US 181 HARBOR BRIDGE PROJECT

Monthly Status Report

Texas Department of Transportation

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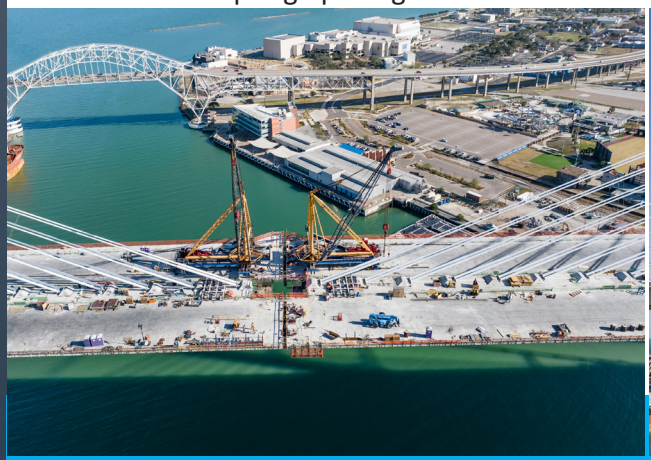
Harbor Bridge Project Cable-Stayed Bridge Milestones

In January, the Harbor Bridge Project (HBP) team placed the final precast segments to set new records for both the widest bridge utilizing precast concrete delta frames and the world's longest precast concrete segmental span. The new cable-stayed bridge is 3,295 feet long between the transition piers with a center span length of 1,661 feet. By month-end, the back span bridge deck was successfully aligned at the approach bridge transitions, with concrete poured to close the gaps. The iconic structural profile, complete with 698 precast concrete box girders and 84 delta frames, and supported by 76 pairs of permanent stay cables, can now be seen for miles around the Coastal Bend.

With final segments secured, there was much to be celebrated in how the cantilever tips aligned with precision despite having procedural adjustments in place if geometry corrections were necessary. Bridge engineers and technical teams remain focused on procedures to finish the final center span cast-in-place closure pour of approximately 30 cubic yards of the premium 170-year concrete mix to secure the final gap of less than three feet.

Here is an overview of the steps outlining the complex back span and center span closure procedures. Once the engineer of record confirms final alignment and the cantilevers are secured using engineered temporary works, the formwork is installed for each cast-in-place closure joint, thus allowing the installation of the reinforcing steel cages. The longitudinal and transverse post-tension ducts are coupled, profiled, and appropriately secured to prevent movement during the concrete placement. Embedded items such as electrical conduit and drainage hardware are secured into the final position. Temperature and mild to moderate wind conditions are essential to a successful operation, necessitating the procedure to occur after sunset and finish soon after sunrise. Before concrete placement commences, final quality checks from survey reviews to equipment viability assessments must be performed. Mixing pump trucks are utilized to discharge the concrete while crews work in unison to vibrate the concrete continuously during the pour, providing consistency and consolidation as the concrete is placed. The concrete is methodically guided into place to ensure the formwork is filled entirely and without voids. After finishing the pour, thermal curing blankets are layered over the slab, and heaters are positioned to aid the curing process. Once the concrete meets the desired strength, the longitudinal post-tensioning tendons are stressed to their final force to complete the closure operation.

All HBP partners are eager to showcase an official Cable-Stayed Bridge 'topping out' in the coming weeks. Over the next few months, crews will continue structural painting and finish work to install guardrails, pedestrian fencing, drainage, illumination, and a smooth bridge deck surface ahead of a late spring opening.



HARBOR BRIDGE
Corpus Christi, Texas