

SarnaProof



BUILDING TYPE: Arena

- STAPLES CENTER ARENA**
Los Angeles, CA
- BUILDING OWNER:**
LA Arena Company
- ARCHITECTURAL FIRM:**
NBBJ Sports and Entertainment
Los Angeles, CA
- GENERAL CONTRACTOR:**
PCL Construction Services, Inc.
Los Angeles, CA
- ROOFING CONTRACTOR:**
Anning – Johnson Company
Industry, CA
- PROJECT SIZE:**
250,000 sq. ft.

The Challenge:

In the new age of building sport entertainment venues, the Staples Center had many unique challenges ahead of it: the owner’s representative, the architect, and the general

contractor wanted to select a manufacturer with history and experience in providing roofing solutions to sporting venues. It was also important to the owner that the roofing contractor have proven experience with the installation of single-ply roofing applications and could meet the challenges of an aggressive work schedule and completion date. This was no easy task considering the contractor would have to keep the building watertight through Southern California’s unusually heavy rainy season brought on by “El Nino”.

The Choice

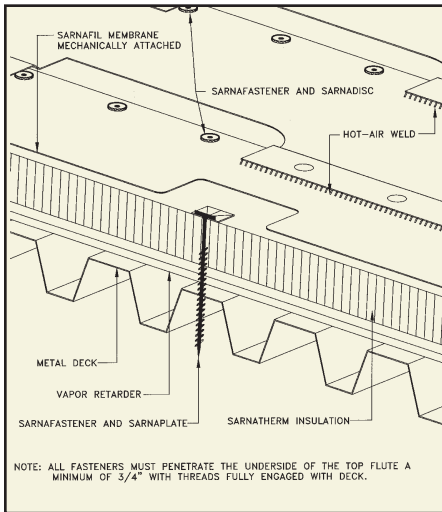
Dan Meis, Owner/Partner of architectural firm NBBJ Sports and Entertainment discusses the inspiration behind the design and creation of Staples Center:

“From the outset it was our goal to design an arena that was not only state-of-the-art, but uniquely “L.A.” as

well. While most arenas are solid, bulky, and seemingly impenetrable buildings, Staples was envisioned to be a dynamic, striking form with large, glowing lobbies allowing the event within to be experienced from the street and to allow those attending the event to connect with the surrounding skyline.”

A major objective of Staples Center’s design was to give it a dynamic character. The 10-degree slope of the exterior walls and the 5-degree slope of the roof were two of the methods used. Another example was the extension of the center’s four-story office wing into a triangular corner of the site, terminating it with a glass-wrapped wall that resembles the prow of a ship. “We needed a roof





that appeared to float above the structure, as well as walls that both curve and lean,” Meis said. The circular roof, which faces the downtown area, is one of the center’s most striking features. It drops 40 feet in elevation from south to north. The roof both serves as a signature skyline element and helps to reduce the scale of the building as it terminates above an outdoor plaza.

The Architect’s unique design of the roof’s “surfboard” shaped steel truss support provided a significant shortcut in construction scheduling, allowing the roof system to be installed much sooner than normal. This also allowed other trades to begin the interior finishes much sooner.

Anning – Johnson (A/J), a Sarnafil Elite Contractor, had already come well recommended with recently completed projects for PCL Construction Services on Bakersfield Arena’s 120,000 s.f. sporting facility, and 150,000 s.f. Blue Water Casino. These references, along with the fact that it is estimated that Sarnafil projects over 50 major arenas and stadiums (approximately 10 million square feet) in North America alone, helped to convince the owner’s representative that Sarnafil and Anning – Johnson were the right choice. Having strong direct field technical support gave the owner’s representative additional assurance that

Sarnafil had a direct employee who would visit the job frequently and work closely with Anning – Johnson to monitor and close out the project.

The Solution

Specifications for the new roofing system called for Sarnafil’s Mechanically Attached Sarnafast System using 60 mil membrane over Sarnatherm insulation on the upper bowl, 60 mil membrane over Dens-Deck on the lower roof, and 48 mil membrane over Sarnatherm insulation on the super truss. Sarnafil’s G410 custom matched “Staples Red” was used on the backdrop for the Staples Center logo.

“The Sarnafil Sarnafast Roof System is fast and easy to install. All seams are hot air welded. No glues or tapes are needed with the Sarnafil System reducing the impact of weather during installation resulting in installation costs savings,” says Rick Kent, Project Manager for Anning – Johnson.

With the upper bowl having wide-open areas of roofing, the architect had designed tapered ribs to direct water equally to perimeter drains. Keeping in mind the aesthetics of the roof, Sarnafil and Anning – Johnson recommended the ribs be manufactured and fabricated out of Sarnafil’s clad metal. The use of clad metal would provide a cleaner finish to the detail and would also transition nicely into the field membrane.

The lower roof areas would house all electrical and mechanical equipment for the arena. In its original design the membrane was to be installed directly over the polyisocyanurate insulation. It was very apparent that these roof areas would be exposed to much higher traffic which could potentially compress the insulation. The solution was to include a layer of 1/4” Dens-Deck®, increasing the compressive strength of the sub-



strate below the Sarnafil membrane.

Anning - Johnson kept the project on schedule and on budget even with the effects of “El Nino.” “It is comforting to have an applicator like Anning - Johnson involved with a complex project like the Staples Center. It takes great teamwork (good design + skilled workmanship + proven materials) to have a successful project,” says Jesse Quezada, Regional Manager, Sarnafil.

The arena was built with three contiguous levels of luxury boxes (160 Suites), 13 Event Suites, and 2,500 premier seats. Nestled in the heart of downtown Los Angeles Business District and adjacent to the Los Angeles Convention Center, the Staples Center would not only revitalize the downtown area but also attract “Corporate America” to lease out the suites and upscale premier seating. The new Staples Center has the distinction of being the only arena in the U.S. that is home to three major sports franchises – the National Basketball Association’s Lakers and Clippers and the National Hockey League’s Kings. The Staples Center is also host to the 2000 Democratic National Convention.