

PLANNING & ZONING

215 1st Avenue South, Suite 103 Long Prairie, MN 56347

Phone: 320-732-4420 Fax: 320-732-4803 Email address: toddplan.zone@co.todd.mn.us

The following is the agenda for <u>Thursday</u>, <u>March 6th</u>, <u>2025 at 6:00pm</u>. The Todd County Planning Commission will hold a public hearing in the Commissioner's Boardroom, Historic Courthouse, 215 1st Ave South, Suite 301, Long Prairie.

NOTE: This meeting is being held in-person and the public is encouraged to attend. Those who do attend in person can find parking atop the hill on the west side of the Historic Courthouse and enter through the North Doors, near the American Flag and monument.

If you have any concerns or questions in regard to the upcoming meeting and the applications on the agenda, feel free to contact the Planning & Zoning Office at either (320) 732-4420 or toddplan.zone@co.todd.mn.us. All correspondence must include name & mailing address and be received 48 hours before the date and time of the hearing.

#### Agenda

- Call to Order
- Pledge of Allegiance
- Introduction of Planning Commission Members and process review.
  - The applicant is introduced
  - Staff report
  - Applicant confirms if staff report accurately represents the request
  - Public comment
  - Board review with applicant, staff, and public
- Approval of agenda
- Approval of the February 6th, 2025 Planning Commission meeting minutes
- 1. Henry Miller: Section 31, Eagle Valley Township

Site Address: 33371 171st Avenue, Clarissa, MN 56440

**PID:** 07-0037500

- 1. Request for CUP to replace #CUP-2024-008 for the expansion of an existing business to include sawmill, horse shoeing, trimming, window manufacturing, woodworking and machining in AF-1 Zoning District.
- 2. Wolf River Electric: Section 14, Germania Township

Site Address: 21381 430th Street, Bertha, MN 56437

**PID:** 09-0009500

- 2. Request a CUP for the installation of a Ground Mounted PC Solar System in excess of 120% of annual energy consumption, in AF-1 Zoning District.
- 3. Justin & Erika Wardell: Section 11, Leslie Township

Site Address: 14795 County Rd 65, Long Prairie, MN 56347

**PID:** 15-0012301

3. Request a CUP for the 30' X 36' addition to an existing garage for temporary family housing in AF-1 Zoning District.

Adjournment -

Next meeting: April 3, 2025

**Planning Commission Meeting Minutes** February 6th, 2025

Completed by: Sue Bertrand, P&Z Staff

Site visits conducted by Adam Ossefoort and Jim Pratt on 1/30/2024.

Meeting attended by board members: Vice Chair Ken Hovet, Lloyd Graves, Roger Hendrickson, Andy Watland

and alternate, George Sutton.

Staff members: Adam Ossefoort and Sue Bertrand

Other members of the public: Sign-in Sheet is available for viewing upon request.

Ken called the meeting to order at 6:00 p.m. The Pledge of Allegiance was recited as a collective group.

Introduction of the staff and board members by Ken.

Roger made a motion to have the agenda approved as written, seconded by Andy, voice vote, no dissent

heard, motion carried.

Lloyd motioned to have the January 2nd, 2025 meeting minutes approved. Roger seconded the motion. Voice

vote, no dissent heard. Motion carried.

AGENDA ITEM 1: LouAnna Mosher: 05-0001300- Burleene Township

1. Request for Zoning Amendment of the NE ¼ of the SE ¼ of Section 2, Burleene Township from

R-10 Zoning to AF-2 Zoning for the creation of a 5-acre lot in the future.

Leila Oliver was present as the applicant. Leila stated she had been asked by the Mosher's to represent them, as LouAnna lives in Cambridge and Martin doesn't drive at night. Also, she is familiar with the property and

the future potential owner, Amy Claseman, once this is figured out.

Staff Findings: Adam read the staff report. The staff report is available for viewing upon request in the Planning

& Zoning Office.

Leila confirmed the staff report was accurate.

On Site Visit Report by Jim was read aloud by Adam: This report may be viewed in full, upon request, at the

Planning and Zoning office.

Correspondence received: None

Public comment: None

Board discussion:

Roger asked Adam what the differences were in the two zoning districts right now.

Page 1 of 3

Adam explained the brighter green is AF-2 and the brown is R-10 and the lighter green is AF-1. The request is to go to the AF-2, making the whole 80 acres AF-2.

Roger asked if he knew the reason it was zoned R-10 at one time?

Adam stated some of the County road parcels around Burleene township were zoned R-10 and considered more residential at the time, even though the uses around there are primarily farming, feedlots, with one odd golf course in the area. He mentioned they did a comprehensive rezoning around 2006, and a lot of the map changed quite a bit, but did not know for sure why it was rezoned R-10.

Lloyd added this is a paved highway.

Adam confirmed, County highway.

Andy asked if the R-10 zoning requires at least a ten-acre lot?

Adam confirmed, yes, and you may have a home on each parcel. He added, in AF-2 and AF-1 they require two acres per parcel minimum, and the number of dwellings in AF-1 is one per 40 acres, and AF-2 is two dwellings per 40 acres.

Andy stated this will reduce the number of dwellings for the forty.

Adam added the request states the reason for the rezone is to make the parcel "size requirement" smaller, as they would like to create a reduced size, 5-acre parcel to sell.

Lloyd addressed Amy Claseman, future buyer, and asked if she was going to build near the existing house on that parcel?

Amy stated no, she will buy and do some remodeling to the existing house. She did not want the extra acreage.

Roger stated he could see no problem with it, and it will be reducing the number of dwellings allowed in Ag, and made the motion to approve with no conditions. Andy seconded.

Ken asked what kind of use is the rest of the R-10 land and is it farmed?

Amy stated it is mostly hunting land, with a lot of swamp, not farmed.

Adam added it's hilly and the bottoms are wet.

Ken asked for the Roll call vote as follows:

Board member	Vote (yes or no)
Roger Hendrickson	Yes
Lloyd Graves	Yes

George Sutton	Yes
Andy Watland	Yes
Ken Hovet	Yes

Motion carried. Ken noted the application will be recommended for approval to the County Board of Commissioners on February 18th, 2025.

George asked Adam how often does this "comprehensive rezoning" take place in the County?

Adam stated he didn't know for sure, the last time it was in 2006, however, we will be re-writing our Comprehensive Plan this year and with that would come any ordinance amendments and changes and probably looking at the map, so we could be doing it again soon, in the next two to five years. He stated we will get through the comp plan re-write first, and see where it leads to.

George motioned to adjourn and Roger seconded. Voice vote to adjourn, no dissent heard. Motion carried and meeting adjourned at 6:17 PM.

## MEMO

### **BOA & PC Training**

When: March 4<sup>th</sup>, 2025

Time: 2:00 pm - 4:00 pm (together & all invited to both)

Where: Commissioners' room



#### PLANNING & ZONING

215 1st Avenue South, Suite 103

Long Prairie, MN 56347

Phone: 320-732-4420 Fax: 320-732-4803 

Revised 5/21/2024

LEB 0 8 3052

### CONDITIONAL USE PERMIT APPLICATION

CONDITIONAL USE PERMIT APPLICATION	
Reco	
Applicant Hewry & Miller Mailing Address Same	d
Applicant   - lawy   Miller   Mailing Address   Same   FEB 0 6 202	5
Phone Number No Ne E-Mail Address E-Mail Address	ħg
Property Owners Name & Address (if not applicant) Jacob C. Mille.  17913 34474 St. Clausea MN. 56444	
Parcel ID(s) 07-003750 Pownship Eagle Valley Lake/River Name	
Zoning District (circle one): (AF-1;) AF2; R-2; R-10; UG; RT; Comm; L-M; or Shoreland.	
Full and Current Legal Description(s)	
Full and Current Legal Description(s) (attach if necessary)	
Current tax statement or other proof of ownership attached ( ) yes ( ) no	
Measurement of land involved: Width Length Acres ZO	
Septic System: Date installed Date of latest Compliance Inspection	
Is an upgrade needed: ( ) yes (X) no	
Site accessed by: public road ( ) easement	
If easement, is the easement legally recorded? ( ) yes ( ) no	
Detailed Explanation of Request:	
House shoeing and trining Sawnill Operation woodworking maching	
Window manufacturing - woodworking - maching	
request 20 Replace CUP # 2024- 008	
Did you meet with the Township Board to present the Application for Conditional Use Permit?  Yes No Date of the meeting:	
Optional Township Board Signature Board Position	

Page 2 of 5

CUP# 2025-001

Conditional Use Permit Application

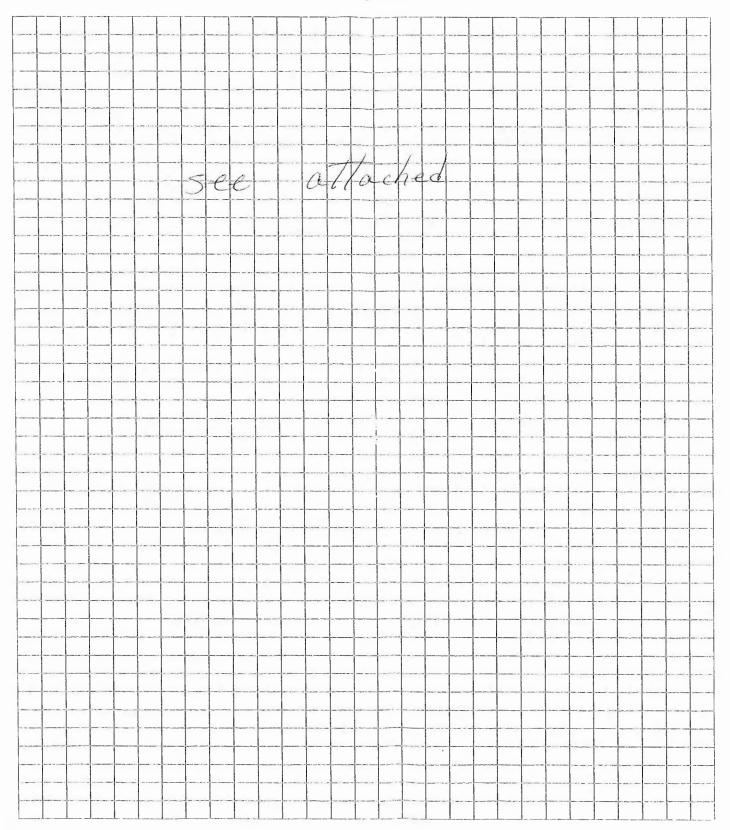
Will the request create an excessive burden on No cars - truck	the existing roads or other utilities? Expla	in 
Is the requested use compatible with the surro	unding properties? Explain	
	Yes	
Could the use significantly depreciate near-by	properties? Explain	
	No	-
Will the structure and the use have an appeara	ance that will not have an adverse effect on	near-by
properties? Explain		
Will the requested use create an adverse affect operation, or general unsightliness? Explain  \( \lambda \text{C} \) -	operation inside o	
	AN, SEWER INFORMATION AND ANY A	DDITION
Todd Cour	MATION, AND FEE TO:  nty Planning & Zoning Office  st Ave South, Suite 103	
	ng Prairie, MN 56347	
	act Fee: \$1,000.00 payable to "Todd Count ications may be placed on an agenda	y"
**A PARCEL IN JOINT OWNERSHIP MU	IST PROVIDE WRITTEN SIGNATURE OF A	ALL OWNERS**
Henry J. Miller Applicant Name Printed	Henry & Miller Signature	$\frac{2-5-25}{\text{Date}}$
Jacob C. Miller Property Owner Name Printed	Signature (If different than applicant)	2-5-25 Date

A Conditional Use Permit expires and is considered invalid unless they are substantially completed within thirty-six months of the date the CUP is granted by the County Board (Section 5.05(N) of the County Zoning Ordinance).



### Site Plan

Outline how the intended use will be situated on the property including buildings, parking areas, signage, material storage areas, etc.



2/4/2025 Henry Miller presented to the Eagle Valley township board a presentation requesting the board sign a paper regarding a CUP.

Document #: A540634

04-05-2024 at 3:33 PM KIMBERLY BOSL TODD COUNTY RECORDER Long Prairie, MN Fee Amount: \$46.00

Return via OTHER: TODD COUNTY PLANNING & ZONING 215 1ST AVE S #103 LONG PRAIRIE, MN 56347

### CONDITIONAL USE PROCEEDINGS

### STATE OF MINNESOTA COUNTY OF TODD

In The Matter of:

Jacob C. Miller

Mailing Address:

47.

17913 344th St.

Clarissa, MN 56440

Property Owner: Mailing Address: Jacob C. Miller

17913 344th St.

Clarissa, MN 56440

Site Address:

33371 171<sup>st</sup> Ave., Clarissa, MN 56440 Parcel Number: 07-0037500

**REOUEST:** Request for a Conditional Use Permit for the operation and retail sales of a Sawmill and or Re-saw business in AF-1 Zoning.

The above entitled matter was heard before the Todd County Planning Commission on the 7th day of March, 2024 on a petition for Conditional Use pursuant to the Todd County Zoning Ordinance, for the following described property:

THE E1/2 OF THE SW1/4 OF SECTION 31, TOWNSHIP 131 NORTH, RANGE 34 WEST, TODD COUNTY, MINNESOTA.

Record this document in: X abstract records torrens records.

IT IS ORDERED that the Conditional Use # CUP-2024-008 be (granted, denied) as upon the following conditions, changes or reasons:

- 1. Hours of operation shall be restricted to 7:00 AM to 6:00 PM CST, Monday through Saturday.
- 2. Operation of the sawmill shall be conducted within a permitted structure.
- 3. Outdoor storage of products shall be allowed but shall be conducted in compliance with Section 9,01B of the Todd County Planning and Zoning Ordinance.
- 4. Business traffic shall access the site via County 84 from the south. North bound traffic from the site shall not be allowed for protection of the roadway.
- 5. Operation site shall meet all the setback requirements for the zoning district in which it's located.

6. There shall be no loading or unloading of materials within the road right of way.

7. Applicant shall work with Eagle Valley Township to establish a sufficient business access and establish truck route signage.

- 8. Establishment of an exhaust system directed through the roof of the structure with inclusion of a muffler.
- 9. Applicant shall abide by all other applicable federal, state, and local standards.

Todd Co	ounty Board	l of Comm	issioners
			TADDAGALUI D

Date

Barb Becker, Chairperson

Bush Becker

### STATE OF MINNESOTA COUNTY OF TODD

### OFFICE OF TODD COUNTY PLANNING & ZONING OFFICE

I, <u>Adam R. Ossefoort</u> Todd County Planning & Zoning Director, County of Todd with and in for said County, do hereby certify that I have compared the foregoing copy and order (granting, denying) a Conditional Use with the original record thereof preserved in my office, and have found the same to be correct and true transcript of the whole thereof.

IN TESTIMONY WHEREOF, I have hereunto subscribed my hand at Long Prairie, MN in the County of Todd on the 27th day of March, 2024.

