



Solar CarPort™ Coatings

Coatings & Applications

Kern Solar Structures offers a wide range of coatings and colors for all carports. We offer four standard coatings on carports: Hot Dipped Galvanization, DTM Urethane, Multi-coat Urethane, and Zinc-Polysiloxane.

Coatings are applied in-house at our EPA compliant facilities. Our **AISC Complex Protective Coating Systems Certification (SSPC QP-3 Equivalent)** documents our ability to provide quality work. Every step of the coating process is documented using state of the art inspection equipment with automatic data logging—including environmental conditions, surface profiles, dry film thicknesses, and inspection results. Photographic documentation can be provided of surface preparation, stripe coats, etc. upon request.

Our certifications means that we meet coatings companies specifications providing warranties on all of our offered coatings.

Color Matters

As important as protective coating are, it is also important that they look good and match preexisting brands and color schemes. With our color matching capabilities we can ensure that our coatings will match branding elements that are important to any business or organization, ensuring a strong visual branded presence.

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Premium Protective Coatings

DTM Urethane Coating

Service life of 7-12 years in Mild Conditions.

Available in Gloss and Semi-Gloss.

This coating is a good option for mild environments. It provides a wide range of color options with a decent level of protection, offering the color option for a lower cost.

Multi-coat Urethane Coating

Service life of 17-20 years in Mild Conditions.

Available in Semi-Gloss.

This coating is a great choice for long lasting protection and a wide range of colors to match. It is a durable finish which can endure some wear and tear to ensure that the structure looks good and is equally protected.

Zinc-Polysiloxane Coating

Service life of 29 years in Mild Conditions.

Available in Gloss.

This coating is one of the most durable coatings offered. It provides an extremely long protective lifetime, and is available in a wide range of colors. This coating is ideal for extreme environments or regions that experience high levels of precipitation and humidity.

Sacrificial Coatings

ASTM123 Hot Dipped Galvanization

Service life of 30 years in Mild Conditions.

This is a durable galvanized coating spec'ed for structural steel. This coating ranges from three mils and up depending on the severity of the environment the structure will be placed in. It is a sacrificial coating, meaning that it degrades over its lifetime.



Solar CarPort™ Accessories

Accessories Equal Added Value

While a solar carport recognizes value quickly with the decreasing cost of solar, enhancing the carport structure with premium accessories is the easiest way to increase value added and speed up the ROI of the initial investment. Premium accessories provide many qualitative benefits to the structure such as brand association, interactive capabilities, and increased customer security and safety.

Install at Anytime

The majority of the accessories offered are pre-configured and modular in nature. This means that they can be installed at anytime over the lifetime of the Solar CarPort™ System. Solar Wraps™ can be moved around, replaced, or upgraded at anytime due to their standardized design. This gives a greater level of flexibility and customization to the asset owner, and allows for changes over time to accommodate the ever changing environment surrounding the structure.

Complete customization

Premium accessories offer the ability for the Solar CarPort™ System to fit any role. Just as the structure itself can be customized to fit a number of roles and aesthetic requirements, the offered accessories were specifically designed for this purpose, granting a wide range of options and functionality.

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Premium Accessories

Solar GaskeX™ Near Water Tight System

Solar GaskeX™ is a foam strip that is placed in-between panels creating a near water tight seal. The Solar GaskeX™ turns the panel array into a surface that also blocks water, providing an area that is shaded and dry. In regions with high levels of precipitation, Solar GaskeX™ are an invaluable addition to a carport.

Solar Wraps™

Solar Wraps™ are an aesthetic add-on which can be customized to any extent. The most popular options are laser cut, and back-lit logos or brand associated patterns. They can also be configured with digital displays, touch screens, advertisements, LED area lighting, and blank wraps to hide conduit. The wraps also conceal conduits and wiring that is otherwise exposed.

SureRaX™ Electrical and Inverter Mounting

SureRaX™ are a specialized version of wraps created specifically for supporting electrical equipment and inverters. The SureRaX™ create excellent mounting points and provide unique electrical and inverter management options that are unique to the Solar CarPort™ System.

EVRaX™ EV Charging Stations

EVRaX™ are specialized wraps designed to support and manage EV charging equipment. EVRaX™ can be configured for any EV charging equipment to be mounted on columns. This places chargers and other relevant equipment as close to the point of use as possible.

Additional Accessories/Customizations

- Security Systems
- Parking Monitoring Systems
- LED Area Lighting
- Water/Snow/Ice Management Systems
- Extended Clearance Heights
- Custom Canopy Widths



SoLFasT™ Installation

Fast Install, More Savings

The SoLFasT™ Installation method is a proprietary install process unique to Kern Solar Structures. Designed and engineered to speed up installations, the SoLFasT™ method boasts an impressive installation speed of 3-5 days per structure. Not only does this increase customer satisfaction, but it significantly reduces the soft costs associated with installations providing the installer with greater control over project pricing and time frames.

Flexible Installation

Due to the increased speed of installation, The SoLFasT™ method allows for large installations to be staggered at different times. This means that only small portions of parking lots have to be sectioned off at a time for the installation. This leaves a majority of the lot still available for use, instead of closing the entire area, while ensuring the entire project is completed in a timely manner.

