HOW TO BUILD A FLOATING BRIDGE

Construction of a floating bridge – especially the world’s longest floating bridge – presents some interesting and unique challenges and opportunities. Below are the major steps it took to build this bridge.

**Step 1:** Start building the bridge’s pontoons, anchors and precast roadway sections in Aberdeen, Tacoma and Kenmore.

**Step 2:** Begin constructing a staging area near Medina with construction barges and cranes. Drive temporary piles in Lake Washington.

**Step 3:** Install anchors, such as these 100-ton fluke anchors, for the floating bridge.

**Step 4:** Begin towing pontoons constructed in Aberdeen and Tacoma to Lake Washington.

**Step 5:** Install cofferdams near the lake’s shore to build bridge piers for the East Approach structure.

**Step 6:** Build East Approach bridge piers inside cofferdams and begin pontoon assembly in a nearby staging area.

**Step 7:** Begin joining football-field-length longitudinal pontoons to the bridge’s “cross” (or end) pontoon near the Medina shoreline.

**Step 8:** Begin building the floating bridge’s superstructure atop the pontoons. The superstructure has 772 columns, 331 concrete girders, and 776 precast roadway deck sections.

**Step 9:** Continue assembling pontoons and constructing the East Approach.

**Step 10:** Install a series of 190-foot-long girders that make up the transition spans linking the floating bridge to its stationary approach bridges at both ends.

**Step 11:** Complete roadway superstructure at the new floating bridge’s west end where it ties into the interim West Connection Bridge and existing SR 520 highway in Seattle.

**Step 12:** Complete final testing, inspections and commissioning, and then switch traffic onto the new bridge.