Adam R. Ossefoort, Todd County Planning and Zoning Director

Drafted by:

Sue Bertrand

Planning and Zoning Staff

This form mailed to applicant: 4/23/2024

Date

Activities granted by a Conditional Use Permit expire and are considered invalid unless they are substantially completed within thirty-six months of the date the conditional use permit is granted by the Board of Commissioners. Section 5.05M Todd County Ordinance.

As of: 2/7/2025

Parcel Number: 07-0037500 Payable Year: 2025 Total Rec

| Detail Record

General Value Information Information Asmts

Special Ditch Sales History Appraisa.

Asmts | Sales History Summary

I Appraisal Current Year Value Notice Previous Year Value Notice

**Current Year TNT** 

Taxpayer/Owner Information Taxpayer #24608

MILLER/JACOB C & EMMA 17913-344TH ST CLARISSA MN 56440

General

MP #07-0037500 Re/Mh: REAL ESTATE

Twp/City School 787

Twp/City 7 - EAGLE VALLEY School Dist 787 - BROWERVILLE

Description

**Block** Sect Twp Range Lot 31 131 34 0

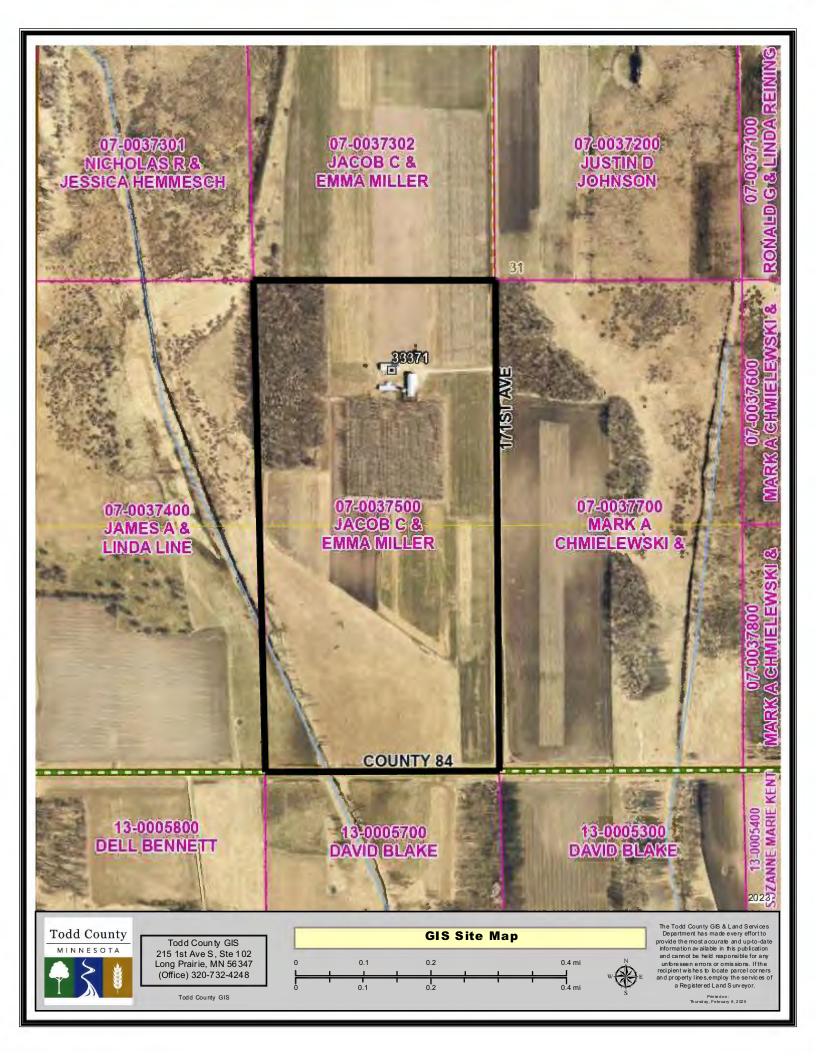
E2 SW4 80.00 ACRES

**Property Address** 33371 171ST AVE 56440

**Escrow** 

Deeded Acres: 80.00

Another Search | Back to ParcelList |



feceip# 2005-000 2



#### PLANNING & ZONING

215 1st Avenue South, Suite 103 Long Prairie, MN 56347

Phone: 320-732-4420 Fax: 320-732-4803 Email: <u>ToddPlan.Zone@Co.Todd.MN.US</u>

### Received

### CONDITIONAL USE PERMIT APPLICATION

FEB 1 2 2025

Todd County Planning & Zoning ... 101 Isanti Parkway NE, Suite G, Isanti, MN 55040

Applicant Wolf River Electric	Mailing Address 101 Isantl Parkway NE, Sulte G, Isant
Site Address 21381 430th St, Bertha, MN 56437	
	-Mail Address
Property Owners Name & Address (if not applicant	Anne Hemstock
21381 430th St, Bertha, MN 56437	
Parcel ID(s) Township German	Lake/River Name
Zoning District (circle one): AF-1 AF2; R-2;	R-10; UG; RT; Comm; L-M; or Shoreland
Full and Current Legal Description(s) Residential si	ngle-family home if necessary)
Current tax statement or other proof of ownership a	
current tax statement of other proof of ownership a	minoned (V) yes ( ) no
Measurement of land involved: Width	_Length Acres _40.92
Septic System: Date installed 4/19/1993 D	ate of latest Compliance Inspection 4/19/1993
Is an upgrade needed: ( ) yes ( ) no	* Has winter agreement.
Site accessed by: 💋 public road ( ) easement	7
If easeme	nt, is the easement legally recorded? ( ) yes ( ) no
Detailed Explanation of Request:	
Installation of a ground-mounted solar system to power the	home,
Did you meet with the Township Board to presen	nt the Application for Conditional Use Permit?
Yes No Date of the meeting:	<u>x</u> 11 303,
	Christian
Optional Township Board Signature	Board Position

Conditional Use Permit Application

Page 2 of 5

Revised 1/13/2025

Will the request create an excessive burden on	the existing roads or other utilities	? Explain
No, the system will be installed on the property away f	from roads and utilities.	
Is the requested use compatible with the surrou Yes, the system does not affect surrounding propertie		
Could the use significantly depreciate near-by  No, the system does not affect surrounding properties	•	
Will the structure and the use have an appearan	nce that will not have an adverse ef	fect on near-by
properties? Explain		
The system will not be visible to nearby properties du	e to tree coverage.	
Will the requested use create an adverse affect operation, or general unsightliness? Explain  No, the system will not be visible because of tree cov		
Todd Count 215 1° Lon	IATION, AND FEE TO: Ty Planning & Zoning Office Ave South, Suite 103 g Prairie, MN 56347	
	ct Fee: \$1,000.00 payable to "Todo a <b>tions may be placed on an ager</b>	•
**A PARCEL IN JOINT OWNERSHIP MUS		
Chloe Kirks	Chloo Kirks	2/11/25
Applicant Name Printed	Signature	Date .
Anne Hemstock Property Owner Name Printed	AnneM. Hemst Signature (If different than applic	100 2-11-2025 ant) Date

Revised 1/13/2025

County Zoning Ordinance).

A Conditional Use Permit expires and is considered invalid unless they are substantially completed within thirty-six months of the date the CUP is granted by the County Board (Section 5.05(N) of the

### **AUTHORIZED AGENT FORM**

I hereby authorize _	Volf River Electric	to act as my
authorized agent for	all public hearing(s) and legal relations with this appl	lication on
property located at:		
Site address_21381 430	Oth St, Bertha, MN 56437	
Section # 34	Township Name Germania	
Parcel Number(s) _0	90009500	
Property Owner(s)	Name(s) (print) dryne Hemstack	
Property Owner(s) S	Signature(s) Anne My Hemstrick	_Date 2-11-2025
Authorized Agent(s)	name(s) (print) Chloe Kirks	
Authorized Agent(s)	) Signature(s)_Chloe Kirks	Date
Authorized Agent P	hone Number	
Authorized Agent Em	ail	

### Site Plan

Outline how the intended use will be situated on the property including buildings, parking areas, signage, material storage areas, etc.

\* see attached

### **Sue Bertrand**

From:

Chloe Kirks <chloe@wolfriverelectric.com>

Sent:

Tuesday, February 11, 2025 8:05 AM

To:

Sue Bertrand

Subject:

Re: Building Permit Application | Anne Hemstock | 21381 430th St, Bertha, MN 56437 |

Wolf River Electric

#### TODD COUNTY SECURITY NOTICE:

This email originated from an external sender. Please exercise caution before clicking on any links or attachments and consider whether you know the sender. For more information please contact MIS.

Good Morning Sue,

We are meeting with Germania Township this evening, and I will have them sign the updated application. I will get it back to you as soon as possible on Wednesday, the 12th. We hope to have the utility's interconnection agreement in early March. I will also work on tracking down the agreement for 13727 Hackberry Road, Long Prairie, MN 56347, PID#15-0016901.

Please let me know if any additional information is needed at this time.

Thank you,

On Mon, Feb 10, 2025 at 9:23 PM Sue Bertrand < Sue.Bertrand@co.todd.mn.us > wrote:

Hello,

Please see our updated CUP application that has the current requirement of the township meeting attendance and signatures needed prior to our Planning Commission meeting.

Please get rid of the old applications, and replace with this revised 2025 CUP forms.

Thank you!

We are still waiting for the interconnection agreement for the application above and also we have not received the interconnection agreement for:13727 Hackberry Road, Long Prairie, MN 56347, PID#15-0016901 from when Ben Struwve quit.

Please send both as soon as possible.

Sue Bertrand

Planning and Zoning Specialist

**Todd County** 

CUSTOMER PROFILE/BILLING HIST

Page: 1	Ext		Dmd Rdg 5.624	Disc Dt tte	
	Addl Phone Home: Mobl: Busn: Fax:	Tax Switch Y N N N N N	Pres Rdg D 92543 Curr Use Days: 0	Stat Con Dt Di 1 09/23/1997 Rate Connect Date Disc Date	05/05/2025
HIST	Phone Ext Home: 218-924-8300 Mobl: 320-310-7381 Busn: Fax:	Emergency Addr: District Office: Board Dist: Srv Area: MN 2 - Todd	Mtr Mult Pres Dt 1.0000 02/01/2025 Last Valid Rdg: 91873	Cred Amt Radio Address -8.00 49 -	
CUSTOMER PROFILE/BILLING HIST		ELEC - ELECTRIC SERVICE  Annual Due:00 Curr Annual:00 Past Annual:00 Board District (Board District (Courty: State: MN County: 2 - Todd City: School: Franchise: Other:	Con Dt Disc Dt 10/28/2020 Last Valid Rdg Dt: 01/01/2025	LM Type WH1-Water Storage House 1 WHB Type	85 85 Gallon
CUSTOMER	Name: ANNE M HEMSTOCK Addl Name: Address: 21381 430TH ST BERTHA MN 56437	TWEC - Todd-Wadena Electric Coop   Service:   Service	Rate Schedule A - General Service		
02/06/2025 04:09:44 pm	Customer: 26417	Account: 26417001 Cycle Code: 1  Provider: TWEC - Todd-Wadena Electric Coop  AR Information:  Total AR:  Total 30 Days:  Total 30 Days:  Total 60 Days:  Total 90 Days:  Dayment Information:  Payment Information:  Payment Date: 01/27/2025 Payme  Location: 4719 Srv Map Loc: 45  Srv Desc:  Srv Stat:  Srv Stat:	Pos Mtr Nbr 1 105644	Load Management: LM Ser Nbr 1123697 Device Information: Pos Dvc Serial Nbr	2 A442208177

Todd-Wadena Electric Coop

02/06/2025 04:09:44 pm		CUSTO	MER PRO	TOMER PROFILE/BILLING HIST	LING HI	ST			Page: 3
Rev YrMo	Bill Dt	Revenue	Demand	Device	PCA	Other	Tax	Adiust	Total
Jan 2024	02/07/2024	91.46	00.	00.	00.	.79	6.75	00.	99.00
Feb 2024	03/07/2024	82.24	00.	00.	00.	.70	90.9	00.	89.00
Mar 2024	04/05/2024	83.52	00.	00.	00.	.32	6.16	00.	00.06
Apr 2024	05/07/2024	79.09	00.	00.	00.	.07	5.84	00:	85.00
May 2024	06/07/2024	112.93	00.	00.	00.	-7.66	7.73	00:	113.00
Jun_2024	07/08/2024	130.73	00.	00.	00.	-7.78	9.05	00.	132.00
Jul 2024	08/07/2024	176.17	00.	00.	00.	-7.57	12.40	00.	181.00
Aug 2024	09/06/2024	159.18	00.	00.	00	-7.33	11.15	00.	163.00
Sep 2024	10/07/2024	112.23	00.	00.	00.	-7.92	69.7	00.	112.00
Oct 2024	11/07/2024	91.46	00.	00.	00.	.79	6.75	00.	00.66
Nov 2024	12/06/2024	94.03	00.	00.	00.	.04	6.93	00.	101.00
Dec 2024	01/07/2025	114.22	00.	00.	00.	-7.05	7.83	00.	115.00
Totals: Averages:		\$1,327.26 \$110.61	\$.00	\$.00	\$.00	\$-42.60 \$-3.55	\$94.34 \$7.86	\$.00	\$1,379.00 \$114.92



PLANNING & ZONING

215 1st Avenue South, Suite 103 Long Prairie, MN 56347

Phone: 320-732-4420 Fax: 320-732-4803 Email: ToddPlan.Zone@Co.Todd.MN.US

### Compliance Inspection Winter Agreement Form

#### **PURPOSE:**

Due to seasonal conditions, a Winter Agreement Form may be submitted to the Planning and Zoning Office in lieu of a compliance inspection for property transfers and permit application between the dates of November 15<sup>th</sup> and April 15<sup>th</sup> that ensures a compliance inspection will be **completed by June 1, 2025.** 

#### **INSTRUCTIONS:**

<u>Property transfers and the application for permits requiring compliance inspections:</u> Prior to the property transfer or the issuance of a permit, submit the completed form, including the required signatures, to the Planning and Zoning Office for review. A **paid receipt** from a MN licensed compliance inspector <u>must</u> be included

included.	ing office for review. A paid receipt in	om a will licensed com	phance ms	sector <u>must</u> be		
Reason for this Winter Agreement (mark all that apply): Building Permit Application Property Transfer						
P	Landowner-	please print				
Name:	Anne Hemstock	Р	hone #:			
Mailing Address:	21381 430th Street,	Bertha s	tate:MN	zip:56437		
Site Address or PIN:	Same	S	State:	Zip:		
	Purchaser (for transf	ers only)-please print				
Name:		P	Phone #:			
Mailing Address: State: Zip:						
Compliance Inspector's paid receipt is attached* *required for approval						
It is understood by all parties that the septic system(s) located on parcel # <u>09</u> <u>000 95 00</u> must have undergone a compliance inspection by June 1, 2025.						
system(s) by a Mi understand that t the land owner a	oility of the land owner to ensure a corn licensed compliance inspector by the failure to meet the deadline will be connot will be processed as such. In order section, all portions of this form must be	e above deadline. By si nsidered a violation of for this Winter Agreem	gning this d the Todd Co nent to be a	locument all parties ounty Ordinance by ccepted in lieu of a		

Planning and Zoning Signature:

Landowner Signature:

**Purchaser Signature:** 

annellitelle

DATE

### HORSESHOE SEPTIC SERVICE 31525 Killdeer Drive Browerville, MN 56438

Email:

Phone: (320) 594-2895

**Invoice** 

Date: 2/10/2025

Invoice No: 1703

Past Due: 2/10/2025

**Net:** 0

To: ANNE HEMSTOCK 21381 430 TH STREET Bertha, MN 56437 Customer ID No: 1178

Customer Phone: Invoice Type: Service Entered By:

Site: 21381 430 TH STREET

Invoiced Line Items	Qty	Unit Prices	Subtotals Taxed	Taxed Amt	Line Totals
COMPLIANCE INSPECTION	1	\$300,000	\$300.000	\$0.00	\$300.00
PUMPED TANK	1	\$160.000	\$160.000	\$0.00	\$160.00

Qty Total	Subtotal	Taxed Total	Line Totals
2	\$460.00	\$0.00	\$460.00

Please pay balance due upon receipt of invoice. Thank You!

