Next Steps Nationally Beyond the BIM for Bridges and Structures Pooled Fund Efforts

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Accelerating IFC Adoption by Advancing IFC Validation Service and Software Certification Program TPF-5(565) study Champion

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TPF TRANSPORTATION POOLED FUND

Planned 2026 to 2028

Open Solicitation
https://pooledfund.org/Details/Solicitation/1635

Business Objectives for State DOT's

- *Specify IFC certified software for road/bridge projects*
- *Validate deliverables to enhance project delivery and management quality.*

Desired Outcomes:

- *Discovery phase*
- *IFC 4.3 Implementation Support*
- *IFC Validation Service Enhancements*
- *Global IFC Software Certification Support*
- *Use Case-based Software Certification*
- *Education and Training*
- *IDS validation*

13 STATES Committed

01 Iowa	09 New York
02 California	10 Pennsylvania
03 Connecticut	11 Texas
04 Georgia	12 Utah
05 Kentucky	13 Washington
06 Michigan	14 FHWA
07 Mississippi	15 Others
08 Nebraska	

IFC

Certification

Validation

Contact James.Hauber@IowaDOT.us for additional information about participation

Objective

- Recommend and incorporate into the Manual for Bridge Element Inspection (MBEI) a national standard element level location taxonomy and spatial representation. In addition, locate element defects via spatial location, protocols and procedures for creating a digital twin.

- It will build off the work of the BIM for Infrastructure and BIM for Bridges pooled funds by identifying and evaluating standards like ISO standards and IFC.

Automated AI Assessment of Defects in Bridge Structures Dr. Behrouz Shafei Iowa State University
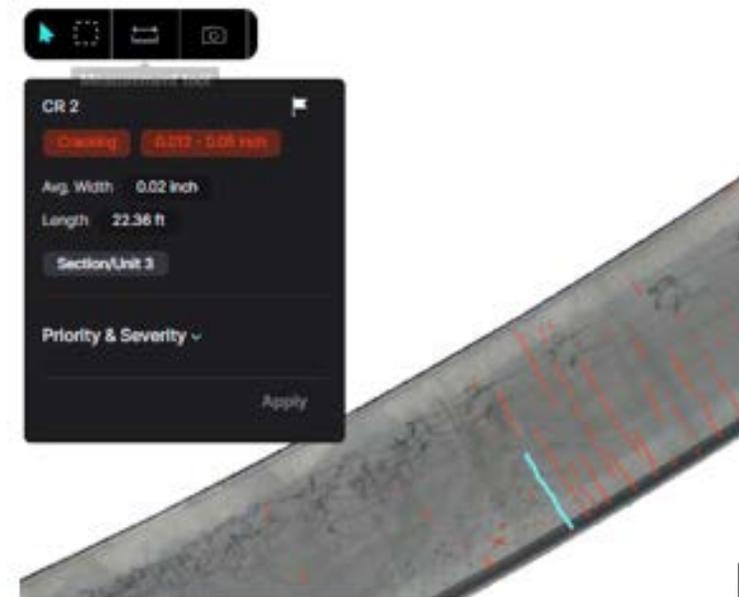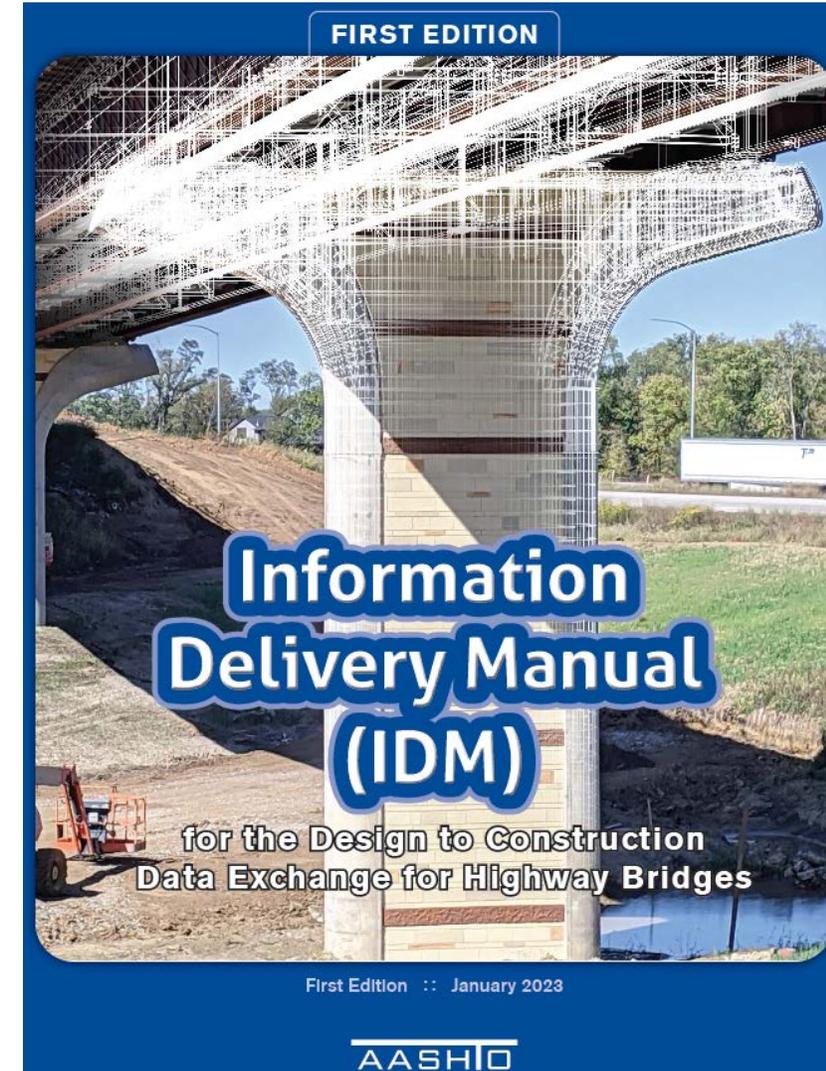

