SHIVLAM

MODEL READINESS REPORT

Is your model ready for AR on site?

An AR and spatial-computing check of your IFC model: what works, what to fix, and how.

Prepared for	Sample client
Project	Sample house
Model file	revit2011-sample-house.ifc
Format	IFC2X3 · Autodesk Revit Architecture 2011
Date	17 Nov 2026

84 / 100

AR-ready with fixes

The model will work in AR; a few fixes will make the result more reliable.

Summary

Area	Result	In short
File & export	Fix	IFC2X3 is an older schema with weaker georeferencing.
Coordinates & georeference	Fix	True north is not set; AR will assume the model's +Y axis is north. (+1 more)
Spatial structure & zones	OK	No issues found.
Floor & anchor readiness	OK	No issues found.
Anchor references	Fix	No grids in the file; grid lines are the easiest reference to check alignment on site.
Size & performance	Fix	1 element sits exactly on top of another element of the same type (duplicates).
Classification & disciplines	OK	No issues found.
Data & properties	Fix	45% of elements have a material.
Stage & progress data	OK	No issues found.
Model quality	OK	No issues found.
Spatial computing readiness	OK	No issues found.

What to fix, most important first

Fix — **File & export:** IFC2X3 is an older schema with weaker georeferencing.
→ Export as IFC4 (Reference View) if your software supports it.

Fix — **Coordinates & georeference:** True north is not set; AR will assume the model's +Y axis is north.
→ Set true north / project north in the authoring tool before export.

Fix — **Coordinates & georeference:** No map conversion: the model is not tied to real-world coordinates.
→ Export with shared / survey coordinates (IFC4 map conversion). Needed for GPS-based placement; not required for marker-free floor anchoring.

Fix — **Anchor references:** No grids in the file; grid lines are the easiest reference to check alignment on site.
→ Include grids in the IFC export (Revit: export the grids with the 3D view).

Fix	**Size & performance:** 1 element sits exactly on top of another element of the same type (duplicates). → Remove duplicated elements; they double the load and confuse checks on site.
Fix	**Data & properties:** 45% of elements have a material. → Assign materials; they help identify elements on site and in reports.

What's already working

- File size 2.27 MB.
- Length unit set (1 unit = 1.0 m).
- Model size 9.28 × 26.57 × 10.55 m looks plausible.
- Geometry reaches 25.6 m from the model origin.
- Site location 41.8744, -87.6394.
- Hierarchy present: 1 site, 1 building, 4 storeys.
- Storeys (bottom to top): T/FDN -1.25 m, Level 1 +0.00 m, Level 2 +3.10 m, Roof +6.00 m
- All 215 elements are on a storey.

Floor heights we'll anchor to

In AR the model is anchored to the real floor. For every floor we found the floor level several independent ways and checked that they agree.

Floor	Rooms / zones	Floor level	Confidence	Needs review
Level 1	10	`+0.000 m`	high	none
Level 2	10	`+3.100 m`	high	none
Roof	1	`+6.000 m`	medium	none

Area by area

File & export Fix

Info	Exported from Autodesk Revit Architecture 2011.
Fix	IFC2X3 is an older schema with weaker georeferencing. → Export as IFC4 (Reference View) if your software supports it.
OK	File size 2.27 MB.
Info	38,898 IFC entities.

Coordinates & georeference Fix

OK	Length unit set (1 unit = 1.0 m).
OK	Model size 9.28 × 26.57 × 10.55 m looks plausible.
OK	Geometry reaches 25.6 m from the model origin.
Fix	True north is not set; AR will assume the model's +Y axis is north. → Set true north / project north in the authoring tool before export.
OK	Site location 41.8744, -87.6394.
Fix	No map conversion: the model is not tied to real-world coordinates. → Export with shared / survey coordinates (IFC4 map conversion). Needed for GPS-based placement; not required for marker-free floor anchoring.

Spatial structure & zones OK

OK	Hierarchy present: 1 site, 1 building, 4 storeys.
Info	4 buildingstorey, 21 space, 0 zone, 21 slab, 57 wall.
OK	Storeys (bottom to top): T/FDN -1.25 m, Level 1 +0.00 m, Level 2 +3.10 m, Roof +6.00 m
OK	All 215 elements are on a storey.
Info	21 zones found using IfcSpace. (No IfcZone in the file, so the next level down is used.)

Floor & anchor readiness OK

OK	Storey elevations are consistent with their placement.
Info	Floor height confidence across 21 zones: 20 high, 1 medium.
OK	Floor height found and cross-checked in all 21 zones.
OK	No tilted floors.

Anchor references Fix

Fix	No grids in the file; grid lines are the easiest reference to check alignment on site. → Include grids in the IFC export (Revit: export the grids with the 3D view).
Info	Anchor candidates per storey: Level 2 0 columns, 25 walls; Level 1 0 columns, 21 walls; T/FDN 0 columns, 7 walls; Roof 0 columns, 4 walls.
OK	Every floor in use has columns or walls to align against.

Size & performance Fix

Info	27,740 triangles in the whole model.
OK	Heaviest floor: Level 1 with 17,672 triangles.
Info	Heaviest elements: StairFlight 1,152, StairFlight 1,152, Railing 1,138, Railing 1,138, FurnishingElement 732.
OK	Every element has 3D geometry.
Fix	1 element sits exactly on top of another element of the same type (duplicates). → Remove duplicated elements; they double the load and confuse checks on site.

Classification & disciplines OK

Info	Elements by discipline: Architectural 175, Structural 40.
OK	0% of elements are generic 'proxy' objects.

Data & properties Fix

OK	Every element has a unique ID.
OK	All elements are named.
Fix	45% of elements have a material. → Assign materials; they help identify elements on site and in reports.
OK	67% of elements carry standard property sets (Pset_...Common).
Info	0% of elements have a classification code (e.g. Uniclass, OmniClass).
OK	Requirements file: 4 of 4 requirements met.

Stage & progress data OK

OK	97% of elements carry phase / status data (PSet_Revit_Phasing.Phase Created).
Info	No schedule (4D) tasks in the model.

Model quality OK

OK	Every element sits within its storey's height.
Info	12 walls / columns start well above their floor (e.g. WallStandardCase 'Basic Wall:Interior - Partition (92mm Stud):143856' on Level 1). Often intended (furring, bulkheads); worth a quick check.

OK	No duplicated rooms.
OK	All doors and windows sit in wall openings.

Spatial computing readiness OK

OK	27,740 triangles: within our working budget for Quest (750,000).
OK	27,740 triangles: within our working budget for Vision Pro (1,000,000).
OK	The model carries colours / surface styles.
OK	Sampled structural elements are closed solids.

How to re-export from Revit

1. File > Export > IFC.
2. IFC version: IFC4 Reference View (or IFC2x3 Coordination View 2.0).
3. Coordinate base: Shared coordinates (or Project base point if the project has no survey point).
4. Include rooms / spaces (export rooms as IfcSpace) and 'Split walls and columns by level'.
5. Tick 'Export IFC common property sets' and 'Export base quantities'.
6. Export the levels you want to check; one file per building is fine.

Next steps

> Send us the updated IFC once the fixes above are done and we'll re-run this check. Then we set up the site demo or pilot on your own model.

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How this check works

We open your IFC model and check it the way an AR app on a phone or iPad will use it: coordinates and units, the floor and zone structure, the real floor level on every floor, references to align against on site, how heavy each floor is for a mobile device, and whether elements are classified by trade. Each area is rated green, amber or red, and the overall score weights the areas that matter most for anchoring the model on site.