Total Tax:	\$0.00
Taxable Amount:	\$0.00
Non-Taxable Amount:	\$460.00
Invoice Total:	\$460.00

	JU
- Amount Received: \$460.0	JU

Default Timeout is: 59 As of: 2/5/2025

Parcel Number: 09-0009500 Payable Year: 2024

General Tax Info

Current Info | Receipts |

Special Asmts | Unpaid Tax

Pay by **History Credit** Card

Current Year Tax Stint Previous Year Tax Stint

Taxpayer/Owner Information Taxpayer #36839 HEMSTOCK/ANNE M 21381 430TH STREET BERTHA MN 56437

General

MP #09-0009500 Re/Mh: REAL ESTATE

Twp/City School Water Debt Agri 9 786 0

Twp/City 9 - GERMANIA School Dist 786 - BERTHA

Description

Sect Twp Range Lot **Block** 14 132 34 0

 NE4 NE4 — 40.92 ACRES - GIS

> **Property Address** 21381 430TH ST 56437

**Escrow** 

Deeded Acres: 40,92

Another Search | Back to ParcelList |

14135 N 374 Hod 595t.

2016 offsat

# ANNE HEMSTOCK

21381 430TH ST, BERTHA, MN 56437

# PHOTOVOLTAIC SYSTEM SPECIFICATIONS

MODULE TYPE & AMOUNT: MODULE DIMENSIONS: INVERTER:

SYSTEM SIZE:

(24) MODULES GROUND MOUNT 9.6 kW DC

(24) WSMDI-400 (L/W/H)73.5/41/1.37 (24) IQ7HS-66-M-US (240V, 1 PHASE)

INTERCONNECTION METHOD: TERMINAL BOX

# GENERAL STRUCTURAL NOTES:

a. THE SOLAR PANELS ARE TO BE GROUND MOUNTED USING SUNMODO RACIONG SYSTEM AND BUT GROUND MOUNT GROUND SCREWS.
2. GROUND SOME DAD = 50 pef
4. WIND SPEED = 115 mph

EXPOSURE CATEGORY = B

AUTHORITIES HAVING JURISDICTION

BUILDING: CITY OF BERTHA
ZONING: CITY OF BERTHA
UTILITY: TODD-WADENA ELECTRIC CO-OP
UTILITY METER: #132 545 255



## SHEET INDEX

a. 2023 NATIONAL ELECTRICAL CODE
b. 2020 MINNESOTA RESIDENTIAL CODE
c. 2020 MINNESOTA BUILDING CONT
d. 2024 MINNESOTA BUILDING c. 2020 MINNESOTA BUILDING CODE
d. 2024 MINNESOTA RIERGY CODE
e. 2020 MINNESOTA ACCESSIBILITY CODE
f. 2020 MINNESOTA MECHANICAL
8. FUEL GAS CODE ALL WORK SHALL CONFORM TO THE FOLLOWING CODES

2020 MINNESOTA PLUMBING CODE 2020 MINNESOTA STATE FIRE CODE ANY OTHER LOCAL AMENDMENTS

# GOVERNING CODES

PLOT & SITE PLAN STRING PLAN COVER SHEET

EQUIPMENT ELEVATION PLACARD SHEET
WARNING SHEET WITNESS TEST MN CHECKLIST 3 LINE SHEET DETAIL SHEET

# GENERAL ELECTRIC NOTES:

- ALL COMPONENTS ARE ULLISTED AND CEC CERTIFIED, WHERE WARRANTED.
- THE SOLAR PV SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH ARTICLE 690 OF THE NEC
- PRIOR TO PARALLEL OPERATION. THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED
- RACEWAY, OR CABLE, OR OTHERWISE RUN WITH THE PV ARRAY CIRCUIT CONDUCTORS WHEN ALL CONDUCTORS OF A CIRCUIT, INCLUDING THE EGC, MUST BE INSTALLED IN THE SAME
- SHALL BE IDENTIFIED AS "CAUTION: SOLAR CIRCUIT" EVERY 10FT. WHERE METALLIC CONDUIT CONTAINING DC CONDUCTORS IS USED INSIDE THE BUILDING, IT THEY LEAVE THE VICINITY OF THE PV ARRAY.
- HEIGHT OF THE AC DISCONNECT SHALL NOT EXCEED 6'-7" PER NEC CODE 240.24.
- GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO LARGER INACCESSIBLE OR INADEQUATE A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT BUILDING MAY BE USED AND BONDED TO THE SERVICE ENTRANCE, IF EXISTING SYSTEM IS THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT. GROUND ROD WITH ACORN CLAMP AND 250-166 SHALL BE PROVIDED. PER NEC GROUNDING ELECTRODE SYSTEM OF EXISTING A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH CEC 690.47 AND 250.50 THROUGH 60

- PHOTOVOLTAIC MODULES ARE TO BE CONSIDERED NON-COMBUSTIBLE.
- ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED PHOTOVOLTAIC INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING. MECHANICAL, OR BUILDING
- SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SINAGE WILL BE INSTALLED AS ALL SINAGE TO BE PLACED IN ACCORDANCE WITH THE LOCAL BUILDING CODE, IF EXPOSED TO AND LISTED FOR SUCH USE. WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF THE

11.

- 12. AS SPECIFIED BY THE AHJ, EQUIPMENT USED IN UNGROUNDED SYSTEMS LABELED ACCORDING REQUIRED BY THE NEC AND AHJ.
- ŗ. INVERTER(S) USED IN UNGROUNDED SYSTEM SHALL BE LISTED FOR THIS USE [NEC 690.35(G)]. TO NEC 690.35(F).
- 14. SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS [NEC 690.4(C)] THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION

Satellite View

Vicinity Map

- ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED (OR BETTER), INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC
- SYSTEM GROUNDING SHALL BE IN ACCORDANCE WITH NEC 690.41.
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION IN ACCORDANCE WITH NEC 690,12
- 19. DISCONNECTING MEANS SHALL BE LOCATED IN A VISIBLE, READILY ACCESSIBLE LOCATION WITHIN THE PV SYSTEM EQUIPMENT OR A MAXIMUM OF 10 FEET AWAY FROM THE SYSTEM [NEC
- ALL WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC 690.31
- 22 20 110.26(A)(1), 110.26(A)(2) AND 110.26(A)(3) WORK CLEARANCES AROUND ELECTRICAL EQUIPMENT WILL BE MAINTAINED PER NEC

215th Ave

- ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED & IDENTIFIED IN ACCORDANCE WITH UL1703
- 23 ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC

WOLF RIVER DESIGNED BY: MOLE BRATH DISCOVERS
BUTTON DE SANTE NA SONO
BUTTON DE Engineer Signature & Stamp Designer Skypeture



21381 430TH ST BERTHA, MN 56437 AHJ: CITY OF BERTHA UTILITY: TODD-WADENA ELECTRIC SO-OP

ANNE HEMSTOCK

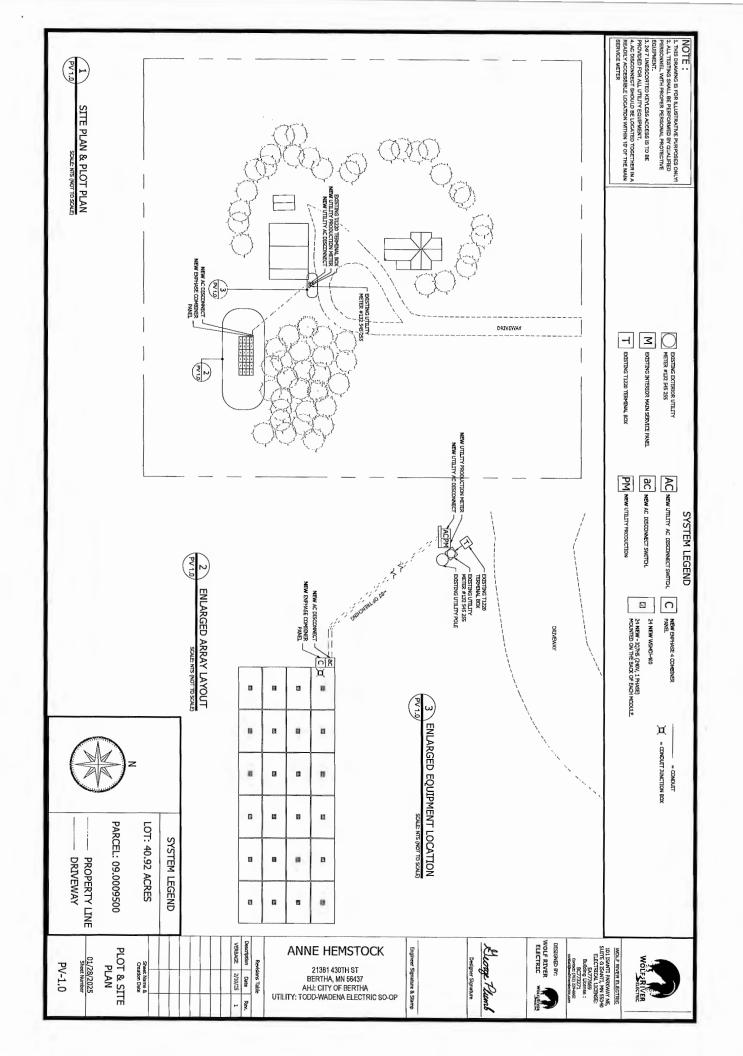
Revisions Table

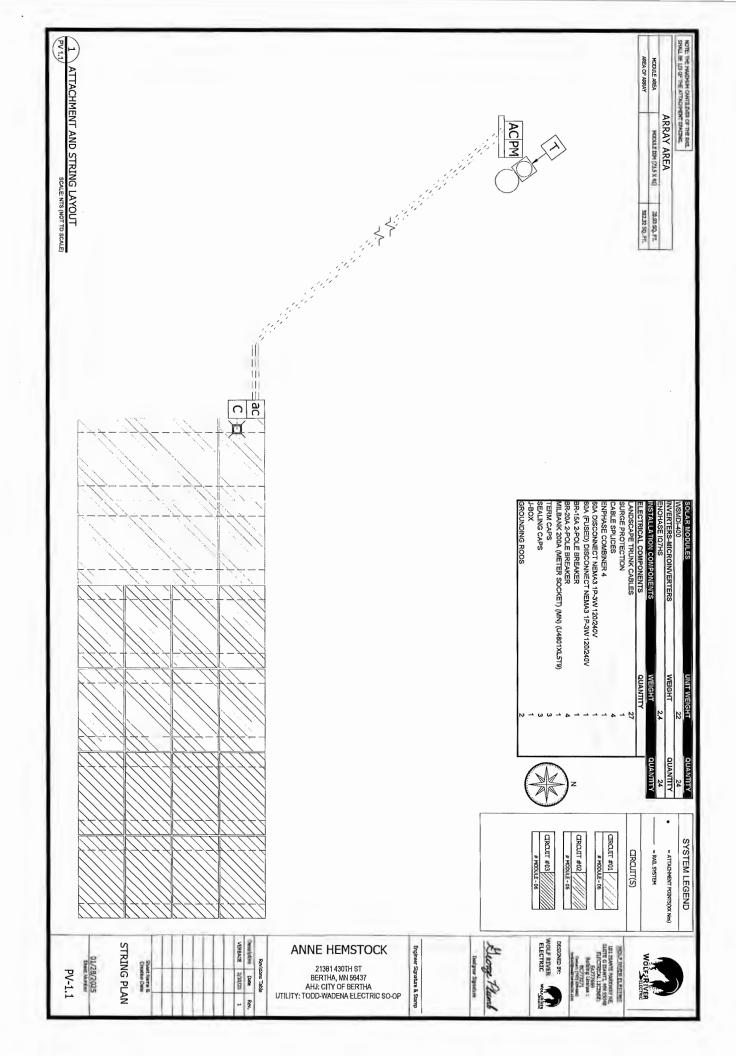
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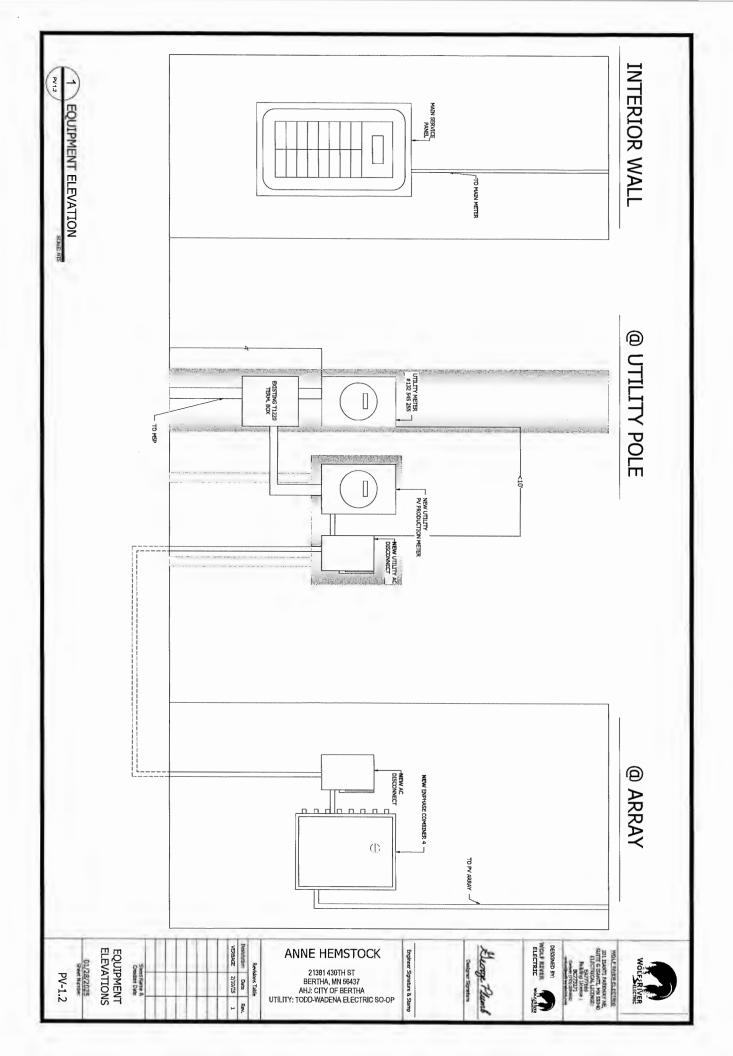
COVER SHEET

01/28/2025 Sheet Municer

PV-0.0

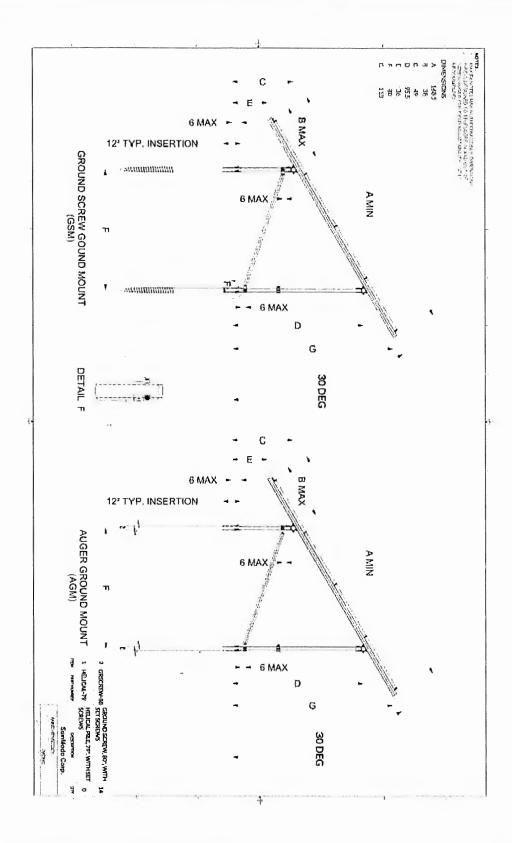












Last edited by Catherine Di Castri on 01/28/25 11:30 AM PST

6 of 8

Revisions Table  Revisions Table  Revisions Revisions Revisions Revisions Revisions Revisions Revisions Revisions Revisions Revision Date  Sheet Number  D=2.0A					 	 	,	,	 	,		,	,
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									,		Rev.		

