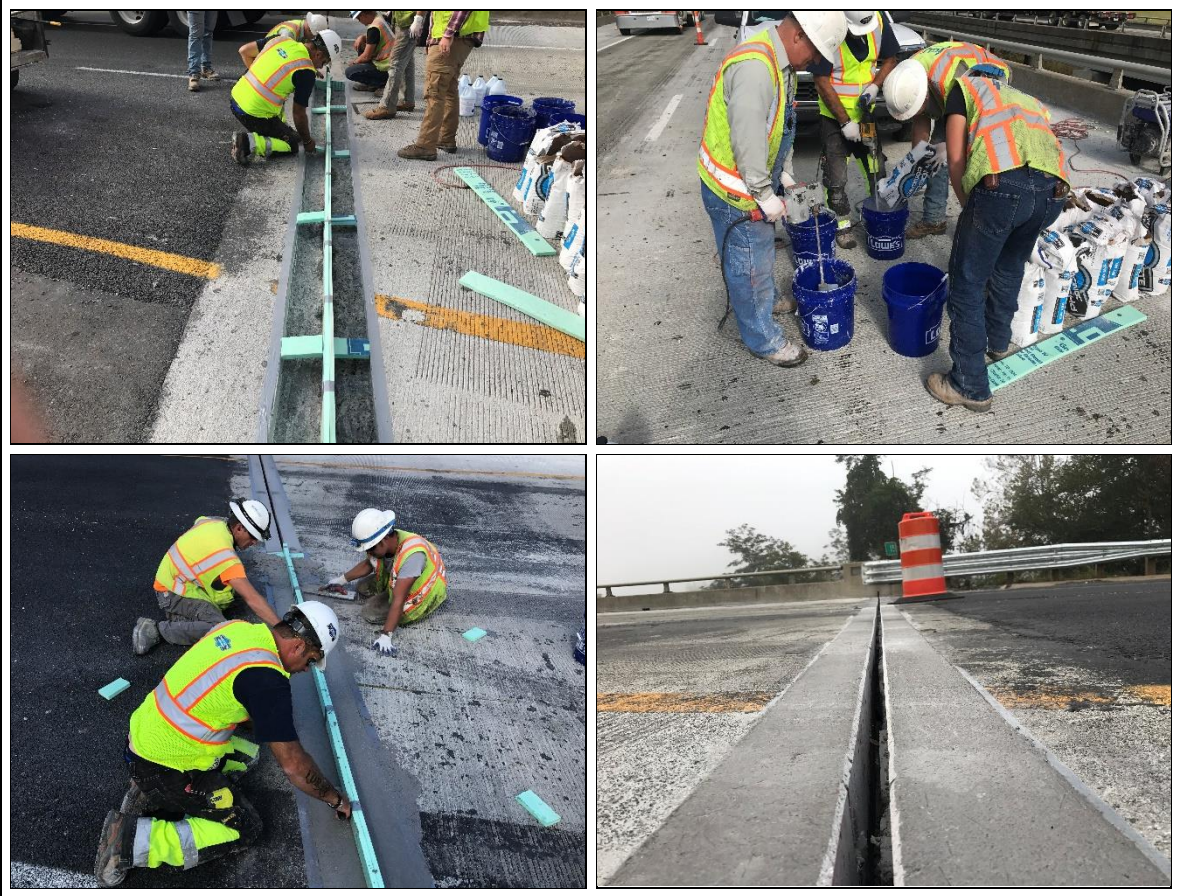




CASE STUDY : PHOSCRETE F1-HC

Bridge Joint Header Installation



Location: [Clyde NC](#)

Ambient Temperature: [62°F, Hazy](#)

Agency: NCDOT (GLF Construction Corporation)

Contact: Lyndon Kirkendall, Project Engineer, lkirkendall@glfusa.com

Installation Date: 20 September 2017

[Link to Google Photos Album](#)

Installation Notes: Full span of two deteriorated joint headers on I-40 bridge over Hyder Mountain Road was saw cut, demolished and replaced with Phoscrete F1-HC over two days with traffic control switched as soon as header was traffic ready (one hour after initial pour). Closed cell foam joint seal was installed the next day.

Inspection Notes: Original installation was performed using Phoscrete F1-HC on 4/28/2017 and spalling was reported by NCDOT in August 29, 2017. Subsequent inspection determined that the material was installed in hot temperatures by a crew using Phoscrete for the first time, and they did not chill the activator per Phoscrete's installation guidelines. Hammer testing revealed several points of delamination, an indication that the fast-setting material was setting up prior to placement.

Cameron Cochran, NCDOT Western Regional Bridge Construction Engineer and the contractor GLF agreed to demolish and re-install the header using Phoscrete F1-HC with Phoscrete's installation manager, Don Visel on-site for training and support.

Because of the close attention paid to this repair, the header was inspected on November 20, 2017, December 6, 2017, and February 18, 2018. Hairline cracks were observed in the header in November. This is normal and likely attributed to impact/load stress from heavy truck traffic. No additional hairline cracks were observed in subsequent inspections, and the size did not change. Hammer testing indicates no delamination across the joint. no spalling was observed.

The header will be inspected again in Spring 2019 following a second winter.

