



Community Planning & Permitting (CPP)

Courthouse Annex - 2045 13th Street - Boulder, Colorado 80302 - (303) 441-3930 - Fax 303-441-4856

Mailing Address: Post Office Box 471 - Boulder, Colorado 80306 www.bouldercounty.org

MEMORANDUM

TO: Agencies, Adjacent Property Owners And Interested Parties

FROM: Jonathan Tardif, Planner I

SUBJECT: Request to waive Site Plan Review at
8829 MARATHON ROAD, UNINCORPORATED, CO 80503

DOCKET: SPRW-22-0053: Stone Ground Mount Solar

DATE: 11/04/2022

The purpose of this memorandum is to inform interested parties that the above listed address is under consideration by the CPP Director for a waiver from the Site Plan Review process for:

Site Plan Review Waiver for construction of a ground-mounted solar array on a 1.03-acre parcel.

The Site Plan Review (SPR) regulations allow for certain types of minor projects, which are likely to be less impacting, to be waived from the full SPR process that would normally be required to approve their construction. These projects are eligible for an expedited review called the "Site Plan Review Waiver (SPRW)," during which the SPR standards are analyzed in a shorter timeframe.

Accessory ground-mounted solar energy systems (as defined by Art. 4-516.G of the Land Use Code) and roof-mounted wind-powered energy systems (as defined by Art. 4-516.P of the Land Use Code), which are proposed to exceed the roofline or zoning district by more than five feet (but no more than 15 feet), are subject to the Site Plan Review Waiver process in order to analyze, in particular, any significant adverse visual impacts on neighboring private and public property.

Waivers from SPR may be granted if the CPP Department does not find the proposal to be in conflict with the standards listed in Article 4-806 of the Boulder County Land Use Code. However, the SPRW determination may include written terms and conditions. The project, even if granted a waiver, is subject to the applicable building permit and building code requirements.

Article 4-802(C) requires that adjacent property owners be notified of the request to waive SPR. The CPP Department appreciates any comments that you may have regarding this proposal. Please direct any written or verbal comments to the CPP Department by **11/14/2022**. If you have any questions or comments, feel free to contact this office at planner@bouldercounty.org or **(303) 441-3930**.

cc: STONE CHRISTOPHER W & SUSAN J, Property Owner
Nicholas Hirsch, Agent



Boulder County Land Use Department

Courthouse Annex Building
 2045 13th Street • PO Box 471 • Boulder, Colorado 80302
 Phone: 303-441-3930
 Email: planner@bouldercounty.org
 Web: www.bouldercounty.org/lu
 Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
 Tuesday 10 a.m. to 4:30 p.m.

Shaded Areas for Staff Use Only
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number		Project Name	
<input type="checkbox"/> Appeal <input type="checkbox"/> Correction Plat <input type="checkbox"/> Exemption Plat <input type="checkbox"/> Final Plat <input type="checkbox"/> Limited Impact Special Use <input type="checkbox"/> Limited Impact Special Use Waiver <input type="checkbox"/> Location and Extent	<input type="checkbox"/> Modification of Site Plan Review <input type="checkbox"/> Modification of Special Use <input type="checkbox"/> Preliminary Plan <input type="checkbox"/> Resubdivision (Replat) <input type="checkbox"/> Rezoning	<input type="checkbox"/> Road Name Change <input type="checkbox"/> Road/Easement Vacation <input type="checkbox"/> Site Plan Review <input type="checkbox"/> Site Plan Review Waiver <input type="checkbox"/> Sketch Plan <input type="checkbox"/> Special Use/SSDP	<input type="checkbox"/> Special Use (Oil & Gas development) <input type="checkbox"/> State Interest Review (1041) <input type="checkbox"/> Subdivision Exemption <input type="checkbox"/> Variance <input checked="" type="checkbox"/> Other: Ground Mounted Solar
Location(s)/Street Address(es) 8829 Marathon Road			
Subdivision Name			
Lot(s)	Block(s)	Section(s)	Township(s)
Area in Acres	Existing Zoning	Existing Use of Property	Number of Proposed Lots
Proposed Water Supply		Proposed Sewage Disposal Method	

Applicants:

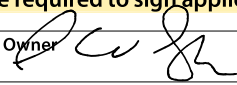
Applicant/Property Owner Christopher Stone			Email chrisstone579@gmail.com	
Mailing Address 8829 Marathon Road				
City Longmont	State CO	Zip Code 80503	Phone 303-589-2778	
Applicant/Property Owner/Agent/Consultant No Problem Electric			Email permitting@rocketsolarcolorado.com	
Mailing Address 6975 Hwy 66				
City Platteville	State CO	Zip Code 80651	Phone 320-761-2899	
Agent/Consultant			Email	
Mailing Address				
City	State	Zip Code	Phone	

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval.

I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner 	Printed Name Christopher Stone	Date 8/16/2022
Signature of Property Owner	Printed Name	Date

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.






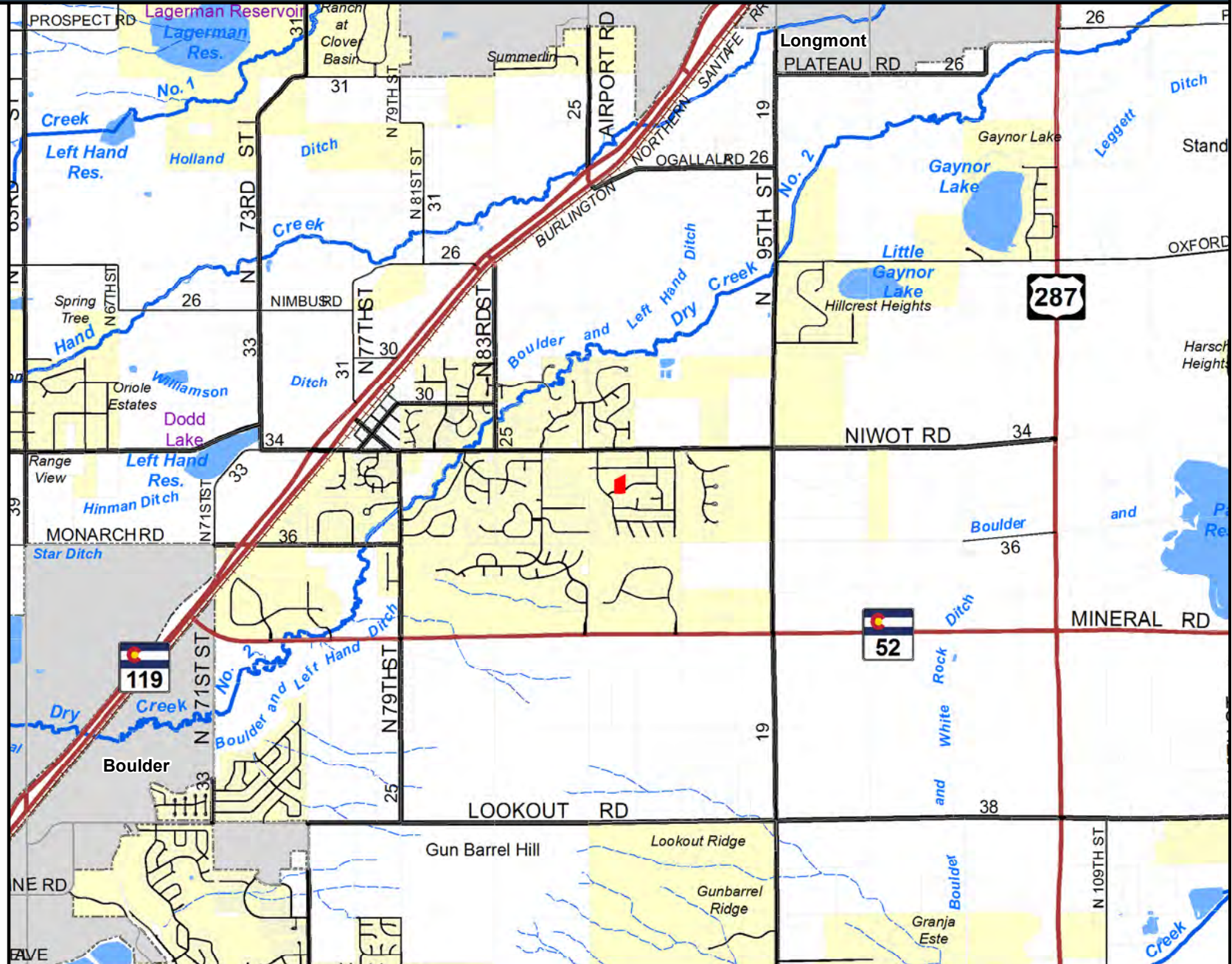
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Vicinity

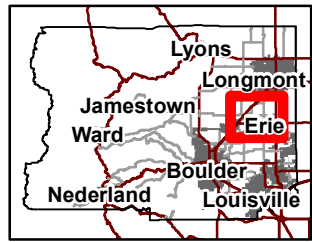
8829 MARATHON RD

-  Subject Parcel
-  Municipalities
- Subdivisions**
-  Subdivisions



0 0.35 0.7 Miles 

Area of Detail Date: 11/1/2022



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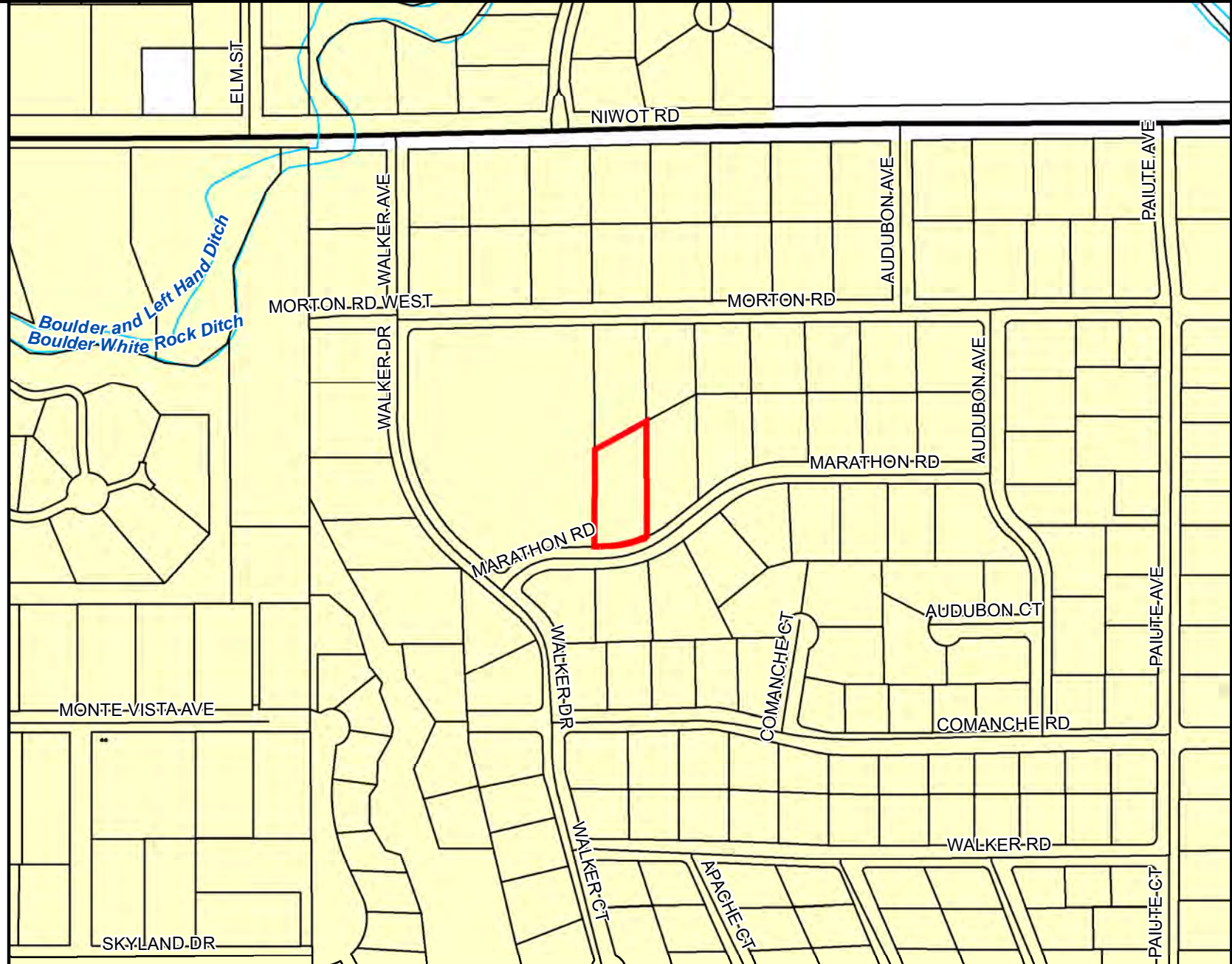
Location

