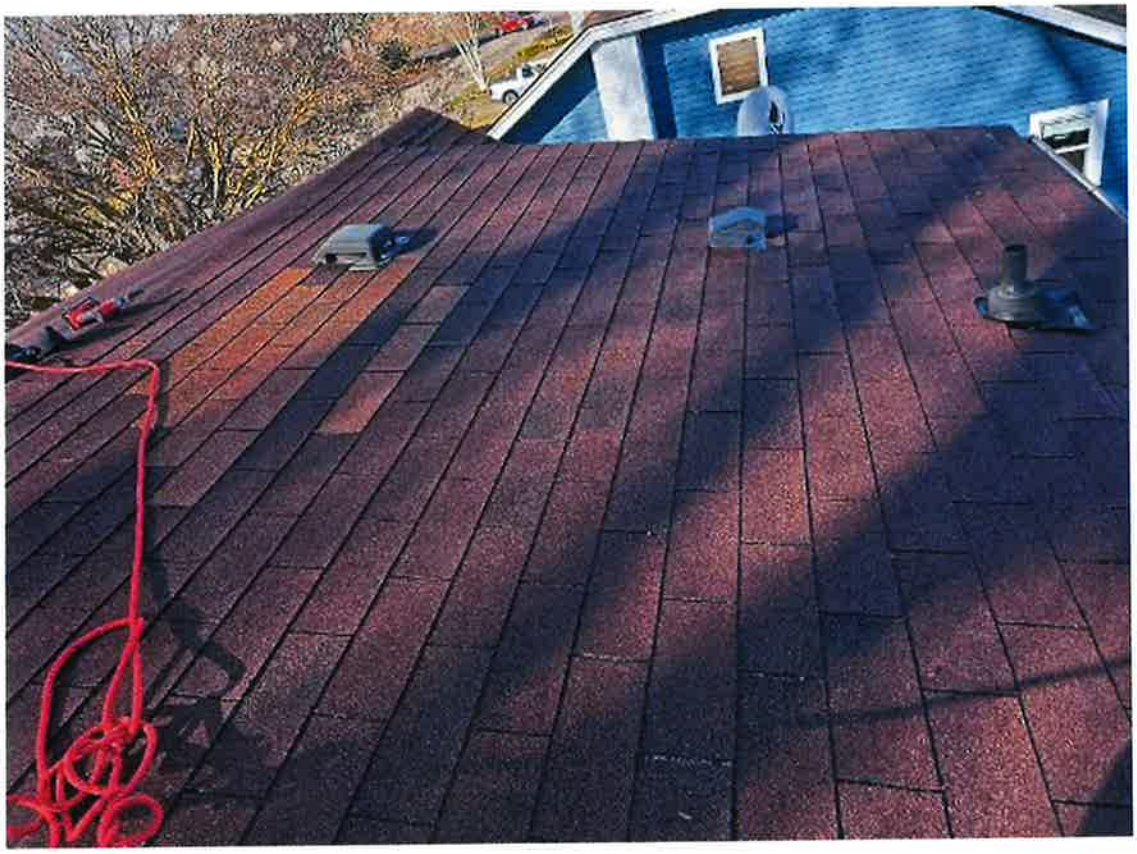
PLANNING DIV





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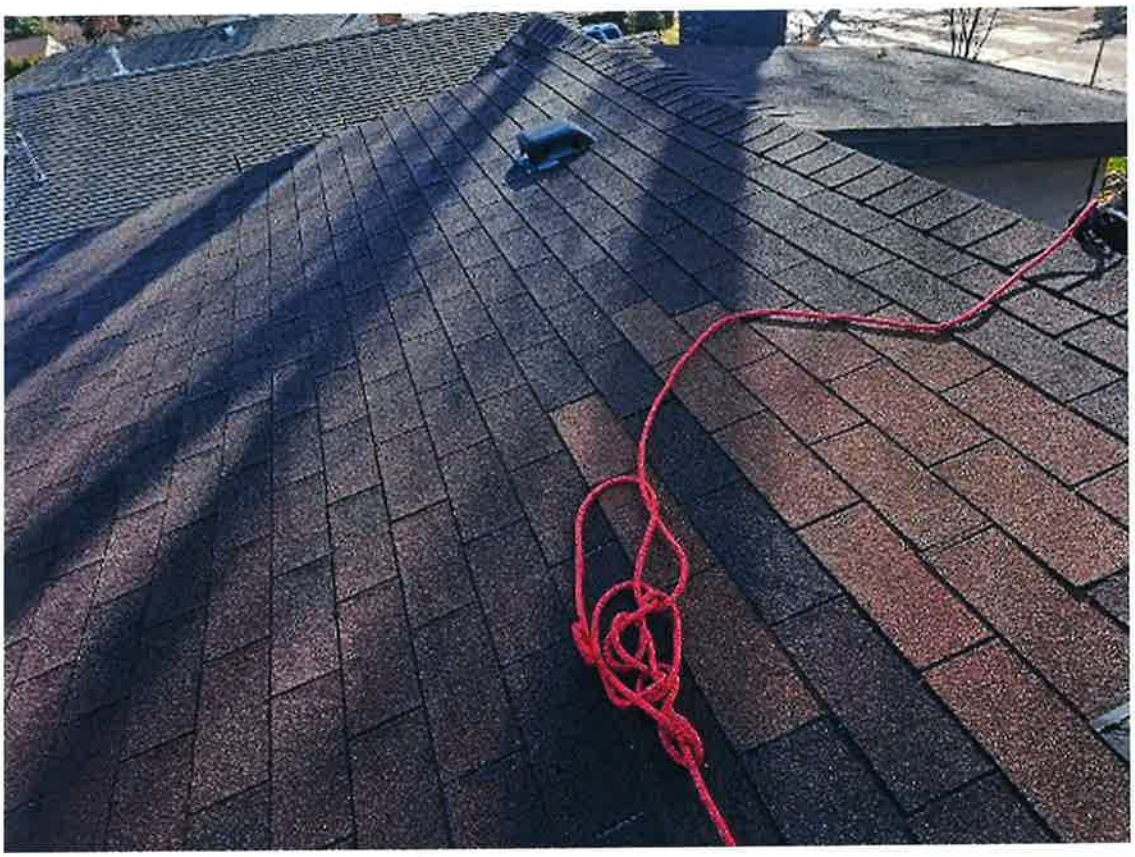

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PLANNING DIV.

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PLANNING DIV

Detached Structure:

8.100kW DC ROOF MOUNT PHOTOVOLTAIC SYSTEM

CODES:

THIS PROPOSED INSTALLATION COMPLIES WITH THE FOLLOWING:
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL RESIDENTIAL CODE
2021 INTERNATIONAL FIRE CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2021 INTERNATIONAL EXISTING BUILDING CODE
2021 INTERNATIONAL FUEL GAS CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2023 NATIONAL ELECTRICAL CODE
AS ADOPTED BY CITY OF YAKIMA

VICINITY MAP:

TABLE OF CONTENTS:

PV-1	PROJECT DETAILS
PV-2	SITE PLAN
PV-2A	ROOF PLAN WITH MODULES LAYOUT
PV-2B	ARRAY DETAILS
PV-3	MOUNTING DETAILS
PV-4	THREE LINE DIAGRAM
PV-5	CONDUCTOR CALCULATIONS
PV-6	EQUIPMENT & SERVICE LIST
PV-7	LABELS
PV-7A	SITE PLACARD
PV-8	OPTIMIZER CHART
PV-9	SAFETY PLAN
PV-10	SAFETY PLAN
APPENDIX	MANUFACTURER SPECIFICATION SHEETS

CONSTRUCTION NOTES:

CONDUIT AND CONDUCTOR SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING AS REQUIRED BY FIELD CONDITIONS.

ALL SOLAR ENERGY SYSTEM EQUIPMENT SHALL BE SCREENED TO THE MAXIMUM EXTENT POSSIBLE AND SHALL BE PAINTED A COLOR SIMILAR TO THE SURFACE UPON WHICH THEY ARE MOUNTED.

MODULES SHALL BE TESTED , LISTED AND INDENTIFIED WITH FIRE CLASSIFICATION IN ACCORDANCE WITH UL 2703. SMOKE AND CARBON MONOXIDE ALARMS ARE REQUIRED PER SECTION R314 AND 315 TO BE VERIFIED AND INSPECTED BY INSPECTOR IN THE FIELD.

DIG ALERT (811) TO BE CONTACTED AND COMPLIANCE WITH EXCAVATION SAFETY PRIOR TO ANY EXCAVATION TAKING PLACE

PHOTOVOLTAIC SYSTEM GROUND WILL BE TIED INTO EXISTING GROUND AT MAIN SERVICE FROM DC DISCONNECT/INVERTER AS PER 2023 NEC SEC 250.166(A).

SOLAR PHOTOVOLTAIC SYSTEM EQUIPMENT WILL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF ART. 690 OF THE 2023 NEC

THE MAIN SERVICE PANEL WILL BE EQUIPPED WITH A GROUND ROD OR UFER

UTILITY COMPANY WILL BE NOTIFIED PRIOR TO ACTIVATION OF THE SOLAR PV SYSTEM

SOLAREDGE OPTIMIZERS ARE LISTED TO IEC 62109-1 (CLASS II SAFETY) AND UL 1741 STANDARDS

INSTALL CREW TO VERIFY ROOF STRUCTURE PRIOR TO COMMENCING WORK. EMT CONDUIT ATTACHED TO THE ROOF USING CONDUIT MOUNT.

THIS SYSTEM DESIGNED WITH:
WIND SPEED: 110
WIND EXPOSURE: C
SNOW LOAD: 30

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PLANNING DIV.

SYSTEM SIZE

PV SYSTEM (DC): 8.100kW
PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS

SALVADOR GUTIERREZ
3103 W YAKIMA AVE, YAKIMA, WA 98902
AHJ: CITY OF YAKIMA
UTILITY: PACIFIC POWER
METER: 65568065
APN: 181323-32421
EMAIL: OMGUTIERREZ@LIVE.COM
FINANCE: MOSAIC POWERSWITCH CHOICE

SYSTEM DETAILS

MODULES: 20 X JA SOLAR: JAM54S31-405/MR
OPTIMIZERS: 20 X SOLAREDGE S440
INVERTER 1: SOLAREDGE SE5700H-US
(PART/SKU: SE5700H-USMNUBL15)
BATTERY: 1 X SOLAREDGE: ENERGY BANK

