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## Relevant Experience

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### NAVAL EDUCATION & TRAINING CENTER MARINA DESIGN PHASE I & II Newport, Rhode Island



**Northeast Engineers & Consultants, Inc. (NE&C)** was contracted to design an expansion of the existing Naval Education & Training Center marina. The site has been used as a refueling depot dating back to 1900. NE&C's comprehensive design for Phases I and II of the project included new piles, floats, docks, a boat ramp and a complete electrical system upgrade. It required that all structures withstand the wind and flood elevation of a 100-year storm.

NE&C conducted a bathymetric survey of the existing marina and analyzed geotechnical borings taken throughout the project site. Pile design was also included as part of our plans and schematics. We designed a boat ramp column and beam to provide the deck for an ADA compliant ramp and float system that was later erected. This included a concrete float system that was created for allowable freeboard when fully loaded. A cofferdam design for below-sea level construction was planned and utilized during the subsequent construction project. In addition to designing the overall marina layout and the mooring tackle design, NE&C also created a new pump station, electrical and lighting system.

Throughout the construction phases of the facility expansion, NE&C provided support engineering, surveying, cost estimating and materials testing services including survey layout, pile driving witnessing and verification, pile lateral force pull test procedure and witnessing, steel inspection, concrete testing and certification of construction.