the challenge:

With 60-foot-high ceilings and soaring glass facades that fill the space with light, LaGuardia Airport's massive new Terminal B completely transforms the travel experience. Its grand-scaled interior includes green space modeled after New York City parks and retail spaces that mimic "Big Apple" streetscapes. From bridges elevated 65 feet above grade, passengers can take in views of the city skyline as they move between the Arrivals and Departures Hall (Headhouse) and Concourses A and B.

To realize the signature design of the terminal's grand-scaled interior, HOK architects required a distinctive architectural building solution to create a cohesive high-quality visual experience for passengers. Meeting fast-paced construction schedules in limited workspaces on the jobsite presented additional challenges with this high-profile project.

CASE STUDY

Project | *LaGuardia Airport Terminal B*
Location | *New York, NY*
Architect | *HOK Architects*
Product | *Plasterform GRG and GFRC Architectural Castings*

the solution:

To create the desired uniform look and feel while addressing more practical considerations, such as durability and speed of construction, the design team selected Plasterform™ glass-fiber reinforced gypsum (GRG) and glass-fiber reinforced concrete (GFRC) architectural castings from Armstrong Ceiling & Wall Solutions.

Based on the architect's 3D models, the Armstrong Plasterform team fabricated more than 9,000 custom GRG and GFRC parts for installation by Cord Contracting in the Headhouse, Spearhead Construction in Bridge B, and The Donaldson Organization in Bridge A and Concourses A and B. The pre-cast components included column covers with recessed pockets for electrical devices, covers for beams and diffusers, and complex components with compound curves for ceiling transitions and other creative design applications.

According to Lance Mueller, project executive at The Donaldson Organization, the preformed casting parts saved a tremendous amount of time in the installation and finishing of the column and beam covers. "Less framing was needed, and we did not have to finish the entire assembled covering," he explains. "The precast components were easily secured to the metal framing with screws and the seams were then taped, feathered in, and sanded to achieve a high-quality architectural aesthetic."

Custom GRG and GFRC architectural casting panels were also chosen by the design team to create unique retail entry portals and curved storefronts in the terminal spaces. These innovative facades with simulated cast iron, molded stone, and other interesting finishes and features replicate streetscapes of iconic Manhattan neighborhoods, including Fifth Avenue, Rockefeller Center, and SoHo.

With tight deadlines and limited floor space to store building materials in the work zones, preplanning and ongoing coordination were critical in keeping the project moving on schedule. "The team producing the precast Plasterform components was very proactive in conveying potential design issues early on to mitigate potential installation problems," Mueller says. "Their parts were precisely fabricated to meet the angles and slope the architects envisioned, and they were delivered to the jobsite on demand to ensure just-in-time construction."

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