REVISIONS

NO.	REVISED BY	DATE
1	B.R.	2/10/2025
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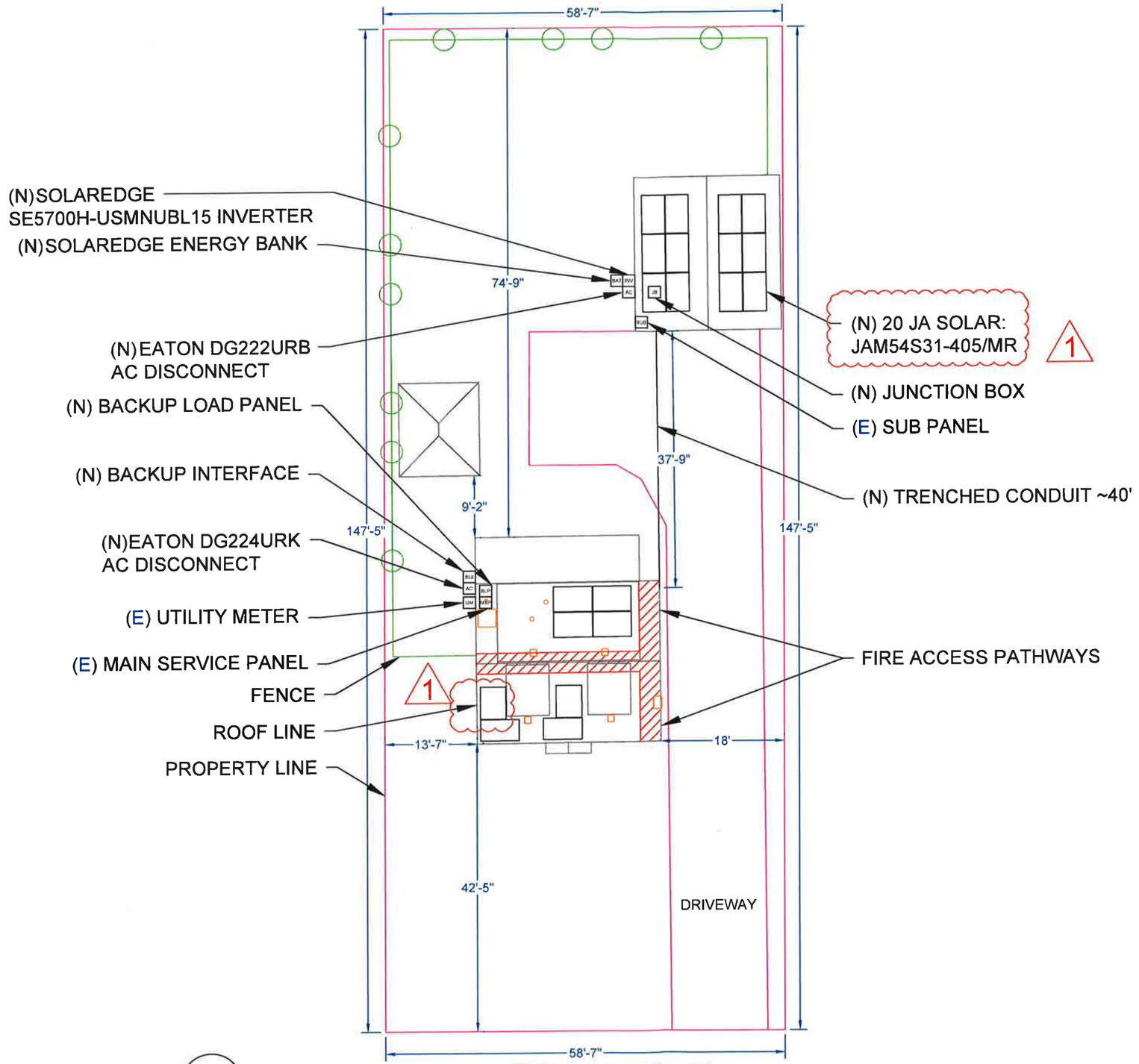
FREEDOM FOREVER "WASHINGTON, LLC"
43445 BUSINESS PARK DRIVE SUITE 110,
TEMECULA, CA 92590
Tel: (888) 557-6431
GREG ALBRIGHT
CONTRACTOR LICENSE:
ELECTRICAL ADMINISTRATOR ALBRIG*807C1

PROJECT DETAILS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-1

LEGEND:

- CHIMNEY
- PIPE VENT
- MODULES
- CONDUIT
- SETBACK
- AC — AC DISCONNECT
- UM — UTILITY METER
- JB — JUNCTION BOX
- INV — INVERTER
- MSP — MAIN SERVICE PANEL



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

1

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SITE PLAN

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-2

LEGEND:

- CHIMNEY
- PIPE VENT
- MODULES
- CONDUIT
- SETBACK
- AC — AC DISCONNECT
- UM — UTILITY METER
- JB — JUNCTION BOX
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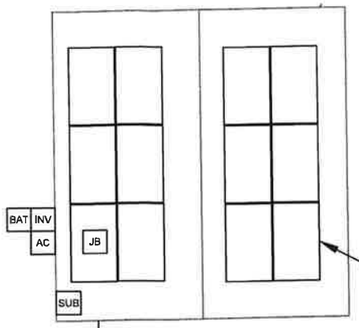

(N) 20 JA SOLAR:
JAM54S31-405/MR

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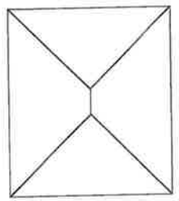

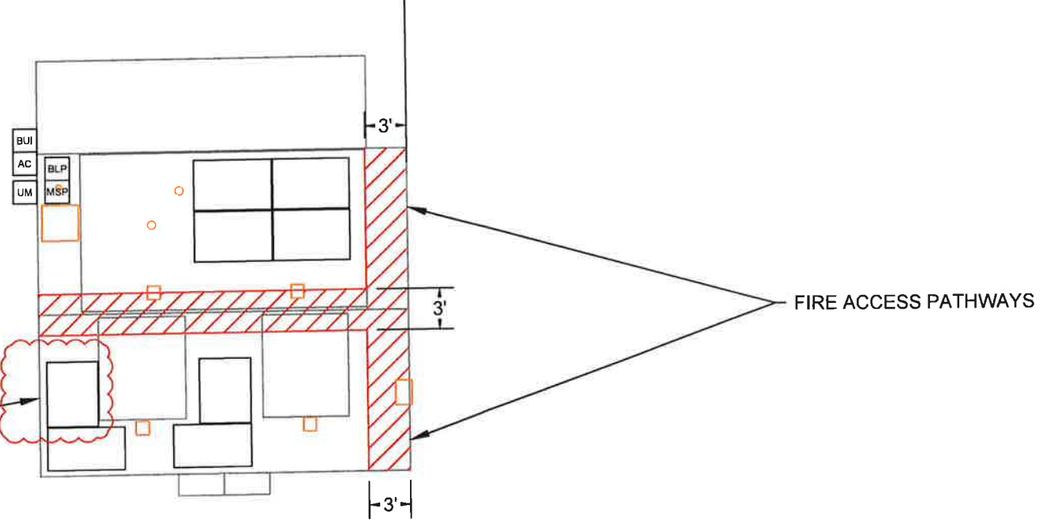

FIRE ACCESS PATHWAYS

ROOF LINE

TOTAL ROOF AREA: 878.99 SQ FT
TOTAL ARRAY AREA: 420.39 SQ FT
ARRAY COVERAGE: 47.83%
SYSTEM DISTRIBUTED WEIGHT: 2.76 LBS
SNAPNRACK RL UNIVERSAL POINT-LOAD:
36.47 LBS

ROOF PLAN
SCALE: 3/32" = 1'-0"

1

NOTES:
1. EMT CONDUIT ATTACHED TO THE ROOF USING CONDUIT MOUNTS
2. ATTACHED CLAMPS AT 25% FROM THE EDGE AND 50% FROM THE CENTER OF THE MODULES
3. JUNCTION BOX IS MOUNTED TO THE RAIL.

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ROOF PLAN WITH MODULES LAYOUT

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-2A

ROOF DETAILS:

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SYSTEM DISTRIBUTED WEIGHT: 2.76 LBS
SNAPNRACK RL UNIVERSAL POINT-LOAD: 36.47 LBS

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ROOF AREA STATEMENT						
ROOF	MODULE QUANTITY	ROOF PITCH	ARRAY PITCH	AZIMUTH	ROOF AREA	ARRAY AREA
ROOF 1	4	33	33	179.4	266.31 SQ FT	84.08 SQ FT
ROOF 2	4	10	9.5	359.4	243.32 SQ FT	84.08 SQ FT
ROOF 3	6	25	25	89.4	266.09 SQ FT	126.12 SQ FT
ROOF 4	6	25	25	269.4	266.09 SQ FT	126.12 SQ FT
----	----	----	----	----	SQ FT	SQ FT
----	----	----	----	----	SQ FT	SQ FT
----	----	----	----	----	SQ FT	SQ FT
----	----	----	----	----	SQ FT	SQ FT
----	----	----	----	----	SQ FT	SQ FT
----	----	----	----	----	SQ FT	SQ FT

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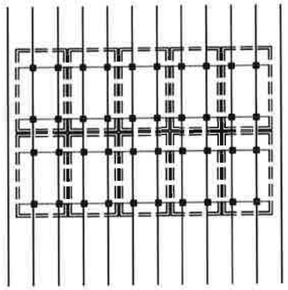
ARRAY DETAILS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-2B

TABLE 1 – ARRAY INSTALLATION

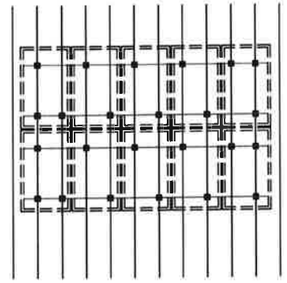
	ROOF PITCH	ROOFING TYPE	ATTACHMENT TYPE	FRAMING TYPE	MAX UNBRACED LENGTH(FT.)	STRUCTURAL ANALYSIS RESULT	PENETRATION PATTERN	MAX ATTACHMENT SPACING (IN.)	MAX RAIL OVERHANG(IN.)
ROOF 1	33	Comp Shingle	SnapNRack RL Universal	2x4 @ 24" O.C.	8	PASS	STAGGERED	72	24
ROOF 2	9.5	Comp Shingle	SnapNRack RL Universal	2x4 @ 24" O.C.	8	PASS	STAGGERED	72	24
ROOF 3	25	Comp Shingle	SnapNRack RL Universal	2x4 @ 24" O.C.	7.16	PASS	STAGGERED	72	24
ROOF 4	25	Comp Shingle	SnapNRack RL Universal	2x4 @ 24" O.C.	7.16	PASS	STAGGERED	72	24

1. CONTRACTOR TO VERIFY FRAMING TYPE AND MAX UNBRACED LENGTH PRIOR TO INSTALLATION. IF THE ABOVE INFORMATION DOES NOT MATCH FIELD CONDITIONS, NOTIFY ENGINEER OF RECORD IMMEDIATELY.
2. WHERE COLLAR TIES OR RAFTER SUPPORTS EXIST, CONTRACTOR SHALL USE RAFTERS WITH COLLAR TIES AS ATTACHMENT POINTS.
3. MAX RAIL OVERHANG APPLICABLE FOR RAILED ATTACHMENT INSTALLATIONS.



