

MILLER CONSTRUCTION, INC.

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TRANSMITTAL

TO: Jennifer Fitch, PE Project Manager Vermont Agency of Transportation	DATE	PROJECT NO.
	10/2/2014	Brookfield BRF FLBR (2)

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WE ENCLOSE THE FOLLOWING:

UNDER SEPARATE COVER WE ARE SENDING THE FOLLOWING

COPIES	NUMBER	DESCRIPTION	CODE
1		FRP Fabrication NCR 12 - Rafts 1 & 2 - Misaligned Bolt Hole	H

CODE:

A FOR INITIAL APPROVAL

B FOR FINAL APPROVAL

C APPROVED AS NOTED-RESUBMISSION REQUIRED

D APPROVED AS NOTED-RESUBMISSION NOT REQUIRED

E DISAPPROVED-RESUBMIT

F QUOTATION REQUESTED

G APPROVED

H FOR APPROVAL

I AS REQUESTED OR REQUIRED

J FOR USE IN ERECTION

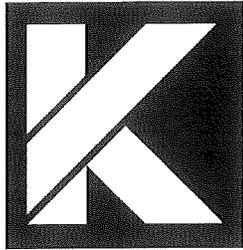
K LETTER FOLLOWS

L FOR FIELD CHECK

M FOR YOUR USE

BY:





**KENWAY
CORPORATION**

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October 1, 2014

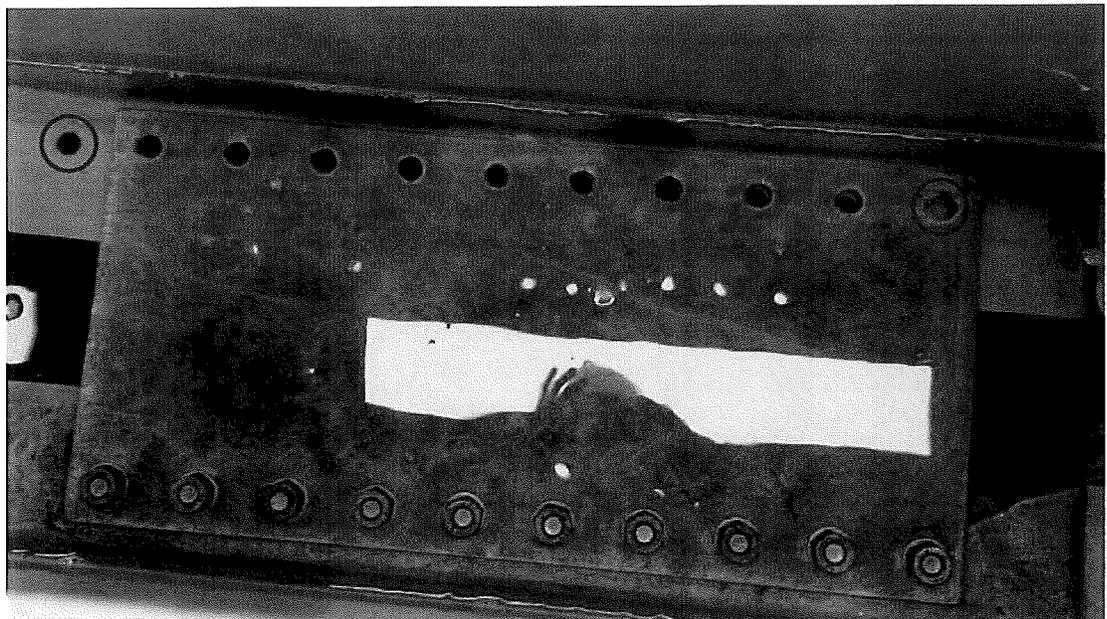
Mr. Paul Holloway
Miller Construction, Inc
PO Box 86
Windsor, VT 05089

Brookfield BRFLBR (2)
Misaligned bolt hole – Raft #2

Dear Mr. Holloway:

Nonconformance

During joining operations between Rafts 1 and 2, Miller identified misaligned bolt holes along one edge of the outer bottom flange (16.5" x 34.5") splice plate connection.



Background

Pontoons 1 through 4 were aligned in their proper orientation and leveled at Kenway to facilitate drilling of splice plate bolt holes. In order to ensure accuracy and reduce handling of the galvanized splice plates, aluminum drilling templates with hardened 1/8 in. drill bushings were fabricated by the steel plate manufacturer using the same CNC equipment used to drill the splice plates. These steps have been executed to satisfy the intent of Special Provision 73.m. Pre-Assembly.

While drilling the first set of 1/8 in. pilot holes in the large splice plate between Rafts 1 and 2, two or three 1/8 in. drill bits were broken and stuck in the corners of the template due to an excessively tight fit inside the bushing. At that point, the technician switched to 7/64 in. drill bits to avoid the issue. Also, given the difficulty associated with reaching the

bottom flange holes, only the corner holes in the templates were initially drilled, the templates repositioned once the rafts were separated, and remaining pilot holes drilled. Looking back, it appears that the template was shifted over one hole in order to make use of it until the stuck drill bit(s) could be removed. Unfortunately, the template must have been shifted in the wrong direction on Raft 2 once it had been separated from Raft 1.

Corrective Action

To correct the discrepancy, Kenway plans to drill the missing bolt hole in place using an extension if necessary to clear the water. The steel plate will be used as a template to align the bit. If the Agency is concerned about drill spoils, a wet/dry vacuum could be used while drilling in an attempt to capture as much debris as possible. An epoxy resin that cures underwater could be used to seal the hole if desired. The extra bolt hole will simply remain open.

Once the 7/64 in. pilot bits were used and the stuck bits removed from the template, there have been no other issues piloting bolt holes. All pilot holes (not just the corners) are being drilled at the same time in every plate location at the initial placement of the template. Along with QA inspection procedures, this will ensure the misaligned bolt hole issue will not be repeated.

Sincerely,

A handwritten signature in cursive script that reads "Jacob Marquis".

Jacob Marquis, P.E.
Senior Project Engineer