8829 MARATHON RD

Subject Parcel

Subdivisions

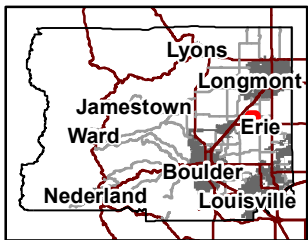
Subdivisions



0 0.035 0.07 Miles



Area of Detail Date: 11/1/2022



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Aerial

8829 MARATHON RD

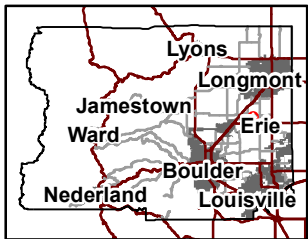
 Subject Parcel



0 0.005 0.01 Miles



Area of Detail Date: 11/1/2022



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Aerial

8829 MARATHON RD

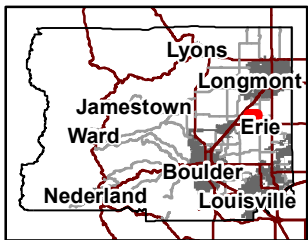
 Subject Parcel



0 0.05 0.1 Miles



Area of Detail Date: 11/1/2022



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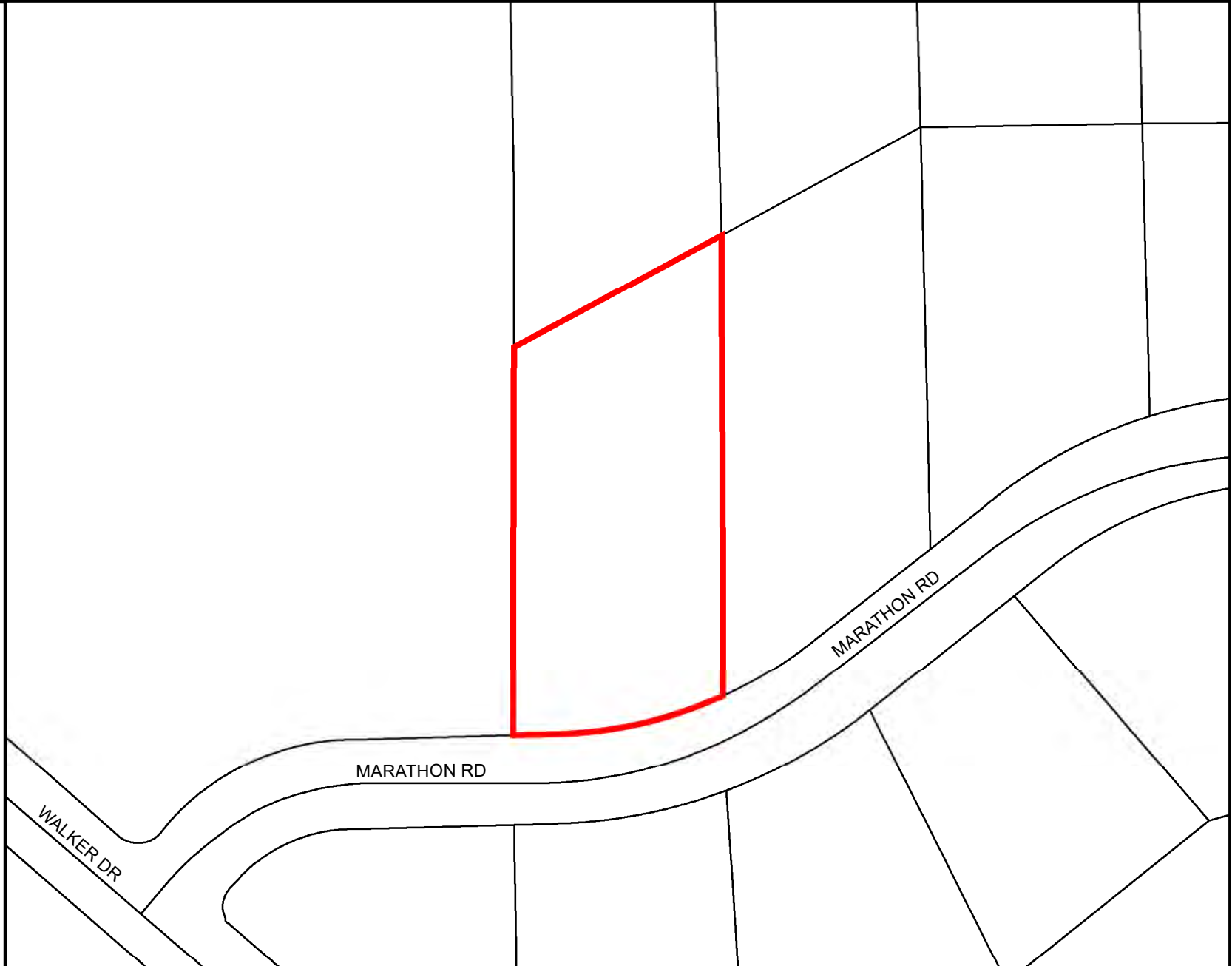
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Comprehensive Plan

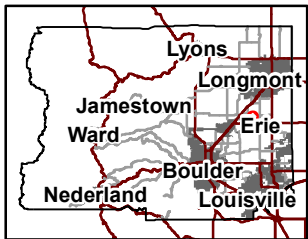
8829 MARATHON RD

 Subject Parcel



0 0.0085 0.017 Miles 

Area of Detail Date: 11/1/2022



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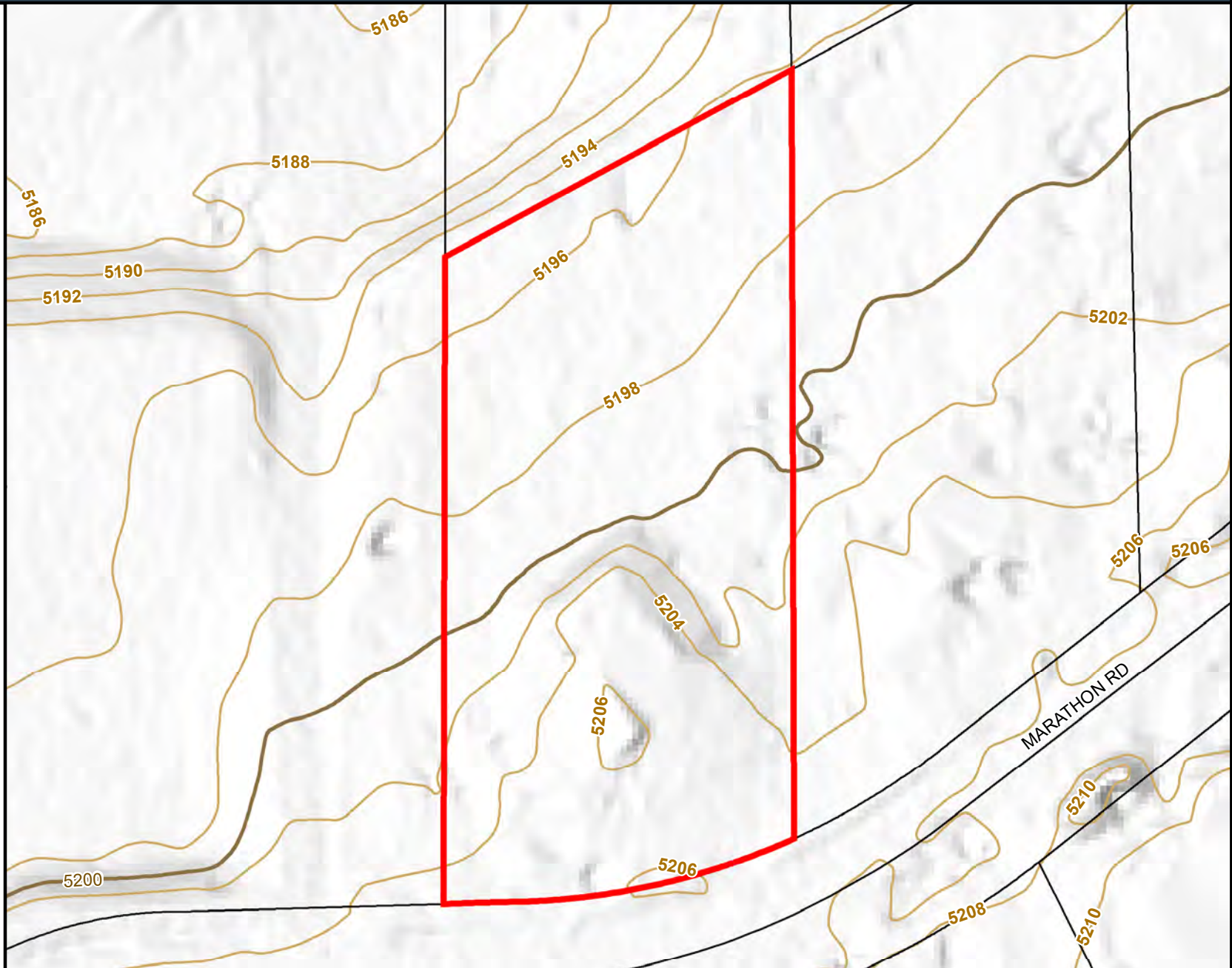
Elevation Contours

8829 MARATHON RD

 Subject Parcel

 Contours 40'

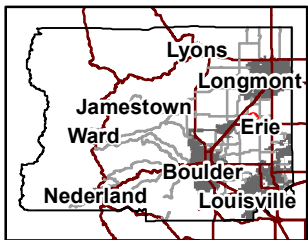
 Contours 2'



0 0.005 0.01 Miles



Area of Detail Date: 11/1/2022



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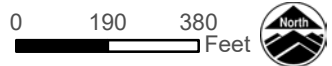
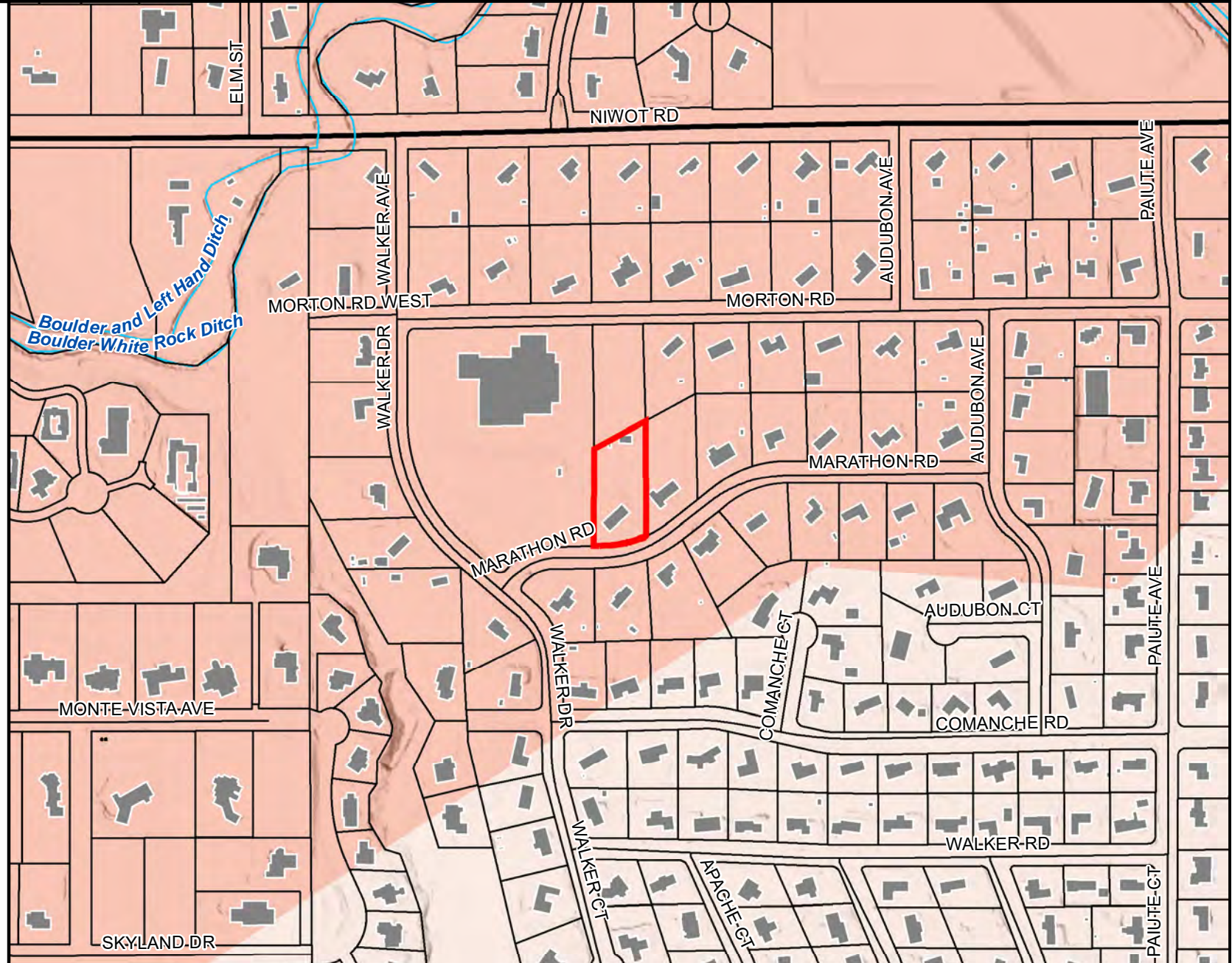
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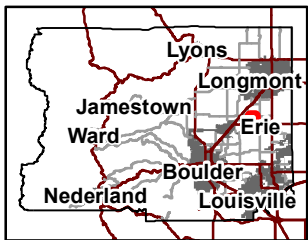
Geologic Hazards