Training

Kern Solar Structures offers free on-site training for installations of projects 100kw and up. This ensures the first installations using SoLFasT™ go smoothly leaving behind a crew that feels comfortable self performing installs in the future. The SoLFasT™ Method is simple enough to where it normally only takes one job in order for the crew to feel confident in their ability to self install. The ease of the system means that a specialized crew is not required in order to successfully complete the installations, further lowering soft costs.

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Install Overview

Day 1

- Install 30" Borings
- Assemble SoLFasT™ Stands

Day 2

- Assemble Solar CarPorT™ System
- Install Electrical Conduit & Grounding Grid
- Inspect Structure, Electrical and Forms

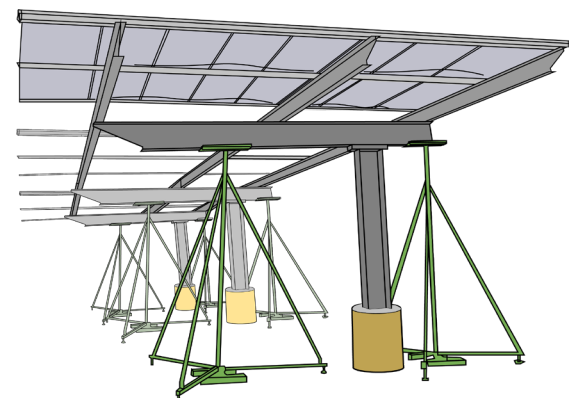
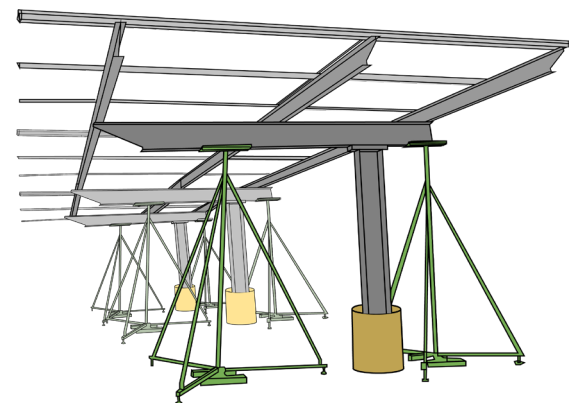
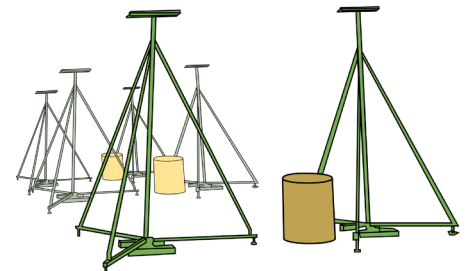
Day 3

- Place Concrete
- Install SpeedRaX™
- Install PV Modules

Day 4-5 - Complete Electrical Installation

Day 6-7 - Enjoy the Weekend!

Day 8 - Remove SoLFasT™ Stands





Solar Carport Comparisons

What Makes a Tier-1 Structure?

Every aspect of our structures are designed and engineered for quality and longevity. From installation methods to coating application, every step of the process is done with intent on achieving the highest quality and longevity. The Kern Solar Structure's Solar CarPorT™ System is designed and engineered to support Tier-1 PV Modules past their projected lifetime, improving the bank-ability of each project.

Protect Your Investment

When installing a solar system that can produce power and offset energy costs it is important to treat the system like the investment that it is. With a Tier-1 structure, projects see decreased risk and increased returns in maintenance and added value.

Longer Lifetime, Lower Costs

While initial structure costs might be higher, over the lifetime of the structure, premium structures cost less to maintain, and have a longer expected lifetime than lower tier structures. In many cases, all that is required for a premium structure is minimal maintenance and upkeep to the coating and any minor damage that may occur. The structure will last for multiple panel lifetimes.

A lower cost structure is a quick fix. Many of them need significant repairs if they are to last a decade. Most low tier structures will need to be replaced well before the Premium PV Modules they are supporting.

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This structure collapsed after suffering wind damage.



This structure is showing significant signs of corrosion only 1 year after being installed.

These pictures go to show just how prone to damage a cold rolled gauge steel structure is. Damages like these may require extensive repairs and generally end in damaged PV Modules and high maintenance and repair costs.

	Solar CarPorT™	Lower Tier Competitors
Structural Steel	✓	
High Quality Coatings	✓	
Engineered Installation System	✓	
Customization Options	✓	
Installation Time	3-5 Days	2-5 Weeks
Maintenance Cost	Low	High
Risk of Failure	Low	High
Projected Lifetime	30+ Years	8-12 Years

Materials

Tier-1 structures typically use structural steel in the form of hot rolled beams. Structural steel is designed to withstand high loads for extended time frames. Because of the performance characteristics of structural steel, less members are required. Other structures use cold rolled gauge material that is pre-galvanized, and formed into shape. A carport structure made with light rolled formed shape requires more pieces to achieve the same results as a structure made of structural steel.

Premium Coatings

Tier-1 structures should be matched with premium coatings and finishes. Our coatings are applied in AISC and EPA certified facilities and are warrantied by the coatings manufacturer. Many other solar structures are only pre-galvanized. Because the coating on these structures is applied before forming and fabrication, and is less than 1 mil in thickness, the protective coating is easily damaged in the field during installation. A secondary coating of spray-galv is often utilized on damaged areas which degrades quickly and can compromise the entire structure at an accelerated rate.