

Valley County Planning and Zoning Department

219 N. Main
PO Box 1350
Cascade, ID 83611
www.co.valley.id.us
cherrick@co.valley.id.us
208-382-7115



Conditional Use Permit Application

TO BE COMPLETED BY THE PLANNING AND ZONING DEPARTMENT		<input checked="" type="checkbox"/> Check # <u>2874</u> or <input type="checkbox"/> Cash
FILE # <u>C.U.P. 22-15</u>	FEE \$ <u>300.00</u>	
ACCEPTED BY _____	DEPOSIT <u> </u>	
CROSS REFERENCE FILE(S): _____	DATE <u>2-21-2022</u>	
PROPOSED USE: <u>solar panels</u>		

When an application has been submitted, it will be reviewed in order to determine compliance with application requirements.
A hearing date will be scheduled only after an application has been accepted as complete or if applicant requests the hearing in writing.

Applicant's Signature: Delta M. James Date: Apr 19, 2022
Delta M. James (Apr 19, 2022 10:34 MDT)

The following must be completed and submitted with the conditional use permit application:

- ☒ A **detailed project description** disclosing the purpose, strategy, and time frame of construction. Include a phasing plan if appropriate. Address fire mitigation, utilities, fencing, access, emissions, dust, noise, and outside storage.
- ☒ A **plot plan**, drawn to scale, showing the boundaries, dimensions, area of lot, existing and proposed utilities, streets, easements, parking, setbacks, and buildings.
- ☒ A **landscaping plan**, drawn to scale, showing elements such as trees, shrubs, ground covers, and vines. Include a plant list indicating the size, quantity, location and name (both botanical and common) of all plant material to be used.
- ☒ A **site grading plan** clearly showing the existing site topography and detailing the best management practices for surface water management, siltation, sedimentation, and blowing of dirt and debris caused by grading, excavation, open cuts, side slopes, and other site preparation and development.
- ☒ A **lighting plan**.
- ☒ **Names and addresses of property owners** within 300 feet of the property lines. Information can be obtained through the GIS Portal at www.co.valley.id.us. Only one copy of this list is required.
- ☒ **Ten (10) copies** of the application, project description, plot plan, landscaping plan, grading plan, and impact report are required.

We recommend you review the Valley County Code online at www.co.valley.id.us
or at the Planning & Zoning Office at 219 North Main Street, Cascade, Idaho

Subject to Idaho Statute Title 55 Chapter 22 Underground Facilities Damage Prevention.

CONTACT INFORMATION

APPLICANT Delta James PHONE [REDACTED]
Owner ☒ Purchaser ☐ Lessee ☐ Renter ☐

MAILING ADDRESS 13643 Farm to Market Road, McCall, ID ZIP

EMAIL [REDACTED]

PROPERTY OWNER Delta James M, Griswold Colin J

MAILING ADDRESS 13643 Farm to Market Road, McCall, ID ZIP 83638

EMAIL

AGENT / REPRESENTATIVE RevoluSun Mountain States PHONE [REDACTED]

MAILING ADDRESS PO Box 1118 McCall ID ZIP 83638

EMAIL [REDACTED]

CONTACT PERSON (if different from above) Teylir Baker

MAILING ADDRESS same as above ZIP 83704

EMAIL [REDACTED] PHONE 208-315-4082

PROPERTY INFORMATION

ADDRESS OF SUBJECT PROPERTY 13643 Farm to Marked Road, McCall, ID 83638

PROPERTY DESCRIPTION (either lot, block & subdivision name or attach a recorded deed with a metes and bounds description.)
Lake Fork Area Subdivision

TAX PARCEL NUMBER(S) RP 17N03E149757

Quarter 25 Section 14 Township 17 North Range 3 East

1. PROPOSED USE: Residential ☒ Civic or Community ☐ Commercial ☐ Industrial ☐

2. SIZE OF PROPERTY 6.073 Acres ☒ or Square Feet ☐

3. EXISTING LAND USES AND STRUCTURES ON THE PROPERTY ARE AS FOLLOWS:
Land Use Class/Description: 534 Res Impr on Cat 12

4. ARE THERE ANY KNOWN HAZARDS ON OR NEAR THE PROPERTY (such as canals, hazardous material spills, and/or soil or water contamination)? If so, describe and give location: None

5. ADJACENT PROPERTIES HAVE THE FOLLOWING BUILDING TYPES AND/OR USES:

North 534 Res Impr on Cat 12

South 512 Res Rural Tract Vacant

East 101 Irrigated Crop Land

West 534 Res Impr on Cat 12

APPLICATION DETAILS

6. MAXIMUM PROPOSED STRUCTURE HEIGHT: 14 ft
7. NON-RESIDENTIAL STRUCTURES OR ADDITIONS (If applicable):
Number of Proposed Structures: 1 Number of Existing Structures: 1
Proposed Gross Square Feet Existing Gross Square Feet
1st Floor _____ 1st Floor _____
2nd Floor _____ 2nd Floor _____
Total 255.44 sq/ft Solar Ground Mount Total 1,688
- 8a. TYPE OF RESIDENTIAL USE (If applicable): Single family residence ☐ Multiple residences on one parcel ☐
8b. TYPE OF STRUCTURE: Stick-built ☐ Manufacture Home ☐ Mobile Home ☐ Tiny Home ☐ Other ☒ Solar Ground Mount
8c. SQUARE FOOTAGE OF PROPOSED RESIDENTIAL STRUCTURES (If applicable): N/A
SQUARE FOOTAGE OF EXISTING RESIDENTIAL STRUCTURES: 1,688
- 8d. DENSITY OF DWELLING UNITS PER ACRE: N/A
9. SITE DESIGN:
Percentage of site devoted to building coverage: 1.7%
Percentage of site devoted to landscaping: 93.2%
Percentage of site devoted to roads or driveways: 5.0%
Percentage of site devoted to other uses: 0.09%, describe: Solar Ground Mount Installation
Total: 100%
10. PARKING (If applicable): N/A Office Use Only
a. Handicapped spaces proposed: _____ Handicapped spaces required: _____
b. Parking spaces proposed: _____ Parking spaces required: _____
c. Number of compact spaces proposed: _____ Number of compact spaces allowed: _____
d. Restricted parking spaces proposed: _____
e. Are you proposing off-site parking: _____
11. SETBACKS: BUILDING Office Use Only PARKING Office Use Only
Proposed Required Proposed Required
Front North: 189' 1" _____ _____ _____
Rear East: 546' 11" _____ _____ _____
Side South: 147' 3" _____ _____ _____
Side Street West: 237' 10" _____ _____ _____
**Minimum setback for PV Ground Mounts of 15' to be observed.
12. NUMBER OF EXISTING ROADS: N/A Width: _____
Existing roads will be: Publicly maintained? ☐ Privately Maintained? ☐ or Combination of both? ☐
Existing road construction: Gravel ☐ Paved ☐ or Combination of both? ☐
13. NUMBER OF PROPOSED ROADS: N/A Proposed width: _____
Proposed roads: Publicly maintained? ☐ Privately Maintained? ☐ or Combination of both? ☐
Proposed road construction: Gravel ☐ Paved ☐ or Combination of both? ☐