8829 MARATHON RD

-  Subject Parcel
-  High Swelling Soil Potential
-  Moderate Swelling Soil Potential



Area of Detail Date: 11/1/2022



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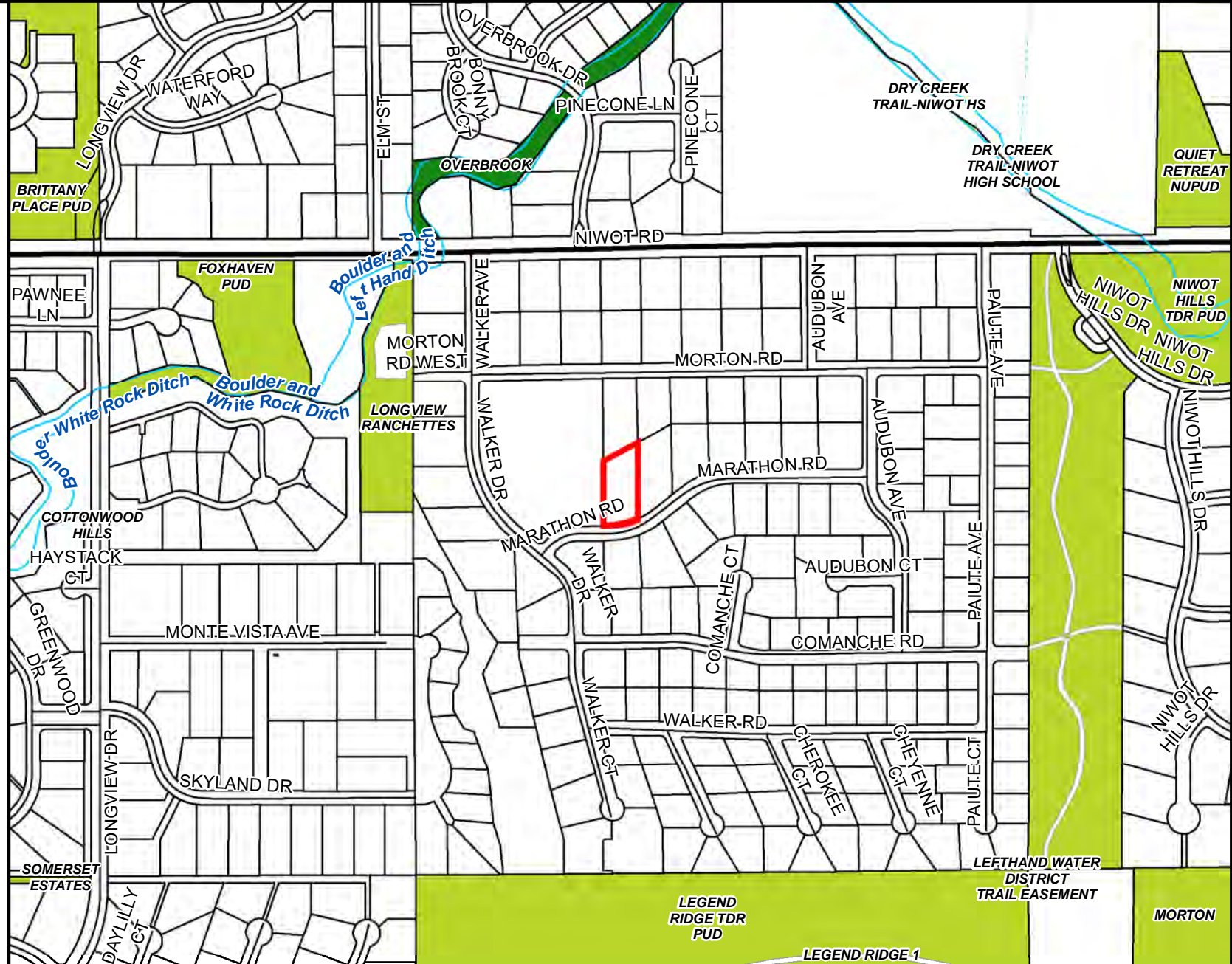
Public Lands & CEs

8829 MARATHON RD

Subject Parcel

Boulder County Open Space

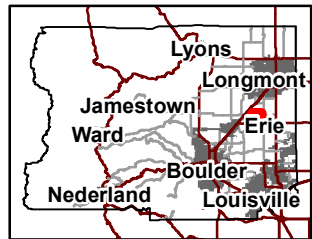
- County Open Space
- County Conservation Easement



0 0.05 0.1 Miles



Area of Detail Date: 11/1/2022



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Zoning

8829 MARATHON RD

Subject Parcel

Zoning Districts

Agricultural

Business

Rural Residential

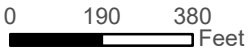
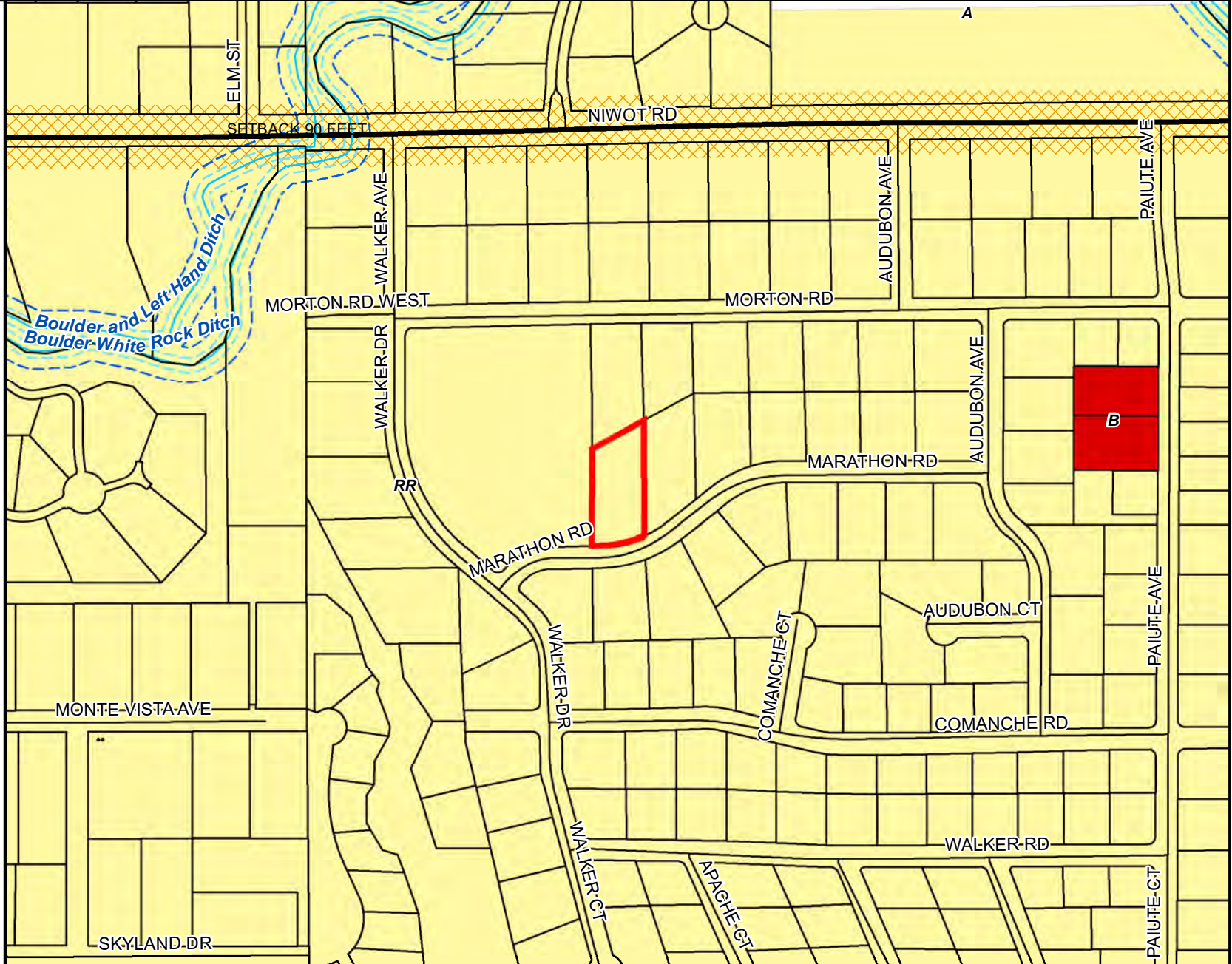
Ditch Setbacks

20 feet

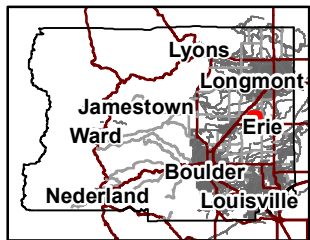
50 feet

Major Road Setbacks

90 feet



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AERIAL VIEW:



STREET VIEW:



CONTRACTOR INFORMATION:

No Problem Electric Corp.
6975 HWY 66
Platteville, CO 80651
License # EC.0100746

SITE INFORMATION

Christopher Stone
8829 Marathon Rd
Longmont, CO 80503
AC SYSTEM SIZE: 6.96 kW AC
DC SYSTEM SIZE: 8.64 kW DC
Lat, 40.099011072655
Long, -105.147033304382
(24) Silfab SIL-360 NX mono PERC PV
MODULES
(24) Enphase IQ8PLUS-72-2-US INVERTER(S)

XCEL Energy CO

GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

EQUIPMENT:
AC SYSTEM SIZE: 6.96 kW AC
DC SYSTEM SIZE: 8.64 kW DC
(24) Silfab SIL-360 NX mono PERC PV MODULES
(24) Enphase IQ8PLUS-72-2-US INVERTER(S)
(1) Enphase Encharge 10 BATTERIES
RACKING: GROUND MOUNT

