

O'Hare International Airport's Terminal 5 renovates with ROCKFON

O'Hare International Airport ranks as the world's second-busiest airport. It offers nonstop and direct service to nearly 200 cities worldwide. Terminal 5 is Chicago O'Hare's international terminal, comprised of a single concourse with 21 common-use gates. Westfield oversees concession management at Terminal 5, and guided the terminal's transformation and expansion from 15,000 to 26,000 square feet. Westfield Concession Management and its tenant partners are investing more than \$26 million into the terminal's redevelopment.

Westfield selected Epstein's interior design and structural engineering team for the project. "Terminal 5 was designed 21 years ago by Perkins+Will. Its Modern, clean design is recognized and appreciated. We did not want this to feel like a renovation that didn't consider the existing architecture. Instead, we wanted to adhere to it, but make it better. We wanted to take the vocabulary of the original building and continue it through the mezzanine renovation and expansion," explains John Kolb, Epstein's associate vice president, IIDA, LEED® AP.

Epstein's scope of work included base building improvements and modifications required to prepare the new and reconfigured concession spaces, as well as redeveloped common areas and new TSA checkpoint. Other performance considerations for the terminal's



Contributing to O'Hare International Airport's Terminal 5's world-class traveler experience, ROCKFON's team provided a metal baffle ceiling system in a custom Oyster Metallic finish, installed above the renovated and expanded Concessions Program.

ceilings included easy installation and maintenance; accessibility to lighting, HVAC and security systems; and compliance with the Chicago Department of Aviation's Sustainability Airport Manual.

"We're familiar with the airport's requirements and have done a lot of work at O'Hare throughout the years, and in other airports around the world. Transportation is one of our biggest market segments," says Suzanne Dissette, ROCKFON's architectural sales manager.

Dissette and the ROCKFON team began the Terminal 5 project early in the design process during the summer of 2012. Preliminary quotations, drawings, a small mock-up and custom color samples were provided to ensure the metal ceiling systems matched the project's budget, installation, look and performance needs.

Terminal 5 remained in operation throughout the construction. The joint venture general contracting team of James McHugh Construction Co. and Ornelas Construction Company minimized disruptions with a carefully choreographed building sequence. ROCKFON's distributor, Reinke Supply Companies supported this with phased material deliveries. The final details of the concession area's interior build-out were completed in the first quarter of 2014.



Terminal 5's transformation and expansion was designed by Epstein, using ROCKFON's ceiling systems to continue the Modern, clean aesthetic established by Perkins+Will.



Reinke Supply Companies supplied Ornelas Construction Company with more than 4,100 square feet of Rockfon® Intaline™ Round-Base 6-inch-deep metal baffles to accommodate Terminal 5's odd shapes, curves and the custom color.

Prior to the renovation, 95 percent of retail and dining was located pre-security. The redevelopment plan, announced by Westfield in 2012, includes 15 new dining and retail brands in the "post-security" zone, plus new passenger amenities throughout the terminal.

"O'Hare's original design palette is black and white, and grays of all different shades. On the interior, we wanted to warm it up a bit and give it a hospitality feel, especially in the concession area," says Kolb.

"Westfield, our client, develops a lot of malls and wanted to keep that sense of warmth and hospitality."

With this goal in mind, a custom Oyster Metallic finish was selected for the ceiling baffles in the concession area. Kolb elaborates on the design: "We did not have much ceiling space to play with. The linear baffle ceiling hides the structure above and makes it feel like a higher ceiling. The above structure was painted black adding to this illusion of height."

Reinke Supply Companies provided more than 4,100 square feet of Rockfon® Intaline™ Round-Base 6-inch-deep metal baffles. "It's one of the largest projects we've done with this product, by far," says Reinke's customer service manager Randy Van Meter. "It wasn't a real simple application. These weren't just straight runs. It was a specialty ceiling with odd shapes, curves and, of course, the custom color."

Kolb continues, "The ceiling's non-standard shapes take their cues from the floor pattern and the millwork. They all sort of mimic each other. Appearance and cost also were considered in the baffles' spacing. We looked at 9-, 12- and 18-inch spacing and decided on 12-inch. We've used the [Rockfon] Intaline metal baffle system before with good success and believe it to be the right product, right design and right cost for this project."

Ornelas Construction's project manager Mike Meyer says the regularly spaced "ceiling baffles resemble an H to anyone who looks up." For Terminal 5, the Rockfon Intaline baffles are assembled in 4-by-4-foot modules attached to 15/16-inch ceiling suspension to ensure module alignment, accept lighting and air diffusers, and provide a continuous linear appearance.

"The entire design works together within the existing space – from the linear graphic to the lines of the soffit to the lighting to the flooring pattern. There's sensitivity in the coordination. It works as both standalone elements and as a total package," reiterates Kolb.

