SORENSENGROSS
EST. 1925

March 31, 2026

Rita Schubert
Purchasing Manager
Genesee County Purchasing Department
324 S. Saginaw St., Suite 9A
Flint, Michigan 48502
Via email to rschubert@geneseecountymi.gov

RE: Best and Final Offer For –
RFP for Solar Canopy Design and Installation At Genesee County Animal Control Facility
RFP #26-469

Dear Rita Schubert:

On behalf of Sorensen Gross Company, I wish to express our appreciation again for consideration as your contractor for the Animal Control Facility Solar Canopy project. We are in receipt of your letter dated March 20, 2026 requesting our best and final offer, and are pleased to provide this revised proposal.

Our proposal includes the following:

- Furnish and install 75’ x 41’ canopy structure, including structural engineering and foundations as required, please see attached proposed canopy layout.
- Furnish and install solar modular water management EPDM gasket & drain with gutter pipe and down pipe to grade
- Furnish and install Photovoltaic system capable of providing minimum of 60KWDC
- Furnish and install Photovoltaic system breaker panel
- Furnish and install Photovoltaic system service disconnects
- Furnish and install Fused switch in existing switchgear for interconnection
- Furnish and install Feeders and interconnection to existing electrical service
- Excavation, backfill with spoils, compaction, & minor restoration for underground electrical
- Demo (1) existing light pole
- Reroute site lighting feed & mount light pole fixture on canopy structure
- Utility provider coordination assistance
- Solar design, electrical engineering & electrical drawings
- Furnish and install 110-Solar Modules
- Restoration of K9 grass- an allowance is included in the bid for an amount of $15,000
- Fence repair- an allowance is included in the bid for an amount of $25,000

- Provide survey services that include a topographic survey of the construction site and approximately 50’ to 100’ beyond the site area. We are not planning on doing a boundary survey or having a background file of the entire property.
- Engineering services will include the standard documents Cover sheet, topographic survey, removal plan, layout plan, grading & storm sewer plan, soil erosion control, utility plan (if applicable) and landscape plan.
- Architectural Services, Design and coordination, construction administration.
- Provide all supervision, management, clean up and all general conditions required to complete this work
- Provide all required permits and coordination with the authorized officials

Our price *does not* include the following:

- Roof sheathing as the Modules will provide the required shade
- Any unforeseen conditions

Base Bid - All for total Lump Sum price of $590,000.00

Alternate No.1

- **If Performance, Labor and Material Bonds are not required- Deduct ($5,500.00)**

Per your request we have also attached an ROI report, based on the solar system installation cost only, using the utility bills you provided earlier.

Please contact me if you have any questions or if you need additional information. We very much appreciate this opportunity, and look forward to hearing from you.

Sahar Abdallah
Senior Vice President, Preconstruction
Sorensen Gross Company

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE MOST RESTRICTIVE STANDARDS OF THE FOLLOWING CODES:
   1.1. 2024 ILLINOIS BUILDING CODE
   1.2. ANSI/AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   1.3. AISI S100-16(2020) w/S2-20 EDITION "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
   1.4. WELDING SHALL BE IN ACCORDANCE WITH A.W.S LATEST EDITION "STRUCTURAL WELDING WELDING CODE" AND A.W.S. LATEST EDITION "SHEET METAL WELDING CODE".
2. THE CONTRACTOR-ERECTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS AS REQUIRED AND SHALL VERIFY EXISTING FIELD CONDITIONS, ALL DIMENSIONS, AND ELEVATIONS SHOWN ON THE DESIGN DRAWINGS BEFORE COMMENCING WORK- ANY DISCREPANCIES SHALL BE REPORTED TO CARPORT STRUCTURES CORP.
3. ALL CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF NATIONAL OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS.
4. ALL WORK SHOWN ON THESE DRAWINGS MAY BE CHECKED BY AN INDEPENDENT TESTING AGENCY RETAINED AT OWNERS EXPENSE TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS.

