US 181 HARBOR BRIDGE PROJECT

Monthly Status Report

Texas Department of Transportation

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HARBOR BRIDGE PROJECT HIGHWAY CONSTRUCTION

HBP roadwork crews have been on task to complete final surface paving for nearly six and a half miles of newly constructed I-37, SH 286, and US 181 mainlanes and frontage roads this spring. Following is an overview of the traffic control planning, material quantities, and quality testing required to complete the new driving surfaces connecting to and from the new Harbor Bridge.

Opening new highways and frontage roads on the HBP requires substantial quantities of layered aggregates to achieve a final driving surface. Throughout the project, an eight-inch lime-treated subgrade is mixed and laid to stabilize the earth, enhancing strength and durability, to support heavy loads on the driving surface. Next, a six-inch layer of cement-treated base (CTB) like crushed concrete is placed to protect the subgrade and establish a moisture-resistant base to distribute the weight of heavy traffic loads. Additional layers of 'Type B' and 'Type D' hot mix asphalt (HMA) complete the frontage roads and highway lanes. Up to seven and a half inches of Type B HMA, a somewhat flexible mix of a larger aggregate combined with oil, are laid and graded, depending on the amount of anticipated traffic. HBP mainlanes and frontage roads are finished at full width with a two-inch layer of Type D HMA made with a smaller aggregate combined with oil and sand to provide a smoother, quieter driving surface that displaces water.

In February, March, and April, our traffic control team worked nights and weekends to close roads and reroute motorists through detours as field engineers supervised final surfacing operations. To date, 71,000 tons of subgrade and 170,922 tons of CTB have been placed project-wide. In 2025, 5,431 tons of Type B HMA and 19,313 tons of Type D HMA were layered to advance roadways into the final configuration around the new South Interchange and on North Beach. *2025 Type B HMA quantities are smaller due to previous quantities placed to establish roadways with a temporary surface during ongoing construction.

To achieve TxDOT standards, quality testing is conducted at each step to ensure roadways last up to twenty years. Base layers underwent dynamic core penetration sampling to confirm the compaction of soil, and roller testing checked for appropriate density and microcracking. Gradation testing is performed on the lime subgrade mix to analyze the particle size distribution of granular materials and to achieve compaction density per the design. Final asphalt layer core samples are sent to a lab to determine if the oil-to-aggregate ratio aligns with the design mix. A final drive test is performed on Type D HMA with a censoring truck to verify whether the roadway smoothness aligns with International Roughness Index (IRI) standards. The lower the IRI value, the smoother the pavement will be. Upon achieving quality checks and passing third-party inspections, striping operations are mobilized in to paint six-inch reflective delineators for lanes and shoulders.

In May, crews will focus on US 181 mainlanes, frontage roads, and ramp access to the new bridge on North Beach. Addressing punch list details and project-wide walkthroughs will continue with commuter safety in mind as we prepare for the public to travel over the new Harbor Bridge.

HARBOR BRIDGE
Corpus Christi, Texas