21381 430TH ST BERTHA, MN 66437 AHJ: CITY OF BERTHA UTILITY: TODD-WADENA ELECTRIC SO-OP

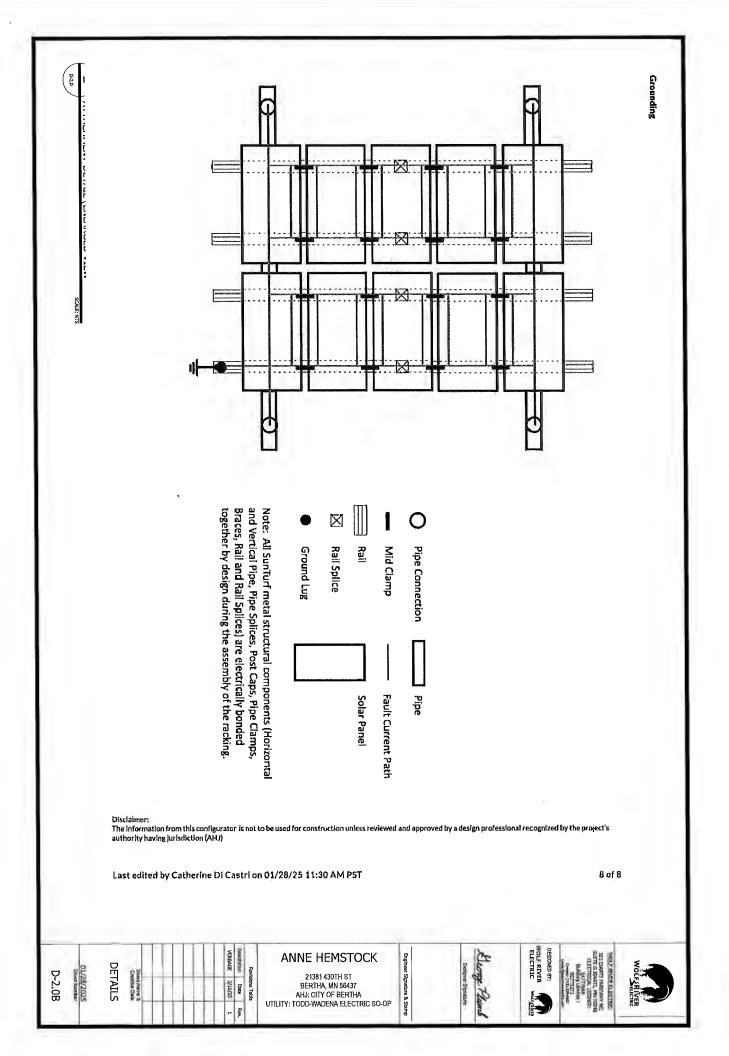












24 ENPHASE 1Q7HS (1-PHASE) INVERTERS TO BE MOUNTED ON THE RAIL BENEATH EACH OF THE PANELS 24 WSMDi-400 73.5X41 (20.93 SF) UTILITY: TODD-WADENA ELECTRIC CO-OP AHJ: CITY OF BERTHA L THIS DRAWNING IS TRY ILLIFRATINE DIRECKES ONLY!

2. ALL TISTING SHALL BE PERFORMED IS FULLIFIED PERSONALE, MITH PROPER PESCONAL PROTECTIVE EQUIPMENT.

3. ALF INVESCRETE DRAVIES ACCESS IS TO BE PROVIDED FORMAL UTILITY EQUIPMENT.

4. THE PRODUCTION METER A AC DISCONNECT SHOULD BE LOCATED TOGETHER VISIBLE-OPEN LOCABLE REVOLLY ACCESSIBLE LOCATION WITHER IS OF THE MAIN SERVICE. NOTES: S THE HETES COCKET FOR THE AM PRODUCTION METER SHALL BE HARGED WITH, A TRAVED BRASS, ALUMBALIN, OR STAINLESS STEEL THIS, INDICATING THE ADDRESS INCLUDING THE WITH THE ROLL THE SHALL BE LOCATED WITHOUTH HE REQUIREMENTS FOR THE RED EMPERICATION STANDARD.

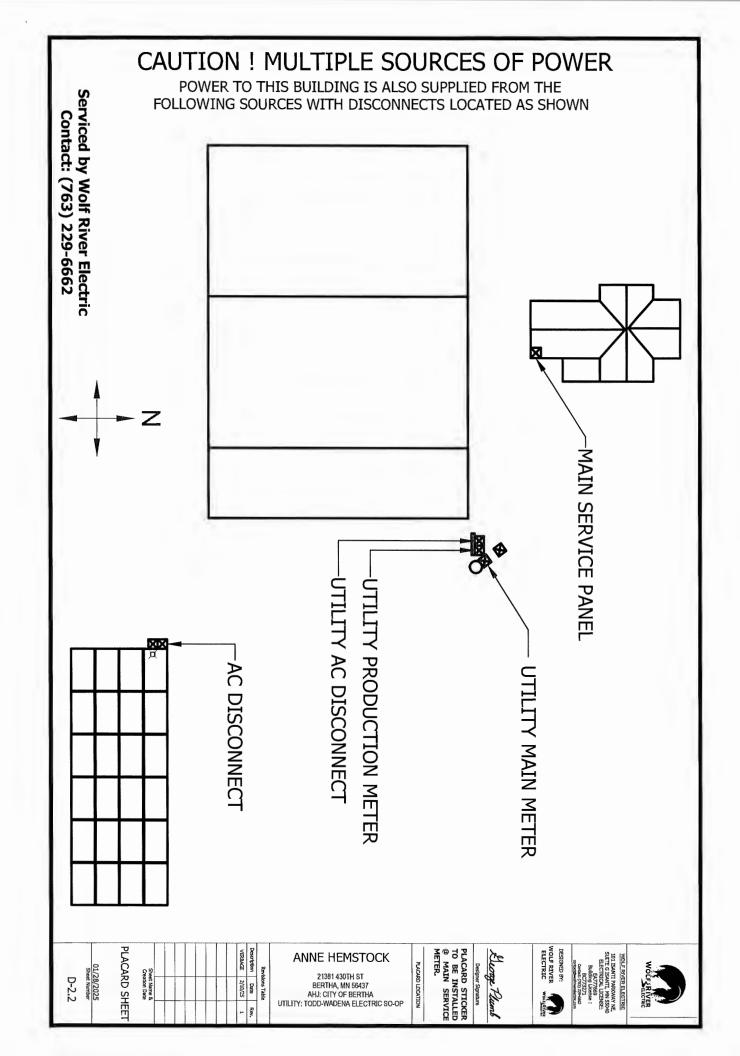
APPROVAL OF THE PROPOSED PY PRODUCTION METERONG WILL NEED TO BE OBTIANDED BY THE LOCAL BECTRIC METER SHOP. Ħ 06 MICRO-INVERTERS IN BRANCH CIRCUIT #2 06 MICRO-INVERTERS IN BRANCH CIRCUIT #1 06 MICRO-INVERTERS IN BRANCH CIRCUIT #3 TERMINATOR CAP ON THE LAST BILE CONNECTOR Q-CABLE (TYP.) Œ. Ħ -- INVERTER ENPHASE IQ7HS AC SISTEM SIZE 9,216 KW
TOTAL MODULE COLINT 24
NOTE: AC DISCONNECT TO BE INSTALLED
WITHIN 19FT FROM UTILITY METER. Photovoltaic System Θ. NEW JUNCTION BOX 600V, NEMA 4 UL LISTED PRODUCTION CT (0)-IQ GATEWAY NEW ENPHASE COMBINER 4 MONITORING DEVICE 240V, NEMA 3R 1 PHASE SURGE PROTECTION DEVICE MNSPD-300-AC 딾고 <u>Θ</u>-TAG# NEW AC DISCONNECT SMITCH 240V/60A, NON-FUSED NEWAZR 억 2 VISTBLE-OPEN LOCKABLE | REFERENCE POINT READILY ACCESSIBLE OF APPLICABILTY DESCRIPTION
INVERTER OUTPUT (ENPHASE Q CABLE) INVERTER OUTPUT (THWN-2) EGC (BARE COPPER GROUND) INVERTER OUTPUT (THWN) INVERTER OUTPUT (URD) (H)-c EGC (THWN-2) EGC (THWN) EGC (URD) NEW UTILITY AC DISCONNECT SWITCH 240V/60A, FLSED NEWAGR MAX. POWER-POINT CLIREBIT (INP)
MAX. POWER-POINT CLIREBIT (INP)
MAX. POWER-POINT CLIREBIT (INC)
MAX. SERIES FLISE (OPD)
MOX. MAX. FOWER IN THE (PMAX)
MAX. STETIER VOLTAGE
VOCTEMPERATURE COEFFICIENT SPECIFIED CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE SPECIFIED EUSES AOS PV MODULE RATING @ STC 0 POINT OF
INTERCONNECTION
EXISTING TERMINAL BDX
(T1220)
NEW ZOOL UTILITY PV
PRODUCTION METER SOOCET
MILBARK U-801-21-519
1-PHASE, 3-WIRE 120/240V CONDUIT CONDUCTOR SCHEDULE #6 AWG (AL) #4 AWG (AL) WIRE GAUGE #10 AWG #12 AWG #6 AWG #6 AWG #12 AWG #6 AWG ≤ E E GAG 10.54 AMPS 38.00 VOLTS 11.32 VOLTS 22 AMPS 400WATTS 1500V -0.28%/°C #6 AWG COPPER GROUND # OF CONDUCTORS/COLOR 0 1(GRN) 3(L1,L2,N) B/R/W 3(L1,L2,N) B/R/W 6(311, 312) 6(31.1, 31.2) 1(GRN) 1(GRN) 1 BARE EXISTING UTILITY METER
SOCKET, 1-PHASE, 3-WIRE
2004/2-90V
LI N L2
LI N L2 NOMINAL AC VOLTAGE

MAX AC CURRENT

MAX OCPD RATING

MAX PANEL/CIRCUIT

SHORT CIRCUIT CURRENT MAX DC VOLT RATING
MAX POWER AT 40 C 3 INVERTER SPECIFICATIONS CONDUIT TYPE SCH 80 PVC FREE AIR ₹ MC EXISTING 240V/200A
BUSBAR RATING, SERVICE
PANEL SINGLE PHASE
WITH 200A DISCONNECT ## ENPHASE 1Q7HS-66-M-US
59 VOLTS
394 WATTS
249 VOLTS
1.60APPS
20 AMPS
10 ELECTRODE SYSTEM CONDUIT SIZE 15 AMPS Š 1" 3/4" N/A George Plumb WOLF RIVER 101 ISANTI PARKWAY NE,
SUITE G ISANTI, MN 55040
BEECTRICAL LICTUSE:
EA777669
Building License:
BC773271
Corese (763) 228-6462
Building License
BC773271 Description Date Rev.
VERBAGE 2/10/25 1 DESIGNED BY: ANNE HEMSTOCK Engineer Signature & Stamp MOLF RIVER ELECTRIC 01/28/2025 Sheet Number 3-LINE Revisions Table Designer Signature 21381 430TH ST D-2.1 BERTHA, MN 56437 AHJ: CITY OF BERTHA UTILITY: TODD-WADENA ELECTRIC SO-OP

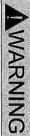


# WARNING

ELECTRICAL SHOCK HAZARD

LOAD SIDES MAY BE ENERGIZED TERMINALS ON THE LINE AND IN THE OPEN POSITION

LABEL LOCATION: COMBINER PANEL, AC DISCONNECT, POINT OF INTERCONNECTION PER CODE: NEC 706.15(C)(4), NEC 690.13(B)



TURN OFF PHOTOVOLTAIC AC WORKING INSIDE PANEL DISCONNECT IOR TO

LABEL LOCATION: COMBINER PANEL(S), MAIN SERVICE DISCONNECT PER CODE: NEC 110.27(C), OSHA 1910.145(f)(7)

# PHOTOVOLTAIC POWER SOURCE

PER CODE: NEC 690.31(D)(2)

NOMINAL OPERATING AC VOLTAGE: 240 V RATED AC OUPUT CURRENT: PHOTOVOLTAIC SYSTEM AC DISCONNECT 38.4A

LABEL LOCATION: AC DISCONNECT/POINT OF INTERCONNECTION PER CODE: NEC 690.54

# **PHOTOVOLTAIC**

ALTILLA

AC DISCONNECT

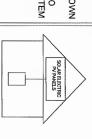
PER CODE: NEC 690,13(B)

SECOND SOURCE IS PHOTOVOLTAIC SYSTEM WARNING DUAL POWER SOURCE

LABEL LOCATION: MAIN SERVICE DISCONNECT, PRODUCTION/NET METER PER CODE: NEC 690.59, 705.12(C)

## SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

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



LABEL LOCATION: MAIN SERVICE DISCONNECT PER CODE: NEC 690.56(C)

### SYSTEM DISCONNECT MAIN PHOTOVOLTAIC

LABEL LOCATION: MAIN SERVICE DISCONNECT, UTILITY METER PER CODE: NEC 690.13(B)

## RAPID SHUTDOWN FOR SOLAR PV SYSTEM

LABEL LOCATION: RSD INITIATION DEVICE, AC DISCONNECT PER CODE: NEC 680.56(C)(2)

### DO NOT DISCONNECT UNDER LOAD

LABEL LOCATION: MAIN SERVICE DISCONNECT PER CODE: NEC 690.15(B) & NEC 690.33(D)(2)

21381 430TH ST BERTHA, MN 56437 AHJ: CITY OF BERTHA UTILITY: TODD-WADENA ELECTRIC SO-OP

XECTIPION Date Rev.

