



Deval L. Patrick, Governor  
Timothy P. Murray, Lt. Governor  
Richard A. Davey, Secretary & CEO  
Frank DePaola, Administrator



February 7, 2012

Pamela Stephenson, Division Administrator  
Federal Highway Administration, Region One  
U.S. Department of Transportation  
55 Broadway - 10th floor  
Cambridge, MA 02142

SUBJECT: Mitchell River Drawbridge Replacement (Br. C-07-001)  
Chatham, Massachusetts  
Project File #603690

Dear Ms. Stephenson:

I am writing in response to a request made by the Advisory Council on Historic Preservation (ACHP) in a letter addressed to you dated January 11, 2012. The ACHP specifically requested that MassDOT “go on record reaffirming its position with regard to the use of wood pilings, focusing on maintenance, materials, and long-term costs to the Town of Chatham.”

Since the start of this project, MassDOT has maintained that the use of wooden piles in this type of saltwater environment poses many challenges relative to durability, maintenance, and environmental impacts. As part of the Section 106 consultation process, MassDOT conducted a detailed analysis of various alternatives in the form of a Life Cycle Cost Comparison and Alternatives Analysis Report dated April 28, 2011, including an addendum to the report dated May 12, 2011. The report, along with an independent peer review, confirmed MassDOT’s concerns.

The report which compares replacement alternatives that use timber piles and concrete filled steel piles, concludes that timber piles would remain serviceable for a maximum of 30 years while steel pipe piles should remain serviceable, for 80 years or more. These conclusions are based in part on observations of past applications of timber piles in a similar marine environment, both on the existing Mitchell River Bridge in Chatham and the Powder Point Bridge in Duxbury. Replacement of the timber piles in 30 years would also require the replacement of the superstructure resulting in estimated increased maintenance costs of over \$5,000,000 to the Town of Chatham. In addition, many fewer steel/concrete piles would be required for the bridge, minimizing impacts to the marine resources during initial and subsequent future reconstructions. The report also considered the use of factory-wrapped piles, such as “Strong Seal.” Strong Seal does not have a track record of use in this environment, and its use would create new durability, inspection and maintenance concerns. In a letter dated May 31, 2011, the Town of Chatham Board of Selectman who are responsible for care, custody and control of the Mitchell River Bridge, notified MassDOT of their majority vote to support MassDOT’s preferred alternative as the “most prudent balance of aesthetic, functional, and financial benefits for the Town”.

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In a financially constrained environment, MassDOT strives to provide infrastructure improvement projects that offer low long-term maintenance, last at least 75 years and remain cost effective within their life-cycles. Although the wooden superstructure that MassDOT has proposed will require some increased maintenance costs as compared to a steel and concrete superstructure, the wooden superstructure will not be in direct contact with the salt water and will be less costly to maintain than timber pilings. MassDOT's preferred alternative represents a reasonable compromise that uses durable materials in the marine environment and provides a context sensitive solution that addresses the needs of all users.

MassDOT looks forward to working with the Federal Highway Administration and the Section 106 Consulting Parties to design and construct a new drawbridge that will provide years of reliable service for the residents of Chatham and will be in keeping with the long line of wooden bridges that have functioned at this location.

If you have any questions, please feel free to contact Joseph A. Pavao, Jr., P.E., Project Manager at (617) 973-8178.

Sincerely,

Thomas F. Broderick, P.E.  
Acting Chief Engineer

cc: Joseph Pavao, Project Manager  
Damaris Santiago, FHWA  
File Scan: Chatham response to Adv Council