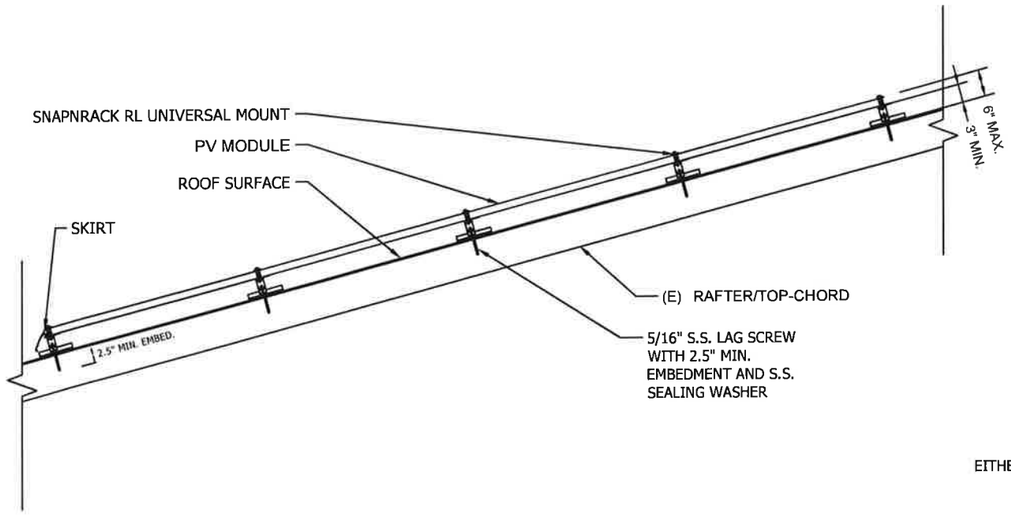
STACKED DETAIL

For Illustration purposes only



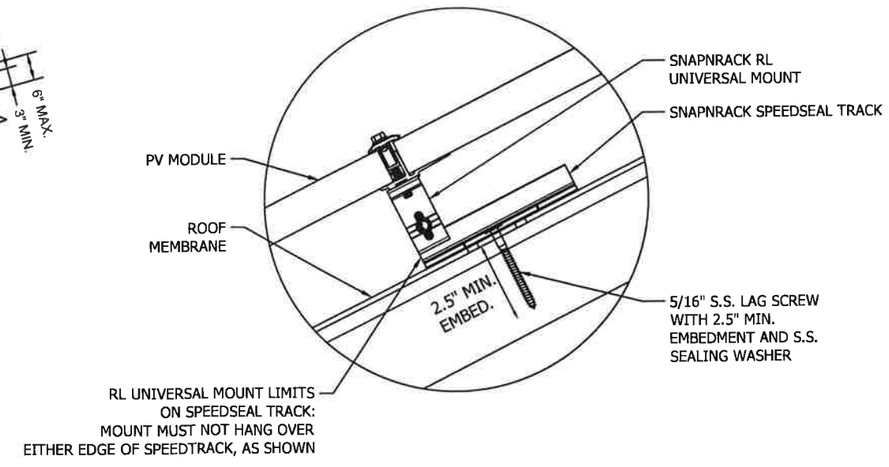
STAGGERED DETAIL

For Illustration purposes only



SOLAR PV ARRAY SECTION VIEW

Scale: NTS



ATTACHMENT DETAIL

Scale: NTS

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43445 BUSINESS PARK DRIVE SUITE 110,
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Tel: (888) 557-6431

GREG ALBRIGHT

CONTRACTOR LICENSE:
ELECTRICAL ADMINISTRATOR ALBRIG*807C1

MOUNTING DETAILS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-3

BACKFEED BREAKER SIZING						
MAX. CONTINUOUS OUTPUT 24.00A @ 240V						
24.00	X	1.25	=	30.00AMPS		30A BREAKER - OK
SEE 705.12 OF 2023 NEC						
200	X	1.20	=	240		
240	-	200	=	40A ALLOWABLE BACKFEED		

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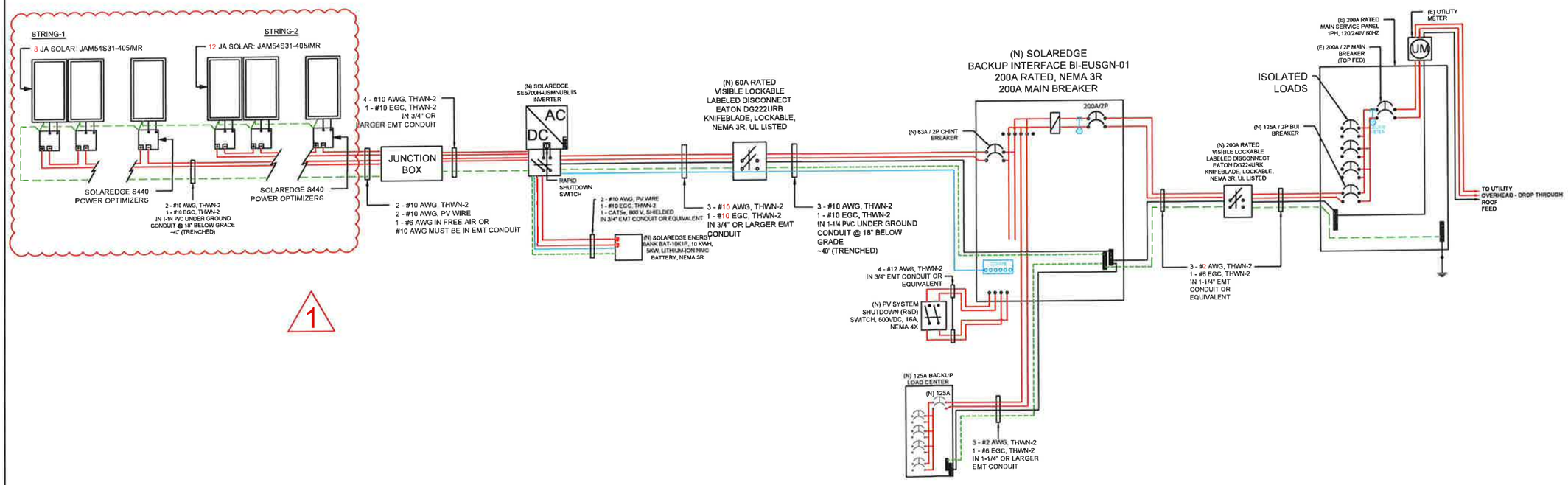

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MODULES: 20 X JA SOLAR: JAM54S31-405/MR
OPTIMIZERS: 20 X SOLAREDGE S440
INVERTER 1: SOLAREDGE SE5700H-US (PART/SKU: SE5700H-USMNUBL15)
BATTERY: 1 X SOLAREDGE: ENERGY BANK

REVISIONS

NO.	REVISED BY	DATE
1	B.R.	2/10/2025
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FREEDOM FOREVER "WASHINGTON, LLC"
43445 BUSINESS PARK DRIVE SUITE 110,
TEMECULA, CA 92590
Tel: (888) 557-6431
GREG ALBRIGHT
CONTRACTOR LICENSE:
ELECTRICAL ADMINISTRATOR ALBRIG*807C1

THREE LINE DIAGRAM

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-4

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CITY OF YAKIMA
PLANNING DIV.

WIRE SCHEDULE

RACEWAY #	EQUIPMENT				CONDUCTOR QTY.	AWG WIRE SIZE	STARTING ALLOWABLE AMPACITY @ 90°C 310.15(B)(16)	STARTING CURRENT APPLIED TO CONDUCTORS IN RACEWAY	TEMPERATURE CORRECTION FACTOR 310.15(B)(2)(a)	ADJUSTMENT FACTOR FOR MORE THAN 3 CONDUCTORS 310.15(B)(3)(a)	ADJUSTED CONDUCTOR AMPACITY @ 90°C	MAXIMUM CURRENT APPLIED TO CONDUCTORS IN RACEWAY
1	DC	MODULE	TO	OPTIMIZER	2	10	40	13.88	0.91	1	36.40	17.34
2	DC	OPTIMIZER	TO	JUNCTION BOX	2	10	40	15.00	0.91	1	36.40	18.75
3	DC	JUNCTION BOX	TO	INVERTER	4	10	40	15.00	0.91	0.8	29.12	18.75
4	DC	ENERGY BANK	TO	INVERTER	2	10	40	16.00	0.91	1	36.40	20.00
5	AC	INVERTER	TO	AC DISCONNECT	3	10	40	24.00	0.91	1	36.40	30.00
6	AC	BACKUP INTERFACE	TO	BACKED UP LOADS PANEL	3	2	130	92.20	0.91	1	118.30	115.25
7	AC	AC DISCONNECT	TO	BACKUP INTERFACE	3	10	40	24.00	0.91	1	36.40	30.00
8	AC	BACKUP INTERFACE	TO	AC DISCONNECT	3	2	130	92.20	0.91	1	118.30	115.25
9	AC	AC DISCONNECT	TO	POI	3	2	130	92.20	0.91	1	118.30	115.25

CONDUCTOR AMPACITY CALCULATIONS IN ACCORDANCE WITH NEC 690.8.

SYSTEM SIZE

PV SYSTEM (DC): 8.100kW
PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS

SALVADOR GUTIERREZ
3103 W YAKIMA AVE, YAKIMA, WA 98902
AHJ: CITY OF YAKIMA
UTILITY: PACIFIC POWER
METER: 66568065
APN: 181323-32421
EMAIL: OMGUTIERREZ@LIVE.COM
FINANCE: MOSAIC POWERSWITCH CHOICE

SYSTEM DETAILS

MODULES: 20 X JA SOLAR: JAM54S31-405/MR
OPTIMIZERS: 20 X SOLAREDGE S440
INVERTER 1: SOLAREDGE SE5700H-US
(PART/SKU: SE5700H-USMNUBL15)
BATTERY: 1 X SOLAREDGE: ENERGY BANK

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CONDUCTOR CALCULATIONS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
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CITY OF YAKIMA
PLANNING DIV.

SYSTEM SIZE

PV SYSTEM (DC): 8.100kW
PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS

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3103 W YAKIMA AVE, YAKIMA, WA 98902
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ELECTRICAL CALCULATIONS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-5A

Missing or invalid reference
File: ..\Deliverables\538347_Salvador Gutierrez_Panel_Schedule.pdf
Sheet: 1

OCPD SIZES:

63A BREAKER
125A BREAKER
125A BREAKER

SERVICE LIST:

TRENCHING

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CITY OF YAKIMA
PLANNING DIV.

MATERIAL LIST:

