

U.S. Department of  
Homeland Security

United States  
Coast Guard



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16591/0.8/H  
Little Harbor/NH  
March 17, 2016

Mr. L. Robert Landry, P.E.  
Chief of Consultant Section, Bureau of Bridge Design  
New Hampshire Dept. of Transportation  
John O. Morton Building  
7 Hazen Drive  
P.O. Box 483  
Concord, NH 03302-0483

Dear Mr. Landry:

In order to assist the New Hampshire Department of Transportation (NHDOT) with submission of an application for authorization to construct a replacement of the NH Route 1B (Wentworth) Bridge over Little Harbor, mile 0.8, between Newcastle and Rye, New Hampshire, I write to inform you of our preliminary review of navigation survey results. This survey, in conjunction with other information discussed below and the reasonable needs of navigation, requires that your bridge replacement proposal provide for a minimal vertical clearance of at least 16.52 feet.

As you know, the Coast Guard has been working closely with NHDOT for several years on the replacement of the functionally obsolete and structurally deficient single-leaf bascule lift bridge on NH Route 1B across Little Harbor. Initially, NHDOT proposed replacing the existing bridge with either another single-leaf bascule bridge (drawbridge) or a fixed bridge. The proposed bascule bridge option would preserve the existing vertical clearance of 65 feet and increase the horizontal clearance from 29 feet to approximately 44 feet. The proposed fixed bridge option would reduce the vertical clearance to 14 feet and increase the horizontal clearance to 51.5 feet. From your Navigational Report of June 23, 2015, we understand that NHDOT prefers the fixed bridge option.

A review of NOAA chart#13283 indicates this area is the main route from points upstream to Portsmouth Harbor and the Atlantic Ocean. The nearby Sagamore Creek US Route 1A Bridge was constructed with a vertical clearance of 16.52 feet above mean high water (MHW) to accommodate commercial fishing vessels upstream of the bridge. Vessels generally only transit the Route 1B Bridge at low tide to avoid the four-hour advance notice to open the bridge, and avoid using the other bridges to exit the back channels because of the low clearances, shallow water, and because of the longer distance to the fishing grounds. Replacement of the Route 1B Bridge with a fixed vertical clearance of 14 feet would make this new bridge the governing structure for vertical clearances on the waterway, and would not satisfy the intended purpose of the US Route 1A Bridge to accommodate commercial fishing vessels.

Historically, bridge openings occurred more frequently than in recent years. In 1995 and 1996, there were 51 total openings, 47 of which were for vessels. Access to Sagamore Creek and the

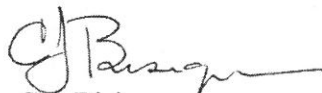
Little Harbor back channels has been limited the last several years due to shoaling. In February 2016, however, the U.S. Army Corps of Engineers (USACE) announced they have funding and a schedule to dredge the channel. We anticipate this will allow more/larger vessels to utilize the waterways. Accordingly, we recently reached out to local mariners and facilities to determine how many vessels would utilize the back channels after the dredging project is complete. While we only received one response, we anticipate that the dredging project will increase waterway use.

Likewise, the responses to our public notice were largely in favor of the drawbridge alternative. Several members of the public commented to encourage replacement with a moveable bridge. The USACE stated that the greater clearance (along with the proposed greater horizontal clearance) associated with the bascule lift bridge would be optimal when dredging/maintaining the federal channel; the greater clearances would provide full access to the Corps' dredging equipment, saving time and money on future projects. Coast Guard Sector Northern New England and local mariners and maritime organizations noted that the drawbridge would allow the back channels to be used as a safe harbor of refuge during storms by larger vessels that normally moor outside of the Route 1B Bridge.

While a bridge replacement that maintains the 65-foot vertical clearance would be optimal, we were unable to produce sufficient data to support it. Based on the information presently available, we have made a preliminary determination that to provide for the current and prospective needs of navigation on waters upstream of the existing NH Route 1B Bridge, an application for a bridge replacement should provide at least 16.52 feet of vertical clearance above mean high water. Please note that this preliminary determination does not constitute an approval or final agency determination, which we can only make in accordance with regulation and after NHDOT submits a complete bridge permit application.

To assist with the application for a bridge permit, please refer to the Coast Guard's Bridge permit Application Guide, COMDTPUB P16591.3 (series), which is available on line at: [http://www.uscg.mil/hq/cg5/cg551/BPAG\\_Page.asp](http://www.uscg.mil/hq/cg5/cg551/BPAG_Page.asp), and contact me at the number above with any questions. We look forward to working with NHDOT and moving this project forward.

Sincerely,



C.J. Bisignano  
Supervisory Bridge Management Specialist  
By direction

E-Copy: (1) FHWA-NH Division  
(2) USCG Sector Northern New England