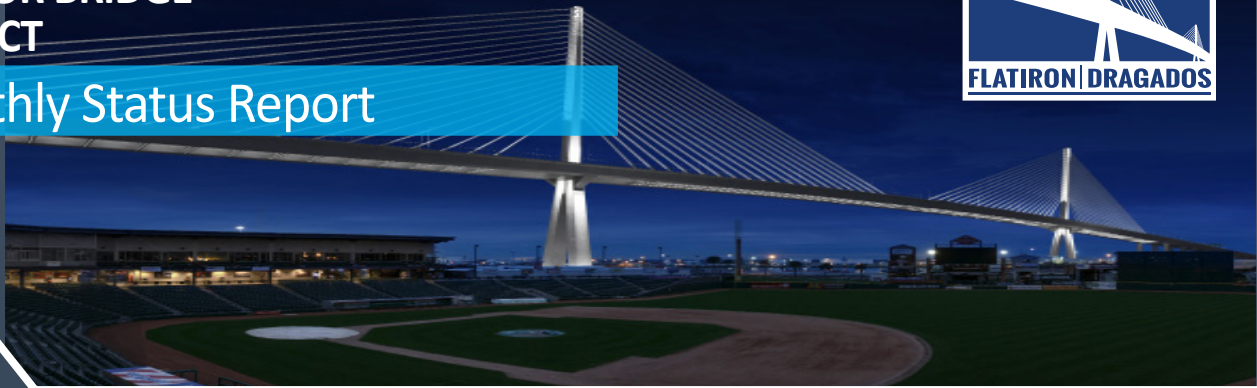


US 181 HARBOR BRIDGE PROJECT

Monthly Status Report



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June 2023

Harbor Bridge Project (HBP) Stay Cable Milestone

Summer 2023 kicked off with a highly anticipated event of installing the first stay cables (temporary) on the HBP Cable-Stayed Bridge (CSB). Last month, the North Pylon crew, alongside specialized industry experts, successfully placed the first set of four stays. Design engineers consistently monitored as the detailed plans were implemented, ensuring that each element of the bridge continued with a road profile and internal force distribution meeting the design intent. The first set of stays are temporary and allow construction to continue in a cantilever method outwards from the towers until all permanent stay cables are installed and the bridge meets in the middle. Once the entire span is in place, the temporary stays will be removed to complete the distinctive silhouette of the bridge.

Temporary versus Permanent Stays:

- A set consists of four stay cables – two on the main span (MS) or ship channel side and two on the back span (BS) or land side. Each tower will have one set of temporary and 19 sets of permanent stays.
- Each temporary stay cable contains 27 epoxy-coated strands, each made of seven high-strength steel wires, fed and stressed one by one through a black high-density polyethylene (HDPE) pipe. Temporary MS and BS cable lengths are about 160 feet long. Cables are anchored at the delta frames down the center of the bridge deck to the Upper Tower (UT) anchor boxes beginning at UT Lift 8.
- Permanent stays combine 70 epoxy-coated strands at Anchor 1 up to 121 strands at Anchor 19, encased and stressed through a white HDPE pipe with a more noticeable white profile. MS and BS cable lengths on each tower will range from 181 feet long for Stay 1 up to 882 feet in length for Stay 19, also referred to as the tower crown. Durable stay cables will elegantly support the bridge structure in place of piers or a substructure for the MS.

Preparation and pre-activity planning, from repetitive safety and equipment training to the importance of precise geometry and succinct coordination, was essential to this celebrated milestone. Installation for the temporary stays on the South Pylon and the first set of permanent cables on the North Pylon will begin in early August. With a main span of 1,661 feet, the New Harbor Bridge is set to become the longest precast concrete segmental cable-stayed bridge in North America. Continue following the monthly status report for more information about CSB installation cycles, materials, equipment, procedures, and sequencing.



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