

DEPICTING *Their Homeland*



Above: The two-lane roads with concrete curbs being constructed at this time will one day be the frontage roads for a divided four-lane highway.
Left: Bay Ltd. is underlaying these new lanes with 10 inches of Type A Grade 1 limestone base. The pavement consists of five inches of Type B asphalt overlay with two inches of Type C asphalt.

Bay Ltd. construction of what otherwise might have been a simple railroad overpass will become a landmark.

By Liz Moucka

Bay Ltd. of Corpus Christi is nearing the final phases of a \$22,664,271 project just west of Gregory in South Texas, where they are constructing a railroad grade separation and interchange facility along US 181. Bay Ltd. began the 3-mile long project in June 2005; despite delays related to Hurricane Rita later that year, Bay expects to finish in December 2007, more than one month ahead of schedule.

While most of the project consists of constructing two-lane frontage roads in each direction, the eye-appealing aspect is in the railroad overpasses and their pre-cast MSE (mechanically stabilized earth) walls. TxDOT Corpus Christi District engineers designed the reliefs to illustrate the area's economy:

- a locomotive signifies not only that this is a bridge over the railroad tracks, but also the vast amount of freight that moves
- through these cotton fields
- to and from the Port of CorpusChristi, depicted by a cargo ship.

Reinforced Earth Co. used these designs in creating pre-cast concrete MSE panels in their Waco facility. To facilitate the fabrication of the panels, TxDOT first provided The Reinforced Earth Company (RECo) with electronic files of the artwork. RECo then overlaid the artwork upon its proposed network of panel joints. Upon TxDOT approval of the layout, RECo used those same electronic files to manufacture form



liners with the necessary precision to ensure that the artistic features were properly aligned between adjacent panels.

The purpose of the project is to provide motorist safety along U.S. 181, according to Dennis Myers, project engineer for the TxDOT Corpus Christi District.

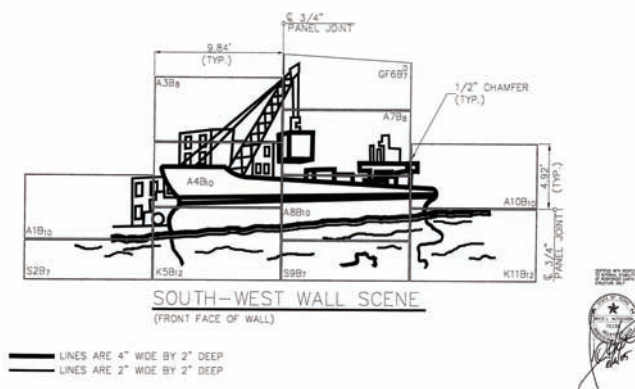
"The construction will create grade separation overpasses for U.S. 181 over the Southern Pacific railroad tracks and two local roads, FM 2986 and Spur 202," Myers explained. "The two-lane roads being constructed at this time will have to serve the area for another five to 10 years, when TxDOT expects to be able to fund U.S. 181's expansion into a divided four-lane highway."

Bay Ltd. is underlaying these new lanes with 10 inches of Type A Grade 1 limestone base material from Martin Marietta's facility on the opposite side of Hwy. 136, just a short haul away, according to Bay Ltd. Project Manager Armando Zendejas. "We will apply five inches of Type B asphalt and overlay that with two inches of Type C asphalt supplied from our own plant."

As Bay Ltd. trucks deliver the hot mix asphalt into windrows, the crews place each lift with their Blaw-Knox paver and compact it with an Ingersoll-Rand pneumatic roller.

Major milestones have included the completion of the FM 2986 bridges and the Spur 202-US 181 connection. The next

Above & Below: The most eye-appealing aspects of the railroad overpasses are their pre-cast MSE walls depicting the area's economy of rail freight, sea-going freight and agriculture.



major milestone will be the completion of the southbound railroad overpass. At the end of March, 83.9 percent of the contract was complete (based on dollar amount of work completed) within 71.8 percent of the allotted time (655 contract days).

Because this area is quite flat, water accumulates after rainfall, so land contouring was designed into the specifications to create two water retention ponds. Near the town of Gregory, underground utilities proved a challenge, but Bay Ltd. crews succeeded in installing approximately 9,400 feet of concrete stormwater lines.

Headquartered in Corpus Christi, Bay Ltd. provides construction, fabrication and maintenance services to industries involved in refining, chemical and petrochemical manufacturing, gas processing and transmission, offshore exploration and production, power generation, and environmental remediation. The company also builds roads, highways, bridges, and marine facilities for local, state and federal agencies as well as private industry. ■

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Pile driving	Webber Balke
Steel/rebar	CMC Rebar
Underground pipe	Hanson
Aggregate base material	Martin Marietta
Asphalt	Bay Ltd.
Concrete	Quality Concrete
Precast bridge panels	Heldenfels Enterprises
Precast MSE panels	Reinforced Earth Co.
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