

Sure-Weld® TPO
Roofing Systems

CASE STUDY

Raton Public Service Co. Power Plant



JOB PROFILE

PROJECT LOCATION:
Raton, NM

APPLICATOR:
J3 Systems, LLC.

MANUFACTURER'S REPRESENTATIVE:
Southern Sustainability

BUILDING OWNER:
Raton Public Service Co.
Power Plant

ROOFING SYSTEMS:

- » Sure-Weld TPO Membrane
- » VacuSeal™ Vent Secured Roofing System
- » DensDeck® Prime Roof Board

The Raton Public Service Co. Power Plant, an electric generation plant located in Raton, New Mexico, is a historic building that was built in 1919. The original coal-fired steam generators were decommissioned in 2012 but the plant still serves as a transfer station for electricity to the city of Raton.

The 11,282 sq. ft. power plant, composed primarily of brick and mortar with old single-pane glass windows, stands 80 feet tall at the peak of the roof, with four additional lower levels. The basement of the plant once served as a fallout shelter during the Cold War, and still contains some of the emergency supplies that were used during this era. The City of Raton hopes to one day convert the power plant into a museum.

At the beginning of 2020, city officials noticed several leaks that threatened to ruin the massive electrical equipment kept inside the plant that provided the city of Raton with electricity, they knew it was time to re-roof the building. The existing roof was an EPDM membrane over insulation and two different roof decks: a portion of the roof deck was structural concrete and another portion was wood planks. The roof system was old and had already received several repairs over the years so a re-roof was recommended.

CASE STUDY



J3 Systems, LLC., a Carlisle SynTec Systems' Authorized Applicator headquartered in Bosque Farms, NM, was awarded the bid on this project. Family-owned and operated since its founding in 1973, J3 Systems was selected because of their expertise in low-slope commercial roofing and high-quality installation work. J3 Systems has earned Excellence in Single-Ply (ESP) and Perfection status from Carlisle, honors reserved for a select group of applicators who consistently exceed Carlisle's standards.

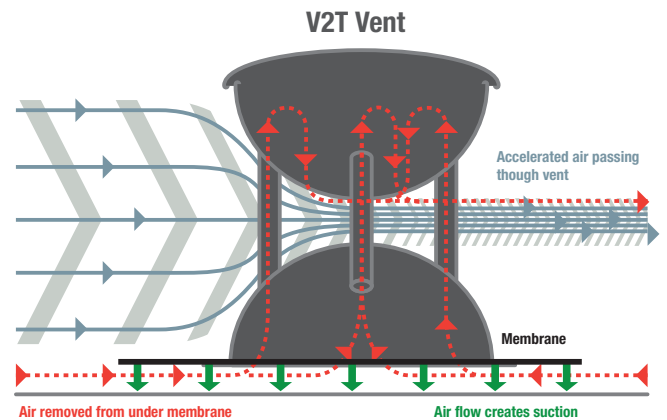
Construction on this re-roofing project began in April of 2020, after J3 Systems performed an inspection of the existing roof system and suggested that Carlisle's Sure-Weld TPO membrane be used to recover the existing EPDM membrane, using VacuSeal Vent Secured Roofing Systems to secure the membrane without using adhesives or fasteners. This recommended roofing system eliminated the need for a complete tear-off, saving the power plant both time and money.

After their initial inspection of the building's roof, J3 Systems discovered the existing drains on the roof in such bad condition that they weren't able to repair them. They made a decision to abandon the existing drains, and to call in a local concrete coring company to cut pathways through the existing concrete crickets and saw scupper holes through the brick walls of the building, so that new overflow scuppers could be installed.

Once this initial drain work was complete, J3 Systems installed a cover board, 1/2" DensDeck Prime, over top of the existing EPDM

membrane, improving resistance to foot traffic and hail damage to the roof. Once the cover board was in place, the new membrane installation process began, and was overseen by Brandon Schufft of Southern Sustainability, a Carlisle Manufacturer's Representative based out of New Mexico. Due to the COVID-19 travel restrictions that were in place at the time of installation, VacuSeal product specialist, Jeremiah Robinson, assisted with the installation via FaceTime, offering technical support to the crew.

Carlisle's VacuSeal Vent Secured Roofing System is a revolutionary assembly that uses special vents to harness the power of the wind to lock the roof membrane in place. VacuSeal systems are quick and easy to install, saving both money and labor by substantially reducing the amount of glue, ballast, or fasteners required in more traditional roofing systems. This engineered system is designed to provide optimal performance and is ideal for retrofit and monolithic deck applications.



Before installing the new membrane over the cover board, the VacuSeal distribution strips were laid out per a pre-engineered diagram that J3 Systems used during the installation process to identify where the vents would be placed. Once these distribution strips were in place, J3 Systems rolled out Carlisle's 60-mil Sure-Weld TPO membrane and marked the vent locations. 5"-diameter openings were cut out of the membrane at each vent location. The VacuSeal vents were then installed at the convergence of the distribution strips and flashed into the TPO membrane.

This re-roofing project was completed at the end of May, 2020. The combination of Carlisle's high-performing TPO membrane and VacuSeal Vent Secured Roofing System, that is UL Certified with uplift certification at 195 psf negative pressure and industry-leading warranties up to 20 years, will keep the power plant protected for years to come.