STRUCTURAL STEEL

1. STRUCTURAL SHAPES SHALL CONFORM TO ASTM A992 GRADE 50 (Fy=50 KSI), PLATES AND ANGLES SHALL CONFORM TO ASTM A-36 (Fy=36KSI), COLD FORMED SHAPES SHALL CONFORM TO ASTM A-653 (Fy=50 KSI) OR 780 DP (Fy=58 KSI) STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500 GRADE "C" (Fy=50 KSI MIN).
2. ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123 SPECS- COLD-FORMED PURLINS AND CHANNELS TO BE GALVANIZED. ALL HARDWARE- BOLTS, NUTS, & WASHERS SHALL BE GALVANIZED PER ASTM A153 SPECS OR HAVE AN ELECTRODEPOSITED ZINC COATING PER ASTM F1941-2016 SPECS.
3. STRUCTURAL STEEL SHALL NOT BE ALTERED IN THE FIELD FROM THAT SHOWN ON THE DESIGN DRAWINGS. MISMATCHED HOLES SHALL BE REAMED TO A LARGER DIAMETER. CUTTING, BURNING, OR WELDING NOT SHOWN ON DESIGN DRAWINGS SHALL NOT BE PERFORMED WITHOUT THE PRIOR WRITTEN APPROVAL OF CARPORT STRUCTURES CORP.

WELDING

1. WELDS SHALL BE MADE BY CERTIFIED WELDERS AND WELDING EQUIPMENT OPERATORS WHO HAVE BEEN QUALIFIED BY TESTS AS PRESCRIBED BY THE STRUCTURAL WELDING CODE OF THE AMERICAN WELDING SOCIETY.

CONCRETE FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON BEARING SOILS HAVING A MINIMUM ALLOWABLE BEARING CAPACITY OF 2,000 PSF
2. AFTER EXCAVATING TO REQUIRED DEPTH AND PRIOR TO FOUNDATION CONSTRUCTION, THE SOILS SHALL BE EVALUATED BY A QUALIFIED GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF ILLINOIS AT THE EXPENSE OF THE OWNER.
3. CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 301(LATEST EDITION) "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE". DRILLED PIERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 336.3R-14 "DESIGN AND CONSTRUCTION OF DRILLED PIERS".
4. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
5. CONCRETE AGGREGATES SHALL COMPLY WITH ASTM C33 AND BE FREE FROM CLAY, LUMPS, AND DELETERIOUS MATERIALS.
6. CONCRETE SHALL BE AIR ENTRAINED WITH 6% AVERAGE AIR CONTENT
7. TOP OF FOUNDATIONS SHALL BE SLOPED SLIGHTLY FOR DRAINAGE
8. STEEL REINFORCEMENT SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 (GR 60)
9. NON-SHRINK GROUT SHALL COMPLY WITH ASTM C1107-20
10. CONTRACTOR SHALL VERIFY ALL CONDITIONS, INCLUDING UNDERGROUND UTILITIES AT THE JOB SITE AND REPORT ANY DISCREPANCIES TO CARPORT STRUCTURES CORP.

MINI PILES

1. ALL MINI PILES SHALL DEVELOP AN ALLOWABLE BEARING CAPACITY OF 5 KIPS AND SHALL BE DRIVEN TO A MINIMUM DEPTH AS SHOWN ON THESE PLANS.

ERECTOR NOTE

1. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE TENSIONED TO A "SNUG TIGHT" CONDITION. A "SNUG TIGHT" CONDITION EXISTS WHEN ALL OF THE PLIES IN A CONNECTION HAVE BEEN PULLED INTO FIRM CONTACT BY THE BOLTS IN THE JOINT AND ALL BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT THE REMOVAL OF THE NUTS WITHOUT USE OF THE WRENCH. THE "SNUG TIGHT" CONDITION IS TYPICALLY ACHIEVED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A WORKER ON A ORDINARY SPUD WRENCH.

