

# **BIM** FOR BRIDGES AND STRUCTURES --- TPF-5(372)

**Permissible Use of the TPF-5(372) BIM for  
Bridges and Structures Unit Test Suite by  
Software Vendors**

July 2024

To help support the bridge modeling and exchange requirements of the Design-to-Construction Data Exchange, as developed in TPF-5(372), the project team has created a “Unit Test Suite” which provides software developers instructions on the desired 3D modeling capabilities, data assignments, and mappings to IFC for export, exchange, and import. The files of the Unit Test Suite represent a variety of real bridges identified as “typical” workhorse designs across the nation by the Pooled Fund project team and bridge owners. The Unit Tests cover a broad spectrum of possible element and bridge permutations to assist the software vendors’ efforts in supporting the desired modeling and exchanges. These unit tests are provided on a public repository on GitHub <[https://github.com/jwouellette/TPF-5\\_372-Unit\\_Test\\_Suite](https://github.com/jwouellette/TPF-5_372-Unit_Test_Suite)> for current and future vendors to utilize during their support development, as well as for the client organizations and public to scrutinize the results.

The software vendors have the permission of HDR, Inc., and the state DOT representatives from the Pooled Fund to use the Unit Test Suite Test Instructions, including all provided drawings (PDFs) and associated files, beyond the scope of the Unit Test Suite and for their own marketing and internal development purposes under the following conditions:

- The display or demonstration of the Unit test Suite test instructions and associated files (PDF, CSV, etc.), as well as resulting proprietary models and IFC files does NOT constitute an explicit endorsement, certification, or validation of the software or software developer by the HDR, Inc. team, the Pooled Fund state DOT partners, the FHWA, or AASHTO;
- The displayed/demonstrated IFC results shall NOT be construed as a certification or validation of “IFC-compliance” by the HDR, Inc. team, the Pooled Fund state DOT partners, the FHWA, AASHTO, or buildingSMART International and the buildingSMART USA chapter;
- Software vendors displaying/demonstrating the bridge models and IFC exchanges may state that they are Pooled Fund participants and have been actively supporting its efforts.
- Publishing of the files should include an attribution/reference to the “TPF-5(372) BIM for Bridges and Structures”. It may include a link to the GitHub repository, per link above, and/or the project website <https://bimforbridgesus.com/>.
- Publishing of any of the Unit Test Instructions shall not be edited to remove the identifying title block and information. Sensitive information has already been redacted from the Unit Test Instruction materials so that resulting information requirements provided may be publicly shared/demonstrated.
- Certification of a software product to correctly model and exchange the information, as well as the validation of IFC files, are separate formal processes. Results of those procedures shall be expressed separately and marketing/messaging of such will be addressed separately, via joint effort by buildingSMART and AASHTO;