The seismic response of the bridge was evaluated using non-linear time history analyses in LSDyna, inclusive of the viscous dampers. This advanced analysis was the cornerstone for the design of the bridge, ensuring that the towers could withstand seismic pressures. The bridge was constructed using the balanced cantilever method, commencing at the towers and progressing towards the mid-span and end bents in a controlled sequence, carefully monitoring geometry and stability at every step. Deck and tower isolation is achieved through a system of 34 seismic dampers around the towers and end bents. This made possible the slender tower structures that we see today and for which the Gerald Desmond Bridge will be appreciated for in the years to come. The main span bridge forms part of a 2-mile corridor with concrete approach viaducts connecting the Port to its downtown and surrounding communities.

From the top of the eastern tower looking west: the bridge was constructed using the balanced cantilever method, commencing at the towers and progressing towards the mid-span and end bents in a controlled sequence, carefully monitoring geometry and stability at every step.

The first long-span cable-stayed bridge in the state of California.