Revisions Table

WARNING SHEET

Sheet Name & Creation Date

01/28/2025 Sheet Number

D-2.3

ANNE HEMSTOCK

Engineer Signature & Stamp



101 ISANTI PARKWAY NE,
SUITE GISANTI, MN 55940
ELECTRICAL LICHOSE:
EA777659
Building License:
B0773271
Cortact (763) 259-66C
contactSwollinestectric.com IOLF RIVER ELECTRIC

DESIGNED BY:



George Plumb

# DEPARTMENT OF LABOR AND INDUSTRY

☐ Have all the required labels been applied? (See label list.)	If both are present, has the DC grounding electrode system been bonded to the AC GES? 690.47
Lipoes the bus of conductor ampacity comply with / US. 12?	$\square$ Has the grounding electrode system been installed? 690.47
fusible disconnecting means? 705.12	☐ Are the EGC properly sized and protected, if exposed not smaller than #o / 650.45, 250.122, and 250.120(C)
Are the utility interactive inverters connected to the system through a dedicated circuit breaker or	
☐ Has the point of connection to other sources been installed per 705.11 or 705.12?	Are the interconnecting devices used for equipment grounding listed and identified and are all connections properly torqued? 690.43 and 110.14
denoting all electric power sources & power production sources? 705.10	igcap Are the mounting structures or systems used for equipment grounding? 690.43
irectory been instal	igcup is all exposed non-current carrying metal parts of the PV system grounded? 690.43 and 690.47
Interconnection	System Grounding
☐ Are PV source or output circuits inside a building in a metal raceway and marked? 690.31(D)	
labeled PV wire, and properly support and secured? 690.31(C)	Determine the maximum circuit current for the PV Source and Output Circuit; Inverter Output Circuit; Inverter Input Circuit; and DC to DC Converter Output (refer to inverter documentation). 690.8
Is single conductor cable used outdoors suplibit resistant Type USF-2. Type RHW-2, or listed &	☐ Is all listed equipment and conductors rated for the maximum voltage? 690.7
Are PV source or output circuits > 30 volts in a raceway or guarded if readily accessible? 690.31	
☐ Has the fuse disconnecting means, if required, been installed? 690.15 and 240.40	○ What is the maximum PV system voltage and is the maximum 600 volts or less for a dwelling or 1000 volts or less for non-dwelling or 1500 volts or less when not located on a building? 690.7
provided for isolation.) 690.15	☐ Has DC Ground-Fault Protection been provided and properly labeled? 690.41(B)?
Are the Isolating devices or equipment disconnecting means installed in circulas cominected to equipment at a location within the equipment, or within sight and of feet of the equipment? (Where the maximum circuit current is creater than 30 ameries an equipment disconnection means shall be	igcup Is the system solidly grounded, ungrounded, or functionally grounded? 690.2 and 690.41
☐ Are the PV disconnect permanently marked and installed in a readily accessible location? 690.13	Is all the equipment listed for PV application or be evaluated for the application and have a field label applied? 690.4
☐ is a rapid shutdown required and if so, how is it accomplished and identified? 690.12 & 690.56(C)	☐ Is the PV system utility-interactive, stand alone or multimode?
☐ Has arc-fault circuit protection been provided for DC source and/or output circuits? 690.11	PV Inverter
☐ Do AC or DC OCPD's have the appropriate voltage, current and interrupt ratings? 690.9	<ul> <li>Verification that the racking system grounding and bonding is listed</li> </ul>
☐ How are the PV Source and Output Circuit protected from overcurrent? 690.9	<ul> <li>Manufacturer's specifications for the module(s)</li> <li>Manufacturer's specifications for the optimizer(s) (if used)</li> </ul>
Are the conductor and cable ampacities determined at 125% before adjustment factors? 690.8(B)	Required Documentation  Manufacturer's specifications for the inverter(s)
Wiring Methods and Disconnecting Means	Solar PV Inspection Checklist for REI #ELE

Engineer Signature & Stamp

Designer Signature

ANNE HEMSTOCK

21381 430TH ST BERTHA, MN 56437 AHJ: CITY OF BERTHA UTILITY: TODD-WADENA ELECTRIC SO-OP

Description Date Rev.
VERBAGE 2/100/25 1

Revisions Table

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SPEC SHEET 01/28/2025 Short Number

S-3.7

Sheet Name & Creation Date

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WILL WASH ELECTRIC
AND SAMPLE SAMPLES
AND SAMPLES
AND











### MIDNITE SOLAR INC.

### Surge Protection

### Surge Protection You Can Count On!

MidNite Solar Surge Protection Devices are type 1 devices, designed for indoor and outdoor applications. Engineered for both AC and PV DC electrical systems, they provide protection to service panels, load centers or electronic devices that are directly connected to a MidNite Surge Protection Device (SPD).

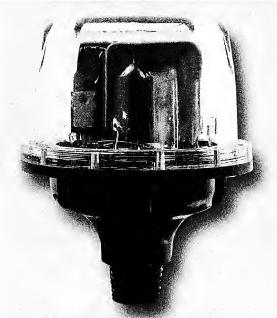
MidNite's SPD's are offered in four models to protect a variety of different voltage ranges. They achieve this protection by clamping surge voltage to a level that your system can sustain without damaging the components of the system.

Compare our SPD's against other surge protection devices. You will see there is no comparison in both our price and features. All our SPD's have a 5 year warranty.

### With lightning you only get one chance, so get the best!



www.midnitesolar.com/spd 19115 - 62nd Ave. NE., Arlington, WA. 360-403-7207 FAX: 360-691-6862



MNSPD300ACFM (Cut-in box)
(MNSPD-300-AC included)



Four Models:

MNSPD-115 MNSPD-300-AC MNSPD-300-DC MNSPD-600





# MidNite Surge Protection Devices

PART NUMBER	MNSPD-115	MNSPD-300-AC	MNSPD-300-DC	MNSPD-600
Nominal Voltage	0 to 90 VAC 0 to 115 VDC	0 to 250 VAC	0 to 300 VDC	0 to 480 VAC 0 to 600 VDC
MCOV	180V	470V	470V	780V
VPR Line to Ground	600V	1200V	1200V	1800V
Suggested Placement	Up to 90VAC circuits, 12V, 24V, 48VDC battery circuits	120/240 VAC circuits	Off-grid PV combiners Charge controller inputs up to 300VDC	316V/480 VAC circuits Grid-tie PV combiners Grid-tie inverter input Non-Isolated Inverters
Type	UL1449 4th Ed. Type 1	UL1449 4th Ed. Type 1	UL1449 4th Ed. Type 1	UL1449 4th Ed. Type 1
Diagnostic Blue LED	MNSPD-115, MNSPD-30	age is present between L1 0-DC and MNSPD-600: age is present between L1	+ ground and L2 + ground + L2 (PV+ PV-)	

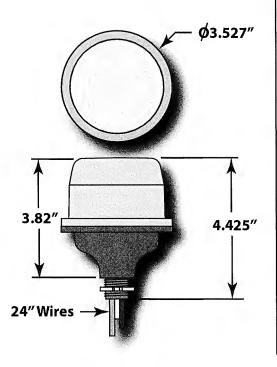
Thermal Disconnector

Internal Fuse

Response Time

<1 micro sec.





#### **Performance**

Surge Current Rating per Phase 80kA Short Circuit Current Rating 10kA

Fusing Individually fused MOVs
Thermal Fusing Yes
Over current Fusing Yes
Operating Frequency 0 to 500 Hz

**Mechanical Description** 

Enclosure Polycarbonate UL94V-0
Environmental Rating Type 4X
Connection Method #12 AWG

Connection Method #12 AWG
Weight 1 lb.
Mounting Method 1/2" Conduit Knockout

 Operating Altitude
 Sea Level – 12,000' (3,658 Meters)

 Storage Temp
 -40° F to +185° F (-40° C to +85° C)

 Operating Temp
 -40° F to +185° F (-40° C to +85° C)

Diagnostics

Blue status LED, one per leg

**Listings and Performance** 

UL Standard for Safety, UL 1449 Surge Protective Devices-Fourth Edition CSA C22.2 No. 8-M1986 Electromangetic Interference (EMI) Filters, Fourth Edition

Model No.	Max Operating Voltage	Surge Current per Phase	Configuration	MCOV	SCCR	VPR 600V/3kA L G
MNSPD-115	100 VAC/150VDC	80kA	1,0,3-wire (2 Legs)	180V L-N	10kA	600V
MNSPD-300-AC	300VAC	80kA	1 Ø, 3-wire (2 Legs)	470V L-N	10kA	1200V
MNSPD-300-DC	385VDC	80kA	1 Ø, 3-wire (2 Legs)	470V L-N	i 10kA	1200V
MNSPD-600	480VAC/600VDC	80kA	1 Ø, 3-wire (2 Legs)	780V L-N	10kA	1800V

### ARKA SERIEG WSMDi-395 to WSMDi-415





Highest reliability & enhanced crack tolerant 9BB module



Better performance under all climatic conditions



Split junction box



Reduced power losses up to 1/4 times



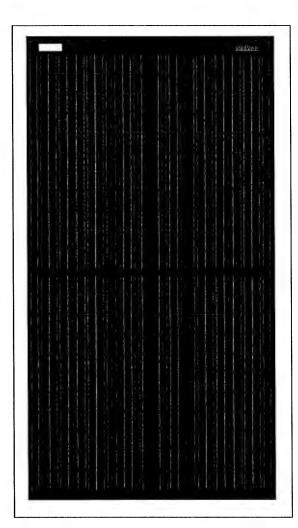
PID resistant with long term reliability



Sustain heavy wind & snow loads (2400 pa & 5400 pa)



M6 Mono PERC cells



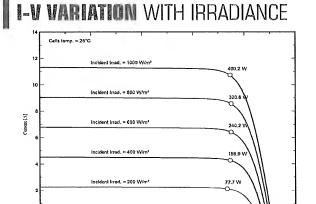
### INTERNATIONAL & NATIONAL CERTIFICATIONS ^

IEC 61215 | IEC 61730 | UL61730 IEC TS 62804-1

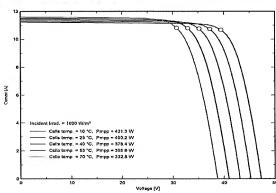




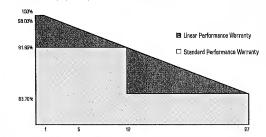




### **VARIATION WITH TEMPERATURE**



The Graphs are for reference purpose only. Please consult Waaree technical team for further clarifications,



ISO 9001:2015 | ISO 14001:2015 | ISO 45001:2018 Independent assessment of factories by BLACK & VEATCH

### ARKA SERIES

### WSMDi-395 to WSMDi-415

### **ELECTRICAL CHARACTERISTICS**



Models	Pmax	(W)	Vmp	(V)	lmp	(A)	lsc	(A)	Voc	(V)	Module Eff. (%)
iviodeis	STC	NOCT	STC	NOCT	STC	ИОСТ	STC	NOCT	STC	NOCT	Module Cit. (70)
WSMD-395	395	296.8	37.77	34.70	10.47	8.55	11.24	9.08	45.00	42.10	19.78
WSMD-400	400	300.6	38.00	34.90	10.54	8,62	11.32	9,14	45.22	42.30	20.03
WSMD-405	405	304.4	38,22	35.10	10.61	8,68	11.40	9.21	45.44	42.50	20.28
WSMD-410	410	308.2	38.44	35.30	10.68	8.74	11.48	9.27	45.66	42.70	20.53
WSMD-415	415	312.1	38.66	35.40	10.75	8.81	11.57	9.34	45.88	42.90	20.78

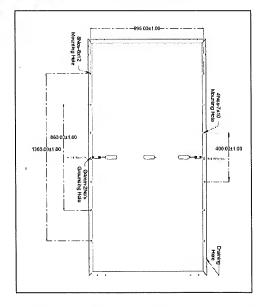
"Standard Test Conditions (STC) - 1000 W/m2 irradiance, Air Mass 1.5 and 25°C cell temperature. Nominal Operating Cell Temperature (NOCT) - 800 W/m2 irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1 m/s. Average power reduction of 4.5% at 200 W/m2 as per IEC 60904-1. Measuring Uncertainty ± 3%.

	System Voltage	1500 V	Series Fuse Rating	22 A
--	----------------	--------	--------------------	------

### **MECHANICAL CHARACTERISTICS**

Length x Width x Thickness (L x W x T)	1924 mm (L) x 1038 mm (W) x 35 mm (T)
Weight	22 kgs
Solar Cells per Module (Units) / Arrangement	132 cells / (11x6     11x6)
Solar Cell Type & Size	Mono PERC, 83 x 166 mm
Front Glass	3.2 mm Low Iron and Tempered glass with ARC coating
Encapsulate	PIO Free & UV Resistant
Junction Box (Protection degree/ Material )	IP68 / Weatherproof PPO
Cable & Connector (Protection degree / Type)	IP68 rated / Staubli MC4 Connector
Cable cross - section & Length	4 mm² & 1200mm
Frame	Anodized Aluminium Alloy, Anodization thickness ≥15 micron
Fire rating	Туре 2

### **DESIGN** SPECIFICATIONS



12 Years Product Warranty • 27 Years Power Output Warranty

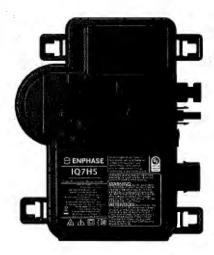
- The electrical data given here is for reference purpose only.
- Please confirm your exact requirements with the sales representative while placing your order.
- · Refer installation Menual instructions & Waaree warranty statement for terms & conditions.
- Wheree Reserves the right to change the specifications without prior notice.z.

### THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), α (%/ºC)	0.055
Temperature coefficient of Voltage (Voc), B (%/°C)	-0.285
Temperature coefficient of Power (Pm), γ (%/°C)	-0.365
NOCT (°C)	43 ± 2
Operating temperature range (°C)	-40 to 85

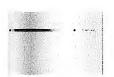
Waaree Energies Ltd. is amongst the top Solar Energy Companies and has the country's largest Solar PV Module manufacturing capacity of 5 GW. In addition, it is committed to provide top notch EPC services, project development, rooftop solutions, solar water pumps and also in an Independent Power Producer. Waaree has its presence in over 325 + locations nationally and 68 countries globally.

<sup>\*</sup>If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation menual, please contact your local Waaree seles and technical representatives.



### **IQ7HS Microinverter**

The high-powered, smart grid-ready IQ7HS Microinverter with integrated MC4 connectors dramatically simplifies installation while achieving the highest system efficiency.