DESIGN TABLE	
BUILDING CODE	SEE GENERAL NOTES
LIVE LOAD	
GROUND SNOW LOAD (Pg)	35.0 PSF
IMPORTANCE FACTOR (Is)	1.0
EXPOSURE FACTOR (Ce)	1.0
THERMAL FACTOR (Ct)	1.2
UNIFORM ROOF DESIGN SNOW LOAD	29.4 PSF
WIND DESIGN DATA	
ULTIMATE WIND SPEED	106.0 MPH
RISK CATEGORY	II
EXPOSURE CATEGORY	B
EARTHQUAKE DESIGN DATA	
SPECTRAL RESPONSE ACCELERATION (S1)	0.047
SPECTRAL RESPONSE ACCELERATION (Ss)	0.086
SITE CLASS	D
SEISMIC DESIGN CATEGORY	B
SEISMIC FORCE RESISTANCE SYSTEM	CANTILEVER COLUMN
RESPONSE MOD. FACTOR	1.25
SEISMIC RESPONSE COEFFICIENT (Cs)	0.073

CARPORT STRUCTURES CORPORATION
1825 Metamora Rd. Oxford, MI. 48371
TEL. (248) 628-5571
FAX. (248) 628-5260

Structural Engineer
Byron L. Martin, P.E.
P.O. Box 10252
Springfield, Missouri 65808
TEL. (417) 823-9999

