

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): Iowa DOT

INSTRUCTIONS:

Lead Agency contacts should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # <i>(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX) TPF-5(480)</i>	Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input checked="" type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)	
TPF Study Number and Title: Building Information Modeling (BIM) for Infrastructure		
Lead Agency Contact: John Wilkerson & Abhishek Bhargava, BIM Launch Alliance	Lead Agency Phone Number: 517-610-6736	Lead Agency E-Mail: john.wilkerson@mbakerintl.com; Abhishek.Bhargava@wsp.com
Lead Agency Project ID:	Other Project ID (i.e., contract #):	Project Start Date: 4/12/2023
Original Project Start Date: 12/31/2023	Original Project End Date: 12/31/2027	If Extension has been requested, updated project End Date: 0

Project schedule status:

- On schedule
 On revised schedule
 Ahead of schedule
 Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Percentage of Work Completed to Date
\$2,600,000	\$1,086,983(incl. Work in Progress)	41.8

Quarterly Project Statistics:

Total Project Budget And Percentage This Quarter	Total Funds Expended This Quarter	Total Percentage of Time to Date
	\$1,000	41.8

Project Description:

Activities that advance the short and medium term goals of the BIM National Strategic Work Plan will be prioritized and carried out by the pooled fund participants. Meetings will serve as a forum to facilitate knowledge sharing among participants. Proposed activities include:

- Develop BIM foundational use cases and workflows. Highlight more effective digital exchange of information (e.g. survey to design, design to construction, construction to asset management, etc.). This kind of exchange will increase collaboration and automation, reduce duplication of effort and avoid errors.
- Establish BIM Processes (e.g. Develop contract model language to guide BIM procurements.)
- Identify and Execute Capacity-Building Activities (e.g. Establish project selection criteria for BIM implementation; Identify project types and use cases for early pilot projects phase).
- Enhance Skills and Collaboration (e.g. Establish workforce training curriculum to set expectations about required BIM qualifications. Understand organizational roles and responsibilities to connect data silos).
- Deploy Standards-Based Data Management Tools and Techniques (e.g. Develop catalog of information model requirements to define what data should be created and why. Develop standard information delivery specifications for data exchange between systems).
- Lessons Learned - Identify issues with current implementation efforts and share potential solutions to help move toward to greater BIM maturity.
- Research Priorities - Identify short-term and long-term research needs and strategically prioritize the needs so the most urgent and impactful opportunities are addressed first.
- Information Exchange - Establish a forum/expert hub for practitioners in the highway industry to understand the various tools and technologies being used, promote the common modeling formats and share experiences.

The objective will be to increase the BIM maturity of each state by one as it relates to the FHWA BIM NSWP. This will be accomplished by publishing artifacts (living and evidence based versions) through the BIM Implementation Guidebook and creating BIM Deployment Tools related to openBIM data exchanges. The BIM Clearinghouse will be the hub for agencies to access these useful tools to help the mature on their journey toward BIM for Infrastructure.

Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):
COORDINATION AND OUTREACH ACTIVITIES

Area C and D work group meetings

Organized and attended Monthly Project Sprint Meetings

Deliverable Status:

The first 3 videos and flyers were developed with draft storyboards and outlines. The flyers will be web page based to provide dynamic feedback to user needs and be able to be printed onto 1 page documents.

Deliverable	Area	Status	Comment
Task 0 Project Coordination	PM	71% Complete	
Task 1 Program Engagement Tasks	PM	67% Complete	5 Year Roadmap 100% Complete Flyers and Videos Started
Task 2 Initiation and Planning IDM Development	Area A	93% Complete	D-C 100% DABs is being finalized
Task 3 BIM Process Design and Information Architecture	Area A/B	59% Complete	D-C 80% DABs is being finalized
Taks 4 IDM Development and Integration	Area B	12% Complete	Taks 4 IDM Development and Integration
Task 5 IDM Testing, Finalization, and Documentation	Area B/C	0% Complete	Task 5 IDM Testing, Finalization, and Documentation