PART_TYPE	PART_NUMBER	SKU	PART_DESCRIPTION	QUANTITY
220 - Mids and Ends	RAC-223-303-DC	242-10063-USA	MFG: Snap N Rack, AlphaTrack (USA), MFG SKU: 242-10063-USA	26
260 - Fittings/Anchors	RAC-263-051-DC	232-02493-USA	MFG: Snap N Rack, Universal Double Portrait Skirt 83IN Black, MFG SKU: 232-02493-USA	10
260 - Fittings/Anchors	RAC-263-052-DC	232-02532-USA	MFG: Snap N Rack, RL Universal Skirt Spacer 30MM, MFG SKU: 232-02532-USA	20
240 - Footings	RAC-245-114-DC	242-02155-USA	MFG: Snap N Rack, RL Universal Mount, MFG SKU: 242-02155-USA	26
240 - Footings	RAC-245-115-DC	242-02156-USA	MFG: Snap N Rack, RL Universal Link, MFG SKU: 242-02156-USA	40
110 - Modules	PV-110-405	JAM54S31-405/MR	MFG: JA Solar, 405W Half-cell Black, Mono, MFG SKU: JAM54S31-405/MR	20
120 - Inverters	INV-120-575	SE5700H-USMNUBL15	MFG: Solaredge, 5.7 kW, Single Phase Energy Hub, HD Wave RGM w/ Consumption Monitoring, MFG SKU: SE5700H-USMNUBL15	1
180 - Monitoring Equipment	ME-180-502	SE-CELL-B-R05-S-S2	MFG: Solaredge, Cell Modem W/5 Yrs, MFG SKU: SE-CELL-B-R05-US-S-S2	1
160 - Equipment Accessories	EA-163-508	SECT-SPL-225A-T-20	MFG: Solaredge, 225A CT, MFG SKU: SECT-SPL-225A-T-20	2
160 - Equipment Accessories	EA-163-304	ENET-HBNP-01	MFG: SolarEdge, Energy Net Plug-In, MFG SKU: ENET-HBNP-01	1
160 - Equipment Accessories	EA-163-302	IAC-RBAT-USYCBL-01	MFG: SolarEdge, Branch Connector set (include + & -), MFG SKU: IAC-RBAT-USYCBL-01	1
350 - Electrical Accessories	EA-350-114	221-612	MFG: Wago, 2 Conductor Compact Splice, 10 Awg, MFG SKU: 221-612	4
130 - Optimizers	OPT-130-440-2	S440	MFG: Solaredge, 440W 60V Optimizer, MFG SKU: S440	20
260 - Fittings/Anchors	RAC-260-061	JB-3	MFG: EZ Solar, Junction Box, PV, MFG SKU: JB-3	2
320 - Disconnects	EE-321-060	DG222URB	MFG: Eaton, Disconnect, General Duty, 2P, 240V, 60A, Non Fusible, Nema 3R, MFG SKU: DG222URB	1
320 - Disconnects	EE-321-202	DG224URK	MFG: Eaton, Disconnect, General Duty, 2P, 240V, 200A, Non Fusible, Nema 3R, MFG SKU: DG224URK	1
140 - Batteries	BAT-143-000	BAT-10K1PS0B-02	MFG: SolarEdge, Home Battery, 5kWp, 10kWh, MFG SKU: BAT-10K1PS0B-02	1
260 - Fittings/Anchors	RAC-260-550	ACC-FPV180	MFG: Burndy, Pv Wiley Cable Clip Â Thickness Range: 1.3 to 3mm MFG SKU: ACC-FPV180	200
350 - Electrical Accessories	EA-350-585	SGB-4	MFG: Ilsco, Ground Lug, MFG SKU: SGB-4	3
260 - Fittings/Anchors	RAC-265-018	4011012	MFG: Eco Fasten, Frame MLPE Mount SS, MFG SKU: 4011012	20
260 - Fittings/Anchors	RAC-263-506	242-02168	MFG: Snap N Rack, Sealing Washer Lag 4-1/2IN SS, MFG SKU: 242-02168	26

SYSTEM SIZE

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PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS

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EQUIPMENT & SERVICE LIST

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-6

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT
690.13(B)

DO NOT DISCONNECT UNDER LOAD
NEC 690.15 (B) & NEC 690.33(D)(2)

⚠ WARNING
SINGLE 120-VOLT SUPPLY
DO NOT CONNECT
MULTIWIRE BRANCH CIRCUITS
NEC 710.15(C) & 692.9 (C)

⚠ WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM
NEC 705.12(D) & NEC 690.59

⚠ WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL
NEC 110.27(C) & OSHA 1910.145(F)(7)

⚠ WARNING
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
706.15(C)(4) & 690.13(B)

⚠ WARNING
THIS EQUIPMENT FED BY MULTIPLE SOURCES:
TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN POWER SUPPLY SHALL NOT EXCEED AMPACITY OF BUSBAR
NEC 705.12(B)(3)(3)

⚠ WARNING
THE DISCONNECTION OF THE GROUNDED CONDUCTOR(S) MAY RESULT IN OVERVOLTAGE ON THE EQUIPMENT
NEC 690.31(E)

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM
690.56(C)(3)

M

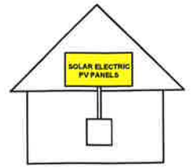
AC

PM

INVERTER

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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



IFC 605.11.3.1(1) & 690.56(C)

⚠ CAUTION
PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED
NEC 705.12(D) & NEC 690.59

⚠ WARNING
POWER SOURCE OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE.
NEC 705.12(C) & NEC 690.59

⚠ WARNING
ARC FLASH AND SHOCK HAZARD
APPROPRIATE PPE REQUIRED
NEC 706.15(C) AND NEC 110.16

PHOTOVOLTAIC AC DISCONNECT
NEC 690.13(B)

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT	24.00A
NOMINAL OPERATING AC VOLTAGE	240V

NEC 690.54

⚠ WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM
NEC 705.12(D) & NEC 690.59

SOLAR PV DC CIRCUIT
EVERY 10' ON CONDUIT AND ENCLOSURES
NEC 690.31

PHOTOVOLTAIC POWER SOURCE
EVERY 10' ON CONDUIT AND ENCLOSURES
NEC 690.31(D)(2)

MAXIMUM VOLTAGE	480	V
MAXIMUM CIRCUIT CURRENT	30	A
MAX DC-DC CONVERTER OUTPUT CURRENT	15	A

DC

J/B

PHOTOVOLTAIC DC DISCONNECT
NEC 690.13(B)

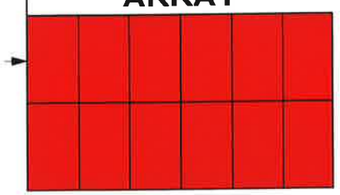
MAXIMUM DC VOLTAGE OF PV SYSTEM
NEC 690.53

⚠ WARNING
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT
706.15(C)(4) & 690.13(B)

⚠ WARNING
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION
706.15(C)(4) & 690.13(B)

⚠ WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL
NEC 110.27(C) & OSHA 1910.145(F)(7)

ARRAY



NEC 690.31(G)(3) & (4)

NOTES:

1. NEC ARTICLES 690 AND 705 AND IRC SECTION R324 MARKINGS SHOWN HEREON.
2. ALL MARKING SHALL CONSIST OF THE FOLLOWING:
   - A. UV RESISTANT SIGN MATERIAL WITH ENGRAVED OR MACHINE PRINTED LETTERS OR ELECTRO-PLATING.
   - B. RED BACKGROUND COLOR WHITE TEXT AND LINE WORK.
   - C. ARIAL FONT.
3. ALL SIGNS SHALL BE SIZED APPROPRIATELY AND PLACED IN THE LOCATIONS SPECIFIED. SIGNAGE CANNOT BE HAND-WRITTEN.
4. SIGNS SHALL BE ATTACHED TO THE SERVICE EQUIPMENT WITH POP-RIVETS OR SCREWS

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CITY OF YAKIMA
PLANNING DIV.

SYSTEM SIZE
PV SYSTEM (DC): 8.100kW
PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS
SALVADOR GUTIERREZ
3103 W YAKIMA AVE, YAKIMA, WA 98902
AHJ: CITY OF YAKIMA
UTILITY: PACIFIC POWER
METER: 66568065
APN: 181323-32421
EMAIL: OMGUTIERREZ@LIVE.COM
FINANCE: MOSAIC POWERSWITCH CHOICE

SYSTEM DETAILS
MODULES: 20 X JA SOLAR: JAM54S31-405/MR
OPTIMIZERS: 20 X SOLAREDGE S440
INVERTER 1: SOLAREDGE SE5700H-US (PART/SKU: SE5700H-USMNUBL15)
BATTERY: 1 X SOLAREDGE: ENERGY BANK

REVISIONS

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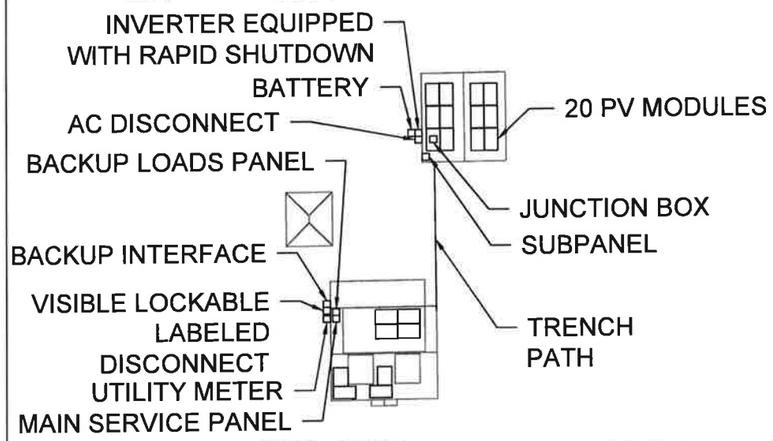
LABELS

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-7

CAUTION:

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS AS SHOWN



WARNING

TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

W YAKIMA AVE

N

1

NOTES:

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2. ALL MARKING SHALL CONSIST OF THE FOLLOWING:
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   B. RED BACKGROUND COLOR WHITE TEXT AND LINE WORK.
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SITE PLACARD

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-7A

SOLAREDGE OPTIMIZER CHART

	1-10	11-20	21-30	31-40	41-50	51-60
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

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OPTIMIZER CHART

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-8

SAFETY PLAN

INSTRUCTIONS:

1. USE SYMBOLS IN KEY TO MARK UP THIS SHEET.
2. SAFETY PLAN MUST BE MARKED BEFORE JOB STARTS AS PART OF THE PRE-PLAN
3. DOCUMENT ALL ADDITIONAL HAZARDS ON THIS PAGE & MAKE NOTES ON THE JHA SHEET

INCIDENT REPORTING:

INJURIES - CALL INJURY HOTLINE

(855) 400-7233

**If injury is life threatening, call 911 first THEN the Injury Hotline*

NON-INJURIES - USE MOBILE INCIDENT REPORTING
(Auto, Property Damage, Near Miss)

NEAREST OCCUPATIONAL/INDUSTRIAL CLINIC:

NAME: _____

ADDRESS: _____

NEAREST HOSPITAL:

NAME: _____

ADDRESS: _____

SAFETY COACH CONTACT INFORMATION:

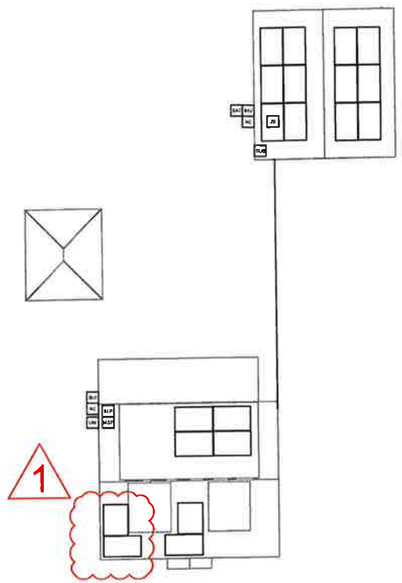
NAME: _____

PHONE NUMBER: _____

ALL EMPLOYEES ON SITE SHALL BE MADE AWARE OF THE SAFETY PLAN AND SIGN INDICATING THAT THEY ARE AWARE OF THE HAZARDS ON-SITE AND THE PLAN FOR WORKING SAFELY.

