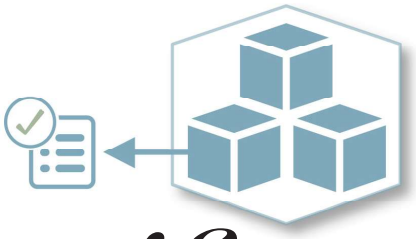

Verification

The usability of BIM depends on its reliability and accuracy. BIM permits project teams to conduct Model Data Verification through rule-based data validation implemented through the Airport's Element Attribute Dictionary. Geometric integrity can be verified for as-built conditions using 3D Laser Scanning and Robotic Total Stations. The Airport relies on its project teams to demonstrate the expertise to manage field changes and communication within their teams and deliver high quality, accurate and reliable Conformed Design Models.

Laser Scanning

What is it?

3D laser scanning is a technology that digitally captures a physical object's exact geometry. 3D laser scanners create point clouds (i.e., a large group of individual points representing the external surface of an object) that can be converted to accurate models which reflect existing or as-built conditions. 3D laser scanning can also capture built elements that will be ultimately concealed by other building components in subsequent construction steps (e.g., in-wall systems or small components).

A 3D laser scanner must be setup in strategic locations around a building to capture its geometry. Laser scanners work with direct line of sight to collect surface points. Therefore, the segments of point clouds must overlap and be tied together. The laser scanners capture digital photos of the environment as well. These digital photos can be aligned with the scans to enable expedited navigation in the viewing software since their processing time is faster than the data intensive point clouds.

How does it benefit stakeholders at the Airport?

- Capturing precise existing or as-built conditions
- Fast access to the virtual representation of accurate as-built conditions