

# Tampa International Airport Expansion Features Hook-On Suspended Metal Ceiling System

**W**hen designing the new Airside A Domestic Terminal of Florida's Tampa International Airport, architects at Hellmuth, Obata & Kassabaum

had to consider several issues before selecting the right ceiling system. From an architectural standpoint, the ceiling not only had to work for the overall design scheme, but also had to be environmentally efficient and compliant with fire codes.

To accommodate the client—Hillsborough County Aviation Authority—it had to be durable, easy to maintain and provide acoustical control. As far as the contractor was concerned, the ceiling had to be easy to install and compatible with the sprinkler, light and speaker systems. HOK turned to Hunter Douglas Architectural Products for a ceiling system that could meet all these requirements.

According to Phil Dangerfield, senior vice president of HOK's Tampa office, the decision to use a perforated metal ceiling was made

early in the planning process. "Metal ceilings can be used to create spacious and dramatic overhead areas as well as comply with fire codes," he said. "The goal was to incorporate every aspect of the ceiling into one design."

HOK's design of the 225,000 square foot domestic terminal, which opened in May 1995, is characterized by a thin roof structure and wide open interior vistas, especially in the column-free boarding/transfer area. This allows plenty of elbow room for passenger movement within the 15-gate terminal and provides maximum interior flexibility. It also accentuates the ceiling by making it a major element in the overall spacious design. To add further drama to the facility, the ceiling was used on exterior soffit areas just outside the glass, to extend the design to the exterior.

## Unusual Goals


Hunter Douglas worked closely with HOK to ensure that the goal of a unified design was achieved in this unique application of plank and tile

metal ceilings. One of HOK's requirements in terms of a ceiling system was the ability to configure the ceiling panels in large spans to help simplify the design and maintain visual continuity. Hunter Douglas met this requirement by providing large panel lengths up to 10 feet. (117.75 inches was the longest nominal dimension specified.)

The large panel configurations proved to be ideal for the spacious areas of the terminal, but they did not blend visually with the curved/rounded areas because they had square edges and linear dimensions. Keeping in harmony with the design unification goals, Hunter Douglas manufactured more than 500 panel sizes, including trapezoidal shapes, to allow the architects to create the appearance of a curved ceiling that followed the contours of the terminal's rounded areas.

The large panel configurations and unusual geometrical shapes that were specified presented another challenge: how to suspend the ceiling without compromising the aesthetics of the design. Of the three

Shuttle To Terminal  
Baggage Claim 

Shuttle To Terminal  
Baggage Claim 

# Tampa International Airport "Airside A" Notes

## Overall Design Goals

- Design was "Outside In"—started with accommodating planes and worked backward to achieve cohesiveness.
- "Light troughs" in center of roof were designed to give directional movement and serve as directional guides for passengers.
- All design elements are "free form," including the outside wall of the bathroom structure, which is similar to the shape of a wave.
- Fire codes mandate that ceilings less than 20 feet above the floor be fireproofed. Fireproofing materials are unsightly, so ceiling helped mask the plenum.
- Systematic approach.
- Unity, harmony.
- Open, inviting, spacious environment.

## Airside F Was Used as a Prototype

- Client initially wanted a clone of Airside F, which has the same basic dimensions.
- HOK used Airside F as a reference for what they

wanted to improve and what they wanted to maintain.

- Airside A turned out to be a much improved design with a completely different look. The Aviation Authority was so pleased with the results that they will most likely use it as the prototype for any further renovations or expansions.

## Prominent Oval or "Capsule Shape" Helps Unify the Design

- What started out as a structural element quickly became a design element. The roof design required exterior supports to properly disperse the weight, and the supports used were oval or "capsule shaped" for aesthetic reasons.
- Capsule shapes were then incorporated into the design scheme so they are prominent throughout the ceiling perforation pattern, the sprinkler/light/speaker system enclosures within the ceiling, the window pattern at top of glass for solar control, all gate and terminal signs and even subtleties like chair handles, check-in booths at gates and planter islands.

suspension options that Hunter Douglas offers for plank and tile ceilings, the hook-on suspension system proved to be the best choice. The hook-on system was able to accommodate the large panel lengths and provide a concealed suspension system with hairline joints for optimum visual appearance.

The premium perforation pattern that HOK chose was another impor-

tant factor in keeping the design cohesive. According to Danger-field, the ceiling's perforation pattern was mimicked by patterns in the glass used throughout the terminal, which was an essential component of the design. The perforations also made it possible to hide air diffusers while performing a vital acoustical function. "Acoustics were a big factor because there was so much glass

used in the design," said Rud Mueller, director of planning for the Hillsborough County Aviation Authority. The perforated ceiling was complemented by a high density, fiberglass insulation backing to achieve a 0.95 noise reduction coefficient, which is a very high rating.

### **Low Maintenance Needed**

In addition to providing acoustical benefits, Mueller said the Hunter Douglas Ceiling System also succeeded in meeting all the aviation authority's maintenance requirements. "One of our primary concerns was finding a ceiling system that was maintenance free. We needed a ceiling that had a durable finish and was made from materials that would give us 20 to 30 years of performance," he said.

Another consideration that was an integral part of the design scheme was the environmental efficiency of the products used. HOK's "Green Team," which is responsible for overseeing the environmental aspects of all of the firm's projects, was quick to recognize the characteristics that make the Hunter Douglas Plank and Tile Metal Ceiling System a green building product. Hunter Douglas metal ceilings are ideal for indoor air quality-sensitive environments because they do not produce or contribute to any of the known sources for IAQ problems. They are highly resistant to moisture, which can spawn the growth of mold and spores, and they do not produce airborne particulates that are inherent to ceiling systems made from materials like mineral fiber. Also, they are made from 100 percent recyclable aluminum or steel. *CD*

### **About the Author**

The Tampa Airport is the latest in a series of major U.S. airport installations for Hunter Douglas that includes Denver, New York's La Guardia, New Orleans, Chicago's O'Hare, St. Louis' Lambert, Orlando, Myrtle Beach's Jet Port, and Atlanta's Hartsfield.