



Solar Foundations[®] USA

Innovative. Adaptable. Grounded.

www.solarfoundationsusa.com

info@solarfoundationsusa.com

(855) 738-7200



“Our mission is to help drive the growth of the residential and light commercial ground mount solar panel support structure markets through the value added by our people, product and innovations.” –

Mike Zuritis, President of Solar Foundations USA

Innovative

SFUSA is constantly developing new designs, engineering new racking solutions and patenting our product lines. We work hard to continuously provide you with the most advanced options for your solar racking system.

Adaptable

With over a decade of experience designing, manufacturing and installing our racking structures across the east coast, we understand the solar energy community is regularly shifting with demands for broader products and services. We strive to identify those necessary changes and quickly refine or reinvent our offerings to better assist your company with its ground mount needs.

We have installed our ground mount support structures in some of the most difficult soils across the east coast, executed a diverse amount of unique ground mount design requests and pride ourselves on the ability to always deliver the most cost-effective option for your company, regardless of the various factors that may come into play.

Grounded

From the beginning, we have built our reputation for quality service one installation at a time. From a synergy of well-grounded professionals, Solar Foundations continues to be a value-orientated, customer-driven solar panel support structure source, providing you with the most optimal solutions to fit your company's needs.

We are committed to ensuring our ground mount systems meet or exceed all of your company's expectations. This is reflected in every stage of our process. From product engineering and design all the way through certified installation by our crews, consistently providing best in class service for you and your client is our goal.



Solar Foundations offers a full range of services including consultation, engineering and design, permit ready plans, custom component manufacturing and installation services all along the entire east coast from Maine to Florida, Texas and now a portion of the Midwestern region.

Office and Warehouse Locations:

