



THE SELF-ANCHORED SUSPENSION SPAN (SAS) FIRST MAIN CABLE STRAND PLACEMENT

December 19, 2011



KEY FACTS

- The Self-Anchored Suspension Span has one main cable.
- The single cable, and the span's asymmetric design (the span is longer east of the tower) gives the SAS a dramatic and distinct appearance.
- The nearly 1-mile long cable is the longest looped suspension cable in any bridge; the cable is anchored into the east end of the roadway, traveling up and over the single tower to wrap around the west end before traveling back along the same path to anchor into the east end; in essence, the cable acts like a giant sling.
- The cable is 2.6 feet wide, the largest for a self-anchored suspension span.
- The cable will have 137 strands, each comprised of 127 steel wires.
- Each steel wire is 5 mm in diameter.
- There are total of 17,399 steel wires in the cable.
- End to end, the wires would be more 14,800 miles long, or nearly 60 percent of the Earth's circumference
- Each steel strand is 2.5-inches wide.
- The cable weighs 5,291 tons or nearly 10.6 million pounds.
- Anchoring the main cable in the deck itself puts the span into compression and enables it to remain standing. In a traditional suspension span, tension created in the main cables is resisted by anchorages in the ground.

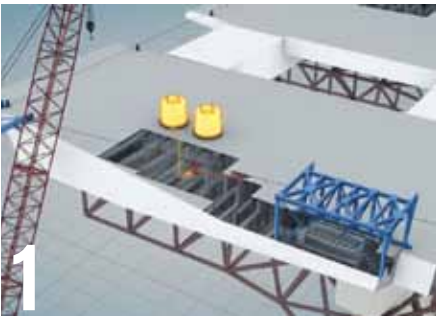
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CABLE STRAND INSTALLATION PROCESS



1 Pre-fabricated strand is attached to the hauling system at the east end of the westbound deck



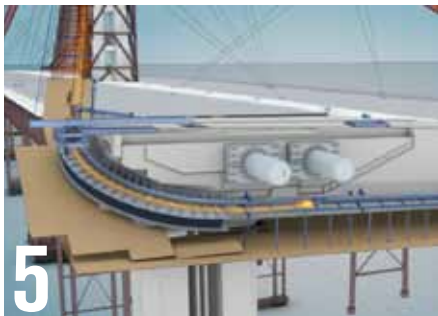
2 Hauling system pulls the strand westbound, the reel remains stationary at the east end of the deck as the strand unspools



3 Strand is hauled over the Tower Cable Saddle



4 Strand reaches west end and is attached to secondary hauling system



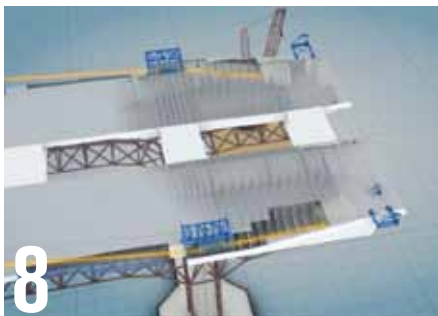
5 Secondary hauling system pulls strand around and under the west end of Self-Anchored Suspension Span



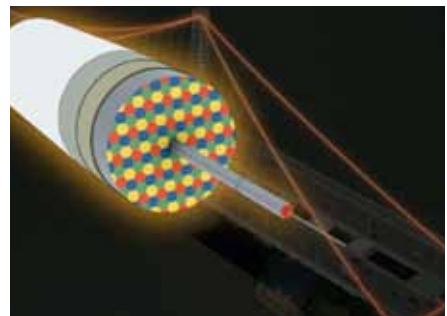
6 Strand is re-attached to primary hauling system and is pulled up and over the tower to the east end of the eastbound deck



7 Strand is positioned within the cable saddles at the tower and the west end of the SAS



8 Strand is anchored into the east end of the SAS



Cable is made up of 137 strands. Each Strand has 127 individual wires