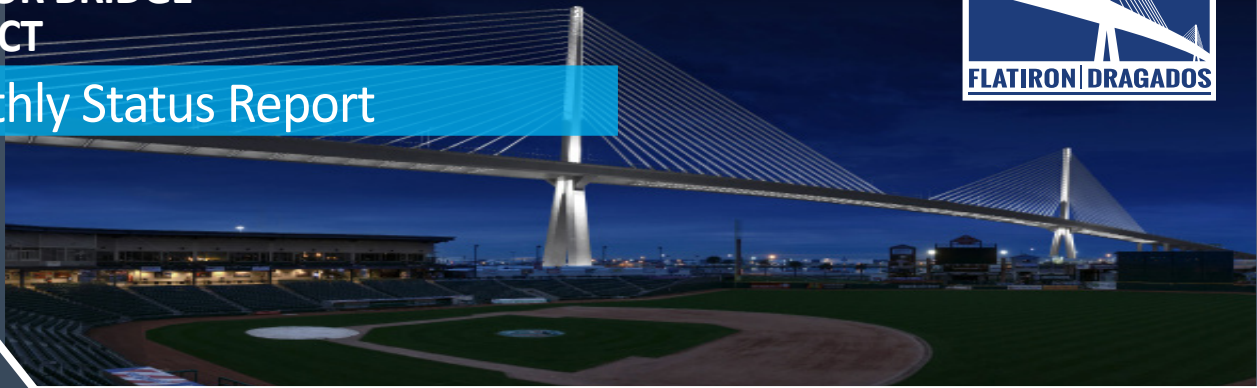


US 181 HARBOR BRIDGE PROJECT

Monthly Status Report



Toll Free: 1.877.227.4144 • Public Information: publicinformation@harborbridgeproject.com

September 2024

HBP South Pylon Soars to Become Tallest Structure in South Texas

We are proud to announce a major engineering achievement on the new Cable-Stayed Bridge (CSB) with the successful 'Topping Out' of the South Tower at an impressive 540 feet tall!

Recently, our formsetters reached a HIGH-light by completing all 20 Upper Tower (UT) lifts. Overcoming significant logistical challenges— including vertical ascents of up to 320 feet from the bridge deck, extreme weather fluctuations, and rigorous day/night/weekend work schedule— our skilled crews executed this phase flawlessly, bringing the tower to its final pre-cap height. After installing all 19 stay cable sets and illumination packages, the tower will reach its ultimate height once the tower crane places a cap, adding another six feet to the structure.

The 'Topping Out' milestone not only represents a key achievement in the project's timeline but also showcases the exceptional technical proficiency of our team in handling complex, high-altitude construction. Our craftsmen will now be applying their skills to other vital aspects of the bridge construction as we progress with segment lifts and cable installation.

- Premium Grade Concrete Poured: 2,770 cubic yards
- Rebar Installed: 1,513,960 pounds
- Steel Anchor Boxes Embedded: 38 units

HBP PreCast Yard Completes Casting all Segments

We're excited to report that our Pre-Cast Yard (PCY) team in Robstown, Texas, has completed casting all 2,651 segments for the CSB and connecting Approaches! The last and most complex expansion joint segments with internal diaphragms were finished earlier this month and consist of 414 cubic yards (CY) of premium-grade concrete and 244,404 pounds of rebar in just four segments. The segments are built to last up to 170 years with a concrete design that requires a minimum strength of 10,000 pounds per square inch (psi), whereas roadwork bridges are about 4,000 psi.

Multiple testing procedures ensure the quality of each concrete batch, with up to six sample cylinders extracted from each concrete truck utilizing a hydraulic press to measure PSI strength. Then, additional testing is performed with a compression machine after casting at 7, 28, and 56-day intervals. Per the Precast Concrete Institute manual for quality control, additional production practices are followed throughout the casting process to ensure the grade of raw materials, optimal curing periods, and post-tensioning reinforcement procedures.

The complex operation of the side-by-side match casting and segment staging is a testament to the precision and experience of the PCY team. Working with nine molds, they cast segments for the approach bridges, connecting ramps, pier caps, and cable-stayed bridge (CSB), with each poured unit ranging from 40 cubic yards (CY) for smaller ramp segments to 80 CY in the CSB closure segments.

The 100-acre yard is equipped with a range of heavy machinery, including 110-ton crawler cranes, 200-ton straddle carriers, two batch plants, eight concrete trucks, forklifts, man lifts, and water trucks for dust control. Flatbed 18-axle heavy hauler trailers are in constant rotation, transporting segments to the job site. Each transport is accompanied by a police escort for traffic control, and bucket trucks to assist with raising low-lying utility lines and traffic signals.

- 2,651 segments: 1,869 for Approaches and 782 for CSB
- Over 850,000 craft manhours worked
- 126,700 CY of concrete and 35,000,000 pounds of rebar
- 150 segments remain to transport to CSB

These accomplishments underscore our team's resilience, technical expertise, and commitment. Congratulations to all involved as we continue the journey towards completing all CSB structural elements of the landmark project this winter!



 @HarborBridgeProject

 @HarborBridgePrj

 @Harbor Bridge Project

CONNECT WITH US



HARBOR BRIDGE