Northeast Operations

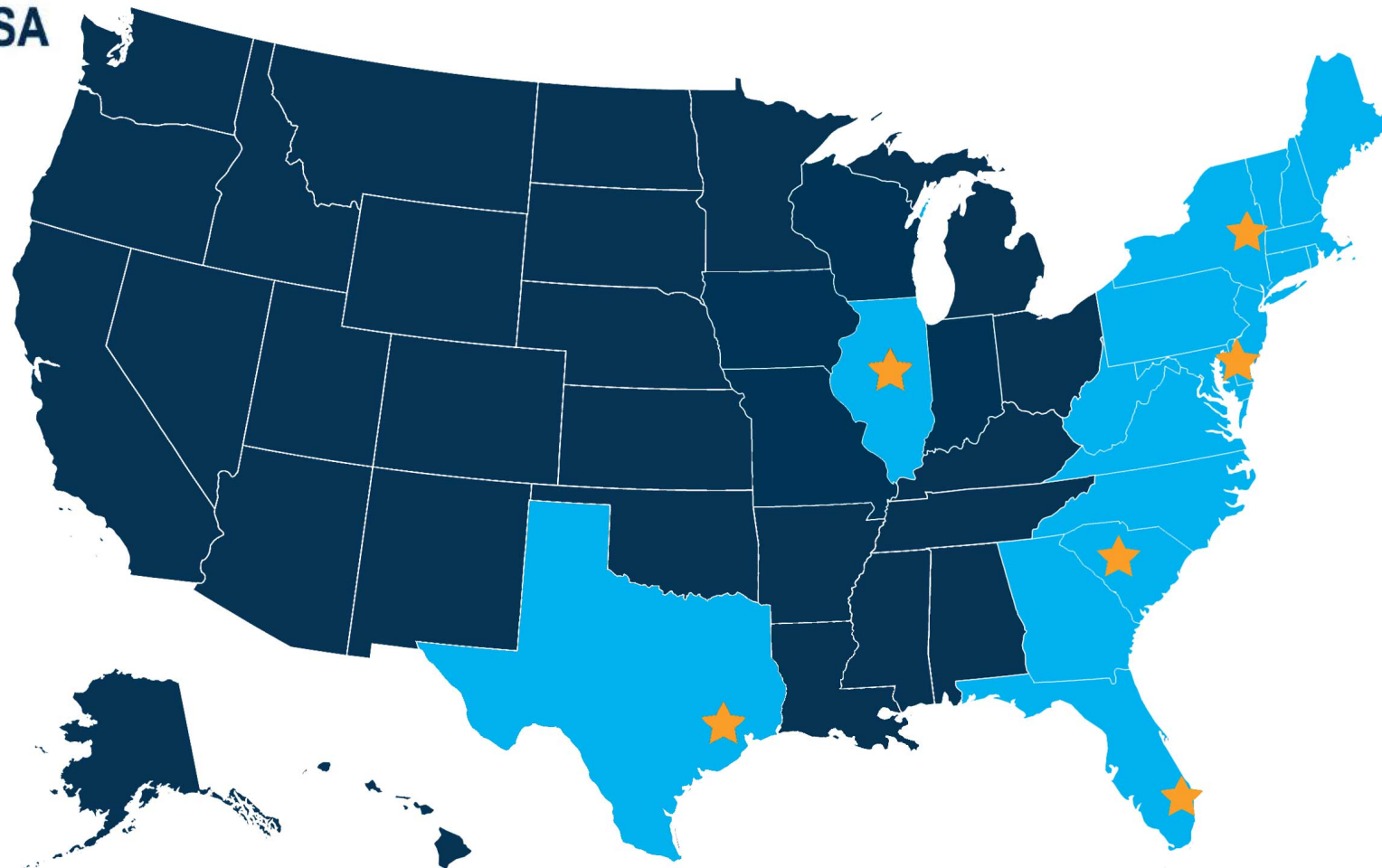
18 Wood Road
Round Lake, NY 12151

Mid-Atlantic Operations

1142 River Road
New Castle, DE 19720

Southeast Operations

6418 Fairfield Road
Columbia, SC 29203



OUR COVERAGE AREA



Solar Foundations[®] USA

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SOLUTIONS

SFUSA Ground Mount

The SFUSA Ground Mount system is the optimal solution for residential and light commercial solar projects. By custom designing and manufacturing components in-house, Solar Foundations' structure fits and functions together seamlessly, installs in far less time and with greater strength.

The highest quality materials such as high-grade steel fully galvanized in accordance with ASTM standards and high-strength aluminum alloys for our panel support rails are utilized for long-term durability. Designed to withstand high snow and wind areas, the UL 2703 classified system has an expected lifespan that exceeds multiple panel lifecycles. Thus, Solar Foundations' product maximizes the residual investment of your ground mount structure.



[Download the SFUSA Ground Mount Brochure](#)

Adaptable Ground Screw Fixed Tilt System



- Allows for mounting panels in four-, five- or six-high in landscape orientation and can be adapted to custom configurations
- Durable design enables any wind speed and snow load
- 0° to 40° tilt with multiple inter-row spacing options
- Compatible with a wide range of modules
- Pile verification report available after the installation has been completed
- 25-year guarantee against failure

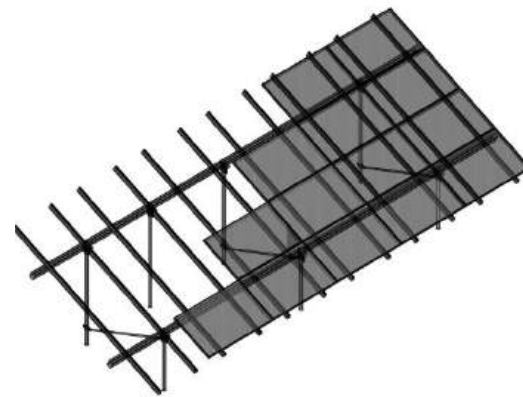
Our foundations feature **wider spans** between support columns and **stronger members**. We engineered our system to obtain a **better balance** between all of the system components, resulting in **less ground penetrations**, a **lower installed cost** and has allowed us to offer further cost optimizations and array configurations that are not typically available in the industry.

