

Transportation Pooled Fund Program

Project Title: Structural Testing of UHPC Connections Between Precast Bridge Deck Elements		
Project Manager and Phone Number: Ben Graybeal Research Structural Engineer FHWA Turner-Fairbank Highway Research Center 202-493-3122	Project No: TPF-5(217)	Project is: <input type="checkbox"/> PLANNING <input checked="" type="checkbox"/> R&D
Reporting Period: April 1, 2010 - June 30, 2010	Multi Year Project	
Description of Work Performed and Progress:		
<p>The six test specimens were fabricated and delivered to Turner-Fairbank prior to the official start of the project.</p> <p>Cyclic and static testing of slab specimens as described in the workplan was completed.</p> <ul style="list-style-type: none"> - Specimen 6B16B2 was cycled through 60k cycles from 2 - 16 kips. An unintended overload of 70 kips occurred causing significant cracking of the specimen including debonding of the HPC/UHPC joint interface. The load range was increased to 3 - 21.3 kips. 10 million cycles completed on April 14, 2010. No additional damage was noted as a result of the cyclic loading. The load range was increased to 3 - 32 kips and 1.1 million cycles were completed. The load rang was increased to 3 - 40 kips. After 343,000 cycles, the panel failed due to rebar tensile fatigue failure. - The remaining five panels were tested statically to failure. Specimen 6H1/6H2 failed via punching shear; the other four specimens all failed in flexure. <p>Work planned for 2010 3rd qtr:</p> <ul style="list-style-type: none"> - Damage assessments of failed panels, coring of joints, and data analysis are underway. - The draft final report will be completed. 		
STATUS AND COMPLETION DATE		
Percentage of work completed to date for total project Project is: <u>80</u> %		
_____ on schedule <input checked="" type="checkbox"/> behind schedule, explain:		
The cyclic and static testing required more time than anticipated due to a combination of resilient panels and laboratory equipment and personnel priorities. Analysis of results and drafting of the final report are underway. The final report should be complete by September 30, 2010.		
Expected Completion Date: <u>September 30, 2010</u>		

Project Manager