

Harbor Bridge Construction Corpus Christi, TX Case Study

JOB

The Texas Department of Transportation has begun replacing Corpus Christi's iconic Harbor Bridge with an impressive feat of civil engineering. The new Harbor Bridge, slated to open in 2021, will provide more safety and give more clearance for the waterways leading into Corpus Christi. This billion dollar project requires an astounding amount of work, in all conditions, to stay on track.

Using nitrogen, instead of cooling tubes, is a game-changing event that is saving FDLCC Corpus Christi several million in costs.

SOLUTION

The use of NITROcrete allows the contractor to control concrete temperatures at the point of placement, and negate the need for cooling tubes and post cooling methods in the forms. Reducing the concrete temperature leads to a lower rate of hydration heat, reducing the temperature differential in the forms and decreasing the opportunity for temperature-induced cracking in the concrete. Using NITROcrete is resulting in significant schedule and monetary savings to the contractor and the Texas Department of Transportation.

NITROcrete's cost-effective solution for cooling ensures this enormous mass concrete project stays on track, all while providing the assurance of precision-cooling without the hassle, liability, and downtime of other methods.

CHALLENGE

The concrete bases of the bridge are roughly the size of two basketball courts, and the height of the towers are over 500 feet, making it the tallest structure in South Texas. The mass of the concrete elements, in addition to the South Texas summer heat, requires extreme temperature control of the fresh concrete to avoid severe and excessive temperatures in the forms. Historically, in almost all cases, concrete pours of this size would require cooling tubes -- an expensive and cumbersome solution -- for controlling the concrete temperatures.

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