BLD322176

Revit to BIM 360 Ops – Exporting Asset and Location Data for Facilities Management

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Learning Objectives

- Learn how to prepare a Revit model for export to BIM 360 Ops
- Identify FM assets and add key properties to the elements for tracking
- Publish rooms to use as locations in BIM 360 Ops
- Transform a Revit file with IMDF to create an Indoor Map for use in BIM 360 Ops with Apple Indoor Positioning

Description

How can you make your Revit asset and location data usable for your owner?
Help your building owner realize the value of your efforts to keep the model up-to-date during design and construction. Empower the facilities team to begin operating and maintaining the building from Day One.
We will demonstrate how to prepare your Revit model for handover in BIM 360 Ops.
• See best practices for using Revit element types, categories and parameters for each asset and how these properties transfer to BIM 360 Ops
• Learn the workflow to set up and export room locations with the BIM 360 Ops Revit Add-in
• Transform a Revit file with IMDF into an Indoor Map for use in BIM 360 Ops with Apple Indoor Positioning to show technicians and vendors a path to their assigned ticket or a nearby asset, track mobile assets with iBeacons, and view a list of new tickets as a heat map on a floor plan for better triaging

Speaker

Mark is entering his 24th year in the industry and has moved into the role of Customer Success Engineer for the Autodesk BIM 360 Ops Software. With this role, Mark will be working with customers on the successful integration of BIM 360 Ops, leading pre-sales opportunities, speaking at industry events and developing case studies with our customers.
Mark is an adjunct professor at Arizona State University on the subject of Building Commissioning and Facility Start-Up. Mark has focused on new and improved ways for a Facility Manager to maintain the operations of a building for its lifecycle.

Sample Asset Management Questions to Ask Your Owner

Asset Handover from Autodesk Revit

Why should you consider BIM 360 Ops for handing over your BIM asset data?

First, it helps the building owner realize the value of your efforts to keep the model up-to-date during design and construction. Second, it makes it possible for the owner to begin operating and maintaining the building from Day One. Third, it is **free** for you.

To help you to create more value for building owners at handover, here's how we recommend you prepare your Revit asset data.

Preparing your Revit asset data for handover is a must!

You will find the BIM 360 Ops Add-in for Revit at the bottom of the Settings page, accessed from the Portfolio dashboard. Only standalone Revit files are supported.

The element mark property is the BIM 360 Ops Asset ID. If the mark property is empty, BIM 360 Ops automatically generates a unique Asset ID. The Revit Element Type and Element Name, formatted as Element Type: Element Name, are the asset Description.

Element Type Category is the assets' Category. Asset categories are used for grouping and reporting.

Any parameter with "barcode" in the name is the BIM 360 Ops Barcode.

We recommend that the element be a family instance. If the room calculation point is turned on inside the Revit family, the BIM 360 Ops location will be the room number. If the element is not a family instance, it will be the Level or Floor. If the Revit project has a location base point assigned, the element geometry location is mapped to the BIM 360 Ops asset geolocation.

Element Type images are added to the BIM 360 Ops Photo gallery.

Parameters with URL string values will be imported into the BIM 360 Ops document gallery.

Manufacturer and Model will first be populated using the Element Type Manufacturer and Model. If those properties are blank, then parameters with names containing "manufacturer" and "model" will be used.

Parameters with names containing "serial number", "install date', and "expire date" will be used to populate the corresponding BIM 360 Ops fields.

Parameters in a Revit MEP group will be imported as custom fields in the More Details section. The Revit MEP groups are: Electrical, Electrical – Circuiting, Electrical – Lighting, Electrical – Load, Mechanical, Mechanical – Flow, Mechanical – Loads, and Plumbing. Only shared parameters of type MEP are exported.

As a best practice, we recommend exporting one asset initially to validate your results.

BIM 360 Ops	Revit Property Name	Notes
Asset ID	Element Mark	If empty, assigned by BIM 360 Ops
Description	Element Type: Element Name	
Category	Element Type Category	
Barcode / QR Code	Any parameter that's name contains "barcode"	
Location		See above
Manufacturer	Element Type Manufacturer, otherwise a parameter that's name contains "manufacturer"	
Model	Element Type Model	
Serial Number	Any parameter that's name contains "serial number"	
Installation Date	Any parameter that's name contains "install date"	
Warranty Expiration	Any parameter that's name contains "expire date"	
More Details		See above

Export Locations from Revit to BIM 360 Ops

In addition to exporting assets to BIM 360 Ops, you can add rooms to a building from your Revit model.

Find the BIM 360 Ops Add-in for Revit at the bottom of the Settings page, accessed from the Portfolio dashboard. Only standalone Revit files are supported.

Select one or more floor plans in the project browser. Locations with the room category checked and shown in the plan view will export.

Choose Export Locations to BIM 360 Ops.

Enter your export code from the Building Details page.

Rooms are created with a number and a name. If the room number already exists in the building, a duplicate is not created.

Autodesk Revit to BIM 360 Indoor Mapping Set Up:

Download the BIM 360 Ops Revit Plug-in from Settings on the Portfolio page. Scroll to the bottom for the Add-in download.

Geo-Locate the project:

On the Manage Tab, go to locations and add user defined Latitude and Longitude loactions

On your site plan plans, go to Visibility/Graphics Overrides: In the Visibility/Graphics Override dialog, scroll down to Site, expand it, then check both the Project Base Point and Survey Point entries. You should now see the Project Base Point (blue circle with dot): Move these points to the known location.

Click on the project base Point and Enter the parameters for Latitude, Longitude, Elevation and Angle to true north for that location.

Duplicate all levels of the Floor Plans and add BIM 360 Ops to the naming convention.

In the Add-ins tab, chose the BIM 360 Ops Indoor Map button and select add Indoor Map Parameters. This will add indoor mapping parameters to the project information. All Project Information Text Parameters must be filled out. See screen shot for definitions.

Select a building section: In each level parameter, fill out the imdf_ordinal parameter with the corresponding building level.

On your BIM 360 Ops Floor plans, go to Visual Overrides samples:

Model Categories

Uncheck all:

Then Check:

Columns

Curtain Panels

Curtain Systems

Curtain Wall Mullions

Doors

Floors

Roofs

Rooms

Shaft Openings

Stairs

Structural Columns

Structural Framing

Walls

Windows

Annotation Categories

Uncheck all:

Then Check:

Rooms

Create a View template and apply to all BIM 360 Ops Floor Plans.

You can download a pre-defined BIM 360 Ops view template from the AU Class site

To export Room locations:

Select the BIM 360 Floor plans in the project browser

Go to the BIM 360 Ops Add-in, Export to BIM 360 Ops, then select export to BIM 360 Ops

Get the export code from BIM 360 Ops, then export.

To export Indoor Maps:

Select the BIM 360 Floor plans in the project browser

Go to the BIM 360 Ops Add-in, Indoor Map, then select export to BIM 360 Ops

This will automatically download the files to an IMDF folder your Documents Folder. These are the filed Needed for Apple.