Part of the Enphase Energy System, the IQ7HS Microinverters integrate with the IQ Gateway, IQ Battery, and the Enphase Installer App monitoring and analysis software.



Connect PV modules quickly and easily to the IQ7HS Microinverters that have integrated MC4 connectors.



IQ7HS Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of poweron testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



IQ7HS Microinverters are UL Listed as PV rapid shutdown equipment and conform with various regulations when installed according to the manufacturer's instructions.

#### Easy to install

- · Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014, 2017, 2020, and 2023)

#### Productive and reliable

- Optimized for high powered
   60-cell/120-half-cut-cell, 66-cell/
   132-half-cut-cell, and 72-cell/
   144-half-cut-cell PV modules
- · More than a million hours of testing
- · Class II double-insulated enclosure
- · UL Listed

#### Smart grid-ready

- Complies with advanced grid support, voltage, and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547:2018 (UL 1741-SB, 3rd Ed.) for single-phase systems

### **IQ7HS Microinverter**

INPUT DATA (DC)	UNITS	107HS-66-M-US
Commonly used module pairings <sup>1</sup>	W	320-460
Module compatibility		60-cell/120-half-cut-cell, 66-cell/132-half-cut-cell, and 72-cell/144-half-cut-cell PV modules
Maximum input DC voltage	V	59
Peak power tracking voltage	V	38-43
Operating range	٧	20-59
Minimum/Maximum start voltage	V	30/59
Maximum input DC short-circuit current	Α	25
${\bf Maximum\ module\ I_{so}}$	Α	20
Overvoltage class DC port	_	II
DC port back-feed current	Α	0
PV array configuration	_	$1\times1$ ungrounded array; no additional DC side protection required; AC side protection requires max. 20 A per branch circuit
OUTPUT DATA (AC)		
Peak output power	VA	384 @ 240 VAC, 369 @ 208 VAC
Maximum continuous output power	VA	384 @ 240 VAC, 369 @ 208 VAC
Nominal (L-L) voltage/Range²	٧	240/211-264, 208/183-229
Maximum continuous output current	_	1.60 A (240 V), 1.77 A (208 V)
Nominal frequency	Hz	60
Extended frequency range	Hz	47–68
AC short-circuit fault current over three cycles	Arms	4.82
Maximum units per 20 A (L-L) branch circuit <sup>3</sup>	_	10 (240 VAC), 9 (208 VAC)
Overvoltage class AC port	_	III
AC port back-feed current	mA	18
Power factor setting	-	1.0
Power factor (adjustable)	_	0.85 leading 0.85 lagging
EFFICIENCY		
CEC weighted efficiency	%	97.0 @ 240 V, 96.5 @ 208 V
MECHANICAL DATA		
Ambient temperature range	°C (°F)	-40 to 60 (-40 to 140)
Relative humidity range	%	4 to 100 (condensing)
DC connector type		Stäubli MC4
Dimensions (H × W × D)	mm (in)	212 (8.3) × 175 (6.9) × 30.2 (1.2) without bracket
Weight	kg (lb)	1.1 (2.4)
Cooling	_	Natural convection—no fans
Approved for wet locations	*****	Yes
Pollution degree		PD3

<sup>&</sup>lt;sup>1</sup> Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at enphase.com/installers/microinverters/calculator.

<sup>&</sup>lt;sup>2</sup> Nominal voltage range can be extended beyond nominal if required by the utility.

<sup>&</sup>lt;sup>3</sup> Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

MECHANICAL DATA

Enclosure Class II double-insulated, corrosion-resistant polymeric enclosure

Environmental category/UV exposure

rating

FEATURES

Communication

Power line communication (PLC)

Enphase Installer App and monitoring options Monitoring

Compatible with IQ Gateway

The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect Disconnecting means

means required by NEC 690 and C22.1-2018 Rule 64-220.

CA Rule 21 (UL 1741-SA), IEEE 1547:2018 (UL 1741-SB 3<sup>rd</sup> Ed.) for single-phase systems

HEI Rule 14H SRD 2.0

UL 62109-1, FCC Part 15 Class B, ICES-0003 Class B

CAN/CSA-C22.2 NO. 107.1-01 Compliance

This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, and NEC

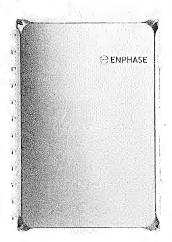
2020 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors,

NEMA type 6/Outdoor

when installed according to manufacturer's instructions.

# Revision history

REVISION	DATE	DESCRIPTION
DSH-00562-1.0	August 2024	Initial release.







X-IQ-AM1-240-4 X2-IQ-AM1-240-4 (IEEE 1547:2018) X-IQ-AM1-240-4C X2-IQ-AM1-240-4C (IEEE 1547:2018)

### IQ Combiner 4/4C

The Enphase IQ Combiner 4/4C with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure and streamlines IQ Microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and an Eaton BR series busbar assembly.



#### IQ Series Microinverters

The high-powered smart grid-ready IQ Series Microinverters (IQ6, IQ7, and IQ8 Series) dramatically simplify the installation process.



#### IQ Battery

All-in-one AC coupled storage system that is reliable, smart, simple, and safe. It provides backup capability, and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.







5-year limited warranty



#### IQ System Controller 2

Provides microgrid interconnection device (MID) functionality by automatically detecting grid failures and seamlessly transitioning the home energy system from grid power to backup



#### IQ Load Controller

Helps prioritize essential appliances during a grid outage to optimize energy consumption and prolong battery life.



#### Smart

- · Includes IQ Gateway for communication and control
- · includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), included only with IQ Combiner 4C
- Includes solar shield to match IQ Battery aesthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

- · Centered mounting brackets support single stud mounting
- · Supports bottom, back and side conduit entry
- · Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- · 80 A total PV or storage branch circuits

- · Durable NRTL-certified NEMA type 3R enclosure
- · Five-year limited warranty
- Two-vears labor reimbursement program coverage included for both the IQ Combiner SKU's
- UL Listed
- · X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C comply with IEEE 1547:2018 (UL 1741-SB, 3rd Ed.)

'Refer to the https://enphase.com/installers/resources/warranty page for country-specific warranty information.

### IQ Combiner 4/4C

MODEL NUMBER	UNITS	DESCRIPTION
IQ Combiner 4 (X-IQ-AM1-240-4, X2-IQ-AM1-240-4)	-	IQ Combiner 4 with an IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%) and consumption monitoring (±2.5%). Includes a silver solar shield to match the IQ Battery and IQ System Controller 2 and to deflect heat.
IQ Combiner 4C (X-IQ-AM1-240-4C, X2-IQ-AM1-240-4C)	-	IQ Combiner 4C with an IQ Gateway printed circuit board for integrated revenue-grade PV production metering (ANSI C12.20 ±0.5%) and consumption monitoring (±2.5%). Includes Enphase Mobile Connect cellular modem (CELLMODEM-M1-O6-SP-O5), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area). Includes a silver solar shield to match the IQ Battery and IQ System Controller 2 and to deflect heat.
WHAT'S IN THE BOX	UNITS	
IQ Gateway printed circuit board		IQ Gateway is the platform for total energy management for comprehensive, remote maintenance, and management of the Enphase Energy System.
Busbar	_	80 A busbar with support for one IQ Gateway breaker and four 20 A breakers for installing IQ Series Microinverters and IQ Battery
IQ Gateway breaker	Α	Circuit breaker, 2-pole, 10/15
Production CT		Pre-wired revenue-grade solid-core CT, accurate up to ±0.5%
Consumption CT		Two consumption metering split core or clamp-type CTs, shipped with the box, accurate up to $\pm 2.5\%$
Emphase Mobile Connect (only with IQ Combiner 4C)	_	4G-based LTE-M1 cellular modem (CELLMODEM-M1-06-SP-05) with a five-year T-Mobile data plan
MICROINVERTERS, ACCESSORIES AND REPLACEMENT PARTS (not included; order separately)	UNITS	
Supported microinverters	_	IQ6, IQ7, and IQ8. Do not mix IQ6/IQ7 Microinverters with IQ8
Enphase Communications Kit COMMS-CELLMODEM-M1-06		- Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with a 5-year T-Mobile data plan for Enphase sites
CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05		- 4G-based LTE-M1 cellular modem with a five-year T-Mobile data plan - 4G-based LTE-M1 cellular modem with a five-year AT&T data plan
Circuit breakers (off-the-shelf)	_	Supports Eaton BR2xx, Siemens Q2xx and GE/ABB THQL21xx Series breakers (xx may be 10, 15, 20, 30, 40, 50, or 60). Supports Eaton BR220B, BR230B, and BR240B circuit breakers compatible with hold-down kit.
Circuit breakers (provided by Enphase)	<del></del>	BRK-10A-2-240V, BRK-15A-2-240V, BRK-20A-2P-240V, BRK-15A-2P-240V-B, and BRK-20A-2P-240V-B
XA-SOLARSHIELD-ES	_	Replacement solar shield for IQ Combiner 4/4C
XA-ENV2-PCBA-4	_	IQ Gateway replacement printed circuit board (PCB) for IQ Combiner 4/4C
XA-PLUG-120-3	_	Accessory receptacle for power line carrier in IQ Combiner 4/4C (required for EPLC-01)
X-IQ-NA-HD-125A	_	Hold-down kit for Eaton circuit breaker with screws
ELECTRICAL SPECIFICATIONS	UNITS	
Rating	Α	80
System voltage and frequency	_	120/240 VAC, 120/208 VAC, 60 Hz
Busbar rating	Α	125
Fault current rating	kAIC	10
Maximum continuous current rating (input from PV/storage)	Α	64
Maximum fuse/Circuit rating (output)	Α	90
Branch circuits (solar and storage)		Up to four 2-pole Eaton BR, Siemens Q, or GE/ABB THQL Series distributed generation (DG) breakers only (not included)
Maximum total branch circuit breaker rating (input)	. A	80 A of distributed generation/95 A with IQ Gateway breaker included
To learn more about Enphase offerings, visit enphase.com	<u>ı</u> .	IQC-4-4C-DSH-00217-3,0-EN-US-2024-08-16

integrated Wi-Fi  Wi-Fi range (recommended)  m (ft)  10 (32.8)  Ethernet  Digital I/O  Digital I/O  Digital input/output for grid operator control  USB 2.0  Access point (AP) mode  Metering ports  Power line communication  Web API  Local API  Local API  Doptional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet  Poptional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet  Poptional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet  Poptional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet  Poptional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet  For Mobile Connect, Communications Kit 1 for IQ Battery 3/3T/10/10T, Communication Kit 2 for IQ Battery 5P  For connection between the IQ Gateway and a mobile device running the Enphase Inst App  Up to two Consumption CTs, one IQ Battery CT, and one Production CT  Power line communication  kHz 90–110  See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular CELLMODEM-M1-06-AT-05 (4G-based L	ELECTRICAL SPECIF	ICATIONS	UNITS		
A   A pair of 200 Aspitt core or clamp-type current transformers	IQ Gateway breaker		Α	10 A or 15 A rating GE/Siemens/Eaton included	
Major   20.0 spin cere or damps system (1.0 pt   1.0 p	Production metering (	т	A	200 A solid core pre-installed and wired to IQ Gateway	
Dimensions (W × H + D)		ing CT (CT-200-SPLIT/CT-	Α	A pair of 200 A split core or clamp-type current transformers	
Medight   Megint	MECHANICAL DATA		UNITS	DESCRIPTION	
Ambient temperaturo range	Dimensions (W × H ×	D)	cm (in)	37.5 × 49.5 × 16.8 (14.75 × 19.5 × 6.63), Height is 53.5 (21.06) with mounting brackets	
Cooling	Weight		kg (lb)	7.5 (16.5)	
Enclosure environmental rating	Ambient temperatu	re range	°C (°F)	-40 to 46 (-40 to 115)	
20 A to 50 A breaker inputs: 14 to 14 AWG copper conductors - 60 A breaker branch input: 14 to 170 AWG copper conductors - 60 A breaker branch input: 14 to 170 AWG copper conductors - 80 A breaker branch input: 14 to 170 AWG copper conductors - Neutral and ground: 14 to 170 AWG copper conductors - Neutral and ground: 14 to 170 copper conductors - Neutral and ground: 14 to 170 copper conductors - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors sizing - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirements for conductors - 10 Aways follow local code requirem	Cooling		-	Natural convection plus a heat shield	
See	Enclosure environme	ental rating		Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction	
Integrated Wi-Fi Integrated Connect Contenting to Production Wi-Fi Integrated Wi-Fi Integrated Connect Contenting Wi-Fi Integrated Connect Contenting Wi-Fi Integrated Comment Via Battery Integrated Connect Category And A mobile Cloud Wi-Fi Integrated Comment Via Battery Integrated Comment Via Battery Integrated Category And A mobile Category And A mobile Cloud Wi-Fi Integrated	Wire sizes		-	<ul> <li>60 A breaker branch input: 4 to 1/0 AWG copper conductors</li> <li>Main lug combined output: 10 to 2/0 AWG copper conductors</li> <li>Neutral and ground: 14 to 1/0 copper conductors</li> </ul>	
Integrated Wi-Fi angle (recommended)  m (ft) 10 (32.8)  Ethernet	Altitude		m (ft)	Up to 2,600 (8,530)	
Integrated Wi-Fi range (recommended)  Mi [ft] 10 (32.8)  Ethernet	COMMUNICATION IN	TERFACES	UNITS	DESCRIPTION	
Ethernet	Integrated Wi-Fi		_	$802.11b/g/n$ (dual band $2.4~\mbox{GHz}/5~\mbox{GHz})$ for connecting the Enphase Cloud through the internet	
Enhance Cloud through the internet  Digital I/O	Wi-Firange (recom	mended)	m (ft)	10 (32.8)	
USB 2.0	Ethernet		· _	Optional 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet	
Access point (AP) mode  App  For connection between the IQ Gateway and a mobile device running the Enphase Inst App  Metering ports  Up to two Consumption CTs, one IQ Battery CT, and one Production CT  Web API  Access point (AP) mode  App  App  All very ending ports  App  App  App  All very ending ports  App  App  App  App  All very ending ports  App  App  App  App  App  App  App  A	Digital I/O			Digital input/output for grid operator control	
Access point (AP) mode         −         App           Metering ports         −         Up to two Consumption CTs, one IQ Battery CT, and one Production CT           Power line communication         kHz         90-110           Web API         −         See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> Local API         −         See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> Cellular/Mobile Connect         −         See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> CELMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem is required for all installation modem.com            CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem is required for all installation modem.com            CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem is required for all installation modem	USB 2.0		-	For Mobile Connect, Communications Kit 1 for IQ Battery 3/3T/10/10T, Communication Kit 2 for IQ Battery 5P	
Power line communication         kHz         90-110           Web API         —         See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> Local API         —         See <a href="Guide for local API">Guide for local API</a> Cellular/Mobile Cornect         —         CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all installation with Enphase IQ Batteries and/or IQ System Controllers           COMPLIANCE         CARule 21 (UL 1741-SA)	Access point (AP) r	node	_	For connection between the IQ Gateway and a mobile device running the Enphase Installer App	
Web API         —         See <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a> Local API         —         See <a href="mailto-guide-for-local-API">GUID CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem)</a> . Note that an Enphase Mobile Connect cellular modem is required for all installating with Enphase IQ Batteries and/or IQ System Controllers           COMPLIANCE           CA Rule 21 (UL 1741-SA) IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C)           CA Rule 21 (UL 1741-SA) IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C)           CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016 Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant           COMPATIBILITY           PV         Microinverters         IQ6, IQ7, and IQ8 Series Microinverters           IQ System Controller         EP200G101-M240US00           COMMS-KIT-01         IQ System Controller 2         EP200G101-M240US01           IQ Battery         ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA           IQ System Controller 3         SC200D111C240US01, SC200G111C240US01	Metering ports			Up to two Consumption CTs, one IQ Battery CT, and one Production CT	
Local API  Cellular/Mobile Connect  CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all installative with Enphase IQ Batteries and/or IQ System Controllers  COMPLIANCE  CA Rule 21 (UL 1741-SA)  IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C)  CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016  Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant  COMPATIBILITY  PV Microinverters IQ6, IQ7, and IQ8 Series Microinverters  IQ System Controller EP200G101-M240US00  COMMS-KIT-01 IQ System Controller 2 EP200G101-M240US01  ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA  IQ System Controller 3 SC200D111C240US01	Power line commun	nication	kHz	90-110	
Cellular/Mobile Connect  - CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G-based LTE-M1 cellular modem). Note that an Enphase Mobile Connect cellular modem is required for all installative with Enphase IQ Batteries and/or IQ System Controllers  COMPLIANCE  CA Rule 21 (UL 1741-SA)  IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C)  CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016  Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant  COMPATIBILITY  PV Microinverters IQ System Controller EP200G101-M240US00  COMMS-KIT-01 IQ System Controller EP200G101-M240US01  IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA  IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	Web API		-	See https://developer-v4.enphase.com	
Compatibility  Py  Microinverters  IQ System Controller  EP200G101-M240US00  COMMS-KIT-01  IQ System Controller 2  IQ System Controller 3  SC200D111C240US01, SC200G111C240US01  SC200G111C240US01  SC200G111C240US01  COMPATIBLE Controller 3  SC200D111C240US01  SC200G111C240US01  Modemis Required for all installation with Enphase Mobile Connect cellular modem is required for all installation with Enphase IQ System Controller Subjects and/or IQ System Controller Subjects And IQ S	Local API		parage		
CA Rule 21 (UL 1741-SA) IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C) CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016 Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant  COMPATIBILITY  PV Microinverters IQ6, IQ7, and IQ8 Series Microinverters IQ System Controller EP200G101-M240US00  COMMS-KIT-01 IQ System Controller 2 EP200G101-M240US01 IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	Cellular/Mobile Co	onnect	-	modem). Note that an Enphase Mobile Connect cellular modem is required for all installations	
IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C) CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016 Production metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2 No. 61010-1, IEEE 2030.5/CSIP Compliant  COMPATIBILITY  PV Microinverters IQ6, IQ7, and IQ8 Series Microinverters IQ System Controller EP200G101-M240US00  COMMS-KIT-01 IQ System Controller 2 EP200G101-M240US01 IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	COMPLIANCE	AL WEST			
PV Microinverters IQ6, IQ7, and IQ8 Series Microinverters IQ System Controller EP200G101-M240US00  COMMS-KIT-01 IQ System Controller 2 EP200G101-M240US01 IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	IQ Combiner with IQ Gateway		IEEE 1547:2 CAN/CSA Production	2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C) C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003, NOM-208-SCFI-2016 n metering: ANSI C12.20 accuracy class 0.5 (PV production), UL 61010-1, CAN/CSA 22.2	
IQ System Controller   EP200G101-M240US00     COMMS-KIT-01   IQ System Controller 2   EP200G101-M240US01     IQ Battery   ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA     IQ System Controller 3   SC200D111C240US01, SC200G111C240US01	COMPATIBILITY				
COMMS-KIT-01 IQ System Controller 2 EP200G101-M240US01 IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	PV	Microinverters	IQ6, IQ7, and IQ8 Series Microinverters		
IQ Battery ENCHARGE-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA IQ System Controller 3 SC200D111C240US01, SC200G111C240US01		IQ System Controller	EP200G101-M240US00		
IQ System Controller 3 SC200D111C240US01, SC200G111C240US01	COMMS-KIT-01	IQ System Controller 2			
		IQ Battery	ENCHARG	E-3-1P-NA, ENCHARGE-10-1P-NA, ENCHARGE-3T-1P-NA, ENCHARGE-10T-1P-NA	
COMMS-KIT-02 <sup>1</sup>		IQ System Controller 3	SC200D1	11C240US01, SC200G111C240US01	
IQ Battery IQBATTERY-5P-1P-NA	COMMS-KIT-02 <sup>1</sup>		IQBATTER	Y-5P-1P-NA	

