Submission for Abstract

A Bridge-Centric Approach to Digital Delivery

Abstract

The continuously evolving discipline of digital delivery is revolutionizing the way projects are delivered. Development of federated models provides views into the future of construction sites and completed projects, improving the way engineering teams, contractors, and asset owners coordinate and manage projects and bridge assets. The industry's increase in digital delivery capabilities and demands has caused disturbance to the traditional bridge design process. While construction drawings may still lag engineering design, digital bridge models are often developed before engineering has even begun, introducing new costs and uncertainties early in the project lifecycle. For projects of all sizes, management of these new costs and uncertainties requires detailed digital delivery strategy that must be developed through collaboration with key stakeholders. These stakeholders include asset owners, contractors, and internal design teams, including bridge engineers, each of whom brings individualized desires that drive a project's digital deliver. A strategic bridge-centric digital delivery must explore, understand, and address each of the stakeholder needs while prioritizing the key drivers of a bridge's engineering design into the digital delivery strategy. This approach optimizes the design process and timeline by increasing the bridge engineer's control of the design and digital model and reduces abortive work at intermediate deliverables, while still meeting the objectives of all stakeholders.

This presentation will discuss how bridge design teams can drive digital delivery processes while keeping bridge design and construction as the focal point. We will examine recent projects and highlight the changes occurring to design processes, coordination, and reviews, as well as provide suggested best practices.

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