NAME	SIGNATURE

DATE: _____ TIME: _____



W YAKIMA AVE

MARK UP KEY

- (P) PERMANENT ANCHOR
- (T) TEMPORARY ANCHOR
- IL INSTALLER LADDER
- B JUNCTION / COMBINER BOX
- S STUB-OUT
- SKYLIGHT
- NO LADDER ACCESS (STEEP GRADE OR GROUND LEVEL OBSTRUCTIONS)
- RESTRICTED ACCESS
- CONDUIT
- (GAS) GAS SHUT OFF
- (H_2O) WATER SHUT OFF
- (7) SERVICE DROP
- (Z) POWER LINES

BREAK AND WATER LOG

THIS LOG IS TO BE FILLED OUT ANY TIME THE TEMP EXCEEDS **90** DEGREES. THE CREW LEAD AND ROOF LEAD ARE RESPONSIBLE FOR ENSURING THIS IS COMPLETED AND UPLOADED AT THE END OF EVERYDAY WHEN TEMPS EXCEED **90** DEGREES

NAME	0800HRS	0900HRS	1000HRS	1100HRS	1200HRS	1300HRS	1400HRS	1500HRS	1600HRS

POLICIES

INSTRUCTIONS:

1. SCAN QR LINK BELOW TO ACCESS ALL FREEDOM FOREVER SAFETY POLICIES AND PROGRAMS.

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SAFETY PLAN

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-9

JOB HAZARD ANALYSIS

Crew leader to fill out all sections below, hold a pre-job safety meeting with all personnel, and upload this completed document and the Safety Plan to Site Capture

Ladder Access
- Ladders must be inspected before each use.
- Extension ladders must be set up on a firm and level surface at a 4-to-1 rise to run angle (or 75 degrees) and the top must be secured to the structure. Extension style ladders placed on uneven, loose or slippery surfaces must additionally have the base firmly anchored or lashed so the base will not slip out.
- Extension ladders must be used with walk-through devices or the ladder must extend 36" above the stepping off point.
- A-frame ladders must only be climbed with the ladder spreader bars locked in the open position; A-frame ladders shall not be climbed while in the closed position (ex, closed and used while leaned against a structure).

- Additional notes:

Mobile Equipment
- Only Qualified operators will operate equipment; operators must maintain a certification on their person for the equipment being operated.
- Type(s) of mobile equipment (Type/Make/Model):
- Qualified operator(s):

Material Handling and Storage
- Materials will be staged/stored in a way that does not present a hazard to client, personnel or public. Materials stored on the roof will be physically protect from failing or sliding off.

Fall Protection
- A site-specific plan for fall prevention and protection is required prior to starting work and must remain onsite at all times until work is complete; a fall rescue plan must be outlined and discussed among the crew prior to work start.
- First-person-Up (FPU) must install their anchor and connect before any other task, including installing other anchors. The Last-Person-Down (LPD) must be the only person on a roof uninstalling fall protection.

- FPCP (name and title):
- FPU and LPD (name and title):

Electrical Safety
- The Electrical Qualified Person (EQP) is required onsite to perform electrical work.
- All electrical work will be performed with equipment in an electrically safe condition (de-energized) unless approval has been granted prior to work.
- Service drops and overhead electrical hazards will be indentified and protected from contact, as neccessary.

- EQP (name and tile):

Public Protection
- The safety of the Client and Public must be maintained at all times.
- The Client and the Public shall be prevented from entering the work zone through the use of barriers and/or signage, as required.
- Company, Client and Public property shall be protected from falling objects.
- Pets (including dogs) shall be secured by their owners prior to work start.
- The Client should not leave pets, family members, or others in charge or care of Employees, Contractors, or Temporary Workers.

- Crew leader responsible for communication with the client:
- Client and public is excluded from work area by barricades (N/A, Yes, No):

Training and Pre-Job Safety Briefing
- All employees onsite shall be made aware of the specific hazards of this project and review this HJA during a pre-job briefing, and their signature indicates awareness of site conditions and the plan to eliminate any hazards identified prior to and during the project.

- Crew leader (name/title):
- Crew member (name/title):
- Crew member (name/title):
- Crew member (name/title):
- Crew member (name/title):
- Crew member (name/title):

Airborne Contaminants:
- Asbestos-containing (Transite) piping (ACP) - Do not disturb (move, drill, cut fracture, etc.)
- Asbestos-containing thermal insulation (ACI) and Asbestos-containing duct wrapping (ACW) - do not disturb, no attic or crawlspace access is allowed if work to be performed could cause exposure to personnel, client or public.

- If yes, list specific tasks and protection in place:

Weather and Environment
- The site supervisor shall forecast the weather conditions at the job site, prior to crew arrival, in order to mitigate any hazards associated with inclement weather (heat, cold, wind, rain, etc.)
- The site supervisor will utilized a portable wind meter (anemometer) to verify actual onsite wind conditions, by checking at the ground and on any elevated work surface (ex, rooftop) prior to work start, at midday and prior to solar panel staging on a roof.
- Elevated work involving the moving or maneuvering of solar panels shall cease at 25mph (sustained wind) until wind subsides.

- Forecasted weather maximum temp (degrees f):

Heat Related Illness Prevention
- Employees shall have access to potable drinking water that is fresh, pure, and suitably cool. The water shall be located as close as practicable to the areas where employees are working. Water shall be supplied in sufficient quantity at the beginning of the work shift to provide at least one quart per employee per hour for drinking for the entire shift. Employees may begin the shift with smaller quantities of water if they identify the location and have effective means for replenishment during the shift to allow employees to drink on quart or more per hour. The frequent drinking of water shall be encouraged.
- Shade shall be present when temperature exceeds 80 degrees Fahrenheit. When the outdoor temperature in the work exceeds 80 degrees Fahrenheit, employees shall have and maintain one or more areas with shade at all times.
- New employees must be acclimatized. New employees will be monitored by their Crew Leader (site supervisor) for the first two (2) weeks of employment or longer when necessary.
- Employees will be allowed and encouraged to implement scheduled breaks during each shift. Employees must take cool-down breaks in the shade any time they feel the need to do so to protect them from overheating. Supervisors are REQUIRED to allow employees any break period they need during high heat conditions.
- Cool Vests are encouraged for all employees at all times during periods of high heat.
- Identify the location of the closet Occupational/Industrial Clinic or Hospital in case a crew member becomes ill.

What is the specific plan to provide and replenish sufficient water for all employees on site?

- If offsite replenish is necessary, where will you go to replenish water (location/address):
- Who will replenish the drinking water (name):

Restroom facilities
- Employees shall have access to restroom facilities with hand-washing stations. Use of onsite restroom is at the client's discretion (location is annotated below). If client does not give permission, location of suitable restroom facilities with hand-washing stations offsite will be provided. The onsite supervisor will identify location and make arrangements to ensure all employees have access at any point.

- Restroom facilities will be (circle one): Onsite - Offsite
- If Offsite, add location name and address:

Incident Reporting Procedure
- Contact your Site Supervisor

Name:

Phone:

- Contact your Manager

Name:

Phone:

- Contact your Site Supervisor

Name:

Phone:

With: Your full name, phone number, office location, brief description of what happen and when.

NOTE ADDITIONAL HAZARDS NOT ADDRESSED ABOVE
(add as many as necessary by using additional sheets)

Define the Hazard:	Method/steps to prevent incident:
Define the Hazard:	Method/steps to prevent incident:
Define the Hazard:	Method/steps to prevent incident:

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SYSTEM SIZE

PV SYSTEM (DC): 8.100kW
PV SYSTEM (AC): 5.7kW @ 240V
BATTERY SYSTEM: 10kWh

CLIENT DETAILS
SALVADOR GUTIERREZ
3103 W YAKIMA AVE, YAKIMA, WA 98902
AHJ: CITY OF YAKIMA
UTILITY: PACIFIC POWER
METER: 66568065
APN: 181323-32421
EMAIL: OMGUTIERREZ@LIVE.COM
FINANCE: MOSAIC POWERSWITCH CHOICE

SYSTEM DETAILS
MODULES: 20 X JA SOLAR: JAM54S31-405/MR
OPTIMIZERS: 20 X SOLAREDGE S440
INVERTER 1: SOLAREDGE SE5700H-US
(PART/SKU: SE5700H-USMNUBL15)
BATTERY: 1 X SOLAREDGE: ENERGY BANK

REVISIONS

NO.	REVISED BY	DATE
1	B.R.	2/10/2025
-	-	-
-	-	-

freedom FOREVER
FREEDOM FOREVER "WASHINGTON, LLC"
43445 BUSINESS PARK DRIVE SUITE 110,
TEMECULA, CA 92590
Tel: (888) 557-6431
GREG ALBRIGHT
CONTRACTOR LICENSE:
ELECTRICAL ADMINISTRATOR ALBRIG*807C1

SAFETY PLAN

JOB NO:	DATE:	DESIGNED BY:	SHEET:
538347	5/16/2025	J.G.	PV-10

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FOR INSTALLATION REFERENCE ONLY

SCAN QR CODE TO ACCESS REFERENCE LINK

FREEDOM REFERENCES

INSTALL HOTLINE

PV INSTALLATION REFERENCES

ENPHASE

SOLAREDGE

TESLA

BATTERY INSTALLATION REFERENCES

Enphase Storage Systems

SOLAREDGE Storage Systems

TESLA Storage Systems

NON-BACKUP Battery Systems

Misc. Quick Guide

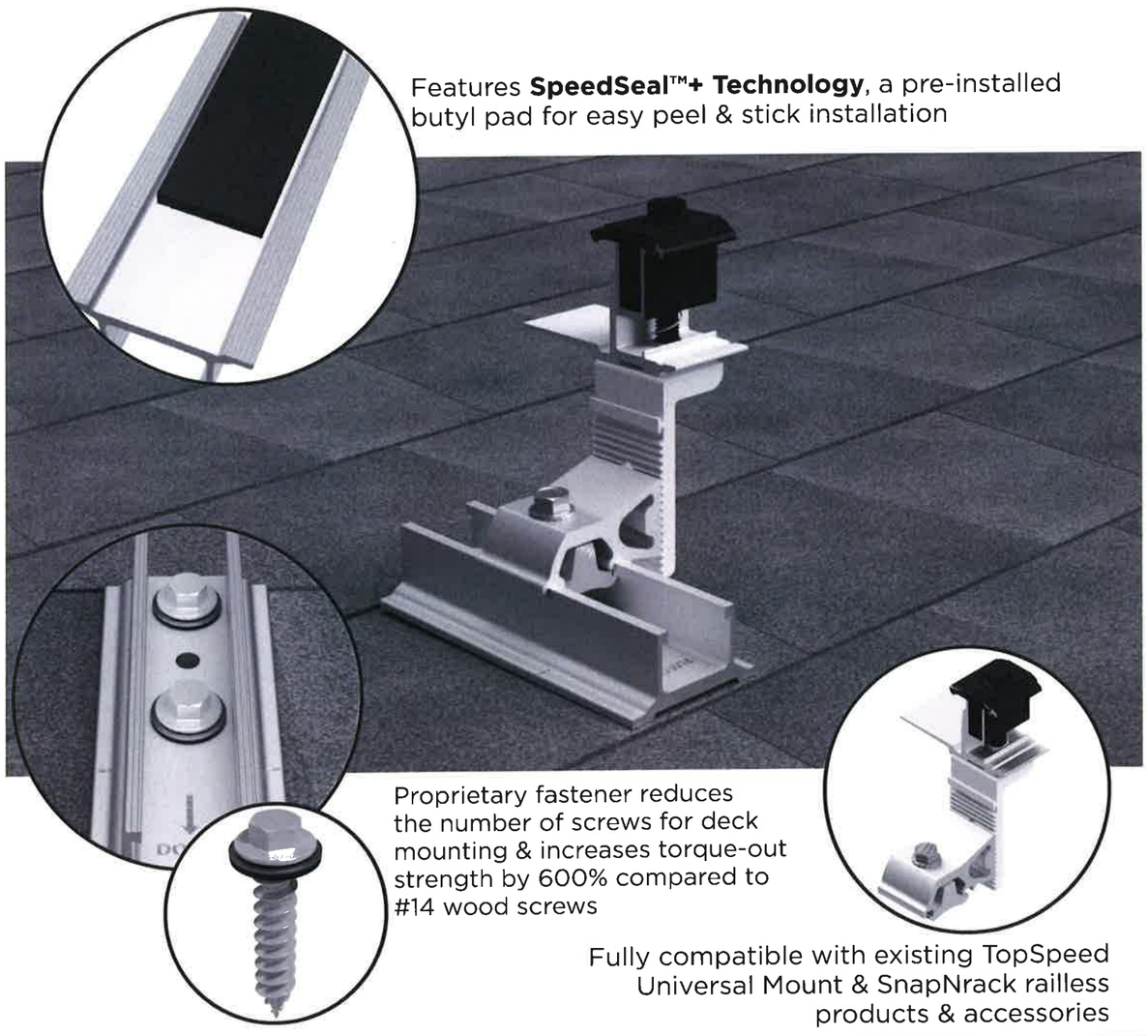
V1.4

SnapNrack®

TOPSPEED® UNIVERSAL

AlphaTrack™ & DeltaTrack™

The Ultimate Attachment for TopSpeed® Universal



Features **SpeedSeal™+ Technology**, a pre-installed butyl pad for easy peel & stick installation