APPLICABLE GOVERNING CODES

2020 NEC
2015 IRC
2015 IFC
2015 IBC

SITE SPECIFICATIONS

OCCUPANCY: R-3
ZONING: RESIDENTIAL

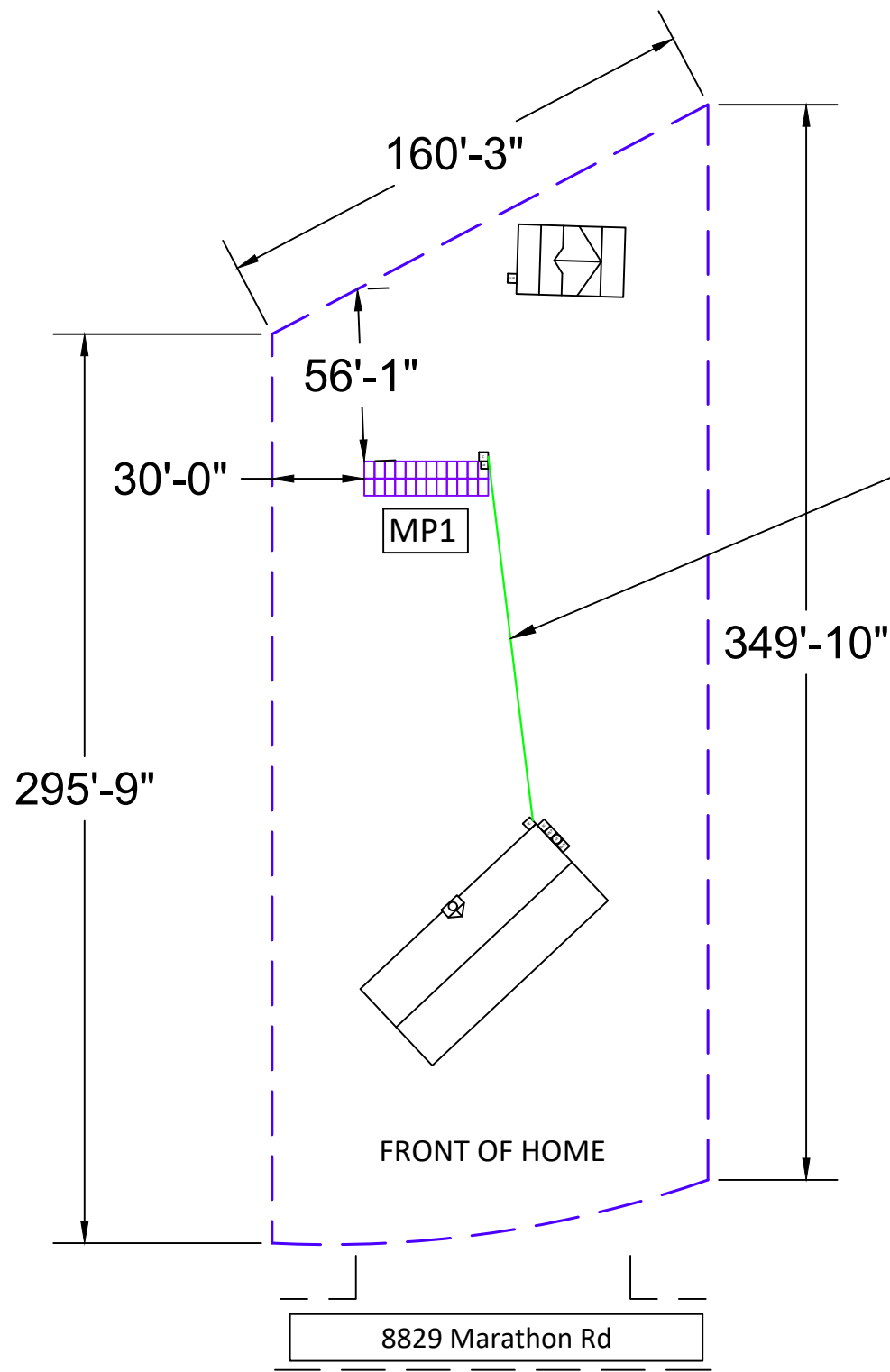
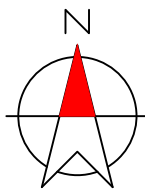
SHEET INDEX:

- PV01 COVER PAGE
- PV02 SITE PLAN
- PV03 ROOF ATTACHMENTS
- PV04 MOUNTING DETAIL
- PV05 LINE DIAGRAM
- PV06 ELECTRICAL CALCS
- PV07 LABELS
- PV08 PLACARD
- PV09 SITE PHOTOS

DRAWN BY: SoloCAD

DATE:
May 30, 2022

COVER PAGE - PV01



ARRAY DETAILS:		
MOUNTING PLANE:	AZIMUTH:	TILT:
MP1	180°	35°



CONTRACTOR INFORMATION:
 No Problem Electric Corp.
 6975 HWY 66
 Platteville, CO 80651
 License # EC.0100746

SITE INFORMATION

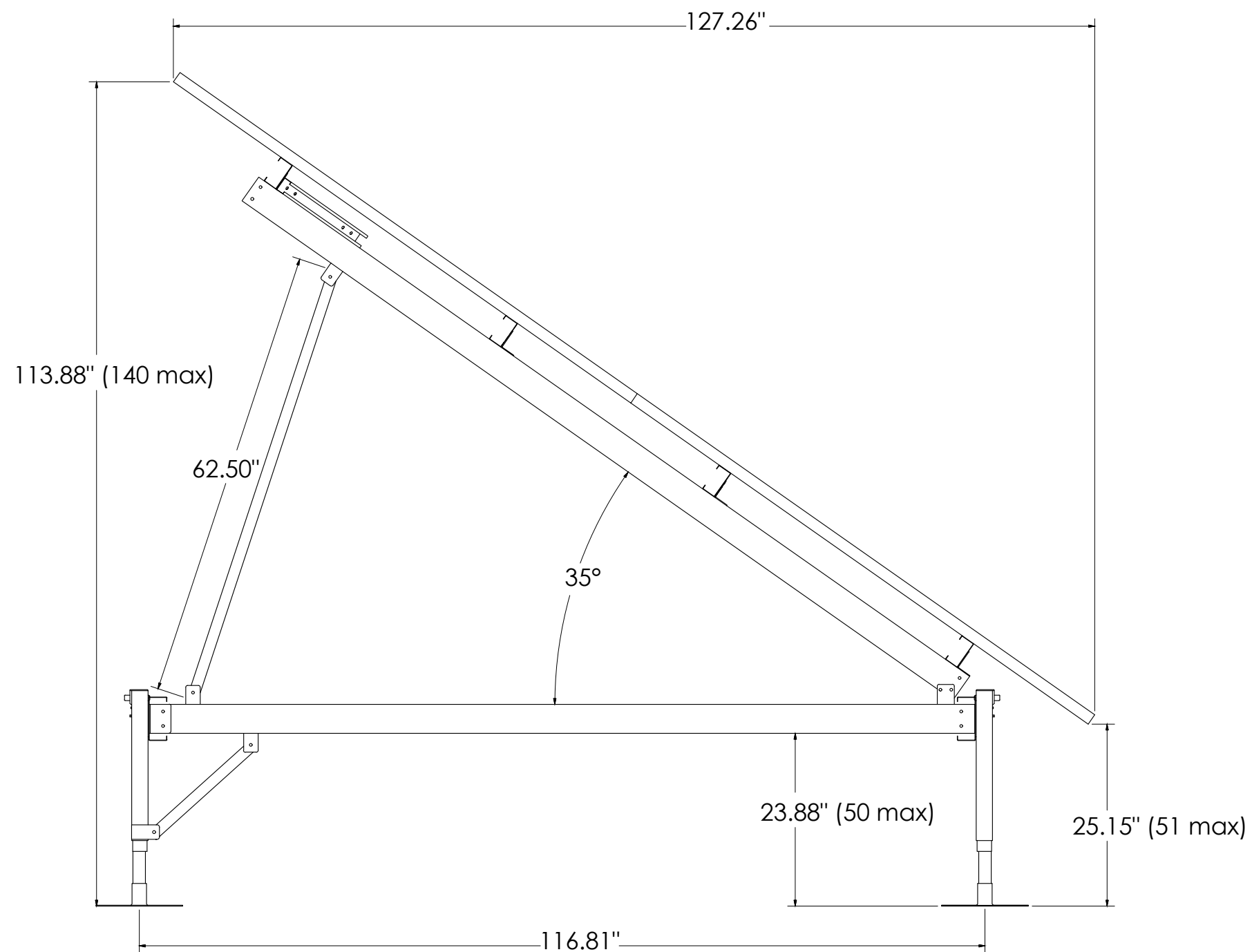
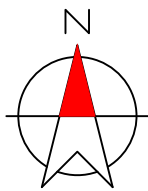
Christopher Stone
 8829 Marathon Rd
 Longmont, CO 80503
 AC SYSTEM SIZE: 6.96 kW AC
 DC SYSTEM SIZE: 8.64 kW DC
 Lat, 40.099011072655
 Long, -105.147033304382
 (24) Silfab SIL-360 NX mono PERC PV MODULES
 (24) Enphase IQ8PLUS-72-2-US INVERTER(S)
 XCEL Energy CO

EQUIPMENT LEGEND:

- UTILITY METER
- VISIBLE, LOCKABLE, LABELED AC DISCONNECT
- INVERTER
- SUB PANEL
- FIRE ACCESS PATHWAY (3' TYP)
- BATTERY(IES)
- MAIN SERVICE PANEL
- METER SOCKET (FOR UTILITY PV METER)
- COMBINER BOX
- LOAD CENTER
- PROPERTY LINE

VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

DRAWN BY: SoloCAD
 DATE: May 30, 2022
 SITE PLAN - PV02



CONTRACTOR INFORMATION:

No Problem Electric Corp.
6975 HWY 66
Platteville, CO 80651
License # EC.0100746

SITE INFORMATION

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8829 Marathon Rd
Longmont, CO 80503
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(24) Silfab SIL-360 NX mono PERC PV
MODULES
(24) Enphase IQ8PLUS-72-2-US INVERTER(S)
XCEL Energy CO

DRAWN BY: SoloCAD

DATE:
May 30, 2022

ROOF ATTACHMENTS - PV03

1. Select a location on the Rear Chassis for a grounding lug to be installed.
2. Drill a through hole in the back of the Rear Chassis and install an ILSCO GBL-4DBT or other UL and cETL listed lay-in grounding lug. Refer to Figure 21 below.

