

**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.*

<b>Transportation Pooled Fund Program Project #</b> <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)</i> <b>TPF-5(523)</b>	<b>Transportation Pooled Fund Program - Report Period:</b> <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)		
<b>TPF Study Number and Title:</b> <i>Building Information Modeling (BIM) for Bridges and Structures – Phase II</i>			
<b>Lead Agency Contact:</b> Khyle Clute	<b>Lead Agency Phone Number:</b> --	<b>Lead Agency E-Mail:</b> Khyle.Clute@iowadot.us	
<b>Lead Agency Project ID:</b> --	<b>Other Project ID (i.e., contract #):</b> --	<b>Project Start Date:</b> 2/1/2024	
<b>Original Project Start Date:</b> 2/1/2024	<b>Original Project End Date:</b> 1/31/2025	<b>If Extension has been requested, updated project End Date:</b> 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
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**Overall Project Statistics:**

Total Project Budget	Total Funds Expended This Quarter	Percentage of Work Completed to Date
\$926,156	\$99,010	61%

## 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	44%
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	58%
Task 4: Client Communication	72%
Task 5: Project Management and Internal Coordination	70%
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.):

### Q2 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
- Task 2 State DOT Pilot Project Support
  - Coordination with State DOT pilot projects on use of TPF-5(372) outcomes
- Task 3 External Stakeholder Collaboration Activities
  - Conducted initial meeting with National Concrete Bridge Council
  - Planning efforts to formally establish the Industry Advisory Group and Technical Working Group
  - Initial coordination with leads of the FHWA Digital Delivery Stakeholder Group
  - Coordination with buildingSMART technical and executive leadership
- Other
  - Prepared and delivered project update for Technology Committee at the AASHTO COBS Annual Meeting in Dallas (June 3, 2025)
  - BIM Week Planning Committee participation

## Anticipated work next quarter:

- Task 1.3 Open Data Standard Development
  - Continue updates to US Bridge IFC mapping table, diagrams, and data dictionary terminology
  - Continue updates to US data dictionary template and US Bridge data dictionary workbook
  - Finalize IDS template for additional exchanges
  - Finalize updates to design-to-construction IDM
- Task 2 State DOT Pilot Project Support
  - Continue coordination with State DOT pilot projects on use of TPF-5(372) outcomes
- Task 3 External Stakeholder Collaboration Activities
  - Conduct initial meeting with National Steel Bridge Alliance
  - Secure participants in the Industry Advisory Group and Technical Working Group, including DOT participants
  - Establish schedule of meetings and conduct kickoff activities
  - Ongoing coordination with FHWA Digital Delivery Stakeholder Group and TPF-5(480) BIM for Infrastructure
  - Continue coordination with buildingSMART technical and executive leadership
- Other
  - Mid-year online meeting with full pooled fund
  - BIM Week Planning Committee participation

**Significant Results:**

ADCMS pilot projects are providing critical feedback that is influencing the work of TPF-5(523).

**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.