



CASE STUDY

Route 501 Bridge Over the James River
Bedford/Amherst County Line, VA



Dedicated: April 2017

Owner: State of Virginia

Concrete Supplier: Lynchburg Ready Mix/Bedford Ready Mix

General Contractor: Orders Construction

Architect/Engineer: AECOM

Whatever it takes. That's what you do to build a replacement bridge over water. The Route 501 bridge over the James River near the Bedford/Amherst County Line is a perfect example of this. The 930-foot replacement bridge contains 3300 cubic yards of concrete. Specifically, mass concrete which required regular monitoring with temperature probes to ensure that the differential between internal and external temps did not exceed 35 degrees.

How they placed the concrete was clever, too. Rather than relying on mounds of gravel to reach the piers, they used floating barge platforms to get the concrete where it needed to go. A crane was kept on shore. The ready mixed trucks would load the concrete into the bucket of the crane. The crane then swung around to the floating barge which had a pump loaded onto it. The concrete was transferred to the pump, then pumped to the bridge deck!