Materials	Hot-dipped galvanized steel, aluminum, stainless-steel mounting hardware
Tilt Angle	0° - 40°
Module Orientation	Landscape
Finishes	Galvanized
Foundation Options	Ground Screw - All soils including rock drilling
Grounding	Integrated Bonding Mid-Clamp
Maximum Grade of Terrain	10°
Design Services	Signed & sealed structural drawings
Certifications	UL 2703
Warranty	25 years
Installation Services	Material, foundations, racking

Adaptable Ground Screw Fixed Tilt System

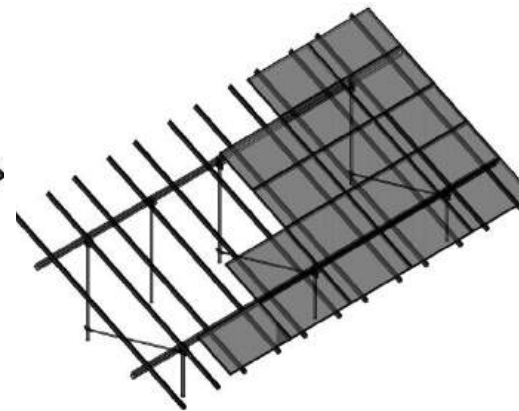
FT4L

Fixed Tilt 4 Landscape



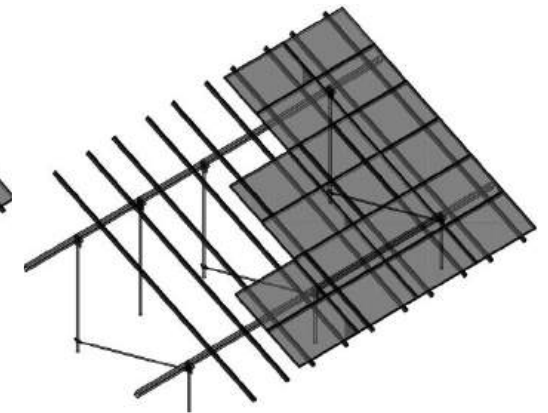
FT5L

Fixed Tilt 5 Landscape



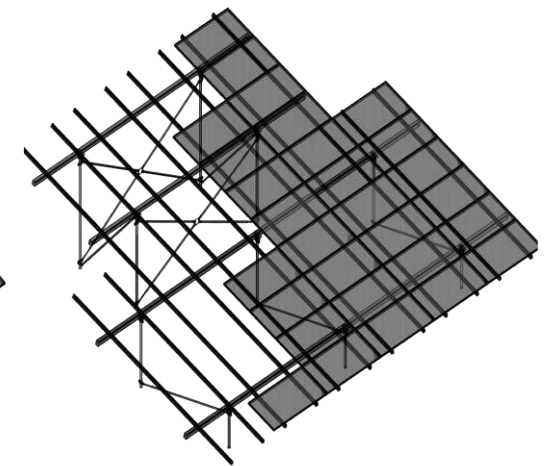
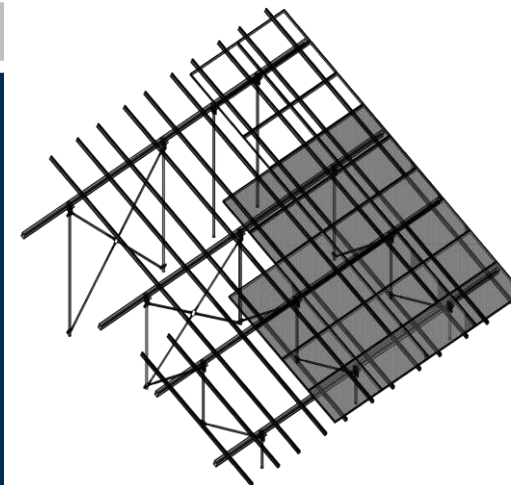
FT6L

Fixed Tilt 6 Landscape



Custom

SFUSA has the ability to come up with creative structures and products outside of our standard systems for unique situations.