Proprietary fastener reduces the number of screws for deck mounting & increases torque-out strength by 600% compared to #14 wood screws

Fully compatible with existing TopSpeed Universal Mount & SnapNrack railless products & accessories

Start Installing AlphaTracks or DeltaTracks Today

SnapNrack

Flexible Rafter & Deck Mounting Options

- AlphaTrack & DeltaTrack available to accomodate rafter & deck mounting based on DeckAnchor™ or wood screw install preferences
- Fully compatible with existing **TopSpeed® Universal Mount** that features a rock-in channel nut design for easy attachment & slotted riser provides leveling for easy height adjustments
- Available in domestic content options, *refer to "-USA" SKUs*

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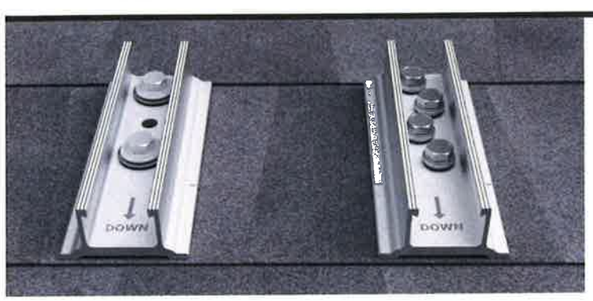
AlphaTrack™
242-10063-USA

DeltaTrack™
242-10064 &
242-10064-USA

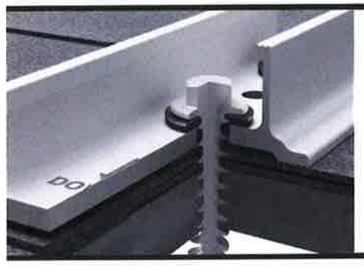


Deck Mounting Fastening Configurations

- AlphaTrack (left) easily installs with (2) DeckAnchors, 242-10035, & DeckTrack (right) requires (4) Sealing Wood Screws, 242-10010

Rafter Mounting Fastening Configurations

- AlphaTrack (left) requires (1) Sealing Washer Lag, 242-02168 & DeckTrack (right) requires (2) Sealing Wood Screws, 242-10010



Patented SpeedSeal+ Technology

- 0.25" thick industry-leading pre-applied butyl
- Innovative bottom design features recessed edges with butyl for firm contact with roof & prevents butyl from squeezing out over time
- Creates a watertight seal over all the roof surfaces, including across shingle tabs
- TAS 100A Wind Driven Rain Testing

Proprietary DeckAnchor™ Fasteners

- Wide threads securely grip the wood deck & significantly reduces the potential for over-tightening
- Reduces the required screw count in half for deck mounting & increases the torque-out strength by 600% compared to a standard #14 wood screw
- ASTM D1761 Screw Capacities
- ½" hex head to maintain the SnapNrack tradition of a single tool install

877-732-2860 www.snapnrack.com contact@snapnrack.com

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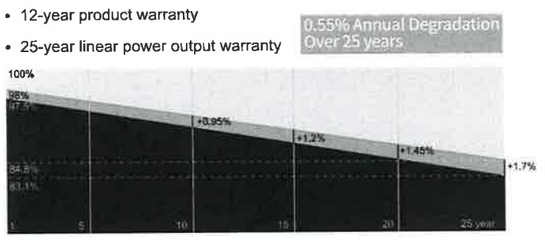
Introduction

Assembled with 11BB PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.

- Higher output power
- Lower LCOE
- Less shading and lower resistive loss
- Better mechanical loading tolerance

Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty



▪ New linear power warranty ■ Standard module linear power warranty

Comprehensive Certificates

- IEC 61215, IEC 61730,UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval

JA SOLAR

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Specifications subject to technical changes and tests.
JA Solar reserves the right of final interpretation.

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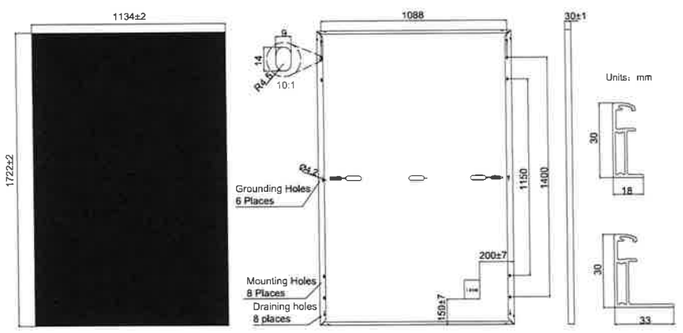
JAM54S31 380-405/MR Series

MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	21.5kg±3%
Dimensions	1722±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm² (IEC), 12 AWG(UL)
No. of cells	108(6x18)
Junction Box	IP68, 3 diodes
Connector	MC4(1000V) MC4-EVO2(1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Packaging Configuration	36pcs/Pallet, 864pcs/40ft Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM54S31 -380/MR	JAM54S31 -385/MR	JAM54S31 -390/MR	JAM54S31 -395/MR	JAM54S31 -400/MR	JAM54S31 -405/MR
Rated Maximum Power(Pmax) [W]	380	385	390	395	400	405
Open Circuit Voltage(Voc) [V]	36.58	36.71	36.85	36.98	37.07	37.23
Maximum Power Voltage(Vmp) [V]	30.28	30.46	30.64	30.84	31.01	31.21
Short Circuit Current(Isc) [A]	13.44	13.52	13.61	13.70	13.79	13.87
Maximum Power Current(Imp) [A]	12.55	12.64	12.73	12.81	12.90	12.98
Module Efficiency [%]	19.5	19.7	20.0	20.2	20.5	20.7
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α_Isc)	+0.045%/°C					
Temperature Coefficient of Voc(β_Voc)	-0.275%/°C					
Temperature Coefficient of Pmax(γ_Pmp)	-0.350%/°C					
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

ELECTRICAL PARAMETERS AT NOCT

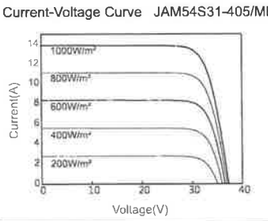
TYPE	JAM54S31 -380/MR	JAM54S31 -385/MR	JAM54S31 -390/MR	JAM54S31 -395/MR	JAM54S31 -400/MR	JAM54S31 -405/MR
Rated Max Power(Pmax) [W]	286	290	294	298	302	306
Open Circuit Voltage(Voc) [V]	34.36	34.49	34.62	34.75	34.88	35.12
Max Power Voltage(Vmp) [V]	28.51	28.68	28.87	29.08	29.26	29.47
Short Circuit Current(Isc) [A]	10.75	10.82	10.89	10.96	11.03	11.10
Max Power Current(Imp) [A]	10.03	10.11	10.18	10.25	10.32	10.38
NOCT	Irradiance 800W/m², ambient temperature 20°C,wind speed 1m/s, AM1.5G					

OPERATING CONDITIONS

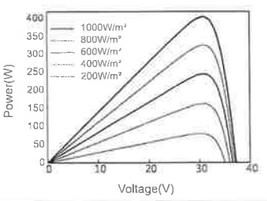
Maximum System Voltage	1000V/1500V DC
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	25A
Maximum Static Load,Front*	5400Pa(112lb/ft²)
Maximum Static Load,Back*	2400Pa(50lb/ft²)
NOCT	45±2°C
Safety Class	Class Ⅱ
Fire Performance	UL Type 1

CHARACTERISTICS

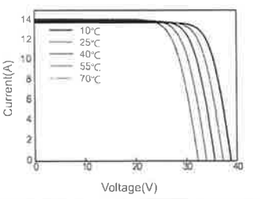
Current-Voltage Curve JAM54S31-405/MR



Power-Voltage Curve JAM54S31-405/MR



Current-Voltage Curve JAM54S31-405/MR



SolarEdge Home Hub Inverter

USA Domestic Content Eligible*
Single Phase, for North America

SE3800H-US / SE5700H-US / SE7600H-US / SE10000H-US / SE11400H-US

HOME BACKUP

Made in the USA from imported parts

SolarEdge's USA-manufactured residential single phase inverter offering for storage and backup applications

- Eligible for domestic content: SolarEdge USA-manufactured inverters*, when paired with certain SolarEdge power optimizers, are intended to be eligible for the enhanced federal income tax credit for domestic content
- The ultimate home energy manager in charge of PV production, battery storage, backup operation during a power outage**, EV Charging, and smart energy devices
- Record-breaking 99% weighted efficiency with up to 200% DC oversizing
- Able to start high LRA HVAC systems during backup operation
- Integrates seamlessly with the complete SolarEdge Home Smart Energy Ecosystem, through SolarEdge Home Network
- Module-level monitoring and visibility of battery status, PV production, and self-consumption data
- Fast and easy installation – small and lightweight, with reduced commissioning time
- A scalable solution that supports future homeowner needs through easy connection to a growing ecosystem of products
- Advanced safety features with integrated arc fault protection and rapid shutdown for 690.11 and 690.12
- Advanced reliability with automotive-grade components
- Embedded revenue grade production data, ANSI C12.20 Class 0.5
- NEMA 4X-rated, for indoor and outdoor installations
- Embedded Power Control System (PCS) – install larger systems while avoiding main panel upgrade

* Manufactured by SolarEdge with the intent to be eligible for inclusion under the elective safe harbor in calculating the Domestic Cost Percentage under the 'Rooftop (MLPE)' category (under IRS Notice 2024-41). For inverters with part number USExxxxxH-USMNBL75, the PCBA, Electrical Parts, and Enclosure are domestically produced and manufactured to meet the requirements of eligibility to be considered for the ITC domestic content bonus adder. For inverters with part number SExxxxxH-USMNxBLx5, the PCBA and Enclosure are domestically manufactured to meet the requirements of eligibility to be considered for the ITC domestic content bonus adder. SolarEdge does not provide tax and/or legal advice. You should consult with your own legal and/or tax advisor(s) regarding the eligibility of your project for the ITC or PTC, including the 10% domestic content bonus, to determine how the applicable rules apply to your particular project. The forward-looking statements in this datasheet are accurate as of the date herein and are subject to change. For more information, please contact your local SolarEdge sales representative.