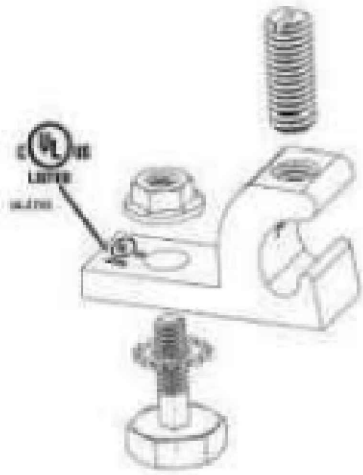
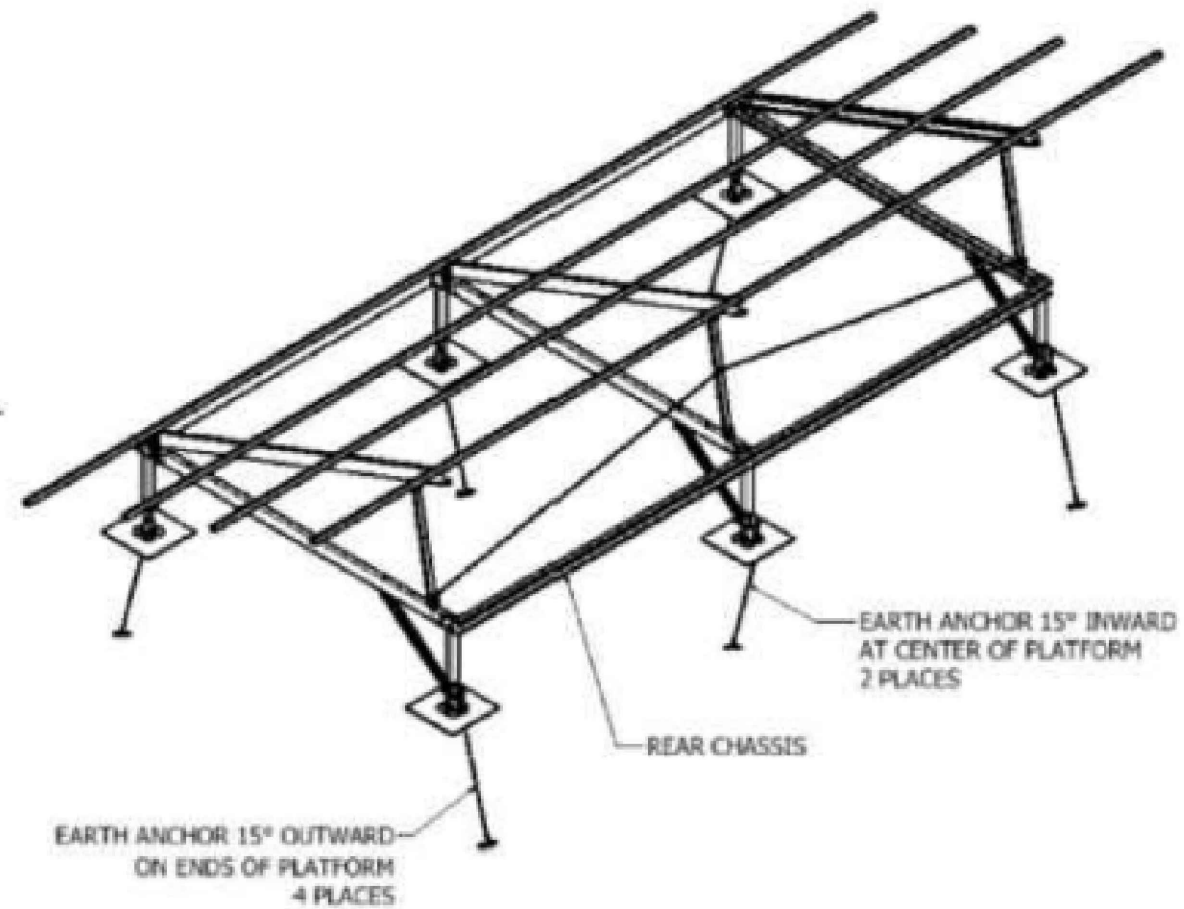
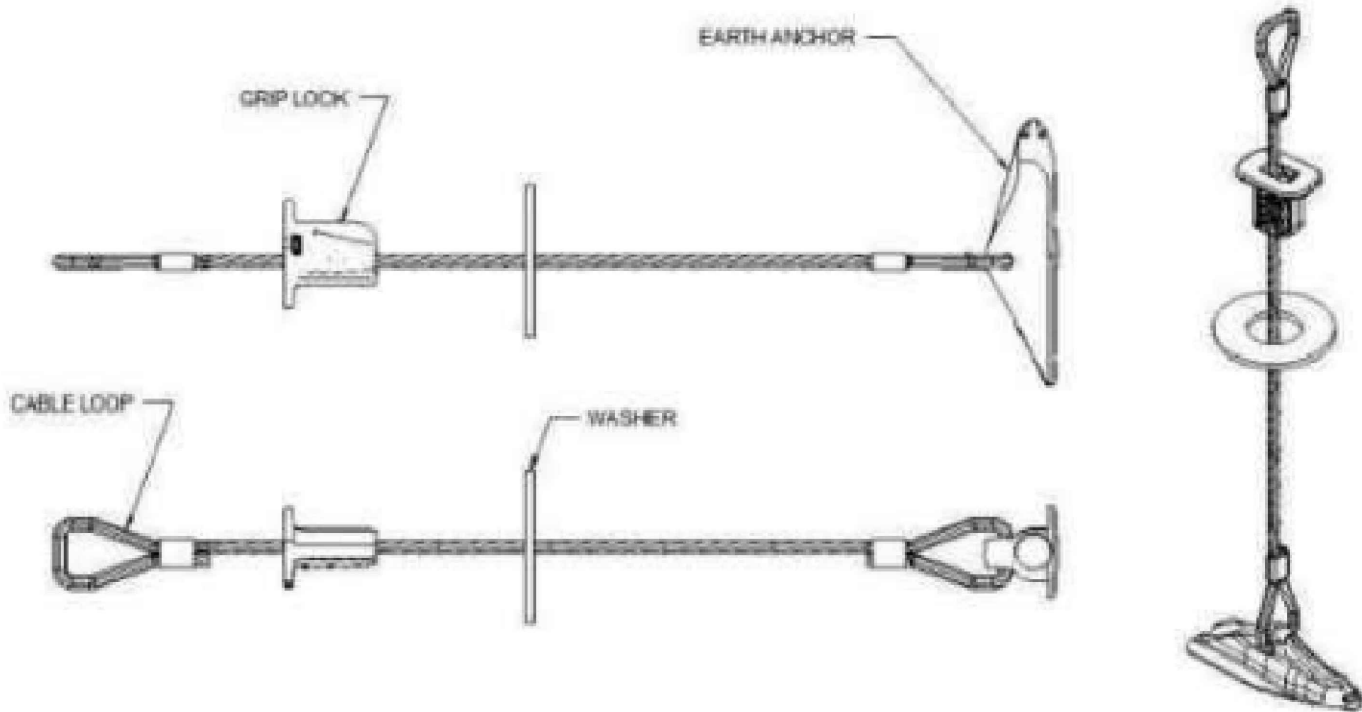


Figure 21: ILSCO GBL-4DBT GROUNDING LUG



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 6975 HWY 66
 Platteville, CO 80651
 License # EC.0100746

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 MODULES
 (24) Enphase IQ8PLUS-72-2-US INVERTER(S)
 XCEL Energy CO

DRAWN BY: SoloCAD
 DATE:
 May 30, 2022
 MOUNTING DETAIL - PV04

Silfab SIL-360 NX mono PERC Specs	
POWER MAX (P _{MAX}):	360W
OPEN CIRCUIT VOLTAGE (V _{OC}):	40.4V
MAX POWER-POINT CURRENT (I _{MP}):	7.8A
MAX POWER-POINT VOLTAGE (V _{MP}):	33.1V
SHORT CIRCUIT CURRENT (I _{SC}):	8.2A
SERIES FUSE RATING:	20A

Enphase IQ8PLUS-72-2-US Specs	
MAX INPUT VOLTAGE:	60 V
MAX DC SHORT CIRCUIT CURRENT:	15 A
MAXIMUM OUTPUT POWER:	290 W
MAXIMUM OUTPUT CURRENT:	1.21 A
NOM. OUTPUT VOLTAGE:	240 V
MAX UNITS PER 20A CIRCUIT:	13
1-Phase, 60 HZ, UL 1741 Listed	

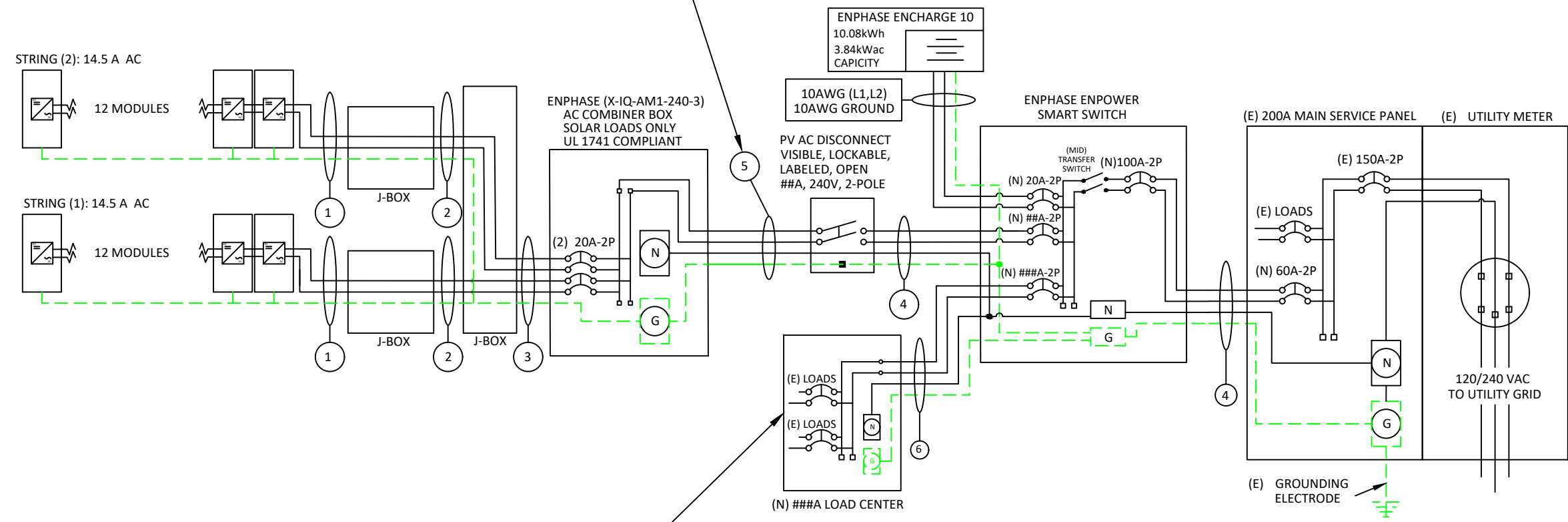
Equipment Schedule			
TYPE:	QTY:	DESCRIPTION:	RATING:
MODULES:	(24)	Silfab SIL-360 NX mono PERC	360 W
INVERTERS:	(24)	Enphase IQ8PLUS-72-2-US	290 W
AC DISCONNECT(S):	(1)	PV AC DISCONNECT, 240V, 2-POLE	60A
ENERGY STORAGE:	(1)	Enphase Encharge 10	10.5 kWh

Conduit & Conductor Schedule				
TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)	
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THWN-2, or THHN COPPER - (GROUND)	
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THHN/THWN-2 - (GROUND)	
4	(3)	6 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT
	(1)	10 AWG	THWN-2 COPPER - (GROUND)	
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	1.5" PVC
	(1)	10 AWG	THWN-2 COPPER - (GROUND)	
6	(3)	2 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	1.25" EMT
	(1)	8 AWG	THWN-2 COPPER - (GROUND)	



CONTRACTOR INFORMATION:
 No Problem Electric Corp.
 6975 HWY 66
 Platteville, CO 80651
 License # EC.0100746

TRENCHING THROUGH DIRT
 APPROX: 130'
 18" MIN DEPTH PVC SCH40



BACKUP LOADS NOT TO EXCEED 20A

VISIBLE, LOCKABLE,
 LABELED AC DISCONNECT
 LOCATED WITHIN 10'
 OF UTILITY METER

SITE INFORMATION

Christopher Stone
 8829 Marathon Rd
 Longmont, CO 80503
 AC SYSTEM SIZE: 6.96 kW AC
 DC SYSTEM SIZE: 8.64 kW DC
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 Long, -105.147033304382
 (24) Silfab SIL-360 NX mono PERC PV
 MODULES
 (24) Enphase IQ8PLUS-72-2-US INVERTER(S)
 XCEL Energy CO

DRAWN BY: SoloCAD

DATE:
 May 30, 2022

LINE DIAGRAM - PV05

STRING CALCULATIONS		
Enphase IQ8PLUS-72-2-US	STRING #1	STRING #2
OPTIMIZER MAX OUTPUT CURRENT:	14.520000A	14.520000A
OPTIMIZERS IN SERIES:	12	12
NOMINAL STRING VOLTAGE:	240V	240V
ARRAY OPERATING CURRENT:	3480A	3480A
ARRAY DC POWER:	8640W	
TOTAL MAX AC CURRENT:	29.040000A	

SYSTEM OCPD CALCULATIONS	
INVERTER MODEL(S):	Enphase IQ8PLUS-72-2-US
# OF INVERTERS:	24
MAX OUTPUT CURRENT:	1.21A
(# OF INVERTERS) X (MAX OUTPUT CURRENT) X 125% <= OCPD RATING	
(24 X 1.21 A X 1.25) = 36.3A <= 40A, OK	

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

BUSBAR CALCULATIONS - 120% RULE	
MAIN BUSBAR RATING:	200A
MAIN DISCONNECT RATING:	150A
BACKFEED BREAKER RATING:	40A (PV) + 20A (BATTERY) = 60A
(MAIN BUS RATING X 120%) - MAIN DISCONNECT RATING >= OCPD RATING	
(200A X 1.2) - 150A = 90A, >= 60A, OK	

