



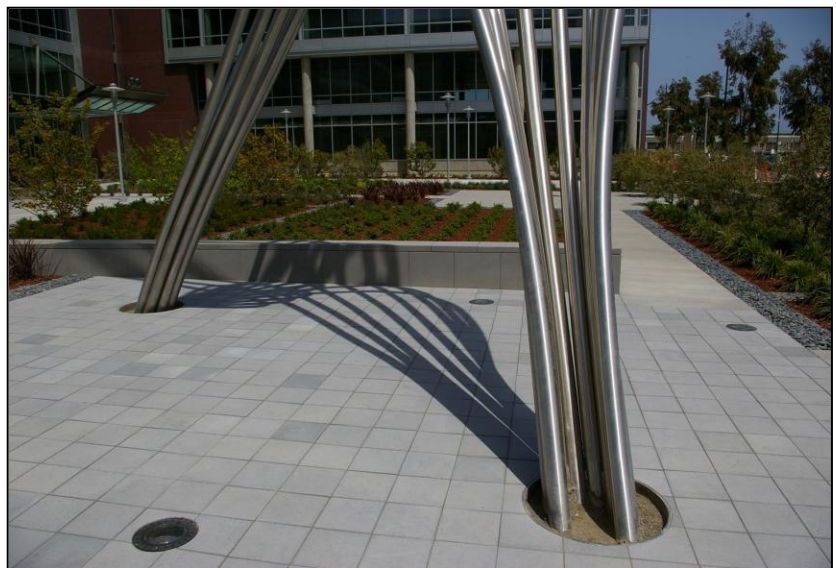
## Richard Deutsch's "Hulls" Sculpture Mission Bay, San Francisco, California

### Civil and Structural Engineering



Mesiti-Miller Engineering was approached by the sculpture artist Richard Deutsch with a challenge: take his form and make it structurally possible. Mr. Deutsch's goal was to bring together form and movement, allow human interaction, and reflect the context of the surroundings; specifically, the shipbuilding history of Mission Bay. Like the ships once tendered nearby, the sculpture is of massive scale and the structural challenges created by its mass were the problems we solved.

MME's primary objective was to analyze and design the sculpture for the inherent wind and seismic loads while minimizing the diameter of the stainless steel pipe members to retain the sculpture's slenderness and translucency. All loads needed to be carefully directed into the earth through specialized connection and foundation design, all while remaining invisible in the finished product. Rigorous three-dimensional computer analyses were iterated to properly model the organic shape and ensure all loads were accurately resolved. Through careful coordination with Mr. Deutsch and his staff, the vision for the massive yet slender "Hulls" sculpture was realized.



#### Client Reference:

Richard Deutsch  
Richard Deutsch Studios  
340 Swanton Road  
Davenport, CA 95017  
(831) 427-2529