** Requires additional hardware and firmware version upgrade.

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/ SolarEdge Home Hub Inverter

USA Domestic Content Eligible
Single Phase, for North America

SE3800H-US / SE5700H-US / SE7600H-US / SE10000H-US / SE11400H-US

Applicable to inverters with part number	SExxxxxH-USMNxBLx5 / USExxxxxH-USMNBL75					
Model Number[1]	SE3800H-US	SE5700H-US	SE7600H-US	SE10000H-US	SE11400H-US	
OUTPUT – AC ON GRID						
Maximum AC Power Output	3800 @ 240V 3300 @ 208V	5760 @ 240V 5000 @ 208V	7600 @ 240V	10,000 @ 240V	11,400 @ 240V 10,000 @ 208V	W
AC Output Voltage (Nominal)	208 / 240					Vac
AC Output Voltage (Range)	183 – 264					Vac
AC Frequency Range (min - nom - max)	59.3 – 60 – 60.5[2]					Hz
Maximum Continuous Output Current	16 @ 240V 16 @ 208V	24 @240V 24 @ 208V	32 @ 240V	42 @ 240V	47.5 @ 240V 48 @208V	A
GFDI Threshold	1					A
Total Harmonic Distortion (THD)	< 3					%
Power Factor	1, adjustable -0.85 to 0.85					
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes					
Charge Battery from AC (if allowed)	Yes					
Typical Nighttime Power Consumption	< 2.5					W
OUTPUT – AC STANDALONE (BACKUP)[3]						
Rated AC Power in Standalone Operation[4]	11,400					W
Maximum Continuous Output Current in Standalone Operation	48					A
Locked Rotor Amperage (LRA)[5]	Up to 106					A
AC L-L Output Voltage Range in Standalone Operation	211 – 264					Vac
AC L-N Output Voltage Range in Standalone Operation	105 – 132					Vac
AC Frequency Range in Standalone Operation (min - nom - max)	55 – 60 – 65					Hz
GFDI	1					A
THD	< 5					%
INPUT – DC (PV AND BATTERY)						
Transformer-less, Ungrounded	Yes					
Maximum Input Voltage	480					Vdc
Nominal DC Input Voltage	380					Vdc
Reverse-Polarity Protection	Yes					
Ground-Fault Isolation Detection	600kΩ Sensitivity					
Maximum Input Short Circuit Current	45					Adc
Maximum Inverter Efficiency	99.2					%
CEC Weighted Efficiency	98.5		99		99 @ 240V 98.5 @ 208V	%
2-Pole Disconnection	Yes					
DC CONNECTION – PV						
Maximum Input Power	7600 @ 240V 6600 @ 208V	11,520 @ 240V 10,000 @ 208V	15,200 @ 240V	20,000 @ 240V	22,800 @ 240V 20,000 @ 208V	W
Maximum Input Current	20 @ 240V 17 @ 208V	30 @ 240V 26 @ 208V	40 @ 240V	53 @ 240V	60 @ 240V 53 @ 208V	Adc
Number of Ports	3					
Maximum Current per Port	40					Adc

(1) These specifications apply to inverters with part number **SExxxxxH-USMNxBLx5** and **USExxxxxH-USMNBL75** and connection unit model number **DCD-1PH-US-PxH-F-x**.
(2) For other regional settings please refer to the SolarEdge Inverters, Power Control Options application note.
(3) Not designed for non-grid connected applications and requires AC for commissioning. Standalone (backup) functionality is only supported for the 240V grid.
(4) For models SE7600H-US and below, the Rated AC Power in Standalone Operation is configurable between 7,600W with a Maximum Continuous Output Current of 32A or 11,400W with a Maximum Continuous Output Current of 48A, from firmware version 4.20.xx.
(5) For more information about LRA (Locked Rotor Amperage) values, see the SolarEdge Home Hub Inverter LRA application note.

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/ SolarEdge Home Hub Inverter

USA Domestic Content Eligible

Single Phase, for North America

SE3800H-US / SE5700H-US / SE7600H-US / SE10000H-US / SE11400H-US

Applicable to inverters with part number	SExxxxxH-USMNxBLx5 / USExxxxxH-USMNBL75					
Model Number[1]	SE3800H-US	SE5700H-US	SE7600H-US	SE10000H-US	SE11400H-US	
DC CONNECTION – BATTERY						
Supported Battery Types	SolarEdge Home Battery 400V					
Number of Batteries per Inverter	Up to 3					
Maximum Continuous Power (Charge and Discharge)[6][7]	11,400					W
Number of Ports	2					
Maximum Current per Port	40					Adc
2-pole Disconnection	Up to the inverter's rated standalone power					
SMART ENERGY CAPABILITIES						
Consumption Metering	Built-in[7]					
Standalone & Battery Storage	With Backup Interface (purchased separately) for service up to 200A; up to 3 inverters					
EV Charging	Direct connection to the SolarEdge Home EV Charger[8]					
ADDITIONAL FEATURES						
Supported Communication Interfaces	RS485, Ethernet, Cellular[10], Wi-Fi[10] (optional), SolarEdge Home Network[10] (optional)					
Revenue Grade Metering, ANSI C12.20	Built-in[7]					
Integrated AC, DC, and Communication Connection Unit	Yes					
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi Access Point for local connection					
DC Voltage Rapid Shutdown (PV and Battery)	Yes, NEC 690.12					
STANDARD COMPLIANCE						
Safety	UL 1741, UL 1741SA, UL 1741SB, UL 1699B, CSA 22.2#107.1, C22.2#330, C22.3#9, ANSI/CAN/UL 9540					
Grid Connection Standards	IEEE1547-2018 and IEEE-1547.1 Rule 21, Rule 14H					
Emissions	FCC Part 15 Class B					
Power Control System (PCS)	UL 1741 PCS[11]					
INSTALLATION SPECIFICATIONS						
AC Terminals	L1, L2, N terminal blocks, PE busbar for inverter connection L1, L2 terminal blocks, PE busbar for EV Charger AC connection					
DC Terminals	3 x terminal block pairs for PV input, 2 x terminal block pair for battery input					
AC Output and EV AC Output Conduit Size / AWG Range	1" maximum / 14 – 4 AWG					
DC Input (PV and Battery) Conduit Size / AWG Range	1" maximum / 14 – 6 AWG					
Dimensions with Connection Unit (H x W x D)	21.06 x 14.6 x 8.2 / 535 x 370 x 208					in / mm
Weight with Connection Unit	44.9 / 20.3					lb / kg
Noise	< 50					dBA
Cooling	Natural Convection					
Operating Temperature Range	-40 to +140 / -40 to +60[12]					°F / °C
Protection Rating	NEMA 4X					

(6) Discharge power is limited up to the inverter's rated AC power for on-grid and standalone applications, as well as up to the installed batteries' rating.
(7) For consumption metering current transformers should be ordered separately: SECT-SPL-225A-T-20 or SEACT1250-400NA-20. Revenue grade metering is only for production metering.
(8) For more information about the SolarEdge Home EV Charger, refer to the SolarEdge Home EV Charger datasheet.
(9) Information concerning the data plan terms & conditions is available in SolarEdge Communication Plan Terms and Conditions.
(10) SolarEdge Home Network Plugin ENET-HBNP-01 and Wi-Fi Antenna SE-ANT-ZBWIFI-KIT purchased separately. For more information refer to the SolarEdge Home Network Plugin datasheet and the Antenna for Wi-Fi and ZigBee Wireless Communications datasheet.
(11) Only part numbers SExxxxH-USMNxx7x and USExxxxxH-USMNxx7x support the PCS meter.
(12) Full power up to at least 122°F / 50°C, for power derating information refer to the Temperature Derating for North America technical note.

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CE Intertek 4004590

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

- SolarEdge
- @SolarEdgePV
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Cautionary Note Regarding Market Data and Industry Forecasts: This brochure may contain market data and industry forecasts from certain third-party sources. This information is based on industry surveys and the preparer's expertise in the industry and there can be no assurance that any such market data is accurate or that any such industry forecasts will be achieved. Although we have not independently verified the accuracy of such market data and industry forecasts, we believe that the market data is reliable and that the industry forecasts are reasonable.

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Power Optimizer

For North America

S440, S500

POWER OPTIMIZER

PV power optimization at the module level

- Specifically designed to work with SolarEdge residential inverters
- Detects abnormal PV connector behavior, preventing potential safety issues*
- Module-level voltage shutdown for installer and firefighter safety
- Superior efficiency (99.5%)
- Mitigates all types of module mismatch loss, from manufacturing tolerance to partial shading
- Faster installations with simplified cable management and easy assembly using a single bolt
- Flexible system design for maximum space utilization
- Compatible with bifacial PV modules
- Meets NEC requirements for arc fault protection (AFCI) and Photovoltaic Rapid Shutdown System (PVRSS)

* Expected availability in 2022

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Power Optimizer

For North America

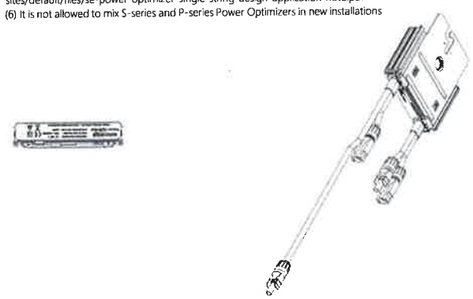
S440, S500

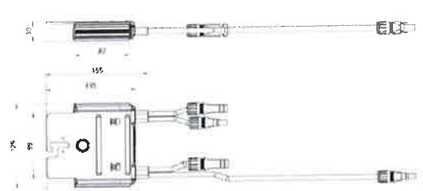
	S440	S500	Unit
INPUT			
Rated Input DC Power[1]	440	500	W
Absolute Maximum Input Voltage (Voc)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc) of Connected PV Module	14.5	15	Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.6		%
Overvoltage Category	II		
OUTPUT DURING OPERATION			
Maximum Output Current	15		Adc
Maximum Output Voltage	60		Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimizer	1+/-0.1		Vdc
STANDARD COMPLIANCE			
Photovoltaic Rapid Shutdown System	NEC 2014, 2017 & 2020		
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3		
Safety	IEC62109-1 (class II safety), UL1741		
Material	UL94 V-0, UV Resistant		
RoHS	Yes		
Fire Safety	VDE-AR-E 2100-712:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 153 x 30 / 5.07 x 6.02 x 1.18		mm / in
Weight (including cables)	655 / 1.5		gr / lb
Input Connector	MC4[2]		
Input Wire Length	0.1 / 0.32		m / ft
Output Connector	MC4		
Output Wire Length	(+) 2.3, (-) 0.10 / (+) 7.54, (-) 0.32		m / ft
Operating Temperature Range[3]	-40 to +85		°C
Protection Rating	IP68 / Type6B		
Relative Humidity	0 - 100		%

(1) Rated power of the module at STC will not exceed the power optimizer Rated Input DC Power. Modules with up to +5% power tolerance are allowed
(2) For other connector types please contact SolarEdge
(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details

PV System Design Using a SolarEdge Inverter		Single Phase HD-Wave	Three Phase for 208V grid	Three Phase for 277/480V grid	
Minimum String Length (Power Optimizers)	S440, S500	8	14	18	
Maximum String Length (Power Optimizers)		25		50[6]	
Maximum Nominal Power per String		5700 (6000 with SE7600-US-SE11400-U)	6000	12750	W
Maximum Allowed Connected Power per String[5] (Permitted only when the difference in connected power between strings is 1,000W or less)		Refer to Footnote 5	One String 7200W	15,000W	
			Two strings or more 7800W		
Parallel Strings of Different Lengths or Orientations		Y			

(4) A string with more than 30 optimizers does not meet NEC rapid shutdown requirements; safety voltage will be above the 30V requirement
(5) If the inverters rated AC power ≤ maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power. Refer to: https://www.solaredge.com/sites/default/files/se-power-optimizer-single-string-design-application-note.pdf
(6) It is not allowed to mix S-series and P-series Power Optimizers in new installations





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making solar simple.