Niricson AI concrete condition survey

LOIN

- **Guide Specifications for Level of Information Need (LOIN) for Highway Bridges to Support Project Development with Building Information Modeling (BIM)**
- **In alignment with ISO**
  - **7817 (Level of Information Need)**
  - **19650** Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling
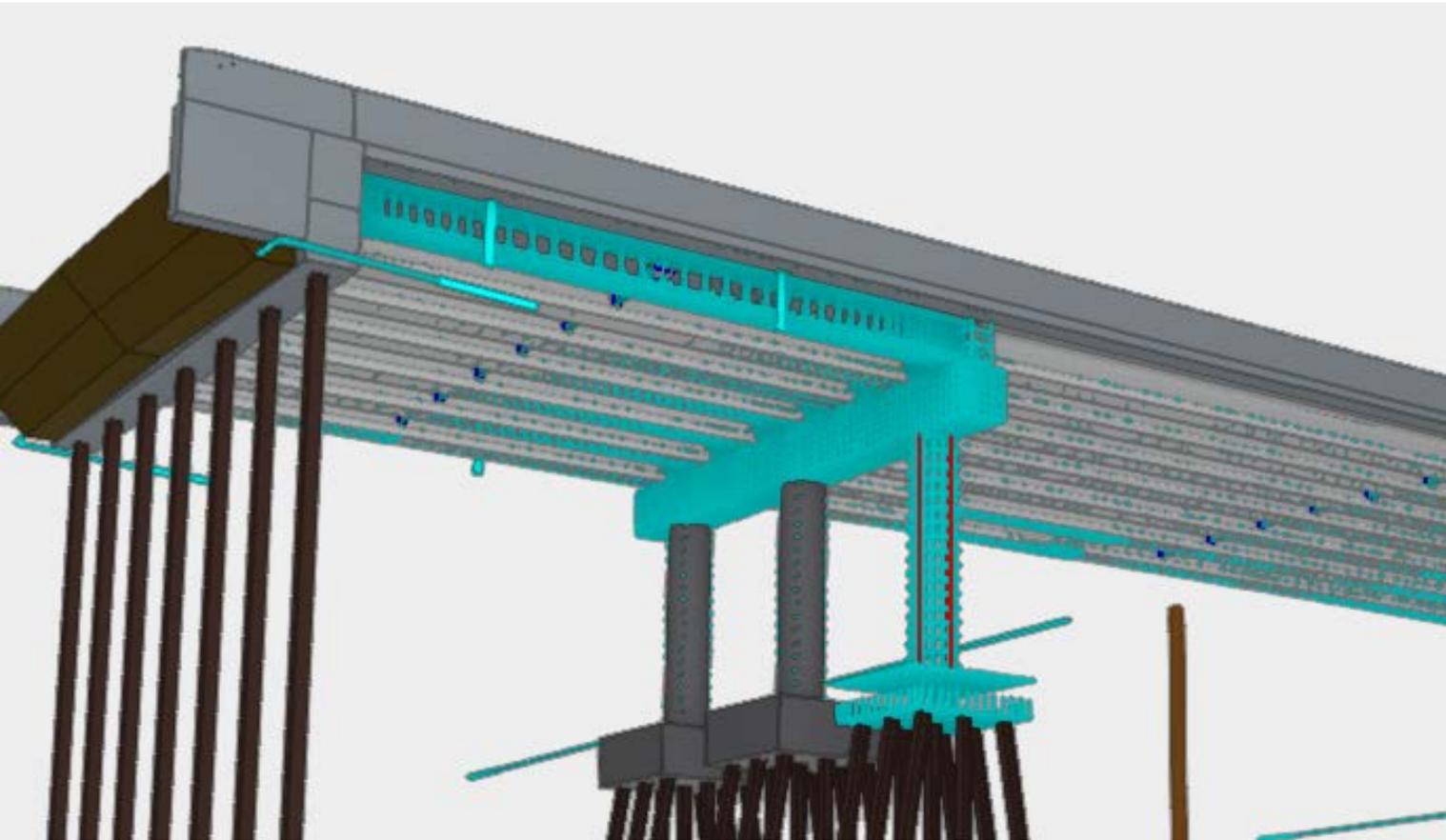
Core Components of LOIN

- **Geometric Information (LOD):** 3D shape, spatial, or 2D symbol requirements.
- **Alphanumeric Information (LOI):** Data-rich attributes (e.g., performance metrics, material properties).
- **Documentation:** Required documents (e.g., manuals, certificates).
- **Purpose:** The justification for the information needed (e.g., for costing, energy analysis).

FIRST EDITION

Information Delivery Manual (IDM)

for the Design to Construction Data Exchange for Highway Bridges

First Edition :: January 2023

AASHTO

Pilot Projects BIM for Bridges and Structures

- Supplemental solicitation to the Pooled fund for IFC 4.3 pilot support

Objective:

- Support for IFC file creation for participating DOTs
- Communicating with one voice with software vendors
- Support for software vendor implementation
- Documenting updates needed with IDM, IDS, usDD.

Iowa ADCMS Pilot project