

Administrative Resolution AR-1-19

Title: Adoption of Industry Foundation Classes (IFC) Schema as the Standard Data Schema for the Exchange of Electronic Engineering Data

Whereas, Several data schema exist for the exchange of electronic engineering data, among them Trans XML, Land XML, and various industry schemas; however, there is no single standard data schema recognized by the industry;

Whereas, Transportation agencies need to implement asset management more efficiently throughout the lifecycle of the asset, which requires the ability to exchange data seamlessly;

Whereas, Transportation agencies are progressing toward Building Information Models as the successor to the standard plan set for highway infrastructure projects;

Whereas, Transportation agencies are utilizing a variety of tools and equipment from multiple vendors and manufacturers to gather, display, and work with the data necessary for infrastructure project development, and interoperability of the models is a critical feature so that the agencies have the ability to transfer data seamlessly across these platforms;

Whereas, Seamless data transfer necessitates a single data schema that is recognized as the industry standard, otherwise there is a potential loss of data when translated from one device or one application to another; however, there has been a lack of consensus for adoption of a single schema;

Whereas, To date efforts to establish a national standard data schema have not been successful, in large part due to the inability to identify an agency or entity capable of providing ongoing development, support, and maintenance of the schema, so it would be advantageous to move toward a schema where that support mechanism already exists;

Whereas, There is an international effort underway, led by buildingSMART International, to extend their existing Industry Foundation Classes (IFC) standard data schema to incorporate infrastructure projects including IFC Bridge and IFC Road;

Whereas, Adoption of a single data schema by transportation agencies would give vendors and manufacturers the standard we need to facilitate collaboration on their adoption as well;

Whereas, The AASHTO Committee on Bridges and Structures already has several efforts underway to facilitate the adoption of IFC Bridge as the standard data schema for their discipline, and it would be essential in order to ensure and maintain interoperability between these two disciplines that we adopt IFC Road for highway infrastructure projects; and

Whereas, There are other AASHTO committees with interest in this effort, including but not limited to the Committee on Data Management and Analytics, the Committee on Bridges and Structures, and AASHTOWare; now, therefore, be it

Resolved, That the AASHTO Board of Directors recommends the adoption of IFC Schema as the national standard for AASHTO States;

Resolved, That an internal, cross-committee, multi-disciplined group within AASHTO should be formed to coordinate schema development, identify gaps, resolve any conflicts, and avoid duplication of efforts; and

Resolved, That possible AASHTO membership in buildingSMART International should be investigated to provide representation and participation for the state DOTs in schema development.

Approved by the AASHTO Board of Directors
October 9, 2019