

Little Ivy Creek Bridge Replacement Using Accelerated Bridge
Construction Methods
(Technical Report)

Placemaking and Performance
(STS Research Paper)

An Undergraduate Thesis Portfolio
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by

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In urban and workspace design, mindful design can promote productivity and collaboration.

In the technical project, a proposal to rehabilitate a bridge on Virginia Route 250 over Ivy Creek, in Charlottesville, Virginia, was developed. Accelerated bridge construction (ABC) methods can reduce the onsite construction time, limiting disruption and hazards. ABC improves site constructability, accelerates project completion, and improves work-zone safety. Conventional bridge construction can necessitate long detours, expensive temporary structures, and limited construction periods. The technical project resulted in the design and construction of a structurally sound replacement of the Rt. 250 bridge over Little Ivy Creek with minimal disruption to the traveling public, in a safe and cost-effective manner.

Placemaking techniques can improve workplace productivity and employee health. Designers must consider social dynamics, physical elements, and individual wellbeing. Mindfully designed office spaces help employees to express their ideas, to listen more and to embrace diversity. Floor plan, biophilic design, lighting, temperature, noise levels, and ventilation must be considered for optimal workplace design.