Conduit & Conductor Schedule											
TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE	CONDUCTOR RATING	CONDUCTOR TEMP. RATE	AMBIENT TEMP	TEMP. DERATE	# OF CONDUCTORS DERATE	CONDUCTOR RATING W/DERATES	CONDUIT FILL
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR	30A	90°C	34°C	0.96	N/A - FREE AIR	28.8A	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)								
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT	40A	90°C	34°C	0.96	1	38.4A	11.9%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT	40A	90°C	34°C	0.96	0.8	30.72A	19.8%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
4	(3)	6 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT	65A	75°C	34°C	0.96	1	62.4A	32.6%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	1.5" PVC	65A	75°C	34°C	0.96	1	62.4A	10.12%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
6	(3)	2 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	1.25" EMT	115A	75°C	34°C	0.96	1	110.4A	25.59%
	(1)	8 AWG	THWN-2 COPPER - (GROUND)								



CONTRACTOR INFORMATION:
 No Problem Electric Corp.
 6975 HWY 66
 Platteville, CO 80651
 License # EC.0100746

SITE INFORMATION

Christopher Stone
 8829 Marathon Rd
 Longmont, CO 80503
 AC SYSTEM SIZE: 6.96 kW AC
 DC SYSTEM SIZE: 8.64 kW DC
 Lat, 40.099011072655
 Long, -105.147033304382
 (24) Silfab SIL-360 NX mono PERC PV MODULES
 (24) Enphase IQ8PLUS-72-2-US INVERTER(S)
 XCEL Energy CO

GROUNDING & GENERAL NOTES:

- PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
- DC GEC AND AC EGC TO BE SPICED TO EXISTING ELECTRODE
- ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
- JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
- AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

INTERCONNECTION NOTES:

- INTERCONNECTION SIZING, INSTALLATION AND COMPLIANCE DETERMINED IN ACCORDANCE WITH NEC [NEC 705.127, 705.128, 705.129, 705.130, 705.131, 705.132, 705.133, 705.134, 705.135, 705.136, 705.137, 705.138, 705.139, 705.140, 705.141, 705.142, 705.143, 705.144, 705.145, 705.146, 705.147, 705.148, 705.149, 705.150, 705.151, 705.152, 705.153, 705.154, 705.155, 705.156, 705.157, 705.158, 705.159, 705.160, 705.161, 705.162, 705.163, 705.164, 705.165, 705.166, 705.167, 705.168, 705.169, 705.170, 705.171, 705.172, 705.173, 705.174, 705.175, 705.176, 705.177, 705.178, 705.179, 705.180, 705.181, 705.182, 705.183, 705.184, 705.185, 705.186, 705.187, 705.188, 705.189, 705.190, 705.191, 705.192, 705.193, 705.194, 705.195, 705.196, 705.197, 705.198, 705.199, 705.200, 705.201, 705.202, 705.203, 705.204, 705.205, 705.206, 705.207, 705.208, 705.209, 705.210, 705.211, 705.212, 705.213, 705.214, 705.215, 705.216, 705.217, 705.218, 705.219, 705.220, 705.221, 705.222, 705.223, 705.224, 705.225, 705.226, 705.227, 705.228, 705.229, 705.230, 705.231, 705.232, 705.233, 705.234, 705.235, 705.236, 705.237, 705.238, 705.239, 705.240, 705.241, 705.242, 705.243, 705.244, 705.245, 705.246, 705.247, 705.248, 705.249, 705.250, 705.251, 705.252, 705.253, 705.254, 705.255, 705.256, 705.257, 705.258, 705.259, 705.260, 705.261, 705.262, 705.263, 705.264, 705.265, 705.266, 705.267, 705.268, 705.269, 705.270, 705.271, 705.272, 705.273, 705.274, 705.275, 705.276, 705.277, 705.278, 705.279, 705.280, 705.281, 705.282, 705.283, 705.284, 705.285, 705.286, 705.287, 705.288, 705.289, 705.290, 705.291, 705.292, 705.293, 705.294, 705.295, 705.296, 705.297, 705.298, 705.299, 705.300, 705.301, 705.302, 705.303, 705.304, 705.305, 705.306, 705.307, 705.308, 705.309, 705.310, 705.311, 705.312, 705.313, 705.314, 705.315, 705.316, 705.317, 705.318, 705.319, 705.320, 705.321, 705.322, 705.323, 705.324, 705.325, 705.326, 705.327, 705.328, 705.329, 705.330, 705.331, 705.332, 705.333, 705.334, 705.335, 705.336, 705.337, 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705.449, 705.450, 705.451, 705.452, 705.453, 705.454, 705.455, 705.456, 705.457, 705.458, 705.459, 705.460, 705.461, 705.462, 705.463, 705.464, 705.465, 705.466, 705.467, 705.468, 705.469, 705.470, 705.471, 705.472, 705.473, 705.474, 705.475, 705.476, 705.477, 705.478, 705.479, 705.480, 705.481, 705.482, 705.483, 705.484, 705.485, 705.486, 705.487, 705.488, 705.489, 705.490, 705.491, 705.492, 705.493, 705.494, 705.495, 705.496, 705.497, 705.498, 705.499, 705.500, 705.501, 705.502, 705.503, 705.504, 705.505, 705.506, 705.507, 705.508, 705.509, 705.510, 705.511, 705.512, 705.513, 705.514, 705.515, 705.516, 705.517, 705.518, 705.519, 705.520, 705.521, 705.522, 705.523, 705.524, 705.525, 705.526, 705.527, 705.528, 705.529, 705.530, 705.531, 705.532, 705.533, 705.534, 705.535, 705.536, 705.537, 705.538, 705.539, 705.540, 705.541, 705.542, 705.543, 705.544, 705.545, 705.546, 705.547, 705.548, 705.549, 705.550, 705.551, 705.552, 705.553, 705.554, 705.555, 705.556, 705.557, 705.558, 705.559, 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705.671, 705.672, 705.673, 705.674, 705.675, 705.676, 705.677, 705.678, 705.679, 705.680, 705.681, 705.682, 705.683, 705.684, 705.685, 705.686, 705.687, 705.688, 705.689, 705.690, 705.691, 705.692, 705.693, 705.694, 705.695, 705.696, 705.697, 705.698, 705.699, 705.700, 705.701, 705.702, 705.703, 705.704, 705.705, 705.706, 705.707, 705.708, 705.709, 705.710, 705.711, 705.712, 705.713, 705.714, 705.715, 705.716, 705.717, 705.718, 705.719, 705.720, 705.721, 705.722, 705.723, 705.724, 705.725, 705.726, 705.727, 705.728, 705.729, 705.730, 705.731, 705.732, 705.733, 705.734, 705.735, 705.736, 705.737, 705.738, 705.739, 705.740, 705.741, 705.742, 705.743, 705.744, 705.745, 705.746, 705.747, 705.748, 705.749, 705.750, 705.751, 705.752, 705.753, 705.754, 705.755, 705.756, 705.757, 705.758, 705.759, 705.760, 705.761, 705.762, 705.763, 705.764, 705.765, 705.766, 705.767, 705.768, 705.769, 705.770, 705.771, 705.772, 705.773, 705.774, 705.775, 705.776, 705.777, 705.778, 705.779, 705.780, 705.781, 705.782, 705.783, 705.784, 705.785, 705.786, 705.787, 705.788, 705.789, 705.790, 705.791, 705.792, 705.793, 705.794, 705.795, 705.796, 705.797, 705.798, 705.799, 705.800, 705.801, 705.802, 705.803, 705.804, 705.805, 705.806, 705.807, 705.808, 705.809, 705.810, 705.811, 705.812, 705.813, 705.814, 705.815, 705.816, 705.817, 705.818, 705.819, 705.820, 705.821, 705.822, 705.823, 705.824, 705.825, 705.826, 705.827, 705.828, 705.829, 705.830, 705.831, 705.832, 705.833, 705.834, 705.835, 705.836, 705.837, 705.838, 705.839, 705.840, 705.841, 705.842, 705.843, 705.844, 705.845, 705.846, 705.847, 705.848, 705.849, 705.850, 705.851, 705.852, 705.853, 705.854, 705.855, 705.856, 705.857, 705.858, 705.859, 705.860, 705.861, 705.862, 705.863, 705.864, 705.865, 705.866, 705.867, 705.868, 705.869, 705.870, 705.871, 705.872, 705.873, 705.874, 705.875, 705.876, 705.877, 705.878, 705.879, 705.880, 705.881, 705.882, 705.883, 705.884, 705.885, 705.886, 705.887, 705.888, 705.889, 705.890, 705.891, 705.892, 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706.115, 706.116, 706.117, 706.118, 706.119, 706.120, 706.121, 706.122, 706.123, 706.124, 706.125, 706.126, 706.127, 706.128, 706.129, 706.130, 706.131, 706.132, 706.133, 706.134, 706.135, 706.136, 706.137, 706.138, 706.139, 706.140, 706.141, 706.142, 706.143, 706.144, 70

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

LABEL 1
PLACED ON THE MAIN DISCONNECTING MEANS FOR THE PV SYSTEM.
[NEC 690.13(B)]

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL 2
FOR PV DISCONNECTING MEANS WHERE THE LINE AND
LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN
POSITION.
[NEC 690.13(B)]

WARNING
POWER SOURCE OUTPUT CONNECTION.
DO NOT RELOCATE THIS OVERCURRENT DEVICE.

LABEL 3
PLACED ADJACENT TO THE BACK-FED BREAKER FROM
THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE
CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(c)]

WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL 4
PLACED ON EQUIPMENT CONTAINING OVERCURRENT
DEVICES IN CIRCUITS SUPPLYING POWER TO
A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE
SOURCES
[NEC 705.10(C)]

WARNING
THIS EQUIPMENT IS FED BY MULTIPLE
SOURCES. TOTAL RATING OF ALL
OVERCURRENT DEVICES, EXCLUDING
MAIN SUPPLY OVERCURRENT
DEVICE, SHALL NOT EXCEED
AMPACITY OF BUSBAR.

LABEL 5
EQUIPMENT CONTAINING OVERCURRENT
DEVICES IN CIRCUITS SUPPLYING POWER TO A
BUSBAR OR CONDUCTOR SUPPLIED FROM
MULTIPLE SOURCES SHALL BE MARKED TO
INDICATE THE PRESENCE OF ALL SOURCES.[NEC
705.12(B)(2)(3)(c)]

PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT: 29
NOMINAL OPERATING AC VOLTAGE: 240

LABEL 6
MARKED AT AC DISCONNECTING MEANS.
[NEC 690.54]

LABELING NOTES:

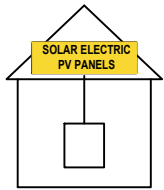
1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2020 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

PHOTOVOLTAIC POWER SOURCE

LABEL 7
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND
ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED
AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS,
PARTITIONS, CEILINGS, OR FLOORS.
[NEC 690.31(D)(2)]

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 ARRAY



LABEL 8
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS
LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM
SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE
CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED
RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

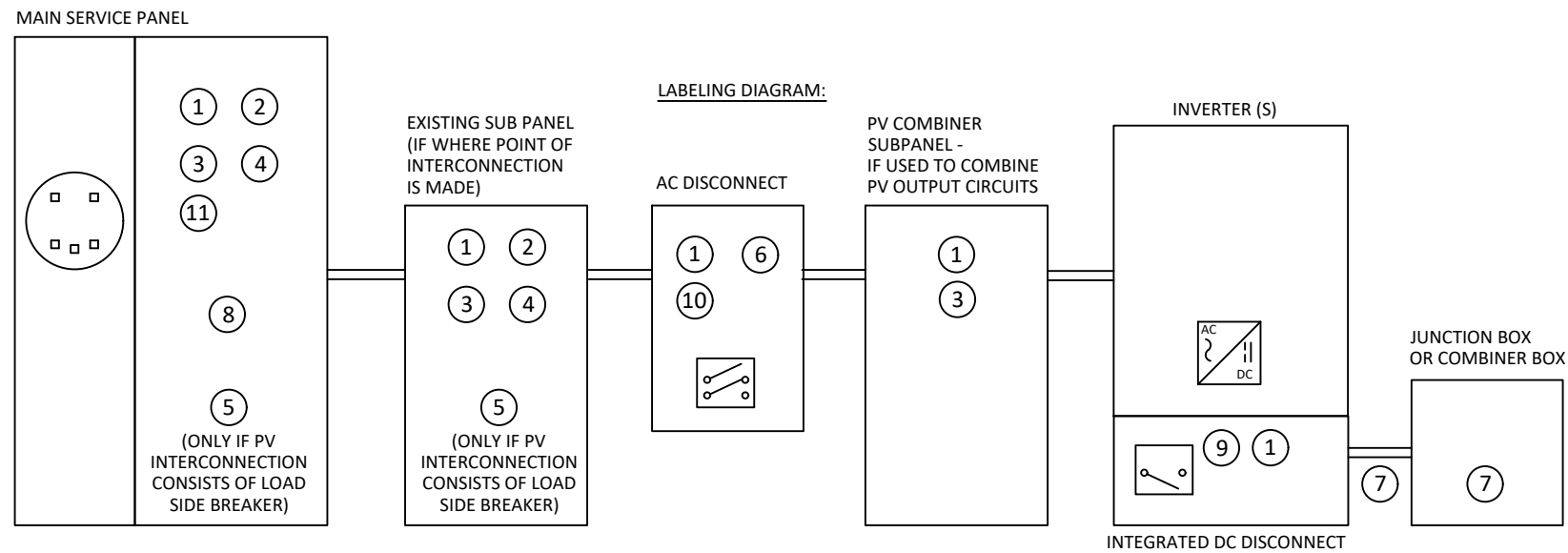
LABEL 9
SIGN LOCATED ON OR NO MORE THAN 3FT
FROM INITIATION DEVICE
[NEC 690.56(C)(2)].