Anticipated work next quarter:**COORDINATION AND OUTREACH ACTIVITIES**

AASHTO COD and COC presentations

BIM TPF winter in-person planning and collaboration meetings

Deliverable	Area	Expected Completion	Comment
Task 0 Project Coordination	PM	90% Complete	
Task 1 Program Engagement Tasks	PM	70% Complete	Develop draft of first video and flyers
Task 2 Initiation and Planning IDM Development	Area A	100% Complete	100% for D-C and Initiate DABs
Task 3 BIM Process Design and Information Architecture	Area A/B	100% Complete	100% for D-C and Initiate DABs
Taks 4 IDM Development and Integration	Area B	33% Complete	Start Beta D-C Info Architecture
Task 5 IDM Testing, Finalization, and Documentation	Area B/C	0% Complete	

Significant Results:

Deliverables completed are available for immediate use.

These include the Current Practices for MALD (L) that highlights the current practices used by State DOTs to deliver MALD with additional examples to be used in conjunction with the AASHTO JTCEES MALD Maturity Guidance.

BIM State of Practice – Legal Issues that provides documentation on the legal issues related to implementing BIM for Infrastructure.

IFC and Role in BIM – Provides a high-level understanding of how IFC can help state DOTs implement BIM4I.

BLA Website – This will house the project deliverables and the Clearinghouse.

State DOT Tools Report and Field Tools/Resources – Highlights the tools currently in use by actor and phase of the asset lifecycle.

Workflow for Digital Delivery – Explains the Digital Workflow Infographic and how it can be used to move toward a BIM based digital workflow.

IDM for a Digital Workflow – Provides the process to be used to develop a US based data dictionary and IDM based on the ISO standards.

Enterprise-wide Asset Inventory – Provides guidance on how to establish and maintain a data driven asset inventory.

Digital Information for Design to Construction/Fabrication – Provides a process to gather the information required for roadway items from Design to Construction/Fabrication. Working with the pooled fund states consensus was reached for the majority of the information requirements for this exchange.

Data Governance and GIS in BIM – Explains how to leverage ISO 19650 to establish data governance.

BIM4I Clearinghouse Knowledge Platform in Draft: <https://bimclearinghouse.com/clearinghouse/>

Scope of the Information Delivery Manual (IDM) has been finalized for collaboration with industry partners and stakeholders.

Initial draft of D-C

Circumstance affecting project or budget. (Please describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope and fiscal constraints set forth in the agreement, along with recommended solutions to those problems).

The BIM for Infrastructure Guidebook was originally planned to go through balloting with the AASHTO COD JTCEES. Due to the need for the Guidebook to be dynamic to allow for the continuing evolution of BIM for Infrastructure and to make it a web-based document the conventional AASHTO Publication process cannot be used. The TPF-5(480) Executive team is coordinating with AASTHO COD to determine a path forward.

Task 2 Initiation and Planning IDM Development has been delayed to December 2024 as establishing 4 of the 7 discipline/functional areas took longer than expected. The other 3 discipline/functional areas have proceeded to Task 3 activities so the efforts will run in parallel to minimize the delay.

Task 3 BIM Process Design and Information Architecture has been delayed to mid 2025 as noted above in Task 2.

Task 3 was previously reported at 83% complete but that primarily reflected the work related to the Data Dictionary for the D-C use case. There was also 70% progress toward the (Year 2 D15) Guidance to link the Information Requirements to BIM Execution Plans being made that was mistakenly linked to the Information Requirements being gathered in Task 2. Task 3 has been corrected to show 59% progress and we anticipated completing this work for D-C use case in 2025 Q3 and Q4 as noted in the Year 3 Work Plan.

Potential Implementation:

Living draft materials as noted in the work completed this quarter are available to the pooled fund team through the project SharePoint Site and will become available for all state DOTs through the BIM for Infrastructure Website.

bimclearinghouse.com