14. ARE SHARED DRIVEWAYS PROPOSED? If so, please explain why. Yes ☐ No ☒
N/A

15. EXISTING UTILITIES ON THE PROPERTY ARE AS FOLLOWS:
Water, Sewer, Electrical

16. PROPOSED UTILITIES: None

Proposed utility easement widths N/A

Locations N/A

17. SEWAGE WASTE DISPOSAL METHOD: Septic ☒ Central Sewage Treatment Facility ☐
Name: _____

18. POTABLE WATER SOURCE: Public ☐ Water Association ☐ Individual Well: ☒ ID# 292175

If individual, has a test well been drilled? _____ Depth 62.00 Flow 45.00 Purity Verified? _____
Nearest adjacent well Well ID 423333 Depth 87.00 Flow 50.00

19. DRAINAGE (Proposed method of on-site retention): Existing infiltration

Any special drains? No (Please attach map)

Soil type(s): Archabal Loam (2 to 4%, 4 to 12%, 12 to 20%), Cabarton Silty Clay Loam

(Information can be obtained from the Natural Resource Conservation Service: websoilsurvey.nrcs.usda.gov)

Stormwater Prevention Management Plan will need approval from Valley County Engineer.

20. IS ANY PORTION OF THE PROPERTY LOCATED IN A FLOODWAY OR 100-YR FLOODPLAIN?
(Information can be obtained from the Planning & Zoning Office) Yes ☐ No ☒

21. DOES ANY PORTION OF THIS PARCEL HAVE SLOPES IN EXCESS OF 15%? Yes ☒ No ☐
Array installation to sit on flat ground.

21. ARE THERE WETLANDS LOCATED ON ANY PORTION OF THE PROPERTY? Yes ☐ No ☒

23. IS THERE ANY SITE GRADING OR PREPARATION PROPOSED? Yes ☐ No ☒
If yes, explain:

24a. ARE THERE ANY EXISTING IRRIGATION SYSTEMS? Yes ☒ No ☐

Are you proposing any alterations, improvements, extensions or new construction? Yes ☐ No ☒

If yes, explain: Boulder Irrigation Co owns irrigation rights. No change proposed.

24b. COMPLETE ATTACHED PLAN FOR IRRIGATION if you have water rights and are in an irrigation district.
Submit letter from Irrigation District, if applicable. Not applicable.

25. COMPLETE ATTACHED WEED CONTROL AGREEMENT

26. COMPLETE ATTACHED IMPACT REPORT

Irrigation Plan

(Idaho Code 31-3805)

This land: ☒ Has water rights available to it
☐ Is dry and has no water rights available to it.

Idaho Code 31-3805 states that when all or part of a subdivision is "located within the boundaries of an existing irrigation district or canal company, ditch association, or like irrigation water deliver entity ... **no subdivision plat or amendment to a subdivision plat or any other plat or map recognized by the city or county for the division of land will be accepted, approved, and recorded unless:**"

- A. The appropriate water rights and assessment of those water rights have been transferred from said lands or excluded from an irrigation entity by the owner; or
- B. The owner filing the subdivision plat or amendment to a subdivision plat or map has provided for the division of land of underground tile or conduit for lots of one acre or less or a suitable system for lots of more than one acre which will deliver water to those landowners within the subdivision who are also within the irrigation entity with the appropriate approvals:
1. For proposed subdivisions located within an area of city impact, both city and county zoning authorities must approve such irrigation system.
 2. For proposed subdivisions outside of negotiated areas of city impact, the delivery system must be approved by the Planning and Zoning Commission and the Board of County Commissioners with the advice of the irrigation entity charged with the delivery of water to said lands (e.g., irrigation district).

To better understand your irrigation request, we need to ask you a few questions. Additional pages can be added. A list of the map requirements follows the short questionnaire. **Any missing information may result in the delay of your request before the Planning and Zoning Commission and ultimately the approval of your irrigation plan by the Board of County Commissioners as part of final plat approval.**

1. Are you within an area of negotiated City Impact? _____ Yes X No

2. What is the name of the irrigation district/company and drainage entities servicing the property?

Irrigation: Boulder Irrigation Co

Drainage: _____

3. How many acres is the property being subdivided? N/A

4. What percentage of this property has water? N/A

5. How many inches of water are available to the property? N/A

6. How is the land currently irrigated? ☐ surface ☐ sprinkler ☐ irrigation well
the land is not currently irrigated ☐ above ground pipe ☐ underground pipe

7. How is the land to be irrigated after it is subdivided? ☐ surface ☐ sprinkler ☐ irrigation well
☐ above ground pipe ☐ underground pipe

