



The Castle Group
Innovation in Action™

W.J. Castle P.E. & Associates
Hydro-Marine Construction
Simplified Bridge Systems

Sets the Standard for

Structural & Marine Engineering, Construction, & Design/Build Services

BULKHEAD DESIGN & BUILD



Project: Design & Installation of
Main Bulkhead/Wave
Breaker at Canal Point Marina

Location: Point Pleasant, New Jersey

Description: W.J. Castle, P.E. & Associates, P.C. was retained by the Canal Point Marina to design/build a new bulkhead at their facilities. The original bulkhead was undermined and deteriorated and no longer functioning as designed.

Castle's repair design included installation of new composite sheeting in front of the existing timber bulkhead and installation of 21 additional 12" diameter timber piles to be placed between the existing deteriorated piles. However, the existing piles and walers were also utilized in the construction of the new bulkhead.

Upon completion of design and details, *Hydro-Marine Construction Co., Inc.* was retained to perform the actual construction of the new bulkhead. Approximately 290' of new composite sheeting was installed with an additional 20 L.F. along the walkway.

Twenty-one new timber piles were installed along the bulkhead and three additional 10" diameter timber piles were installed near the walkway as per the client's specification.

All work was completed by October 2008 at a cost of approximately \$400,000.00.

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