Project
GENESEE COUNTY
ANIMAL CONTROL
4351 Pasadena Ave,
Flint, MI 48504

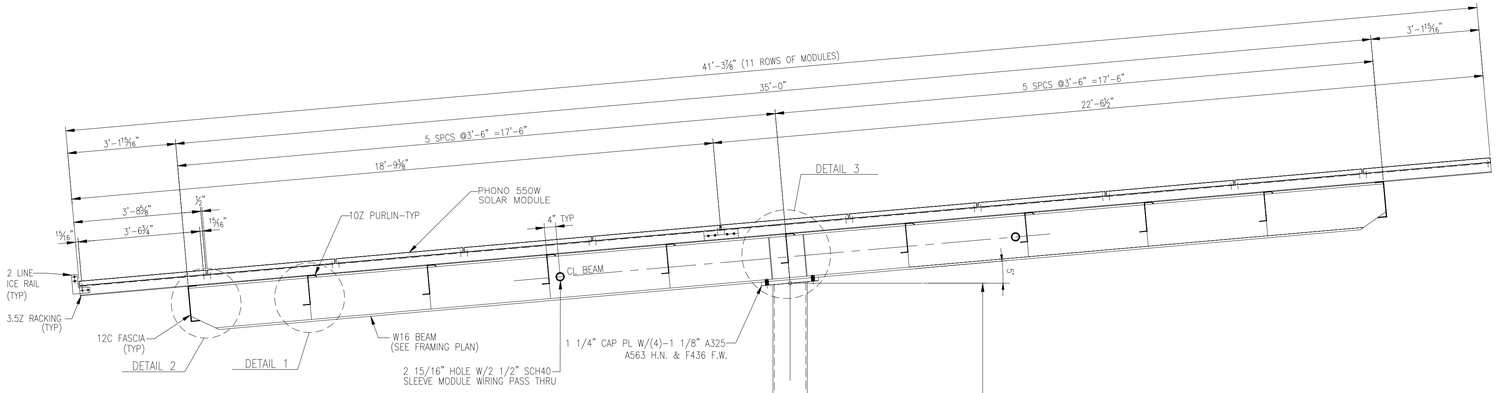
Sheet
PRELIMINARY SOLAR LAYOUT

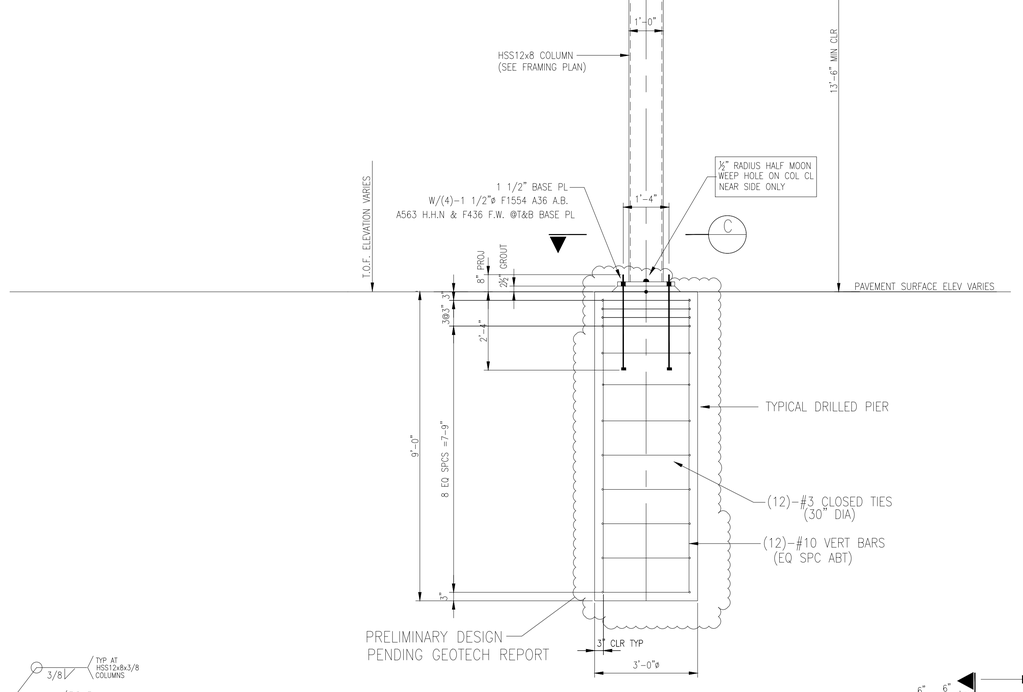
Revision
2-9-26 SHEET CREATED
3-26-26 STRUCTURE SIZE CHANGE

Drawn By: N.WATTS
Checked By: J.NASH
Approved By: B.MARTIN

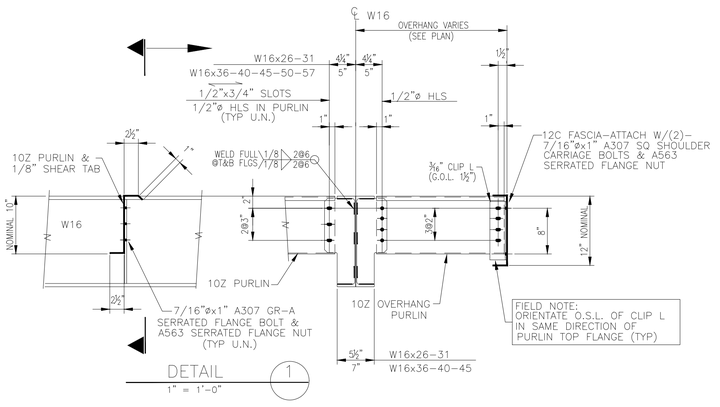
Project no.

Sheet no.
S1

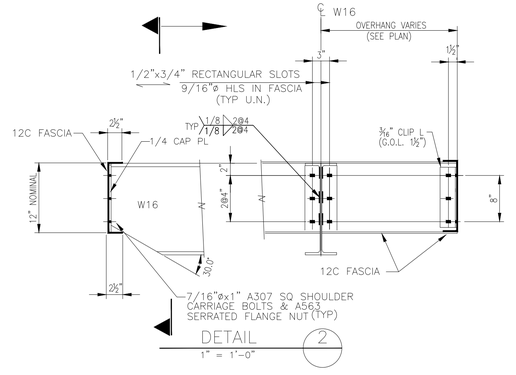




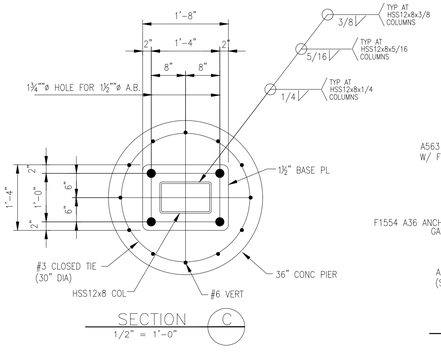
SECTION A
1/2" = 1'-0"