8. Describe how the head gate/pump connects to the canal and irrigated land and where ditches &/or pipes go.

N/A

9. Is there an irrigation easement(s) on the property? ☐ Yes ☐ No

10. How do you plan to retain storm and excess water on each lot? N/A

11. How do you plan to process this storm water and/or excess irrigation water prior to it entering the established drainage system? (i.e. oil, grease, contaminated aggregates)
N/A

Irrigation Plan Map Requirements N/A

The irrigation plan **must be on a scalable map** and show all of the irrigation system including all supply and drainage structures and easements. Please include the following information on your map:

- ☐ All canals, ditches, and laterals with their respective names.
- ☐ Head gate location and/or point of delivery of water to the property by the irrigation entity.
- ☐ Pipe location and sizes, if any
- ☐ Rise locations and types, if any.
- ☐ Easements of all private ditches that supply adjacent properties (i.e. supply ditches and drainage ways).
- ☐ Slope of the property in various locations.
- ☐ Direction of water flow (use short arrows on your map to indicate water flow direction →).
- ☐ Direction of wastewater flow (use long arrows on your map to indicate wastewater direction —→).
- ☐ Location of drainage ponds or swales, if any where wastewater will be retained on property
- ☐ Other information: _____

Also, provide the following documentation: N/A

- ☐ Legal description of the property.
- ☐ Proof of ownership.
- ☐ A written response from the irrigation entity and/or proof of agency notification.
- ☐ Copy of any water users' association agreement which shows water schedules and maintenance responsibilities.
- ☐ Copy of all new easements ready for recording (irrigation supply and drainage).
- ☐ If you are in a city area of impact, please include a copy of the approvals by the city planning and zoning commission and city council of your irrigation plan.

=====Applicant Acknowledgement=====

I, the undersigned, agree that prior to the Planning and Zoning Department accepting this application, I am responsible to have all the required information and site plans.

I further acknowledge that the irrigation system, as approved by the Planning and Zoning Commission and ultimately the Board of County Commissioners, must be **bonded** and/or **installed** prior to the recording of the plat or building permit.

Signed: This is not applicable to the installation of ground mount system

Applicant Delta M. James
Delta M. James (Apr 19, 2022 16:34 MDT)

Date: / /

Apr 19, 2022



VALLEY COUNTY

WEED CONTROL AGREEMENT

The purpose of this agreement is to establish a cooperative relationship between Valley County and the undersigned Cooperator to protect the natural and economic values in the Upper Payette River watershed from damages related to the invasion and expansion of infestations of noxious weeds and invasive plants. This is a cooperative effort to prevent, eradicate, contain and control noxious weeds and invasive plants on public and private lands in this area. Factors related to the spread of weeds are not related to ownership nor controllable at agency boundaries. This agreement formalizes the cooperative strategy for management of these weeds addressed in Valley County's Integrated Weed Management Plan.

In this continuing effort to control Noxious Weeds, Valley County Weed Control will consult with the undersigned Cooperator and outline weed identification techniques, present optional control methods and recommend proper land management practices.

The undersigned Cooperator acknowledges that he/she is aware of any potential or real noxious weed problems on his/her private property and agrees to control said weeds in a timely manner using proper land management principles.

Valley County Weed Department can be contacted at 208-382-7199.

By: Delta M James
Applicant

By: _____
Valley County Weed Control

Date: 4-19-2022

Date: _____

IMPACT REPORT (from Valley County Code 9-5-3-D)

You may add information to the blanks below or attach additional sheets.

- ❖ An impact report shall be required for all proposed Conditional Uses.
- ❖ Answer all questions. Mark N/A if the question is not applicable to your application.
- ❖ The impact report shall address potential environmental, economic, and social impacts and how these impacts are to be minimized as follows:
 1. Traffic volume, character, and patterns including adequacy of existing or proposed street width, surfacing, alignment, gradient, and traffic control features or devices, and maintenance. Contrast existing with the changes the proposal will bring during construction and after completion, build-out, or full occupancy of the proposed development. Include pedestrian, bicycle, auto, and truck traffic.
N/A
 2. Provision for the mitigation of impacts on housing affordability.
N/A
 3. Noise and vibration levels that exist and compare to those that will be added during construction, normal activities, and special activities. Include indoor and outdoor, day and night variations. Construction related noise only. Daytime construction for one week. Noise primarily resulting from crews digging trenches and concrete piles for ground mount solar array. No noise or vibration increase after installation.
 4. Heat and glare that exist and that might be introduced from all possible sources such as autos in parking areas, outdoor lights, water or glass surfaces, buildings or outdoor activities.
Glare from solar modules. Minimal impact. Glare and visibility of the array will be reduced/screened by surrounding vegetation, and fully blocked from the road by the existing home. Additionally, the array is only 255.44 square feet, and is a significant distance from adjacent properties.
 5. Particulate emissions to the air including smoke, dust, chemicals, gasses, or fumes, etc., both existing and what may be added by the proposed uses.
Minimal dust production possible during installation. No increase in any of the above factors after completion of installation.
 6. Water demand, discharge, supply source, and disposal method for potable uses, domestic uses, and fire protection. Identify existing surface water drainage, wetlands, flood prone areas and potential changes. Identify existing ground water and surface water quality and potential changes due to this proposal.
N/A

7. Fire, explosion, and other hazards existing and proposed. Identify how activities on neighboring property may affect the proposed use.

Equipment installed to comply with NEC and IFC standards. No affect from or on neighboring properties.

8. Removal of existing vegetation or effects thereon including disturbance of wetlands, general stability of soils, slopes, and embankments and the potential for sedimentation of disturbed soils.

Minimal removal of existing vegetation, no wetland disturbance, no impact on stability of disturbed soils. One 100 ft, 24 in deep trench extending from the ground mount array to the home. Six concrete pilings 6'6" in depth at the array.

9. Include practices that will be used to stabilize soils and restore or replace vegetation.

N/A

10. Soil characteristics and potential problems in regard to slope stability, embankments, building foundation, utility and road construction. Include suitability for supporting proposed landscaping.

