Seismic Retrofit Celebrates Milestone as Erection of 525-Foot-Tall Tower Begins

Oakland, July 28, 2010 – The first steel tower section for the San Francisco-Oakland Bay Bridge’s Self-Anchored Suspension Span (SAS) is being placed onto a massive marine foundation today. This historic lift marks the moment when construction moves in a different direction – straight up – as the 525-foot-tall tower rises from the bay.

"Today we celebrate another impressive engineering and construction milestone in the ongoing seismic retrofit of one of the country's most vital bridges," said Dale Bonner, Secretary of the California Business, Transportation and Housing Agency. "The Self-Anchored Suspension Span is the signature element of the new East Span, and the placement of the first tower section today is another significant step towards an opening in late 2013."

The first four tower sections arrived in the Bay Area on July 9. The tower is actually made up of four independent legs, each of which is composed of five vertical sections. The first four sections are 165 feet tall, each weighing 1,200 tons or 2.3 million pounds.

A mechanical platform called a strand jack gantry positioned atop the erection tower will lift the segments lying horizontally on a barge into a vertical position over the tower’s foundation, and then will lower them into place.

“The Eastern Span’s Self-Anchored Suspension Span is the largest public works project in California’s history,” said San Francisco Mayor Gavin Newsom. “As these tower sections arrive all the way from San Francisco’s Sister City Shanghai, the world watches as we mark a milestone for our region in terms of seismic safety, transportation infrastructure, creating jobs, and stimulating our regional economy.”

"The team behind this bridge is comprised of all-stars from around the world," added Alameda County Supervisor Scott Haggerty, who serves as Chair of the Bay Area Toll Authority. "Every segment is designed and built to extremely rigorous standards, and the result is world class. But we are mindful that there still is much work ahead of us, and we are in a race against time."
The first sections are being placed onto the tower’s massive marine foundation, a concrete-encased steel footing box that is 85 feet long, 73 feet wide and 21 feet thick. The foundation has 13 concrete piles enrobed in steel casings that reach 196 feet below the waterline to anchor into bedrock. After the other sections are placed, workers will then attach the tower legs' cross bracings and shear link beams.

Shear link beams, which connect the tower’s four independent legs, are designed to move independently of the tower to absorb seismic energy during an earthquake and to protect the tower from catastrophic damage. The damaged beams can be removed and replaced.

"Only recently have we witnessed what this new bridge will truly look like," said Bob Alvarado, Chair of the California Transportation Commission. "As we place this first tower segment today, it becomes crystal clear that California will have another symbol of its constant effort to dream big and deliver new cutting edge ideas that benefit society."

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