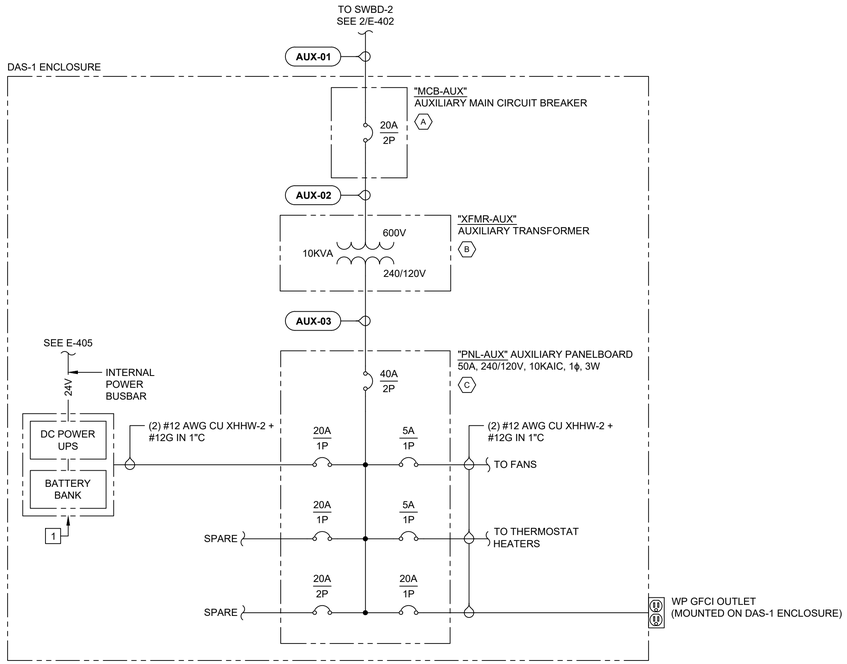
THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING - PAPER SIZE 34" X 22" - THIS EDGE INTENTIONALLY LEFT BLANK FOR BINDING



1 AUXILIARY DIAGRAM
SCALE: NTS

SHEET NOTES:

1. ALL SWITCHGEAR, SWITCHBOARDS, PANELBOARDS AND TRANSFORMERS SHALL BE NEMA 3R RATED.
2. LOW VOLTAGE AC WIRING SHALL BE COPPER, XHHW-2 UNLESS OTHERWISE NOTED.

KEYED NOTES:

1. DAS MONITORING EQUIPMENT SUPPLIED BY DAS MANUFACTURER. REFER TO DAS SYSTEM DESIGN DRAWINGS FOR ADDITIONAL DETAILS.

EQUIPMENT SPECS:

A. 20A, 2-POLE, 35 KAIC, MAIN CIRCUIT BREAKER.

B. 10 KVA, 600V PRIMARY, 240/120V SECONDARY, 1ϕ, GENERAL PURPOSE DRY TYPE TRANSFORMER IN NEMA 3R ENCLOSURE, DONGAN, OAE.

C. 50A, 240/120V, 1ϕ, 10 KAIC, PANELBOARD IN NEMA 3R WEATHERPROOF ENCLOSURE, EATON, OAE. EQUIPMENT RATINGS SHALL BE AS INDICATED.

PANELBOARD SCHEDULE				
PANEL NAME:	**BUS:**	50A	**NOTES:**	
PNL-AUX	**VOLTAGE:**	240/120V		
MAIN:	**PH. / WIRE:**	1PH, 3W		
40A	**A.I.C.:**	10,000		
DESCRIPTION	**KVA**	**BKR**	**CKT**	**PH**
DC UPS	1.92	20	1	A
FANS	0.48	5	2	B
THERMOSTAT HEATERS	0.48	5	3	A
WP GFCI OUTLET	1.92	20	4	B
SPARE	-	20	7	A
SPARE	-		8	A
	-		9	B
TOTAL PHASE A 2.40 KVA 20A				
TOTAL PHASE B 2.40 KVA 20A				
TOTAL: 4.80 KVA				

LVAC AUX CIRCUIT CABLE SCHEDULE AND CALCULATIONS

GENERAL			PHASE & NEUTRAL CONDUCTOR DETAILS					GROUNDING CONDUCTOR DETAILS			RACEWAY DETAILS					OCPD SIZING / TERMINATION AMPACITY				RACEWAY AMPACITY				VOLTAGE DROP CALCULATIONS			
CABLE ID	FROM	TO	QTY	SIZE	MATERIAL	INSULATION TYPE	INSULATION VOLTAGE	SIZE (1 PER RACEWAY)	MATERIAL	TYPE	QTY	SIZE	TYPE	FILL (%)	TYPE	MAX CURRENT (A)	CONTINUOUS RATING	OCPD RATING (A)	75°C TERM RATING (A)	90°C AMPACITY (A)	TEMP CORR.	FILL ADJUST	C.O.U. AMPACITY (A)	ONE-WAY LENGTH (FT)	OPERATING CURRENT (A)	OPERATING VOLTAGE (V)	FEEDER VOLTAGE DROP (%)
AUX-01	SWBD-2	MCB-AUX	2	#12 AWG	COPPER	XHHW_2	600 V	#12 AWG	COPPER	EGC	1	1"	PVC_40	7%	CONDUIT	16.0	80%	20	25	30	0.97	1.00	29.2	45	12.8	600	0.19%
AUX-02	MCB-AUX	XFMR-AUX	2	#12 AWG	COPPER	XHHW_2	600 V	#12 AWG	COPPER	EGC	1	1"	PVC_40	7%	CONDUIT	16.0	80%	20	25	30	0.97	1.00	29.2	10	12.8	600	0.04%
AUX-03	XFMR-AUX	PNL-AUX	3	#8 AWG	COPPER	XHHW_2	600 V	#8 AWG	COPPER	SSBJ	1	1"	PVC_40	21%	CONDUIT	40.0	80%	40	50	55	0.97	1.00	53.6	10	32.0	240	0.10%

DESIGN COORDINATOR

KNOBELSDORFF
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GOODHUE, MN 55027

PROJECT

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FREDERICK, IL 62639
40.089020°, -90.442132°

ENGINEER

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SOLAR ENGINEERING
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IL DESIGN FIRM #184.009162
WWW.STELLAVISE.COM (619) 837-5331

SEAL

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REVISIONS

#	DESCRIPTION	DATE
0	IFC	02/06/2026
1	IFC R1	02/27/2026

ISSUED FOR CONSTRUCTION
FEBRUARY 27, 2026

138883 CEMETERY SUN, LLC
FREDERICK, IL, 62639

SHEET TITLE

SINGLE LINE DIAGRAM - AUX

SHEET NO.

E-404