N/A

11. Site grading or improvements including cuts and fills, drainage courses and impoundments, sound and sight buffers, landscaping, fencing, utilities, and open areas.

N/A

12. Visibility from public roads, adjoining property, and buildings. Include what will be done to reduce visibility of all parts of the proposal but especially cuts and fills and buildings. Include the impacts of shadows from new features on neighboring property.

No shading on neighboring property. Cuts and fills not visible. Visibility from the road to be obstructed by surrounding vegetation and the existing home. Visibility to neighboring properties to be obstructed by surrounding vegetation. See planset for site plan, landscaping plan, and full array dimensions.

13. Reasons for selecting the particular location including topographic, geographic and similar features, historic, adjoining land ownership or use, access to public lands, recreation, utilities, streets, etc., in order to illustrate compatibility with and opportunities presented by existing land uses or character.

N/A

14. Approximation of increased revenue from change in property tax assessment, new jobs available to local residents, and increased local expenditures.

N/A

15. Approximation of costs for additional public services, facilities, and other economic impacts.

N/A

16. State how the proposed development will impact existing developments providing the same or similar products or services.

N/A

17. State what natural resources or materials are available at or near the site that will be used in a process to produce a product and the impacts resulting from the depletion of the resource. Describe the process in detail and describe the impacts of each part.

N/A

18. What will be the impacts of a project abandoned at partial completion?

N/A

19. Number of residential dwelling units, other buildings and building sites, and square footage or gross non-residential floor space to be available.

N/A

20. Stages of development in geographic terms and proposed construction time schedule. Construction time of one week- occurring within the 2022 building season

21. Anticipated range of sale, lease or rental prices for dwelling units, building or other site, or non-residential floor space in order to insure compatibility with adjacent land use and development.

N/A

Property Tax Exemption

New and expanding business **may** qualify for a property tax exemption for up to 5 years by meeting the qualifications in accordance with Idaho Code§ 63-602NN

Application must be filed with the Valley County Assessor's office before construction begins.

Protocols for qualifying property exemption in Valley County, Idaho:

- Application must be received prior to the start of construction (ex. Building Permits, excavation)
- Term of exemption, not to exceed 5 years, will be up to the discretion of the Valley County Board of Commissioners
- Retail sales business do not qualify
- Multi use may qualify excluding retail sale area
- Housing
 - Multi-family housing must have 5 units or more per structure.
 - Multi-Family housing units may qualify if more than one structure is built totaling 5 or more units
 - For local housing only (workforce)
 - Short term rentals not allowed
 - Units cannot be individually sold (e.g., no condominiums)
- Remodel and/or additions to existing businesses
 - Only the area of remodel/addition may qualify for exemption
 - Retail sales additions/remodel will not qualify

For further information regarding the 63-602NN application process and instructions, please contact the Valley County Assessor's office at 208-382-7126.

James CUP Application 4.18.22

Final Audit Report

2022-04-19

Created:	2022-04-19
By:	Teylir Baker [REDACTED]
Status:	Signed
Transaction ID:	CBJCHBCAABAAi9O7gerlCUWhasACnVuiBUDP2cGdk9U7

"James CUP Application 4.18.22" History



Document created by Teylir Baker [REDACTED]

2022-04-19 - 10:31:22 PM GMT - IP address: 96.18.155.50



Document emailed to Delta M James [REDACTED] for signature

2022-04-19 - 10:32:31 PM GMT



Email viewed by Delta M James [REDACTED]

2022-04-19 - 10:33:13 PM GMT



Document e-signed by Delta M James [REDACTED]

Signature Date: 2022-04-19 - 10:34:37 PM GMT - Time Source: server



Agreement completed.

2022-04-19 - 10:34:37 PM GMT



Adobe Acrobat Sign

Valley County Planning and Zoning Department
219 North Main
Cascade, ID 83611

04/18/22

Please find the below outline for a proposed solar ground mount project at the James residence at 13643 Farm to Market Road, McCall ID 83638. This outline is for the purpose of approval for a conditional use permit.

Below is our detailed project description:

Array Details:

Installation of a ground mount PV array to be 4.8kW consisting of 12 Tesla 400W modules in three rows of four
Array's bottom height from ground will be 6' while the top height from the ground shall not exceed 14' - height of array is intended to sit above snow cover in winter.

The array's dimensions will be 24' 10" long x 7'6" high at a tilt of 45 degrees

The total area of the array is 255.44 sq/ft

PV system will operate in conjunction with Idaho Power's electrical grid and follow Idaho Power Customer Generation Guidelines for operation

Array will have a protective fencing installed on the backside to protect electrical components per code

All equipment to be installed is UL listed and compliant to NEC and IFC regulations

Array installed on homeowners private property

Construction/Installation Details:

Six concrete footings at 6'6" in depth

One trench from the array to the house approximately 100' long and 24" deep

Estimated installation time frame is one week

Installation to be overseen by Idaho licensed Journeyman Electrician under RevoluSun's licenses both ELC 039193 and RCE 48299. Installed per manufacturer guidelines and jurisdictional requirements to meet NEC and IFC code requirements.

