

UNDERWATER INSPECTION REPORT

for

GANGPLANK MARINA

Prepared for:

GUTHRIE DIVING COMPANY

Prepared by:



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Introduction

This report has been prepared to evaluate the condition of the Gangplank Marina in Washington D.C. An underwater inspection was performed by Guthrie Diving Company (GDC) from August 6, 2007 to August 17, 2007. The structural elements of the docks, the truss frames, cross-bracing, and floatation devices were all inspected for condition and serviceability. The purpose of this investigation was to develop repair/replacement recommendations based on the findings of the GDC's underwater inspection.

Site Description

The marina was constructed in 1969 by Atlantic-Meeco. There are 11 total docks, docks A thru I, K and T. The docks consist of triangle truss structural members. Docks A, B, and C have bucket floatation devices and the remaining docks have polystyrene foam. The decking varies throughout the marina from concrete pans to timber planks.

Underwater Inspection

The main problem throughout the marina is the deterioration of the diagonal supports at the ends of the finger piers. A number of these braces have already been repaired with welds. Approximately 150 diagonals have been broken and some of the welds have not held. Ten (10) bolts at the diagonal connections have been sheared off, eighteen (18) bolts are loose, and there are six (6) diagonals missing completely. Another problem encountered during the inspection was that six (6) sections of the struts between the finger piers were missing. Nine (9) strut sections were not connected to the finger piers, two (2) were bent and twisted, two (2) strut splice connections were loose, and one (1) strut splice connection was missing bolts. Thirty-one (31) vertical truss members are either broken or not connected. There are also fifteen (15) loose bolts at the vertical truss connections, and eleven (11) missing bolts. See attached Figures for locations of these problems.

The bucket floats are in good condition. The polystyrene floats have approximately 25%-50% section loss; however, some exhibit up to 100% section loss, but are still functioning properly.

Surface Inspection

The concrete decking throughout is in poor to fair condition. Several pans have scaling and spalling. The timber decking is in fair to good condition. There is a broken timber deck plank at B Dock at the finger pier between slips 16 and 18 that should be replaced.

Recommendations

Based on the inspection, the following repairs are required:

1. Replace all broken diagonal bracing.

2. Replace missing sections of horizontal struts.
3. Replace all broken vertical truss members.
4. The loose connections should be tightened, bolts added, and members welded as necessary.
5. The concrete pan deck sections should be replaced in the near future.
6. Replace broken timber deck plank on B Dock finger pier between slips 16 and 18.

In lieu of these repairs, the Marina may choose to replace certain docks or the marina in its entirety.