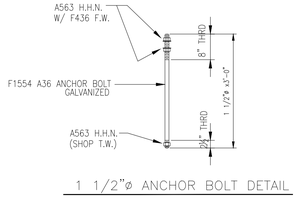
DETAIL 1
1" = 1'-0"



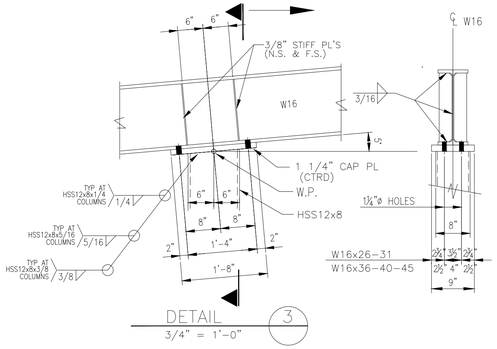
DETAIL 2
1" = 1'-0"



SECTION C
1/2" = 1'-0"



1 1/2"ø ANCHOR BOLT DETAIL



DETAIL 3
3/4" = 1'-0"

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

CARPORI STRUCTURES CORPORATION
1825 Metamora Rd. Oxford, MI. 48371
TEL. (248) 628-5571
FAX. (248) 628-5260

Structural Engineer
Byron L. Martin, P.E.
P.O. Box 10252
Springfield, Missouri 65808
TEL. (417) 823-9999

Project
GENESEE COUNTY ANIMAL CONTROL
4351 Pasadena Ave, Flint, MI 48504

Sheet
PRELIMINARY SOLAR LAYOUT

Revision
2-9-26 SHEET CREATED
3-26-26 STRUCTURE SIZE CHANGE

Drawn By: N.WATTS
Checked By: J.NASH
Approved By: B.MARTIN

Project no.

Sheet no.
S2

Design 3 Genesee County Animal Control Canopy 4351 Pasadena Ave, Flint, MI 48504, USA

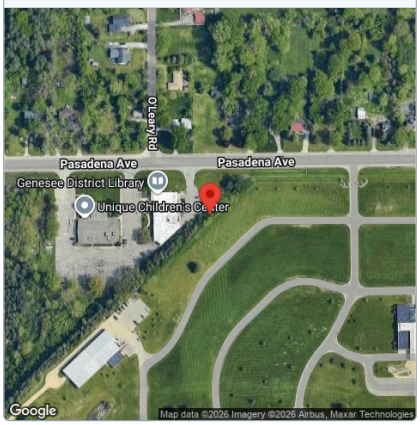
Project Details

Address	4351 Pasadena Ave, Flint, MI 48504, USA
Customer Name	Sorensen Gross
Owner	James Mattila
Last Modified	James Mattila an hour ago
Location	(43.045548100000026, -83.75969589999998) (GMT -5)
Profile	Default Commercial

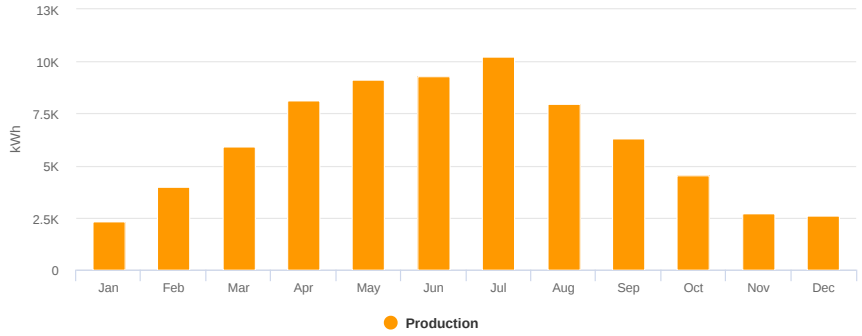
System Metrics

Design	Design 3
Module DC Nameplate	64.35 kW
Inverter AC Nameplate	100.00 kW Load Ratio: 0.64
Annual Production	73.0 MWh
Performance Ratio	77.9%
kWh/kWp	1,135.0
Weather Dataset	TMY, 10km Grid (43.05,-83.75), NREL (prospector)
Simulator Version	7cc42bb06c-14b3484bd1-9cccf5a138-0f50ce10e4