- Dust, noise, and disruption is minimal and will occur during normal working hours

Project Purpose:

- Generate solar power to power homeowner's electrical and storage system
- Solar generation to offset utility use and provide power during any electrical outages

Please find supporting documentation:

- Project Purpose by property owner - ground mount vs. roof mount
- PV System Plan Set to include: plot plan, site plan, assembly detail, and equipment specifications
- Documentation requested but not applicable to our installation
 - Landscaping plan - no landscaping to occur
 - Lighting plan - no lighting to occur
 - Site grading - no grading or excavation to occur
 - No irrigation changes- does not irrigate

Project Purpose from property owner:

Although the existing house has a southerly roof aspect that is large enough to accommodate a roof-mount solar system, the homeowner is requesting approval for a ground-mount solar system for the following reasons:

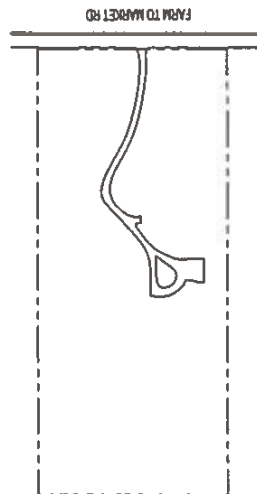
1. The existing house was designed and constructed with energy efficiency in mind., It is a passive solar house with a "cold roof" that is purposely designed to hold snow on the roof to assist with building envelope insulation. Adding solar panels to the roof would create snow shedding areas that defeat the energy efficiency properties of the existing cold roof system.
2. Installation of solar panels on the roof would also necessitate permeation of the roof envelope which can reduce the effectiveness of the cold roof insulation, increasing the possibility of ice damming and leaking.
3. The asphalt shingle roofing material on the existing house has a remaining expected service life of approximately 5-7 years. If solar panels were installed on this roof now, they would need to be removed and reinstalled in just a few years when roofing replacement occurs, and every time a new roof is needed in the future. The ground mounted solar system can be maintained independently of the house.

ASSESSOR'S #: RP17N03E149757



AERIAL PHOTO

NOT TO SCALE



PLAT MAP

RESULTS



PROJECT INFORMATION

OWNER:	DELTA JAMES	REVOLUTION MOUNTAIN STATES, LLC
NAME:	ANNA MILLER	
PHONE:	208152240	
CONTRACTOR:		
NAME:	208151002	
PHONE:	RESIDENTIAL	
BUILDING:	VALETT COUNTRY	
ZONING:	VALETT COUNTRY	
UTILITY:	IDAHO POWER	
DESIGN SPECIFICATIONS:		
OCCUPANCY:	SINGLE FAMILY	
CONSTRUCTION:	RESIDENTIAL	
ZONING:	20 PSF	
GROUND SLOPE:	C	
WIND EXPOSURE:	115 MPH	
WIND SPEED:	APPLICABLE CODES & STANDARDS	
BUILDING:	IBC 2010, IRC 2010	
ELECTRICAL:	NEC 2011	
FEES:	EST: 2014	

GENERAL NOTES

- 1.11 PROJECT NOTES:
- 1.12 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL
- 1.13 ELECTRIFICATION CODE ARTICLE 690, ALL MANUFACTURERS LISTING AND
- 1.14 INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY
- 1.15 THE AUTHORITY HAVING JURISDICTION (N/A APPLICABLE CODES).
- 1.16 THE UNITY INTERCONNECTOR ATTACHMENT MUST BE APPROVED AND PV
- 1.17 SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION.
- 1.18 ALL PV SYSTEM COMPONENTS, MODULES, UNITY-INTERACTIVE INVERTERS,
- 1.19 AND SOURCE CIRCUIT COMPONENT BODIES ARE IDENTIFIED AND LISTED FOR
- 1.20 USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC, IEC, PV MODULES, UL
- 1.21 LISTED, CERTIFIED, IEEE 1547, IEC 61508 COMPLIANT BODIES; UL 1703 OR UL 1741
- 1.22 ACCESSORY
- 1.23 MAX. DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP
- 1.24 COEFFICIENT FOR VOLTAGE, IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED
- 1.25 ACCORDING TO IEC 60907.
- 1.26 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND
- 1.27 SOURCE CIRCUIT COMPONENTS INTEGRATED FOR USE IN A PHOTOVOLTAIC
- 1.28 POWER SYSTEM MUST BE IDENTIFIED AND LISTED FOR THE APPLICATION PER
- 1.29 IEC 61508. IT SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM
- 1.30 LISTING OR LABELING IEC 11713.
- 1.31 ALL SERVICE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE.
- 1.32 IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT, ALL PLACES AND
- 1.33 SURFACES SHALL BE INSTALLED AS REQUIRED BY THE NEC AND ALL
- 1.34 SCOPE OF WORK:
- 1.35 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND
- 1.36 SPECIFICATIONS OF THE ORBIDED PHOTOVOLTAIC SYSTEM RETROFIT.
- 1.37 PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING
- 1.38 ON-SITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE GROUND
- 1.39 MOUNT ARMED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS
- 1.40 DOCUMENT.
- 1.41 WORK INCLUDES:
- 1.42 PV ATTACHMENTS - ROOFSPACE GROUND MOUNT
- 1.43 PV RACKING SYSTEM INSTALLATION - ROOFSPACE OR 100
- 1.44 PV MODULE AND INVERTER INSTALLATION - TESLA TAOH / TESLA
- 1.45 POWERWALL / TESLA BACKUP CATEWAY 2
- 1.46 PV EQUIPMENT GROUNDING
- 1.47 PV LEAD CENTERS (IF INCLUDED)
- 1.48 PV WEATHER GUARDING (IF INCLUDED)
- 1.49 PV DISCONNECTS
- 1.50 PV GROUNDING ELECTRODE AS BONDING TO (E) GEC
- 1.51 PV FINAL COMMISSIONING
- 1.52 (E) ELECTRICAL EQUIPMENT RETROFIT (E) PV
- 1.53 STORAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE
- 1.54 (E) DRAINAGE (IF NECESSARY)

SCOPE OF WORK

STC: $12 \times 400W = 4,800kW$
 PTC: $12 \times 372.9W = 4,475kW$ DC
 (12) TESLA T400H
 (11) TESLA POWERWALL •
 (10) TESLA BACKUP GATEWAY 2

ATTACHMENT TYPE: FRONT-LOADER MOUNT

[illegible]

CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 206-315-4062

ADDRESS: 467 STEELHEAD WAY,
BOISE, ID 83704

LIC. NO.: ECL 009193

E.E. NO.:

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF PROFESSIONAL ETHICS
AND SHALL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 4.800 kWp

JAMES

RESIDENCE

13643 FARM TO MARKET RD.

MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

SITE PLAN

DATE: 03.30.2022

DESIGN BY: E.A.

