

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)</i> TPF-5(523)	Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input checked="" type="checkbox"/> Quarter 3 (July 1 – September 30) <input type="checkbox"/> Quarter 4 (October 1 – December 31)		
TPF Study Number and Title: <i>Building Information Modeling (BIM) for Bridges and Structures – Phase II</i>			
Lead Agency Contact: Khyle Clute	Lead Agency Phone Number: --	Lead Agency E-Mail: Khyle.Clute@iowadot.us	
Lead Agency Project ID: --	Other Project ID (i.e., contract #): --	Project Start Date: 2/1/2024	
Original Project Start Date: 2/1/2024	Original Project End Date: 1/31/2025	If Extension has been requested, updated project End Date: 3/31/2026	

Project schedule status:

<input checked="" type="checkbox"/> On schedule	<input type="checkbox"/> On revised schedule	<input type="checkbox"/> Ahead of schedule	<input type="checkbox"/> Behind schedule
---	--	--	--

Overall Project Statistics:

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
\$926,156	\$79,291	67%

Project Description:

The AASHTO Committee on Bridges and Structures has been working on a comprehensive plan to advance the use of BIM specifically for bridges and structures. In 2017, the TPF-5(372) BIM for Bridges and Structures project provided the primary funding mechanism for developing the foundational elements to implement open data exchange standards to support BIM for bridges and structures in the U.S. This multi-year effort focused on developing the open standards for enabling digital data exchange from design to construction for workhorse bridges using the Industry Foundation Classes (IFC) schema. A significant amount of progress was accomplished through this effort, which resulted in an implementable AASHTO guide specification to exchange 3D model-based information for workhorse bridges to execute construction. The published IDM was used as a basis for related work products that will allow for further data exchange standards to be implemented into software products and utilized at the agency level.

The current pooled fund effort, TPF-5(523) BIM for Bridges and Structures – Phase II, was created for the purpose of developing additional technical solutions for delivering 3D bridge models and other digital data in an open, non-proprietary format. The Phase II effort will expand upon the Phase I work and undertake additional exchanges in the bridge lifecycle beyond the design-to-construction data exchange. The objectives for TPF-5(523) BIM for Bridges and Structures - Phase II project are to:

1. Develop additional technical solutions to enable the use of IDM requirements specific to IFC exchanges for multiple ways of using bridge models (or model use cases), continue software vendor engagement efforts, and assist State DOTs with piloting and adoption of future IDS.
2. Establish an Industry Advisory Group to enhance engagement with industry stakeholders, especially contractor and construction-related groups, and to obtain direct input from these stakeholders on the additional technical solutions to be developed under Phase II.
3. Help State DOTs implement the standards developed during TPF-5(372) through pilot projects selected by individual pooled fund members to produce, export, and validate IFC deliverables to support bidding, construction, and fabrication.

To achieve these objectives, the team will carry out the following tasks, with current percent complete shown:

	% Complete
Task 1: Development of National Open Data Standards Task 1.1 Methodology Development Task 1.2 Evaluation and Final Selection of Exchanges Task 1.3 Open Data Standard Development Task 1.4 Software Vendor Engagement	70%
Task 2: State DOT Pilot Project Support	50%
Task 3: External Stakeholder Collaboration Activities Task 3.1 Update Stakeholder Communication and Engagement Plan Task 3.2: Prepare Presentations and Educational Videos Task 3.3 Industry Advisory Group Collaboration	90%
Task 4: Client Communication	80%
Task 5: Project Management and Internal Coordination	83%
Task 6: BIM Week (in-person collaboration meetings)	75%

Note: The percentage completion values shown correspond to the percent complete for the current contract year. The project is anticipated to last through January 2028 with contract renewals at the end of each year.

Progress this Quarter

(includes meetings, work plan status, contract status, significant progress, etc.):

Q3 2025

- Task 1.1 Methodology Development
 - Task is complete.
- Task 1.2 Evaluation and Final Selection of Exchanges
 - Task is complete.
 - Per TPF member preference, the next data exchange to be developed is the fabrication detail exchange.
- Task 1.3 Open Data Standard Development
 - Updates to US Bridge IFC mapping table, diagrams, and data dictionary terminology
 - Updates to US data dictionary template and US Bridge data dictionary workbook
 - Preparing IDS template for additional exchanges
 - Updates to design-to-construction IDM
 - Coordination of internal and other technical reviews
- Task 2 State DOT Pilot Project Support
 - Coordination with State DOT pilot projects on use of TPF-5(372) outcomes
 - Collection of feedback to refine design-to-construction data exchange standards
- Task 3 External Stakeholder Collaboration Activities
 - Conducted initial meeting with National Steel Bridge Alliance (NSBA) leadership
 - Issued invitation and memo of expectations to NSBA and National Concrete Bridge Council (NCBC) for joining the Technical Working Group to support Task 1.3 activities
- Other
 - Conducted mid-year online meeting with pooled fund members in August 2025
 - Preparations for BIM Week, to be held week of November 3, 2025

Anticipated work next quarter:

- Task 1.3 Open Data Standard Development
 - Finalize Task 1.3.1 Design-to-Construction Exchange Refinements and issue updated IDM, including IFC mapping table and data dictionary workbook
 - Launch the Technical Working Group
 - Initiate development of IFC mapping table and data dictionary workbook for the fabrication detail exchange
- Task 2 State DOT Pilot Project Support
 - Provide advisory support to State DOT pilot projects on use of TPF-5(372) outcomes
- Task 3 External Stakeholder Collaboration Activities
 - Coordination with leadership of the FHWA Digital Delivery Stakeholder Group and TPF-5(480) BIM for Infrastructure on formation of the Industry Advisory Group
- Other
 - Prepare, attend, and facilitate sessions at BIM Week, week of November 3, 2025
 - Planning activities for 2026

Significant Results:

None at this time

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).

None at this time

Potential Implementation:

The outcomes of TPF-5(372) are being implemented by software vendors and deployed by DOTs via pilot projects.