<sup>&</sup>lt;sup>1</sup> For information about IQ Combiner 4/4C compatibility with the 3<sup>rd</sup>-generation batteries, refer to the <u>compatibility matrix</u>.

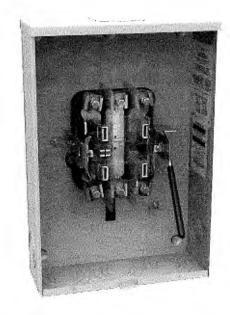
# Revision history

REVISION	DATE	DESCRIPTION
DSH-00217-3.0	August 2024	Updated the system voltage value. Updated Sprint plan to T-Mobile data plan.
DSH-00217-2.0	April 2024	Updated the UL smart mark.
DSH-00217-1.0	February 2024	Initial release.

Previous releases.



### U4801-XL-5T9



Catalog Number	U4801-XL-5T9
Marketing Product Description	5 Terminal Ringless Small Closing Plate Lever Bypass 5th Terminal 9 Oclock Position
UPC	784572288218
Length (IN)	4.844
Width (IN)	13
Height (IN)	19
Brand Name	Milbank
Туре	Ringless Meter Socket
Application	Meter Socket
Standard	UL Listed;Type 3R
Voltage Rating	600 Volts Alternating Current
Amperage Rating	200 Continuous Ampere
Phase	1 Phase
Frequency Rating	60 Hertz
Size	4,844L x 13W x 19H
Number Of Cutouts	0
Cutout Size	No Main Breaker
Cable Entry	Overhead or Underground
Terminal	Lay in
Insulation	Glass Polyester
Mounting	Surface Mount

Enclosure	G90 Galvanized Steel with Powder Coat Finish
Jaw Quantity	5 Terminal
Bypass Type	Lever Bypass
Number of Meter Positions	1 Position
Equipment Ground	Bonded Ground Strap
Hub Opening	Small Closing Plate
Line Side Wire Range	6 AWG - 350 kcmil
Load Side Wire Range	6 AWG - 350 kcmil
Number Of Receptacles	0

Please consult serving utility for their requirements prior to ordering or installing, as specifications and approvals vary by utility and may require local electrical inspector approval. All installations must be installed by a licensed electrician and must comply with all national and local codes, laws and regulations. Milbank reserves the right to make changes in specifications and features shown without notice or obligation.

#### **Anne Hemstock**

7BC891

 ${\bf Ground\ Mount\ -\ SunTurf\ System}$ 



#### **Project Details**

Project Name

Anne Hemstock

Zip Code:

56437

ASCE

7-16

City, State

Bertha, MN

**Total Watts** 

10 kW

Date

01/28/25

**Total Modules** 

24

**Module Dimensions** 

Height: 1,866.9 mm, Width: 1,041.4 mm, Depth: 35.0 mm (73.5" x 41" x 1.38")

#### **Load Assumptions**

Structure & Foundation

Wind Speed

115 mph

Span Selection

Automatic: 72"

Wind Expsoure **Ground Snow Load**  С 60 psf Front Edge Height

36"

Foundation Type

**Ground Screw** 

Length of Screw

80"

Tilt

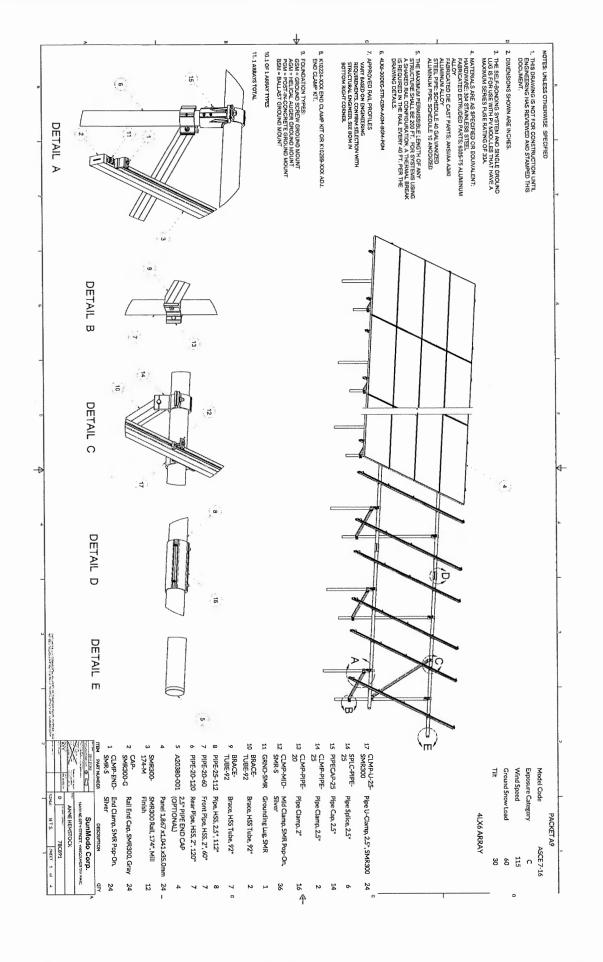
30°

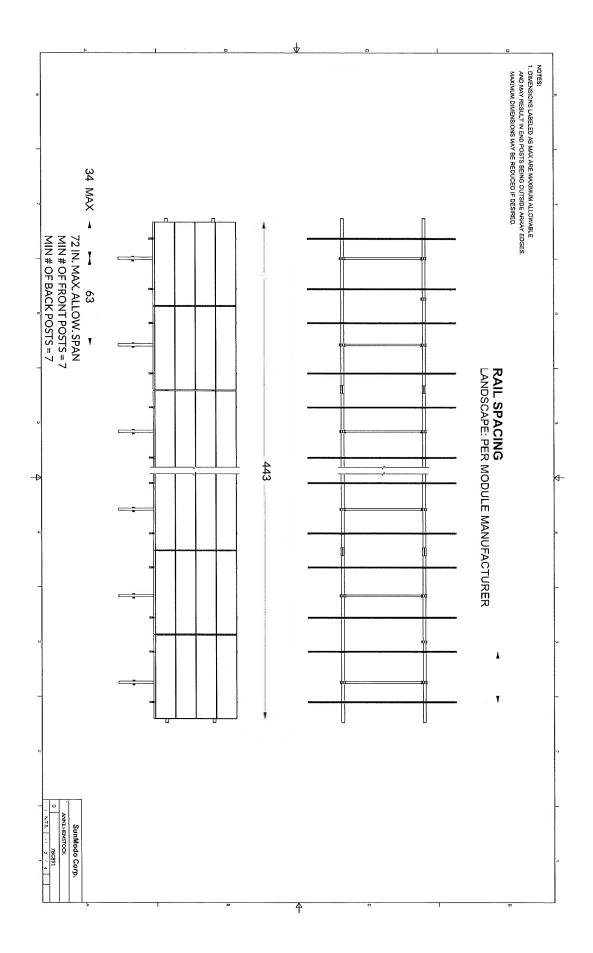
### Bill of Materials

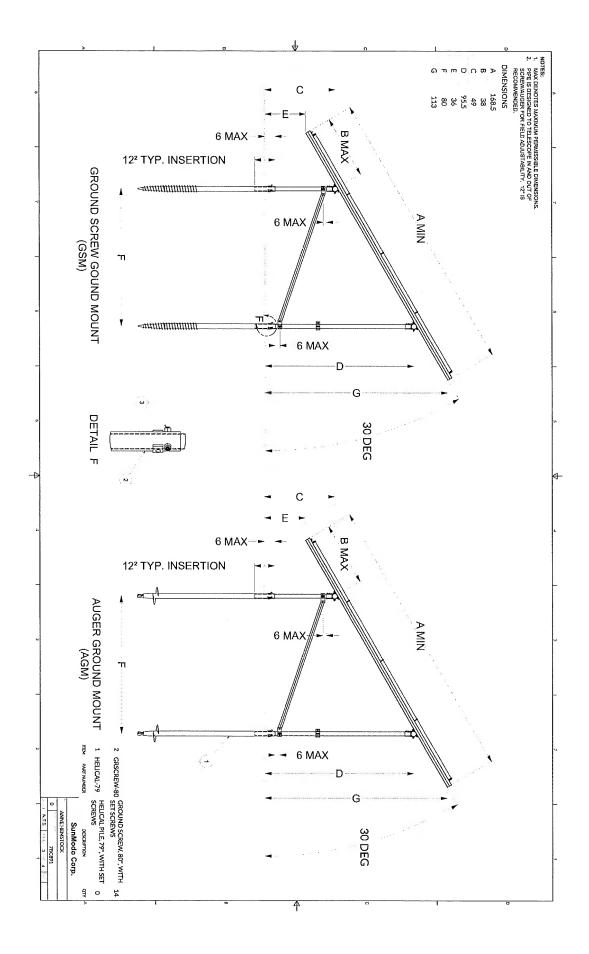
Part	Spares Total Qty
GRSCREW-80 Ground Screw, 80", with set screws	14
PIPE-20-60 Front Pipe, HSS, 2", 60"	7
PIPE-20-120 Rear Pipe, HSS, 2", 120"	7
PIPE-25-112 Pipe, HSS, 2.5", 112"	8
BRACE-TUBE-92 Brace, HSS Tube, 92"	9
SMR300-174-M SMR300 Rail, 174", Mill Finish	12
CLMP-U-25-SMR300 Pipe U-Clamp, 2.5", SMR300	24
PIPECAP-25 Pipe Cap, 2.5"	14
CLMP-PIPE-20 Pipe Clamp, 2"	16
CLMP-PIPE-25 Pipe Clamp, 2.5"	2
SPLC-PIPE-25 Pipe Spilce, 2.5"	é
CLMP-MID-SMR-S Mid Clamp, SMR Pop-On, Silver	36
CLMP-END-SMR-S End Clamp, SMR Pop-On, Silver	24
GRND-SMR Grounding Lug, SMR	1
CAP-SMR300-G Rail End Cap, 5MR300, Gray	24
MLPE-SMR MLPE-Mount-SMR	24