Helping achieve the correct aesthetic and proper installation, Pete Rudd and ROCKFON's technical services team provided drawings and on-site guidance. "When we first opened the box, I thought,



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ROCKFON's linear baffle ceiling hides the structure above and makes it feel like a higher ceiling. The above structure was painted black adding to this illusion of height.

"Whoa boy! Here we go," remembers Ornelas Construction's project superintendent, Bill Ornelas. "Pete and the [his team] worked with us to get it right. It's a good system and easy to work with as long as you have your layout square."

"Mike and his colleagues at Ornelas took an active role in learning about the product and installation methods. Our technical services team worked very hard in document and drawing preparation to ensure we had the right plan for this complex installation," says ROCKFON's district sales manager, Christine Uhlir, LEED AP ID+C.

In addition to the Rockfon Intaline baffles, Ornelas installed 1,200 square feet of Rockfon Magna T-Cell™ ceiling systems and 300 linear

feet of Paired Infinity™ engineered perimeter trim. This open plenum masking system is positioned above the TSA Checkpoint and also surrounds the concession area's ceiling baffles.

To support the perception of a high ceiling, the Rockfon Magna T-Cell panels are painted black and blend with the black perimeter trim. Infinity perimeter trim is paired together, back-to-back, for visual details including arcs and curves. Paired Infinity provides attractive, smooth, rust- and distortion-free design accents.

Working on site, the contractor installed the perimeter trim and assembled the Magna T-Cell's U-shaped blades into 6-by-6-inch cells to form 2-by-4-foot panels, which are installed into 9/16-inch ceiling suspension. The suspension and panels blend together to provide a continuous open cell ceiling appearance. It also allows easy maintenance with access to the HVAC, security and other systems above it.

"Not only is the metal ceiling maintainable and accessible, but when you need to access or replace something, it doesn't look like it was messed with," observes Kolb. Contributing to both low-maintenance and environmental benefits, the metal on Rockfon Intaline baffles, Rockfon Magna T-Cell and Paired Infinity trim contains no organic compounds to support mold and microbial growth.

Epstein's designers incorporated other environmentally responsible design solutions, with respect to the Sustainable Airport Manual (SAM). More than 100 projects at Chicago's airports have earned green airplane certification under the SAM rating system. In March 2013, the Chicago Department of Aviation also adopted a *Green Concessions Policy and Guide to Green Concessions Operations*, among the first of its kind in the airport industry.

The SAM draws largely from the U.S. Green Building Council's 2009 LEED Rating Systems. For O'Hare Terminal 5, this includes taking advantage of existing daylight, requiring energy-efficient lighting systems and procuring building materials that utilize resource reuse, recycled content and regional origins.

ROCKFON's Uhlir and Dissette agree, "Environmental attributes always are important." Supporting sustainable initiatives, Rockfon



Supported with ROCKFON's phased deliveries, James McHugh Construction and Ornelas Construction minimized disruptions as Terminal 5 remained in operation throughout the renovation.

Intaline baffles and Magna T-Cell systems contain 100 percent recycled aluminum content and at the end of the ceiling system's useful life, it is 100 percent locally recyclable.

"Quality materials with the desired custom color finish, a knowledgeable staff with airport experience and close collaboration between the team members, all contributed to the project's completion and on time and on budget," summarizes ROCKFON's metal ceilings product manager, Patrick Wallis.

Reinke's Van Meter agrees, "Everything went very smoothly – from submitting drawings to final delivery. The material arrived on time. We didn't wait on anything. [Their team] was very easy to work with."

Pleased with the results, Epstein's Kolb reports that Westfield is "very satisfied" with the ceiling's contribution on the renovated and expanded Terminal 5.

"We are transforming the entire passenger experience in Terminal 5. We are deploying Westfield's global expertise in operating some of the most iconic shopping venues in the world to Terminal 5," stated Dominic Lowe, executive vice president of Westfield Concession Management.

"The reconfigured Terminal 5 raises the bar for airport concessions programs in Chicago and across the country," concluded Chicago Department of Aviation's commissioner Rosemarie S. Andolino.

PROJECT	O'Hare International Airport's Terminal 5 – Chicago, IL
OWNER	Chicago Department of Aviation – Chicago, IL
OWNER'S REPRESENTATIVE	CARE Plus LLC; Chicago – Chicago, IL
MANAGER	Westfield Concession Management – Chicago, IL
ARCHITECTURAL AND INTERIOR DESIGNER, STRUCTURAL ENGINEER	Epstein – Chicago, IL
GENERAL CONTRACTOR	James McHugh Construction Co. – Chicago, IL
JOINT VENTURE PARTNER AND INSTALLING CONTRACTOR	Ornelas Construction Company – Chicago, IL
CEILING SYSTEMS – DISTRIBUTOR	Reinke Supply Companies – Chicago, IL
ROCKFON PRODUCTS	Rockfon® Intaline™ Round-Base metal baffles Rockfon Magna T-Cell™ Rockfon Paired Infinity™ trim