CHECKED BY: M.M.

REVISIONS

A-101.00

(SHEET 1)

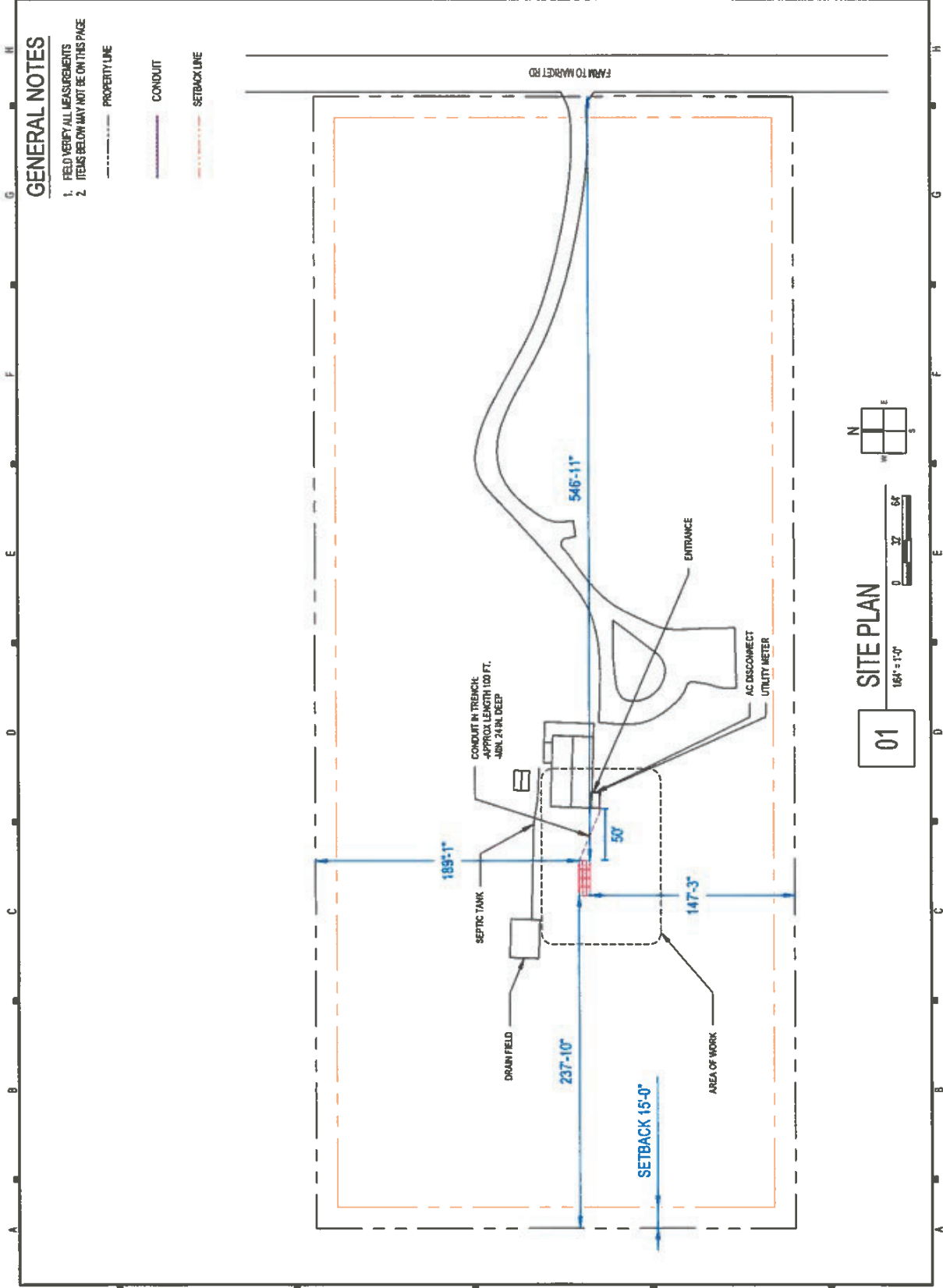
GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

PROPERTY LINE

CONDUIT

SETBACK LINE





GENERAL NOTES

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PROPERTY LINE

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SETBACK LINE

NOTE: GROUND MOUNT INSTALLATION OF 255.44 FT², LOCATED TO THE WEST SIDE OF THE HOME, TO BE VISUALLY OBSTRUCTED FOR NEIGHBORING PROPERTIES BY THE EXISTING VEGETATION. ARRAY TO BE OBSTRUCTED FROM THE ROAD BY THE EXISTING HOME. SEE ARRAY LOCATION. ARRAY TO SIT ON FLAT GROUND TO THE SOUTH OF THE SEPTIC SYSTEM WITH SUFFICIENT CLEARANCE FROM THIS EXISTING INFRASTRUCTURE. ARRAY TO SIT 50 FT DIRECTLY TO THE WEST OF THE HOME.



CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

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NEW PV SYSTEM: 4,800 kWp

JAMES

RESIDENCE

13643 FARM TO MARKET RD,
MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

LANDSCAPING PLAN

DATE: 03.30.2022

DESIGN BY: E.K.

CHECKED BY: M.U.

REVISIONS

A-101.00

SHEET 3



LANDSCAPING PLAN

0 25 50
Feet

01

CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

PHONE: 208-315-4002

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BOISE, ID 83704

L.C. NO.: ECL 089193

H.C. NO.:

E.C. NO.:

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NEW PV SYSTEM: 4.800 kWp

JAMES

RESIDENCE

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MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

ELECTRICAL PLAN

DATE: 03.30.2022

DESIGN BY: E.A.

CHECKED BY: J.M.

