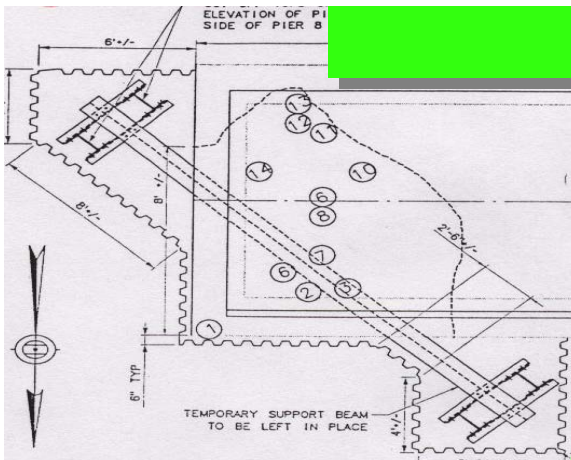


Railway Bridge Rehabilitation New Jersey Transit

**NJT Bridge 1362-157
Over Manasquan River, Brielle NJ**

SUBAQUEOUS INSPECTION SURVEY

Atlantic Engineering, LLC performed a detailed underwater inspection utilizing surface supplied dive equipment with voice communication to assess the condition of the substructure under an emergency situation to produce repair drawings. Significant scour had exposed timber piles and resulted in extensive marine borer damage.



REPAIR RECOMENDATIONS

Conditions observed required conceptualization and implementation of immediate temporary repairs. Atlantic Engineering continued construction inspection of repair work in progress.

BRIELLE BRIDGE

**Completion Date: December 2001
Construction Cost: \$3,000,000**

**NJT References: Mike Tomasetti P.E.
HNTB References: Tom Potts P.E.**

UNDERWATER CAPABILITIES

- DETAILED INSPECTION SURVEYS
- CONSTRUCTION INSPECTION
- VIDEO & 35mm PHOTOGRAPHY
- HYDROGRAPHIC SURVEYS
- CONFINED SPACE & PENETRATIONS
- P.E. DIVER INSPECTION
- ULTRASONIC THICKNESS MEASUREMENTS

Atlantic Engineering LLC

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New Jersey Transit—Inspection and Evaluation 14 Bridges

UNDERWATER INSPECTION SURVEY AND EVALUATION



Atlantic Engineering, LLC was selected to inspect and evaluate the underwater conditions of 14 New Jersey Transit Bridges between the years of 2007 and 2008. All Atlantic Engineering employees have track and OSHA safety training and have extensive experience in railway bridge design and construction. The bridges consisted of both moveable and non moveable bridges. Services provided include 35mm above and underwater photography, digital underwater video, full sounding documentation and digital mudline projection drawings for all elevations of the structure. Reports containing all conclusions and

findings were prepared according to the NJ Transit standards. Reports also include recommendations for future inspections and repairs to be performed.



Bridges inspected included locations in Essex, Hudson, and Monmouth counties.



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Substructure / Scour Repairs New Jersey Transit

**NJT Bridge Carrying Boonton Line over the
Passaic River, MP 19.43, Little Falls/Wayne, NJ**

INSPECTION, EVALUATION, DESIGN

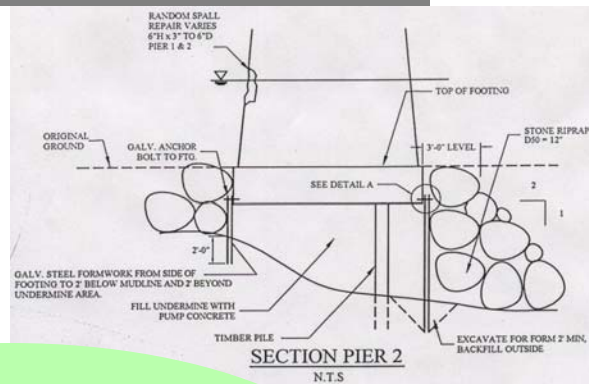


Atlantic Engineering, LLC was first contracted to perform an underwater inspection and evaluation report of the bridge. Pier 2 had a history of scour and undermining problems. Atlantic Engineering quantified the deficiencies through detailed measurement, gathering sufficient data to produce detailed repair plans. Along with the drawing package, the necessary DEP permitting applications were prepared.

CONSTRUCTION INSPECTION AND MONITORING

Atlantic Engineering also developed estimates for the construction work and prepared a bid package. Atlantic Engineering continues with involvement in the entire construction process, providing P.E. Divers to inspect the workmanship for conformity with the repair documents. The versatility of our staff allows the same individuals to not only “crunch the numbers” in

the design process, but also to provide hands-on underwater inspection. Our Professional Engineer Divers have construction experience as well, enhancing their knowledge of underwater marine construction.



NJT Boonton Line over the Passaic River

Completion Date: On-going

NJT References: Richard Olsen P.E.

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Marine Borer Study New Jersey Transit

Hoboken Ferry Terminal
Hoboken NJ

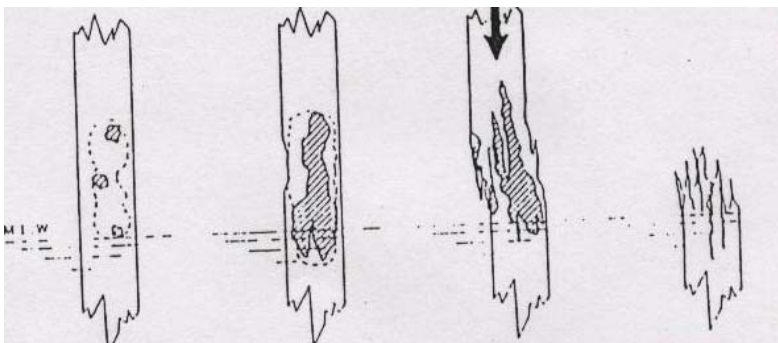
SUBAQUEOUS INSPECTION SURVEY

Atlantic Engineering, LLC is performing a three year marine borer study which includes the placement, retrieval and analysis of sacrificial timber test boards. A detailed report with the results of each inspection is prepared documenting the extent of marine borer activity along with photographs and recommendations. The information is being used to prioritize repairs.



REPAIR RECOMENDATIONS

Atlantic Engineering, LLC is familiar with deficiencies observed that are characteristic of the various species of the marine borer. The two species typically found in the northeast are the Limnoria and the Teredo. Pile wrap repair details are provided in order to prevent further damage. If piles are in an advanced state of deterioration, and unable to support the design loads, the pile is encapsulated with concrete or replaced.



HOBOKEN FERRY TERMINAL
Completion Date: December 2002

NJT Reference: Frank Smolnar, P.E.
Contract Amount: \$150,000

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