the challenge:

Terminal C at John Wayne Airport is a new 282,000-square-foot extension of the existing terminal. Architecturally, the Gensler design team wanted to draw from the features that make the existing terminal distinctive, including its barrel vault ceilings.

the solution:

To help replicate the visual feel of the existing terminal, the design team included barrel-shaped ceilings in the main entrance check-in area, concourse area, and baggage claim area of the new terminal.

Over 80,000 square feet of Armstrong MetalWorks Torsion Spring Custom Curved Ceiling planks were used to accomplish the design. The planks measure 30” x 82” in size, and feature a custom Cream Weave surface finish. They are also perforated and backed with a fiberglass infill to provide acoustical control.

The curved plank system enabled a variety of arch lengths to be utilized in shaping the semi-cylindrical ceiling design. Planks with smaller radii were installed in the concourse area, while those with larger radii were used in the other public spaces, including the 70-foot-high vault in the baggage claim area.

According to Gensler Principal and Design Director, David Loyola, MetalWorks Torsion Spring ceilings were selected for a number of reasons. One was aesthetics. “We wanted a clean, refined look in the ceiling that would not only be consistent with the architecture of the terminal, but also highlight it,” he says. “The butt edge detail of the planks provided us with the seamless look we were looking for.”

Durability was another consideration. “Metal ceilings are a good long term solution for airports because they must last for decades,” he states. Accessibility was also key. “Most of the ceilings here are not easy to get to, so the downward accessibility provided by the torsion spring feature makes it easier for the airport’s operations staff.”

“Considering the number of different vault sizes, we’re quite pleased with the result,” he continues. “Maintaining a consistent shape in that many curved ceilings is not easy to do.”