



Elevate Counterfort Project Profile - IDOT 60Y39

Highlights:

Project Name: Illinois DOT Interstate I-90 from Harlem to 190 Interchange

Owner: Illinois Department of Transportation

Contractor: Granite Construction Inc.

Engineer: HNTB, EXP US Services, Inc

Location: Chicago, Illinois

Precaster: Utility Concrete Products, LLC- Morris, IL

Wall completion: September 2020



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The counterfort wall designed to meet the demands of tomorrow's transit

Situated in the heart of Norwood Park, the intersection of I-90 & Harlem Avenue experiences a heavy flow of commuter and commercial traffic as it is only 4 miles from O'Hare International Airport and 1 mile south of AMITA Hospital. When IDOT commissioned the redevelopment of the intersection, a three-foot thick cast-in-place retaining wall structure was designed to support the adjacent roadway and support a noise abatement structure.

Since Kenny Construction Company (now Granite, Inc.) had recently experienced the benefits of Elevate's patent-pending precast counterfort system on a local railroad project, they knew a partnership with Elevate would lead accelerated construction schedules, more cost-effective traffic maintenance, and more efficient wall construction.

In order to accommodate all of the intricate design elements, Elevate Infrastructure developed a custom structure with integrally-cast pilasters to encompass the noise abatement wall and the roadway embankment. Utilities also played a large role in the development of the wall layout. Storm sewers and piles were abundant in the backfill, so Elevate's engineering team worked with Kenny to develop specialized base units and facing sections that were custom built to adapt to the site-specific needs and geometry.

The original retaining wall design for the Illinois DOT included wall heights ranging from 7.5' to 25.5' tall, so a wide range of bases and face units were needed to meet grade. Wall construction took place between active lanes of I-90 and the adjacent frontage road, so



Elevate's efficient profile was perfect for accelerating the construction schedule and keeping everyone safe. Elevate coordinated with the contractor on site to ensure accurate deliveries and seamless construction. The communication from the design phase through construction was a highly coordinated effort, and Elevate was a perfect fit for Kenny's ingenuity and hard work!



"The Elevate wall was a much more efficient design... and it allowed for an accelerated construction schedule which enabled significant labor savings... Elevate's system saved not only Granite, but also the State by utilizing the system through a value engineering process."

- Adam Backhaus

Elevate Infrastructure
2945 W. Bungalow Road
Morris, Illinois 60450
815-705-9099



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