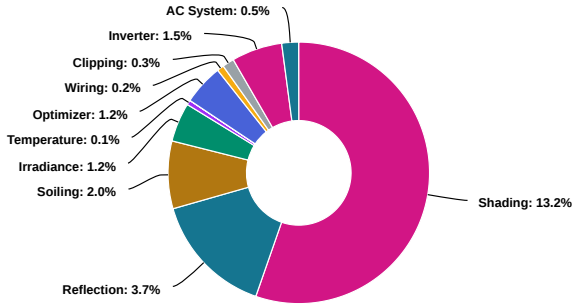
Project Location



Energy Consumption



System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,370.7	-
	POA Irradiance	1,456.5	6.3%
	Shaded Irradiance	1,263.6	-13.2%
	Irradiance After Reflection	1,217.4	-3.7%
	Irradiance After Soiling	1,193.1	-2.0%
	Total Collector Irradiance	**1,194.1**	**0.1%**
Energy (kWh)	Nameplate	76,835.0	-
	Output at Irradiance Levels	75,948.6	-1.2%
	Output at Cell Temperature Derate	75,839.5	-0.1%
	Output after Electrical Mismatch	75,839.3	-0.0%
	Optimizer Output	74,928.8	-1.2%
	Optimal DC Output	74,779.6	-0.2%
	Constrained DC Output	74,520.2	-0.3%
	Inverter Output	73,402.4	-1.5%
	AC System Output	73,035.4	-0.5%
	Energy to Grid	**73,035.4**	**0.0%**

Temperature Metrics	
Avg. Operating Ambient Temp	11.1°C
Avg. Operating Cell Temp	17.2°C

Simulation Metrics	
Operating Hours	4,638

Condition Set

Description	Condition Set 1
Weather Dataset	TMY, 10km Grid (43.05,-83.75), NREL(prospector) (download)
Solar Angle Location	Meteo Lat/Lng
Transposition Model	Perez Model
Temperature Model	Sandia Model

Temperature Model Parameters

Rack Type	a	b	Temperature Delta
Fixed Tilt	-3.56	-0.08	3.0°C
Flush Mount	-2.81	-0.05	0.0°C
East-West	-3.56	-0.08	3.0°C
Carport	-3.56	-0.08	3.0°C

Soiling (%)

J	F	M	A	M	J	J	A	S	O	N	D
2	2	2	2	2	2	2	2	2	2	2	2

Albedo

J	F	M	A	M	J	J	A	S	O	N	D
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Rear Mismatch Loss	10%	**Rear Shading Factor**	5%
Module Transparency	0%		
Irradiation Variance	5.0%		
Cell Temperature Spread	4.0°C		
Module Binning Range	-2.5% to 2.5%		
AC System Derate	0.50%		

Component Characterizations

Type	Component	Characterization	Bifacial
Module	JKM585M-7RL4-V-A1-EN (Jinko)	Spec Sheet Characterization, PAN	False
Buck Boost Optimizer	C651U (for NA use only) (SolarEdge)	Mfg Spec Sheet	N/A
Inverter	SE100KUS (SE-TRI-US00IBNS4) - Domestic Content (SolarEdge)		N/A

Design BOM

Component	Type	Quantity
3 input Combiners	Combiners	1 (-)
SE100KUS (SE-TRI-US00IBNS4) - Domestic Content (SolarEdge)	Inverters	1 (100.00 kW)
Jinko, JKM585M-7RL4-V-A1-EN, (585W)	Modules	110 (64.35 kW)
C651U (for NA use only) (SolarEdge)	Optimizers	110 (71.50 kW)
10 AWG (Copper)	Strings	3 (142.9 ft)