UT-Gen I

The SFUSA UT-Gen I Canopy is the ideal hybrid solar racking solution for residential projects. Solar Foundations' versatile fixed tilt structure can be elevated to serve as a carport, utility storage structure or as a general canopy. Our durable design permits the canopy system to be installed on uneven ground or in areas that have minor slopes over the entire width of the structure. The existing material and equipment used for the SFUSA Ground Mount structure are also employed for the SFUSA UT-Gen I Canopy, allowing Solar Foundations' installation crews to install the canopy system quickly and efficiently. Depending on the desired tilt and configuration, the SFUSA UT-Gen I Canopy can often provide maximum clear heights of 8 to 10 feet.



[Download the Utility Canopy UT-Gen I Brochure](#)

Elevated Utility Canopy System



- Complete structural drawing packages available, including wet stamped seals that can be submitted with your permit package
- Compatible with a wide range of modules
- Each structure is designed specifically to meet/exceed local building codes
- High-grade steel fully galvanized in accordance with ASTM standards and high-strength aluminum alloys
- Custom layouts are available
- 25-year guarantee against failure

The solar modules act as the canopy roof. While this provides the desired shading and significant protection from rain, the system is not intended to be waterproof. Thus, the canopy does allow some water and sunlight to pass through the small gaps between the panels.

Substructure Assembly

Horizontal Support Beam



We provide maximum support for our structure by utilizing high yield strength hollow structural steel sections on our racking systems.

Diagonal Wind Brace and Insert



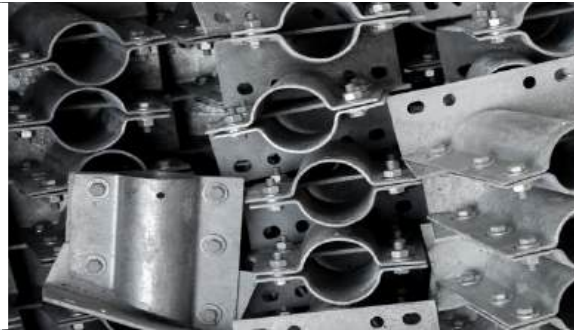
Our patented telescopic design allows quick and easily adaptable length changes to match installation conditions.

Diagonal Wind Brace Column Connector



Solar Foundations' hot-dipped galvanized custom Wind Brace Column Connectors fasten the Diagonal Wind Brace to a vertical column.

Column Caps



Our unique design allows a straightforward connection to the horizontal steel support beam.

Racking Assembly

Ground Mount Rail



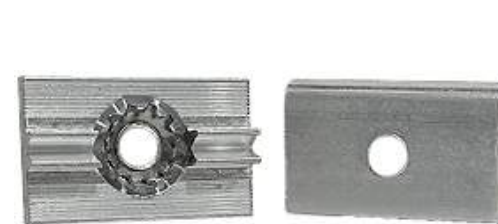
Solar Foundations' patented rail design offers a simple connection detail between the panel support rail and the horizontal support beams.

Module End Clamp



Our end clamp design securely fastens the top and bottom edges of a column of solar panels to the SF Rail.

Module Mid Clamp



The mid clamp fastens two adjoining solar panels in a column of solar panels to the SF Rail. Our sleek design with multiple serrations increases the holding power of the modules to our SF Rails.

Grounding



Our UL 2703 Certification encompasses the rail to beam and beam to pile connections, permitting the use of a single grounding lug for the entire racking system.

[Download Technical Datasheets](#)

Our Foundations

Solar Continuous Flight Helical Pile

Solar Foundations manufactures our Solar Continuous Flight Helical Piles with heavy wall structural tubing followed by hot-dip galvanizing. Our custom ground screws are used for most systems because of their uplift and bearing performance, ease and speed of installation, minimal disturbance to site and soil and the ability to validate pile capacity during installation.

