

## December 2023

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Corpus Christi, Texas

## Harbor Bridge Project 2023 Highlights and Progress

**UTILITIES:** City of Corpus Christi U tility Packages were completed as follows: Water - 10/11, Wastewater 11/12, Gas 18/18, and Fiber - 2/2. Completed all North Beach Water, Wastewater, and Gas Packages. **DRAINAGE:** By year-end 2023, several HBP drainage packages were finished, with overall project drainage

reaching 85% completion. Excavation of the Salt Flat Channel alongide the South Approach continued.

**ILLUMINATION:** Completed relocations and new installation of 23/23 high mast light poles, 7/22 residential drilled shafts remain, and 34/83 TxDOT drilled shafts were finished.

**ROADWORK:** Structure and roadworks crews achieved numerous milestones last year: All remaining HBP substructure footing piles, foundations, columns, and pier caps, along with nine soil nail and mechanically stabilized earth retaining walls, were completed. New construction of sidewalks, driveways, curb/gutter, riprap, barrier walls, traffic rail foundations, sign columns, and concrete-asphalt pours topped off a busy year. Project-wide current and future connectivity progressed substantially with the following HBP accomplishments: Completed all structural elements of northbound (NB) and southbound (SB) IH 37 direct connectors to US 181. The new Leopard Street Bridge opened to connect motorists and pedestrians from Port Avenue to Staples Street. IH 37 NB and SB traffic switches onto new mainlanes and a bridge overpass occurred above the new US 181 connection. Roadways and sidewalks along Doss, Mestina, and Coke streets were rebuilt and opened to commuters. Lake Street opened with a new bridge and sidewalks connecting northside residents from Sam Rankin Street to Port Avenue. A turnaround at Nueces Bay Blvd and the NB IH 37 frontage road opened, improving industrial traffic flow. A fully restored and elevated Breakwater Avenue reopened to smoothly route North Beach attraction visitors to the W Causeway Blvd frontage road for access to SB US 181. Our team began building the new Southwest Loop Ramp to connect from SB US 181 to IH 37 towards the Downtown area. This Winter, crews are proceeding with mass excavation and demolition around the new South Interchange, preparations for a realignment of SH 286, and the opening of a new ramp from NB SH 286 to Staples Street.

**OPERATIONS AND MAINTENANCE:** Removed Heavy Debris – 430 miles \* Repaired Silt Fences – 4950 feet \* Repaired Guardrail – 200 feet \* Removed Litter – 197 acres \* Prevented Weeds – 155 acres \* Maintained Signs – 540 each \* Cleaned Inlets – 249 each \* Repaired Potholes – 309 each \* Swept – 458 miles \* Mowed – 138 acres \* Repaired Drain Inlets – 170 each \* Placed and Maintained Grass Seeding – 60,000 square feet.

**PRECAST YARD:** Cast 238 main span segments and delta frames to complete 2643/2651 CSB and Approach Bridge elements. By Spring 2024, the remaining four expansion joints and four closure pour segments will be cast to complete the CSB northbound and southbound main lanes. 2022/2561 segments and delta frames have been delivered to the Approach Bridges and CSB Towers.

**NORTH APPROACH BRIDGE(NAB)**: Crews completed all remaining substructure elements – 858 PreCast Piles at 110 feet each, 44 footings, nine cofferdams, 244 Column Lifts at 14 feet each, and 44 bent pier caps. By Fall, superstructure crews completed placing segments for the remaining 8/42 spans utilizing a falsework erection method. The US 181 abutement and retaining walls connected to the NAB reached 90% completion.

**SOUTH APPROACH BRIDGE (SAB):** Superstructure crews completed the remaining 10/56 spans utilizing the Launching Gantry Crane (LGC) to lift and place segments and expansion joints. Closure pours to ramps and installation of drainage and electric lines topped off the milestone of a structurally complete SAB. After numerous cycles of forward/back launching and side-shifting, the LGC was placed in an out-of-service mode for disassembly of the 1500-ton machine to begin this Winter.

*NAB and SAB:* The utility team installed the majority of hangers and conduits for Intelligent Traffic Systems. Finishes such as drainage tie-ins inside the tunnels below the bridge decks, guardrail, traffic barriers, pedestrian fencing, and painting are all that remain to complete the Approach Bridges.

## CABLE-STAYED BRIDGE (CSB):

North Tower: Completed 18/20 upper tower (UT) lifts \* Lifted, placed, and post-tensioned 100/346 segments and 12/42 delta frames \* Installed and stressed 4/19 sets of permanent main/back span stay cables. South Tower: Completed 15/20 UT lifts \* Lifted, placed, and post-tensioned 68/346 segments and 8/42 delta frames \* Installed and stressed 2/19 sets of permanent main/back span stay cables.

Both CSB Towers: Installed main/back span stay-stressing platforms \* Executed several tower crane jumps and tie-ins \* Assembled and commissioned four S-50 Derrick Cranes - two on each CSB tower bridge deck \* Installed steel stay anchor boxes inside UT lifts \* Placed anchor boxes and struts for delta frame median slabs \* Installed rebar and stressed transverse post-tensioning in main/back span median slabs \* Constructed and poured 24 total additional drilled shafts at 205 feet each and backfilled to complete the CSB footing expansion \* Completed rebar, footing pours, and erected sections for temporary back span towers.