

## Sure-Weld® TPO Roofing Systems

### JOB PROFILE

**PROJECT:**  
Estrella Jail

**PROJECT LOCATION:**  
Phoenix, AZ

**COMPLETION DATE:**  
11/26/1996

**SIZE:**  
25,600 Square Feet

**ROOFING SYSTEM:**  
45-mil White Sure-Weld TPO

### JOB PROFILE

**PROJECT:**  
Del Prado Elementary School

**PROJECT LOCATION:**  
Boca Raton, FL

**COMPLETION DATE:**  
03/20/1998

**SIZE:**  
76,000 Square Feet

**ROOFING SYSTEM:**  
45-mil White Sure-Weld TPO

## Proven Performance TPO Projects with Over 15 Years of Installed Performance

Originally built in 1991, the Estrella Jail in Phoenix, Arizona completed an addition to its facility in 1996. This dormitory-style facility houses up to 1,000 primarily female inmates. Located in a geographic area where the average daily temperature is as high as 95°F in July and 60°F in February, the building required a roofing system that could help keep it cool and withstand the hot Arizona sun. Carlisle SynTec Systems' Sure-Weld TPO with a 15-year warranty was the ideal choice.

The Estrella Jail's 25,600 square-foot addition was capped off with Carlisle's 45-mil white Sure-Weld TPO, mechanically fastened over insulation and a cellular light-weight concrete substrate. Carlisle's white Sure-Weld membrane features an initial ENERGY STAR® solar reflectance of .79 and emissivity of .95, making it a great choice for the hot, sunny Phoenix climate. The Sure-Weld TPO membrane used on the Estrella Jail, which has lasted over 15 years, has the same basic formulation as today's industry-leading Sure-Weld TPO, featuring the OctaGuard XT Weathering Package for superior long-term performance. OctaGuard XT is a unique eight-component blend of antioxidants, UV absorbers, and light and heat stabilizers that results in the most dependable, long-term performance characteristics in the industry.

The Estrella Jail's roof has performed admirably since its installation. And although the original warranty expired in 2012, the roof continues to withstand the hot Phoenix sun.

In 1998, the 76,000-square-foot Del Prado Elementary School, located in Boca Raton, Florida, was in need of a new roof. When the building's existing single-ply membrane roofing system reached the end of its service life, Del Prado Elementary turned to Carlisle SynTec Systems and its Sure-Weld TPO for this re-roofing project. With a steel deck and an existing single-ply membrane in place, Carlisle's Sure-Weld TPO was adhered to a layer of polyiso insulation installed directly over the existing roof.

Superior wind uplift performance was a critical factor when selecting Carlisle's Sure-Weld TPO, as the school is located in a hot and humid climate with severe tropical storm activity. Independent tests conducted using ASTM methods consistently show that Carlisle's Sure-Weld TPO membrane exhibits far stronger seams and a wider window of weldability than competing products. That means better wind uplift performance and fewer leaks and callbacks. With an initial 10-year warranty on this TPO re-roofing project, the Del Prado Elementary School's roofing system is still performing.

# CASE STUDY

“...the most dependable, long-term performance characteristics in the industry.”

## JOB PROFILE

**PROJECT:**

College of Southern Nevada

**PROJECT LOCATION:**

Henderson, NV

**COMPLETION DATE:**

08/04/1999

**SIZE:**

30,000 Square Feet

**ROOFING SYSTEM:**

60-mil White Sure-Weld TPO

Built in 1981 as the second comprehensive campus of College of Southern Nevada (CSN), the Henderson campus offers a wide variety of educational tracks, including an award-winning, nationally recognized Air Conditioning Technology Program. When constructing their state-of-the-art Academic Computing Center in 1999, it was an easy choice for CSN to select a “cool” reflective TPO roof to help save on air conditioning costs in the hot Nevada desert. A Carlisle SynTec Systems 60-mil white TPO membrane fit the bill perfectly.

Carlisle is the leading supplier of TPO membrane, and use of its reflective Sure-Weld TPO membranes can contribute to a significant reduction in energy use and cooling costs for buildings in warm, Southern climates. White and tan Sure-Weld TPO membranes are ENERGY STAR®-qualified and Cool Roof Rating Council (CRRC)-certified, and can help earn LEED® credits for a facility.

When the roof on CSN’s Academic Computing Center was completed in August of 1999, it received a 15-year warranty. Even though the roofing system is still performing outstandingly well, CSN can rest assured that Carlisle’s Total System Warranties, as well as the largest network of field technical representatives, reflect a commitment and ability to address any warranty issue.

## JOB PROFILE

**PROJECT:**

Carlisle High School Gym

**PROJECT LOCATION:**

Carlisle, PA

**COMPLETION DATE:**

07/16/1996

**SIZE:**

12,350 Square Feet

**ROOFING SYSTEM:**

60-mil White Sure-Weld TPO

When Carlisle High School (CHS) in Carlisle, Pennsylvania needed a new roof for the Gene Evans Gym, their answer was in their own backyard. Located less than a mile from Carlisle SynTec Systems’ corporate headquarters, CHS was well aware of Carlisle’s decades of manufacturing experience and industry-leading products and services. CHS selected a mechanically fastened Sure-Weld TPO system for this re-roofing project.

The 60-mil TPO system was installed directly over the existing built-up roof. Once the seams are welded together, TPO membrane forms a monolithic cover over the entire field of the roof, creating redundancy in the system for additional protection. Due to the barrel-style structure of the gym roof, it was important to the school district that the roof stayed clean and looked good over the long term. A combination of Carlisle’s state-of-the-art manufacturing process and over 15 years of TPO manufacturing experience creates a smoother top surface on the membrane, which is designed to resist dirt, debris, mildew and bacteria build-up. That means the Carlisle School District will get a roof that stays cleaner and more solar-reflective for its entire service life.

When the roof was completed, it received a 15-year warranty, which expired in 2011. Due to the outstanding performance characteristics of TPO, the CHS gym roof is still functioning properly, more than 17 years after installation.