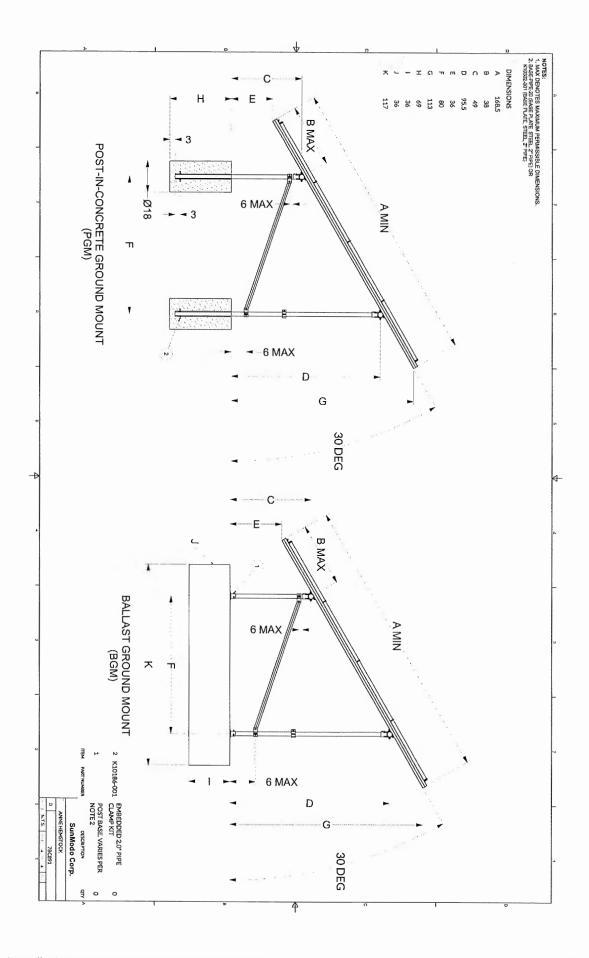
#### Array #1 Details

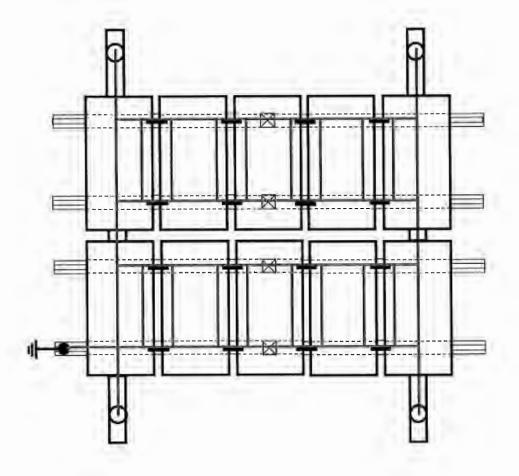
Orientation	Landscape	Rail Type	SMR300 Rail, 174", Mill Finish
Layout	4 rows by 6 columns	N/S Span (in)	80
Front Posts	7	E/W Max Span (in)	72
Back Posts	7	Area	441" (FW) x 164" (NS)





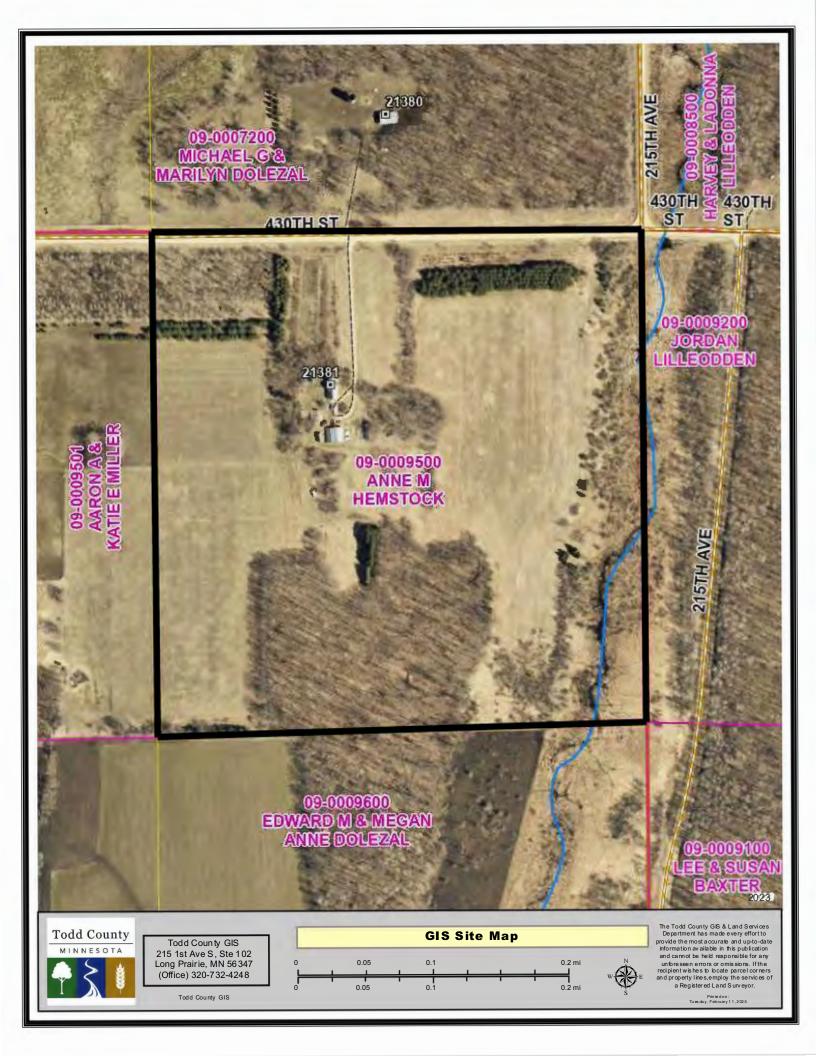






Disclaimer:

The information from this configurator is not to be used for construction unless reviewed and approved by a design professional recognized by the project's authority having jurisdiction (AHJ)



Receipt#2025-0023



Conditional Use Permit Application

#### PLANNING & ZONING

215 1st Avenue South, Suite 103 Long Prairie, MN 56347

Phone: 320-732-4420 Fax: 320-732-4803 Email: ToddPlan.Zone@Co.Todd.MN.US

Revised 1/13/2025

### Received

FEB 1 1 2025

Todd County Manning

### CONDITIONAL USE PERMIT APPLICATION

Applicant Justin & Erika Wardell Mailing Address 14795 Cold Site Address Sand all Mailing priving MNDG E-Mail Address Phone Number Property Owners Name & Address (if not applicant) \_\_\_\_ Parcel ID(s) 15-0012301 Township 1541 Lake/River Name Zoning District (circle one): (AF-1;) AF2; R-2; R-10; UG; RT; Comm; L-M; or Shoreland. Full and Current Legal Description(s) Current tax statement or other proof of ownership attached ( ) yes ( ) no Measurement of land involved: Width \_\_\_\_\_\_Length \_\_\_\_\_\_Acres \_\_\_\_ Septic System: Date installed 9 14 11 Date of latest Compliance Inspection 2/6/25 Is an upgrade needed: ( ) yes ( ) no Site accessed by: ( ) public road ( ) easement If easement, is the easement legally recorded? ( ) yes ( ) no Detailed Explanation of Request: temporary dwelling to our pole shood Did you meet with the Township Board to present the Application for Conditional Use Permit? No \_\_\_\_\_ Date of the meeting: 129 125 **Optional Township Board Signature** 

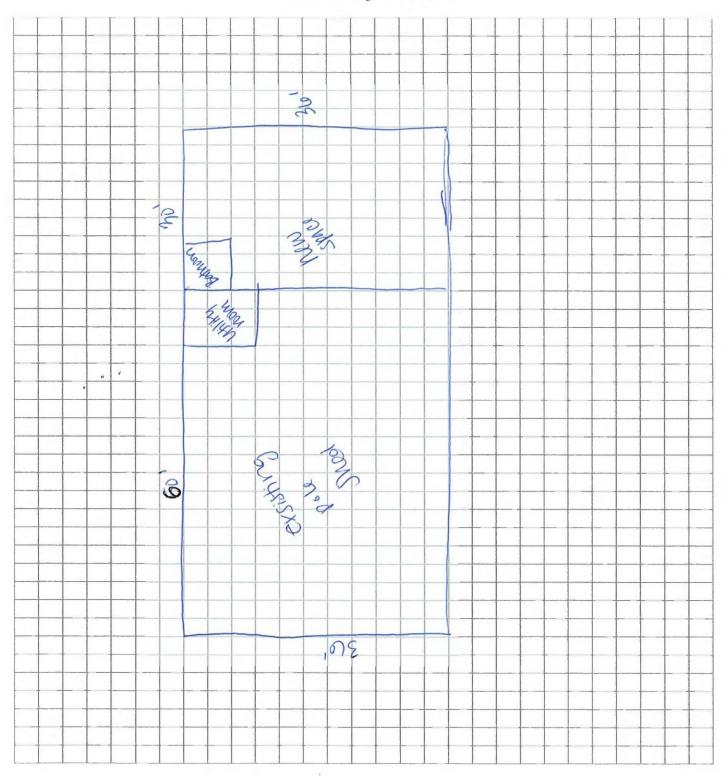
Page 2 of 5

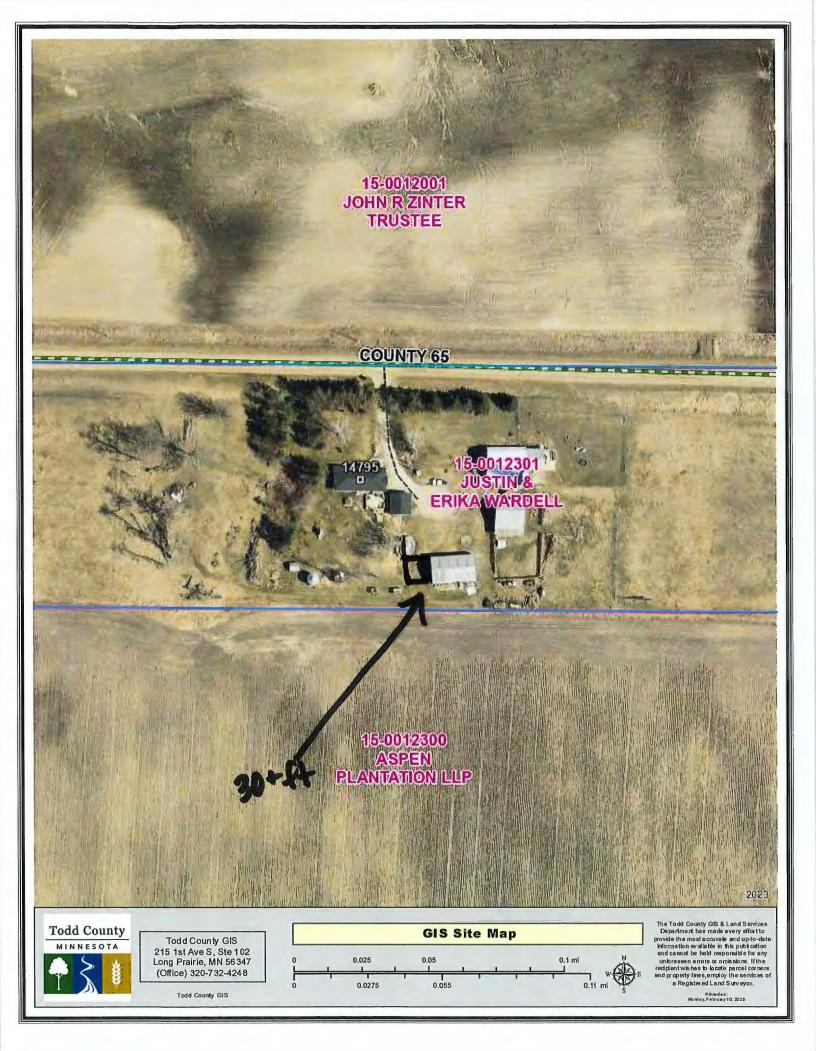
Will the request create an excessive burden on the existing roads or other utilities? Explain	1
Executivity WII be ran to the building but the use we	MINDA
be excessive. The ollupart will have one rehicle o	and would low
Is the requested use compatible with the surrounding properties? Explain The pwp. Is the requested use compatible with the surrounding properties?	ty whatly once
The request would not involve other property	westly
THE I STUDY TO THE OTHER PROPERTY	
Could the use significantly depreciate near-by properties? Explain	
No. it would likely improve the Look of our proper	tu
mere fine increasure summinding value	
Traverse training surrounding varia	
Will the structure and the use have an appearance that will not have an adverse effect on ne	ar-by
properties? Explain	
Yes, the building idea will importe a current	structure
with new siding that matches other build	ing on the
property	0
Will the requested use create an adverse affect on near-by properties because of noise, odor	r, glare, hours of
operation, or general unsightliness? Explain	
No, it will be occupied by widowed elderer total	homan.
me aumentry take care of ner current proper	m which take
time away from our, so with the extra free-	Time, we can
RETURN APPLICATION, SITE PLAN, SEWER INFORMATION AND ANY ADI INFORMATION, AND FEE TO:	but mon
Todd County Planning & Zoning Office	time into
215 1 <sup>st</sup> Ave South, Suite 103 Long Prairie, MN 56347	Will world
	ows,
Fee: \$500.00 or After-the-Fact Fee: \$1,000.00 payable to "Todd County"  Only complete applications may be placed on an agenda	
**A PARCEL IN JOINT OWNERSHIP MUST PROVIDE WRITTEN SIGNATURE OF AL.	L OWNERS**
he Gorangen I spiva wardell (historially any minder	F1/0107025
Applicant Name Printed Signature	Date
Justin z lerika warden	
Property Owner Name Printed Signature (If different than applicant)	Date

A Conditional Use Permit expires and is considered invalid unless they are substantially completed within thirty-six months of the date the CUP is granted by the County Board (Section 5.05(N) of the County Zoning Ordinance).

Site Plan

Outline how the intended use will be situated on the property including buildings, parking areas, signage, material storage areas, etc.





#### Exhibit "A"

Legal description for parcel #15-0012301

The North 10.00 acres of the East Half of the Southwest Quarter of Section 11, Township 129 North, Range 35 West, the South line of said 10.00 acres is parallel with the North line of said East Half of the Southwest Quarter, according to the United States Government Survey thereof.

**Default Timeout is: 59** 

As of:

2/10/2025

Parcel Number: 15-0012301

Payable Year: 2024

General Tax Info

Current Info | Receipts |

**Special** Asmts Unpaid **History Credit** Tax

Current Year Tax Stint Previous Year Tax Stint

Taxpayer/Owner Information Taxpayer #31555 WARDELL/JUSTIN & ERIKA 14795 COUNTY ROAD 65

LONG PRAIRIE MN 56347

General

MP #15-0012301 Re/Mh: REAL ESTATE

Pay by

Card

Twp/City School Water Debt Agri 2753 15

Twp/City 15 - LESLIE

School Dist 2753 - LONG PRAIRIE-GREY EAGLE

Description

Sect Twp **Block** Range Lot 11 129 35 0

N 10 AC OF NE4 SW4 10.00 ACRES

**Property Address** 14795 COUNTY 65 56347

**Escrow** 15 CORELOGIC Deeded Acres: 10.00

Another Search | Back to ParcelList |

