

Key Findings

This project demonstrated the new opportunities which have opened up for the usage of AM in the transportation and infrastructure sector in general. Although the path for successful application of AM is not linear, all participants in the project have concluded that there is a future where AM can play a significant role in improving the construction and maintenance of our transportation infrastructure.

Use of Findings

One of the immediate next steps in this research effort will focus on additive repair of deteriorated steel bridges.

Also an initial framework of standard operating procedures for AM within MassDOT was presented which could be implemented. Where possible, leverage existing standards for evaluating component performance. The material, process, and post-processing standards described at the beginning of this section of the report are used to qualify a printing process to reliably produce the same quality of parts during each successive print. These standards are therefore not necessary where the MassDOT is only concerned with finished part performance. As long as printed parts are demonstrated to conform to required levels, there is no need for MassDOT to invest time in evaluating the standardization of the production process through which the parts are fabricated. In general, MassDOT would benefit from participation in standardization bodies and professional associations focused on standardization in AM.

Project Information

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