

MacDonald Woods Park



Location: **MacDonald Woods Park**

Owner: **Town of Cary, NC**

Designer: **Ward Consulting Engineers, P.C.**

Contractor: **Fluvial Solutions, Inc.**

Challenge

MacDonald Woods is a low-lying park in the Len's Branch floodplain in Cary, N.C. The area often floods after heavy rain, and an undersized culvert was failing. The Town of Cary wanted to replace the culvert and build up the creek embankments to prevent flooding. A boardwalk was needed to traverse low land, and a bridge was required to cross the creek area.

Solution

Using PermaTrak's extended length precast beams allowed Ward Consulting Engineers to design a structure that spans the creek, avoiding debris buildup that could occur with additional piers. PermaTrak's 26 ft. span bridge links two areas of the park and features boardwalk ramps on either side.

An additional 22 ft. concrete boardwalk structure was installed in the park, required to combat uplift hydraulic forces in the floodplain. The Town of Cary knew they could rely on PermaTrak's durability and lack of maintenance in this type of floodplain environment after several other successful installations in the area.

Becky Ward, President of Ward Consulting Engineers, praised PermaTrak for providing support and being responsive when her team needed help or changes made to construction drawings. "The PermaTrak structure came out really nicely, providing a nice aesthetic bridge. The elevation change of the bridge makes it a very nice view and walk up over the stream. The Town of Cary really wanted a concrete application that was a long-term, low maintenance solution. It achieved what the client wanted," Ward said.

TECHNICAL DESCRIPTION

Boardwalk Lengths: 22 ft. and 102 ft.

Tread Width: 11 ft. 3 in.

Color: Melbourne Tan

Texture: Timber

Installation Date: December 2012



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