Advantages of Using SFUSA Solar Continuous Flight Helical Piles and Ground Screws

Rapid Installation

- SFUSA installs piles using our high-speed, custom-designed HP-Drive System. The driver requires only a single operator and provides indication of uplift and bearing capacity while allowing for multi-axis adjustment of the pile during installation – with no movement of the machine.
- Unlike concrete, helical piles and ground screws do not require any time afterward to carry loads. Our crews immediately begin assembling the structure after the piles have been installed.

Inspection Requirements

- Solar Foundations' helical piles and ground screws require fewer inspection requirements both pre and post-installation than concrete piers. Inspections for helical piles and ground screws typically include verification of equipment used, pile depth, pile diameter and configuration, final installation torque and any information required in the documents prepared by the design engineer. SFUSA provides a verified installation report after the ground mount structure has been installed.

Minimal Disturbance to Soils

- The only impact on the soil when installing the posts is the 8" diameter of the helical pile or ground screw. Unlike concrete, the installation of helical piles does not auger or drill soil to the surface to create spoils. This keeps the work site clean and requires minimal cleanup when the installation is complete, saving time and money on the project.

Installation Monitoring and Reliable Capacity Indication

- One of the most important advantages of using SFUSA helical piles and ground screws is the verification of load capacity during installation. Solar Foundations' patented equipment presents reliable capacity indication and allows installers to verify data with our engineering and design team in real time. This ensures your company's ground mount structure is accurately installed to the required design parameters and depths.

Preferred in Environmentally Sensitive Areas

- When it comes to installing helical piles or ground screws in sensitive areas such as beach or lake fronts, wetlands, swamplands or marshes, Solar Foundations' structures have been recommended as a safe approach to constructing with minimal impact to the ecological habitat.

Flexibility and Removal

- Our helical piles or ground screws can easily be removed once they have served their purpose or they can be relocated if the project design parameters have changed.

Wide Range of Soil Applications

- The combination of Solar Foundations' helical piles and patented installation equipment allow for our crews to install in a wide range of soil conditions including, but not limited to sand, clay, shale or rock. This permits work to proceed without pile rejection.

Year-Round Installation

- SFUSA installs all year round in any temperature since there is no need for concrete or grout. Unlike concrete, there is no down time in winter when it is too cold for concrete to cure properly.

Part Number	Description	Material	Finish	Patent
CF70	2.00\" Sub-40 HDG Continuous Flight Helical Pile w/ NPT, Threaded, 70\" Long	ASTM A500	Hot-Dipped Galvanized	Pending
CF84	2.00\" Sub-40 HDG Continuous Flight Helical Pile w/ NPT, Threaded, 84\" Long	Grade C	to ASTM A123/A129A	Pending
CF120	2.00\" Sub-40 HDG Continuous Flight Helical Pile, 120\" Long			

21\" Schedule 40 Round Pipe Section Properties	
Axis X-X Value	Value
I (Moment of Inertia)	1,550 in ⁴
S (Section Modulus)	1,010 in ³
r (Radius of Gyration)	0.852 in
Z (Plastic Modulus)	1,370 in ³

Axis Y-Y Value	
Axis X-X Value	Value
I (Moment of Inertia)	1,450 in ⁴
S (Section Modulus)	1,010 in ³
r (Radius of Gyration)	0.852 in
Z (Plastic Modulus)	1,370 in ³

Outside Dimensions	
Wall Thickness	0.305 in
Area	1.568 in ²
Weight	5.813 lb/ft

Installation Torque Profile	
Allow Compressive Load	42,000 lbs
Allow Tensile Load Limit	42,000 lbs
Transverse Bending Limit	5,000 lbs
Allow Drilled Annul Capacity	40,000 lbs
Allow Lateral Load Capacity	2,000 lbs

[Download the Technical Datasheet](#)

Our Process

Solar Foundations provides a full range of services including consultation, engineering and design, permit ready plans, custom component manufacturing and installation services. With your company's new ground mount structure in place, you simply install the solar panels and remaining infrastructure and the project is complete.