REVISIONS

A-102.00

(SHEET 1)

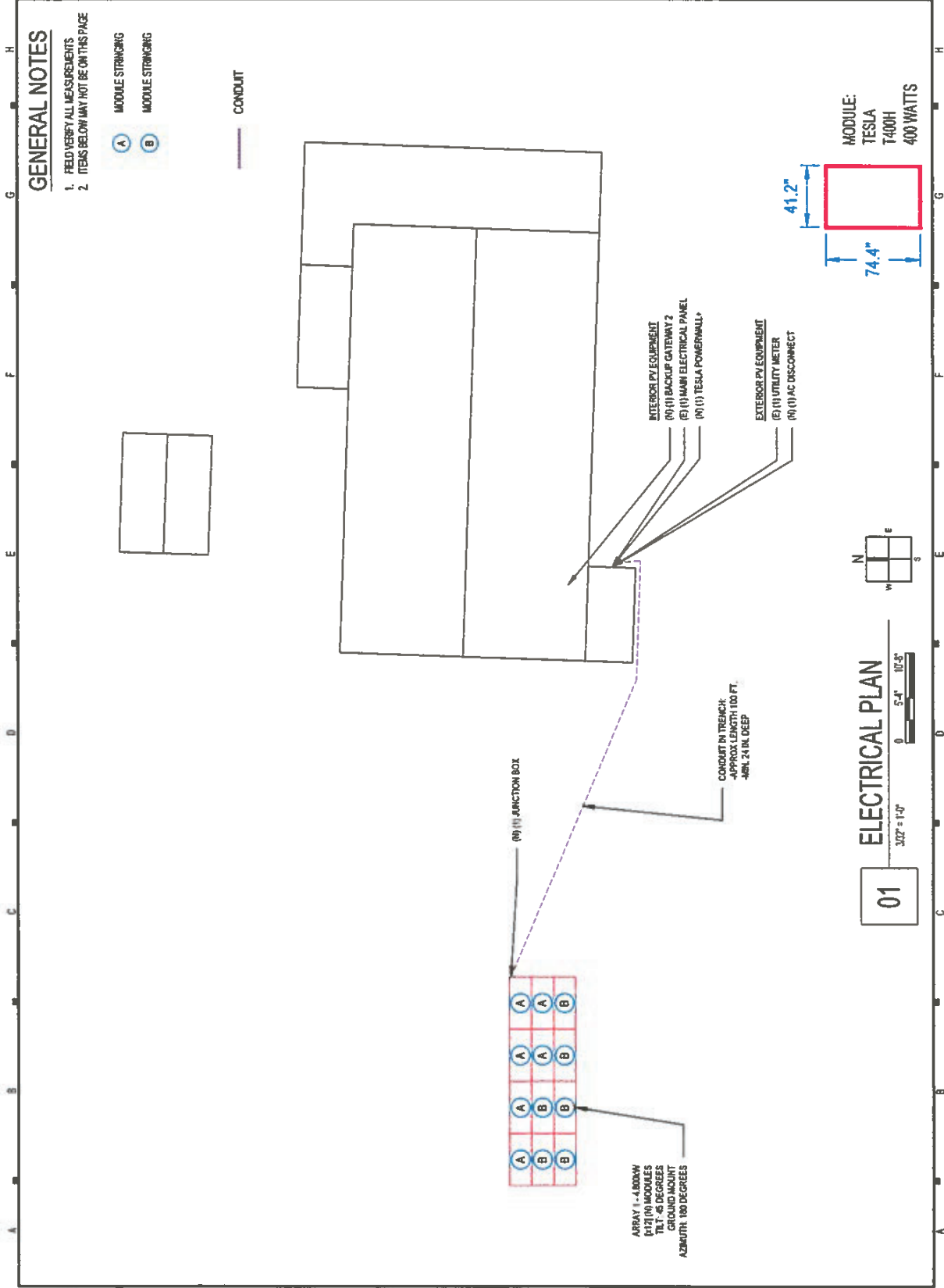
GENERAL NOTES

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MODULE STRINGING

MODULE STRINGING

CONDUIT



CONTRACTOR

REVOLUSUN MOUNTAIN STATES, LLC

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MANNER WITHOUT PERMISSION.
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 4.800 kWp

JAMES

RESIDENCE

13843 FARM TO MARKET RD,

MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A09 B)

SOLAR ATTACHMENT PLAN

DATE: 03.30.2022

DESIGN BY: E.K.

CHECKED BY: M.M.

REVISIONS

A-103.00

SHEET 1/1

GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

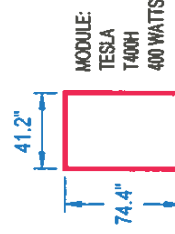
IRON RIDGE 4X1000 RAIL

END CLAMP

MID CLAMP

GROUND MOUNT SOLAR MODULES (SEE
SHEET S-501 FOR MOUNTING DETAILS)

IRON RIDGE TOP CAP



SOLAR ATTACHMENT PLAN

01

1/2" = 1'-0"

Tesla Photovoltaic Module T395H, T400H, and T405H

The Tesla module is one of the most successful residential photovoltaic modules available and exceeds industry engineering and quality standards. Featuring our proprietary Zip-Groove design, the all-black module mounts close to your roof for a seamless aesthetic. Modules are certified to IEC 61710 - 1, IEC 61710 - 2 and IEC 61215.



