



Metra/ UPRR Webster Road and Deering Bridge Rehabilitation

Highlights:

Project Name: Webster Road and Deering Bridge Rehabilitation

Owner: Metra/UPRR

Contractor: Kenny/Granite Construction - Civil Division

Engineer: Alfred Benesch & Company and Bowman, Barrett, & Associates

Location: Chicago, Illinois

Precaster: Utility Concrete Products, LLC- Morris, IL

Wall completion: October 1st, 2018



ELEVATE
RETAINING WALLS

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

Commuters heavily rely on the popular Union Pacific / North Line, a Metra line running through the Chicago metropolitan area. Metra recently commissioned the reconstruction of this line due to the overall age and associated strenuous use. **This reconstruction included a retaining wall from Fullerton Avenue to Webster Avenue with the purpose of building up and supporting future railway.**

The original engineering plans specified this wall as cast in place. However, the general contractor, Kenny/Granite Construction, upon learning about Elevate Retaining Walls, proposed the precast option better aligning with the project's accelerated schedule. According to Bill Moore, of Kenny/Granite, "Once we learned the Elevate wall system did not require special backfill, we could easily see its advantage."

Elevate's innovative patent-pending precast counterfort system **was designed to support the future embankment using backfill onsite.** The system includes a precast concrete base and a precast concrete face with integral counterforts. Low strength material is pumped under the base to ensure proper bearing on the foundation soils while high strength grout is utilized at the joints between the base and face with integral counterforts.

This grout mechanically fastens the sections together along with the use of cast in bar anchors. The overall ease of installation surpassed the expectations and experiences of both the general contractor and owner.



Elevate offers various sized pieces depending on a project's criteria. The pieces used here were 12'-11" in width and 15'-0" to 18'-4" in height. Special considerations were given to pieces in close proximity to the existing buildings along Fullerton Avenue. While these pieces provided a challenge, Elevate was up for the task! A lighter option was designed for the general contractor's limitations around pick weights, without degrading any load / impact criteria.



Bill Moore explained, "it was very easy to work with Elevate's engineering team to customize the wall during the original design as well as during installation when unique situations occurred due to the nature of this site in a highly established urban environment."

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