JB-3
Specification Sheet
PV Junction Box for Rail or Panel Mount Applications

A. System Specifications and Ratings

- Maximum Voltage: 1,000 Volts
- Maximum Current: 80 Amps
- Allowable Wire: 14 AWG – 6 AWG
- Maximum Number of Input Circuits: 4
- Spacing: Please maintain a spacing of at least ½" between uninsulated live parts and fittings for conduit, armored cable, and uninsulated live parts of opposite polarity.
- Enclosure Rating: Type 3R
- Roof Slope Range: 2.5 – 12:12
- Max Side Wall Fitting Size: 1"
- Max Floor Pass-Through Fitting Size: 1"
- Ambient Operating Conditions: (-35°C) - (+75°C)
- Compliance:
  - JB-3: UL1741, CSA C22.2 No. 290
  - Approved wire connectors: must conform to UL1741
- System Marking: **Intertek Symbol and File #5025824**
- Periodic Re-inspections: If re-inspections yield loose components, loose fasteners, or any corrosion between components, components that are found to be affected are to be replaced immediately.

Table 1: Typical Wire Size, Torque Loads and Ratings

	1 Conductor	2 Conductor	Torque				
			Type	NM	Inch Lbs	Voltage	Current
ABB ZS6 terminal block	10-24 awg	16-24 awg	Sol/Str	0.5-0.7	6.2-8.85	600V	30 amp
ABB ZS10 terminal block	6-24 awg	12-20 awg	Sol/Str	1.0-1.6	8.85-14.16	600V	40 amp
ABB ZS16 terminal block	4-24 awg	10-20 awg	Sol/Str	1.6-2.4	14.6-21.24	600V	60 amp
ABB M6/8 terminal block	8-22 awg		Sol/Str	.08-1	8.85	600V	50 amp
Ideal 452 Red WING-NUT Wire Connector	8-18 awg		Sol/Str	Self-Torque	Self-Torque	600V	
Ideal 451 Yellow WING-NUT Wire Connector	10-18 awg		Sol/Str	Self-Torque	Self-Torque	600V	
Ideal, In-Sure Push-in Connector Part #30	10-14 awg		Sol/Str	Self-Torque	Self-Torque	600V	
WAGO, 2204-1201	10-20 awg	16-24 awg	Sol/Str	Self-Torque	Self-Torque	600V	30 amp
WAGO, 221-612	10-20 awg	10-24 awg	Sol/Str	Self-Torque	Self-Torque	600V	30 amp
Dottie DRC75	6-12 awg		Sol/Str	Snap-In	Snap-In		
ESP NG-53	4-6 awg		Sol/Str		45	2000V	
	10-14 awg		Sol/Str		35		
ESP NG-717	4-6 awg		Sol/Str		45	2000V	
	10-14 awg		Sol/Str		35		
Brumall 4-5,3	4-6 awg		Sol/Str		45	2000V	
	10-14 awg		Sol/Str		35		

Table 2: Minimum wire-bending space for conductors through a wall opposite terminals in mm (inches)

Wire size, AWG or kcmil (mm2)	Wires per terminal (pole)							
	1		2		3		4 or More	
	mm	(inch)	mm	(inch)	mm	(inch)	mm	(inch)
14-10 (2.1-5.3)	Not Specified		-		-		-	
8 (8.4)	38.1	(1-1/2)	-		-		-	
6 (13.3)	50.8	(2)	-		-		-	

Intertek
5025824

Product specifications

Eaton DG222URB

Catalog Number: DG222URB

Eaton General duty non-fusible safety switch, single-throw, 60 A, NEMA 3R, Rainproof, Painted galvanized steel, Two-pole, Two-wire, 240 V

General specifications

Product Name
Eaton general duty non-fusible safety switch

Catalog Number
DG222URB

UPC
782113144238

Product Length/Depth
7.38 in

Product Height
14.38 in

Product Width
8.69 in

Product Weight
9 lb

Warranty
Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

Certifications
UL Listed

Catalog Notes
WARNING! Switch is not approved for service entrance unless a neutral kit is installed.

Product specifications

Product Category
General duty safety switch

Enclosure material
Painted galvanized steel

Type
Non-fusible, single-throw

Fuse configuration
Non-fusible

Number of wires
2

Enclosure
NEMA 3R

Voltage rating
240V

Amperage Rating
60A

Number Of Poles
Two-pole

Resources

Catalogs
Eaton's Volume 2—Commercial Distribution

Multimedia
Double Up on Safety

Switching Devices Flex Center

Specifications and datasheets
Eaton Specification Sheet - DG222URB

Warranty guides
Selling Policy 25-000 - Distribution and Control Products and Services

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Product specifications

Eaton DG224URK

Catalog Number: DG224URK

Eaton General duty non-fusible safety switch, single-throw, 200 A, NEMA 3R, Rainproof, Painted galvanized steel, Two-pole, Two-wire, 240 V

General specifications

Product Name
Eaton general duty non-fusible safety switch

Catalog Number
DG224URK

UPC
786685234816

Product Length/Depth
11.25 in

Product Height
25.5 in

Product Width
16 in

Product Weight
55 lb

Warranty
Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

Certifications
UL Listed

Catalog Notes
WARNING! Switch is not approved for service entrance unless a neutral kit is installed.

Powering Business Worldwide

Product specifications

Product Category
General duty safety switch

Enclosure material
Painted galvanized steel

Type
Non-fusible, single-throw

Fuse configuration
Non-fusible

Number of wires
2

Enclosure
NEMA 3R

Voltage rating
240V

Amperage Rating
200A

Number Of Poles
Two-pole

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SolarEdge Energy Bank 10kWh Battery

For North America

10 YEAR WARRANTY

HOME BACKUP

Optimized for SolarEdge Energy Hub Inverters(1)

- Maximized system performance, gaining more energy to store and use for on-grid and backup power applications
- Integrates with the complete SolarEdge residential offering, providing a single point of contact for warranty, support, training, and simplified logistics & operations
- DC coupled battery featuring superior overall system efficiency, from PV to battery to grid
- Scalable solution for increased power and capacity with multiple SolarEdge inverters and batteries
- Solar, storage, EV charging, and smart devices all monitored and managed by a single app to optimize solar production, consumption and backup* power
- Wireless communication to the inverter, reducing wiring, labor and installation faults
- Simple plug and play installation, with automatic SetApp-based configuration
- Includes multiple safety features for battery protection

* Backup application are subject to local regulation and may require additional components and firmware upgrade

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/ SolarEdge Energy Bank 10kWh Battery

For North America

	BAT-10K1P(2)	
BATTERY SPECIFICATION		
Usable Energy (100% depth of discharge)	9700	Wh
Continuous Output Power	5000	W
Peak Output Power (for 10 seconds)	7500	W
Peak Roundtrip Efficiency	>94.5	%
Warranty(3)	10	Years
Voltage Range	350-450	Vdc
Communication Interfaces	Wireless*	
Batteries per Inverter	Up to 3(4)	
STANDARD COMPLIANCE		
Safety	UL1642, UL1973, UL9540, UN38.3	
Emissions	FCC Part 15 Class B	
MECHANICAL SPECIFICATIONS		
Dimensions (W x H x D)	31.1 x 46.4 x 9.84 / 790 x 1179 x 250	in / mm
Weight	267 / 121	lb / kg
Mounting(5)	Floor or wall mount(6)	
Operating Temperature(7)	+14 to +122 / -10 to +50	°F / °C
Storage Temperature (more than 3 months)	+14 to +86 / -10 to +30	°F / °C
Storage Temperature (less than 3 months)	-22 to + 140 / -30 to +60	°F / °C
Altitude	6562 / 2000	ft / m
Enclosure Protection	IP55 / NEMA 3R - indoor and outdoor (water and dust protection)	
Cooling	Natural convection	
Noise (at 1m distance)	<25	dBA

* The SolarEdge Energy Bank is designed for use with SolarEdge Energy Net for wireless communication. The inverter might require a matching SolarEdge Energy Net Plug-in (more details below). Using RS485 could reduce the usable energy to 9500Wh.

(1) Please refer to the SolarEdge Energy Bank battery connections and configuration application note for compatible inverters.
(2) These specifications apply to part number BAT-10K1PS0B-01.
(3) For warranty details please refer to the SolarEdge Energy Bank battery Limited Warranty.
(4) Installations with multiple SolarEdge Energy Bank batteries connected to a single inverter require a pair of branch connectors (DC + and DC -) per battery excluding the last battery. Support for 3 batteries is pending supporting inverter firmware. The branch connectors should be purchased separately.
(5) Installation and mounting requires handles that should be purchased separately. Please refer to the Accessories' PN table below.
(6) The floor stand is purchased separately. One floor stand is required per SolarEdge Energy Bank battery. Please refer to the Accessories' PN table below.
(7) Please note that operating the SolarEdge Energy Bank at extreme temperatures for extended durations of time may void the Energy Bank's warranty coverage. Please see the Energy Bank Limited Product Warranty for additional details.

SolarEdge Energy Bank Battery – Accessories (purchased separately)	
Accessory	**PN**
Floor stand	IAC-RBAT-FLRSTD-01
Branch connectors set (includes a pair of DC + and DC - connectors) Required for installations with multiple SolarEdge Energy Bank batteries with a single inverter	IAC-RBAT-USYCBL-01
Handles	IAC-RBAT-HANDLE-01
SolarEdge Energy Net Plug-in	ENET-HBNP-01
Battery inverter extension cable 2m long (MC4 to terminal block)	IAC-RBAT-10M420-01

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April 30, 2024

SnapNrack
775 Fiero Lane, Ste. 200
San Luis Obispo, CA 93401
TEL: (877) 732-2860

Attn.: SnapNrack - Engineering Department

Re: SnapNrack pre-engineered PV racking systems:

- RL Universal System (Report # 2019-02916A.01 and B.01)
- S200 Ground Mount System (Report # 2017-00240-D.02)
- UR40 Railed System (Report # 2017-03227.11)
- UR60 Railed System (Report # 2018-11940.03)
- TopSpeed Deck Mount System (Report # 2022-02141)

Subject: Engineering certification for the State of Washington.

PZSE, Inc. - Structural Engineers has provided engineering and span tables as presented in the above referenced reports. All information, data, and analysis therein are based on, and comply with, the following building codes and typical specifications:

Building Codes:

1. ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, by American Society of Civil Engineers
2. 2018 & 2021 International Building Code, by International Code Council, Inc.
3. 2018 & 2021 International Residential Code, by International Code Council, Inc.
4. AC428 Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012, by ICC-ES
5. Aluminum Design manual 2015, by The Aluminum Association, Inc.
6. ANSI/AWC NDS-2018, National Design Specification for Wood Construction, by the American Wood Council

This letter certifies that the design criteria and design methodology for the SnapNrack product span tables are in compliance with the above codes. Please refer to the system specific Engineering Certification Reports (listed above) for system specific design criteria and limitations.

If you have any questions on the above, do not hesitate to call.

PAUL K. ZACHER
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52035
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PROFESSIONAL ENGINEER

EXPIRES 08/02/2025

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