

## PRESS RELEASE

### Entrant Roles

New England engineering firms Stantec Consulting Services, Inc. and Calderwood Engineering received an Engineering Excellence Award for their design of the replacement bridge for the Bridge Street Bridge, located in the heart of downtown Westbrook over the Presumpscot River. The project also included the design of streetscape and riverwalk improvements for the area surrounding the bridge. The award, from the American Council of Engineering Companies (ACEC) of Maine, recognized the design of the new bridge which utilized a non-traditional material called fiber-reinforced polymer (FRP); an innovative product with an expected lifespan of 100 years. At the time of design, it was only one of 12 highway bridges in North America using Hybrid Composite (HC) Beams made with FRP.

The bridge replacement project and associated streetscape improvements overcame technical and site constraint challenges to reach completion in November 2016. The existing bridge had deteriorated and the surrounding area had unsafe pedestrian accommodations, inadequate public recreational space, and was lacking a riverwalk connection to the north riverbank.

Due to the site's urban setting, it was vital to minimize impacts to downtown businesses during construction. The project also required extensive coordination with five major utilities.

The off-alignment bridge construction allowed two lanes of vehicular and pedestrian traffic to be maintained across the river on the existing bridge while the new bridge was constructed, which minimized business impacts. The HC Beam placement also required less construction staging area because the beams are lighter than their steel or concrete counterparts, so adequate business parking could be maintained.

To maximize the bridge service life, the design incorporated fiber-reinforced polymer (FRP) hybrid composite (HC) beams, drains, stay-in-place (SIP) deck panels, and intermediate utility supports. Dual-coated corrosion-resistant reinforcing was also used in the bridge deck.

Stantec, Calderwood Engineering, a host of specialty subconsultants, and the Maine Department of Transportation (MaineDOT) convened to execute this project and complete it 6 months earlier than planned.

Today's Bridge Street Bridge provides a sustainable, low maintenance highway bridge structure, with an added pedestrian bridge, and accompanying river falls viewing outlooks safely set back from highway traffic.