1

Quote Request

We begin our process by preparing a quote at no cost. Pricing will vary based on several factors such as array configuration, quantity of panels, travel distance, design conditions and other various inputs. By providing more details about your proposed structure, our engineering department can grant a more accurate quote for your ground mount racking project.

2

Engineering & Design

Our designers work hard to identify any opportunities for overall project cost savings while ensuring every solar array design conforms to each state's requirements and remains within the tested parameters of each solar component. With both standard and custom array configurations available, we provide you with the tools necessary to make an informed evaluation of design and power output.

3

Installation Scheduling

Solar Foundations works with you to collaborate on providing the most efficient installation date for your racking structure. We typically schedule your installation two to three weeks upon receipt of necessary documentation and accommodate specific project needs. We have the ability to expedite rush installations and because the homeowner does not need to be home at the time of installation, our crews have the ability to seamlessly complete one project and move on to the next.

4

Project Installation

All installations of our patented products are performed by Solar Foundations' trained and certified crews. Our crews go through a rigorous training and qualification process to ensure they have the skills necessary to provide best in class service. Standardized crew training ensures your company can expect to receive the same high level of performance regardless of project location or installation crew. Our custom equipment rigs and patented installation equipment gives Solar Foundations the tools necessary to outperform the competition.

WHY SFUSA

Engineering

Our experienced engineers will begin by preparing a quote at no cost. The quote will be based on the specific array configuration in your initial request. Once approved, we will issue an engineer stamped structural design package for the project which can be used in obtaining permits. Our engineering services also include a certified foundation installation report after the ground mount structure has been installed.

Cost Optimization

Solar Foundations' designers work to identify any opportunities for overall project cost savings by optimizing the integration of solar module selection, racking configuration, and project design parameters. This is accomplished by evaluating multiple designs for each project and identifying optimal configurations. We will present you with these available options and associated cost savings when we quote your requested design. This process gives our clients the ability to make an informed evaluation of array configuration and power output as it relates to overall project costs.

Installations

All installations of our patented products are performed by Solar Foundations USA trained and certified crews. Our crews go through a rigorous training and qualification process to ensure they have the skills necessary to provide best in class service. Standardized crew training ensures our clients can expect to receive the same high level of performance regardless of project location or installation crew. Our custom equipment rigs and patented installation equipment gives our crews the tools needed to outperform the competition.

With over 2,800 foundation and racking solutions for ground mount solar array structures installed, Solar Foundations USA can make your next installation easier and more cost-effective. With our experienced engineering, patented technology, methodology, customized or stock components and specialty tools and equipment, we offer you predictable cost structures and schedules to make your installations profitable and easy.



A common issue encountered with ground mount structures is installation in difficult conditions due to dense or rocky soils as well as solid bedrock. Our crews have the ability to install our custom ground screws in any of these soil conditions by pre-drilling pile locations with the use of a carbide rock auger or drilling into solid rock with our down the hole hammer attachment. In the past, this level of capability has only been economically available on large commercial projects.



Solar Foundations[®] USA

Foundations

Solar Foundations uses ground screws and helical piles because of their uplift and bearing performance, ease and speed of installation, minimal disturbance to site and soil and the ability to validate pile capacity during installation.

Racking Systems

Solar Foundations designed the section properties of the racking to account for the typical larger racking support spans seen on ground mount structures. This has allowed us to offer further cost optimizations and array configurations that are not typically available in the industry.

Residential Structures

Solar Foundations has developed patented equipment that permits rapid deployment and single operator pile installation utilizing a compact and lightweight power unit. Our quick installation process ensures that your jobs will be completed on time and on budget with minimal disturbance to surrounding site conditions.

