Falsework Construction Method

While the Overhead Gantry Crane continues to erect spans and advance the North Approach superstructure towards completion, an alternative precast segmental erection method, known as Falsework Erection, is being used to erect the first spans on the project’s South Approach. Falsework consists of temporary structures used in construction to support a permanent structure until its construction is sufficiently advanced to support itself. In this case, shoring towers are used to support the precast segments until the draped tendons are fully stressed and the span is self-supporting. Geometry control is very tight in precast segmental erection, so the crews must be very precise when installing the shoring towers and erecting the segments. Falsework methods are routinely used for new builds, ensuring the structural integrity and desired architectural design of the finished product. Falsework originated in ancient times and the Romans were renowned for using these systems in construction of bridges and viaducts. Today, falsework plays an important role as temporary support for formwork in the construction of bridges.

Protecting Against Environmental Disturbances

The HPB is built alongside several drainage channels which traverse different areas of the project. A lesser known storm water best management practice (BMP) for some drainage channels are Turbidity Curtains. These devices consist of heavy-duty fabric 2-3 feet high stretched between small canals/channels. These curtains, also called floating silt barriers, can be seen in three areas of the project. 1) Near Burleson Street – North Beach area. 2) Near NuStar Energy – North Beach area. 3) Near Brewster Street – South area. The purpose of a Turbidity Curtain is to reduce the impact of erosion and control silt and sedimentation loads from moving downstream. A properly installed curtain will not completely stop the flow of water, but only slow down water velocity while preventing discharges in unpermitted regulated waters. Turbidity Curtains, when combined with other storm water BMPs, form an effective and comprehensive control to maintain compliance with the Clean Water Act.