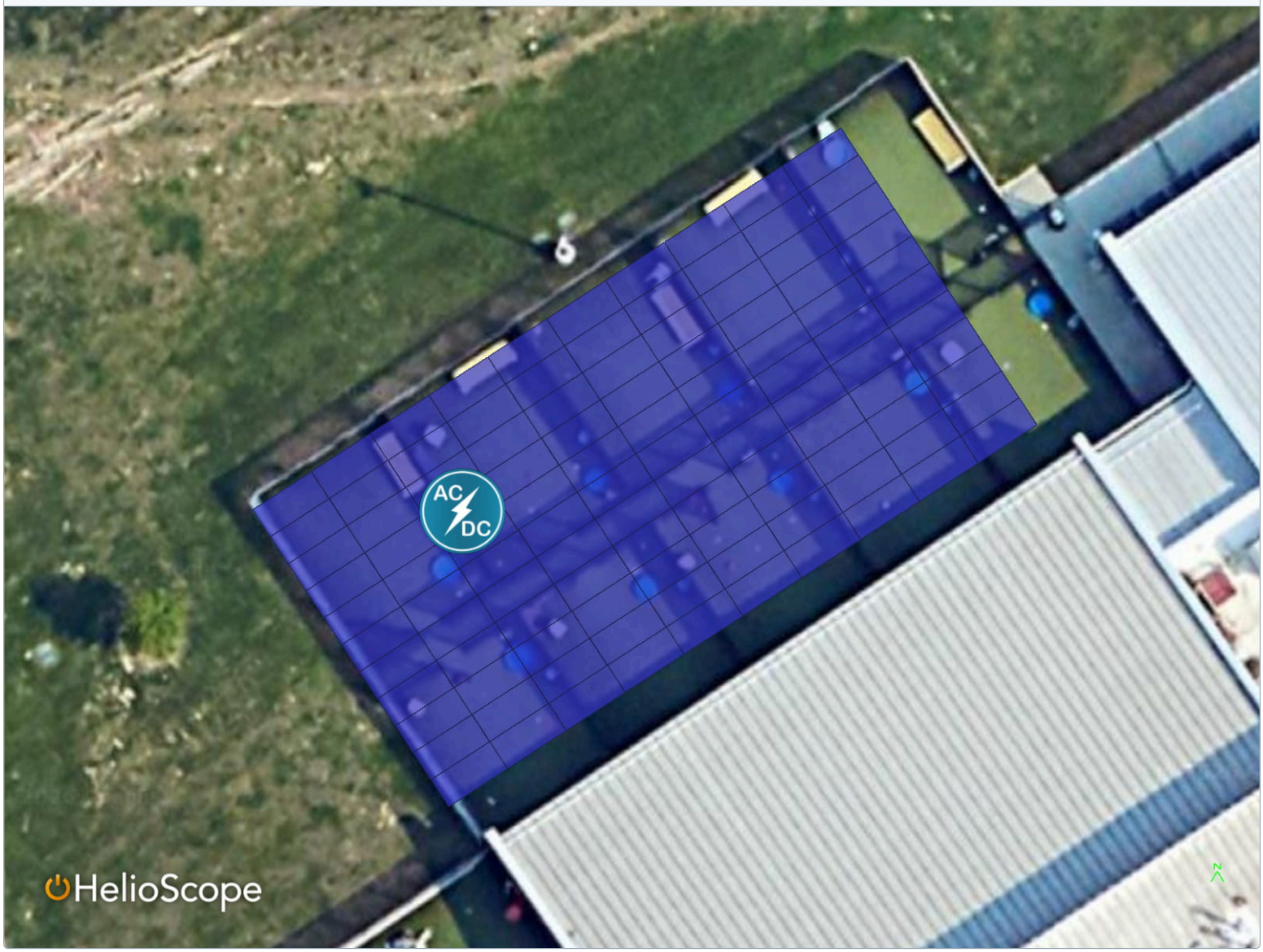
Monthly Shading

Month	GHI (kWh/m^2)	POA (kWh/m^2)	Shaded (kWh/m^2)	Nameplate (kWh)	Grid (kWh)
January	39.6	45.4	38.4	2,289.0	2,316.5
February	68.8	78.9	64.9	3,901.5	3,969.6
March	104.2	113.3	96.8	5,865.5	5,899.5
April	151.3	159.3	138.2	8,421.5	8,118.2
May	171.7	175.4	158.3	9,657.5	9,120.2
June	181.5	184.3	164.9	10,086.3	9,283.9
July	200.6	204.5	181.6	11,113.0	10,219.1
August	157.4	163.4	143.1	8,734.3	7,990.0
September	120.9	130.8	110.6	6,727.1	6,290.1
October	82.9	92.9	78.1	4,722.4	4,528.3
November	47.4	54.8	45.6	2,740.1	2,694.5
December	44.4	53.5	43.2	2,576.8	2,605.6

Design Wiring Zone

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	18 - 37	Along Racking

Design Render



Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Fixed Tilt	Landscape (Horizontal)	Module: 10°	Module: 147°	0.0 ft	1x1	110	110	64.35 kW

Financial Banner

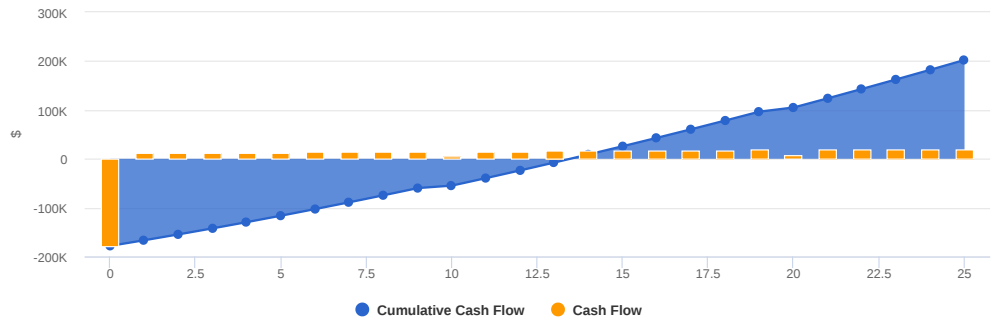
Financial Summary

13.5 years	$0.12 / KWh
Payback Period	Levelized Cost Of Energy

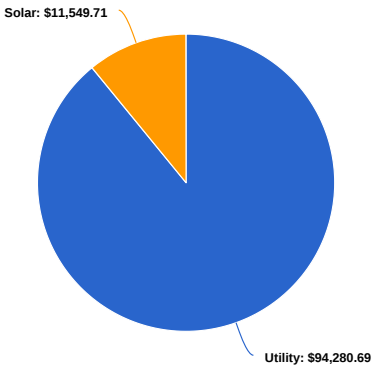
Financial Metrics

System Start	May 2026
Total Value of Energy	$400,504.91
Lifetime Value (NPV)	$202,255.41
Internal Rate of Return (IRR)	6.24%
Return on Investment (ROI)	113.47%
Payback Period	13.5 years
Levelized Cost of Energy	$0.12 / KWh
Offset Energy	11.04%
Offset Bill	10.91%

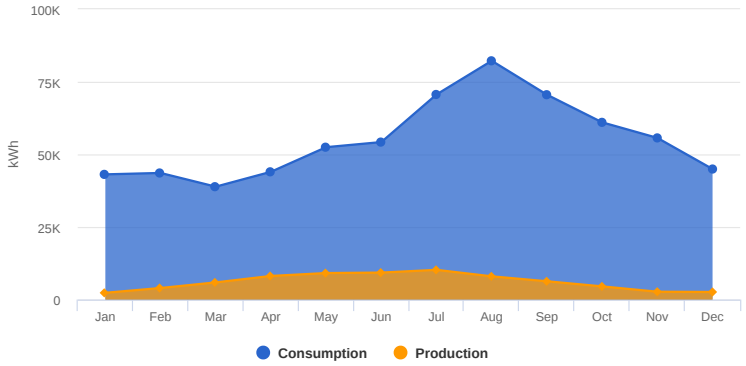
Lifetime Production



Utility Breakdown



Energy Consumption



Monthly Savings