PV AC DISCONNECT

LABEL 10
PLACARD TO BE PLACED AT THE
AC DISCONNECT.

PHOTOVOLTAIC SYSTEM CONNECTED

LABEL 11
PLACARD TO BE PLACED AT THE MAIN
BILLING METER PER XCEL ENERGY.



*ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENTATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VARY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ON THE ELECTRICAL DIAGRAM PAGE.



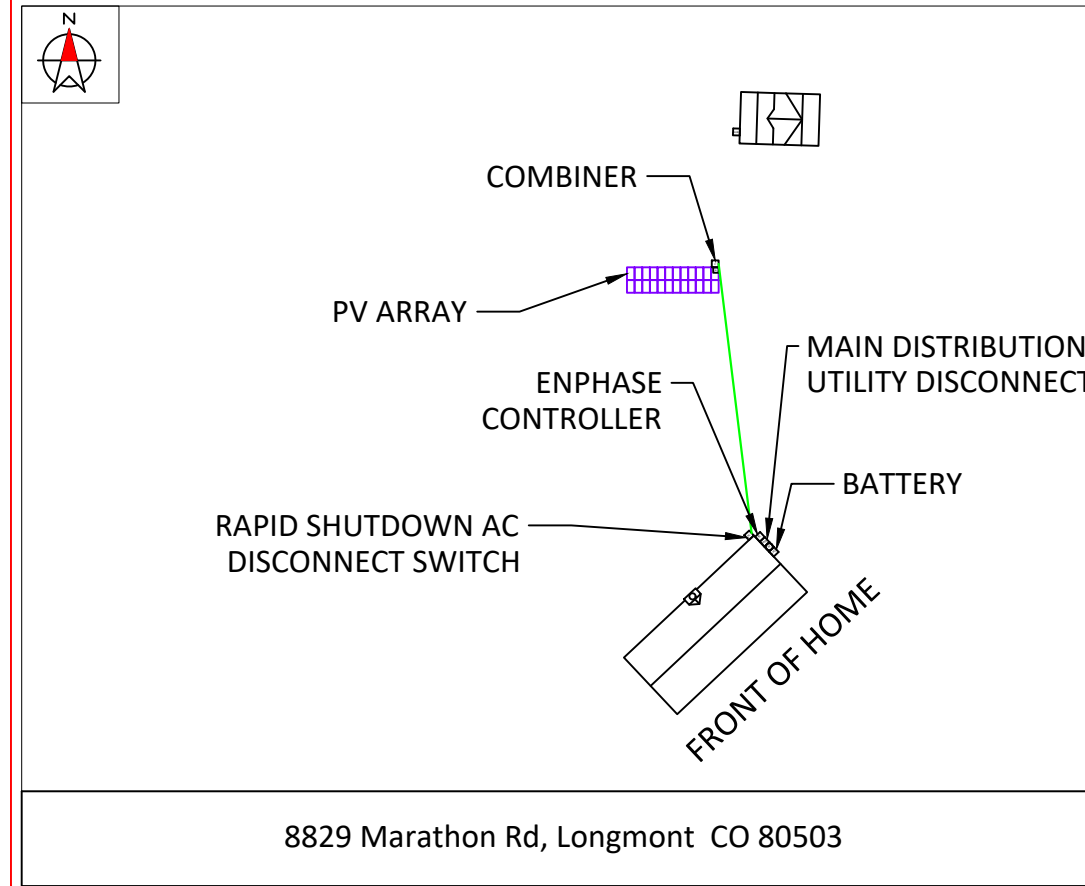
CONTRACTOR INFORMATION:
No Problem Electric Corp.
6975 HWY 66
Platteville, CO 80651
License # EC.0100746

SITE INFORMATION
Christopher Stone
8829 Marathon Rd
Longmont, CO 80503
AC SYSTEM SIZE: 6.96 kW AC
DC SYSTEM SIZE: 8.64 kW DC
Lat, 40.099011072655
Long, -105.147033304382
(24) Silfab SIL-360 NX mono PERC PV MODULES
(24) Enphase IQ8PLUS-72-2-US INVERTER(S)
XCEL Energy CO

DRAWN BY: SoloCAD
DATE:
May 30, 2022
LABELS - PV07

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:



DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN:
NEC 690.56(B)&(C), [NEC 705.10])



CONTRACTOR INFORMATION:

No Problem Electric Corp.
6975 HWY 66
Platteville, CO 80651
License # EC.0100746

SITE INFORMATION

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Longmont, CO 80503
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Long, -105.147033304382
(24) Silfab SIL-360 NX mono PERC PV
MODULES
(24) Enphase IQ8PLUS-72-2-US INVERTER(S)
XCEL Energy CO

DRAWN BY: SoloCAD

DATE:
May 30, 2022

PLACARD - PV08

SITE PHOTOS:



CONTRACTOR INFORMATION:
No Problem Electric Corp.
6975 HWY 66
Platteville, CO 80651
License # EC.0100746

SITE INFORMATION

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XCEL Energy CO



DRAWN BY: SoloCAD

DATE:
May 30, 2022

SITE PHOTOS - PV09



SIL-360 NX



HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE

INDUSTRY LEADING WARRANTY

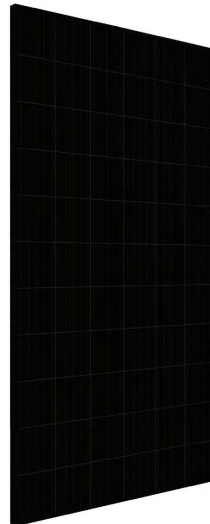
All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION

Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY

Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



CHUBB
* Chubb provides error and omission insurance to Silfab Solar Inc.

BAA / ARRA COMPLIANT

Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

LIGHT AND DURABLE

Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS

Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC PRODUCTION

Silfab Solar manufactures PV modules in two automated locations within North America. Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING

All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT

PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-360 NX mono PERC	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	360	258
Maximum power voltage (Vpmax)	V	36.6	33.1
Maximum power current (Ipmax)	A	9.9	7.8
Open circuit voltage (Voc)	V	44.5	40.4
Short circuit current (Isc)	A	10.5	8.2
Module efficiency	%	19.7	17.6
Maximum system voltage (VDC)	V		1000
Series fuse rating	A		20
Power Tolerance	Wp		0 to +10

Measurement conditions: STC 1000 W/m² • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
• Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

Temperature Ratings		SIL-360 NX mono PERC	
Temperature Coefficient Isc		+0.064 %/°C	
Temperature Coefficient Voc		-0.279 %/°C	
Temperature Coefficient Pmax		-0.36 %/°C	
NOCT (± 2°C)		46 °C	
Operating temperature		-40/+85 °C	

Mechanical Properties and Components		SIL-360 NX mono PERC	
	Metric	Imperial	
Module weight	20±0.2 kg	44±0.4 lbs	
Dimensions (H x L x D)	1832 mm x 1000 mm x 38 mm	72.13 in x 39.4 in x 1.5 in	
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5/112.8 lb/ft ²	
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph	
Cells	66 - Si mono-PERC - 5 busbar 158.75 x 158.75 mm	66 - Si mono-PERC - 5 busbar 62.25 x 62.25 in	
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating	
Cables and connectors (refer to installation manual)	1200 mm ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 (12AWG), MC4 from Staubli	
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet		
Frame	Anodized Aluminum (Black)		
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)		
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated		

Warranties		SIL-360 NX mono PERC	
Module product workmanship warranty		25 years**	
Linear power performance guarantee		30 years	
		≥ 97.1% end 1 st year	≥ 91.6% end 12 th year ≥ 85.1% end 25 th year ≥ 82.6% end 30 th year

Certifications		SIL-360 NX mono PERC	
Product		ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2***, IEC 61730-1/-2***, CSA C22.2#61730-1/-2, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certified, UL Fire Rating: Type 2	
Factory		ISO9001:2015	

All states except California California
 ■ Modules Per Pallet: 26 ■ Modules Per Pallet: 26
 ■ Pallets Per Truck: 34 ■ Pallets Per Truck: 32
 ■ Modules Per Truck: 884 ■ Modules Per Truck: 832

*Warning: Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

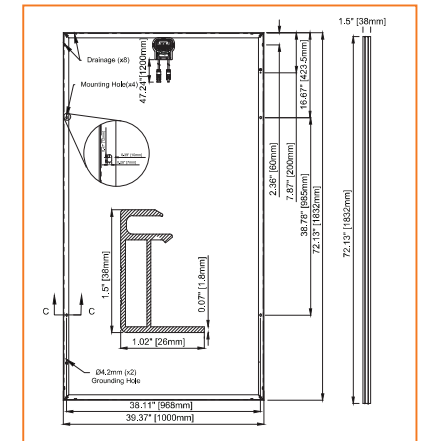
***Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.



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IQ8 Series Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.



Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Series, Enphase B-Series, and the Enphase App monitoring and analytics software.



IQ8 Series Microinverters include a 25-year warranty with more than one million non-damaging hours of proven testing, enabling an industry-leading limited warranty of up to 25 years.



Connect PV modules quickly and easily to IQ8 Series Microinverters using the included GO2-DC adapter cable with plug-in MC4 connectors.



IQ8 Series Microinverters are UL Listed as PV Rapid Shut-Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

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IQ8S16C6-0000-0004E-000200-0000

Easy to install

- Lightweight and compact with plug-in play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down
- More than one million cumulative hours of testing
- Class II double-insulated enclosure

- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8 Series Microinverters

INPUT DATA (DC)	EMPHASE05	EMPHASE06	EMPHASE06L	EMPHASE06S	EMPHASE1000	EMPHASE1000L
Commonly used module pairing ¹	W 235-350	230-440	260-440	260-440	295-500	320-540
Module compatibility	60-66/120-hal-cell	60-66/120-hal-cell	60-66/120-hal-cell	60-66/120-hal-cell and 72-cell,144-hal-cell	60-66/120-hal-cell and 72-cell,144-hal-cell	60-66/120-hal-cell and 72-cell,144-hal-cell
MPPV voltage range	V 27-37	29-45	33-45	33-45	36-45	36-45
Operating voltage	V 29-48				29-58	
Minimum start voltage	V 32/48				32/58	
Max input DC voltage	V 66				66	
Max DC current (module to ICI)	A				10	
Overvoltage-class OC port					8	
DC port backfeed current	mA				0	
PV array configuration	1/1 (grounded array); No additional DC side protection required; AC side protection requires max 25A per branch circuit					
PERFORMANCE	EMPHASE05	EMPHASE06	EMPHASE06L	EMPHASE06S	EMPHASE1000	EMPHASE1000L
Peak output power	W 240	300	300	300	364	360
Max continuous output power	W 240	290	325	349	380	360
Normal DC1 voltage range ²	V 100-120					
Max continuous output current	A 1.0	1.21	1.35	1.45	1.58	1.73
Normal frequency	Hz 60					
Extended frequency range	Hz 50-68					
Max input per 20 A (UL branch circuit) ³	W 16	13	11	10	10	9
Total harmonic distortion	% <5%					
Overvoltage-class AC port	8					
AC port backfeed current	mA 30					
Power factor setting	1.0					
Grid-tied power factor (adjustable)	0.95 leading - 0.95 lagging					
Peak efficiency	% 97.6	97.6	97.6	97.6	97.6	97.4
CEC weighted efficiency	% 97	97	97	97	97	97
Nighttime power consumption	W 60					
MECHANICAL DATA						
Ambient temperature range	-40°C to +40°C (-40°F to +104°F)					
Relative humidity range	4% to 100% (noncondensing)					
DC Connector type	M24					
Dimensions (HxWxD)	212 mm (8.37" x 175 mm (6.87" x 303.2 mm (12.7")					
Weight	1.08 kg (2.38 lbs)					
Cooling	Natural convection - no fans					
Approved for wet locations	Yes					
Acoustic noise at 1m	480 dBA					
Ingress degree	IP63					
Enclosure	Class II dust-tolerant, corrosion-resistant polycarbonate enclosure					
Emission category / UV exposure rating	NEMA Type 8 / outdoor					
COMPLIANCE						
CA Rule 21 (UL 1741-SA)	CA Rule 21 (UL 1741-SA), IEC 62109-4, UL 1741 (IEEE 1547), FCC Part 15 Class B, IEEE-C39.03 Class B, IEC 62109-2, IEC 62109-3, IEC 62109-4, IEC 62109-5, IEC 62109-6, IEC 62109-7, IEC 62109-8, IEC 62109-9, IEC 62109-10, IEC 62109-11, IEC 62109-12, IEC 62109-13, IEC 62109-14, IEC 62109-15, IEC 62109-16, IEC 62109-17, IEC 62109-18, IEC 62109-19, IEC 62109-20, IEC 62109-21, IEC 62109-22, IEC 62109-23, IEC 62109-24, IEC 62109-25, IEC 62109-26, IEC 62109-27, IEC 62109-28, IEC 62109-29, IEC 62109-30, IEC 62109-31, IEC 62109-32, IEC 62109-33, IEC 62109-34, IEC 62109-35, IEC 62109-36, IEC 62109-37, IEC 62109-38, IEC 62109-39, IEC 62109-40, IEC 62109-41, IEC 62109-42, IEC 62109-43, IEC 62109-44, IEC 62109-45, IEC 62109-46, IEC 62109-47, IEC 62109-48, IEC 62109-49, IEC 62109-50, IEC 62109-51, IEC 62109-52, IEC 62109-53, IEC 62109-54, IEC 62109-55, IEC 62109-56, IEC 62109-57, IEC 62109-58, IEC 62109-59, IEC 62109-60, IEC 62109-61, IEC 62109-62, IEC 62109-63, IEC 62109-64, 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Nuance Energy's Osprey PowerPlatform® is a proprietary ground-mounted racking system that has revolutionized the solar industry – both in terms of cost and time.

You hit a home run with this product!
— Jack Ramsey, CEO, AltSys Solar



KEY SPECIFICATIONS

- Each unit holds as many as 16 panels; average installation time: 59 minutes, 4-person crew
- Average labor cost: \$0.0125/watt installed
- Total power output per unit up to 6kW
- Panel technology neutral; UL2703 certified
- Wind loads <150 mph and snow loads <60+ psf, CPP fully tested
- Anchors hold in all permafrost conditions
- 25-year "bumper to bumper" warranty protection
- Fixed tilt orientation (15° to 35°)
- Independent power adjustable legs
- Engineered for sloped terrain (up to 12°)
- Custom engineering for sloped terrain (up to 23°)
- Galvanized (G90) steel finish (standard); other options available
- Self-bonding mid clamps
- Tamper-proof module fasteners (optional)
- Integrated wire management
- Ideal for mounting string inverters

Quick & Easy Installation = Lower Costs

Installation is blazing fast with six main steel components to assemble. Osprey PowerPlatform solar structures assemble on site using standard power hand tools. Eliminate the higher cost of skilled labor and on site heavy machinery.

- **No foundations, no concrete**
- **No cutting, welding or drilling**
- **Minimal site prep and clean up**

Sustainable Solution

A geotechnical report or 3rd party special inspection is usually not required. Real-time soil verification and load (pull) test is achieved through proprietary use of earth anchors during installation. Anchors act like underground toggle bolts to secure structure to ground. Up to 30 cubic feet of earth and sediment above each earth anchor support and ballast these versatile solar racking structures.

Structural Engineering

A site specific Structural Calculation and Engineering Report complete with vertical and lateral analysis (dead load, live load, wind load and seismic load, etc.) is provided.

MODEL	PANEL TYPE	DIMENSIONS ³	TILT	LEG ADJUSTMENT	SOLAR PANEL LAYOUT ⁴	WIND/MPH ^{**}
OSP - STD	(60, 72 Cell) & SPR ²	12ft x 26ft	15° - 35°	up to 26"	2x5 2x6 2x7 2x8'	< 150mph
OSP - HD ¹	(60, 72 Cell) & SPR ²	12ft x 26ft	15° - 35°	up to 26"	2x5 2x6 2x7 2x8'	< 150mph

¹ Available in HD: Heavy Duty Snow Load or XHD: Extra Heavy Duty Snow Load; ² SunPower Modules
³ Based on 2x8 footprint; smaller footprint available; ⁴ All Sizes Portrait Design; Landscape available

^{*}Standard
^{**}110mph Standard



INDUSTRY'S FASTEST INSTALLATION TIME + DRAMATIC COST REDUCTIONS

OSPREY POWERPLATFORM® 2MW INSTALLATION

16

DAYS TO INSTALL

*Fully trained, 16-person crew installing the foundation, racking and modules

\$130,000+

SAVINGS

*Savings due to lower field labor costs, no pile driving, and no geotechnical reports

VS

CONVENTIONAL FOUNDATION INSTALLATION 2MW INSTALLATION

60+

DAYS TO INSTALL

SAVE TIME AND MONEY



No Geotechnical Reports¹



No Heavy Equipment



No Ground Screws



No Concrete



No Skilled Labor²

¹ In atypical soil conditions, a geotechnical report may be advisable. ² May not be applicable under certain instances (i.e., union labor wages).

Enphase IQ Battery 10

The **Enphase IQ Battery 10** all-in-one AC-coupled storage system is **reliable, smart, simple, and safe**. It is comprised of three base IQ Battery 3 units, has a total usable energy capacity of 10.08 kWh and twelve embedded Grid-Forming Microinverters with 3.84 kW power rating. It provides backup capability and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.



Reliable

- Proven high reliability IQ Series Microinverters
- Ten-year limited warranty
- Three independent IQ Battery base units
- Twelve embedded IQ8-BAT Microinverters
- Passive cooling (no moving parts/fans)

Smart

- Grid-forming capability for backup operation
- Remote software and firmware upgrade
- Mobile app-based monitoring and control
- Support for self consumption
- Utility time of use (TOU) optimization

Simple

- Fully integrated AC battery system
- Quick and easy plug-and-play installation
- Interconnects with standard household AC wiring

Safe

- Cells safety tested
- Lithium iron phosphate (LFP) chemistry for maximum safety and longevity

Enphase IQ Battery 10

MODEL NUMBER	
ENCHARGE-IQ10-18-NA	IQ Battery 10 system with integrated Enphase IQ Microinverters and battery management unit (BMU) includes: <ul style="list-style-type: none"> • Three IQ Battery 3 3.84 kWh base units (BMS-A01-US00-1-0) • One IQ Battery 10 cover kit with cover, wall mounting bracket, watertight conduit tube, and interconnect kit for wiring between batteries (BMS-C-1055-0)
ACCESSORIES	
ENCHARGE4IN0LR1	One set of IQ Battery base unit installation hardware
GUTPUT (AC)	
Rated (continuous) output power	3.84 kW ¹
Peak output power	5.7 kVA (10 seconds)
Nominal voltage / range	240 / 211 – 264 VAC
Nominal frequency / range	60 / 57 – 61 Hz
Rated output current	16 A
Peak output current	24.6A (10 seconds)
Power factor (adjustable)	0.85 leading... 0.85 lagging
Maximum units per 20-A branch circuit	1 unit (single phase)
Interconnection	Single-phase
Maximum AC short circuit fault current over 3 cycles	69.6 Arms
Round-trip efficiency ²	89%
BATTERY	
Total capacity	10.5 kWh
Usable capacity	10.08 kWh
Round trip efficiency	96%
Nominal DC voltage	67.2 V
Maximum DC voltage	73.5 V
Ambient operating temperature range	-10° C to 50° C (0° F to 113° F) non-condensing
Optimum operating temperature range	0° C to 38° C (32° F to 98° F)
Chemistry	Lithium iron phosphate (LFP)
MECHANICAL DATA	
Dimensions (WxHxD)	1070 mm x 664 mm x 319 mm (42.13 in x 26.14 in x 12.56 in)
Weight	Three individual 44.2 kg (97.4 lb) base units plus 21.1 kg (48.7 lb) cover and mounting brackets, total 154.7 kg (341.8 lb)
Enclosure	Outdoor – NEMA type 3R
IQ 8-BAT Microinverter enclosure	NEMA type 6
Cabling	Natural/construction – No fans
Altitude	Up to 2500 meters (8200 feet)
Mounting	Wall mount
FEATURES AND COMPLIANCE	
Compatibility	Compatible with grid-tied PV systems. Compatible with Enphase M215/M250 and IQ Series Micro, Enphase IQ System Controller, and Enphase IQ Gateway for backup operation.
Communication	Wireless 2.4 GHz
Services	Backup, self-consumption, TOU, Demand Charge, NEM Integrity
Monitoring	Enphase Installer Platform and Enphase App monitoring options, API integration
Compliance	UL 9540; UL 9541; UL 9540A; UL 9540B; UL 1996; UL 1991; NEMA Type 3R; AC156 DMJ 47 CFR, Part 15, Class B, FCIS 003 Cell Module: UL 1073, UL 383 Inverters: UL 62109-1, IEC 62109-2, UL 1741SA, CAN/CSA C22.2 No. 1071-16, and IEEE 1547
LIMITED WARRANTY	
Limited Warranty ³	~70% capacity, up to 10 years or 4000 cycles
<ol style="list-style-type: none"> Supported in backhaul grid operations. AC-to-Battery to AC at 50% power rating. Whichever occurs first. Restrictions apply. 	

To learn more about Enphase offerings, visit enphase.com



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Enphase IQ System Controller 2

The **Enphase IQ System Controller 2** connects the home to grid power, the IQ Battery system, and solar PV. It provides microgrid interconnection device (MID) functionality by automatically detecting and seamlessly transitioning the home energy system from grid power to backup power in the event of a grid failure. It consolidates interconnection equipment into a single enclosure and streamlines grid independent capabilities of PV and storage installations by providing a consistent, pre-wired solution for residential applications.

Reliable

- Durable NEMA type 3R enclosure
- Ten-year limited warranty

Smart

- Controls safe connectivity to the grid
- Automatically detects grid outage
- Provides seamless transition to backup

Simple

- Connects to the load or service equipment¹ side of the main load panel
- Centered mounting brackets support single stud mounting
- Supports conduit entry from the bottom, bottom left side, and bottom right side
- Supports whole home and partial home backup and subpanel backup
- Up to 200A main breaker support
- Includes neutral forming transformer for split phase 120V/240V backup operation
- IQ System Controller supports backward compatibility with older generations of PV microinverters (M615, M215 and S series), making it simple for home owners to upgrade their systems
- Easy integration with generator from major manufacturers

1. IQ System Controller 2 is not suitable for use as an overcurrent protective device.



To learn more about Enphase offerings, visit enphase.com



Enphase IQ System Controller 2

MODEL NUMBER

EP3000-120V-200A-3000

Enphase IQ System Controller 2 with neutral forming transformer (NFT), Microgrid Measurement Device (MID), Breaker, and Service Disconnect (SD) are optional accessories. See the IQ System Controller 2 PV and Battery Installation Manual for more information.

ACCESSORIES and REPLACEMENT PARTS

EP3000-120V-200A-3000

Mid-Isolation IQ System Controller System Disconnect

EP3000-120V-200A-3000

Enphase IQ circuit breaker (breaker sizes 60, 100, 150, 200A)

IC2-120V-2PT

200 A light duty current transformer for Generator (max 150V)

CP100-120V-2PT

Not included, see order separately

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