Engineering & Design

We engineered our systems to obtain a better balance between all of the system components. This approach results in optimized array designs with fewer ground penetrations and a resultant lower installed cost. We can provide fully engineered and approved plans for any ground mount system.

Installations

All installations of our patented products are performed by SFUSA trained and certified crews. Our installation crews endure a rigorous training and qualification process to ensure they have the skills necessary to provide the best in class service.

Commercial Structures

With the use of our versatile patented tools and equipment, SFUSA is capable of installing multiple arrays at an accelerated pace for greater efficiency. We pride ourselves on the quality of our product, which has an expected lifespan that exceeds multiple panel life cycles.



INSTALLATION DETAILS



OUR TEAM

Who should you contact first?

New Clients:

John Bollentin

Project Coordinator

Jbollentin@solarfoundationsusa.com

Office: (302) 499-3300 Ext 109

Catelyn Linendoll

Assistant Project Coordinator

Clinendoll@solarfoundationsusa.com

Office: (302)499-3300 Ext 105



Other Contacts:

James Douglas

Director of Engineering & Operations

JDouglas@solarfoundationsusa.com

Cell: (518) 396-0483

Michael Zuritis

President

Mike@solarfoundationsusa.com

Cell: (518) 858-7359

Paul Lapinski

Vice President

PLapinski@solarfoundationsusa.com

Office: (302) 499-3300 Ext 107

Lisa French, CPA

Controller

LFrench@solarfoundationsusa.com

Direct: (302) 499-3300 Ext. 106

Mike Gohl

Project Manager

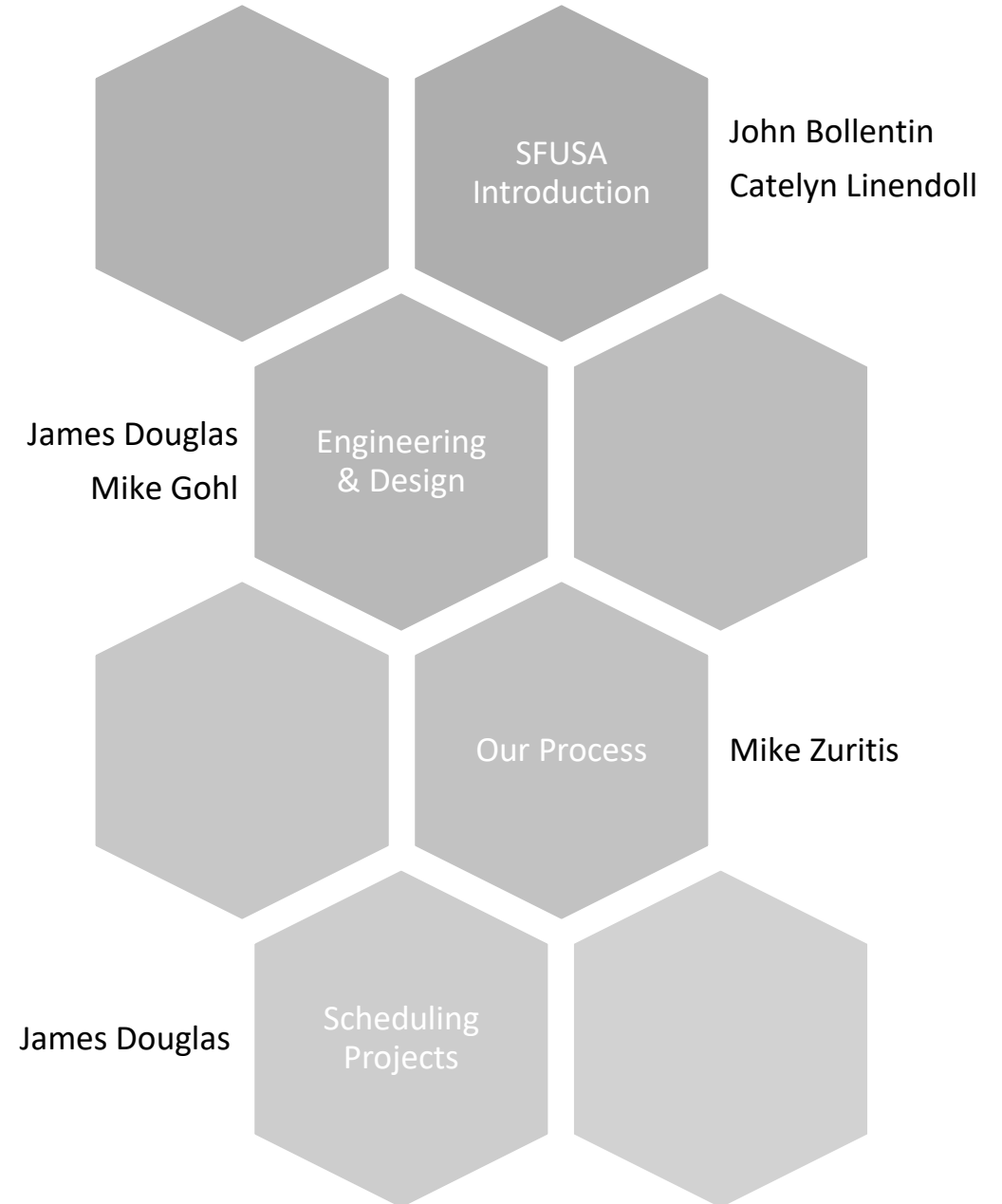
Mgohl@solarfoundationsusa.com

Cell: (518) 903-4801

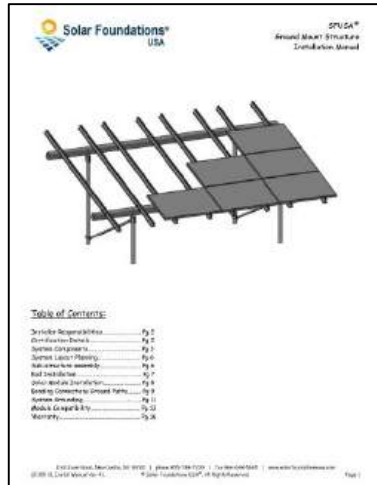
Travis Irvin

Lead Trainer/QA

TIrvin@solarfoundationsusa.com



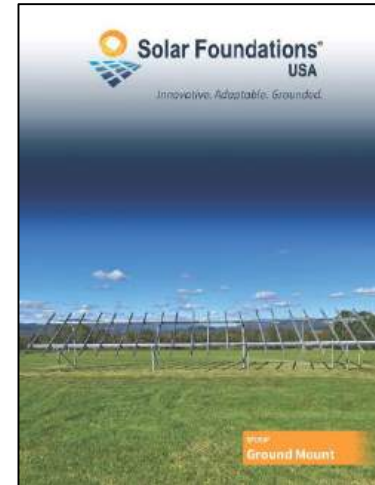
WARRANTY & PRODUCT SPECIFICATIONS



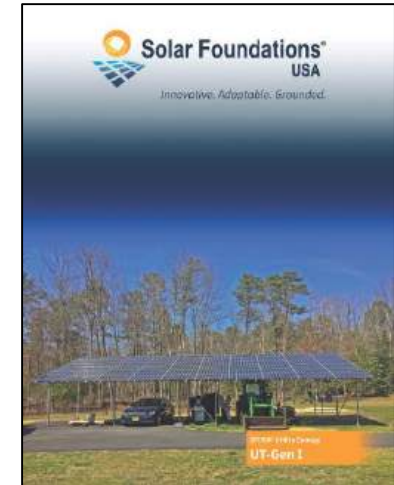
[INSTALL MANUAL & WARRANTY](#)



[PRODUCT DATASHEETS BINDER](#)



[GROUND MOUNT BROCHURE](#)



[UTILITY CANOPY BROCHURE](#)



[PROJECT SUBMITTAL SHEET](#)



[ADD-ONS BROCHURE](#)

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