LA GUARDIA AIRPORT REDEVELOPMENT

Queens, New York, USA

Price: $2.4bn (USD)
Project Scope: Engineering Professional Services for Physical Security
Size: 1.3 million square feet
Project Start: 2016
Project Completion: 2018
Client Reference:
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Project: The airport currently features four main terminals: A, B, C and D. Terminal B, also known as Central Terminal Building (CTB) opened in April 1964. It was modernized and expanded in the 1990s. It has approximately 835,000 square feet of floor space.

The CTB redevelopment project included the demolition of the existing CTB and associated infrastructure such as CTB Parking Garage (Parking lot 2), four concourses (A, B, C and D), Hangars 1, 2 and 4, and frontage roads. A new terminal building was built in place of the demolished CTB. The new CTB covers an area of 1.3 million square feet. It features 38 aircraft gates, 214 check-in counters and kiosks, baggage handling systems with a centralized in-line, a baggage screening facility, and 1,620 feet of baggage claim device presentation frontage. It will also feature two passenger security screening checkpoints (SSCP) with a total of 22 lanes, and other passenger amenities. The PANYNJ authority is invested $2.4bn in the CTB redevelopment project.

Assignment: Peer review of the analysis and design calculations for blast loading for the cable-supported glass curtain walls at the Head House (HH) building of the new CTB. The HH is an approximately one million square-foot, four-storey steel structure with three full floors, one half-floor, several mezzanine levels, and a roof that is split into a high and low roof levels. The HH façade is comprised of glazed curtainwall, stud-backed metal panel systems, reinforced concrete walls, reinforced concrete masonry unit (CMU) walls and louver systems. The HH is required to be designed to mitigate hazard due to explosive threats due to improvised explosive devices (IEDs).

Responsibilities: Performed peer review of the curtain wall calculations against blast loading (analysis and design), originally developed by the curtain wall supplier. Replicated blast loading calculations and compared them to their counterparts developed by the curtain wall supplier. Provided comments to and analyzed feedback from the client and other stakeholders.