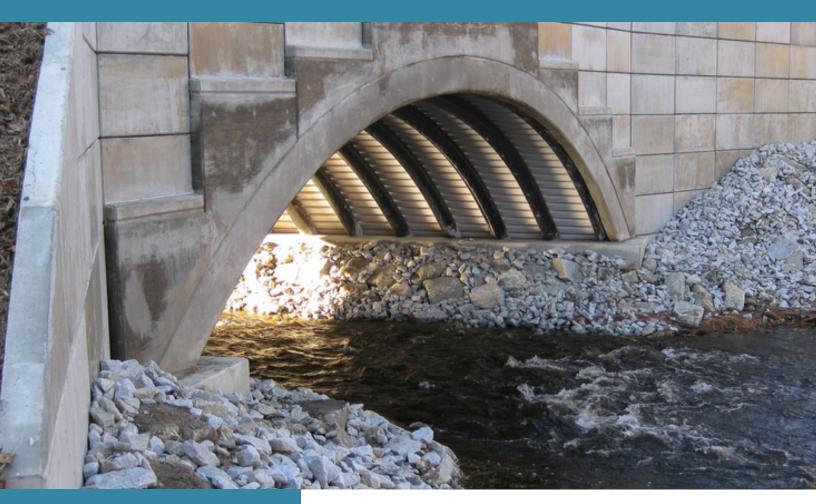
## BMDO Bridge Material Design Options



## FAST FACTS:

## **Rigified FRP**

PROJECT LOCATION: PROJECT NAME: BRIDGE MATERIAL DESIGN OPTION: UNIQUE FEATURE:

**PROJECT DESCRIPTION:** 

Royal River Bridge Rigified FRP Project was selected as a National 2011 Engineering Excellence Grand Award winner by the American Council of Engineering Companies.

Auburn, ME

The Royal River Bridge spans the Royal River in Auburn and is located on the Old Danville Road, a local road. The new bridge is a 38' span composite arch on concrete footings and piles. The width was increased to 28'. T-walls were used to minimize stream impacts.

The stream was constricted at the previous bridge and erodible soils were evident downstream. The bridge had a sufficiency rating of 59.4 and consisted of a 24' span with steel girders on concrete abutments and granite and gabion wingwalls. Width, alignment, and sight distances were deficient.		
N/A		
\$793,854		
\$764,164		
\$793,854		
Use precast voided slab superstructure		
Bridge in a Backpack		
Span: Rise: Width: Skew: Arch: Headwall:	38' 9' 6" 38' 15 degrees 13 carbon filter tubes, 12" cast-in-place concrete foo wall	in diam., spaced @ 3' 1" ting and precast modular gravity
Bridge in a Backpack; a stepped cast-in-place concrete footing placed for the headwall		
Long lasting, maintenance free, buried structure.		
June 2010 to	June 2010 to November 2010	
MaineDOT		
AEWC Adva	MaineDOT; Advanced Infrastructure Technologies; University of Maine AEWC Advanced Structures and Composites Center; Kleinfelder • SEA; Wyman & Simpson	
CONTACTS:Dale Peabody Research Engineer MaineDOT 207-624-3305 dale.peabody@maine.govNate Benoit Project Manager Urban & Federal Bridge Program MaineDOT 207-215-1590 nathaniel.benoit@maine.gov		Brit Svoboda President/CEO, Advanced Infrastructure Technologies 20 Godfrey Drive Orono, ME 04473 207-866-6526
		Jonathan Kenerson Structural Bridge Engineer Advanced Infrastructure Technologies 207-866-6526 jon@aitbridges.com
	<ul> <li>were evident and consiste granite and g deficient.</li> <li>N/A</li> <li>\$793,854</li> <li>\$764,164</li> <li>\$793,854</li> <li>Use precast</li> <li>Bridge in a Bassian and the second Width:</li> <li>Skew:</li> <li>Arch:</li> <li>Headwall:</li> <li>Bridge in a Easting</li> <li>June 2010 to MaineDOT</li> <li>MaineDOT; A AEWC Adva</li> <li>Wyman &amp; Si</li> <li>Dale Peaboor</li> <li>Research Er MaineDOT</li> <li>207-624-330</li> <li>dale.peaboor</li> <li>Nate Benoit</li> <li>Project Mana Urban &amp; Fed</li> <li>MaineDOT</li> <li>207-215-155</li> </ul>	<ul> <li>were evident downstream. The bridge ha and consisted of a 24' span with steel gir granite and gabion wingwalls. Width, alig deficient.</li> <li>N/A</li> <li>\$793,854</li> <li>\$764,164</li> <li>\$793,854</li> <li>Use precast voided slab superstructure</li> <li>Bridge in a Backpack</li> <li>Span: 38' Rise: 9' 6"</li> <li>Width: 38'</li> <li>Skew: 15 degrees</li> <li>Arch: 13 carbon filter tubes, 12"</li> <li>Headwall: cast-in-place concrete for wall</li> <li>Bridge in a Backpack; a stepped cast-in- the headwall</li> <li>Long lasting, maintenance free, buried si June 2010 to November 2010</li> <li>MaineDOT</li> <li>MaineDOT</li> <li>MaineDOT; Advanced Infrastructure Tech AEWC Advanced Structures and Compo Wyman &amp; Simpson</li> <li>Dale Peabody Research Engineer</li> <li>MaineDOT</li> <li>Dale Peabody@maine.gov</li> <li>Nate Benoit</li> <li>Project Manager</li> <li>Urban &amp; Federal Bridge Program</li> <li>MaineDOT</li> <li>207- 215-1590</li> </ul>