Module Specifications

Electrical Characteristics



Power Class
Test Method
ISO Power P_{max} (W)
Open Circuit Voltage V_{oc} (V)
Short Circuit Current I_{sc} (A)
Max Power Voltage V_{mp} (V)
Max Power Current I_{mp} (A)
Module Efficiency (%)

Power Class	STC	1000 W/m ² , 25°C, AM1.5
Test Method	IEC 61215	IEC 61215
ISO Power P_{max} (W)	395	395
Open Circuit Voltage V_{oc} (V)	43.27	43.27
Short Circuit Current I_{sc} (A)	11.90	11.90
Max Power Voltage V_{mp} (V)	38.88	38.88
Max Power Current I_{mp} (A)	10.31	10.31
Module Efficiency (%)	20.3	20.3

Mechanical Loading

Front Side Test Load	8300 Pa (1.28 lb/ft ²)
Rear Side Test Load	5200 Pa (0.78 lb/ft ²)
Front Side Design Load	4080 Pa (0.65 lb/ft ²)
Rear Side Design Load	4080 Pa (0.65 lb/ft ²)
Temperature Test	25 mm horizontal at 23 mm/s

Mechanical Parameters

Cell Orientation	180° (± 5°)
Interdigitated Back Contact (IBC)	Yes
Cell Size	166 mm x 166 mm
Cell Spacing	4 mm (0.157 in)
Standard IBC or Heterojunction	Standard IBC or Heterojunction
Front Cover	0.13 in (3.3 mm) aluminum per stressed glass
Frame	Black Anodized Aluminum Alloy
Weight	21.5 kg (47.4 lb)
Dimensions	1660 mm x 1048 mm x 40 mm 18 x 42 in x 1.57 in

Operation Parameters

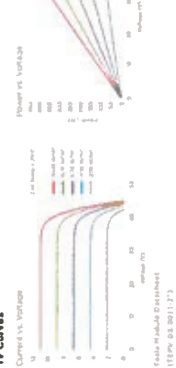
Operating Temperature	-40°C to +85°C
Power Output Tolerance	± 3%
Power Output Tolerance	± 3%
Max System Voltage	DC 1500 V (IEC 61713)
Max Series Fuse Rating	20 A
MOET	45.3 ± 1°C
Substrate Class	Class 1
Fire Rating	UL 9550 Type 2

Linear Power Warranty

Warranty and Performance	25 years
Linear Power Output	25 years

At least 90% of nominal power during first year. Transfer max. 0.5% degradation per year. At least 91.2% of nominal power at 25 years. At least 86% of nominal power at 25 years.

IV Curves



Tesla Module Engineering
(11/19/2018 11:21)

CONTRACTOR

REVOLUTION MOUNTAIN STATES, LLC

PHONE: 204-315-4002

ADDRESS: 457 STEELHEAD WAY,
BOISE, ID 83704

LIC. NO.: EQ 039193

INC. NO.:

ELE. NO.:

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NEW PV SYSTEM: 4,800 kWp

JAMES

RESIDENCE

13643 FARM TO MARKET RD.,

MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI)

RESOURCE DOCUMENT

DATE: 03.30.2022

DESIGN BY: E.L.

CHECKED BY: M.M.

REVISIONS

R-001.00

SHEET 1/3



Ground Mount System

Datasheet



All-Terrain Mounting

The IronRidge Ground Mount System combines our XR1000 or XR10000 rails with locally-sourced steel pipes or mechanical tubing, to create a cost-effective structure capable of handling any site or terrain challenge. Installation is simple with only a few structural components and no drilling, welding, or heavy machinery required. In addition, the system works with a variety of foundation options—including concrete piers, ground screws, helical or driven piles, and above-ground ballast blocks.



Rugged Construction
Engineered steel and aluminum components ensure durability.



PE Certified
Pre-stamped engineering letters available in most states.



UL 2703 Listed System
Meets newest effective UL 2703 standard.



Design Software
Online tool generates engineering values and bill of materials.



Flexible Architecture
Multiple foundation and array configuration options.



25-Year Warranty
Products guaranteed to be free of impacting defects.

Datasheet



Substructure

Top Caps



Connect vertical and cross pipes.

Bonded Rail Connectors



Attach and bond rail assembly to cross pipes.

Diagonal Braces



Optional brace provides additional support.

Cross Pipe & Piers



Steel pipes or mechanical tubing for substructure.

360° Product Tour
Vail.ironridge.com

Rail Assembly

XR1000/XR10000 Rails



Curved rails increase spanning capabilities.

UFOs



Universal fastening objects bond modules to rails.

Stopper Sleeves



Snap onto the UFO to turn into a bonded end clamp.

CAMO



Bond modules to rails while staying completely hidden.

Resources



Design Assistant
Go from rough layout to fully engineered system. For free.
Go to ironridge.com/design



NABCEP Certified Training
Earn free continuing education credits while learning more about our systems.
Go to ironridge.com/training



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NEW PV SYSTEM: 4,800 kWp

JAMES

RESIDENCE

13843 FARM TO MARKET RD,

MCCALL, ID 83638

APN: RP17N03E149757

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A4) (B)

RESOURCE DOCUMENT

DATE: 03.30.2022

DESIGN BY: ELC

CHECKED BY: M.M.

REVISIONS

R-005.00

Sheet 1 of 5

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U.S. Patents: 48,465,792; 48,479,264; 48,479,265; 48,479,266; 48,479,267; 48,479,268; 48,479,269; 48,479,270; 48,479,271; 48,479,272; 48,479,273; 48,479,274; 48,479,275; 48,479,276; 48,479,277; 48,479,278; 48,479,279; 48,479,280; 48,479,281; 48,479,282; 48,479,283; 48,479,284; 48,479,285; 48,479,286; 48,479,287; 48,479,288; 48,479,289; 48,479,290; 48,479,291; 48,479,292; 48,479,293; 48,479,294; 48,479,295; 48,479,296; 48,479,297; 48,479,298; 48,479,299; 48,479,300; 48,479,301; 48,479,302; 48,479,303; 48,479,304; 48,479,305; 48,479,306; 48,479,307; 48,479,308; 48,479,309; 48,479,310; 48,479,311; 48,479,312; 48,479,313; 48,479,314; 48,479,315; 48,479,316; 48,479,317; 48,479,318; 48,479,319; 48,479,320; 48,479,321; 48,479,322; 48,479,323; 48,479,324; 48,479,325; 48,479,326; 48,479,327; 48,479,328; 48,479,329; 48,479,330; 48,479,331; 48,479,332; 48,479,333; 48,479,334; 48,479,335; 48,479,336; 48,479,337; 48,479,338; 48,479,339; 48,479,340; 48,479,341; 48,479,342; 48,479,343; 48,479,344; 48,479,345; 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