

Alberta Infrastructure

**Digital Project Delivery
Asset Information Management
Design-Builder Requirements**

Alberta

Infrastructure

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Asset Information Management Objectives

The Province's objective for the use of Asset Information Management (AIM) is to capture, manage, and exchange asset information to increase efficiency for the Province's Facility and Operations Management. The objective for the AIM requirements is a focus on the as built and turn over data associated with the assets of a project. The AIM Requirements expects that the Design-Builder has downloaded, read, and understood the organization and purpose of the Construction Operations Building information exchange (COBie) standard and these instructions.

1. AIM Manager

- .1 The Design-Builder shall designate one individual, the AIM Manager, who is accountable to the Province for the COBie deliverables.
- .2 The AIM Manager is accountable for coordination of asset information collection, input, and as-built updates provided to the Province.
- .3 The AIM Manager shall be accountable for the following activities:
 - .1 Ensuring compliance with the Province’s AIM Design-Builder Requirements.
 - .2 Coordinating and attending the AIM kick-off meeting with the Province within 2 weeks of project award.
 - .3 Developing, maintaining, updating, distributing, and providing clarifications to/for the AIM Execution Plan (AEP).
 - .4 Executing the AIM procedures as detailed in the AEP and ensuring the reliability of information in the Design-Builder’s deliverables.
 - .5 Leading and facilitating all AIM project meetings defined in the AEP with project team members, including the Province.
 - .6 Executing quality control (QC) processes for accurate data creation, standards adherence, and classification of all assets required.
 - .7 Coordinating and submitting asset information to the Province.
 - .8 Providing the Province with access to the COBie Deliverables in a file sharing platform with the ability to regularly download and view progress.

2. AIM Execution Plan (AEP)

- .1 The AEP is a process management document created in consultation with the Design-Builder and the Province. The AEP shall define how the teams use AIM to meet the Province’s requirements. The Design-Builder shall:
 - .1 Use the AEP template (GOA-AI-TSB-SPE_AEP_Template) provided by the Province as the basis for the AEP, with additional modifications according to the needs of the Design-Builder.
 - .2 Submit the AEP to the Province within 30 days following project award for review and confirmation of acceptance.
 - .3 Resubmit the AEP to the Province for review and confirmation of acceptance whenever it is revised.

3. AIM Requirements

3.1 General

- .1 The Design-Builder shall:
 - .1 Capture all assets in the COBie file according to the Province’s COBie Requirements (GOA-AI-TSB-SPE_COBie Requirements) and in collaboration with the Province.
 - .2 Complete regular updates, additions or deletions in the COBie file in the event of project changes that impact the assets, spaces, or documents.
 - .3 Provide a single COBie file containing the complete set of asset information for all trades at the construction milestones defined in the AEP.

3.2 As-Built Requirements

- .1 The Design-Builder shall provide to the Province:
 - .1 As-built markups in an accurately scaled, measurable, and digital format (PDF, CAD, etc.). All mark-ups, notes, and annotations shall be added on the Drawings using the digital mark-up or annotation tool in the software. No hand-written, hand-drawn, or scanned mark-ups shall be accepted.
 - .2 Updates to the As-Built Drawings and COBie files, according to the scheduled updates submissions on a monthly basis, or as defined in the AEP.
 - .3 Final Construction COBie Deliverables at Substantial Performance as per the Province’s COBie Requirements.
- .2 As-Built Drawings shall contain the accurate representation of all assets in the COBie file, including:
 - .1 The as-built quantity and size.
 - .2 The actual orientation, location, elevation, and routing of major services.
 - .3 Dimensional references to gridlines and/or major permanent building elements such as walls, ceilings, and floors.

3.3 Reality Capture

- .1 As-Built Photographs produced by the Design-Builder are intended to capture the as-built conditions of concealed spaces (floors, walls, and ceilings) prior to being enclosed. The as-built photographs are not intended or required to be incorporated into the Record Model geometry. They are for visual record only.
 - .1 The Design-Builder shall provide the following digital photographs of the installed as-built conditions of all building elements at a minimum:
 - .2 Rooms/Spaces
 - .1 Photograph of each wall (north, east, south, and west views) prior to concealment.
 - .2 Additional photographs as needed to capture interiors of wall spaces, equipment, rough-in details or large wall sections.

- .3 Photographs of each ceiling space (room quadrants: NE, SE, NW, SW views) prior to concealment. Break ceiling photographs of large areas into maximum of 200 square metre sections.
 - .4 Additional photographs as needed to capture interiors of ceiling spaces, equipment, rough-in details or large area ceiling sections.
 - .5 Floors/Slabs
 - .6 Photographs of each floor or slab (section quadrants: NE, SE, NW, SW views) prior to concealment/concrete pour. Break floor/slab photographs of large areas into maximum of 200 square metre sections. Minimum of 4 photographs are required per 200 square metre sections.
 - .7 Additional photographs as needed to capture details of floors or slabs, equipment, rough-in details or large floor area sections.
 - .8 Equipment
 - .9 Photographs of all equipment and assets in the final installed location and orientation (minimum of one).
 - .10 Minimum of one photograph of nameplate or equipment tag.
- .3 The methods and technology to be used to capture and manage the photographs shall be defined in the AEP.
- .2 Additional Reality Capture Methods
 - .1 The optional use of panoramic photos, laser scanning or other reality capture technologies are encouraged. These methods can be used to supersede the above as-built photograph requirements at the discretion of the Province.
 - .2 Use of any additional reality capture options shall be detailed in the AEP for review and acceptability.